

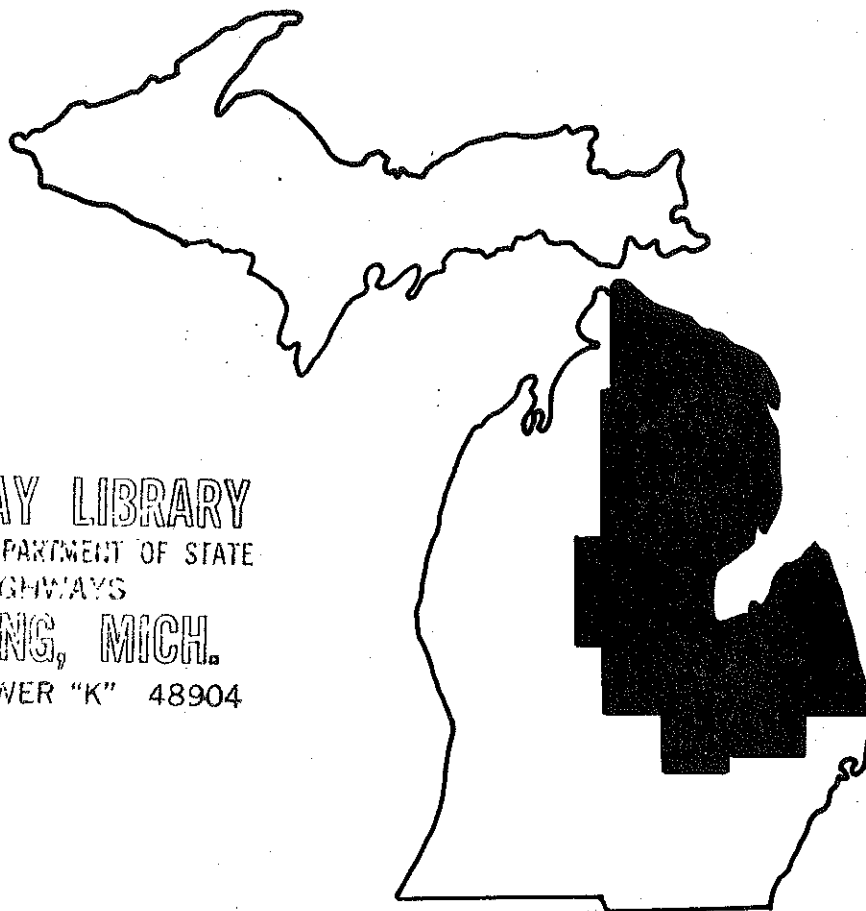
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# MICHIGAN DEPARTMENT OF STATE HIGHWAYS AND TRANSPORTATION

TAWAS CITIES AREA 1972  
EXTERNAL  
ORIGIN DESTINATION  
SURVEY

FACTUAL DATA REPORT

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MICHIGAN DEPARTMENT  
OF  
STATE HIGHWAYS AND TRANSPORTATION

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JOHN P. WOODFORD, STATE HIGHWAY DIRECTOR

February 15, 1974

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 Tawas Cities External Origin Destination Survey. Included are tables, maps and summaries of data obtained during the survey.

This report was prepared by Transportation Analyst Robert M. Kirkbride with the assistance of Michael Demott. Both are under the supervision of Maynard A. Christensen of the Northeast Analysis Unit.

Sincerely,

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

Keith E. Bushnell, Engineer  
Transportation Survey & Analysis



TABLE OF CONTENTS

	PAGE
Survey Area.....	1
Terminology and Definitions.....	3
Field Procedure.....	4
All Stations.....	8
Station 1 - Wilbur Road.....	15
Station 2 - US-23 N.....	24
Station 3 - US-23 S.....	33
Station 4 - M-55.....	42
Station 5 - Plank Road.....	51

Appendix A

General Purpose Summaries

Trip Length Frequency Distribution Graphs

Appendix B

Interview Form

Manual Classification Form

LIST OF TABLES

TABLE		PAGE
1	External Stations.....	5
2	Internal Analysis Zones.....	6
3	Tawas Cities Total Area Trips.....	10
4	Total Area Terminal Trips.....	11
5	Total Area Trip Lengths.....	13
6	Station 1 Terminal Trips.....	17
7	Station 1 Through Trips.....	19
8	Station 1 Trips by Vehicle Type and Purpose.....	21
9	Station 1 Trip Lengths.....	22
10	Station 2 Terminal Trips.....	26
11	Station 2 Through Trips.....	28
12	Station 2 Trips by Vehicle Type and Purpose.....	30
13	Station 2 Trip Lengths.....	31
14	Station 3 Terminal Trips.....	35
15	Station 3 Through Trips.....	37
16	Station 3 Trips by Vehicle Type and Purpose.....	39
17	Station 3 Trip Lengths.....	40
18	Station 4 Terminal Trips.....	44
19	Station 4 Through Trips.....	46
20	Station 4 Trips by Vehicle Type and Purpose.....	48
21	Station 4 Trip Lengths.....	49
22	Station 5 Terminal Trips.....	52
23	Station 5 Through Trips.....	54
24	Station 5 Trips by Vehicle Type and Purpose.....	56
25	Station 5 Trip Lengths.....	57

LIST OF FIGURES

FIGURE		PAGE
1	Study Area.....	2
2	Station and Zone Map.....	7
3	Total Area Terminal Trips.....	12
4	Selected Traffic Counts.....	14
5	Station 1 Terminal Trips.....	18
6	Station 1 Through Trips.....	20
7	Station 1 Distribution of Trip Ends by County.....	23
8	Station 2 Terminal Trips.....	27
9	Station 2 Through Trips.....	29
10	Station 2 Distribution of Trip Ends by County.....	32
11	Station 3 Terminal Trips.....	36
12	Station 3 Through Trips.....	38
13	Station 3 Distribution of Trip Ends by County.....	41
14	Station 4 Terminal Trips.....	45
15	Station 4 Through Trips.....	47
16	Station 4 Distribution of Trip Ends by County.....	50
17	Station 5 Terminal Trips.....	53
18	Station 5 Through Trips.....	55
19	Station 5 Distribution of Trip Ends by County.....	58

## SURVEY AREA

The Tawas Cities (Tawas City and East Tawas) with a combined 1970 population of over 4,000 serve as the hub of activity in Iosco County. In addition, Tawas City is the Iosco County Seat. Located along the scenic Lake Huron coastline about 240 miles north of Detroit, these communities are known primarily for their summertime recreational activities. An abundance of inland lakes, forests and, of course, the beaches of Lake Huron contribute significantly to the recreation industry of the Tawas area.

The area is served by two state trunkline facilities--M-55 and US-23. M-55 provides service for area residents and visitors to the west. The primary route, US-23 provides service along the coast and to the more populous areas of the state.

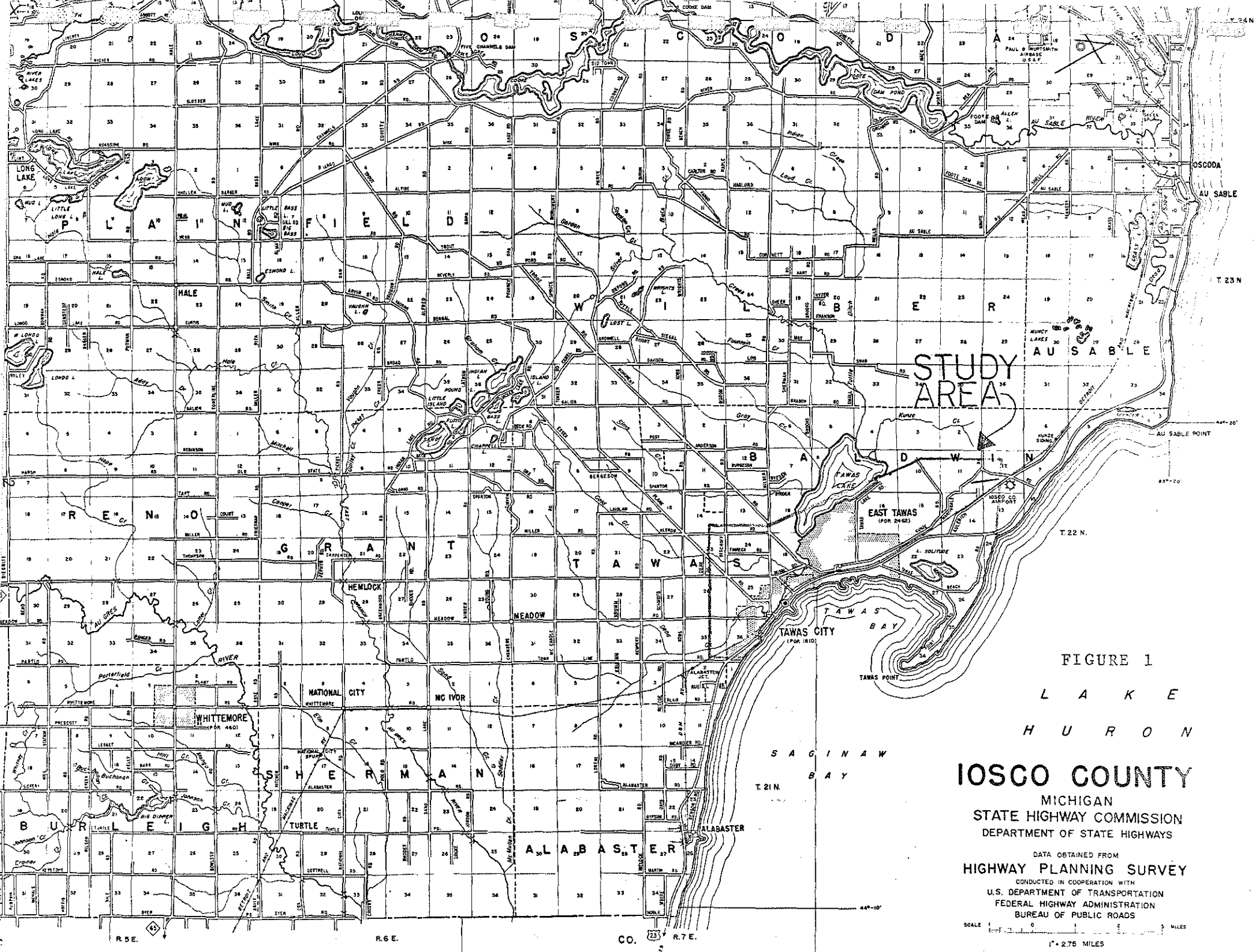


FIGURE 1  
 LAKE  
 HURON  
**IOSCO COUNTY**  
 MICHIGAN  
 STATE HIGHWAY COMMISSION  
 DEPARTMENT OF STATE HIGHWAYS  
 DATA OBTAINED FROM  
**HIGHWAY PLANNING SURVEY**  
 CONDUCTED IN COOPERATION WITH  
 U.S. DEPARTMENT OF TRANSPORTATION  
 FEDERAL HIGHWAY ADMINISTRATION  
 BUREAU OF PUBLIC ROADS  
 SCALE 1" = 2.75 MILES



## TERMINOLOGY AND DEFINITIONS

**Cordon Line:** An imaginary line around the area under study.

**External Station:** A point on a highway at the limits of the study area (Cordon Line) where drivers of vehicles are stopped and interviewed.

**Study Area:** The area enclosed by the Cordon Line.

**Origin:** The place where a trip begins.

**Destination:** The place where a trip ends.

**Origin-Destination Zone:** (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.

**Trip:** One-way travel between an Origin and Destination.

**Terminal Trip:** 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.)

**Through Trip:** A trip passing through the study area. (Both ends of the trip outside the Cordon Line.)

## FIELD PROCEDURE

Field work for the Tawas Cities 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 the Tawas Cities. 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

TAWAS CITY

EXTERNAL ORIGIN DESTINATION SURVEY

EXTERNAL STATIONS

Station No.	Location
1	Wilbur Rd., Between N and S Jct. of Wilbur & Monument
2	US-23, E. of Baldwin Resort Rd.
3	US-23, N. of Townline Rd.
4	M-55, E. of Dean Rd.
5	Plank Rd., SE of Dean Rd.

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TABLE 2

TAWAS

EXTERNAL ORIGIN DESTINATION SURVEY

ANALYSIS ZONES

<u>ZONE NO.</u>	<u>ABBREVIATION</u>	<u>DESCRIPTION</u>
6	WTWP	WEST TAWAS TOWNSHIP
7	ICMCF	IOSCO COUNTY MEDICAL CARE FACILITY
8	SMOT	SOUTH MOTEL
9	TCBD	TAWAS CITY CENTRAL BUSINESS DISTRICT
10	TRES	TAWAS CITY RESIDENTIAL AREA
11	HOSP	HOSPITAL
12	WCOM	WEST SIDE COMMERCIAL
13	DMRC	DETROIT & MACKINAW RAILROAD CO.
14	ETCPK	EAST TAWAS CITY PARK
15	ETCBD	EAST TAWAS CENTRAL BUSINESS DISTRICT
16	ETRES	EAST TAWAS RESIDENTIAL AREA
17	TLK	TAWAS LAKE
18	NETWP	NE TAWAS TOWNSHIP
19	ECOM	EAST SIDE COMMERCIAL
20	AIRP	IOSCO CO. AIRPORT
21	IND	INDUSTRIAL AREA
22	SETWP	SE TAWAS TOWNSHIP
23	TPSPK	TAWAS POINT STATE PARK

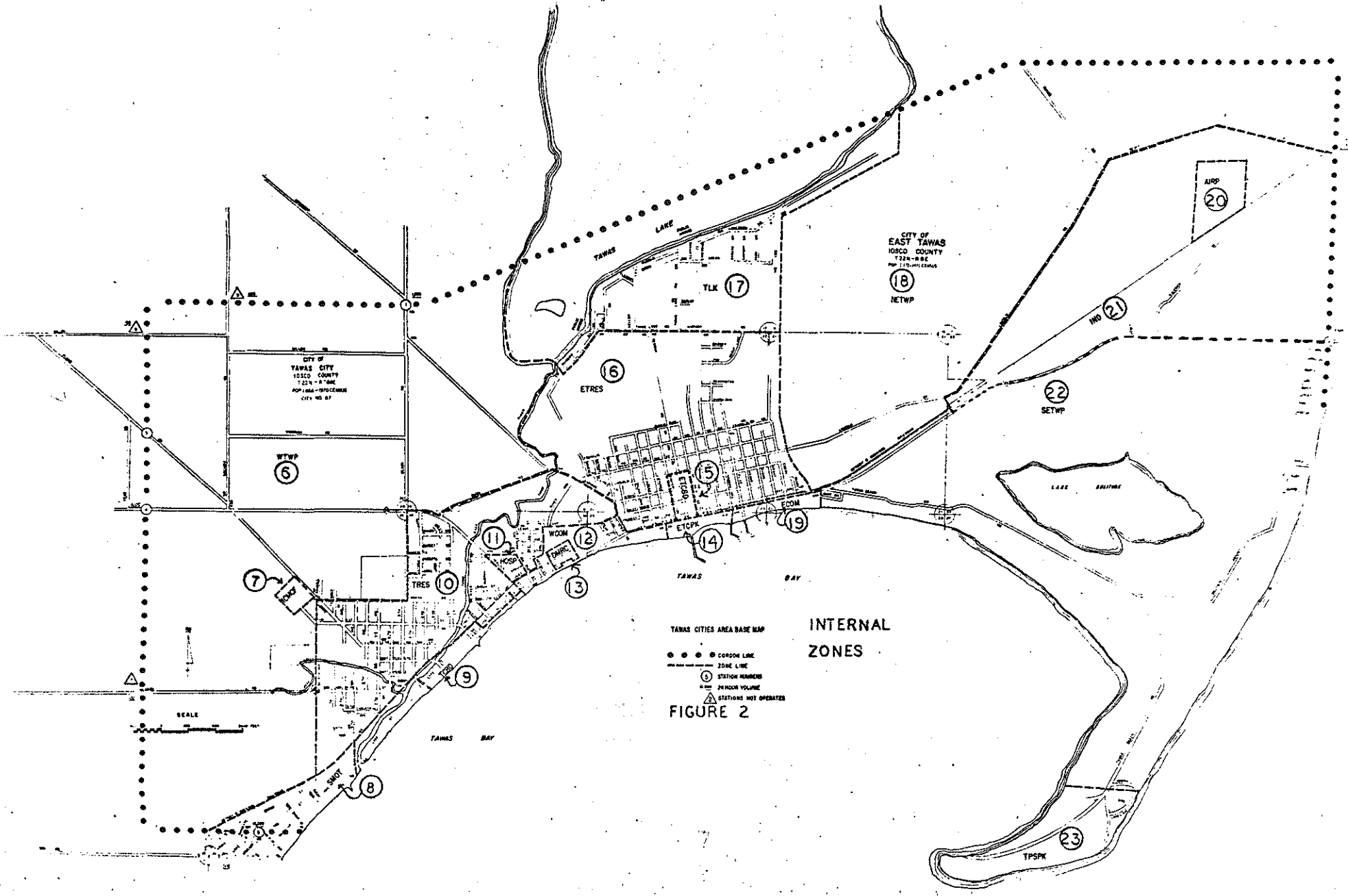


FIGURE 2

INTERNAL ZONES

## ALL STATIONS

Interviews were conducted for the Tawas Cities External Origin Destination Survey on an average July, 1972 weekday. A total of 18,961 vehicles passed through all stations. Of this number, 11,542 were stopped and interviewed yielding an area-wide interview rate of 61.6%. 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 of this report will be slightly understated.

After expansion, for all stations, there were 18,741 total area vehicle trips. As can be seen in Table 3, 15,473 or 82.6% of total vehicle area trips utilized M-55 and US-23, state trunk-line facilities. The other two stations located on county roads, constituted the remainder.

Traffic was categorized as terminal or through, with the former constituting 64.3% and the latter 35.7% of all vehicle trips. However, since a through trip is counted at its entrance or exit station, in order to determine total trips it was necessary to half factor all through trips to adjust for this double counting. When considered in this light, terminal trips account for 78.1% of all trips and through trips 21.9%.

Over 49% of all terminal trips interchanged with Zone 9 (Tawas City CBD), Zone 15 (East Tawas CBD) or Zone 16 (East Tawas Residential Area). Table 4 presents a list of total area terminal trips by zone with Figure 3 displaying the study area with terminal trips superimposed.

Through trips will be treated in individual station analysis.

Table 5, which shows the trip length of all trips determined through the survey, indicates that the average trip length was 1 hour 17 minutes. The longest trip was 15 hours 10 minutes. It is to be noted that through trips were half factored for reasons previously discussed.

In conjunction with station interviews, machine traffic counts were taken throughout the study area at selected locations. A schematic showing traffic volumes at these points is presented in Figure 4.

TABLE 3

## TAWAS CITIES TOTAL AREA TRIPS

Station	<sup>1</sup> 24-Hour Traffic Counts	14-Hour Interviews	Percent Interviewed	<sup>2</sup> Vehicle Trips	Percent of Total Traffic
1	2354	1653	70.2	2284	12.19
2	6118	3638	59.5	6131	32.71
3	6445	3623	56.2	6557	34.99
4	2813	1902	67.6	2785	14.86
5	1013	726	71.7	984	5.25
Total	18743	11542	61.6	18741	100.0

Station	<sup>2</sup> Vehicle Trips	Terminal Trips	% of Total	Through Trips	% of Total
1	2284	1962	85.9	322	14.1
2	6131	3363	54.9	2768	45.1
3	6557	3777	57.6	2780	42.4
4	2785	2094	75.2	691	24.8
5	984	850	86.4	134	13.6
Total Vehicle Trips	18741	12046	64.3	6695	35.7
Trips	15427	12046	78.1	<sup>3</sup> 3381	21.9

<sup>1</sup>Motorcycles and busses, 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	1	2	3	4	5	Total
	49	52	63	31	23	218

<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.

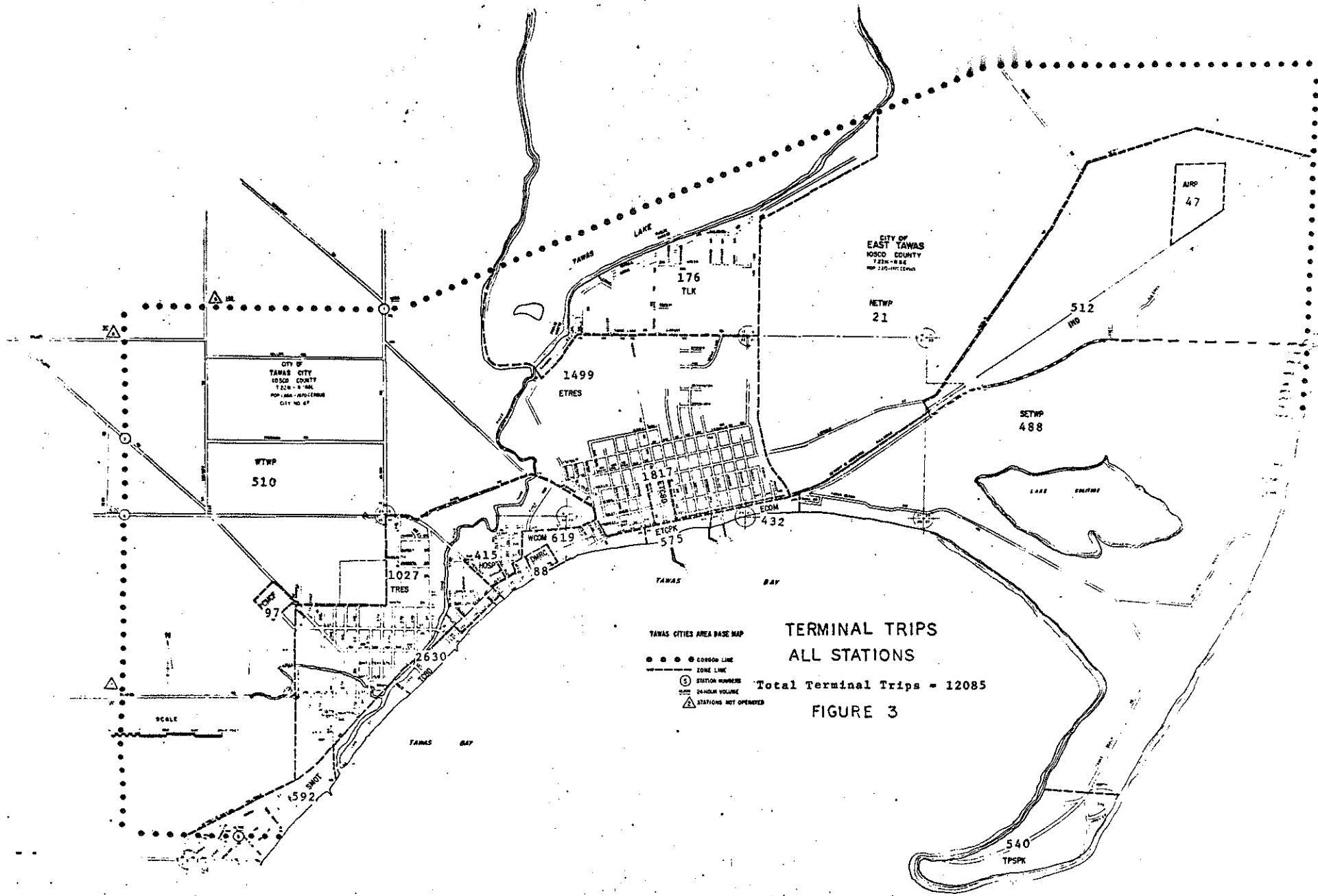


Table 4

## TOTAL AREA TERMINAL TRIPS

Zone No.	Origins	Destinations	Total	Percent of Total
6	237	273	510	4.22
7	51	46	97	.80
8	299	295	592	4.90
9	1267	1363	2630	21.75
10	526	501	1027	8.50
11	210	205	415	3.43
12	322	297	619	5.12
13	32	56	88	.73
14	276	299	575	4.76
15	907	910	1817	15.04
16	808	691	1499	12.40
17	91	85	176	1.46
18	9	12	21	.17
19	219	213	432	3.58
20	18	29	47	.39
21	260	252	512	4.24
22	255	233	488	4.04
23	278	262	540	4.47
	<u>6065</u>	<u>6020</u>	<u>12085</u>	<u>100.0</u>

\*Total trips may differ slightly from individual station trips due to rounding during computer processing.



12

TABLE 5

TOTAL AREA  
TRIP LENGTHS

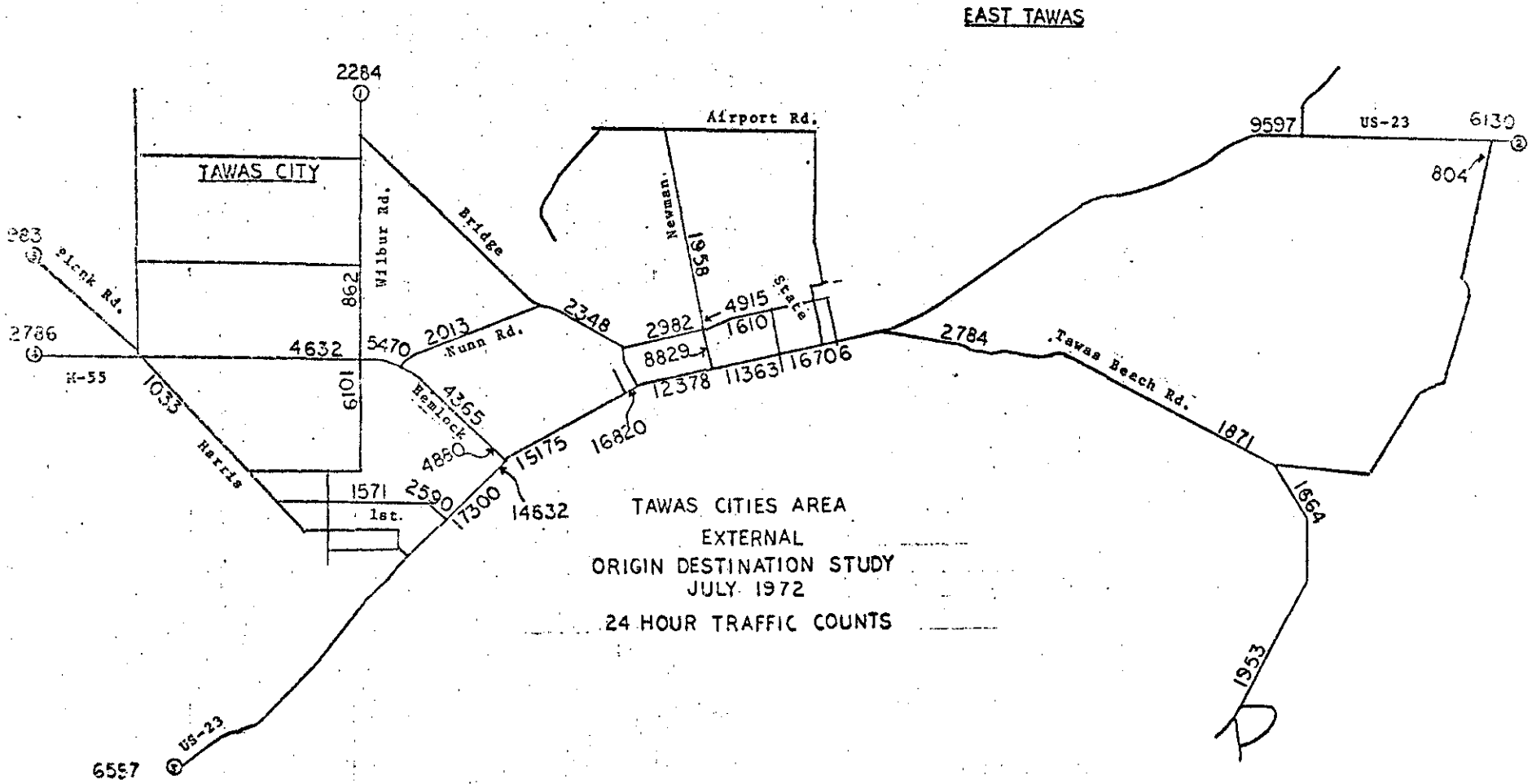
<u>Minutes</u>	<u>Trips</u>	<u>Percent of Total</u>
1 - 20	4870	31.39
20 - 40	5232	33.72
40 - 60	654	4.21
60 - 90	1011	6.51
90 - 120	788	5.08
120 - 180	1010	6.51
180 - 240	997	6.42
240 - 300	527	3.39
300 - 360	209	1.34
360 - 910	<u>214</u>	<u>1.43</u>
	*15512	100.0

Longest Trip = 15 Hours 10 Minutes

Average Trip Length = 1 Hour 17 Minutes

\*Total trips may deviate from other total trips reported for all stations due to the nature of the program used to compute trip lengths.

Note: Appearing in Appendix A is a trip length frequency distribution graph which may prove useful in determining the number of trips for each 10 minute increment of time.



**FIGURE 4**

## STATION 1

Station 1 was located on Wilbur Road north of Tawas City. Total trips at this location (2,284) represents 12% of all trips for the study area. The greatest proportion of these trips (85.9%) were terminal, i.e., one end of the trip either originated at or was destined to an internal analysis zone. The remainder were through trips. Table 6 lists terminal trips by zone with Figure 5 graphically displaying the interchange of all terminal trips from the station to each zone. More than 50% interchange with one of three zones. Zone 16 accounts for 18.69% with zones 9 and 15 accounting for 17.57% and 14.21% respectively.

About 46% of through trips at Station 1 interchanged with Station 3. Table 7 presents the distribution of through trips to all stations with Figure 6 displaying these interchanges schematically.

The single greatest trip purpose was other social recreation at 35.9% of total trips. Work constituted the next largest category at 25.2% with shopping trips accounting for an additional 19%. In all, over 80% of all trips at this station were accounted for by these three purposes.

Passenger cars were the most popular means of transportation as evidenced by the fact that nearly 81% of all trips were made in this manner. Not suprisingly, pickup trucks was the next largest vehicle type at 15.6%.

A breakdown of total, terminal and through trips at Station 1 by trip purpose and vehicle type is presented in Table 8.

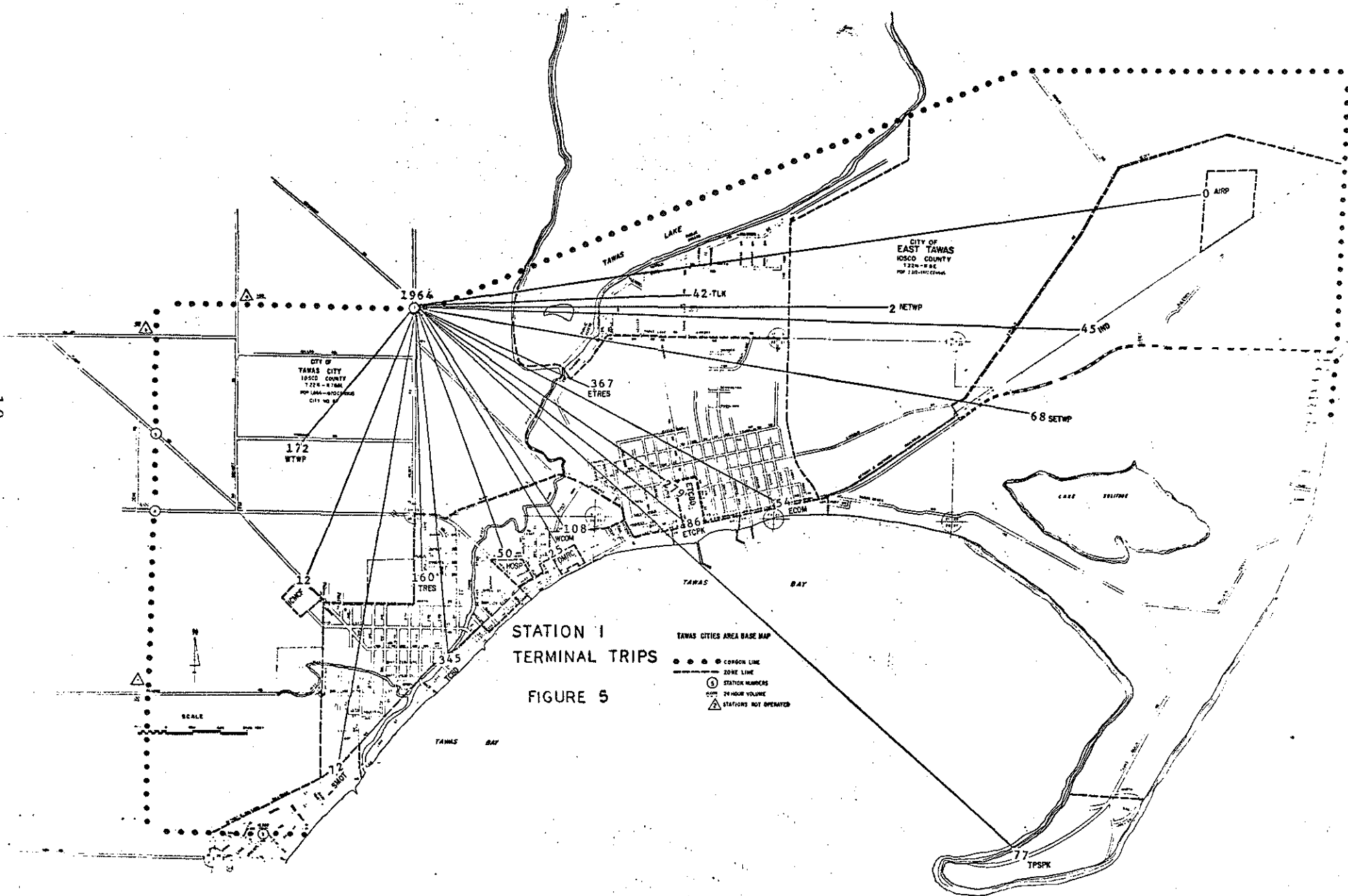
It was possible to determine trip lengths for each of the trips which passed through Station 1 utilizing the Statewide Traffic Forecasting Model. A summary of these trip lengths appears in Table 9. As can be seen most trips were of relatively short duration with nearly 63% having a trip length of 20 minutes or less. The average trip length for all trips was 37 minutes.

A county outline map of Michigan is presented as Figure 7 showing the distribution of origin and destination trip ends for all trips passing through the station. Since Wilbur Road is a county road it is not surprising to note that the great majority of trip ends occur in Iosco County (92.56%) with more than 97% accounted for when all adjacent counties are considered.

Table 6

## STATION 1 TERMINAL TRIPS

Zone No.	Origins	Destinations	Total	Percent of Total
6	77	95	172	8.75
7	6	6	12	.61
8	35	37	72	3.67
9	151	194	345	17.57
10	76	84	160	8.15
11	20	30	50	2.55
12	59	49	108	5.49
13	9	16	25	1.27
14	45	41	86	4.38
15	146	133	279	14.21
16	180	187	367	18.69
17	30	12	42	2.14
18	0	2	2	.10
19	25	29	54	2.75
20	0	0	0	0
21	24	21	45	2.29
22	38	30	68	3.46
23	38	39	77	3.92
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	959	1005	1964	100.0



STATION 1  
 TERMINAL TRIPS  
 FIGURE 5

TAWIAS CITIES AREA BASE MAP

- ● ● ● CORON LINE
- ZONE LINE
- ① STATION NUMBERS
- 24 HOUR VOLUME
- △ STATIONS NOT OPERATED

SCALE



TABLE 7

STATION 1

WILBUR ROAD  
 BETWEEN N. AND S. JCT. OF MONUMENT ROAD

THROUGH TRIPS TO ALL OTHER STATIONS

Station	Vehicles	Percent of Total
2	90	27.96
3	149	46.27
4	76	23.60
5	7	2.17
<b>Total</b>	<b>322</b>	<b>100.0</b>

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TABLE 8  
STATION 1  
WILBUR ROAD  
BETWEEN N. AND S. JCT. OF MONUMENT ROAD

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	1851	81.03	1608	86.9	243	13.1
Passenger Car with Trailer	20	.89	11	55.0	9	45.0
Panel or Pickup	356	15.58	301	84.55	55	15.4
Panel or Pickup with Trailer	15	.67	13	86.67	2	13.3
Other Single Unit Trucks	33	1.44	23	69.70	10	30.3
Combinations and Trucks with Trailers	9	.39	6	66.67	3	33.3
<b>TOTAL</b>	<b>2284</b>	<b>100.0</b>	<b>1962</b>	<b>85.9</b>	<b>322</b>	<b>14.1</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	576	25.22	485	84.20	91	15.8
Personal Business	175	7.68	164	93.71	11	6.2
Shopping	435	19.03	416	95.63	19	4.3
Vacation	117	5.14	68	58.12	49	41.8
Other Soc.-Rec.	820	35.90	688	83.9	132	16.1
All Other	161	7.03	141	87.58	20	12.4
<b>TOTAL</b>	<b>2284</b>	<b>100.0</b>	<b>1962</b>	<b>85.9</b>	<b>322</b>	<b>14.1</b>

TABLE 9  
 STATION 1  
 WILBUR ROAD  
 BETWEEN N. AND S. JCT. OF MONUMENT ROAD

<u>Minutes</u>	<u>Trips</u>	<u>Percent of Total</u>
1 - 20	1418	62.73
20 - 40	531	23.31
40 - 60	23	1.05
60 - 90	179	7.86
90 - 390	127	5.05
TOTAL	*2278	100.0

Longest Trip = 6 1/2 Hours

Average Trip Length = 37 Minutes

\*Total trips may deviate from other total trips for this station due to the nature of the program used to compute trip lengths.

Note: Appearing in Appendix A is a trip length frequency distribution graph which may prove useful in determining the number of trips for each 10 minute increment of time.



## STATION 2

Station 2 was located on US-23 east of Baldwin Resort Road. The importance of US-23, a state trunkline, to the Tawas is evidenced by the fact that 33% of the study area trips passed through this location. Of the 6,131 trips, 55% were terminal and 45% through. Trips at this station represent 27.9% and 41.3% of total area terminal and through trips, respectively. Table 10 lists terminal trips by zone with Figure 8 graphically displaying the interchange of these trips between the station and zones.

Almost 51% of terminal trips interchange with one of three zones. Zone 9 accounts for 21.12% with zones 15 and 16 following with 16.09% and 13.65% respectively.

A breakdown of through trips from Station 2 to all other external stations is shown in Table 11 with Figure 9 presenting these interchanges schematically. The most significant interchange is with Station 3 located on US-23 south of Tawas City. More than 82% of all through vehicles are accounted for in this interchange.

Work trips at 1,999 was the largest single trip purpose comprising 32.6% of all trips at this station. Other social-recreation trips accounted for 21.4%, vacation and shopping followed at 16.8% and 14.8% respectively. Over 78% of all trips were made by passenger cars with an additional 10.11% being made by pickup truck. A complete breakdown of total, terminal and through trips by vehicle type and trip purpose is presented in Table 12.

As expected with a large proportion of through trips, trip lengths are much longer than was determined at Station 1 on Wilbur Road. The average trip length was determined to be 1 hour 51 minutes with the longest trip at nearly 15 hours. Table 13 shows the distribution of trips by increments of time.

A county outline map of Michigan is presented as Figure 10 showing the distribution of origin and destination trip ends for all trips passing through the station. Nearly 74% of all trip ends occur in counties adjacent to and including Iosco County. Iosco County itself accounts for about 67%. A significant number of trip ends (250) occurred out of state contributing to an increased average trip length.

Table 10

## STATION 2 TERMINAL TRIPS

Zone No.	Origins	Destinations	Total	Percent of Total
6	44	37	81	2.43
7	18	11	29	.89
8	73	46	119	3.55
9	340	372	712	21.12
10	129	103	232	6.90
11	76	82	158	4.71
12	76	51	127	3.78
13	5	15	20	.62
14	39	57	96	2.87
15	231	310	541	16.09
16	259	201	460	13.65
17	25	28	53	1.60
18	3	6	9	.30
19	68	67	135	3.43
20	13	21	34	1.04
21	111	114	225	6.70
22	106	111	217	6.50
23	58	70	128	3.82
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	1674	1702	3376	100.0



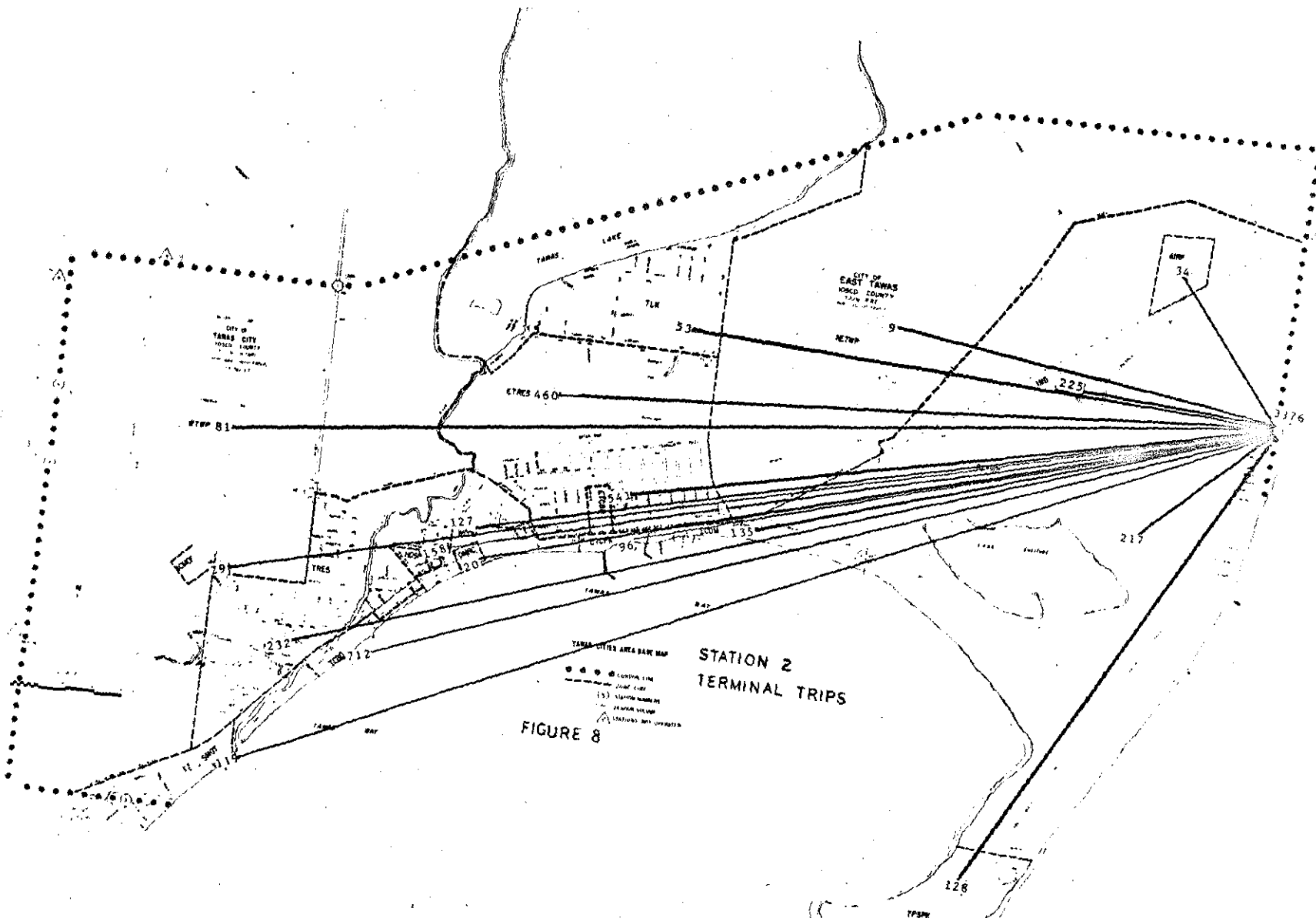


FIGURE 8

STATION 2  
TERMINAL TRIPS

TABLE 11

STATION 2 ,

US-23 E. OF BALDWIN RESORT ROAD  
THROUGH TRIPS TO ALL OTHER STATIONS

Station	Vehicles	Percent of Total
1	78	2.82
3	2276	82.23
4	397	14.34
5	<u>17</u>	<u>.61</u>
Total	2768	100.0

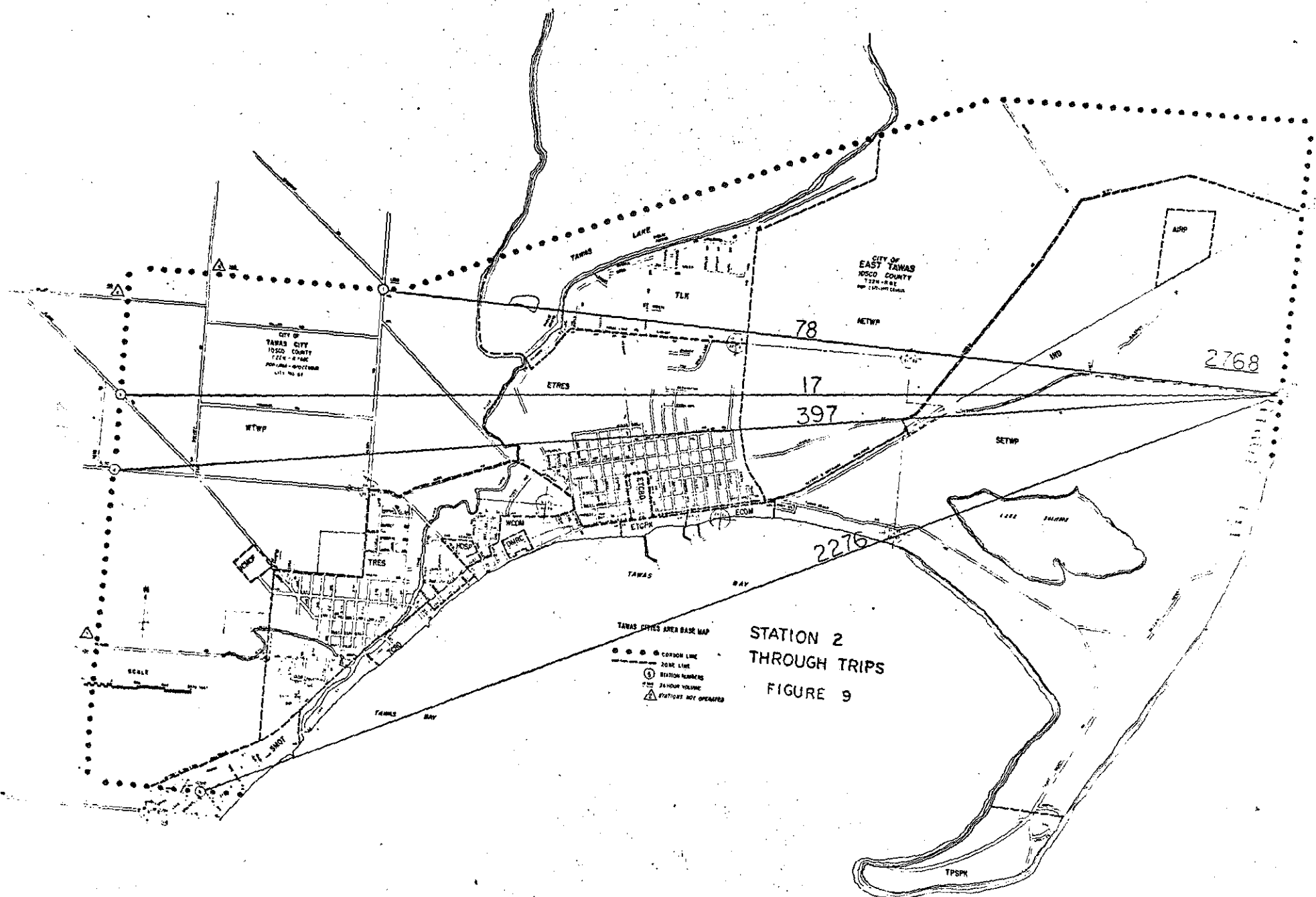


TABLE 12

## STATION 2

US-23 E. OF BALDWIN RESORT ROAD

## 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	4841	78.97	2750	56.80	2091	43.29
Passenger Car with Trailer	145	2.36	32	22.07	113	77.93
Panel or Pickup	620	10.11	377	60.81	243	39.19
Panel or Pickup with Trailer	59	.96	13	22.03	46	77.97
Other Single Unit Trucks	273	4.45	152	55.68	121	44.32
Combinations and Trucks with Trailers	193	3.15	39	20.21	154	79.79
<b>Total</b>	<b>6131</b>	<b>100.0</b>	<b>3363</b>	<b>54.85</b>	<b>2768</b>	<b>45.15</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	1999	32.60	1209	60.48	790	39.52
Personal Business	462	7.53	303	65.58	159	34.42
Shopping	906	14.77	799	88.19	107	11.81
Vacation	1031	16.83	188	18.24	843	81.76
Other Soc.-Rec.	1309	21.35	582	44.46	727	55.54
All Other	424	6.92	282	66.51	142	34.49
<b>Total</b>	<b>6131</b>	<b>100.0</b>	<b>3363</b>	<b>54.85</b>	<b>2768</b>	<b>45.15</b>

TABLE 13

STATION 2 ,

US-23 E. OF BALDWIN RESORT ROAD

TRIP LENGTHS

<u>Minutes</u>	<u>Trips</u>	<u>Percent of Total</u>
1 - 20	970	15.87
20 - 40	2294	37.55
40 - 60	226	3.69
60 - 90	265	5.97
90 - 120	324	5.30
120 - 180	530	8.67
180 - 240	592	9.69
240 - 300	423	6.92
300 - 420	243	3.97
420 - 890	<u>142</u>	<u>2.37</u>
	*6109	100.0

Longest Trip = 14 Hours 50 Minutes

Average Trip Length = 1 Hour 51 Minutes

\*Total trips may deviate from other total trips reported for this station due to the nature of the program used to compute trip lengths.

Note: Appearing in Appendix A is a trip length frequency distribution graph which may prove useful in determining the number of trips for each 10 minute increment of time.

TAWAS CITIES  
 EXTERNAL ORIGIN DESTINATION SURVEY  
 STATION 2  
 US-23 E. OF BALDWIN RESORT ROAD  
 DISTRIBUTION OF TRIP END  
 BY COUNTY

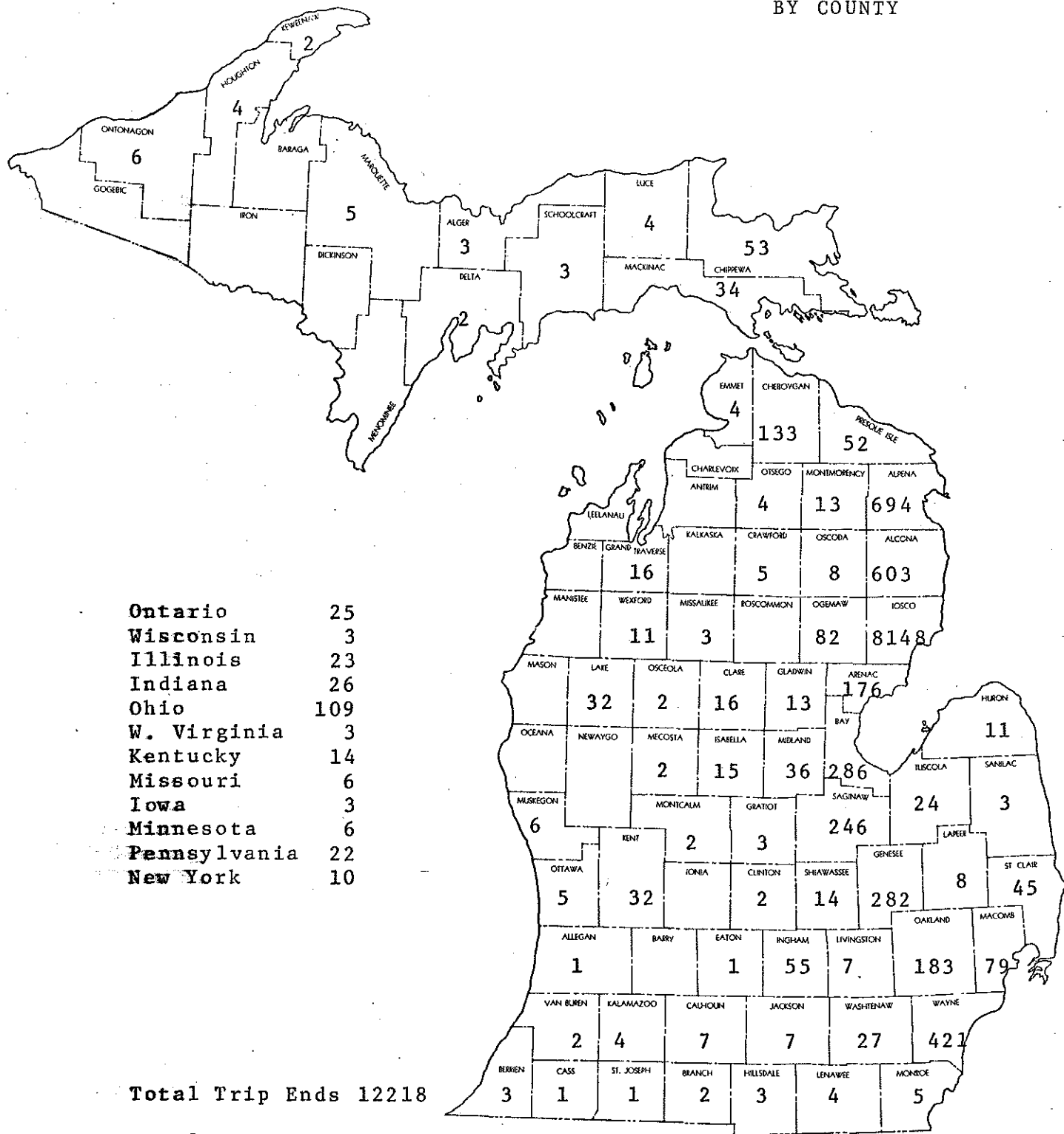


FIGURE 10

### STATION 3

Station 3 was located on US-23 N. of Townline Road. As in the case of Station 2 this trunkline facility is of prime importance to the Tawas area. Nearly 35% of the area's traffic passed through this location. Of the 6,445 trips, 57.6% were terminal and 42.4% through. Trips at this station represent 31.4% and 41.5% of total area terminal and through trips, respectively. Table 14 lists terminal trips by zone with Figure 11 graphically displaying the interchange of these trips between the station and internal analysis zones. Nearly 47% of terminal trips interchange with one of three zones. Zone 9 (Tawas City CBD) accounted for 24.22% with zone 15 (East Tawas CBD) and Zone 16 (East Tawas Residential Area) following at 12.3% for the former and 10.45% for the latter.

A breakdown of through trips from Station 3 to all other external stations is shown in Table 15 with Figure 12 presenting these interchanges schematically. The most important interchange is with the other US-23 external station (Station 2) which accounts for 91.77% of all through trips at this location.

Work trips at 1,759 was the greatest single trip purpose constituting 26.83% of all trips at the station. Other Social-recreation followed closely at 25.29%. Over 87% of these trips were made by passenger car or pickup with the former accounting for 78.53% and the latter 8.54%. A complete breakdown of total, terminal and through trips by vehicle type and purpose is presented in Table 16.

Trip lengths determined at this location was very similar to those at Station 2. Average trip length was 5 minutes greater at 1 hour 56 minutes with the longest trip being 15 hours and 10 minutes. Table 17 shows the distribution of trips by increments of time.

An analysis of Figure 13 will reveal that the origin and destination ends of all trips at this station were concentrated in and around Iosco County. Nearly 67% of all trip ends are accounted for by counties adjacent to and including Iosco County. Iosco County itself accounts for about 56%. Wayne, Genesee, Saginaw, Bay and Alpena Counties combined, also significantly contributed to travel at this location. More than 23% of all trip ends either originated at or were destined to these areas.

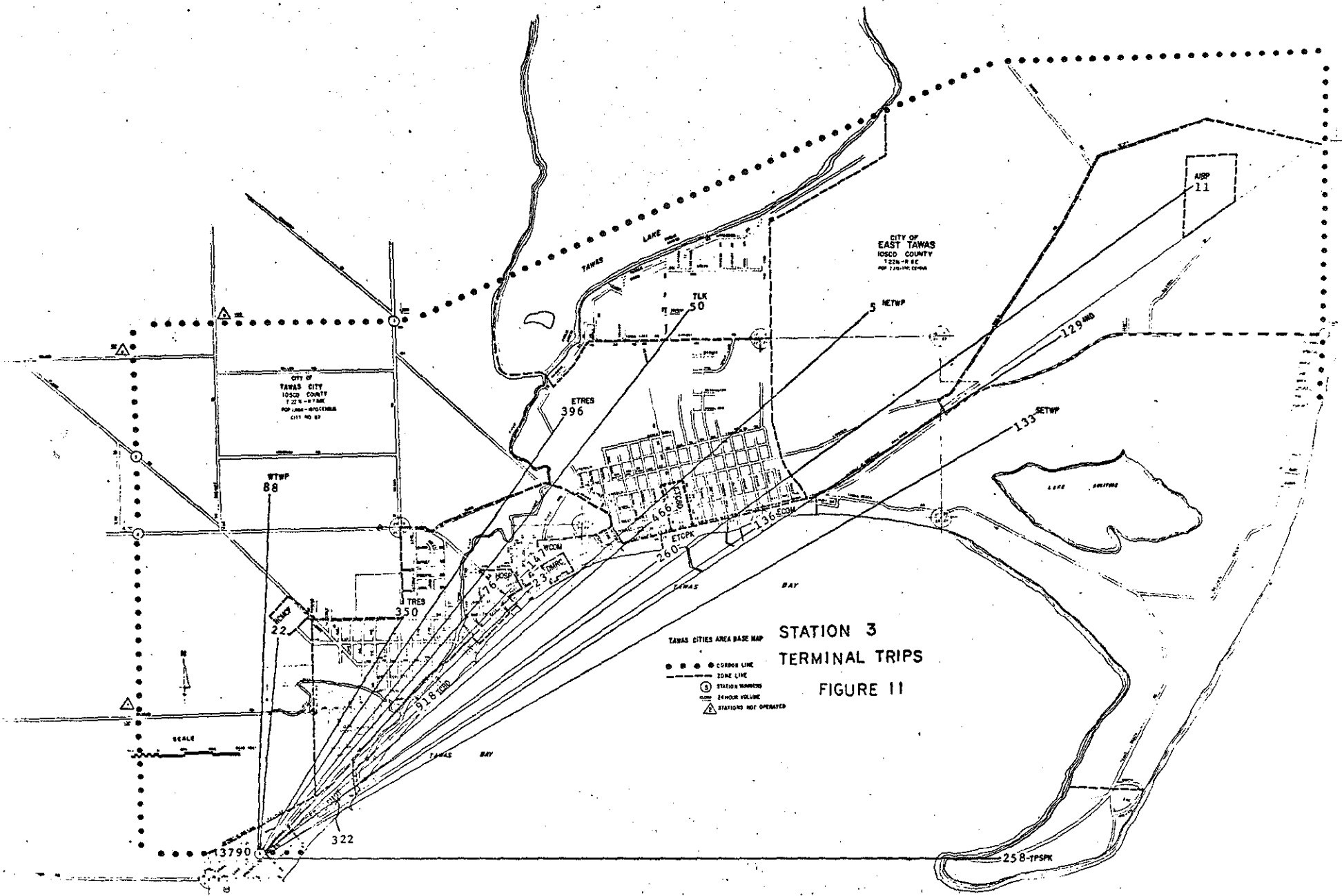


Table 14

## STATION 3 TERMINAL TRIPS

Zone No.	Origins	Destinations	Total	Percent of Total
6	47	41	88	2.32
7	7	15	22	.58
8	169	153	322	8.50
9	456	462	918	24.22
10	155	195	350	9.24
11	27	49	76	2.01
12	61	86	147	3.87
13	13	10	23	.61
14	125	135	260	6.86
15	218	248	466	12.30
16	176	220	396	10.45
17	23	27	50	1.32
18	1	4	5	.13
19	59	77	136	3.58
20	7	4	11	.29
21	65	64	129	3.40
22	52	81	133	3.51
23	114	144	258	6.81
	<hr/>	<hr/>	<hr/>	<hr/>
	1775	2015	3790	100.0

36



STATION 3  
 TERMINAL TRIPS  
 FIGURE 11

TAWAKONI CITIES AREA BASE MAP  
 ●●●●● CORRIDOR LINE  
 - - - - - ZONE LINE  
 ○ STATION MARKERS  
 —▲— 24 HOUR VOLUME  
 ▲ STATIONS NOT OPERATED

SCALE  
 0 100 200 FEET

CITY OF  
 TAWAKONI  
 TARRANT COUNTY  
 122 N. W. 1/4  
 POP. 1,200  
 CITY NO. 87

CITY OF  
 EAST TAWAKONI  
 TARRANT COUNTY  
 122 N. W. 1/4  
 POP. 1,200  
 CITY NO. 88

AIRP  
 11

TAWAKONI LAKE

LAKE AMISTAD

TAWAKONI BAY

TAWAKONI BAY

133-SETWP

129-IND

ETRES  
 396

TLK  
 50

ETOPK  
 260

136-SCM

ETRES  
 350

ETWP  
 88

22

322

3790

258-TPSPK

TABLE 15

STATION 3

US-23  
N. OF TOWNLINER ROAD

THROUGH TRIPS TO ALL OTHER STATIONS

Station	Vehicles	Percent of Total
1	101	3.63
2	2551	91.77
4	111	3.99
5	17	.61
Total	2780	100.0

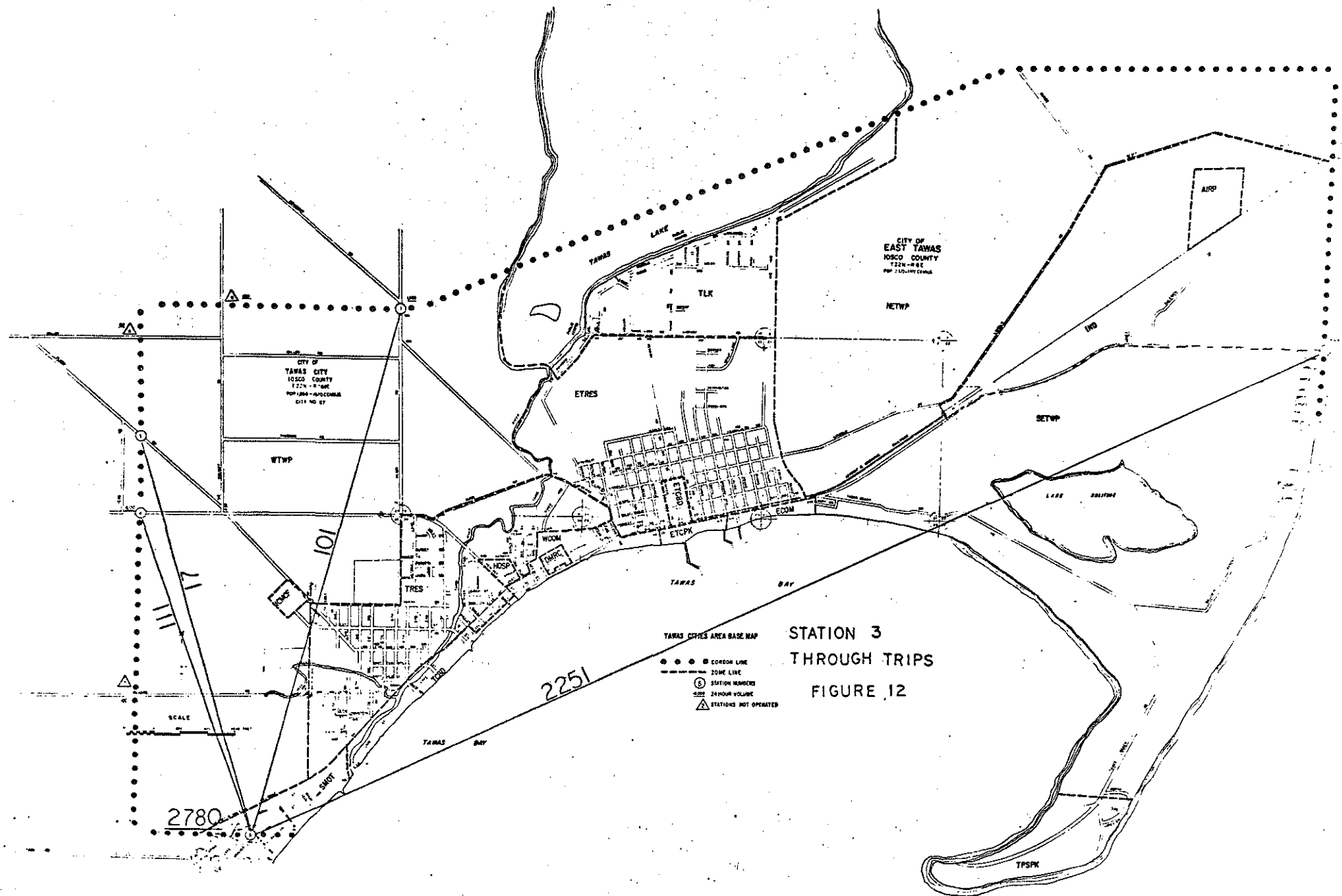


TABLE 16  
STATION 3  
US-23  
N. OF TOWNLINE ROAD

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	5150	78.53	3011	58.47	2139	41.5
Passenger Car with Trailer	205	3.13	97	47.32	108	52.0
Panel or Pickup	560	8.54	382	68.21	178	31.7
Panel or Pickup with Trailer	55	0.84	21	38.18	34	61.8
Other Single Unit Trucks	377	5.75	227	60.21	150	39.7
Combinations and Trucks with Trailers	210	3.21	39	18.57	171	81.4
<b>Total</b>	<b>6557</b>	<b>100.0</b>	<b>3777</b>	<b>57.60</b>	<b>2780</b>	<b>42.4</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	1759	26.83	990	56.28	769	43.7
Personal Business	436	6.65	292	66.97	144	33.0
Shopping	1131	17.25	996	88.06	135	11.9
Vacation	1197	18.25	356	29.74	841	70.2
Other Soc.-Rec.	1658	25.29	918	55.37	740	44.6
All Other	376	5.73	225	59.84	151	40.1
<b>Total</b>	<b>6557</b>	<b>100.0</b>	<b>3777</b>	<b>57.60</b>	<b>2780</b>	<b>42.4</b>

TABLE 17

STATION 3 ,

US-23 N. OF TOWNLINE ROAD

TRIP LENGTHS

<u>Minutes</u>	<u>Trips</u>	<u>Percent of Total</u>
1 - 20	1726	26.30
20 - 40	1025	15.62
40 - 60	171	2.60
60 - 90	491	7.48
90 - 120	661	10.07
120 - 180	845	12.87
180 - 240	867	13.21
240 - 300	474	7.22
300 - 360	162	2.46
360 - 910	<u>139</u>	<u>2.17</u>
	*6561	100.0

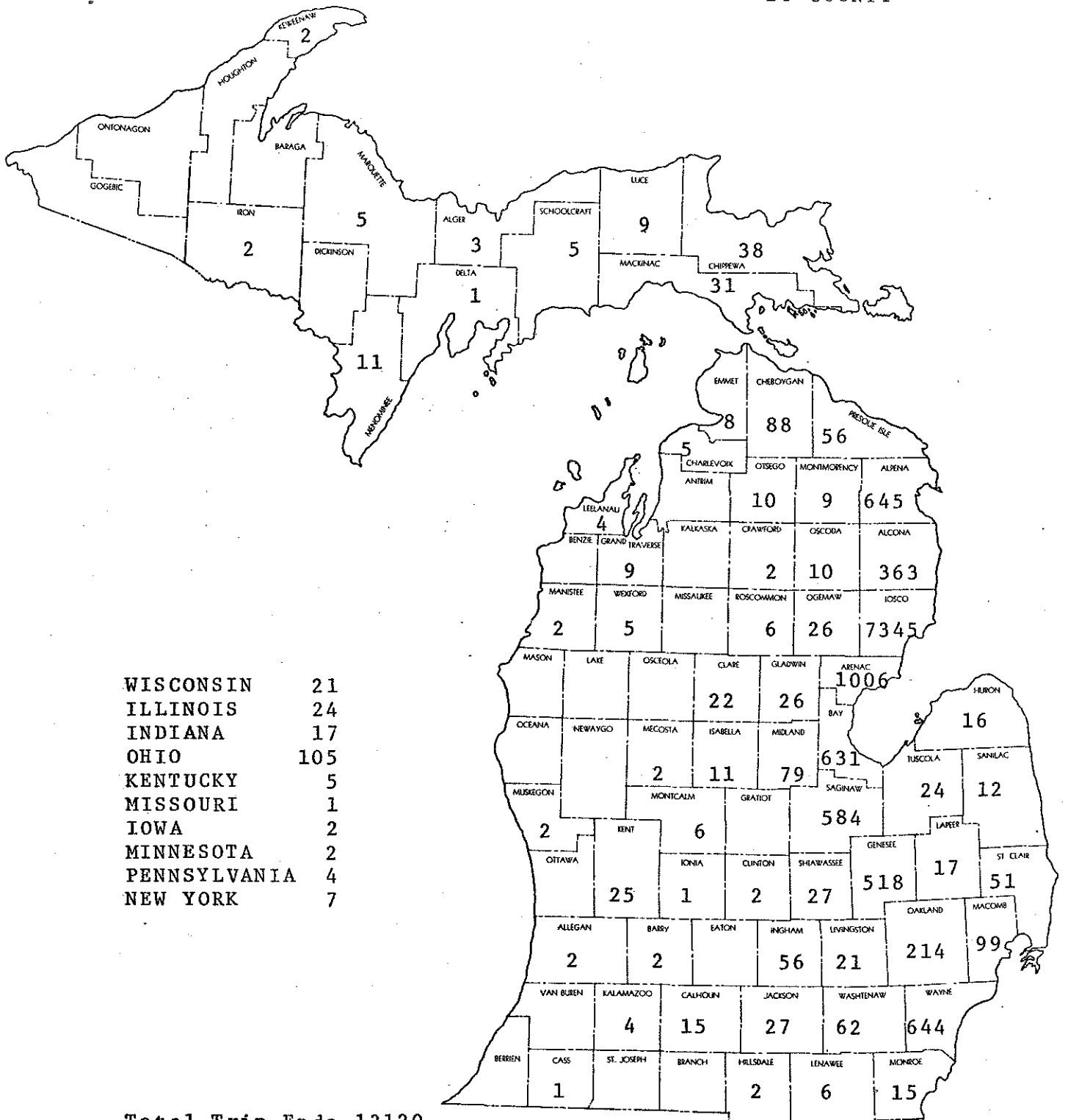
Longest Trip = 15 Hours 10 Minutes

Average Trip Length = 1 Hour 56 Minutes

\*Total trips may deviate from other total trips reported for this station due to the nature of the program used to compute trip lengths.

Note: Appearing in Appendix A is a trip length frequency distribution graph which may prove useful in determining the number of trips for each 10 minute increment of time.

TAWAS CITIES  
 EXTERNAL ORIGIN DESTINATION SURVEY  
 STATION 3  
 US-23 N. OF TOWNLINE ROAD  
 DISTRIBUTION OF TRIP ENDS  
 BY COUNTY



Total Trip Ends 13120

Total Trips 6560

FIGURE 13

#### STATION 4

Station 4 was located on M-55 near Dean Road. This trunk-line facility, although displaying lower volumes than previously discussed US-23 stations, nevertheless, serves an important role in providing east-west service to the Tawas. About 15% of total area traffic passed through this station with 75.2% being terminal and 24.8% being through.

Table 18 lists terminal trips by internal analysis zones with Figure 14 graphically displaying the interchange of these trips between the station and zones. As in previous station analysis, it was found that three zones account for nearly 47% of these trips. Zone 9 (Tawas City CBD) accounted for 18.77% with zone 15 (East Tawas CBD) and zone 16 (East Tawas Residential Area) accounting for 17.19% and 10.72% respectively.

Through trips as a proportion of total trips, were less significant than was determined for US-23 stations. Only 24.8% (691) were through trips with the primary interchange being with station 2 (69.31%) north of East Tawas. A list of these trips is provided as Table 19 with Figure 15 graphically showing these interchanges.

Of the 2785 trips 34.6% were for the purpose of work with other social-recreation constituting 24.32%. Over 93% of these trips were made by passenger car or pickup truck with the former contributing 79.57% and the latter 13.47%. Trips by vehicle type and purpose are presented in detail in Table 20.

Average trip length at this M-55 station was shorter than any at the US-23 stations. It was determined that the average trip



length was 1 hour and 5 minutes with the longest trip being 13 hours and 10 minutes. Table 21 presents a breakdown of trips by increments of time.

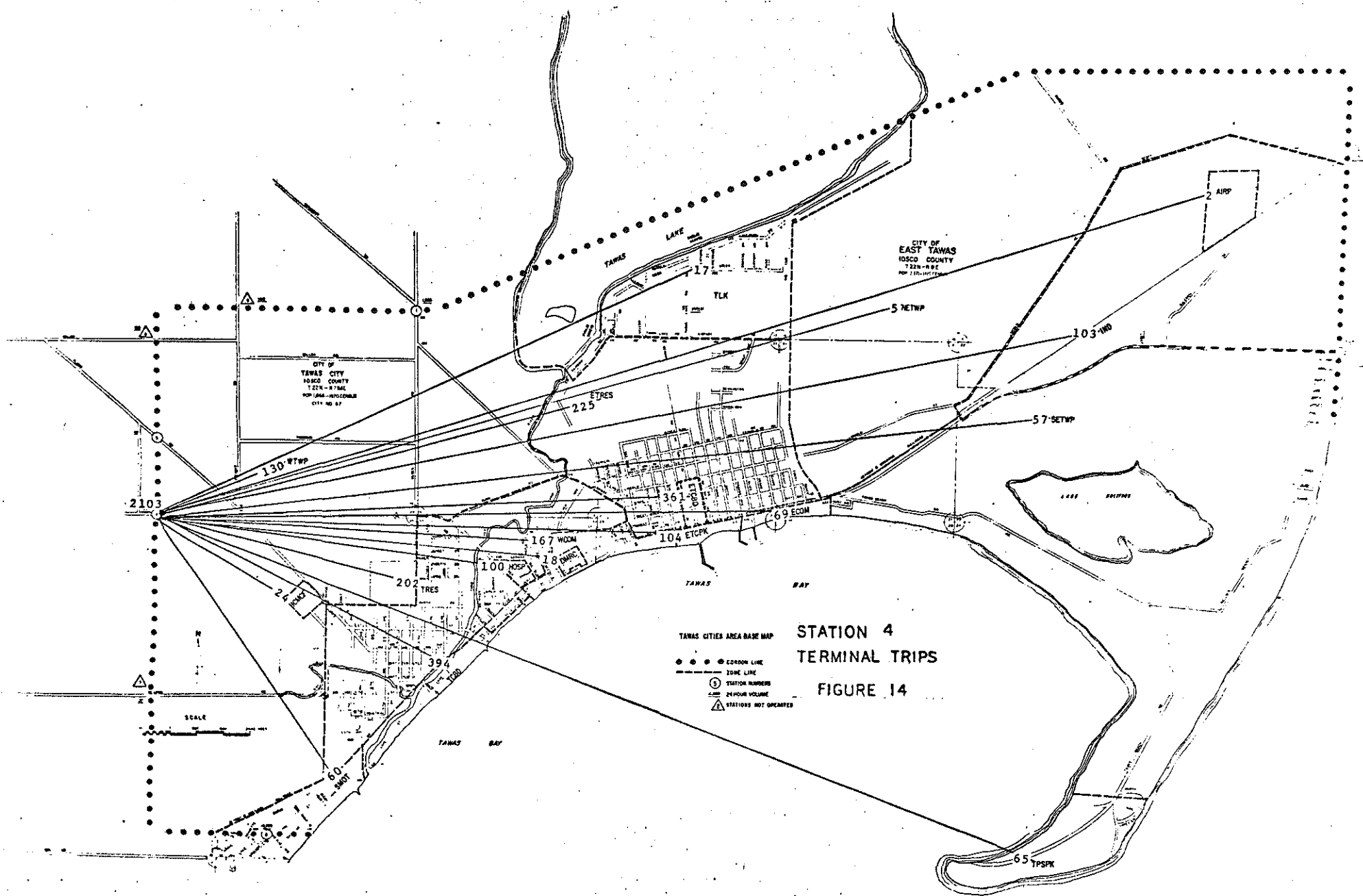
The distribution of trip ends by county is presented in Figure 16. An analysis of this map will reveal that nearly 79% of all trip ends occur within Iosco County with an additional 10.4% accounted for by the adjacent counties.

Table 18

## STATION 4 TERMINAL TRIPS

Zone No.	Origins	Destinations	Total	Percent of Total
6	54	76	130	6.20
7	9	15	24	1.16
8	30	30	60	2.87
9	191	203	394	18.77
10	95	107	202	9.63
11	50	50	100	4.78
12	68	99	167	7.96
13	7	11	18	.88
14	50	54	104	4.97
15	184	177	361	17.19
16	124	101	225	10.72
17	4	13	17	.83
18	3	2	5	.26
19	30	39	69	3.30
20	1	1	2	.12
21	55	48	103	4.52
22	25	32	57	2.73
23	28	37	65	3.11
	<u>1008</u>	<u>1095</u>	<u>2103</u>	<u>100.0</u>

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STATION 4  
 TERMINAL TRIPS  
 FIGURE 14

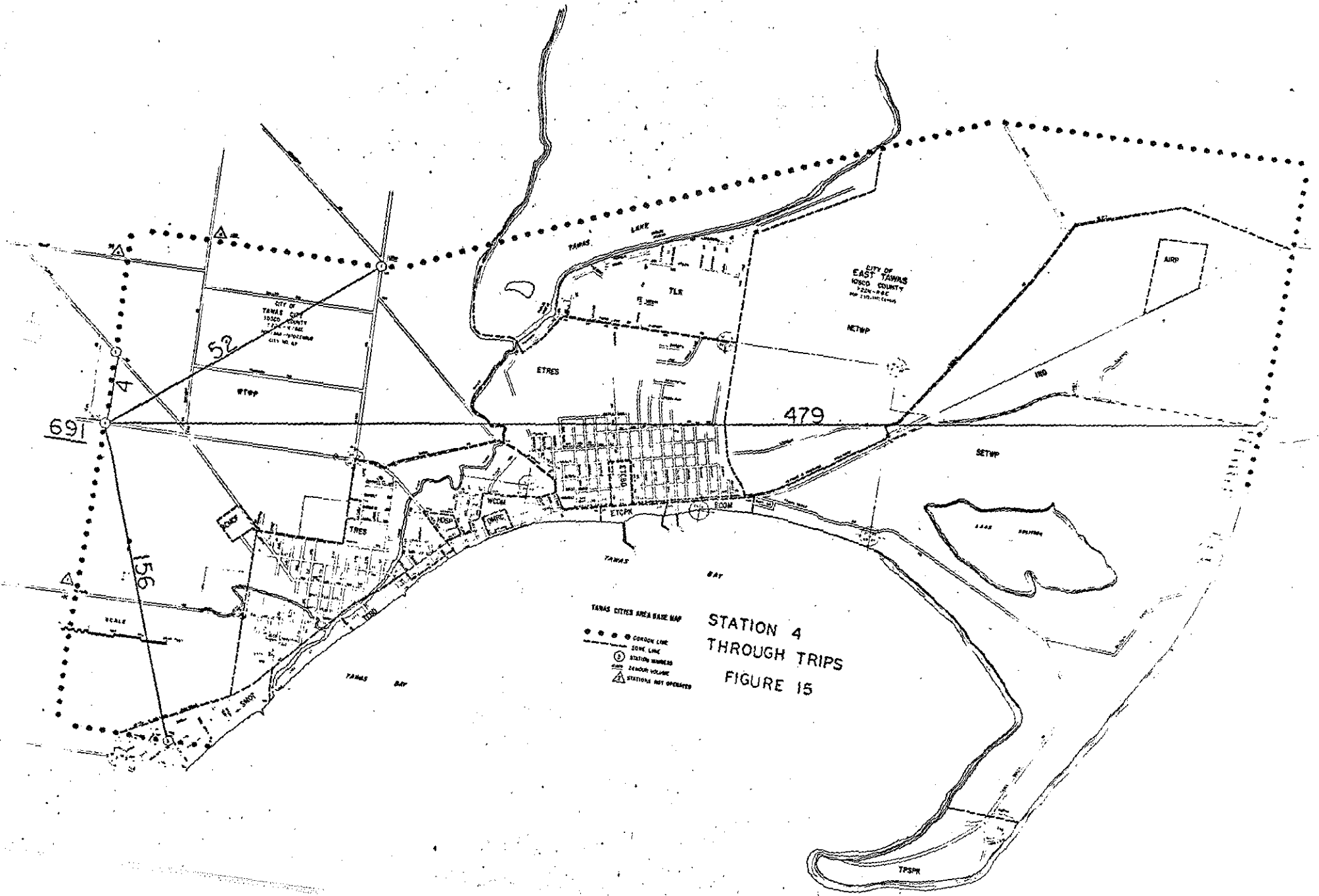
TABLE 19

STATION 4

M-55  
E. OF DEAN ROAD

THROUGH TRIPS TO ALL OTHER STATIONS

Station	Vehicles	Percent of Total
1	52	7.53
2	479	69.31
3	156	22.58
5	4	.58
Total	691	100.0



STATION 4  
THROUGH TRIPS  
FIGURE 15

TABLE 20

STATION 4 ,

M-55  
E. OF DEAN ROAD

## 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	2216	79.57	1666	75.18	550	24.8
Passenger Car with Trailer	52	1.86	32	61.54	20	38.4
Panel or Pickup	375	13.47	288	76.80	87	23.2
Panel or Pickup with Trailer	15	.55	11	73.33	4	26.6
Other Single Unit Trucks	95	3.41	75	78.95	20	21.0
Combinations and Trucks with Trailers	32	1.14	22	68.75	10	31.2
Total	2785	100.0	2094	75.19	691	24.8

<u>Trip Purpose</u>	<u>Vehicles</u>	<u>Percent of Total</u>	<u>Terminal Trips</u>	<u>%</u>	<u>Through</u>	<u>%</u>
Work	964	34.60	759	78.73	205	21.2
Personal Business	312	11.19	236	75.64	76	24.3
Shopping	398	14.30	354	88.95	44	11.0
Vacation	240	8.64	135	56.25	105	43.7
Other Soc.-Rec.	677	24.32	459	67.80	218	32.2
All Other	194	6.95	151	77.84	43	21.1
Total	2785	100.0	2094	75.19	691	24.8

TABLE 21  
 STATION 4  
 M-55  
 E. OF DEAN ROAD

TRIP LENGTHS

<u>Minutes</u>	<u>Trips</u>	<u>Percent of Total</u>
1 - 20	599	21.45
20 - 40	1153	41.29
40 - 60	291	10.42
60 - 90	230	8.22
90 - 120	173	6.19
120 - 180	163	5.83
180 - 240	94	2.25
240 - 790	89	4.35
Total	*2792	100.0

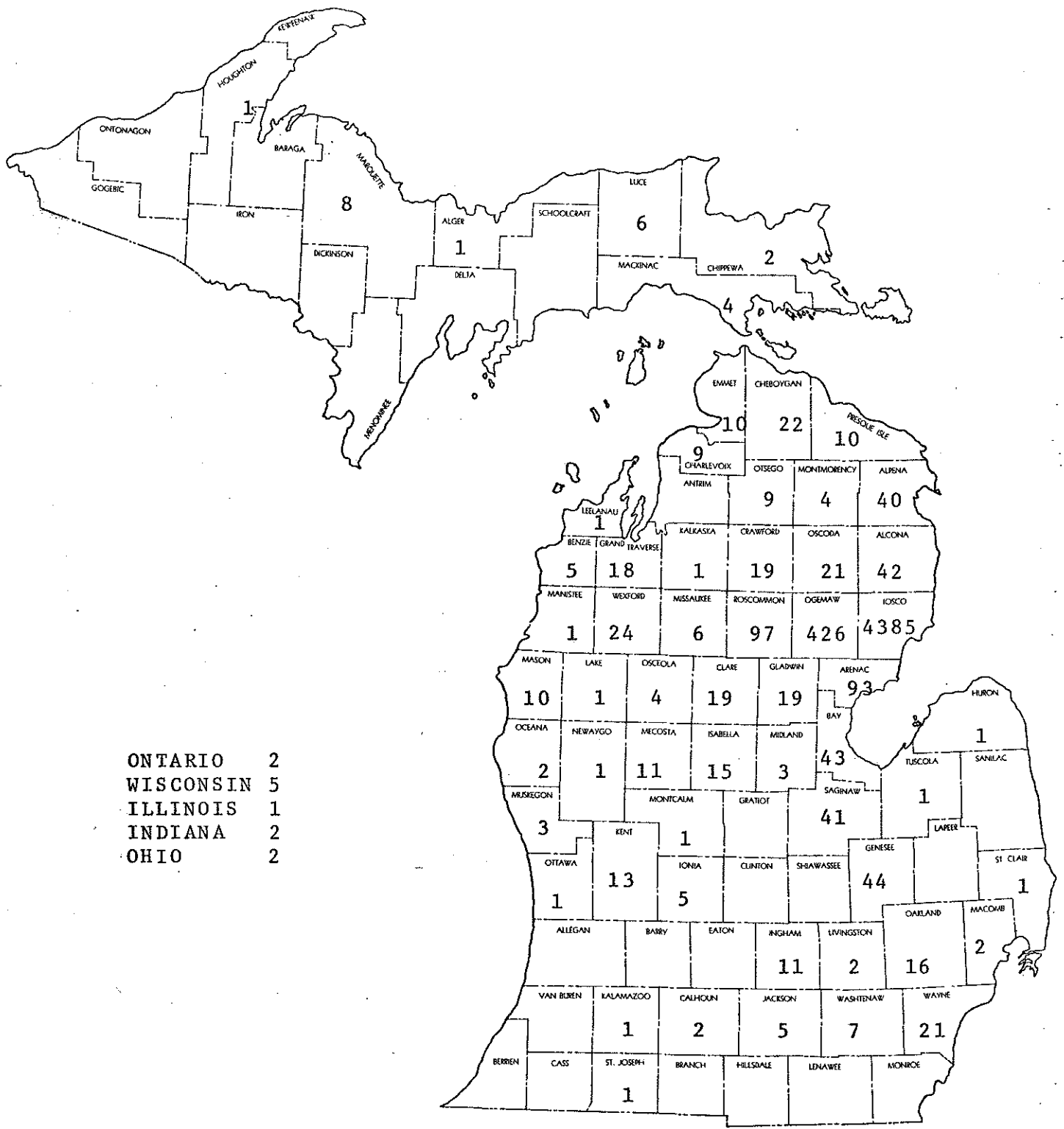
Longest Trip = 13 hours 10 minutes

Average Trip Length = 1 hour 5 minutes

\*Total trips may deviate from other total trips reported for this station due to the nature of the program used to compute trip lengths.

Note: Appearing in Appendix A is a trip length frequency distribution graph which may prove useful in determining the number of trips for each 10 minute increment of time.

TAWAS CITIES  
 EXTERNAL ORIGIN DESTINATION SURVEY  
 STATION 4  
 M-55 E. OF DEAN ROAD  
 DISTRIBUTION OF TRIP ENDS  
 BY COUNTY



Total Trip Ends 5584

Total Trips 2792

FIGURE 16



## STATION 5

Station 5 was located on Plank Road S.E. of Dean Road. This low volume county road constituted only about 5% of total area traffic. Of the total of 984 more than 86% was terminal traffic.

Terminal trips by internal analysis zone are listed in Table 22 with Figure 17 graphically displaying these interchanges. The Central Business Districts of both cities exerted the greatest influence on these trips with Zone 9 (Tawas City CBD) accounting for 30.62% and Zone 15 (East Tawas CBD) 20.02%.

Through trips, although minimal at this location (134), had the greatest interchange with Station 3 (58.95%). Station 2 accounted for an additional 27.61%. Table 23 lists through trips at this station with Figure 18 displaying this information graphically.

Other social recreation was the largest trip purpose at 26.7% followed by shopping at 24.39% and work at 24.12%. Virtually all trips were made by passenger car or pickup truck with the former being 86.59% and the latter 11.92%. Table 24 lists all trips for this station by vehicle type and trip purpose.

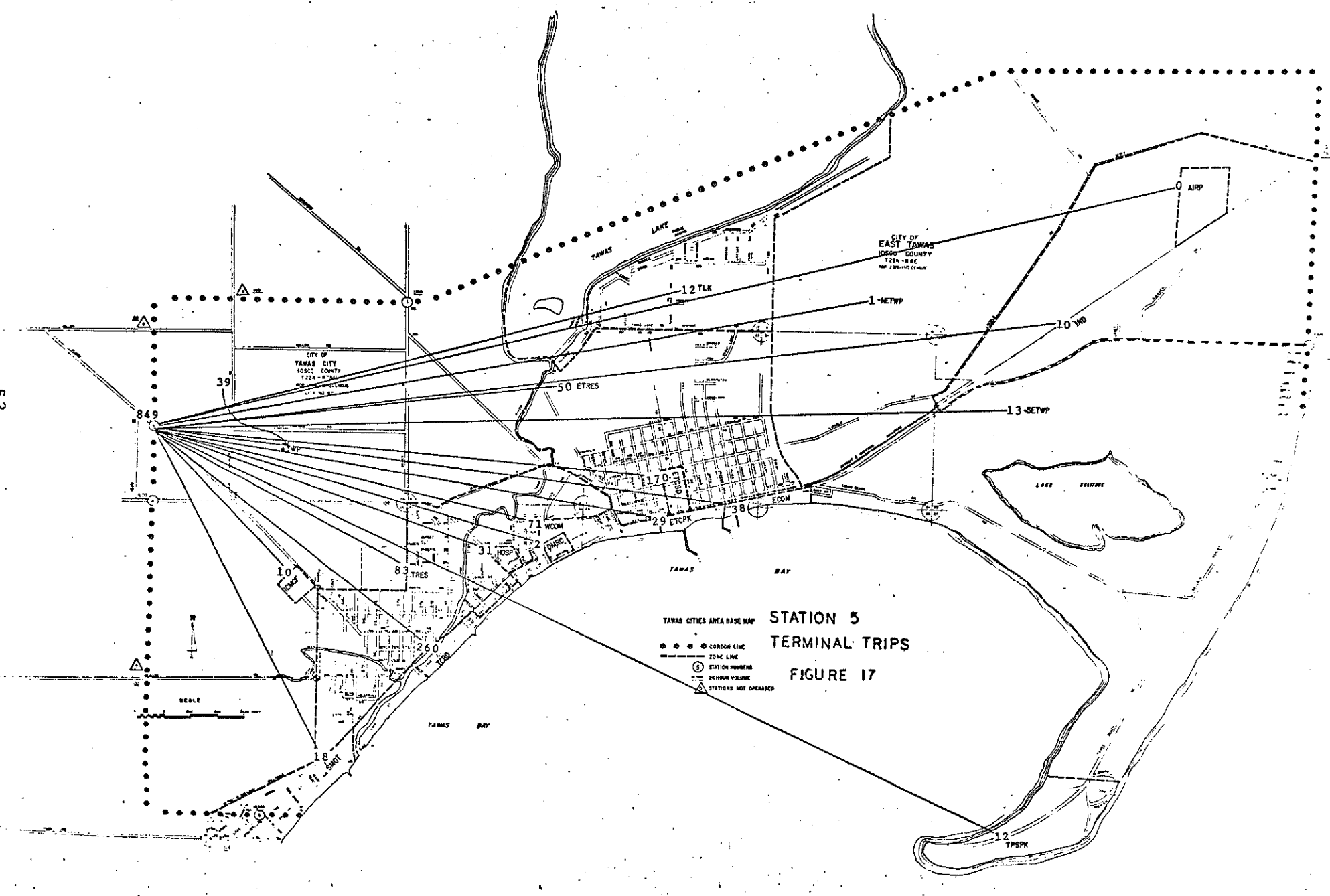
Due to the nature of trips at this station it is not surprising to note that the average trip length was 36 minutes with the longest trip being 4 1/2 hours. Shown in Table 25 are trips categorized by increments of time.

Of all stations operated during this survey, Plank Road was the most local in nature. Figure 19, showing the distribution of trip ends by county, indicates that over 97% of all trip ends occur within Iosco County.

Table 22

## STATION 5 TERMINAL TRIPS

Zone No.	Origins	Destinations	Total	Percent of Total
6	21	18	39	4.59
7	3	7	10	1.18
8	7	11	18	2.12
9	122	138	260	30.62
10	32	51	83	9.78
11	14	17	31	3.65
12	34	37	71	8.36
13	1	1	2	.24
14	7	22	29	3.42
15	98	72	170	20.02
16	25	25	50	5.89
17	4	8	12	1.41
18	0	1	1	.12
19	19	19	38	4.48
20	0	0	0	0
21	6	4	10	1.18
22	5	8	13	1.53
23	11	1	12	1.41
	<hr/> 409	<hr/> 440	<hr/> 849	<hr/> 100.0



STATION 5  
 TERMINAL TRIPS  
 FIGURE 17

TAMAS CITIES AREA BASE MAP  
 ●●●● CORDON LINE  
 - - - - ZONE LINE  
 ○ STATION NUMBER  
 — 24 HOUR VOLUME  
 △ STATIONS NOT OPERATED

SCALE

CITY OF  
 TAMAS CITY  
 TAZEN COUNTY  
 122N - 87W  
 100-100-100-100  
 CITY NO. 87

CITY OF  
 EAST TAMAS  
 TAZEN COUNTY  
 122N - 87W  
 100-100-100-100

TAMAS LAKE

LAKE SALITREE

TAMAS BAY

TAMAS BAY

TPSPK

AIRP

50 ETRES

12 TLK

1-NETWP

10 WBD

13-SETWP

71 WCOM

29 ETCPK

38 ECOM

83 TRES

260

31 WOSP

39

849

10 WBD

8 WBD

11 WBD

12 TPSPK

TABLE 23

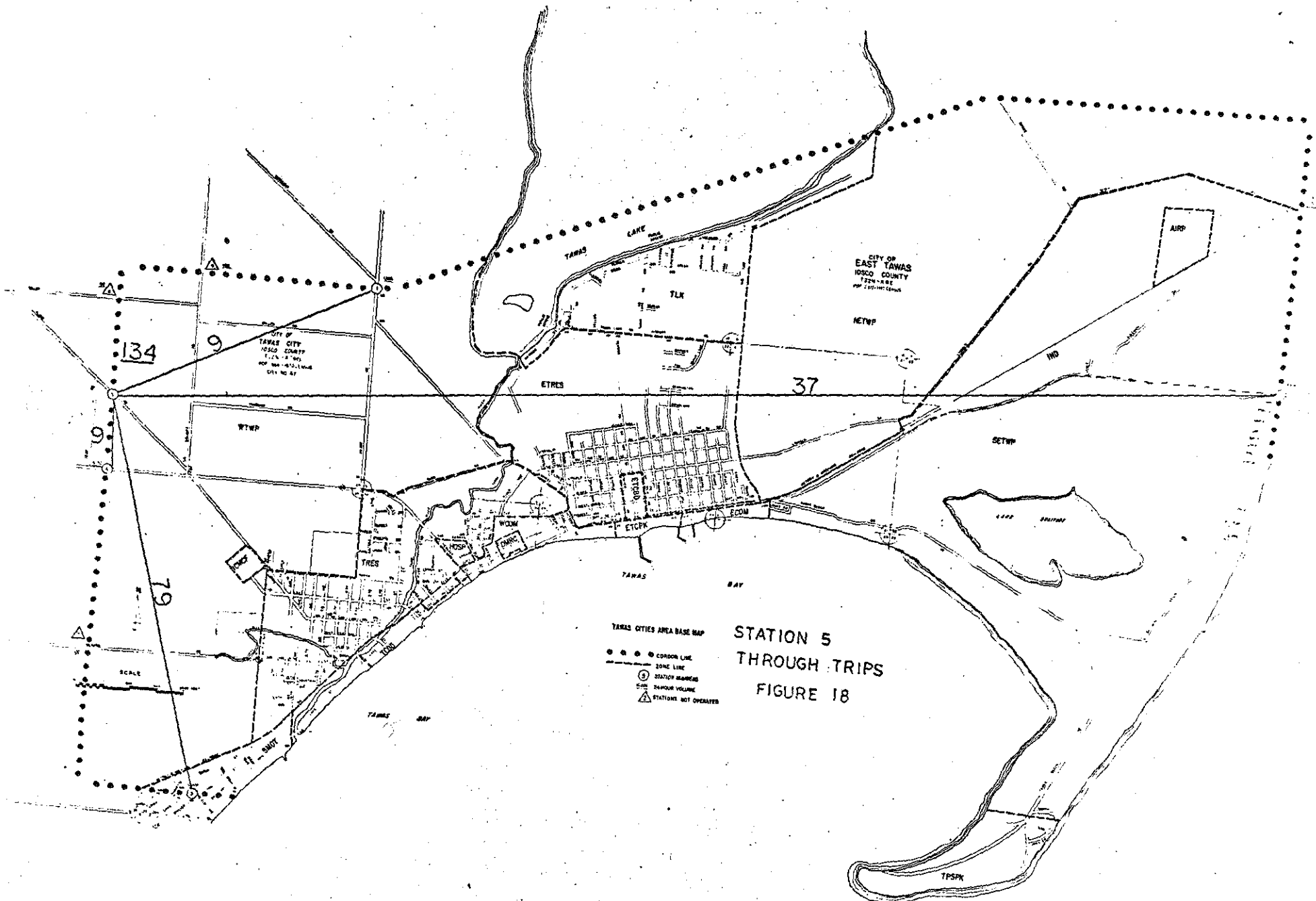
STATION 5

PLANK ROAD  
S.E. OF DEAN ROAD

THROUGH TRIPS TO ALL OTHER STATIONS

Station	Vehicles	Percent of Total
1	9	6.72
2	37	27.61
3	79	58.95
4	9	6.72
Total	134	100.0

55



TAWIAS CITIES AREA BASE MAP

- ● ● CORRIDOR LINE
- - - ZONE LINE
- ⊙ STATION ADDRESS
- ⊕ STATION VOLUME
- △ STATIONS NOT OPERATED

STATION 5  
THROUGH TRIPS  
FIGURE 18

TABLE 24  
STATION 5  
PLANK ROAD  
S.E. OF DEAN ROAD

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	852	86.59	738	86.62	114	13.38
Passenger Car with Trailer	9	.93	7	77.78	2	22.22
Panel or Pickup	117	11.92	101	86.33	16	13.67
Panel or Pickup with Trailer	4	.36	4	100.0	0	0
Other Single Unit Trucks	0	0	0	0	0	0
Combinations and Trucks with Trailers	2	.20	0	0	2	100.0
<b>Total</b>	<b>984</b>	<b>100.0</b>	<b>850</b>	<b>86.38</b>	<b>134</b>	<b>13.62</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	237	24.12	207	87.34	30	12.66
Personal Business	106	10.80	103	97.17	3	2.83
Shopping	240	24.39	232	96.67	8	3.33
Vacation	72	7.33	51	70.83	21	29.17
Other Soc.-Rec.	263	26.70	195	74.14	68	25.86
All Other	66	6.66	62	93.94	4	6.06
<b>Total</b>	<b>984</b>	<b>100.0</b>	<b>850</b>	<b>86.38</b>	<b>134</b>	<b>13.62</b>

TABLE 25

STATION 5

PLANK ROAD  
S.E. OF DEAN ROAD

TRIP LENGTHS

<u>Minutes</u>	<u>Trips</u>	<u>Percent of Total</u>
1 - 20	289	29.61
20 - 40	646	66.18
40 - 60	3	.30
60 - 90	18	1.84
90 - 270	20	2.07
Total	*976	100.0

Longest Trip = 4 hours 30 minutes

Average Trip Length = 36 minutes

\* Total trips may deviate from other total trips reported for this station due to the nature of the program used to compute trip lengths.

Note: Appearing in Appendix A is a trip length frequency distribution graph which may prove useful in determining the number of trips for each 10 minute increment of time.





APPENDIX A

USE OF TABLES AND CHARTS

## USE OF GENERAL PURPOSE SUMMARY TABLES

The table on page        shows 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 a table for each station for each interview date.

VEHICLE TYPE

RANGES	1	2	3	4	5	6	7	8	TOTAL TOT %
1	5101.75	10.58	951.34	7.95	254.01	227.64	0.00	2.01	6645.58
1	78.12	0.16	14.32	0.12	3.82	3.43	0.00	0.03	53.72
	48.82	38.87	80.12	80.47	92.04	97.06	0.00	100.00	
	41.96	0.09	7.69	0.06	2.05	1.84	0.00	0.02	
2	834.71	2.84	59.93	1.93	3.45	0.00	0.00	0.00	902.86
2	92.45	0.31	6.64	0.21	0.38	0.00	0.00	0.00	7.30
	7.85	10.43	5.05	19.53	1.25	0.00	0.00	0.00	
	6.75	0.02	0.48	0.02	0.03	0.00	0.00	0.00	
TRIPS	1968.70	10.03	85.91	0.00	12.87	0.00	0.00	0.00	2077.51
TRIPS	94.76	0.48	4.14	0.00	0.62	0.00	0.00	0.00	16.79
TRIPS	18.51	36.85	7.23	0.00	4.66	0.00	0.00	0.00	
TRIPS	15.91	0.08	0.69	0.00	0.10	0.00	0.00	0.00	
TRIPS	6.25	0.00	2.01	0.00	0.00	0.00	0.00	0.00	8.26
TRIPS	75.67	0.00	24.33	0.00	0.00	0.00	0.00	0.00	0.07
TRIPS	0.06	0.00	0.17	0.00	0.00	0.00	0.00	0.00	
TRIPS	0.05	0.00	0.02	0.00	0.00	0.00	0.00	0.00	
5	836.02	1.25	42.32	0.00	3.15	0.00	0.00	0.00	882.74
5	94.71	0.14	4.79	0.00	0.36	0.00	0.00	0.00	7.14
5	7.86	4.59	3.56	0.00	1.14	0.00	0.00	0.00	
5	6.76	0.01	0.34	0.00	0.03	0.00	0.00	0.00	
6	1797.01	2.52	45.92	0.00	2.51	6.91	0.00	0.00	1854.87
6	96.88	0.14	2.48	0.00	0.14	0.37	0.00	0.00	14.99
6	16.90	9.26	3.87	0.00	0.91	2.94	0.00	0.00	
6	14.53	0.02	0.37	0.00	0.02	0.06	0.00	0.00	

ROW TOTALS 2077.51  
16.79

TOTAL TOT %	<span style="border: 1px solid black; padding: 2px;">10634.44 85.96</span>	27.22 0.22	1187.43 9.60	9.88 0.08	275.99 2.23	234.85 1.90	0.00 0.00	2.01 0.02	<span style="border: 1px solid black; padding: 2px;">12371.82</span>
	COLUMN TOTALS								TOTAL TRIPS

TRIPS  
COLUMN TOTALS

ROW TOTALS  
TOTAL %

EXIT-ENT STATION = 01 TO 05

VEHICLE TYPE

RANGES	1	2	3	4	5	6	7	8	TOTAL TOT %
↑ 1	47.42	1.35	33.47	1.46	4.00	3.00	0.00	0.00	90.70
	52.28	1.49	36.90	1.61	4.41	3.31	0.00	0.00	28.11
	19.50	15.19	60.89	56.15	40.00	100.00	0.00	0.00	
R	14.70	0.42	10.37	0.45	1.24	0.93	0.00	0.00	
I 2	11.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.65
	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.61
	4.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
P	3.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
P 3	15.52	0.00	3.75	0.00	0.00	0.00	0.00	0.00	19.27
	80.54	0.00	19.46	0.00	0.00	0.00	0.00	0.00	5.97
	6.38	0.00	6.82	0.00	0.00	0.00	0.00	0.00	
U	4.81	0.00	1.16	0.00	0.00	0.00	0.00	0.00	
R 4	35.73	4.08	2.52	1.14	6.00	0.00	0.00	0.00	49.47
	72.23	8.25	5.09	2.30	12.13	0.00	0.00	0.00	15.33
	14.69	45.89	4.58	43.85	60.00	0.00	0.00	0.00	
P	11.07	1.26	0.78	0.35	1.86	0.00	0.00	0.00	
O 5	118.75	2.29	11.23	0.00	0.00	0.00	0.00	0.00	132.27
	89.78	1.73	8.49	0.00	0.00	0.00	0.00	0.00	40.99
	48.83	25.76	20.43	0.00	0.00	0.00	0.00	0.00	
E	36.80	0.71	3.48	0.00	0.00	0.00	0.00	0.00	
6	14.12	1.17	4.00	0.00	0.00	0.00	0.00	0.00	19.29
	73.20	6.07	20.74	0.00	0.00	0.00	0.00	0.00	5.98
	5.81	13.16	7.28	0.00	0.00	0.00	0.00	0.00	
	4.38	0.36	1.24	0.00	0.00	0.00	0.00	0.00	
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TOTAL	243.19	8.89	54.97	2.60	10.00	3.00	0.00	0.00	322.65
TOT %	75.37	2.76	17.04	0.81	3.10	0.93	0.00	0.00	

Station 1 Through Trips

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	
T 1	292.63	0.00	159.25	8.58	19.00	6.00	0.00	0.00	485.46
T 1	60.28	0.00	32.80	1.77	3.91	1.24	0.00	0.00	24.75
R 1	18.20	0.00	52.94	68.04	82.61	100.00	0.00	0.00	
R 1	14.92	0.00	8.12	0.44	0.97	0.31	0.00	0.00	
I 2	133.99	1.14	26.60	0.00	2.00	0.00	0.00	0.00	163.73
P 2	81.84	0.70	16.25	0.00	1.22	0.00	0.00	0.00	8.35
P 2	8.33	9.91	8.84	0.00	8.70	0.00	0.00	0.00	
P 2	6.83	0.06	1.36	0.00	0.10	0.00	0.00	0.00	
P 3	365.82	2.41	44.79	2.54	0.00	0.00	0.00	0.00	415.56
P 3	88.03	0.58	10.78	0.61	0.00	0.00	0.00	0.00	21.18
U 3	22.75	20.96	14.89	20.14	0.00	0.00	0.00	0.00	
U 3	18.65	0.12	2.28	0.13	0.00	0.00	0.00	0.00	
R 4	65.96	0.00	0.00	0.00	2.00	0.00	0.00	0.00	67.96
P 4	97.06	0.00	0.00	0.00	2.94	0.00	0.00	0.00	3.46
P 4	4.10	0.00	0.00	0.00	8.70	0.00	0.00	0.00	
P 4	3.36	0.00	0.00	0.00	0.10	0.00	0.00	0.00	
S 5	622.26	7.95	57.67	0.00	0.00	0.00	0.00	0.00	687.88
S 5	90.46	1.16	8.38	0.00	0.00	0.00	0.00	0.00	35.06
E 5	38.70	69.13	19.17	0.00	0.00	0.00	0.00	0.00	
E 5	31.72	0.41	2.94	0.00	0.00	0.00	0.00	0.00	
6	127.23	0.00	12.48	1.49	0.00	0.00	0.00	0.00	141.20
6	90.11	0.00	8.84	1.06	0.00	0.00	0.00	0.00	7.20
6	7.91	0.00	4.15	11.82	0.00	0.00	0.00	0.00	
6	6.49	0.00	0.64	0.08	0.00	0.00	0.00	0.00	
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TOTAL	1607.89	11.50	300.79	12.61	23.00	6.00	0.00	0.00	1961.79
TOT X	81.96	0.59	15.33	0.64	1.17	0.31	0.00	0.00	

Station 1 Terminal Trips

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

STATION NUMBER

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	340.05	1.35	192.72	10.04	23.00	9.00	0.00	0.00	576.16
	1	59.02	0.23	33.45	1.74	3.99	1.56	0.00	0.00	
R		18.37	6.62	54.17	66.01	69.70	100.00	0.00	0.00	0.00
		14.89	0.06	8.44	0.44	1.01	0.39	0.00	0.00	
I	2	145.64	1.14	26.60	0.00	2.00	0.00	0.00	0.00	175.36
	2	83.04	0.65	15.17	0.00	1.14	0.00	0.00	0.00	
P		7.87	5.59	7.48	0.00	6.06	0.00	0.00	0.00	0.00
		6.38	0.05	1.16	0.00	0.09	0.00	0.00	0.00	
P	3	381.34	2.41	48.54	2.54	0.00	0.00	0.00	0.00	434.83
	3	87.70	0.55	11.16	0.58	0.00	0.00	0.00	0.00	
U		20.60	11.82	13.64	16.70	0.00	0.00	0.00	0.00	0.00
		16.69	0.11	2.12	0.11	0.00	0.00	0.00	0.00	
R	4	101.69	4.08	2.52	1.14	8.00	0.00	0.00	0.00	117.43
	4	86.60	3.47	2.15	0.97	6.81	0.00	0.00	0.00	
P		5.49	20.01	0.71	7.50	24.24	0.00	0.00	0.00	0.00
		4.45	0.18	0.11	0.05	0.35	0.00	0.00	0.00	
S	5	741.01	10.24	68.90	0.00	0.00	0.00	0.00	0.00	820.15
	5	90.35	1.25	8.40	0.00	0.00	0.00	0.00	0.00	
E		40.03	50.22	19.37	0.00	0.00	0.00	0.00	0.00	0.00
		32.44	0.45	3.02	0.00	0.00	0.00	0.00	0.00	
	6	141.35	1.17	16.48	1.49	0.00	0.00	0.00	0.00	160.49
	6	88.07	0.73	10.27	0.93	0.00	0.00	0.00	0.00	
		7.64	5.74	4.63	9.80	0.00	0.00	0.00	0.00	0.00
		6.19	0.05	0.72	0.07	0.00	0.00	0.00	0.00	
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TOTAL		1851.08	20.39	355.76	15.21	33.00	9.00	0.00	0.00	2264.44
TOT %		81.03	0.89	15.57	0.67	1.44	0.39	0.00	0.00	

Station 1 Total Trips



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	
T 1	412.29	4.94	127.04	4.05	90.65	150.38	0.00	0.00	789.35
T 1	52.23	0.63	16.09	0.51	11.48	19.05	0.00	0.00	28.52
R 1	19.72	4.37	52.33	8.81	74.74	27.75	0.00	0.00	
R 1	14.90	0.18	4.59	0.15	3.26	5.43	0.00	0.00	
I 2	130.55	12.73	12.60	1.33	1.99	0.00	0.00	0.00	159.20
I 2	82.00	8.00	7.91	0.84	1.25	0.00	0.00	0.00	5.75
P 2	6.24	11.26	5.19	2.89	1.64	0.00	0.00	0.00	
P 2	4.72	0.46	0.46	0.05	0.07	0.00	0.00	0.00	
P 3	91.91	1.25	9.47	0.00	3.73	0.00	0.00	0.00	106.36
P 3	86.41	1.18	8.90	0.00	3.51	0.00	0.00	0.00	3.84
U 3	4.40	1.11	3.90	0.00	3.08	0.00	0.00	0.00	
U 3	3.32	0.05	0.34	0.00	0.13	0.00	0.00	0.00	
R 4	659.82	76.06	51.71	34.79	18.78	1.99	0.00	0.00	843.15
R 4	78.26	9.02	6.13	4.13	2.23	0.24	0.00	0.00	30.47
P 4	31.56	67.29	21.30	75.70	15.48	1.29	0.00	0.00	
P 4	23.84	2.75	1.87	1.26	0.68	0.07	0.00	0.00	
O 5	671.54	18.05	29.90	4.00	3.55	0.00	0.00	0.00	727.04
O 5	92.37	2.48	4.11	0.55	0.49	0.00	0.00	0.00	26.27
S 5	32.12	15.97	12.32	8.70	2.93	0.00	0.00	0.00	
S 5	24.26	0.65	1.08	0.14	0.13	0.00	0.00	0.00	
E 6	124.57	0.00	12.07	1.79	2.58	1.47	0.00	0.00	142.48
E 6	87.43	0.00	8.47	1.26	1.81	1.03	0.00	0.00	5.15
E 6	5.96	0.00	4.97	3.89	2.13	0.96	0.00	0.00	
E 6	4.50	0.00	0.44	0.06	0.09	0.05	0.00	0.00	
<hr/>									
TOTAL	2090.68	113.03	242.79	45.96	121.28	153.84	0.00	0.00	2767.58
TOT %	75.54	4.08	8.77	1.66	4.38	5.56	0.00	0.00	

Station 2 Through Trips

STA NO. 2

EXITMENT STATION TO

VEHICLE TYPE

RANGES		1	2	3	4	5	6	7	8	TOTAL TOT X
		1	2	3	4	5	6	7	8	
T	1	774.85	5.34	260.77	10.87	120.31	37.22	0.00	0.00	1209.36
	1	64.07	0.44	21.56	0.90	9.95	3.08	0.00	0.00	
R		28.17	16.86	69.22	85.05	79.28	94.54	0.00	0.00	
		23.04	0.16	7.75	0.32	3.58	1.11	0.00	0.00	
I	2	274.38	6.36	19.76	0.00	0.00	0.00	0.00	0.00	302.50
	2	91.37	2.10	6.53	0.00	0.00	0.00	0.00	0.00	
P		10.05	20.08	5.25	0.00	0.00	0.00	0.00	0.00	
		8.22	0.19	0.59	0.00	0.00	0.00	0.00	0.00	
P	3	745.37	3.96	44.20	0.00	5.77	0.00	0.00	0.00	799.30
	3	93.25	0.50	5.53	0.00	0.72	0.00	0.00	0.00	
U		27.10	12.50	11.73	0.00	3.80	0.00	0.00	0.00	
		22.16	0.12	1.31	0.00	0.17	0.00	0.00	0.00	
R	4	159.83	7.95	11.30	1.91	7.39	0.00	0.00	0.00	188.36
	4	84.84	4.22	6.00	1.01	3.92	0.00	0.00	0.00	
P		5.81	25.09	3.00	14.95	4.87	0.00	0.00	0.00	
		4.75	0.24	0.34	0.06	0.22	0.00	0.00	0.00	
S	5	536.96	7.01	26.28	0.00	9.50	2.15	0.00	0.00	581.90
	5	92.28	1.20	4.52	0.00	1.63	0.37	0.00	0.00	
E		19.52	22.13	6.98	0.00	6.26	5.46	0.00	0.00	
		15.97	0.21	0.78	0.00	0.28	0.06	0.00	0.00	
	6	257.32	1.06	14.42	0.00	8.82	0.00	0.00	0.00	281.62
	6	91.37	0.38	5.12	0.00	3.13	0.00	0.00	0.00	
		9.35	3.35	3.83	0.00	5.81	0.00	0.00	0.00	
		7.65	0.03	0.43	0.00	0.26	0.00	0.00	0.00	
TOTAL		2750.71	31.68	376.73	12.78	151.79	39.37	0.00	0.00	3363.06
TOT X		81.79	0.94	11.20	0.38	4.51	1.17	0.00	0.00	

Station 2 Terminal Trips

STATION NUMBER = 2

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	1187.14	10.28	387.81	14.92	210.96	187.60	0.00	0.00	1998.71
	59.40	0.51	19.40	0.75	10.55	9.39	0.00	0.00	32.60
R	24.52	7.10	62.60	25.40	77.25	97.10	0.00	0.00	
	19.36	0.17	6.33	0.24	3.44	3.06	0.00	0.00	
I	406.93	19.09	32.36	1.33	1.99	0.00	0.00	0.00	461.70
	88.14	4.13	7.01	0.29	0.43	0.00	0.00	0.00	7.53
P	8.41	13.19	5.22	2.26	0.73	0.00	0.00	0.00	
	6.64	0.31	0.53	0.02	0.03	0.00	0.00	0.00	
P	837.28	5.21	53.67	0.00	9.50	0.00	0.00	0.00	905.66
	92.45	0.58	5.93	0.00	1.05	0.00	0.00	0.00	14.77
U	17.29	3.60	8.66	0.00	3.48	0.00	0.00	0.00	
	13.66	0.08	0.88	0.00	0.15	0.00	0.00	0.00	
R	819.65	84.01	63.01	36.70	26.17	1.99	0.00	0.00	1031.53
	79.46	8.14	6.11	3.56	2.54	0.19	0.00	0.00	16.83
P	16.93	58.05	10.17	62.48	9.58	1.03	0.00	0.00	
	13.37	1.37	1.03	0.60	0.43	0.03	0.00	0.00	
O	1208.50	25.06	56.18	4.00	13.05	2.15	0.00	0.00	1308.94
	92.33	1.91	4.29	0.31	1.00	0.16	0.00	0.00	21.35
S	24.96	17.32	9.07	6.81	4.78	1.11	0.00	0.00	
	19.71	0.41	0.92	0.07	0.21	0.04	0.00	0.00	
E	381.89	1.06	26.49	1.79	11.40	1.47	0.00	0.00	424.10
	90.05	0.25	6.25	0.42	2.69	0.35	0.00	0.00	6.92
	7.89	0.73	4.28	3.05	4.17	0.76	0.00	0.00	
	6.23	0.02	0.43	0.03	0.19	0.02	0.00	0.00	
<hr/>									
TOTAL	4841.39	144.71	619.52	58.74	273.07	193.21	0.00	0.00	6130.64
TOT %	78.97	2.36	10.11	0.96	4.45	3.15	0.00	0.00	

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		
T	1	406.39	2.25	78.19	15.60	103.88	162.64	0.00	0.00	768.95
	1	52.85	0.29	10.17	2.03	13.51	21.15	0.00	0.00	27.66
		19.00	2.08	44.08	46.43	69.19	74.84	0.00	0.00	
H		14.62	0.08	2.81	0.56	2.74	5.85	0.00	0.00	
I	2	130.72	5.83	7.14	0.00	0.00	0.00	0.00	0.00	143.69
	2	90.97	4.06	4.97	0.00	0.00	0.00	0.00	0.00	5.17
P		6.11	5.38	4.02	0.00	0.00	0.00	0.00	0.00	
		4.70	0.21	0.26	0.00	0.00	0.00	0.00	0.00	
P	3	102.90	2.59	25.72	0.00	3.92	0.00	0.00	0.00	135.13
	3	76.15	1.92	19.03	0.00	2.90	0.00	0.00	0.00	4.86
U		4.81	2.39	14.50	0.00	2.61	0.00	0.00	0.00	
		3.70	0.09	0.93	0.00	0.14	0.00	0.00	0.00	
R	4	681.14	83.81	18.20	14.79	35.80	7.14	0.00	0.00	840.86
	4	81.00	9.97	2.16	1.76	4.26	0.85	0.00	0.00	30.25
P		31.85	77.30	10.26	44.02	23.84	4.16	0.00	0.00	
		24.50	3.01	0.65	0.53	1.29	0.26	0.00	0.00	
O	5	681.95	12.41	38.43	1.52	4.44	1.70	0.00	0.00	740.85
	5	92.10	1.68	5.19	0.21	0.60	0.23	0.00	0.00	26.64
E		31.89	11.45	21.66	4.52	2.96	0.99	0.00	0.00	
		24.53	0.45	1.38	0.05	0.16	0.06	0.00	0.00	
	6	135.64	1.53	9.72	1.69	2.10	0.00	0.00	0.00	150.68
	6	90.02	1.02	6.45	1.12	1.39	0.00	0.00	0.00	5.42
		6.34	1.41	5.48	5.03	1.40	0.00	0.00	0.00	
		4.88	0.06	0.35	0.06	0.08	0.00	0.00	0.00	
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TOTAL	2138.74	108.42	177.40	33.60	150.14	171.48	0.00	0.00	2779.78	
TOT %	76.94	3.90	6.38	1.21	5.40	6.17	0.00	0.00		

Station 3 Through Trips

STA. NO. 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		
T	1	599.60	1.62	188.37	10.94	155.74	33.96	0.00	0.00	990.23
	1	60.55	0.16	19.02	1.10	15.73	3.43	0.00	0.00	26.21
R		19.91	1.67	49.24	51.56	68.64	87.17	0.00	0.00	
		15.87	0.04	4.99	0.29	4.12	0.90	0.00	0.00	
I	2	255.61	4.83	25.41	0.00	6.80	0.00	0.00	0.00	292.65
	2	87.34	1.65	8.68	0.00	2.32	0.00	0.00	0.00	7.75
P		8.49	4.98	6.64	0.00	3.00	0.00	0.00	0.00	
		6.77	0.13	0.67	0.00	0.18	0.00	0.00	0.00	
P	3	873.55	13.44	84.01	1.46	20.26	3.40	0.00	0.00	996.12
	3	87.70	1.35	8.43	0.15	2.03	0.34	0.00	0.00	26.37
U		29.01	13.87	21.96	6.88	8.93	8.73	0.00	0.00	
		23.13	0.36	2.22	0.04	0.54	0.09	0.00	0.00	
R	4	245.61	54.50	21.28	5.91	28.48	0.00	0.00	0.00	355.78
	4	69.03	15.32	5.98	1.66	8.00	0.00	0.00	0.00	9.42
P		8.16	56.23	5.56	27.85	12.55	0.00	0.00	0.00	
		6.50	1.44	0.56	0.16	0.75	0.00	0.00	0.00	
S	5	833.87	20.40	46.40	2.91	12.36	1.60	0.00	0.00	917.54
	5	90.88	2.22	5.06	0.32	1.35	0.17	0.00	0.00	24.29
E		27.69	21.05	12.13	13.71	5.45	4.11	0.00	0.00	
		22.07	0.54	1.23	0.08	0.33	0.04	0.00	0.00	
	6	202.71	2.13	17.07	0.00	3.24	0.00	0.00	0.00	225.15
	6	90.03	0.95	7.58	0.00	1.44	0.00	0.00	0.00	5.96
		6.73	2.20	4.46	0.00	1.43	0.00	0.00	0.00	
		5.37	0.06	0.45	0.00	0.09	0.00	0.00	0.00	
<hr/>										
TOTAL		3010.95	96.92	382.54	21.22	226.88	38.96	0.00	0.00	3777.47
TOT X		79.71	2.57	10.13	0.56	6.01	1.03	0.00	0.00	

Station 3 Terminal Trips

STATION NUMBER = 3

EXIT-ENT STATION = 01 TO

## VEHICLE TYPE

RANGES	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	TOTAL TOT %
T 1	1005.99	3.87	266.56	26.54	239.62	196.60	0.00	0.00	1759.18
T 1	57.19	0.22	15.15	1.51	14.76	11.18	0.00	0.00	26.83
R	19.53	1.88	47.61	48.41	68.86	93.42	0.00	0.00	
R	15.34	0.06	4.07	0.40	3.96	3.00	0.00	0.00	
I 2	384.33	10.66	32.55	0.00	6.80	0.00	0.00	0.00	436.34
I 2	88.54	2.44	7.46	0.00	1.56	0.00	0.00	0.00	6.65
P	7.50	5.19	5.81	0.00	1.80	0.00	0.00	0.00	
P	5.89	0.16	0.50	0.00	0.10	0.00	0.00	0.00	
P 3	976.45	16.03	109.73	1.46	24.18	3.40	0.00	0.00	1131.25
P 3	86.32	1.42	9.70	0.13	2.14	0.30	0.00	0.00	17.25
U	18.95	7.81	19.60	2.66	6.41	1.62	0.00	0.00	
U	14.89	0.24	1.67	0.02	0.37	0.05	0.00	0.00	
R 4	926.75	138.31	39.48	20.70	64.28	7.14	0.00	0.00	1196.66
R 4	77.44	11.56	3.30	1.73	5.37	0.60	0.00	0.00	18.25
P	18.00	67.36	7.05	37.76	17.05	3.39	0.00	0.00	
P	14.13	2.11	0.60	0.32	0.98	0.11	0.00	0.00	
J 5	1515.82	32.81	84.83	4.43	16.80	3.30	0.00	0.00	1657.97
J 5	91.43	1.98	5.12	0.27	1.01	0.20	0.00	0.00	25.28
S	29.44	15.98	15.15	8.08	4.46	1.57	0.00	0.00	
E	23.12	0.50	1.29	0.07	0.26	0.05	0.00	0.00	
6	338.35	3.66	26.79	1.69	5.34	0.00	0.00	0.00	375.83
6	90.03	0.97	7.13	0.45	1.42	0.00	0.00	0.00	5.73
	6.57	1.78	4.78	3.08	1.42	0.00	0.00	0.00	
	5.16	0.06	0.41	0.03	0.08	0.00	0.00	0.00	
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TOTAL	5149.69	205.34	559.94	54.82	377.02	210.44	0.00	0.00	6557.25
TOT %	78.53	3.13	8.54	0.84	5.75	3.21	0.00	0.00	

Station 3 Total Trips

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	
T	1	121.16	1.71	53.74	0.00	18.55	10.07	0.00	0.00	205.23
	1	59.04	0.83	26.19	0.00	9.04	4.91	0.00	0.00	29.68
		22.01	8.48	61.58	0.00	94.59	100.00	0.00	0.00	
R		17.52	0.25	7.77	0.00	2.66	1.46	0.00	0.00	
I	2	64.32	0.00	11.37	0.00	0.00	0.00	0.00	0.00	75.69
	2	84.98	0.00	15.02	0.00	0.00	0.00	0.00	0.00	10.95
P		11.68	0.00	13.03	0.00	0.00	0.00	0.00	0.00	
		9.30	0.00	1.64	0.00	0.00	0.00	0.00	0.00	
P	3	42.52	0.00	1.19	0.00	0.00	0.00	0.00	0.00	43.71
	3	97.28	0.00	2.72	0.00	0.00	0.00	0.00	0.00	6.32
		7.72	0.00	1.36	0.00	0.00	0.00	0.00	0.00	
U		6.15	0.00	0.17	0.00	0.00	0.00	0.00	0.00	
R	4	84.99	12.12	4.15	2.57	0.00	0.00	0.00	0.00	105.83
	4	82.20	11.45	3.92	2.43	0.00	0.00	0.00	0.00	15.31
P		15.80	60.12	4.76	67.28	0.00	0.00	0.00	0.00	
		12.58	1.75	0.60	0.37	0.00	0.00	0.00	0.00	
S	5	201.48	3.70	11.07	1.25	1.06	0.00	0.00	0.00	218.56
	5	92.19	1.69	5.06	0.57	0.48	0.00	0.00	0.00	31.61
		36.60	18.35	12.68	32.72	5.41	0.00	0.00	0.00	
E		29.14	0.54	1.60	0.18	0.15	0.00	0.00	0.00	
	6	33.99	2.63	5.75	0.00	0.00	0.00	0.00	0.00	42.37
	6	80.22	6.21	13.57	0.00	0.00	0.00	0.00	0.00	6.13
		6.17	13.05	6.59	0.00	0.00	0.00	0.00	0.00	
	4.92	0.38	0.83	0.00	0.00	0.00	0.00	0.00		
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TOTAL		550.46	20.16	87.27	3.82	19.61	10.07	0.00	0.00	691.39
TOT %		79.62	2.92	12.62	0.55	2.84	1.46	0.00	0.00	

Station 4 Through Trips

STATION NUMBER

EXIT-ENT STATION

VEHICLE TYPE

RANGES		1	2	3	4	5	6	7	8	TOTAL TOT %
		1	2	3	4	5	6	7	8	
T	1	488.03	4.75	169.25	6.29	68.90	21.73	0.00	0.00	758.95
	1	64.30	0.63	22.30	0.83	9.08	2.86	0.00	0.00	36.24
		29.29	15.03	58.80	54.36	91.55	100.00	0.00	0.00	
R		23.30	0.23	8.08	0.30	3.29	1.04	0.00	0.00	
I	2	201.28	3.55	29.02	0.00	2.12	0.00	0.00	0.00	235.97
	2	85.30	1.50	12.30	0.00	0.90	0.00	0.00	0.00	11.27
P		12.08	11.23	10.08	0.00	2.82	0.00	0.00	0.00	
		9.61	0.17	1.39	0.00	0.10	0.00	0.00	0.00	
	3	314.41	1.19	36.76	1.19	1.06	0.00	0.00	0.00	354.61
P	3	88.66	0.34	10.37	0.34	0.30	0.00	0.00	0.00	16.93
		18.87	3.76	12.77	10.29	1.41	0.00	0.00	0.00	
	U	15.01	0.06	1.76	0.06	0.05	0.00	0.00	0.00	
R	4	113.53	13.62	4.39	0.00	3.18	0.00	0.00	0.00	134.72
	4	84.27	10.11	3.26	0.00	2.36	0.00	0.00	0.00	6.43
	P	6.81	43.09	1.53	0.00	4.23	0.00	0.00	0.00	
O		5.42	0.65	0.21	0.00	0.15	0.00	0.00	0.00	
	5	415.58	4.74	34.44	4.09	0.00	0.00	0.00	0.00	458.85
	5	90.57	1.03	7.51	0.89	0.00	0.00	0.00	0.00	21.91
E		24.94	15.00	11.97	35.35	0.00	0.00	0.00	0.00	
		19.84	0.23	1.64	0.20	0.00	0.00	0.00	0.00	
	6	133.41	3.76	13.96	0.00	0.00	0.00	0.00	0.00	151.13
6	6	88.27	2.49	9.24	0.00	0.00	0.00	0.00	0.00	7.22
		8.01	11.89	4.85	0.00	0.00	0.00	0.00	0.00	
		6.37	0.18	0.67	0.00	0.00	0.00	0.00	0.00	
TOTAL		1666.24	31.61	287.82	11.57	75.26	21.73	0.00	0.00	2094.23
TOT %		79.56	1.51	13.74	0.55	3.59	1.04	0.00	0.00	

Station 4 Terminal Trips



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	
T 1	609.19	6.46	222.99	6.29	87.45	31.80	0.00	0.00	964.18
1	63.18	0.67	23.13	0.65	9.07	3.30	0.00	0.00	34.61
R	27.48	12.48	59.45	40.87	92.18	100.00	0.00	0.00	
	21.87	0.23	8.01	0.23	3.14	1.14	0.00	0.00	
I 2	265.60	3.55	40.39	0.00	2.12	0.00	0.00	0.00	311.66
2	85.22	1.14	12.96	0.00	0.68	0.00	0.00	0.00	11.19
P	11.98	6.86	10.77	0.00	2.23	0.00	0.00	0.00	
	9.53	0.13	1.45	0.00	0.08	0.00	0.00	0.00	
P 3	356.93	1.19	37.95	1.19	1.06	0.00	0.00	0.00	398.32
3	89.61	0.30	9.53	0.30	0.27	0.00	0.00	0.00	14.30
U	16.10	2.30	10.12	7.73	1.12	0.00	0.00	0.00	
	12.81	0.04	1.36	0.04	0.04	0.00	0.00	0.00	
R 4	200.52	25.74	8.54	2.57	3.18	0.00	0.00	0.00	240.55
4	83.36	10.70	3.55	1.07	1.32	0.00	0.00	0.00	8.64
P	9.05	49.72	2.28	16.70	3.35	0.00	0.00	0.00	
	7.20	0.92	0.31	0.09	0.11	0.00	0.00	0.00	
Q 5	617.06	8.44	45.51	5.34	1.06	0.00	0.00	0.00	677.41
5	91.09	1.25	6.72	0.79	0.16	0.00	0.00	0.00	24.32
E	27.84	16.30	12.13	34.70	1.12	0.00	0.00	0.00	
	22.15	0.30	1.63	0.19	0.04	0.00	0.00	0.00	
6	167.40	6.39	19.71	0.00	0.00	0.00	0.00	0.00	193.50
6	86.51	3.30	10.19	0.00	0.00	0.00	0.00	0.00	6.95
	7.55	12.34	5.25	0.00	0.00	0.00	0.00	0.00	
	6.01	0.23	0.71	0.00	0.00	0.00	0.00	0.00	
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TOTAL	2216.70	51.77	375.09	15.39	94.87	31.80	0.00	0.00	2785.62
TOT %	79.58	1.86	13.47	0.55	3.41	1.14	0.00	0.00	

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
		1	2	3	4	5	6	7	8	TOT %
T	1	14.11	0.00	13.52	0.00	0.00	2.00	0.00	0.00	29.63
	1	47.62	0.00	45.63	0.00	0.00	6.75	0.00	0.00	22.15
		12.45	0.00	84.18	0.00	0.00	100.00	0.00	0.00	
R		10.55	0.00	10.11	0.00	0.00	1.50	0.00	0.00	
I	2	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.60
	2	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.94
P		2.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
		1.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
P	3	8.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.37
	3	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.26
U		7.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
		6.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
R	4	18.33	2.35	0.00	0.00	0.00	0.00	0.00	0.00	20.68
	4	88.64	11.36	0.00	0.00	0.00	0.00	0.00	0.00	15.45
P		16.17	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
		13.70	1.76	0.00	0.00	0.00	0.00	0.00	0.00	
U	5	65.46	0.00	2.54	0.00	0.00	0.00	0.00	0.00	68.00
	5	96.26	0.00	3.74	0.00	0.00	0.00	0.00	0.00	50.84
E		57.76	0.00	15.82	0.00	0.00	0.00	0.00	0.00	
		48.94	0.00	1.90	0.00	0.00	0.00	0.00	0.00	
6	6	4.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.47
	6	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34
		3.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
		3.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
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TOTAL		113.34	2.35	16.06	0.00	0.00	2.00	0.00	0.00	133.75
TOT %		84.74	1.76	12.01	0.00	0.00	1.50	0.00	0.00	

Station 5 Through Trips

STATION NUMBER

EXIT-ENT STATION TO

VEHICLE TYPE

RANGES	1	2	3	4	5	6	7	8	
	1	2	3	4	5	6	7	8	
T 1	141.23	3.13	59.70	3.54	0.00	0.00	0.00	0.00	20
	68.03	1.51	28.76	1.71	0.00	0.00	0.00	0.00	2
R 1	19.13	45.76	59.04	100.00	0.00	0.00	0.00	0.00	
	16.62	0.37	7.03	0.42	0.00	0.00	0.00	0.00	
I 2	94.02	0.00	7.58	0.00	0.00	0.00	0.00	0.00	103
	92.68	0.00	7.32	0.00	0.00	0.00	0.00	0.00	12
P 2	13.01	0.00	7.50	0.00	0.00	0.00	0.00	0.00	
	11.30	0.00	0.89	0.00	0.00	0.00	0.00	0.00	
P 3	220.27	0.00	11.11	0.00	0.00	0.00	0.00	0.00	231.
	95.20	0.00	4.80	0.00	0.00	0.00	0.00	0.00	27.
U 3	29.84	0.00	10.99	0.00	0.00	0.00	0.00	0.00	
	25.92	0.00	1.31	0.00	0.00	0.00	0.00	0.00	
R 4	47.44	1.17	2.83	0.00	0.00	0.00	0.00	0.00	51.
	92.22	2.27	5.50	0.00	0.00	0.00	0.00	0.00	6..
P 4	6.43	17.11	2.80	0.00	0.00	0.00	0.00	0.00	
	5.58	0.14	0.33	0.00	0.00	0.00	0.00	0.00	
Q 5	173.37	2.54	18.72	0.00	0.00	0.00	0.00	0.00	194.6
S 5	89.08	1.31	9.62	0.00	0.00	0.00	0.00	0.00	22.9
	23.49	37.13	18.51	0.00	0.00	0.00	0.00	0.00	
E 5	20.40	0.30	2.20	0.00	0.00	0.00	0.00	0.00	
	59.88	0.00	1.18	0.00	0.00	0.00	0.00	0.00	61.0
6	98.07	0.00	1.93	0.00	0.00	0.00	0.00	0.00	7.1
	8.11	0.00	1.17	0.00	0.00	0.00	0.00	0.00	
	7.05	0.00	0.14	0.00	0.00	0.00	0.00	0.00	
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TOTAL	738.21	6.84	101.12	3.54	0.00	0.00	0.00	0.00	849.7
TOT %	86.88	0.80	11.90	0.42	0.00	0.00	0.00	0.00	

Station 5 Terminal Trips

STATION NUMBER = 5

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	155.34	3.13	73.22	3.54	0.00	2.00	0.00	0.00	237.23
	1	65.48	1.32	30.86	1.49	0.00	0.84	0.00	0.00	24.12
		18.24	34.06	62.49	100.00	0.00	100.00	0.00	0.00	
R		15.80	0.32	7.45	0.36	0.00	0.20	0.00	0.00	
I	2	98.62	0.00	7.58	0.00	0.00	0.00	0.00	0.00	106.20
	2	92.86	0.00	7.14	0.00	0.00	0.00	0.00	0.00	10.80
P		11.58	0.00	6.47	0.00	0.00	0.00	0.00	0.00	
		10.03	0.00	0.77	0.00	0.00	0.00	0.00	0.00	
P	3	228.64	0.00	11.11	0.00	0.00	0.00	0.00	0.00	239.75
	3	95.37	0.00	4.63	0.00	0.00	0.00	0.00	0.00	24.38
		26.85	0.00	9.48	0.00	0.00	0.00	0.00	0.00	
U		23.25	0.00	1.13	0.00	0.00	0.00	0.00	0.00	
R	4	65.77	3.52	2.83	0.00	0.00	0.00	0.00	0.00	72.12
	4	91.20	4.88	3.92	0.00	0.00	0.00	0.00	0.00	7.33
P		7.72	38.30	2.42	0.00	0.00	0.00	0.00	0.00	
		6.69	0.36	0.29	0.00	0.00	0.00	0.00	0.00	
O	5	238.83	2.54	21.26	0.00	0.00	0.00	0.00	0.00	262.63
	5	90.94	0.97	8.10	0.00	0.00	0.00	0.00	0.00	26.70
		28.05	27.64	18.14	0.00	0.00	0.00	0.00	0.00	
E		24.28	0.26	2.16	0.00	0.00	0.00	0.00	0.00	
	6	64.35	0.00	1.18	0.00	0.00	0.00	0.00	0.00	65.53
	6	98.20	0.00	1.80	0.00	0.00	0.00	0.00	0.00	6.66
		7.56	0.00	1.01	0.00	0.00	0.00	0.00	0.00	
		6.54	0.00	0.12	0.00	0.00	0.00	0.00	0.00	
-----										
TOTAL		851.55	9.19	117.18	3.54	0.00	2.00	0.00	0.00	983.46
TOT %		86.59	0.93	11.92	0.36	0.00	0.20	0.00	0.00	

Station 5 Total Trips

FORM NUMBER = 6

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	
T 1	505.11	5.72	156.45	10.58	110.70	164.37	0.00	0.00	952.93
	53.01	0.60	16.42	1.11	11.62	17.25	0.00	0.00	28.18
	19.48	4.45	53.23	24.54	72.49	96.39	0.00	0.00	
R	14.94	0.17	4.63	0.31	3.27	4.86	0.00	0.00	
I 2	171.18	9.29	15.60	0.67	1.00	0.00	0.00	0.00	197.74
	86.57	4.70	7.89	0.34	0.51	0.00	0.00	0.00	5.85
P	6.60	7.23	5.31	1.55	0.65	0.00	0.00	0.00	
	5.06	0.27	0.46	0.02	0.03	0.00	0.00	0.00	
P 3	132.66	1.93	20.86	0.00	3.83	0.00	0.00	0.00	159.28
	83.29	1.21	13.10	0.00	2.40	0.00	0.00	0.00	4.71
	5.12	1.50	7.10	0.00	2.51	0.00	0.00	0.00	
U	3.92	0.06	0.62	0.00	0.11	0.00	0.00	0.00	
R 4	748.34	89.51	38.45	26.72	30.31	4.57	0.00	0.00	937.90
	79.79	9.54	4.10	2.85	3.23	0.49	0.00	0.00	27.74
P	28.87	69.68	13.08	61.97	19.85	2.68	0.00	0.00	
	22.13	2.65	1.14	0.79	0.90	0.14	0.00	0.00	
O 5	876.27	19.32	46.74	3.40	4.53	0.85	0.00	0.00	951.11
	92.13	2.03	4.91	0.36	0.48	0.09	0.00	0.00	28.13
	33.80	15.04	15.90	7.88	2.97	0.50	0.00	0.00	
E	25.92	0.57	1.38	0.10	0.13	0.03	0.00	0.00	
	158.77	2.68	15.82	1.75	2.34	0.74	0.00	0.00	182.10
6	87.19	1.47	8.69	0.96	1.29	0.41	0.00	0.00	5.39
	6.12	2.09	5.38	4.06	1.53	0.43	0.00	0.00	
	4.70	0.08	0.47	0.05	0.07	0.02	0.00	0.00	
-----									
TOTAL	2592.33	128.45	293.92	43.12	152.71	170.53	0.00	0.00	3381.06
TOT %	76.67	3.80	8.69	1.28	4.52	5.04	0.00	0.00	

Total Area Through Trips

FORM NUMBER

= 6

EXIT-ENT STATION

=

TO

VEHICLE TYPE

RANGES	1	2	3	4	5	6	7	8	TOTAL TOT %
	1	2	3	4	5	6	7	8	
T 1	2296.34	14.84	837.34	40.22	363.95	98.91	0.00	0.00	3651.60
	62.89	0.41	22.93	1.10	9.97	2.71	0.00	0.00	30.31
R 1	23.49	8.31	57.79	65.17	76.31	93.26	0.00	0.00	
	19.06	0.12	6.95	0.33	3.02	0.82	0.00	0.00	
I 2	963.28	15.88	109.37	0.00	10.92	0.00	0.00	0.00	1098.45
P 2	87.69	1.45	9.87	0.00	0.99	0.00	0.00	0.00	9.12
	9.86	8.89	7.48	0.00	2.29	0.00	0.00	0.00	
	8.00	0.13	0.90	0.00	0.09	0.00	0.00	0.00	
P 3	2519.42	21.00	220.87	5.19	27.09	3.40	0.00	0.00	2796.97
U 3	90.08	0.75	7.90	0.19	0.97	0.12	0.00	0.00	23.22
	25.78	11.76	15.24	8.41	5.68	3.21	0.00	0.00	
	20.91	0.17	1.83	0.04	0.22	0.03	0.00	0.00	
R 4	632.37	77.24	39.80	7.82	41.05	0.00	0.00	0.00	798.28
P 4	79.22	9.68	4.99	0.98	5.14	0.00	0.00	0.00	6.63
	6.47	43.26	2.75	12.67	8.61	0.00	0.00	0.00	
	5.25	0.64	0.33	0.06	0.34	0.00	0.00	0.00	
O 5	2582.04	42.64	183.51	7.00	21.86	3.75	0.00	0.00	2840.80
S 5	90.89	1.50	6.46	0.25	0.77	0.13	0.00	0.00	23.58
	26.42	23.88	12.66	11.34	4.58	3.54	0.00	0.00	
E 5	21.43	0.35	1.52	0.06	0.18	0.03	0.00	0.00	
6	780.55	6.95	59.11	1.49	12.06	0.00	0.00	0.00	860.16
6	90.74	0.81	6.87	0.17	1.40	0.00	0.00	0.00	7.14
	7.99	3.89	4.08	2.41	2.53	0.00	0.00	0.00	
	6.48	0.06	0.49	0.01	0.10	0.00	0.00	0.00	
-----									
TOTAL	9774.00	178.55	1449.00	61.72	476.93	106.06	0.00	0.00	12046.26
TOT %	81.14	1.48	12.03	0.51	3.96	0.88	0.00	0.00	

Total Area Terminal Trips

FORM NUMBER \* 6

EXPT-ENT STATION \* 01 TU

## VEHICLE TYPE

RANGES	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	TOTAL TOT %
T 1	2801.45	20.56	993.79	50.80	474.65	263.28	0.00	0.00	4604.53
	60.84	0.45	21.58	1.10	10.31	5.72	0.00	0.00	29.85
R 1	22.65	6.70	57.02	48.45	75.38	95.19	0.00	0.00	
	18.16	0.13	6.44	0.33	3.08	1.71	0.00	0.00	
I 2	1134.46	25.17	123.97	0.67	11.92	0.00	0.00	0.00	1296.19
	87.52	1.94	9.56	0.05	0.92	0.00	0.00	0.00	8.40
P 2	9.17	8.20	7.11	0.64	1.89	0.00	0.00	0.00	
	7.35	0.16	0.80	0.00	0.08	0.00	0.00	0.00	
P 3	2652.08	22.93	241.73	5.19	30.92	3.40	0.00	0.00	2956.25
	89.71	0.78	8.18	0.18	1.05	0.12	0.00	0.00	19.16
U 3	21.45	7.47	13.87	4.95	4.91	1.23	0.00	0.00	
	17.19	0.15	1.57	0.03	0.20	0.02	0.00	0.00	
R 4	1380.71	166.75	78.25	34.54	71.36	4.57	0.00	0.00	1736.18
	79.53	9.60	4.51	1.99	4.11	0.26	0.00	0.00	11.25
P 4	11.17	54.32	4.49	32.95	11.33	1.65	0.00	0.00	
	8.95	1.08	0.51	0.22	0.46	0.03	0.00	0.00	
D 5	3458.31	61.96	230.25	10.40	26.39	4.60	0.00	0.00	3791.91
S 5	91.20	1.63	6.07	0.27	0.70	0.12	0.00	0.00	24.58
	27.97	20.18	13.21	9.92	4.19	1.66	0.00	0.00	
E 5	22.42	0.40	1.49	0.07	0.17	0.03	0.00	0.00	
	939.32	9.63	74.93	3.24	14.40	0.74	0.00	0.00	1042.26
6	90.12	0.92	7.19	0.31	1.38	0.07	0.00	0.00	6.76
	7.60	3.14	4.30	3.09	2.29	0.27	0.00	0.00	
	6.09	0.06	0.49	0.02	0.09	0.00	0.00	0.00	
-----									
TOTAL	12366.33	307.00	1742.92	104.84	629.64	276.59	0.00	0.00	15427.32
TOT %	80.16	1.99	11.30	0.68	4.08	1.79	0.00	0.00	

Total Area Total Trips

## 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 in length. The percent of trips which were 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 for each interview date will be presented.



01-V

	P.C.	CUM.	ACTUAL
1.....	30.326	30.326	2346
2.....	2.896	33.221	224
3.....	42.645	75.866	3299
4.....	7.497	83.363	580
5.....	3.270	86.634	253
6.....	3.775	90.408	292
7.....	0.982	91.391	76
8.....	1.370	92.761	106
9.....	0.776	93.537	60
10.....	2.081	95.618	161
11.....	0.375	95.993	29
12.....	0.388	96.381	30
13.....	0.608	96.988	47
14.....	0.543	97.531	42
15.....	0.336	97.867	26
16.....	0.168	98.035	13
17.....	0.297	98.332	23
18.....	0.155	98.488	12
19.....	0.090	98.578	7
20.....	0.194	98.772	15
21.....	0.220	98.992	17
22.....	0.271	99.263	21
23.....	0.026	99.289	2
24.....	0.052	99.341	4
25.....	0.052	99.392	4
26.....	0.000	99.392	0
27.....	0.026	99.418	2
28.....	0.039	99.457	3
29.....	0.000	99.457	0
30.....	0.026	99.483	2
31.....	0.026	99.509	2
32.....	0.013	99.522	1
33.....	0.039	99.560	3
34.....	0.000	99.560	0
35.....	0.000	99.560	0
36.....	0.026	99.586	2
37.....	0.000	99.586	0
38.....	0.065	99.651	5
39.....	0.000	99.651	0
40.....	0.013	99.664	1
41.....	0.000	99.664	0
42.....	0.000	99.664	0
43.....	0.026	99.690	2
44.....	0.000	99.690	0
45.....	0.026	99.716	2
46.....	0.039	99.754	3
47.....	0.000	99.754	0
48.....	0.052	99.806	4
49.....	0.000	99.806	0
50.....	0.000	99.806	0
51.....	0.000	99.806	0
52.....	0.000	99.806	0
53.....	0.000	99.806	0
54.....	0.000	99.806	0
55.....	0.000	99.806	0
56.....	0.000	99.806	0
57.....	0.000	99.806	0
58.....	0.000	99.806	0

TRIP LENGTH FREQUENCY DISTRIBUTION

0 12 6 24 28 36 40 52 64 8 7 80

	P.C.	U	ACTUAL
1.	0.483	0.483	11
2.	62.248	62.730	1418
3.	0.000	62.730	0
4.	23.310	86.040	531
5.	0.658	86.699	15
6.	0.395	87.094	9
7.	0.790	87.884	18
8.	6.453	94.337	147
9.	0.615	94.952	14
10.	1.010	95.961	23
11.	0.132	96.093	3
12.	0.219	96.313	5
13.	0.219	96.532	5
14.	0.746	97.278	17
15.	0.088	97.366	2
16.	0.307	97.673	7
17.	0.044	97.717	1
18.	0.351	98.068	8
19.	0.395	98.454	9
20.	0.307	98.771	7
21.	0.658	99.429	15
22.	0.000	99.429	0
23.	0.132	99.561	3
24.	0.132	99.693	3
25.	0.044	99.737	1
26.	0.088	99.824	2
27.	0.000	99.824	0
28.	0.000	99.824	0
29.	0.044	99.868	1
30.	0.088	99.956	2
31.	0.000	99.956	0
32.	0.000	99.956	0
33.	0.000	99.956	0
34.	0.000	99.956	0
35.	0.000	99.956	0
36.	0.000	99.956	0
37.	0.000	99.956	0
38.	0.000	99.956	0
39.	0.044	100.000	1

REMAINING VALUES ARE ALL ZERO  
 NUMBER OF OBSERVATIONS= 2278      SUM= 8429.      MEAN= 3.700      VAR= 13.132      SD= 3.624

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

Station 1

	P.C.	U.C.	ACTUAL
SP18A	0.000	0.000	0
2.....	15.878	15.878	970
3.70009 = 5A7	0.000	15.878	0
4.20000 = 1	37.551	53.429	2294
5.80000 = 255	1.882	55.312	115
6.00000 = 255	1.817	57.129	111
7.00000 = 10	2.161	59.290	132
8.00000 = 1	3.176	62.465	194
9.00000 = 547	0.638	63.104	39
10.00000 = 1 SKIM TREE NO. 101	0.606	63.709	37
11.00000 = 1.7 SKIM TREE NO. 101	2.750	66.459	168
12.00000 = 1.3 SKIM TREE NO. 101	1.948	68.407	119
13.00000 = 1.4 SKIM TREE NO. 101	1.031	69.439	63
14.00000 = 1.5 SKIM TREE NO. 101	0.917	70.355	56
15.....	0.344	70.699	21
16.....	3.565	74.284	219
17.....	0.999	75.282	61
18.....	1.801	77.083	110
19.....	0.966	78.049	59
20.....	0.851	78.900	52
21.....	3.127	82.027	191
22.00000 = F	0.557	82.583	34
23.00000 = F	1.637	84.220	100
24.00000 = F	2.554	86.774	156
25.....	1.948	88.722	119
26.....	1.277	89.998	78
27.....	0.589	90.588	36
28.....	1.866	92.454	114
29.....	0.507	92.961	31
30.....	0.737	93.698	45
31.....	0.491	94.189	30
32.....	0.720	94.909	44
33.....	0.393	95.302	24
34.....	0.196	95.498	12
35.....	0.900	96.399	55
36.....	0.360	96.759	22
37.....	0.164	96.923	10
38.....	0.147	97.070	9
39.....	0.164	97.234	10
40.....	0.164	97.397	10
41.....	0.082	97.479	5
42.....	0.196	97.676	12
43.....	0.147	97.823	9
44.....	0.065	97.888	4
45.....	0.147	98.036	9
46.....	0.016	98.052	1
47.....	0.055	98.118	4
48.....	0.049	98.167	3
49.....	0.311	98.478	19
50.....	0.131	98.609	8
51.....	0.115	98.723	7
52.....	0.229	98.952	14
53.....	0.033	98.985	2
54.....	0.180	99.165	11
55.....	0.033	99.198	2
56.....	0.000	99.198	0
57.....	0.049	99.247	3
58.....	0.098	99.345	6
59.....	0.016	99.362	1
60.....	0.098	99.460	6
61.....			

Station 2

64.	0.016	99.542	1
65.	0.065	99.542	1
66.	0.000	99.557	0
67.	0.016	99.624	1
68.	0.000	99.624	0
69.	0.033	99.656	2
70.	0.000	99.656	0
71.	0.000	99.656	0
72.	0.000	99.656	0
73.	0.033	99.689	2
74.	0.000	99.689	0
75.	0.000	99.689	0
76.	0.065	99.754	4
77.	0.000	99.754	0
78.	0.000	99.754	0
79.	0.049	99.804	3
80.	0.000	99.804	0
81.	0.000	99.804	0
82.	0.049	99.853	3
83.	0.000	99.853	0
84.	0.049	99.902	3
85.	0.000	99.902	0
86.	0.000	99.902	0
87.	0.082	99.984	5
88.	0.000	99.984	0
89.	0.016	100.000	1

REMAINING VALUES ARE ALL ZERO

NUMBER OF OBSERVATIONS= 6109      SUM= 68111.      MEAN= 11.149      VAR= 139.127      SD= 11.795

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

	P.C.	U.C.	ACTUAL
1.....	14.373	14.373	943
2.....	11.934	26.307	783
3.....	0.000	26.307	0
4.....	15.623	41.930	1025
5.....	1.570	43.499	103
6.....	1.036	44.536	68
7.....	1.417	45.953	93
8.....	0.945	46.898	62
9.....	5.121	52.020	336
10.....	3.765	55.784	247
11.....	3.140	58.924	206
12.....	3.170	62.094	208
13.....	1.006	63.100	66
14.....	3.307	66.408	217
15.....	1.036	67.444	68
16.....	3.734	71.178	245
17.....	2.195	73.373	144
18.....	1.600	74.973	105
19.....	1.357	76.330	89
20.....	0.930	77.260	61
21.....	5.289	82.548	347
22.....	1.189	83.737	78
23.....	1.448	85.185	95
24.....	3.003	88.188	197
25.....	1.875	90.062	123
26.....	1.067	91.129	70
27.....	0.625	91.754	41
28.....	2.378	94.132	156
29.....	0.655	94.787	43
30.....	0.625	95.412	41
31.....	0.579	95.991	38
32.....	0.396	96.388	26
33.....	0.427	96.815	28
34.....	0.457	97.272	30
35.....	0.457	97.729	30
36.....	0.152	97.881	10
37.....	0.061	97.942	4
38.....	0.137	98.080	9
39.....	0.107	98.186	7
40.....	0.076	98.262	5
41.....	0.061	98.323	4
42.....	0.183	98.506	12
43.....	0.107	98.613	7
44.....	0.046	98.659	3
45.....	0.030	98.689	2
46.....	0.213	98.903	14
47.....	0.122	99.025	8
48.....	0.030	99.055	2
49.....	0.305	99.360	20
50.....	0.091	99.451	6
51.....	0.061	99.512	4
52.....	0.030	99.543	2
53.....	0.000	99.543	0
54.....	0.061	99.604	4
55.....	0.030	99.634	2
56.....	0.000	99.634	0
57.....	0.076	99.710	5
58.....	0.076	99.787	5
59.....	0.000	99.787	0
60.....	0.030	99.817	2

Station 3

64.	0.000	99.848	0
65.	0.000	99.848	0
66.	0.000	99.848	0
67.	0.000	99.848	0
68.	0.000	99.848	0
69.	0.000	99.848	0
70.	0.000	99.848	0
71.	0.000	99.848	0
72.	0.000	99.848	0
73.	0.000	99.848	0
74.	0.000	99.848	0
75.	0.000	99.848	0
76.	0.000	99.848	0
77.	0.000	99.848	0
78.	0.000	99.848	0
79.	0.061	99.909	4
80.	0.030	99.939	2
81.	0.000	99.939	0
82.	0.000	99.939	0
83.	0.030	99.970	2
84.	0.000	99.970	0
85.	0.000	99.970	0
86.	0.000	99.970	0
87.	0.000	99.970	0
88.	0.000	99.970	0
89.	0.015	99.985	1
90.	0.000	99.985	0
91.	0.015	100.000	1

REMAINING VALUES ARE ALL ZERO  
NUMBER OF OBSERVATIONS= 6561

SUM= 75970.      MEAN= 11.379      VAR= 115.641      SD= 10.754

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

	P.C.	U	ACTUAL
1.....	11.497	11.497	321
2.....	9.957	21.454	278
3.	0.000	21.454	0
4.....	41.297	62.751	1153
5.....	2.973	65.723	83
6.....	7.450	73.173	208
7.....	5.552	78.725	155
8..	0.681	79.405	19
9.....	2.006	81.411	56
10.....	3.474	84.885	97
11.....	1.862	86.748	52
12..	0.860	87.607	24
13..	0.609	88.216	17
14....	1.791	90.007	50
15..	0.788	90.795	22
16...	1.182	91.977	33
17.	0.287	92.264	8
18...	1.182	93.446	33
19..	0.573	94.019	16
20..	0.537	94.556	15
21...	1.325	95.881	37
22.	0.251	96.132	7
23..	0.466	96.597	13
24.	0.215	96.812	6
25..	0.358	97.170	10
26..	0.681	97.851	19
27.	0.072	97.923	2
28.	0.143	98.066	4
29..	0.358	98.424	10
30.	0.072	98.496	2
31.	0.267	98.782	8
32.	0.000	98.782	0
33.	0.215	98.997	6
34.	0.072	99.069	2
35.	0.251	99.319	7
36.	0.000	99.319	0
37.	0.107	99.427	3
38.	0.000	99.427	0
39.	0.000	99.427	0
40.	0.036	99.463	1
41.	0.000	99.463	0
42.	0.000	99.463	0
43.	0.000	99.463	0
44.	0.000	99.463	0
45.	0.000	99.463	0
46.	0.143	99.606	4
47.	0.000	99.606	0
48.	0.072	99.678	2
49.	0.000	99.678	0
50.	0.036	99.713	1
51.	0.072	99.785	2
52.	0.000	99.785	0
53.	0.000	99.785	0
54.	0.000	99.785	0
55.	0.000	99.785	0
56.	0.000	99.785	0
57.	0.000	99.785	0
58.	0.000	99.785	0
59.	0.036	99.821	1
60.	0.036	99.857	1
61.			

Station 4

64.											0.000	99.957	0
65.											0.000	99.928	0
66.											0.000	99.928	0
67.											0.072	99.928	2
68.											0.000	99.928	0
69.											0.000	99.928	0
70.											0.000	99.928	0
71.											0.000	99.928	0
72.											0.000	99.928	0
73.											0.000	99.928	0
74.											0.000	99.928	0
75.											0.000	99.928	0
76.											0.000	99.928	0
77.											0.000	99.928	0
78.											0.000	99.928	0
79.											0.072	100.000	2

REMAINING VALUES ARE ALL ZERO  
NUMBER OF OBSERVATIONS= 2792

SUM= 18223.      MEAN= 6.527      VAR= 49.505      SD= 7.036

TOTAL TRIPS OVER MAXP = 0  
TOTAL TRIPS OVER 255 = 0  
VOLUME TABLE NUMBER = 204  
SKIM TREE NUMBER = 101



	0	12	6	2	28	46	52	6	6	8	7	80	P.C.	ACTUAL	
1.....													14.857	14.857	145
2.....													14.754	29.611	144
3.....													0.000	29.611	0
4.....													66.189	95.799	646
5.....													0.102	95.902	1
6.....													0.205	96.107	2
7..													1.025	97.131	10
8.....													0.102	97.234	1
9..													0.717	97.951	7
10.....													0.205	98.156	2
11.....													0.000	98.156	0
12.....													0.102	98.258	1
13.....													0.205	98.463	2
14.....													0.307	98.770	3
15.....													0.000	98.770	0
16.....													0.102	98.873	1
17.....													0.000	98.873	0
18.....													0.205	99.078	2
19.....													0.205	99.283	2
20.....													0.000	99.283	0
21.....													0.205	99.488	2
22.....													0.000	99.488	0
23.....													0.102	99.590	1
24.....													0.102	99.693	1
25.....													0.000	99.693	0
26.....													0.000	99.693	0
27.....													0.307	100.000	3

REMAINING VALUES ARE ALL ZERO  
 NUMBER OF OBSERVATIONS= 976      SUM= 3535.      MEAN= 3.622      VAR= 6.702      SD= 2.589

TOTAL TRIPS OVER MAXP = 0  
 TOTAL TRIPS OVER 255 = 0  
 VOLUME TABLE NUMBER = 205  
 SKIM TREE NUMBER = 101

Station 5

TAKAS AREA TRIP LENGTH FREQUENCY DISTRIBUTION



	P.C.	CUM.	ACTUAL
1.....	8.961	8.961	1390
2.....	22.434	31.395	3480
3.....	0.000	31.395	0
4.....	33.729	65.124	5232
5.....	1.934	67.058	300
6.....	2.282	69.340	354
7.....	1.715	71.055	266
8.....	2.243	73.298	348
9.....	2.559	75.857	397
10.....	2.237	78.094	347
11.....	1.541	79.635	239
12.....	1.302	80.937	202
13.....	0.619	81.556	96
14.....	1.741	83.297	270
15.....	0.535	83.832	83
16.....	1.721	85.553	267
17.....	0.825	86.378	128
18.....	1.070	87.448	166
19.....	0.767	88.216	119
20.....	0.612	88.828	95
21.....	2.624	91.452	407
22.....	0.458	91.909	71
23.....	0.748	92.657	116
24.....	1.218	93.876	189
25.....	0.928	94.804	144
26.....	0.625	95.429	97
27.....	0.277	95.707	43
28.....	0.935	96.641	145
29.....	0.329	96.970	51
30.....	0.303	97.273	47
31.....	0.271	97.544	42
32.....	0.258	97.802	40
33.....	0.181	97.982	28
34.....	0.174	98.156	27
35.....	0.335	98.491	52
36.....	0.129	98.620	20
37.....	0.058	98.678	9
38.....	0.064	98.743	10
39.....	0.058	98.801	9
40.....	0.058	98.859	9
41.....	0.032	98.891	5
42.....	0.090	98.981	14
43.....	0.064	99.046	10
44.....	0.019	99.065	3
45.....	0.039	99.104	6
46.....	0.116	99.220	18
47.....	0.058	99.278	9
48.....	0.026	99.304	4
49.....	0.122	99.426	19
50.....	0.052	99.478	8
51.....	0.052	99.529	8
52.....	0.052	99.581	8
53.....	0.013	99.594	2
54.....	0.064	99.658	10
55.....	0.019	99.678	3
56.....	0.000	99.678	0
57.....	0.032	99.710	5
58.....	0.032	99.742	5
59.....	0.013	99.755	2
60.....			

Total Area

62.	0.000	99.866	0
63.	0.006	99.866	1
64.	0.006	99.866	1
65.	0.026	99.839	4
66.	0.000	99.839	0
67.	0.019	99.858	3
68.	0.000	99.858	0
69.	0.006	99.865	1
70.	0.000	99.865	0
71.	0.000	99.865	0
72.	0.000	99.865	0
73.	0.006	99.871	1
74.	0.000	99.871	0
75.	0.000	99.871	0
76.	0.013	99.884	2
77.	0.000	99.884	0
78.	0.000	99.884	0
79.	0.039	99.923	6
80.	0.006	99.929	1
81.	0.000	99.929	0
82.	0.013	99.942	2
83.	0.006	99.948	1
84.	0.019	99.968	3
85.	0.000	99.968	0
86.	0.000	99.968	0
87.	0.013	99.981	2
88.	0.000	99.981	0
89.	0.013	99.994	2
90.	0.000	99.994	0
91.	0.006	100.000	1

REMAINING VALUES ARE ALL ZERO  
NUMBER OF OBSERVATIONS= 15512

SUM= 118974, MEAN= 7.670 VAR= 83,226 SD= 9.123

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

APPENDIX B

**SINGLE STATION RURAL O-D STUDY**

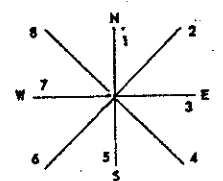
STATE OF MICHIGAN  
DEPARTMENT OF STATE HIGHWAYS  
TRANSPORTATION AND PLANNING

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		
																							0 0 0		
																							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																		

-21-

- VEHICLE TYPE**
- 1 PASSENGER CAR WITHOUT A TRAILER
  - 2 PASSENGER CAR WITH A TRAILER
  - 3 PANEL OR PICK-UP WITHOUT A TRAILER
  - 4 PANEL OR PICK-UP WITH A TRAILER
  - 5 OTHER SINGLE UNIT TRUCKS
  - 6 COMBINATIONS & TRUCKS WITH TRAILERS



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

- GARAGED**
- 1 ORIGIN
  - 2 DESTINATION
  - 3 OTHER

- TRIP PURPOSE**
- 1 WORK
  - 2 PERS. BUSINESS
  - 3 SHOPPING
  - 4 VACATION
  - 5 OTHER SOC. OR REC.