Statewide Transportation Analysis & Research

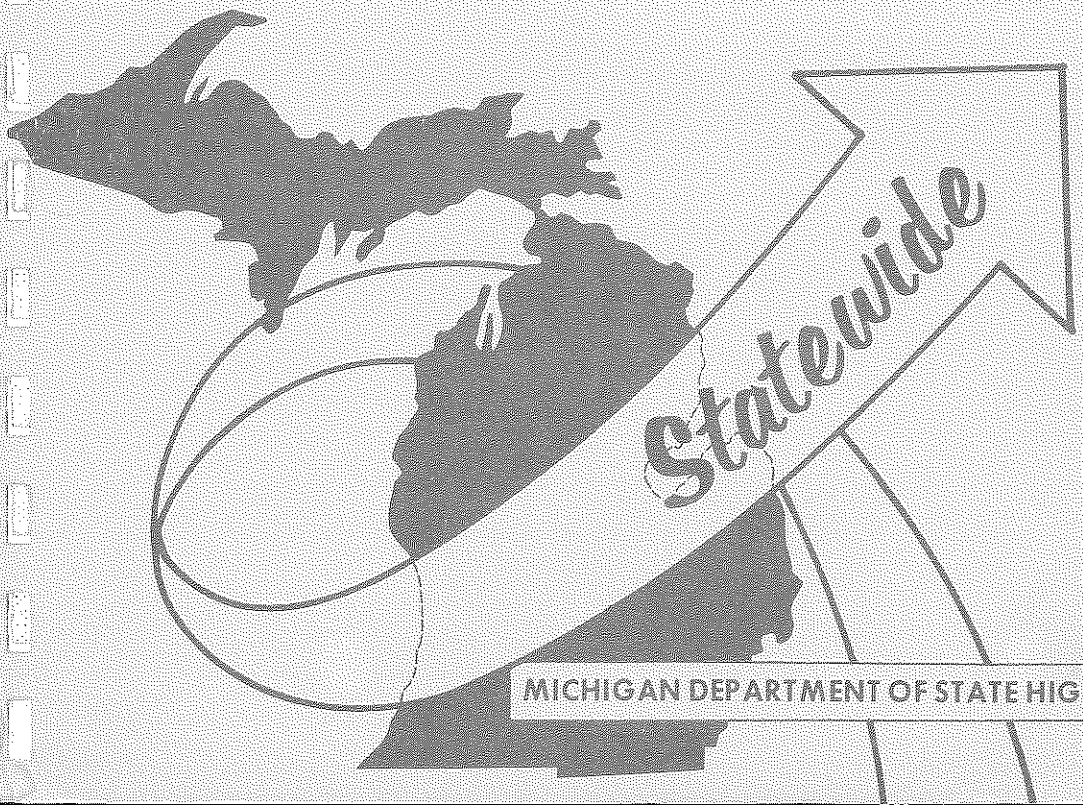
MICHIGAN'S STATEWIDE
TRANSPORTATION MODELING SYSTEM

REFERENCE HANDBOOK NO. 3

MINOR ORIGIN & DESTINATION TRAVEL CHARACTERISTICS REGION 2

STATEWIDE PROCEDURES SECTION

SEPTEMBER, 1978



MICHIGAN DEPARTMENT OF STATE HIGHWAYS AND TRANSPORTATION

MICHIGAN DEPARTMENT OF STATE HIGHWAYS AND TRANSPORTATION

BUREAU OF TRANSPORTATION PLANNING

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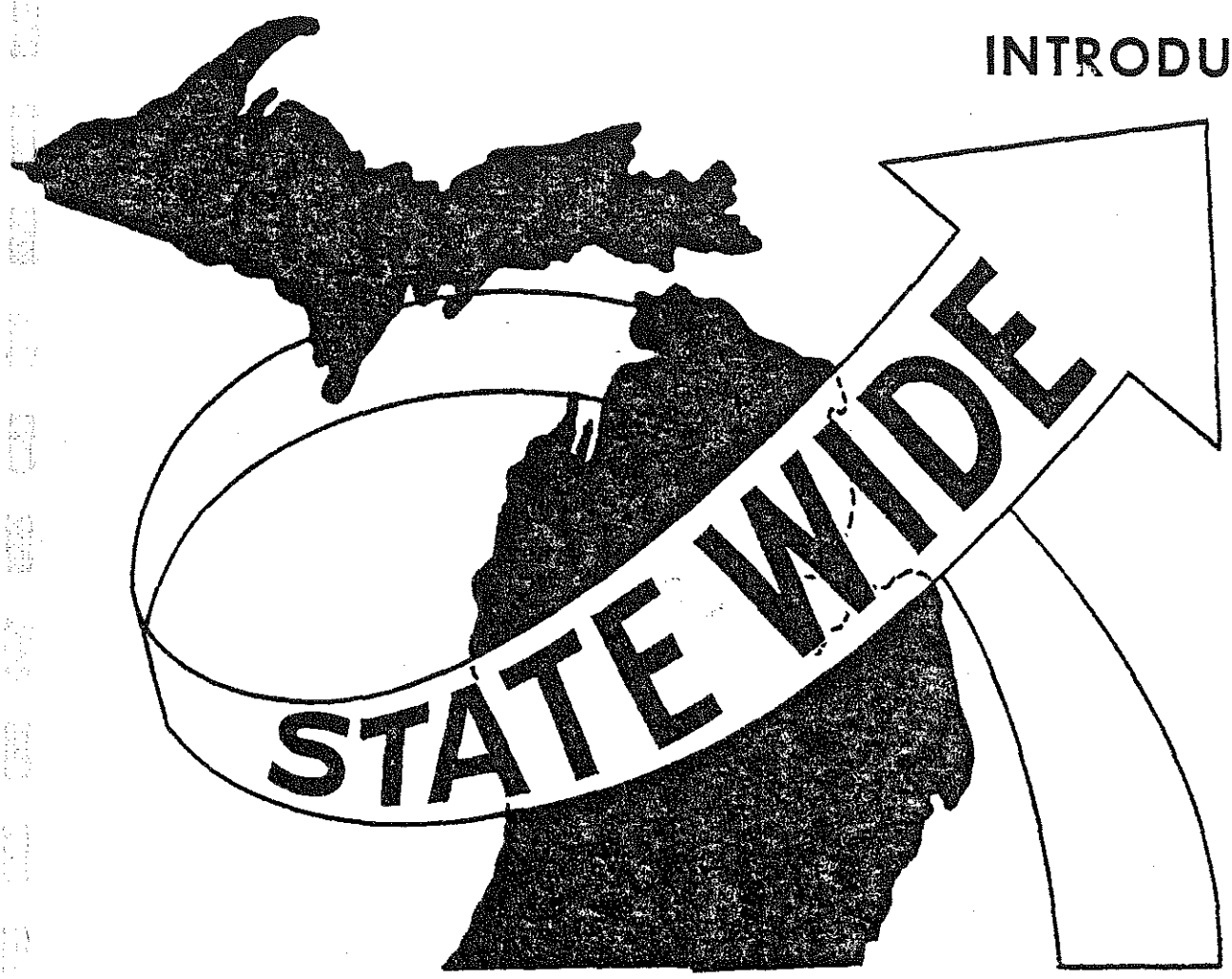
MINOR ORIGIN AND DESTINATION TRAVEL CHARACTERISTICS

BY: DAVID R SCHADE

INTRODUCTION



INTRODUCTION

The Statewide Procedures Section, Bureau of Transportation Planning, Department of State Highways and Transportation, has prepared a travel characteristics handbook in order to fully utilize information collected in minor origin and destination studies. The conversion of minor O&D studies to a single format made this handbook possible and is intended to supply the user with travel characteristics about a specific minor O&D study or a group of studies by region. The geographical locations of the minor O&D studies appear in Figure 1.

This handbook was organized at the regional level, with an individual book for each of the 14 planning regions. This format will allow the user to compare one region to another. There were no minor O&D studies taken in Regions 6 and 14; thus, no handbook is presently available for these regions. Each handbook contains the following sections:

1. Statewide Travel Characteristics Summaries
2. Regional Travel Characteristics Summaries
3. City Travel Characteristics Summaries in Alphabetical Order

The O&D data collection process is based upon the 547-zone system with Michigan consisting of 508 zones (Figure 2) and the remaining zones representing out-of-state locations (Figure 3). Each zone number corresponds to a specific city or area. Appendix A is a list of the zone number and its corresponding area. Basing the O&D data collection process around a single zone system allows the Department to fully utilize many of the analysis routines that were developed in conjunction with the statewide transportation modeling system. A list documenting other utilizations of the statewide modeling system follows on the next pages.

STATEWIDE SYSTEM DEVELOPMENT REPORTS

VOLUME I	- OBJECTIVES AND WORK PROGRAM
VOLUME I-A	- REGION 4 WORKSHOP TOPIC SUMMARIES
VOLUME I-B	- SINGLE AND MULTIPLE CORRIDOR ANALYSIS
VOLUME I-D	- PROXIMITY ANALYSIS
VOLUME I-E	- MODEL APPLICATION: COST-BENEFIT ANALYSIS
VOLUME I-F	- AIR AND NOISE POLLUTION
VOLUME I-G	- PSYCHOLOGICAL IMPACT MODEL
VOLUME I-H	- LEVEL OF SERVICE MODEL
VOLUME I-I	- STATEWIDE SOCIO-ECONOMIC AND TRANSPORTATION RESOURCES
VOLUME I-J	- SERVICE AREA MODEL
VOLUME I-K	- EFFECTIVE SPEED MODEL
VOLUME I-L	- SYSTEM IMPACT ANALYSIS GRAPHIC DISPLAY
VOLUME I-M	- MODELING GASOLINE CONSUMPTION
VOLUME I-O	- ACCIDENT RATES 547 ZONE SYSTEM
VOLUME I-P	- POPULATION PROJECTIONS 547 ZONE SYSTEM
VOLUME II	- DEVELOPMENT OF NETWORK MODELS
VOLUME II-A	- EFFICIENT NETWORK UPDATING WITH INTERACTIVE GRAPHICS
VOLUME II-B	- TREE PLOTTING WITH INTERACTIVE GRAPHICS
VOLUME II-C	- CALIBRATION OF MICHIGAN'S STATEWIDE TRAFFIC FORECASTING MODEL
VOLUME III	- SEGMENTAL MODEL
VOLUME III-A	- SEMI-AUTOMATIC NETWORK GENERATOR USING A "DIGITIZER"
VOLUME III-B	- AUTOMATIC NETWORK GENERATOR USING INTERACTIVE GRAPHICS
VOLUME IV	- AASHTO REPORT
VOLUME IV-A	- MICHIGAN'S STATEWIDE MODELING SYSTEM - SYNOPSIS
VOLUME V	- PART A - REFORMATION - TRIP DATA BANK PREPARATION
VOLUME V	- PART B - DEVELOPMENT OF SOCIO-ECONOMIC DATA BANK FOR TRIP GENERATION - DISTRIBUTION
VOLUME V-A	- SINGLE STATION O&D PROCEDURES MANUAL
VOLUME V-B	- EXTERNAL O&D PROCEDURES MANUAL
VOLUME VI	- CORRIDOR LOCATION DYNAMICS
VOLUME VI-A	- ENVIRONMENTAL SENSITIVITY COMPUTER MAPPING
VOLUME VII	- DESIGN HOUR VOLUME MODEL
VOLUME VII-A	- CAPACITY ADEQUACY FORECASTING MODEL
VOLUME VII-B	- MODELING MAJOR FACILITY OPENING IMPACT ON DHV
VOLUME VIII	- PUBLIC AND PRIVATE FACILITY FILE
VOLUME VIII-A	- CONVERSION OF INDUSTRIAL EXPANSION FILE
VOLUME IX	- SOCIO-ECONOMIC DATA FILE
VOLUME IX-A	- MAPPING SOCIO-ECONOMIC DATA WITH SYMAP
VOLUME IX-B	- CONVERSION OF THE AGRICULTURAL CENSUS FILE
VOLUME IX-C	- TAX RATE AND ASSESSED VALUATION INFORMATION
VOLUME IX-D	- SCHOOL DISTRICT DATA FILE
VOLUME X-A	- TRAVEL IMPACT ANALYSIS PROCEDURES
VOLUME X-A-1	- AUTOMATED DESIRELINE PLOTTING
VOLUME X-A-2	- TRAFFIC FORECASTING FOR A SPECIAL GENERATOR
VOLUME X-B	- SOCIAL IMPACT ANALYSIS PROCEDURES
VOLUME X-C	- ECONOMIC IMPACT ANALYSIS PROCEDURES
VOLUME XI	- COMPUTER RUN TIMES
VOLUME XIII	- MICHIGAN GOES MULTI-MODAL

VOLUME XIII-A - MULTI-MODAL MOBILITY AND ACCESSIBILITY ANALYSIS
VOLUME XIII-B - 1972 STATEWIDE RAIL NETWORK - SUMMARY TABULATIONS
VOLUME XIII-C - MICHIGAN'S RAIL CROSSING INVENTORY AND ANALYSIS PROCESS
VOLUME XIII-D - IMPACT OF POPULATION AND ENERGY ON TRANSPORTATION NEEDS - A MULTI-MODAL APPROACH
VOLUME XIV-A - COMMODITY FLOW MATRIX - ANN ARBOR RAILROAD
VOLUME XIV-B - COMMODITY FLOW MATRIX - PENN CENTRAL RAILROAD
VOLUME XIV-C - COMMODITY FLOW MATRIX - MICHIGAN RAILROADS 1% SAMPLE
VOLUME XV-A - RAILROAD FINANCIAL IMPACT ANALYSIS
VOLUME XV-B - RAILROAD COMMUNITY IMPACT ANALYSIS
VOLUME XVI - DIAL-A-RIDE
VOLUME XVII - INTERMODAL IMPACT ANALYSIS - TRUCK AND RAILROAD
VOLUME XVIII - CUTLINE ANALYSIS PROGRAM

STATEWIDE SYSTEM APPLICATION REPORTS

REPORT 1 - COMMUNITY COLLEGE SERVICE - AREA ANALYSIS
REPORT 2 - PROXIMITY OF PEOPLE TO GENERAL PURPOSE HOSPITALS
REPORT 3 - INDUSTRIAL PARK PROXIMITY ANALYSIS
REPORT 4 - PROXIMITY OF AUTOMOBILE INJURY ACCIDENTS TO HOSPITALS
REPORT 5 - PROXIMITY OF AIRPORTS WITH SCHEDULED SERVICE TO POPULATION
REPORT 6 - REGIONAL PARK PROXIMITY ANALYSIS
REPORT 7 - RIFLE RANGE PROXIMITY ANALYSIS
REPORT 8 - AMBULANCE SERVICE - AREA ANALYSIS
REPORT 9 - COMPREHENSIVE STATEWIDE PLANNING
REPORT 10 - GRAPHIC DISPLAY OF FIXED-OBJECT ACCIDENT DATA
REPORT 11 - PRELIMINARY INVESTIGATION: A TECHNIQUE FOR THE PROJECTION OF ACCIDENT RATES
REPORT 12 - IMPACT OF 50, 55, OR 60 M.P.H. STATEWIDE SPEED LIMIT
REPORT 13 - A METHOD FOR FUNCTIONALLY CLASSIFYING RURAL ARTERIAL HIGHWAYS
REPORT 14 - ECONOMIC AND TRAVEL IMPACTS OF SPEED LIMIT REDUCTION USING A STATEWIDE TRANSPORTATION MODELING SYSTEM
REPORT 15 - I-69 IMPACT ON THE ACCESSIBILITY OF HEALTH, FIRE, AND AMBULANCE SERVICES TO RESIDENTIAL AREAS
REPORT 16 - CRISIS OR OPPORTUNITY: APPLICATION OF AN OPERATIONAL STATEWIDE TRANSPORTATION MODELING SYSTEM
REPORT 17 - US-23 CORRIDOR LOCATION STUDY - PRELIMINARY TRAVEL IMPACT ANALYSIS
REPORT 19 - GRAPHIC DISPLAY OF ACCIDENT DATA
REPORT 20 - DEMOGRAPHIC INFORMATION FOR THE NORTHWEST REGION
REPORT 21 - AMTRAK MARKET AREA ANALYSIS - SYSTEM APPLICATION

STATEWIDE SYSTEM REFERENCE HANDBOOKS

REFERENCE HANDBOOK #1 - STATEWIDE BUS TICKET SURVEY TRAVEL CHARACTERISTICS
REFERENCE HANDBOOK #2 - MICHIGAN'S PERMANENT TRAFFIC RECORDER TRENDS - POTENTIAL APPLICATION IN TRANSPORTATION PLANNING - ENERGY ANALYSIS
REFERENCE HANDBOOK #3 - MINOR ORIGIN & DESTINATION TRAVEL CHARACTERISTICS - PART A

FIGURE 1

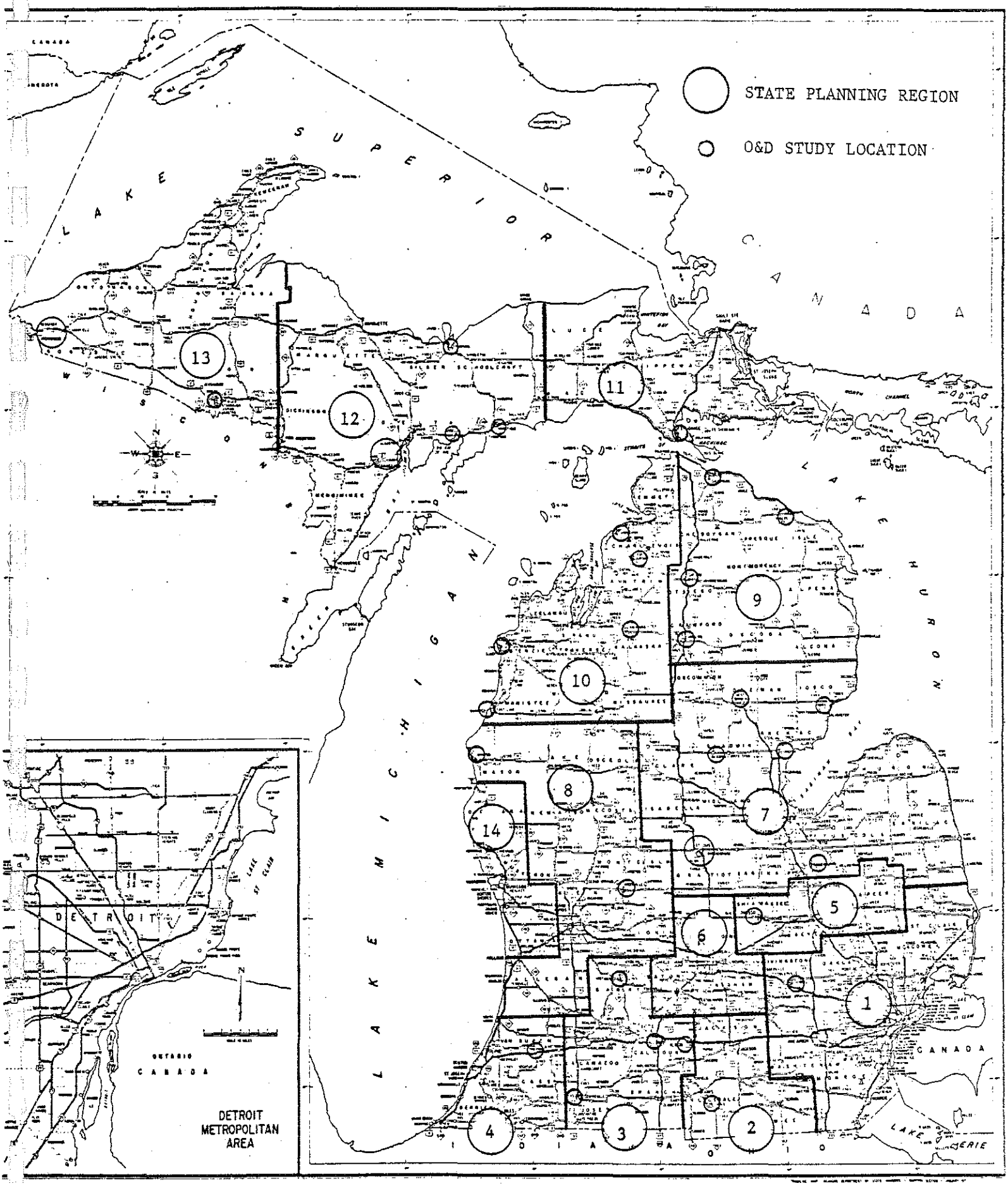
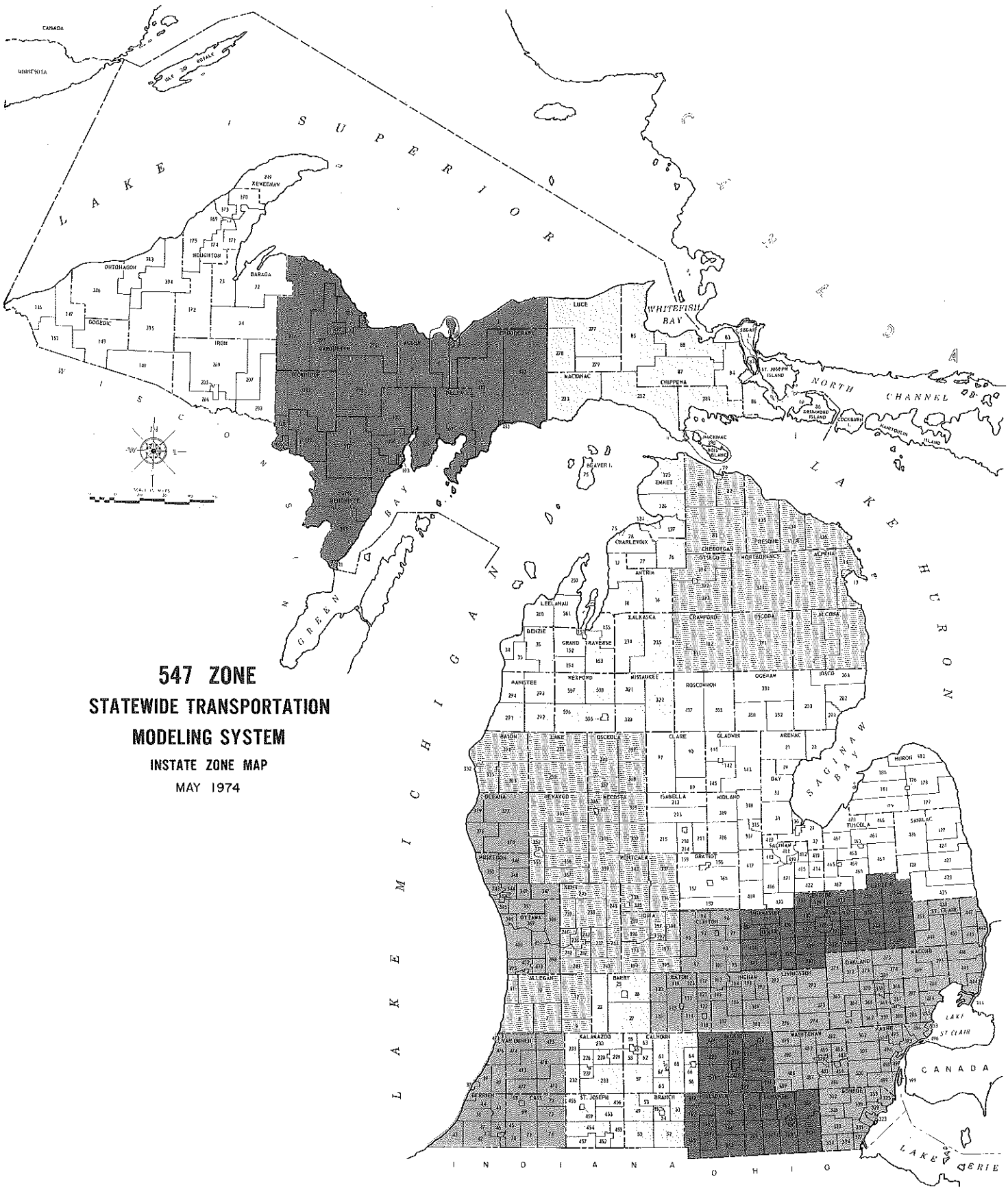

STATE PLANNING REGION
O&D STUDY LOCATION
LAKE SUPERIOR
CANADA
LAKE MICHIGAN
LAKE HURON
LAKE ERIE
13
12
11
9
10
8
14
7
5
6
1
4
3
2
DETROIT
LAKE ST CLAIR
ONTARIO
CANADA
DETROIT METROPOLITAN AREA

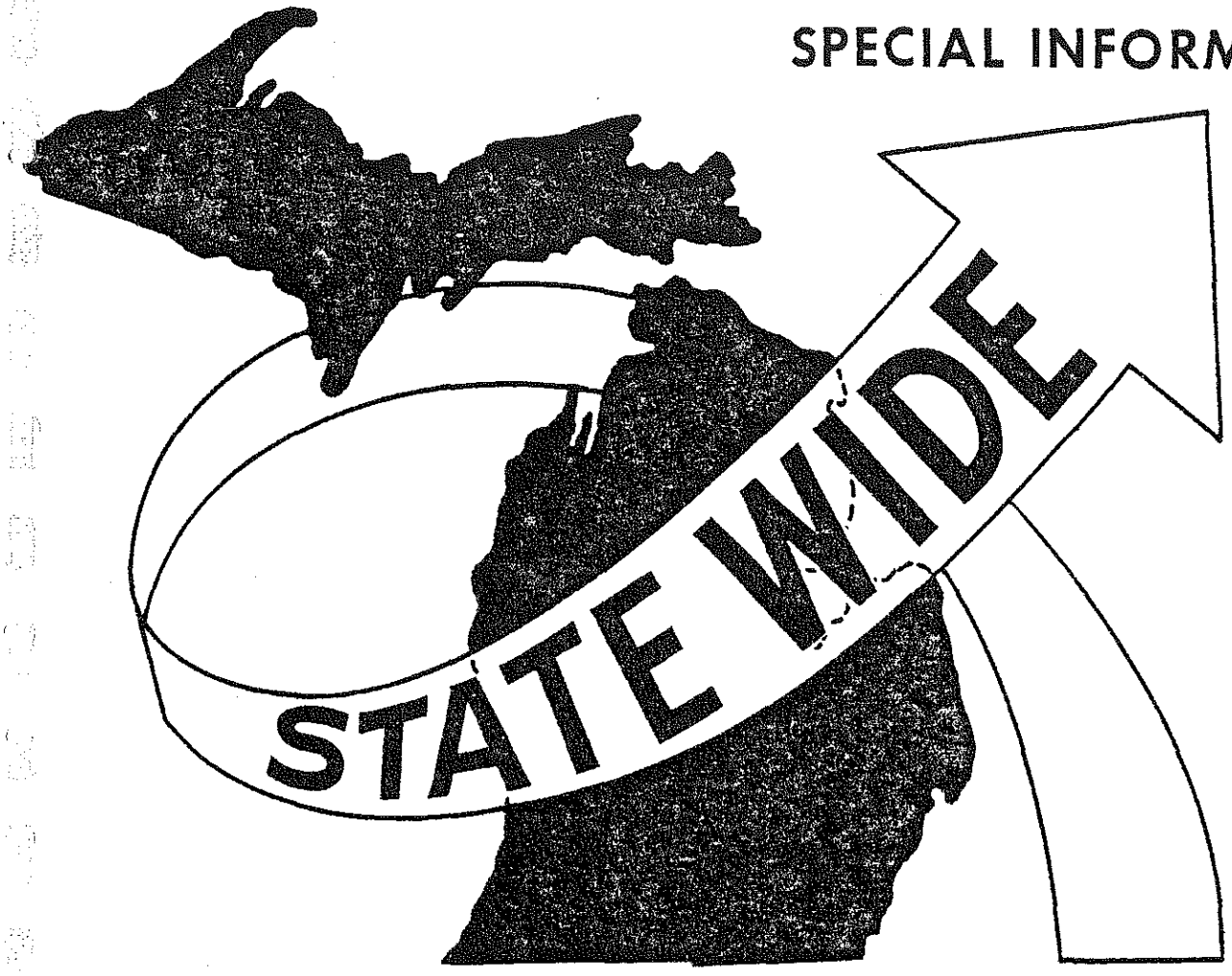
FIGURE 2


CANADA
MINNESOTA
ISLE ROYALE
LAKE SUPERIOR
WISCONSIN
GREEN BAY
LAKE MICHIGAN
LAKE HURON
SAGINAW BAY
WHITEFISH BAY
NORTH CHANNEL
LAKE ST CLAIR
CANADA
LAKE ERIE
INDIANA
OHIO
547 ZONE
STATEWIDE TRANSPORTATION
MODELING SYSTEM
INSTATE ZONE MAP
MAY 1974

MICHIGAN'S TRANSPORTATION MODELING SYSTEM

547 ZONE
OUTSTATE ANALYSIS ZONES

SPECIAL INFORMATION



SPECIAL INFORMATION

To properly evaluate the following handbook information, it is important to understand how the data is used. Each handbook has been set up to analyze the travel characteristics of minor O&D studies. It was necessary to use only terminal trips to analyze the travel impacts generated as a result of a specific city. These are trips that have an origin and/or destination in that city or study area. Any trips that were not terminal in relation to the study area were not used. Nonterminal trips are classified as "thru trips", those which pass through a given city or study area. Figures 4a and 4b show the effect thru trips would have on a city's true travel characteristics. It is obvious that including thru trips could greatly distort the travel pattern and the actual impacts a specific city has on its region.

There are some instances where the O&D city is not a statewide model zone in itself, such as in Figure 5a. Generally, this does not present a problem, but the reader should be made aware of it. The trips that go into the study city will be shown as going to the zone that surrounds the city. The ideal situation arises when the study cordon is set up as close to the city boundary as possible and the city represents its own zone, such as in Figure 5b.

FIGURE 5a

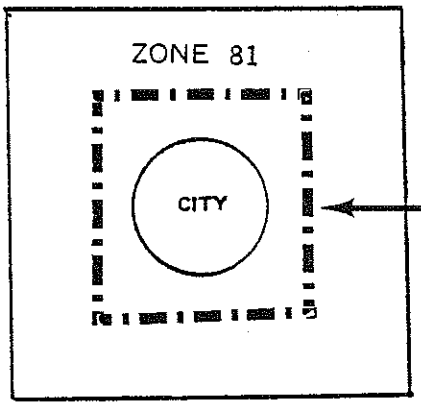
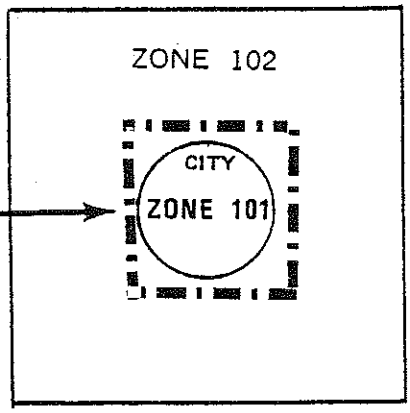


FIGURE 5b



STUDY CORDON

TERMINAL TRIPS ONLY

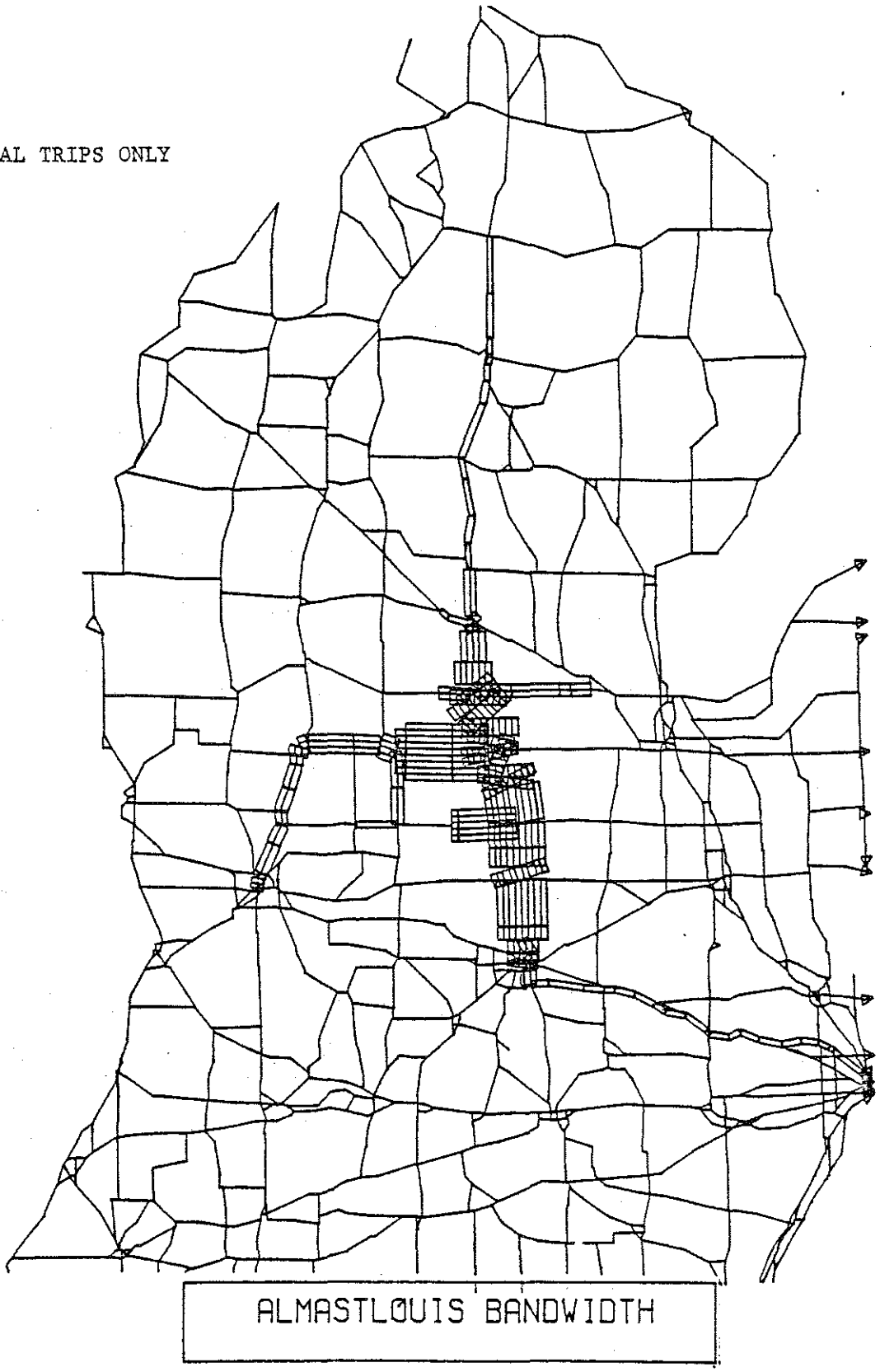
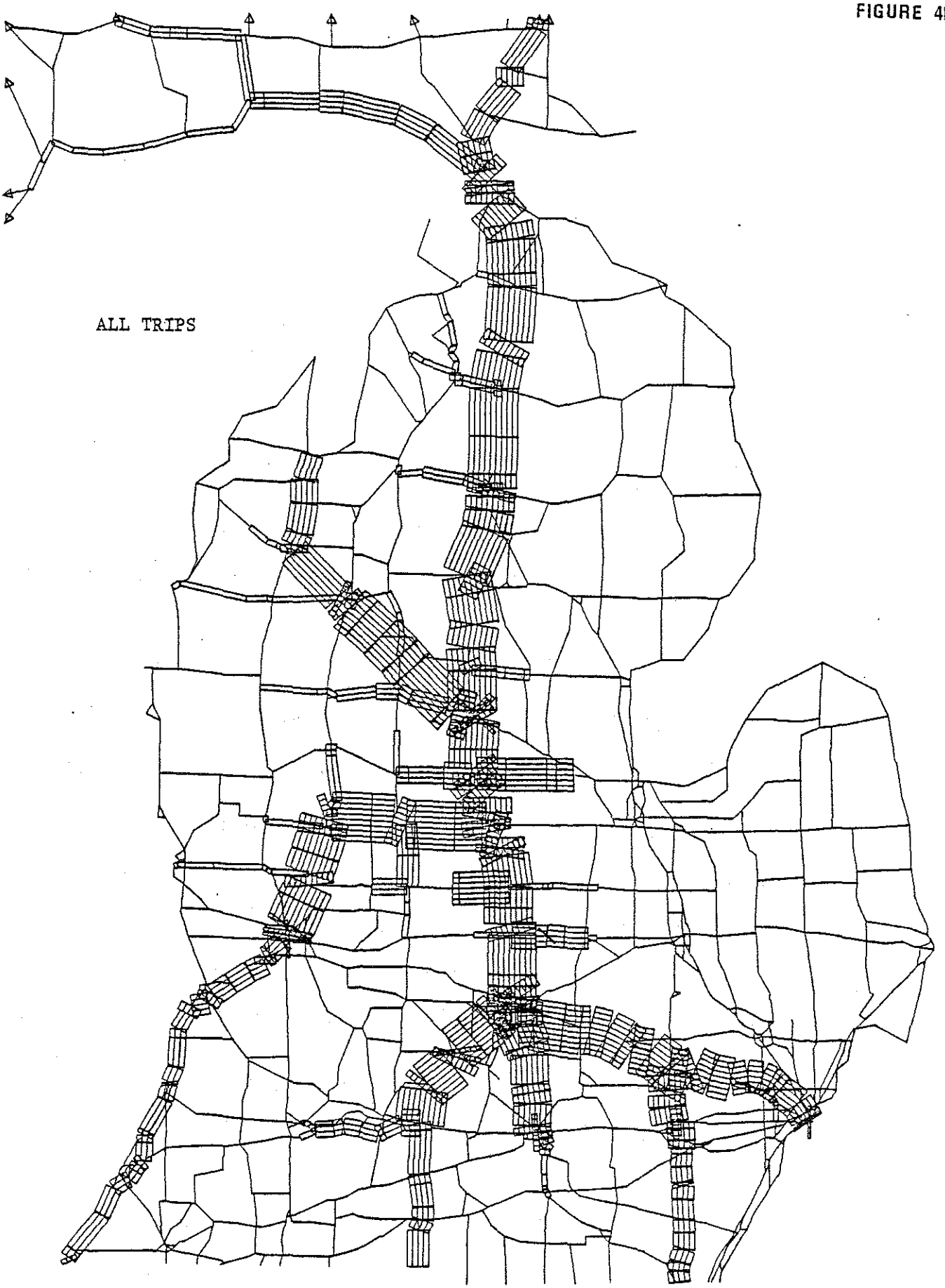


FIGURE 4b



ALMASTLOUIS BANDWIDTH

The travel analysis in this handbook is based on three main computer routines. These routines deal with three types of transportation analysis:

1. General Purpose Summary Program Tables
2. Trip Length Distribution Graphs
3. Selected Link Plots

The following is a brief explanation of the three areas:

General Purpose Summary Program (GPSP)

Terminal trips were summarized by vehicle type, trip purpose, number of occupants, and by where the vehicle is garaged (Figure 6). For example, in Figure 6, 34.8% of all trips to and from Cheboygan are work trips (4095 trips).

In addition to the straight percentage breakdowns and actual trips, cross tabulations of trip purpose versus vehicle occupancy and trip purpose versus vehicle type were supplied. Figure 7 shows that 75.1% of all work trips to and from Cheboygan have one person in the vehicle (3075 trips). These summaries like the previous data appear at the statewide, regional, and city levels.

Trip Length Distribution (TLD)

A trip length frequency distribution (TLD) is a graph that summaries the distribution of the length of trips in minutes for each study. In each handbook, TLD's are available at three levels:

1. Statewide
2. Regional
3. City

CHEBOYGAN

EXTERNAL ORIGIN-DESTINATION INTERVIEW

TERMINAL-TRIP SUMMARY TABLE

VEHICLE TYPE

CAR W/O TRLR	CAR W/ TRLR	PICK-UP W/O/TRLR	PICK-UP W/ TRLR	SINGLE-UNIT TRUCKS	COMBINATION TRUCKS
80.9%	1.0%	13.9%	0.4%	2.6%	1.3%
9533	113	1632	52	303	150

TRIP PURPOSE

	WORK	PERS BIZ	SHOP	VACATION	SOC-REC	OTHER
PERCENT OF TRIPS	34.8%	7.2%	30.5%	3.8%	17.2%	6.6%
NUMBER OF TRIPS	4095	848	3595	446	2021	779

NUMBER IN VEHICLE

1	2	3	4	5	6+
46.5%	27.7%	11.4%	7.5%	3.7%	3.2%
5479	3260	1342	883	440	379

VEHICLE GARAGED AT

ORIGIN	DESTIN	OTHER
40.4%	27.5%	32.1%
4762	3244	3777

TOTAL TRIPS = 11783

MINOR

EXTERNAL ORIGIN-DESTINATION INTERVIEW

TERMINAL-TRIP SUMMARY TABLE FOR CHEBOYGAN

TRIP PURPOSE

# IN VEH.	WORK	PERS BIZ	SHOP	VACATION	SOC-REC	OTHER
	PERCENT OF TOTAL WORK TRIPS					
	75.1%	43.3%	30.4%	8.6%	29.9%	39.0%
1	3075	367	1091	38	604	304
	NUMBER OF TRIPS					
	16.8%	36.0%	33.1%	40.4%	31.9%	32.2%
2	688	306	1191	180	644	251
	4.7%	11.4%	15.9%	14.5%	14.7%	15.7%
3	192	96	570	65	296	123
	2.4%	4.9%	11.2%	15.3%	10.5%	7.7%
4	99	41	402	68	212	60
	0.5%	2.7%	5.7%	12.0%	5.6%	3.4%
5	19	23	205	54	113	27
	0.5%	1.7%	3.8%	9.1%	7.5%	1.9%
6+	22	15	135	41	151	15
	100%	100%	100%	100%	100%	100%
TOTAL	4095	848	3595	446	2021	779

TOTAL TERMINAL-TRIPS FOR CHEBOYGAN = 11783

The left hand column of the chart (Figure 8) is the trip length in 10-minute increments. If a trip is less than 10 minutes, it was recorded as a 10-minute trip. All trips over the maximum time allowed by the program were recorded in the last time span.

The top row of the chart is the percent of total travel for that TLD. Figure 8 indicates that 40.460% of all work trips to and from Cheboygan are between 30-40 minutes. Each graph is for a specific trip purpose with the last chart showing all purposes combined.

At the bottom left of the TLD, the "volume table number" designates the trip purpose:

201 = work trips

202 = business trips

203 = shopping trips

204 = vacation trips

205 = other social or recreational trips

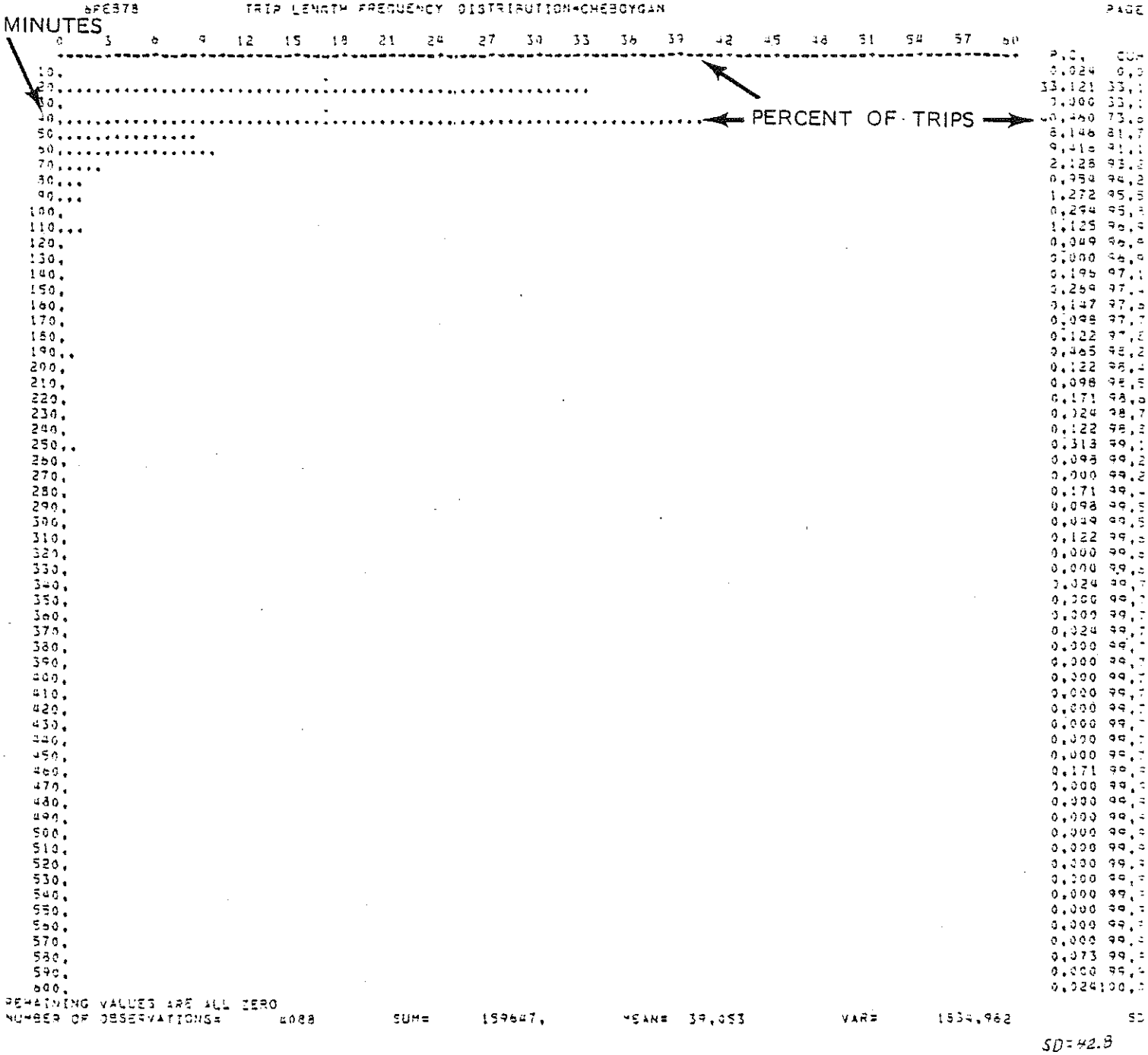
206 = all other trips

207 = total trips

Selected Link Plots

Selected link plots are available at the city level only. These plots are a diagram of the distribution of travel that has an origin or destination in the city and the probable routes on the state trunkline system this traffic used.

The magnitude of the travel on each highway link is shown by the bandwidths with each band's value representing 100 trips. The value assigned to the bands




```
APE378          TRIP LENGTH FREQUENCY DISTRIBUTION-CHEBOYGAN                    PAGE

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

                                                                                P.C.    CUM
  10,                                                                           0.024   0.0
  20,.....                                                                      33.121  33.1
  30,                                                                           0.000  33.1
  40,.....                                                                      40.460  73.6
  50,.............                                                               8.146  81.7
  60,..............                                                              9.416  91.1
  70,.....                                                                      2.128  93.2
  80,...                                                                        0.958  94.2
  90,...                                                                        1.272  95.5
 100,                                                                           0.294  95.8
 110,...                                                                        1.125  96.9
 120,                                                                           0.049  96.9
 130,                                                                           0.000  96.9
 140,                                                                           0.196  97.1
 150,                                                                           0.269  97.4
 160,                                                                           0.147  97.5
 170,                                                                           0.098  97.7
 180,                                                                           0.122  97.8
 190,.                                                                          0.465  98.2
 200,                                                                           0.122  98.4
 210,                                                                           0.098  98.5
 220,                                                                           0.171  98.6
 230,                                                                           0.024  98.7
 240,                                                                           0.122  98.8
 250,.                                                                          0.318  99.1
 260,                                                                           0.098  99.2
 270,                                                                           0.000  99.2
 280,                                                                           0.171  99.4
 290,                                                                           0.098  99.5
 300,                                                                           0.049  99.5
 310,                                                                           0.122  99.6
 320,                                                                           0.000  99.6
 330,                                                                           0.000  99.6
 340,                                                                           0.024  99.7
 350,                                                                           0.000  99.7
 360,                                                                           0.000  99.7
 370,                                                                           0.024  99.7
 380,                                                                           0.000  99.7
 390,                                                                           0.000  99.7
 400,                                                                           0.000  99.7
 410,                                                                           0.000  99.7
 420,                                                                           0.000  99.7
 430,                                                                           0.000  99.7
 440,                                                                           0.000  99.7
 450,                                                                           0.000  99.7
 460,                                                                           0.171  99.8
 470,                                                                           0.000  99.8
 480,                                                                           0.000  99.8
 490,                                                                           0.000  99.8
 500,                                                                           0.000  99.8
 510,                                                                           0.000  99.8
 520,                                                                           0.000  99.8
 530,                                                                           0.000  99.8
 540,                                                                           0.000  99.8
 550,                                                                           0.000  99.8
 560,                                                                           0.000  99.8
 570,                                                                           0.000  99.8
 580,                                                                           0.073  99.8
 590,                                                                           0.000  99.8
 600,                                                                           0.024 100.0
REMAINING VALUES ARE ALL ZERO
NUMBER OF OBSERVATIONS=      4088        SUM=      159647,        MEAN=  39.053        VAR=      1834.962        SD

                                                                                SD=42.8

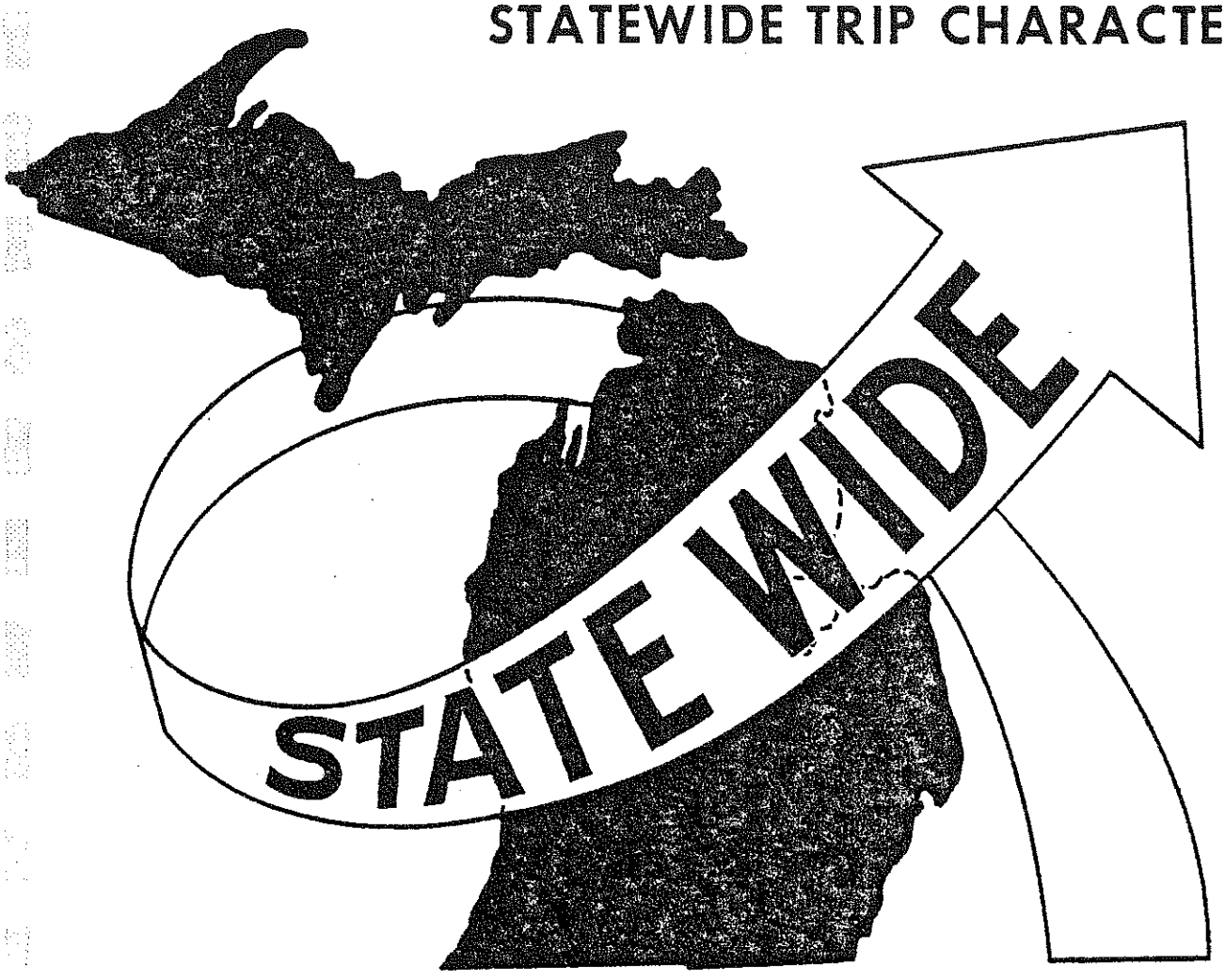
TOTAL TRIPS OVER MAX=     =        0
TOTAL TRIPS OVER 255      =        0
VOLUME TABLE NUMBER       =      201
SKIM TREE NUMBER          =      101
```

is the same for all cities. Using the same value accomplishes two purposes:

1. simplifies the reading of the plots
2. shows the importance of one city relative to another

These plots, using the constant bandwidth values, can be used to identify the service area of a city and the function one city plays relative to another.

STATEWIDE TRIP CHARACTERISTICS



MINOR

EXTERNAL ORIGIN-DESTINATION INTERVIEW

TERMINAL-TRIP SUMMARY TABLE

VEHICLE TYPE

REGION	CAR W/O TRLR	CAR W/ TRLR	PICK-UP W/O/TRLR	PICK-UP W/ TRLR	SINGLE-UNIT TRUCKS	COMBINATION TRUCKS
1	81.1% 26968	0.4% 119	14.6% 4859	0.2% 64	2.8% 924	1.0% 324
2	78.3% 16424	0.2% 50	16.3% 3425	0.2% 49	3.3% 686	1.6% 343
3	79.6% 57205	0.3% 203	14.5% 10427	0.2% 145	3.7% 2669	1.8% 1261
4	80.6% 13958	0.3% 50	15.2% 2627	0.2% 41	2.8% 479	1.0% 172
5	77.6% 22200	0.4% 100	15.3% 4390	0.2% 54	4.2% 1192	2.4% 675
6	0.0% 0	0.0% 0	0.0% 0	0.0% 0	0.0% 0	0.0% 0
7	78.1% 59871	0.8% 646	14.9% 11455	0.4% 282	3.8% 2936	2.0% 1508
8	79.8% 50406	0.7% 463	14.2% 8987	0.4% 222	3.4% 2139	1.5% 959
9	78.4% 43329	2.0% 1096	12.9% 7134	0.4% 232	4.8% 2625	1.5% 845
10	79.8% 40959	0.8% 416	14.0% 7210	0.3% 142	3.6% 1841	1.5% 762
11	78.8% 9864	3.3% 416	12.7% 1592	0.5% 69	4.1% 508	0.6% 73
12	76.8% 21307	1.5% 409	15.5% 4303	0.5% 133	3.5% 961	2.2% 614
13	76.1% 19369	1.1% 278	17.3% 4399	0.4% 114	3.8% 960	1.4% 348
14	0.0% 0	0.0% 0	0.0% 0	0.0% 0	0.0% 0	0.0% 0
STATE	78.9% 381860	0.9% 4247	14.6% 70806	0.3% 1546	3.7% 17922	1.6% 7884

TABLE SHOWS PCT OF EXPANDED ORIGIN-DESTINATION INTERVIEWS FOR EACH CATEGORY IN THE REGION. ACTUAL TRIPS BELOW EACH PCT DOES NOT REPRESENT ALL TRAVEL IN THE REGION--ONLY THAT INTERVIEWED.

MINOR

EXTERNAL ORIGIN-DESTINATION INTERVIEW

TERMINAL-TRIP SUMMARY TABLE

TRIP PURPOSE

REGION	WORK	PERS BIZ	SHOP	VACATION	SOC-REC	OTHER
1	40.7% 13537	10.7% 3573	19.1% 6350	0.7% 229	16.6% 5512	12.2% 4056
2	48.1% 10082	7.1% 1486	19.8% 4147	0.1% 22	12.1% 2540	12.9% 2702
3	46.7% 33564	7.2% 5146	18.2% 13123	0.8% 607	15.4% 11098	11.6% 8372
4	34.8% 6026	9.5% 1653	23.5% 4077	2.4% 416	16.7% 2886	13.1% 2268
5	51.9% 14847	9.3% 2662	14.5% 4160	0.2% 71	12.9% 3693	11.1% 3179
6	0.0% 0	0.0% 0	0.0% 0	0.0% 0	0.0% 0	0.0% 0
7	38.8% 29779	9.9% 7609	20.7% 15856	3.5% 2723	16.2% 12429	10.8% 8302
8	39.4% 24916	8.0% 5070	22.4% 14124	2.7% 1690	17.1% 10810	10.4% 6565
9	33.4% 18432	7.0% 3852	27.9% 15443	7.4% 4108	15.9% 8782	8.4% 4645
10	35.5% 18224	8.1% 4140	19.9% 10189	6.6% 3371	19.8% 10168	10.2% 5237
11	19.0% 2380	4.3% 536	12.3% 1536	36.1% 4516	18.8% 2354	9.6% 1200
12	32.7% 9072	8.0% 2208	22.5% 6240	7.0% 1934	21.4% 5942	8.4% 2331
13	29.5% 7520	6.9% 1762	23.7% 6047	6.9% 1754	21.4% 5452	11.5% 2933
14	0.0% 0	0.0% 0	0.0% 0	0.0% 0	0.0% 0	0.0% 0
TATE	38.9% 188380	8.2% 39698	20.9% 101291	4.4% 21441	16.9% 81666	10.7% 51789

TABLE SHOWS PCT OF EXPANDED ORIGIN-DESTINATION INTERVIEWS FOR EACH CATEG ORY IN THE REGION. ACTUAL TRIPS BELOW EACH PCT DOES NOT REPRESENT ALL TR AVEL IN THE REGION--ONLY THAT INTERVIEWED.

MINOR

EXTERNAL ORIGIN-DESTINATION INTERVIEW

TERMINAL-TRIP SUMMARY TABLE

NUMBER IN VEHICLE

REGION	1	2	3	4	5	6+
1	60.5% 20136	23.2% 7713	8.9% 2968	4.3% 1424	1.7% 575	1.3% 440
2	64.1% 13437	24.0% 5044	7.6% 1596	2.8% 589	0.9% 183	0.6% 129
3	62.6% 45020	23.7% 17048	7.6% 5476	3.6% 2562	1.5% 1100	1.0% 703
4	56.8% 9848	25.4% 4399	9.5% 1638	5.3% 911	1.9% 337	1.1% 194
5	65.9% 18855	22.4% 6399	6.9% 1982	3.1% 882	1.0% 290	0.7% 204
6	0.0% 0	0.0% 0	0.0% 0	0.0% 0	0.0% 0	0.0% 0
7	53.8% 41250	26.0% 19974	9.8% 7530	5.8% 4455	2.5% 1906	2.1% 1582
8	53.9% 34083	26.3% 16585	9.7% 6113	5.6% 3554	2.5% 1552	2.0% 1289
9	44.4% 24536	28.7% 15864	11.3% 6246	8.2% 4551	3.8% 2094	3.6% 1971
10	50.6% 25964	27.7% 14196	10.3% 5275	6.5% 3340	2.7% 1410	2.2% 1144
11	27.5% 3445	30.5% 3815	14.1% 1767	14.3% 1785	7.0% 878	6.7% 833
12	44.9% 12450	28.8% 7980	11.7% 3244	7.6% 2115	4.0% 1118	3.0% 820
13	47.8% 12184	30.5% 7779	10.8% 2738	6.0% 1520	2.9% 728	2.0% 520
14	0.0% 0	0.0% 0	0.0% 0	0.0% 0	0.0% 0	0.0% 0
STATE	53.9% 261207	26.2% 126796	9.6% 46574	5.7% 27688	2.5% 12170	2.0% 9829

TABLE SHOWS PCT OF EXPANDED ORIGIN-DESTINATION INTERVIEWS FOR EACH CATEGORY IN THE REGION. ACTUAL TRIPS BELOW EACH PCT DOES NOT REPRESENT ALL TRAVEL IN THE REGION--ONLY THAT INTERVIEWED.

MINOR

EXTERNAL ORIGIN-DESTINATION INTERVIEW

TERMINAL-TRIP SUMMARY TABLE

VEHICLE GARAGED AT

REGION	ORIGIN	DESTIN	OTHER
1	44.6% 14820	35.1% 11660	20.4% 6777
2	46.9% 9845	37.2% 7801	15.9% 3332
3	46.1% 33165	37.0% 26580	16.9% 12164
4	44.4% 7686	34.4% 5966	21.2% 3675
5	50.0% 14319	39.4% 11277	10.5% 3015
6	0.0% 0	0.0% 0	0.0% 0
7	44.1% 33808	35.2% 27011	20.7% 15879
8	43.6% 27521	35.0% 22118	21.4% 13536
9	37.0% 20468	27.9% 15401	35.1% 19392
10	38.1% 19557	30.5% 15640	31.4% 16132
11	20.7% 2589	19.5% 2445	59.8% 7488
12	42.6% 11810	32.6% 9034	24.8% 6883
13	38.9% 9902	33.4% 8504	27.7% 7063
14	0.0% 0	0.0% 0	0.0% 0
TATE	42.4% 205492	33.7% 163438	23.8% 115335

TABLE SHOWS PCT OF EXPANDED ORIGIN-DESTINATION INTERVIEWS FOR EACH CATEG ORY IN THE REGION. ACTUAL TRIPS BELOW EACH PCT DOES NOT REPRESENT ALL TR AVEL IN THE REGION--ONLY THAT INTERVIEWED.

MINOR

EXTERNAL ORIGIN-DESTINATION INTERVIEW

TERMINAL-TRIP SUMMARY TABLE FOR STATE

TRIP PURPOSE

# IN VEH.	WORK	PERS BTZ	SHOP	VACATION	SOC-REC	OTHER
1	79.7% 150202	49.5% 19644	38.5% 39042	6.8% 1468	35.5% 29020	42.2% 21831
2	15.1% 28469	31.1% 12354	33.7% 34147	37.9% 8123	33.0% 26925	32.4% 16777
3	3.4% 6354	10.6% 4202	14.0% 14150	17.2% 3690	13.9% 11381	13.1% 6796
4	1.2% 2215	5.3% 2107	7.7% 7821	20.3% 4353	9.3% 7575	7.0% 3617
5	0.4% 697	2.1% 844	3.5% 3544	9.5% 2036	4.3% 3495	3.0% 1554
6+	0.2% 442	1.4% 546	2.6% 2586	8.3% 1770	4.0% 3270	2.3% 1214
TOTAL	100% 188380	100% 39698	100% 101291	100% 21441	100% 81666	100% 51789

TOTAL TERMINAL-TRIPS FOR ALL STUDIES IN REGION = 484264

TABLE SHOWS PCT OF EXPANDED ORIGIN-DESTINATION INTERVIEWS FOR EACH CATEG ORY IN THE REGION. ACTUAL TRIPS BELOW EACH PCT DOES NOT REPRESENT ALL TR AVEL IN THE REGION--ONLY THAT INTERVIEWED.

MINOR

EXTERNAL ORIGIN-DESTINATION INTERVIEW

TERMINAL-TRIP SUMMARY TABLE FOR STATE

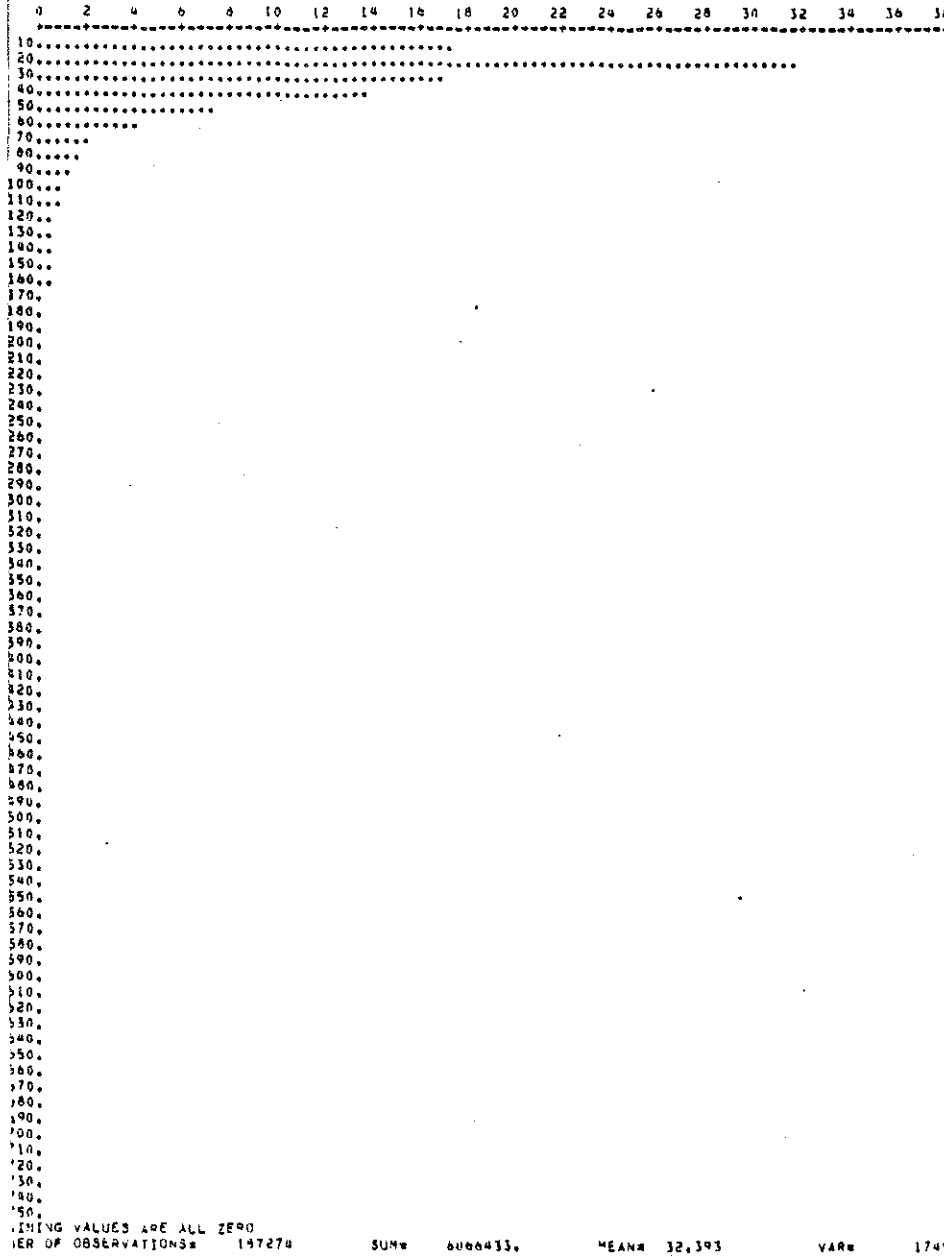
TRIP PURPOSE

VEH TYPE	WORK	PERS BIZ	SHOP	VACATION	SOC-RFC	OTHER
CAR W/O TRLR	66.1% 124466	85.0% 33758	86.4% 87559	82.9% 17775	89.4% 73046	87.4% 45256
CAR W/ TRLR	0.2% 422	0.6% 226	0.8% 805	7.0% 1501	1.1% 922	0.7% 371
PICK-UP W/O/TRLR	21.1% 39816	13.5% 5367	11.8% 11931	5.5% 1171	8.5% 6937	10.8% 5583
PICK-UP W/ TRLR	0.4% 670	0.2% 71	0.2% 171	1.3% 280	0.3% 250	0.2% 104
SINGLE-UNIT TRUCKS	8.2% 15420	0.6% 250	0.7% 754	3.0% 634	0.5% 443	0.8% 421
COMBINATION TRUCKS	4.0% 7585	0.1% 27	0.1% 71	0.4% 80	0.1% 68	0.1% 54
TOTAL	100% 188380	100% 39698	100% 101291	100% 21441	100% 81666	100% 51789

TOTAL TERMINAL-TRIPS FOR ALL STUDIES IN REGION = 484264

TABLE SHOWS PCT OF EXPANDED ORIGIN-DESTINATION INTERVIEWS FOR EACH CATEGORY IN THE REGION. ACTUAL TRIPS BELOW EACH PCT DOES NOT REPRESENT ALL TRAVEL IN THE REGION--ONLY THAT INTERVIEWED.

IHAR78 TRIP LENGTH FREQUENCY DISTRIBUTION-TOT PAGE 2



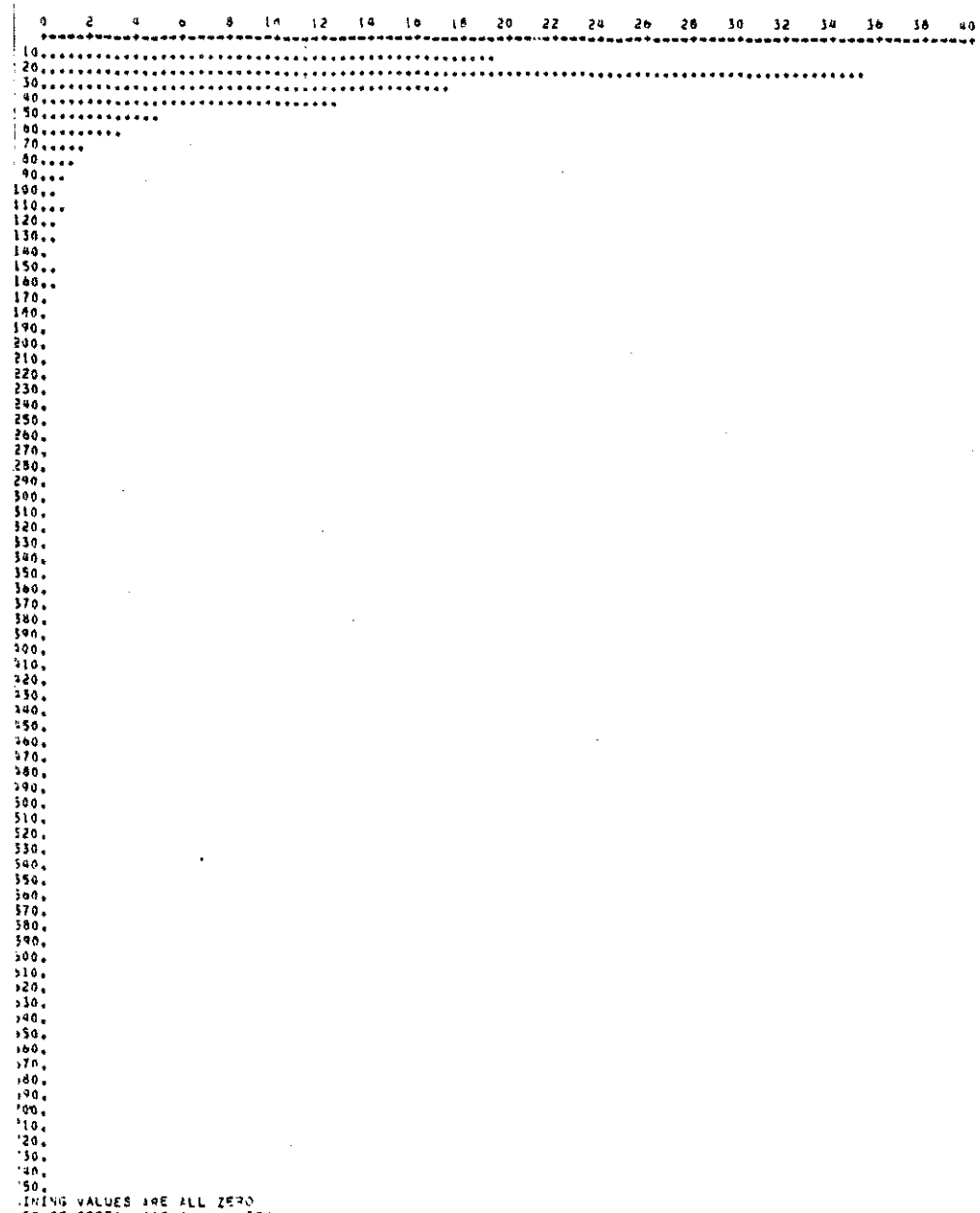
	P.C.	CUM.	ACTUAL
10	17.038	17,038	31407
20	31.697	48,735	58361
30	16.806	65,541	31474
40	13.658	79,199	25578
50	7.157	86,356	13403
60	3.848	90,204	7206
70	1.948	92,153	3649
80	1.561	93,714	2924
90	1.170	94,885	2192
100	0.637	95,521	1192
110	0.908	96,429	1701
120	0.591	97,020	1107
130	0.399	97,420	748
140	0.232	97,652	434
150	0.214	97,865	400
160	0.372	98,237	696
170	0.140	98,377	262
180	0.146	98,523	274
190	0.173	98,696	324
200	0.135	98,831	253
210	0.075	98,906	141
220	0.088	98,994	164
230	0.133	99,127	250
240	0.075	99,203	141
250	0.138	99,341	259
260	0.061	99,402	114
270	0.056	99,457	104
280	0.029	99,486	54
290	0.059	99,545	110
300	0.030	99,575	57
310	0.022	99,597	41
320	0.038	99,635	71
330	0.026	99,661	49
340	0.024	99,685	45
350	0.034	99,720	64
360	0.014	99,734	27
370	0.034	99,768	64
380	0.011	99,779	21
390	0.010	99,789	18
400	0.014	99,803	27
410	0.004	99,807	7
420	0.011	99,818	20
430	0.008	99,826	15
440	0.036	99,862	68
450	0.012	99,874	22
460	0.015	99,889	28
470	0.017	99,905	31
480	0.006	99,912	12
490	0.011	99,923	20
500	0.003	99,925	5
510	0.004	99,930	8
520	0.008	99,938	15
530	0.002	99,940	4
540	0.006	99,946	11
550	0.003	99,948	5
560	0.005	99,953	9
570	0.002	99,955	3
580	0.008	99,963	15
590	0.006	99,968	11
600	0.003	99,971	5
610	0.005	99,977	10
620	0.001	99,978	2
630	0.000	99,978	0
640	0.000	99,978	0
650	0.001	99,978	1
660	0.003	99,981	5
670	0.002	99,982	3
680	0.001	99,983	1
690	0.005	99,988	9
700	0.001	99,989	2
710	0.000	99,989	0
720	0.000	99,989	0
730	0.000	99,989	0
740	0.002	99,991	4
750	0.009	100,000	17

ISING VALUES ARE ALL ZERO
BER OF OBSERVATIONS= 197278 SUM= 6386433. MEAN= 32.393 VAR= 1745.897 SD= 41.784

L TRIPS OVER MAXP = 17
L TRIPS OVER 255 = 0
ME TABLE NUMBER = 201
TREE NUMBER = 101

WORK TRIPS

CHART8 TRIP LENGTH FREQUENCY DISTRIBUTION-TOT PAGE 3

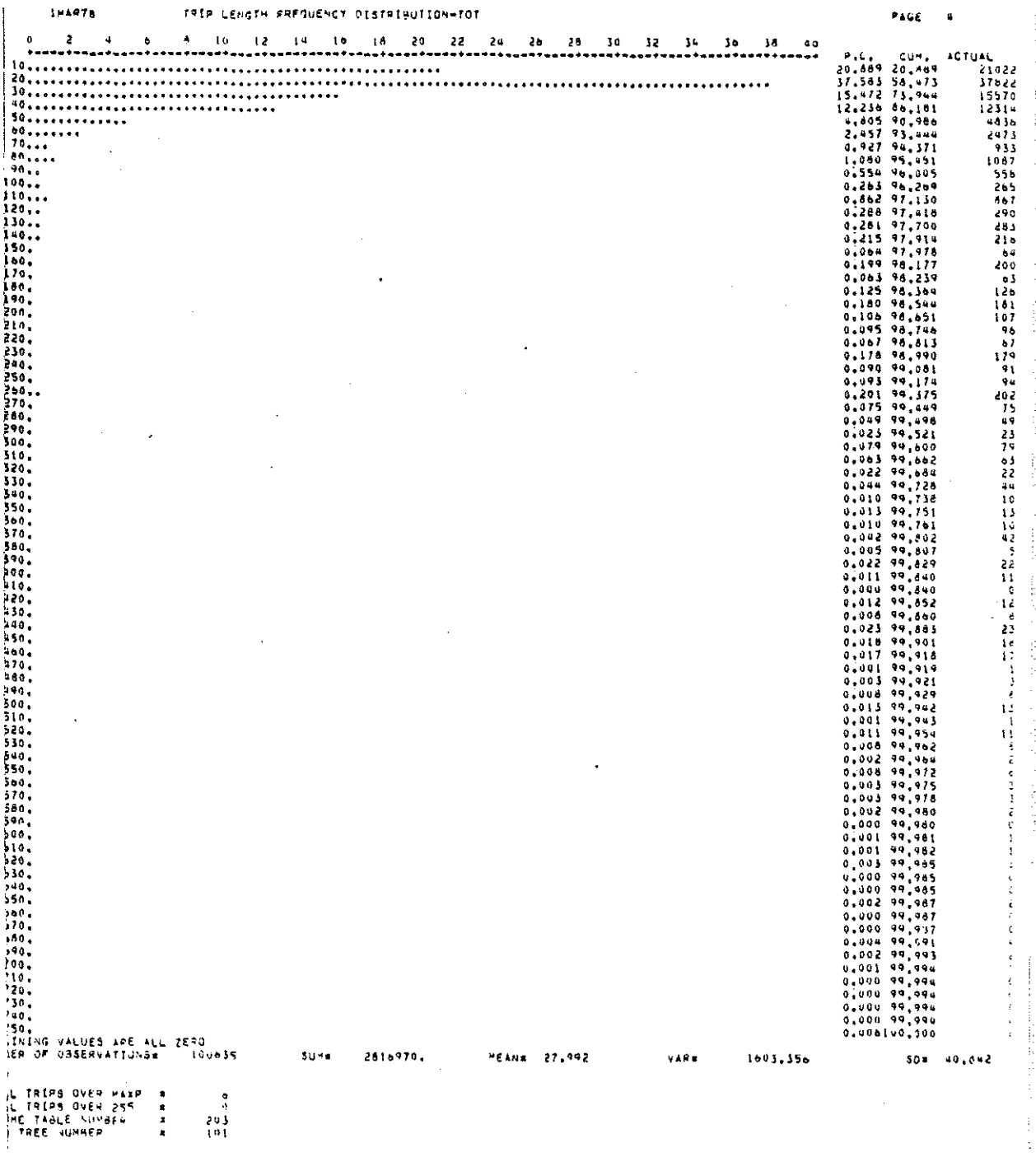


	P.C.	CUM.	ACTUAL
10	19.028	19.028	746
20	35.341	54.369	1392
30	17.227	71.596	678
40	12.596	84.192	496
50	4.900	89.092	193
60	3.007	92.098	118
70	1.540	93.639	60
80	1.108	94.745	43
90	0.812	95.557	32
100	0.487	96.044	19
110	0.787	96.831	31
120	0.370	97.201	14
130	0.279	97.480	11
140	0.186	97.666	7
150	0.218	97.884	8
160	0.520	98.404	20
170	0.140	98.544	5
180	0.119	98.663	4
190	0.165	98.830	6
200	0.137	98.967	5
210	0.104	99.071	4
220	0.084	99.155	3
230	0.065	99.218	2
240	0.069	99.287	2
250	0.069	99.355	2
260	0.071	99.427	2
270	0.089	99.515	3
280	0.036	99.551	1
290	0.023	99.574	
300	0.053	99.627	2
310	0.020	99.647	
320	0.028	99.675	1
330	0.025	99.701	1
340	0.028	99.728	1
350	0.025	99.754	1
360	0.000	99.754	
370	0.020	99.774	
380	0.005	99.779	
390	0.005	99.784	
400	0.005	99.789	
410	0.008	99.797	
420	0.018	99.815	
430	0.013	99.827	
440	0.005	99.833	
450	0.005	99.838	
460	0.010	99.848	
470	0.020	99.868	
480	0.008	99.876	
490	0.000	99.876	
500	0.010	99.886	
510	0.005	99.891	
520	0.013	99.904	
530	0.008	99.911	
540	0.008	99.919	
550	0.000	99.919	
560	0.000	99.919	
570	0.005	99.924	
580	0.005	99.929	
590	0.005	99.934	
600	0.008	99.942	
610	0.003	99.944	
620	0.005	99.949	
630	0.010	99.959	
640	0.000	99.959	
650	0.005	99.964	
660	0.000	99.964	
670	0.015	99.980	
680	0.003	99.982	
690	0.008	99.990	
700	0.005	99.995	
710	0.000	99.995	
720	0.000	99.995	
730	0.000	99.995	
740	0.000	99.995	
750	0.005	100.000	

INING VALUES ARE ALL ZERO
ER OF OBSERVATIONS= 39410 SUM= 1165781. MEAN= 29.581 VAR= 1678.348 SD= 40.966

L TRIPS OVER MAX = 2
L TRIPS OVER 255 = 0
ME TABLE NUMBER = 202
TREE NUMBER = 101

PERS.BUSINESS TRIPS



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    1HART8          TRIP LENGTH FREQUENCY DISTRIBUTION-TOT                    PAGE   8

  0   2   4   6   8  10  12  14  16  18  20  22  24  26  28  30  32  34  36  38  40
  +---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+
10.*****************************************************
20.*****************************************************************************
30.*************************************
40.*******************************
50.************
60.*******
70.***
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90..
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680.
690.
700.
710.
720.
730.
740.
750.
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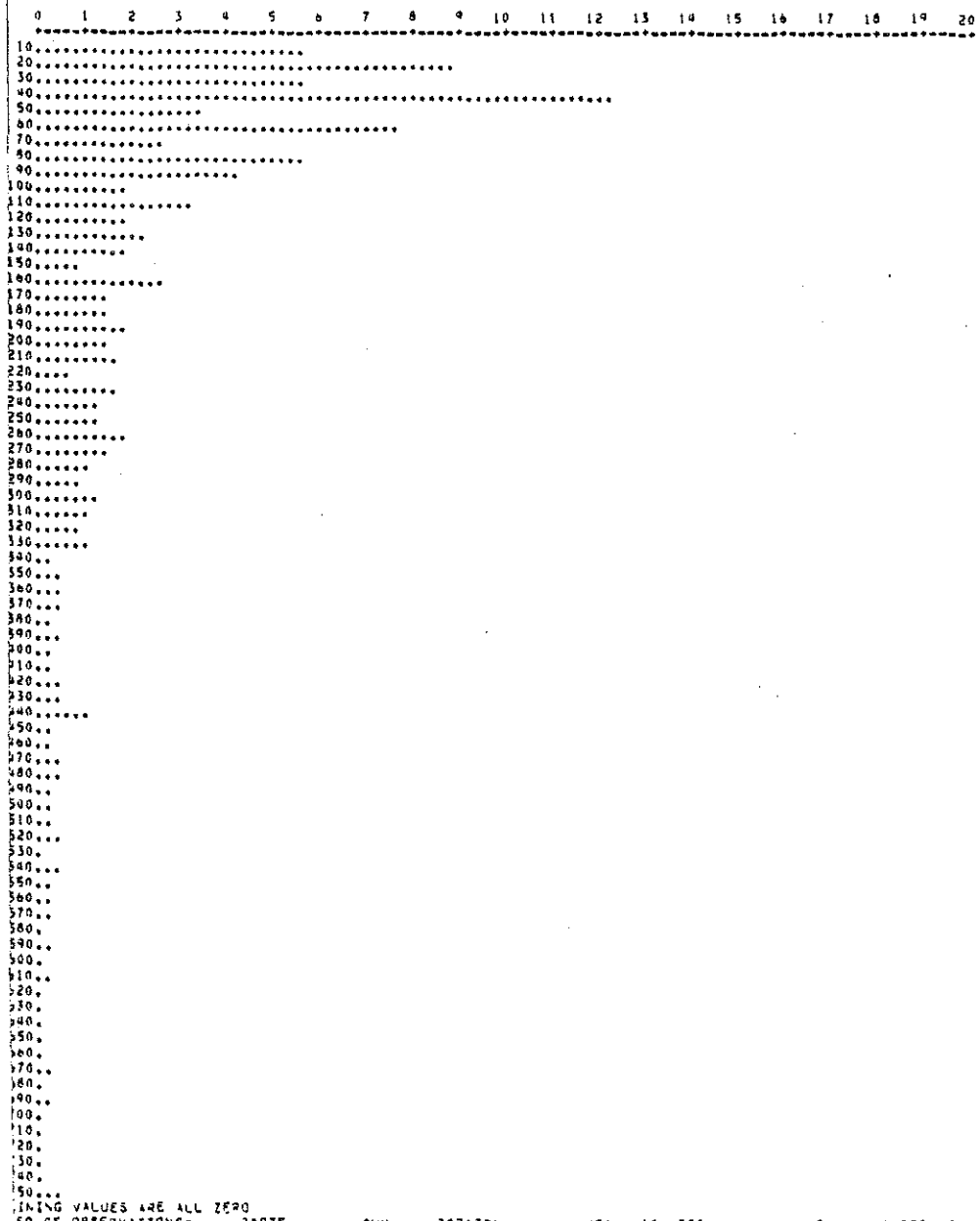
P.C.	CUM.	ACTUAL
20.889	20.889	21022
37.585	58.473	37822
15.472	73.944	15570
12.238	86.181	12314
4.805	90.986	4836
2.457	93.444	2473
0.927	94.371	933
1.080	95.451	1087
0.554	96.005	558
0.263	96.269	265
0.862	97.130	867
0.288	97.418	290
0.281	97.700	283
0.215	97.914	216
0.064	97.978	64
0.199	98.177	200
0.063	98.239	63
0.125	98.364	126
0.180	98.544	181
0.106	98.651	107
0.095	98.746	96
0.067	98.813	67
0.178	98.990	179
0.090	99.081	91
0.093	99.174	94
0.201	99.375	202
0.075	99.449	75
0.049	99.498	49
0.023	99.521	23
0.079	99.600	79
0.063	99.662	63
0.022	99.684	22
0.044	99.728	44
0.010	99.738	10
0.013	99.751	13
0.010	99.761	10
0.042	99.802	42
0.005	99.807	5
0.022	99.829	22
0.011	99.840	11
0.000	99.840	0
0.012	99.852	12
0.006	99.860	6
0.023	99.885	23
0.016	99.901	16
0.017	99.918	17
0.001	99.919	1
0.003	99.921	3
0.008	99.929	8
0.015	99.944	15
0.001	99.945	1
0.011	99.956	11
0.006	99.962	6
0.002	99.964	2
0.008	99.972	8
0.003	99.975	3
0.003	99.978	3
0.002	99.980	2
0.000	99.980	0
0.001	99.981	1
0.001	99.982	1
0.003	99.985	3
0.000	99.985	0
0.000	99.985	0
0.002	99.987	2
0.000	99.987	0
0.000	99.987	0
0.004	99.991	4
0.002	99.993	2
0.001	99.994	1
0.000	99.994	0
0.000	99.994	0
0.000	99.994	0
0.000	99.994	0
0.006	100.000	6

```
INING VALUES ARE ALL ZERO
BER OF OBSERVATIONS=   100635        SUM=   2816970.        MEAN=  27.992        VAR=      1603.356        SD=  40.042

L TRIPS OVER MAXP   =        0
L TRIPS OVER 255    =        0
HC TABLE NUMBER     =      203
 TREE NUMBER        =      101
```

SHOPPING TRIPS

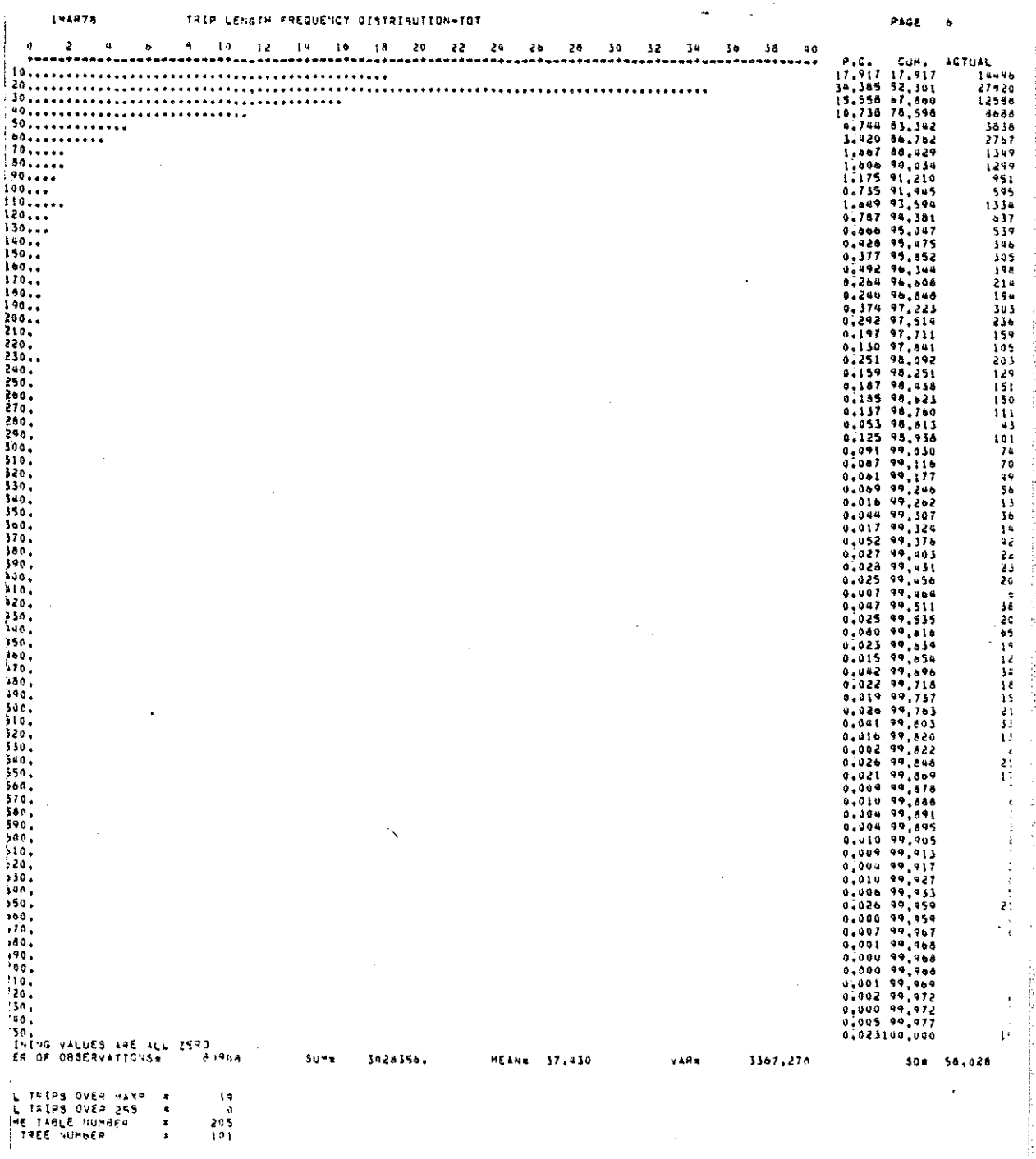


	P.C.	CUM.	ACTUAL
10	5.883	5.883	119
20	8.715	14.598	182
30	5.592	19.990	117
40	12.167	32.157	255
50	3.342	35.499	70
60	7.638	43.137	160
70	2.565	45.702	53
80	5.507	51.209	115
90	4.105	55.313	86
100	1.836	57.149	38
110	3.280	60.429	68
120	1.778	62.207	37
130	2.207	64.415	46
140	1.754	66.169	36
150	0.882	67.051	18
160	2.532	69.583	53
170	1.440	71.023	30
180	1.411	72.434	29
190	1.874	74.308	39
200	1.383	75.690	29
210	1.545	77.235	32
220	0.658	77.893	13
230	1.526	79.418	32
240	1.235	80.653	25
250	1.216	81.869	25
260	1.769	83.638	37
270	1.492	85.130	31
280	0.987	86.117	20
290	0.853	86.970	17
300	1.125	88.095	23
310	0.968	89.063	20
320	0.806	89.869	16
330	1.087	90.956	22
340	0.234	91.190	4
350	0.462	91.652	9
360	0.319	91.971	6
370	0.420	92.391	8
380	0.277	92.667	5
390	0.319	92.987	6
400	0.296	93.282	6
410	0.267	93.549	5
420	0.488	94.036	10
430	0.305	94.341	6
440	1.025	95.366	21
450	0.267	95.633	5
460	0.191	95.824	4
470	0.343	96.167	7
480	0.324	96.491	6
490	0.200	96.691	4
500	0.170	96.860	3
510	0.234	97.101	4
520	0.191	97.292	4
530	0.038	97.330	
540	0.391	97.721	8
550	0.180	98.107	3
560	0.138	98.246	2
570	0.143	98.389	3
580	0.033	98.422	
590	0.110	98.532	2
600	0.024	98.555	
610	0.243	98.799	5
620	0.095	98.894	2
630	0.091	98.985	1
640	0.029	99.013	
650	0.024	99.037	
660	0.010	99.046	
670	0.200	99.247	4
680	0.010	99.256	
690	0.119	99.375	2
700	0.057	99.433	1
710	0.010	99.442	
720	0.029	99.471	
730	0.057	99.528	1
740	0.057	99.585	1
750	0.415	100.000	8

MINING VALUES ARE ALL ZERO
NUMBER OF OBSERVATIONS= 19975 SUM= 2681726. MEAN= 134.528 VAR= 20258.872 SD= 142.333

ALL TRIPS OVER MAXP = 87
ALL TRIPS OVER 255 = 0
NAME TABLE NUMBER = 204
TREE NUMBER = 101

VACATION TRIPS



1MAR78 TRIP LENGTH FREQUENCY DISTRIBUTION-TOT PAGE 6

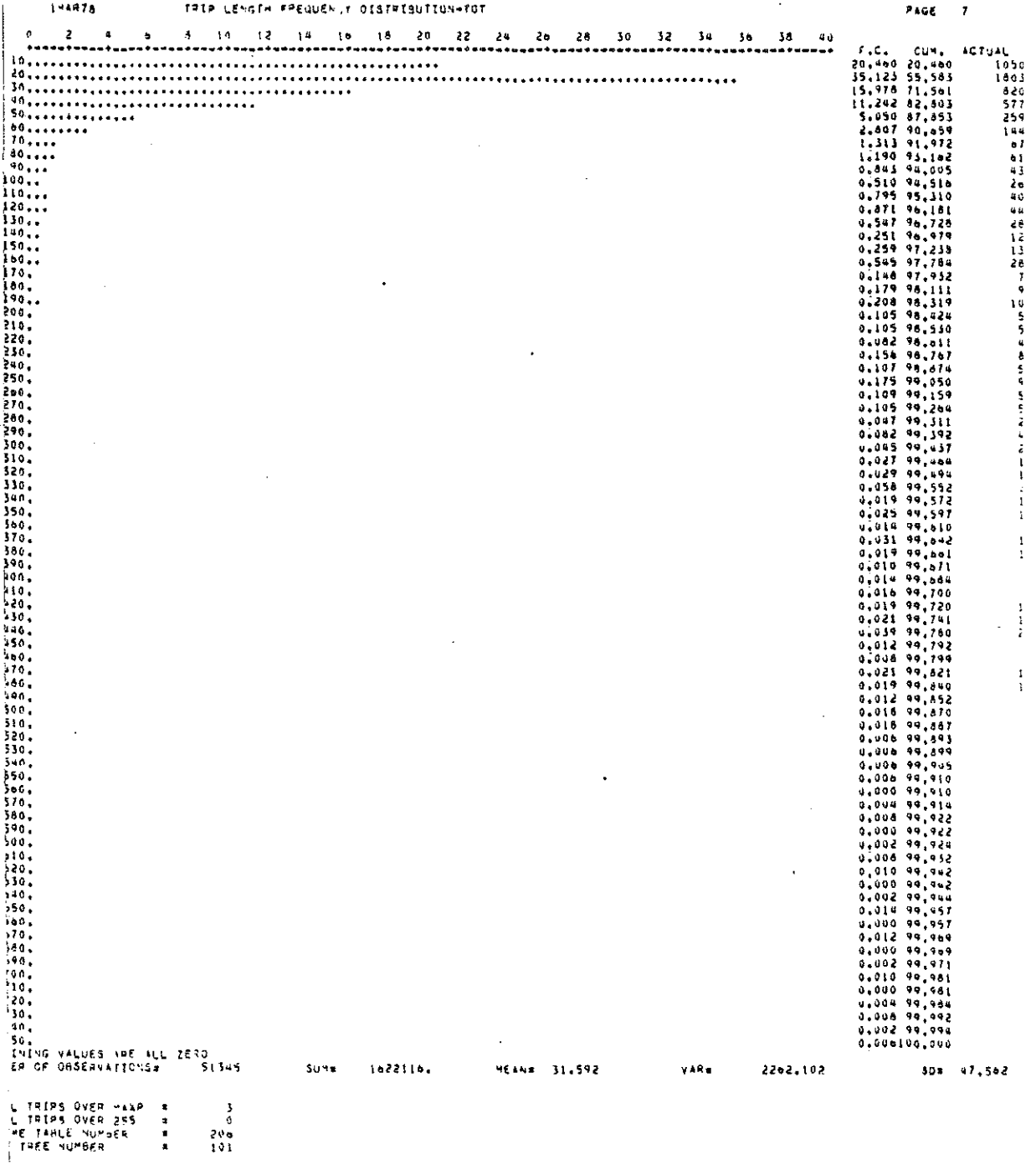
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40

	P.C.	CUM.	ACTUAL
10	17.917	17.917	14446
20	34.385	52.301	27720
30	15.558	67.860	12548
40	10.738	78.598	8658
50	4.744	83.342	3838
60	3.420	86.762	2767
70	1.667	88.429	1349
80	1.608	90.038	1299
90	1.175	91.210	951
100	0.735	91.945	595
110	1.649	93.594	1334
120	0.787	94.381	637
130	0.666	95.047	539
140	0.428	95.475	346
150	0.377	95.852	305
160	0.492	96.344	398
170	0.264	96.608	214
180	0.240	96.848	194
190	0.374	97.223	303
200	0.292	97.514	236
210	0.197	97.711	159
220	0.130	97.841	105
230	0.251	98.092	203
240	0.159	98.251	129
250	0.187	98.438	151
260	0.185	98.623	150
270	0.137	98.760	111
280	0.053	98.813	43
290	0.125	98.938	101
300	0.091	99.030	74
310	0.087	99.116	70
320	0.061	99.177	49
330	0.069	99.246	56
340	0.016	99.262	13
350	0.044	99.307	36
360	0.017	99.324	14
370	0.052	99.376	42
380	0.027	99.403	22
390	0.028	99.431	23
400	0.025	99.456	20
410	0.007	99.464	6
420	0.047	99.511	38
430	0.025	99.535	20
440	0.080	99.616	65
450	0.023	99.639	19
460	0.015	99.654	12
470	0.042	99.696	34
480	0.022	99.718	18
490	0.019	99.737	15
500	0.026	99.763	21
510	0.041	99.803	33
520	0.016	99.820	13
530	0.002	99.822	2
540	0.026	99.848	21
550	0.021	99.869	17
560	0.009	99.878	7
570	0.010	99.888	8
580	0.004	99.891	3
590	0.004	99.895	3
600	0.010	99.905	8
610	0.009	99.913	7
620	0.004	99.917	3
630	0.010	99.927	8
640	0.006	99.933	5
650	0.026	99.959	21
660	0.000	99.959	0
670	0.007	99.967	6
680	0.001	99.968	1
690	0.000	99.968	0
700	0.000	99.968	0
710	0.001	99.969	1
720	0.002	99.972	2
730	0.000	99.972	0
740	0.005	99.977	4
750	0.023	100.000	19

ING VALUES ARE ALL 2990
ER OF OBSERVATIONS= 81984 SUM= 3028356. MEAN= 37.430 VAR= 3367.270 SD= 58.028

L TRIPS OVER MAXD = 19
L TRIPS OVER 255 = 0
HE TABLE NUMBER = 205
TREE NUMBER = 101

OTHER SOC. OR REC. TRIPS



```
1+AR78          TRIP LENGTH FREQUEN,Y DISTRIBUTION-TOT                    PAGE  7

  0   2   4   6   8  10  12  14  16  18  20  22  24  26  28  30  32  34  36  38  40
  +---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+
 10.*****************************************************                  F.C.   CUM.  ACTUAL
 20.*****************************************************************...  20.460 20.460   1050
 30.*************************************                                  35.123 55.583   1803
 40.*****************************                                         15.978 71.561    820
 50.**************                                                       11.242 82.803    577
 60.********                                                             5.050 87.853    259
 70.****                                                                 2.807 90.659    144
 80.****                                                                 1.313 91.972     67
 90.***                                                                  1.190 93.162     61
100..                                                                    0.841 94.005     43
110...                                                                   0.510 94.516     26
120...                                                                   0.795 95.310     40
130..                                                                    0.871 96.181     44
140..                                                                    0.547 96.728     28
150..                                                                    0.251 96.979     12
160..                                                                    0.259 97.238     13
170.                                                                     0.545 97.784     28
180.                                                                     0.140 97.932      7
190..                                                                    0.179 98.111      9
200.                                                                     0.208 98.319     10
210.                                                                     0.105 98.424      5
220.                                                                     0.105 98.530      5
230.                                                                     0.082 98.611      4
240.                                                                     0.156 98.767      8
250.                                                                     0.107 98.874      5
260.                                                                     0.175 99.050      9
270.                                                                     0.109 99.159      5
280.                                                                     0.105 99.264      5
290.                                                                     0.047 99.311      2
300.                                                                     0.082 99.392      4
310.                                                                     0.045 99.437      2
320.                                                                     0.027 99.464      1
330.                                                                     0.029 99.494      1
340.                                                                     0.058 99.552      .
350.                                                                     0.019 99.572      1
360.                                                                     0.025 99.597      1
370.                                                                     0.014 99.610
380.                                                                     0.031 99.642      1
390.                                                                     0.019 99.661      1
400.                                                                     0.010 99.671
410.                                                                     0.014 99.684
420.                                                                     0.016 99.700
430.                                                                     0.019 99.720      1
440.                                                                     0.021 99.741      1
450.                                                                     0.039 99.780      2
460.                                                                     0.012 99.792
470.                                                                     0.008 99.799
480.                                                                     0.021 99.821      1
490.                                                                     0.019 99.840      1
500.                                                                     0.012 99.852
510.                                                                     0.018 99.870
520.                                                                     0.018 99.887
530.                                                                     0.006 99.893
540.                                                                     0.006 99.899
550.                                                                     0.006 99.905
560.                                                                     0.006 99.910
570.                                                                     0.000 99.910
580.                                                                     0.004 99.914
590.                                                                     0.008 99.922
600.                                                                     0.000 99.922
610.                                                                     0.002 99.924
620.                                                                     0.006 99.932
630.                                                                     0.010 99.942
640.                                                                     0.000 99.942
650.                                                                     0.002 99.944
660.                                                                     0.014 99.957
670.                                                                     0.000 99.957
680.                                                                     0.012 99.969
690.                                                                     0.000 99.969
700.                                                                     0.002 99.971
710.                                                                     0.010 99.981
720.                                                                     0.000 99.981
730.                                                                     0.004 99.984
740.                                                                     0.008 99.992
750.                                                                     0.002 99.994
                                                                         0.006100.000
INING VALUES ARE ALL ZERO
ER OF OBSERVATIONS=     51345        SUM=    1622116.        MEAN=  31.592        VAR=      2202.102        SD=  47.562


L TRIPS OVER MAX  =        3
L TRIPS OVER 255  =        0
RE TABLE NUMBER   =      200
 TREE NUMBER      =      101
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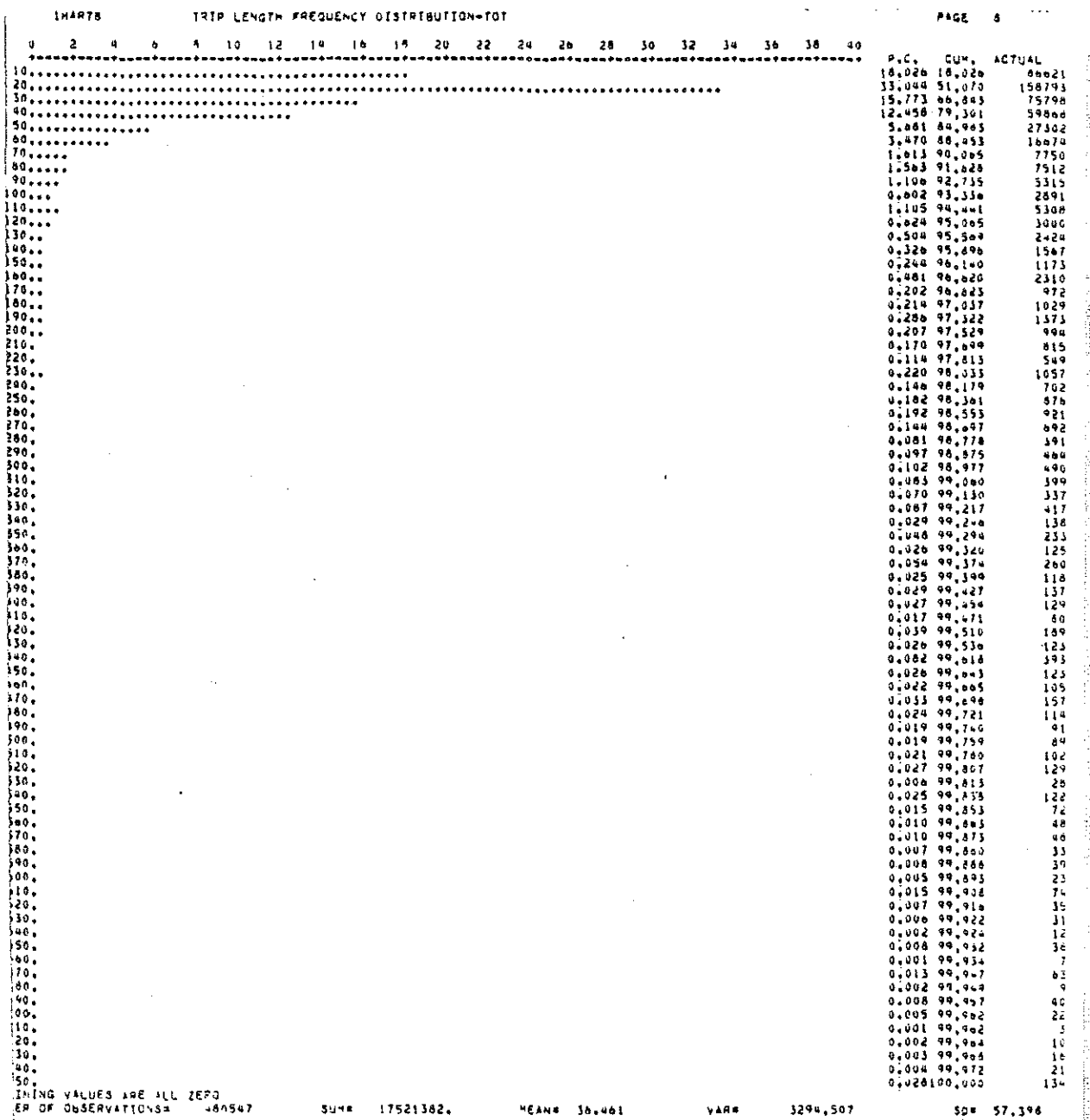
ALL OTHER TRIPS



```
CHART8          TRIP LENGTH FREQUENCY DISTRIBUTION-TOT                    PAGE  8

  0   2   4   6   8  10  12  14  16  18  20  22  24  26  28  30  32  34  36  38  40
  +---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+
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150

  P.C.    CUM.   ACTUAL
 16.026  16.026   86021
 33.044  51.070  158793
 15.773  66.843   75798
 12.458  79.301   59866
  5.681  84.983   27302
  3.470  88.453   16678
  1.613  90.065    7750
  1.563  91.628    7512
  1.106  92.735    5315
  0.602  93.336    2891
  1.105  94.441    5308
  0.624  95.065    3000
  0.504  95.569    2424
  0.326  95.896    1567
  0.244  96.140    1173
  0.481  96.620    2310
  0.202  96.822     972
  0.214  97.037    1029
  0.286  97.322    1373
  0.207  97.529     994
  0.170  97.699     815
  0.114  97.813     549
  0.220  98.033    1057
  0.146  98.179     702
  0.182  98.361     876
  0.192  98.553     921
  0.144  98.697     692
  0.081  98.778     391
  0.097  98.875     466
  0.102  98.977     490
  0.083  99.060     399
  0.070  99.130     337
  0.087  99.217     417
  0.029  99.246     138
  0.048  99.294     233
  0.026  99.320     125
  0.054  99.374     260
  0.025  99.399     118
  0.029  99.427     137
  0.027  99.454     129
  0.017  99.471      80
  0.039  99.510     189
  0.026  99.536     123
  0.082  99.618     393
  0.026  99.643     125
  0.022  99.665     105
  0.033  99.698     157
  0.024  99.721     114
  0.019  99.740      91
  0.019  99.759      89
  0.021  99.780     102
  0.027  99.807     129
  0.006  99.813      28
  0.025  99.838     122
  0.015  99.853      72
  0.010  99.863      48
  0.010  99.873      46
  0.007  99.880      33
  0.008  99.888      39
  0.005  99.893      23
  0.015  99.908      74
  0.007  99.914      35
  0.006  99.922      31
  0.002  99.924      12
  0.008  99.932      38
  0.001  99.934       7
  0.013  99.947      63
  0.002  99.949       9
  0.008  99.957      40
  0.005  99.962      22
  0.001  99.962       5
  0.002  99.964      10
  0.003  99.966      16
  0.004  99.972      21
  0.028 100.000     134

INING VALUES ARE ALL ZERO
ER OF OBSERVATIONS=  480547      SUM=  17521382.      MEAN=  36.461      VAR=  3294.507      SD=  57.396

L TRIPS OVER MAXP  =     134
L TRIPS OVER 255   =       0
ME TABLE NUMBER    =     207
 TREE NUMBER       =     101
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TOTAL TRIPS

MINOR ORIGIN AND DESTINATION STUDIES

MEAN TRIP LENGTHS BY PURPOSE

REGION 1

TRIP PURPOSE	MINUTES	PERCENT OF TOTAL TRIPS
1	26	41
2	21	11
3	18	19
4	119	1
5	22	17
6	20	12
ALL	23	

REGION 2

TRIP PURPOSE	MINUTES	PERCENT OF TOTAL TRIPS
1	27	48
2	25	7
3	20	20
4	197	0
5	22	12
6	25	13
ALL	25	

REGION 3

TRIP PURPOSE	MINUTES	PERCENT OF TOTAL TRIPS
1	25	47
2	20	7
3	18	18
4	149	1
5	24	15
6	25	12
ALL	24	

TRIP PURPOSE

1 WORK
2 PERS. BUSINESS
3 SHOPPING
4 VACATION
5 OTHER SOC. OR REC.
6 ALL OTHER

REGION 4

TRIP PURPOSE	MINUTES	PERCENT OF TOTAL TRIPS
1	33	35
2	35	10
3	20	24
4	124	2
5	41	17
6	36	13
ALL	34	

REGION 5

TRIP PURPOSE	MINUTES	PERCENT OF TOTAL TRIPS
1	35	52
2	30	9
3	26	15
4	193	0
5	32	13
6	30	11
ALL	33	

REGION 7

TRIP PURPOSE	MINUTES	PERCENT OF TOTAL TRIPS
1	33	39
2	31	10
3	26	21
4	115	3
5	38	16
6	33	11
ALL	35	

REGION 8

TRIP PURPOSE	MINUTES	PERCENT OF TOTAL TRIPS
1	32	39
2	26	8
3	24	22
4	145	3
5	33	17
6	27	10
ALL	32	

REGION 9

TRIP PURPOSE	MINUTES	PERCENT OF TOTAL TRIPS
1	34	33
2	35	7
3	47	28
4	136	7
5	52	16
6	47	8
ALL	49	

REGION 10

TRIP PURPOSE	MINUTES	PERCENT OF TOTAL TRIPS
1	31	36
2	29	8
3	23	20
4	92	7
5	31	20
6	26	10
ALL	33	

REGION 11

TRIP PURPOSE	MINUTES	PERCENT OF TOTAL TRIPS
1	51	19
2	50	4
3	48	12
4	125	36
5	76	19
6	52	10
ALL	82	

REGION 12

TRIP PURPOSE	MINUTES	PERCENT OF TOTAL TRIPS
1	58	33
2	51	8
3	45	23
4	201	7
5	64	21
6	53	8
ALL	65	

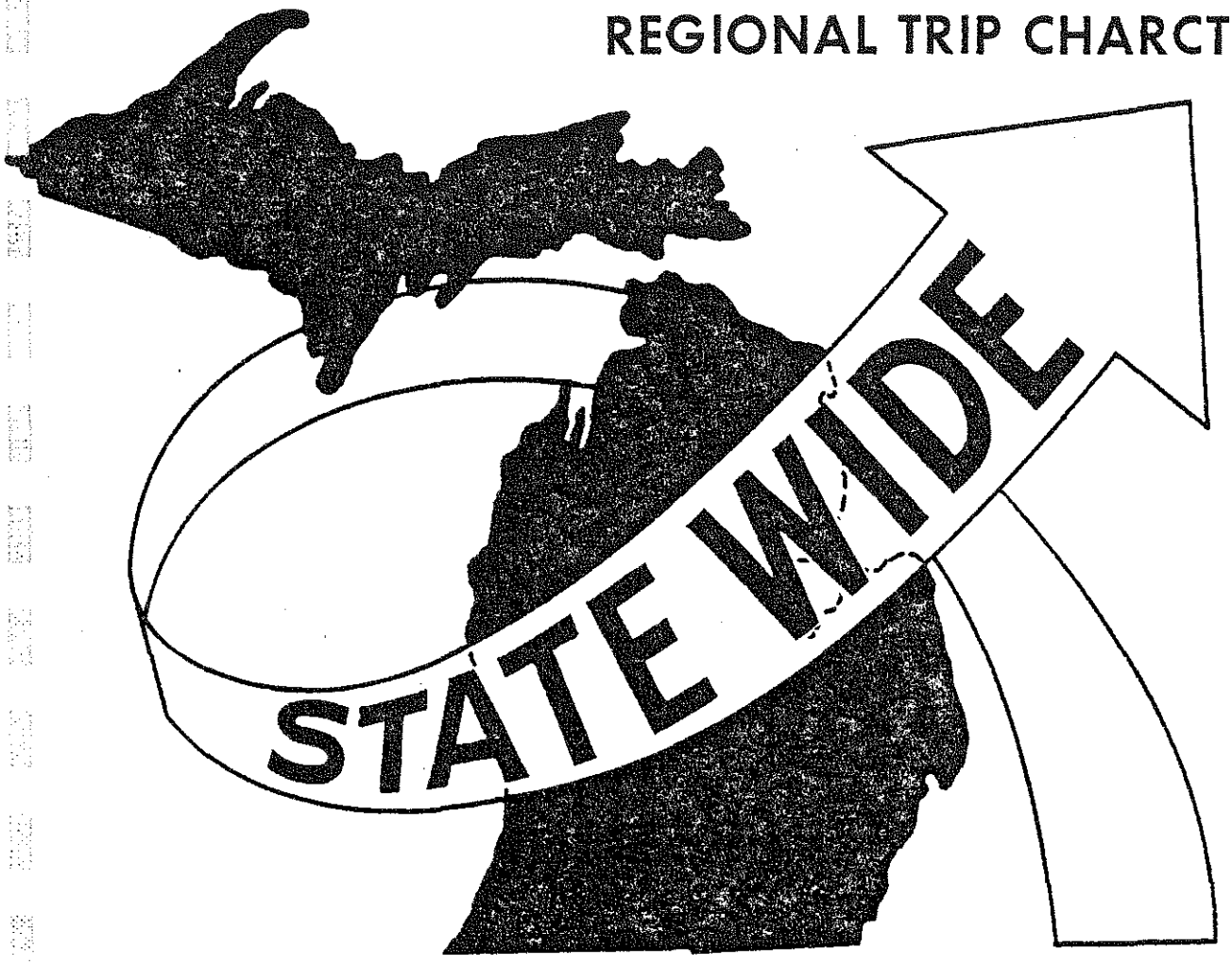
REGION 13

TRIP PURPOSE	MINUTES	PERCENT OF TOTAL TRIPS
1	42	30
2	35	7
3	24	24
4	179	7
5	40	21
6	37	12
ALL	46	

STATEWIDE AVERAGE

TRIP PURPOSE	MINUTES	PERCENT OF TOTAL TRIPS
1	32	39
2	30	8
3	28	21
4	135	4
5	37	17
6	32	11
ALL	36	

REGIONAL TRIP CHARCTERISTICS



REGION 2

EXTERNAL ORIGIN-DESTINATION INTERVIEW

TERMINAL-TRIP SUMMARY TABLE

VEHICLE TYPE

CAR W/O TRLR	CAR W/ TRLR	PICK-UP W/O/TRLR	PICK-UP W/ TRLR	SINGLE-UNIT TRUCKS	COMBINATION TRUCKS
78.3%	0.2%	16.3%	0.2%	3.3%	1.6%
16424	50	3425	49	686	343

TRIP PURPOSE

WORK	PERS BIZ	SHOP	VACATION	SOC-REC	OTHER
48.1%	7.1%	19.8%	0.1%	12.1%	12.9%
10082	1486	4147	22	2540	2702

NUMBER IN VEHICLE

1	2	3	4	5	6+
64.1%	24.0%	7.6%	2.8%	0.9%	0.6%
13437	5044	1596	589	183	129

VEHICLE GARAGED AT

ORIGIN	DESTIN	OTHER
46.9%	37.2%	15.9%
9845	7801	3332

TOTAL TRIPS = 20978

MINOR

EXTERNAL ORIGIN-DESTINATION INTERVIEW

TERMINAL-TRIP SUMMARY TABLE FOR REGION 2

TRIP PURPOSE

# IN VEH.	WORK	PERS BIZ	SHOP	VACATION	SOC-REC	OTHER
1	81.2% 8187	52.2% 776	47.3% 1963	27.0% 6	45.8% 1165	49.6% 1341
2	14.6% 1473	32.6% 484	33.6% 1394	38.2% 8	32.0% 812	32.3% 873
3	3.0% 303	9.8% 146	12.5% 517	6.4% 1	12.7% 324	11.3% 305
4	0.8% 82	3.6% 53	4.7% 196	21.7% 5	5.9% 149	3.9% 105
5	0.2% 18	1.2% 18	1.3% 53	0.0% 0	1.9% 49	1.6% 44
6+	0.2% 19	0.6% 9	0.6% 25	6.7% 1	1.6% 42	1.2% 34
TOTAL	100% 10082	100% 1486	100% 4147	100% 22	100% 2540	100% 2702

TOTAL TERMINAL-TRIPS FOR ALL STUDIES IN REGION = 20978

TABLE SHOWS PCT OF EXPANDED ORIGIN-DESTINATION INTERVIEWS FOR EACH CATEGORY IN THE REGION. ACTUAL TRIPS BELOW EACH PCT DOES NOT REPRESENT ALL TRAVEL IN THE REGION--ONLY THAT INTERVIEWED.

MINOR

EXTERNAL ORIGIN-DESTINATION INTERVIEW

TERMINAL-TRIP SUMMARY TABLE FOR REGION 2

TRIP PURPOSE

VEH TYPE	WORK	PERS BIZ	SHOP	VACATION	SOC-REC	OTHER
CAR W/O TRLR	68.5% 6909	84.3% 1253	85.7% 3556	90.5% 20	90.1% 2288	88.8% 2399
CAR W/ TRLR	0.1% 15	0.2% 2	0.2% 8	9.5% 2	0.3% 8	0.5% 14
PICK-UP W/O/TRLR	21.2% 2135	15.2% 226	13.8% 572	0.0% 0	8.9% 226	9.8% 266
PICK-UP W/ TRLR	0.3% 33	0.0% 0	0.0% 2	0.0% 0	0.4% 10	0.1% 4
SINGLE-UNIT TRUCKS	6.4% 650	0.3% 5	0.2% 8	0.0% 0	0.3% 7	0.6% 16
COMBINATION TRUCKS	3.4% 340	0.0% 0	0.0% 1	0.0% 0	0.0% 0	0.1% 2
TOTAL	100% 10082	100% 1486	100% 4147	100% 22	100% 2540	100% 2702

TOTAL TERMINAL-TRIPS FOR ALL STUDIES IN REGION = 20978

TABLE SHOWS PCT OF EXPANDED ORIGIN-DESTINATION INTERVIEWS FOR EACH CATEGORY IN THE REGION. ACTUAL TRIPS BELOW EACH PCT DOES NOT REPRESENT ALL TRAVEL IN THE REGION--ONLY THAT INTERVIEWED.

```
  0    3    6    9   12   15   18   21   24   27   30   33   36   39   42   45   48   51   54   57   60
  +----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+
 10.............................                                                                    P.C.   CUM.  ACTUAL
 20.....................................................................                            16.928 16.928   17
 30.......................                                                                           40.355 57.283    4
 40.........................                                                                         12.542 69.825  1
 50.......                                                                                          15.102 84.928  1
 60.........                                                                                         3.165 88.193   3
 70....                                                                                              5.090 93.283   5
 80.                                                                                                 1.151 94.434   1
 90....                                                                                              0.159 94.593   1
100.....                                                                                             1.111 95.704   1
110.                                                                                                 1.558 97.262   1
120..                                                                                                0.159 97.421   1
130..                                                                                                0.645 98.066   6
140..                                                                                                0.446 98.512   4
150.                                                                                                 0.625 99.137   6
160.                                                                                                 0.149 99.286   1
170.                                                                                                 0.249 99.535   2
180.                                                                                                 0.069 99.604
190.                                                                                                 0.030 99.633
200.                                                                                                 0.020 99.653
210.                                                                                                 0.030 99.683
220.                                                                                                 0.010 99.693
230.                                                                                                 0.020 99.713
240.                                                                                                 0.010 99.723
250.                                                                                                 0.010 99.733
260.                                                                                                 0.000 99.733
270.                                                                                                 0.050 99.782
280.                                                                                                 0.060 99.842
290.                                                                                                 0.000 99.842
300.                                                                                                 0.010 99.852
310.                                                                                                 0.010 99.861
320.                                                                                                 0.000 99.861
330.                                                                                                 0.030 99.891
340.                                                                                                 0.000 99.891
350.                                                                                                 0.000 99.891
360.                                                                                                 0.000 99.891
370.                                                                                                 0.000 99.891
380.                                                                                                 0.000 99.891
390.                                                                                                 0.000 99.891
400.                                                                                                 0.030 99.921
410.                                                                                                 0.000 99.921
420.                                                                                                 0.000 99.921
430.                                                                                                 0.000 99.921
440.                                                                                                 0.000 99.921
450.                                                                                                 0.030 99.951
460.                                                                                                 0.000 99.951
470.                                                                                                 0.000 99.951
480.                                                                                                 0.000 99.951
490.                                                                                                 0.000 99.951
500.                                                                                                 0.000 99.951
510.                                                                                                 0.030 99.981
520.                                                                                                 0.000 99.981
530.                                                                                                 0.000 99.981
540.                                                                                                 0.000 99.981
550.                                                                                                 0.000 99.981
560.                                                                                                 0.000 99.981
570.                                                                                                 0.040 99.970
580.                                                                                                 0.000 99.970
590.                                                                                                 0.000 99.970
600.                                                                                                 0.020 99.990
610.                                                                                                 0.000 99.990
620.                                                                                                 0.010100.000
MAINING VALUES ARE ALL ZERO
MBER OF OBSERVATIONS=     10078        SUM=     268958.        MEAN=  26.688        VAR=     1111.998        SD=  33.347


TAL TRIPS OVER MAXP  =        0
TAL TRIPS OVER 255   =        0
LUME TABLE NUMBER    =      201
IM TREE NUMBER       =      101
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```
   0    3    6    9   12   15   18   21   24   27   30   33   36   39   42   45   48   51   54   57   60
   +----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+
 10.****************************                                                                        17.611 17.631   26
 20.************************************************************                                        41.454 59.085   61
 30.*****************************                                                                       16.420 75.505   24
 40.************************                                                                            13.997 89.502   20
 50.****                                                                                                 2.019 91.521    3
 60.******                                                                                               3.163 94.684    4
 70..                                                                                                    0.404 95.087
 80.                                                                                                     0.202 95.289
 90..                                                                                                    0.875 96.164    1
100....                                                                                                  1.750 97.914    2
110.                                                                                                     0.000 97.914
120.                                                                                                     0.269 98.183
130..                                                                                                    0.336 98.520
140..                                                                                                    0.471 98.991
150.                                                                                                     0.135 99.125
160.                                                                                                     0.000 99.125
170.                                                                                                     0.202 99.327
180.                                                                                                     0.000 99.327
190.                                                                                                     0.000 99.327
200.                                                                                                     0.135 99.462
210.                                                                                                     0.000 99.462
220.                                                                                                     0.000 99.462
230.                                                                                                     0.000 99.462
240.                                                                                                     0.000 99.462
250.                                                                                                     0.000 99.462
260.                                                                                                     0.202 99.664
270.                                                                                                     0.067 99.731
280.                                                                                                     0.000 99.731
290.                                                                                                     0.000 99.731
300.                                                                                                     0.000 99.731
310.                                                                                                     0.135 99.865
320.                                                                                                     0.000 99.865
330.                                                                                                     0.000 99.865
340.                                                                                                     0.135100.000
MAINING VALUES ARE ALL ZERO
MBER OF OBSERVATIONS=      1486        SUM=      36506.      MEAN= 24.567        VAR=      907.532          SD= 30.125

TAL TRIPS OVER MAXP  =       0
TAL TRIPS OVER 255   =       0
LUME TABLE NUMBER    =     202
IM TREE NUMBER       =     101
```

23FEB78 TRIP LENGTH FREQUENCY DISTRIBUTION-REG2 PAGE 4

```
   0    3    6    9   12   15   18   21   24   27   30   33   36   39   42   45   46   51   54   57   60
   +----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+
  10.*******************************.                                                                    P.C.   CUM.  ACTUAL
  20.*************************************************************************.                       19.228 19.228      79
  30.************************.                                                                          46.683 65.911     193
  40.*********************.                                                                             15.537 81.448      64
  50.*****.                                                                                             12.334 93.782      51
  60.*****.                                                                                              2.316 96.098       9
  70.                                                                                                    2.244 98.311       9
  80.                                                                                                    0.145 98.456
  90.                                                                                                    0.048 98.504
 100..                                                                                                   0.290 98.794       1
 110.                                                                                                    0.314 99.107       1
 120.                                                                                                    0.000 99.107
 130.                                                                                                    0.145 99.252
 140.                                                                                                    0.169 99.421
 150.                                                                                                    0.097 99.517
 160.                                                                                                    0.024 99.542
 170.                                                                                                    0.000 99.542
 180.                                                                                                    0.000 99.542
 190.                                                                                                    0.048 99.590
 200.                                                                                                    0.048 99.638
 210.                                                                                                    0.000 99.638
 220.                                                                                                    0.000 99.638
 230.                                                                                                    0.000 99.638
 240.                                                                                                    0.000 99.638
 250.                                                                                                    0.000 99.638
 260.                                                                                                    0.000 99.638
 270.                                                                                                    0.024 99.662
 280.                                                                                                    0.000 99.662
 290.                                                                                                    0.000 99.662
 300.                                                                                                    0.000 99.662
 310.                                                                                                    0.000 99.662
 320.                                                                                                    0.000 99.662
 330.                                                                                                    0.000 99.662
 340.                                                                                                    0.241 99.903       1
 350.                                                                                                    0.000 99.903
 360.                                                                                                    0.000 99.903
 370.                                                                                                    0.000 99.903
 380.                                                                                                    0.000 99.903
 390.                                                                                                    0.000 99.903
 400.                                                                                                    0.000 99.903
 410.                                                                                                    0.000 99.903
 420.                                                                                                    0.000 99.903
 430.                                                                                                    0.000 99.903
 440.                                                                                                    0.000 99.903
 450.                                                                                                    0.000 99.903
 460.                                                                                                    0.000 99.903
 470.                                                                                                    0.000 99.903
 480.                                                                                                    0.000 99.903
 490.                                                                                                    0.000 99.903
 500.                                                                                                    0.000 99.903
 510.                                                                                                    0.072 99.976
 520.                                                                                                    0.000 99.976
 530.                                                                                                    0.000 99.976
 540.                                                                                                    0.000 99.976
 550.                                                                                                    0.000 99.976
 560.                                                                                                    0.024100.000
CHAINING VALUES ARE ALL ZERO
NBER OF OBSERVATIONS=      4145        SUM=      84760.        MEAN=  20.449          VAR=       725.637          SD=  26.938

TAL TRIPS OVER MAXP  =       0
TAL TRIPS OVER 255   =       0
LUME TABLE NUMBER    =     203
IN TREE NUMBER       =     131
```

```
   0    2    4    6    8   10   12   14   16   18   20   22   24   26   28   30   32   34   36   38   40
   +----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+
  10.                                                                                                    0.000  0.000
  20.....................................................                                                22.727 22.727
  30............                                                                                          4.545 27.273
  40.                                                                                                    0.000 27.273
  50.                                                                                                    0.000 27.273
  60............                                                                                          4.545 31.818
  70.                                                                                                    0.000 31.818
  80.                                                                                                    0.000 31.818
  90.                                                                                                    0.000 31.818
 100.................................                                                                   13.636 45.455
 110.                                                                                                    0.000 45.455
 120.                                                                                                    0.000 45.455
 130.                                                                                                    0.000 45.455
 140........................                                                                             9.091 54.545
 150.                                                                                                    0.000 54.545
 160.                                                                                                    0.000 54.545
 170.                                                                                                    0.000 54.545
 180.                                                                                                    0.000 54.545
 190.                                                                                                    0.000 54.545
 200.                                                                                                    0.000 54.545
 210.                                                                                                    0.000 54.545
 220.                                                                                                    0.000 54.545
 230.                                                                                                    0.000 54.545
 240.                                                                                                    0.000 54.545
 250.                                                                                                    0.000 54.545
 260.                                                                                                    0.000 54.545
 270.................................                                                                   13.636 68.182
 280.                                                                                                    0.000 68.182
 290.                                                                                                    0.000 68.182
 300.                                                                                                    0.000 68.182
 310........................                                                                             9.091 77.273
 320.                                                                                                    0.000 77.273
 330.                                                                                                    0.000 77.273
 340.                                                                                                    0.000 77.273
 350.                                                                                                    0.000 77.273
 360.                                                                                                    0.000 77.273
 370.................................                                                                   13.636 90.909
 380.                                                                                                    0.000 90.909
 390.                                                                                                    0.000 90.909
 400.                                                                                                    0.000 90.909
 410.                                                                                                    0.000 90.909
 420.                                                                                                    0.000 90.909
 430.                                                                                                    0.000 90.909
 440.                                                                                                    0.000 90.909
 450.                                                                                                    0.000 90.909
 460.                                                                                                    0.000 90.909
 470.                                                                                                    0.000 90.909
 480.                                                                                                    0.000 90.909
 490.                                                                                                    0.000 90.909
 500.                                                                                                    0.000 90.909
 510.                                                                                                    0.000 90.909
 520.                                                                                                    0.000 90.909
 530.                                                                                                    0.000 90.909
 540.                                                                                                    0.000 90.909
 550.                                                                                                    0.000 90.909
 560.........................                                                                            9.091 100.000
MAINING VALUES ARE ALL ZERO
MBER OF OBSERVATIONS=        22        SUM=       4337.       MEAN= 197.136          VAR=      29434.409          SD= 171.565

TAL TRIPS OVER MAXP  =       3
TAL TRIPS OVER 255   =       0
LUME TABLE NUMBER    =     204
EM TREE NUMBER       =     101
```

23FEB78 TRIP LENGTH FREQUENCY DISTRIBUTION-REG2 PAGE 6

```
  0    3    6    9   12   15   18   21   24   27   30   33   36   39   42   45   48   51   54   57   60
  +----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+
 10.....................................                                                                 25.443 25.443   64
 20.....................................................................                                 41.512 66.955  175
 30.....................                                                                                 11.776 78.732   29
 40.................                                                                                      9.334 88.066   23
 50........                                                                                               3.427 91.493    8
 60........                                                                                               3.781 95.274    9
 70..                                                                                                     0.551 95.825    1
 80.                                                                                                      0.079 95.904
 90...                                                                                                    1.182 97.085    3
100...                                                                                                    1.300 98.385    3
110.                                                                                                      0.197 98.582
120.                                                                                                      0.276 98.858
130.                                                                                                      0.276 99.134
140..                                                                                                     0.315 99.449
150.                                                                                                      0.039 99.488
160.                                                                                                      0.118 99.606
170.                                                                                                      0.079 99.685
180.                                                                                                      0.000 99.685
190.                                                                                                      0.000 99.685
200.                                                                                                      0.079 99.764
210.                                                                                                      0.039 99.803
220.                                                                                                      0.000 99.803
230.                                                                                                      0.000 99.803
240.                                                                                                      0.000 99.803
250.                                                                                                      0.000 99.803
260.                                                                                                      0.039 99.842
270.                                                                                                      0.039 99.882
280.                                                                                                      0.000 99.882
290.                                                                                                      0.000 99.882
300.                                                                                                      0.000 99.882
310.                                                                                                      0.000 99.882
320.                                                                                                      0.000 99.882
330.                                                                                                      0.000 99.882
340.                                                                                                      0.000 99.882
350.                                                                                                      0.079 99.961
360.                                                                                                      0.000 99.961
370.                                                                                                      0.000 99.961
380.                                                                                                      0.000 99.961
390.                                                                                                      0.000 99.961
400.                                                                                                      0.000 99.961
410.                                                                                                      0.000 99.961
420.                                                                                                      0.000 99.961
430.                                                                                                      0.000 99.961
440.                                                                                                      0.000 99.961
450.                                                                                                      0.000 99.961
460.                                                                                                      0.000 99.961
470.                                                                                                      0.000 99.961
480.                                                                                                      0.000 99.961
490.                                                                                                      0.000 99.961
500.                                                                                                      0.000 99.961
510.                                                                                                      0.000 99.961
520.                                                                                                      0.000 99.961
530.                                                                                                      0.000 99.961
540.                                                                                                      0.000 99.961
550.                                                                                                      0.000 99.961
560.                                                                                                      0.000 99.961
570.                                                                                                      0.000 99.961
580.                                                                                                      0.000 99.961
590.                                                                                                      0.000 99.961
600.                                                                                                      0.000 99.961
610.                                                                                                      0.000 99.961
620.                                                                                                      0.039100.000
MAINING VALUES ARE ALL ZERO
MBER OF OBSERVATIONS=      2539        SUM=      55795.        MEAN=  21.975          VAR=       771.672          SD=  27.779

TAL TRIPS OVER MAXP  =       0
TAL TRIPS OVER 255   =       2
LUME TABLE NUMBER    =     235
IM TREE NUMBER       =     101
```

23FEB78 TRIP LENGTH FREQUENCY DISTRIBUTION-REG2 PAGE 7

```
    0   3   6   9  12  15  18  21  24  27  30  33  36  39  42  45  48  51  54  57  60
    +---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+
 10.*************************.....                                                    
 20.*************************************************************************.....
 30.*********************.....                                                       
 40.*******************.....                                                         
 50.******.....                                                                      
 60.******.                                                                         
 70.                                                                                 
 80.                                                                                 
 90..                                                                                
100...                                                                               
110.                                                                                 
120...                                                                               
130.                                                                                 
140..                                                                                
150.                                                                                 
160.                                                                                 
170.                                                                                 
180.                                                                                 
190.                                                                                 
200.                                                                                 
210.                                                                                 
220.                                                                                 
230.                                                                                 
240.                                                                                 
250.                                                                                 
260.                                                                                 
270.                                                                                 
280.                                                                                 
290.                                                                                 
300.                                                                                 
310.                                                                                 
320.                                                                                 
330.                                                                                 
340.                                                                                 
350.                                                                                 
360.                                                                                 
370.                                                                                 
380.                                                                                 
390.                                                                                 
400.                                                                                 
410.                                                                                 
420.                                                                                 
430.                                                                                 
440.                                                                                 
450.                                                                                 
460.                                                                                 
470.                                                                                 
480.                                                                                 
490.                                                                                 
500.                                                                                 
510.                                                                                 
520.                                                                                 
530.                                                                                 
540.                                                                                 
550.                                                                                 
560.                                                                                 
570.                                                                                 
580.                                                                                 
590.                                                                                 
600.                                                                                 
610.                                                                                 
620.                                                                                 
```

P.C.	CUM.	ACTUAL
22.206	22.206	6
43.745	65.951	11
12.028	77.979	3
10.733	88.712	2
2.665	91.377	
3.146	94.523	
0.259	94.782	
0.000	94.782	
0.629	95.411	
1.110	96.521	
0.148	96.669	
1.221	97.890	
0.222	98.113	
0.555	98.668	
0.037	98.705	
0.111	98.816	
0.111	98.927	
0.000	98.927	
0.000	98.927	
0.000	98.927	
0.037	98.964	
0.000	98.964	
0.000	98.964	
0.037	99.001	
0.000	99.001	
0.074	99.275	
0.185	99.260	
0.148	99.408	
0.000	99.408	
0.000	99.408	
0.037	99.445	
0.000	99.445	
0.074	99.519	
0.111	99.630	
0.000	99.630	
0.000	99.630	
0.000	99.630	
0.000	99.630	
0.037	99.667	
0.000	99.667	
0.000	99.667	
0.000	99.667	
0.000	99.667	
0.185	99.852	
0.000	99.852	
0.000	99.852	
0.000	99.852	
0.000	99.852	
0.000	99.852	
0.037	99.889	
0.000	99.889	
0.000	99.889	
0.000	99.889	
0.000	99.889	
0.000	99.889	
0.000	99.889	
0.000	99.889	
0.000	99.889	
0.000	99.889	
0.111	100.000	

REMAINING VALUES ARE ALL ZERO
NUMBER OF OBSERVATIONS= 2702 SUM= 67949. MEAN= 25.148 VAR= 1831.661 SD= 42.798

TOTAL TRIPS OVER MAXP = 0
TOTAL TRIPS OVER 255 = 0
VOLUME TABLE NUMBER = 206
SKIM TREE NUMBER = 101

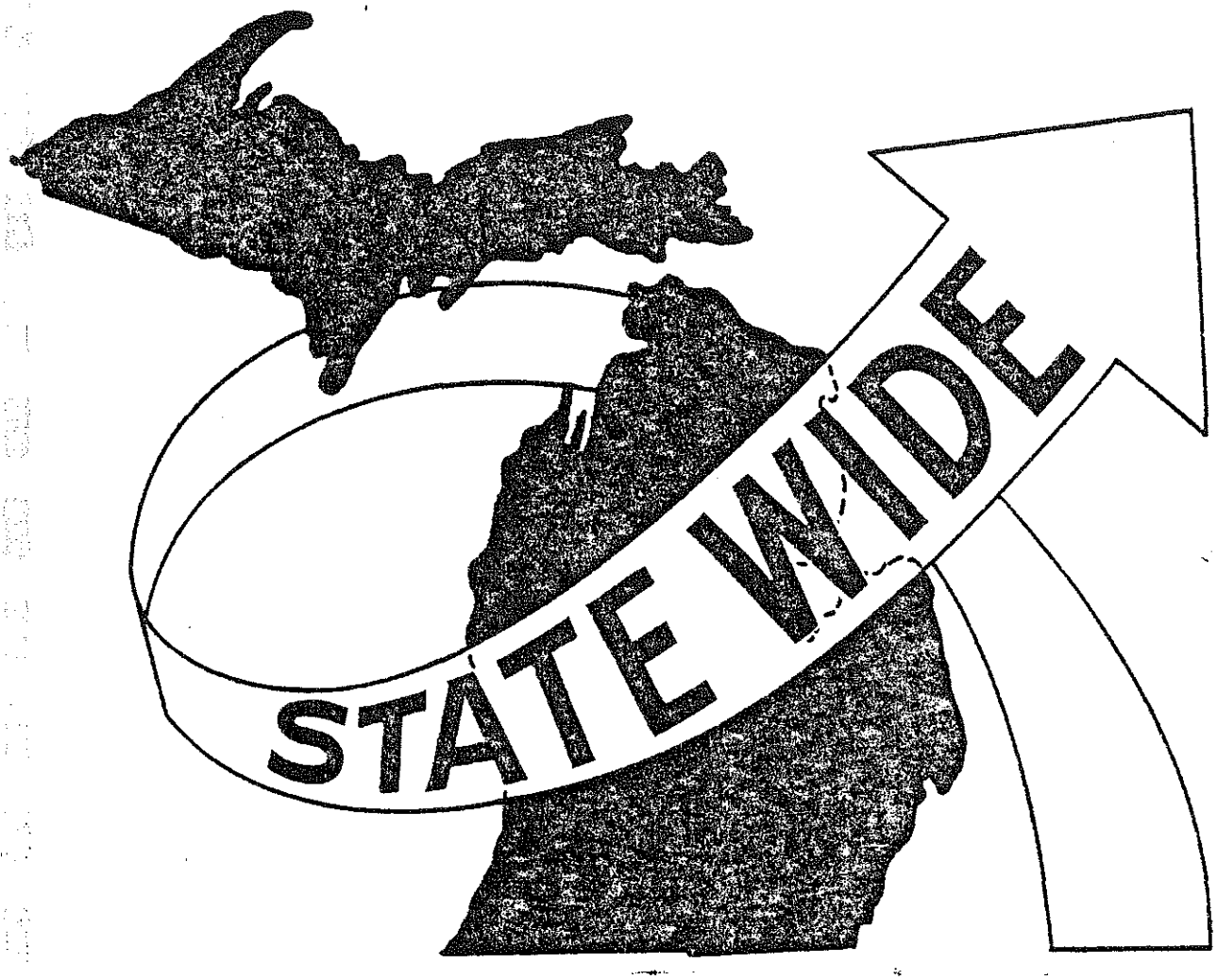
23FEB78 TRIP LENGTH FREQUENCY DISTRIBUTION-REG2 PAGE 9

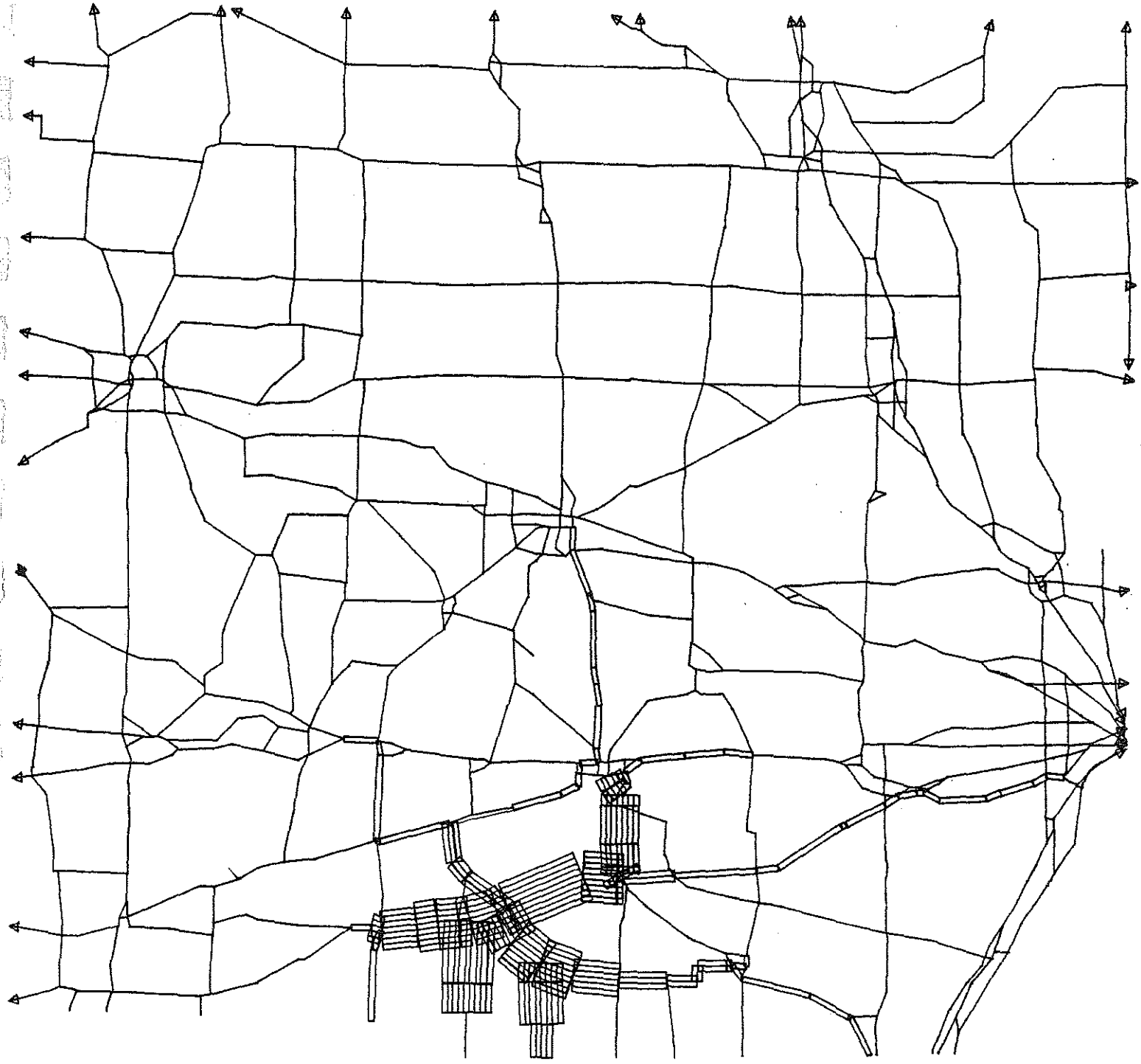
	P.C.	CUM.	ACTUAL
10	19.126	19.126	4
20	42.262	61.368	8
30	13.241	74.609	27
40	13.196	87.803	27
50	2.880	90.683	6
60	3.981	94.664	8
70	0.710	95.375	1
80	0.110	95.484	
90	0.877	96.362	1
100	1.249	97.611	2
110	0.119	97.730	
120	0.548	98.279	1
130	0.357	98.632	
140	0.472	99.104	
150	0.095	99.199	
160	0.148	99.347	
170	0.072	99.418	
180	0.024	99.442	
190	0.019	99.461	
200	0.033	99.495	
210	0.014	99.509	
220	0.010	99.518	
230	0.005	99.523	
240	0.010	99.533	
250	0.000	99.533	
260	0.057	99.590	
270	0.076	99.666	
280	0.019	99.685	
290	0.005	99.690	
300	0.005	99.695	
310	0.029	99.723	
320	0.000	99.723	
330	0.072	99.795	
340	0.033	99.828	
350	0.000	99.828	
360	0.000	99.828	
370	0.014	99.843	
380	0.000	99.843	
390	0.019	99.862	
400	0.000	99.862	
410	0.000	99.862	
420	0.000	99.862	
430	0.000	99.862	
440	0.038	99.900	
450	0.000	99.900	
460	0.000	99.900	
470	0.000	99.900	
480	0.000	99.900	
490	0.000	99.900	
500	0.033	99.933	
510	0.000	99.933	
520	0.000	99.933	
530	0.000	99.933	
540	0.000	99.933	
550	0.000	99.933	
560	0.033	99.967	
570	0.000	99.967	
580	0.000	99.967	
590	0.010	99.976	
600	0.000	99.976	
610	0.000	99.976	
620	0.024	100.000	

MAINING VALUES ARE ALL ZERO
MBER OF OBSERVATIONS= 20972 SUM= 518305. MEAN= 24.714 VAR= 1139.965 SD= 33.763

TAL TRIPS OVER MAXP = 0
TAL TRIPS OVER 255 = 0
LUME TABLE NUMBER = 207
IM TREE NUMBER = 101

CITY TRIP CHARACTERISTICS BY ALPHA NAME





HILLSDALE BANDWIDTH

HILLSDALE

EXTERNAL ORIGIN-DESTINATION INTERVIEW

TERMINAL-TRIP SUMMARY TABLE

VEHICLE TYPE

CAR W/O TRLR	CAR W/ TRLR	PICK-UP W/O/TRLR	PICK-UP W/ TRLR	SINGLE-UNIT TRUCKS	COMBINATION TRUCKS
78.3%	0.2%	16.3%	0.2%	3.3%	1.6%
16424	50	3425	49	686	343

TRIP PURPOSE

WORK	PERS BIZ	SHOP	VACATION	SOC-REC	OTHER
48.1%	7.1%	19.8%	0.1%	12.1%	12.9%
10082	1486	4147	22	2540	2702

NUMBER IN VEHICLE

1	2	3	4	5	6+
64.1%	24.0%	7.6%	2.8%	0.9%	0.6%
13437	5044	1596	589	183	129

VEHICLE GARAGED AT

ORIGIN	DESTIN	OTHER
46.9%	37.2%	15.9%
9845	7801	3332

TOTAL TRIPS = 20978

MINOR

EXTERNAL ORIGIN-DESTINATION INTERVIEW

TERMINAL-TRIP SUMMARY TABLE FOR HILLSDALE

TRIP PURPOSE

# IN VEH.	WORK	PERS BIZ	SHOP	VACATION	SOC-REC	OTHER
1	81.2% 8187	52.2% 776	47.3% 1963	27.0% 6	45.8% 1165	49.6% 1341
2	14.6% 1473	32.6% 484	33.6% 1394	38.2% 8	32.0% 812	32.3% 873
3	3.0% 303	9.8% 146	12.5% 517	6.4% 1	12.7% 324	11.3% 305
4	0.8% 82	3.6% 53	4.7% 196	21.7% 5	5.9% 149	3.9% 105
5	0.2% 18	1.2% 18	1.3% 53	0.0% 0	1.9% 49	1.6% 44
6+	0.2% 19	0.6% 9	0.6% 25	6.7% 1	1.6% 42	1.2% 34
TOTAL	100% 10082	100% 1486	100% 4147	100% 22	100% 2540	100% 2702

TOTAL TERMINAL-TRIPS FOR HILLSDALE = 20978

MINOR

EXTERNAL ORIGIN-DESTINATION INTERVIEW

TERMINAL-TRIP SUMMARY TABLE FOR HILLSDALE

TRIP PURPOSE

VEH TYPE	WORK	PERS BIZ	SHOP	VACATION	SOC-REC	OTHER
CAR W/O TRLR	68.5% 6909	84.3% 1253	85.7% 3556	90.5% 20	90.1% 2288	88.8% 2399
CAR W/ TRLR	0.1% 15	0.2% 2	0.2% 8	9.5% 2	0.3% 8	0.5% 14
PICK-UP W/O/TRLR	21.2% 2135	15.2% 226	13.8% 572	0.0% 0	8.9% 226	9.8% 266
PICK-UP W/ TRLR	0.3% 33	0.0% 0	0.0% 2	0.0% 0	0.4% 10	0.1% 4
SINGLE-UNIT TRUCKS	6.4% 650	0.3% 5	0.2% 8	0.0% 0	0.3% 7	0.6% 16
COMBINATION TRUCKS	3.4% 340	0.0% 0	0.0% 1	0.0% 0	0.0% 0	0.1% 2
TOTAL	100% 10082	100% 1486	100% 4147	100% 22	100% 2540	100% 2702

TOTAL TERMINAL-TRIPS FOR HILLSDALE = 20978

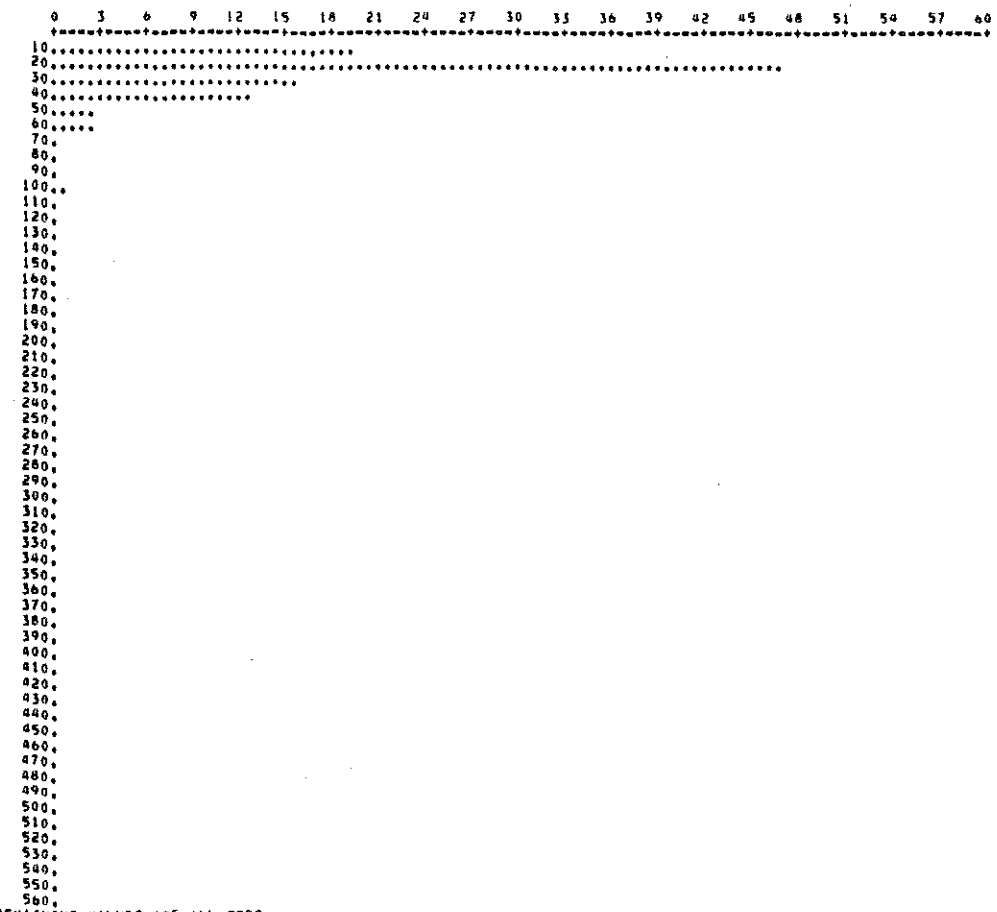
```
    0   3   6   9  12  15  18  21  24  27  30  33  36  39  42  45  48  51  54  57  60
    +---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+
 10 +*************************                                                        P.C.   CUM.
 20 +*************************************************************************      16.928 16.928
 30 +**********************                                                         40.355 57.283
 40 +*************************                                                      12.542 69.825
 50 +******                                                                       15.102 84.928
 60 +********                                                                     1.165 86.093
 70 +***                                                                          5.090 91.183
 80 +                                                                            1.151 92.334
 90 +***                                                                         0.159 92.493
100 +****                                                                        1.111 93.604
110 +                                                                           1.558 97.162
120 +**                                                                         0.159 97.321
130 +**                                                                         0.645 97.966
140 +**                                                                         0.486 98.452
150 +                                                                           0.625 99.077
160 +                                                                           0.149 99.226
170 +                                                                           0.248 99.474
180 +                                                                           0.069 99.544
190 +                                                                           0.030 99.573
200 +                                                                           0.020 99.593
210 +                                                                           0.030 99.623
220 +                                                                           0.010 99.633
230 +                                                                           0.020 99.653
240 +                                                                           0.010 99.663
250 +                                                                           0.010 99.673
260 +                                                                           0.000 99.673
270 +                                                                           0.050 99.722
280 +                                                                           0.060 99.782
290 +                                                                           0.000 99.782
300 +                                                                           0.010 99.792
310 +                                                                           0.010 99.802
320 +                                                                           0.010 99.811
330 +                                                                           0.000 99.811
340 +                                                                           0.030 99.841
350 +                                                                           0.000 99.841
360 +                                                                           0.000 99.841
370 +                                                                           0.000 99.841
380 +                                                                           0.000 99.841
390 +                                                                           0.000 99.841
400 +                                                                           0.030 99.871
410 +                                                                           0.000 99.871
420 +                                                                           0.000 99.871
430 +                                                                           0.000 99.871
440 +                                                                           0.000 99.871
450 +                                                                           0.030 99.901
460 +                                                                           0.000 99.901
470 +                                                                           0.000 99.901
480 +                                                                           0.000 99.901
490 +                                                                           0.000 99.901
500 +                                                                           0.000 99.901
510 +                                                                           0.030 99.931
520 +                                                                           0.000 99.931
530 +                                                                           0.000 99.931
540 +                                                                           0.000 99.931
550 +                                                                           0.000 99.931
560 +                                                                           0.000 99.931
570 +                                                                           0.040 99.970
580 +                                                                           0.000 99.970
590 +                                                                           0.000 99.970
600 +                                                                           0.020 99.990
610 +                                                                           0.000 99.990
620 +                                                                           0.000 99.990
                                                                                0.010100.000
```

REMAINING VALUES ARE ALL ZERO
NUMBER OF OBSERVATIONS= 10078 SUM= 268958. MEAN= 26.688 VAR= 1111.998 SD=

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

```
    0   3   6   9  12  15  18  21  24  27  30  33  36  39  42  45  48  51  54  57  60
    +---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+
 10,*****************************                                                      P.C.   Cum.  AC
 20,*************************************************************************       17.631 17.631
 30,***************************                                                      41.454 59.085
 40,************************                                                         16.420 75.505
 50,***                                                                             13.997 89.502
 60,*****                                                                            2.019 91.521
 70,**                                                                               3.183 94.684
 80,*                                                                                0.404 95.087
 90,*                                                                                0.202 95.289
100,***                                                                              0.875 96.164
110,                                                                                 1.750 97.914
120,                                                                                 0.000 97.914
130,*                                                                                0.269 98.183
140,*                                                                                0.336 98.520
150,                                                                                 0.471 98.991
160,                                                                                 0.135 99.125
170,                                                                                 0.000 99.125
180,                                                                                 0.202 99.327
190,                                                                                 0.000 99.327
200,                                                                                 0.000 99.327
210,                                                                                 0.135 99.462
220,                                                                                 0.000 99.462
230,                                                                                 0.000 99.462
240,                                                                                 0.000 99.462
250,                                                                                 0.000 99.462
260,                                                                                 0.202 99.664
270,                                                                                 0.067 99.731
280,                                                                                 0.000 99.731
290,                                                                                 0.000 99.731
300,                                                                                 0.000 99.731
310,                                                                                 0.135 99.865
320,                                                                                 0.000 99.865
330,                                                                                 0.000 99.865
340,                                                                                 0.135100.000
REMAINING VALUES ARE ALL ZERO
NUMBER OF OBSERVATIONS=      1486      SUM=     36506.      MEAN=  24.567      VAR=     907.532      SD=  3

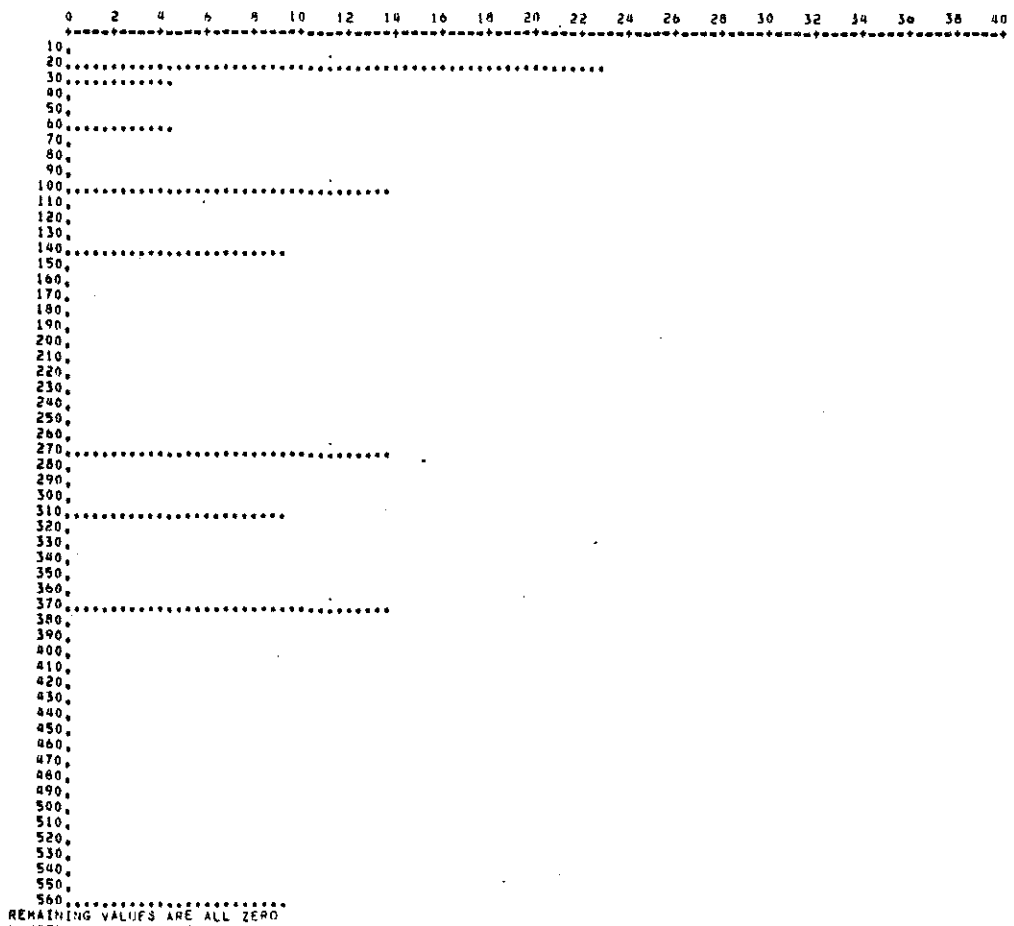
TOTAL TRIPS OVER MAXP  =       0
TOTAL TRIPS OVER 255   =       0
VOLUME TABLE NUMBER    =     202
SKIM TREE NUMBER       =     101
```



	P.C.	CUM.
10	19.228	19.228
20	46.683	65.911
30	15.537	81.448
40	12.304	93.752
50	2.316	96.068
60	2.244	98.311
70	0.145	98.456
80	0.048	98.504
90	0.290	98.794
100	0.314	99.107
110	0.000	99.107
120	0.145	99.252
130	0.169	99.421
140	0.097	99.517
150	0.024	99.542
160	0.000	99.542
170	0.000	99.542
180	0.048	99.590
190	0.048	99.638
200	0.000	99.638
210	0.000	99.638
220	0.000	99.638
230	0.000	99.638
240	0.000	99.638
250	0.000	99.638
260	0.024	99.662
270	0.000	99.662
280	0.000	99.662
290	0.000	99.662
300	0.000	99.662
310	0.000	99.662
320	0.000	99.662
330	0.241	99.903
340	0.000	99.903
350	0.000	99.903
360	0.000	99.903
370	0.000	99.903
380	0.000	99.903
390	0.000	99.903
400	0.000	99.903
410	0.000	99.903
420	0.000	99.903
430	0.000	99.903
440	0.000	99.903
450	0.000	99.903
460	0.000	99.903
470	0.000	99.903
480	0.000	99.903
490	0.000	99.903
500	0.072	99.976
510	0.000	99.976
520	0.000	99.976
530	0.000	99.976
540	0.000	99.976
550	0.000	99.976
560	0.024	100.000

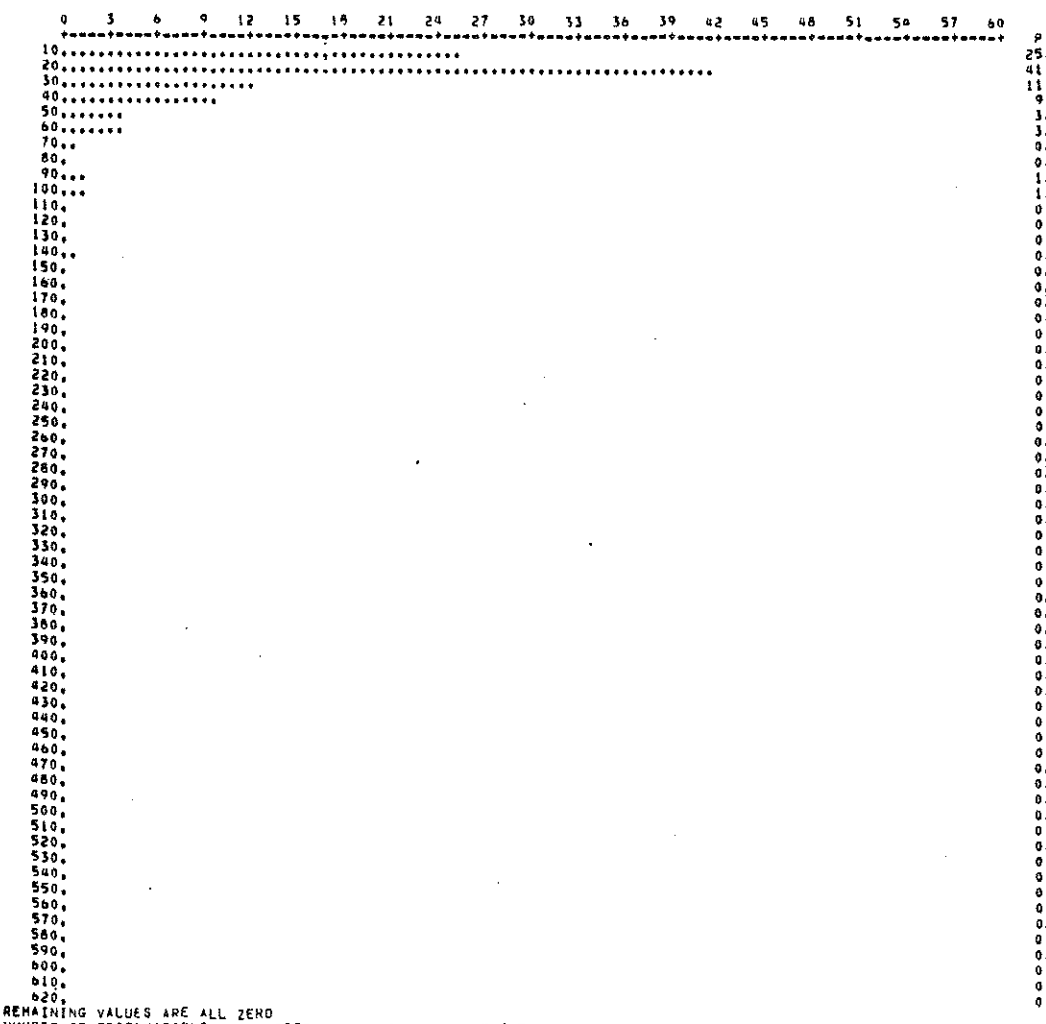
REMAINING VALUES ARE ALL ZERO
NUMBER OF OBSERVATIONS= 4145 SUM= 84760. MEAN= 20.449 VAR= 725.637 SD= 2

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



REMAINING VALUES ARE ALL ZERO
NUMBER OF OBSERVATIONS= 22 SUM= 4337. MEAN= 197.136 VAR= 29434.409 SD= 171.

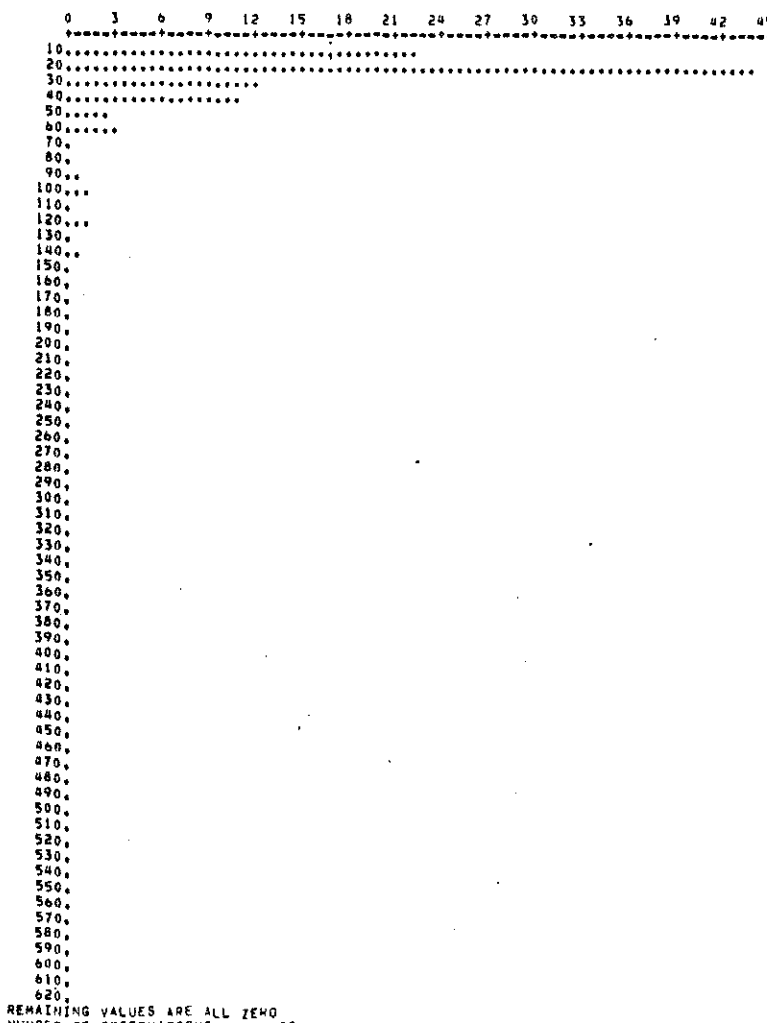
TOTAL TRIPS OVER MAXP = 0
TOTAL TRIPS OVER 255 = 0
VOLUME TABLE NUMBER = 204
SKIM TREE NUMBER = 101



	P.C.	CUM.
10	25.443	25.443
20	41.512	66.955
30	11.776	78.732
40	9.334	88.066
50	3.427	91.493
60	3.781	95.274
70	0.551	95.825
80	0.079	95.904
90	1.182	97.085
100	1.300	98.385
110	0.197	98.582
120	0.276	98.858
130	0.276	99.134
140	0.315	99.449
150	0.039	99.488
160	0.118	99.606
170	0.079	99.685
180	0.000	99.685
190	0.000	99.685
200	0.079	99.764
210	0.039	99.803
220	0.000	99.803
230	0.000	99.803
240	0.000	99.803
250	0.000	99.803
260	0.039	99.842
270	0.039	99.882
280	0.000	99.882
290	0.000	99.882
300	0.000	99.882
310	0.000	99.882
320	0.000	99.882
330	0.000	99.882
340	0.079	99.961
350	0.000	99.961
360	0.000	99.961
370	0.000	99.961
380	0.000	99.961
390	0.000	99.961
400	0.000	99.961
410	0.000	99.961
420	0.000	99.961
430	0.000	99.961
440	0.000	99.961
450	0.000	99.961
460	0.000	99.961
470	0.000	99.961
480	0.000	99.961
490	0.000	99.961
500	0.000	99.961
510	0.000	99.961
520	0.000	99.961
530	0.000	99.961
540	0.000	99.961
550	0.000	99.961
560	0.000	99.961
570	0.000	99.961
580	0.000	99.961
590	0.000	99.961
600	0.000	99.961
610	0.000	99.961
620	0.039	100.000

REMAINING VALUES ARE ALL ZERO
NUMBER OF OBSERVATIONS= 2539 SUM= 55795. MEAN= 21.975 VAR= 771.672 SD= 2

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



	P.C.	CUM.
10	22.206	22.206
20	43.745	65.951
30	12.028	77.979
40	10.733	88.712
50	2.665	91.377
60	3.146	94.523
70	0.259	94.782
80	0.000	94.782
90	0.629	95.411
100	1.110	96.521
110	0.148	96.669
120	1.221	97.890
130	0.222	98.113
140	0.555	98.668
150	0.037	98.705
160	0.111	98.816
170	0.111	98.927
180	0.000	98.927
190	0.000	98.927
200	0.000	98.927
210	0.037	98.964
220	0.000	98.964
230	0.000	98.964
240	0.037	99.001
250	0.000	99.001
260	0.074	99.075
270	0.185	99.260
280	0.148	99.408
290	0.000	99.408
300	0.000	99.408
310	0.037	99.445
320	0.000	99.445
330	0.074	99.519
340	0.111	99.630
350	0.000	99.630
360	0.000	99.630
370	0.000	99.630
380	0.000	99.630
390	0.037	99.667
400	0.000	99.667
410	0.000	99.667
420	0.000	99.667
430	0.000	99.667
440	0.185	99.852
450	0.000	99.852
460	0.000	99.852
470	0.000	99.852
480	0.000	99.852
490	0.000	99.852
500	0.037	99.889
510	0.000	99.889
520	0.000	99.889
530	0.000	99.889
540	0.000	99.889
550	0.000	99.889
560	0.000	99.889
570	0.000	99.889
580	0.000	99.889
590	0.000	99.889
600	0.000	99.889
610	0.000	99.889
620	0.111	100.000

REMAINING VALUES ARE ALL ZERO
NUMBER OF OBSERVATIONS= 2702 SUM= 67949. MEAN= 25.148 VAR= 1831.661 SD= 4

TOTAL TRIPS OVER MAXP = 0
TOTAL TRIPS OVER 255 = 0
VOLUME TABLE NUMBER = 206
SKIM TREE NUMBER = 101

```
   0   3   6   9  12  15  18  21  24  27  30  33  36  39  42  45  48  51  54  57  60
   +---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+
 10.**********.*******************                                                    P.C.   CUM.  AC
 20.**********.*******************************************************************  19.126 19.126
 30.***********.***********                                                          42.242 61.368
 40.***********.***********                                                          13.241 74.609
 50.******                                                                           13.194 87.803
 60.********                                                                         2.880 90.683
 70..                                                                                3.981 94.664
 80.                                                                                 0.710 95.375
 90..                                                                                0.110 95.484
100...                                                                               0.877 96.362
110.                                                                                1.249 97.611
120..                                                                               0.119 97.730
130..                                                                               0.548 98.279
140..                                                                               0.353 98.632
150.                                                                                0.472 99.104
160.                                                                                0.095 99.199
170.                                                                                0.148 99.347
180.                                                                                0.072 99.418
190.                                                                                0.024 99.442
200.                                                                                0.019 99.461
210.                                                                                0.033 99.495
220.                                                                                0.014 99.509
230.                                                                                0.010 99.518
240.                                                                                0.005 99.523
250.                                                                                0.010 99.533
260.                                                                                0.000 99.533
270.                                                                                0.057 99.590
280.                                                                                0.076 99.666
290.                                                                                0.019 99.685
300.                                                                                0.005 99.690
310.                                                                                0.005 99.695
320.                                                                                0.029 99.723
330.                                                                                0.000 99.723
340.                                                                                0.072 99.795
350.                                                                                0.033 99.828
360.                                                                                0.000 99.828
370.                                                                                0.000 99.828
380.                                                                                0.014 99.843
390.                                                                                0.000 99.843
400.                                                                                0.019 99.862
410.                                                                                0.000 99.862
420.                                                                                0.000 99.862
430.                                                                                0.000 99.862
440.                                                                                0.038 99.900
450.                                                                                0.000 99.900
460.                                                                                0.000 99.900
470.                                                                                0.000 99.900
480.                                                                                0.000 99.900
490.                                                                                0.000 99.900
500.                                                                                0.033 99.933
510.                                                                                0.000 99.933
520.                                                                                0.000 99.933
530.                                                                                0.000 99.933
540.                                                                                0.000 99.933
550.                                                                                0.000 99.933
560.                                                                                0.033 99.967
570.                                                                                0.000 99.967
580.                                                                                0.000 99.967
590.                                                                                0.010 99.976
600.                                                                                0.000 99.976
610.                                                                                0.000 99.976
620.                                                                                0.024100.000
REMAINING VALUES ARE ALL ZERO
NUMBER OF OBSERVATIONS=     20972        SUM=     518305.        MEAN=  24.714          VAR=      1139.965          SD=  3

TOTAL TRIPS OVER MAXP  =        0
TOTAL TRIPS OVER 255   =        0
VOLUME TABLE NUMBER    =      207
SKIM TREE NUMBER       =      101
```

APPENDIX "A"-EQUIVALENCE LIST

ZONE	COUNTY	TOWNSHIP OR CITY
001	ALCONA	ALCONA, CALEDONIA, GREENBUSH, GUSTIN, HARRISVILLE, HAWES, HAYNES, MIKADO.
002	ALCONA	CURTIS, MILLEN, MITCHELL.
003	ALGER	MUNISING(CITY).
004	ALGER	BURT, MUNISING.
005	ALGER	LIMESTONE, MATHIAS, ONOTA, ROCK RIVER.
006	ALGER	AU TRAIN, GRAND ISLAND.
007	ALLEGAN	ALLEGAN, CHESHIRE, TROWBRIDGE, VALLEY.
008	ALLEGAN	CASCO, CLYDE, GANGES, LEE.
009	ALLEGAN	GUNPLAIN, OTSEGO.
010	ALLEGAN	FILLMORE, HEATH, MANLIUS, MONTEREY, OVERISEL, SALEM.
011	ALLEGAN	LAKETOWN, SAUGATUCK.
012	ALLEGAN	DORR, HOPKINS, LEIGHTON, MARTIN, WATSON, WAYLAND.
013	ALPENA	ALPENA(CITY).
014	ALPENA	ALPENA, SANBORN.
015	ALPENA	GREEN, LONG RAPIDS, MAPLE RIDGE, OSSINEKE, WELLINGTON. WILSON.
016	ANTRIM	CHESTONIA, JORDAN, MANCELONA, STAR, WARNER.
017	ANTRIM	BANKS, CENTRAL LAKE, ECHO, TORCH LAKE.
018	ANTRIM	CUSTER, ELK RAPIDS, FOREST HOME, HELENA, KEARNEY, MILTON.
019	ARENAC	LINCOLN, STANDISH.
020	ARENAC	AU GRES, SIMS, TURNER, WHITNEY.
021	ARENAC	ADAMS, ARENAC, CLAYTON, DEEP RIVER, MASON, MOFFATT.
022	BARAGA	ARVON, LANSE.
023	BARAGA	BARAGA.
024	BARAGA	COVINGTON, SPURR.
025	BARRY	HASTINGS(CITY).
026	BARRY	CARLTON, CASTLETON, HASTINGS, IRVING, RUTLAND, WOODLAND.
027	BARRY	ASSYRIA, BALTIMORE, BARRY, HOPE, JOHNSTOWN, MAPLE GROVE.
028	BARRY	ORANGEVILLE, PRAIRIEVILLE, THORNAPPLE, YANKEE SPRINGS.
029	BAY	BAY CITY.
030	BAY	BANGOR.
031	BAY	BEAVER, KAWKAWLIN, MONITOR, WILLIAMS.
032	BAY	FRANKENLUST, HAMPTON, MERRITT, PORTSMOUTH.
033	BAY	FRASER, GARFIELD, GIBSON, MT. FOREST, PINCONNING.
034	BENZIE	CRYSTAL LAKE, LAKE.
035	BENZIE	BENZONIA, BLAINE, GILMORE, JOYFIELD, WELDON.
036	BENZIE	ALMIRA, COLFAX, HOMESTEAD, INLAND, PLATTE.
037	BERRIEN	BENTON HARBOR(CITY),ST.JOE(CITY).
038	BERRIEN	BARODA, LAKE, ORONOKO.
039	BERRIEN	BENTON, HAGAR, ST. JOSEPH.
040	BERRIEN	BAINBRIDGE, COLOMA, WATERVLIET.
041	BERRIEN	BERRIEN, PIPESTONE.
042	BERRIEN	BERTRAND, BUCHANAN, GALIEN, WEESAW.
043	BERRIEN	CHIKAMING, NEW BUFFALO, THREE OAKS.
044	BERRIEN	LINCOLN, ROYALTON, SODUS.
045	BERRIEN	NILES(CITY).
046	BERRIEN	NILES.
047	BERRIEN	BUCHANAN(CITY).

048	BRANCH	COLDWATER(CITY).
049	BRANCH	BATAVIA, MATTESON, SHERWOOD.
050	BRANCH	BETHEL, BRONSON, GILEAD, NOBLE.
051	BRANCH	BUTLER, QUINCY.
052	BRANCH	ALGANSEE, CALIFORNIA, KINDERHOOK, OVID.
053	BRANCH	GIRARD, UNION.
054	BRANCH	COLDWATER.
055	CALHOUN	BATTLE CREEK(CITY).
056	CALHOUN	ALBION, HOMER.
057	CALHOUN	ATHENS, BURLINGTON, LEROY, NEWTON.
058	CALHOUN	BATTLE CREEK.
059	CALHOUN	BEDFORD.
060	CALHOUN	CLARENCE, CLARENDON, ECKFORD, LEE, MARENGO,
061	CALHOUN	CONVIS, FREDONIA, MARSHALL.
062	CALHOUN	EMMETT.
063	CALHOUN	PENNFIELD.
064	CALHOUN	SHERIDAN.
065	CALHOUN	TEKONSHA.
066	CALHOUN	ALBION(CITY).
067	CALHOUN	MARSHALL(CITY).
068	CASS	DOWAGIAC(CITY).
069	CASS	LA GRANGE, POKAGON, SILVER CREEK, WAYNE.
070	CASS	HOWARD, MILTON.
071	CASS	JEFFERSON, ONTWA.
072	CASS	MARCELLUS, VOLINIA.
073	CASS	NEWBERG, PENN.
074	CASS	CALVIN, MASON, PORTER.
075	CHARLEVOIX	CHARLEVOIX(CITY), PEAINE, ST. JAMES.
076	CHARLEVOIX	BOYNE VALLEY, CHANDLER, HUDSON, MELROSE.
077	CHARLEVOIX	SOUTH ARM, WILSON.
078	CHARLEVOIX	BAY, CHARLEVOIX, EVANGELINE, EVELINE, HAYES, MARION, NORWOOD.
079	CHEBOYGAN	CHEBOYGAN.
080	CHEBOYGAN	BEAUGRAND, BURT, HEBRON, INVERNESS, MACKINAW, MULLETT, MUNRO.
081	CHEBOYGAN	ELLIS, FOREST, KOEHLER, MENTOR, NUNDA, TUSCARORA, WALKER, WAVERLY, WILMOT.
082	CHEBOYGAN	ALOHA, BENTON, GRANT.
083	CHIPPEWA	SAULT STE. MARIE, SUGAR ISLAND.
084	CHIPPEWA	BRUCE, PICKFORD.
085	CHIPPEWA	CHIPPEWA, HULBERT, WHITEFISH.
086	CHIPPEWA	DETOUR, DRUMMOND, RABER.
087	CHIPPEWA	KINROSS, RUDYARD, TROUT LAKE.
088	CHIPPEWA	BAY MILLS, DAFTER, SUPERIOR.
089	CLARE	GRANT, SHERIDAN.
090	CLARE	ARTHUR, FRANKLIN, FROST, HAMILTON, HATTON, HAYES.
091	CLARE	FREEMAN, GARFIELD, GREENWOOD, LINCOLN, REDDING, SUMMERFIELD, SURREY, WINTERFIELD.
092	CLINTON	ST. JOHNS(CITY).
093	CLINTON	BATH.
094	CLINTON	BENGAL, BINGHAM, ESSEX.
095	CLINTON	DALLAS, LEBANON, WESTPHALIA.
096	CLINTON	DUPLAIN, GREENBUSH.
097	CLINTON	EAGLE, RILEY, WATERTOWN.
098	CLINTON	OLIVE, VICTOR.
099	CLINTON	OVID.
100	CLINTON	DEWITT.

101	CRAWFORD	GRAYLING(CITY).
102	CRAWFORD	BEAVER CREEK, FREDERIC, GRAYLING, LOVELLS, MAPLE FOREST, SOUTH BRANCH.
103	DELTA	ESCANABA(CITY).
104	DELTA	BARK RIVER, FORD RIVER.
105	DELTA	BAY DE NOC, ENSIGN, MASONVILLE.
106	DELTA	ESCANABA, WELLS.
107	DELTA	FAIRBANKS, GARDEN, NAHMA.
108	DELTA	BALDWIN, BRAMPTON, CORNELL, MAPLE RIDGE.
109	DICKINSON	IRON MOUNTAIN(CITY).
110	DICKINSON	BREITUNG.
111	DICKINSON	BREEN, FELCH, SAGOLA, WEST BRANCH.
112	DICKINSON	NORWAY, WAUCEDAH.
113	EATON	CHARLOTTE(CITY).
114	EATON	BENTON, BROOKFIELD, EATON.
115	EATON	CARMEL, CHESTER, WALTON.
116	EATON	BELLEVUE, KALAMO.
117	EATON	DELTA.
118	EATON	EATON RAPIDS, HAMLIN.
119	EATON	ONEIDA, ROXAND.
120	EATON	SUNFIELD, VERMONTVILLE.
121	EATON	WINDSOR.
122	EATON	EATON RAPIDS(CITY).
123	EATON	GRAND LEDGE(CITY).
124	EMMET	PETOSKEY(CITY).
125	EMMET	BLISS, CARP LAKE, CROSS VILLAGE, CENTER, MCKINLEY, READMOND, WAWATAM.
126	EMMET	FRIENDSHIP, LITTLEFIELD, LITTLE TRAVERSE, MAPLE RIVER, PLEASANT VIEW, WEST TRAVERSE.
127	EMMET	BEAR CREEK, RESORT, SPRINGVALE.
128	GENESEE	FLINT(CITY).
129	GENESEE	VIENNA.
130	GENESEE	FLUSHING, MT MORRIS.
131	GENESEE	CLAYTON, FLINT.
132	GENESEE	GRAND BLANC.
133	GENESEE	BURTON(CITY).
134	GENESEE	DAVISON.
135	GENESEE	RICHFIELD.
136	GENESEE	GENESEE.
137	GENESEE	FOREST, THETFORD.
138	GENESEE	MONTROSE.
139	GENESEE	GAINES, MUNDY.
140	GENESEE	ARGENTINE, FENTON,
141	GENESEE	ATLAS.
142	GLADWIN	GLADWIN(CITY).
143	GLADWIN	BENTLEY, BILLINGS, BOURRET, BUTMAN, CLEMENT, GRIM, HAY, SECORD, SHERIDAN, TOBACCO.
144	GLADWIN	GLADWIN, SAGE, SHERMAN.
145	GLADWIN	BEAVERTON, BUCKEYE, GROUT.
146	GOGEBIC	IRONWOOD.
147	GOGEBIC	WAKEFIELD.
148	GOGEBIC	MARENISCO.
149	GOGEBIC	WATERSMEET.
150	GOGEBIC	BESSEMER, ERWIN.
151	GRAND TRAVERSE	TRAVERSE CITY(CITY)ANDPENINSULA.
152	GRAND TRAVERSE	BLAIR, GARFIELD, GREEN LAKE, LONG LAKE.

153 GRAND TRAVERSE EAST BAY, FIFE LAKE, PARADISE, UNION.
154 GRAND TRAVERSE GRANT, MAYFIELD.
155 GRAND TRAVERSE ACME, WHITEWATER.

156 GRATIOT ALMA(CITY).
157 GRATIOT ARCADA, EMERSON, HAMILTON, LAFAYETTE, NORTH STAR, NEW HAVEN, NEWARK, SUMNER.
158 GRATIOT BETHANY, PINE RIVER, SEVILLE, WHEELER.
159 GRATIOT ELBA, FULTON, NORTH SHADE, WASHINGTON.
160 GRATIOT ITHACA(CITY).

161 HILLSDALE HILLSDALE(CITY).
162 HILLSDALE ALLEN, FAYETTE.
163 HILLSDALE AMBOY, RANSOM, WRIGHT.
164 HILLSDALE CAMBRIA, HILLSDALE, WOODBRIDGE.
165 HILLSDALE CAMDEN, READING.
166 HILLSDALE JEFFERSON, PITTSFORD.
167 HILLSDALE LITCHFIELD, MOSCOW, SCIPO.
168 HILLSDALE ADAMS, SOMERSET, WHEATLAND.

169 HOUGHTON HOUGHTON(CITY).
170 HOUGHTON CALUMET, OSCEOLA, SCHOOLCRAFT.
171 HOUGHTON CHASSELL, TORCH LAKE
172 HOUGHTON DUNCAN, LAIRD.
173 HOUGHTON FRANKLIN, HANCOCK, QUINCY.
174 HOUGHTON PORTAGE.
175 HOUGHTON ADAMS, ELM RIVER, STANTON.

176 HURON BAD AXE(CITY).
177 HURON BINGHAM, PARIS, SAND BEACH, SHERMAN.
178 HURON BLOOMFIELD, LINCOLN, RIBICON, SIGEL, VERONA.
179 HURON BROOKFIELD, GRANT, SEBEWAING, SHERIDAN.
180 HURON CASEVILLE, CHANDLER, LAKE, MCKINLEY, MEADE.
181 HURON COLFAX, FAIRHAVEN, OLIVER, WINSOR.
182 HURON DWIGHT, GORE, HUME, HURON, PORT AUSTIN, POINT AUX BARQUES.

183 INGHAM LANSING(CITY),E.LANSING(CITY).
184 INGHAM MERIDIAN.
185 INGHAM DELHI.
186 INGHAM ALAIEDON, VEVAY.
187 INGHAM AURELIUS, LESLIE, ONONDAGA.
188 INGHAM BUNKER HILL, STOCKBRIDGE.
189 INGHAM INGHAM, WHITE OAK.
190 INGHAM LEROY, LOCKE.
191 INGHAM WHEATFIELD, WILLIAMSTON.

192 IONIA IONIA(CITY).
193 IONIA BERLIN, BOSTON.
194 IONIA CAMPBELL, ODESSA.
195 IONIA DANBY, SEBEWA.
196 IONIA EASTON, KEENE.
197 IONIA IONIA, RONALD.
198 IONIA LYONS, NORTH PLAINS.
199 IONIA ORANGE, PORTLAND.
200 IONIA ORLEANS, OTISCO.

201 IOSCO ALABASTER, TAWAS.
202 IOSCO AU SABLE, BALDWIN, WILBER.
203 IOSCO BURLEIGH, GRANT, PLAINFIELD, RENO, SHERMAN.
204 IOSCO OSCODA.

205 IRON IRON RIVER(CITY).
206 IRON STAMBAUGH.
207 IRON CRYSTAL FALLS.
208 IRON MANSFIELD, MASTODON.

209	IRON	BATES, HEMATITE, IRON RIVER.
210	ISABELLA	MT PLEASANT.
211	ISABELLA	CHIPPEWA, COE.
212	ISABELLA	COLDWATER, GILMORE, VERNON, WISE.
213	ISABELLA	DENVER, ISABELLA, NOTTAWA, SHERMAN.
214	ISABELLA	LINCOLN, UNION.
215	ISABELLA	BROOMFIELD, DEERFIELD, FREMONT, ROLLAND.
216	JACKSON	JACKSON(CITY).
217	JACKSON	SUMMIT.
218	JACKSON	CONCORD, HANOVER, PULASKI, SPRING ARBOR.
219	JACKSON	BLACKMAN, RIVES.
220	JACKSON	GRASS LAKE, LEONI.
221	JACKSON	NAPOLEON, NORVELL.
222	JACKSON	COLUMBIA, LIBERTY.
223	JACKSON	PARMA, SANDSTONE.
224	JACKSON	SPRINGPORT, TOMKINS.
225	JACKSON	HENRIETTA, WATERLOO.
226	KALAMAZOO	KALAMAZOO.
227	KALAMAZOO	PORTAGE.
228	KALAMAZOO	COMSTOCK.
229	KALAMAZOO	CHARLESTON.
230	KALAMAZOO	COOPER, RICHLAND, ROSS.
231	KALAMAZOO	ALAMO, OSHTEMO.
232	KALAMAZOO	PRAIRIE RONDE, TEXAS.
233	KALAMAZOO	BRADY, CLIMAX, PAVILION, SCHOOLCRAFT, WAKESHMA.
234	KALKASKA	BOARDMAN, CLEARWATER, KALKASKA, ORANGE, RAPID RIVER, SPRINGFIELD.
235	KALKASKA	BEAR LAKE, BLUE LAKE, COLD SPRINGS, EXCELSIOR, GARFIELD, OLIVER.
236	KENT	GRAND RAPIDS(CITY).
237	KENT	ADA, CASCADE.
238	KENT	ALGOMA, CANNON, COURTLAND, PLAINFIELD.
239	KENT	ALPINE, SPARTA.
240	KENT	BOWNE, CALEDONIA.
241	KENT	BYRON, GAINES.
242	KENT	GRAND RAPIDS.
243	KENT	GRATTAN, OAKFIELD, SPENCER.
244	KENT	LOWELL, VERGENNES.
245	KENT	NELSON, SOLON, TYRONE.
246	KENT	WALKER.
247	KENT	KENTWOOD.
248	KENT	WYOMING(CITY).
249	KEWEENAW	ALLOUEZ, EAGLE HARBOR, GRANT, HOUGHTON, SHERMAN.
250	LAKE	CHASE, CHERRY VALLEY, LAKE, PINORA, PLEASANT PLAIN, SWEETWATER, WEBBER, YATES.
251	LAKE	DOVER, EDEN, ELK, ELLSWORTH, NEWKIRK, PEACOCK, SAUBLE.
252	LAPEER	LAPEER(CITY).
253	LAPEER	ARCADIA, ATTICA, GOODLAND.
254	LAPEER	BURLINGTON, BURNSIDE, NORTH BRANCH.
255	LAPEER	DEERFIELD, MARATHON, RICH.
256	LAPEER	ELBA, HADLEY, METAMORA.
257	LAPEER	LAPEER, MAYFIELD, OREGON.
258	LAPEER	ALMONT, DRYDEN, IMLAY.
259	LEELANAU	LEELANAU, LELAND, SUTTONS BAY
260	LEELANAU	CLEVELAND, EMPIRE, GLEN ARBOR, KASSON.
261	LEELANAU	BINGHAM, CENTERVILLE, ELMWOOD, SOLON.

262	LENAWEE	ADRIAN(CITY).
263	LENAWEE	ADRIAN, FRANKLIN.
264	LENAWEE	BLISSFIELD, DEERFIELD, OGDEN, PALMYRA, RIGA.
265	LENAWEE	CAMBRIDGE, ROME.
266	LENAWEE	CLINTON, MACON, RAISIN, RIDGEWAY, TECUMSEH.
267	LENAWEE	DOVER, SENECA.
268	LENAWEE	FAIRFIELD, MADISON.
269	LENAWEE	HUDSON, MEDINA.
270	LENAWEE	ROLLIN, WOODSTOCK.
271	LIVINGSTON	HOWELL, MARION.
272	LIVINGSTON	COHOCTAH, CONWAY, HANDY, IOSCO.
273	LIVINGSTON	DEERFIELD, HARTLAND, OCEOLA, TYRONE.
274	LIVINGSTON	GREEN OAK, HAMBURG.
275	LIVINGSTON	BRIGHTON, GENOA.
276	LIVINGSTON	PUTNAM, UNADILLA.
277	LUCE	MCMILLAN.
278	LUCE	COLUMBUS, LAKEFIELD.
279	LUCE	PENTLAND.
280	MACKINAC	BOIS BLANC ISLAND, ST.IGNACE(CITY).
281	MACKINAC	CLARK, MARQUETTE, ST IGNACE.
282	MACKINAC	BREVORT, HENDRICKS, HUDSON, MORAN.
283	MACKINAC	GARFIELD, NEWTON, PORTAGE.
284	MACOMB	CLINTON, HARRISON.
285	MACOMB	ST CLAIR SHORES(CITY)E,DET(CITY),ROSEVILLE(CITY).
286	MACOMB	WARREN(CITY).
287	MACOMB	SHELBY.
288	MACOMB	CHESTERFIELD, MACOMB.
289	MACOMB	BRUCE, RAY, WASHINGTON.
290	MACOMB	ARMADA, LENOX, RICHMOND.
291	MANISTEE	BROWN, FILER, MANISTEE, STRONACH.
292	MANISTEE	DICKSON, NORMAN.
293	MANISTEE	CLEON, MAPLE GROVE, MARILLA, SPRINGDALE.
294	MANISTEE	ARCADIA, BEAR LAKE, ONEKAMA, PLEASANTON.
295	MARQUETTE	MARQUETTE(CITY).
296	MARQUETTE	CHOCOLAY, RICHMOND, SANDS, SKANDIA, WEST BRANCH.
297	MARQUETTE	ELY, ISHPEMING, TILDEN.
298	MARQUETTE	EWING, FORSYTH, TURIN, WELLS.
299	MARQUETTE	ISHPEMING(CITY).
300	MARQUETTE	MARQUETTE, NEGAUNEE.
301	MARQUETTE	CHAMPION, HUMBOLDT, MICHIGAMME, POWELL, REPUBLIC.
302	MASON	LUDINGTON(CITY).
303	MASON	BRANCH, CUSTER, EDEN, LOGAN.
304	MASON	FREESOIL, GRANT, HAMLIN, MEADE, SHERIDAN, SHERMAN, VICTORY.
305	MASON	AMBER, PERE MARQUETTE, RIVERTON, SUMMIT.
306	MECOSTA	BIG RAPIDS(CITY).
307	MECOSTA	BIG RAPIDS, COLFAX, GRANT, GREEN.
308	MECOSTA	CHIPPEWA, FORK, MARTINY, SHERIDAN.
309	MECOSTA	HINTON, MILLBROOK, MORTON, WHEATLAND.
310	MECOSTA	AETNA, AUSTIN, DEERFIELD, MECOSTA.
311	MENOMINEE	MENOMINEE(CITY).
312	MENOMINEE	HARRIS, MEYER, SPALDING.
313	MENOMINEE	INGALLSTON, LAKE, MELLEN, MENOMINEE, STEPHENSON.
314	MENOMINEE	CEDARVILLE, DAGGETT, FAITHORN, GOURLEY, HOLMES, NADEAU.
315	MIDLAND	MIDLAND(CITY).

316	MIDLAND	GREENDALE, JASPER, LEE, PORTER.
317	MIDLAND	HOMER, INGERSOLL, MIDLAND, MT. HALEY.
318	MIDLAND	HOPE, LARKIN, LINCOLN, MILLS.
319	MIDLAND	EDENVILLE, GENEVA, JEROME, WARREN.
320	MISSAUKEE	LAKE, REEDER, RICHLAND, RIVERSIDE.
321	MISSAUKEE	BLOOMFIELD, CALDWELL, FOREST, PIONEER.
322	MISSAUKEE	AETNA, BUTTERFIELD, CLAM UNION, ENTERPRISE, HOLLAND, NORWICH, WEST BRANCH.
323	MONROE	MONROE(CITY).
324	MONROE	BEDFORD.
325	MONROE	BERLIN.
326	MONROE	DUNDEE.
327	MONROE	ERIE.
328	MONROE	EXETER, RAISINVILLE.
329	MONROE	FRENCHTOWN, MONROE.
330	MONROE	IDA, SUMMERFIELD.
331	MONROE	LASALLE.
332	MONROE	LONDON, MILAN.
333	MONROE	ASH.
334	MONROE	WHITEFORD.
335	MONTCALM	GREENVILLE.
336	MONTCALM	BLOOMER, BUSHNELL, CRYSTAL, EVERGREEN.
337	MONTCALM	DAY, FERRIS, HOME, RICHLAND.
338	MONTCALM	EUREKA, FAIRPLAIN, MONTCALM, SIDNEY.
339	MONTCALM	MAPLE VALLEY, PIERSON, REYNOLDS, WINFIELD.
340	MONTCALM	BELVIDERE, CATO, DOUGLASS, PINE.
341	MONTMORENCY	ALBERT, AVERY, BRILEY, HILLMAN, LOUD, MONTMORENCY, RUST, VIENNA.
342	MUSKEGON	MUSKEGON(CITY).
343	MUSKEGON	LAKETON.
344	MUSKEGON	MUSKEGON.
345	MUSKEGON	NORTON SHORES.
346	MUSKEGON	BLUE LAKE, HOLTON.
347	MUSKEGON	CASNOVIA, MOORLAND.
348	MUSKEGON	CEDAR CREEK, DALTON.
349	MUSKEGON	EGELSTON.
350	MUSKEGON	FRUITLAND, MONTAGUE, WHITE RIVER, WHITEHALL.
351	MUSKEGON	FRUITPORT, RAVENNA, SULLIVAN.
352	NEWAGO	FREMONT(CITY).
353	NEWAGO	BARTON, BEAVER, DENVER, HOME, LILLEY, MERRILL, MONROE, NORWICH, TROY.
354	NEWAGO	BIG PRAIRIE, EVERETT, GOODWELL, LINCOLN, SHERMAN, WILCOX.
355	NEWAGO	BRIDGETON, DAYTON, SHERIDAN.
356	NEWAGO	BROOKS, CROTON, GARFIELD.
357	NEWAGO	ASHLAND, ENSLEY, GRANT.
358	OAKLAND	PONTIAC(CITY).
359	OAKLAND	SOUTHFIELD.
360	OAKLAND	ROYAL OAK TWP, AND THE FOLLOWING CITIES) BERKLEY, CLAWSON, FERNDALE, HAZEL PARK, HUNTINGTON WOODS, MADISON HEIGHTS, OAK PARK, PLEASANT RIDGE.
361	OAKLAND	BLOOMFIELD.
362	OAKLAND	FARMINGTON.
363	OAKLAND	LYON.
364	OAKLAND	COMMERCE.
365	OAKLAND	HIGHLAND, MILFORD, WHITE LAKE.
366	OAKLAND	WEST BLOOMFIELD.
367	OAKLAND	TROY(CITY).
368	OAKLAND	AVON.
369	OAKLAND	PONTIAC.

371	OAKLAND	HOLLY, ROSE.
372	OAKLAND	GROVELAND, SPRINGFIELD.
373	OAKLAND	BRANDON, INDEPENDENCE.
374	OAKLAND	OAKLAND, ORION.
375	OAKLAND	ADDISON, OXFORD.
376	OCEANA	BENONA, CLAYBANKS, SHELBY.
377	OCEANA	COLFAX, CRYSTAL, ELBRIDGE, HART, LEAVITT, WEARE.
378	OCEANA	FERRY, GRANT, GREENWOOD, NEWFIELD, OTTO.
379	OCEANA	GOLDEN, PENTWATER.
380	OGEMAW	EDWARDS, HORTON, OGEMAW, WEST BRANCH.
381	OGEMAW	CUMMING, FOSTER, GOODAR, HILL, KLACKING, ROSE.
382	OGEMAW	CHURCHILL, LOGAN, MILLS, RICHLAND.
383	ONTONAGON	ONTONAGON.
384	ONTONAGON	BOHEMIA, GREENLAND, ROCKLAND.
385	ONTONAGON	HAIGHT, INTERIOR, MCMILLAN, STANNARD.
386	ONTONAGON	BERGLAND, CARP LAKE, MATCHWOOD.
387	OSCEOLA	HERSEY, RICHMOND.
388	OSCEOLA	EVART, ORIENT, OSCEOLA, SYLVAN.
389	OSCEOLA	HARTWICK, HIGHLAND, MARION, MIDDLE BRANCH.
390	OSCEOLA	BURDELL, CEDAR, LEROY, LINCOLN, ROSE LAKE, SHERMAN.
391	OSCODA	BIG CREEK, CLINTON, COMINS, ELMER, GREENWOOD, MENTOR.
392	OTSEGO	GAYLORD(CITY).
393	OTSEGO	BAGLEY, CHARLTON, CHESTER, HAYES, OTSEGO LAKE.
394	OTSEGO	CORWITH, DOVER, ELMIRA, LIVINGSTON.
395	OTTAWA	HOLLAND(CITY).
396	OTTAWA	CHESTER, TALLMADGE, WRIGHT.
397	OTTAWA	CROCKERY, POLKTON.
398	OTTAWA	GEORGETOWN, JAMESTOWN.
399	OTTAWA	SPRING LAKE.
400	OTTAWA	GRAND HAVEN, OLIVE, PORT SHELDON, ROBINSON.
401	OTTAWA	ALLENDALE, BLENDON
402	OTTAWA	HOLLAND, PARK.
403	OTTAWA	ZEELAND.
404	PRESQUE ISLE	BELKNAP, BISMARCK, METZ, MOLTKE, ROGERS.
405	PRESQUE ISLE	ALLIS, BEARINGER, CASE, NORTH ALLIS, OCQUEOC.
406	PRESQUE ISLE	KRAKOW, POSEN, PRESQUE ISLE, PULAWSKI.
407	ROSCOMMON	DENTON, GERRISH, LAKE, LYON, MARKEY, ROSCOMMON.
408	ROSCOMMON	AU SABLE, BACKUS, HIGGINS, NESTER, RICHFIELD.
409	SAGINAW	SAGINAW(CITY).
410	SAGINAW	TITTABAWASSEE.
411	SAGINAW	CARROLLTON, KOCHVILLE, SAGINAW.
412	SAGINAW	BUENA VISTA, ZILWAUKEE.
413	SAGINAW	THOMAS.
414	SAGINAW	FRANKENMUTH.
415	SAGINAW	BRIDGEPORT.
416	SAGINAW	JAMES, ST. CHARLES, SWAN CREEK.
417	SAGINAW	FREMONT, JONESFIELD, LAKEFIELD, RICHLAND.
418	SAGINAW	BRADY, BRANT, CHAPIN, MARION.
419	SAGINAW	BLUMFIELD
420	SAGINAW	CHESANING, MAPLE GROVE.
421	SAGINAW	ALBEE, SPAULDING.
422	SAGINAW	BIRCH RUN, TAYMOUTH.
423	SANILAC	BUEL, ELK, LEXINGTON.

424	SANILAC	BRIDGEHAMPTON, CUSTER, FORESTER.
425	SANILAC	FLYNN, FREMONT, MAPLE VALLEY, SPEAKER, WORTH.
426	SANILAC	ARGYLE, AUSTIN, EVERGREEN, GREENLEAF, LAMOTTE, MOORE.
427	SANILAC	DELAWARE, MARION, MINDEN, WHEATLAND.
428	SANILAC	ELMER, MARLETTE.
429	SANILAC	SANILAC, WASHINGTON, WATERTOWN.
430	SCHOOLCRAFT	MANISTIQUE(CITY).
431	SCHOOLCRAFT	HIAWATHA, INWOOD, THOMPSON.
432	SCHOOLCRAFT	DOYLE, GERMFASK, MANISTIQUE, MUELLER, SENEY.
433	SHIAWASSEE	OWOSSO(CITY).
434	SHIAWASSEE	BENNINGTON, SCIOTA.
435	SHIAWASSEE	BURNS, VERNON.
436	SHIAWASSEE	CALEDONIA.
437	SHIAWASSEE	FAIRFIELD, MIDDLEBURY, OWOSSO.
438	SHIAWASSEE	HAZELTON, VENICE.
439	SHIAWASSEE	NEW HAVEN, RUSH.
440	SHIAWASSEE	ANTRIM, SHIAWASSEE.
441	SHIAWASSEE	PERRY, WOODHULL.
442	ST CLAIR	FORT GRATIOT, PORT HURON.
443	ST CLAIR	CASCO, CHINA, EAST CHINA, IRA.
444	ST CLAIR	CLAY, COTTRELLVILE.
445	ST CLAIR	KIMBALL.
446	ST CLAIR	COLUMBUS, ST CLAIR.
447	ST CLAIR	BURTCHVILLE, CLYDE, GRANT.
448	ST CLAIR	BROCKWAY, GREENWOOD.
449	ST CLAIR	BERLIN, EMMETT, RILEY.
450	ST CLAIR	KENOCKEE, WALES.
451	ST CLAIR	LYNN, MUSSEY.
452	ST JOSEPH	STURGIS.
453	ST JOSEPH	COLON, NOTTAWA.
454	ST JOSEPH	CONSTANTINE, FLORENCE, SHERMAN.
455	ST JOSEPH	FABIUS, FLOWERFIELD, LOCKPORT, PARK.
456	ST JOSEPH	LEONIDAS, MENDON.
457	ST JOSEPH	MOTTVILLE, WHITE PIGEON.
458	ST JOSEPH	BURR OAK, FAWN RIVER.
459	ST JOSEPH	THREE RIVERS(CITY).
460	TUSCOLA	CARO.
461	TUSCOLA	ALMER, ELLINGTON, NOVESTA.
462	TUSCOLA	ARBELA, MILLINGTON.
463	TUSCOLA	INDIANFIELDS, JUNIATA.
464	TUSCOLA	DAYTON, KINGSTON, KOYLTON, WELLS.
465	TUSCOLA	DENMARK, TUSCOLA.
466	TUSCOLA	ELKLAND, ELMWOOD.
467	TUSCOLA	FAIRGROVE, GILFORD.
468	TUSCOLA	FREMONT, VASSAR, WATERTOWN.
469	TUSCOLA	VASSAR(CITY).
470	TUSCOLA	AKRON, COLUMBIA, WISNER.
471	VAN BUREN	SOUTH HAVEN(CITY).
472	VAN BUREN	ANTWERP, DECATUR, PORTER.
473	VAN BUREN	ARLINGTON, HARTFORD, LAWRENCE.
474	VAN BUREN	BANGOR, COLUMBIA, GENEVA.
475	VAN BUREN	BLOOMINGDALE, PINE GROVE.
476	VAN BUREN	COVERT, SOUTH HAVEN.
477	VAN BUREN	HAMILTON, KEELER.
478	VAN BUREN	ALMENA, PAW PAW, WAVERLY.
479	WASHTENAW	ANN ARBOR(CITY).
480	WASHTENAW	ANN ARBOR.
481	WASHTENAW	PITTSFIELD

482	WASHTENAW	SCIO, WEBSTER.
483	WASHTENAW	YPSILANTI(CITY).
484	WASHTENAW	YPSILANTI.
485	WASHTENAW	SUPERIOR.
486	WASHTENAW	AUGUSTA, YORK.
487	WASHTENAW	LODI, SALINE.
488	WASHTENAW	BRIDGEWATER, FREEDOM, SHARON.
489	WASHTENAW	MANCHESTER.
490	WASHTENAW	LIMA, SYLVAN.
491	WASHTENAW	DEXTER, LYNDON.
492	WASHTENAW	NORTHFIELD, SALEM.
493	WAYNE	DETROIT(PART 1 OF 3), EAST OF LIVERNOIS, WEST OF JOHN R, SOUTH AND WEST OF EAST GRAND BLVD.
494	WAYNE	DEARBORN(CITY).
495	WAYNE	DETROIT(PART 2 OF 3), WEST OF LIVERNOIS, NORTH OF TIREMAN.
496	WAYNE	DETROIT (PART 3 OF 3), EAST OF JOHN R, EAST OF OAKLAND, NORTH AND EAST OF EAST GRAND BLVD.
497	WAYNE	ALLEN PARK(CITY), ECORSE(CITY), LINCOLN PARK(CITY), MELVINDALE(CITY), RIVER ROUGE(CITY), SOUTHGATE(CITY), WYANDOTTE(CITY).
498	WAYNE	TAYLOR(CITY).
499	WAYNE	BROWNSTOWN, GROSSE ISLE, HURON.
500	WAYNE	ROMULUS, SUMPTER, VAN BUREN.
501	WAYNE	CANTON.
502	WAYNE	NORTHVILLE, PLYMOUTH.
503	WAYNE	GROSSE PTE(CITY), GROSSE PTE FARMS(CITY), GROSSE PTE PARK(CITY), GROSSE PTE SHORES(CITY) GROSSE PTE WOODS(CITY), HARPER WOODS(CITY).
504	WAYNE	REDFORD.
505	WEXFORD	CADILLAC(CITY).
506	WEXFORD	BOON, CHERRY GROVE, CLAM LAKE, HARING, HENDERSON, SOUTH BRANCH, SELMA, SLAGLE.
507	WEXFORD	ANTIOCH, HANOVER, SPRINGVILLE, WEXFORD.
508	WEXFORD	CEDAR CREEK, COLFAX, GREENWOOD, LIBERTY.

ZONE	PROVINCE	MAJOR CITIES WITHIN ZONE
509	ONTARIO	LEAMINGTON, TILBURY, WINDSOR.
510	ONTARIO	SARNIA.
511	ONTARIO	FORT FRANCES, KENORA, SAULT STE. MARIE, SUDBURY, TIMMINS.
512	ONTARIO	CHATHAM, GODFRICH, HAMILTON, KITCHNER, LONDON, NIAGARA FALLS, WALLACEBURG.
513	ONTARIO	KINGSTON, OTTAWA, PEMBROKE, STURGEON FALLS, TORONTO.

ZONE	STATE	COUNTY
514	WISCONSIN	IRON.
515	WISCONSIN	ASHLAND, BAYFIELD.
516	WISCONSIN	ONEIDA, VILAS.
517	WISCONSIN	FOREST.
518	WISCONSIN	FLORENCE.
519	WISCONSIN	MARINETTE.
520	WISCONSIN	BURNETT, DOUGLAS, SAWYER, WASHBURN.
521	WISCONSIN	BARRON, BUFFALO, CHIPPEWA, CLARK, DUNN, EAU CLAIRE, JACKSON, LANGLADE, LINCOLN, MARATHON, PEPIN, PIERCE, POLK, PORTAGE, PRICE, RUSK, ST CROIX, TAYLOR, TREMPEALEAU, WOOD.
522	WISCONSIN	BROWN, CALUMET, DOOR, FOND DU LAC, KEWAUNEE, MANITOWOC,

		MENOMINEE, OCONTO, OUTAGAMIE, SHAWANO, SHEBOYGAN, WAUPACA, WINNEBAGO.
523	WISCONSIN	DANE, DODGE, JEFFERSON, KENOSHA, MILWAUKEE, OZAUKEE, RACINE, ROCK, WALWORTH, WASHINGTON, WAUKESHA.
524	WISCONSIN	ADAMS, COLUMBIA, CRAWFORD, GRANT, GREEN, GREEN LAKE, IOWA, JUNEAU, LA CROSSE, LAFAYETTE, MARQUETTE, MONROE, RICHLAND, SAUK, VERNON, WAUSHARA.
525	ILLINOIS	BOONE, COOK, DE KALB, DU PAGE, GRUNDY, KANE, KENDALL, LAKE, MCHENRY, WILL, WINNEBAGO.
526	ILLINOIS	BUREAU, CARROLL, CHAMPAIGN, CHRISTIAN, COLES, DE WITT, DOUGLAS, EDGAR, FORD, FULTON, HENDERSON, HENRY, IROQUOIS, JO DAVIESS, KANKAKEE, KNOX, LA SALLE, LEE, LIVINGSTON, LOGAN, MACON, MARSHALL, MASON, MCLEAN, MENARD, MERCER, MOULTRIE, OGLE, PEORIA, PIATT, PUTNAM, ROCK ISLAND, SANGAMON, STARK, STEPHENSON, TAZEWELL, VERMILION, WARREN, WHITESIDE, WOODFORD.
527	ILLINOIS	ADAMS, ALEXANDER, BOND, BROWN, CALHOUN, CASS, CLARK, CLAY, FAYETTE, FRANKLIN, GALLATIN, GREENE, HAMILTON, HANCOCK, CLINTON, CRAWFORD, CUMBERLAND, EDWARDS, EFFINGHAM, HARDIN, JACKSON, JASPER, JEFFERSON, JERSEY, JOHNSON, LAWRENCE, MACOUPIN, MADISON, MARION, MASSAC, MCDONOUGH, MONROE, MONTGOMERY, MORGAN, PERRY, PIKE, POPE, PULASKI, RANDOLPH, RICHLAND, SALINE, SCHUYLER, SCOTT, SHELBY, ST CLAIR, UNION, WABASH, WASHINGTON, WAYNE, WHITE, WILLIAMSON.
528	INDIANA	LAKE, PORTER.
529	INDIANA	LAPORTE, STARKE.
530	INDIANA	MARSHALL, ST JOSEPH.
531	INDIANA	ELKHART, KOSCIUSKO.
532	INDIANA	ALLEN, DE KALB, LAGRANGE, NOBLE, STEUBEN, WHITLEY.
533	INDIANA	ADAMS, BENTON, BLACKFORD, BOONE, CARROLL, CASS, CLINTON, DELAWARE, FOUNTAIN, FULTON, GRANT, HENRY, HOWARD, HUNTINGTON, JASPER, JAY, MADISON, MIAMI, MONTGOMERY, NEWTON, PULASKI, RANDOLPH, TIPPECANOE, TIPTON, WABASH, WARREN, WAYNE, WELLS, WHITE.
534	INDIANA	BARTHOLOMEW, BROWN, CLARK, CLAY, CRAWFORD, DAVIESS, DEARBORN, DECATUR, DUBOIS, FAYETTE, FLOYD, FRANKLIN, GIBSON, GREENE, HAMILTON, HANCOCK, HARRISON, HENDRICKS, JACKSON, JEFFERSON, JENNINGS, JOHNSON, KNOX, LAWRENCE, MARION, MARTIN, MONROE, MORGAN, OHIO, ORANGE, OWEN, PARKE, PERRY, PIKE, POSEY, PUTNAM, RIPLEY, RUSH, SCOTT, SHELBY, SPENCER, SULLIVAN, SWITZERLAND, UNION, VANDERBURGH, VERMILLION, VIGO, WARRICK, WASHINGTON.
535	OHIO	DEFIANCE, WILLIAMS.
536	OHIO	FULTON, HENRY.
537	OHIO	LUCAS, WOOD.
538	OHIO	ALLEN, AUGLAIZE, CRAWFORD, DARKE, ERIE, HANCOCK, HARDIN, HURON, LOGAN, MARION, MERCER, OTTAWA, PAULDING, PUTNAM, SANDUSKY, SENECA, SHELBY, VAN WERT, WYANDOT.
539	OHIO	ASHTABULA, BELMONT, CARROLL, COLUMBIANA, COSHOCTON, CUYAHOGA, DELAWARE, FAIRFIELD, FRANKLIN, GEAUGA, HAMILTON, HARRISON, JACKSON, JEFFERSON, LAKE, LORAIN, MAHONING, MEDINA, PORTAGE, STARK, SUMMIT, TRUMBULL, WARREN, WASHINGTON.
540	OHIO	ADAMS, ASHLAND, ATHENS, BROWN, BUTLER, CHAMPAIGN, CLARK, CLERMONT, CLINTON, FAYETTE, GALLIA, GREENE, GUERNSEY, HIGHLAND, HOCKING, HOLMES, KNOX, LAWRENCE, LICKING, MADISON MEIGS, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM NOBLE, PERRY, PICKAWAY, PIKE, PREBLE, RICHLAND, ROSS, SCIOTO, TUSCARAWAS, UNION, VINTON, WAYNE.

ZONE	STATE
541	NORTH CAROLINA, VIRGINIA, WEST VIRGINIA.
542	ALABAMA, FLORIDA, GEORGIA, KENTUCKY, SOUTH CAROLINA, TENNESSEE.
543	ARIZONA, ARKINSAW, KANSAS, LOUISIANA, MISSISSIPPI, MISSOURI, NEW MEXICO, OKLAHOMA, TEXAS.
544	CALIFORNIA, COLORADO, HAWAII, IDAHO, IOWA, NEBRASKA, NEVADA, OREGON, UTAH, WYOMING.
545	ALASKA, MINNESOTA, MONTANA, NORTH DAKOTA, SOUTH DAKOTA, WASHINGTON.
546	DISTRICT OF COLUMBIA, DELAWARE, MARYLAND, NEW JERSEY, PENNSYLVANIA.
547	CONNECTICUT, MAINE, MASSACHUSETTS, NEW HAMPSHIRE, NEW YORK, RHODE ISLAND, VERMONT.