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MONITORING AND ANALYSIS OF CARBON MONOXIDE AND TRAFFIC CHARACTERISTICS AT OAKBROOK

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Air and Waste Management
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

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by

R. M. Patterson and F. A. Record

GCA Corporation
GCA/Technology Division
Bedford, Massachusetts 01730

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EPA Project Officer: Edwin L. Meyer, Jr.

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SECTION I

INTRODUCTION AND SUMMARY

This document reports the results of a carbon monoxide and traffic monitoring and analysis program conducted at Oakbrook Shopping Center in the Village of Oak Brook, a Chicago suburb.

Following a description of the study site, this report falls into three sections. The first section describes the details of the carbon monoxide and meteorology monitoring techniques, and it gives a summary of the results. The full data listings are presented in Appendices A and B. The next section presents a discussion of traffic monitoring locations, and it evaluates the results in terms of the impact of the shopping center on traffic loads at a nearby intersection, trip generation rates, and vehicular operating modes at intersections.

The final section integrates the findings described in the other sections by developing a method for approximating emission profiles for queuing vehicles, and testing the composite model formed by the approximated profiles and the HIWAY line source model against carbon monoxide concentrations measured at the study site. Twenty-two of twenty-seven calculated concentrations are within a factor of two of those observed. Six comparisons agree exactly. The mean calculated value is 3.5 ppm versus a mean 3.8 ppm observed value. The correlation coefficient is 0.34, significant at better than the 10 percent level. Less favorable agreement was found when concentrations were calculated by (1) using a larger initial vertical diffusion parameter and (2) assuming stability conditions one class less stable than those

computed by the standard objective method. A suggested technique for estimating carbon monoxide concentrations near intersections is also presented. This technique involves examining the properties inherent to the Gaussian diffusion equation compared with receptor locations and emission characteristics at intersections.

SECTION II

SITE DESCRIPTION

Oakbrook Shopping Center is located in the Village of Oak Brook, Illinois, a suburb located 12 miles west of the Chicago Loop. The shopping center lies in an area of high accessibility being served by the Tri-State Tollway, located two miles east of the center, and the Eisenhower (East-West Tollway) Expressway, located 1/4 mile south of the center. The Oak Brook area is also served by three major regional arterial roads: Roosevelt Road (Illinois Route 38), Butterfield Road (Illinois Route 56), and Kingery Highway (Illinois Route 83). Figure 1 illustrates the relationship of the center to Chicago and the regional arterial roadway system.

There are substantial quantities of office space in the vicinity of the shopping center (mostly to the east). The Oakbrook Association of Commerce and Industry estimates that there are 2.5 million square feet of office space in the Village of Oak Brook. In addition, there are two theaters and several hotels and motels within 1/4 mile of the site. Figure 2 illustrates the location of Oakbrook Shopping Center with respect to adjacent developments and the roadway network. Another major regional shopping center, Yorktown (approximately 1.5 million square feet of gross leasible area, or GLA) is located 2-1/2 miles west of Oak Brook in Lombard, Illinois.

Regional access to the center is provided by two major arterials, Illinois Route 83 and 22nd Street. Interchanges with the East-West Tollway are located on both these streets south of the center. Local

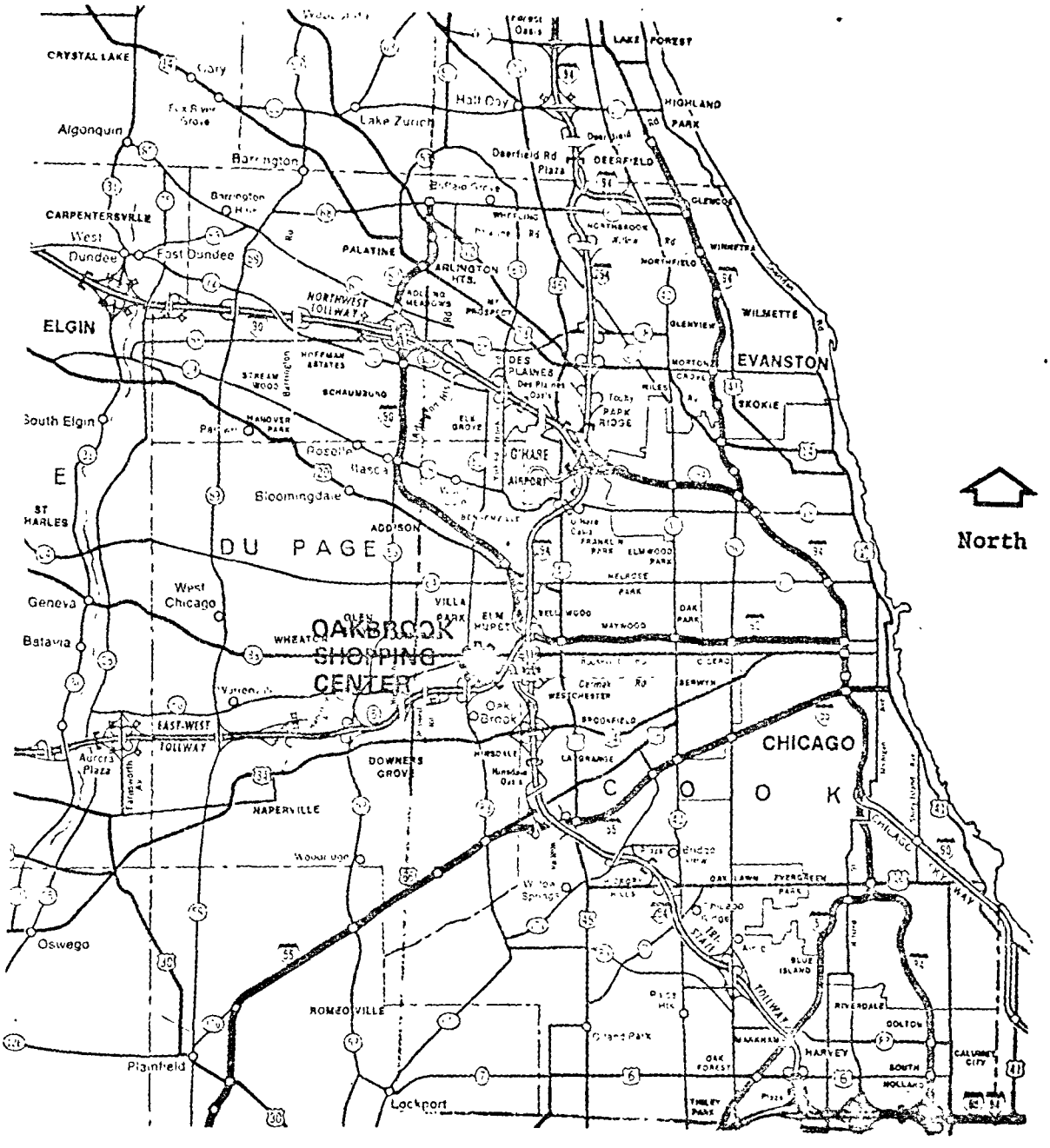


Figure 1. Proximity of Oakbrook to Chicago and major expressways

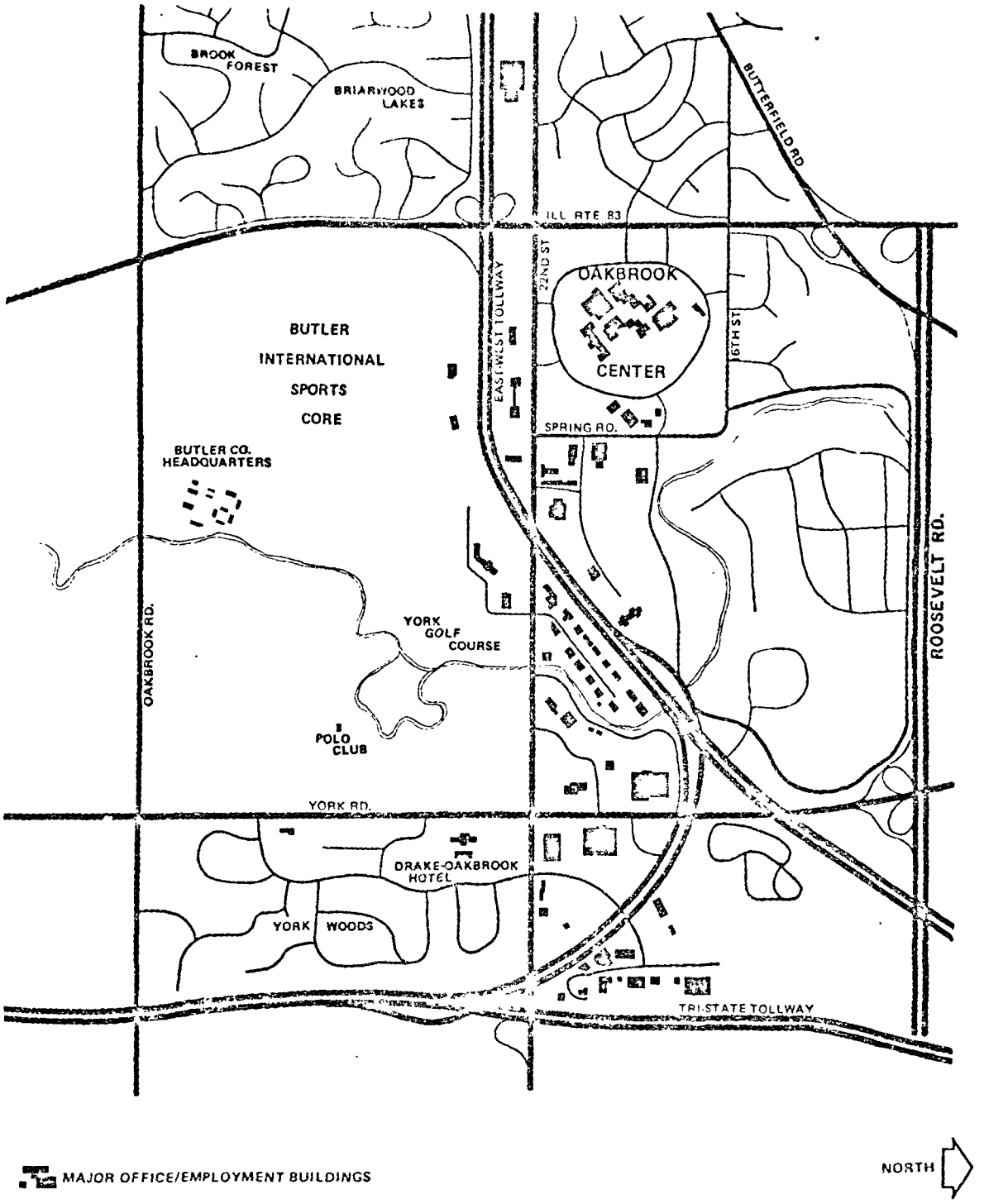


Figure 2. Oakbrook Shopping Center area development

access to the center is also provided by Spring Road (eastern site boundary) and 16th Street (northern site boundary). The center has six major access drives: two each on 22nd Street and Illinois Route 83, and one each on 16th Street and Spring Road. The entrances on Illinois Route 83 and 22nd Street are controlled by actuated traffic signals while the remaining two entrances are controlled by stop signs. The shopping center has a parking lot capacity of approximately 7,200 spaces.

Oakbrook Shopping Center, completed in 1962, has a total GLA of approximately 1,250,000 square feet. The prime tenants of the shopping center are Marshall Field & Company (Building A), Sears, Roebuck and Co. (Building B), and Lord & Taylor (Building C). The center contains 60 smaller shops. Figure 3 illustrates the layout of the buildings, the parking lots, and the entrances. The prime trade area of the center includes an area of over 180 square miles having a generally more affluent population than other regional shopping centers in the Chicago area.[1]

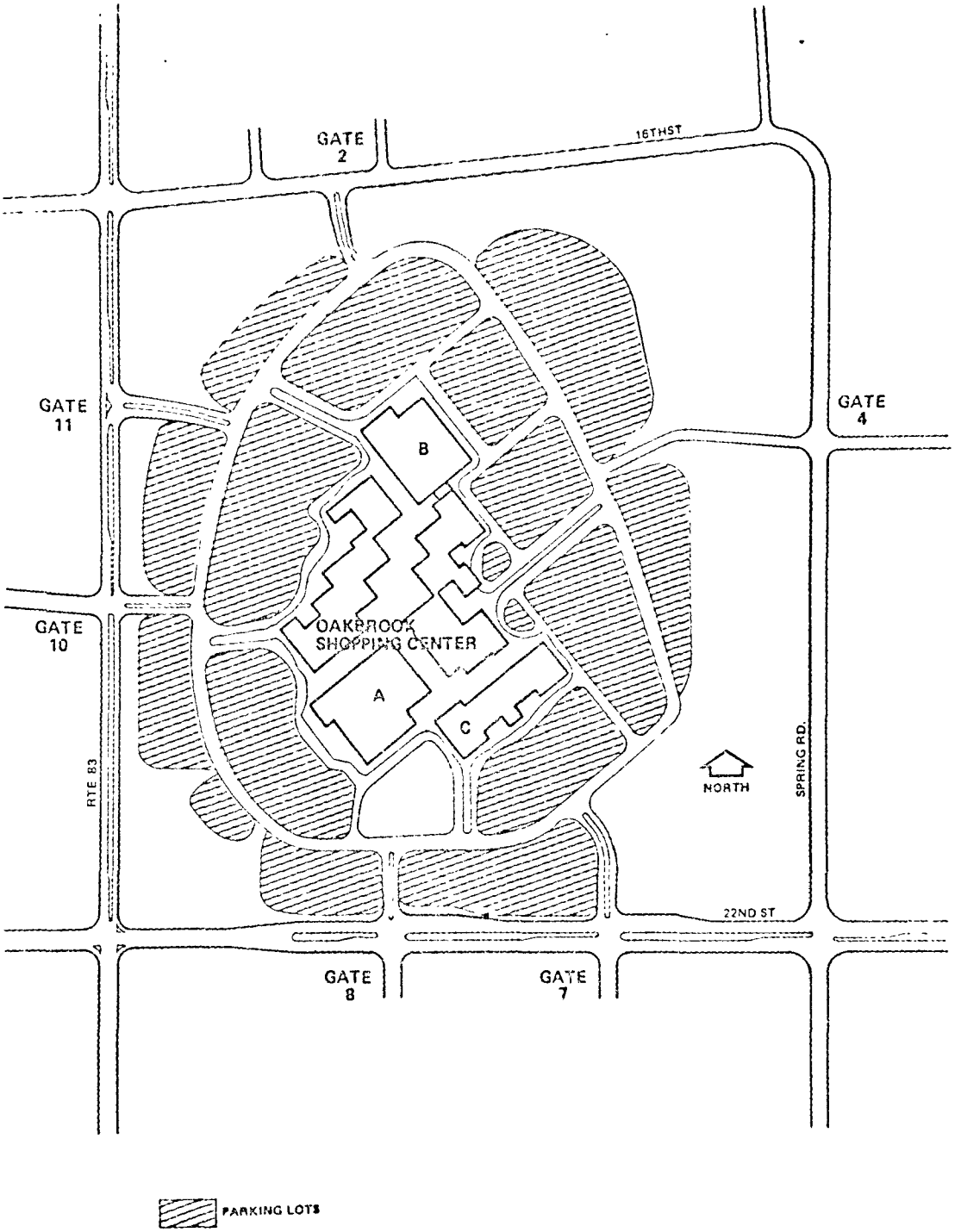


Figure 3. Oakbrook Shopping Center building and parking lot locations

SECTION III

CARBON MONOXIDE MONITORING PROGRAM

DATA COLLECTION

Introduction

The study of air quality in the vicinity of the Oakbrook Shopping Center was conducted using both bag sampling and continuous monitoring techniques to measure carbon monoxide concentrations in the ambient air. The study commenced Friday, March 22, and continued through Saturday, April 13, 1974.

The locations of the monitoring sites relative to the shopping center are shown in Figure 4. Sites 11 through 15 and 161 through 163 were continuous monitors, and sites 181 through 184 were bag sampling locations. Six of the eight continuous CO analyzers were located near the intersection of Route 83 and 22nd Street. Meteorological data were also collected near this intersection.

Instrumentation

Two types of CO analyzers were used during this study. One was the "Ecolyzer", manufactured by Energetics Science, Inc. The analysis performed by this instrument is based upon electrochemical oxidation of the carbon monoxide. The instrument is portable and has a dual 0-100, 0-50 ppm range meter. Each analyzer was connected to a continuously recording strip chart recorder throughout the study.

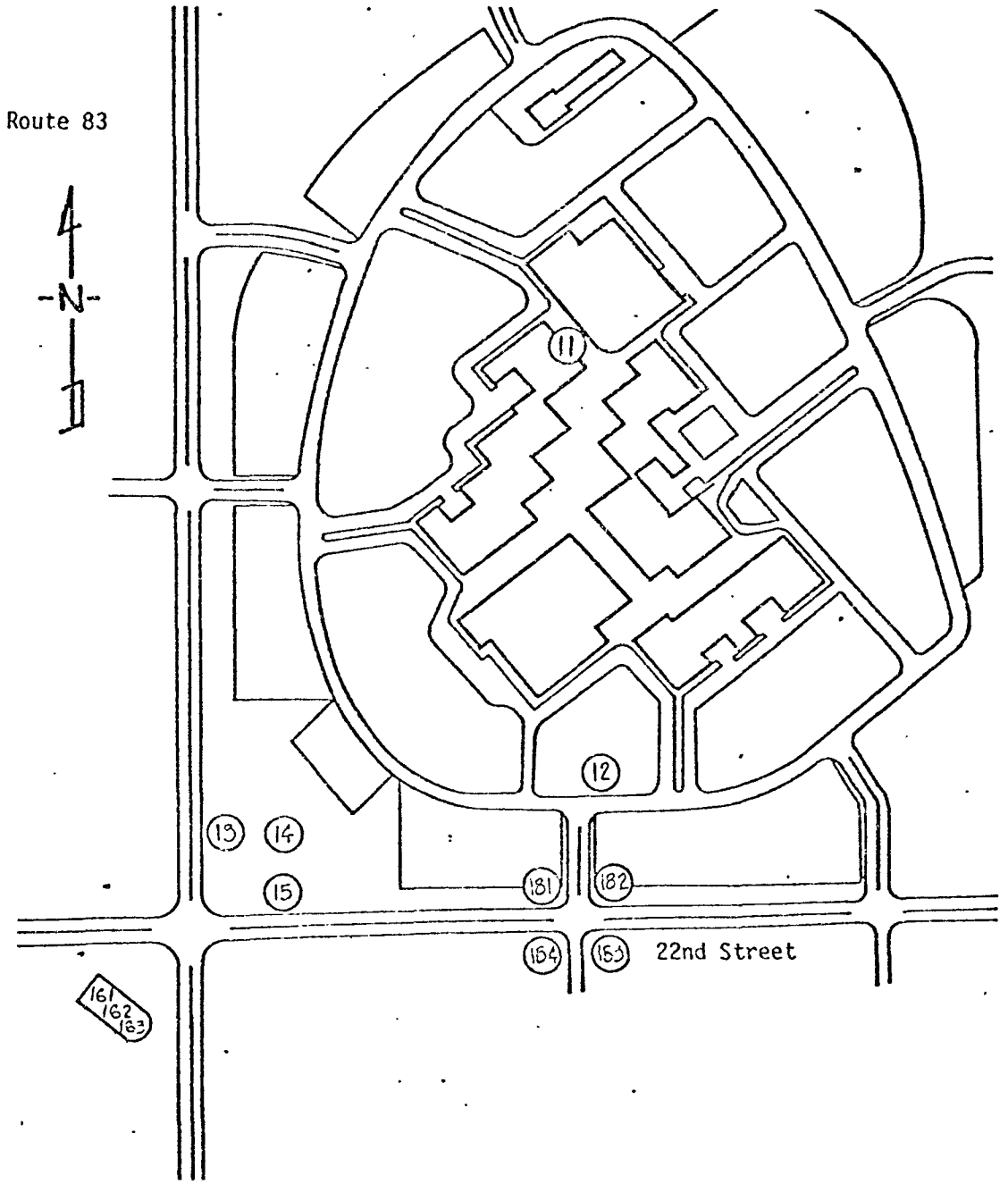


Figure 4. Location of monitoring sites in relation to the shopping center

The second type of CO analyzer was the instrument used in the EPA standard reference method for the continuous measurement of carbon monoxide in the atmosphere (Federal Register, April 30, 1971). This instrument, a non-dispersive infrared (NDIR) unit, was manufactured by the Mine Safety and Appliance Company. These units were also equipped with continuously recording strip chart recorders. The measurement of CO by this instrument is based upon the absorption of infrared radiation by carbon monoxide. The range of the unit is 0 to 50 ppm.

Calibration

All of the CO analyzers were calibrated at least once daily throughout the study. The "Ecolyzer" units were normally calibrated using a built-in instrument zero setting and a span gas (48 ppm) which was almost full scale on the 0 to 50 ppm range which was used. The instrument zero settings were also verified at various times throughout the study with a zero gas. These two zero techniques showed close agreement. In addition to these end point calibrations, random low range checks were made on the "Ecolyzers" using a certified 11.5 ppm CO gas.

Zero and span gas checks were also performed on the NDIR units on a daily basis. The zero and span gases (0 and 37.8 ppm) were traceable standards, as they had been calibrated against zero and span gases certified by the National Bureau of Standards.

A multi-point calibration to check the instrument linearity was conducted every week. This consisted of checking the instrument readings at five different carbon monoxide concentrations across the 0 to 50 ppm scale. These concentrations were made by combining the zero and span gas traceable standards in various known proportions. The calibration procedures on the NDIR instruments were performed by employees of the Quality Assurance and Environmental Laboratory of the EPA.

Similar linearity checks were also performed on the two "Ecolyzers" used at Site 162. The reasons for changing units at this site are described later.

All strip chart recorders were also checked daily to ensure that reasonable data were being obtained and that the recorders were keeping accurate time.

Continuous Monitoring Sites

As mentioned above, six of the eight continuous CO analyzers were located in the immediate vicinity of the intersection of Route 83 and 22nd Street. Figure 5 shows the exact location of these six monitors.

Sites 13, 14 and 15, located on the northeast corner of the intersection, had "Ecolyzer" CO monitors. Each set of instruments was housed in a fully enclosed utility trailer measuring approximately 6 feet long, 4 feet high and 4 feet wide. Each trailer was heated with a thermostatically controlled electric heater, and the temperature within the trailer was maintained at approximately 70°F. A 3/8 inch Teflon sampling line was housed in a metal conduit which passed through the floor of the trailer, attached to the side of the trailer, and extended above grade about 8 feet with a U-shaped bend at the top. A one-gallon glass container was inserted into the sample gas line ahead of the carbon monoxide analyzer to act as an integrator to reduce the excessive scatter which normally occurs on the strip chart without such a "surge tank." Figure 6 is a schematic diagram of the sampling arrangement.

Three analyzers were located in a temperature controlled van at 75 ± 2°F, situated on the southwest corner of the intersection. Analyzers 161 and 163 were NDIR units, and analyzer 162 was an "Ecolyzer." All three of these analyzers were connected to the same sampling air manifold, and hence the three received essentially identical samples. It was thus

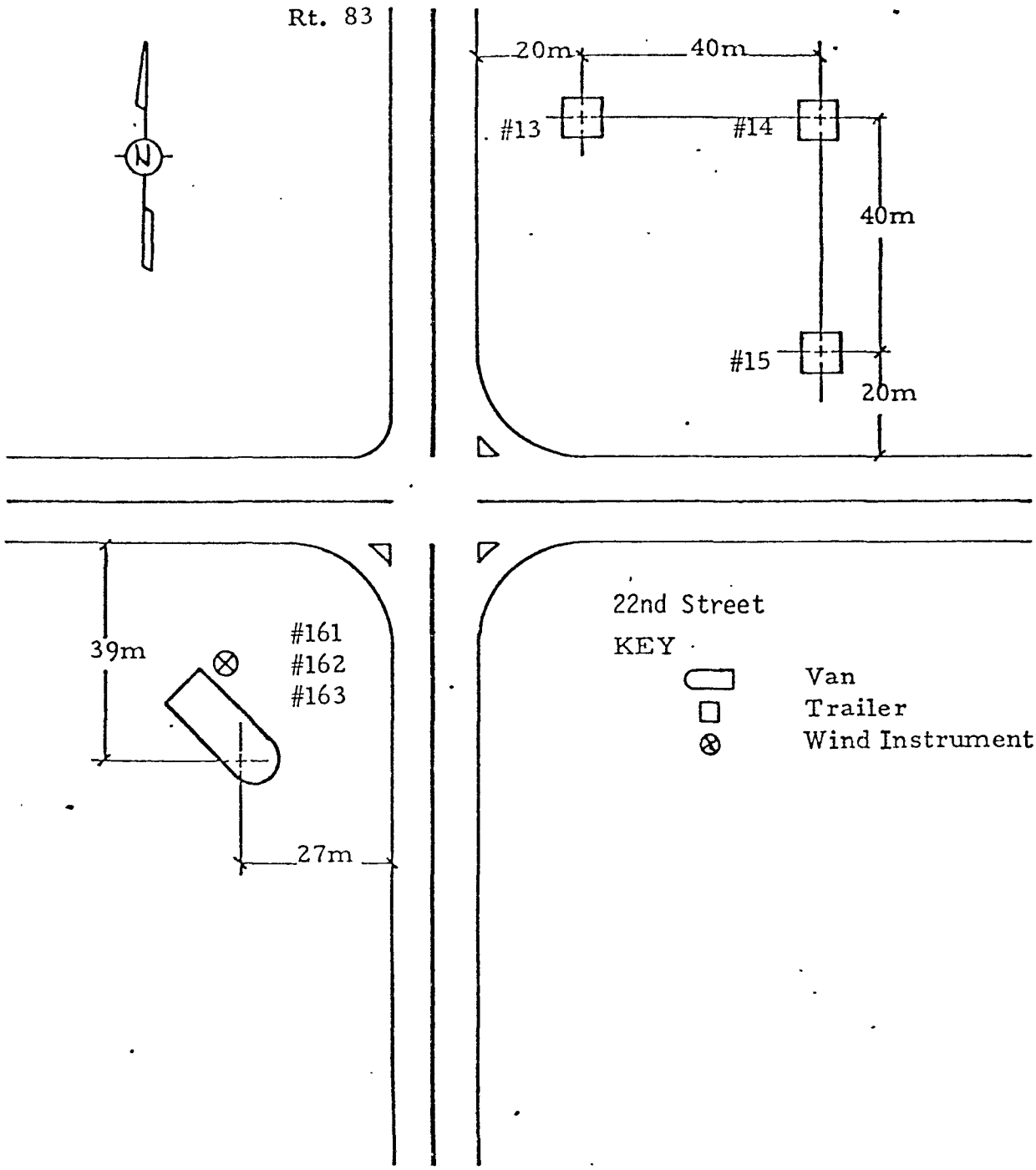


Figure 5. Continuous monitoring sites at Route 83 and 22nd Street

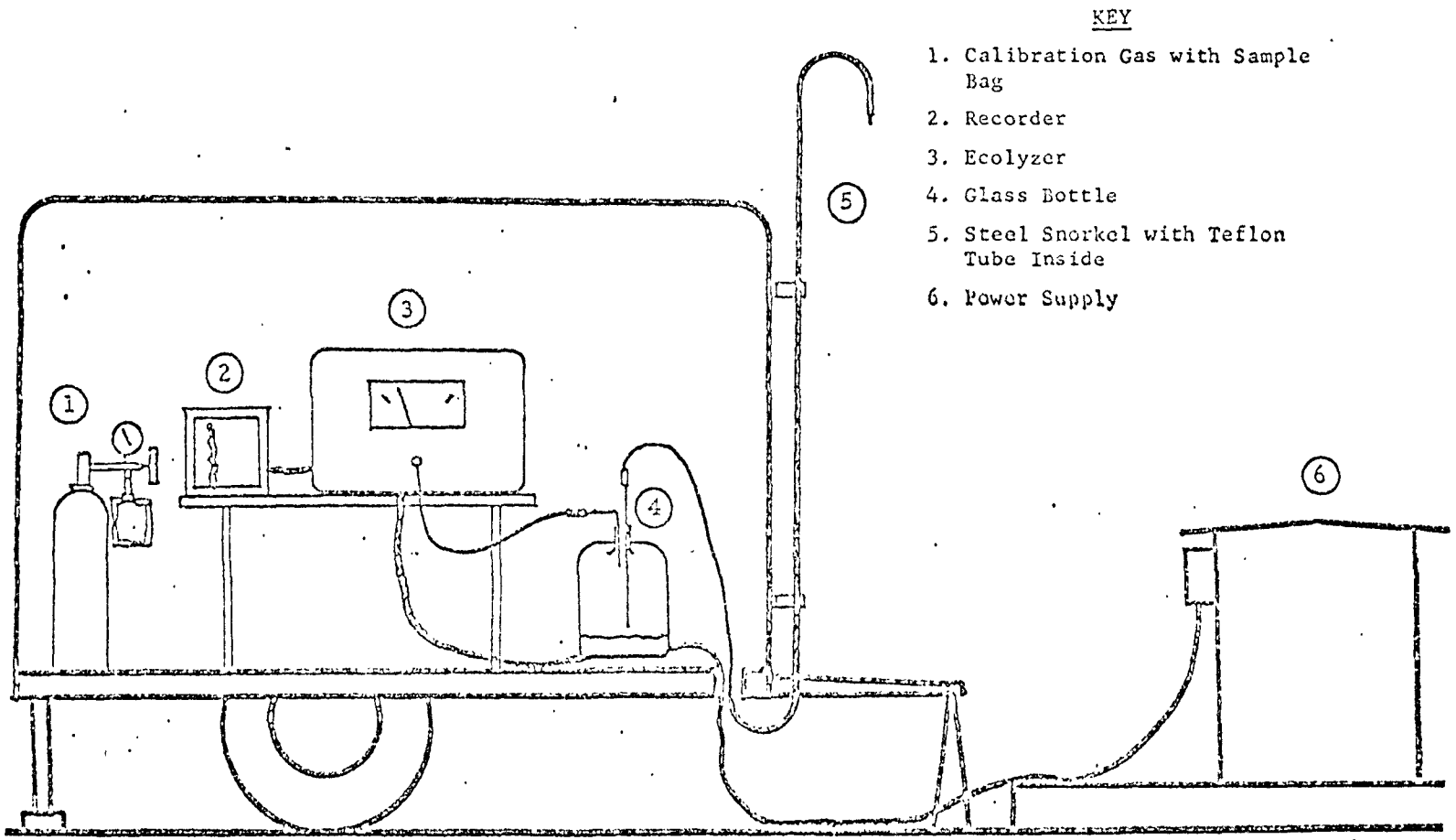


Figure 6. Monitoring station schematic

possible to compare the readings obtained on the "Ecolyzer" with those obtained by the EPA reference method. The results of this comparison will be discussed in a later section.

NDIR unit 161 was used as a continuous monitor for sampling the ambient air and contained a surge tank to reduce the scatter. NDIR unit 163 was used as a continuous monitor as well, but it was also used to determine the concentration of the bag samples. For this reason, no surge tank was used on this analyzer. "Ecolyzer" 162 was equipped with a 2 liter surge tank instead of the one gallon glass container mentioned earlier. The 2 liter container was sufficient to reduce the excessive scatter since some integration was accomplished in the sampling air manifold.

Two other "Ecolyzers" were used in the study. They were located at sites 11 and 12, shown in Figure 4. Site 11 was located on the shopping mall. The analyzer was placed behind a locked door leading to a maintenance storage area. A sampling line was connected to the outdoors and sampled the air approximately 6 feet above grade. Site 12 had the sampling arrangement shown in Figure 6. It was located in the parking area, inside the ring road serving the interior of the shopping center.

Bag Sampling

There were four bag sampling locations at the intersection of the busier shopping center gate on 22nd Street. These are shown in Figure 7. Eight one-hour samples were collected each day using the apparatus shown in Figure 8. One of the four sites was selected each day depending upon the wind direction. The site which would receive the maximum CO effect of the intersection was chosen. For example, site 182 was chosen when the wind was from the southwest. The eight-hour periods sampled each day differed for weekends and weekdays. From Monday through Friday, bag samples were taken between 2:00 p.m. and 10:00 p.m. Saturday samples were collected from 11:00 a.m. through 7:00 p.m., and Sunday from 10:00 a.m. to 6:00 p.m.

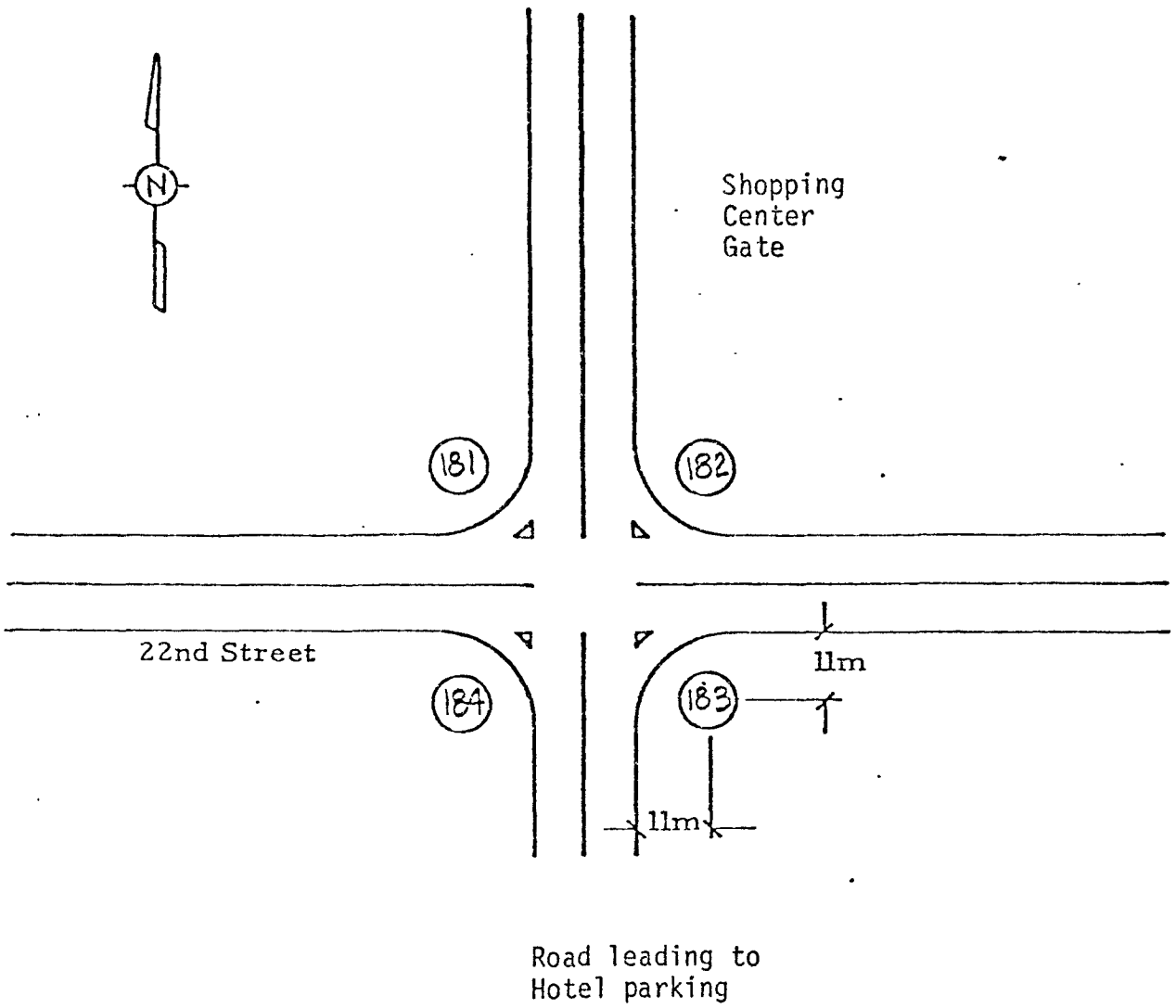


Figure 7. Location of bag sample sites

KEY:

1. Sample Inlet
2. Automobile Battery
3. Pressure and Flow Regulated Pump
4. Tedlar Air Bag w/Shut off Valve
5. Weathertight Housing

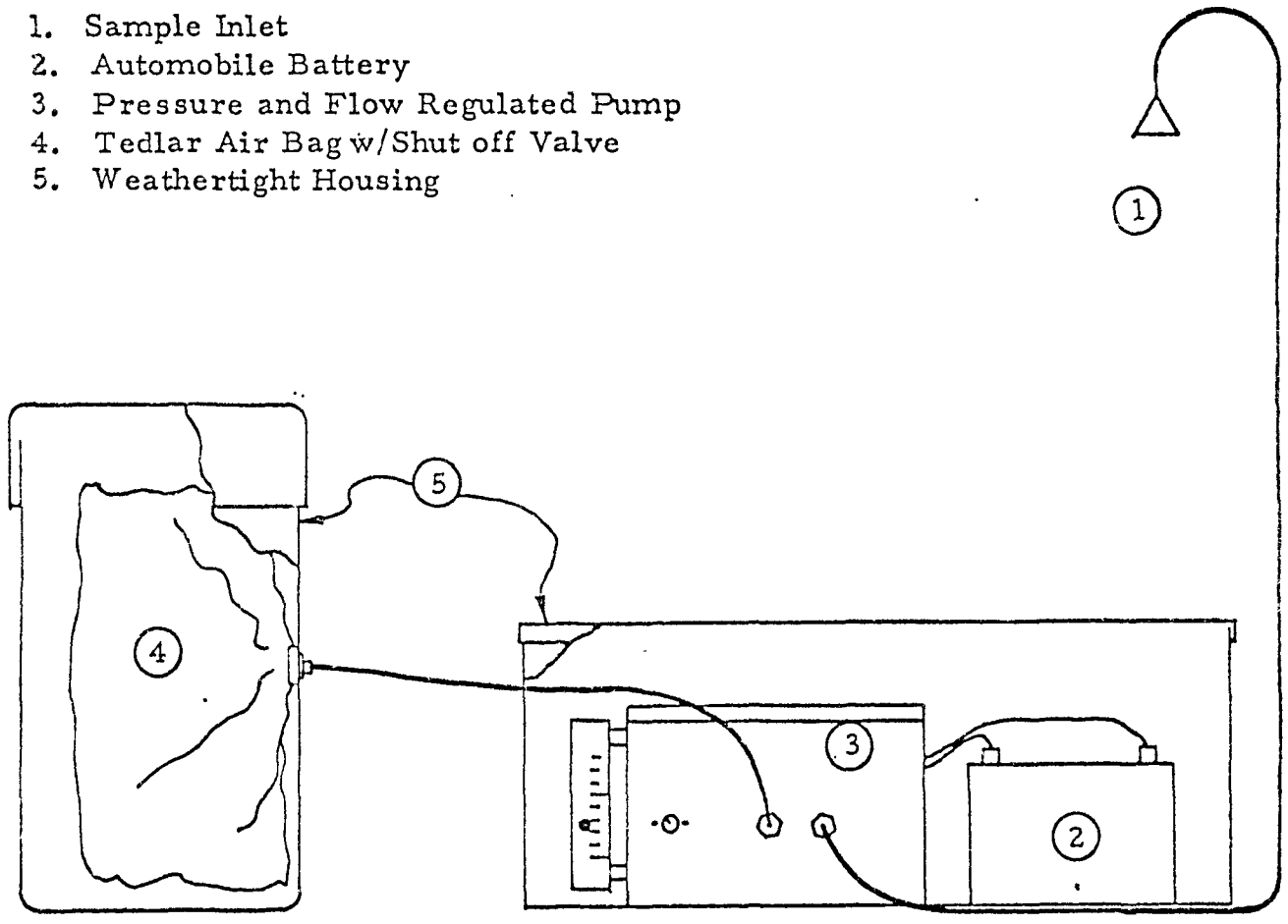


Figure 8. Bag sample apparatus

These hours were determined from the maximum daily 8-hour averages obtained during a previous carbon monoxide monitoring study conducted at the shopping center.[2]

The bag samples were collected hourly, alternating between two 50 liter "Tedlar" bags. Thus, one sample was being collected while the previous one-hour sample was being analyzed. The samples were analyzed on both "Ecolyzer" 162 and NDIR 163. This afforded another controlled comparison of the two instruments in analyzing identical sample gas. The bags were properly flushed after each analysis so that there was no contamination from previous samples.

DATA ANALYSIS AND RESULTS

Data Reduction

The data recorded on the strip charts were reduced manually by dividing each one-hour period into four 15-minute increments, computing the adjusted average in each increment based on the zero and span calibrations, and then averaging the four to produce a one-hour average. The NDIR data were reduced and validated by the Quality Assurance and Environmental Monitoring Laboratory, EPA. The data on the Ecolyzer strip charts were averaged to the nearest ppm; the NDIR data were averaged to the nearest 0.5 ppm. The one-hour readings are the basic data for the study, and these data have been keypunched and are available in a computerized system.

Ecolyzer - NDIR Comparison

As discussed earlier, the NDIR unit is used in the EPA standard reference method for the determination of carbon monoxide in the atmosphere. The "Ecolyzer" was used in several sampling sites in this study because of the lesser expense, and the greater ease of operation and portability of

this analyzer. It was necessary to compare the performance of the "Ecolyzer" versus the NDIR unit. As described in a previous section, two NDIR units (161 and 163) and an "Ecolyzer" (162) were connected to the same air sampling manifold. To ensure that the "Ecolyzer" used in the comparison was not unique, it was replaced on April 3 with a second unit. The NDIR results for any given hour were averaged, or a single NDIR reading was used if that was all that was available. A regression comparison of the analyzer and NDIR data prior to April 3 yielded the relation ("Ecolyzer" reading) ppm = 1.053 (NDIR reading) ppm + 0.548 ppm and a correlation coefficient of 0.945. A similar comparison of the data taken after April 3 gave the result ("Ecolyzer" reading) ppm = 1.311 (NDIR reading) ppm + 0.489 ppm with a correlation coefficient of 0.970. A regression analysis of all the "Ecolyzer" and NDIR data was then made using the least squares method. The regression analysis yielded the following equation:

("Ecolyzer" reading) ppm = 1.153 (NDIR reading) ppm + 0.546 ppm

This equation had a correlation coefficient of 0.947. Several other regression studies were made using data greater than 6 ppm, less than 3 ppm, and other data comparisons. None of these, however, yielded a correlation coefficient as high as the one found using all data. All "Ecolyzer" data obtained throughout the study were corrected using the above regression equation. It should be noted that this equation was obtained from the results of this study only, and that it is not necessarily generally applicable as presented.

Continuous Monitoring Data

Time series plots of the continuous monitoring data are given in Appendix A, Tables A1 and A2. The "Ecolyzer" data have been corrected using the regression equation, and all values ending in 0.50 through 0.99 have been rounded up to the next highest integer. The corrected one-hour

and eight-hour averages for all of the continuous monitoring sites are listed in Tables A3 and A4 in Appendix A.

Bag Sampling Data

The one-hour and eight-hour averages obtained by bag sampling are listed in Table A5, Appendix A. The NDIR unit was used to analyze all bag samples until the NDIR units were removed on April 10th. Data collection continued until April 13, and an "Ecolyzer" was used to determine the CO concentration of the bag samples for the three remaining days. The data obtained during these three days have been corrected by the regression equation discussed above.

Episodes

The data listing in Tables A3 and A4, Appendix A, shows that neither the one-hour nor the eight-hour standards were exceeded during the study. The highest one-hour reading of 11.7 ppm occurred at two different stations during the evening of Wednesday, April 3, 1974. Station 12 recorded the reading between 8:00 and 9:00 p.m., and station 15 recorded it between 9:00 and 10:00 p.m. The wind speed was 2 to 3 mph and the winds were from the east-southeast.

The highest eight-hour average recorded was 8.5 ppm, and it occurred at station 12 in the eight-hour period from 9:00 p.m. on Friday, April 5 to 5:00 a.m. on April 6.

Table 1 gives a listing of the three highest non-overlapping episodes. There is no definite trend evident from this table. The highest episode occurred during the early morning hours when the concentration is usually the lowest. It also occurred in the parking lot when traffic near the station would be minimal. The wind speed was very low, however, and all eight analyzers recorded eight-hour averages above 6.0 ppm during this episode.

Table 1. CHARACTERISTICS OF THE THREE HIGHEST "EPISODES"

Episode no.	CO ppm	Dates	Hours	Day	Station #	Average wind speed (mph)	Prevailing wind direction	Remarks
1	8.5	4/5 to 4/6	9 PM - 5 AM	Fri. - Sat.	12	0.1	calm	8.2 ppm at Station 13 for same 8 hour period
2	8.1	3/29	12 Noon - 8 PM	Sat.	163	5.9	90° - 120°	
3	7.9	4/3	4 PM - 12 Midnite	Wed.	15	4.1	120° - 240°	Two highest hourly readings (11.7 ppm)

The second highest episode had an eight-hour average of 8.1 ppm. The prevailing wind direction was from the east, and under these conditions the analyzers in the van should have recorded the effects of the intersection. This was indeed the case and stations 161, 162, and 163 all recorded eight-hour averages over 7 ppm during this episode, including the high value of 8.1 ppm at 163.

The third highest episode recorded occurred on Wednesday, April 3, when the eight-hour average reached 7.9 ppm. The two highest hourly averages (11.7 ppm) were recorded during this episode.

Diurnal Patterns

The diurnal patterns for weekdays, Saturdays and Sundays were determined by averaging the readings from all of the continuous monitoring analyzers for each hour of the day.

The diurnal pattern for weekdays, shown in Figure 9, indicates three discernible peaks. The first peak, between 7:00 and 8:00 a.m., is probably due to the morning rush period and the second peak, between 5:00 and 6:00 p.m., is the evening rush period. The third peak, between 9:00 and 10:00 p.m., occurs at the shopping center closing time.

The diurnal pattern for Saturday (Figure 10) shows that the early morning hours have the highest CO readings. This is questionable and can be explained by the fact that only three days of data were used to determine the diurnal pattern. This included Saturday, April 6, which had the highest eight-hour average recorded during the entire survey. The diurnal pattern does show a definite peak during the early afternoon shopping hours. There is also a peak between 5:00 and 6:00 p.m., which would include the shopping center closing time, followed by a sharp reduction.

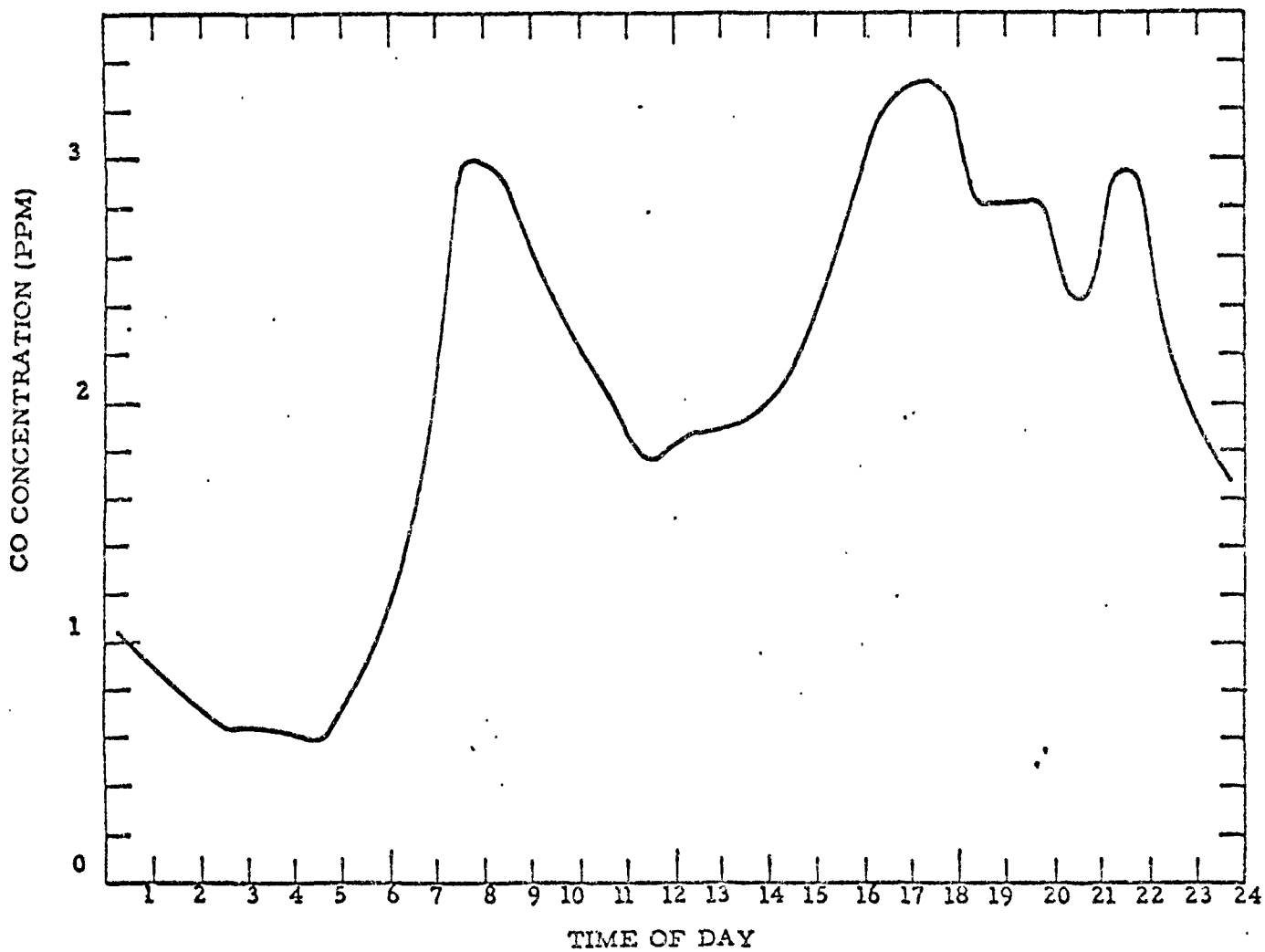


Figure 9. Diurnal pattern - all stations - weekdays

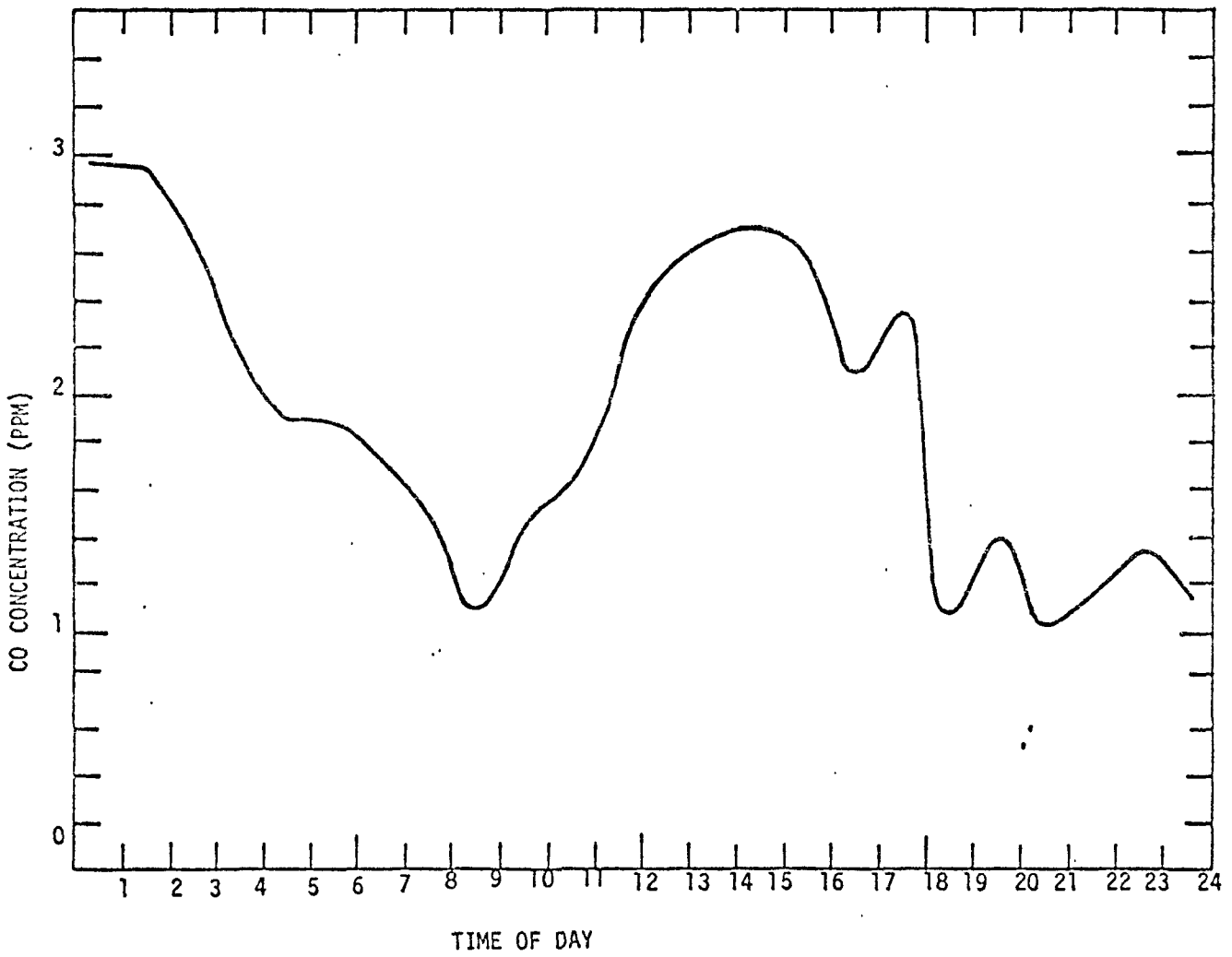


Figure 10. Diurnal pattern - all stations - Saturday

Sunday's diurnal pattern, shown in Figure 11, also includes only three days of data. It shows a very similar afternoon pattern with a pronounced peak during the early afternoon, a second peak at closing time and a sharp reduction after closing. The early morning hours are much lower, however. Diurnal patterns based on the bag sampling data were also determined, and these were compared to the continuous monitoring diurnal patterns for the same eight-hour periods. These comparisons are shown in Figures 12, 13 and 14.

The weekday bag sampling pattern shows a strong similarity to the continuous monitoring pattern, as shown in Figure 12. The evening rush peak on the bag sampling data is much more pronounced, but the timing is very similar, as is the peak at the shopping center closing time. The higher peak is due in part to the location of the receptors, as shown in Figures 5 and 7. The closest continuous monitors were located twice as far from the road edge as the bag sampling locations. The effect of this distance can be seen in all three bag sampling diurnal patterns.

The Saturday bag sampling diurnal pattern is also similar to the continuous monitoring pattern for the same time period, as shown in Figure 13. The shopping center closing time (5:30 p.m.) produces a peak on both curves, followed by a very sharp drop in CO concentration during the following hours. The early afternoon patterns are not so similar, but both show a sharp increase in the very early afternoon and a decrease in the hour prior to closing.

Sunday's diurnal pattern comparison, shown in Figure 14, shows a sharp increase in the early afternoon concentrations with a peak between 3:00 and 4:00 p.m. on both curves.

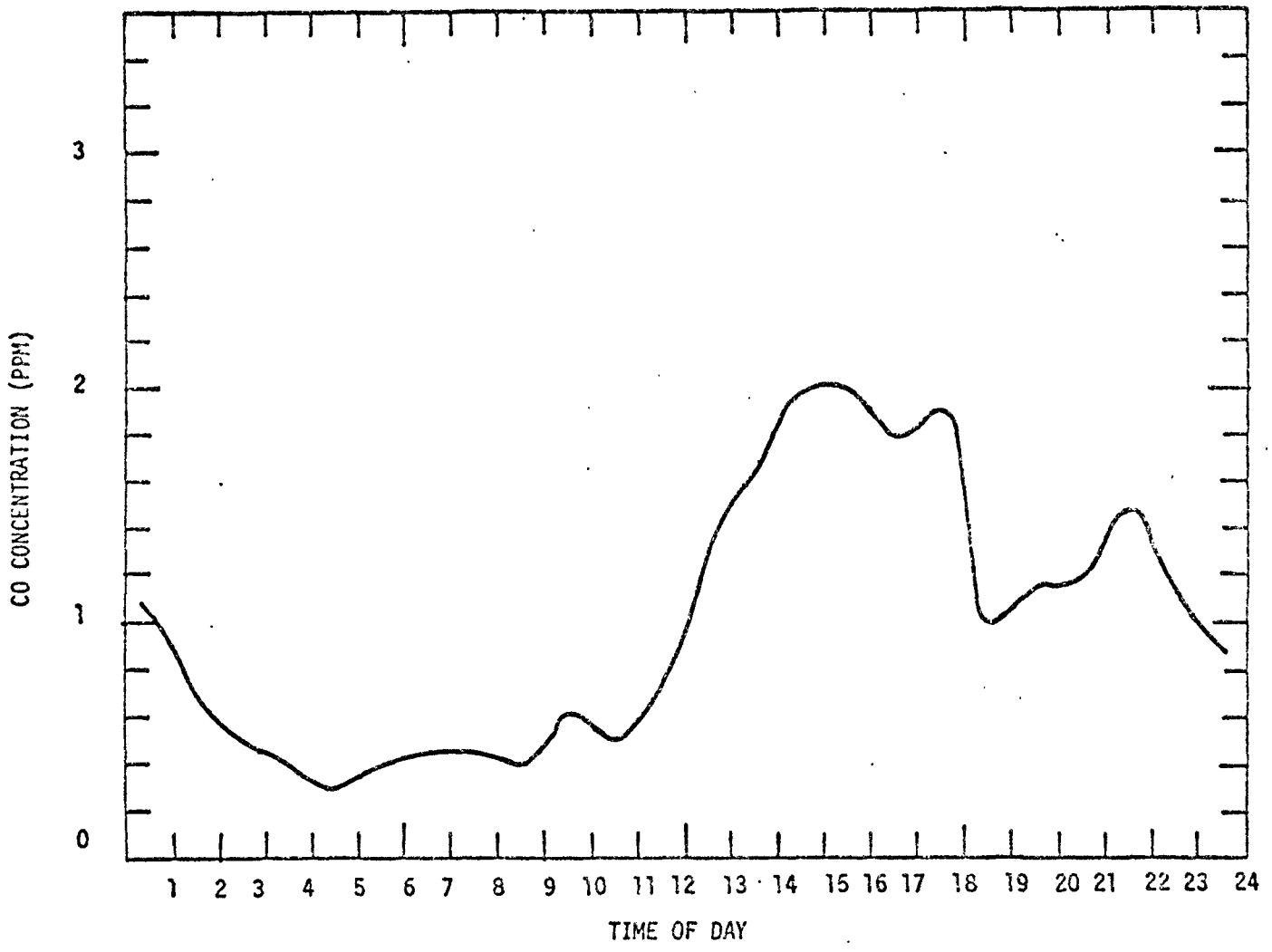


Figure 11. Diurnal pattern - all stations - Sunday

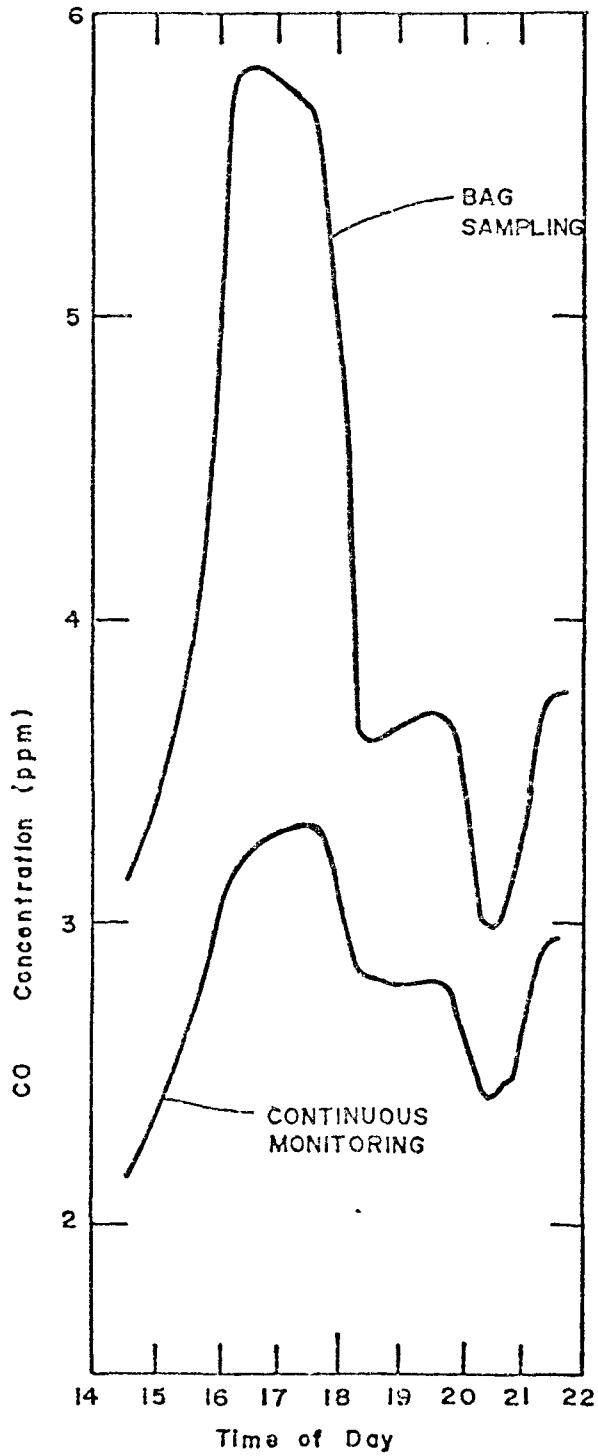


Figure 12. Diurnal pattern - weekdays

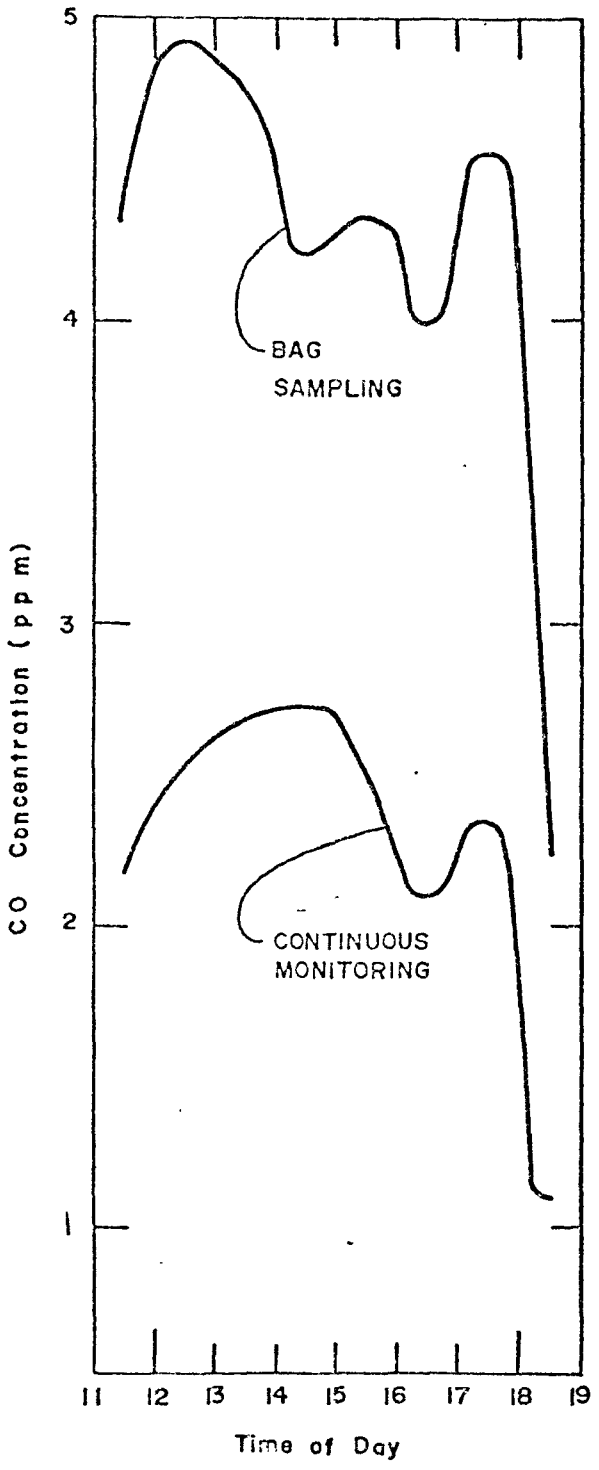


Figure 13. Diurnal pattern - Saturdays

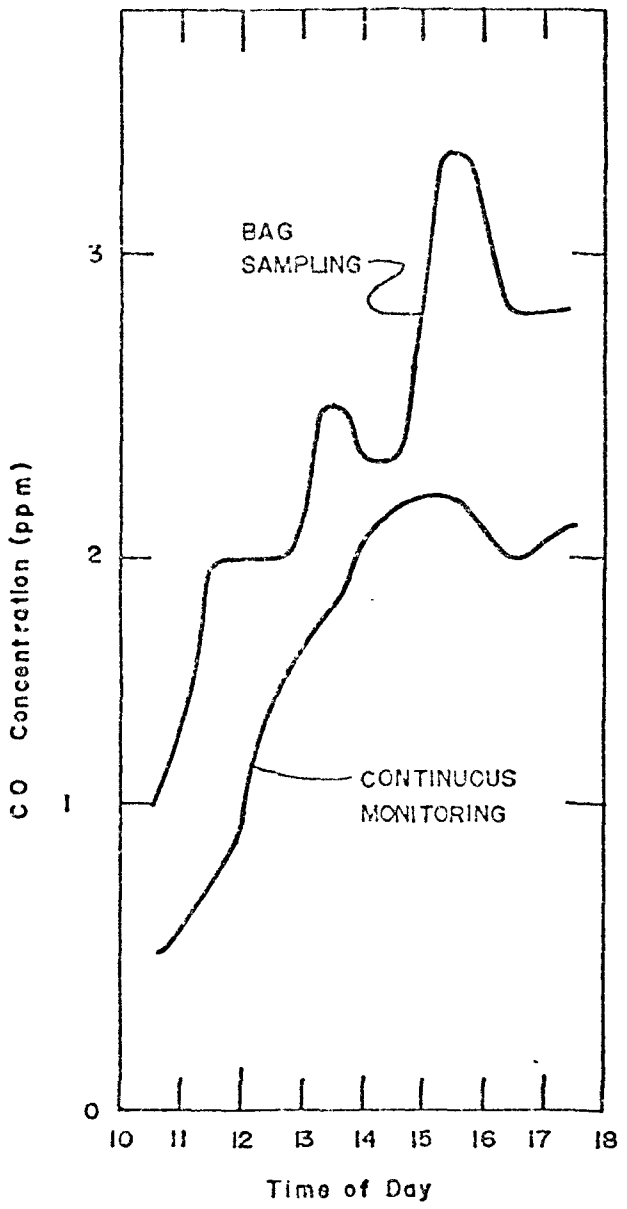


Figure 14. Diurnal pattern - Sundays

Frequency Distributions

The cumulative frequency distribution of one-hour and eight-hour CO concentrations is shown in Figure 15. Figure 16 is a similar plot on log-probability paper, used to test the hypothesis that the distribution is log normal.

These curves were used to determine the frequency distribution values listed in Table 2.

Table 2. FREQUENCY DISTRIBUTION OF OBSERVED CO CONCENTRATIONS

Percentile	40	50	70	90	99
1 hour	0.6	1.1	2.1	4.0	8.0
8 hour	0.6	0.9	1.8	3.5	6.4

METEOROLOGICAL DATA

Wind Speed and Direction

Wind speed and direction data were collected at the site shown in Figure 5 in the immediate vicinity of the intersection of Route 83 and 22nd Street. The wind sensing instrument used was a "W101-P Skyvane 1 Wind Sensor" from Weather Measure Corporation, mounted at the top of a 20-foot pole. The data were recorded on a "W123 Wind Recorder," manufactured by the same firm. The recorder was housed in the van containing the two NDIR CO analyzers and the "Ecolyzer."

The strip charts were checked daily to ensure that reasonable data were being obtained and that the chart drive was maintaining accurate time.

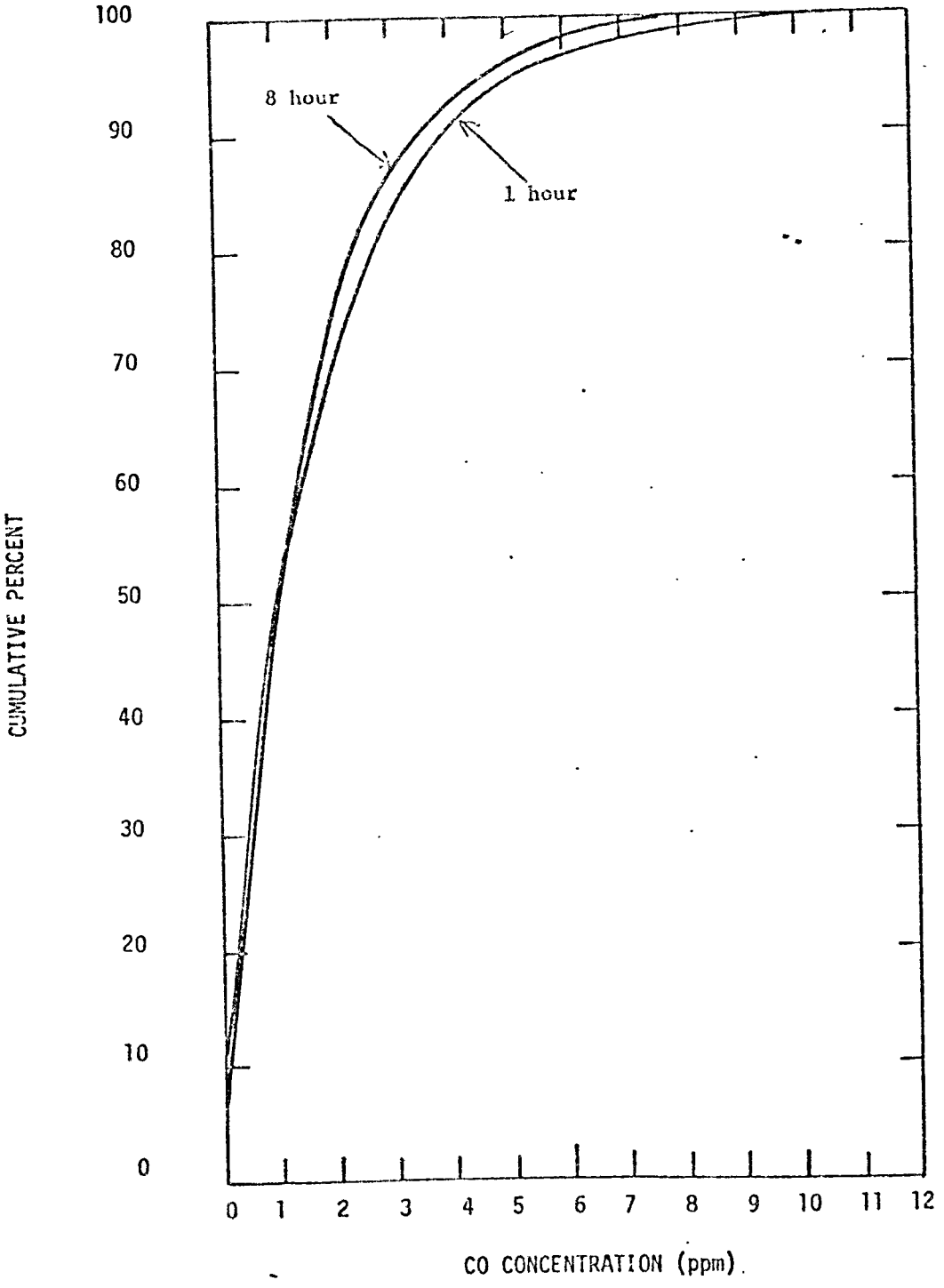


Figure 15. Cumulative frequency distribution

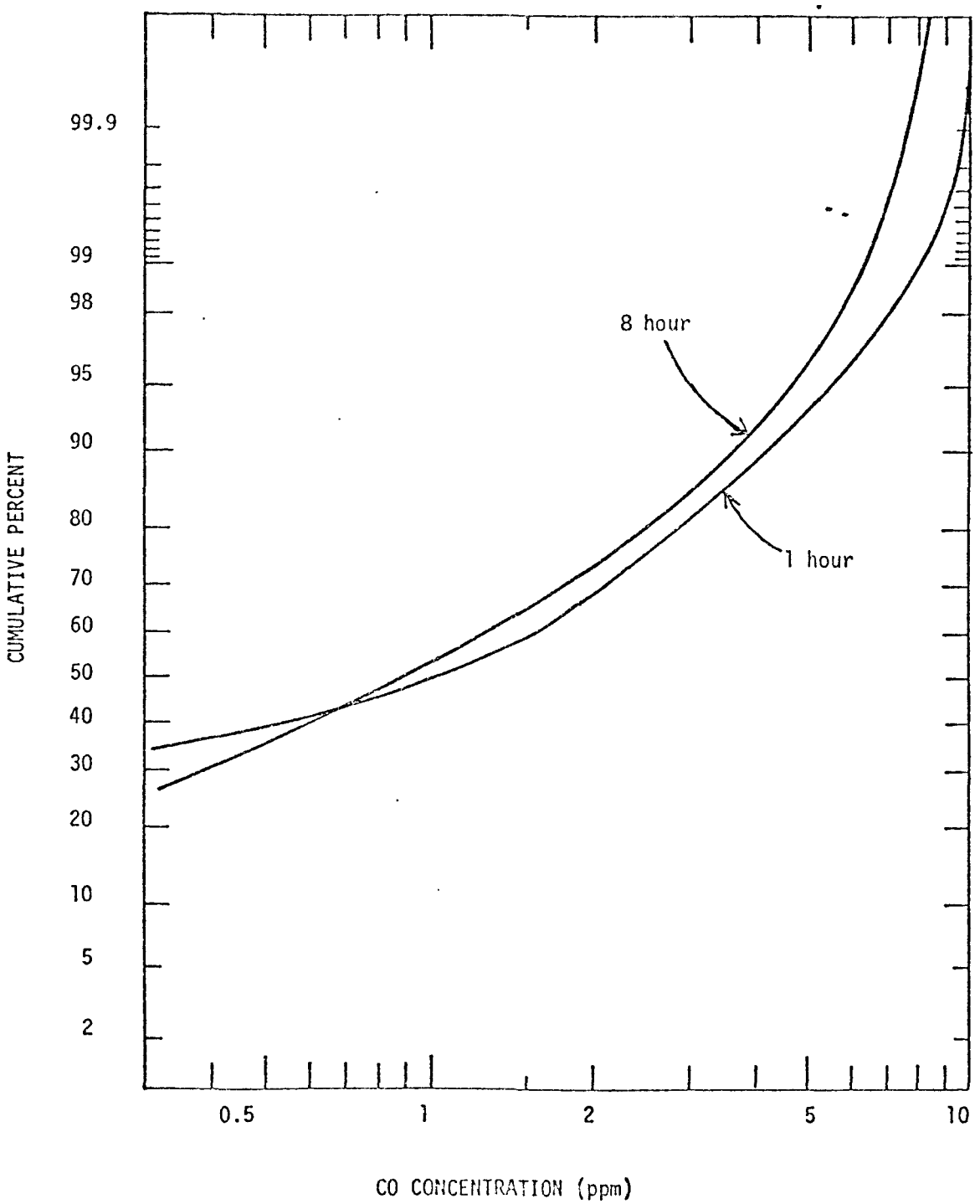


Figure 16. Cumulative frequency distribution

The data on the strip charts were reduced manually by dividing each one-hour period into four 15-minute increments, computing the average in each increment, and then averaging the four to produce a one-hour average. The wind speed was averaged to the nearest mph, and the wind direction was averaged to the nearest 10 degrees.

The wind speed is plotted in Tables A1 and A2, Appendix A, and the wind direction is listed in these tables also. Both are also listed in Tables A3 and A4. The number of occurrences of each wind speed obtained during the survey is listed in Table 3, along with the percent of each occurrence and the cumulative percent. This information was used to derive the frequency distribution curve shown in Figure 17.

Stability Class

The stability class for each hour of the survey was determined by an objective method[3] from the month, date, hour of day, cloud cover, cloud ceiling, and wind speed of each hour. All of these data were either known or collected on-site, with the exception of cloud cover and cloud ceiling. Data for these two parameters were obtained from the National Weather Service. Two sets of data, one measured at Midway Airport and the second at O'Hare Airport, were obtained, and the stability classes were calculated using each set of data. A comparison of the stability classes showed that they were very similar.

The O'Hare stability classes were then chosen, because O'Hare is slightly closer to the monitoring site than Midway (approximately 9 miles versus 11 miles).

Temperature readings at different heights were obtained from the Meteorological Station at Argonne National Laboratory, which is located approximately nine miles to the south of the monitoring site.

Table 3. WIND SPEED FREQUENCY DATA

Wind speed (mph)	# of Occurrences	% of Occurrences	Cumulative %
0	18	3.3	3.3
1	19	3.5	6.8
2	17	3.1	10.0
3	31	5.7	15.7
4	22	4.1	19.8
5	36	6.6	26.4
6	38	7.0	33.4
7	37	6.8	40.3
8	31	5.7	46.0
9	40	7.4	53.4
10	40	7.4	60.8
11	29	5.4	66.2
12	25	4.6	70.8
13	16	3.0	73.7
14	22	4.1	77.8
15	21	3.9	81.7
16	13	2.4	84.1
17	15	2.8	86.9
18	13	2.4	89.3
19	14	2.6	91.8
20	16	3.0	94.8
21	3	0.5	95.4
22	4	0.7	96.1
23	2	0.4	96.5
24	4	0.7	97.2
25	4	0.7	97.9
26	2	0.4	98.3
27	3	0.5	98.9
28	1	0.2	99.0
29	2	0.4	99.4
30	2	0.4	99.8
31	1	0.2	100.0

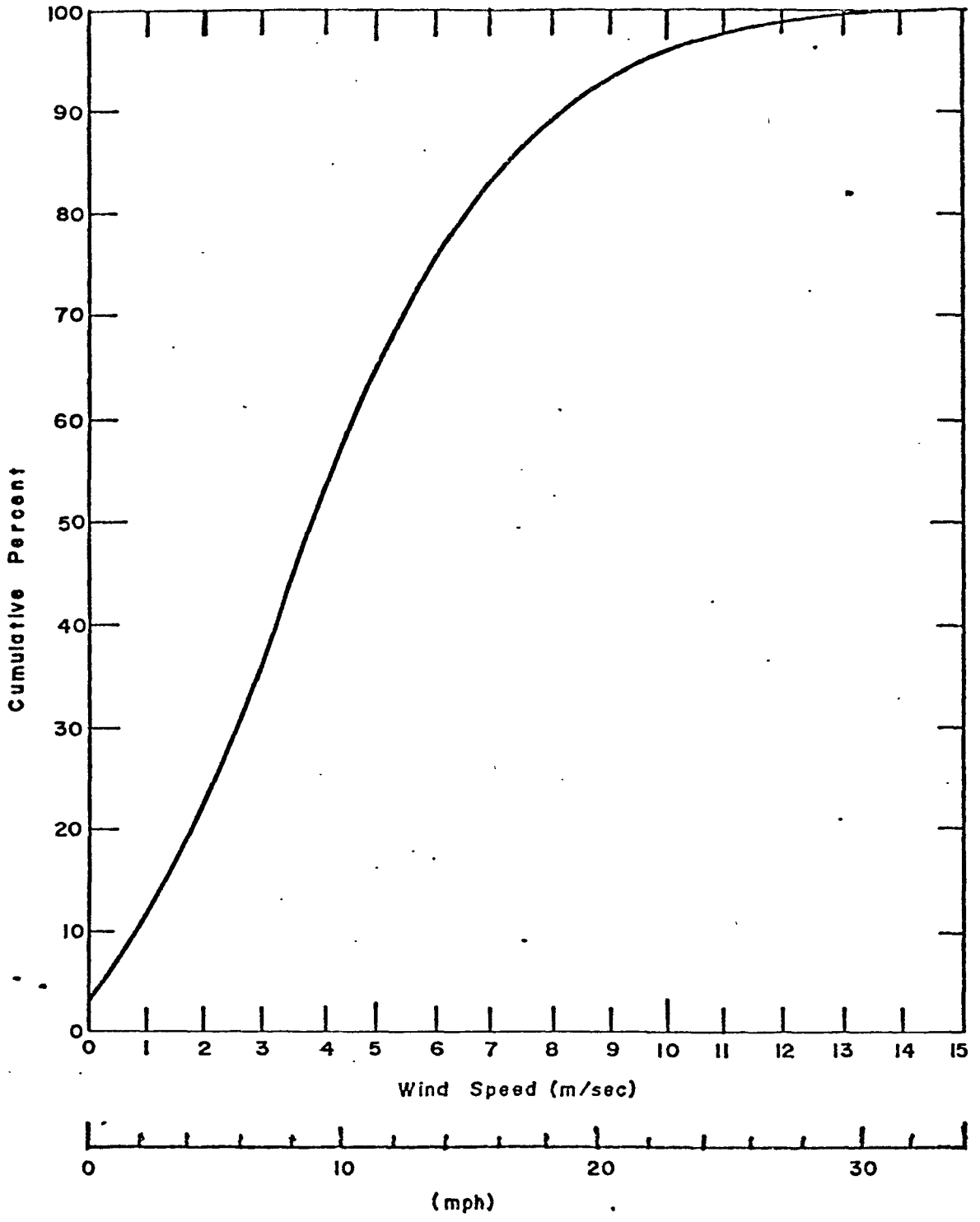


Figure 17. Wind speed frequency distribution

The standard deviation of the wind direction strip charts data was also determined for each hour.

The input data to these alternate methods for determining stability class are available for validation of the calculated values listed in Appendix B.

SECTION IV

TRAFFIC MONITORING PROGRAM

MONITORING NETWORK

The basic geometric and lane-use configuration at the intersection of Route 83 and 22nd Street is illustrated in Figure 18. The intersection is controlled by a four-phase, fully-actuated traffic signal, with phasing as illustrated in Figure 18. In addition, traffic conditions were also analyzed at the two shopping center entrances nearest the intersection (one north of the intersection on Illinois Route 83 and one east of the intersection on 22nd Street). Both of these two entrances are controlled by fully-actuated, three-phase traffic signals. The basic geometries for these two entrances and their signal phasing are illustrated in Figure 19.

The monitoring of traffic volumes at the two entrances and at the intersection of Illinois Route 83 and 22nd Street was performed continuously from March 13 through April 13, 1974. Automatic traffic counters were placed at the intersection to enable all turning and through movements to be monitored. The counters recorded the traffic volumes occurring each 15-minute and hourly interval. Figure 20 illustrates the location of the traffic counters at the intersection. In addition, automatic traffic counters were also located to monitor inbound and outbound traffic at the two nearby entrances and on the shopping center circulation road. Figure 21 illustrates the approximate locations of these counters.

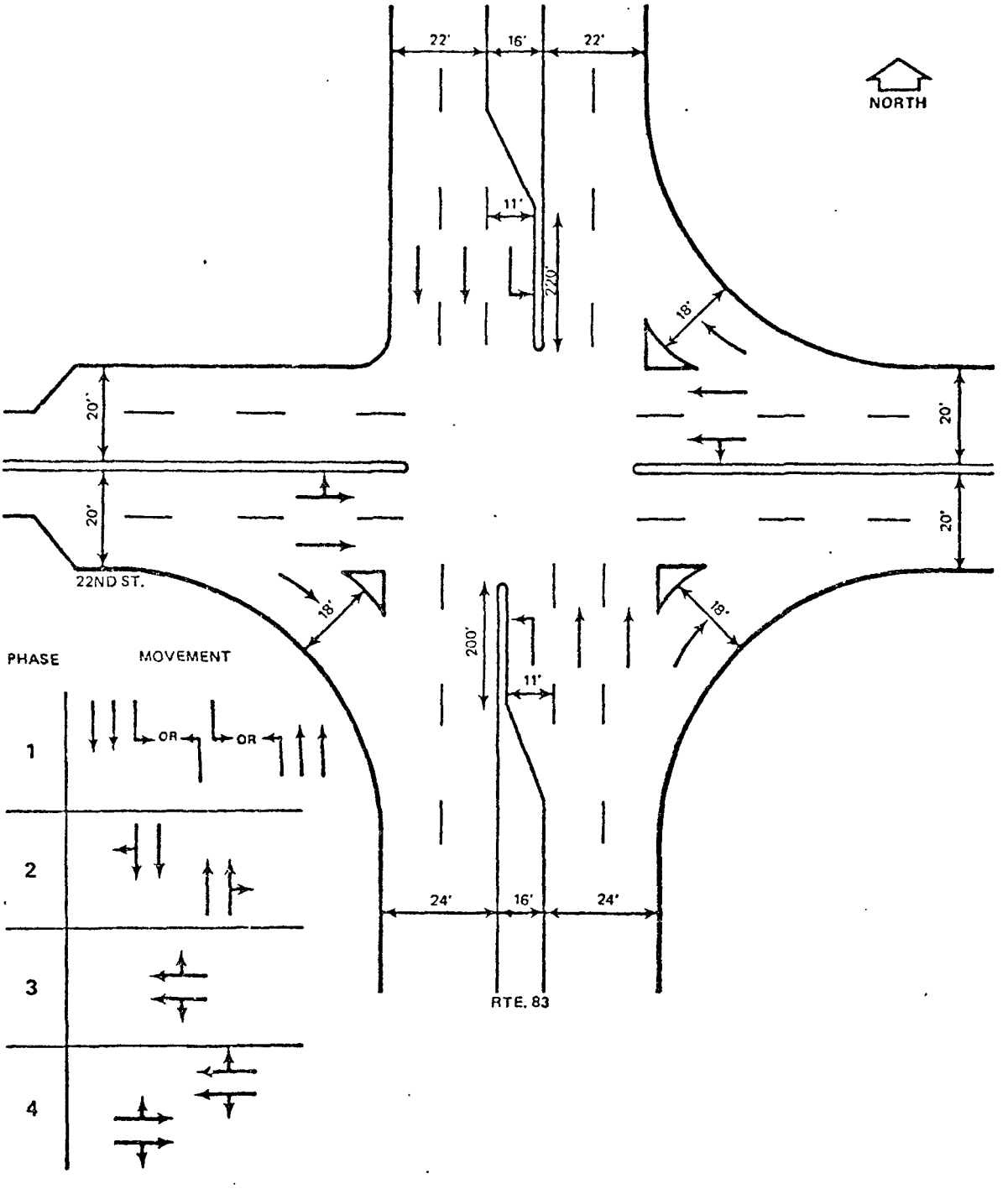


Figure 18. Route 83 - 22nd St. intersection configuration and existing signal phasing

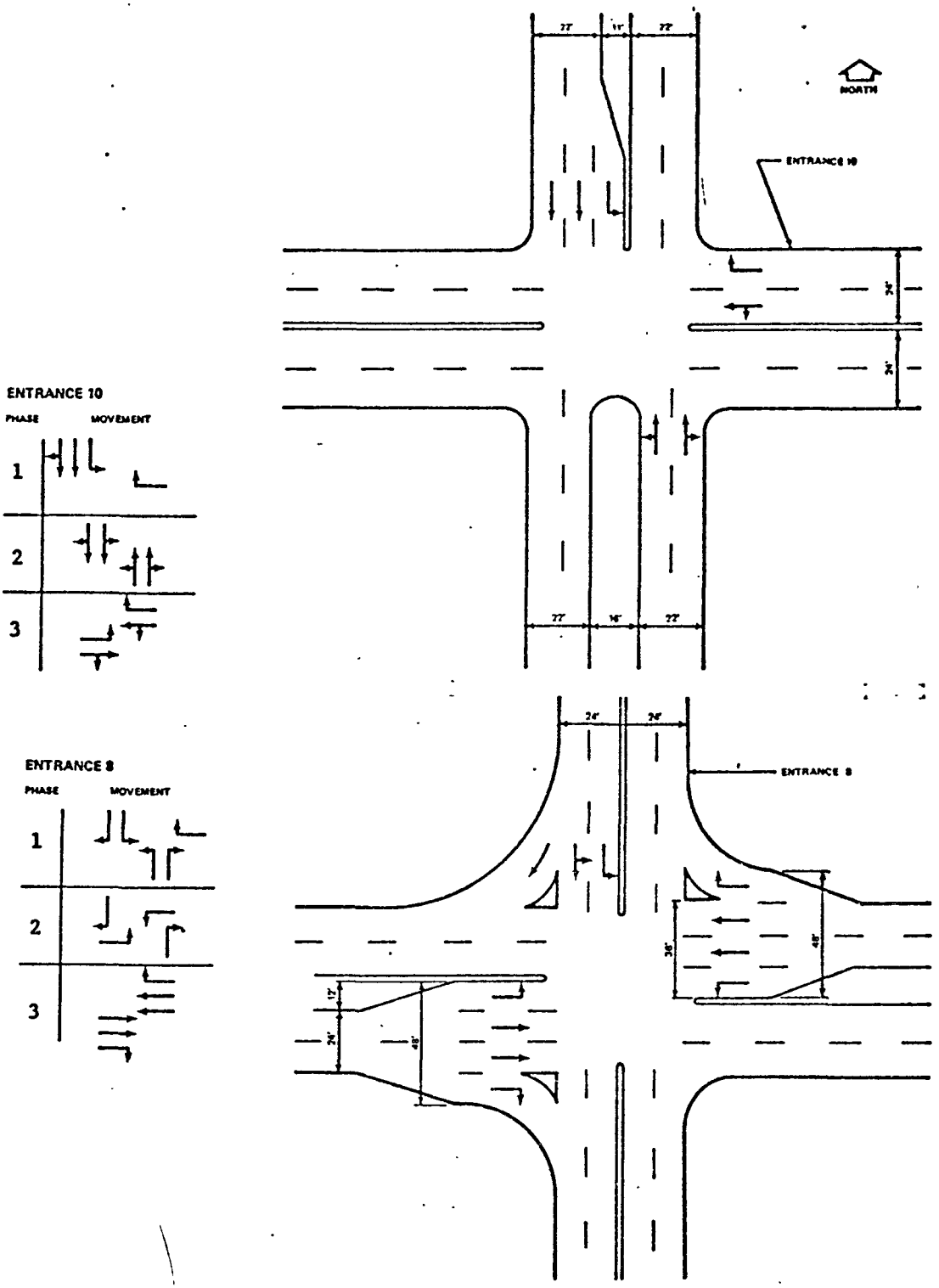


Figure 19. Entrances 8 and 10 - geometric configurations and existing signal phasing

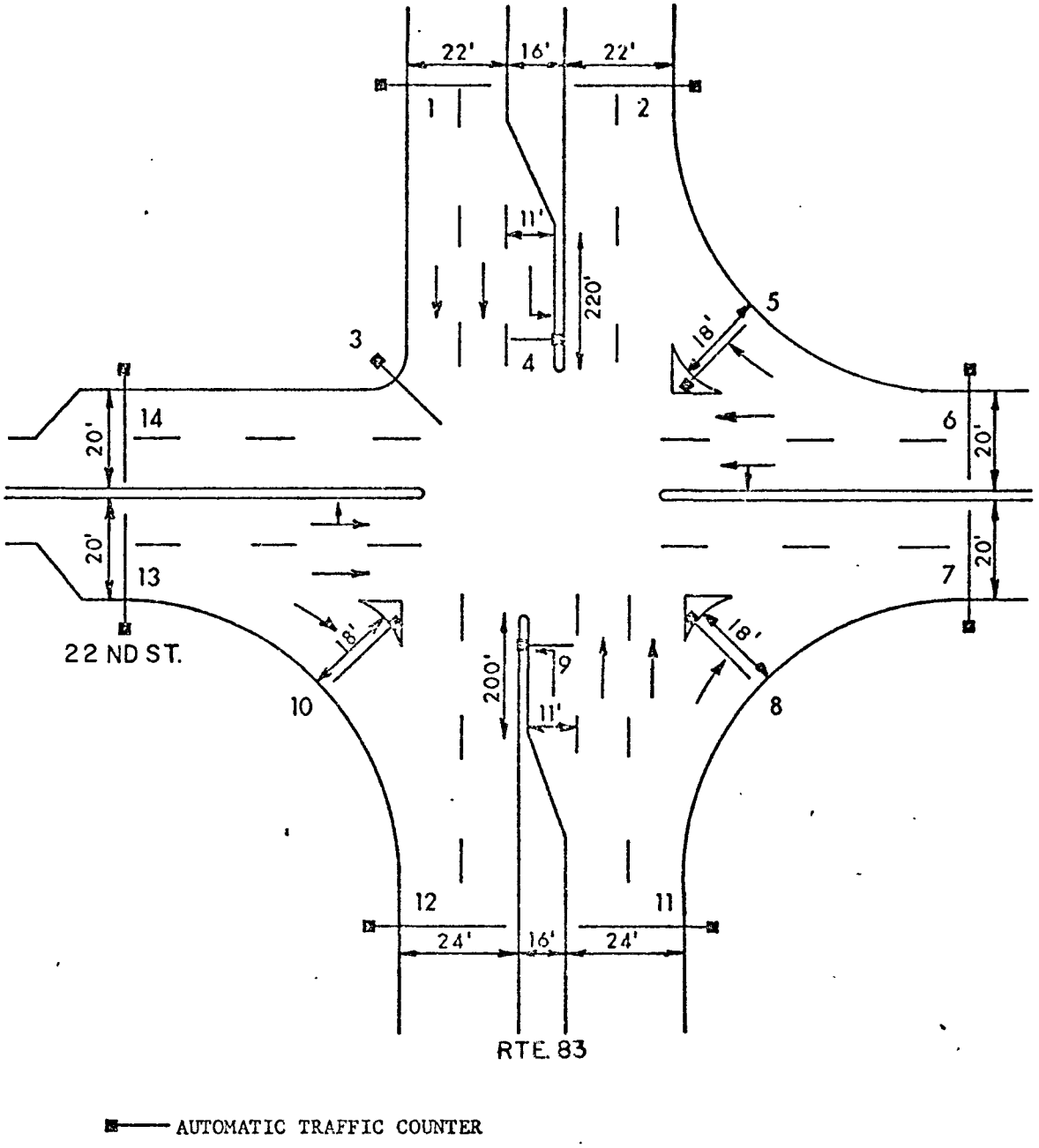


Figure 20. Location of intersection counters

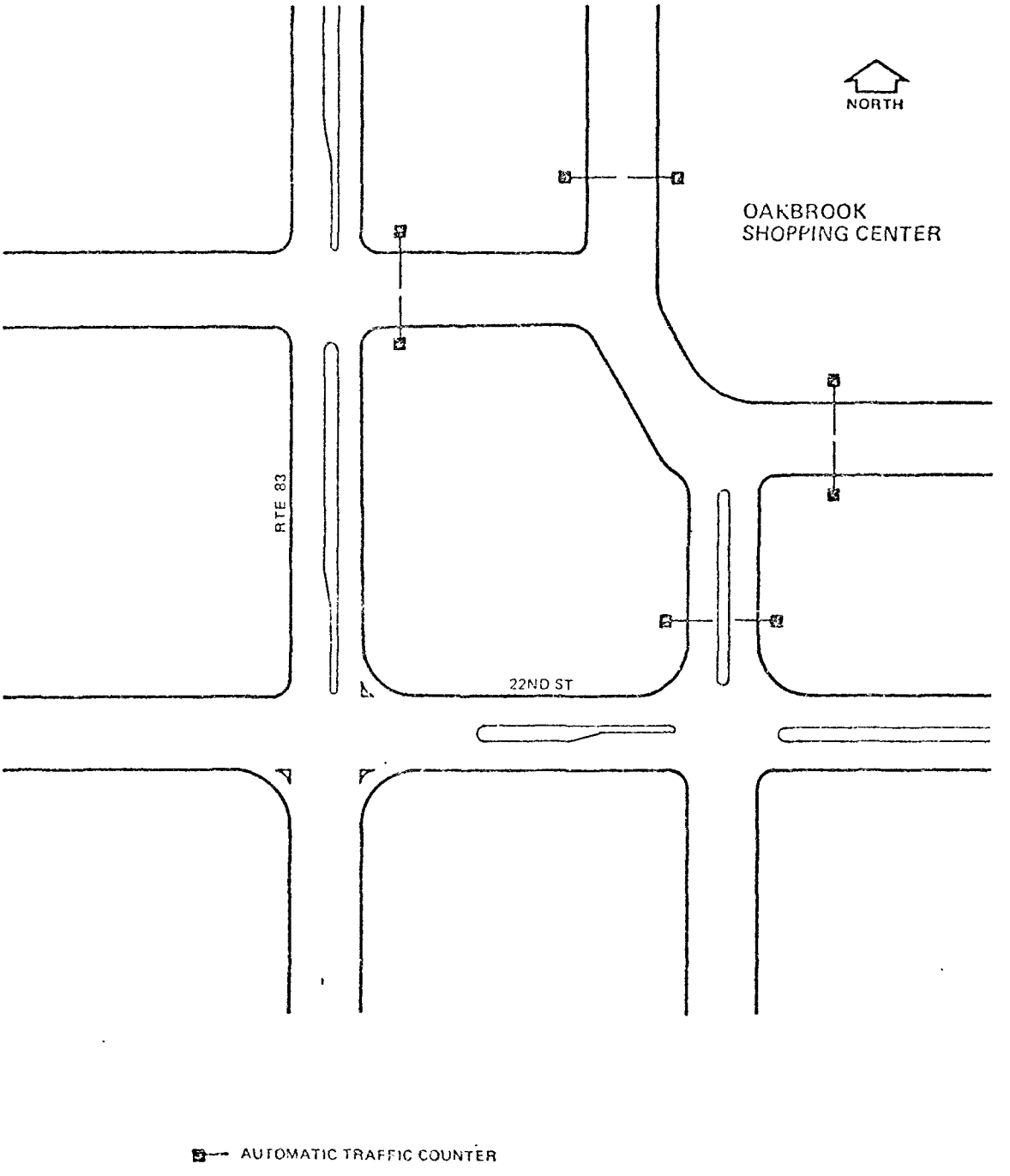


Figure 21. Location of counters within shopping center

At various times during the monitoring process, additional field studies were performed to obtain data on the average operating characteristics of the vehicles traveling through the intersection. Utilizing "test" vehicles, data on queue lengths/cycle, intersection delay/stopped time, and acceleration and deceleration rates were obtained.

The "test" vehicles were staffed by one driver and one observer-data recorder in each auto. On each of 5 days, while the traffic volumes were being monitored by the automatic counters, two vehicles were continuously driven through the intersection. The vehicles were driven as closely as possible to the same pace as the traffic stream. For each run through the intersection, approach speeds (approximately free-flow), deceleration times, queue times, queue lengths, acceleration times, and departure speeds were recorded. The beginning time and direction of each run was recorded as well as the type of movement being performed (right turn, left turn, or through). These queuing studies were performed on weekdays on March 15, 21, and 22 from 9:00 a.m. through 6:00 p.m. and on April 7 and 8 from 7:00 a.m. through 7:00 p.m. In addition to these studies, manual traffic counts at the intersection were performed to determine the accuracy of the machine counters and to determine the distribution of traffic by lane. Field surveys were also performed to determine signal phasing and timing at the intersection and intersection geometry.

EVALUATION OF TRAFFIC OBSERVATIONS

Impact of Shopping Center on Local Volumes at Intersection

From the analysis of additional traffic counts taken at Oakbrook Shopping Center during the month of December, 1973,[2] and from previous counts taken in 1972, it was determined that the distribution of shopping center traffic volumes by entrance (and turning movement) does not fluctuate significantly from one day (or hour) to another. Table 4

Table 4. DISTRIBUTION OF TRAFFIC VOLUMES BY ENTRANCE (PERCENT OF TOTAL VOLUME) OAKBROOK SHOPPING CENTER (1,250,000 SQUARE FEET GLA)--SEARS, MARSHALL FIELDS, LORD AND TAYLOR

	Gate					
Daily	2	4	7	8	10	11
Saturday, 12/15/73	21	11	18	20	18	11
Thursday, 12/20/73	18	12	20	20	18	12
Friday, 12/21/73	18	16	17	17	23	10
Saturday, 12/22/73	22	14	17.	16	22	9
Sunday, 12/23/73	23	13	16	16	21	11
Monday, 12/24/73	21	14	15	16	21	13
Tuesday, 12/25/73	16	15	26	19	17	8
Wednesday, 12/26/73	19	15	18	17	20	11
Thursday, 12/27/73	19	15	20	18	18	10
Friday, 12/28/73	19	15	20	17	19	9
Saturday, 12/29/73	20	15	19	17	19	10
Sunday, 12/30/73	19	15	22	18	19	8
Monday, 12/31/73	21	16	18	17	19	9
Tuesday, 1/1/74	15	10	43	14	14	3
Wednesday, 1/2/74	19	16	18	16	19	11
Thursday, 1/3/74	18	16	19	18	19	9
Friday, 1/4/74	20	16	18	17	19	9
Saturday, 1/5/74	19	15	19	17	19	11
Sunday, 1/6/74	21	16	20	16	17	10
Monday, 1/7/74	21	15	19	19	18	8
Tuesday, 1/8/74	20	14	19	19	18	10
All days average:	19.5	14.5	20.0	17.3	18.9	9.6
All days S^2:	3.6	2.9	32.6	2.2	3.6	4.0
Holidays excluded average:	19.9	14.7	18.5	17.4	19.3	10.1
Holidays excluded S^2:	2.0	2.0	2.6	1.7	2.3	1.7

indicates the distribution of shopping center traffic by entrance during the December, 1973 study. Figures 22 and 23 illustrate the distribution of shopping center traffic volumes at the various entrances and roadways adjacent to the site on a typical Saturday and a typical weekday, respectively, during the previous study. The percents of right turns and left turns at each entrance are also indicated. The large solid arrows are the principal outbound directions of departure. The small solid arrows show the breakdown of the principal deparparting traffic into the turning movements at the various intersections and entrances. The large striped arrows are the principal inbound directions of approach. The smaller dashed arrows are a breakdown of the inbound traffic by turning movement at the intersections and entrances.

For example, in Figure 22, 20 percent of the total site traffic approached the center from the east on 22nd Street. Of this 20 percent, 1 percent turns right on Spring Road and enters on Hargar Road (entrance off of Spring Road). The remaining 19 percent continues eastbound on 22nd Street to the next entrance where 16 percent turns right into the site and 3 percent continues westbound and turns right into the site at the next entrance. As shown, the shopping center percent of total approaching and departing traffic that passes through the intersection of 22nd Street and Illinois Route 83 varies by direction. The north leg (the section of roadway north of the intersection including approach and departure lanes) accommodates approximately 19 percent of departing shopping center traffic and 16 percent of approaching shopping center traffic, averaged from both Figures 22 and 23. The south leg accommodates approximately 15 percent and 16 percent departing and approaching traffic, respectively; the east leg 16 percent and 20 percent; and the west leg 20 percent both departing and approaching. Assuming this distribution of shopping center traffic to be a constant function over time, the impact of shopping center traffic on the intersection was determined using the additional data collected during March and April. Table 5 indicates the impact of shopping center traffic volumes on the north

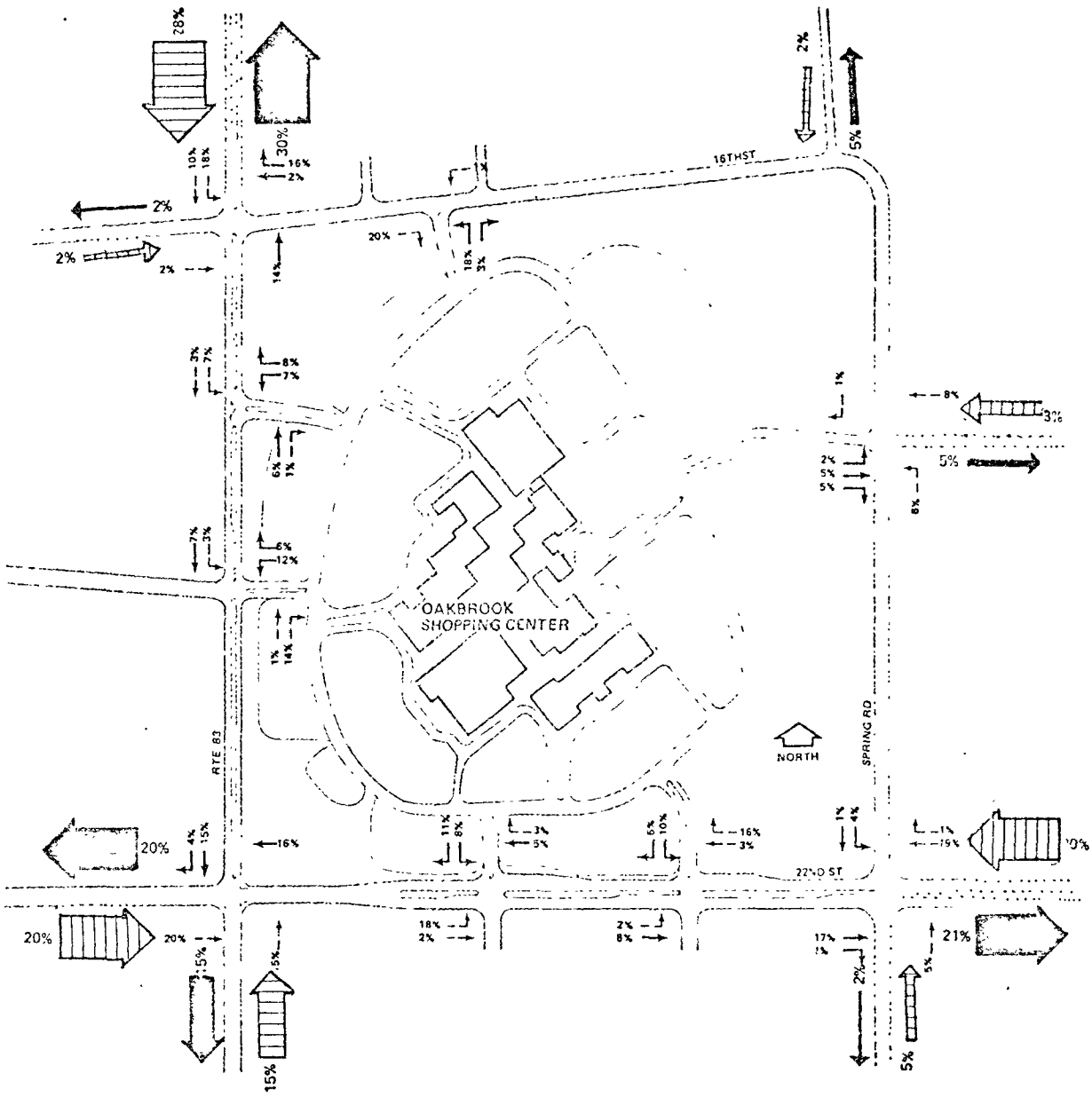


Figure 22. Directional distribution of traffic on a typical Saturday

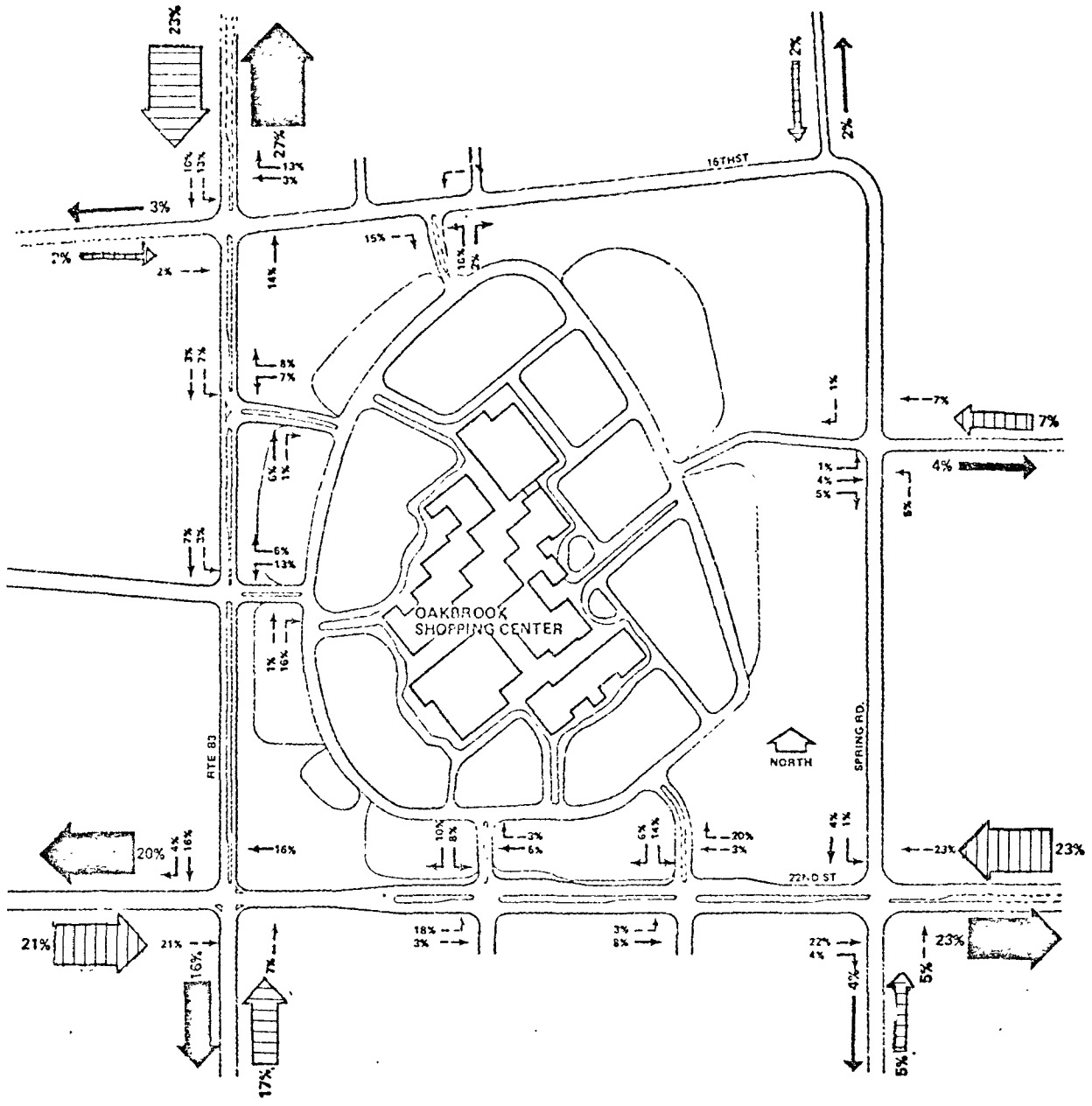


Figure 23. Directional distribution of traffic on a typical weekday

Table 5. SHOPPING CENTER VOLUMES AS PERCENT OF TOTAL TRAFFIC VOLUMES

Week beginning	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Total week
North leg (Route 83)								
3/10/74	- %	- %	- %	- %	31.4%	30.9%	36.4%	32.9%
3/17/74	27.9	34.5	33.2	33.9	20.1	18.9	27.2	27.9
3/24/74	29.6	34.3	33.1	32.6	29.7	30.3	33.8	31.9
3/31/74	29.0	32.4	31.1	29.2	32.2	31.4	33.5	31.3
4/07/74	32.4	35.6	35.8	26.4	34.0	34.0	19.1	31.3
	29.7	34.2	33.3	30.5	29.8	29.1	30.0	30.8
East leg (22nd street)								
3/10/74	- %	- %	- %	- %	29.3%	27.3%	36.1%	30.9%
3/17/74	32.0	28.1	25.8	29.4	29.3	26.5	34.3	29.3
3/24/74	32.6	31.4	28.5	28.4	26.6	25.4	31.2	29.1
3/31/74	31.6	27.8	28.6	27.8	28.9	28.4	33.5	29.5
4/07/74	32.8	31.0	30.9	31.1	30.1	35.5	38.7	32.8
	32.2%	29.5%	28.5%	29.1%	28.8%	28.6%	34.8%	30.2%

and east legs of the intersection (in terms of percent of two-way, 24-hour volumes) by day of the week. The impact of the shopping center traffic volumes on the total two-way hourly volumes at the intersection varies considerably throughout the day. At Oakbrook Shopping Center, the peak impact of the shopping center traffic (in terms of percent of total traffic) occurs during the midafternoon hours on both weekdays and weekends when as much as 50 to 60 percent of the total intersection traffic is destined to or departing from Oakbrook Shopping Center. During the morning weekday rush hours (approximately 7:00 a.m. to 9:00 a.m.) only 18 percent of the traffic at the intersection is attributable to the shopping center. This shopping center traffic is basically the employee traffic. Thirty-two percent of the traffic of the intersection is attributable to the shopping center during the afternoon rush hours (approximately 4:00 p.m. to 6:00 p.m.). The exact percentage is a function of both the shopping center activity and the activity of the surrounding traffic generating land-uses. A complete analysis of the hourly fluctuations in shopping center traffic as compared to total traffic for all the days surveyed in March and April is presented in Appendix C by intersection leg for two-way traffic. Tables 6 and 7 present 1- and 8-hour traffic volumes for each direction of travel on the north and east legs of the intersection. These volumes are broken down as through, shopping center, and total volumes; and the percent of the total volume comprised of shopping center traffic is presented.

Guidelines for Relating Operating and Design Characteristics to Selected Key Parameters for Emission Estimation

The estimation of emissions generated by traffic in the vicinity of a proposed indirect source such as a regional shopping center is dependent upon two principal traffic parameters: the total volumes of traffic occurring on adjacent roadways in the vicinity of the site and some measure of congestion such as the "level of service" at which the volume of traffic is operating.

Table 6. DIRECTIONAL TRAFFIC VOLUMES - NORTH LEG OF ROUTE 83 AND 22ND STREET INTERSECTION

Date	Day of week	Hour of day	Southbound direction of travel				Northbound direction of travel			
			Through volumes	Shopping center	Total volumes	Percent s.c.	Through volumes	Shopping center	Total volumes	Percent s.c.
3/22/74	Fri.	12	494	86	580	15	327	368	695	53
3/22/74	Fri.	13	518	167	685	24	287	350	637	55
3/22/74	Fri.	14	387	195	582	33	103	385	488	79
3/22/74	Fri.	15	506	324	830	39	388	296	684	43
3/22/74	Fri.	16	695	338	1,033	33	379	233	612	38
3/22/74	Fri.	17	988	437	1,425	30	577	281	858	33
3/22/74	Fri.	18	847	517	1,364	38	486	302	788	38
3/22/74	Fri.	19	580	187	767	24	215	321	536	60
8-hour total			5,015	2,251	7,266	31	2,762	2,536	5,298	48
4/ 5/74	Fri.	12	380	226	606	37	231	254	485	52
4/ 5/74	Fri.	13	312	240	552	44	180	298	478	62
4/ 5/74	Fri.	14	491	274	765	36	409	290	699	41
4/ 5/74	Fri.	15	391	319	710	45	494	214	708	30
4/ 5/74	Fri.	16	667	377	1,044	36	473	187	660	29
4/ 5/74	Fri.	17	951	513	1,464	35	613	217	830	26
4/ 5/74	Fri.	18	721	562	1,283	44	507	242	749	32
4/ 5/74	Fri.	19	708	204	912	22	459	257	716	36
8-hour total			4,621	2,715	7,336	37	3,366	1,959	5,325	37
4/ 6/74	Sat.	12	450	335	785	43	388	473	861	55
4/ 6/74	Sat.	13	575	450	1,025	44	421	462	883	52
4/ 6/74	Sat.	14	677	446	1,123	40	393	468	861	54
4/ 6/74	Sat.	15	524	510	1,034	49	407	457	864	53
4/ 6/74	Sat.	16	681	576	1,257	46	431	374	805	46
4/ 6/74	Sat.	17	535	568	1,103	51	559	246	705	35
4/ 6/74	Sat.	18	425	623	1,048	59	442	112	554	20
4/ 6/74	Sat.	19	612	88	700	13	443	58	491	12
8-hour total			4,479	3,596	8,075	45	3,484	2,650	6,134	43
4/10/74	Wed.	12	--	--	714	--	424	238	662	36
4/10/74	Wed.	13	--	--	786	--	327	316	643	49
4/10/74	Wed.	14	--	--	837	--	403	264	667	40
4/10/74	Wed.	15	712	130	842	15	395	177	672	26
4/10/74	Wed.	16	590	417	1,007	41	475	201	676	30
4/10/74	Wed.	17	818	566	1,384	41	641	201	842	24
4/10/74	Wed.	18	820	556	1,376	40	513	219	732	30
4/10/74	Wed.	19	674	231	905	26	225	263	488	54
8-hour total							3,403	1,876	5,279	36
4/12/74	Fri.	12	586	298	832	34	353	402	735	55
4/12/74	Fri.	13	540	464	1,004	46	309	402	711	57
4/12/74	Fri.	14	508	419	927	45	305	431	735	59
4/12/74	Fri.	15	547	505	1,052	48	425	432	857	50
4/12/74	Fri.	16	679	541	1,220	44	494	322	816	39
4/12/74	Fri.	17	599	595	1,194	50	309	238	547	44
4/12/74	Fri.	18	524	514	1,038	50	540	123	663	19
4/12/74	Fri.	19	550	251	801	31	553	30	583	5
8-hour total			4,533	3,587	8,120	44	3,268	2,380	5,648	42

Table 7. DIRECTIONAL TRAFFIC VOLUMES - EAST LEG OF ROUTE 83 AND 22ND STREET INTERSECTION

Date	Day of week	Hour of day	Westbound direction of travel				Eastbound direction of travel			
			Through volumes	Shopping center	Total volumes	Percent s.c.	Through volumes	Shopping center	Total volumes	Percent s.c.
3/22/74	Fri.	12	637	141	778	18	403	239	642	37
3/22/74	Fri.	13	596	181	777	23	562	292	854	34
3/22/74	Fri.	14	483	202	685	29	500	306	806	38
3/22/74	Fri.	15	508	230	738	31	363	270	633	43
3/22/74	Fri.	16	627	260	887	30	339	272	611	44
3/22/74	Fri.	17	833	241	1,074	23	356	267	623	43
3/22/74	Fri.	18	773	255	1,028	25	285	211	496	42
3/22/74	Fri.	19	546	163	709	23	392	219	611	36
8-hour total			5,003	1,673	6,676	25	3,200	2,076	5,276	39
4/ 5/74	Fri.	12	636	161	797	20	387	253	640	40
4/ 5/74	Fri.	13	576	195	771	25	541	305	846	35
4/ 5/74	Fri.	14	483	203	868	29	540	315	855	37
4/ 5/74	Fri.	15	432	245	677	36	384	271	655	41
4/ 5/74	Fri.	16	611	277	888	31	393	257	650	40
4/ 5/74	Fri.	17	774	264	1,038	25	490	277	767	36
4/ 5/74	Fri.	18	761	283	1,044	27	278	301	579	52
4/ 5/74	Fri.	19	552	213	765	28	332	251	583	43
8-hour total			4,825	1,841	6,666	28	3,345	2,230	5,575	40
4/ 6/74	Sat.	12	399	227	626	36	307	461	768	60
4/ 6/74	Sat.	13	459	300	759	40	387	439	826	53
4/ 6/74	Sat.	14	470	299	769	39	323	532	855	62
4/ 6/74	Sat.	15	408	374	782	48	272	507	779	65
4/ 6/74	Sat.	16	395	396	791	50	365	363	728	50
4/ 6/74	Sat.	17	272	416	688	61	378	274	652	42
4/ 6/74	Sat.	18	306	450	756	60	413	143	556	26
4/ 6/74	Sat.	19	714	55	769	7	405	67	472	14
8-hour total			3,423	2,517	5,940	42	2,850	2,786	5,636	49
4/10/74	Wed.	12	682	169	851	20	369	337	706	48
4/10/74	Wed.	13	481	255	736	35	513	356	869	41
4/10/74	Wed.	14	447	263	710	37	493	342	835	41
4/10/74	Wed.	15	313	277	590	47	406	277	683	41
4/10/74	Wed.	16	431	319	750	42	361	235	596	39
4/10/74	Wed.	17	777	257	1,034	25	399	245	644	38
4/10/74	Wed.	18	732	278	1,010	28	301	256	557	46
4/10/74	Wed.	19	474	214	688	31	262	256	513	49
8-hour total			4,337	2,032	6,369	32	3,104	2,304	5,408	43
4/12/74	Fri.	12	570	213	783	27	373	407	780	52
4/12/74	Fri.	13	737	296	1,033	29	427	429	856	50
4/12/74	Fri.	14	537	299	836	36	419	460	879	52
4/12/74	Fri.	15	477	375	852	44	442	433	875	49
4/12/74	Fri.	16	474	360	834	43	405	383	788	49
4/12/74	Fri.	17	549	326	875	37	377	321	698	46
4/12/74	Fri.	18	487	325	812	40	291	291	582	50
4/12/74	Fri.	19	345	205	550	37	303	213	516	41
8-hour total			4,176	2,399	6,575	36	3,037	2,937	5,974	49

Traffic Volumes - The volume of traffic in the vicinity of the shopping center can be separated into two parts: through traffic volumes and site-generated (shopping center) traffic volumes. Each should be treated as an independent phenomenon having distinguishable diurnal, weekly, and seasonal patterns.

The volume of through traffic on any section of roadway in the vicinity of the site at a given hour depends on several factors such as the type of roadway (function, capacity) and the intensity of development in the area to which the roadway provides access. As stated previously, Oakbrook Shopping Center is located adjacent to two major regional arterial roadways. These two routes serve as feeder routes to the expressway system and as principal access routes to the major office/employment areas east of the center. As is typical of roadways of this nature, several diurnal weekday patterns of through traffic occur:

1. Highly directional patterns (approximately 70/30 directional splits) of traffic during morning and evening rush hours. These are northbound and eastbound in the morning and southbound and westbound in the afternoon.
2. High peaking characteristics. Peak morning and evening rush hour traffic is 10 to 12 percent of the total 24-hour traffic volumes.

The projection of through traffic volumes in the vicinity of a proposed shopping center is at best an "inexact science." The general lack of substantial data on diurnal, weekly, seasonal, and annual patterns at most locations requires several simplifying assumptions to be made. The following procedure is presented as a method for determining future 1-hour and 8-hour through traffic volumes on the roadways adjacent to the site:

1. Determine the existing 1-hour and 8-hour traffic volumes. Perform 24-hour (or 12-hour, minimum) traffic counts at the major intersections in the vicinity of the site. Manual counts, including all turning movements, should be made during morning and evening rush

hours, if possible. An analysis of these data will provide a basis for estimating the existing peak 1-hour and 8-hour periods of traffic.*

2. Obtain adjustment factors to account for weekly and seasonal fluctuations. These estimates can usually be obtained from state or local highway agencies or from consultants familiar with traffic patterns in the site vicinity. Weekly and seasonal adjustment factors can vary considerably with the geographical location and urban, suburban, or rural environments.

3. Determine the annual growth rate. The future through traffic volumes on the highway are highly dependent upon the potential for growth in the area surrounding the center (other than the center itself). A trend analysis of traffic volumes (or population growth) is perhaps the best method for determining future growth rates on roadways. Of course, consideration must be given to the amount of potentially undevelopable land in the vicinity of the site, other proposed new developments adjacent to the site and future programmed improvements to the roadway network (new or improved roadways). Typical annual growth rates for through traffic volumes range from 0 to 1 percent for built-up urban areas to 5 percent or more for rural areas on the fringe of growing metropolitan areas. Again, local and state highway officials and appropriate planning agencies should be consulted to determine localized factors for annual growth rates.

4. Estimate 24-hour, 8-hour and 1-hour traffic volumes for air quality design year(s). Existing traffic counts should be adjusted by weekly and seasonal factors and a growth factor to determine maximum, average, and minimum traffic volumes on a daily basis.

The traffic volumes generated by regional shopping centers depend on several factors. Among these are size, tenant mix, operation of center (opening times, special sales, etc.), trade area demographics, transit usage, and regional geographical location within the United

*A second method for determining through traffic volumes which is considerably less precise is to use AADT maps (usually available from state or local highway agencies). Typically, the 1-hour peak is 8 to 10 percent of the AADT and the 8-hour peak is 50 to 60 percent of the AADT.

States. The most important factor singled out in the present state-of-the-art is size in square feet of gross leasable floor area (GLA). Although a great deal of research work has gone into determining volumes generated by regional centers, there are still numerous variables whose effects have not yet been quantified. A study of six regional centers in the Chicago metropolitan area[2] indicates substantial variations which appear to be attributable to factors other than size. Appendix D summarizes the results of the December traffic counts at these six regional centers.

The analysis of traffic generated by Oakbrook Shopping Center during December, 1973, and January, March, and April, 1974, is summarized in Tables 8, 9, and 10. More detailed information on the observed hourly and daily trip generation rates is presented in Appendix E.

The peak single day for traffic at Oakbrook Shopping Center during the two periods surveyed was the Saturday before Christmas with the Wednesday after Christmas a close second. The 24-hour, 8-hour, and 1-hour volumes generated on these two days were 150 to 170 percent greater than the averages for all the days surveyed (excluding holidays when the center was closed). The lowest single day of shopping center traffic was the Sunday after New Years. The lowest weekday observed was Monday, January 7, 1974. As anticipated, Saturday is the typical peak day for shopping center traffic. The average 24-hour generation rate for all Saturdays observed was 35.5 trips/1,000 square feet compared to 32.0 for all weekdays. Friday was the second highest day of the week for shopping center traffic activity, averaging 34.9 trips/1,000 square feet daily. Sunday was the lowest day of shopping activity averaging 23.5 trips/1,000 square feet over all the days surveyed.

As indicated by the data in the tables, the average 24-hour, 8-hour, and 1-hour traffic generation rates for the center during the peak Christmas period are approximately 20 to 30 percent higher than the

Table 8. DAILY TRIP GENERATION RATES (ONE-WAY TRIPS/1,000 SQUARE FEET GLA)
OAKBROOK SHOPPING CENTER

Week beginning	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Week average (excluding holidays)
12/17/73	--	--	--	40.3	45.0	49.3	36.9	42.8
12/24/73	39.2	1.2[a]	48.9	42.0	41.4	40.7	20.4	38.8
12/31/73	30.3	2.6[a]	33.8	33.7	35.3	39.7	19.3	32.0
01/07/74	20.5	24.1	--	--	--	--	--	22.4
Day-of-week average: (excluding holidays)[b]	30.0	24.1	41.4	38.7	40.6	43.2	25.5	35.6
03/11/74	--	--	--	29.4	29.5	32.8	20.6	28.1
03/18/74	28.3	28.8	30.1	29.6	30.5	26.2	20.8	27.8
03/25/74	29.9	30.3	30.1	26.5	28.7	31.1	23.2	28.5
04/01/74	28.6	29.5	27.2	29.2	32.7	33.7	23.6	29.2
04/08/74	32.4	32.3	29.9	32.9	35.8	30.6	--	32.3
Day-of-week average:[c]	29.8	30.2	29.3	29.5	31.4	30.9	22.1	29.2

[a] Holiday

[b] Average daily trips generated for all days equals 31.6 trips/1,000 square feet.

[c] Average daily trips generated for all days equals 31.4 trips/1,000 square feet.

Table 9. MAXIMUM EIGHT-HOUR TRIP GENERATION RATES (ONE-WAY TRIPS/1,000 SQUARE FEET GLA) OAKBROOK SHOPPING CENTER

Week beginning	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Week average (excluding holidays)
12/10/73	--	--	--	--	--	28.6	--	28.6
12/17/73	--	--	--	23.9	28.3	38.2	33.2	30.9
12/24/73	34.5	0.7[a]	33.3	27.7	26.0	31.7	16.8	28.3
12/31/73	35.3	1.8[a]	21.9	22.4	22.3	30.1	17.5	23.3
01/07/74	15.8	16.5	--	--	--	--	--	16.2
Day-of-week average: (excluding holidays)[b]	25.2	16.5	27.6	24.7	25.5	32.2	22.5	26.0
03/11/74	--	--	--	18.2	18.1	27.4	19.3	20.8
03/18/74	18.2	18.7	19.2	18.4	19.1	22.4	19.6	19.4
03/25/74	19.6	19.0	19.3	16.7	17.7	25.0	21.9	19.9
04/01/74	18.5	18.5	16.5	17.9	20.2	27.4	22.3	20.2
04/08/74	21.5	20.5	18.8	20.8	25.7	25.8	--	22.0
Day-of-week average:[c]	19.5	19.2	18.5	18.4	20.2	25.6	20.8	20.4

[a] Holiday

[b] Average maximum trips generated per eight-hours for all days equals 22.5 trips/1,000 square feet.

[c] Average maximum trips generated per eight-hours for all days equals 22.5 trips/1,000 square feet.

Table 10. MAXIMUM ONE-HOUR TRIP GENERATION RATES (ONE-WAY TRIPS/1,000 SQUARE FEET GLA) OAKBROOK SHOPPING CENTER

Week beginning	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Week average (excluding holidays)
12/10/73	--	--	--	--	--	4.1	--	4.1
12/17/73	--	--	--	3.2	3.9	5.3	5.6	4.5
12/24/73	5.2	0.1[a]	4.7	4.0	4.2	4.8	3.1	4.3
12/31/73	4.3	0.4[a]	3.1	3.2	3.2	4.4	3.4	3.6
01/07/74	2.5	2.4	--	--	--	--	--	2.5
Day-of-week average: (excluding holidays)[b]	4.0	2.4	3.9	3.5	3.8	4.7	4.0	3.9
03/11/74	--	--	--	2.6	3.0	4.3	3.6	3.4
03/18/74	2.8	2.8	2.7	2.9	2.9	3.7	3.7	3.1
03/25/74	2.9	2.9	2.8	2.5	2.7	3.9	4.1	3.1
04/01/74	3.1	2.8	2.5	2.7	3.0	4.1	4.2	3.2
04/08/74	3.0	3.0	2.9	2.9	3.9	3.7	--	3.2
Day-of-week average:[c]	3.0	2.9	2.7	2.7	3.1	3.9	3.9	3.2

[a] Holiday

[b] Average maximum trips generated per one-hour for all days equals 3.5 trips/1,000 square feet.

[c] Average maximum trips generated per one-hour for all days equals 3.5 trips/1,000 square feet.

generation rates during the pre-Easter period. Past observations of seasonal patterns at other centers in the Chicago metropolitan area indicate that traffic during both of these periods is higher than the average for all days during the year. It is estimated that at Oakbrook Shopping Center, the peak 3 or 4 pre-Christmas days have traffic generation rates approximately 200 percent of the overall average, while the pre-Easter days' rate is approximately 130 percent of the overall average.

The average maximum 8-hour volume generated by Oakbrook Shopping Center for all days surveyed was approximately 70 percent of the average 24-hour volumes. The weekday maximum 8-hour volumes averaged 67 percent of the weekday 24-hour volumes, while the weekend maximum 8-hour volumes averaged 83 percent of the weekend 24-hour volumes. The average maximum 1-hour volumes on a weekday were approximately 10 percent of the average 24-hour volumes, while the average maximum 1-hour volumes on a weekend were approximately 14 percent of the average weekend 24-hour volumes. The relatively high-peaking characteristics of weekend shopping center traffic is a reflection of the shorter hours of operation during those days.

The volume of shopping center traffic on any single section of roadway in the vicinity of a proposed shopping center depends on (1) the volume of traffic generated by the shopping center during the period under analysis (1-hour, 8-hour, or 24-hour), and (2) the direction of approach and departure for the traffic generated by the center.

In view of the possible variation of generation rates from one center to another and the lack of substantive information on regional centers throughout the United States, the following procedure is recommended for the best estimate of the generation rate for a proposed shopping center.

1. Select an existing center of equivalent size (and, if possible, tenant mix and trade area demographics) in the same region as the proposed center.

2. Monitor traffic volumes on several peak days (such as the Saturday before Christmas, the weekday before Christmas, or the Friday after Thanksgiving) as well as several average days (non-special sale days in May or September). These days can be selected by using daily sales indices for existing regional centers in the area.

3. Estimate maximum 24-hour, 8-hour, and 1-hour volumes from the peak pre-Christmas day(s) and the average 24-hour, 8-hour, and 1-hour volumes from the observations on the average day.

The distribution of indirect source generated traffic should be calculated on the basis of a detailed analysis of the distribution of trip origins and destinations within the area of influence of the development. For commercial and industrial/office land-uses, the home is the primary origin-destination and, therefore, the distribution of population should provide a good estimate. For residential land-uses, the place of work is the primary origin-destination and, therefore, the place of employment should provide a good estimate. The net new trips attracted to an indirect source originating from or destined to a specific area should be assigned to the roadway network on the basis of the relative efficiency of the alternate routes available. The distribution of traffic at the entrances to the center is determined by relative attractiveness of the entrances, which is in turn a function of distance and congestion (or expected delay). Appendix F presents a more detailed description of a suggested procedure for determining the distribution of shopping center traffic on the adjacent roadways and entrances.

Estimating the total maximum 24-hour, 8-hour, and 1-hour volumes in the vicinity of the proposed shopping center requires a joint analysis of the diurnal, weekly, and seasonal patterns of both through traffic and shopping center traffic. The analysis of the data collected at Oakbrook Shopping Center illustrates the impact that these fluctuations can have on the peak volumes occurring on any section of roadway. Figures 24 and 25 present the weekday diurnal patterns of through and shopping center traffic volumes at the intersection of 22nd Street and Illinois Route 83. The diurnal pattern represents

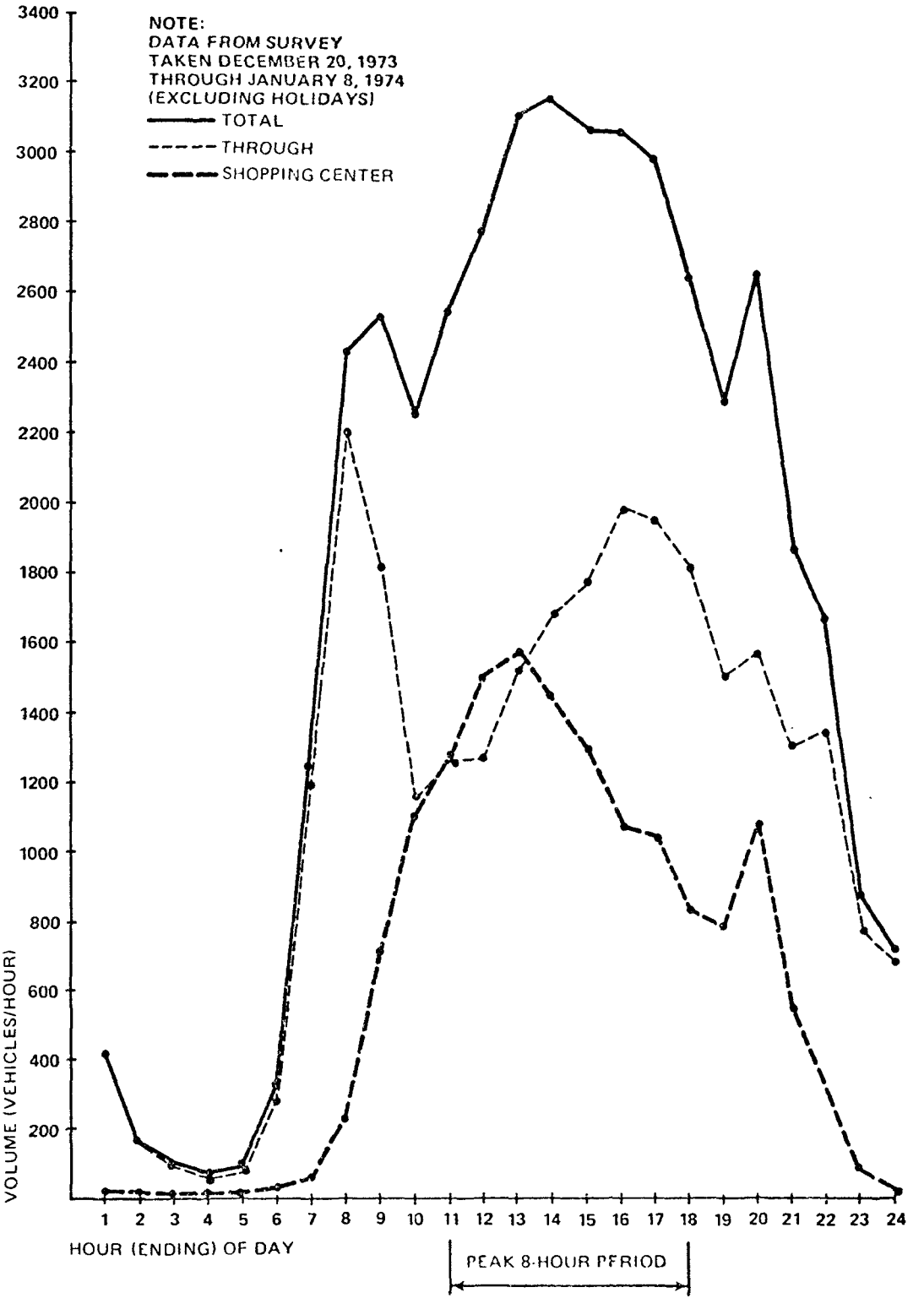


Figure 24. Diurnal pattern of weekday intersection traffic

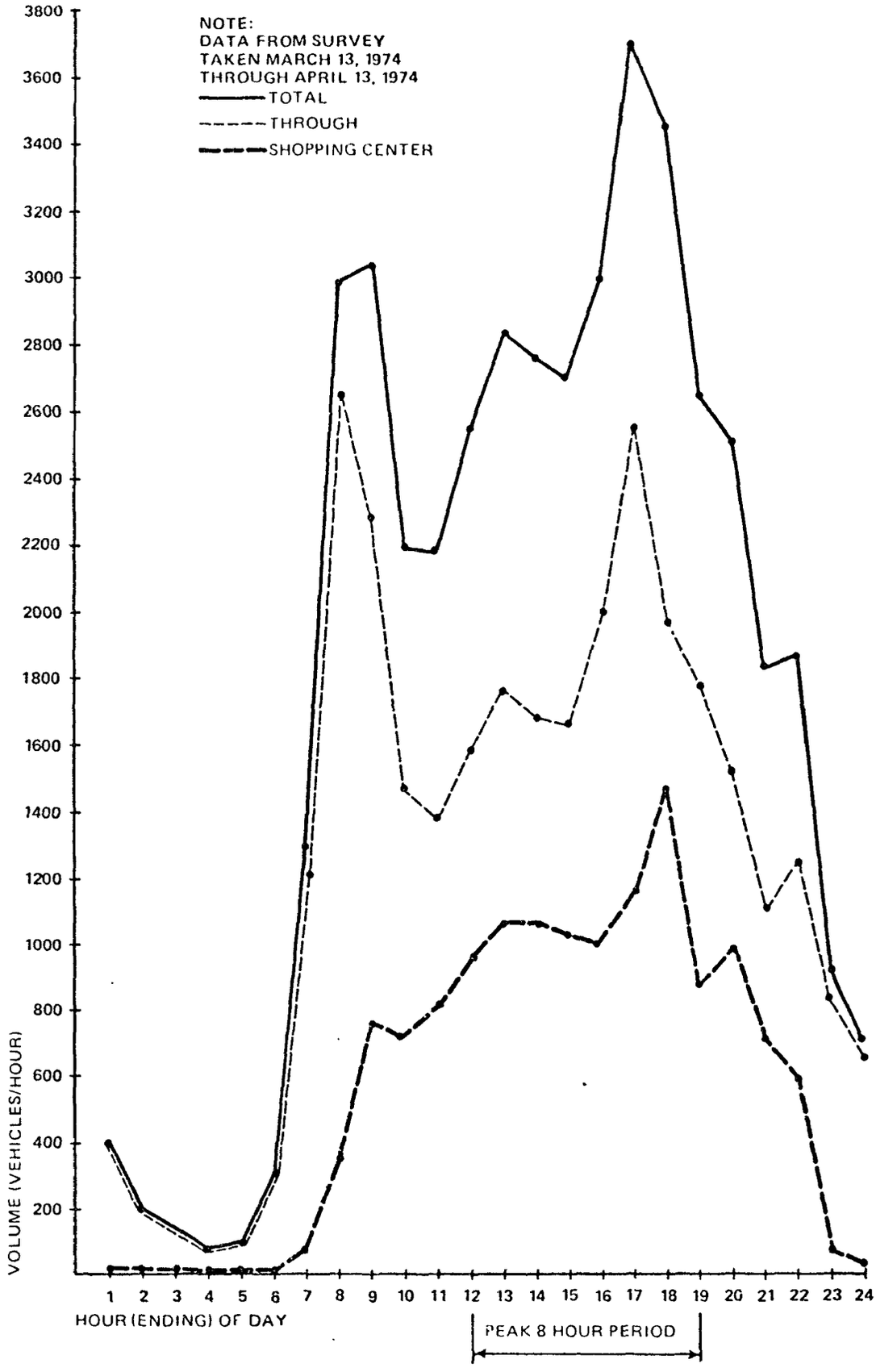


Figure 25. Diurnal pattern of weekday intersection traffic

the average of all the weekdays during the period surveyed. Several observations can be noted from the analysis of these two patterns. First, the diurnal pattern for through traffic remained stable between the Christmas and pre-Easter seasons except for an overall increase of approximately 10 percent in the volumes. Second, the peak period for shopping center traffic shifted from the 12:00 p.m. to 2:00 p.m. period during the Christmas season to 4:00 p.m. to 6:00 p.m. during the pre-Easter season. Finally, an overall decrease in weekday shopping center traffic of approximately 8 percent was recorded. The net effect of these three "seasonal" shifts on total weekday traffic volumes at the intersection was an overall increase in the 24-hour intersection volumes of approximately 4 percent from December to March, but an increase of approximately 27 percent in the afternoon 4:00 p.m. to 6:00 p.m. peak period.

From the combined Christmas and pre-Easter data, the 24-hour, 8-hour, and 1-hour periods of maximum intersection volumes have been identified. These are summarized in Tables 11, 12, and 13.

During the two periods surveyed, 24-hour, two-way volumes in excess of 48,000 vehicles occurred on only four days, three of which were the days immediately after Christmas day. On all of these peak days, 8-hour volumes in excess of 26,000 vehicles occurred. Out of all the days surveyed, 8-hour volumes in excess of 26,000 vehicles occurred on only eight. Except for the Thursday after Christmas, maximum intersection 1-hour volumes in excess of 4,000 vehicles occurred on all of the four peak days. These four days of peak intersection traffic occurred as a result of both high through traffic volumes and high shopping center volumes. During these four peak days, the average through traffic volumes were 19 percent higher than the average volumes for all the days surveyed. It is expected that much of this increased through traffic on these days is attributable to the nearby competing Yorktown Shopping Center, thus causing through traffic and Oakbrook Shopping

Table 11. PEAK TWENTY-FOUR HOUR TWO-WAY VOLUMES

Day	Date	Two-way volumes								
		North leg			East leg			North and east legs		
		Through	Shopping center	Total	Through	Shopping center	Total	Through	Shopping center	Total
Wednesday	12-26-73	16,850	8,908	25,758	14,749	11,067	25,816	31,599	19,975	51,574
Friday	12-28-73	18,334	6,353	24,687	16,171	10,024	26,195	34,505	16,377	50,882
Friday	04-05-74	17,047	7,952	24,999	17,424	6,965	24,389	34,471	14,917	49,388
Thursday	12-27-73	18,563	6,397	24,960	13,991	10,322	24,313	32,554	16,719	49,273
	Average:	17,698	7,403	25,101	15,584	9,594	25,178	33,282	16,997	50,279

Table 12. PEAK EIGHT-HOUR TWO-WAY VOLUMES

Day	Date	Two-way volumes								
		North leg			East leg			North and east legs		
		Through	Shopping center	Total	Through	Shopping center	Total	Through	Shopping center	Total
Wednesday	12-26-73	8,078	6,078	14,370	6,975	7,527	14,502	15,271	13,605	28,872
Saturday	12-22-73	8,197	7,761	15,958	8,132	3,846	11,978	16,329	11,607	27,998
Friday	04-12-74	7,694	6,244	13,938	7,406	5,405	12,881	15,100	11,649	26,749
Thursday	12-27-73	8,955	4,093	13,048	6,974	6,497	13,471	15,929	10,590	26,519
Friday	12-21-73	8,702	4,384	13,086	6,916	6,376	13,292	15,618	10,760	26,378
Friday	12-28-73	9,032	3,791	12,823	7,289	6,229	13,518	16,321	10,020	26,351
Friday	04-05-74	8,816	4,761	13,577	8,375	4,256	12,631	17,191	9,017	26,208
Saturday	04-06-74	7,638	6,691	14,329	6,999	4,851	11,850	14,637	11,542	26,179
	Average:	8,416	5,475	13,891	7,383	5,623	13,006	15,799	11,098	26,897

Table 13. PEAK ONE-HOUR TWO-WAY VOLUMES

		Two-way volumes								
		North leg			East leg			North and east legs		
Day	Date	Through	Shopping center	Total	Through	Shopping center	Total	Through	Shopping center	Total
Saturday	12-22-72	1,231	1,098	2,329	528	1,405	1,933	1,759	2,503	4,262
Friday	04-05-74	1,595	699	2,294	1,264	541	1,805	2,859	1,240	4,099
Tuesday	04-09-74	1,450	781	2,231	1,520	278	1,798	2,970	1,059	4,029
Wednesday	12-26-74	1,187	851	2,038	1,045	931	1,976	2,232	1,782	4,014
Wednesday	04-10-74	1,509	717	2,226	1,509	277	1,786	3,018	944	4,012
Friday	03-22-74	2,002	281	2,283	1,480	241	1,721	3,482	522	4,004
	Average:	1,496	738	2,234	1,224	612	1,836	2,720	1,350	4,070

Center traffic to reach peaks at the same time. The average traffic volume generated by the shopping center on these four peak days was 30 percent higher than the average for all days surveyed.

As indicated by the data collected at the Oakbrook Shopping Center, identification of the maximum 8-hour and 1-hour traffic periods for a proposed shopping center is not a simple process. However, the following guidelines should be used to determine when these periods are most likely to occur.

1. The peak periods of total traffic are highly dependent upon the ratio of through traffic to shopping center traffic. Typically, this ratio is approximately 2:1 for suburban regional centers.[16] With this ratio, fluctuations in through traffic have twice the impact that the same percentage fluctuations in shopping center traffic would have.

2. The most likely periods of maximum traffic are:

   a. Preschool sale days in August and September or spring sale days (pre-Easter) when (1) through traffic is generally at its peak (as high as 120 percent of the average day on a Friday), and (2) shopping center traffic is close to its design level (approximately 140 percent of the average day).

   b. Pre-Christmas Saturdays when through traffic (in an area that does not contain intense commercial development) is approximately 80 percent of the annual average daily volumes and shopping center traffic is approximately 180 to 200 percent of the average day.

   c. Post-Christmas (day after) exchange and sale days when through traffic on a Friday may be 100 to 110 percent of the average annual day and shopping center traffic is approximately 150 to 160 percent of the average day.

3. The maximum 8-hour period in the vicinity of a regional shopping center (through traffic plus shopping center traffic) typically occurs between 11:00 a.m. and 7:00 p.m. on weekdays and between 10:00 a.m. and 6:00 p.m. on Saturdays and Sundays. The peak

1-hour of traffic occurs simultaneously with the peak period of through traffic (usually 4:00 p.m. to 5:00 p.m.).

4. The following set of calculations illustrates a suggested methodology for analyzing the maximum traffic flows on any critical section of roadway:

   Given: Projections of through traffic indicate that a section of roadway adjacent to the site will carry annual average daily traffic (AADT) volume of 10,000 vehicles. Traffic counts indicate the evening peak hour is 10 percent of AADT and the 8-hour period (11: a.m. to 7:00 p.m.) is 50 percent of AADT.

   Information from the State Highway Department indicates December traffic flows are 90 percent of AADT, April and September flows are 110 percent of AADT, Fridays are 110 percent and Saturdays are 90 percent of the average day.

   Trip generation and direction of approach analyses indicate 4,000 shopping center vehicles utilize the section of road on an average day.

   Find:

   a. Total 8-hour and 1-hour traffic volumes on a Friday preschool sale day in August:

      - 24-hour maximum through traffic = 10,000 x 1.10 (month factor) x 1.10 (day of week factor) = 10,000 (1.21) = 12,100 vehicles.

      - 8-hour maximum through traffic = 12,100 x 0.50 (8-hour factor) = 6,050 vehicles.

      - 1-hour maximum through traffic = 12,100 x 0.10 (1-hour factor) = 1,210 vehicles.

      - 24-hour maximum shopping center traffic = 4,000 x 1.40 (sale day factor) = 5,600 vehicles.

- 8-hour maximum shopping center traffic = 5,600 x 0.70 (8-hour factor) = 3,930 vehicles.

- 1-hour maximum shopping center traffic = 5,600 x 0.12 (1-hour factor) = 672 vehicles.

- Total maximum 24-hour volume = 12,100 + 5,600 = 17,700 vehicles.

- Total maximum 8-hour volume = 6,050 + 3,930 = 9,980 vehicles.

- Total maximum 1-hour volume = 1,210 + 672 = 1,882 vehicles.

b. Total traffic volumes on a pre-Christmas Saturday:

- 24-hour maximum through traffic = 10,000 x 0.90 x 0.90 = 8,100 vehicles.

- 8-hour maximum through traffic = 8,100 x 0.50 = 4,050 vehicles.

- 1-hour maximum through traffic = 8,100 x 0.10 = 810 vehicles.

- 24-hour maximum shopping center traffic = 4,000 x 1.80 = 7,200 vehicles.

- 8-hour maximum shopping center traffic = 7,200 x 0.80 = 5,760 vehicles.

- 1-hour maximum shopping center traffic = 7,200 x 0.12 = 864 vehicles.

- Total 24-hour maximum traffic = 8,100 + 7,200 = 15,300 vehicles.

- Total 8-hour maximum traffic = 4,050 + 5,760 = 9,810 vehicles.

- Total 1-hour maximum traffic = 810 + 864 = 1,674.

c. Total traffic on a post-Christmas Friday:

- 24-hour maximum through traffic = 10,000 x 0.90 x 1.10 = 10,000 vehicles.
- 8-hour maximum through traffic = 10,000 x 0.50 = 5,000 vehicles.
- 1-hour maximum through traffic = 10,000 x 0.10 = 1,000 vehicles.
- 24-hour maximum shopping center traffic = 4,000 x 1.50 = 6,000 vehicles.
- 8-hour maximum shopping center traffic = 6,000 x 0.80 = 4,800 vehicles.
- 1-hour maximum shopping center traffic = 6,000 x 0.12 = 720 vehicles.
- Total 24-hour maximum traffic = 10,000 + 6,000 = 16,000 vehicles.
- Total 8-hour maximum traffic = 5,000 + 4,800 = 9,800 vehicles.
- Total 1-hour maximum traffic = 1,000 + 720 = 1,720 vehicles.

For this section of roadway, the maximum 24-hour, 8-hour, and 1-hour volumes are most likely to occur on the special preschool or spring sale days on a Friday in April or August.

Level of Service - The term "level of service" is a broadly defined measure of traffic operating conditions at intersections and continuous segments of roadways.

Of critical concern to the estimation of vehicle emissions at intersections is the determination of the vehicular operating modes (i.e., approach speeds, deceleration, queueing, and acceleration modes).

Although a level of service condition at an intersection cannot directly be used to predict the vehicle operating modes (i.e., a given level of service does not correspond to a single condition of approach speeds, deceleration, etc.), the level of service function provides a framework for estimating these parameters. Therefore, it is necessary to understand the process for determining intersection capacity, service volumes, and level of service at signalized intersections as part of the process for estimating operating modes. The level of service terminology and procedures are outlined in more detail in Appendix G. The process for estimating operating modes is presented in the following section of this report.

Methodology for Estimating Vehicular Operating Modes at Intersections

As stated previously, the critical elements of traffic operating conditions at intersections are the vehicular operating modes. The estimation of the vehicular approach and departure speeds, acceleration and deceleration rates, and queuing characteristics is essential for the determination of carbon monoxide emissions.

Approach and Departure Speeds - For this study, the approach and departure speeds were defined as the vehicle speeds experienced outside of the influence zone of the signalized intersection, (i.e., the free-flow speeds prior to deceleration and after acceleration at the signal). The average approach and departure speeds observed at the intersection of Illinois Route 83 and 22nd Street are presented in Table 14. Except on the south leg, where approach and departure speeds are close to constant, there is a discernable pattern of lower speeds during the morning (7:00 a.m. to 9:00 a.m.) and evening (4:00 p.m. to 6:00 p.m.) rush hours. Midday speeds are approximately 5 to 10 miles per hour below the existing speed limits (50 miles per hour on Illinois Route 83 and 40 miles per hour on 22nd Street), while peak-hour speeds are 15 to 20 miles per hour below the existing speed limits. Figures 26 and 27 illustrate the relationship between

Table 14. OBSERVED APPROACH AND DEPARTURE SPEEDS

Hour ending	Approach speeds			
	North leg southbound	South leg northbound	East leg westbound	West leg eastbound
8	39	48	38	32
9	36	48	39	33
10	39	49	38	41
11	41	50	37	45
12	38	50	35	42
13	38	50	33	39
14	41	51	34	37
15	38	49	32	40
16	35	50	32	42
17	32	49	24	38
18	32	49	26	42
19	38	50	37	44
Average:	37.3	49.6	33.3	39.4

Hour ending	Departure speeds			
	South leg southbound	North leg northbound	West leg westbound	East leg eastbound
8	42	35	40	32
9	44	37	42	31
10	44	37	39	36
11	45	38	38	36
12	45	36	36	35
13	43	36	35	35
14	43	40	39	34
15	44	37	36	36
16	41	39	37	35
17	43	35	33	34
18	43	40	33	35
19	43	39	36	37
Average:	43.3	37.4	36.4	34.6

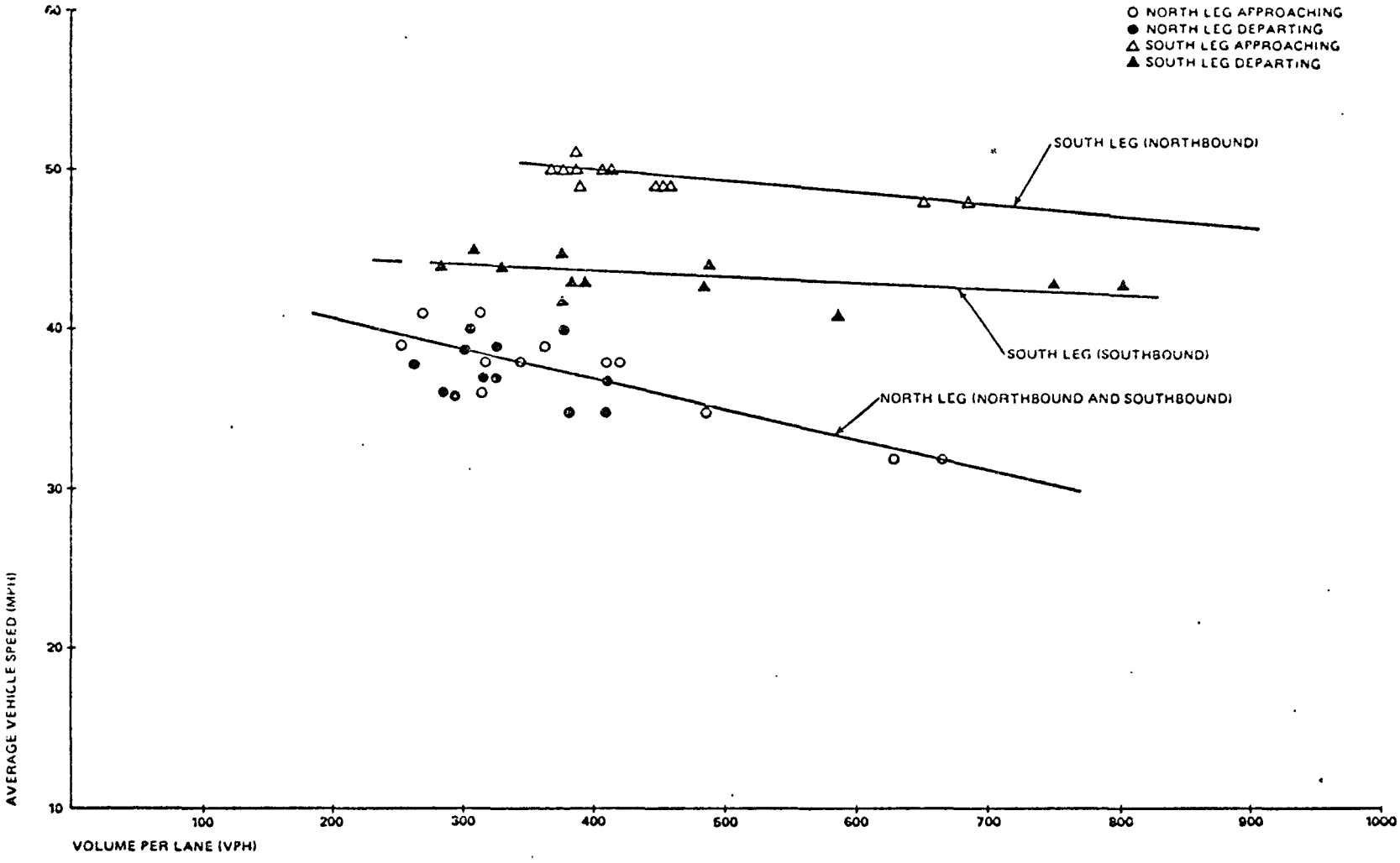


Figure 26. Average approach and departure speeds versus volume

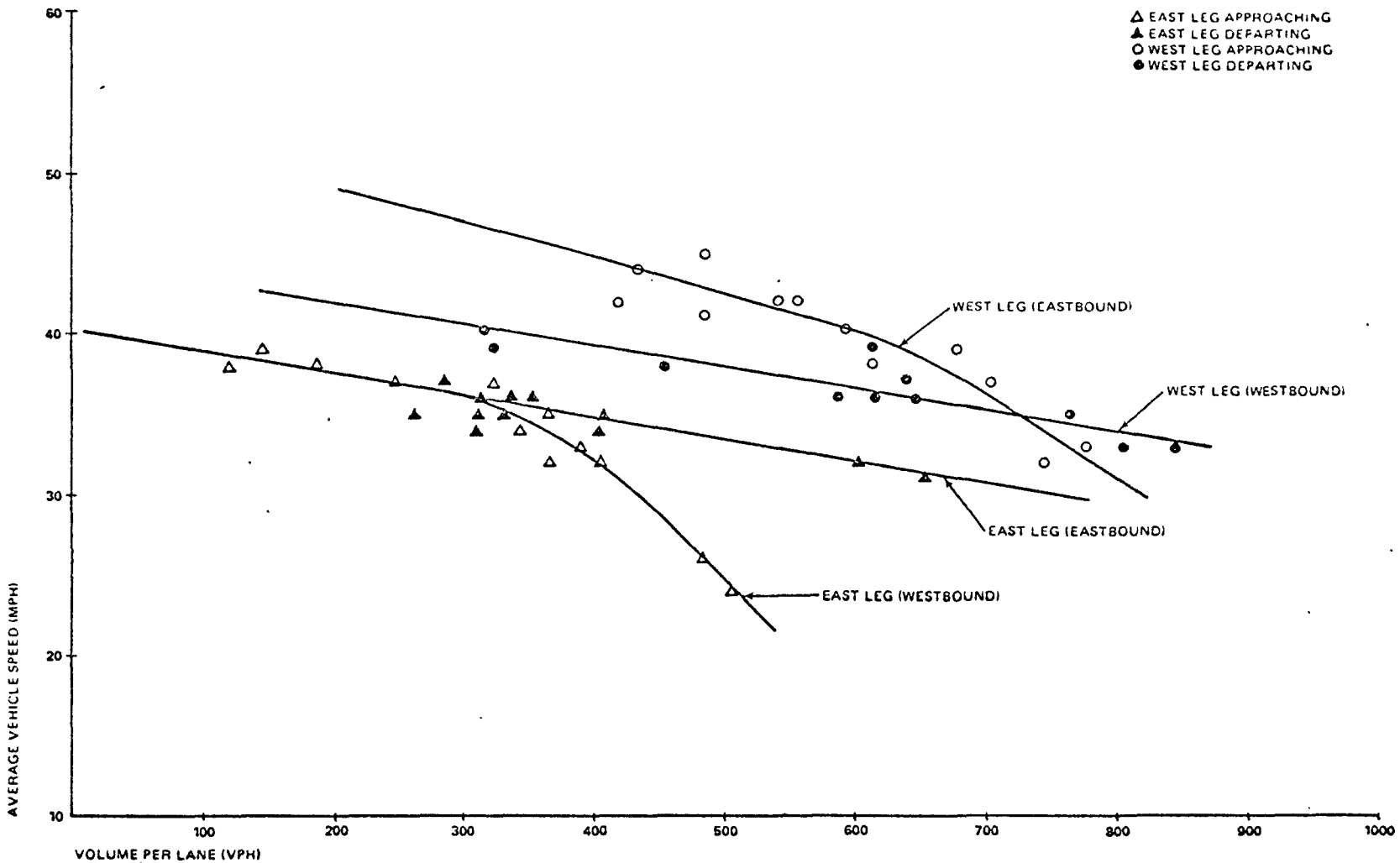


Figure 27. Average approach and departure speeds versus volume

the average observed approach and departure speeds versus the average volumes per lane on the intersection legs. Assuming the single-lane capacity for each leg is constant, a pattern similar to the relationships between volume and average speeds for rural highways indicated in Chapter 3 of reference 4 would be indicated. The lower overall speeds (5 to 10 miles per hour) on the east and north legs is most likely caused by disruption from adjacent signalized intersections. The east leg approach speeds appear to be more significantly impacted by the higher volumes per lane. This is most likely due to excessive congestion at the intersection of Illinois Route 83 and 22nd Street, itself, during the peak hours. The posted speed limit appears to provide the upper boundary for all the approach and departure speeds as no average single observed speed of more than 5 miles per hour over the posted speed limit was recorded on either roadway during the study period.

The reasonable estimation of approach and departure speeds for intersections in the vicinity of a proposed indirect source is difficult. Approaching and departing flow conditions can vary from uninterrupted (free-flow) conditions to interrupted conditions for numerous reasons. Speed limits may vary from 55 miles per hour to below 25 miles per hour. The limitations on vehicular acceleration and deceleration rates also influence the speeds that can be obtained between consecutive signalized intersections. The influence of decelerating and accelerating vehicles may be experienced at distances of up to 400 feet upstream or downstream from a signalized intersection. Thus, midblock uninterrupted flow conditions (average speeds $\geq$ 30 miles per hour) are unlikely to exist if signal spacing is less than 800 feet. Where signal spacings of 800 feet or greater exist, the approaching and departing speeds can be approximated by uninterrupted rural conditions, and the curves relating volume to average speeds as found in Figures 3.41-3.43 of reference 4 should be applicable. However, for roadways in the vicinity of an indirect source, the posted speed limit should be used in place of the average highway speed.

For signal spacings of 800 feet or less, the relationship of V/C to average speeds for urban and suburban arterials indicated by Figure 10.3 of reference 4 can be used. However, the V/C ratio shown in the graph reflects the midblock V/C and not the typical controlling intersection V/C condition.

The speeds found from the various curves presented in reference 4 are only approximations. Results should be compared with any available recent studies. Wherever possible, local conditions should be analyzed and appropriate adjustments made. Field measurements of existing conditions in the vicinity of a proposed regional shopping center or at locations having conditions equivalent to future proposed conditions would provide the best measure.

Acceleration and Deceleration Rates - The average acceleration and deceleration rates observed at the intersection by hour of the day are shown in Table 15. Peak-hour congestion does not appear to have any significant effect on these events. The average observed rates for this study agree well with typical roadway deceleration and acceleration performances recorded in several other traffic engineering studies.[5] For the purpose of emission estimation, it is suggested that deceleration rates of between 2.5 and 3.0 mph/sec and acceleration rates of 2.25 to 2.75 mph/sec be used. More applicable data should be substituted if available.

Queuing Characteristics - The third critical element of the traffic operating conditions at signalized intersections is queuing. The number of vehicles waiting and the average waiting time per queued vehicle are important parameters for the estimation of emission intensities at intersections because of the high density emission rates of idling vehicles.

Table 15. OBSERVED ACCELERATION AND DECELERATION RATES

Hour ending	Average deceleration rates (mph/sec)			
	North leg southbound	South leg northbound	East leg westbound	West leg eastbound
8	2.5	2.7	3.0	2.0
9	2.4	2.7	2.6	2.9
10	2.5	3.0	3.7	2.8
11	3.1	3.1	3.4	2.8
12	2.4	2.8	3.1	2.2
13	2.5	2.9	2.9	3.1
14	-	-	-	-
15	2.6	3.0	2.5	2.9
16	2.6	2.4	2.4	2.8
17	2.2	3.1	2.1	3.6
18	2.2	2.9	2.0	3.2
19	2.0	2.8	3.6	3.1
Average:	2.45	2.85	2.85	2.85

Hour ending	Average acceleration rates (mph/sec)			
	South leg southbound	North leg northbound	East leg eastbound	West leg westbound
8	3.0	3.0	2.2	2.2
9	2.7	3.1	2.5	2.5
10	2.7	2.1	2.8	2.7
11	3.1	2.8	2.4	2.4
12	2.4	2.2	2.4	1.9
13	2.4	2.8	1.9	2.2
14	-	-	-	-
15	2.4	2.8	2.2	2.4
16	2.1	3.0	2.4	2.4
17	2.0	2.5	1.8	2.7
18	2.2	2.5	1.9	2.3
19	2.2	2.9	2.2	3.3
Average:	2.47	2.70	2.24	2.45

The hourly averages of the maximum queue lengths (in vehicles) observed per signal cycle at the intersection of Illinois Route 83 and 22nd Street are presented in Table 16. The data indicate an increase in the number of queued vehicles per cycle as volumes on the approach increase.

Several mathematical models for predicting queue lengths have been developed. As part of the analysis of queue formation, two different models were analyzed. The first model investigated is frequently used in operations research problems, and it is also used by traffic engineers for the design of toll booth or drive-in bank storage areas. The model, or the "Toll Booth Formula," assumes a Poisson distribution of arrivals and an exponential distribution of service time. The average number of vehicles in the queue is given as:

$$N = \frac{V^2}{C(C-V)} \tag{1}$$

where: N = expected number of vehicles waiting.

V = expected number of arrivals per unit time (equivalent to approach demand volume).

C = expected number of units departing per unit time (equivalent approach capacity).

The time unit of the volume and capacity variables has no effect on the number of expected vehicles in the queue as long as the volume demand to capacity ratio is constant over each unit of time. Using the observed hourly data on approach volumes, and the hourly capacity calculations (based on the level of service calculations presented in Appendices G and H), the expected number of waiting vehicles was calculated. This calculated queue length was then plotted against the observed values. These plots are shown in Figure 28. The graphs indicate the Toll Booth Formula almost consistently underestimates the queue length by a factor of two or greater. Some inconsistency is due to the Toll Booth Formula averaging the queue over both the green and red signal phases. Corrections for this discrepancy would increase

Table 16. AVERAGE OBSERVED VEHICLES QUEUED PER SIGNAL CYCLE

Hour of day	Number of vehicles queued					
	North leg		South leg		East leg	West leg
	Left-turn lane (1)	Through lanes (2)	Left-turn lane (1)	Through lanes (2)	Through lanes (2)	Through lanes (2)
8	1.0	4.0	6.0	19.9	4.4	18.4
9	5.5	8.0	3.0	13.3	5.9	24.5
10	2.0	7.2	3.0	9.0	6.6	13.2
11	3.0	6.3	3.0	5.3	8.3	11.0
12	1.0	7.5	2.0	7.8	12.2	16.5
13	2.0	10.5	2.3	8.4	20.6	20.8
14	1.3	8.3	1.5	8.9	16.8	32.6
15	3.4	11.8	1.5	10.4	10.6	13.5
16	3.0	16.8	2.9	10.9	16.5	13.0
17	2.8	23.3	3.0	12.7	33.4	17.2
18	2.8	28.4	3.0	10.6	33.1	16.4
19	1.0	11.5	2.0	6.5	15.0	10.9

the calculated values by only a factor of between 1.10 and 1.70. This would not improve the performance of this formula significantly.

The second model tested was a modification of the "Red Time Formula" which is typically used by traffic engineers to calculate storage length requirements for intersection approaches. This modified formula is given by:

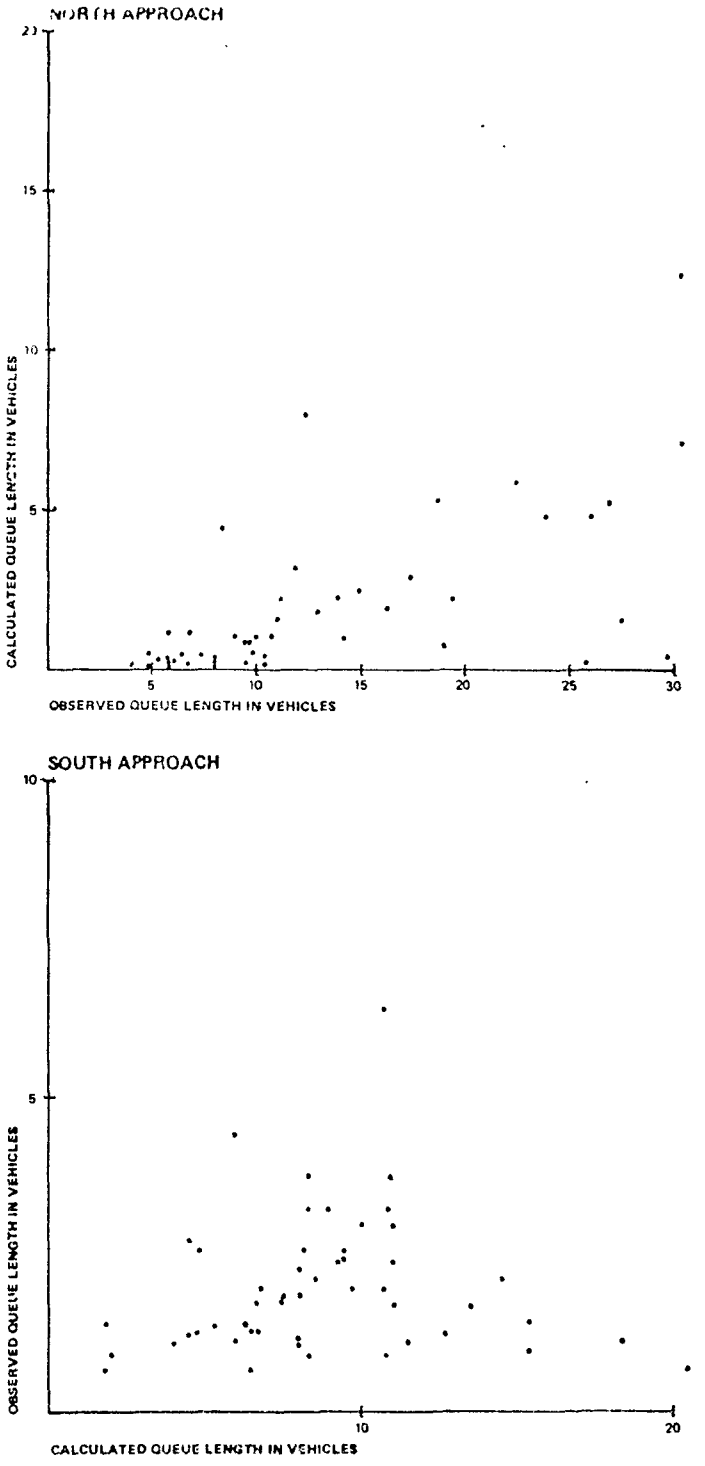
$$N = \frac{(V) \quad (1-G'/C')}{CPH} \tag{2}$$

where N = expected number of vehicles queued per signal cycle.

V = expected number of arrivals per hour (hourly volume demand).

G'/C' = green time provided the approach as percent of total cycle time ($(1-G'C')$ is the red time plus amber time).

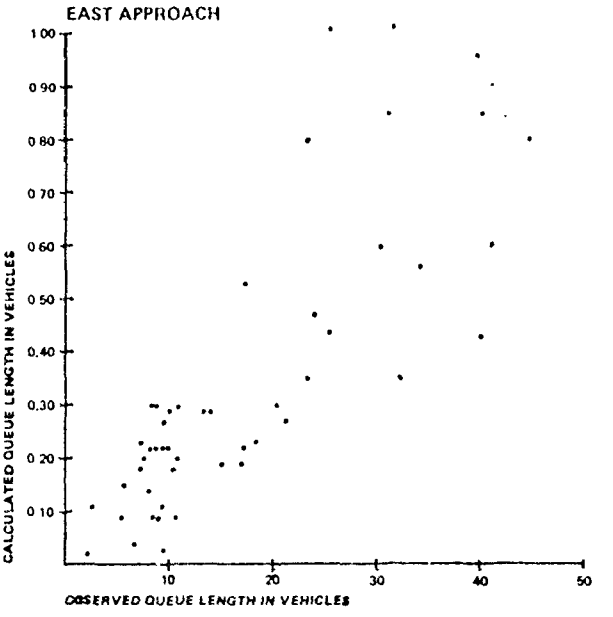
CPH = number of signal cycles per hour.

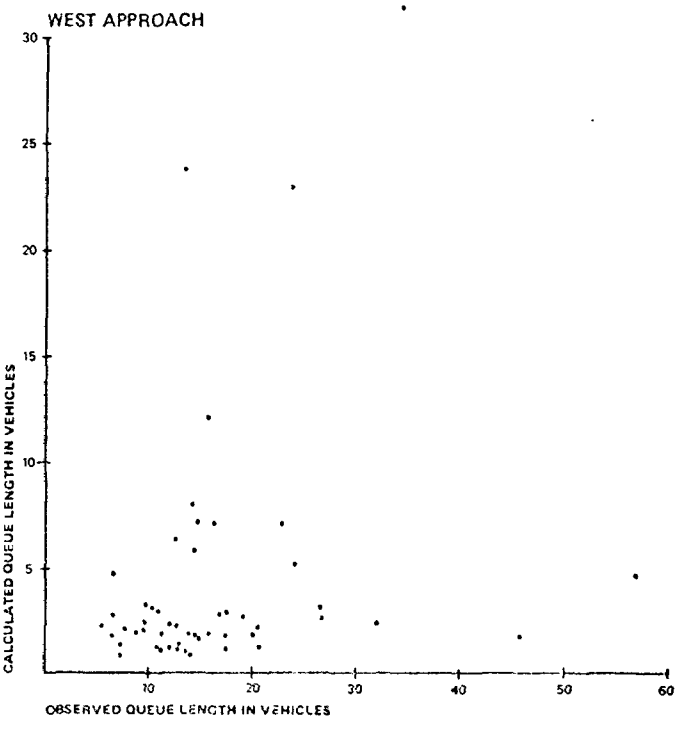


NOTE : TOLL BOOTH FORMULA

$$N = \frac{V^2}{C(C-V)}$$

Figure 28. Calculated versus observed queue length using tollbooth formula





NOTE . TOLL BOOTH FORMULA

$$N = \frac{V^2}{C(C-V)}$$

Figure 28 (continued). Calculated versus observed queue length using tollbooth formula

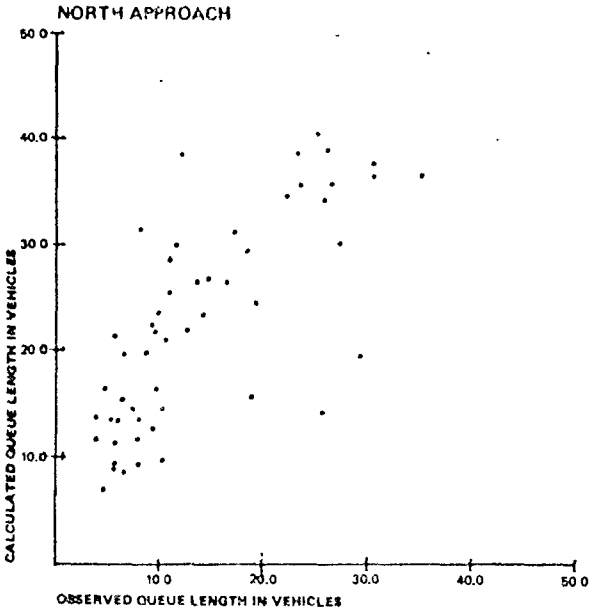
Using the data on hourly volumes and average cycle length observed at the intersection, and the calculated G'/C' ratios (see Appendix G for a discussion of provided G'/C' ratio calculations), the queue lengths predicted by the Red Time Formula were also plotted against the observed values. The results are displayed in Figure 29. The graphs indicate that although the Red Time Formula in most cases slightly over predicts the queue length, it estimates the queue length much better than the Toll Booth Formula.

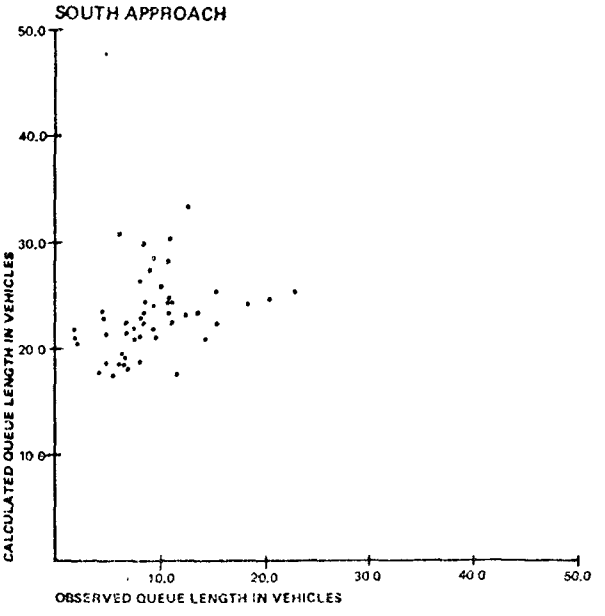
Further refinements of the simple Red Time Formula can easily be made. A factor to account for a Poisson distribution of arrivals can be used along with a desired confidence level to determine more accurately the expected number of arrivals. Also, the $(1-G'/C')$ factor can be modified to account for first vehicle and overall queue delay times which result from delayed driver reactions to the green indication. Several additional studies using these refinements should be consulted for more detailed information.[6,7,12]

Another important aspect of queue formation is the average waiting time per vehicle in the queue. Table 17 summarizes the waiting times of vehicles queued at the intersection of Route 83 and 22nd Street.

Table 17. VEHICLE WAITING TIMES AND ESTIMATED RED TIME

	North leg		South leg		East leg	West leg
	Left turn	Through	Left turn	Through	All movements	All movements
Minimum time (seconds)	2.0	3.0	1.0	2.0	2.0	2.0
Maximum time (seconds)	121.0	180.0	84.0	138.0	191.0	128.0
Average time (seconds)	36.9	27.2	36.9	30.9	47.8	40.5
Standard deviation	28.6	27.5	22.6	23.0	40.6	28.3
Average red plus amber time (estimated)	144	104	144	104	88	104

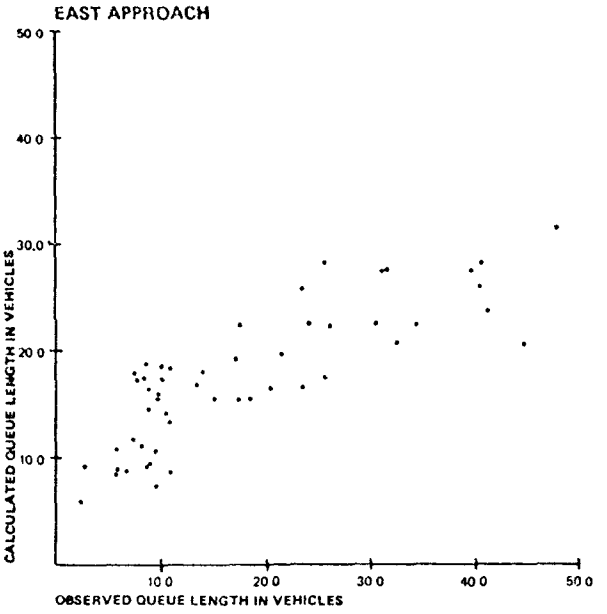


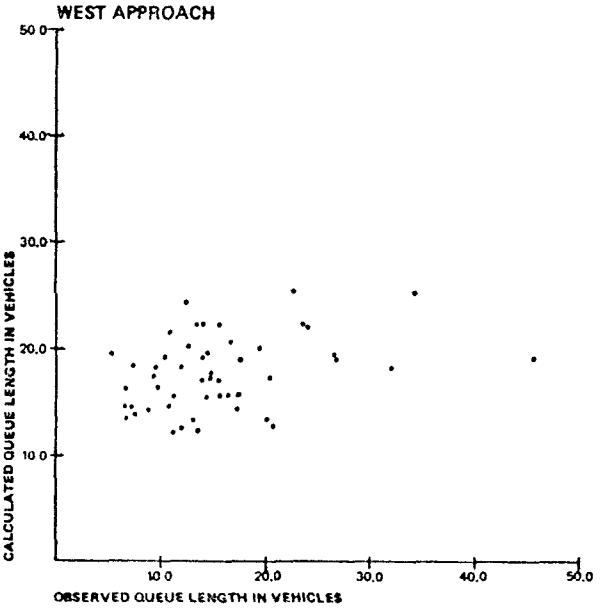


NOTE: RED TIME FORMULA

$$N = \frac{V(1-G'/C')}{CPH}$$

Figure 29. Calculated versus observed queue length using red time formula





NOTE: RED TIME FORMULA

$$N = \frac{V(1-G'/C')}{CPH}$$

Figure 29 (continued). Calculated versus observed queue length using red time formula

An analysis of queue time versus queue position was inconclusive. The major east and west through movements experienced significantly more delay than the north and south through movements. The estimated average red plus amber times (cycle time minus green time) for the approaches is also given in Table 17. The average waiting time per vehicle varies from 25 to 55 percent of the estimated red plus amber time for the approaches.

The estimation of emission intensities at intersections requires a detailed evaluation of all vehicle operating modes. The approach speeds, being a function of the midblock V/C ratio, are sensitive to the capacity of the roadways. Roadway width and surging characteristics are key determinants of the capacity of a roadway. Increased roadway widths (number of lanes) can significantly reduce the V/C ratio and thus allow for higher average speeds. However, for most urban and suburban conditions, increases beyond level of service C will not generally yield significantly increased average speeds. In many cases, the posted speed limit will restrict the maximum speeds.

The acceleration, deceleration, and queuing characteristics are related to the intersection control. The total number of vehicles having to stop at a signalized intersection depends on the arrival pattern of the traffic and the G'/C' ratio provided by the signal control. Assuming an uncontrolled (random) arrival rate, the number of vehicles queued during an hour is approximately equal to the volume demand times the hourly percent cycle time given to red and amber time (or $V \times (1-G'/C')$. As the green time per cycle for an approach increases, the number of vehicles queued decreases. However, the green time given to one approach is usually limited by the green time required by an opposing leg. Increasing the G'/C' ratio will thus have a limited effect in reducing the queuing at the intersection as a whole, although queue lengths could be "traded" among approaches.

A more promising measure to reduce queuing is to modify the vehicle arrival pattern. This can be done by progressive signal systems. A progressive signal system times the release of traffic at signal-controlled intersections so that vehicles arrive at succeeding intersections during the green phase, provided they travel at the proper speed. Such a coordinated signal system will maximize the use of green time for the direction of travel being progressed, and it will reduce the vehicle start-up and queue delays. The successive intersections must be free of queues when the progressed vehicles arrive.

To determine the effect of signal progression on queuing at an intersection, the designer must provide an estimate of the percent of total approach traffic which has been progressed. The percent of vehicles progressed is essentially the progression bandwidth divided by the cycle length, and the bandwidth is the width (seconds) of the "window" of green in a given direction which allows the vehicles to proceed unopposed through the succeeding intersection. This information is generally available from the analysis of the traffic distribution at a regional center. This percent/100 can be designated as P, the progression factor. The through traffic adjacent to a shopping center will often be progressed since it represents the majority of traffic flow, and the value of P may vary from 0.40 to 0.70. Assuming this platooned traffic proceeds through the intersection with only minor disruptions due to turning movements, the emissions generated by the progressed traffic can be estimated by the cruise emission strength. The volume of progressed traffic is simply $V_p = P$ (V total) and the speed is the design progression speed. Techniques to model the effects of a progression on emissions have been developed.[19]

The remaining nonprogressed traffic ($V-V_p$) should be analyzed according to the following procedures developed for determining the operating characteristics of vehicles at intersections.

1. Determine maximum 8-hour and 1-hour volumes by approach according to procedures outlined in Section IV.

2. Determine the approach speed by calculating the midblock V/C ratio and using the appropriate chart relating V/C to average speeds. Capacity should be based on analysis of a continuous roadway section using factors for roadway width and trucks.

3. Calculate the provided G'/C' ratio for each approach according to the procedure described in Appendix G. The total $(G + Y)/C$ ratio for all approaches should be ≤ 1.00 at level of service D for worst conditions. (Y represents amber time).

4. The number of vehicles decelerating, accelerating and idling during a given hour (by approach) is calculated by $N_{TQ} = V \times (1-G'/C')$. The average number of vehicles queued per cycle length is given by the Red Time Formula.

5. The volume of vehicles passing through the intersection during an hour (at a constant speed equal to approach speeds) is given by $V-N_{TQ}$.

The cycle length for a traffic actuated signal varies with demand similarly to the G/C ratio. Typical cycle lengths can vary from 60 seconds to 180 seconds for arterial roads. At Oakbrook Shopping Center, the cycle length at Route 83 and 22nd Street intersection varied from 140 to 210 seconds throughout the day. Table 18 indicates average cycle lengths observed at Oakbrook Shopping Center by hour of the day.

The determination of cycle length (existing or proposed) is not a difficult process. The estimation of the existing cycle length required only a brief field observation of the intersection during peak conditions. In predicting future conditions, the designer usually selects the optimal cycle lengths based on the approach speeds and the phasing necessary to accommodate traffic at the desired level of service. Several methods for determining optimal cycle lengths for fixed time or actuated signals are available.[17]

Cycle lengths for fixed-time signals are limited between 60 and 120 seconds due to equipment restrictions. Good estimates would be 60-,

Table 18. OBSERVED CYCLE LENGTH - ROUTE 83 AND 22ND STREET INTERSECTION

Date	Day	Hour of day	Average cycle length (secs)	Cycles/ hour
6/13/74	Thursday	8	174	20.7
6/13/74	Thursday	9	170	21.2
6/13/74	Thursday	10	133	27.1
6/13/74	Thursday	11	147	24.5
6/13/74	Thursday	12	152	23.7
6/13/74	Thursday	13	160	22.1
6/17/74	Monday	14	191	18.8
6/17/74	Monday	15	181	19.9
6/17/74	Monday	16	177	20.3
6/17/74	Monday	17	179	20.1
6/17/74	Monday	18	174	20.7
6/17/74	Monday	19	166	21.7

75-, or 90-second cycle lengths for fixed time, depending upon the progressive system (if any). Fixed-time signals are usually found only in urban conditions where the signal coordination is essential. Actuated signals are usually found in suburban and rural conditions, where most signals are isolated, due to the great expense to coordinate actuated signals. Cycle lengths for actuated equipment are highly variable. However, cycle lengths of 90 or 120 seconds would be good estimates. In all cases, local data should take precedence over these estimates.

SECTION V

MODEL DEVELOPMENT AND EVALUATION

This section describes a technique for estimating emission profiles at intersections. Estimated profiles are then used as inputs to the HIWAY model for comparison of calculated and observed carbon monoxide concentrations. A discussion of area source evaluation follows this. The section concludes with the presentation of a methodology for estimating concentrations near intersections.

ESTIMATION OF EMISSION PROFILES FROM QUEUING VEHICLES

A signalized intersection resolves conflicts between opposing streams of traffic by alternately "blocking" and then allowing free passage of vehicles on intersecting approaches. This feature, plus the relatively fine detail in emission strength variations which must be known to assess nearby concentrations adequately, imply that the widely used "average route speed" method of computing emission strengths is not suitable in this case. A detailed knowledge must be provided of the emission variations from a vehicle undergoing mode changes from cruise through deceleration to idle, and acceleration back to cruise. The recently developed "Modal Analysis Model"[9] supplies this emission detail.

The Modal Analysis Model computes total emissions of hydrocarbons, carbon monoxide, and oxides of nitrogen from a user-specified vehicle mix through 1971. Any desired driving sequence falling within the range of model applicability may be used. The model was modified for this study

to calculate emissions at equal length intervals for a given "approach" cruise speed, rate of deceleration, rate of acceleration, and "departure" speed for an "average" vehicle representing a 1974 low altitude mix. A 1974 mix was obtained by calculating emissions for a 1971 mix using Table 3.1.2.7 of AP-42[10] and multiplying the results by the ratio of 1974 to 1971 test results. For carbon monoxide this ratio is 39/47.[11] The length interval was chosen as 8 meters, since this is the average distance occupied by queued vehicles (front bumper to front bumper) used in the proposed interim guidelines.[18] Figure 30 shows the carbon monoxide emission profile calculated by the modified Modal Analysis Model for one vehicle decelerating from 35 mph/sec at -2.75 mph/sec and accelerating from 0 back to 35 mph at 2.50 mph/sec with no idle time. These values of speed, deceleration, and acceleration are representative of the values observed at Oakbrook as described in Section IV. The units on the abscissa are meters upstream (negative values) and downstream (positive values) from the intersection stop line which, for the single vehicle depicted here, is approximately the location of the front bumper when the vehicle is stopped. The vehicle moves from left to right. The ordinate units are grams/8 meters - time is not included here, but it will be later in the discussion of queuing and signal cycle lengths. All that is of interest at this point is the mass of CO emitted in each 8 meter length interval by a stopping and starting (but not idling) vehicle.

The modeling of traffic flow requires simplifying assumptions to keep the analysis tractable, and an idealized model of the behavior of queuing vehicles was used in calculating emission profiles at intersections. All vehicles which stop are assumed to decelerate at a constant rate from a constant cruise speed. They queue up with each vehicle occupying an 8 meter interval, and then they accelerate at a constant rate back to cruise speed. The emission profile is calculated by adding the emissions from each vehicle in each interval according to the vehicle's speed and mode in the interval. It consists essentially of adding up 10 of the curves shown in Figure 30, with each successive curve displaced -8 meters from the previous curve; i.e., 8 meters upstream, and then subtracting out the cruise emission component. Figure 31 shows the excess emission profile

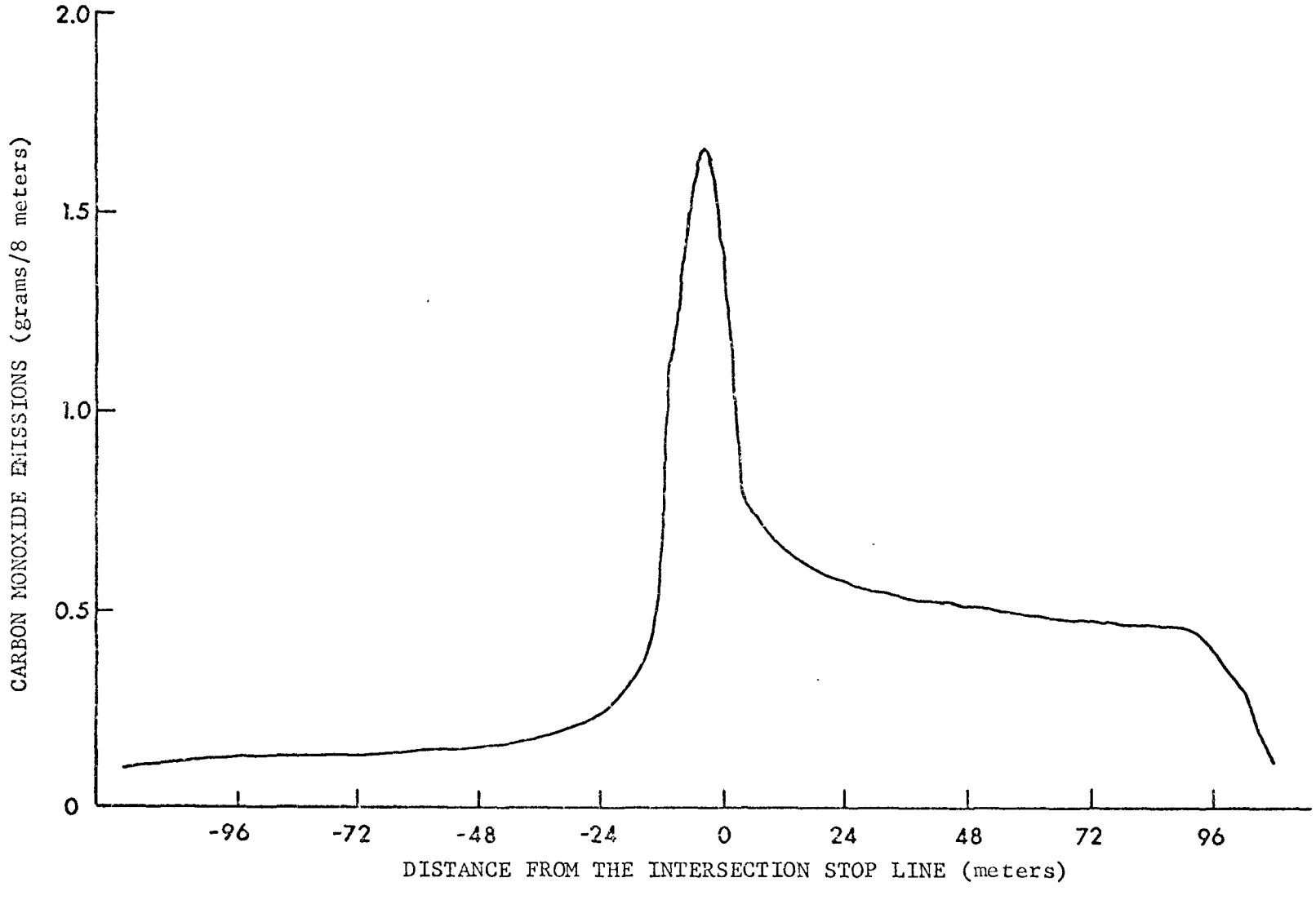


Figure 30. Emission profile for one vehicle decelerating from 35 mph at -2.75 mph/sec and accelerating back to 35 mph at 2.50 mph/sec with no idle emissions.

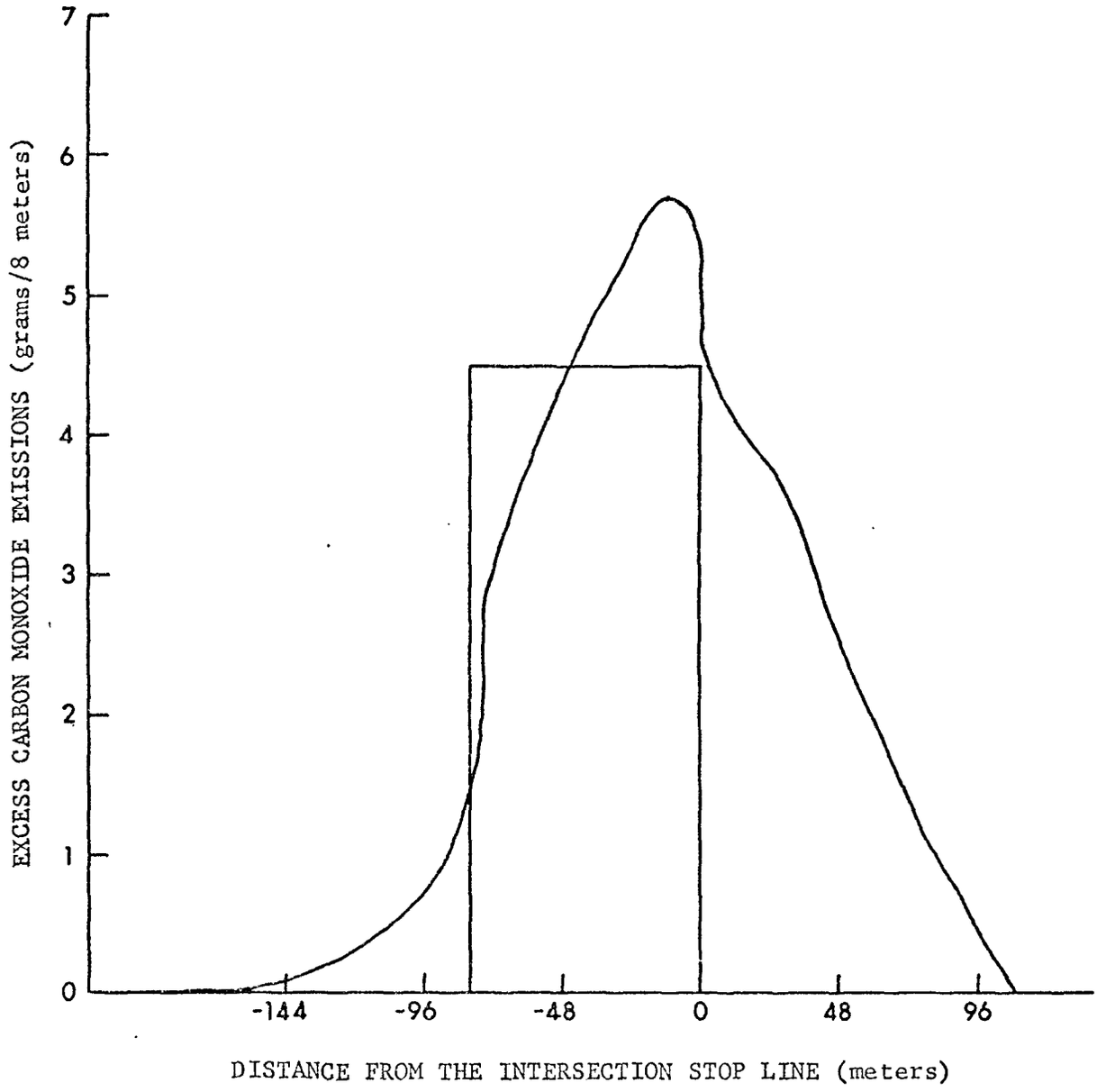


Figure 31. Profile and step function approximation of excess emissions for a queue of 10 vehicles

due to stopping and starting only for a queue of 10 vehicles having approach and departure speeds both equal to 35 mph, deceleration of -2.75 mph/sec, and acceleration of 2.50 mph/sec. Note that the scales on the ordinate and the abscissa are different from those of Figure 30. The emission profile pictured in Figure 31 does not include idle or cruise emissions, but only the emissions in excess of cruise emissions occurring for stops and starts. The step function also shown on Figure 31 depicts the approximation to the profile of excess emissions. The amplitude equals the average emissions over the queue length of 10 vehicles, or 4.5 grams. This average amplitude is 79 percent of the peak value of 5.7 grams of carbon monoxide, and the area contained within the step function is 56 percent of the total excess emissions attributable to deceleration and acceleration.

It is important to note that the excess emissions described here are related to a spatial scale rather than to a temporal scale directly. They arise from two effects. The first is an increase in the calculated emission rate during both deceleration and acceleration compared to the emission rate at cruise speed. The second is an increase in the time for a vehicle to travel 8 meters during deceleration and acceleration compared to the time to travel 8 meters at cruise speed. The emission profiles show the product of these two effects.

The method of constructing the emission profile for the 10 queuing vehicles and the calculation of the amplitude of the step function approximation is further explained by reference to Table 19. This table lists the emissions calculated by the Modal Model from each of the 10 vehicles in each of the 8 meter scale lengths through which the vehicles decelerate and accelerate. The distances from the intersection stop line which are listed represent the mid-points of the scale lengths, so that the first queuing vehicle occupies the scale length having its mid-point -4 meters from the intersection stop line. Cruise emissions are 0.119 grams/8 meters.

Looking at the column for vehicle number 1 (column 11), it is seen that this vehicle is at cruise speed until it reaches the scale length with mid-point -108 meters from the intersection stop line, then it begins to

Table 19. REFERENCE DATA FOR DESCRIBING EMISSION PROFILE CALCULATION

1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Emissions from vehicle number (g/8 m)												
Distance from intersection stop line (m)	10	9	8	7	6	5	4	3	2	1	Total emissions (gm/8m)	Cruise component (gm/8m)	Excess emissions (gm/8m)
-188	0.119	0.119	0.119	0.119	0.119	0.119	0.119	0.119	0.119	0.119	1.190	1.190	0.000
-180	0.126	0.119	0.119	0.119	0.119	0.119	0.119	0.119	0.119	0.119	1.197	1.190	0.007
-172	0.136	0.126	0.119	0.119	0.119	0.119	0.119	0.119	0.119	0.119	1.214	1.190	0.024
-164	0.139	0.136	0.126	0.119	0.119	0.119	0.119	0.119	0.119	0.119	1.234	1.190	0.044
-156	0.142	0.139	0.136	0.126	0.119	0.119	0.119	0.119	0.119	0.119	1.257	1.190	0.067
-148	0.146	0.142	0.139	0.136	0.126	0.119	0.119	0.119	0.119	0.119	1.284	1.190	0.094
-140	0.151	0.146	0.142	0.139	0.136	0.126	0.119	0.119	0.119	0.119	1.316	1.190	0.126
-132	0.157	0.151	0.146	0.142	0.139	0.136	0.126	0.119	0.119	0.119	1.354	1.190	0.164
-124	0.166	0.157	0.151	0.146	0.142	0.139	0.136	0.126	0.119	0.119	1.401	1.190	0.211
-116	0.177	0.166	0.157	0.151	0.146	0.142	0.139	0.136	0.126	0.119	1.459	1.190	0.269
-108	0.193	0.177	0.166	0.157	0.151	0.146	0.142	0.139	0.136	0.126	1.533	1.190	0.343
-100	0.219	0.193	0.177	0.166	0.157	0.151	0.146	0.142	0.139	0.136	1.626	1.190	0.436
- 92	0.271	0.219	0.193	0.177	0.166	0.157	0.151	0.146	0.142	0.139	1.761	1.190	0.571
- 84	0.600	0.271	0.219	0.193	0.177	0.166	0.157	0.151	0.146	0.142	2.222	1.190	1.032
- 76	1.676	0.600	0.271	0.219	0.193	0.177	0.166	0.157	0.151	0.146	3.756	1.190	2.566
- 68	0.788	1.676	0.600	0.271	0.219	0.193	0.177	0.166	0.157	0.151	4.398	1.190	3.208
- 60	0.655	0.788	1.676	0.600	0.271	0.219	0.193	0.177	0.166	0.157	4.902	1.190	3.712
- 52	0.591	0.655	0.788	1.676	0.600	0.271	0.219	0.193	0.177	0.166	5.336	1.190	4.146
- 44	0.553	0.591	0.655	0.788	1.676	0.600	0.271	0.219	0.193	0.177	5.723	1.190	4.533
- 36	2.529	0.553	0.591	0.655	0.788	1.676	0.600	0.271	0.219	0.193	6.075	1.190	4.885
- 28	0.512	0.529	0.553	0.591	0.655	0.788	1.676	0.600	0.271	0.219	6.394	1.190	5.204
- 20	0.501	0.512	0.529	0.553	0.591	0.655	0.788	1.676	0.600	0.271	6.676	1.190	5.486
- 12	0.492	0.501	0.512	0.529	0.553	0.591	0.655	0.788	1.676	0.600	6.897	1.190	5.707
- 4	0.486	0.492	0.501	0.512	0.529	0.553	0.591	0.655	0.788	1.676	6.783	1.190	5.593
4	0.481	0.486	0.492	0.501	0.512	0.529	0.553	0.591	0.655	0.788	5.588	1.190	4.398
12	0.478	0.481	0.486	0.492	0.501	0.512	0.529	0.553	0.591	0.655	5.278	1.190	4.088
20	0.476	0.478	0.481	0.486	0.492	0.501	0.512	0.529	0.553	0.591	5.099	1.190	3.909
28	0.365	0.476	0.478	0.481	0.486	0.492	0.501	0.512	0.529	0.553	4.873	1.190	3.683
36	0.119	0.365	0.476	0.478	0.481	0.486	0.492	0.501	0.512	0.529	4.439	1.190	3.249
44	0.119	0.119	0.365	0.476	0.478	0.481	0.486	0.492	0.501	0.512	4.029	1.190	2.839
52	0.119	0.119	0.119	0.365	0.476	0.478	0.481	0.486	0.492	0.501	3.636	1.190	2.446
60	0.119	0.119	0.119	0.119	0.365	0.476	0.478	0.481	0.486	0.492	3.254	1.190	2.064
68	0.119	0.119	0.119	0.119	0.119	0.365	0.476	0.478	0.481	0.486	2.881	1.190	1.691
76	0.119	0.119	0.119	0.119	0.119	0.119	0.365	0.476	0.478	0.481	2.514	1.190	1.324
84	0.119	0.119	0.119	0.119	0.119	0.119	0.119	0.365	0.476	0.478	2.514	1.190	0.962
92	0.119	0.119	0.119	0.119	0.119	0.119	0.119	0.119	0.365	0.476	1.793	1.190	0.603
100	0.119	0.119	0.119	0.119	0.119	0.119	0.119	0.119	0.119	0.365	1.436	1.190	0.246
108	0.119	0.119	0.119	0.119	0.119	0.119	0.119	0.119	0.119	0.119	1.190	1.190	0.000

Mean = 4.504

decelerate and the mass emissions per 8 meters increase. Acceleration emissions from this vehicle begin in the scale length with mid-point -4 meters; cruising speed is attained again in the scale length having its mid-point at 108 meters. Looking now at the column for vehicle number 2, it is seen that the emissions are displaced one scale length upstream (negative direction) from the intersection compared to vehicle 1 because this vehicle must begin decelerating one scale length earlier to come to a stop in the scale length immediately behind vehicle 1. Likewise, vehicle 3 begins decelerating one scale length earlier than vehicle 2 and so on for the remaining vehicles.

Each row represents a scale length and each column gives the emissions from each vehicle in each row, or scale length. Adding across each row gives the total emissions of all vehicles in each scale length. These total emissions are presented in the twelfth column. The next column is simply the total cruise component from all 10 vehicles for each scale length. The final column is obtained by subtracting the cruise component from the total emissions, and it thus represents the excess emissions due to deceleration and acceleration without idle emissions or the emissions which would have been obtained if all vehicles had remained at cruise speed. These are the emissions represented in Figure 31. On this column of excess emissions are shown the 10 emissions from the 10 queue positions which are used to calculate the average emissions for the step function approximation to the emission profile.

Table 20, column 3, lists the average excess emissions occurring over the distance occupied by queues of 5, 10, ..., and 30 vehicles for approach and departure cruising speeds of 15, 20, ..., and 50 mph. The fourth column lists the standard deviation for each of the average excess emission values to indicate the range of emission values which are used to compute the average. For example, at the far right of Table 19 are shown the emission values used to calculate the average value of 4.504 grams/8 meters. These can be compared with the information on Table 20 which lists, for a cruise speed of 35 mph and a queue of 10 vehicles, an average excess emission value of 4.504 grams/8 meters with a standard deviation of 1.077 grams/8 meters. The fifth column lists the percent of the total excess emissions (defined by the entire excess emission profile) contained

Table 20. EMISSION VALUES FOR USE IN APPROXIMATING EMISSION PROFILES

DECELERATION = 2.75 mph/sec
ACCELERATION = 2.50 mph/sec

1	2	3	4	5	6	7
Speed (mph)	Queue length (vehicles)	Average excess emissions (gm/8m)	Standard deviation (gm/8m)	% of total excess	Total excess per vehicle	Cruise emission (gm/8m)
15	5	2.297	0.314	89.3	2.574	0.245
	10	2.436	0.255	94.6		
	15	2.482	0.216	96.4		
	20	2.505	0.190	97.3		
	25	2.519	0.171	97.9		
	30	2.528	0.157	98.2		
20	5	2.860	0.533	77.2	3.703	0.183
	10	3.282	0.577	88.6		
	15	3.422	0.492	92.4		
	20	3.492	0.440	94.3		
	25	3.535	0.401	95.5		
	30	3.563	0.370	96.2		
25	5	3.066	0.565	61.6	4.978	0.150
	10	3.984	0.866	80.0		
	15	4.315	0.857	86.7		
	20	4.481	0.792	90.0		
	25	4.581	0.734	92.0		
	30	4.647	0.684	93.3		
30	5	3.163	0.565	49.4	6.406	0.131
	10	4.389	1.077	68.5		
	15	5.061	1.237	79.0		
	20	5.397	1.215	84.3		
	25	5.599	1.157	87.4		
	30	5.733	1.096	89.5		
35	5	3.221	0.565	40.3	7.992	0.119
	10	4.504	1.077	56.4		
	15	5.541	1.521	69.3		
	20	6.154	1.643	77.0		
	25	6.522	1.637	81.6		
	30	6.767	1.590	84.7		
40	5	3.253	0.565	33.4	9.745	0.113
	10	4.569	1.077	46.9		
	15	5.679	1.561	58.3		
	20	6.645	1.983	68.2		
	25	7.265	2.114	74.6		
	30	7.678	2.128	78.8		
45	5	3.269	0.565	28.0	11.671	0.109
	10	4.601	1.077	39.4		
	15	5.727	1.561	49.1		
	20	6.773	2.051	58.0		
	25	7.719	2.484	66.1		
	30	8.378	2.647	71.8		
50	5	3.273	0.565	23.8	13.777	0.108
	10	4.610	1.077	33.5		
	15	5.740	1.561	41.7		
	20	6.790	2.051	49.3		
	25	7.806	2.556	56.7		
	30	8.764	3.029	63.6		

within the step function approximation. Referring again to Table 19, the last column, Excess Emissions, totals to 79.930 grams. Of this, 45.040 grams or 56 percent is accounted for over the 10 queue positions. This percent is basically a function of the queue length and the distance required to stop and start. The greater the ratio of the queue length to the stop and start distance the greater will be the percent of the total excess emissions contained within the step function. The next column is included to show the total excess emissions (grams) per vehicle stopping and starting from each of the cruise speeds in column 1, and the final column indicates the cruise emissions (grams/8 meters) for each of the cruise speeds.

Emissions from cruise and idle modes must be added to those due to stopping and starting to develop the full emission profile. Cruise emissions are included simply by adding the cruise emissions from each vehicle in each 8 meter interval. Figure 32 shows the result of adding cruise emissions to the emission profile and to the step function approximation for a queue of 10 vehicles. The profile approximation now contains 68 percent of the total emissions, and the approximated peak of 5.69 grams is 83 percent of the peak of 6.90 grams.

The signal phases and phase times are needed to calculate idle emissions and mean expected queue lengths. The method for finding the mean queue length will be discussed first; idle emissions are found by a simple calculation following this.

Let the length of the red (plus amber) phase of a traffic signal be R, let the vehicle arrival rate be q, let N be the number of vehicles queued at the end of the red phase, and M be the number waiting at the beginning of the red phase. Then, assuming random arrivals and no service during R, the distribution of the quantity N-M is[12]

$$\frac{(qR)^k e^{-qR}}{k!} \quad , \quad k = 0,1,\ldots \tag{3}$$

where k equals N-M.

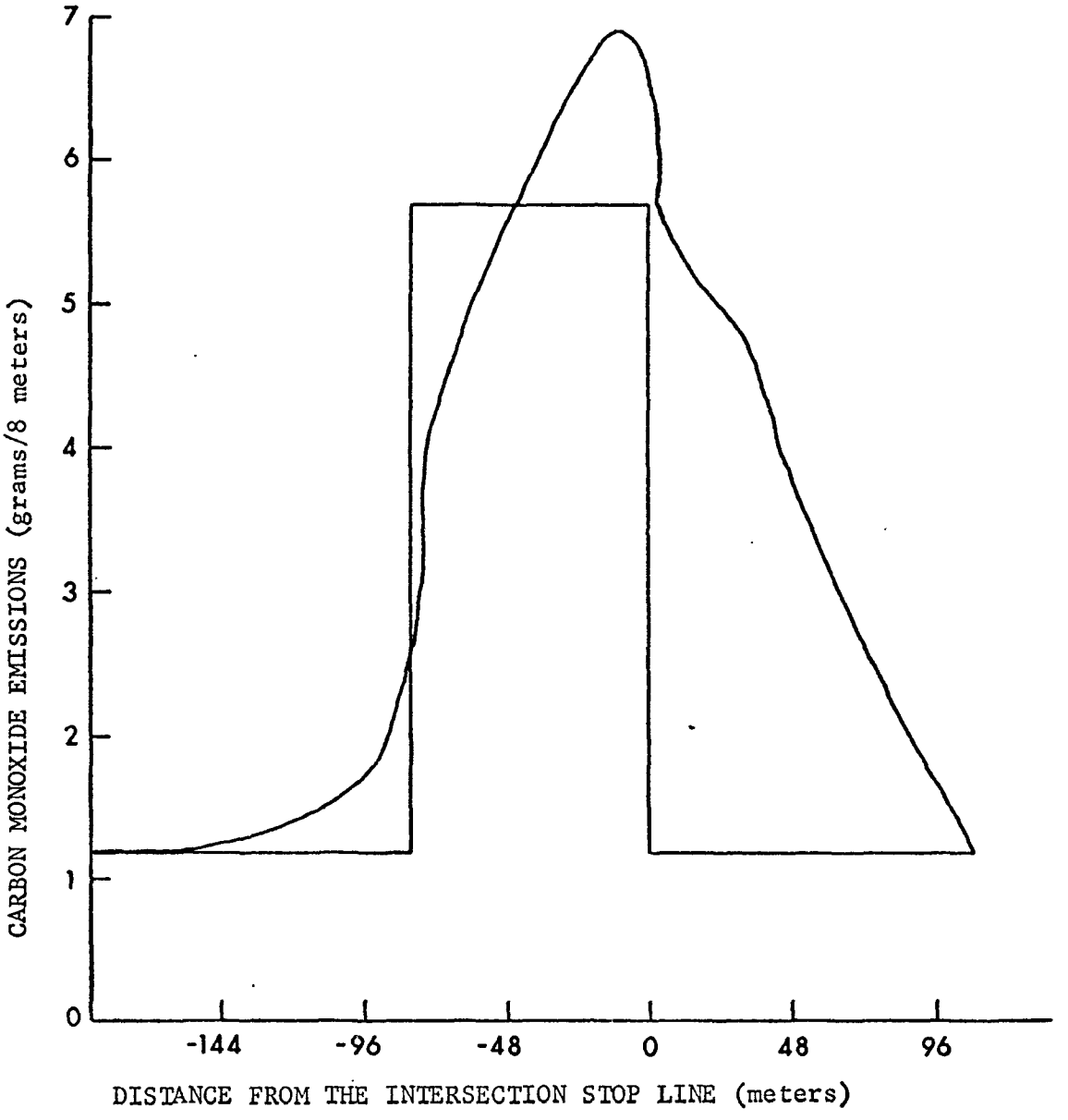


Figure 32. Emission profile and step function approximation for excess and cruise emissions for a queue of 10 vehicles.

This is a Poisson distribution with mean qR. Making the assumption that M = 0, the mean queue length per cycle is

$$\bar{N} = q(\text{veh/sec})\ R\ (\text{sec/cycle}) \tag{4}$$

This is the origin of the Red Time Formula described earlier in this report.

This formula neglects the possibility of additional queuing during the green phase before the initial queue clears the intersection. This can be accounted for as follows to provide a conservative estimate of the total queue length during a signal cycle. Given that N vehicles are queued at the beginning of the green phase, the distribution of the total number of vehicles, N′, which will queue up during the red and green phases before the queue disappears, is given by[12]

$$\frac{N}{N'} \frac{e^{-N'\rho} (N'\rho)^{N'-N}}{(N'-N)!} \quad , N' = N, N+1, \ldots \tag{5}$$

The mean of this distribution is

$$\bar{N}' = \frac{N}{1-\rho} . \tag{6}$$

The parameter ρ is the traffic intensity, which equals the mean arrival rate, q, divided by the mean service rate, s, <u>during the green phase</u>. Since $\bar{N}$ = qR, the mean total number of vehicles queued during a cycle is given by

$$\bar{N}' = \frac{qR}{1 - q/s} \tag{7}$$

The service rate, s (veh/sec) during green, is nearly equivalent to the denominator used to compute G/C as described in Appendix G. (Actually it will be slightly less, since there is some delay associated with getting the queue in motion. This leads to a tendency to underestimate

$\overline{N}'$.) The volume parameter q(veh/sec) is the actual volume using the roadway, and it is equivalent to the numerator used to calculate G/C. Hence at level of service E (capacity), 1-G/C can be used for 1-q/s.

The length of the red (plus amber) phase, R, is given by R(seconds) = (1-G′/C′) Cycle Length (seconds). The quantity G′/C′ is the actual green time to cycle length ratio provided at an approach to an intersection, as opposed to G/C, which is the green time to cycle length ratio required to accommodate traffic on an approach. G′/C′ is computed for an individual approach by dividing G/C for that approach by the sum of the G/C for all approaches plus the amber time of the signal cycle:

$$G'/C' = (G/C) \div \left(\frac{G+Y}{C}\right), \tag{8}$$

where $\frac{G+Y}{C}$ is the sum of the G/C for all approaches plus the amber time for the signal cycle. This calculation for demand actuated signals is presented in detail in Appendix G. Thus, the mean total queue length can be computed by

$$\overline{N}' = \frac{(V \text{ veh/hr})\ (1-G'/C')\ (\text{cycle length})}{(3600 \text{ sec/hr})\ (1-G/C)} \tag{9}$$

Including the amber time with the red time as 1-G′/C′ is a conservative estimate which assumes nonagressive driver behavior.

This particular formulation for $\overline{N}'$ applies to demand actuated traffic signals, for which the G/C calculations described in Appendix G must be made to determine the signal phase times. For a fixed-time signal, G/C will be constant for an approach, and this is used in place of G′/C′ used above to compute the length of the red (plus amber) phase. For this case

$$\overline{N}' = \frac{(V \text{ veh/hr})\ (1-G/C)\ (\text{cycle length})}{(3600 \text{ sec/hr}) \left(1 - \frac{V \text{ veh/hr}}{C \text{ veh/hr of green}}\right)} \tag{10}$$

As an example, consider an approach to an intersection with a volume of 215 veh/hr, G/C equal to 0.18, a cycle length of 180 seconds, $\frac{G+Y}{C}$ of 0.86, and G'/C' of 0.18/0.86, or 0.21. The mean total queue length per cycle is then

$$\bar{N}' = \frac{(215)\ (1-0.21)\ (180)}{(3600)\ (1-0.18)} \tag{11}$$

$$= 10 \text{ veh/cycle}$$

The length of the red (plus amber) phase for this example is 142 seconds. On the average, a stopped vehicle waits 1/2 the red phase, or 71 seconds for this case. The idle emission rate of carbon monoxide calculated by the Modal Analysis Model is 0.234 gm/sec. This is assumed to occur in each of the queue positions an average of 71 out of every 180 seconds, that is, $(1 - G'/C')/2$, or 0.39 of the time. Hence the idle emissions average 0.092 gm/sec for each queue position for this example. This tends to underestimate emissions in the lead queue positions, where vehicles wait longer than 1/2 R, and to overestimate emissions for the rear positions.

The HIWAY Model calls for emissions in units of grams/m-sec, and now that volume and signal parameters have been specified, these will be calculated for approach and departure speeds of 35 mph, deceleration of -2.75 mph/sec, and acceleration of 2.50 mph/sec. Since $\bar{N}' = 10$ veh/cycle, the excess emissions due only to stopping and starting are 4.504 gm/8m/cycle, or 0.563 gm/m/cycle. But the signal cycle is 180 sec, so this becomes 0.563/180 = 0.00313 gm/m-sec due to stopping and starting. The volume of 215 veh/hr equals 10.75 veh/cycle from which cruise emissions must be added. The cruise emission rate is 0.119 gm/8m (Table 20), or

$$\frac{(0.119 \text{ gm})\ (10.75 \text{ veh/cycle})}{(8\text{m})\ (180 \text{ sec/cycle})} = 0.00089 \text{ gm/m-sec} \tag{12}$$

cruise emissions. The idle emissions were found earlier to be 0.092 gm/sec for each 8 meter queue position, so the idle contribution is 0.01150 gm/m-sec from idle. The approximation of the emission profile is then

0.00313	gm/m-sec	from stopping and starting
0.00089	gm/m-sec	from cruise
0.01150	gm/m-sec	from idle

or 0.01552 gm/m-sec over the 10 queue positions, and 0.00089 gm/m-sec elsewhere. The approximated peak is 95 percent of the peak calculated using the Modal Analysis Model, and the total approximated emissions are 94 percent of the total. This arises from the large contribution by idle emissions which are computed in the same manner for both cases.

It is suggested that the following technique be used to estimate emission profiles from queuing vehicles using the factors presented in Table 20.

1. Identify the parameters necessary for calculating the expected mean total queue length. These parameters are

   a. V = hourly demand volume

   b. Cycle length

   c. G/C = required G/C ratio (see Appendix G)

   d. G'/C' = actual G/C ratio provided

   or if the signal is fixed time,

   c. G'/C' = actual G/C ratio provided

   d. Capacity per hour of green

2. Compute the expected mean total queue length using equation 9 for a demand actuated signal or equation 10 for a fixed time signal.

3. If the queue length is less than 5, assume it equals 5. If it is less than a multiple of 5 plus 3, round down to a multiple of 5, otherwise round up. Thus, both 8 and 12 would become 10. If average emission factors are known for the exact queue length, these should be used and it would not be necessary to round off the queue length to a multiple of 5.

4. Identify the approach and departure speeds. If they are unequal, assume both equal the departure speed. If the average emission factors are known for the given approach and departure speed combination, these should be used and it would not be necessary to make the assumption that both equal the departure speed.

5. Using Table 20 find the mean emissions per 8 meters due to stopping and starting for the queue length-speed combination.

6. Calculate the emission strength (gm/m-sec) over the distance occupied by the queue by adding:

$$\frac{\text{(mean stopping and starting emissions gm/8m)}}{\text{(8m) (cycle length sec)}} +$$

$$\frac{\text{(cruise emissions gm/8m) (V veh/hr) (cycle length sec)}}{\text{(8m) (3600 sec/hr)}} +$$

$$\frac{\text{(idle emission rate gm/sec) (1/2 the length of the red phase sec)}}{\text{(8m)}}$$

= emission strength over the queue length (gm/m-sec)

7. Assume that only the cruise speed emission strength exists upstream and downstream of the queue (excluding the center of the intersection).

8. After the emission strengths are found over the queue lengths for all approaches, average them and assume this emission strength for lanes in the center of the intersection.

Figures 31 and 32 show that the profile actually maintains high emission values downstream of the intersection. Step 8 tends to include these high values through the intersection, although further downstream they are not included. This discrepancy becomes more pronounced at higher speeds when the ratio of the deceleration-acceleration distance to the queue length is increased. This is counteracted somewhat by the approximate profile being higher at the upstream end of the queue.

COMPARISON OF OBSERVED AND CALCULATED CONCENTRATIONS

The Modal Analysis Model and the EPA HIWAY Model are designed to estimate emissions and concentrations, respectively. To test the compatibility of the two models in translating traffic and meteorological parameters into concentrations of carbon monoxide, a composite model was used to predict concentrations at Oakbrook for comparison with observed values.

An exact analysis would include emission strengths calculated for each 8-meter section of roadway, application of the HIWAY Model to each 8-meter section, and addition of the individual section contributions to find the calculated concentration at a receptor. An exact analysis, however, is quite consuming of both manpower and computer time, and the "improvement" in calculated values is probably of marginal benefit. Because of this, and because it was necessary to evaluate the effectiveness of the emission profile approximations as inputs to concentration estimates, the technique described previously for approximating emission profiles was used to generate inputs to the HIWAY Model.

Twelve cases were chosen for analysis based on relatively low wind speed, a wind angle suitable for defining concentrations upwind and downwind of the intersection of Route 83 and 22nd Street, and completeness of the input data set for the hour under study. In four of these cases the wind was from the northeast quadrant, and concentrations were calculated for the monitor in the southwest quadrant (station 162). In the other eight cases the wind direction was reversed, and concentrations were calculated for each of the three monitors in the northeast quadrant (stations 13, 14, and 15). Missing data occurred for one case at station 13 so that there are a total of 27 comparisons of observed and calculated values. Concentrations recorded by the Ecolyzer were used for the southwest location unless it was not operating for the particular hour under study. In these cases the average of the NDIR values (stations 161 and 163) was used.

Table 21 displays the dates, hours, and applicable meteorological conditions chosen for the comparisons. The traffic parameters are listed in Appendix H for Level of Service E. The higher G/C and G'/C' for each phase was used (where $G'/C' = G/C \div \frac{G+Y}{C}$). The volumes were taken from the tables of V/C. The signal cycle lengths are given in Table 22.

Table 21 also shows the calculated and observed concentrations for the periods studied, where the observed concentrations equal the difference between downwind and upwind readings. Two sets of calculated concentrations are given: (1) those based on an initial vertical diffusion parameter σ_{zo} = 1.5 m, and (2) those based on σ_{zo} = 3.0 m. The average of all calculated concentrations is 3.5 ppm versus 3.8 ppm for the average observed with σ_{zo} = 1.5 m. The correlation coefficient is r = 0.34, which indicates less than a 10 percent probability that the linear relationship between calculated and observed values has occurred by chance. The correlation coefficient obtained using σ_{zo} = 3.0 m is r = 0.29. Figure 33 is a plot of the data pairs. Concentric circles indicate more than one point. Twenty-two calculated values are within a factor of two of those observed, while five vary by more than a factor of two. Six of the calculated values agree exactly with the observed values.

The good agreement of the mean calculated and observed concentrations is encouraging but there is a tendency for the composite model to underpredict. Fifteen of the twenty-seven calculated values are less than those observed, while only six are greater.

When the values are normalized for wind speed the mean calculated χU is 11.7 ppm-m/sec compared to 13.7 ppm-m/sec observed. The correlation coefficient is 0.44. This is significant at the 2 percent level, and more of the variance is explained. The linear regression equation is

$$\chi U \text{ calculated} = 8.2 + 0.25\, \chi U \text{ observed} \qquad (13)$$

Predicted concentrations tend to be overestimated at low wind speeds and underestimated at high wind speeds. The crossover occurs at wind speeds of approximately 3.5 m/sec.

Table 21. OBSERVED AND CALCULATED CARBON MONOXIDE CONCENTRATIONS USING THE COMPOSITE MODEL

Day	Hour	Wind			Receptor 162			Receptor 13			Receptor 14			Receptor 15		
		Direction (degrees)	Speed (m/sec)	Stability	Cal. (ppm)	Obs. (ppm)	Cal.[a] (ppm)	Cal. (ppm)	Obs. (ppm)	Cal.[a] (ppm)	Cal. (ppm)	Obs. (ppm)	Cal.[a] (ppm)	Cal. (ppm)	Obs. (ppm)	Cal.[a] (ppm)
4-5	1800	20	3.1	E	7	7	6									
3-28	1000	60	2.2	D	8	2	7									
3-29	1000	70	2.2	D	6	3	5									
3-26	1700	70	3.1	D	5	5	5									
4-2	0800	220	2.7	C				5	5	4	4	5	3	5	2	4
4-13	1600	220	4.0	C				3	4	3	2	1	2	3	3	3
4-13	1400	230	4.5	C				3	4	2	2	3	2	3	6	2
4-13	1500	230	4.5	C				3	5	2	2	3	2	3	6	2
4-6	1000	250	2.2	B				1	M	1	2	2	1	4	4	4
4-9	1800	250	3.6	D				2	4	2	3	0	2	6	7	5
4-6	1300	250	4.0	C				2	5	2	2	1	2	4	5	3
4-6	1100	250	4.5	C				1	3	1	1	2	1	4	5	3
				$\bar{X}$	3.5	3.8	3.0									
				S	1.8	1.8	1.6									
				r	0.34		0.29									

[a] $\sigma_{zo} = 3$ m

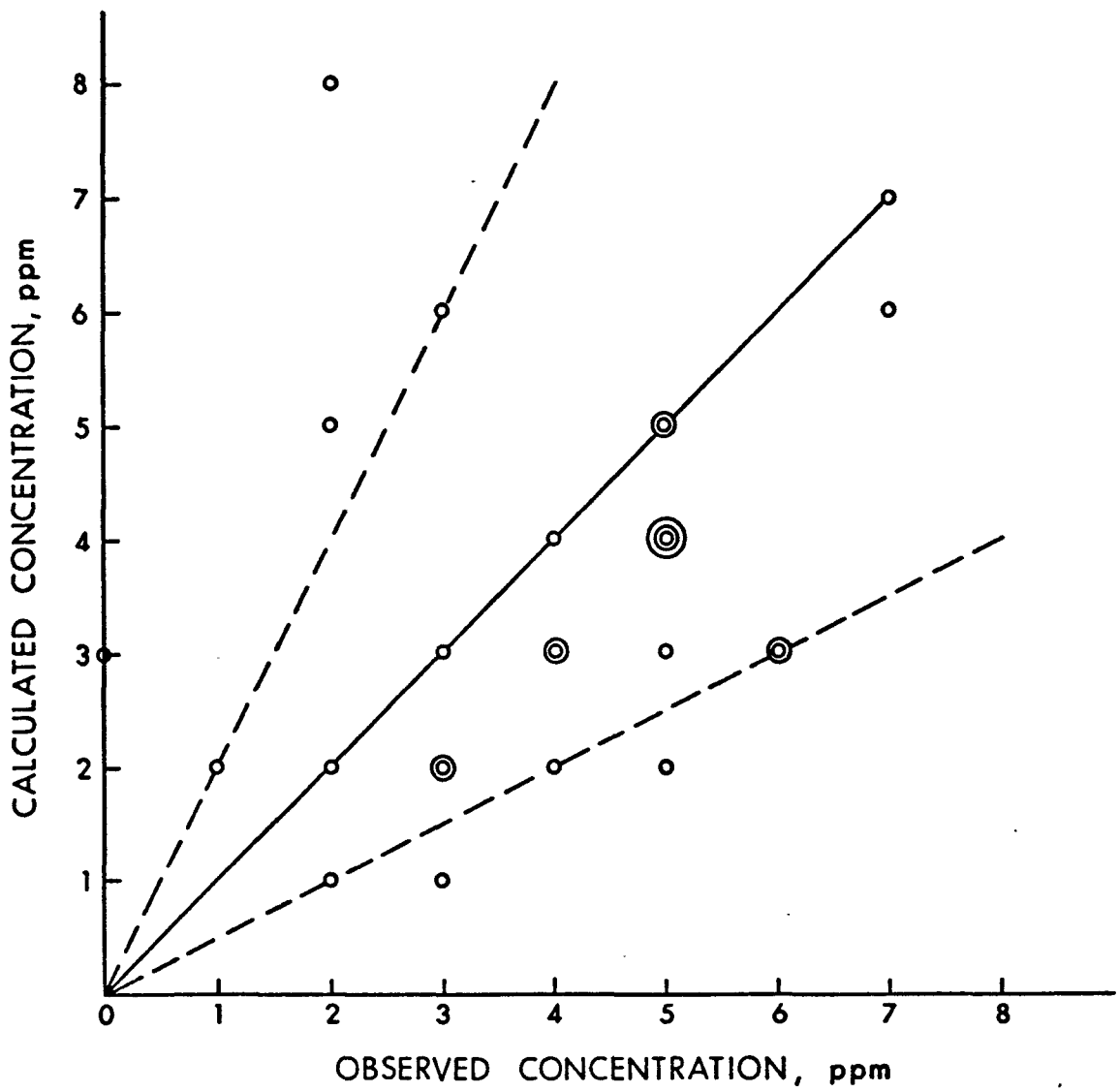


Figure 33. Calculated versus observed concentrations of carbon monoxide.

Table 22. CYCLE LENGTHS AT THE INTERSECTION OF ROUTE 83 AND 22nd STREET

Hour ending	Cycle length (sec)
0800	174
0900	170
1000	133
1100	147
1200	152
1300	163
1400	191
1500	181
1600	177
1700	179
1800	174
1900	166

EVALUATION OF AREA SOURCE MODEL

Evaluation of the area source model of the interim guidelines[18] requires the calculation of the carbon monoxide concentration at a receptor site based upon the location of the receptor with respect to the area source, the size of the area source, and its emission density. These calculated values are then compared with observed carbon monoxide concentrations to determine the effectiveness of the model.

A carbon monoxide monitoring study[2] conducted at the Oakbrook Shopping Center for a 3-week period in December 1973, through January, 1974, was used for the evaluation. Traffic volumes, base running times, area source size and receptor locations are known from this study so that concentrations can be calculated for comparison with the carbon monoxide concentrations actually measured at the receptors.

Figure 34 shows the receptor locations, the layout of the buildings, the parking areas, the entrances and exits, and the ring road serving the interior of the shopping center. The monitor at site 3 was moved to site 3-A during the study because of difficulties with electrical service. The monitor was shut down at site 3 on December 31, and commenced operation at site 3-A on January 4.

The parking areas between two receptor sites were considered as area sources for this evaluation, as shown in Figure 34. This meant that one receptor was at the upwind edge of the area source and the second was at the downwind edge. If the wind was in the proper direction, the difference in carbon monoxide concentration was due solely to the area sources between the receptors.

A 30° wind sector was used in the evaluation. A line was drawn between the two receptors and the closest 30° wind sector (the wind direction was recorded in 10° increments during the study) was used. For simplicity, Figure 34 shows area sources between sites 2 and 3 and also between sites 3-A and 4. Data between sites 2 and 3-A and sites 3 and 4 were also considered, but this is not shown on Figure 34.

Appendix Table A-6 lists the observed carbon monoxide concentrations at the upwind and downwind receptors and the concentration difference between the receptors for each area source. A summary of these data is shown in Table 23. This table includes only hours when the shopping center was open. The results show that 30 percent of the observations yielded no change in concentration due to the area source and 30 percent showed a decrease in the concentration. This is probably due to the influence of the ring road. The remaining 40 percent show an increase in concentration downwind of the area source.

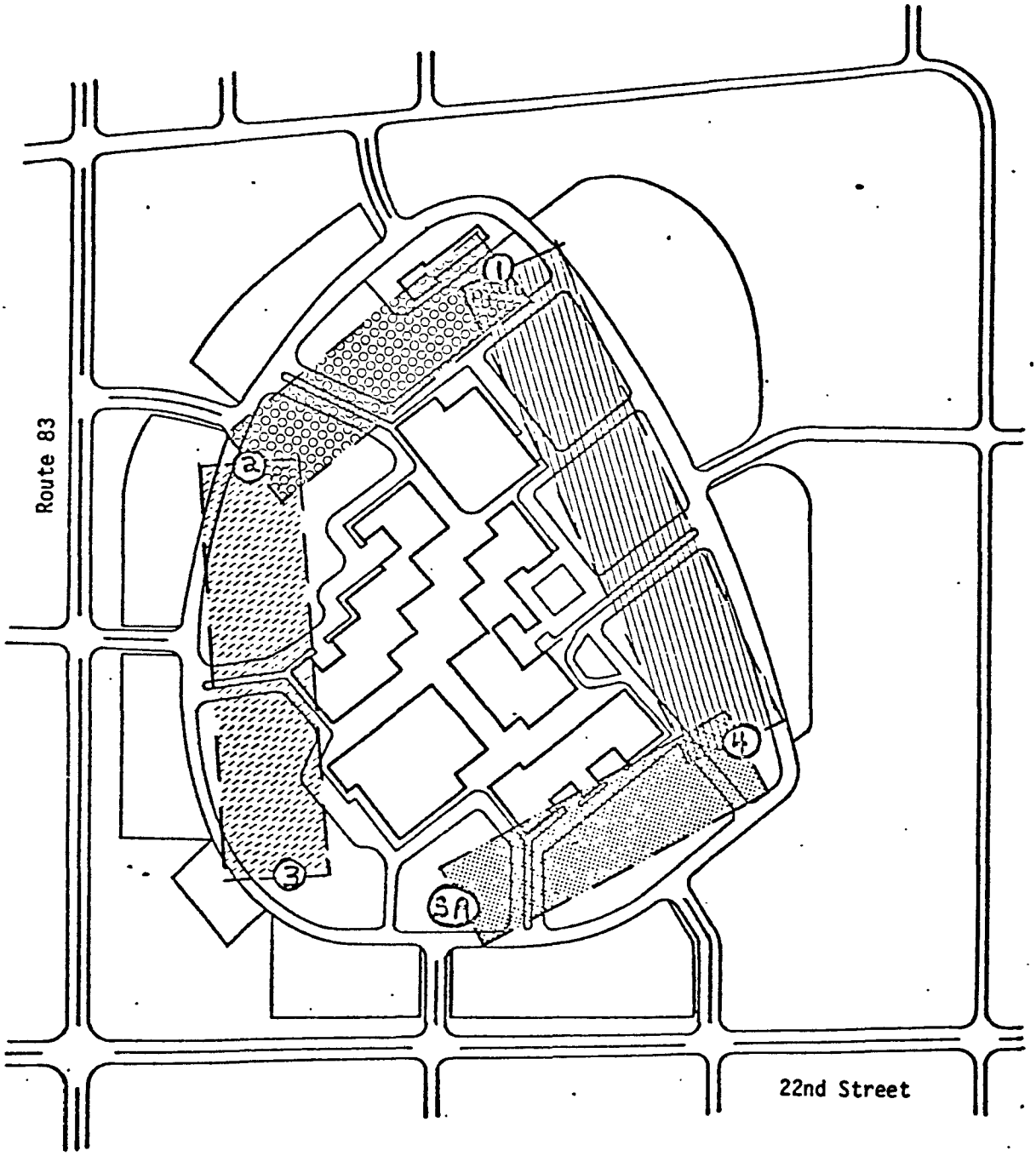


Figure 34. Locations of receptors and area sources

Table 23. AREA SOURCE UPWIND - DOWNWIND CO CONCENTRATION DIFFERENCES

Area source between receptors	Downwind CO concentration less than upwind (number of hours)	No difference in CO concentration (number of hours)	Downwind CO concentration greater than upwind (number of hours)
1 and 4	3	3	5
3 and 4	4	5	8
3A and 4	0	1	2
1 and 2	6	5	5
2 and 3	6	9	12
2 and 3A	3	0	0
Total	22	23	32
Percent of all cases	28.6	29.9	41.6

OUTLINE OF A "QUICK ESTIMATION" TECHNIQUE

For nearby receptors, examination of the actual length of roadway which contributes most of the pollution concentration shows the emission profile approximation to be reasonably adequate. Assuming a normal distribution of downwind pollutant concentrations in the horizontal and vertical directions, approximately 95 percent of the horizontal distribution lies within $\pm 2\ \sigma_y$. If the receptor is taken to be a point source, and the roadway is taken as a line along which concentrations are to be calculated, then 95 percent of the total contribution of the point source to the receptor line lies along the line within $\pm 2\ \sigma_y$ of the intercept of the point source plume axis with the line receptor. If now the roadway is the source and the point becomes the receptor, 95 percent of the total line source contribution will lie within the same $\pm 2\ \sigma_y$ distance. The HIWAY model reduces the length of a line source to approximately $\pm 4\ \sigma_y$ to reduce computation time. This distance includes essentially all of the line source contribution to concentrations at a receptor point.

The method used to calculate the $\pm 2\ \sigma_y$ line source distances is explained with reference to Figure 35. The coordinate axes are noted on the Figure. The X axis lies along the roadway, and the X′ axis lies along the wind direction at an angle θ to the X axis. Numerical subscripts indicate a distance, while alphabetic subscripts refer to positions on the X and X′ axes. The receptor is located at a perpendicular distance y from the origin of the X axis. The horizontal dispersion parameter is a function of the downwind distance, x′, of the form $\sigma_y(x') = a\ x'^b$, where a and b are functions of atmospheric stability and the roughness of the area. The lengths x_1 and x_2 are the projections on the line source of the two distances $2\sigma_y(x'_1)$ and $2\sigma_y(x'_2)$ which lie perpendicular to the wind direction. The sum of x_1 and x_2 is then the length of the line source contributing 95 percent of the total concentration at the receptor. These are found from the relations:

$$x_1 = \frac{2\sigma_y(x'_1)}{\sin\theta}, \tag{14}$$

and

$$x_2 = \frac{2\sigma_y(x'_2)}{\sin\theta}. \tag{15}$$

The distances x'_1 and x'_2 are found from

$$x'_1 = \frac{y}{\sin\theta} - x_1 \cos\theta, \tag{16}$$

and

$$x'_2 = \frac{y}{\sin\theta} + x_2 \cos\theta. \tag{17}$$

For Pasquill-Gifford Stability Class D, the parameters a and b are 0.13 and 0.903.[13] An initial dispersion coefficient $\sigma_{yo} = 3$ meters is assumed on roadways because of the mixing caused by moving traffic. This leads to the addition of 32 meters to the downwind distance used to compute σ_y:

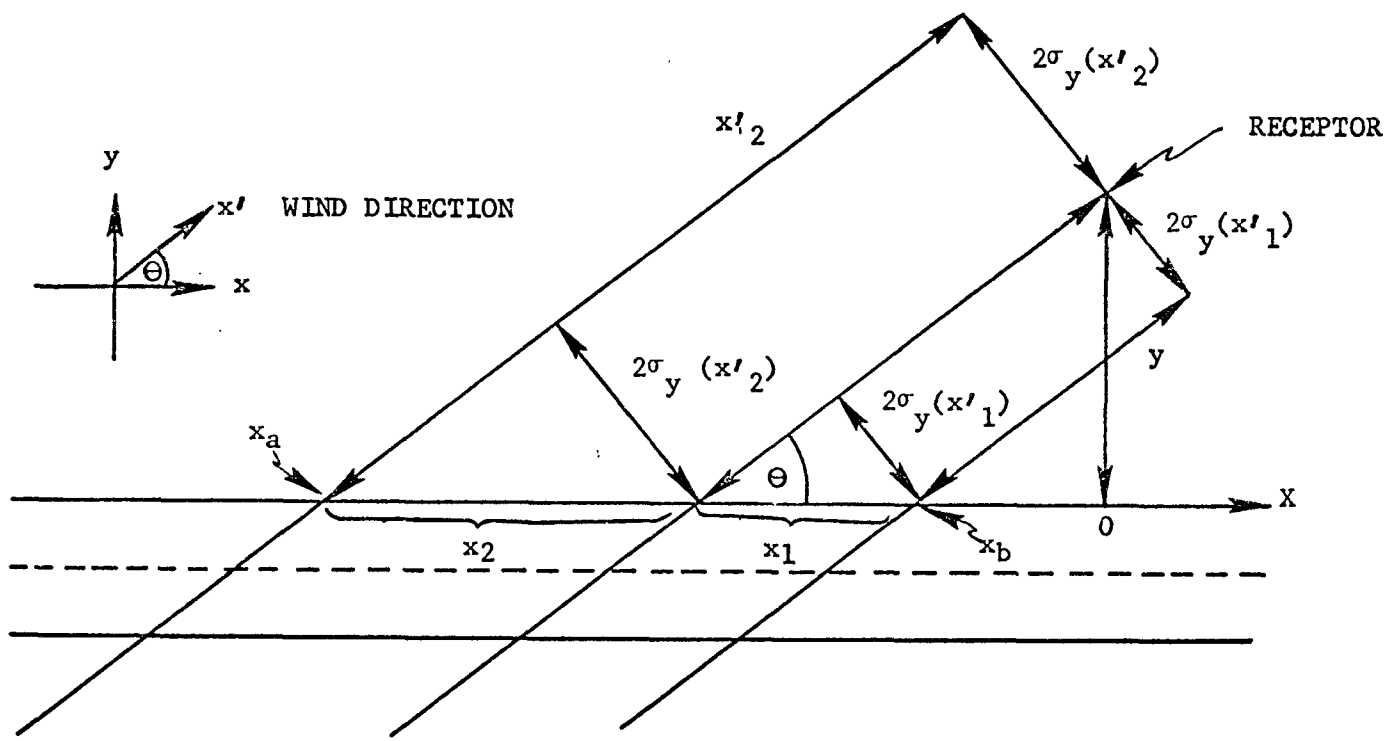


Figure 35. Diagram of 2σ distances for line source calculation

$$\sigma_{yo} = \sigma_{yo}(32) = 3 \text{ meters.}$$

The roadway lengths can now be calculated from:

$$x_1 = \frac{(2)\ (0.13)\ (\frac{y}{\sin\theta} + x_1 \cos\theta + 32)^{0.903}}{\sin\theta}, \tag{18}$$

and

$$x_2 = \frac{(2)\ (0.13)\ (\frac{y}{\sin\theta} + x_2 \cos\theta + 32)^{0.903}}{\sin\theta}. \tag{19}$$

Values of x_1 and x_2 were found by Newton's method for y = 10, 15, ..., 50 meters and θ = 10, 20, ..., 90 degrees for stability class D. The results are listed in Table 24, where x_a and x_b are the distances from the origin as shown on Figure 35. Also listed are the total distance $x_b - x_a$ and the equivalent queue length N.

Table 24 shows that except for wind angles less than 20 degrees, the maximum length of roadway contributing 95 percent to a receptor not more than 50 meters away is no more than 192 meters. This is equivalent to a 24-vehicle queue assuming each vehicle occupies at least 8 meters. For wind angles of 30 degrees or greater, a roadway length approximately equal to a 10-vehicle queue will contribute 95 percent.

Concentrations due to an infinite line source at receptor locations from 10 to 50 meters were calculated from

$$\chi = \frac{\sqrt{\frac{2}{\pi}}\ Q \exp -\left[\frac{H^2}{2\ \sigma_z^2\ (y/\sin\theta)}\right]}{u \sin\theta\ \sigma_z\ (y/\sin\theta)}, \tag{20}$$

which is equivalent to equation 9 of reference 14. These calculations were made using unit wind speed and source strength, a ground level source, a receptor height of 2.0 meters, and Stability Class D. Table 25 lists the results. At a given receptor distance the highest concentrations occur with small wind angles to a single roadway. For an

Table 24. ROADWAY LOCATIONS AND DISTANCES INCLUDED IN $\pm 2\sigma_y$ $\left(\sigma_{yo} = 3m.\right)$

y (m)	θ (degrees)	x_a (m)	x_b (m)	$x_b - x_a$ (m)	N (vehicles)	θ (degrees)	x_a (m)	x_b (m)	$x_b - x_a$ (m)	N (vehicles)
10	10	- 677	- 10	667		40	-28	- 1	27	3
15		- 708	- 25	683			-37	- 5	32	4
20		- 579	- 39	540			-45	-10	35	4
25		- 755	- 55	700			-53	-14	39	5
30		- 846	- 69	777			-61	-18	43	5
35		- 939	- 84	855			-70	-23	47	6
40		-1030	-100	930			-78	-27	51	6
45		-1119	-115	1004			-86	-32	54	7
50		-1207	-130	1077			-94	-36	58	7
10	20	- 82	- 5	77	10	50	-20	1	21	3
15		- 105	- 15	90	11		-27	- 2	25	3
20		- 130	- 24	106	12		-32	- 5	27	3
25		- 154	- 33	121	15		-38	- 8	30	4
30		- 176	- 41	135	17		-43	-11	32	4
35		- 200	- 51	149	19		-49	-14	35	4
40		- 223	- 60	163	20		-55	-18	37	5
45		- 247	- 70	177	22		-61	-20	41	5
50		- 269	- 78	191	24		-66	-23	43	5
10	30	- 42	- 3	39	5	60	-16	2	18	2
15		- 56	- 9	47	6		-20	0	20	3
20		- 69	- 16	53	7		-24	- 2	22	3
25		- 81	- 21	60	8		-27	- 3	24	3
30		- 94	- 28	66	8		-32	- 5	27	3
35		- 106	- 34	72	9		-36	- 7	29	4
40		- 118	- 40	78	10		-40	- 9	31	4
45		- 131	- 46	85	11		-44	-11	33	4
50		- 144	- 53	91	11		-48	-13	35	4

Table 24 (continued). ROADWAY LOCATIONS AND DISTANCES INCLUDED IN $\pm 2\sigma_y \cdot \left(\sigma_{yo} = 3m.\right)$

y (m)	θ (degrees)	x_a (m)	x_b (m)	$x_b - x_a$ (m)	N (vehicles)	θ (degrees)	x_a (m)	x_b (m)	$x_b - x_a$ (m)	N (vehicles)
10	70	- 13	4	17	2	90	- 8	8	16	2
15		- 15	4	19	2		- 8	8	16	2
20		- 18	2	20	3		- 9	9	18	2
25		- 21	1	22	3		-10	10	20	3
30		- 24	0	24	3		-11	11	22	3
35		- 26	- 1	25	3		-12	12	24	3
40		- 29	- 2	27	3		-12	12	24	3
45		- 31	- 2	29	4		-13	13	26	3
50		- 34	- 3	31	4		-14	14	28	4
10	80	- 10	6	16	2					
15		- 12	5	17	2					
20		- 14	5	19	2					
25		- 15	6	21	3					
30		- 16	6	22	3					
35		- 18	6	24	3					
40		- 20	5	25	3					
45		- 22	5	27	3					
50		- 24	5	29	4					

Table 25. RECEPTOR CONCENTRATIONS $\left(\frac{XU}{Q}\right)$ FOR AN INFINITE LINE SOURCE, ppm-m^2/gm. WIND SPEED = 1 m/sec. SOURCE STRENGTH = 1 gm/m-sec. STABILITY CLASS D. RECEPTOR HEIGHT = 2.0m. Source Height = 0.0m.

Perpendicular distance from the roadway (m)	Angle to the roadway								
	10°	20°	30°	40°	50°	60°	70°	80°	90°
10	886	562	409	325	274	243	224	214	210
15	723	501	382	312	268	239	222	212	209
20	609	447	353	295	257	232	216	207	205
25	527	401	326	277	245	223	209	201	198
30	465	364	302	261	232	213	201	194	191
35	416	333	281	245	220	203	192	186	184
40	377	306	262	231	209	194	184	179	177
45	345	284	245	218	199	186	177	171	170
50	318	265	231	207	190	177	169	165	163

orthogonal intersection the maximum values still occur when the wind angle to one of the roadways is small, as can be seen by adding the results listed in Table 25 for complementary angles.

A complication is added by the variations in emission strengths at intersections: the section of roadway with the highest emission strength will not necessarily coincide with the section having the greatest (unit strength) impact at a receptor point. Calculation of maximum expected concentrations must be optimized for both roadways together. This has not been thoroughly investigated.

The difference in emission strengths at an intersection, and upstream or downstream of an intersection, can vary by a factor of about 7 up to a factor of 50 or more when traffic is light. Thus, emissions calculated for a queue of 10 vehicles probably account for almost all of the

concentration at a receptor for wind angles of 20 degrees or greater as long as the queue occurs on the roadway section having maximum impact. Shorter queues suffice at larger wind angles.

Greater lengths of roadway are involved at small wind angles, and it is necessary to examine concentration contributions on a finer scale. The contributions of 40 meter lengths of roadway were calculated for wind angles of 10 and 20 degrees. The 40 meter length interval was chosen since it is equivalent to the five vehicle queue lengths used in the emission profile approximations. Table 26 shows the results of the calculations. The concentrations are listed as XU/Q (ppm-m^2/gm). The wind speed is 1.0 m/sec, the source strength is 1 gm/m-sec, the source height is 0.0 m, the receptor height is 2.0 m, and Pasquill-Gifford Stability Class D is assumed. Concentrations were calculated for receptors located at distances of 10, 15, . . . , and 50 meters from the roadway. Under each receptor distance, the column labeled x_a, x_b lists the end points of the 40 meter roadway interval relative to the intercept of the roadway with the normal from the receptor. This is the same notation used in Figure 35, except in that case X_a and X_b denoted the end points of the roadway length contributing 95 percent of the total concentration at the receptor. The next column, labeled XU/Q, under each receptor distance gives the concentrations contributed for each of the 40 meter intervals. For example, for a wind angle of 10 degrees to the roadway, the roadway length with end points (- 17, 23) contributes a concentration of 39.3 ppm-m^2/gm at the receptor. The dotted lines on Table 26 indicate the approximate location of the intercept on the roadway of the line lying along the wind direction which connects the roadway and the receptor. It is interesting to note that for a queue of 10 vehicles, a wind angle of 10 degrees (and complement 80 degrees) still leads to a maximum concentration at 10 meters, but it no longer does so at a receptor located 50 meters from the roadway. Table 26 shows that for a wind angle of 10 degrees, the maximum concentration from 10 vehicles occurs when they are queued in the roadway lengths (-57, -17) and (-97, -57) relative to the

Table 26. CONCENTRATION CONTRIBUTIONS OF SUCCESSIVE 40m SECTIONS OF ROADWAY, ppm-m^2/gm

Wind angle	Perpendicular distance from the roadway (meters)																	
	10		15		20		25		30		35		40		45		50	
	X_a, X_b (m)	XU/Q (ppm-m^2/gm)	X_a, X_b (m)	XU/Q (ppm-m^2/gm)	X_a, X_b (m)	XU/Q (ppm-m^2/gm)	X_a, X_b (m)	XU/Q (ppm-m^2/gm)	X_a, X_b (m)	XU/Q (ppm-m^2/gm)	X_a, X_b (m)	XU/Q (ppm-m^2/gm)	X_a, X_b (m)	XU/Q (ppm-m^2/gm)	X_a, X_b (m)	XU/Q (ppm-m^2/gm)	X_a, X_b (m)	XU/Q (ppm-m^2/gm)
$\theta=10^\circ$	-17, 23	39.3	-45, -5	93.8	-73, -33	115.5	-62, -22	20.7	-90, -50	36.6	-119, -79	46.5	-107, -67	12.5	-135, -95	18.9	-164, -124	23.5
	-57, -17	359.5	-85, -45	243.7	-113, -73	169.2	-102, -62	111.2	-130, -90	94.5	-159, -119	78.6	-147, -107	47.7	-175, -135	45.2	-204, -164	41.5
	-97, -57	223.4	-125, -85	154.2	-153, -113	113.0	-142, -102	122.5	-170, -130	93.1	-199, -159	72.9	-187, -147	65.0	-215, -175	54.3	-244, -204	45.8
	-137, -97	98.3	-165, -125	80.2	-193, -153	65.9	-182, -142	85.7	-210, -170	68.0	-239, -199	54.9	-227, -187	58.9	-255, -215	48.7	-284, -244	40.8
	-177, -137	47.6	-205, -165	43.5	-233, -193	39.1	-222, -182	54.2	-250, -210	45.8	-279, -239	38.8	-267, -227	45.7	-295, -255	38.7	-324, -284	33.0
	-217, -177	25.9	-245, -205	25.4	-273, -233	24.2	-262, -222	34.4	-290, -250	30.6	-319, -279	27.1	-307, -267	33.5	-335, -295	29.3	-364, -324	25.6
	-257, -217	15.5	-285, -245	15.9	-313, -273	15.8	-302, -262	22.5	-330, -290	20.9	-359, -319	19.2	-347, -307	24.3	-375, -335	21.9	-404, -364	19.6
	-297, -257	10.0	-325, -285	10.5	-353, -313	10.7	-342, -302	15.2	-370, -330	14.6	-399, -359	13.8	-387, -347	17.7	-415, -375	16.3	-444, -404	15.0
	-337, -297	6.8	-365, -325	7.3	-393, -353	7.6	-382, -342	10.6	-410, -370	10.5	-439, -399	10.1	-427, -387	13.1	-455, -415	12.3	-484, -444	11.6
	-377, -337	4.8	-405, -365	5.2	-433, -393	5.5	-422, -382	7.7	-450, -410	7.7	-479, -439	7.6	-467, -427	9.8	-495, -455	9.4	-524, -484	9.1
	-417, -377	3.5	-445, -405	3.9	-473, -433	4.2	-462, -422	5.7	-490, -450	5.8	-519, -479	5.8	-507, -467	7.5	-535, -495	7.4	-564, -524	7.2
Total XU/Q		834.6		683.6		570.7		490.4		428.1		375.3		335.7		302.4		272.7

Table 26 (Continued). CONCENTRATION CONTRIBUTIONS OF SUCCESSIVE 40m SECTIONS OF ROADWAY, ppm-m^2/gm

Wind angle	Perpendicular distance from the roadway (meters)																	
	10		15		20		25		30		35		40		45		50	
	X_a, X_b (m)	XU/Q (ppm-m^2/gm)	X_a, X_b (m)	XU/Q (ppm-m^2/gm)	X_a, X_b (m)	XU/Q (ppm-m^2/gm)	X_a, X_b (m)	XU/Q (ppm-m^2/gm)	X_a, X_b (m)	XU/Q (ppm-m^2/gm)	X_a, X_b (m)	XU/Q (ppm-m^2/gm)	X_a, X_b (m)	XU/Q (ppm-m^2/gm)	X_a, X_b (m)	XU/Q (ppm-m^2/gm)	X_a, X_b (m)	XU/Q (ppm-m^2/gm)
θ=20°	-27, -13	247.8	-41, -1	232.5	-55, -15	213.0	-69, -29	192.1	-42, -2	7.6	-56, -16	13.7	-70, -30	19.9	-84, -44	25.4	-97, -57	28.1
	-67, -27	275.7	-81, -41	224.7	-95, -55	185.5	-109, -69	155.3	-82, -42	167.1	-96, -56	148.1	-110, -70	130.6	-124, -84	115.1	-137, -97	101.1
	-107, -67	27.7	-121, -81	32.7	-135, -95	35.7	-149, -109	37.1	-122, -82	135.2	-136, -96	115.8	-150, -110	100.4	-164, -124	87.9	-177, -137	78.8
	-147, -107	3.4	-161, -121	5.0	-175, -135	6.6	-189, -149	8.1	-162, -122	38.6	-176, -136	38.0	-190, -150	36.8	-204, -164	35.4	-217, -177	34.7
	-187, -147	0.6	-201, -161	1.0	-215, -175	1.5	-229, -189	2.0	-202, -162	9.7	-216, -176	10.7	-230, -190	11.6	-244, -204	12.2	-257, -217	13.0
	-227, -187	0.2	-241, -201	0.3	-255, -215	0.4	-269, -229	0.6	-242, -202	2.7	-256, -216	3.2	-270, -230	3.7	-284, -244	4.2	-297, -257	4.8
Total XU/Q		555.4		496.2		442.7		395.2		360.9		329.5		303.0		280.2		260.5

Note: Wind speed = 1.0 m/sec; source strength = 1 gm/m-sec; stability class D; receptor height = 2.0 m; source height = 0.0 m.

point at which the normal from the receptor intersects the roadway, for a receptor located 10 meters away. This concentration is 359.5 + 223.4 = 582.9 ppm-m^2/gm. If the wind angle were 20 degrees the concentration would be 247.8 + 275.7 = 523.5 ppm-m^2/gm. Looking across the table to a receptor distance equal to 50 meters, the concentration with a wind angle of 10 degrees would be 40.8 + 33.0 = 73.8 ppm-m^2/gm, while if the wind made an angle of 20 degrees to the roadway the concentration would be 101.1 + 78.8 = 179.9 ppm-m^2/gm.

This brief investigation into the effects of queue length and wind angle on concentrations at nearby receptors suggests the following approach for estimating expected concentrations.

1. Determine the wind angle likely to lead to the highest concentrations for each of a number of queue lengths (e.g., 5, 10, . . .) at each of a number of receptor locations. This is likely to be a small wind angle to one of a pair of intersecting roadways.

2. List the XU/Q concentrations calculated for each 40 meter section of roadway for each receptor location. Since large sections of roadway contribute at small wind angles, approximately 8 to 10 values might be listed.

To estimate actual expected concentrations the following three steps might be implemented.

3. Multiply the values of step 2 by the emission profile source strength estimate.

4. Subtract the sum of the values in step 2 from the value calculated for an infinite line source (e.g., Table 25), and multiply the result by the cruise emission strength.

5. The concentration (for a 1 m/sec wind) is given by the sum of the results of steps 3 and 4.

SECTION VI

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APPENDIX A

CARBON MONOXIDE DATA

Table A-1. PLOT OF CARBON MONOXIDE AVERAGES FOR STATIONS 11, 12, 13 AND 14; AND PLOT OF WIND DIRECTION AND SPEED.

Note:

Table A-1 has been presented in 11 individual pages. These pages may be connected together to form one large time series plot, giving an overview of the entire monitoring study.

Weekday: Sunday = 1, Monday = 2, etc.
Hour: Midnight to 1:00 a.m. = 1, 1:00 a.m. to 2:00 a.m. = 2, etc.

For each station CO plot:
(0=0ppm, 1=1ppm, ..., 9=9ppm, 0=10ppm, 1=11ppm, ..., etc.)

For the wind speed plot, the same format was used with units of mph instead of ppm.

An X on the right margin of the plot indicates that no data were recorded except in the wind speed plots, where an X indicates that the wind speed was greater than or equal to 19 mph.

MONTH	DATE	WEEK DAY	HOUR	STATION 11 CO -PPM-	STATION 12 CO -PPM-	STATION 13 CO -PPM-	STATION 14 CO -PPM-	WIND SPEED -MPH-	WIND DIR. -DEG.-
3	22	6	12				2		240
3	22	6	13			4	3		230
3	22	6	14			3	3		230
3	22	6	15			3	3		210
3	22	6	16	1	2	4	4		210
3	22	6	17	1	3	4	5		210
3	22	6	18	1	4	5	5		200
3	22	6	19	1	3	5	5	6	210
3	22	6	20	2	2	5	4	5	230
3	22	6	21	2	2	3	2	3	250
3	22	6	22	3	2	2	1	4	300
3	22	6	23	1	1	1	0	2	300
3	22	6	24	1	0	1	0	0	300
3	23	7	1	0	0	0	0	9	300
3	23	7	2	0	0	0	0	9	300
3	23	7	3	0	0	0	0	1	300
3	23	7	4	0	0	0	0	0	310
3	23	7	5	0	0	0	0	8	310
3	23	7	6	0	0	0	0	9	310
3	23	7	7	1	0	0	0	8	310
3	23	7	8	1	0	0	0	8	310
3	23	7	9	1	0	0	0	8	310
3	23	7	10	1	1	1	0	8	310
3	23	7	11	1	1	1	0	8	310
3	23	7	12	2	2	1	0	8	330
3	23	7	13	2	2	2	1	6	330
3	23	7	14	3	3	2	1	5	340
3	23	7	15	2	2	2	1	7	350
3	23	7	16	2	2	2	1	6	350
3	23	7	17	2	2	2	1	5	350
3	23	7	18	2	2	1	1	3	360
3	23	7	19	1	0	2	1	3	330
3	23	7	20	1	0	2	1	4	330
3	23	7	21	1	0	1	1	3	320
3	23	7	22	1	1	2	1	5	290
3	23	7	23	1	2	5	4	3	260
3	23	7	24	0	3	5	4	4	250
3	24	1	1	0	3	2	2	7	250
3	24	1	2	0	1	2	1	8	240
3	24	1	3	0	0	0	1	1	240
3	24	1	4	0	0	0	0	7	290
3	24	1	5	0	0	0	0	3	310
3	24	1	6	0	0	0	0	3	300
3	24	1	7	0	0	0	0	2	300
3	24	1	8	0	0	0	0	2	300
3	24	1	9	0	0	0	0	4	300
3	24	1	10	0	0	0	0	4	300
3	24	1	11	0	0	0	0	5	310
3	24	1	12	1	0	0	0	2	300

```
3  24   1  13I                XI  2                I0                  I0                  I          0          I  320
3  24   1  14I                XI  2                I  2                I 1                 I           1         I  300
3  24   1  15I                XI  2                I  2                I 1                 I           1         I  300
3  24   1  16I                XI  2                I  2                I 1                 I          0          I  310
3  24   1  17I                XI 1                 I  2                I 1                 I          0          I  310
3  24   1  18I                XI 1                 I 1                 I0                  I       7             I  310
3  24   1  19I                XI0                  I 1                 I 1                 I     5               I  300
3  24   1  20I                XI0                  I 1                 I  2                I    4                I  280
3  24   1  21I                XI0                  I  2                I  2                I 1                   I  260
3  24   1  22I                XI 1                 I   3               I   3               I 1                   I  260
3  24   1  23I                XI 1                 I   3               I   3               I 1                   I  230
3  24   1  24I                XI 1                 I  2                I  2                I 1                   I  230
3  25   2   1I                XI 1                 I0                  I 1                 I 1                   I  210
3  25   2   2I                XI0                  I0                  I 1                 I 2                   I  190
3  25   2   3I                XI0                  I0                  I0                  I     5               I  170
3  25   2   4I                XI0                  I0                  I0                  I      6              I  170
3  25   2   5I                XI0                  I0                  I0                  I       7             I  180
3  25   2   6I                XI0                  I0                  I0                  I           2         I  190
3  25   2   7I                XI0                  I 1                 I 1                 I             3       I  190
3  25   2   8I                XI  2                I    4              I  2                I               5   I  190
3  25   2   9I                XI  2                I   3               I 1                 I                  XI  190
3  25   2  10I                XI 1                 I   3               I 1                 I                  XI  190
3  25   2  11I                XI 1                 I  2                I 1                 I                  XI  190
3  25   2  12I                XI  2                I  2                I 1                 I                  XI  200
3  25   2  13I                XI  2                I  2                I                  XI                  XI  210
3  25   2  14I                XI 1                 I   3               I  2                I                  XI  210
3  25   2  15I                XI                  XI   3               I   3               I                  XI  220
3  25   2  16I                XI                  XI   3               I   3               I                  XI  210
3  25   2  17I0                I                  XI     5             I   3               I                  XI  220
3  25   2  18I0                I                  XI   3               I   3               I                  XI  220
3  25   2  19I0                I                  XI    4              I    4              I                6  I  220
3  25   2  20I0                I                  XI    4              I   3               I               5   I  210
3  25   2  21I0                I                  XI   3               I  2                I              4    I  200
3  25   2  22I0                I                  XI    4              I   3               I           1        I  200
3  25   2  23I0                I                  XI  2                I  2                I           1        I  210
3  25   2  24I0                I                  XI 1                 I 1                 I              4     I  210
3  26   3   1I0                I                  XI0                  I 1                 I               5    I  220
3  26   3   2I0                I                  XI0                  I0                  I                6   I  220
3  26   3   3I0                I                  XI0                  I0                  I              4     I  230
3  26   3   4I0                I                  XI0                  I0                  I               5    I  220
3  26   3   5I 1               I                  XI0                  I0                  I              4     I  220
3  26   3   6I 1               I                  XI 1                 I 1                 I               5    I  220
3  26   3   7I0                I                  XI     5             I   3               I             3      I  240
3  26   3   8I0                I                  XI      6            I    4              I              4     I  240
3  26   3   9I 1               I                  XI    4              I   3               I           2        I  260
3  26   3  10I                XI                  XI 1                 I 1                 I           2        I  290
3  26   3  11I                XI                  XI 1                 I0                  I           2        I  320
3  26   3  12I                XI                  XI 1                 I0                  I          1         I  350
3  26   3  13I                XI                  XI0                  I0                  I         0          I  350
3  26   3  14I                XI                  XI 1                 I0                  I       9            I  350
3  26   3  15I                XI                  XI  2                I0                  I     6              I  340
3  26   3  16I                XI 1                 I 1                 I0                  I     5              I  340
3  26   3  17I 1                I   3               I  2                I 1                 I       7            I   70
3  26   3  18I  2               I     5             I  2                I  2                I       7            I   80
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3 26 3 19I  2                I     6          I   3          I: 2          I    4          I 100
3 26 3 20I  2                I      5         I   3          I   3         I    4          I  90
3 26 3 21I  2                I      5         I  2           I  2          I    4          I 100
3 26 3 22I 1                 I       6        I  2           I   3         I    4          I  90
3 26 3 23I  2                I   3            I  2           I  2          I     5         I  70
3 26 3 24I 1                 I   3            I 1            I  2          I     5         I  70
3 27 4  1I 1                 I   3            I 1            I 1           I      6        I  80
3 27 4  2I0                  I   3            I 1            I0            I       7       I  80
3 27 4  3I0                  I  2             I0             I0            I    4          I 100
3 27 4  4I0                  I  2             I0             I 1           I     5         I 130
3 27 4  5I0                  I   3            I0             I 1           I    4          I 100
3 27 4  6I 1                 I    4           I0             I  2          I 2            I 120
3 27 4  7I 1                 I      6         I  2           I   3         I  3           I 130
3 27 4  8I  2                I      6         I    4         I    4        I  3           I 120
3 27 4  9I    4              I      6         I    4         I    4        I  3           I 110
3 27 4 10I    4              I      6         I     5        I     5       I  3           I 110
3 27 4 11I     5             I    4           I    4         I   3         I     5        I 110
3 27 4 12I    4              I   3            I  2           I  2          I        8     I  90
3 27 4 13I  2                I   3            I 1            1  2          I          0   I  80
3 27 4 14I  2                I               XI  2           I  2          I          0   I  90
3 27 4 15I                  XI               XI 1           I  2          I          0   I  90
3 27 4 16I                  XI               XI  2          I  2          I         9    I  90
3 27 4 17I                  XI               XI  2          I  2          I          0   I  80
3 27 4 18I                  XI               XI  2          I  2          I          0   I  80
3 27 4 19I    4              I               XI 1           I 1           I          0   I  70
3 27 4 20I    4              I               XI 1           I0            I           1  I  70
3 27 4 21I    4              I               XI0            I0            I           2  I  70
3 27 4 22I   3               I               XI 1           I0            I           1  I  70
3 27 4 23I   3               I               XI0            I0            I          0   I  70
3 27 4 24I   3               I               XI0            I0            I          0   I  70
3 28 5  1I   3               I               XI0            I0            I         9    I  60
3 28 5  2I   3               I               XI0            I0            I           1  I  70
3 28 5  3I   3               I               XI0            I0            I          0   I  80
3 28 5  4I   3               I               XI0            I0            I          0   I  80
3 28 5  5I   3               I               XI0            I0            I          0   I  80
3 28 5  6I   3               I               XI0            I 1           1           1  I  90
3 28 5  7I   3               I               XI0            1  2          I          0   I  90
3 28 5  8I    4              I               XI 1           I   3.        I        8    I 100
3 28 5  9I     5             I               XI    3        I     5       I      6      I  90
3 28 5 10I    4              I               XI    4        1     5       I     5       I  60
3 28 5 11I   3               I               XI   3         I    4        I       7     I  60
3 28 5 12I   3               I               XI  2          I   3         I          0   I  80
3 28 5 13I   3               I               XI  2          1   3         I           2  I  80
3 28 5 14I   3               I               XI 1           I  2          I           2  I  80
3 28 5 15I  2                I               XI 1           I  2          I            3 I  80
3 28 5 16I 1                 I    4           I  2          I  2          I           2  I  90
3 25 5 17I  2                I     5          I   3         I   3         I          0   I  80
3 28 5 18I   3               I     5          I   3         I   3         I          0   I  80
3 28 5 19I  2                I  2             I  2          I  2          I          0   I  70
3 28 5 20I  2                I  2             I  2          I  2          I         9    I  60
3 28 5. 21I 1                I 1              I 1           I 1           I          0   I  70
3 28 5 22I  2                I  2             I 1           I 1           I          0   I  70
3 28 5 23I0                  I0               I 1           I0            I         9    I  80
3 28 5 24I0                  I0               I 1           I0            I        8     I  70
```

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3  29  6   1I0                  I0                  I0                  I0                  I       8           I   80
3  29  6   2I0                  I0                  I0                  I0                  I       8           I   80
3  29  6   3I0                  I0                  I0                  I0                  I      7            I   70
3  29  6   4I0                  I0                  I0                  I0                  I      7            I   90
3  29  6   5I0                  I0                  I0                  I0                  I    5              I   80
3  29  6   6I0                  I0                  I 1                 I 1                 I     6             I   70
3  29  6   7I 1                 I0                  I 1                 I  2                I     6             I   90
3  29  6   8I  2                I   3               I  2                I   3               I   4               I  100
3  29  6   9I   3               I    4              I   3               I    4              I   4               I   90
3  29  6  10I    4              I    4              I   3               I    4              I    5              I   70
3  29  6  11I    4              I     5             I   3               I    4              I     6             I   80
3  29  6  12I    4              I     5             I    4              I    4              I     6             I   90
3  29  6  13I    4              I      6            I    4              I    4              I    5              I   90
3  29  6  14I    4              I      6            I   3               I    4              I     6             I   90
3  29  6  15I   3               I     5             I   3               I    4              I      7            I   90
3  29  6  16I    4              I      6            I      6            I    4              I        9          I   90
3  29  6  17I    4              I      6            I      6            I     5             I     6             I  100
3  29  6  18I    4              I       8           I      6            I      6            I   4               I  100
3  29  6  19I     5             I      7            I      6            I      6            I    5              I  100
3  29  6  20I     5             I    4              I      6            I      6            I    5              I  120
3  29  6  21I  2                I 1                 I  4                I    4              I      7            I  130
3  29  6  22I0                  I 1                 I    4              I  2                I           2       I  180
3  29  6  23I0                  I0                  I    4              I   3               I        9          I  210
3  29  6  24I0                  I0                  I    4              I    4              I     6             I  230
3  30  7   1I0                  I0                  I    4              I    4              I    5              I  240
3  30  7   2I0                  I0                  I  2                I 1                 I  3                I  280
3  30  7   3I0                  I0                  I 1                 I0                  I  3                I  320
3  30  7   4I0                  I0                  I 1                 I0                  I  3                I  330
3  30  7   5I0                  I0                  I 1                 I 1                 I 2                 I  340
3  30  7   6I 1                 I0                  I 1                 I 1                 I   4               I  310
3  30  7   7I0                  I0                  I0                  I 1                 I          1        I  340
3  30  7   8I0                  I 1                 I0                  I0                  I           2       I  350
3  30  7   9I0                  I 1                 I0                  I0                  I          1        I  360
3  30  7  10I 1                 I  2                I0                  I0                  I          1        I  340
3  30  7  11I   3               I  2                I 1                 I 1                 I           3       I  320
3  30  7  12I      6            I     5             I  2                I  2                I      7            I  310
3  30  7  14I     5             I     5             I  2                I  2                I      7            I  310
3  30  7  15I     5             I     5             I 1                 I  2                I        9          I  310
3  30  7  16I      6            I      6            I  2                I   3               I        9          I  310
3  30  7  17I   3               I    4              I 1                 I  2                I        9          I  320
3  30  7  13I       7           I     5             I  2                I   3               I     6             I  300
3  30  7  18I  2                I   3               I 1                 I 1                 I          1        I  330
3  30  7  19I0                  I0                  I0                  I 1                 I        9          I  340
3  30  7  20I0                  I0                  I0                  I 1                 I        9          I  340
3  30  7  21I0                  I0                  I0                  I0                  I         0         I  330
3  30  7  22I0                  I0                  I0                  I0                  I         0         I  330
3  30  7  23I0                  I0                  I0                  I0                  I        9          I  330
3  30  7  24I0                  I0                  I0                  I0                  I          1        I  330
3  31  1   1I0                  I0                  I0                  I0                  I     6             I  310
3  31  1   2I0                  I0                  I0                  I0                  I     6             I  320
3  31  1   3I0                  I0                  I0                  I0                  I     6             I  320
3  31  1   4I0                  I0                  I0                  I0                  I       8           I  320
3  31  1   5I0                  I0                  I0                  I0                  I   5               I  320
3  31  1   6I0                  I0                  I0                  I0                  I 3                 I  330
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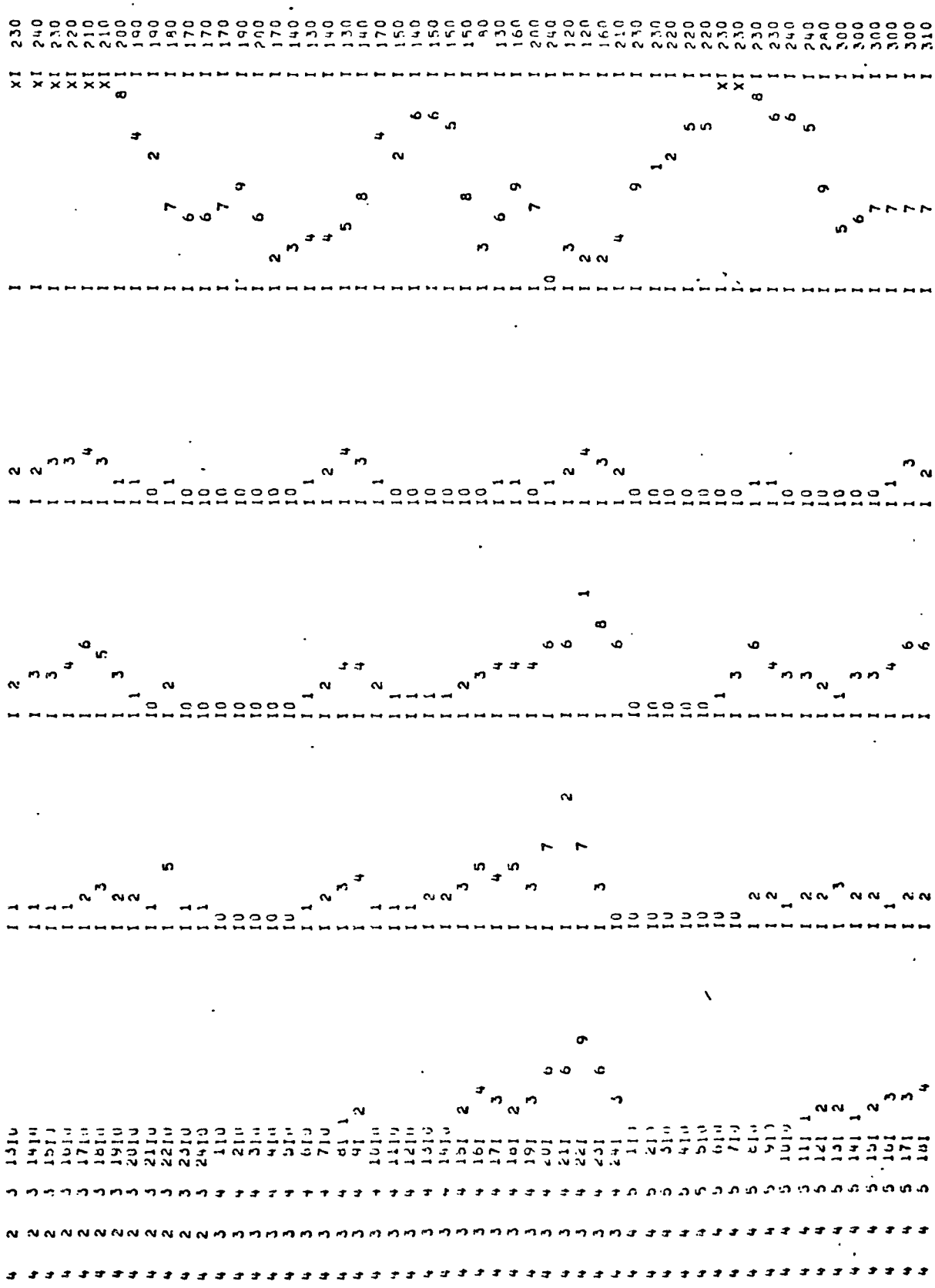
```
3  31   1   7I0                I0                I0                I0                I  2                I  310
3  31   1   8I0                I0                I0                I0                I   3               I  290
3  31   1   9I0                I0                I0                I0                I   3               I  300
3  31   1  10I0                I0                I0                I0                I    4              I   30
3  31   1  11I0                I0                I0                I0                I  2                I  120
3  31   1  12I0                I 1               I0                I0                I  2                I  130
3  31   1  13I 1               I  2              I   3             I 1               I   3               I  100
3  31   1  14I0                I    4            I 1               I 1               I    4              I  160
3  31   1  15I0                I  2              I 1               I 1               I     5             I  120
3  31   1  16I  2              I 1               I  2              I  2              I     5             I  100
3  31   1  17I  2              I0                I  2              I  2              I        8          I  100
3  31   1  18I 1               I0                I  2              I  2              I         9         I   80
3  31   1  19I0                I0                I 1               I0                I       6           I   90
3  31   1  20I0                I0                I 1               I0                I         9         I   90
3  31   1  21I0                I0                I 1               I0                I         9         I   70
3  31   1  22I0                I0                I 1               I0                I        8          I   90
3  31   1  23I0                I0                I0                I0                I          0        I   90
3  31   1  24I0                I0                I0                I0                I          0        I   90
4   1   2   1I0                I0                I0                I0                I           1       I   90
4   1   2   2I0                I0                I0                I0                I            2      I   90
4   1   2   3I0                I0                I0                I0                I             3     I   90
4   1   2   4I0                I0                I0                I0                I               4   I   70
4   1   2   5I0                I0                I0                I0                I               4   I   80
4   1   2   6I0                I0                I0                I0                I               4   I   90
4   1   2   7I0                I 1               I 1               I0                I             3     I   90
4   1   2   8I  2              I   3             I  2              I0                I         9         I   90
4   1   2   9I  2              I   3             I   3             I  2              I       7           I   90
4   1   2  10I   3             I   3             I   3             I 1               I       6           I  120
4   1   2  11I   3             I 1               I   3             I 1               I         9         I  110
4   1   2  12I 1               I 1               I  2              I 1               I         9         I  120
4   1   2  13I0                I  2              I 1               I0                I         9         I  150
4   1   2  14I0                I  2              I   3             I  2              I           1       I  180
4   1   2  15I0                I  2              I     5           I    4            I         9         I  200
4   1   2  16I  2              I  2              I      6          I     5           I           1       I  230
4   1   2  17I  2              I  2              I      6          I    4            I               4   I  260
4   1   2  18I  2              I   3             I     4           I   3             I                  XI  270
4   1   2  19I  2              I  2              I  2              I 1               I                  XI  270
4   1   2  20I 1               I  2              I  2              I 1               I                6  I  280
4   1   2  21I  2              I 1               I  2              I 1               I               5  I  280
4   1   2  22I 1               I 1               I  2              I0                I                6  I  290
4   1   2  23I0                I 1               I 1               I0                I               5  I  300
4   1   2  24I0                I 1               I 1               I0                I               5  I  300
4   2   3   1I0                I 1               I 1               I0                I           1      I  290
4   2   3   2I0                I 1               I 1               I0                I       7          I  280
4   2   3   3I0                I 1               I 1               I0                I      6           I  270
4   2   3   4I0                I 1               I 1               I0                I         9         I  250
4   2   3   5I0                I 1               I 1               I0                I        8          I  250
4   2   3   6I0                I 1               I  2              I 1               I       7          I  240
4   2   3   7I0                I  2              I     5           I   3             I       7          I  240
4   2   3   8I 1               I  2              I       7         I       7         I      6           I  220
4   2   3   9I 1               I   3             I      6          I      6          I               4  I  220
4   2   3  10I0                I  2              I  2              I   3             I                7 I  220
4   2   3  11I0                I  2              I  2              I  2              I                  XI  220
4   2   3  12I0                I 1               I  2              I  2              I                  XI  220
```



```
4  4  5  191  2                I 1                I   3                I 1                I        8          I  320
4  4  5  201   3               I   3              I  2                 I 1                I    4              I  330
4  4  5  211     5             I  2               I0                   I 1                I     5             I  330
4  4  5  221 1                 I  2               I0                   I 1                I     5             I  350
4  4  5  2310                  I 1                I0                   I0                 I   3               I  340
4  4  5  2410                  I0                 I0                   I0                 I     5             I  330
4  5  6   11 1                 I0                 I0                   I0                 I      6            I  340
4  5  6   21   3               I0                 I0                   I0                 I      6            I  330
4  5  6   31 1                 I0                 I0                   I0                 I      6            I  340
4  5  6   410                  I0                 I0                   I0                 I      6            I  350
4  5  6   510                  I0                 I0                   I0                 I       7           I  350
4  5  6   610                  I0                 I0                   I0                 I      6            I  350
4  5  6   710                  I0                 I0                   I0                 I     5             I  350
4  5  6   31 1                 I0                 I  2                 I 1                I      6            I  330
4  5  6   91 1                 I0                 I 1                  I 1                I      6            I  340
4  5  6  101 1                 I0                 I 1                  I0                 I      6            I  350
4  5  6  111 1                 I0                 I 1                  I0                 I        8          I  340
4  5  6  121 1                 I0                 I 1                  I0                 I        8          I  340
4  5  6  131 1                 I0                 I 1                  I0                 I        8          I  340
4  5  6  141 1                 I0                 I 1                  I0                 I         9         I  340
4  5  6  151 1                 I0                 I 1                  I0                 I         9         I  340
4  5  6  161 1                 I0                 I 1                  I0                 I          0        I  350
4  5  6  171 1                 I0                 I  2                 I 1                I         9         I  350
4  5  6  181 1                 I 1                I0                   I 1                I       7           I   20
4  5  6  191 1                 I  2               I 1                  I 1                I     5             I   30
4  5  6  201  2                I  2               I 1                  I 1                I   3               I   50
4  5  6  211  2                I   3              I 1                  I 1                I  2                I   50
4  5  6  221   4               I            1     I          9         I       6          I 1                 I   50
4  5  6  231      7            I          9       I          9         I         8        I0                  I   50
4  5  6  241      7            I          9       I          9         I         8        I0                  I   50
4  5  7   11     6             I          9       I          9         I           9      I0                  I   40
4  5  7   21     6             I        8         I          9         I       7          I0                  I   40
4  5  7   31       8           I         9        I        8           I         8        I0                  I   40
4  5  7   41      7            I       7          I      6             I      6           I0                  I   40
4  5  7   51     6             I      6           I      6             I      6           I0                  I   40
4  5  7   61     6             I      6           I      6             I      6           I0                  I   40
4  5  7   71    4              I      6           I      6             I      6           I0                  I   40
4  6  7   81   3               I   3              I    4               I     5            I0                  I   30
4  6  7   91   3               I 1                I  2                 I  2               I  2                I  280
4  6  7  101   3               I 1                I                    XI  2              I     5             I  250
4  6  7  111  2                I  2               I   3                I  2               I          0        I  250
4  6  7  121  2                I 1                I   3                I 1                I        9          I  260
4  6  7  131  2                I  2               I     5              I 1                I        9          I  250
4  6  7  141  2                I  2               I     5              I   3              I            2      I  250
4  6  7  151 1                 I  2               I     5              I   3              I              5    I  240
4  6  7  161 1                 I  2               I     5              I   3              I               7   I  230
4  6  7  1710                  I  2               I     5              I   3              I                8  I  220
4  6  7  1810                  I   3              I     5              I   3              I                 XI  220
4  6  7  1910                  I0                 I  2                 I  2               I                8  I  220
4  6  7  2010                  I 1                I    4               I    4             I              5    I  210
4  6  7  2110                  I 1                I   3                I   3              I               7   I  210
4  6  7  2210                  I 1                I   3                I   3              I              5    I  200
4  6  7  2310                  I  2               I   3                I   3              I            4      I  200
4  6  7  2410                  I 1                I 1                  I 1                I              5    I  200
```

```
4  7  1   1I0                I0                I   3            I0                I           1         I  200
4  7  1   2I0                I0                I0               I0                I               4     I  200
4  7  1   3I0                I0                I0               I0                I                 7   I  210
4  7  1   4I0                I0                I0               I0                I           1         I  210
4  7  1   5I0                I0                I0               I0                I         8           I  210
4  7  1   6I0                I0                I0               I0                I         8           I  210
4  7  1   7I0                I0                I0               I0                I   3               I  120
4  7  1   8I0                I0                I0               I0                I   3               I  190
4  7  1   9I0                I0                I0               I0                I  2                I  170
4  7  1  10I0                I0                I0               I0                I    4              I  110
4  7  1  11I0                I0                I0               I0                I                 6   I   20
4  7  1  12I0                I0                I0               I0                I                 6   I   30
4  7  1  13I0                I0                I0               I0                I             3       I   40
4  7  1  14I0                I 1               I0               I0                I                 6   I   40
4  7  1  15I0                I   3             I0               I0                I                  7  I   40
4  7  1  16I0                I  2              I0               I0                I                  7  I   40
4  7  1  17I0                I 1               I0               I0                I                   8 I   30
4  7  1  18I0                I  2              I0               I0                I                   XI   30
4  7  1  19I0                I0                I0               I0                I                   XI   30
4  7  1  20I0                I0                I0               I0                I                  7  I   30
4  7  1  21I0                I0                I0               I0                I                 6   I   30
4  7  1  22I0                I0                I0               I0                I                  7  I   40
4  7  1  23I0                I0                I0               I0                I                  7  I   30
4  7  1  24I0                I0                I0               I0                I                  7  I   40
4  8  2   1I0                I0                I0               I0                I                   8 I   40
4  8  2   2I0                I0                I0               I0                I                   XI   50
4  8  2   3I0                I0                I0               I0                I                   XI   50
4  8  2   4I0                I0                I0               I0                I                   XI   50
4  8  2   5I0                I0                I0               I0                I                   XI   50
4  8  2   6I0                I0                I0               I0                I                   XI   50
4  8  2   7I0                I0                I0               I0                I                   8 I   50
4  8  2   8I0                I0                I0               I0                I                   XI   50
4  8  2   9I0                I0                I0               I0                I                   8 I   50
4  8  2  10I0                I0                I0               I0                I                   XI   50
4  8  2  11I0                I0                I0               I0                I                   XI   40
4  8  2  12I0                I 1               I0               I0                I                  7  I   40
4  8  2  13I0                I 1               I0               I0                I                  7  I   40
4  8  2  14I0                I0                I0               I0                I                   XI   40
4  8  2  15I0                I 1               I0               I0                I                   XI   30
4  8  2  16I0                I0                I0               I0                I                  7  I   30
4  8  2  17I0                I 1               I0               I0                I                  7  I   20
4  8  2  18I0                I  2              I0               I0                I             3       I   20
4  8  2  19I0                I 1               I0               I0                I           2         I   20
4  8  2  20I0                I  2              I0               I0                I         1           I   20
4  8  2  21I0                I  2              I0               I0                I       9             I   20
4  8  2  22I0                I   3             I0               I 1               I     7               I   20
4  8  2  23I0                I  2              I0               I0                I   3               I    0
4  8  2  24I0                I 1               I0               I0                I  2                I  350
4  9  3   1I0                I 1               I0               I0                I 1                 I  360
4  9  3   2I0                I 1               I0               I0                I 1                 I  350
4  9  3   3I0                I 1               I0               I0                I 1                 I  350
4  9  3   4I0                I 1               I0               I0                I0                  I  350
4  9  3   5I0                I 1               I0               I0                I 1                 I  350
4  9  3   6I0                I 1               I0               I0                I 1                 I  350
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4   9   3   7I 1                I   3                I 1                I0                 I  2                I  330
4   9   3   8I   3              I     4              I      5           I 1                I  2                I  310
4   9   3   9I  2               I  2                  I 1               I     4            I 1                 I  310
4   9   3  10I 1                I 1                   I0                I  2               I   3               I  340
4   9   3  11I  2               I 1                   I0                I0                 I   3               I   70
4   9   3  12I 1                I 1                   I0                I0                 I   3               I  310
4   9   3  13I 1                I 1                   I 1               I0                 I     5             I  300
4   9   3  14I 1                I 1                   I  2              I0                 I       7           I  270
4   9   3  15I 1                I 1                   I   3             I0                 I    4              I  260
4   9   3  16I 1                I 1                   I  2              I0                 I      6            I  270
4   9   3  17I  2               I    4                I     4           I0                 I        8          I  260
4   9   3  18I  2               I      6              I      5          I 1                I        8          I  250
4   9   3  19I0                 I     5               I      5          I 1                I     5             I  210
4   9   3  20I0                 I     5               I   3             I 1                I   3               I  200
4   9   3  21I 1                I     5               I 1               I  2               I 1                 I  190
4   9   3  22I 1                I        8            I   3             I   3              I0                  I  190
4   9   3  23I  2               I    4                I  2              I 1                I0                  I  170
4   9   3  24I  2               I    4                I  2              I 1                I0                  I  170
4  10   4   1I   3              I     5               I  2              I 1                I0                  I  170
4  10   4   2I   3              I     5               I  2              I 1                I0                  I  160
4  10   4   3I   3              I    4                I 1               I 1                I0                  I  160
4  10   4   4I  2               I    4                I 1               I 1                I 1                 I  160
4  10   4   5I  2               I   3                 I 1               I 1                I 1                 I  150
4  10   4   6I 1                I   3                 I 1               I  2               I 1                 I  130
4  10   4   7I  2               I    4                I  2              I  2               I 1                 I  140
4  10   4   8I  2               I     5               I   3             I   3              I 1                 I  140
4  10   4   9I  2               I    4                I   3             I 1                I 1                 I  140
4  10   4  10I0                 I  2                  I 1               I 1                I  2                I  150
4  10   4  11I0                 I  2                  I 1               I 1                I  2                I  160
4  10   4  12I0                 I 1                   I 1               I 1                I   3               I  170
4  10   4  13I0                 I 1                   I  2              I  2               I     5             I  170
4  10   4  14I0                 I 1                   I  2              I0                 I       7           I  180
4  10   4  15I0                 I 1                   I  2              I0                 I             2     I  180
4  10   4  16I 1                I 1                   I  2              I0                 I               4   I  170
4  10   4  17I0                 I 1                   I   3             I0                 I           1       I  170
4  10   4  18I0                 I   3                 I  2              I0                 I           1       I  160
4  10   4  19I0                 I   3                 I  2              I0                 I        8          I  160
4  10   4  20I0                 I    4                I  2              I0                 I      6            I  150
4  10   4  21I0                 I   3                 I   3             I0                 I     5             I  140
4  10   4  22I 1                I    4                I 1               I0                 I     5             I  140
4  10   4  23I0                 I 1                   I  2              I0                 I      6            I  150
4  10   4  24I0                 I 1                   I  2              I0                 I     5             I  140
4  11   5   1I0                 I 1                   I 1               I 1                I    4              I  150
4  11   5   2I0                 I 1                   I0                I 1                I     5             I  210
4  11   5   3I0                 I 1                   I0                I 1                I   3               I  170
4  11   5   4I0                 I 1                   I0                I 1                I     5             I  110
4  11   5   5I0                 I 1                   I0                I 1                I        8          I  130
4  11   5   6I0                 I 1                   I0                I 1                I          0        I  160
4  11   5   7I0                 I 1                   I  2              I 1                I          0        I  170
4  11   5   8I0                 I  2                  I   3             I   3              I          0        I  170
4  11   5   9I0                 I  2                  I   3             I   3              I           1       I  160
4  11   5  10I0                 I  2                  I   3             I  2               I          0        I  150
4  11   5  11I0                 I  2                  I   3             I 1                I           1       I  140
4  11   5  12I0                 I  2                  I   3             I   3              I         9         I  150
```

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4  11   5  13I0                I   3              I  2              I   3              I       1        I  170
4  11   5  14I 1               I     4            I 1               I  2               I                8 I  200
4  11   5  15I 1               I  2               I  2              I  2               I          0     I  190
4  11   5  16I 1               I   3              I       6         I     4            I            4   I  190
4  11   5  17I0                I      5           I      5          I       6          I         9      I  190
4  11   5  18I0                I   3              I     4           I     4            I       7        I  170
4  11   5  19I0                I   3              I  2              I  2               I        8       I  160
4  11   5  20I0                I  2               I 1               I  2               I           2    I  170
4  11   5  21I0                I 1                I 1               I 1                I            3   I  170
4  11   5  22I0                I 1                I  2              I  2               I              5 I  170
4  11   5  23I0                I 1                I0                1 1                I                8 I  170
4  11   5  24I0                I 1                I0                I0                 I                 XI  170
4  12   6   1I0                I 1                I0                I0                 I                 XI  170
4  12   6   2I0                I 1                I0                I0                 I                 XI  170
4  12   6   3I0                I 1                I0                I0                 I                8 I  160
4  12   6   4I0                I 1                I0                I0                 I                 XI  160
4  12   6   5I0                I 1                I0                I0                 I                 XI  170
4  12   6   6I0                I 1                I0                I0                 I                8 I  170
4  12   6   7I0                I 1                I0                I0                 I                 XI  170
4  12   6   8I0                I  2               I  2              I0                 I                 XI  180
4  12   6   9I0                I  2               I  2              I0                 I                 XI  190
4  12   6  10I0                I  2               I  2              I0                 I                 XI  190
4  12   6  11I0                I  2               I   3             I0                 I                 XI  190
4  12   6  12I0                I  2               I   3             I0                 I                 XI  200
4  12   6  13I0                I  2               I   3             I 1                I                 XI  200
4  12   6  14I0                I  2               I    4            I 1                I                 XI  200
4  12   6  15I0                I  2               I    4            I 1                I                 XI  200
4  12   6  16I0                I  2               I      5          I   3              I                 XI  210
4  12   6  17I 1               I  2               I    4            I   3              I                 XI  220
4  12   6  18I 1               I  2               I      5          I   3              I                8 I  230
4  12   6  19I 1               I 1                I   3             I  2               I              5   I  230
4  12   6  20I 1               I 1                I  2              I 1                I            4     I  250
4  12   6  21I0                I 1                I 1               I 1                I           3      I  250
4  12   6  22I 1               I 1                I  2              I 1                I           3      I  260
4  12   6  23I0                I 1                I 1               I 1                I         9        I  260
4  12   6  24I0                I0                 I 1               I 1                I      6         I  240
4  13   7   1I0                I0                 I   3             1  2               I     7          I  180
4  13   7   2I0                I0                 I  2              10                 I     7          I  200
4  13   7   3I0                I0                 I 1               I0                 I      8         I  200
4  13   7   4I0                I0                 I0                I0                 I     7          I  220
4  13   7   5I0                I0                 I0                I0                 I       9        I  220
4  13   7   6I0                I0                 I0                I0                 I          2     I  220
4  13   7   7I0                I0                 I0                I 1                I         0      I  240
4  13   7   8I0                I0                 I0                I 1                I           3    I  240
4  13   7   9I 1               I0                 I0                I 1                I             5  I  230
4  13   7  10I      5          I0                 I 1               I 1                I            4   I  240
4  13   7  11I  2              I 1                I  2              I 1                I           3    I  250
4  13   7  12I  2              I  2               I  3              I  2               I           3    I  240
4  13   7  13I  2              I   3              I    4            I   3              I          2     I  240
4  13   7  14I  2              I   3              I    4            I   3              I         0      I  230
4  13   7  15I   3             I   3              I      5          I   3              I         0      I  230
4  13   7  16I  2              I   3              I      5          I  2               I       9        I  220
4  13   7  17I  2              I   3              I  2              I0                 I     7          I  220
4  13   7  18I 1               I      5           I    4            I 1                I 3              I  200
```

| | | |

Table A-2. PLOT OF CARBON MONOXIDE 1-HOUR AVERAGES FOR STATIONS 15, 161, 162 AND 163; AND PLOT OF WIND DIRECTION AND SPEED.

Note:

Table A-2 has been presented in 11 individual pages. These pages may be connected together to form one large time series plot, giving an overview of the entire monitoring study.

Weekday: Sunday = 1, Monday = 2, etc.
Hour: Midnight to 1:00 a.m. = 1, 1:00 a.m. to 2:00 a.m. = 2, etc.

For each station CO plot:
(0=0ppm, 1=1ppm, ..., 9=9ppm, 0=10ppm, 1=11ppm, ..., etc.)

For the wind speed plot, the same format was used with mph instead of ppm.

An X on the right margin of the plot indicates that no data were recorded except in the wind speed plots, where an X indicates that the wind speed was greater than or equal to 19 mph.

MONTH DATE	WEEK DAY	HOUR	STATION 45 CO -PPM-	STATION 161 CO -PPM-	STATION 162 CO -PPM-	STATION 163 CO -PPM-	WIND SPEED -MPH-	WIND DIR. -DEG.-
3 22	6	12						240
3 22	6	13	1					230
3 22	6	14	1					230
3 22	6	15	2					210
3 22	6	16	5	1		1		210
3 22	6	17	3	1		2		210
3 22	6	18	5	2		2		200
3 22	6	19	4	2		2	6	210
3 22	6	20		2		2	5	230
3 22	6	21		1		2	3	250
3 22	6	22		2		2	4	300
3 22	6	23		1		1	2	300
3 22	6	24		1		1	0	300
3 23	7	1		1		1	9	300
3 23	7	2		1		1	9	300
3 23	7	3		1		1	1	300
3 23	7	4		1		1	0	310
3 23	7	5		1		1	8	310
3 23	7	6		1		1	9	310
3 23	7	7		1		1	8	310
3 23	7	8		1		1	8	310
3 23	7	9				1	8	310
3 23	7	10					8	310
3 23	7	11		2		2	8	310
3 23	7	12		2	1	3	8	330
3 23	7	13		3	2	3	6	330
3 23	7	14		4	3	4	5	340
3 23	7	15		4	3	4	7	350
3 23	7	16		4	3	4	6	350
3 23	7	17		4	3	3	5	350
3 23	7	18		4	4	5	3	360
3 23	7	19		2	1	2	3	330
3 23	7	20		3	2	2	4	330
3 23	7	21		2	1	1	3	320
3 23	7	22	2	2	1	1	5	290
3 23	7	23	4	2	1	1	3	260
3 23	7	24	5	3	1	1	4	250
3 24	1	1	5	2		1	7	250
3 24	1	2	2	2		1	8	240
3 24	1	3	1	2		1	1	240
3 24	1	4		2		1	7	290
3 24	1	5		2		0	3	310
3 24	1	6		2		1	3	300
3 24	1	7		2		1	2	300
3 24	1	8		1		1	2	300
3 24	1	9				1	4	300
3 24	1	10		0			4	300
3 24	1	11		0		1	5	310
3 24	1	12		0		2	2	300

```
3  24  1  13I0                I 1                 I0                  I  2                I          0          I  320
3  24  1  14I0                I 1                 I0                  I 1                 I           1         I  300
3  24  1  15I 1               I  2                I 1                 I 1                 I           1         I  300
3  24  1  16I0                I 1                 I0                  I 1                 I          0          I  310
3  24  1  17I0                I 1                 I0                  I 1                 I          0          I  310
3  24  1  18I0                I 1                 I0                  I 1                 I       7             I  310
3  24  1  19I 1               I0                  I0                  I0                  I     5               I  300
3  24  1  20I  2              I0                  I0                  I0                  I    4                I  280
3  24  1  21I   3             I0                  I0                  I0                  I 1                   I  260
3  24  1  22I       6         I0                  I 1                 I0                  I 1                   I  260
3  24  1  23I   3             I 1                 I0                  I 1                 I 1                   I  230
3  24  1  24I   3             I 1                 I 1                 I 1                 I 1                   I  230
3  25  2   1I   3             I 1                 I 1                 I  2                I 1                   I  210
3  25  2   2I   3             I 1                 I  2                I 1                 I  2                  I  190
3  25  2   3I 1               I0                  I 1                 I 1                 I     5               I  170
3  25  2   4I 1               I0                  I 1                 I 1                 I      6              I  170
3  25  2   5I 1               I0                  I0                  I 1                 I       7             I  180
3  25  2   6I 1               I 1                 I 1                 I 1                 I           2         I  190
3  25  2   7I   3             I 1                 I 1                 I 1                 I             3       I  190
3  25  2   8I   3             I 1                 I 1                 I 1                 I               5     I  190
3  25  2   9I  2              I 1                 I 1                 I 1                 I                  XI  190
3  25  2  10I 1               I 1                 I0                  I 1                 I                  XI  190
3  25  2  11I 1               I                   XI0                 I  2                I                  XI  190
3  25  2  12I 1               I                   XI0                 I  2                I                  XI  200
3  25  2  13I  2              I 1                 I                   XI 1                I                  XI  210
3  25  2  14I     4           I  2                I                   XI                  XI                 XI  210
3  25  2  15I       6         I  2                I                   XI 1                I                  XI  220
3  25  2  16I       6         I  2                I                   XI 1                I                  XI  210
3  25  2  17I       6         I  2                I0                   I 1                I                  XI  220
3  25  2  18I     4           I  2                I                   XI 1                I                  XI  220
3  25  2  19I  2              I 1                 I 1                  I 1                I                6  I  220
3  25  2  20I   3             I 1                 I  2                 I 1                I               5   I  210
3  25  2  21I  2              I 1                 I  2                 I 1                I              4    I  200
3  25  2  22I 1               I 1                 I  2                 I 1                I           1        I  200
3  25  2  23I 1               I 1                 I  2                 I 1                I           1        I  210
3  25  2  24I 1               I 1                 I  2                 I 1                I              4     I  210
3  26  3   1I 1               I 1                 I  2                 I 1                I               5    I  220
3  26  3   2I 1               I 1                 I  2                 I 1                I                6   I  220
3  26  3   3I 1               I0                  I  2                 I 1                I              4     I  230
3  26  3   4I 1               I0                  I  2                 I 1                I               5    I  220
3  26  3   5I 1               I0                  I 1                  I 1                I              4     I  220
3  26  3   6I     4           I0                  I 1                  I 1                I               5    I  220
3  26  3   7I       7         I0                  I 1                  I 1                I             3      I  240
3  26  3   8I       6         I0                  I 1                  I 1                I              4     I  240
3  26  3   9I  2              I 1                 I 1                  I  2               I           2        I  260
3  26  3  10I 1               I 1                 I 1                  I 1                I           2        I  290
3  26  3  11I0                I 1                 I 1                  I  2               I           2        I  320
3  26  3  12I0                I                   XI                   XI  2              I          1         I  350
3  26  3  13I0                I                   XI 1                  I   3             I         0          I  350
3  26  3  14I0                I  2                I 1                   I   3             I       9            I  350
3  26  3  15I0                I  2                I 1                   I  2              I     6              I  340
3  26  3  16I  2              I  2                I                    XI   3             I    5               I  340
3  26  3  17I   3             I       7           I                    XI       7         I      7             I   70
3  26  3  18I   3             I       7           I                    XI       7         I      7             I   80
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3  26  3  19I   3                I     5                I                 XI     5                I    4                I  100
3  26  3  20I  2                  I    4                I                 XI     5                I    4                I   90
3  26  3  21I  2                  I   3                 I                 XI   3                  I    4                I  100
3  26  3  22I  2                  I   3                 I                 XI  2                   I    4                I   90
3  26  3  23I 1                   I   3                 I                 XI   3                  I     5               I   70
3  26  3  24I 1                   I  2                  I                 XI   3                  I     5               I   70
3  27  4   1I0                    I  2                  I                 XI  2                   I      6              I   80
3  27  4   2I0                    I 1                   I                 XI 1                    I       7             I   80
3  27  4   3I0                    I0                    I                 XI 1                    I    4                I  100
3  27  4   4I0                    I0                    I                 XI 1                    I     5               I  130
3  27  4   5I 1                   I0                    I                 XI 1                    I    4                I  100
3  27  4   6I   3                 I 1                   I                 XI 1                    I  2                  I  120
3  27  4   7I     5               I  2                  I                 XI   3                  I  3                  I  130
3  27  4   8I     5               I     6               I                 XI       7              I  3                  I  120
3  27  4   9I       6             I      7              I                 XI       7              I  3                  I  110
3  27  4  10I    4                I      7              I                 XI      6               I  3                  I  110
3  27  4  11I  2                  I                   XI                  XI       7              I     5               I  110
3  27  4  12I 1                   I     5               I                 XI                   8 I                    I   90
3  27  4  13I 1                   I     5               I                 XI                     0 I                  I   80
3  27  4  14I                    xI     5               I                 XI                     0 I                  I   90
3  27  4  15I                    XI     5               I    4            I                      0 I                  I   90
3  27  4  16I                    XI     5               I      6          I       7              I                 9 I  I   90
3  27  4  17I                    XI     5               I      6          I          9           I                 0 I  I   80
3  27  4  18I                    xI         9           I        7        I          9           I                 0 I  I   80
3  27  4  19I                    xI      7              I     5           I     5                I                 0 I  I   70
3  27  4  20I                    XI     5               I    4            I    4                 I                  1 I  I   70
3  27  4  21I                    XI    4                I    4            I   3                  I                   2 I  I   70
3  27  4  22I                    xI   3                 I    4            I    4                 I                  1 I  I   70
3  27  4  23I                    xI  2                  I  2              I   3                  I                 0 I  I   70
3  27  4  24I                    xI  2                  I  2              I  2                   I                 0 I  I   70
3  28  5   1I                    xI  2                  I  2              I 1                    I                 9 I  I   60
3  28  5   2I                    xI  2                  I 1               I 1                    I                  1 I  I   70
3  28  5   3I                    XI 1                   I0                I 1                    I                 0 I  I   80
3  28  5   4I                    xI 1                   I0                I 1                    I                 0 I  I   80
3  28  5   5I                    XI 1                   I0                I 1                    I                 0 I  I   80
3  28  5   6I                    xI 1                   I0                I 1                    I                  1 I  I   90
3  28  5   7I                    xI  2                  I1                I  2                   I                 0 I  I   90
3  28  5   8I                    XI     5               I    4            I    5                 I                8 I  I  100
3  28  5   9I                    XI      6              I      6          I      6               I      6          I   90
3  28  5  10I                    xI       7             I      6          I       7              I     5           I   60
3  28  5  11I                    XI                   XI      6          I      6               I       7          I   60
3  28  5  12I                    XI     5               I     5           I                    XI                 0 I  I   80
3  28  5  13I                    XI    4                I    4            I                    XI                   2 I  I   80
3  28  5  14I  2                  I   3                 I   3             I    4               I                   2 I  I   80
3  28  5  15I  2                  I    4                I    4            I    4               I                    3 I  I   80
3  28  5  16I   3                 I    4                I    4            I      6             I                   2 I  I   90
3  28  5  17I   3                 I        8            I        8        I                 0 I                 0 I  I   80
3  28  5  18I  2                  I          0          I          0     XI                 9 I                 0 I  I   80
3  28  5  19I 1                   I      6              I       7         I      6             I                 0 I  I   70
3  28  5  20I 1                   I      6              I      6          I     5              I                9 I  I   60
3  28  5  21I 1                   I    4                I   3             I    4               I                 0 I  I   70
3  28  5  22I0                    I     5               I     6           I    4               I                 0 I  I   70
3  28  5  23I0                    I  2                  I  2              I   3               I                9 I  I   80
3  28  5  24I0                    I  2                  I  2              I   3               I                8 I  I   70
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3  29  6   1I0                I  2                I  2                I  2                I        8          I   80
3  29  6   2I0                I 1                 I0                  I 1                 I        8          I   80
3  29  6   3I0                I 1                 I0                  I 1                 I       7           I   70
3  29  6   4I 1               I 1                 I0                  I 1                 I       7           I   90
3  29  6   5I 1               I 1                 I0                  I 1                 I     5             I   80
3  29  6   6I   3             I  2                I 1                 I  2                I      6            I   70
3  29  6   7I     5           I   3               I  2                I    4              I      6            I   90
3  29  6   8I    4            I      6            I      6            I        8          I    4             I  100
3  29  6   9I    4            I        8          I       7           I         9         I    4             I   90
3  29  6  10I     5           I        8          I       7           I        8          I     5            I   70
3  29  6  11I     5           I       7           I      6            I       7           I      6            I   80
3  29  6  12I    4            I                   XI     6            I       7           I      6            I   90
3  29  6  13I    4            I                   XI      7           I       8           I     5             I   90
3  29  6  14I    4            I                   XI     6            I       7           I      6            I   90
3  29  6  15I     5           I      6            I      6            I       7           I       7           I   90
3  29  6  16I      6          I      6            I      6            I       7           I         9         I   90
3  29  6  17I      6          I        8          I       7           I         9         I      6            I  100
3  29  6  18I                XI          0        I         9         I           1       I    4               I  100
3  29  6  19I                XI        8          I        8          I          0        I     5             I  100
3  29  6  20I                XI       7           I       7           I         9         I     5             I  120
3  29  6  21I                XI    4              I    4              I    4              I       7.           I  130
3  29  6  22I                XI 1                 I0                  I  2                I           2        I  180
3  29  6  23I                XI0                  I0                  I                  XI         9          I  210
3  29  6  24I                XI 1                 I0                  I                  XI      6             I  230
3  30  7   1I                XI 1                 I0                  I                  XI     5              I  240
3  30  7   2I                XI 1                 I0                  I                  XI   3                I  280
3  30  7   3I                XI 1                 I0                  I                  XI   3                I  320
3  30  7   4I                XI 1                 I0                  I                  XI   3                I  330
3  30  7   5I                XI 1                 I0                  I                  XI  2                 I  340
3  30  7   6I                XI  2                I0                  I                  XI    4               I  310
3  30  7   7I                XI 1                 I0                  I                  XI            1       I  340
3  30  7   8I                XI 1                 I0                  I                  XI             2      I  350
3  30  7   9I                XI  2                I0                  I                  XI            1       I  360
3  30  7  10I                XI  2                I 1                 I                  XI            1       I  340
3  30  7  11I                XI 1                 I0                  I                  XI              3     I  320
3  30  7  12I                XI                   XI 1                I                  XI       7            I  310
3  30  7  14I    3            I    3               I  2                I  2                I       7            I  310
3  30  7  15I   2             I  2                 I  2                I  2                I         9          I  310
3  30  7  16I    3            I    3               I  2                I  2                I         9          I  310
3  30  7  17I   2             I  2                 I  2                I  2                I         9          I  320
3  30  7  18I    3            I    3               I  2                I  2                I      6             I  300
3  30  7  18I   2             I  2                 I  2                I  2                I           1        I  330
3  30  7  19I 1               I  2                 I 1                 I  2                I         9          I  340
3  30  7  20I 1               I  2                 I  2                I  2                I         9          I  340
3  30  7  21I 1               I  2                 I 1                 I  2                I          0         I  330
3  30  7  22I0                I  2                 I 1                 I  2                I          0         I  330
3  30  7  23I0                I 1                  I0                  I 1                 I         9          I  330
3  30  7  24I0                I 1                  I0                  I 1                 I           1        I  330
3  31  1   1I0                I 1                  I0                  I 1                 I      6             I  310
3  31  1   2I0                I 1                  I0                  I 1                 I      6             I  320
3  31  1   3I0                I 1                  I0                  I 1                 I      6             I  320
3  31  1   4I0                I0                   I0                  I 1                 I        8           I  320
3  31  1   5I0                I0                   I0                  I 1                 I     5              I  320
3  31  1   6I0                I0                   I0                  I 1                 I   3                I  330
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3  31   1   7I 1                 I0                  I0                  I 1                 I  2                I  310
3  31   1   8I0                  I0                  I0                  I 1                 I   3               I  290
3  31   1   9I0                  I 1                 I0                  I 1                 I   3               I  300
3  31   1  10I0                  I 1                 I0                  I  2                I    4              I   30
3  31   1  11I0                  I                  XI                  XI 1                 I  2                I  120
3  31   1  12I0                  I 1                 I0                  I  2                I  2                I  130
3  31   1  13I  2                I 1                 I0                  I  2                I   3               I  100
3  31   1  14I  2                I  2                I 1                 I   3               I    4              I  160
3  31   1  15I  2                I    4              I    4              I    4              I    5              I  120
3  31   1  16I   3               I    4              I    4              I     5             I    5              I  100
3  31   1  17I   3               I    4              I    4              I    4              I       8           I  100
3  31   1  18I  2                I      6            I      6            I      6            I        9          I   80
3  31   1  19I 1                 I   3               I  2                I   3               I      6            I   90
3  31   1  20I 1                 I   3               I    4              I    4              I         9         I   90
3  31   1  21I 1                 I    4              I   3               I    4              I         9         I   70
3  31   1  22I 1                 I   3               I  2                I    4              I        8          I   90
3  31   1  23I 1                 I 1                 I 1                 I  2                I          0        I   90
3  31   1  24I0                  I 1                 I0                  I  2                I          0        I   90
4   1   2   1I0                  I 1                 I0                  I 1                 I           1       I   90
4   1   2   2I0                  I0                  I0                  I 1                 I            2      I   90
4   1   2   3I0                  I0                  I0                  I 1                 I             3     I   90
4   1   2   4I0                  I0                  I0                  I 1                 I              4    I   70
4   1   2   5I0                  I0                  I0                  I 1                 I              4    I   80
4   1   2   6I0                  I0                  I0                  I 1                 I              4    I   90
4   1   2   7I 1                 I  2                I 1                 I   3               I             3     I   90
4   1   2   8I  2                I     5             I     5             I      6            I        9          I   90
4   1   2   9I   3               I     5             I     5             I     5             I      7            I   90
4   1   2  10I   3               I      6            I      6            I      6            I      6            I  120
4   1   2  11I   3               I    4              I    4              I    4              I        9          I  110
4   1   2  12I   3               I   3               I    4              I                   XI         9         I  120
4   1   2  13I   3               I  2                I 1                 I                   XI         9         I  150
4   1   2  14I   3               I                  XI0                  I    4              I          1        I  180
4   1   2  15I   3               I                  XI                  XI  2                I         9         I  200
4   1   2  16I    4              I 1                 I0                  I  2                I          1        I  230
4   1   2  17I      6            I 1                 I0                  I  2                I             4     I  260
4   1   2  18I      6            I 1                 I0                  I  2                I                  XI  270
4   1   2  19I      6            I 1                 I0                  I  2                I                  XI  270
4   1   2  20I   3               I 1                 I0                  I 1                 I                6   I  280
4   1   2  21I   3               I 1                 I0                  I 1                 I               5    I  280
4   1   2  22I   3               I 1                 I0                  I 1                 I                6   I  290
4   1   2  23I  2                I 1                 I0                  I 1                 I               5    I  300
4   1   2  24I  2                I 1                 I0                  I 1                 I               5    I  300
4   2   3   1I  2                I0                  I0                  I 1                 I          1         I  290
4   2   3   2I  2                I0                  I0                  I 1                 I       7            I  280
4   2   3   3I  2                I0                  I0                  I 1                 I      6             I  270
4   2   3   4I  2                I0                  I0                  I 1                 I         9          I  250
4   2   3   5I  2                I0                  I0                  I 1                 I        8           I  250
4   2   3   6I  2                I0                  I 1                 I 1                 I       7            I  240
4   2   3   7I   3               I0                  I 1                 I 1                 I       7            I  240
4   2   3   8I    4              I 1                 I  2                I  2                I      6             I  220
4   2   3   9I       7           I 1                 I 1                 I 1                 I               4    I  220
4   2   3  10I       7           I 1                 I0                  I 1                 I                 7  I  220
4   2   3  11I     5             I 1                 I0                  I 1                 I                  XI  220
4   2   3  12I   3               I                  XI0                  I 1                 I                  XI  220
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4  2  3  13I    4                I 1                 I0                  I0                  I                   XI  230
4  2  3  14I    4                I 1                 I0                  I0                  I                   XI  240
4  2  3  15I    4                I 1                 I0                  I 1                 I                   XI  230
4  2  3  16I   3                 I 1                 I0                  I 1                 I                   XI  220
4  2  3  17I   3                 I 1                 I0                  I 1                 I                   XI  210
4  2  3  18I    4                I0                  I0                  I 1                 I                   XI  210
4  2  3  19I   3                 I0                  I0                  I 1                 I                 8 I  200
4  2  3  20I 1                  I 1                 I 1                 I 1                 I             4     I  190
4  2  3  21I 1                  I 1                 I 1                 I  2                I           2       I  190
4  2  3  22I    4               I  2                I  2                I   3               I       7         I  180
4  2  3  23I 1                  I 1                 I 1                 I  2                I      6          I  170
4  2  3  24I 1                  I0                  I 1                 I 1                 I      6          I  170
4  3  4   1I0                   I0                  I0                  I 1                 I       7         I  170
4  3  4   2I0                   I0                  I0                  I 1                 I         9       I  190
4  3  4   3I0                   I0                  I0                  I 1                 I      6          I  200
4  3  4   4I0                   I0                  I0                  I 1                 I  2               I  170
4  3  4   5I0                   I0                  I0                  I 1                 I   3              I  140
4  3  4   6I 1                  I0                  I 1                 I  2                I    4             I  130
4  3  4   7I   3                I  2                I   3               I   3               I    4            I  140
4  3  4   8I     5              I     5             I     6             I     5             I     5           I  130
4  3  4   9I     5              I    4              I    4              I    4              I       8         I  140
4  3  4  10I   3                I 1                 I  2                I  2                I             4   I  170
4  3  4  11I  2                 I 1                 I 1                 I  2                I           2     I  150
4  3  4  12I  2                 I                   XI 1                I  2                I               6 I  140
4  3  4  13I  2                 I                   XI                  XI 2                I               6 I  150
4  3  4  14I  2                 I  2                I  2                I  2                I              5  I  150
4  3  4  15I  2                 I  2                I   3               I    4              I       8         I  150
4  3  4  16I     5              I         9         I          0        I        8          I   3             I   80
4  3  4  17I        8           I     5             I     6             I     6             I      6          I  130
4  3  4  18I        8           I    4              I    5              I    4              I         9       I  160
4  3  4  19I      6             I  2                I   3               I   3               I       7         I  200
4  3  4  20I       7            I      6            I      7            I     6             I0                  I  240
4  3  4  21I       7            I        8          I          0        I        8          I   3             I  120
4  3  4  22I           2        I       7           I         9         I       7           I  2              I  120
4  3  4  23I          9         I       7           I        8          I        8          I  2              I  160
4  3  4  24I      6             I   3               I    4              I       7           I    4            I  210
4  4  5   1I 1                  I0                  I 1                 I  2                I         9       I  230
4  4  5   2I 1                  I0                  I0                  I 1                 I           1     I  230
4  4  5   3I0                   I 1                 I0                  I 1                 I             2   I  220
4  4  5   4I0                   I 1                 I0                  I 1                 I              5  I  220
4  4  5   5I0                   I0                  I0                  I 1                 I              5  I  220
4  4  5   6I0                   I0                  I0                  I 1                 I                 XI  230
4  4  5   7I  2                 I0                  I0                  I 1                 I                XI   230
4  4  5   8I      6             I 1                 I0                  I 1                 I                 8 I  230
4  4  5   9I      6             I 1                 I0                  I 1                 I                6  I  230
4  4  5  10I     5              I 1                 I0                  I 1                 I                6  I  240
4  4  5  11I     5              I 1                 I0                  I 1                 I              5    I  240
4  4  5  12I   3                I 1                 I0                  I 1                 I         9       I  280
4  4  5  13I 1                  I                   XI 1                I                   XI     5            I  300
4  4  5  14I 1                  I   3               I 1                 I  2                I      6           I  300
4  4  5  15I 1                  I  2                I 1                 I 1                 I       7          I  300
4  4  5  16I 1                  I 1                 I 1                 I  2                I       7          I  300
4  4  5  17I  2                 I   3               I  2                I   3               I       7          I  300
4  4  5  18I   3                I  2                I  2                I  2                I       7          I  310
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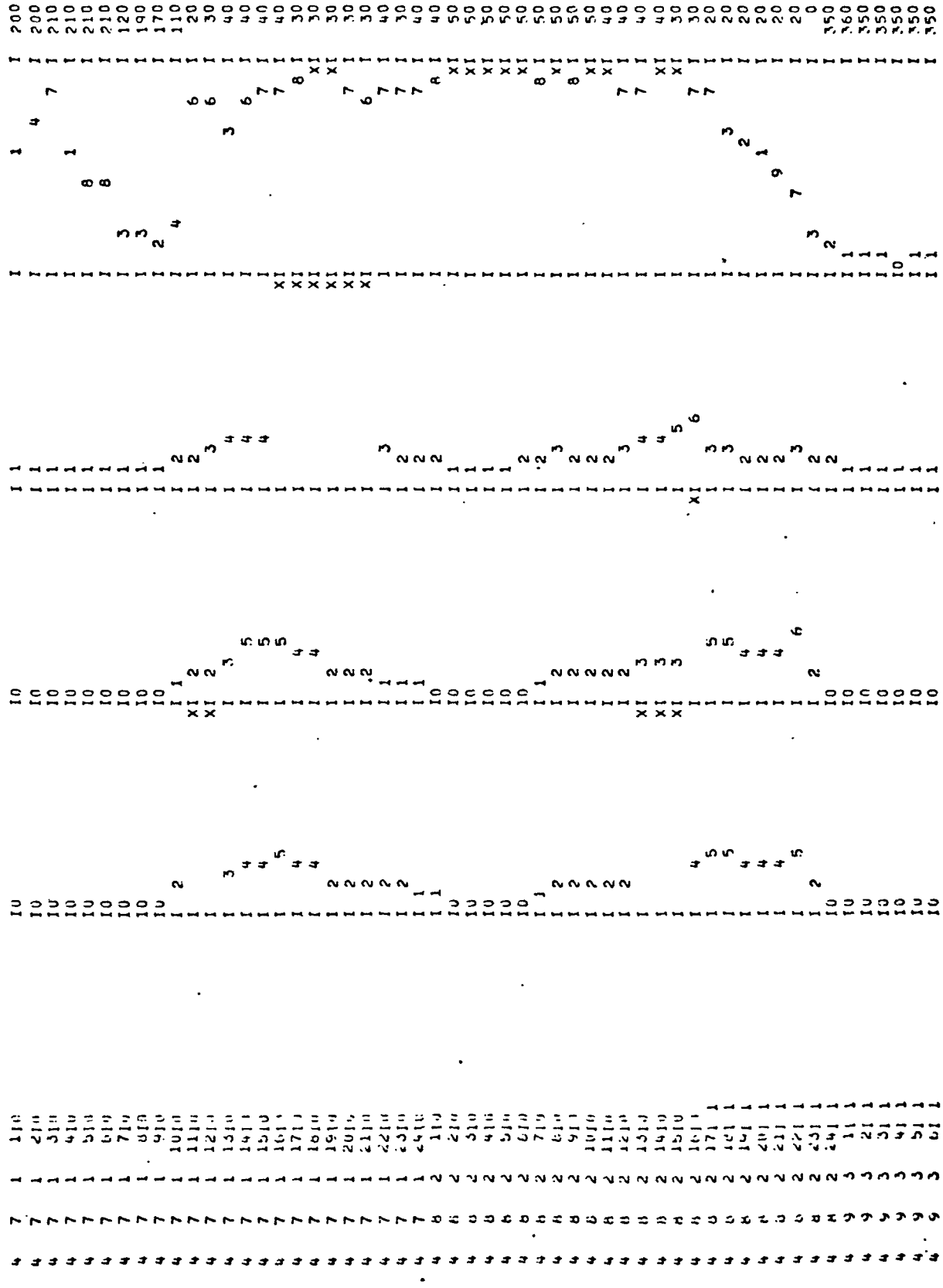
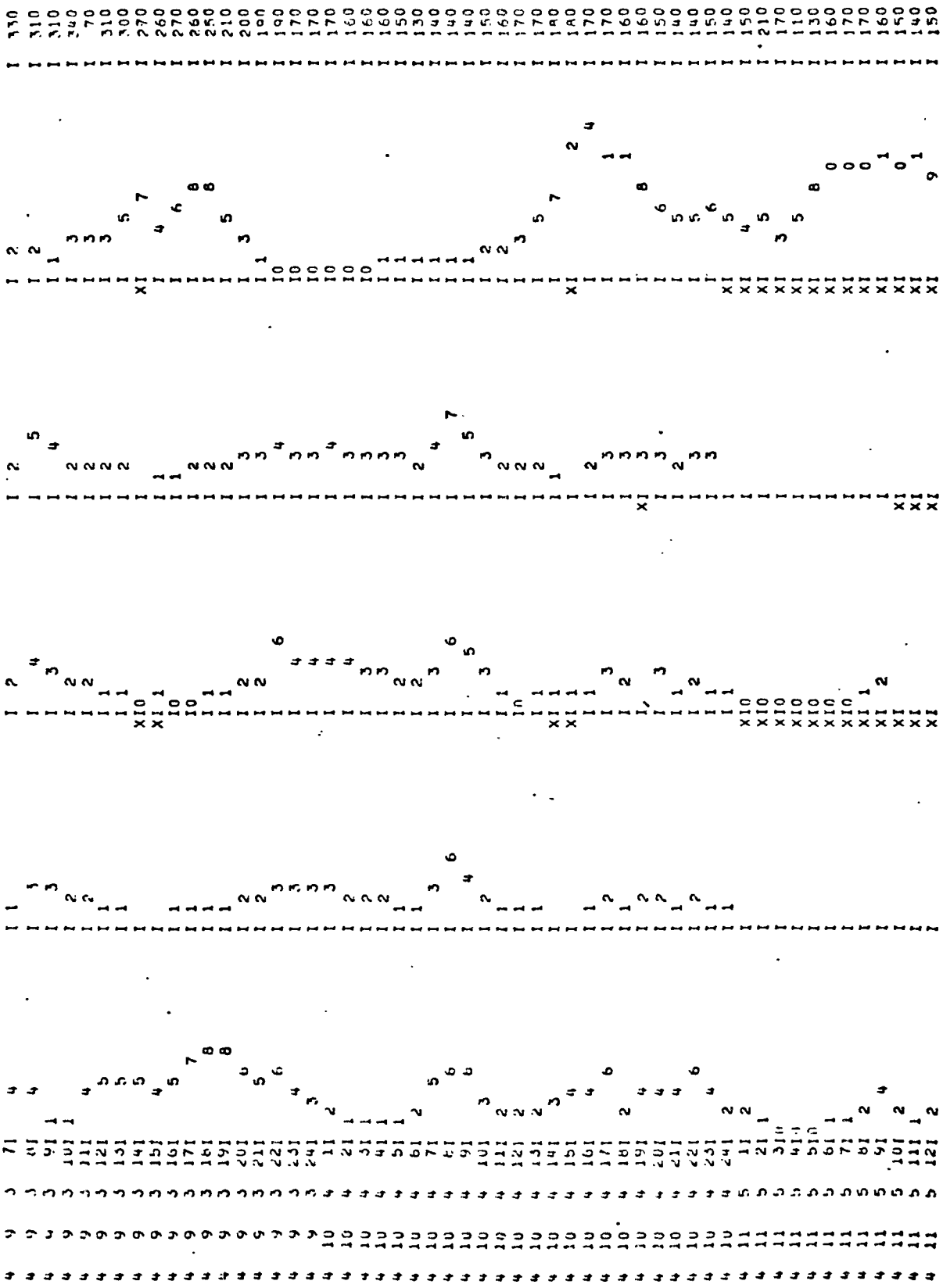
4   4   5   19I 1                I  2                I  2                I  2                I        8          I  320
4   4   5   20I 1                I   3               I   3               I  2                I    4              I  330
4   4   5   21I 1                I  2                I  2                I  2                I     5             I  330
4   4   5   22I 1                I  2                I  2                I  2                I     5             I  350
4   4   5   23I0                 I  2                I 1                 I 1                 I   3               I  340
4   4   5   24I0                 I 1                 I0                  I 1                 I     5             I  330
4   5   6    1I0                 I 1                 I0                  I 1                 I      6            I  340
4   5   6    2I0                 I 1                 I0                  I 1                 I      6            I  330
4   5   6    3I0                 I0                  I0                  I 1                 I      6            I  340
4   5   6    4I0                 I0                  I0                  I0                  I      6            I  350
4   5   6    5I0                 I0                  I0                  I0                  I       7           I  350
4   5   6    6I0                 I0                  I0                  I0                  I      6            I  350
4   5   6    7I0                 I 1                 I0                  I 1                 I     5             I  350
4   5   6    8I0                 I   3               I   3               I   3               I      6            I  330
4   5   6    9I0                 I   3               I   3               I   3               I      6            I  340
4   5   6   10I0                 I  2                I  2                I  2                I      6            I  350
4   5   6   11I0                 I  2                I  2                I 1                 I        8          I  340
4   5   6   12I0                 I 1                 I 1                 I 1                 I        8          I  340
4   5   6   13I0                 I                   XI  2               I  2                I        8          I  340
4   5   6   14I0                 I  2                I  2                I  2                I         9         I  340
4   5   6   15I0                 I  2                I  2                I  2                I         9         I  340
4   5   6   16I0                 I  2                I  2                I  2                I          0        I  350
4   5   6   17I0                 I   3               I   3               I   3               I         9         I  350
4   5   6   18I0                 I        7          I        7          I        7          I       7           I   20
4   5   6   19I0                 I         8         I         8         I         8         I     5             I   30
4   5   6   20I0                 I         8         I          9        I         8         I   3               I   50
4   5   6   21I0                 I         8         I         8         I         8         I  2                I   50
4   5   6   22I     4            I        7          I       7           I      6            I 1                 I   50
4   5   6   23I            0     I   3               I     5             I    4              I0                  I   50
4   5   6   24I          8       I    4              I      6            I     5             I0                  I   50
4   6   7    1I         8        I     5             I      6            I      6            I0                  I   40
4   6   7    2I        7         I         8         I          9        I         9         I0                  I   40
4   6   7    3I        7         I       6           I      6            I        7          I0                  I   40
4   6   7    4I       6          I      5            I      6            I      6            I0                  I   40
4   6   7    5I     5            I    4              I      6            I     5             I0                  I   40
4   6   7    6I     5            I    4              I     5             I     5             I0                  I   40
4   6   7    7I     5            I   3               I    4              I   3               I0                  I   40
4   6   7    8I    4             I   3               I   3               I  2                I0                  I   30
4   6   7    9I  2               I 1                 I 1                 I  2                I  2                I  280
4   6   7   10I    4             I 1                 I0                  I  2                I     5             I  250
4   6   7   11I     5            I 1                 I0                  I 1                 I          0        I  250
4   6   7   12I     5            I                   XI0                 I                   XI         9        I  260
4   6   7   13I     5            I0                  I0                  I 1                 I         9         I  250
4   6   7   14I      6           I0                  I0                  I 1                 I            2      I  250
4   6   7   15I      6           I0                  I0                  I0                  I               5   I  240
4   6   7   16I      6           I0                  I0                  I0                  I                 7 I  230
4   6   7   17I     5            I0                  I0                  I0                  I                  8I  220
4   6   7   18I     5            I0                  I0                  I 1                 I                 XI  220
4   6   7   19I  2               I0                  I0                  I 1                 I                  8I  220
4   6   7   20I   3              I0                  I0                  I 1                 I               5 I  210
4   6   7   21I   3              I0                  I0                  I 1                 I                 7 I  210
4   6   7   22I   3              I0                  I0                  I 1                 I               5 I  200
4   6   7   23I    4             I0                  I0                  I 1                 I              4  I  200
4   6   7   24I 1                I0                  I0                  I 1                 I               5 I  200
```





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4  11  5  151   3                I   XI                  XI                  XI         1         I  170
4  11  5  141  2                  I   XI                  XI                  XI                 8 I  200
4  11  5  151  2                  I   XI                  XI                  XI       0         I  190
4  11  5  161    4                I   XI                  XI                  XI           4     I  190
4  11  5  171      6              I   XI                  XI                  XI      9          I  190
4  11  5  181       7             I   XI                  XI                  XI    7            I  170
4  11  5  191      6               I   XI   3              I                  XI     8           I  160
4  11  5  201     5                I   XI  2               I                  XI         2       I  170
4  11  5  211     5                I   XI 1                I                  XI           3     I  170
4  11  5  221    4                 I   XI 1                I                  XI             5   I  170
4  11  5  231  2                   I   XI 1                I                  XI                 8 I  170
4  11  5  241  2                   I   XI0                 I                  XI                  XI  170
4  12  6   11  2                   I   XI0                 I                  XI                  XI  170
4  12  6   21  2                   I   XI0                 I                  XI                  XI  170
4  12  6   31 1                    I   XI0                 I                  XI                 8 I  160
4  12  6   41 1                    I   XI0                 I                  XI                  XI  160
4  12  6   51 1                    I   XI0                 I                  XI                  XI  170
4  12  6   61 1                    I   XI0                 I                  XI                 8 I  170
4  12  6   71 1                    I   XI0                 I                  XI                  XI  170
4  12  6   81 1                    I   XI0                 I                  XI                  XI  180
4  12  6   91 1                    I   XI0                 I                  XI                  XI  190
4  12  6  101 1                    I   XI0                 I                  XI                  XI  190
4  12  6  111 1                    I   XI0                 I                  XI                  XI  190
4  12  6  121  2                   I   XI0                 I                  XI                  XI  200
4  12  6  131  2                   I   XI0                 I                  XI                  XI  200
4  12  6  141   3                  I   XI0                 I                  XI                  XI  200
4  12  6  151   3                  I   XI0                 I                  XI                  XI  200
4  12  6  161      6               I   XI0                 I                  XI                  XI  210
4  12  6  171      6               I   XI0                 I                  XI                  XI  220
4  12  6  181       7              I   XI0                 I                  XI                 8 I  230
4  12  6  191      6               I   XI0                 I                  XI             5     I  230
4  12  6  201      6               I   XI0                 I                  XI            4      I  250
4  12  6  211    4                 I   XI0                 I                  XI           3       I  250
4  12  6  221    4                 I   XI0                 I                  XI           3       I  260
4  12  6  231   3                  I   XI0                 I                  XI      9            I  260
4  12  6  241  2                   I   XI 1                I                  XI   6              I  240
4  13  7   11   3                  I   XI0                 I                  XI    7             I  180
4  13  7   21  2                   I   XI0                 I                  XI    7             I  200
4  13  7   31  2                   I   XI0                 I                  XI     8            I  200
4  13  7   41 1                    I   XI0                 I                  XI    7             I  220
4  13  7   51 1                    I   XI0                 I                  XI      9            I  220
4  13  7   61 1                    I   XI0                 I                  XI         2        I  220
4  13  7   71 1                    I   XI0                 I                  XI       0          I  240
4  13  7   81  2                   I   XI0                 I                  XI           3      I  240
4  13  7   91   3                  I   XI0                 I                  XI             5    I  230
4  13  7  101    4                 I   XI0                 I                  XI            4     I  240
4  13  7  111    4                 I   XI0                 I                  XI           3       I  250
4  13  7  121    4                 I   XI0                 I                  XI           3       I  240
4  13  7  131     5                I   XI0                 I                  XI         2         I  240
4  13  7  141      6               I   XI0                 I                  XI       0          I  230
4  13  7  151      6               I   XI0                 I                  XI       0          I  230
4  13  7  161    4                 I   XI 1                I                  XI      9           I  220
4  13  7  171   3                  I   XI  2               I                  XI    7             I  220
4  13  7  181    4                 I   XI   3              I                  XI  3               I  200
```

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4  13   7  19I  2                I                XI   3                I                XI        7                I  180
4  13   7  20I  1                I                XI  2                I                XI                 4     I  170
4  13   7  21I  1                I                XI 1                 I                XI             2         I  170
4  13   7  22I  2                I                XI 1                 I                XI           1           I  180
4  13   7  23I  1                I                XI 1                 I                XI         0             I  170
4  13   7  24I0                  I                XI 1                 I                XI        7              I  160
```

Table A-3. LISTING OF CARBON MONOXIDE 1-HOUR AND 8-HOUR* AVERAGES FOR STATIONS 11, 12, 13 AND 14; AND LISTING OF WIND DIRECTION AND SPEED.

Note:

MON = Month

DW = Day of Week (Sunday = 1, Monday = 2, etc.)

HR = Hour (Midnight to 1:00 a.m. = 1, 1:00 a.m. to 2:00 a.m. = 2, etc.)

WD = Wind Direction (degrees)

WS = Wind Speed (mph)

* The 8-hour average listed for any given hour is calculated by using that given hour and the previous 7 hours.

A "999.0" reading on the 1-hour average indicates that no data were recorded.

A "******" reading on the 8-hour average indicates that there were not sufficient data to calculate an 8-hour average.

MON	DAY	DW	HR	1-HR ST-11	8-HR ST-11	1-HR ST-12	8-HR ST-12	1-HR ST-13	8-HR ST-13	1-HR ST-14	8-HR ST-14	WD	WS
3	22	6	12	999.0******		999.0******		999.0******		2.1******		240.0	23.0
3	22	6	13	999.0******		999.0******		3.9******		3.0******		230.0	22.0
3	22	6	14	999.0******		999.0******		3.0******		3.0******		230.0	22.0
3	22	6	15	999.0******		999.0******		3.0******		3.0******		210.0	30.0
3	22	6	16	1.3******		2.1******		3.9******		3.9******		210.0	28.0
3	22	6	17	1.3******		3.0******		3.9******		4.7	3.3	210.0	25.0
3	22	6	18	1.3******		3.9******		4.7	3.7	4.7	3.5	200.0	20.0
3	22	6	19	1.3******		3.0******		4.7	3.9	4.7	3.6	210.0	16.0
3	22	6	20	2.1******		2.1******		4.7	4.0	3.9	3.9	230.0	15.0
3	22	6	21	2.1	1.6	2.1	2.7	3.0	3.9	2.1	3.8	250.0	13.0
3	22	6	22	3.0	1.8	2.1	2.6	2.1	3.8	1.3	3.5	300.0	14.0
3	22	6	23	1.3	1.7	1.3	2.5	1.3	3.5	.4	3.2	300.0	12.0
3	22	6	24	1.3	1.7	.4	2.2	1.3	3.2	.4	2.8	300.0	10.0
3	23	7	1	.4	1.6	0.	1.9	.4	2.8	.4	2.2	300.0	9.0
3	23	7	2	.4	1.5	0.	1.4	.4	2.2	.4	1.7	300.0	9.0
3	23	7	3	.4	1.4	0.	1.0	.4	1.7	.4	1.2	300.0	11.0
3	23	7	4	.4	1.2	0.	.7	.4	1.2	.4	.7	310.0	10.0
3	23	7	5	.4	.9	0.	.5	.4	.8	.4	.5	310.0	8.0
3	23	7	6	.4	.6	0.	.2	.4	.6	.4	.4	310.0	9.0
3	23	7	7	1.3	.6	0.	.0	.4	.5	.4	.4	310.0	8.0
3	23	7	8	1.3	.6	.4	.0	.4	.4	.4	.4	310.0	8.0
3	23	7	9	1.3	.7	.4	.1	.4	.4	.4	.4	310.0	8.0
3	23	7	10	1.3	.8	1.3	.3	1.3	.5	.4	.4	310.0	8.0
3	23	7	11	1.3	.9	1.3	.4	1.3	.6	.4	.4	310.0	8.0
3	23	7	12	2.1	1.2	2.1	.7	1.3	.7	.4	.4	330.0	8.0
3	23	7	13	2.1	1.4	2.1	.9	2.1	.9	1.3	.5	330.0	6.0
3	23	7	14	3.0	1.7	3.0	1.3	2.1	1.2	1.3	.6	340.0	5.0
3	23	7	15	2.1	1.8	2.1	1.6	2.1	1.4	1.3	.7	350.0	7.0
3	23	7	16	2.1	1.9	2.1	1.8	2.1	1.6	1.3	.8	350.0	6.0
3	23	7	17	2.1	2.0	2.1	2.0	2.1	1.8	1.3	.9	350.0	5.0
3	23	7	18	2.1	2.1	2.1	2.1	1.3	1.8	1.3	1.0	360.0	3.0
3	23	7	19	1.3	2.1	.4	2.0	2.1	1.9	1.3	1.2	330.0	3.0
3	23	7	20	1.3	2.0	.4	1.8	2.1	2.0	1.3	1.3	330.0	4.0
3	23	7	21	1.3	1.9	.4	1.6	1.3	1.9	1.3	1.3	320.0	3.0
3	23	7	22	1.3	1.7	1.3	1.4	2.1	1.9	1.3	1.3	290.0	5.0
3	23	7	23	1.3	1.6	2.1	1.4	4.7	2.2	3.9	1.6	260.0	3.0
3	23	7	24	.4	1.4	3.0	1.5	4.7	2.6	3.9	1.9	250.0	4.0
3	24	1	1	.4	1.2	3.0	1.6	2.1	2.6	2.1	2.0	250.0	7.0
3	24	1	2	.4	.9	1.3	1.5	2.1	2.7	1.3	2.0	240.0	8.0
3	24	1	3	.4	.8	.4	1.5	.4	2.5	1.3	2.0	240.0	11.0
3	24	1	4	.4	.7	.4	1.5	.4	2.2	.4	1.9	290.0	17.0
3	24	1	5	.4	.6	.4	1.5	.4	2.1	.4	1.8	310.0	13.0
3	24	1	6	.4	.5	.4	1.4	.4	1.9	.4	1.7	300.0	13.0
3	24	1	7	.4	.4	.4	1.2	.4	1.4	.4	1.3	300.0	12.0
3	24	1	8	.4	.4	.4	.8	.4	.8	.4	.8	300.0	12.0
3	24	1	9	.4	.4	.4	.5	.4	.6	.4	.6	300.0	14.0
3	24	1	10	999.0	.4	.4	.4	.4	.4	.4	.5	300.0	14.0
3	24	1	11	999.0	.4	.4	.4	.4	.4	.4	.4	310.0	15.0
3	24	1	12	999.0******		1.3	.5	.4	.4	.4	.4	300.0	12.0
3	24	1	13	999.0******		2.1	.7	.4	.4	.4	.4	320.0	10.0
3	24	1	14	999.0******		2.1	.9	2.1	.6	1.3	.5	300.0	11.0
3	24	1	15	999.0******		2.1	1.2	2.1	.8	1.3	.6	300.0	11.0

3	24	1	16	999.0******	2.1	1.4	2.1	1.0	1.3	.7	310.0	10.0
3	24	1	17	999.0******	1.3	1.5	2.1	1.3	1.3	.8	310.0	10.0
3	24	1	18	999.0******	1.3	1.6	1.3	1.4	.4	.8	310.0	7.0
3	24	1	19	999.0******	.4	1.6	1.3	1.5	1.3	.9	300.0	5.0
3	24	1	20	999.0******	.4	1.5	1.3	1.6	2.1	1.2	280.0	4.0
3	24	1	21	999.0******	.4	1.3	2.1	1.8	2.1	1.4	260.0	1.0
3	24	1	22	999.0******	1.3	1.2	3.0	1.9	3.0	1.6	260.0	1.0
3	24	1	23	999.0******	1.3	1.0	3.0	2.0	3.0	1.8	230.0	1.0
3	24	1	24	999.0******	1.3	.9	2.1	2.0	2.1	1.9	230.0	1.0
3	25	2	1	999.0******	1.3	.9	.4	1.8	1.3	1.9	210.0	1.0
3	25	2	2	999.0******	.4	.8	0.	1.6	1.3	2.0	190.0	2.0
3	25	2	3	999.0******	.4	.8	0.	1.5	.4	1.9	170.0	5.0
3	25	2	4	999.0******	.4	.8	0.	1.3	.4	1.7	170.0	6.0
3	25	2	5	999.0******	.4	.8	0.	1.1	.4	1.5	180.0	7.0
3	25	2	6	999.0******	.4	.7	.4	.7	.4	1.2	190.0	12.0
3	25	2	7	999.0******	.4	.6	1.3	.5	1.3	.9	190.0	13.0
3	25	2	8	999.0******	2.1	.7	3.9	.7	2.1	.9	190.0	15.0
3	25	2	9	999.0******	2.1	.8	3.0	1.1	1.3	.9	190.0	20.0
3	25	2	10	999.0******	1.3	.9	3.0	1.4	1.3	.9	190.0	20.0
3	25	2	11	999.0******	1.3	1.0	2.1	1.7	1.3	1.0	190.0	20.0
3	25	2	12	999.0******	2.1	1.3	2.1	2.0	1.3	1.2	200.0	25.0
3	25	2	13	999.0******	2.1	1.5	2.1	2.2	999.0	1.3	210.0	25.0
3	25	2	14	999.0******	1.3	1.6	3.0	2.6	2.1	1.5	210.0	27.0
3	25	2	15	999.0******	999.0	1.8	3.0	2.8	3.0	1.8	220.0	27.0
3	25	2	16	999.0******	999.0	1.7	3.0	2.7	3.0	1.9	210.0	27.0
3	25	2	17	.4******	999.0******		4.7	2.9	3.0	2.1	220.0	24.0
3	25	2	18	.4******	999.0******		3.0	2.9	3.0	2.4	220.0	22.0
3	25	2	19	.4******	999.0******		3.9	3.1	3.9	2.7	220.0	16.0
3	25	2	20	.4******	999.0******		3.9	3.3	3.0	3.0	210.0	15.0
3	25	2	21	.4******	999.0******		3.0	3.4	2.1	2.9	200.0	14.0
3	25	2	22	.4	.4	999.0******	3.9	3.5	3.0	3.0	200.0	11.0
3	25	2	23	.4	.4	999.0******	2.1	3.4	2.1	2.9	210.0	11.0
3	25	2	24	.4	.4	999.0******	1.3	3.2	1.3	2.7	210.0	14.0
3	26	3	1	0.	.3	999.0******	.4	2.7	1.3	2.5	220.0	15.0
3	26	3	2	0.	.3	999.0******	.4	2.3	.4	2.1	220.0	16.0
3	26	3	3	0.	.2	999.0******	.4	1.9	.4	1.7	230.0	14.0
3	26	3	4	.4	.2	999.0******	.4	1.5	.4	1.4	220.0	15.0
3	26	3	5	1.3	.4	999.0******	.4	1.2	.4	1.2	220.0	14.0
3	26	3	6	1.3	.5	999.0******	1.3	.8	1.3	.9	220.0	15.0
3	26	3	7	.4	.5	999.0******	4.7	1.2	3.0	1.0	240.0	13.0
3	26	3	8	.4	.5	999.0******	6.5	1.8	3.9	1.4	240.0	14.0
3	26	3	9	1.3	.6	999.0******	3.9	2.2	3.0	1.6	260.0	12.0
3	26	3	10	999.0	.7	999.0******	1.3	2.3	1.3	1.7	290.0	12.0
3	26	3	11	999.0	.8	999.0******	1.3	2.5	.4	1.7	320.0	12.0
3	26	3	12	999.0******	999.0******		1.3	2.6	.4	1.7	350.0	11.0
3	26	3	13	999.0******	999.0******		.4	2.6	.4	1.7	350.0	10.0
3	26	3	14	999.0******	999.0******		1.3	2.6	.4	1.6	350.0	9.0
3	26	3	15	999.0******	999.0******		2.1	2.2	.4	1.3	340.0	6.0
3	26	3	16	999.0******	1.3******		1.3	1.6	.4	.8	340.0	5.0
3	26	3	17	1.3******	3.0******		2.1	1.4	1.3	.6	70.0	7.0
3	26	3	18	2.1******	4.7******		2.1	1.5	2.1	.7	80.0	7.0
3	26	3	19	2.1******	5.6******		3.0	1.7	2.1	.9	100.0	4.0
3	26	3	20	2.1******	4.7******		3.0	1.9	3.0	1.3	90.0	4.0
3	26	3	21	2.1******	4.7	4.0	2.1	2.1	2.1	1.5	100.0	4.0

3	26	3	22	1.3	1.8	6.5	4.4	2.1	2.2	3.0	1.8	90.0	4.0
3	26	3	23	2.1	1.9	3.0	4.2	2.1	2.2	2.1	2.0	70.0	5.0
3	26	3	24	1.3	1.8	3.0	4.4	1.3	2.2	2.1	2.2	70.0	5.0
3	27	4	1	1.3	1.8	3.0	4.4	1.3	2.1	1.3	2.2	80.0	6.0
3	27	4	2	.4	1.6	3.0	4.2	1.3	2.0	.4	2.0	60.0	7.0
3	27	4	3	.4	1.4	2.1	3.8	.4	1.7	.4	1.8	100.0	4.0
3	27	4	4	.4	1.2	2.1	3.4	.4	1.4	1.3	1.6	130.0	5.0
3	27	4	5	.4	.9	3.0	3.2	.4	1.2	1.3	1.5	100.0	4.0
3	27	4	6	1.3	.9	3.9	2.9	.4	.9	2.1	1.4	120.0	2.0
3	27	4	7	1.3	.8	5.6	3.2	2.1	.9	3.0	1.5	130.0	3.0
3	27	4	8	2.1	.9	5.6	3.5	3.9	1.3	3.9	1.7	120.0	3.0
3	27	4	9	3.9	1.3	5.6	3.9	3.9	1.6	3.9	2.0	110.0	3.0
3	27	4	10	3.9	1.7	6.5	4.3	4.7	2.0	4.7	2.6	110.0	3.0
3	27	4	11	4.7	2.2	3.9	4.5	3.9	2.5	3.0	2.9	110.0	5.0
3	27	4	12	3.9	2.7	3.0	4.6	2.1	2.7	2.1	3.0	90.0	8.0
3	27	4	13	2.1	2.9	3.0	4.6	1.3	2.8	2.1	3.1	80.0	10.0
3	27	4	14	2.1	3.0	999.0	4.7	2.1	3.0	2.1	3.1	90.0	10.0
3	27	4	15	999.0	3.2	999.0	4.6	1.3	2.9	2.1	3.0	90.0	10.0
3	27	4	16	999.0	3.4	999.0	******	2.1	2.7	2.1	2.8	90.0	9.0
3	27	4	17	999.0	******	999.0	******	2.1	2.5	2.1	2.6	80.0	10.0
3	27	4	18	999.0	******	999.0	******	2.1	2.1	2.1	2.2	80.0	10.0
3	27	4	19	3.9	******	999.0	******	1.3	1.8	1.3	2.0	70.0	10.0
3	27	4	20	3.9	******	999.0	******	1.3	1.7	.4	1.8	70.0	11.0
3	27	4	21	3.9	******	999.0	******	.4	1.6	.4	1.6	70.0	12.0
3	27	4	22	3.0	******	999.0	******	1.3	1.5	.4	1.4	70.0	11.0
3	27	4	23	3.0	******	999.0	******	.4	1.4	.4	1.2	70.0	10.0
3	27	4	24	3.0	3.4	999.0	******	.4	1.2	.4	.9	70.0	10.0
3	28	5	1	3.0	3.4	999.0	******	.4	.9	.4	.7	60.0	9.0
3	28	5	2	3.0	3.3	999.0	******	.4	.7	.4	.5	70.0	11.0
3	28	5	3	3.0	3.2	999.0	******	.4	.6	.4	.4	80.0	10.0
3	28	5	4	3.0	3.1	999.0	******	.4	.5	.4	.4	80.0	10.0
3	28	5	5	3.0	3.0	999.0	******	.4	.5	.4	.4	80.0	10.0
3	28	5	6	3.0	3.0	999.0	******	.4	.4	1.3	.5	90.0	11.0
3	28	5	7	3.0	3.0	999.0	******	.4	.4	2.1	.7	90.0	10.0
3	28	5	8	3.9	3.1	999.0	******	1.3	.5	3.0	1.0	100.0	8.0
3	28	5	9	4.7	3.3	999.0	******	3.0	.8	4.7	1.6	90.0	6.0
3	28	5	10	3.9	3.4	999.0	******	3.9	1.3	4.7	2.1	60.0	5.0
3	28	5	11	3.0	3.4	999.0	******	3.0	1.6	3.9	2.6	60.0	7.0
3	28	5	12	3.0	3.4	999.0	******	2.1	1.8	3.0	2.9	80.0	10.0
3	28	5	13	3.0	3.4	999.0	******	2.1	2.0	3.0	3.2	80.0	12.0
3	28	5	14	3.0	3.4	999.0	******	1.3	2.1	2.1	3.3	60.0	12.0
3	28	5	15	2.1	3.3	999.0	******	1.3	2.2	2.1	3.3	80.0	13.0
3	28	5	16	1.3	3.0	3.9	******	2.1	2.3	2.1	3.2	90.0	12.0
3	28	5	17	2.1	2.7	4.7	******	3.0	2.3	3.0	3.0	60.0	10.0
3	28	5	18	3.0	2.6	4.7	******	3.0	2.2	3.0	2.8	80.0	10.0
3	28	5	19	2.1	2.5	2.1	******	2.1	2.1	2.1	2.6	70.0	10.0
3	28	5	20	2.1	2.3	2.1	******	2.1	2.1	2.1	2.5	60.0	9.0
3	28	5	21	1.3	2.1	1.3	3.1	1.3	2.0	1.3	2.2	70.0	10.0
3	28	5	22	2.1	2.0	2.1	3.0	1.3	2.0	1.3	2.1	70.0	10.0
3	28	5	23	.4	1.8	.4	2.7	1.3	2.0	.4	1.9	60.0	9.0
3	28	5	24	.4	1.7	0.	2.2	1.3	1.9	.4	1.7	70.0	8.0
3	29	6	1	.4	1.5	0.	1.6	.4	1.6	.4	1.4	80.0	8.0
3	29	6	2	.4	1.2	0.	1.0	.4	1.3	.4	1.0	80.0	8.0
3	29	6	3	.4	.9	0.	.7	.4	1.0	.4	.8	70.0	7.0

3	29	6	4	.4	.7	0.	.5	.4	.8	.4	.6	90.0	7.0
3	29	6	5	.4	.6	0.	.3	.4	.7	.4	.5	80.0	5.0
3	29	6	6	.4	.4	.4	.1	1.3	.7	1.3	.5	70.0	6.0
3	29	6	7	1.3	.5	.4	.1	1.3	.7	2.1	.7	90.0	6.0
3	29	6	8	2.1	.7	3.0	.5	2.1	.8	3.0	1.0	100.0	4.0
3	29	6	9	3.0	1.0	3.9	1.0	3.0	1.2	3.9	1.5	90.0	4.0
3	29	6	10	3.9	1.5	3.9	1.4	3.0	1.5	3.9	1.9	70.0	5.0
3	29	6	11	3.9	1.9	4.7	2.0	3.0	1.8	3.9	2.3	80.0	6.0
3	29	6	12	3.9	2.3	4.7	2.6	3.9	2.2	3.9	2.8	90.0	6.0
3	29	6	13	3.9	2.8	5.6	3.3	3.9	2.7	3.9	3.2	90.0	5.0
3	29	6	14	3.9	3.2	5.6	4.0	3.0	2.9	3.9	3.5	90.0	6.0
3	29	6	15	3.0	3.4	4.7	4.5	3.0	3.1	3.9	3.8	90.0	7.0
3	29	6	16	3.9	3.6	5.6	4.8	5.6	3.5	3.9	3.9	90.0	9.0
3	29	6	17	3.9	3.8	5.6	5.1	5.6	3.9	4.7	4.0	100.0	6.0
3	29	6	18	3.9	3.8	8.2	5.6	5.6	4.2	6.5	4.3	100.0	4.0
3	29	6	19	4.7	3.9	7.3	5.9	5.6	4.5	5.6	4.5	100.0	5.0
3	29	6	20	4.7	4.0	3.9	5.8	5.6	4.7	5.6	4.7	120.0	5.0
3	29	6	21	2.1	3.8	1.3	5.3	3.9	4.7	3.9	4.7	130.0	7.0
3	29	6	22	.4	3.3	1.3	4.7	3.9	4.8	2.1	4.5	130.0	12.0
3	29	6	23	.4	3.0	.4	4.2	3.9	4.9	3.0	4.4	210.0	9.0
3	29	6	24	.4	2.6	0.	3.5	3.9	4.7	3.9	4.4	230.0	6.0
3	30	7	1	.4	2.1	0.	2.8	3.9	4.5	3.9	4.3	240.0	5.0
3	30	7	2	.4	1.7	.4	1.8	2.1	4.1	1.3	3.6	280.0	3.0
3	30	7	3	.4	1.2	.4	.9	1.3	3.5	.4	3.0	320.0	3.0
3	30	7	4	.4	.6	.4	.5	1.3	3.0	.4	2.3	330.0	3.0
3	30	7	5	.4	.4	.4	.4	1.3	2.7	1.3	2.0	340.0	2.0
3	30	7	6	1.3	.5	.4	.3	1.3	2.3	1.3	1.9	310.0	4.0
3	30	7	7	.4	.5	.4	.3	.4	1.9	1.3	1.7	340.0	11.0
3	30	7	8	.4	.5	1.3	.5	.4	1.5	.4	1.3	350.0	12.0
3	30	7	9	.4	.5	1.3	.6	.4	1.0	.4	.8	360.0	11.0
3	30	7	10	1.3	.6	2.1	.8	.4	.8	.4	.7	340.0	11.0
3	30	7	11	3.0	.9	2.1	1.0	1.3	.8	1.3	.8	320.0	13.0
3	30	7	12	5.6	1.6	4.7	1.6	2.1	.9	2.1	1.0	310.0	7.0
3	30	7	14	4.7	2.1	4.7	2.1	2.1	1.0	2.1	1.2	310.0	7.0
3	30	7	15	4.7	2.6	4.7	2.7	1.3	1.0	2.1	1.3	310.0	9.0
3	30	7	16	5.6	3.2	5.6	3.3	2.1	1.3	3.0	1.5	310.0	9.0
3	30	7	17	3.0	3.5	3.9	3.6	1.3	1.4	2.1	1.7	320.0	9.0
3	30	7	15	7.3	4.4	4.7	4.1	2.1	1.6	3.0	2.0	300.0	6.0
3	30	7	18	2.1	4.5	3.0	4.2	1.3	1.7	1.3	2.1	330.0	11.0
3	30	7	19	.4	4.2	.4	4.0	.4	1.6	1.3	2.1	340.0	9.0
3	30	7	20	.4	3.5	.4	3.4	.4	1.4	1.3	2.0	340.0	9.0
3	30	7	21	.4	3.0	.4	2.9	.4	1.2	.4	1.8	330.0	10.0
3	30	7	22	.4	2.5	.4	2.3	.4	1.0	.4	1.6	330.0	10.0
3	30	7	23	.4	1.8	0.	1.6	.4	.8	.4	1.3	330.0	9.0
3	30	7	24	.4	1.5	0.	1.2	.4	.7	.4	1.0	330.0	11.0
3	31	1	1	.4	.6	0.	.6	.4	.5	.4	.7	310.0	6.0
3	31	1	2	.4	.4	0.	.2	.4	.4	.4	.6	320.0	6.0
3	31	1	3	.4	.4	0.	.1	.4	.4	.4	.5	320.0	6.0
3	31	1	4	.4	.4	0.	.1	.4	.4	.4	.4	320.0	8.0
3	31	1	5	.4	.4	0.	.0	.4	.4	0.	.3	320.0	5.0
3	31	1	6	.4	.4	0.	0.	.4	.4	.4	.3	330.0	3.0
3	31	1	7	.4	.4	0.	0.	.4	.4	.4	.3	310.0	2.0
3	31	1	8	.4	.4	.4	.0	.4	.4	.4	.3	290.0	3.0
3	31	1	9	.4	.4	0.	.0	.4	.4	.4	.3	300.0	3.0

3	31	1	10	.4	.4	0.	.0	.4	.4	.4	.3	30.0	4.0
3	31	1	11	.4	.4	.4	.1	.4	.4	.4	.3	120.0	2.0
3	31	1	12	.4	.4	1.3	.3	.4	.4	.4	.3	130.0	2.0
3	31	1	13	1.3	.5	2.1	.5	3.0	.7	1.3	.5	100.0	3.0
3	31	1	14	.4	.5	3.9	1.0	1.3	.8	1.3	.6	160.0	4.0
3	31	1	15	.4	.5	2.1	1.3	1.3	.9	1.3	.7	120.0	5.0
3	31	1	16	2.1	.7	1.3	1.4	2.1	1.2	2.1	.9	100.0	5.0
3	31	1	17	2.1	.9	.4	1.4	2.1	1.4	2.1	1.2	100.0	8.0
3	31	1	18	1.3	1.0	.4	1.5	2.1	1.6	2.1	1.4	60.0	9.0
3	31	1	19	.4	1.0	.4	1.5	1.3	1.7	.4	1.4	90.0	6.0
3	31	1	20	.4	1.0	.4	1.4	1.3	1.8	.4	1.4	90.0	9.0
3	31	1	21	.4	.9	.4	1.2	1.3	1.6	.4	1.3	70.0	9.0
3	31	1	22	.4	.9	.4	.7	1.3	1.6	.4	1.2	90.0	8.0
3	31	1	23	.4	.9	.4	.5	.4	1.5	.4	1.0	90.0	10.0
3	31	1	24	.4	.7	.4	.4	.4	1.3	0.	.8	90.0	10.0
4	1	2	1	.4	.5	.4	.4	.4	1.0	0.	.5	90.0	11.0
4	1	2	2	.4	.4	0.	.3	.4	.8	0.	.2	90.0	12.0
4	1	2	3	.4	.4	0.	.3	.4	.7	0.	.2	90.0	13.0
4	1	2	4	.4	.4	0.	.2	.4	.6	0.	.1	70.0	14.0
4	1	2	5	.4	.4	0.	.2	.4	.5	0.	.1	80.0	14.0
4	1	2	6	.4	.4	.4	.2	.4	.4	0.	.0	90.0	14.0
4	1	2	7	.4	.4	1.3	.3	1.3	.5	0.	0.	90.0	13.0
4	1	2	8	2.1	.6	3.0	.6	2.1	.7	.4	.0	90.0	9.0
4	1	2	9	2.1	.8	3.0	1.0	3.0	1.0	2.1	.3	90.0	7.0
4	1	2	10	3.0	1.2	3.0	1.3	3.0	1.4	1.3	.5	120.0	6.0
4	1	2	11	3.0	1.5	1.3	1.5	3.0	1.7	1.3	.6	110.0	9.0
4	1	2	12	1.3	1.6	1.3	1.6	2.1	1.9	1.3	.3	120.0	9.0
4	1	2	13	.4	1.6	2.1	1.9	1.3	2.0	.4	.8	150.0	9.0
4	1	2	14	.4	1.6	2.1	2.1	3.0	2.3	2.1	1.1	100.0	11.0
4	1	2	15	.4	1.6	2.1	2.2	4.7	2.8	3.9	1.6	200.0	9.0
4	1	2	16	2.1	1.6	2.1	2.1	6.5	3.3	4.7	2.1	230.0	11.0
4	1	2	17	2.1	1.6	2.1	2.0	5.6	3.6	3.9	2.3	260.0	14.0
4	1	2	18	2.1	1.5	3.0	2.0	3.9	3.8	3.0	2.6	270.0	19.0
4	1	2	19	2.1	1.4	2.1	2.1	2.1	3.6	1.3	2.6	270.0	19.0
4	1	2	20	1.3	1.4	2.1	2.2	2.1	3.6	1.3	2.6	280.0	16.0
4	1	2	21	2.1	1.6	1.3	2.1	2.1	3.8	1.3	2.7	280.0	15.0
4	1	2	22	1.3	1.7	1.3	2.0	2.1	3.6	.4	2.5	290.0	16.0
4	1	2	23	.4	1.7	1.3	1.9	1.3	3.2	0.	2.0	300.0	15.0
4	1	2	24	.4	1.5	1.3	1.8	1.3	2.6	0.	1.4	300.0	15.0
4	2	3	1	0.	1.2	1.3	1.7	1.3	2.0	.4	.9	290.0	11.0
4	2	3	2	0.	.9	1.3	1.5	1.3	1.7	.4	.6	280.0	7.0
4	2	3	3	0.	.7	1.3	1.4	1.3	1.6	.4	.5	270.0	6.0
4	2	3	4	0.	.5	1.3	1.3	1.3	1.5	.4	.4	250.0	9.0
4	2	3	5	0.	.3	1.3	1.3	1.3	1.4	.4	.3	250.0	8.0
4	2	3	6	0.	.1	1.3	1.3	2.1	1.4	1.3	.4	240.0	7.0
4	2	3	7	.4	.1	2.1	1.4	4.7	1.6	3.0	.8	240.0	7.0
4	2	3	8	1.3	.2	2.1	1.5	7.3	2.6	7.3	1.7	220.0	6.0
4	2	3	9	1.3	.4	3.0	1.7	5.6	3.1	5.6	2.3	220.0	14.0
4	2	3	10	.4	.4	2.1	1.8	2.1	3.2	3.0	2.7	220.0	17.0
4	2	3	11	.4	.5	2.1	1.9	2.1	3.3	2.1	2.9	220.0	19.0
4	2	3	12	.4	.5	1.3	1.9	2.1	3.4	2.1	3.1	220.0	24.0
4	2	3	13	.4	.6	1.3	1.9	2.1	3.5	2.1	3.3	230.0	24.0
4	2	3	14	.4	.6	1.3	1.9	3.0	3.6	2.1	3.4	240.0	25.0
4	2	3	15	0.	.6	1.3	1.8	3.0	3.4	3.0	3.4	230.0	23.0

4	2	3	16	0.	.4	1.3	1.7	3.9	3.0	3.0	2.9	220.0	22.0
4	2	3	17	0.	.2	2.1	1.6	5.6	3.0	3.9	2.7	210.0	20.0
4	2	3	18	0.	.2	3.0	1.7	4.7	3.3	3.0	2.7	210.0	20.0
4	2	3	19	0.	.1	2.1	1.7	3.0	3.4	1.3	2.6	200.0	18.0
4	2	3	20	0.	.1	2.1	1.8	1.3	3.3	1.3	2.5	190.0	14.0
4	2	3	21	0.	.0	1.3	1.8	.4	3.1	.4	2.2	190.0	12.0
4	2	3	22	0.	0.	4.7	2.2	2.1	3.0	1.3	2.1	180.0	7.0
4	2	3	23	0.	0.	1.3	2.2	.4	2.7	.4	1.8	170.0	6.0
4	2	3	24	0.	0.	1.3	2.2	.4	2.2	.4	1.5	170.0	6.0
4	3	4	1	0.	0.	.4	2.0	.4	1.6	.4	1.0	170.0	7.0
4	3	4	2	0.	0.	.4	1.7	.4	1.0	.4	.7	190.0	9.0
4	3	4	3	0.	0.	.4	1.5	.4	.7	0.	.6	200.0	6.0
4	3	4	4	0.	0.	.4	1.3	.4	.6	.4	.5	170.0	2.0
4	3	4	5	0.	0.	.4	1.2	.4	.6	.4	.5	140.0	3.0
4	3	4	6	0.	0.	1.3	.7	1.3	.5	1.3	.5	130.0	4.0
4	3	4	7	.4	.0	2.1	.8	2.1	.7	2.1	.7	140.0	4.0
4	3	4	8	1.3	.2	3.0	1.0	3.9	1.2	3.9	1.1	130.0	5.0
4	3	4	9	2.1	.5	3.9	1.5	3.9	1.6	3.0	1.4	140.0	8.0
4	3	4	10	.4	.5	1.3	1.6	2.1	1.8	1.3	1.5	170.0	14.0
4	3	4	11	.4	.6	1.3	1.7	1.3	1.9	.4	1.6	150.0	12.0
4	3	4	12	.4	.6	1.3	1.8	1.3	2.0	0.	1.5	140.0	16.0
4	3	4	13	.4	.7	2.1	2.0	1.3	2.1	0.	1.5	150.0	16.0
4	3	4	14	.4	.7	2.1	2.1	1.3	2.1	0.	1.3	150.0	15.0
4	3	4	15	2.1	.9	3.0	2.2	2.1	2.1	.4	1.1	150.0	8.0
4	3	4	16	3.9	1.3	4.7	2.5	3.0	2.0	.4	.7	80.0	3.0
4	3	4	17	3.0	1.4	3.9	2.5	3.9	2.0	1.3	.5	130.0	6.0
4	3	4	18	2.1	1.6	4.7	2.9	3.9	2.2	1.3	.5	160.0	9.0
4	3	4	19	3.0	1.9	3.0	3.1	3.9	2.6	.4	.5	200.0	7.0
4	3	4	20	5.6	2.6	7.3	3.9	6.5	3.2	1.3	.6	240.0	0.
4	3	4	21	6.5	3.3	11.7	5.1	5.6	3.8	2.1	.9	120.0	3.0
4	3	4	22	9.1	4.4	7.3	5.7	10.8	4.9	3.9	1.4	120.0	2.0
4	3	4	23	6.5	4.9	3.0	5.7	8.2	5.7	3.0	1.7	160.0	2.0
4	3	4	24	3.0	4.8	.4	5.2	5.6	6.0	2.1	1.9	210.0	4.0
4	4	5	1	0.	4.5	.4	4.7	.4	5.6	.4	1.8	230.0	9.0
4	4	5	2	0.	4.2	.4	4.2	.4	5.2	0.	1.6	230.0	11.0
4	4	5	3	0.	3.8	.4	3.9	.4	4.7	0.	1.6	220.0	12.0
4	4	5	4	0.	3.1	.4	3.0	.4	4.8	0.	1.4	220.0	15.0
4	4	5	5	0.	2.3	.4	1.6	.4	3.3	0.	1.2	220.0	15.0
4	4	5	6	0.	1.2	.4	.7	1.3	2.1	0.	.7	230.0	20.0
4	4	5	7	0.	.4	.4	.4	3.0	1.5	.4	.4	230.0	19.0
4	4	5	8	.4	.0	2.1	.6	5.6	1.5	1.3	.3	230.0	18.0
4	4	5	9	.4	.1	2.1	.8	3.9	1.9	1.3	.4	230.0	16.0
4	4	5	10	.4	.1	1.3	.9	3.0	2.2	.4	.4	240.0	16.0
4	4	5	11	1.3	.3	2.1	1.2	3.0	2.6	.4	.5	240.0	15.0
4	4	5	12	2.1	.6	2.1	1.4	2.1	2.8	.4	.5	280.0	9.0
4	4	5	13	2.1	.8	3.0	1.7	1.3	2.9	.4	.6	300.0	5.0
4	4	5	14	1.3	1.0	2.1	1.9	3.0	3.1	.4	.6	300.0	6.0
4	4	5	15	2.1	1.3	2.1	2.1	3.0	3.1	.4	.6	300.0	7.0
4	4	5	16	3.0	1.6	1.3	2.0	3.9	2.9	1.3	.6	300.0	7.0
4	4	5	17	3.0	1.9	2.1	2.0	5.6	3.1	3.0	.8	300.0	7.0
4	4	5	18	3.9	2.3	2.1	2.1	6.5	3.5	2.1	1.0	310.0	7.0
4	4	5	19	2.1	2.5	1.3	2.0	3.0	3.5	1.3	1.2	320.0	8.0
4	4	5	20	3.0	2.6	3.0	2.1	2.1	3.5	1.3	1.3	330.0	4.0
4	4	5	21	4.7	2.9	2.1	2.0	.4	3.4	1.3	1.4	330.0	5.0

4	4	5	22	1.3	2.9	2.1	2.0	.4	3.1	1.3	1.5	350.0	5.0
4	4	5	23	.4	2.7	1.3	1.9	.4	2.8	.4	1.5	340.0	3.0
4	4	5	24	.4	2.3	.4	1.8	.4	2.3	.4	1.4	330.0	5.0
4	5	6	1	1.3	2.1	.4	1.6	.4	1.7	.4	1.0	340.0	6.0
4	5	6	2	3.0	2.0	0.	1.3	0.	.9	.4	.8	330.0	6.0
4	5	6	3	1.3	1.9	0.	1.2	0.	.5	.4	.7	340.0	6.0
4	5	6	4	.4	1.6	0.	.8	0.	.2	.4	.6	350.0	6.0
4	5	6	5	.4	1.0	0.	.5	0.	.2	.4	.5	350.0	7.0
4	5	6	6	.4	.9	0.	.3	0.	.1	.4	.4	350.0	6.0
4	5	6	7	.4	.9	.4	.1	.4	.1	.4	.4	350.0	5.0
4	5	6	8	1.3	1.0	.4	.1	2.1	.4	1.3	.5	330.0	6.0
4	5	6	9	1.3	1.0	.4	.1	1.3	.5	1.3	.6	340.0	6.0
4	5	6	10	1.3	.8	.4	.2	1.3	.6	.4	.6	350.0	6.0
4	5	6	11	1.3	.8	.4	.2	1.3	.8	.4	.6	340.0	8.0
4	5	6	12	1.3	.9	.4	.3	1.3	.9	.4	.6	340.0	8.0
4	5	6	13	1.3	1.0	.4	.3	1.3	1.1	.4	.6	340.0	8.0
4	5	6	14	1.3	1.2	.4	.4	1.3	1.3	.4	.6	340.0	9.0
4	5	6	15	1.3	1.3	.4	.4	1.3	1.4	.4	.6	340.0	9.0
4	5	6	16	1.3	1.3	.4	.4	1.3	1.3	.4	.5	350.0	10.0
4	5	6	17	1.3	1.3	.4	.4	2.1	1.4	1.3	.5	350.0	9.0
4	5	6	18	1.3	1.3	1.3	.5	.4	1.3	1.3	.6	20.0	7.0
4	5	6	19	1.3	1.3	2.1	.7	1.3	1.3	1.3	.7	30.0	5.0
4	5	6	20	2.1	1.4	2.1	.9	1.3	1.3	1.3	.8	50.0	3.0
4	5	6	21	2.1	1.5	3.0	1.3	1.3	1.3	1.3	.9	50.0	2.0
4	5	6	22	3.9	1.8	10.8	2.6	9.1	2.2	5.6	1.6	50.0	1.0
4	5	6	23	7.3	2.6	9.1	3.6	9.1	3.2	8.2	2.6	50.0	0.
4	5	6	24	7.3	3.3	9.1	4.7	9.1	4.2	8.2	3.5	50.0	0.
4	6	7	1	6.5	4.0	9.1	5.8	9.1	5.1	9.1	4.5	40.0	0.
4	6	7	2	6.5	4.6	8.2	6.7	9.1	6.1	7.3	5.3	40.0	0.
4	6	7	3	8.2	5.5	9.1	7.5	8.2	7.0	8.2	6.1	40.0	0.
4	6	7	4	7.3	6.1	7.3	8.2	6.5	7.7	6.5	6.8	40.0	0.
4	6	7	5	5.6	6.6	5.6	8.5	5.6	8.2	5.6	7.3	40.0	0.
4	6	7	6	5.6	6.8	5.6	7.9	5.6	7.8	5.6	7.3	40.0	0.
4	6	7	7	3.9	6.4	5.6	7.4	5.6	7.3	5.6	7.0	40.0	0.
4	6	7	8	3.0	5.8	3.0	6.7	3.9	6.7	4.7	6.6	30.0	0.
4	6	7	9	3.0	5.4	1.3	5.7	2.1	5.8	2.1	5.7	260.0	2.0
4	6	7	10	3.0	4.9	1.3	4.8	999.0	5.3	2.1	5.1	250.0	5.0
4	6	7	11	2.1	4.2	2.1	4.0	3.0	4.6	2.1	4.3	250.0	10.0
4	6	7	12	2.1	3.5	1.3	3.2	3.0	4.1	1.3	3.6	260.0	9.0
4	6	7	13	2.1	3.1	2.1	2.8	4.7	4.0	1.3	3.1	250.0	9.0
4	6	7	14	2.1	2.7	2.1	2.3	4.7	3.9	3.0	2.8	250.0	12.0
4	6	7	15	1.3	2.3	2.1	1.9	4.7	3.7	3.0	2.5	240.0	15.0
4	6	7	16	1.3	2.1	2.1	1.8	4.7	3.9	3.0	2.2	230.0	17.0
4	6	7	17	.4	1.8	2.1	1.9	4.7	4.2	3.0	2.3	220.0	18.0
4	6	7	18	.4	1.5	3.0	2.1	4.7	4.3	3.0	2.5	220.0	21.0
4	6	7	19	0.	1.2	.4	1.9	2.1	4.2	2.1	2.5	220.0	18.0
4	6	7	20	0.	.9	1.3	1.9	3.9	4.3	3.9	2.8	210.0	15.0
4	6	7	21	0.	.7	1.3	1.8	3.0	4.1	3.0	3.0	210.0	17.0
4	6	7	22	0.	.4	1.3	1.7	3.0	3.9	3.0	3.0	200.0	15.0
4	6	7	23	0.	.3	2.1	1.7	3.0	3.6	3.0	3.0	200.0	14.0
4	6	7	24	0.	.1	1.3	1.6	1.3	3.2	1.3	2.8	200.0	15.0
4	7	1	1	0.	.0	.4	1.4	3.0	3.0	.4	2.5	200.0	11.0
4	7	1	2	0.	0.	.4	1.0	.4	2.5	.4	2.1	200.0	14.0
4	7	1	3	0.	0.	.4	1.0	.4	2.2	0.	1.9	210.0	17.0

4	7	1	4	0.	0.	.4	.9	0.	1.8	0.	1.4	210.0	11.0
4	7	1	5	0.	0.	.4	.8	0.	1.4	0.	1.0	210.0	8.0
4	7	1	6	0.	0.	.4	.7	.4	1.1	0.	.6	210.0	8.0
4	7	1	7	0.	0.	.4	.5	.4	.7	0.	.3	120.0	3.0
4	7	1	8	0.	0.	.4	.4	.4	.6	.4	.1	190.0	3.0
4	7	1	9	0.	0.	.4	.4	.4	.3	0.	.1	170.0	2.0
4	7	1	10	0.	0.	.4	.4	.4	.3	0.	.0	110.0	4.0
4	7	1	11	0.	0.	.4	.4	.4	.3	0.	.0	20.0	16.0
4	7	1	12	0.	0.	.4	.4	.4	.3	0.	.0	30.0	16.0
4	7	1	13	.4	.0	.4	.4	.4	.4	.4	.1	40.0	13.0
4	7	1	14	.4	.1	1.3	.5	.4	.4	.4	.1	40.0	16.0
4	7	1	15	.4	.1	3.0	.8	.4	.4	.4	.2	40.0	17.0
4	7	1	16	.4	.2	2.1	1.0	.4	.4	.4	.2	40.0	17.0
4	7	1	17	.4	.2	1.3	1.2	.4	.4	.4	.2	30.0	18.0
4	7	1	18	0.	.2	2.1	1.4	.4	.4	.4	.3	30.0	19.0
4	7	1	19	0.	.2	.4	1.4	.4	.4	0.	.3	30.0	19.0
4	7	1	20	0.	.2	.4	1.4	.4	.4	0.	.3	30.0	17.0
4	7	1	21	0.	.2	.4	1.4	.4	.4	0.	.2	30.0	16.0
4	7	1	22	0.	.1	.4	1.3	.4	.4	0.	.2	40.0	17.0
4	7	1	23	0.	.1	.4	.9	.4	.4	0.	.1	30.0	17.0
4	7	1	24	0.	.0	.4	.7	.4	.4	0.	.1	40.0	17.0
4	8	2	1	0.	0.	.4	.6	.4	.4	0.	.0	40.0	18.0
4	8	2	2	0.	0.	.4	.4	.4	.4	0.	0.	50.0	19.0
4	8	2	3	0.	0.	.4	.4	.4	.4	0.	0.	50.0	19.0
4	8	2	4	0.	0.	.4	.4	.4	.4	.4	.0	50.0	20.0
4	8	2	5	0.	0.	.4	.4	.4	.4	.4	.1	50.0	20.0
4	8	2	6	0.	0.	.4	.4	.4	.4	.4	.1	50.0	19.0
4	8	2	7	0.	0.	.4	.4	.4	.4	.4	.2	50.0	18.0
4	8	2	8	0.	0.	.4	.4	.4	.4	.4	.2	50.0	19.0
4	8	2	9	0.	0.	.4	.4	.4	.4	.4	.3	50.0	18.0
4	8	2	10	0.	0.	.4	.4	.4	.4	0.	.3	50.0	20.0
4	8	2	11	0.	0.	.4	.4	.4	.4	0.	.3	40.0	19.0
4	8	2	12	0.	0.	1.3	.5	.4	.4	0.	.2	40.0	17.0
4	8	2	13	0.	0.	1.3	.6	.4	.4	0.	.2	40.0	17.0
4	8	2	14	0.	0.	.4	.6	.4	.4	0.	.1	40.0	19.0
4	8	2	15	0.	0.	1.3	.7	.4	.4	0.	.1	30.0	19.0
4	8	2	16	0.	0.	.4	.7	.4	.4	0.	.0	30.0	17.0
4	8	2	17	.4	.0	1.3	.8	.4	.4	0.	0.	20.0	17.0
4	8	2	18	.4	.1	2.1	1.0	.4	.4	.4	.0	20.0	13.0
4	8	2	19	.4	.1	1.3	1.2	.4	.4	.4	.1	20.0	12.0
4	8	2	20	.4	.2	2.1	1.3	.4	.4	.4	.1	20.0	11.0
4	8	2	21	.4	.2	2.1	1.4	.4	.4	.4	.2	20.0	9.0
4	8	2	22	.4	.3	3.0	1.7	.4	.4	1.3	.4	20.0	7.0
4	8	2	23	.4	.3	2.1	1.8	.4	.4	.4	.4	0.	3.0
4	8	2	24	.4	.4	1.3	1.9	.4	.4	.4	.5	350.0	2.0
4	9	3	1	.4	.4	1.3	1.9	.4	.4	.4	.5	360.0	1.0
4	9	3	2	.4	.4	1.3	1.8	.4	.4	.4	.5	350.0	1.0
4	9	3	3	.4	.4	1.3	1.8	.4	.4	.4	.5	350.0	1.0
4	9	3	4	.4	.4	1.3	1.7	.4	.4	.4	.5	350.0	0.
4	9	3	5	.4	.4	1.3	1.6	.4	.4	.4	.5	350.0	1.0
4	9	3	6	.4	.4	1.3	1.4	.4	.4	.4	.4	350.0	1.0
4	9	3	7	1.3	.5	3.0	1.5	1.3	.5	.4	.4	330.0	2.0
4	9	3	8	3.0	.8	3.9	1.8	4.7	1.0	1.3	.5	310.0	2.0
4	9	3	9	2.1	1.0	2.1	1.9	1.3	1.2	3.9	.9	310.0	1.0

4	9	3	10	1.3	1.2	1.3	1.9	.4	1.2	2.1	1.2	340.0	3.0
4	9	3	11	2.1	1.4	1.3	1.9	.4	1.2	.4	1.2	70.0	3.0
4	9	3	12	1.3	1.5	1.3	1.9	.4	1.2	.4	1.2	310.0	3.0
4	9	3	13	1.3	1.6	1.3	1.9	1.3	1.3	0.	1.1	300.0	5.0
4	9	3	14	1.3	1.7	1.3	1.9	2.1	1.5	0.	1.1	270.0	7.0
4	9	3	15	1.3	1.7	1.3	1.7	3.0	1.7	.4	1.1	260.0	4.0
4	9	3	16	1.3	1.5	1.3	1.4	2.1	1.4	.4	.9	270.0	6.0
4	9	3	17	2.1	1.5	3.9	1.6	3.9	1.7	.4	.5	260.0	8.0
4	9	3	18	2.1	1.6	5.6	2.1	4.7	2.2	1.3	.4	250.0	8.0
4	9	3	19	.4	1.4	4.7	2.6	4.7	2.8	1.3	.5	210.0	5.0
4	9	3	20	.4	1.3	4.7	3.0	3.0	3.1	1.3	.6	200.0	3.0
4	9	3	21	1.3	1.3	4.7	3.4	1.3	3.1	2.1	.9	190.0	1.0
4	9	3	22	1.3	1.3	6.2	4.3	3.0	3.2	3.0	1.3	190.0	0.
4	9	3	23	2.1	1.4	3.9	4.6	2.1	3.1	1.3	1.4	170.0	0.
4	9	3	24	2.1	1.5	3.9	4.9	2.1	3.1	1.3	1.5	170.0	0.
4	10	4	1	3.0	1.6	4.7	6.1	2.1	2.9	1.3	1.6	170.0	0.
4	10	4	2	3.0	1.7	4.7	4.9	2.1	2.6	1.3	1.6	165.0	0.
4	10	4	3	3.0	2.0	3.9	4.8	1.3	2.1	1.3	1.6	160.0	0.
4	10	4	4	2.1	2.2	3.9	4.7	1.3	1.9	1.3	1.6	160.0	1.0
4	10	4	5	2.1	2.3	3.0	4.5	1.3	1.9	1.3	1.5	150.0	1.0
4	10	4	6	1.3	2.3	3.0	3.9	1.3	1.7	2.1	1.4	130.0	1.0
4	10	4	7	2.1	2.3	3.9	3.9	2.1	1.7	2.1	1.5	140.0	1.0
4	10	4	8	2.1	2.3	4.7	4.0	3.0	1.8	3.0	1.7	140.0	1.0
4	10	4	9	2.1	2.2	3.9	3.9	3.0	1.9	1.3	1.7	140.0	1.0
4	10	4	10	.4	1.9	2.1	3.5	1.3	1.8	1.3	1.7	150.0	2.0
4	10	4	11	.4	1.6	2.1	3.3	1.3	1.8	1.3	1.7	160.0	2.0
4	10	4	12	0.	1.3	1.3	3.0	1.3	1.8	1.3	1.7	170.0	3.0
4	10	4	13	0.	1.1	1.3	2.8	2.1	1.9	2.1	1.8	170.0	5.0
4	10	4	14	0.	.9	1.3	2.6	2.1	2.0	.4	1.6	180.0	7.0
4	10	4	15	0.	.6	1.3	2.2	2.1	2.0	.4	1.4	180.0	12.0
4	10	4	16	0.	.4	1.3	1.8	2.1	1.9	.4	1.0	170.0	14.0
4	10	4	17	0.	.1	1.3	1.5	3.0	1.9	.4	.9	170.0	11.0
4	10	4	18	0.	.0	3.0	1.6	2.1	2.0	0.	.8	160.0	11.0
4	10	4	19	0.	0.	3.0	1.7	2.1	2.1	0.	.6	160.0	8.0
4	10	4	20	.4	.0	3.9	2.0	2.1	2.2	0.	.5	150.0	6.0
4	10	4	21	.4	.1	3.0	2.2	3.0	2.3	0.	.2	140.0	5.0
4	10	4	22	1.3	.3	3.9	2.6	1.3	2.2	.4	.2	140.0	5.0
4	10	4	23	.4	.3	1.3	2.6	2.1	2.2	0.	.1	150.0	6.0
4	10	4	24	.4	.4	1.3	2.6	2.1	2.2	0.	.1	140.0	5.0
4	11	5	1	.4	.4	1.3	2.6	1.3	2.0	1.3	.2	150.0	4.0
4	11	5	2	.4	.5	1.3	2.3	.4	1.8	1.3	.4	210.0	5.0
4	11	5	3	.4	.5	1.3	2.1	.4	1.6	1.3	.5	170.0	3.0
4	11	5	4	.4	.5	1.3	1.8	.4	1.4	1.3	.7	110.0	5.0
4	11	5	5	.4	.5	1.3	1.6	.4	1.0	1.3	.8	130.0	8.0
4	11	5	6	.4	.4	1.3	1.3	.4	.9	1.3	.9	160.0	10.0
4	11	5	7	.4	.4	1.3	1.3	2.1	.9	1.3	1.1	170.0	10.0
4	11	5	8	.4	.4	2.1	1.4	3.0	1.0	3.0	1.5	170.0	10.0
4	11	5	9	.4	.4	2.1	1.5	3.0	1.3	3.0	1.7	160.0	11.0
4	11	5	10	.4	.4	2.1	1.6	3.0	1.6	2.1	1.8	150.0	10.0
4	11	5	11	.4	.4	2.1	1.7	3.0	1.9	1.3	1.8	140.0	11.0
4	11	5	12	.4	.4	2.1	1.5	3.0	2.2	3.0	2.0	150.0	9.0
4	11	5	13	.4	.4	3.0	2.0	2.1	2.5	3.0	2.2	170.0	11.0
4	11	5	14	1.3	.5	3.9	2.3	1.3	2.6	2.1	2.3	200.0	18.0
4	11	5	15	1.3	.6	2.1	2.5	2.1	2.6	2.1	2.5	190.0	10.0

4	11	5	16	1.3	.7	3.0	2.6	5.6	2.9	3.9	2.6	190.0	14.0
4	11	5	17	.4	.7	4.7	2.9	4.7	3.1	6.5	3.8	190.0	9.0
4	11	5	18	.4	.7	3.0	3.0	3.9	3.2	3.9	3.2	170.0	7.0
4	11	5	19	0.	.7	3.0	3.1	2.1	3.1	2.1	3.3	160.0	8.0
4	11	5	20	0.	.6	2.1	3.1	1.3	2.9	2.1	3.2	170.0	12.0
4	11	5	21	0.	.6	1.3	2.9	1.3	2.8	1.3	3.0	170.0	13.0
4	11	5	22	.4	.5	1.3	2.6	2.1	2.9	2.1	3.0	170.0	15.0
4	11	5	23	0.	.3	1.3	2.5	.4	2.7	1.3	2.9	170.0	16.0
4	11	5	24	0.	.1	1.3	2.2	0.	2.0	0.	2.4	170.0	21.0
4	12	6	1	0.	.1	1.3	1.8	0.	1.4	0.	1.6	170.0	20.0
4	12	6	2	0.	.0	1.3	1.6	0.	.9	0.	1.1	170.0	19.0
4	12	6	3	0.	.0	1.3	1.4	0.	.6	0.	.8	160.0	18.0
4	12	6	4	0.	.0	1.3	1.3	0.	.5	0.	.6	160.0	20.0
4	12	6	5	0.	.0	1.3	1.3	0.	.3	0.	.4	170.0	21.0
4	12	6	6	0.	0.	1.3	1.3	0.	.0	0.	.2	170.0	18.0
4	12	6	7	0.	0.	1.3	1.3	.4	.0	0.	0.	170.0	20.0
4	12	6	8	0.	0.	2.1	1.4	2.1	.3	.4	.0	180.0	20.0
4	12	6	9	0.	0.	2.1	1.5	2.1	.6	.4	.1	190.0	20.0
4	12	6	10	0.	0.	2.1	1.6	2.1	.8	.4	.1	190.0	21.0
4	12	6	11	0.	0.	2.1	1.7	3.0	1.2	.4	.2	190.0	24.0
4	12	6	12	0.	0.	2.1	1.8	3.0	1.6	.4	.2	200.0	29.0
4	12	6	13	0.	0.	2.1	1.9	3.0	2.0	1.3	.4	200.0	30.0
4	12	6	14	0.	0.	2.1	2.0	3.9	2.5	1.3	.6	200.0	29.0
4	12	6	15	.4	.0	2.1	2.1	3.9	2.9	1.3	.7	200.0	31.0
4	12	6	16	.4	.1	2.1	2.1	4.7	3.2	3.0	1.0	210.0	26.0
4	12	6	17	1.3	.3	2.1	2.1	3.9	3.4	3.0	1.4	220.0	26.0
4	12	6	18	1.3	.4	2.1	2.1	4.7	3.8	3.0	1.7	230.0	18.0
4	12	6	19	1.3	.6	1.3	2.0	3.0	3.8	2.1	1.9	230.0	15.0
4	12	6	20	1.3	.7	1.3	1.9	2.1	3.6	1.3	2.0	250.0	14.0
4	12	6	21	.4	.8	1.3	1.8	1.3	3.4	1.3	2.0	250.0	13.0
4	12	6	22	1.3	.9	1.3	1.7	2.1	3.2	1.3	2.0	260.0	13.0
4	12	6	23	0.	.9	1.3	1.6	1.3	2.9	1.3	2.0	260.0	9.0
4	12	6	24	0.	.8	.4	1.4	1.3	2.5	1.3	1.8	240.0	6.0
4	13	7	1	0.	.7	.4	1.2	3.0	2.3	2.1	1.7	180.0	7.0
4	13	7	2	0.	.5	.4	.9	2.1	2.0	.4	1.4	200.0	7.0
4	13	7	3	0.	.4	.4	.8	1.3	1.8	.4	1.2	200.0	8.0
4	13	7	4	0.	.2	.4	.7	.4	1.6	.4	1.0	220.0	7.0
4	13	7	5	0.	.2	.4	.6	0.	1.4	.4	.9	220.0	9.0
4	13	7	6	0.	0.	.4	.5	0.	1.2	.4	.8	220.0	12.0
4	13	7	7	.4	.0	.4	.4	.4	1.1	1.3	.8	240.0	10.0
4	13	7	8	.4	.1	.4	.4	.4	.9	1.3	.8	240.0	13.0
4	13	7	9	1.3	.3	.4	.4	.4	.6	1.3	.7	230.0	15.0
4	13	7	10	4.7	.8	.4	.4	1.3	.5	1.3	.8	240.0	14.0
4	13	7	11	2.1	1.1	1.3	.5	2.1	.6	1.3	.9	250.0	13.0
4	13	7	12	2.1	1.4	2.1	.7	3.0	.9	2.1	1.2	240.0	13.0
4	13	7	13	2.1	1.6	3.0	1.0	3.9	1.4	3.0	1.5	240.0	12.0
4	13	7	14	2.1	1.9	3.0	1.4	3.9	1.9	3.0	1.8	230.0	10.0
4	13	7	15	3.0	2.2	3.0	1.7	4.7	2.5	3.0	2.0	230.0	10.0
4	13	7	16	2.1	2.5	3.0	2.0	4.7	3.0	2.1	2.1	220.0	9.0
4	13	7	17	2.1	2.6	3.0	2.3	2.1	3.2	.4	2.0	220.0	7.0
4	13	7	18	1.3	2.1	4.7	2.9	3.9	3.5	1.3	2.0	200.0	3.0
4	13	7	19	.4	1.9	1.3	2.9	.4	3.3	.4	1.9	180.0	7.0
4	13	7	20	.4	1.7	1.3	2.8	1.3	3.1	0.	1.6	170.0	14.0
4	13	7	21	.4	1.5	.4	2.5	.4	2.7	0.	1.3	170.0	12.0

4	13	7	22	.4	1.3	.4	2.1	.4	2.2	.4	.9	180.0	11.0
4	13	7	23	.4	.9	.4	1.8	.4	1.7	.4	.6	170.0	10.0
4	13	7	24	.4	.7	.4	1.5	.4	1.2	.4	.4	160.0	7.0

Table A-4. LISTING OF CARBON MONOXIDE 1-HOUR AND 8-HOUR* AVERAGES FOR STATIONS 15, 161, 162 AND 14; AND LISTING OF WIND DIRECTION AND SPEED.

Note:

MON = Month

DW = Day of Week (Sunday = 1, Monday = 2, etc.)

HR = Hour (Midnight to 1:00 a.m. = 1, 1:00 a.m. to 2:00 a.m. = 2, etc.)

WD = Wind Direction (degrees)

WS - Wind Speed (mph)

* The 8-hour average listed for any given hour is calculated by using that given hour and the previous 7 hours.

A "999.0" reading on the 1-hour average indicates that no data were recorded.

A "******" reading on the 8-hour average indicates that there were not sufficient data to calculate an 8-hour average.

MON	DAY	DW	HR	1-HR ST-15	8-HR ST-15	1-HR SW161	8-HR SW161	1-HR SW162	8-HR SW162	1-HR SW163	8-HR SW163	WD	WS
3	22	6	12	999.0******		999.0******		999.0******		999.0******		240.0	23.0
3	22	6	13	1.3******		999.0******		999.0******		999.0******		230.0	22.0
3	22	6	14	1.3******		999.0******		999.0******		999.0******		230.0	22.0
3	22	6	15	2.1******		999.0******		999.0******		999.0******		210.0	30.0
3	22	6	16	4.7******		.5******		999.0******		1.0******		210.0	28.0
3	22	6	17	3.0******		1.0******		.4******		1.5******		210.0	25.0
3	22	6	18	4.7	2.9	1.5******		.4******		1.5******		200.0	20.0
3	22	6	19	3.9	3.0	1.5******		.4******		1.5******		210.0	16.0
3	22	6	20	999.0	3.0	1.5******		.4******		1.5******		230.0	15.0
3	22	6	21	999.0	3.3	1.0	1.2	.4******		1.5	1.4	250.0	13.0
3	22	6	22	999.0******		1.5	1.2	.4	.4	1.5	1.4	300.0	14.0
3	22	6	23	999.0******		1.0	1.2	.4	.4	1.0	1.4	300.0	12.0
3	22	6	24	999.0******		1.0	1.3	.4	.4	1.0	1.4	300.0	10.0
3	23	7	1	999.0******		1.0	1.3	.4	.4	1.0	1.3	300.0	9.0
3	23	7	2	999.0******		.5	1.1	.4	.4	1.0	1.3	300.0	9.0
3	23	7	3	999.0******		.5	1.0	.4	.4	1.0	1.2	300.0	11.0
3	23	7	4	999.0******		.5	.9	.4	.4	.5	1.1	310.0	10.0
3	23	7	5	999.0******		.5	.8	.4	.4	.5	.9	310.0	8.0
3	23	7	6	999.0******		.5	.7	.4	.4	.5	.8	310.0	9.0
3	23	7	7	999.0******		.5	.6	.4	.4	.5	.7	310.0	8.0
3	23	7	8	999.0******		.5	.6	.4	.4	1.0	.7	310.0	8.0
3	23	7	9	999.0******		999.0	.5	.4	.4	1.0	.7	310.0	8.0
3	23	7	10	.4******		999.0	.5	.4	.4	999.0	.7	310.0	8.0
3	23	7	11	.4******		1.5	.7	999.0	.4	2.0	.9	310.0	8.0
3	23	7	12	.4******		2.0	.9	1.3	.5	2.5	1.1	330.0	8.0
3	23	7	13	.4******		3.0	1.3	2.1	.8	3.0	1.5	330.0	6.0
3	23	7	14	.4******		3.5	1.8	3.0	1.1	4.0	2.0	340.0	5.0
3	23	7	15	.4	.4	4.0	2.4	3.0	1.5	4.0	2.5	350.0	7.0
3	23	7	16	.4	.4	4.0	3.0	3.0	1.9	3.5	2.9	350.0	6.0
3	23	7	17	.4	.4	4.0	3.1	3.0	2.3	2.5	3.1	350.0	5.0
3	23	7	18	.4	.4	4.0	3.2	3.9	2.8	4.5	3.2	360.0	3.0
3	23	7	19	.4	.4	2.0	3.3	1.3	2.6	1.5	3.2	330.0	3.0
3	23	7	20	.4	.4	3.0	3.4	2.1	2.7	2.0	3.1	330.0	4.0
3	23	7	21	.4	.4	2.0	3.3	1.3	2.6	.5	2.8	320.0	3.0
3	23	7	22	2.1	.6	2.0	3.1	1.3	2.4	1.0	2.4	290.0	5.0
3	23	7	23	3.9	1.0	2.0	2.9	1.3	2.1	1.0	2.1	260.0	3.0
3	23	7	24	4.7	1.6	2.5	2.7	1.3	1.9	1.0	1.8	250.0	4.0
3	24	1	1	4.7	2.1	2.0	2.4	.4	1.6	.5	1.5	250.0	7.0
3	24	1	2	2.1	2.3	2.0	2.2	.4	1.2	.5	1.0	240.0	8.0
3	24	1	3	1.3	2.5	2.0	2.2	.4	1.1	.5	.9	240.0	11.0
3	24	1	4	.4	2.5	2.0	2.1	.4	.8	.5	.7	290.0	17.0
3	24	1	5	.4	2.5	1.5	2.0	.4	.7	0.	.6	310.0	13.0
3	24	1	6	0.	2.2	1.5	1.9	.4	.6	.5	.6	300.0	13.0
3	24	1	7	0.	1.7	1.5	1.9	.4	.5	.5	.5	300.0	12.0
3	24	1	8	.4	1.2	1.0	1.7	.4	.4	.5	.4	300.0	12.0
3	24	1	9	.4	.6	999.0	1.6	.4	.4	.5	.4	300.0	14.0
3	24	1	10	.4	.4	0.	1.4	.4	.4	999.0	.4	300.0	14.0
3	24	1	11	.4	.3	0.	1.1	.4	.4	1.0	.5	310.0	15.0
3	24	1	12	.4	.3	0.	.8	.4	.4	1.5	.6	300.0	12.0
3	24	1	13	.4	.3	.5	.6	.4	.4	1.5	.9	320.0	10.0
3	24	1	14	.4	.3	1.0	.6	.4	.4	1.0	.9	300.0	11.0
3	24	1	15	1.3	.5	1.5	.6	1.3	.5	1.0	1.0	300.0	11.0

3	24	1	16	.4	.5	1.0	.6	.4	.5	.5	1.0	310.0	10.0
3	24	1	17	.4	.5	1.0	.6	.4	.5	.5	1.0	310.0	10.0
3	24	1	18	0.	.5	1.0	.7	.4	.5	.5	.9	310.0	7.0
3	24	1	19	1.3	.6	0.	.7	.4	.5	0.	.8	300.0	5.0
3	24	1	20	2.1	.8	0.	.7	.4	.5	0.	.6	280.0	4.0
3	24	1	21	3.0	1.1	0.	.7	.4	.5	0.	.4	260.0	1.0
3	24	1	22	5.6	1.8	0.	.6	1.3	.6	0.	.3	260.0	1.0
3	24	1	23	3.0	2.0	1.0	.5	.4	.5	1.0	.3	230.0	1.0
3	24	1	24	3.0	2.3	1.0	.5	1.3	.6	1.0	.4	230.0	1.0
3	25	2	1	3.0	2.6	1.0	.5	1.3	.7	2.0	.6	210.0	1.0
3	25	2	2	3.0	3.0	.5	.4	2.1	.9	1.0	.6	190.0	2.0
3	25	2	3	1.3	3.0	0.	.4	1.3	1.1	.5	.7	170.0	5.0
3	25	2	4	1.3	2.9	0.	.4	1.3	1.2	.5	.7	170.0	6.0
3	25	2	5	1.3	2.7	0.	.4	.4	1.2	.5	.8	180.0	7.0
3	25	2	6	1.3	2.1	.5	.5	1.3	1.2	.5	.9	190.0	12.0
3	25	2	7	3.0	2.1	.5	.4	1.3	1.3	1.0	.9	190.0	13.0
3	25	2	8	3.0	2.1	.5	.4	1.3	1.3	1.0	.9	190.0	15.0
3	25	2	9	2.1	2.0	.5	.3	1.3	1.3	1.0	.7	190.0	20.0
3	25	2	10	1.3	1.8	.5	.3	.4	1.1	1.0	.7	190.0	20.0
3	25	2	11	1.3	1.8	999.0	.4	.4	.9	1.5	.9	190.0	20.0
3	25	2	12	1.3	1.8	999.0	.4	.4	.8	1.5	1.0	200.0	25.0
3	25	2	13	2.1	1.9	1.0	.6	999.0	.9	.5	1.0	210.0	25.0
3	25	2	14	3.9	2.2	1.5	.7	999.0	.8	999.0	1.1	210.0	27.0
3	25	2	15	5.6	2.6	1.5	.9	999.0	******	1.0	1.1	220.0	27.0
3	25	2	16	6.5	3.0	1.5	1.1	999.0	******	1.0	1.1	210.0	27.0
3	25	2	17	5.6	3.4	1.5	1.3	.4	******	1.0	1.1	220.0	24.0
3	25	2	18	3.9	3.8	1.5	1.4	999.0	******	1.0	1.1	220.0	22.0
3	25	2	19	2.1	3.9	1.0	1.4	1.3	******	.5	.9	220.0	16.0
3	25	2	20	3.0	4.1	1.0	1.3	2.1	******	1.0	.9	210.0	15.0
3	25	2	21	2.1	4.1	.5	1.3	2.1	******	1.0	.9	200.0	14.0
3	25	2	22	1.3	3.8	1.0	1.2	2.1	******	.5	.9	200.0	11.0
3	25	2	23	1.3	3.2	1.0	1.1	2.1	1.7	.5	.8	210.0	11.0
3	25	2	24	1.3	2.6	.5	1.0	2.1	1.8	.5	.7	210.0	14.0
3	26	3	1	1.3	2.0	.5	.9	2.1	2.0	.5	.7	220.0	15.0
3	26	3	2	1.3	1.7	.5	.7	2.1	2.0	.5	.6	220.0	16.0
3	26	3	3	1.3	1.6	0.	.6	2.1	2.1	.5	.6	230.0	14.0
3	26	3	4	1.3	1.4	0.	.5	2.1	2.1	.5	.6	220.0	15.0
3	26	3	5	1.3	1.3	0.	.4	1.3	2.0	.5	.5	220.0	14.0
3	26	3	6	3.9	1.6	0.	.3	1.3	1.9	.5	.5	220.0	15.0
3	26	3	7	7.3	2.3	0.	.2	1.3	1.8	.5	.5	240.0	13.0
3	26	3	8	6.5	3.0	0.	.1	1.3	1.7	1.0	.6	240.0	14.0
3	26	3	9	2.1	3.1	.5	.1	1.3	1.6	1.5	.7	260.0	12.0
3	26	3	10	1.3	3.1	.5	.1	1.3	1.5	1.0	.7	290.0	12.0
3	26	3	11	.4	3.0	1.0	.3	1.3	1.4	1.5	.9	320.0	12.0
3	26	3	12	.4	2.9	999.0	.3	999.0	1.3	2.0	1.1	350.0	11.0
3	26	3	13	.4	2.8	999.0	.3	1.3	1.3	2.5	1.3	350.0	10.0
3	26	3	14	.4	2.3	2.0	.7	1.3	1.3	2.5	1.6	350.0	9.0
3	26	3	15	.4	1.5	2.0	1.0	1.3	1.3	2.0	1.7	340.0	6.0
3	26	3	16	2.1	.9	2.0	1.3	999.0	1.3	2.5	1.9	340.0	5.0
3	26	3	17	3.0	1.0	7.0	2.4	999.0	******	7.0	2.6	70.0	7.0
3	26	3	18	3.0	1.3	7.0	3.5	999.0	******	6.5	3.3	80.0	7.0
3	26	3	19	3.0	1.6	4.5	4.1	999.0	******	4.5	3.7	100.0	4.0
3	26	3	20	2.1	1.8	4.0	4.1	999.0	******	4.5	4.0	90.0	4.0
3	26	3	21	2.1	2.0	2.5	3.9	999.0	******	2.5	4.0	100.0	4.0

3	26	3	22	2.1	2.2	3.0	4.0	999.0******		2.0	3.9	90.0	4.0
3	26	3	23	1.3	2.3	3.0	4.1	999.0******		3.0	4.1	70.0	5.0
3	26	3	24	1.3	2.2	2.0	4.1	999.0******		2.5	4.1	70.0	5.0
3	27	4	1	.4	1.9	1.5	3.4	999.0******		1.5	3.4	80.0	6.0
3	27	4	2	.4	1.6	.5	2.6	999.0******		.5	2.6	80.0	7.0
3	27	4	3	.4	1.3	0.	2.1	999.0******		.5	2.1	100.0	4.0
3	27	4	4	.4	1.0	0.	1.6	999.0******		.5	1.6	130.0	5.0
3	27	4	5	1.3	.9	0.	1.3	999.0******		.5	1.4	100.0	4.0
3	27	4	6	3.0	1.0	.5	.9	999.0******		1.0	1.3	120.0	2.0
3	27	4	7	4.7	1.5	2.0	.8	999.0******		2.5	1.2	130.0	3.0
3	27	4	8	4.7	1.9	6.0	1.3	999.0******		7.0	1.7	120.0	3.0
3	27	4	9	5.6	2.6	6.5	1.9	999.0******		6.5	2.4	110.0	3.0
3	27	4	10	3.9	3.0	6.5	2.7	999.0******		6.0	3.1	110.0	3.0
3	27	4	11	2.1	3.2	999.0	3.1	999.0******		6.5	3.8	110.0	5.0
3	27	4	12	1.3	3.3	5.0	3.8	999.0******		999.0	4.3	90.0	8.0
3	27	4	13	1.3	3.3	5.0	4.5	999.0******		999.0	4.9	80.0	10.0
3	27	4	14	999.0	3.4	4.5	5.1	999.0******		999.0******		90.0	10.0
3	27	4	15	999.0	3.1	4.5	5.4	3.9******		3.5******		90.0	10.0
3	27	4	16	999.0******		5.0	5.3	5.6******		6.5******		90.0	9.0
3	27	4	17	999.0******		5.0	5.1	6.5******		8.5******		80.0	10.0
3	27	4	18	999.0******		8.5	5.4	7.3******		8.5******		80.0	10.0
3	27	4	19	999.0******		6.5	5.5	4.7******		4.5******		70.0	10.0
3	27	4	20	999.0******		4.5	5.4	3.9	5.3	4.0	5.9	70.0	11.0
3	27	4	21	999.0******		3.5	5.2	3.9	5.1	3.0	5.5	70.0	12.0
3	27	4	22	999.0******		3.0	5.1	3.9	5.0	3.5	5.2	70.0	11.0
3	27	4	23	999.0******		2.0	4.7	2.1	4.7	2.5	5.1	70.0	10.0
3	27	4	24	999.0******		2.0	4.4	2.1	4.3	2.0	4.6	70.0	10.0
3	28	5	1	999.0******		2.0	4.0	2.1	3.8	1.0	3.6	60.0	9.0
3	28	5	2	999.0******		1.5	3.1	1.3	3.0	1.0	2.7	70.0	11.0
3	28	5	3	999.0******		1.0	2.4	.4	2.5	.5	2.2	80.0	10.0
3	28	5	4	999.0******		1.0	2.0	.4	2.0	.5	1.8	80.0	10.0
3	28	5	5	999.0******		1.0	1.7	.4	1.6	.5	1.4	80.0	10.0
3	28	5	6	999.0******		1.0	1.4	.4	1.2	.5	1.1	90.0	11.0
3	28	5	7	999.0******		2.0	1.4	1.3	1.1	2.0	1.0	90.0	10.0
3	28	5	8	999.0******		4.5	1.7	3.9	1.3	4.5	1.3	100.0	8.0
3	28	5	9	999.0******		6.0	2.2	5.6	1.7	6.0	1.9	90.0	6.0
3	28	5	10	999.0******		6.5	2.9	5.6	2.2	6.5	2.6	60.0	5.0
3	28	5	11	999.0******		999.0	3.1	6.5	3.0	6.0	3.3	60.0	7.0
3	28	5	12	999.0******		4.5	3.6	4.7	3.5	999.0	3.7	60.0	10.0
3	28	5	13	999.0******		4.0	4.1	3.9	4.0	999.0	4.2	60.0	12.0
3	28	5	14	2.1******		2.5	4.3	3.0	4.3	3.5	4.7	60.0	12.0
3	28	5	15	2.1******		3.5	4.5	3.9	4.6	4.0	5.1	80.0	13.0
3	28	5	16	3.0******		4.0	4.4	3.9	4.6	6.0	5.3	90.0	12.0
3	28	5	17	3.0******		7.5	4.6	8.2	5.0	10.0	6.0	80.0	10.0
3	28	5	18	2.1******		9.5	5.1	999.0	4.9	9.0	6.4	60.0	10.0
3	28	5	19	1.3	2.3	6.0	5.2	7.3	5.0	6.0	6.4	70.0	10.0
3	28	5	20	1.3	2.1	5.5	5.3	5.6	5.1	5.0	6.2	60.0	9.0
3	28	5	21	1.3	2.0	3.5	5.2	3.0	5.0	4.0	5.9	70.0	10.0
3	28	5	22	.4	1.8	4.5	5.5	5.6	5.4	4.0	6.0	70.0	10.0
3	28	5	23	.4	1.6	1.5	5.2	2.1	5.1	3.0	5.9	80.0	9.0
3	28	5	24	.4	1.3	2.0	5.0	2.1	4.9	3.0	5.5	70.0	8.0
3	29	6	1	.4	.9	2.0	4.3	2.1	4.0	1.5	4.4	80.0	8.0
3	29	6	2	.4	.7	1.0	3.2	.4	3.5	1.0	3.4	80.0	8.0
3	29	6	3	.4	.6	.5	2.6	.4	2.7	1.0	2.8	70.0	7.0

3	29	6	4	1.3	.6	1.0	2.0	.4	2.0	1.0	2.3	90.0	7.0
3	29	6	5	1.3	.6	1.0	1.7	.4	1.7	1.0	1.9	80.0	5.0
3	29	6	6	3.0	.9	2.0	1.4	1.3	1.2	2.0	1.7	70.0	6.0
3	29	6	7	4.7	1.5	3.0	1.6	2.1	1.2	4.0	1.8	90.0	6.0
3	29	6	8	3.9	1.9	6.0	2.1	5.6	1.6	7.5	2.4	100.0	4.0
3	29	6	9	3.9	2.3	8.0	2.8	7.3	2.2	8.5	3.2	90.0	4.0
3	29	6	10	4.7	2.9	8.0	3.7	7.3	3.1	8.0	4.1	70.0	5.0
3	29	6	11	4.7	3.4	6.5	4.4	6.5	3.9	7.0	4.9	80.0	6.0
3	29	6	12	3.9	3.8	999.0	4.9	5.6	4.5	7.0	5.6	90.0	6.0
3	29	6	13	3.9	4.1	999.0	5.6	7.3	5.4	7.5	6.4	90.0	5.0
3	29	6	14	3.9	4.2	999.0	******	6.5	6.0	6.5	7.0	90.0	6.0
3	29	6	15	4.7	4.2	6.0	******	6.5	6.6	7.0	7.4	90.0	7.0
3	29	6	16	5.6	4.4	5.5	******	5.6	6.6	6.5	7.2	90.0	9.0
3	29	6	17	6.5	4.7	7.5	******	7.3	6.6	8.5	7.2	100.0	6.0
3	29	6	18	999.0	4.7	9.5	******	9.1	6.8	11.0	7.6	100.0	4.0
3	29	6	19	999.0	4.7	8.0	******	8.2	7.0	9.5	7.9	100.0	5.0
3	29	6	20	999.0	******	7.0	7.2	7.3	7.2	8.5	8.1	120.0	5.0
3	29	6	21	999.0	******	3.5	3.7	3.9	6.8	4.0	7.7	130.0	7.0
3	29	6	22	999.0	******	1.0	6.0	.4	6.0	1.5	7.1	160.0	12.0
3	29	6	23	999.0	******	0.	5.2	.4	5.3	999.0	7.1	210.0	9.0
3	29	6	24	999.0	******	.5	4.6	.4	4.6	999.0	7.2	220.0	6.0
3	30	7	1	999.0	******	1.0	3.8	.4	3.8	999.0	******	240.0	5.0
3	30	7	2	999.0	******	1.0	2.7	.4	2.7	999.0	******	280.0	3.0
3	30	7	3	999.0	******	1.0	1.9	.4	1.7	999.0	******	320.0	3.0
3	30	7	4	999.0	******	1.0	1.1	.4	.8	999.0	******	330.0	3.0
3	30	7	5	999.0	******	1.0	.8	.4	.4	999.0	******	340.0	2.0
3	30	7	6	999.0	******	1.5	.9	.4	.4	999.0	******	310.0	4.0
3	30	7	7	999.0	******	1.0	1.0	.4	.4	999.0	******	340.0	11.0
3	30	7	8	999.0	******	1.0	1.1	.4	.4	999.0	******	350.0	12.0
3	30	7	9	999.0	******	1.5	1.1	.4	.4	999.0	******	360.0	11.0
3	30	7	10	999.0	******	1.5	1.2	1.3	.5	999.0	******	340.0	11.0
3	30	7	11	999.0	******	1.0	1.2	.4	.5	999.0	******	320.0	13.0
3	30	7	12	999.0	******	999.0	1.2	1.3	.6	999.0	******	310.0	7.0
3	30	7	14	3.0	******	2.5	1.4	2.1	.8	2.0	******	310.0	7.0
3	30	7	15	2.1	******	2.0	1.5	2.1	1.1	2.0	******	310.0	9.0
3	30	7	16	3.0	******	2.5	1.7	2.1	1.3	2.0	******	310.0	9.0
3	30	7	17	2.1	******	1.5	1.8	2.1	1.5	2.0	******	320.0	9.0
3	30	7	13	3.0	******	2.5	1.9	2.1	1.7	2.0	******	300.0	6.0
3	30	7	18	2.1	2.6	2.0	2.0	2.1	1.8	1.5	1.9	330.0	11.0
3	30	7	19	1.3	2.4	1.5	2.1	1.3	1.9	1.5	1.9	340.0	9.0
3	30	7	20	1.3	2.2	2.0	2.1	2.1	2.0	1.5	1.8	340.0	9.0
3	30	7	21	1.3	2.0	1.5	1.9	1.3	1.9	1.5	1.7	330.0	10.0
3	30	7	22	.4	1.8	1.5	1.9	1.3	1.8	1.5	1.7	330.0	10.0
3	30	7	23	.4	1.5	1.0	1.7	.4	1.6	1.0	1.6	330.0	9.0
3	30	7	24	.4	1.3	.5	1.6	.4	1.4	.5	1.4	330.0	11.0
3	31	1	1	.4	.9	.5	1.3	.4	1.2	1.0	1.3	310.0	6.0
3	31	1	2	.4	.7	.5	1.1	.4	.9	1.0	1.2	320.0	6.0
3	31	1	3	.4	.6	.5	1.0	.4	.8	1.0	1.1	320.0	6.0
3	31	1	4	.4	.5	0.	.7	.4	.6	1.0	1.1	320.0	8.0
3	31	1	5	.4	.4	0.	.6	.4	.5	1.0	1.0	320.0	5.0
3	31	1	6	.4	.4	0.	.4	.4	.4	1.0	.9	330.0	3.0
3	31	1	7	1.3	.5	0.	.3	.4	.4	1.0	.9	310.0	2.0
3	31	1	8	.4	.5	0.	.2	.4	.4	1.0	1.0	290.0	3.0
3	31	1	9	.4	.5	.5	.2	.4	.4	1.0	1.0	300.0	3.0

3	31	1	10	0.	.5	1.0	.3	.4	.4	1.5	1.1	30.0	4.0
3	31	1	11	.4	.5	999.0	.2	999.0	.4	1.0	1.1	120.0	2.0
3	31	1	12	0.	.4	1.0	.4	.4	.4	1.5	1.1	130.0	2.0
3	31	1	13	2.1	.6	1.0	.5	.4	.4	1.5	1.2	100.0	3.0
3	31	1	14	2.1	.8	2.0	.8	1.3	.5	3.0	1.4	160.0	4.0
3	31	1	15	2.1	.9	3.5	1.3	3.9	1.0	4.0	1.8	120.0	5.0
3	31	1	16	3.0	1.3	4.0	1.9	3.9	1.5	4.5	2.2	100.0	5.0
3	31	1	17	3.0	1.6	3.5	2.3	3.9	2.0	4.0	2.6	100.0	8.0
3	31	1	18	2.1	1.9	6.0	3.0	5.6	2.8	6.0	3.2	80.0	9.0
3	31	1	19	1.3	2.0	2.5	2.9	2.1	2.7	3.0	3.4	90.0	6.0
3	31	1	20	1.3	2.1	3.0	3.2	3.9	3.1	4.0	3.7	90.0	9.0
3	31	1	21	1.3	2.0	3.5	3.5	3.0	3.4	4.0	4.1	70.0	9.0
3	31	1	22	1.3	1.9	2.5	3.6	2.1	3.5	3.5	4.1	90.0	8.0
3	31	1	23	1.3	1.8	1.0	3.2	1.3	3.2	2.0	3.9	90.0	10.0
3	31	1	24	.4	1.5	.5	2.8	.4	2.8	1.5	3.5	90.0	10.0
4	1	2	1	.4	1.2	.5	2.4	.4	2.4	1.0	3.1	90.0	11.0
4	1	2	2	.4	.9	0.	1.7	.4	1.7	1.0	2.5	90.0	12.0
4	1	2	3	.4	.8	0.	1.4	.4	1.5	1.0	2.2	90.0	13.0
4	1	2	4	.4	.7	0.	1.0	.4	1.1	1.0	1.9	70.0	14.0
4	1	2	5	.4	.6	0.	.6	.4	.7	1.0	1.5	60.0	14.0
4	1	2	6	.4	.5	0.	.3	.4	.5	1.0	1.2	90.0	14.0
4	1	2	7	1.3	.5	1.5	.3	1.3	.5	2.5	1.2	90.0	13.0
4	1	2	8	2.1	.7	5.0	.9	4.7	1.1	5.5	1.7	90.0	9.0
4	1	2	9	3.0	1.0	5.0	1.4	4.7	1.6	5.0	2.2	90.0	7.0
4	1	2	10	3.0	1.4	5.5	2.1	5.6	2.2	5.5	2.8	120.0	6.0
4	1	2	11	3.0	1.7	3.5	2.6	3.9	2.7	4.0	3.2	110.0	9.0
4	1	2	12	3.0	2.0	3.0	2.9	3.9	3.1	999.0	3.5	120.0	9.0
4	1	2	13	3.0	2.3	1.5	3.1	1.3	3.2	999.0	3.9	150.0	9.0
4	1	2	14	3.0	2.7	999.0	3.6	.4	3.2	4.0	4.4	180.0	11.0
4	1	2	15	3.0	2.9	999.0	3.9	999.0	3.5	2.0	4.3	200.0	9.0
4	1	2	16	3.9	3.1	.5	3.2	.4	2.9	2.0	3.7	230.0	11.0
4	1	2	17	6.5	3.5	1.0	2.5	.4	2.3	1.5	3.2	260.0	14.0
4	1	2	18	6.5	4.0	1.0	1.8	.4	1.5	1.5	2.5	270.0	19.0
4	1	2	19	5.6	4.3	.5	1.3	.4	1.0	1.5	2.1	270.0	19.0
4	1	2	20	3.0	4.3	.5	.8	.4	.5	1.0	1.9	280.0	16.0
4	1	2	21	3.0	4.3	.5	.7	.4	.4	1.0	1.8	280.0	15.0
4	1	2	22	3.0	4.3	1.0	.7	.4	.4	1.0	1.4	290.0	16.0
4	1	2	23	2.1	4.2	.5	.7	.4	.4	1.0	1.3	300.0	15.0
4	1	2	24	2.1	4.0	.5	.7	.4	.4	1.0	1.2	300.0	15.0
4	2	3	1	2.1	3.4	0.	.6	.4	.4	1.0	1.1	290.0	11.0
4	2	3	2	2.1	2.9	0.	.4	.4	.4	1.0	1.1	260.0	7.0
4	2	3	3	2.1	2.5	0.	.4	.4	.4	1.0	1.0	270.0	6.0
4	2	3	4	2.1	2.3	0.	.3	.4	.4	1.0	1.0	250.0	9.0
4	2	3	5	2.1	2.2	0.	.3	.4	.4	1.0	1.0	250.0	8.0
4	2	3	6	2.1	2.1	0.	.1	1.3	.5	1.0	1.0	240.0	7.0
4	2	3	7	3.0	2.2	0.	.1	1.3	.6	1.0	1.0	240.0	7.0
4	2	3	8	3.9	2.5	1.0	.1	2.1	.8	1.5	1.1	220.0	6.0
4	2	3	9	7.3	3.1	1.0	.3	1.3	.9	1.0	1.1	220.0	14.0
4	2	3	10	7.3	3.8	.5	.3	.4	.9	1.0	1.1	220.0	17.0
4	2	3	11	4.7	4.1	.5	.4	.4	.9	.5	1.0	220.0	19.0
4	2	3	12	3.0	4.2	999.0	.4	.4	.9	.5	.9	220.0	24.0
4	2	3	13	3.9	4.4	.5	.5	.4	.9	0.	.8	230.0	24.0
4	2	3	14	3.9	4.6	.5	.6	.4	.8	0.	.7	240.0	25.0
4	2	3	15	3.9	4.7	.5	.6	.4	.7	.5	.6	230.0	23.0

4	2	3	16	3.0	4.6	.5	.6	.4	.5	.5	.5	220.0	22.0
4	2	3	17	3.0	4.1	.5	.5	.4	.4	.5	.4	210.0	20.0
4	2	3	18	3.9	3.6	0.	.4	.4	.4	.5	.4	210.0	20.0
4	2	3	19	3.0	3.4	0.	.4	.4	.4	1.0	.4	200.0	18.0
4	2	3	20	1.3	3.2	.5	.4	1.3	.5	1.0	.5	190.0	14.0
4	2	3	21	1.3	2.9	.5	.4	1.3	.6	1.5	.7	190.0	12.0
4	2	3	22	3.9	2.9	1.5	.5	2.1	.8	2.5	1.0	180.0	7.0
4	2	3	23	1.3	2.6	.5	.5	1.3	.9	1.5	1.1	170.0	6.0
4	2	3	24	1.3	2.3	0.	.4	1.3	1.1	1.0	1.2	170.0	6.0
4	3	4	1	.4	2.0	0.	.4	.4	1.1	1.0	1.2	170.0	7.0
4	3	4	2	.4	1.6	0.	.4	.4	1.1	.5	1.3	190.0	9.0
4	3	4	3	.4	1.3	0.	.4	.4	1.1	.5	1.2	200.0	6.0
4	3	4	4	.4	1.2	0.	.3	.4	.9	1.0	1.2	170.0	2.0
4	3	4	5	.4	1.0	0.	.3	.4	.8	1.0	1.1	140.0	3.0
4	3	4	6	1.3	.7	0.	.1	1.3	.7	1.5	1.0	130.0	4.0
4	3	4	7	3.0	.9	2.0	.3	3.0	.9	2.5	1.1	140.0	4.0
4	3	4	8	4.7	1.4	5.0	.9	5.6	1.5	5.0	1.6	130.0	5.0
4	3	4	9	4.7	1.9	4.0	1.4	3.9	1.9	4.0	2.0	140.0	8.0
4	3	4	10	3.0	2.2	.5	1.4	2.1	2.1	2.0	2.2	170.0	14.0
4	3	4	11	2.1	2.5	.5	1.5	1.3	2.2	2.0	2.4	150.0	12.0
4	3	4	12	2.1	2.7	999.0	1.7	1.3	2.4	2.0	2.5	140.0	16.0
4	3	4	13	2.1	2.9	999.0	2.0	999.0	2.6	2.0	2.6	150.0	16.0
4	3	4	14	2.1	3.0	1.5	2.2	2.1	2.8	2.0	2.7	150.0	15.0
4	3	4	15	2.1	2.9	2.0	2.2	3.0	2.8	3.5	2.8	150.0	8.0
4	3	4	16	4.7	2.9	6.5	2.8	9.9	3.4	8.0	3.2	80.0	3.0
4	3	4	17	8.2	3.3	5.0	3.0	6.5	3.7	5.5	3.4	130.0	6.0
4	3	4	18	8.2	4.0	4.0	3.6	4.7	4.1	4.0	3.6	160.0	9.0
4	3	4	19	5.6	4.4	2.0	3.8	3.0	4.4	2.5	3.7	200.0	7.0
4	3	4	20	7.3	5.1	6.0	4.1	7.3	5.2	5.5	4.1	240.0	0.
4	3	4	21	7.3	5.7	7.5	4.6	9.9	5.8	7.5	4.8	120.0	3.0
4	3	4	22	11.7	6.9	6.5	5.2	9.1	6.7	7.0	5.4	120.0	2.0
4	3	4	23	9.1	7.8	7.0	5.8	6.2	7.3	8.0	6.0	160.0	2.0
4	3	4	24	5.6	7.9	2.5	5.1	3.9	6.6	6.5	5.8	210.0	4.0
4	4	5	1	1.3	7.0	0.	4.4	1.3	5.9	1.5	5.3	230.0	9.0
4	4	5	2	1.3	6.1	0.	3.9	.4	5.4	1.0	4.9	230.0	11.0
4	4	5	3	.4	5.5	.5	3.7	.4	5.1	.5	4.7	220.0	12.0
4	4	5	4	.4	4.6	.5	3.1	.4	4.2	.5	4.1	220.0	15.0
4	4	5	5	.4	3.8	0.	2.1	.4	3.0	.5	3.2	220.0	15.0
4	4	5	6	.4	2.3	0.	1.3	.4	1.9	.5	2.4	230.0	20.0
4	4	5	7	2.1	1.5	0.	.4	.4	.9	.5	1.4	230.0	19.0
4	4	5	8	6.5	1.6	.5	.2	.4	.5	.5	.7	230.0	18.0
4	4	5	9	6.5	2.2	.5	.3	.4	.4	.5	.6	230.0	16.0
4	4	5	10	4.7	2.7	.5	.3	.4	.4	.5	.5	240.0	16.0
4	4	5	11	4.7	3.2	.5	.3	.4	.4	.5	.5	240.0	15.0
4	4	5	12	3.0	3.5	.5	.3	.4	.4	1.0	.6	260.0	9.0
4	4	5	13	1.3	3.6	999.0	.4	1.3	.5	999.0	.6	300.0	5.0
4	4	5	14	1.3	3.8	2.5	.7	1.3	.6	1.5	.7	300.0	6.0
4	4	5	15	1.3	3.6	2.0	1.0	1.3	.7	1.0	.8	300.0	7.0
4	4	5	16	1.3	3.0	1.0	1.1	1.3	.8	1.5	.9	300.0	7.0
4	4	5	17	2.1	2.5	2.5	1.4	2.1	1.1	2.5	1.2	300.0	7.0
4	4	5	18	3.0	2.2	1.5	1.5	2.1	1.3	2.0	1.4	310.0	7.0
4	4	5	19	1.3	1.8	1.5	1.6	2.1	1.5	2.0	1.6	320.0	8.0
4	4	5	20	1.3	1.6	3.0	2.0	3.0	1.8	2.0	1.8	330.0	4.0
4	4	5	21	1.3	1.6	1.5	1.9	2.1	1.9	1.5	1.7	330.0	5.0

4	4	5	22	1.3	1.6	2.0	1.9	2.1	2.0	2.0	1.8	350.0	5.0
4	4	5	23	.4	1.5	1.5	1.8	1.3	2.0	1.0	1.8	340.0	3.0
4	4	5	24	.4	1.4	.5	1.7	.4	1.9	.5	1.7	330.0	5.0
4	5	6	1	0.	1.1	.5	1.5	.4	1.7	.5	1.4	340.0	6.0
4	5	6	2	0.	.7	.5	1.4	.4	1.5	.5	1.3	330.0	6.0
4	5	6	3	0.	.6	0.	1.2	.4	1.3	.5	1.1	340.0	6.0
4	5	6	4	0.	.4	0.	.8	.4	.9	0.	.8	350.0	6.0
4	5	6	5	0.	.3	0.	.6	.4	.7	0.	.6	350.0	7.0
4	5	6	6	0.	.1	0.	.4	.4	.5	0.	.4	350.0	6.0
4	5	6	7	.4	.1	.5	.3	.4	.4	.5	.3	350.0	5.0
4	5	6	8	.4	.1	3.0	.6	3.0	.7	3.0	.6	330.0	6.0
4	5	6	9	.4	.1	2.5	.8	3.0	1.1	2.5	.9	340.0	6.0
4	5	6	10	.4	.2	1.5	.9	2.1	1.3	2.0	1.1	350.0	6.0
4	5	6	11	.4	.2	1.5	1.1	2.1	1.5	1.0	1.1	340.0	8.0
4	5	6	12	0.	.2	1.0	1.3	1.3	1.6	1.0	1.3	340.0	8.0
4	5	6	13	0.	.2	999.0	1.4	2.1	1.8	1.5	1.4	340.0	8.0
4	5	6	14	0.	.2	2.0	1.7	2.1	2.0	1.5	1.6	340.0	9.0
4	5	6	15	0.	.2	2.0	1.9	2.1	2.2	1.5	1.7	340.0	9.0
4	5	6	16	0.	.1	2.0	1.8	2.1	2.1	2.0	1.6	350.0	10.0
4	5	6	17	0.	.1	3.0	1.9	3.0	2.1	3.0	1.7	350.0	9.0
4	5	6	18	0.	.0	7.0	2.6	7.3	2.8	6.5	2.2	20.0	7.0
4	5	6	19	.4	.0	7.5	3.5	8.2	3.5	8.0	3.1	30.0	5.0
4	5	6	20	.4	.1	8.0	4.5	9.1	4.5	8.0	4.0	50.0	3.0
4	5	6	21	.4	.1	7.5	4.9	8.2	5.3	7.5	4.7	50.0	2.0
4	5	6	22	3.9	.6	7.0	5.5	7.3	5.9	6.0	5.3	50.0	1.0
4	5	6	23	9.9	1.9	3.0	5.6	4.7	6.3	3.5	5.6	50.0	0.
4	5	6	24	8.2	2.9	3.5	5.8	5.6	6.7	4.5	5.9	50.0	0.
4	6	7	1	8.2	3.9	5.0	6.1	6.5	7.1	5.5	6.2	40.0	0.
4	6	7	2	7.3	4.8	8.0	6.2	9.1	7.3	9.0	6.5	40.0	0.
4	6	7	3	7.3	5.7	6.0	6.0	6.5	7.1	6.5	6.3	40.0	0.
4	6	7	4	5.6	6.4	4.5	5.6	5.6	6.7	5.5	6.0	40.0	0.
4	6	7	5	4.7	6.9	4.0	5.1	5.6	6.4	5.0	5.7	40.0	0.
4	6	7	6	4.7	7.0	3.5	4.7	4.7	6.0	4.5	5.5	40.0	0.
4	6	7	7	4.7	6.4	3.0	4.7	3.9	5.9	3.0	5.4	40.0	0.
4	6	7	8	3.9	5.8	2.5	4.6	3.0	5.6	2.0	5.1	30.0	0.
4	6	7	9	2.1	5.1	1.0	4.1	1.3	5.0	1.5	4.6	280.0	2.0
4	6	7	10	3.9	4.6	.5	3.1	.4	3.9	1.5	3.7	250.0	5.0
4	6	7	11	4.7	4.3	.5	2.4	.4	3.1	1.0	3.0	250.0	10.0
4	6	7	12	4.7	4.2	999.0	2.1	.4	2.5	999.0	2.6	260.0	9.0
4	6	7	13	4.7	4.2	0.	1.6	.4	1.8	.5	2.0	250.0	9.0
4	6	7	14	6.5	4.4	0.	1.1	.4	1.3	.5	1.4	250.0	12.0
4	6	7	15	6.5	4.6	0.	.6	.4	.8	0.	1.0	240.0	15.0
4	6	7	16	6.5	4.9	0.	.3	.4	.5	0.	.7	230.0	17.0
4	6	7	17	4.7	5.3	0.	.1	.4	.4	0.	.5	220.0	18.0
4	6	7	18	4.7	5.4	0.	.1	.4	.4	.5	.4	220.0	21.0
4	6	7	19	2.1	5.1	0.	0.	.4	.4	.5	.3	220.0	18.0
4	6	7	20	3.0	4.8	0.	0.	.4	.4	.5	.3	210.0	15.0
4	6	7	21	3.0	4.6	0.	0.	.4	.4	.5	.3	210.0	17.0
4	6	7	22	3.0	4.2	0.	0.	.4	.4	1.0	.4	200.0	15.0
4	6	7	23	3.9	3.9	0.	0.	.4	.4	1.0	.5	200.0	14.0
4	6	7	24	1.3	3.2	0.	0.	.4	.4	1.0	.6	200.0	15.0
4	7	1	1	.4	2.7	0.	0.	.4	.4	1.0	.7	200.0	11.0
4	7	1	2	.4	2.1	0.	0.	.4	.4	1.0	.8	200.0	14.0
4	7	1	3	.4	1.9	0.	0.	.4	.4	.5	.8	210.0	17.0

4	7	1	4	.4	1.6	0.	0.	.4	.4	.5	.8	210.0	11.0
4	7	1	5	.4	1.3	0.	0.	.4	.4	.5	.8	210.0	8.0
4	7	1	6	.4	.9	0.	0.	.4	.4	.5	.7	210.0	8.0
4	7	1	7	.4	.5	0.	0.	.4	.4	1.0	.7	120.0	3.0
4	7	1	8	.4	.4	0.	0.	.4	.4	1.0	.7	190.0	3.0
4	7	1	9	.4	.4	0.	0.	.4	.4	1.0	.7	170.0	2.0
4	7	1	10	.4	.4	2.0	.3	1.3	.5	2.0	.9	110.0	4.0
4	7	1	11	.4	.4	999.0	.3	2.1	.7	1.5	1.0	20.0	16.0
4	7	1	12	.4	.4	999.0	.3	2.1	.9	3.0	1.3	30.0	16.0
4	7	1	13	.4	.4	3.0	.8	3.0	1.3	3.5	1.7	40.0	13.0
4	7	1	14	.4	.4	4.0	1.5	4.7	1.8	4.0	2.1	40.0	16.0
4	7	1	15	.4	.4	4.0	2.2	4.7	2.4	4.0	2.5	40.0	17.0
4	7	1	16	.4	.4	4.5	2.9	4.7	2.9	999.0	2.7	40.0	17.0
4	7	1	17	.4	.4	4.0	3.6	3.9	3.3	999.0	3.0	30.0	18.0
4	7	1	18	.4	.4	3.5	3.8	3.9	3.7	999.0	******	30.0	19.0
4	7	1	19	.4	.4	2.0	3.6	2.1	3.7	999.0	******	30.0	19.0
4	7	1	20	.4	.4	2.0	3.4	2.1	3.7	999.0	******	30.0	17.0
4	7	1	21	.4	.4	1.5	3.2	2.1	3.5	999.0	******	30.0	16.0
4	7	1	22	.4	.4	2.0	2.9	1.3	3.1	3.0	******	40.0	17.0
4	7	1	23	.4	.4	1.5	2.6	1.3	2.7	2.0	******	30.0	17.0
4	7	1	24	.4	.4	1.0	2.2	1.3	2.2	1.5	******	40.0	17.0
4	8	2	1	.4	.4	.5	1.7	.4	1.8	1.5	******	40.0	15.0
4	8	2	2	.4	.4	0.	1.3	.4	1.4	1.0	******	50.0	19.0
4	8	2	3	.4	.4	0.	1.1	.4	1.2	1.0	1.7	50.0	19.0
4	8	2	4	.4	.4	0.	.8	.4	.9	1.0	1.6	50.0	20.0
4	8	2	5	.4	.4	0.	.6	.4	.7	1.0	1.5	50.0	20.0
4	8	2	6	.4	.4	0.	.4	.4	.6	1.5	1.3	50.0	19.0
4	8	2	7	.4	.4	.5	.3	1.3	.6	2.0	1.3	50.0	18.0
4	8	2	8	.4	.4	1.5	.3	2.1	.7	3.0	1.5	50.0	19.0
4	8	2	9	.4	.4	2.0	.5	2.1	.9	1.5	1.5	50.0	18.0
4	8	2	10	.4	.4	1.5	.7	2.1	1.2	2.0	1.6	50.0	20.0
4	8	2	11	.4	.4	2.0	.9	2.1	1.4	1.5	1.7	40.0	19.0
4	8	2	12	.4	.4	2.0	1.2	2.1	1.6	3.0	1.9	40.0	17.0
4	8	2	13	.4	.4	999.0	1.4	3.0	1.9	3.5	2.2	40.0	17.0
4	8	2	14	.4	.4	999.0	1.6	3.0	2.2	4.0	2.6	40.0	19.0
4	8	2	15	.4	.4	999.0	******	3.0	2.5	4.5	2.9	30.0	19.0
4	8	2	16	.4	.4	3.5	******	999.0	2.5	5.5	3.2	30.0	17.0
4	8	2	17	1.3	.5	5.0	******	4.7	2.9	3.0	3.4	20.0	17.0
4	8	2	18	1.3	.6	5.0	******	4.7	3.3	3.0	3.5	20.0	13.0
4	8	2	19	1.3	.7	4.0	******	3.9	3.5	2.0	3.6	20.0	12.0
4	8	2	20	1.3	.8	3.5	******	3.9	3.7	2.0	3.4	20.0	11.0
4	8	2	21	1.3	.9	3.5	4.1	3.9	3.9	2.0	3.2	20.0	9.0
4	8	2	22	1.3	1.0	4.5	4.1	5.6	4.2	2.5	3.1	20.0	7.0
4	8	2	23	1.3	1.2	1.5	3.8	2.1	4.1	2.0	2.7	0.	3.0
4	8	2	24	1.3	1.3	0.	3.4	.4	3.7	1.5	2.2	350.0	2.0
4	9	3	1	1.3	1.3	0.	2.7	.4	3.1	1.0	2.0	360.0	1.0
4	9	3	2	1.3	1.3	0.	2.1	.4	2.6	1.0	1.7	350.0	1.0
4	9	3	3	1.3	1.3	0.	1.6	.4	2.1	1.0	1.6	350.0	1.0
4	9	3	4	1.3	1.3	0.	1.2	.4	1.7	1.0	1.5	350.0	0.
4	9	3	5	1.3	1.3	0.	.7	.4	1.3	1.0	1.4	350.0	1.0
4	9	3	6	1.3	1.3	0.	.2	.4	.6	1.0	1.2	350.0	1.0
4	9	3	7	3.9	1.6	1.0	.1	2.1	.6	2.0	1.2	330.0	2.0
4	9	3	8	3.9	1.9	3.0	.5	3.9	1.1	4.5	1.6	310.0	2.0
4	9	3	9	1.3	1.9	3.0	.9	3.0	1.4	3.5	1.9	310.0	1.0

4	9	3	10	1.3	1.9	2.0	1.1	2.1	1.6	2.0	2.0	340.0	3.0
4	9	3	11	3.9	2.2	2.0	1.4	2.1	1.8	2.0	2.1	70.0	3.0
4	9	3	12	4.7	2.7	1.0	1.5	1.3	1.9	1.5	2.2	310.0	3.0
4	9	3	13	4.7	3.1	1.0	1.6	1.3	2.0	1.5	2.2	300.0	5.0
4	9	3	14	4.7	3.5	999.0	1.9	.4	2.0	999.0	2.4	270.0	7.0
4	9	3	15	3.9	3.5	999.0	2.0	1.3	1.9	.5	2.2	260.0	4.0
4	9	3	16	4.7	3.6	.5	1.6	.4	1.5	1.0	1.7	270.0	6.0
4	9	3	17	7.3	4.4	.5	1.2	.4	1.2	1.5	1.4	260.0	8.0
4	9	3	18	8.2	5.3	.5	.9	1.3	1.1	1.5	1.4	250.0	8.0
4	9	3	19	8.2	5.8	1.0	.7	1.3	.9	1.5	1.3	210.0	5.0
4	9	3	20	5.6	5.9	2.0	.9	2.1	1.1	2.5	1.4	200.0	3.0
4	9	3	21	4.7	5.9	2.0	1.1	2.1	1.2	3.0	1.6	190.0	1.0
4	9	3	22	5.6	6.0	3.0	1.4	5.6	1.8	3.5	1.9	190.0	0.
4	9	3	23	3.9	6.0	2.5	1.5	3.9	2.1	3.0	2.2	170.0	0.
4	9	3	24	3.0	5.8	3.0	1.8	3.9	2.6	3.0	2.4	170.0	0.
4	10	4	1	2.1	5.2	3.0	2.1	3.9	3.0	3.5	2.7	170.0	0.
4	10	4	2	1.3	4.3	2.0	2.3	3.9	3.3	3.0	2.9	160.0	0.
4	10	4	3	1.3	3.4	2.0	2.4	3.0	3.5	3.0	3.1	160.0	0.
4	10	4	4	1.3	2.9	2.0	2.4	3.0	3.7	3.0	3.1	160.0	1.0
4	10	4	5	1.3	2.5	1.0	2.3	2.1	3.7	2.5	3.1	150.0	1.0
4	10	4	6	2.1	2.0	1.0	2.1	2.1	3.2	2.0	2.9	130.0	1.0
4	10	4	7	4.7	2.1	3.0	2.1	3.0	3.1	3.5	2.9	140.0	1.0
4	10	4	8	5.6	2.5	6.0	2.5	5.6	3.3	6.5	3.4	140.0	1.0
4	10	4	9	6.5	3.0	4.0	2.6	4.7	3.4	4.5	3.5	140.0	1.0
4	10	4	10	3.0	3.2	2.0	2.6	3.0	3.3	3.0	3.5	150.0	2.0
4	10	4	11	2.1	3.3	.5	2.4	1.3	3.1	2.0	3.4	160.0	2.0
4	10	4	12	2.1	3.4	.5	2.2	.4	2.8	1.5	3.2	170.0	3.0
4	10	4	13	2.1	3.5	1.0	2.2	1.3	2.7	1.5	3.1	170.0	5.0
4	10	4	14	3.0	3.6	999.0	2.4	1.3	2.6	1.0	2.9	180.0	7.0
4	10	4	15	3.9	3.5	999.0	2.3	1.3	2.4	999.0	2.9	180.0	12.0
4	10	4	16	3.9	3.3	1.0	1.5	1.3	1.8	1.5	2.1	170.0	14.0
4	10	4	17	5.6	3.2	1.5	1.1	3.0	1.6	2.5	1.9	170.0	11.0
4	10	4	18	2.1	3.1	1.0	.9	2.1	1.5	2.5	1.8	160.0	11.0
4	10	4	19	3.9	3.3	1.5	1.1	999.0	1.5	3.0	1.9	160.0	8.0
4	10	4	20	3.9	3.5	1.5	1.3	3.0	1.9	3.0	2.1	150.0	6.0
4	10	4	21	3.9	3.8	1.0	1.3	1.3	1.9	2.0	2.2	140.0	5.0
4	10	4	22	6.5	4.2	1.5	1.3	2.1	2.0	3.0	2.5	140.0	5.0
4	10	4	23	3.9	4.2	.5	1.2	1.3	2.0	2.5	2.5	150.0	6.0
4	10	4	24	2.1	4.0	.5	1.1	1.3	2.0	999.0	2.6	140.0	5.0
4	11	5	1	2.1	3.5	999.0	1.1	.4	1.6	999.0	2.7	150.0	4.0
4	11	5	2	1.3	3.4	999.0	1.1	.0.	1.3	999.0	******	210.0	5.0
4	11	5	3	.4	3.0	999.0	******	0.	1.2	999.0	******	170.0	3.0
4	11	5	4	.4	2.6	999.0	******	.4	.8	999.0	******	110.0	5.0
4	11	5	5	.4	2.1	999.0	******	.4	.7	999.0	******	130.0	8.0
4	11	5	6	1.3	1.5	999.0	******	0.	.5	999.0	******	160.0	10.0
4	11	5	7	1.3	1.2	999.0	******	.4	.4	999.0	******	170.0	10.0
4	11	5	8	2.1	1.2	999.0	******	1.3	.4	999.0	******	170.0	10.0
4	11	5	9	3.9	1.4	999.0	******	2.1	.6	999.0	******	160.0	11.0
4	11	5	10	2.1	1.5	999.0	******	999.0	.7	999.0	******	150.0	10.0
4	11	5	11	1.3	1.6	999.0	******	999.0	.8	999.0	******	140.0	11.0
4	11	5	12	2.1	1.8	999.0	******	999.0	******	999.0	******	150.0	9.0
4	11	5	13	3.0	2.1	999.0	******	999.0	******	999.0	******	170.0	11.0
4	11	5	14	2.1	2.2	999.0	******	999.0	******	999.0	******	200.0	18.0
4	11	5	15	2.1	2.3	999.0	******	999.0	******	999.0	******	190.0	10.0

4	11	5	16	3.9	2.6	999.0******	999.0******		999.0******	190.0	14.0
4	11	5	17	6.5	2.9	999.0******	999.0******		999.0******	190.0	9.0
4	11	5	18	7.3	3.5	999.0******	999.0******		999.0******	170.0	7.0
4	11	5	19	5.6	4.1	999.0******	3.0******		999.0******	160.0	8.0
4	11	5	20	4.7	4.4	999.0******	2.1******		999.0******	170.0	12.0
4	11	5	21	4.7	4.6	999.0******	1.3******		999.0******	170.0	13.0
4	11	5	22	3.9	4.8	999.0******	1.3******		999.0******	170.0	15.0
4	11	5	23	2.1	4.8	999.0******	1.3******		999.0******	170.0	18.0
4	11	5	24	2.1	4.6	999.0******	.4	1.6	999.0******	170.0	21.0
4	12	6	1	2.1	4.1	999.0******	.4	1.4	999.0******	170.0	20.0
4	12	6	2	2.1	3.4	999.0******	.4	1.3	999.0******	170.0	19.0
4	12	6	3	1.3	2.9	999.0******	.4	.9	999.0******	160.0	18.0
4	12	6	4	.4	2.3	999.0******	.4	.7	999.0******	160.0	20.0
4	12	6	5	0.	1.8	999.0******	.4	.6	999.0******	170.0	21.0
4	12	6	6	0.	1.3	999.0******	.4	.5	999.0******	170.0	18.0
4	12	6	7	0.	1.0	999.0******	.4	.4	999.0******	170.0	20.0
4	12	6	8	.4	.8	999.0******	.4	.4	999.0******	180.0	20.0
4	12	6	9	.4	.6	999.0******	.4	.4	999.0******	190.0	20.0
4	12	6	10	1.3	.5	999.0******	.4	.4	999.0******	190.0	21.0
4	12	6	11	1.3	.5	999.0******	.4	.4	999.0******	190.0	24.0
4	12	6	12	2.1	.7	999.0******	.4	.4	999.0******	200.0	29.0
4	12	6	13	2.1	.9	999.0******	.4	.4	999.0******	200.0	30.0
4	12	6	14	3.0	1.3	999.0******	.4	.4	999.0******	200.0	29.0
4	12	6	15	3.0	1.7	999.0******	.4	.4	999.0******	200.0	31.0
4	12	6	16	6.5	2.5	999.0******	.4	.4	999.0******	210.0	26.0
4	12	6	17	6.5	3.2	999.0******	.4	.4	999.0******	220.0	26.0
4	12	6	18	7.3	4.0	999.0******	.4	.4	999.0******	230.0	18.0
4	12	6	19	6.5	4.6	999.0******	.4	.4	999.0******	230.0	15.0
4	12	6	20	5.6	5.1	999.0******	.4	.4	999.0******	250.0	14.0
4	12	6	21	3.9	5.3	999.0******	.4	.4	999.0******	250.0	13.0
4	12	6	22	3.9	5.4	999.0******	.4	.4	999.0******	260.0	13.0
4	12	6	23	3.0	5.4	999.0******	.4	.4	999.0******	260.0	9.0
4	12	6	24	2.1	4.8	999.0******	1.3	.5	999.0******	240.0	6.0
4	13	7	1	3.0	4.4	999.0******	.4	.5	999.0******	180.0	7.0
4	13	7	2	2.1	3.8	999.0******	.4	.5	999.0******	200.0	7.0
4	13	7	3	2.1	3.2	999.0******	.4	.5	999.0******	200.0	8.0
4	13	7	4	1.3	2.7	999.0******	.4	.5	999.0******	220.0	7.0
4	13	7	5	1.3	2.3	999.0******	.4	.5	999.0******	220.0	9.0
4	13	7	6	1.3	2.0	999.0******	.4	.5	999.0******	220.0	12.0
4	13	7	7	1.3	1.8	999.0******	.4	.5	999.0******	240.0	10.0
4	13	7	8	2.1	1.8	999.0******	.4	.4	999.0******	240.0	13.0
4	13	7	9	3.0	1.8	999.0******	.4	.4	999.0******	230.0	15.0
4	13	7	10	3.9	2.0	999.0******	.4	.4	999.0******	240.0	14.0
4	13	7	11	3.9	2.2	999.0******	.4	.4	999.0******	250.0	13.0
4	13	7	12	3.9	2.6	999.0******	.4	.4	999.0******	240.0	13.0
4	13	7	13	4.7	3.0	999.0******	.4	.4	999.0******	240.0	12.0
4	13	7	14	5.6	3.5	999.0******	.4	.4	999.0******	230.0	10.0
4	13	7	15	5.6	4.1	999.0******	.4	.4	999.0******	230.0	10.0
4	13	7	16	3.9	4.3	999.0******	1.3	.5	999.0******	220.0	9.0
4	13	7	17	3.0	4.3	999.0******	2.1	.7	999.0******	220.0	7.0
4	13	7	18	3.9	4.3	999.0******	3.0	1.1	999.0******	200.0	3.0
4	13	7	19	2.1	4.1	999.0******	3.0	1.4	999.0******	180.0	7.0
4	13	7	20	1.3	3.8	999.0******	2.1	1.6	999.0******	170.0	14.0
4	13	7	21	1.3	3.3	999.0******	1.3	1.7	999.0******	170.0	12.0

4	13	7	22	2.1	2.9	999.0******	1.3	1.8	999.0******	180.0	11.0
4	13	7	23	1.3	2.3	999.0******	1.3	1.9	999.0******	170.0	10.0
4	13	7	24	.4	1.9	999.0******	1.3	1.9	999.0******	160.0	7.0

Table A-5. CARBON MONOXIDE BAG SAMPLING DATA

Note:

Day of Week: Sunday = 1, Monday = 2, etc.

Hours: Midnight to 1:00 a.m. = 1, 1:00 a.m. to 2:00 a.m. = 2, etc.

MONTH	DATE	DAY OF WEEK	STATION NUMBER	HOUR	CO PPM	HOUR	CO PPM	HOUR	CO PPM	HOUR	CO PPM	HOUR	CO PPM	HOUR	CO PPM	HOUR	CO PPM	HOUR	CO PPM	8-HOUR AVG
3	23	7	103	12	3.0	13	3.5	14	3.5	15	3.5	16	4.0	17	4.5	18	5.0	19	2.0	3.6
3	24	1	103	11	1.0	12	2.5	13	2.5	14	3.5	15	3.0	16	4.0	17	3.5	18	4.0	3.0
3	25	2	102	15	2.5	16	3.5	17	3.5	18	4.0	19	2.5	20	2.5	21	2.0	22	3.5	3.0
3	26	3	103	15	3.5	16	3.5	17	5.0	18	4.0	19	2.5	20	2.0	21	1.5	22	1.5	2.9
3	27	4	101	15	3.0	16	3.5	17	4.0	18	4.5	19	2.5	20	1.5	21	1.5	22	2.5	2.9
3	28	5	101	15	2.5	16	3.0	17	5.0	18	6.5	19	3.0	20	2.0	21	1.5	22	3.0	3.3
3	29	6	101	15	4.0	16	5.5	17	6.5	18	12.0	19	8.5	20	7.0	21	4.0	22	3.5	6.4
3	30	7	103	12	7.5	13	8.0	14	6.5	15	6.0	16	6.5	17	5.5	18	5.5	19	2.0	5.9
3	31	1	104	11	1.0	12	1.5	13	1.5	14	1.5	15	1.0	16	2.5	17	2.0	18	1.5	1.6
4	1	2	101	15	5.0	16	3.0	17	6.5	18	4.0	19	1.5	20	1.0	21	.5	22	.5	2.7
4	2	3	102	15	2.5	16	3.0	17	3.5	18	3.0	19	2.0	20	2.0	21	1.5	22	2.0	2.4
4	3	4	101	15	3.0	16	6.0	17	8.0	18	5.5	19	4.5	20	9.0	21	8.5	22	12.0	7.1
4	4	5	103	15	5.0	16	5.0	17	8.0	18	6.0	19	3.5	20	4.5	21	3.5	22	4.0	4.9
4	5	6	103	15	3.0	16	3.0	17	4.0	18	4.0	19	4.0	20	5.0	21	4.5	22	4.0	3.9
4	6	7	102	12	3.0	13	3.5	14	3.5	15	3.5	16	3.0	17	3.0	18	3.0	19	2.0	3.1
4	7	1	104	11	1.0	12	2.0	13	2.0	14	2.5	15	3.0	16	3.5	17	3.0	18	3.0	2.5
4	8	2	104	15	3.0	16	3.6	17	5.5	18	5.5	19	4.5	20	4.0	21	4.0	22	6.0	4.5
4	9	3	102	15	2.0	16	3.5	17	11.0	18	11.0	19	5.0	20	3.0	21	2.5	22	3.0	5.1
4	10	4	101	15	3.0	16	4.0	17	4.5	18	6.0	19	4.0	20	4.0	21	3.5	22	4.0	4.1
4	11	5	101	15	3.0	16	3.9	17	9.1	18	7.3	19	3.0	20	3.9	21	3.0	22	3.0	4.5
4	12	6	102	15	2.1	16	3.0	17	3.0	18	2.1	19	3.0	20	3.9	21	3.0	22	3.9	3.0
4	13	7	102	12	3.9	13	4.7	14	5.6	15	3.9	16	3.9	17	2.1	18	6.0	19	3.0	4.1

Table A-6. AREA SOURCE EVALUATION DATA

Note:

Wind speed is listed in mph.

Wind direction is listed in degrees. North = 0°

The receptor concentrations are listed in ppm CO.

A difference is listed only in those cases where the downwind receptor CO concentration is equal to or higher than the upwind receptor CO concentration.

Month	Day	Hour	Speed	Direction	Station 1 Upwind Wind Direction (40°, 50°, 60°) #1	#2	Diff.	Station 2 Upwind Wind Direction (220°, 230°, 240°) #1	#2	Diff.
12	17	22	1	230				4	10	
12	19	23	10	40	1	1	0			
		24	8	40	0	1	1			
12	22	19	12	220				3	3	0
		20	9	240				2	2	0
		21	10	240				2	2	0
12	23	6	2	60	1	1	0			
		7	3	60	1	2	1			
		8	2	50	1	2	1			
12	25	14	16	230				1	1	0
		16	13	240				1	1	0
		17	10	240				1	1	0
		19	10	240				2	1	1
		20	12	240				2	1	1
		21	8	220				2	1	1
		22	11	240				2	1	1
12	26	10	2	60	6	5				
		11	3	50	7	6				
		12	4	60	4	5	1			
		15	6	50	4	6	2			
		16	7	60	4	5	1			
		17	8	60	4	5	1			
		18	7	40	5	4				
12	27	4	8	240				0	2	
		5	7	240				0	2	
		8	7	240				2	1	1
		9	8	240				2	2	0
		12	10	230				3	2	1
		20	13	240				2	2	0
12	28	3	5	220				1	0	1
		19	9	220				2	3	
		20	8	240				3	3	0
		23	6	240				1	2	

Month	Day	Hour	Wind Speed	Wind Direction	Station #4 Upwind Wind Direction (150°, 160°, 170°) #1	#4	Diff.	Station #1 Upwind Wind Direction (330°, 340°, 350°) #4	#1	Diff.
12	17	21	0	160	5	6				
12	18	1	1	160	1	3				
		2	1	150	1	2				
		14	4	150	2	4				
12	20	8	10	350				2	3	
		14	12	340				3	1	2
		15	10	350				3	1	2
		16	10	350				3	2	1
		17	10	350				3	3	0
		19	9	350				4	4	0
12	25	1	12	160	2	1	1			
		2	8	160	1	0	1			
		3	7	170	1	1	0			
12	26	6	1	150	1	1	0			
		19	4	340				3	4	
		23	2	350				3	4	
12	29	6	5	340				1	0	1
		7	6	350				2	0	2
12	30	16	3	350				2	2	0
1	3	16	4	330				2	7	

Month	Day	Hour	Wind Speed	Wind Direction	Station #3 Upwind Wind Direction (250°, 260°, 270°) #3	#4	Diff.	Station #4 Upwind Wind Direction (70°, 80°, 90°) #4	#3	Diff.
12	17	23	1	250	4	4	0			
12	19	1	6	80				2	2	0
		2	6	90				2	3	1
		9	3	90				4	3	0
		10	6	80				3	3	0
		11	6	80				3	3	0
		12	10	70				2	3	1
		13	9	70						
12	21	11	4	270	5	4				
		12	6	270	5	3				
		14	5	270	6	4				
		16	5	270	8	5				
		18	3	270	12	9				
12	22	22	10	250	2	2	0			
		23	10	250	1	1	0			
12	23	9	1	90				2	2	0
		10	3	90				4	3	
		17	12	90				1	3	2
		23	10	90				2	1	
		24	10	80				1	1	0
12	24	3	9	90				0	1	1
12	25	18	11	250	2	1				
		24	4	250	1	1	0			
12	26	9	0	80				3	5	2
12	27	1	7	250	2	2	0			
		2	7	260	2	2	0			
		3	7	250	2	1				
		6	9	260	2	1				
		7	8	250	2	1				
		10	9	250	3	2				
		13	14	250	4	3				
		14	14	270	3	3	0			
		16	18	270	4	2				
12	28	21	7	250	3	4	1			
		22	7	250	6	8	2			
		24	6	250	2	4	2			
12	29	1	7	260	1	2	1			
		20	8	270	3	4	1			
12	30	10	7	250	2	0	1			
		13	4	270	3	1				

Month	Day	Hour	Speed	Direction	Station 2 Upwind Wind Direction (350°, 360°, 10°) #2	#3	Diff.	Station 3 Upwind Wind Direction (170°, 180°, 190°) #2	#3	Diff.
12	20	3	11	10	1	2	1			
		4	11	360	1	1	0			
		5	12	360	1	1	0			
		6	12	360	2	1	0			
		7	11	360	2	1				
		8	10	350	3	2				
		9	11	360	3	2				
		10	12	360	3	2				
		11	14	360	4	3				
		12	11	360	4	4	0			
		13	13	10	4	4	0			
		15	12	350	4	4	0			
		16	10	350	5	5	0			
		17	10	350	7	6				
		18	10	360	7	5				
		19	13	350	5	5	0			
12	21	3	4	10	1	2	1			
		5	3	360	1	2	1			
		9	7	360	4	5	1			
		10	1	350	5	5	0			
12	23	5	1	10	1	1	0			
12	25	3	7	170				0	1	
		4	9	180				0	1	
		5	7	190				0	1	
		12	2	180				1	2	
		13	7	190				2	1	1
12	26	8	2	360	3	4	1			
		23	2	350	4	3				
12	27	11	8	180				2	4	
12	28	6	5	190				1	1	0
		7	5	180				1	2	
		8	5	170				1	2	
		9	8	170				1	2	
		10	11	180				2	2	0
		11	12	180				2	2	0
		12	14	190				2	3	
		13	13	190				2	3	
		14	13	190				2	4	
12	29	7	6	350	0	1	1			
12	30	16	3	350	2	3	1			
		17	2	360	2	3	1			
		18	5	10	3	3	0			
		23	9	10	0	3	3			
		24	9	360	0	3	3			

(continued)

(continued)

Month	Day	Hour	Speed	Direction	Station 2 Upwind Wind Direction (350°, 360°, 10°) #2	#3	Diff.	Station 3 Upwind Wind Direction (170°, 180°, 190°) #2	#3	Diff.
12	31	1	8	350	0	2	2			
		2	9	360	0	2	2			
		3	7	360	0	2	2			
		4	8	10	0	2	2			
		6	6	10	0	3	3			
		8	6	360	1	4	3			
		9	6	350	2	4	2			

Month	Day	Hour	Speed	Direction	Station 2 Upwind Wind Direction (330°, 340°, 350°) #2	#3A	Diff.	Station 3A Upwind Wind Direction (150°, 160°, 170°) #2	#3A	Diff.
1	3	12	3	350	3	4	1			
		13	6	330	3	5	2			
		16	4	330	3	5	2			
1	4	1	5	330	0	1	1			
		2	6	330	0	1	1			
		6	3	330	0	1	1			

Month	Day	Hour	Speed	Direction	Station 3A Upwind Wind Direction (230°, 240°, 250°) #A	#4	Diff.	Station #4 Upwind Wind Direction (50°, 60°, 70°) #A	#3	Diff.
1	4	4	0	250	1	3	2			
		5	1	250	1	3	2			
		19	1	250	9	8				
1	5	2	1	250	5	9	4			
		10	2	250	3	3	0			

APPENDIX B

METEROLOGICAL STABILITY DATA

Month	Date	Hour	Ceiling (100's of feet)*	Wind Speed (mph)	Cloud Cover (tenths)	Stability Class
3	22	12	250	23	5	4
3	22	13	250	22	6	4
3	22	14	250	22	10	4
3	22	15	70	30	10	4
3	22	16	33	28	10	4
3	22	17	70	25	10	4
3	22	18	120	20	10	4
3	22	19	15	16	10	4
3	22	20	6	15	10	4
3	22	21	6	13	10	4
3	22	22	8	14	10	4
3	22	23	9	12	10	4
3	22	24	17	10	10	4
3	23	1	23	9	10	4
3	23	2	200	9	8	4
3	23	3	200	11	3	5
3	23	4	200	10	2	5
3	23	5	200	8	2	5
3	23	6	250	9	3	4
3	23	7	250	8	10	4
3	23	8	250	8	10	3
3	23	9	23	8	10	4
3	23	10	250	8	10	2
3	23	11	200	8	10	2
3	23	12	200	8	10	2
3	23	13	200	6	10	2
3	23	14	200	5	10	2
3	23	15	200	7	10	3
3	23	16	200	6	10	3
3	23	17	200	5	10	4
3	23	18	200	3	10	5
3	23	19	200	3	7	5
3	23	20	200	4	5	5
3	23	21	200	3	4	5
3	23	22	200	5	4	5
3	23	23	999	3	6	5
3	23	24	999	4	0	5
3	24	1	38	7	2	5
3	24	2	17	8	2	5
3	24	3	17	11	10	4
3	24	4	17	17	2	4
3	24	5	17	13	2	4
3	24	6	20	13	3	4
3	24	7	20	12	4	4
3	24	8	20	12	5	4
3	24	9	20	14	6	4
3	24	10	20	14	6	4
3	24	11	20	15	5	4
3	24	12	20	12	5	3
3	24	13	20	10	5	3
3	24	14	20	11	5	3
3	24	15	30	11	4	4
3	24	16	30	10	2	3
3	24	17	30	10	1	4

*A "999" indicates unlimited ceiling.

3	24	18	300	7	1	5
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3	24	20	999	4	0	5
3	24	21	999	1	0	5
3	24	22	999	1	0	5
3	24	23	999	1	0	5
3	24	24	999	1	0	5
3	25	1	999	1	0	5
3	25	2	999	2	0	5
3	25	3	999	5	0	5
3	25	4	120	6	3	5
3	25	5	46	7	8	5
3	25	6	46	12	2	4
3	25	7	200	13	2	4
3	25	8	999	15	0	4
3	25	9	200	20	6	4
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3	25	11	200	20	7	4
3	25	12	200	25	7	4
3	25	13	200	25	5	4
3	25	14	80	27	6	4
3	25	15	200	27	7	4
3	25	16	200	27	5	4
3	25	17	200	24	7	4
3	25	18	250	22	7	4
3	25	19	250	16	6	4
3	25	20	250	15	10	4
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3	25	22	250	11	10	4
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3	25	24	250	14	10	4
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3	26	6	60	15	10	4
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3	26	8	60	14	9	4
3	26	9	250	12	6	4
3	26	10	29	12	8	4
3	26	11	250	12	6	3
3	26	12	25	11	5	3
3	26	13	250	10	4	3
3	26	14	250	9	8	3
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3	26	19	250	4	9	5
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3	26	21	100	4	9	5
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3	26	23	250	5	10	5

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3	27	4	70	5	10	4
3	27	5	60	4	10	4
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4	5	21	996	2	0	5
4	5	22	996	1	0	5
4	5	23	996	0	0	5
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4	13	22	29	11	10	4
4	13	23	33	10	10	4
4	13	24	23	7	10	4

APPENDIX C

SHOPPING CENTER TRAFFIC
AS PERCENT OF TOTAL TRAFFIC

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-13-74 DAY OF WEEK= WEDNESDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

NORTH LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	191.	0.	191.	0.0
2	83.	0.	83.	0.0
3	75.	0.	75.	0.0
4	41.	0.	41.	0.0
5	78.	0.	78.	0.0
6	212.	0.	212.	0.0
7	857.	0.	857.	0.0
8	1454.	0.	1454.	0.0
9	1166.	0.	1166.	0.0
10	957.	0.	957.	0.0
11	1004.	0.	1004.	0.0
12	1239.	0.	1239.	0.0
13	1125.	0.	1125.	0.0
14	1344.	0.	1344.	0.0
15	1411.	0.	1411.	0.0
16	1737.	337.	1399.	19.4
17	1926.	637.	1288.	33.1
18	1834.	724.	1109.	39.5
19	1497.	461.	1035.	30.8
20	1246.	461.	784.	37.0
21	905.	327.	577.	36.2
22	890.	243.	646.	27.3
23	483.	38.	444.	7.9
24	387.	15.	371.	4.0
	22142	3243	18890	14.6

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-13-74 DAY OF WEEK= WEDNESDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

EAST LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	146.	0.	146.	0.0
2	55.	0.	55.	0.0
3	37.	0.	37.	0.0
4	20.	0.	20.	0.0
5	15.	0.	15.	0.0
6	87.	0.	87.	0.0
7	468.	0.	468.	0.0
8	1643.	0.	1643.	0.0
9	1711.	0.	1711.	0.0
10	1095.	0.	1095.	0.0
11	1280.	0.	1280.	0.0
12	1503.	0.	1503.	0.0
13	1645.	0.	1645.	0.0
14	1495.	0.	1495.	0.0
15	1349.	317.	1031.	23.5
16	1370.	479.	890.	35.0
17	1620.	444.	1175.	27.4
18	1494.	434.	1059.	29.0
19	1216.	375.	841.	30.8
20	1166.	385.	780.	33.0
21	804.	393.	410.	48.9
22	831.	130.	700.	15.7
23	390.	20.	369.	5.1
24	313.	14.	298.	4.5
	21753	2990	18753	13.7

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-14-74 DAY OF WEEK= THURSDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

NORTH LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	258.	3.	254.	1.4
2	109.	3.	105.	3.5
3	52.	1.	50.	2.0
4	47.	0.	47.	0.0
5	56.	0.	56.	0.0
6	216.	7.	208.	3.5
7	736.	28.	707.	3.8
8	1706.	177.	1528.	10.3
9	1490.	410.	1079.	27.5
10	898.	512.	385.	57.0
11	931.	438.	492.	47.1
12	1010.	501.	508.	49.6
13	978.	540.	437.	55.2
14	1174.	546.	627.	46.5
15	1307.	562.	744.	43.0
16	1542.	516.	1025.	33.5
17	2219.	661.	1557.	29.7
18	2097.	668.	1428.	31.8
19	1626.	490.	1135.	30.1
20	1470.	468.	1001.	31.8
21	1163.	390.	772.	33.5
22	1116.	349.	766.	31.3
23	627.	40.	586.	6.5
24	423.	13.	409.	3.1
	23251	7323	15906	31.4

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-14-74 DAY OF WEEK= THURSDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

EAST LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	164.	6.	157.	4.0
2	78.	3.	74.	4.7
3	38.	0.	38.	0.0
4	37.	3.	33.	9.5
5	30.	3.	26.	12.3
6	79.	7.	71.	9.3
7	431.	49.	381.	11.5
8	1596.	147.	1448.	9.2
9	1609.	360.	1248.	22.3
10	1115.	244.	870.	21.9
11	1141.	430.	710.	37.7
12	1357.	481.	875.	35.4
13	1486.	496.	989.	33.4
14	1428.	472.	955.	33.0
15	1414.	541.	872.	38.3
16	1320.	432.	887.	32.7
17	1626.	450.	1175.	27.7
18	1503.	482.	1020.	32.0
19	1181.	420.	760.	35.5
20	1088.	451.	636.	41.5
21	819.	328.	490.	40.1
22	822.	281.	540.	34.2
23	297.	30.	266.	10.3
24	279.	26.	252.	9.6
	20938	6142	14773	29.3

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-15-74 DAY OF WEEK= FRIDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

NORTH LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	310.	3.	306.	1.1
2	208.	1.	206.	0.9
3	110.	2.	107.	2.7
4	85.	2.	82.	3.1
5	78.	0.	78.	0.0
6	260.	11.	248.	4.3
7	810.	26.	783.	3.2
8	1915.	210.	1704.	10.9
9	1774.	530.	1243.	29.9
10	1339.	367.	971.	27.4
11	1290.	413.	876.	32.0
12	1282.	485.	796.	37.8
13	1360.	506.	853.	37.2
14	1168.	557.	610.	47.7
15	1279.	518.	760.	40.5
16	1427.	540.	886.	37.8
17	2006.	720.	1285.	35.9
18	2094.	836.	1257.	39.9
19	1390.	419.	970.	30.1
20	1373.	520.	852.	37.9
21	974.	446.	527.	45.8
22	935.	383.	551.	41.0
23	534.	44.	489.	8.3
24	426.	20.	405.	4.8
	24427	7559	16845	30.9

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-15-74 DAY OF WEEK= FRIDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

EAST LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	198.	9.	188.	4.8
2	86.	2.	83.	3.1
3	46.	11.	34.	25.9
4	16.	1.	15.	6.2
5	19.	0.	18.	4.4
6	95.	6.	88.	7.0
7	492.	48.	443.	9.8
8	1639.	164.	1474.	10.0
9	1667.	247.	1420.	14.8
10	1019.	318.	700.	31.2
11	1054.	365.	688.	34.6
12	1390.	427.	962.	30.7
13	1545.	471.	1073.	30.5
14	1454.	492.	961.	33.8
15	1238.	453.	784.	36.6
16	1338.	445.	892.	33.3
17	1655.	444.	1211.	26.8
18	1515.	521.	993.	34.4
19	1269.	374.	894.	29.5
20	1266.	434.	831.	34.3
21	1049.	394.	654.	37.6
22	1109.	352.	757.	31.7
23	542.	64.	477.	11.9
24	466.	24.	441.	5.3
	22167	6063	16081	27.3

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-16-74 DAY OF WEEK= SATURDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

NORTH LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	447.	10.	436.	2.2
2	293.	1.	291.	0.6
3	218.	4.	213.	1.8
4	94.	0.	93.	0.9
5	68.	2.	65.	4.3
6	140.	7.	132.	5.0
7	285.	8.	276.	2.8
8	495.	53.	441.	10.8
9	638.	233.	404.	36.5
10	952.	518.	433.	54.4
11	1044.	625.	418.	59.9
12	1599.	898.	700.	56.1
13	1802.	909.	892.	50.4
14	2138.	1102.	1036.	51.5
15	1892.	1094.	798.	57.8
16	2238.	975.	1262.	43.6
17	1709.	813.	895.	47.5
18	1694.	660.	1033.	38.9
19	1159.	160.	998.	13.8
20	1225.	92.	1132.	7.5
21	978.	70.	907.	7.1
22	770.	80.	689.	10.4
23	532.	46.	485.	8.6
24	627.	28.	598.	4.5
	23039	8388	14627	36.4

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-16-74 DAY OF WEEK= SATURDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

EAST LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	433.	9.	423.	2.2
2	149.	3.	145.	2.5
3	77.	2.	74.	3.7
4	54.	1.	52.	3.4
5	22.	1.	20.	7.7
6	48.	6.	41.	14.2
7	115.	15.	99.	13.6
8	244.	40.	203.	16.7
9	597.	189.	407.	31.7
10	865.	362.	502.	41.9
11	1125.	509.	615.	45.2
12	1324.	597.	726.	45.1
13	1748.	822.	925.	47.0
14	1581.	828.	752.	52.3
15	1519.	878.	641.	57.8
16	1448.	768.	679.	53.0
17	1297.	601.	695.	46.3
18	1157.	523.	633.	45.2
19	800.	152.	647.	19.1
20	1240.	167.	1072.	13.5
21	733.	103.	629.	14.1
22	1191.	159.	1032.	13.3
23	609.	57.	551.	9.4
24	556.	48.	507.	8.7
	18932	6838	12070	36.1

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-17-74 DAY OF WEEK= SUNDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

NORTH LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	748.	23.	724.	3.2
2	483.	12.	470.	2.6
3	342.	2.	339.	0.8
4	170.	0.	170.	0.0
5	69.	0.	68.	1.2
6	69.	0.	69.	0.0
7	74.	2.	71.	2.8
8	158.	5.	152.	3.2
9	211.	6.	204.	3.2
10	396.	17.	378.	4.3
11	627.	148.	478.	23.6
12	1236.	525.	710.	42.4
13	1402.	714.	687.	50.9
14	1889.	854.	1034.	45.2
15	1913.	903.	1009.	47.2
16	1579.	819.	759.	51.9
17	1717.	621.	1095.	36.2
18	1534.	321.	1212.	20.9
19	1003.	55.	947.	5.4
20	779.	31.	747.	4.0
21	566.	23.	542.	4.0
22	657.	27.	629.	4.2
23	533.	10.	522.	1.9
24	363.	7.	355.	2.0
	18518	5125	13371	27.6

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-17-74 DAY OF WEEK= SUNDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

EAST LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	536.	20.	515.	3.8
2	271.	7.	263.	2.8
3	238.	3.	235.	1.2
4	46.	2.	43.	5.8
5	36.	3.	32.	10.2
6	22.	0.	22.	0.0
7	33.	2.	31.	6.0
8	86.	6.	79.	7.4
9	101.	9.	91.	9.4
10	174.	26.	147.	15.1
11	340.	76.	263.	22.5
12	804.	367.	436.	45.6
13	1178.	516.	661.	43.8
14	1547.	744.	802.	48.1
15	1646.	773.	872.	46.9
16	1539.	732.	806.	47.5
17	1265.	562.	702.	44.4
18	1005.	249.	755.	24.8
19	636.	97.	539.	15.2
20	671.	59.	611.	8.9
21	380.	39.	340.	10.3
22	594.	48.	546.	8.0
23	292.	12.	279.	4.1
24	189.	15.	173.	8.0
	13629	4365	9243	32.0

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-18-74 DAY OF WEEK= MONDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

NORTH LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	186.	1.	184.	1.0
2	130.	3.	126.	2.9
3	52.	2.	49.	5.4
4	36.	0.	35.	2.4
5	48.	0.	48.	0.0
6	232.	7.	224.	3.0
7	930.	25.	904.	2.7
8	1548.	242.	1305.	15.6
9	1172.	513.	658.	43.7
10	1063.	341.	741.	31.5
11	1116.	455.	660.	40.8
12	1126.	519.	606.	46.1
13	1157.	561.	595.	48.5
14	[illegible]	510.	785.	39.4
15	[illegible]	541.	742.	42.1
16	[illegible]	531.	1206.	30.5
17	2031.	716.	1314.	35.2
18	1905.	718.	1186.	37.6
19	1342.	411.	930.	30.6
20	865.	559.	325.	63.2
21	690.	315.	375.	45.6
22	674.	308.	365.	45.8
23	324.	38.	285.	11.8
24	255.	14.	240.	5.8
	21240	7329	13888	34.5

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-18-74 DAY OF WEEK= MONDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

EAST LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	209.	8.	200.	4.2
2	31.	0.	31.	0.0
3	22.	0.	21.	3.8
4	25.	1.	23.	7.4
5	13.	2.	11.	15.3
6	85.	3.	81.	4.5
7	441.	50.	390.	11.5
8	1615.	155.	1460.	9.5
9	1723.	247.	1475.	14.3
10	1016.	294.	721.	29.0
11	1007.	263.	743.	26.1
12	1303.	396.	906.	30.4
13	1601.	497.	1103.	31.0
14	1401.	489.	911.	34.9
15	1303.	483.	819.	37.1
16	1293.	487.	805.	37.6
17	1575.	508.	1066.	32.3
18	1518.	486.	1031.	32.0
19	1289.	430.	858.	33.4
20	970.	398.	571.	41.1
21	748.	330.	417.	44.2
22	740.	217.	522.	29.4
23	363.	19.	343.	5.2
24	213.	10.	202.	4.9
	20504	5772	14710	28.1

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-19-74 DAY OF WEEK= TUESDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

NORTH LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	203.	0.	203.	0.0
2	127.	2.	124.	1.6
3	72.	1.	70.	1.4
4	56.	0.	56.	0.0
5	71.	0.	71.	0.0
6	210.	4.	205.	1.9
7	854.	23.	830.	2.7
8	1540.	115.	1424.	7.5
9	1201.	540.	660.	45.0
10	930.	372.	557.	40.0
11	1047.	337.	709.	32.2
12	1096.	474.	621.	43.2
13	1037.	567.	469.	54.7
14	1175.	576.	598.	49.0
15	1356.	518.	837.	38.2
16	1582.	563.	1018.	35.6
17	2153.	665.	1487.	30.8
18	1878.	729.	1148.	38.8
19	1334.	483.	850.	36.2
20	1177.	450.	726.	38.2
21	709.	350.	358.	49.3
22	666.	261.	404.	39.2
23	427.	38.	388.	8.9
24	365.	8.	356.	2.2
	21266	7076	14169	33.2

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-19-74 DAY OF WEEK= TUESDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

EAST LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	182.	7.	174.	3.9
2	56.	5.	50.	9.6
3	31.	2.	28.	8.2
4	24.	0.	23.	3.5
5	20.	1.	18.	9.2
6	69.	6.	62.	9.4
7	449.	48.	400.	10.6
8	1628.	165.	1462.	10.1
9	1724.	249.	1474.	14.4
10	1054.	326.	727.	31.0
11	1081.	365.	715.	33.8
12	1279.	475.	803.	37.2
13	1618.	547.	1070.	33.8
14	1429.	538.	890.	37.6
15	1306.	499.	806.	38.2
16	1338.	490.	847.	36.6
17	1631.	472.	1158.	28.9
18	1573.	501.	1071.	31.8
19	1141.	390.	750.	34.2
20	1016.	445.	570.	43.8
21	820.	334.	485.	40.8
22	924.	248.	675.	26.8
23	316.	26.	289.	8.3
24	241.	18.	222.	7.8
	20950	6157	14769	29.3

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-20-74 DAY OF WEEK= WEDNESDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

NORTH LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	256.	1.	254.	0.7
2	168.	39.	128.	23.5
3	64.	1.	62.	1.6
4	60.	2.	57.	3.5
5	77.	24.	52.	32.3
6	193.	19.	173.	10.0
7	885.	24.	860.	2.7
8	1650.	180.	1469.	10.9
9	1277.	524.	752.	41.0
10	956.	376.	579.	39.3
11	958.	487.	470.	50.9
12	1288.	531.	756.	41.2
13	1380.	549.	830.	39.8
14	1208.	610.	597.	50.5
15	13[illegible].	593.	767.	43.6
16	17[illegible]7.	565.	1141.	33.1
17	2169.	660.	1508.	30.4
18	2064.	725.	1338.	35.1
19	1389.	466.	922.	33.6
20	1242.	533.	708.	42.9
21	733.	345.	387.	47.0
22	640.	268.	371.	41.9
23	472.	46.	425.	9.8
24	368.	95.	272.	25.9
	22565	7663	14878	33.9

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-20-74 DAY OF WEEK= WEDNESDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

EAST LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	236.	8.	227.	3.6
2	61.	2.	58.	4.1
3	40.	1.	38.	4.2
4	17.	1.	16.	5.8
5	20.	2.	17.	13.5
6	85.	5.	79.	6.5
7	386.	37.	348.	9.6
8	1409.	136.	1272.	9.6
9	1694.	238.	1455.	14.0
10	1046.	378.	667.	36.1
11	1092.	371.	720.	34.0
12	1345.	445.	899.	33.1
13	1716.	575.	1140.	33.5
14	1490.	568.	921.	38.1
15	1314.	514.	799.	39.1
16	1375.	502.	872.	36.5
17	1667.	512.	1154.	30.7
18	1465.	479.	985.	32.7
19	1202.	425.	776.	35.4
20	1091.	396.	694.	36.3
21	756.	299.	456.	39.5
22	836.	256.	579.	30.6
23	361.	31.	329.	8.7
24	304.	16.	287.	5.3
	21008	6197	14788	29.4

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-21-74 DAY OF WEEK= THURSDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

NORTH LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	268.	14.	253.	5.4
2	183.	4.	178.	2.6
3	66.	38.	27.	58.2
4	48.	122.	-74.	255.8
5	50.	4.	45.	9.2
6	237.	16.	220.	6.8
7	775.	18.	756.	2.3
8	1462.	158.	1303.	10.8
9	1529.	522.	1006.	34.1
10	1178.	311.	866.	26.4
11	1019.	327.	691.	32.1
12	1044.	386.	657.	37.0
13	993.	342.	650.	34.4
14	1024.	340.	683.	33.2
15	1343.	218.	1124.	16.2
16	1428.	236.	1191.	16.5
17	2182.	279.	1902.	12.8
18	1984.	259.	1724.	13.0
19	1477.	311.	1165.	21.1
20	1288.	362.	925.	28.1
21	1005.	174.	830.	17.3
22	814.	43.	770.	5.2
23	582.	11.	570.	1.9
24	407.	5.	401.	1.2
	22386	4500	17862	20.1

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-21-74 DAY OF WEEK= THURSDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

EAST LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	113.	8.	104.	7.7
2	90.	2.	87.	3.0
3	41.	4.	36.	11.4
4	15.	1.	13.	12.3
5	22.	1.	21.	4.5
6	81.	5.	75.	7.2
7	395.	38.	356.	9.6
8	1449.	147.	1301.	10.1
9	1654.	275.	1378.	16.6
10	1067.	344.	722.	32.2
11	995.	351.	643.	35.3
12	1359.	416.	942.	30.6
13	1538.	474.	1063.	30.8
14	1403.	499.	903.	35.6
15	1282.	487.	794.	38.0
16	1358.	507.	850.	37.3
17	1596.	481.	1114.	30.1
18	1532.	514.	1017.	33.5
19	1326.	415.	910.	31.3
20	1177.	458.	718.	38.9
21	854.	359.	494.	42.1
22	886.	304.	581.	34.3
23	397.	41.	355.	10.5
24	286.	18.	267.	6.6
	20916	6149	14744	29.3

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-22-74 DAY OF WEEK= FRIDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

NORTH LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	281.	1.	279.	0.3
2	158.	3.	154.	1.9
3	64.	1.	62.	1.6
4	65.	1.	63.	1.6
5	84.	0.	84.	0.0
6	212.	5.	206.	2.4
7	835.	14.	820.	1.7
8	1502.	202.	1299.	13.4
9	1394.	495.	898.	35.5
10	1222.	344.	877.	28.1
11	1277.	359.	917.	28.1
12	1275.	368.	906.	28.9
13	1322.	349.	972.	26.4
14	1070.	385.	684.	36.0
15	1514.	296.	1217.	19.5
16	1645.	233.	1411.	14.1
17	2283.	281.	2001.	12.3
18	2152.	302.	1849.	14.0
19	1303.	321.	981.	24.6
20	1491.	370.	1120.	24.8
21	1098.	190.	907.	17.3
22	1027.	82.	944.	8.0
23	610.	12.	597.	2.0
24	558.	6.	551.	1.1
	24442	4620	19799	18.9

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-22-74 DAY OF WEEK= FRIDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

EAST LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	211.	8.	202.	3.9
2	93.	6.	86.	6.8
3	37.	3.	34.	8.1
4	15.	0.	15.	0.0
5	27.	2.	24.	10.5
6	91.	10.	80.	11.5
7	415.	44.	370.	10.7
8	1545.	147.	1397.	9.5
9	1721.	241.	1479.	14.0
10	1040.	311.	728.	29.9
11	1103.	363.	739.	32.9
12	1420.	380.	1039.	26.7
13	1631.	473.	1157.	29.0
14	1491.	508.	982.	34.0
15	1371.	499.	871.	36.4
16	1498.	532.	965.	35.5
17	1697.	508.	1188.	29.9
18	1524.	466.	1058.	30.5
19	1320.	382.	937.	28.9
20	1446.	478.	967.	33.1
21	960.	345.	614.	36.0
22	1287.	308.	978.	23.9
23	497.	55.	441.	11.1
24	440.	18.	421.	4.2
	22880	6086	16772	26.5

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-23-74 DAY OF WEEK= SATURDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

NORTH LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	533.	19.	513.	3.6
2	328.	5.	322.	1.6
3	230.	0.	229.	0.3
4	91.	0.	90.	0.9
5	73.	0.	73.	0.0
6	143.	1.	141.	1.2
7	294.	0.	294.	0.0
8	401.	5.	395.	1.3
9	647.	22.	624.	3.4
10	1021.	51.	969.	5.0
11	1303.	148.	1154.	11.4
12	1309.	229.	1079.	17.5
13	1571.	834.	736.	53.1
14	1670.	921.	748.	55.1
15	1535.	858.	676.	55.9
16	1615.	831.	783.	51.4
17	1430.	610.	819.	42.6
18	1387.	481.	905.	34.7
19	1130.	115.	1014.	10.2
20	998.	101.	896.	10.1
21	723.	45.	677.	6.3
22	698.	56.	641.	8.1
23	589.	28.	560.	4.8
24	565.	39.	525.	7.0
	20284	5399	14863	26.6

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-23-74 DAY OF WEEK= SATURDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

EAST LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	524.	27.	496.	5.2
2	167.	9.	157.	5.6
3	81.	3.	77.	4.5
4	44.	0.	44.	0.0
5	24.	0.	24.	0.0
6	38.	8.	29.	22.1
7	147.	9.	137.	6.7
8	255.	35.	219.	14.0
9	574.	180.	393.	31.4
10	899.	395.	503.	43.9
11	1060.	488.	571.	46.0
12	1297.	600.	696.	46.2
13	1647.	680.	966.	41.2
14	1466.	758.	707.	51.7
15	1617.	826.	790.	51.1
16	1442.	693.	748.	48.0
17	1344.	638.	705.	47.5
18	1014.	505.	508.	49.8
19	787.	141.	645.	17.9
20	1236.	147.	1089.	11.8
21	853.	98.	754.	11.5
22	1314.	154.	1159.	11.7
23	430.	44.	385.	10.4
24	580.	30.	549.	5.2
	18840	6467	12351	34.3

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-24-74 DAY OF WEEK= SUNDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

NORTH LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	572.	15.	556.	2.7
2	363.	1.	361.	0.4
3	202.	2.	199.	1.4
4	113.	0.	113.	0.0
5	56.	1.	54.	1.8
6	31.	0.	31.	0.0
7	47.	2.	44.	6.3
8	141.	5.	135.	4.1
9	226.	6.	219.	2.9
10	375.	17.	357.	4.6
11	468.	115.	352.	24.6
12	1013.	493.	519.	48.7
13	1465.	780.	684.	53.2
14	1743.	860.	882.	49.3
15	1812.	926.	885.	51.1
16	1934.	837.	1096.	43.3
17	1631.	601.	1029.	36.8
18	1258.	339.	918.	27.0
19	907.	66.	840.	7.3
20	783.	39.	743.	5.0
21	544.	18.	525.	3.4
22	607.	27.	579.	4.5
23	490.	5.	484.	1.1
24	236.	6.	229.	2.8
	17017	5161	11834	30.3

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-24-74 DAY OF WEEK= SUNDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

EAST LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	375.	20.	354.	5.4
2	197.	2.	194.	1.2
3	125.	0.	125.	0.0
4	41.	1.	39.	4.5
5	24.	0.	23.	3.5
6	17.	2.	14.	15.8
7	37.	3.	34.	8.1
8	66.	3.	62.	5.8
9	85.	7.	77.	9.0
10	162.	22.	139.	13.6
11	252.	61.	190.	24.4
12	644.	381.	262.	59.2
13	1008.	531.	476.	52.7
14	1440.	727.	712.	50.4
15	1613.	770.	842.	47.7
16	1549.	704.	844.	45.5
17	1430.	592.	837.	41.4
18	1021.	296.	724.	29.0
19	945.	78.	866.	8.3
20	692.	65.	626.	9.5
21	525.	32.	492.	6.1
22	446.	31.	414.	6.9
23	436.	19.	416.	4.4
24	222.	6.	215.	2.8
	13352	4353	8977	32.6

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-25-74 DAY OF WEEK= MONDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

NORTH LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	143.	1.	141.	0.7
2	72.	1.	70.	2.6
3	37.	3.	33.	8.5
4	25.	1.	23.	7.1
5	60.	1.	58.	3.2
6	237.	5.	231.	2.5
7	883.	13.	869.	1.5
8	1449.	21.	1427.	1.4
9	1491.	500.	990.	33.5
10	1057.	357.	699.	33.8
11	1057.	440.	616.	41.7
12	965.	468.	496.	48.5
13	1148.	607.	540.	52.8
14	1244.	609.	634.	48.9
15	1195.	563.	631.	47.1
16	1535.	474.	1060.	30.9
17	2073.	693.	1379.	33.4
18	1974.	747.	1226.	37.8
19	1442.	524.	917.	36.3
20	1208.	648.	559.	53.6
21	796.	406.	389.	51.0
22	731.	343.	387.	46.9
23	394.	34.	359.	8.8
24	310.	9.	300.	2.9
	21526	7468	14034	34.6

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-25-74 DAY OF WEEK= MONDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

EAST LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	77.	2.	74.	3.3
2	24.	0.	23.	3.5
3	13.	0.	12.	6.5
4	21.	3.	17.	18.3
5	12.	1.	11.	8.3
6	30.	7.	22.	25.6
7	103.	13.	89.	12.8
8	271.	115.	155.	42.4
9	1821.	253.	1568.	13.8
10	1076.	288.	787.	26.8
11	1084.	374.	709.	34.5
12	1377.	377.	999.	27.4
13	1533.	569.	963.	37.1
14	1485.	524.	960.	35.2
15	1270.	481.	788.	37.9
16	1457.	465.	992.	31.9
17	1650.	495.	1154.	30.0
18	1462.	519.	942.	35.5
19	1231.	445.	785.	36.1
20	1185.	486.	698.	41.0
21	815.	348.	466.	42.7
22	794.	280.	513.	35.3
23	397.	38.	358.	9.5
24	221.	16.	204.	7.5
	19409	6097	13289	31.4

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-26-74 DAY OF WEEK= TUESDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

NORTH LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	192.	0.	192.	0.0
2	133.	2.	130.	2.2
3	60.	1.	58.	1.7
4	50.	0.	49.	1.7
5	101.	4.	96.	4.7
6	254.	4.	249.	1.8
7	1036.	29.	1006.	2.8
8	1499.	259.	1239.	17.2
9	1408.	573.	834.	40.6
10	1114.	428.	685.	38.4
11	980.	518.	461.	52.8
12	1112.	445.	666.	40.0
13	1219.	564.	654.	46.3
14	1270.	539.	730.	42.5
15	1480.	532.	947.	35.9
16	1651.	508.	1142.	30.8
17	2118.	702.	1415.	33.1
18	1957.	755.	1201.	38.6
19	1367.	429.	937.	31.3
20	1123.	575.	547.	51.2
21	755.	400.	354.	53.0
22	836.	271.	564.	32.4
23	521.	38.	482.	7.4
24	386.	13.	372.	3.3
	22622	7589	15010	33.5

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-26-74 DAY OF WEEK= TUESDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

EAST LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	185.	5.	179.	3.0
2	64.	1.	62.	2.8
3	39.	2.	36.	6.5
4	30.	5.	24.	19.0
5	23.	2.	21.	8.6
6	79.	10.	68.	13.3
7	426.	48.	377.	11.2
8	1564.	153.	1410.	9.8
9	1893.	280.	1612.	14.8
10	1165.	352.	812.	30.2
11	1065.	366.	698.	34.4
12	1319.	429.	889.	32.5
13	1576.	531.	1044.	33.7
14	153[illegible].	[illegible]35.	997.	34.9
15	132[illegible].	[illegible]97.	825.	37.6
16	1334.	474.	859.	35.5
17	1678.	505.	1172.	30.1
18	1615.	537.	1077.	33.2
19	1210.	397.	812.	32.8
20	1194.	460.	733.	38.5
21	867.	326.	540.	37.6
22	877.	260.	617.	29.6
23	480.	47.	432.	9.9
24	288.	15.	272.	5.2
	21826	6235	15568	28.5

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-27-74 DAY OF WEEK= WEDNESDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

NORTH LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	196.	2.	193.	1.4
2	131.	3.	127.	2.4
3	52.	4.	47.	9.4
4	59.	0.	59.	0.0
5	100.	0.	100.	0.0
6	231.	6.	224.	2.9
7	1031.	27.	1003.	2.6
8	1758.	219.	1538.	12.4
9	1418.	505.	912.	35.6
10	1233.	400.	832.	32.4
11	954.	431.	522.	45.2
12	1168.	499.	668.	42.7
13	1302.	607.	694.	46.6
14	1150.	574.	575.	49.9
15	1325.	561.	763.	42.3
16	1668.	506.	1161.	30.3
17	2161.	707.	1453.	32.7
18	1990.	730.	1259.	36.7
19	1246.	491.	754.	39.4
20	1212.	585.	626.	48.3
21	754.	360.	393.	47.7
22	777.	297.	479.	38.3
23	566.	42.	523.	7.4
24	376.	16.	359.	4.3
	22858	7572	15264	33.1

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-27-74 DAY OF WEEK= WEDNESDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

EAST LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	211.	7.	203.	3.5
2	81.	3.	77.	4.3
3	31.	3.	27.	11.9
4	30.	3.	26.	12.8
5	24.	0.	24.	0.0
6	82.	9.	72.	11.4
7	404.	50.	353.	12.4
8	1593.	164.	1428.	10.3
9	1648.	257.	1390.	15.6
10	1133.	317.	815.	28.0
11	1135.	375.	759.	33.0
12	1454.	446.	1007.	30.7
13	1668.	531.	1136.	31.8
14	1400.	524.	875.	37.4
15	13[illegible].	537.	827.	39.3
16	14[illegible]2.	499.	953.	34.3
17	1629.	480.	1149.	29.4
18	1454.	497.	956.	34.2
19	1267.	403.	863.	31.8
20	1188.	447.	740.	37.6
21	843.	283.	559.	33.6
22	932.	305.	626.	32.7
23	387.	27.	359.	7.0
24	295.	18.	276.	6.3
	21706	6183	15500	28.4

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-28-74 DAY OF WEEK= THURSDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

NORTH LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	270.	4.	265.	1.7
2	130.	7.	122.	6.0
3	49.	1.	47.	2.1
4	48.	2.	45.	6.2
5	94.	2.	91.	2.8
6	244.	11.	232.	4.6
7	1006.	34.	971.	3.4
8	1553.	208.	1344.	13.3
9	1414.	547.	866.	38.6
10	1212.	372.	839.	30.7
11	1012.	381.	630.	37.7
12	1111.	388.	722.	34.9
13	1135.	512.	622.	45.1
14	1240.	513.	726.	41.4
15	1241.	463.	777.	37.3
16	1439.	408.	1030.	28.4
17	2019.	651.	1367.	32.2
18	1771.	650.	1120.	36.7
19	1515.	439.	1075.	29.0
20	1288.	482.	805.	37.4
21	713.	312.	400.	43.8
22	876.	286.	589.	32.7
23	523.	44.	478.	8.5
24	399.	12.	386.	3.1
	22302	6729	15549	30.1

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-28-74 DAY OF WEEK= THURSDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

EAST LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	186.	8.	177.	4.3
2	76.	3.	72.	4.6
3	38.	0.	37.	2.2
4	22.	2.	19.	11.5
5	30.	1.	28.	6.1
6	90.	8.	81.	9.6
7	436.	44.	391.	10.2
8	1499.	156.	1342.	10.4
9	1650.	242.	1407.	14.6
10	1099.	298.	800.	27.1
11	953.	291.	661.	30.6
12	1260.	330.	930.	26.1
13	1388.	448.	939.	32.3
14	132[illegible]	32.	892.	32.6
15	1219.	433.	785.	35.5
16	1301.	419.	881.	32.2
17	1582.	462.	1119.	29.2
18	1374.	425.	948.	30.9
19	1129.	380.	748.	33.7
20	1172.	433.	738.	37.0
21	804.	299.	504.	37.2
22	833.	215.	617.	25.8
23	355.	28.	326.	8.1
24	354.	23.	330.	6.5
	20175	5379	14772	26.6

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-29-74 DAY OF WEEK= FRIDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

NORTH LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	291.	7.	283.	2.6
2	160.	7.	152.	4.3
3	75.	5.	69.	6.7
4	45.	2.	42.	6.6
5	80.	0.	79.	1.1
6	235.	9.	225.	4.0
7	870.	35.	834.	4.0
8	1586.	194.	1391.	12.2
9	1488.	541.	946.	36.4
10	1083.	376.	706.	34.7
11	877.	401.	475.	45.8
12	1201.	501.	699.	41.7
13	1337.	573.	763.	42.8
14	1139.	476.	662.	41.8
15	1378.	512.	865.	37.2
16	1769.	508.	1260.	28.7
17	2181.	657.	1523.	30.1
18	1844.	704.	1139.	38.1
19	1204.	397.	806.	33.0
20	1321.	412.	908.	31.2
21	821.	366.	454.	44.5
22	1020.	345.	674.	33.8
23	631.	54.	576.	8.7
24	513.	20.	492.	3.9
	23149	7102	16023	30.6

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-29-74 DAY OF WEEK= FRIDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

EAST LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	207.	11.	195.	5.7
2	93.	4.	88.	4.8
3	35.	2.	32.	8.1
4	17.	1.	15.	10.8
5	27.	4.	22.	16.8
6	86.	4.	81.	5.4
7	409.	42.	366.	10.3
8	1547.	130.	1416.	8.4
9	1765.	271.	1493.	15.3
10	1165.	304.	860.	26.1
11	1109.	335.	773.	30.2
12	1415.	378.	1036.	26.7
13	1679.	484.	1194.	28.8
14	156[illegible]	[illegible]7.	1044.	33.1
15	1361	[illegible]84.	876.	35.5
16	1426.	469.	957.	32.8
17	1764.	458.	1305.	25.9
18	1569.	493.	1075.	31.4
19	1282.	356.	925.	27.8
20	1503.	418.	1084.	27.8
21	1031.	330.	700.	32.0
22	1236.	375.	860.	30.3
23	721.	77.	643.	10.7
24	464.	21.	442.	4.6
	23473	5967	17482	25.4

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-30-74 DAY OF WEEK= SATURDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

NORTH LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	457.	19.	437.	4.2
2	281.	5.	275.	1.9
3	223.	2.	220.	1.1
4	111.	1.	109.	1.7
5	117.	3.	113.	3.1
6	156.	4.	151.	2.5
7	319.	18.	300.	5.8
8	480.	43.	436.	9.0
9	775.	231.	543.	29.8
10	1044.	483.	560.	46.3
11	1200.	510.	689.	42.5
12	1597.	738.	858.	46.2
13	1736.	858.	877.	49.4
14	1643.	952.	691.	57.9
15	1818.	953.	865.	52.4
16	1625.	785.	839.	48.3
17	1787.	741.	1045.	41.4
18	1500.	631.	868.	42.0
19	960.	113.	846.	11.8
20	1038.	138.	899.	13.3
21	864.	48.	815.	5.6
22	800.	86.	713.	10.8
23	683.	60.	622.	8.8
24	561.	18.	542.	3.2
	21777	7440	14313	34.1

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-30-74 DAY OF WEEK= SATURDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

EAST LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	556.	20.	535.	3.6
2	176.	14.	161.	8.1
3	117.	5.	111.	4.3
4	81.	5.	75.	6.2
5	42.	6.	35.	16.5
6	51.	4.	46.	8.6
7	177.	33.	143.	19.0
8	293.	52.	240.	17.9
9	639.	197.	441.	30.9
10	933.	438.	494.	46.9
11	1169.	571.	597.	48.9
12	1438.	715.	722.	49.7
13	1653.	722.	930.	43.7
14	1608.	724.	883.	45.0
15	1578.	821.	756.	52.0
16	1533.	716.	816.	46.7
17	1309.	623.	685.	47.6
18	1388.	266.	1121.	19.2
19	804.	102.	701.	12.7
20	1877.	308.	1568.	16.4
21	1238.	161.	1076.	13.0
22	1489.	199.	1289.	13.3
23	890.	68.	821.	7.6
24	704.	28.	675.	3.9
	21743	6798	14921	31.2

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-31-74 DAY OF WEEK= SUNDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

NORTH LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	601.	12.	588.	2.1
2	477.	3.	473.	0.7
3	359.	2.	356.	0.8
4	111.	2.	108.	2.6
5	56.	0.	56.	0.0
6	62.	1.	60.	3.1
7	103.	7.	95.	7.5
8	166.	4.	161.	2.5
9	189.	13.	175.	7.0
10	428.	40.	387.	9.4
11	727.	180.	546.	24.8
12	1176.	532.	645.	45.2
13	1534.	715.	818.	46.6
14	1941.	877.	1064.	45.1
15	2141.	996.	1144.	46.5
16	2040.	946.	1093.	46.4
17	1869.	718.	1150.	38.4
18	1474.	393.	1080.	26.6
19	925.	64.	860.	6.9
20	860.	66.	793.	7.7
21	661.	44.	616.	6.6
22	559.	21.	537.	3.9
23	583.	22.	561.	3.7
24	330.	7.	322.	2.3
	19375	5664	13688	29.2

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-31-74 DAY OF WEEK= SUNDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

EAST LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	516.	5.	510.	1.1
2	159.	3.	155.	2.3
3	239.	12.	226.	5.1
4	46.	6.	39.	13.2
5	32.	0.	32.	0.0
6	27.	1.	26.	3.7
7	49.	2.	47.	4.0
8	100.	8.	92.	8.0
9	183.	8.	175.	4.3
10	251.	23.	228.	9.1
11	392.	94.	298.	23.9
12	924.	407.	516.	44.0
13	1453.	625.	827.	43.0
14	1[illegible]0.	804.	915.	46.7
15	1[illegible]00.	894.	805.	52.6
16	1678.	782.	895.	46.6
17	1395.	631.	763.	45.2
18	1226.	358.	867.	29.2
19	625.	80.	544.	12.8
20	1055.	99.	956.	9.3
21	514.	23.	490.	4.6
22	642.	22.	619.	3.5
23	384.	24.	359.	6.4
24	236.	7.	228.	3.1
	15546	4916	10612	31.6

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 1-74 DAY OF WEEK= MONDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

NORTH LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	207.	6.	200.	3.1
2	91.	5.	85.	6.2
3	47.	4.	42.	8.5
4	34.	0.	34.	0.0
5	56.	0.	55.	1.5
6	241.	10.	230.	4.5
7	1007.	31.	975.	3.1
8	1496.	221.	1274.	14.7
9	1140.	470.	669.	41.2
10	892.	350.	541.	39.3
11	999.	393.	605.	39.3
12	1120.	421.	698.	37.6
13	1258.	543.	714.	43.2
14	1254.	508.	745.	40.5
15	1357.	487.	869.	35.9
16	1532.	476.	1055.	31.1
17	2050.	652.	1397.	31.8
18	2056.	713.	1342.	34.7
19	1450.	545.	904.	37.5
20	1295.	576.	718.	44.4
21	986.	414.	571.	42.0
22	774.	321.	452.	41.5
23	415.	41.	373.	10.0
24	315.	7.	307.	2.2
	22072	7194	14855	32.5

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 1-74 DAY OF WEEK= MONDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

EAST LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	197.	12.	184.	6.1
2	43.	1.	41.	4.3
3	12.	0.	12.	0.0
4	20.	0.	20.	0.0
5	13.	0.	13.	0.0
6	83.	4.	79.	4.8
7	416.	63.	352.	15.3
8	1535.	160.	1374.	10.4
9	1724.	262.	1461.	15.2
10	1093.	385.	707.	35.2
11	1031.	365.	665.	35.4
12	1272.	417.	854.	32.8
13	1473.	299.	1174.	20.2
14	1453.	303.	1150.	20.8
15	1306.	479.	826.	36.7
16	1331.	497.	833.	37.3
17	1680.	688.	991.	40.9
18	1580.	537.	1042.	34.0
19	1281.	457.	823.	35.7
20	1217.	599.	617.	49.2
21	819.	283.	535.	34.5
22	948.	53.	894.	5.6
23	316.	15.	300.	5.0
24	277.	5.	271.	2.0
	21120	5884	15218	27.8

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 2-74 DAY OF WEEK= TUESDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

NORTH LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	202.	6.	195.	3.3
2	131.	3.	127.	2.4
3	78.	2.	75.	2.6
4	51.	1.	49.	3.8
5	76.	0.	75.	1.1
6	250.	2.	247.	1.1
7	971.	29.	941.	3.0
8	1540.	255.	1284.	16.5
9	1394.	520.	873.	37.3
10	1194.	296.	897.	24.8
11	1155.	456.	698.	39.4
12	1231.	483.	747.	39.2
13	1311.	550.	760.	41.9
14	1219.	538.	680.	44.2
15	1418.	547.	870.	38.6
16	1618.	480.	1137.	29.6
17	2185.	695.	1489.	31.8
18	1867.	724.	1142.	38.8
19	1476.	453.	1022.	30.7
20	1335.	549.	785.	41.1
21	988.	356.	631.	36.0
22	872.	284.	587.	32.6
23	484.	50.	433.	10.5
24	335.	14.	320.	4.3
	23381	7293	16064	31.1

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 2-74 DAY OF WEEK= TUESDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

EAST LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	148.	2.	145.	1.9
2	72.	5.	66.	7.5
3	24.	1.	23.	4.1
4	19.	1.	17.	9.7
5	19.	4.	14.	22.3
6	90.	29.	60.	32.5
7	449.	86.	362.	19.2
8	1591.	186.	1404.	11.7
9	1695.	344.	1350.	20.3
10	1146.	487.	659.	42.4
11	1106.	318.	788.	28.7
12	1445.	271.	1174.	18.7
13	16[illegible].	332.	1313.	20.1
14	1568.	583.	985.	37.1
15	1351.	496.	854.	36.7
16	1321.	488.	832.	36.9
17	1720.	465.	1254.	27.0
18	1540.	512.	1027.	33.3
19	1218.	446.	771.	36.6
20	1152.	489.	663.	42.4
21	823.	327.	495.	39.7
22	806.	255.	550.	31.7
23	319.	25.	293.	8.1
24	250.	15.	234.	6.3
	21517	6164	15333	28.6

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 3-74 DAY OF WEEK= WEDNESDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

NORTH LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	339.	10.	328.	3.0
2	131.	5.	125.	4.0
3	74.	3.	70.	5.2
4	43.	0.	42.	2.0
5	84.	0.	84.	0.0
6	253.	2.	250.	1.1
7	974.	34.	939.	3.5
8	1659.	222.	1436.	13.4
9	1434.	499.	934.	34.8
10	1158.	370.	787.	31.9
11	1129.	386.	742.	34.2
12	1252.	437.	8[illegible]	34.9
13	[illegible]	549.	7[illegible]5.	43.0
14	[illegible]	533.	8[illegible]9.	38.8
15	[illegible]	407.	629.	39.2
16	[illegible]	393.	1173.	25.1
17	1770.	519.	1250.	29.3
18	1699.	634.	1064.	37.3
19	1428.	441.	986.	30.9
20	1171.	492.	678.	42.0
21	901.	327.	573.	36.3
22	856.	280.	575.	32.7
23	492.	41.	450.	8.3
24	324.	7.	316.	2.3
	22423	6591	15809	29.3

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 3-74 DAY OF WEEK= WEDNESDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

EAST LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	173.	9.	163.	5.7
2	72.	6.	65.	8.4
3	19.	2.	16.	13.4
4	33.	2.	30.	8.1
5	19.	0.	18.	4.4
6	82.	8.	73.	10.2
7	467.	52.	414.	11.3
8	1588.	164.	1423.	10.3
9	1742.	255.	1486.	14.6
10	1067.	336.	730.	31.5
11	1084.	402.	681.	37.1
12	1394.	463.	930.	33.2
13	1570.	537.	1032.	34.2
14	1222.	550.	672.	45.0
15	943.	361.	581.	38.3
16	1044.	330.	713.	31.6
17	1531.	349.	1181.	22.8
18	1470.	448.	1021.	30.4
19	1231.	388.	842.	31.5
20	1365.	458.	906.	33.6
21	858.	317.	540.	37.0
22	955.	274.	680.	28.7
23	369.	34.	334.	9.3
24	340.	13.	326.	3.9
	20638	5757	14857	27.8

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 4-74 DAY OF WEEK= THURSDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

NORTH LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	265.	8.	256.	3.1
2	161.	5.	155.	3.1
3	67.	5.	61.	7.8
4	67.	2.	64.	4.2
5	78.	1.	76.	1.3
6	251.	3.	247.	1.5
7	914.	35.	878.	3.9
8	1452.	224.	1227.	15.4
9	1452.	526.	925.	36.2
10	1169.	400.	768.	34.2
11	1014.	405.	608.	39.9
12	1061.	368.	692.	34.7
13	1113.	465.	647.	41.8
14	1340.	436.	903.	32.5
15	1231.	477.	753.	38.8
16	1445.	477.	967.	33.0
17	1952.	707.	1244.	36.2
18	1619.	699.	919.	43.2
19	1443.	513.	929.	35.5
20	1185.	582.	602.	49.1
21	938.	391.	546.	41.7
22	955.	348.	606.	36.4
23	478.	59.	418.	12.5
24	388.	12.	375.	3.1
	22038	7148	14866	32.4

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 4-74 DAY OF WEEK= THURSDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

EAST LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	209.	5.	203.	2.5
2	90.	3.	86.	4.1
3	32.	2.	29.	7.9
4	31.	0.	31.	0.0
5	26.	2.	23.	10.9
6	85.	7.	77.	8.7
7	391.	48.	342.	12.3
8	1463.	137.	1325.	9.3
9	1324.	286.	1037.	21.6
10	1070.	332.	737.	31.1
11	1061.	387.	673.	36.5
12	1302.	469.	832.	36.0
13	1488.	548.	939.	36.8
14	1532.	456.	1075.	29.8
15	1408.	460.	947.	32.6
16	1389.	463.	925.	33.3
17	1607.	436.	1170.	27.1
18	1467.	494.	972.	33.6
19	1199.	390.	808.	32.6
20	1371.	453.	917.	33.0
21	897.	346.	550.	38.6
22	1034.	346.	687.	33.4
23	367.	37.	329.	10.1
24	307.	17.	289.	5.7
	21150	6124	15003	28.9

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 5-74 DAY OF WEEK= FRIDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

NORTH LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	262.	4.	257.	1.7
2	169.	3.	165.	2.2
3	86.	1.	84.	2.2
4	64.	0.	63.	1.3
5	81.	1.	79.	1.2
6	249.	2.	246.	1.2
7	978.	29.	948.	3.0
8	1530.	223.	1306.	14.6
9	1250.	491.	758.	39.2
10	949.	412.	536.	43.5
11	1145.	385.	75[illegible]	33.6
12	[illegible]	[illegible]1.	59[illegible]	45.0
13	1[illegible]	[illegible]55.	47[illegible]	53.9
14	14[illegible]	[illegible]6.	887.	39.3
15	1413.	[illegible]3.	894.	36.9
16	1704.	542.	1161.	31.8
17	2294.	699.	1594.	30.4
18	2032.	761.	1270.	37.4
19	1628.	464.	1163.	28.5
20	1636.	675.	960.	41.3
21	1401.	521.	879.	37.2
22	1323.	482.	840.	36.5
23	712.	66.	645.	9.2
24	503.	22.	480.	4.4
	24999	7928	17047	31.7

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 5-74 DAY OF WEEK= FRIDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

EAST LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	263.	6.	256.	2.4
2	123.	4.	118.	3.5
3	36.	1.	35.	2.7
4	33.	0.	33.	0.0
5	20.	0.	20.	0.0
6	84.	10.	73.	12.2
7	396.	43.	352.	11.0
8	1419.	148.	1270.	10.4
9	1774.	257.	1516.	14.4
10	1089.	346.	742.	31.7
11	1100.	355.	744.	32.2
12	1437.	413.	1023.	28.7
13	1617.	502.	1114.	31.0
14	1541.	518.	1022.	33.6
15	1332.	515.	816.	38.7
16	1538.	534.	1003.	34.7
17	1805.	541.	1263.	29.9
18	1623.	584.	1038.	35.9
19	1352.	464.	887.	34.3
20	1823.	598.	1224.	32.8
21	1439.	579.	859.	40.2
22	1382.	419.	962.	30.3
23	737.	82.	654.	11.2
24	426.	25.	400.	5.9
	24389	6944	17424	28.4

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 6-74 DAY OF WEEK= SATURDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

NORTH LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	419.	17.	401.	4.1
2	348.	9.	338.	2.6
3	218.	2.	215.	0.9
4	119.	4.	114.	4.0
5	96.	5.	90.	6.0
6	177.	2.	174.	1.5
7	357.	9.	347.	2.6
8	490.	39.	450.	8.0
9	673.	279.	393.	41.5
10	976.	526.	449.	53.9
11	1421.	667.	753.	46.9
12	1646.	841.	804.	51.1
13	1908.	925.	982.	48.5
14	1984.	929.	1054.	46.8
15	1898.	970.	927.	51.1
16	2062.	928.	1133.	45.0
17	1808.	771.	1036.	42.6
18	1602.	660.	941.	41.2
19	1191.	143.	1047.	12.0
20	1080.	152.	927.	14.1
21	944.	116.	827.	12.3
22	860.	96.	763.	11.2
23	687.	50.	636.	7.4
24	1143.	25.	1117.	2.2
	24107	8165	15918	33.8

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 6-74 DAY OF WEEK= SATURDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

EAST LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	501.	29.	471.	5.8
2	223.	11.	211.	5.3
3	96.	4.	92.	4.1
4	40.	1.	38.	4.6
5	28.	5.	22.	18.7
6	38.	8.	29.	22.5
7	154.	17.	136.	11.3
8	295.	40.	254.	13.8
9	620.	206.	413.	33.2
10	956.	397.	558.	41.6
11	1185.	530.	654.	44.7
12	1395.	687.	707.	49.3
13	1585.	739.	845.	46.6
14	1624.	831.	792.	51.1
15	1561.	881.	680.	56.4
16	1519.	759.	759.	49.9
17	1340.	689.	650.	51.4
18	1312.	592.	719.	45.1
19	1241.	122.	1118.	9.8
20	1668.	238.	1429.	14.2
21	1165.	163.	1001.	14.0
22	1568.	149.	1418.	9.5
23	804.	89.	714.	11.1
24	564.	17.	546.	3.0
	21482	7203	14256	33.5

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 7-74 DAY OF WEEK= SUNDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

NORTH LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	577.	24.	552.	4.1
2	398.	7.	390.	1.9
3	334.	6.	327.	1.9
4	105.	1.	103.	1.8
5	48.	0.	47.	1.8
6	65.	2.	62.	4.6
7	117.	2.	114.	1.7
8	177.	2.	174.	1.1
9	259.	6.	252.	2.6
10	421.	24.	396.	5.7
11	669.	188.	480.	28.1
12	934.	579.	354.	62.0
13	1579.	802.	776.	50.8
14	2026.	953.	1072.	47.0
15	1563.	1064.	498.	68.1
16	2090.	939.	1150.	44.9
17	1407.	706.	700.	50.2
18	1519.	388.	1130.	25.5
19	913.	69.	843.	7.6
20	888.	47.	840.	5.3
21	548.	24.	523.	4.3
22	555.	21.	533.	3.8
23	436.	9.	426.	2.2
24	279.	1.	277.	0.3
	17907	5864	12019	32.7

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 7-74 DAY OF WEEK= SUNDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

EAST LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	670.	36.	633.	5.4
2	243.	9.	233.	4.0
3	238.	2.	235.	1.1
4	56.	4.	52.	7.1
5	21.	0.	21.	0.0
6	17.	0.	16.	5.0
7	57.	3.	53.	6.7
8	85.	7.	77.	8.7
9	124.	16.	107.	13.2
10	211.	28.	182.	13.4
11	332.	82.	249.	24.8
12	878.	431.	446.	49.1
13	1478.	614.	863.	41.5
14	1615.	793.	821.	49.1
15	1695.	867.	827.	51.1
16	1650.	813.	836.	49.3
17	1231.	595.	635.	48.3
18	1182.	374.	807.	31.6
19	616.	60.	555.	9.7
20	894.	77.	816.	8.6
21	446.	19.	426.	4.3
22	541.	19.	521.	3.6
23	319.	16.	302.	5.2
24	231.	3.	227.	1.6
	14830	4868	9940	32.8

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 8-74 DAY OF WEEK= MONDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

NORTH LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	133.	6.	126.	4.9
2	65.	6.	58.	9.4
3	32.	2.	29.	6.5
4	35.	0.	35.	0.0
5	72.	0.	71.	1.2
6	210.	9.	200.	4.4
7	978.	35.	942.	3.6
8	1357.	234.	1122.	17.3
9	1245.	500.	744.	40.2
10	1025.	379.	645.	37.0
11	1079.	451.	627.	41.8
12	1307.	514.	792.	39.3
13	1192.	647.	544.	54.3
14	1417.	575.	841.	40.6
15	1182.	563.	618.	47.7
16	1643.	552.	1090.	33.6
17	2124.	731.	1392.	34.4
18	2031.	756.	1274.	37.2
19	1500.	581.	918.	38.7
20	1123.	594.	528.	52.9
21	1005.	418.	586.	41.6
22	702.	371.	330.	52.9
23	412.	42.	369.	10.2
24	319.	11.	308.	3.4
	22188	7976	14189	35.9

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 8-74 DAY OF WEEK= MONDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

EAST LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	116.	3.	112.	3.0
2	32.	0.	32.	0.0
3	17.	1.	16.	5.8
4	16.	0.	15.	5.3
5	15.	1.	13.	12.3
6	75.	8.	66.	11.6
7	411.	59.	351.	14.4
8	1485.	137.	1347.	9.2
9	1802.	272.	1530.	15.0
10	1100.	336.	763.	30.6
11	1139.	367.	771.	32.2
12	1345.	442.	902.	32.9
13	1599.	576.	1022.	36.0
14	1568.	576.	991.	36.7
15	1335.	546.	788.	40.9
16	1369.	529.	839.	38.6
17	1713.	549.	1163.	32.0
18	1567.	552.	1014.	35.2
19	1344.	508.	835.	37.8
20	1279.	502.	776.	39.3
21	904.	410.	493.	45.3
22	906.	346.	560.	38.1
23	447.	41.	405.	9.3
24	234.	13.	220.	5.6
	21818	6772	15024	31.0

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 9-74 DAY OF WEEK= TUESDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

NORTH LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	221.	12.	208.	5.5
2	90.	4.	85.	5.4
3	45.	1.	43.	2.3
4	62.	2.	59.	3.3
5	72.	0.	71.	1.2
6	229.	2.	226.	1.3
7	885.	26.	858.	2.9
8	1373.	213.	1159.	15.5
9	1099.	425.	673.	38.6
10	1144.	403.	740.	35.2
11	1199.	503.	695.	42.0
12	916.	505.	410.	55.2
13	1361.	637.	723.	46.8
14	1245.	581.	663.	46.6
15	1491.	587.	903.	39.4
16	1722.	603.	1118.	35.0
17	2231.	781.	1449.	35.0
18	1921.	773.	1147.	40.2
19	1296.	501.	794.	38.6
20	968.	560.	407.	57.9
21	741.	396.	344.	53.5
22	898.	317.	580.	35.3
23	468.	51.	416.	11.0
24	424.	19.	404.	4.6
	22101	7902	14175	35.7

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 9-74 DAY OF WEEK= TUESDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

EAST LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	181.	6.	174.	3.5
2	56.	2.	53.	4.8
3	27.	0.	26.	3.1
4	21.	3.	17.	16.9
5	29.	4.	24.	15.6
6	82.	7.	74.	9.2
7	400.	47.	352.	11.8
8	1501.	156.	1345.	10.3
9	1798.	278.	1519.	15.4
10	1078.	339.	738.	31.4
11	1194.	429.	764.	36.0
12	1478.	505.	972.	34.1
13	1600.	555.	1044.	34.7
14	1552.	613.	938.	39.5
15	1385.	561.	823.	40.5
16	1378.	528.	849.	38.3
17	1561.	514.	1046.	32.9
18	1589.	541.	1047.	34.0
19	1209.	407.	801.	33.6
20	1215.	492.	722.	40.5
21	853.	382.	470.	44.8
22	943.	327.	615.	34.7
23	397.	42.	354.	10.6
24	273.	16.	256.	5.9
	21800	6753	15023	30.9

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4-10-74 DAY OF WEEK= WEDNESDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

NORTH LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	244.	13.	230.	5.5
2	118.	2.	115.	1.7
3	64.	0.	64.	0.0
4	47.	2.	44.	4.4
5	98.	0.	98.	0.0
6	243.	2.	240.	0.8
7	872.	28.	843.	3.2
8	1715.	222.	1492.	12.9
9	1271.	534.	736.	42.0
10	1084.	332.	751.	30.7
11	1180.	353.	826.	29.9
12	1376.	280.	1095.	20.3
13	1429.	373.	1055.	26.1
14	1504.	311.	1192.	20.7
15	1511.	[illegible]	1194.	21.0
16	1583.	[illegible]	1092.	35.0
17	2226.	717.	1508.	32.2
18	2108.	731.	1376.	34.6
19	1393.	506.	886.	36.3
20	1309.	540.	768.	41.2
21	988.	411.	576.	41.6
22	937.	342.	594.	36.5
23	589.	42.	546.	7.1
24	357.	16.	340.	4.5
	24349	6666	17661	27.3

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4-10-74 DAY OF WEEK= WEDNESDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

EAST LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	197.	5.	191.	2.6
2	75.	7.	67.	10.0
3	38.	3.	34.	9.3
4	19.	1.	18.	5.2
5	28.	0.	27.	3.0
6	80.	2.	77.	3.3
7	449.	55.	393.	12.4
8	1597.	150.	1446.	9.4
9	1786.	277.	1508.	15.5
10	1159.	394.	764.	34.0
11	1220.	457.	762.	37.4
12	1557.	506.	1050.	32.5
13	1605.	611.	994.	38.0
14	1545.	604.	940.	39.1
15	1273.	554.	718.	43.5
16	1348.	553.	794.	41.0
17	1678.	501.	1176.	29.8
18	1567.	534.	1032.	34.1
19	1206.	469.	736.	38.9
20	1358.	550.	807.	40.5
21	907.	392.	514.	43.2
22	917.	293.	623.	32.0
23	482.	30.	451.	6.3
24	263.	21.	241.	8.2
	22354	6968	15363	31.1

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4-11-74 DAY OF WEEK= THURSDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

NORTH LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	301.	3.	297.	1.2
2	144.	6.	137.	4.6
3	83.	1.	81.	2.1
4	59.	3.	55.	5.3
5	90.	0.	89.	0.9
6	261.	2.	258.	1.0
7	823.	33.	789.	4.0
8	1637.	171.	1465.	10.5
9	1505.	375.	1129.	24.9
10	1173.	449.	723.	38.3
11	884.	593.	290.	67.1
12	1195.	594.	600.	49.7
13	1306.	676.	629.	51.8
14	1393.	743.	649.	53.3
15	1495.	733.	761.	49.0
16	1682.	677.	1004.	40.2
17	1241.	801.	439.	64.6
18	2042.	759.	1282.	37.1
19	1513.	441.	1071.	29.1
20	1411.	557.	853.	39.4
21	1085.	396.	688.	36.5
22	1044.	435.	608.	41.7
23	549.	62.	486.	11.4
24	417.	22.	394.	5.4
	23333	8532	14777	36.5

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4-11-74 DAY OF WEEK= THURSDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

EAST LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	204.	13.	190.	6.4
2	71.	7.	63.	10.0
3	34.	0.	33.	2.5
4	32.	0.	31.	2.6
5	15.	0.	15.	0.0
6	70.	5.	64.	8.1
7	402.	51.	350.	12.8
8	1484.	158.	1325.	10.6
9	1739.	287.	1451.	16.5
10	1066.	291.	774.	27.3
11	1087.	382.	705.	35.1
12	1267.	370.	896.	29.2
13	1500.	519.	980.	34.6
14	1464.	526.	937.	35.9
15	1418.	543.	874.	38.2
16	1424.	542.	881.	38.0
17	1661.	492.	1168.	29.6
18	1486.	494.	991.	33.2
19	1131.	438.	692.	38.8
20	1292.	518.	773.	40.1
21	933.	429.	503.	46.0
22	1057.	368.	688.	34.8
23	403.	47.	355.	11.7
24	337.	37.	299.	11.2
	21577	6516	15038	30.1

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4-12-74 DAY OF WEEK= FRIDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

NORTH LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	336.	11.	324.	3.4
2	201.	2.	198.	1.3
3	86.	4.	81.	5.1
4	82.	1.	80.	1.2
5	85.	0.	84.	1.0
6	197.	5.	191.	2.9
7	676.	15.	660.	2.3
8	990.	71.	918.	7.1
9	1078.	238.	839.	22.1
10	1096.	491.	604.	44.8
11	1557.	648.	908.	41.6
12	1617.	726.	890.	44.9
13	1715.	867.	847.	50.6
14	1662.	863.	798.	51.9
15	1909.	937.	971.	49.1
16	2036.	838.	1197.	41.1
17	1741.	784.	956.	45.0
18	1701.	581.	1120.	34.1
19	1384.	248.	1135.	17.9
20	1237.	241.	995.	19.4
21	1090.	249.	840.	22.9
22	954.	316.	637.	33.1
23	468.	43.	424.	9.2
24	493.	19.	473.	3.9
	24391	8197	16170	33.6

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4-12-74 DAY OF WEEK= FRIDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

EAST LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	240.	9.	230.	4.0
2	93.	8.	84.	9.4
3	40.	5.	34.	14.6
4	36.	1.	34.	4.7
5	21.	0.	21.	0.0
6	54.	7.	46.	14.2
7	286.	44.	241.	15.4
8	979.	121.	857.	12.4
9	1229.	240.	988.	19.5
10	1134.	375.	758.	33.0
11	1328.	504.	823.	38.0
12	1563.	620.	942.	39.6
13	1889.	723.	1165.	38.2
14	1715.	758.	956.	44.2
15	1727.	807.	919.	46.7
16	1622.	732.	889.	45.1
17	1573.	646.	926.	41.1
18	1394.	615.	778.	44.1
19	1066.	417.	648.	39.1
20	1307.	494.	812.	37.8
21	1081.	404.	676.	37.3
22	1176.	363.	812.	30.9
23	566.	52.	513.	9.2
24	332.	27.	304.	8.3
	22451	7972	14456	35.5

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4-13-74 DAY OF WEEK= SATURDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

NORTH LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	446.	12.	433.	2.8
2	253.	2.	250.	0.8
3	194.	0.	194.	0.0
4	95.	0.	95.	0.0
5	70.	0.	70.	0.0
6	110.	2.	107.	2.5
7	276.	0.	275.	0.3
8	418.	6.	411.	1.5
9	714.	30.	683.	4.2
10	983.	77.	905.	7.8
11	1384.	194.	1189.	14.0
12	1595.	300.	1294.	18.8
13	1713.	356.	1357.	20.7
14	1667.	388.	1278.	22.9
15	1674.	389.	1285.	23.2
16	1744.	472.	1272.	27.0
17	1556.	433.	1122.	27.8
18	1344.	453.	890.	33.7
19	911.	67.	843.	7.4
20	900.	40.	859.	4.5
21	721.	43.	677.	6.0
22	686.	29.	656.	4.2
23	575.	22.	552.	3.8
24	424.	8.	415.	2.0
	20485	3322	17142	16.2

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4-13-74 DAY OF WEEK= SATURDAY

TWO-WAY INTERSECTION VOLUMES BY HOUR OF DAY

EAST LEG

HOUR	TOTAL	SHOPPING CENTER	THROUGH	SC PERCENT OF TOTAL
1	479.	14.	464.	2.9
2	126.	11.	114.	8.9
3	84.	2.	81.	3.2
4	50.	2.	47.	5.7
5	22.	0.	21.	3.8
6	30.	3.	26.	12.8
7	108.	22.	85.	20.6
8	212.	42.	169.	19.8
9	475.	191.	283.	40.2
10	905.	465.	439.	51.4
11	1124.	553.	570.	49.2
12	1276.	637.	638.	49.9
13	1447.	751.	695.	51.9
14	1501.	783.	717.	52.2
15	1368.	764.	603.	55.8
16	1346.	742.	603.	55.1
17	1166.	627.	538.	53.8
18	1137.	548.	588.	48.2
19	609.	103.	505.	16.9
20	985.	123.	861.	12.5
21	738.	78.	659.	10.5
22	861.	75.	785.	8.7
23	688.	55.	632.	8.0
24	317.	22.	294.	7.2
	17054	6613	10417	38.7

APPENDIX D

COMPARISON TRIP GENERATION STUDY OF REGIONAL CENTERS IN CHICAGO AREA

During December, 1973, the traffic volumes at five regional centers in the Chicago metropolitan area were monitored.[2] These five centers and the days they were monitored are:

- Deerbrook Shopping Center, December 15 and 20
- Lincoln Mall, December 15
- Old Orchard Shopping Center, December 15 and 26
- Randhurst Shopping Center, December 19 and 22
- River Oaks Shopping Center, December 28 and 29

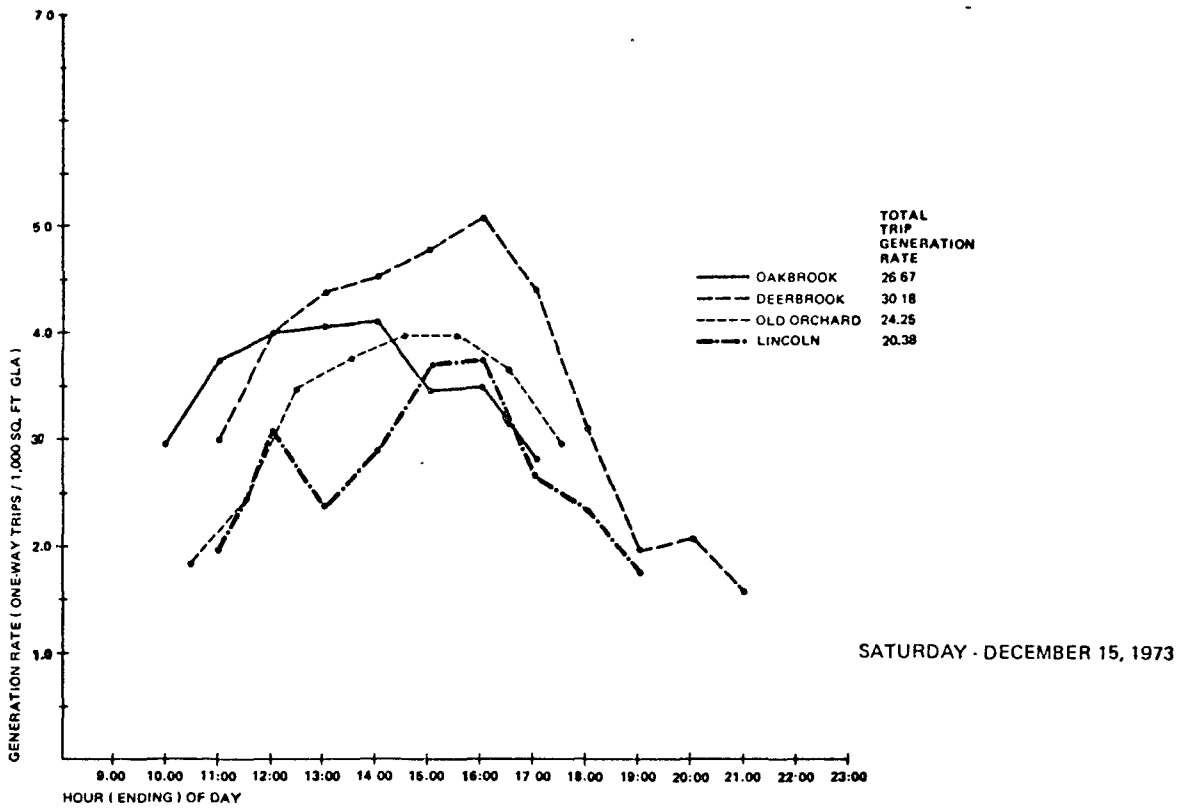
The days selected were anticipated to be among the peak days of sales activity and thus also the highest days of shopping center traffic generation.

The purpose of the study was to provide an additional data base for estimating the effect of tenant mix, operating hours and demographic characteristics on the trip generation rates of regional shopping centers. The five centers (plus Oakbrook Shopping Center) were selected to provide a representative sample of regional shopping centers in the Chicago area.

The location, GLA, tenant mix and mall characteristics of each of the centers monitored are listed below.

Deerbrook Shopping Center Deerfield, Illinois (Enclosed Mall)	GLA: Major Tenants: Date Opened:	500,000 square feet Montgomery Ward Turnstyle 1969
Lincoln Mall Matteson, Illinois (Enclosed Mall)	GLA: Major Tenants: Date Opened:	1,003,462 square feet Carson Pirie Scott J.C. Penney Montgomery Ward Wieboldt's 1973
Old Orchard Shopping Center Skokie, Illinois (Open Mall)	GLA: Major Tenants: Date Opened:	1,123,144 square feet Montgomery Ward Marshall Field's 1956
Randhurst Shopping Center Mount Prospect, Illinois (Enclosed Mall)	GLA: Major Tenants: Date Opened:	1,096,310 square feet Carson Pirie Scott Montgomery Ward Wieboldt's 1962
River Oaks Shopping Center Calumet City, Illinois (Open Mall)	GLA: Major Tenants: Date Opened:	1,328,978 square feet Marshall Field's Sears, Roebuck 1966

Figures D-1, D-2, and D-3 compare the trip generation rates for the various centers (including Oakbrook Shopping Center). The centers are compared only for the days when counts were taken at two or more centers. The data indicate a wide variation in trip generation rates from center-to-center even on the same day in the same metropolitan area. The trip generation rates for the four centers monitored on Saturday, December 15, varied from 20.38 to 30.18 with Deerbrook Shopping Center having the highest generation rate. For the two days monitored, Deerbrook's generation rate averaged 15 percent higher than Oakbrook's. Randhurst Shopping Center's daily generation rate was only 6 percent higher than Oakbrook's but the peak one-hour rate was 21 percent higher on the day surveyed. Some similarity in the diurnal patterns of these two centers could be seen. Old Orchard Shopping Center and Oakbrook Shopping Center exhibited almost identical generation rates, and very similar diurnal patterns of trip generation. River Oaks and Oakbrook Shopping Centers had similar diurnal traffic patterns. However, a



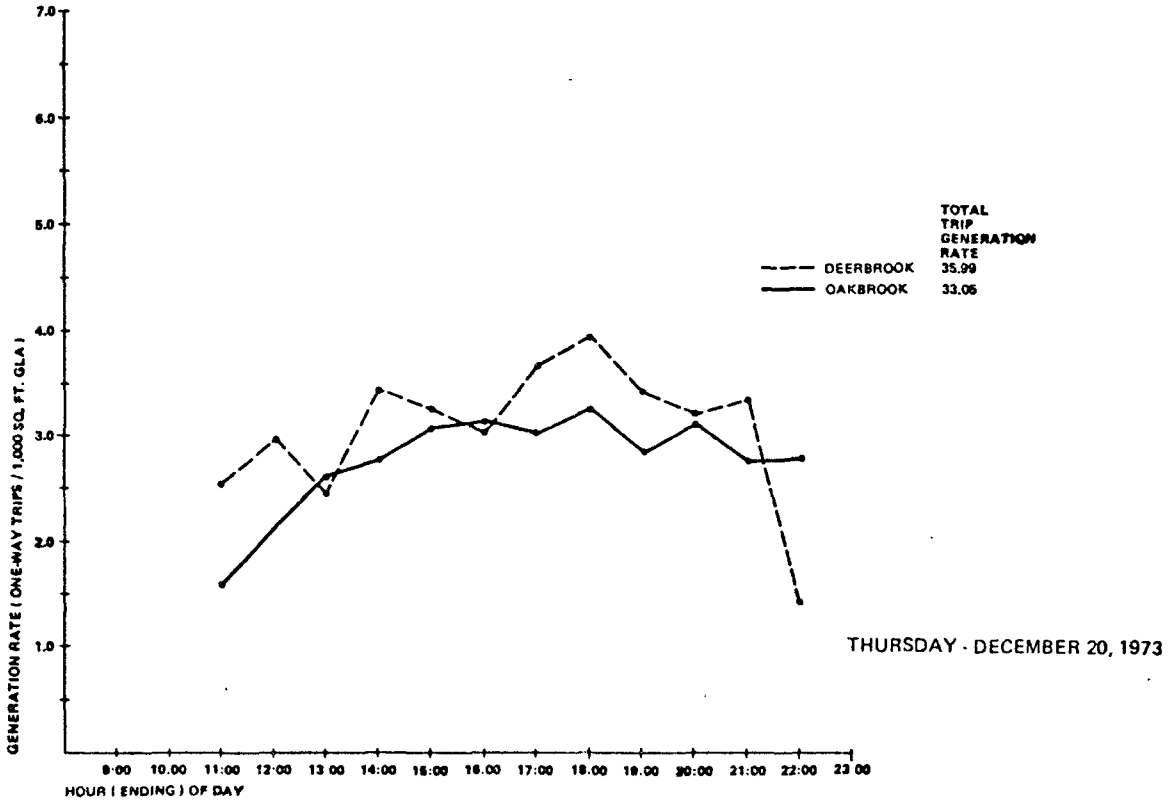
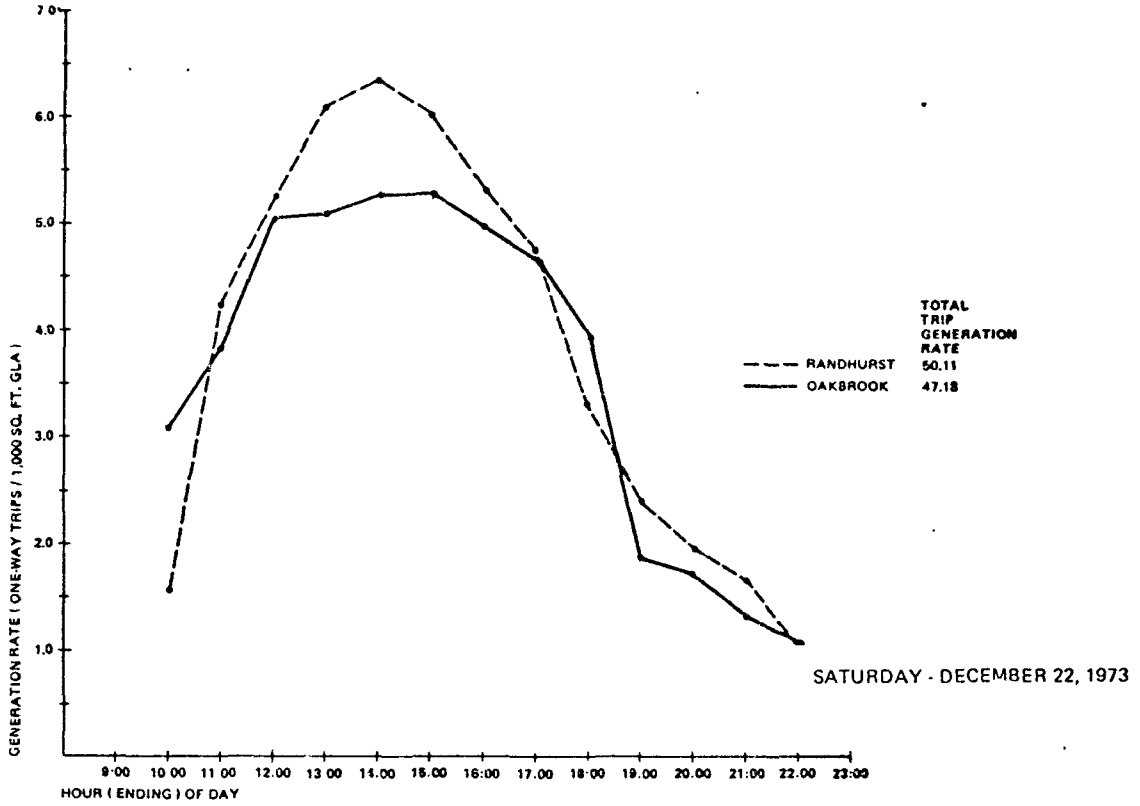


Figure D-1. Observed hourly generation rates, Oakbrook, Illinois



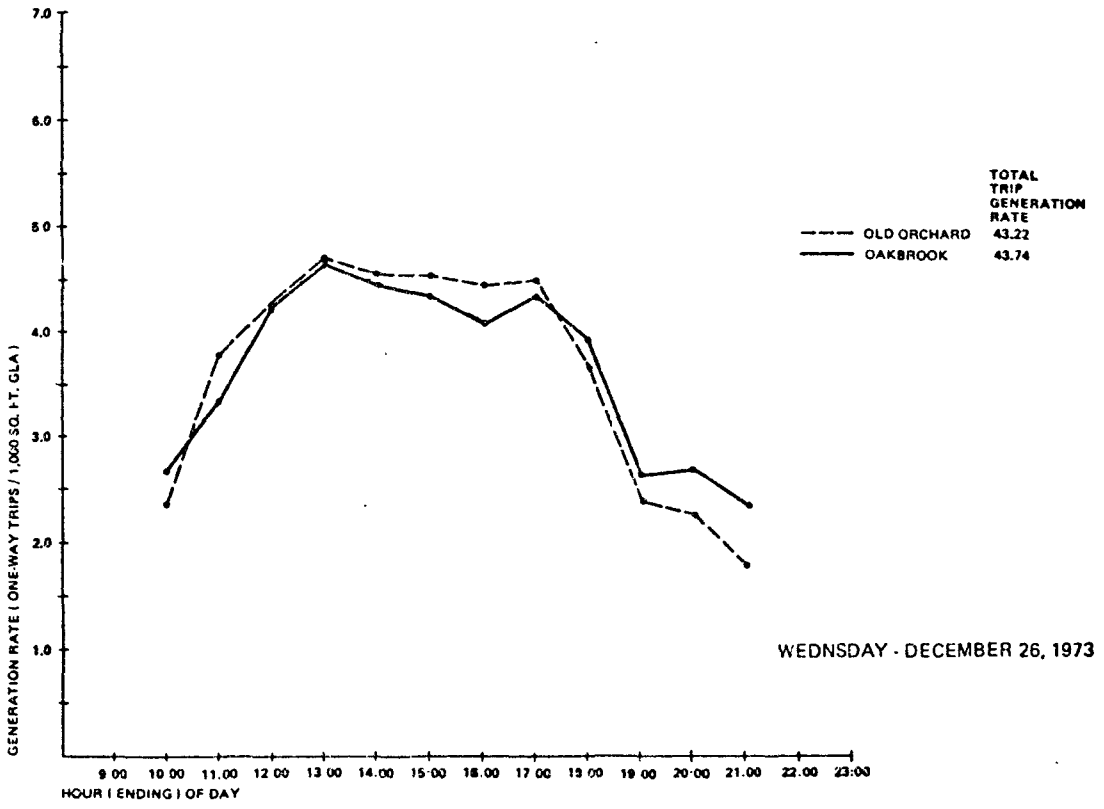


Figure D-2. Observed hourly generation rates, Oakbrook, Illinois

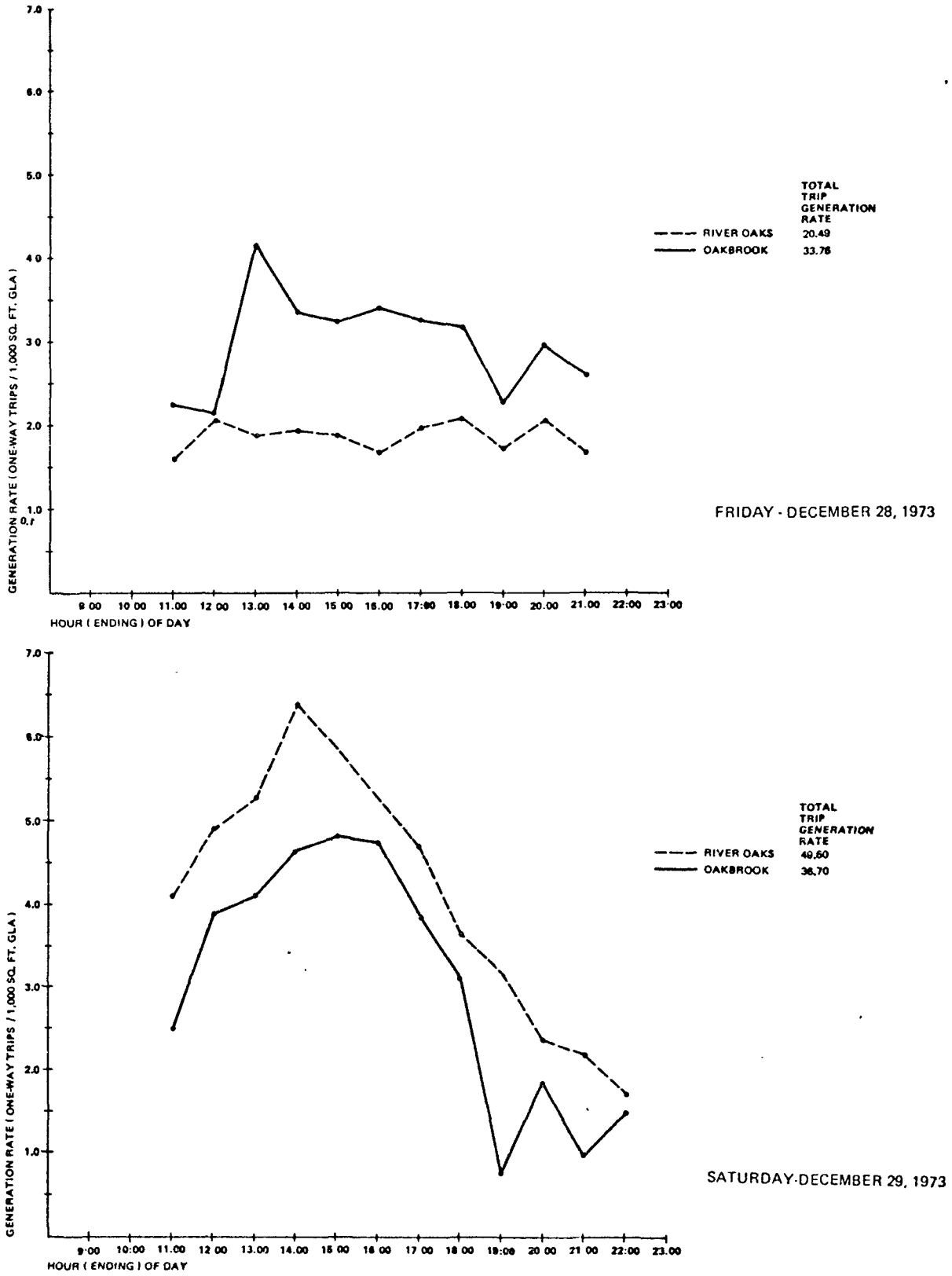


Figure D-3. Observed hourly generation rates, Oakbrook, Illinois

marked disimilarity between generation rates was observed. Oakbrook Shopping Center had a substantially higher trip generation rate on Friday while River Oaks Shopping Center had a higher generation rate on Saturday.

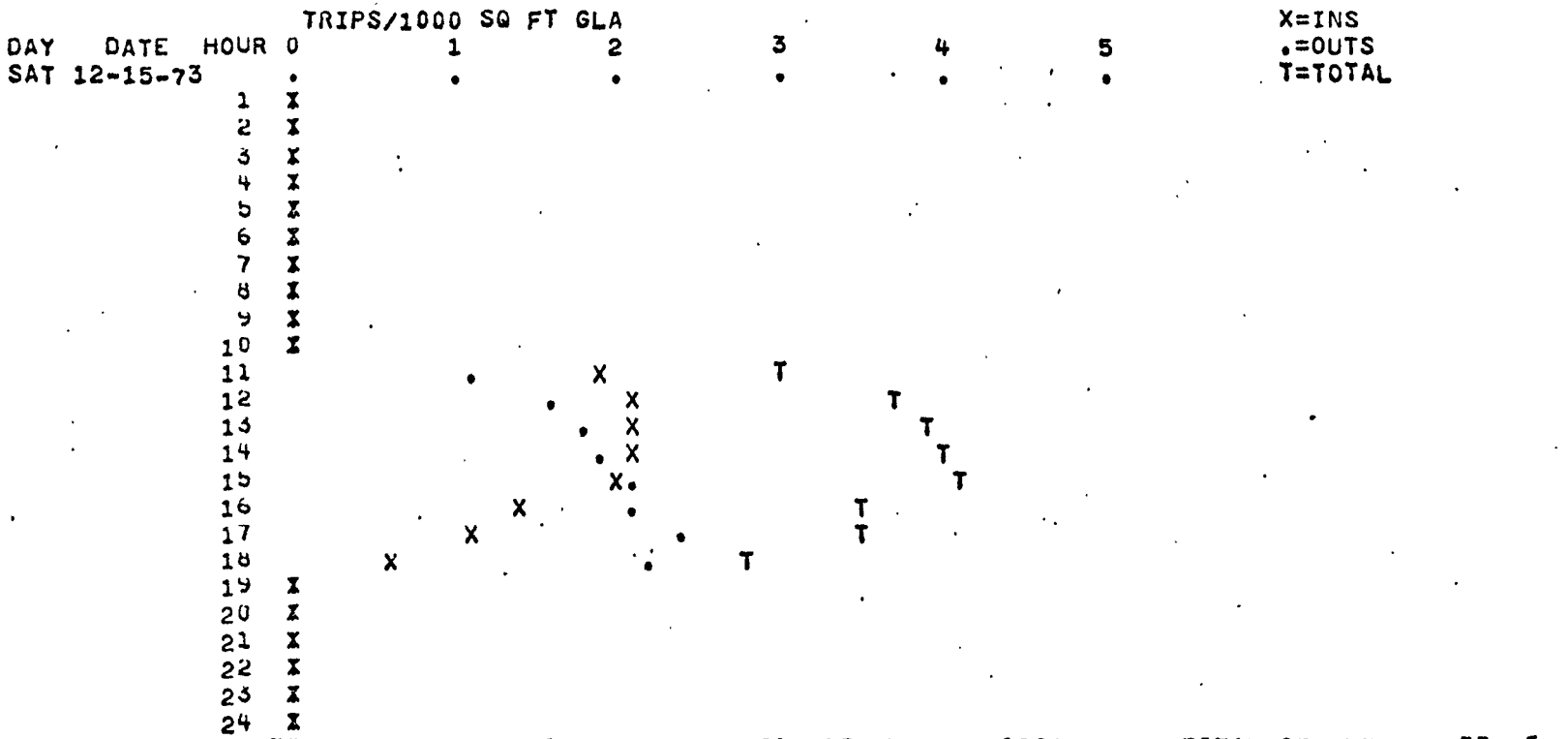
Without examining potential interactions among operating hours, demographic characteristics, and tenant mix it is impossible to make exact quantitative statements on the varying generation rates. However, when the centers are stratified by GLA, the generation rates are seen to follow a pattern described previously.[15] Deerbrook, with a GLA about half that of the other centers, has a higher generation rate. The remaining centers fall in the same range about a mean value ($\pm$ 20 percent about the mean[15]) when compared on any given day, with the exception of River Oaks and Oakbrook on Friday, December 28. (See Figure D-3). The average trip generation rate for Oakbrook during the March and April period up to the week before Easter is 30 trips per 1000 ft^2 GLA, which is the mean value given in reference 15 for centers of similar size.

APPENDIX E

HOURLY AND DAILY TRIP GENERATION RATES--
OAKBROOK SHOPPING CENTER

GENERATION RATES BY HOUR OF DAY

OAKBROOK SHOPPING CENTER
1,250,000 SQ FT GLA
SEARS, MARSHALL FIELDS, LORD AND TAYLOR

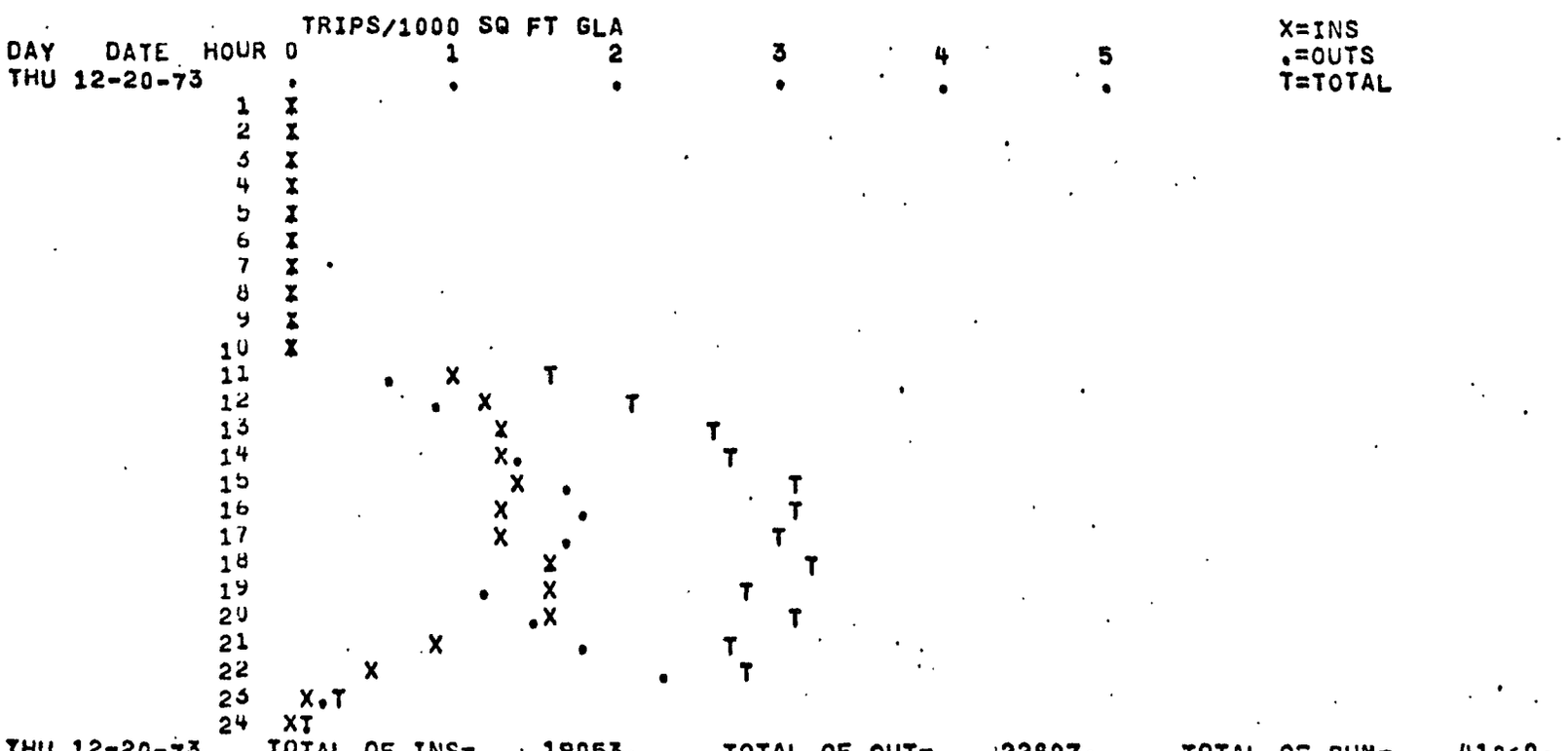


SAT 12-15-73 TOTAL OF INS= 16687. TOTAL OF OUT= 19018. TOTAL OF SUM= 35705.

(10:00 A.M. to 6:00 P.M. only)

GENERATION RATES BY HOUR OF DAY

OAKBROOK SHOPPING CENTER
1,250,000 SQ FT GLA
SEARS, MARSHALL FIELDS, LORD AND TAYLOR

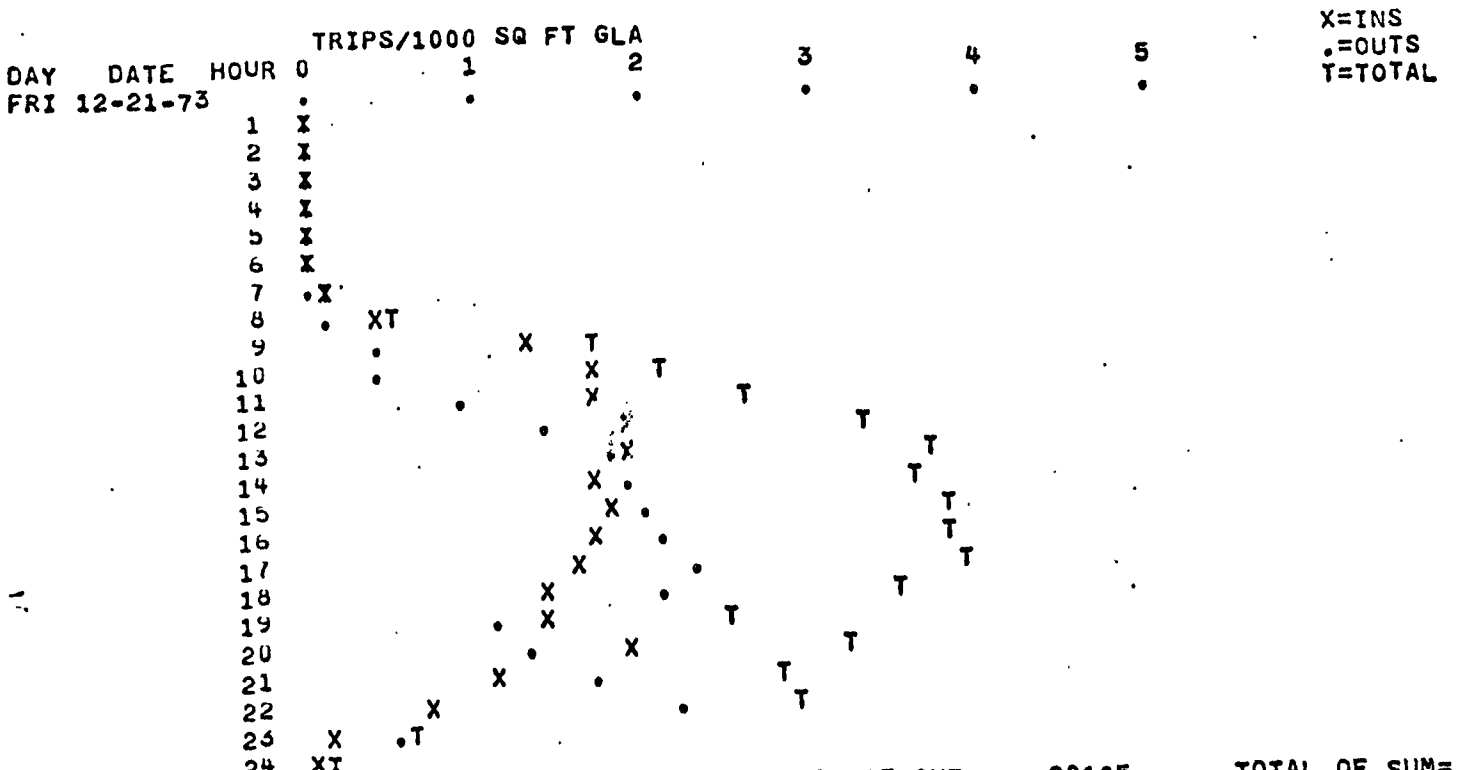


THU 12-20-73 TOTAL OF INS= 19053. TOTAL OF OUT= 22807. TOTAL OF SUM= 41860.

(10:00 A.M. to Midnight only)

GENERATION RATES BY HOUR OF DAY

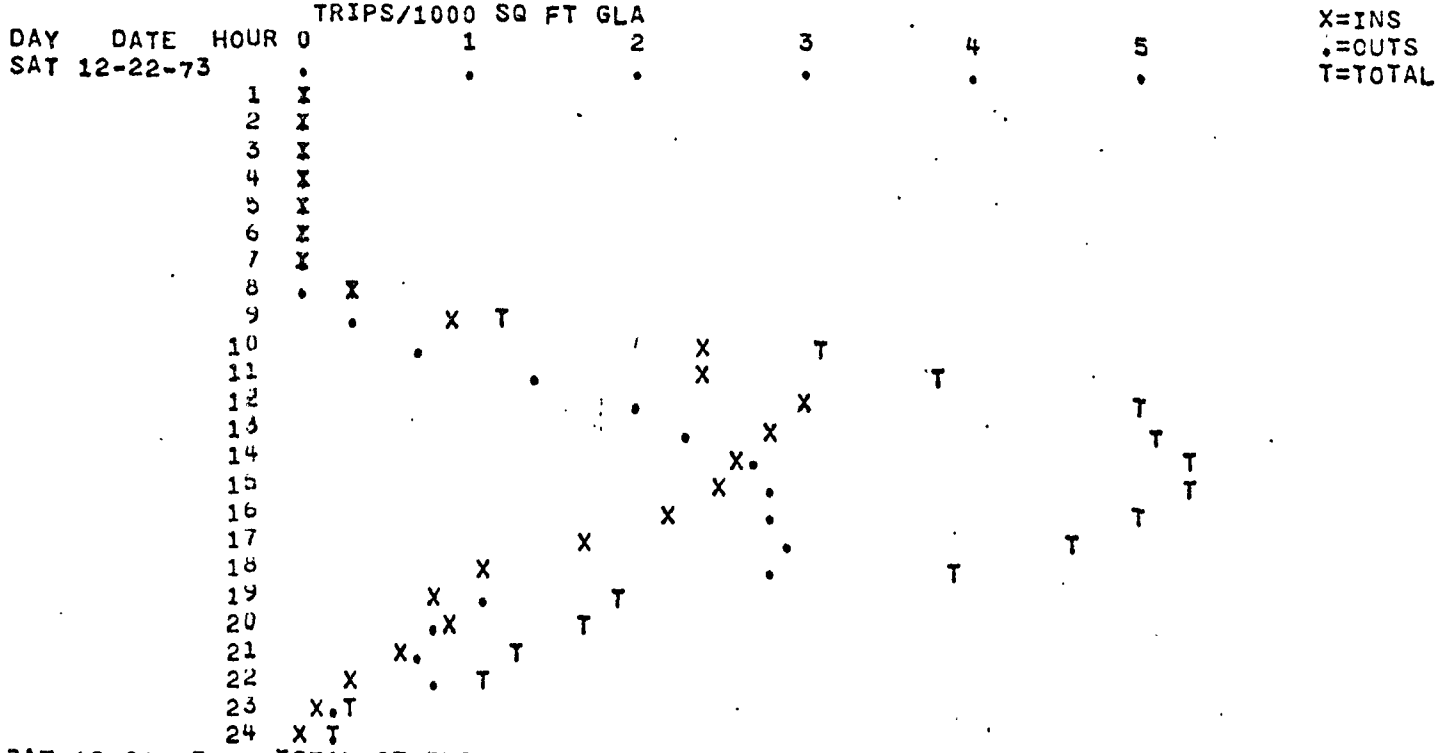
OAKBROOK SHOPPING CENTER
1,250,000 SQ FT GLA
SEARS, MARSHALL FIELDS, LORD AND TAYLOR



FRI 12-21-73 TOTAL OF INS= 28118. TOTAL OF OUT= 28105. TOTAL OF SUM= 56223.

GENERATION RATES BY HOUR OF DAY

OAKBROOK SHOPPING CENTER
1,250,000 SQ FT GLA
SEARS, MARSHALL FIELDS, LORD AND TAYLOR



SAT 12-22-73 TOTAL OF INS= 30813. TOTAL OF OUT= 30760. TOTAL OF SUM= 61573.

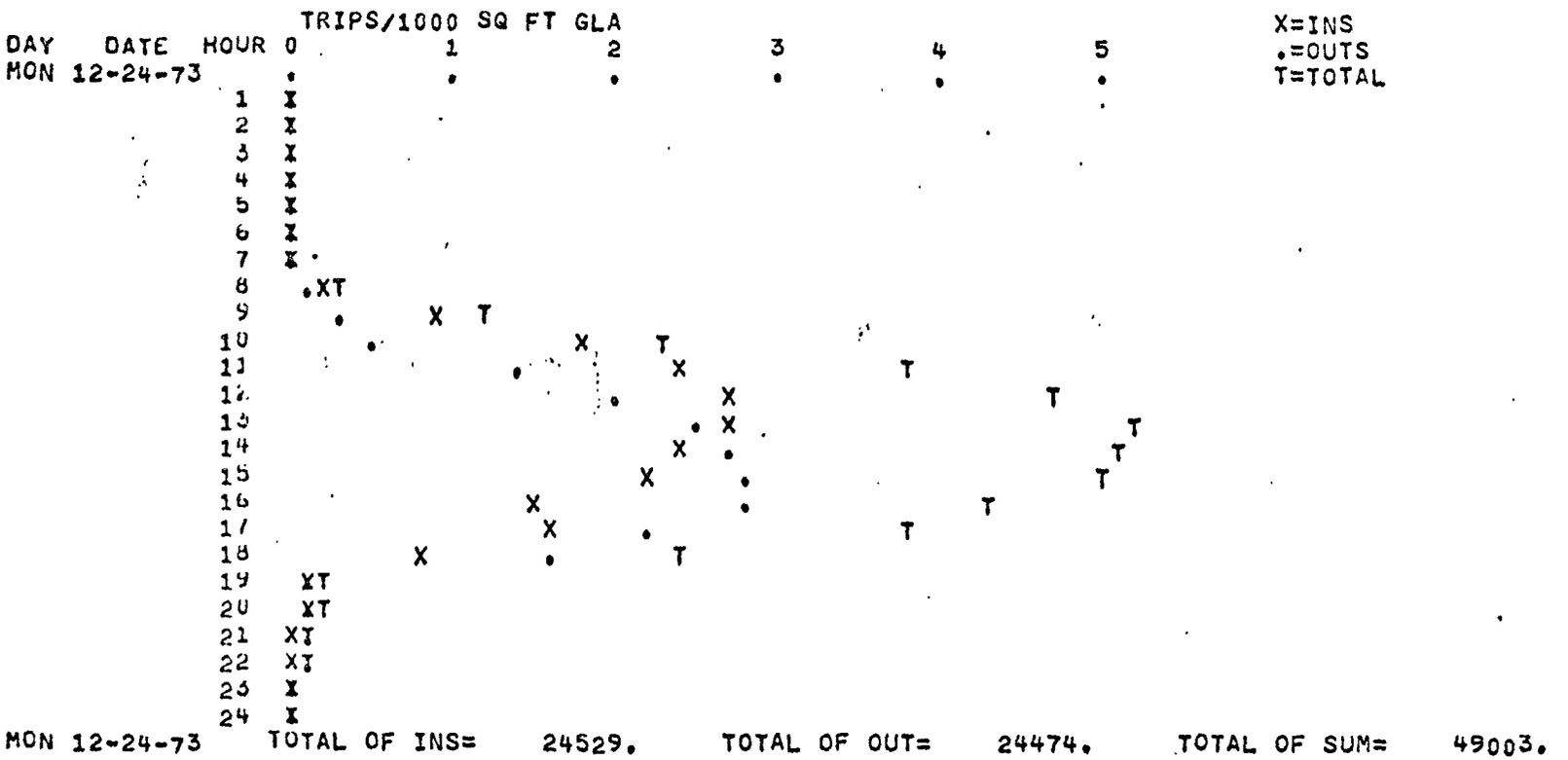
GENERATION RATES BY HOUR OF DAY

OAKBROOK SHOPPING CENTER
1,250,000 SQ FT GLA
SEARS, MARSHALL FIELDS, LORD AND TAYLOR

```
                    TRIPS/1000 SQ FT GLA                                          X=INS
DAY   DATE  HOUR 0         1         2         3         4         5            .=OUTS
SUN 12-23-73     .         .         .         .         .         .            T=TOTAL
                1  XT
                2  X
                3  X
                4  X
                5  X
                6  X
                7  X .
                8  .X
                9  . X
               10   .    XT
               11     .          X  T
               12          .          X       T
               13                .         X                 T
               14                        .X                      T
               15                          X .                        T
               16                     X         .                   T
               17               X                 .           T
               18          X                .      T
               19     X .  T
               20    . X T
               21   .XT
               22    X. T
               23  XT
               24  XT
SUN 12-23-73    TOTAL OF INS=    23040.     TOTAL OF OUT=    23108.     TOTAL OF SUM=    46148.
```

GENERATION RATES BY HOUR OF DAY

OAKBROOK SHOPPING CENTER
1,250,000 SQ FT GLA
SEARS, MARSHALL FIELDS, LORD AND TAYLOR



MON 12-24-73 TOTAL OF INS= 24529. TOTAL OF OUT= 24474. TOTAL OF SUM= 49003.

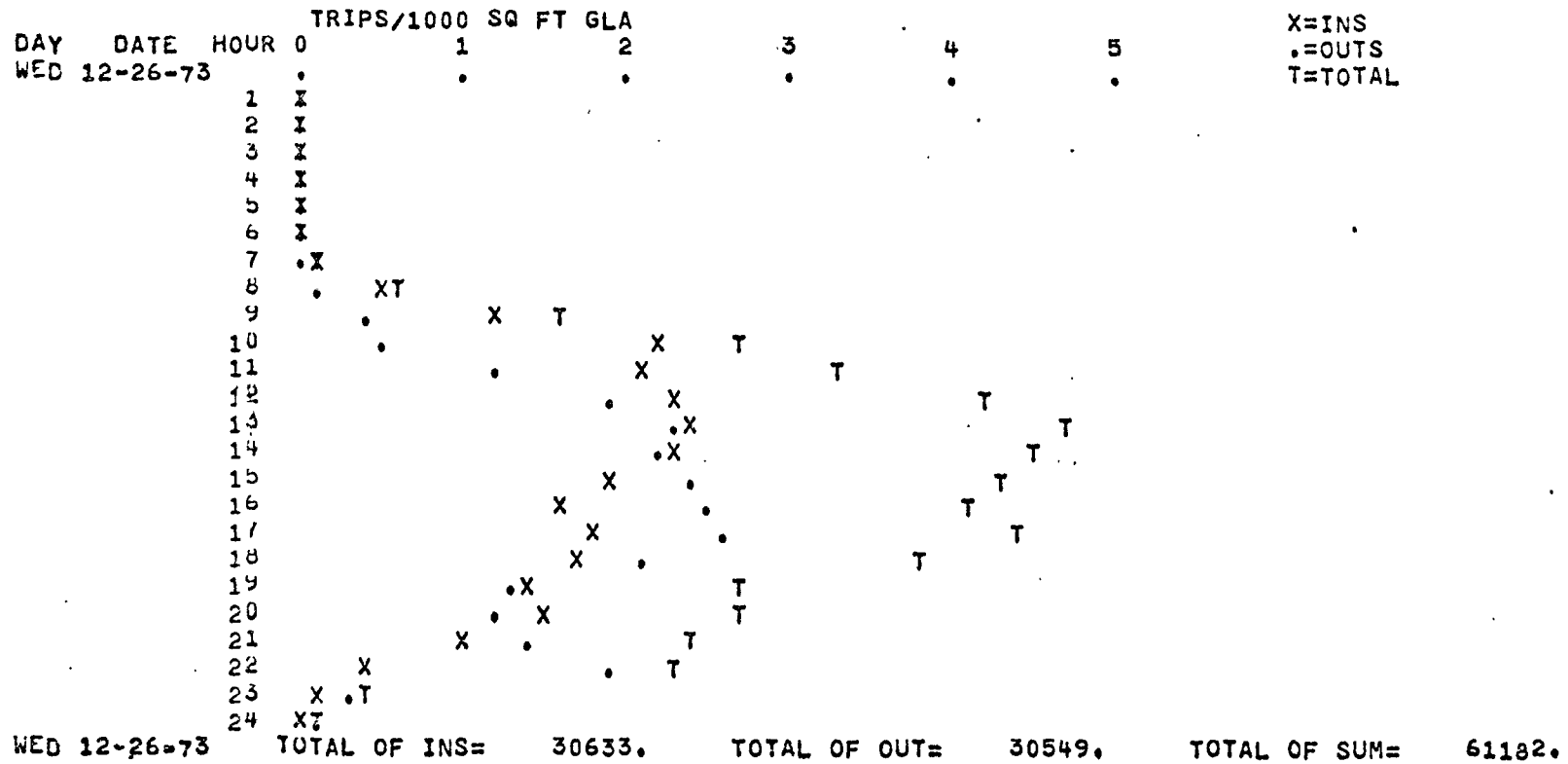
GENERATION RATES BY HOUR OF DAY

OAKBROOK SHOPPING CENTER
1,250,000 SQ FT GLA
SEARS, MARSHALL FIELDS, LORD AND TAYLOR

```
                    TRIPS/1000 SQ FT GLA                                          X=INS
DAY   DATE  HOUR 0          1          2          3          4          5        .=OUTS
TUE 12-25-73     .          .          .          .          .          .        T=TOTAL
                1  XT
                2  X
                3  X
                4  X
                5  X
                6  X
                7  X
                8  X
                9  X
               10  X
               11  X
               12  X
               13  X
               14  X
               15  X
               16  .X
               17  X
               18  X
               19  X
               20   XT
               21  X
               22  XT
               23  X
               24  X
TUE 12-25-73    TOTAL OF INS=      735.     TOTAL OF OUT=      800.     TOTAL OF SUM=     1535.
```

GENERATION RATES BY HOUR OF DAY

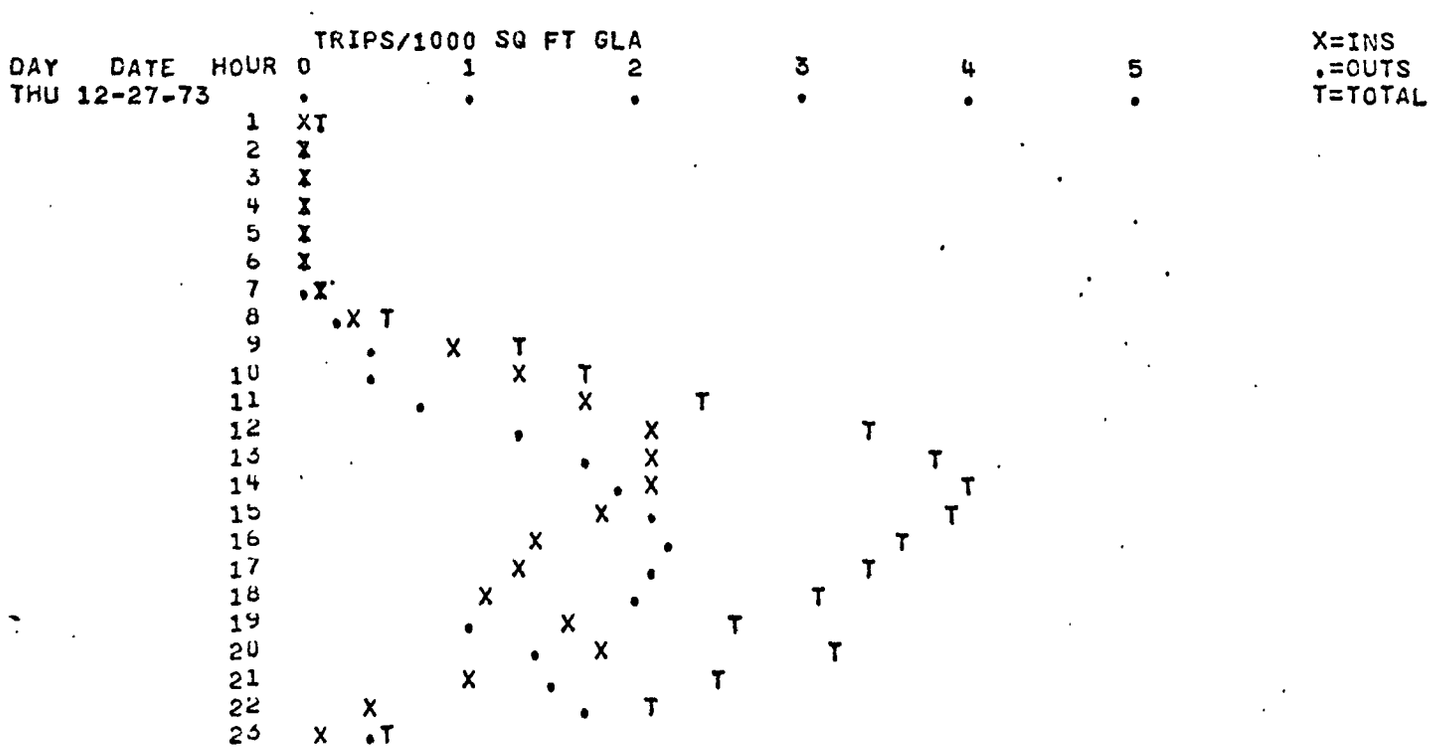
OAKBROOK SHOPPING CENTER
1,250,000 SQ FT GLA
SEARS, MARSHALL FIELDS, LORD AND TAYLOR



WED 12-26-73 TOTAL OF INS= 30633. TOTAL OF OUT= 30549. TOTAL OF SUM= 61182.

GENERATION RATES BY HOUR OF DAY

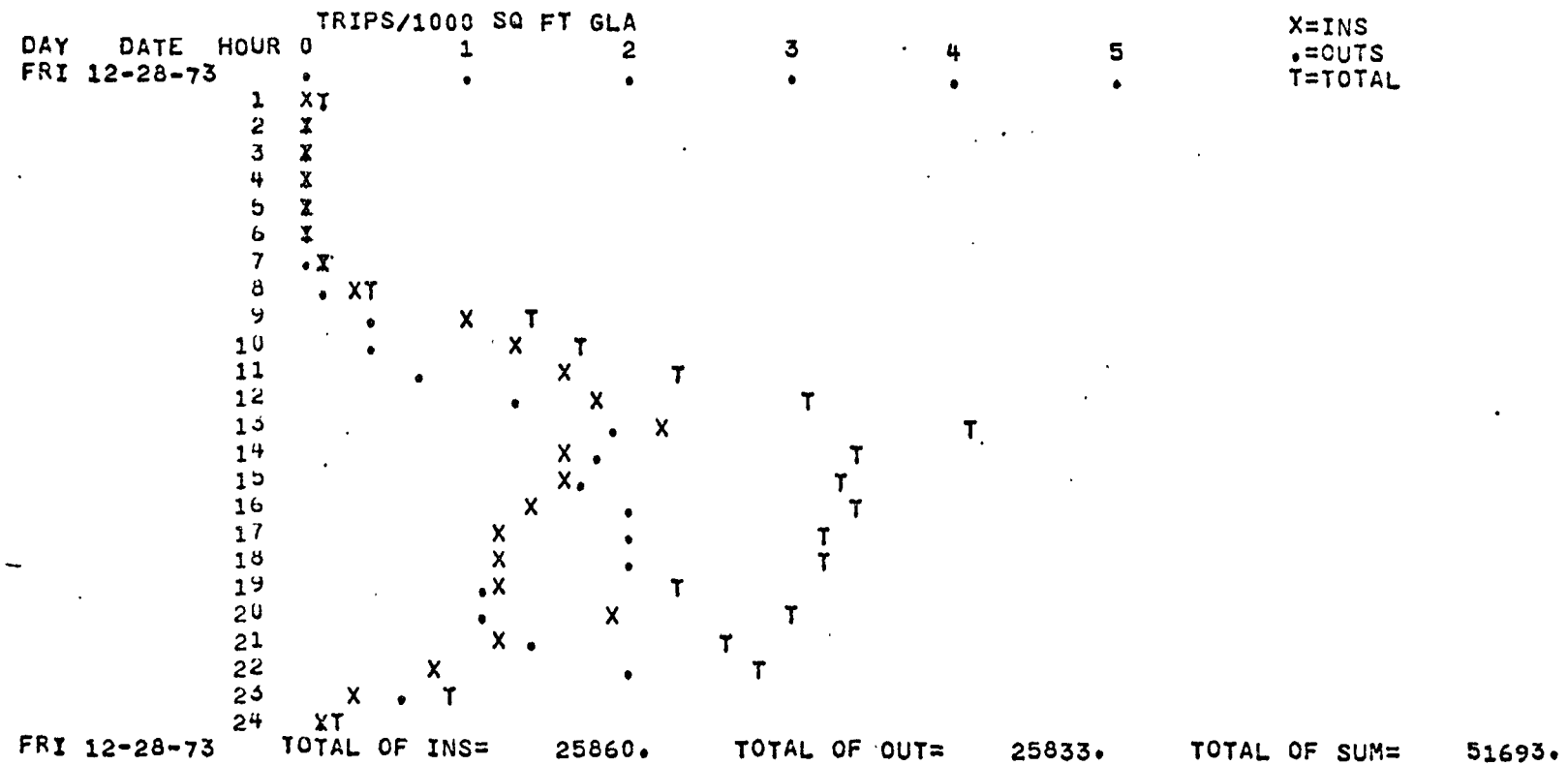
OAKBROOK SHOPPING CENTER
1,250,000 SQ FT GLA
SEARS, MARSHALL FIELDS, LORD AND TAYLOR



THU 12-27-73 TOTAL OF INS= 26275. TOTAL OF OUT= 26293. TOTAL OF SUM= 52568.

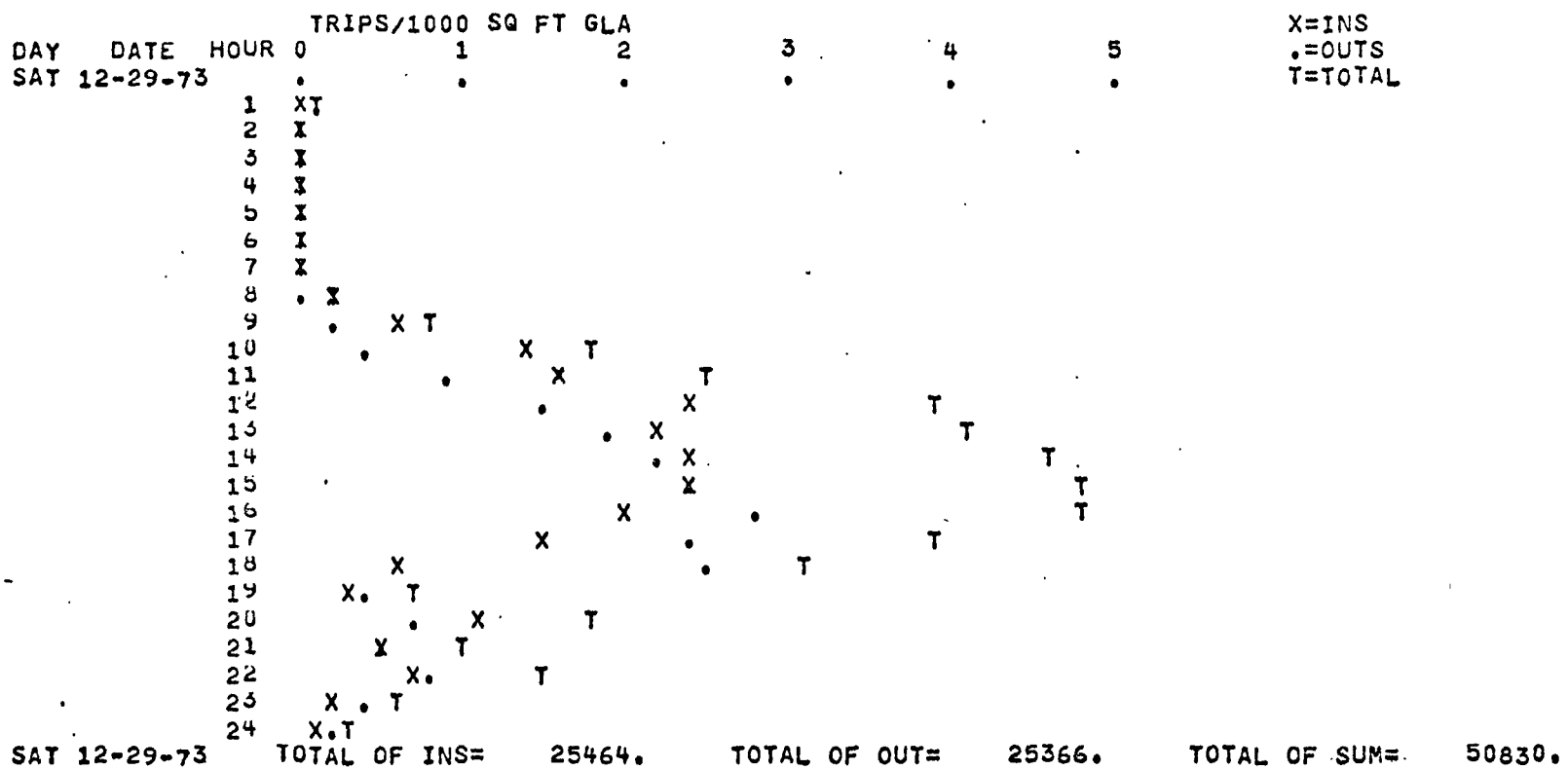
GENERATION RATES BY HOUR OF DAY

OAKBROOK SHOPPING CENTER
1,250,000 SQ FT GLA
SEARS, MARSHALL FIELDS, LORD AND TAYLOR



GENERATION RATES BY HOUR OF DAY

OAKBROOK SHOPPING CENTER
1,250,000 SQ FT GLA
SEARS, MARSHALL FIELDS, LORD AND TAYLOR



SAT 12-29-73 TOTAL OF INS= 25464. TOTAL OF OUT= 25366. TOTAL OF SUM= 50830.

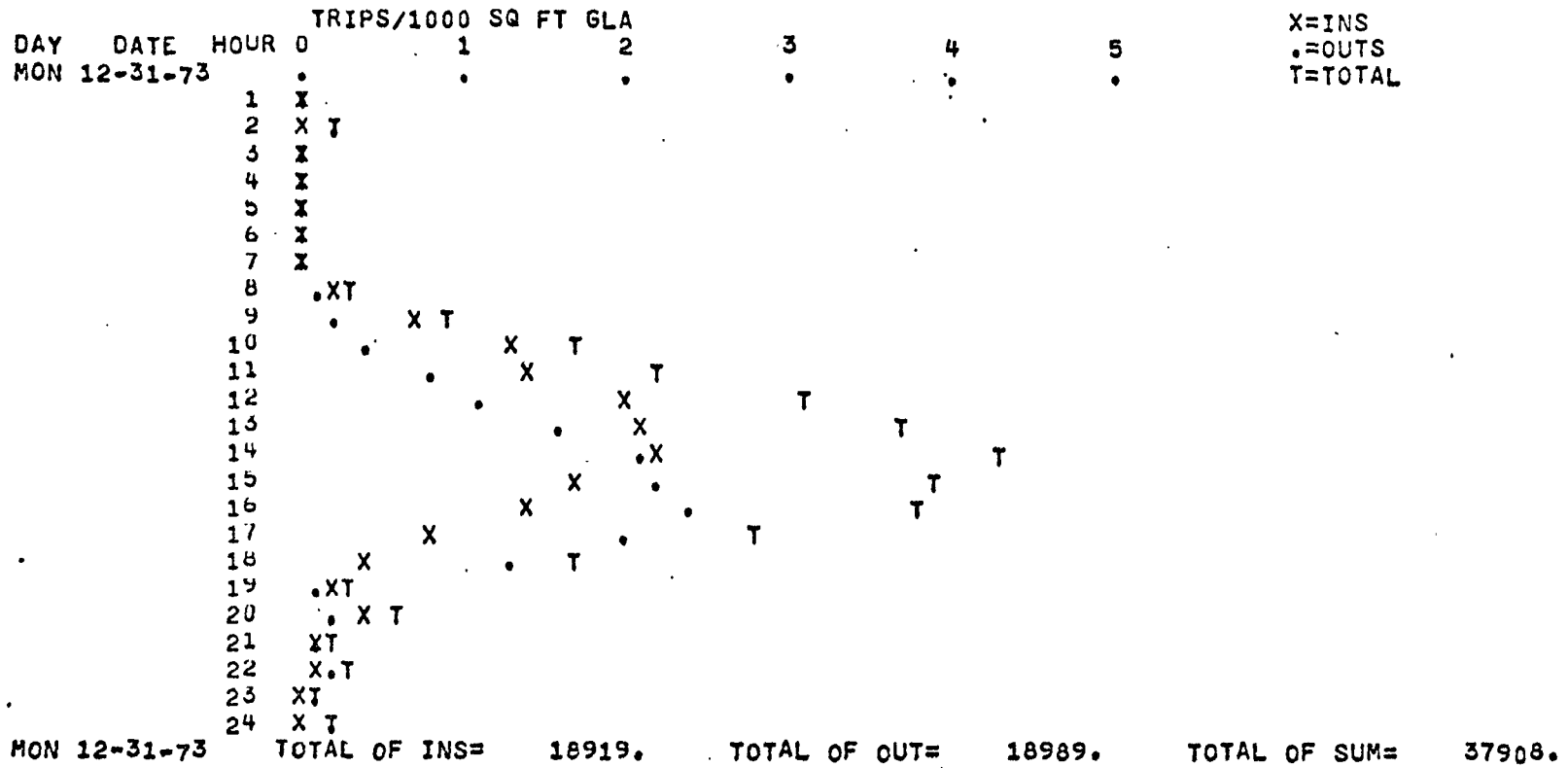
GENERATION RATES BY HOUR OF DAY

OAKBROOK SHOPPING CENTER
1,250,000 SQ FT GLA
SEARS, MARSHALL FIELDS, LORD AND TAYLOR

```
                    TRIPS/1000 SQ FT GLA                                          X=INS
DAY   DATE  HOUR 0         1         2         3         4         5            .=OUTS
SUN 12-30-73     .         .         .         .         .         .            T=TOTAL
                1  XT
                2  XT
                3  X
                4  X
                5  X
                6  X
                7  X
                8  X
                9  X
               10  X
               11   .  XT
               12     .     X  T
               13         .     X     T
               14             .   X        T
               15               .  X          T
               16              X   .          T
               17         X         .     T
               18     X     .  T
               19    X T
               20        .X     T
               21   .XT
               22     X .  T
               23  XT
               24  X  T
SUN 12-30-73    TOTAL OF INS=    12809.     TOTAL OF OUT=    12700.     TOTAL OF SUM=    25509.
```

GENERATION RATES BY HOUR OF DAY

OAKBROOK SHOPPING CENTER
1,250,000 SQ FT GLA
SEARS, MARSHALL FIELDS, LORD AND TAYLOR



MON 12-31-73 TOTAL OF INS= 18919. TOTAL OF OUT= 18989. TOTAL OF SUM= 37908.

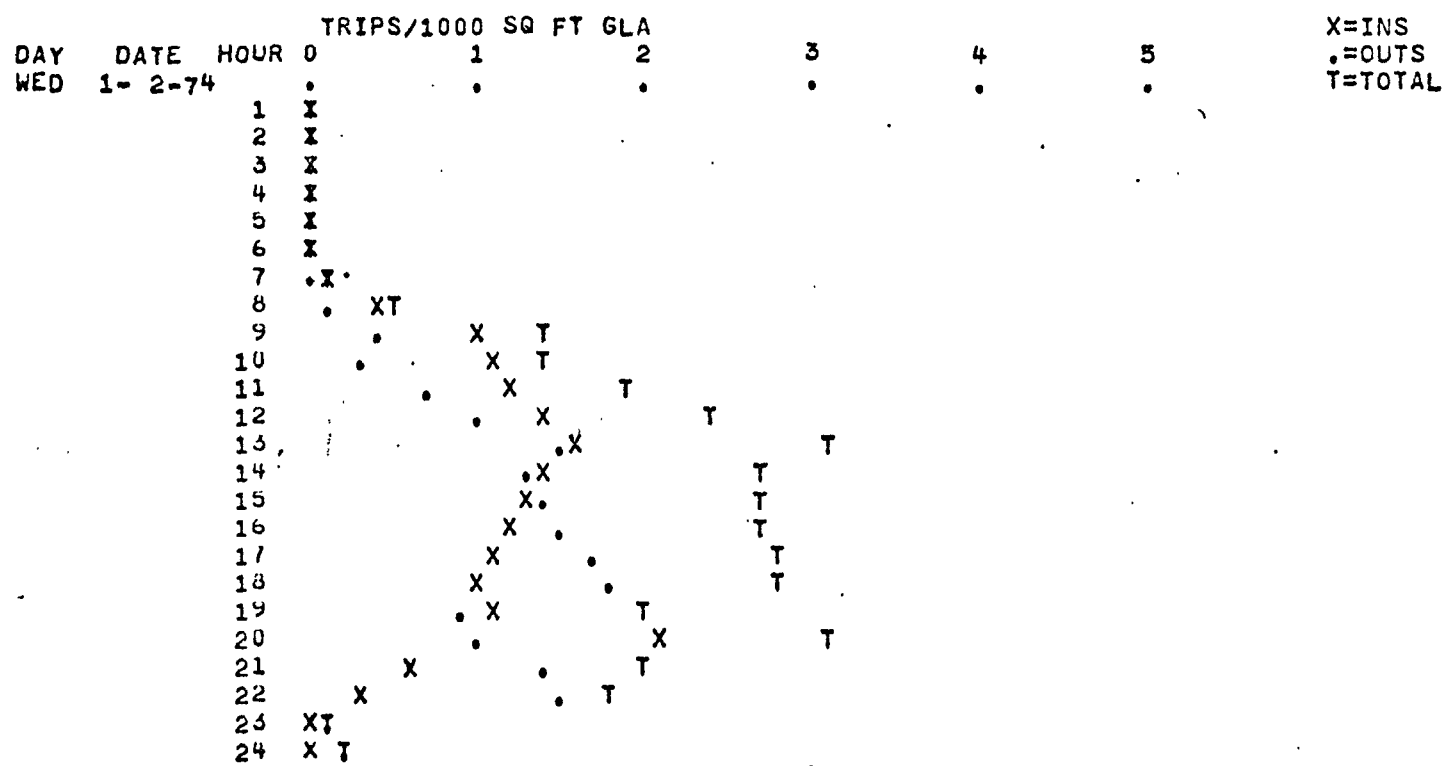
GENERATION RATES BY HOUR OF DAY

OAKBROOK SHOPPING CENTER
1,250,000 SQ FT GLA
SEARS, MARSHALL FIELDS, LORD AND TAYLOR

```
                    TRIPS/1000 SQ FT GLA                                        X=INS
DAY   DATE  HOUR 0          1          2          3          4          5      .=OUTS
TUE  1- 1-74     .          .          .          .          .          .      T=TOTAL
                1  XT
                2  XT
                3  X
                4  X
                5  X
                6  X
                7  X
                8  X
                9  X
               10  X
               11  X
               12  X
               13   XT
               14   XT
               15   XT
               16   XT
               17   XT
               18   XT
               19   XT
               20    X T
               21   XT
               22   X.T
               23  X
               24  X
TUE  1- 1-74    TOTAL OF INS=     1536.     TOTAL OF OUT=     1754.     TOTAL OF SUM=     3290.
```

GENERATION RATES BY HOUR OF DAY

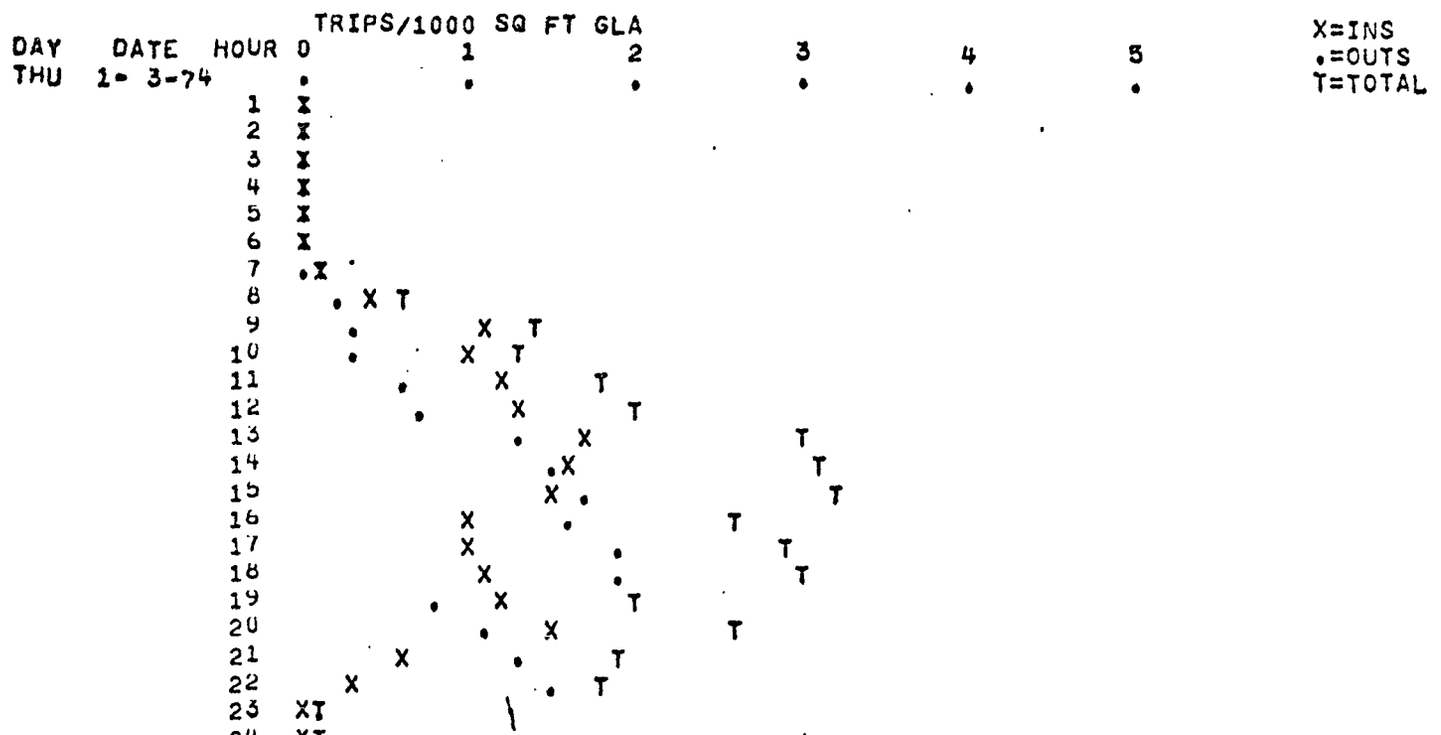
OAKBROOK SHOPPING CENTER
1,250,000 SQ FT GLA
SEARS, MARSHALL FIELDS, LORD AND TAYLOR



WED 1- 2-74 TOTAL OF INS= 21140. TOTAL OF OUT= 21133. TOTAL OF SUM= 42273.

GENERATION RATES BY HOUR OF DAY

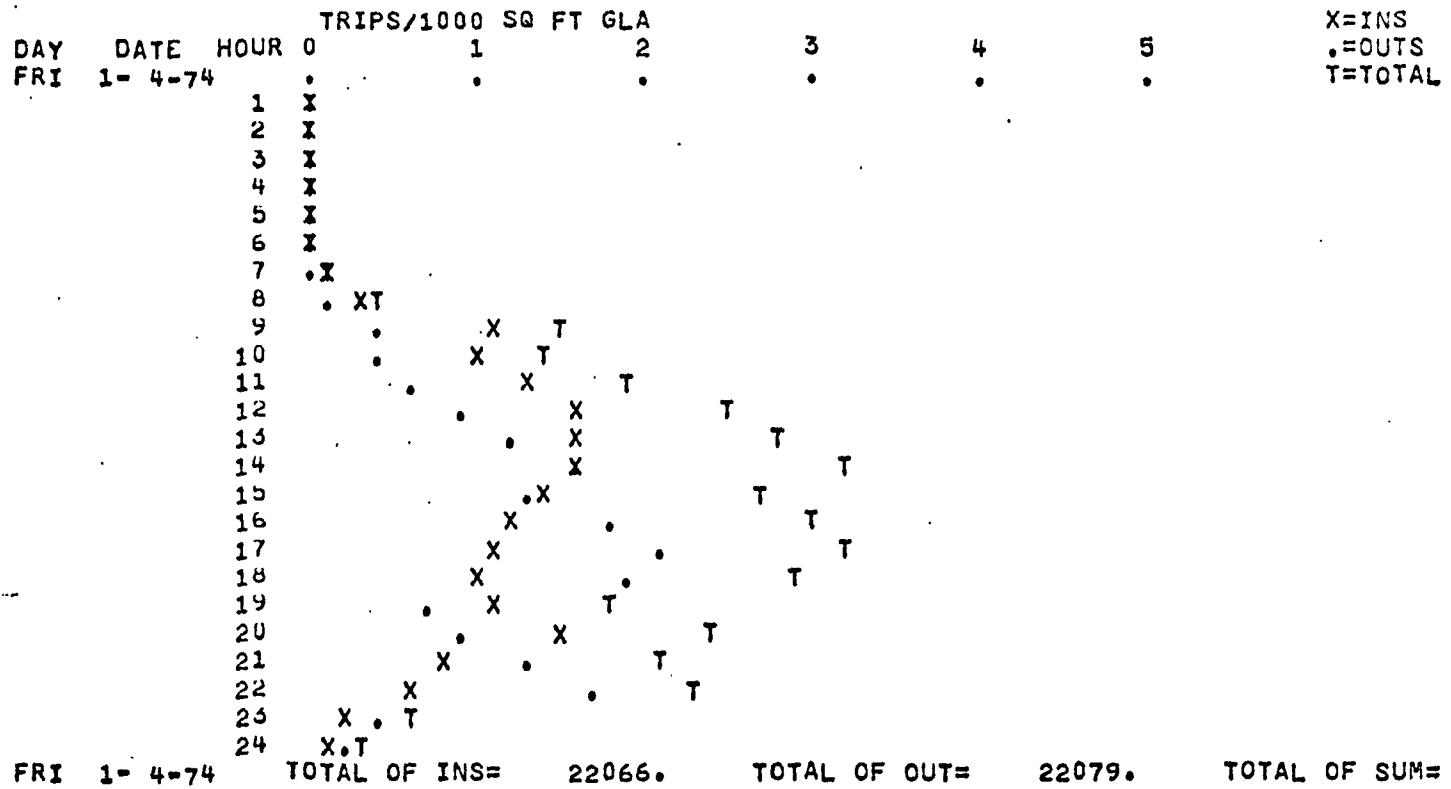
OAKBROOK SHOPPING CENTER
1,250,000 SQ FT GLA
SEARS, MARSHALL FIELDS, LORD AND TAYLOR



THU 1- 3-74 TOTAL OF INS= 21116. TOTAL OF OUT= 21097. TOTAL OF SUM= 42213.

GENERATION RATES BY HOUR OF DAY

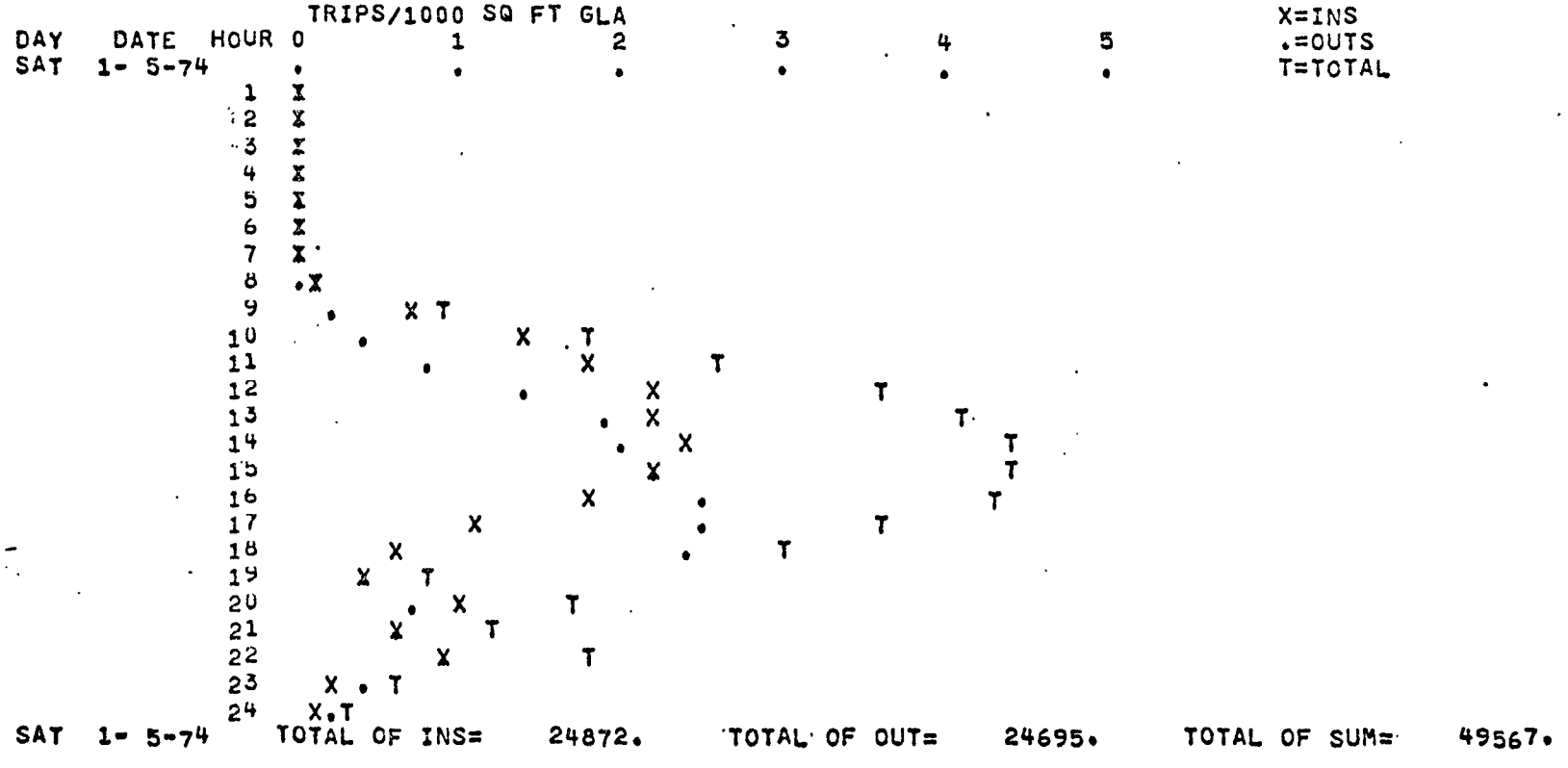
OAKBROOK SHOPPING CENTER
1,250,000 SQ FT GLA
SEARS, MARSHALL FIELDS, LORD AND TAYLOR



FRI 1- 4-74 TOTAL OF INS= 22066. TOTAL OF OUT= 22079. TOTAL OF SUM= 44145.

GENERATION RATES BY HOUR OF DAY

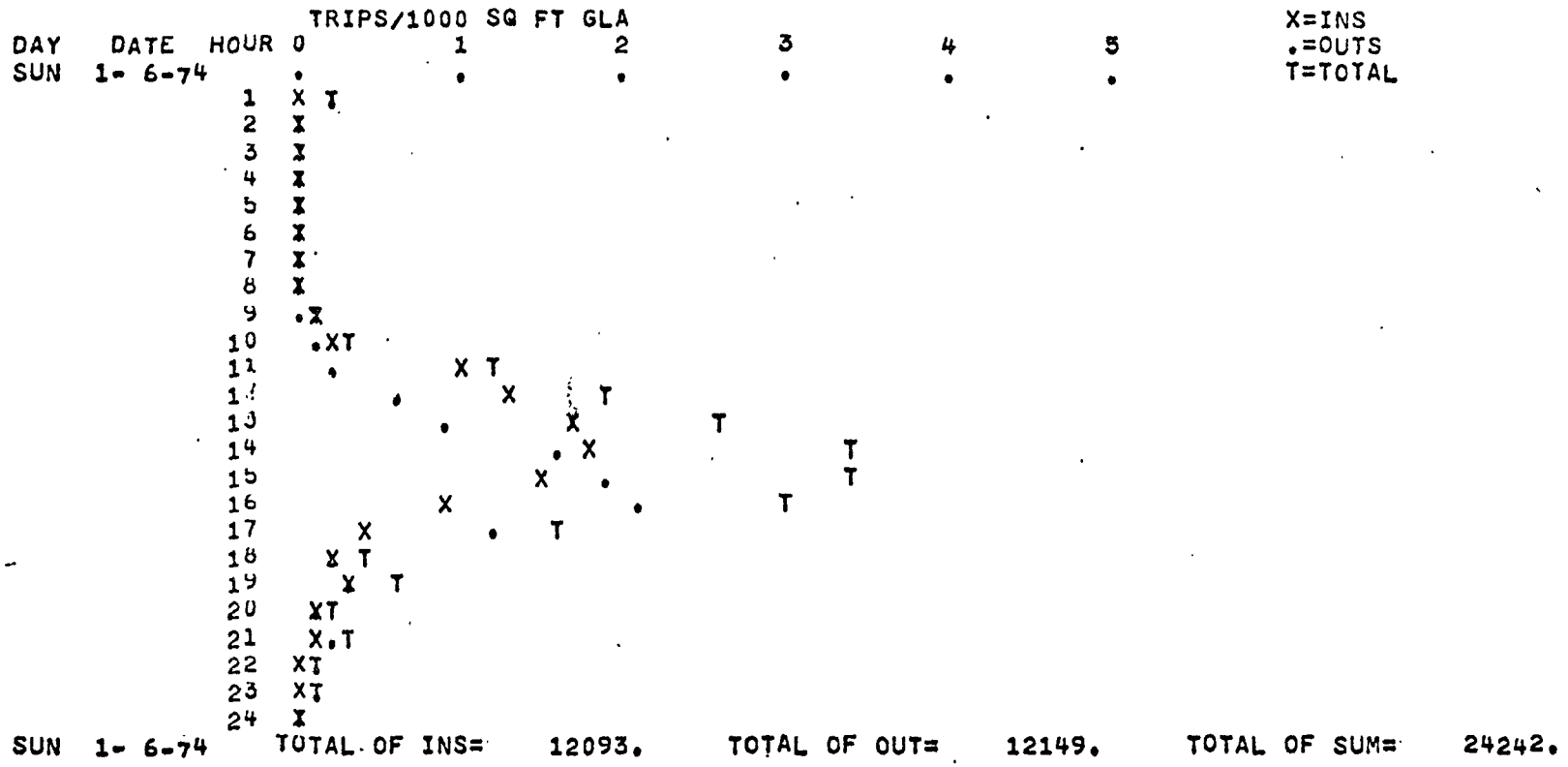
OAKBROOK SHOPPING CENTER
1,250,000 SQ FT GLA
SEARS, MARSHALL FIELDS, LORD AND TAYLOR



SAT 1- 5-74 TOTAL OF INS= 24872. TOTAL OF OUT= 24695. TOTAL OF SUM= 49567.

GENERATION RATES BY HOUR OF DAY

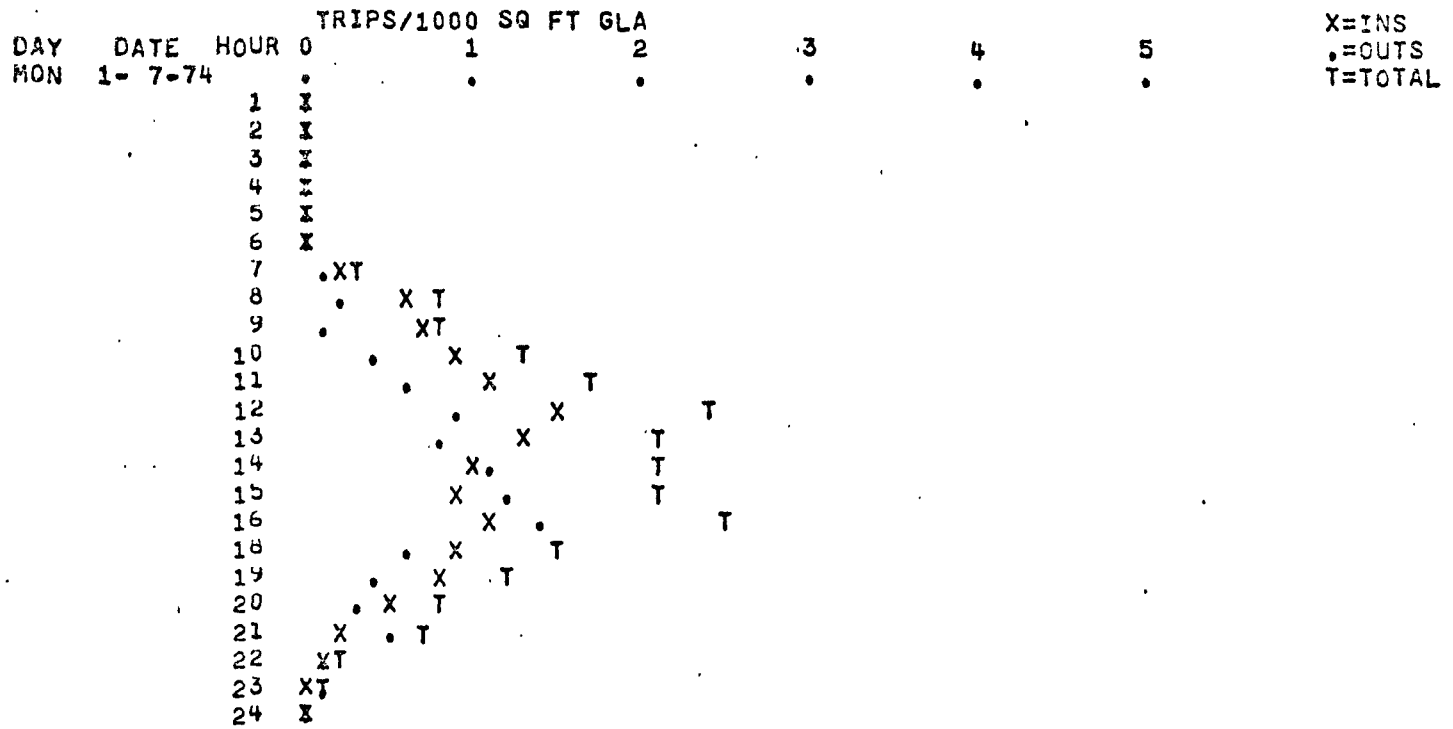
OAKBROOK SHOPPING CENTER
1,250,000 SQ FT GLA
SEARS, MARSHALL FIELDS, LORD AND TAYLOR



SUN 1- 6-74 TOTAL OF INS= 12093. TOTAL OF OUT= 12149. TOTAL OF SUM= 24242.

GENERATION RATES BY HOUR OF DAY

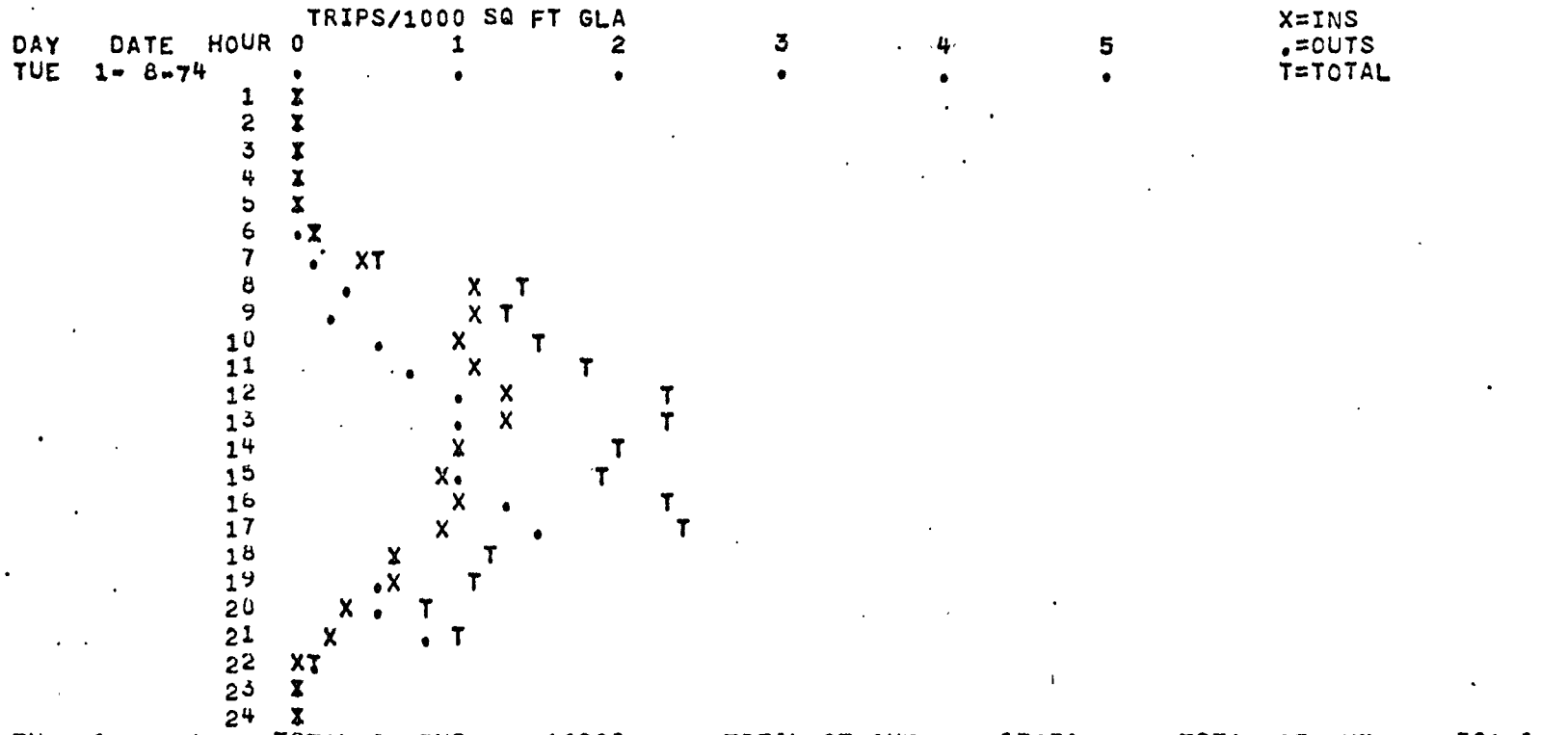
OAKBROOK SHOPPING CENTER
1,250,000 SQ FT GLA
SEARS, MARSHALL FIELDS, LORD AND TAYLOR



MON 1- 7-74 TOTAL OF INS= 14917. TOTAL OF OUT= 10778. TOTAL OF SUM= 25695.

GENERATION RATES BY HOUR OF DAY

OAKBROOK SHOPPING CENTER
1,250,000 SQ FT GLA
SEARS, MARSHALL FIELDS, LORD AND TAYLOR

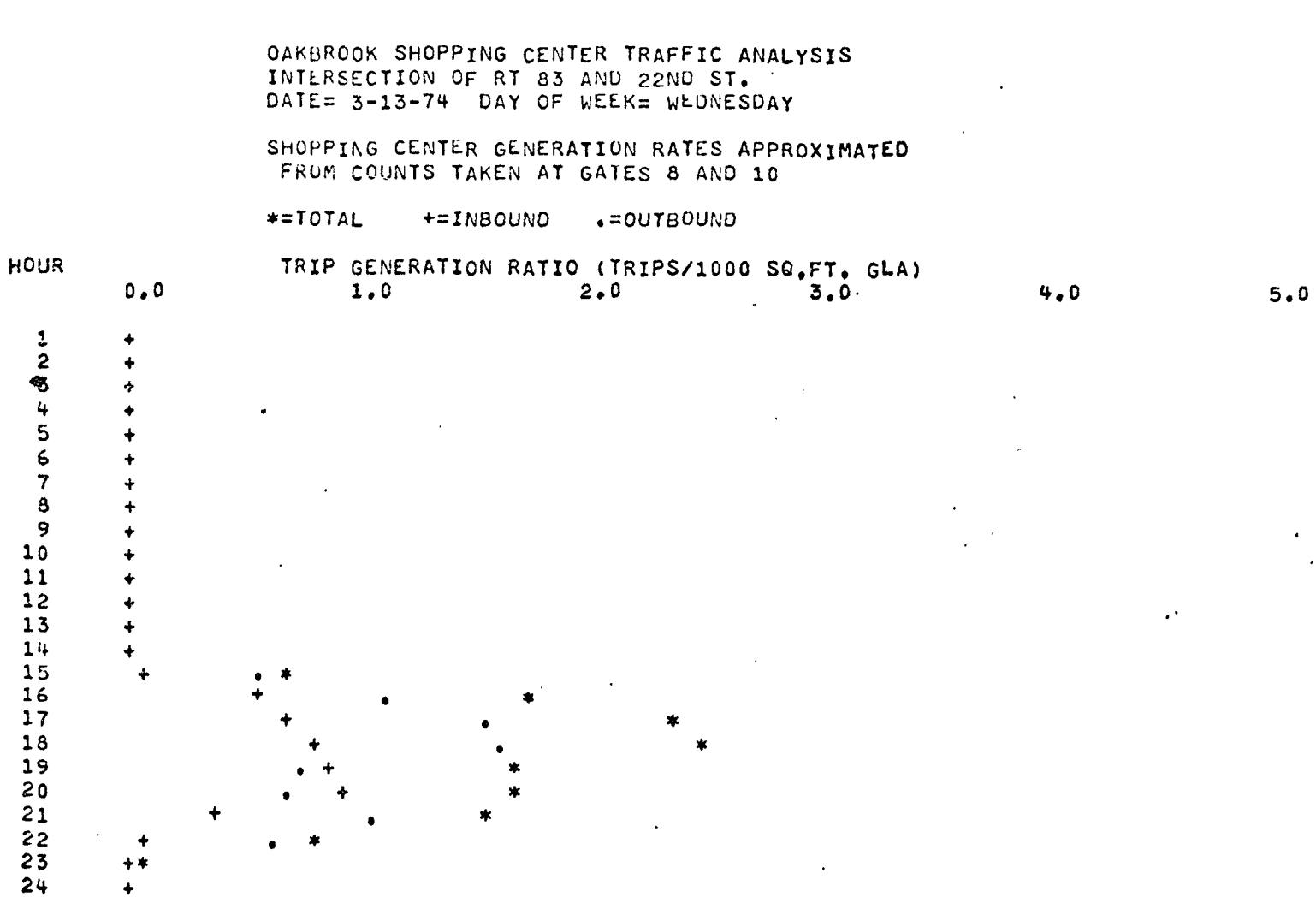


TUE 1- 8-74 TOTAL OF INS= 16220. TOTAL OF OUT= 13931. TOTAL OF SUM= 30151.

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-13-74 DAY OF WEEK= WEDNESDAY

SHOPPING CENTER GENERATION RATES APPROXIMATED
FROM COUNTS TAKEN AT GATES 8 AND 10

*=TOTAL +=INBOUND .=OUTBOUND



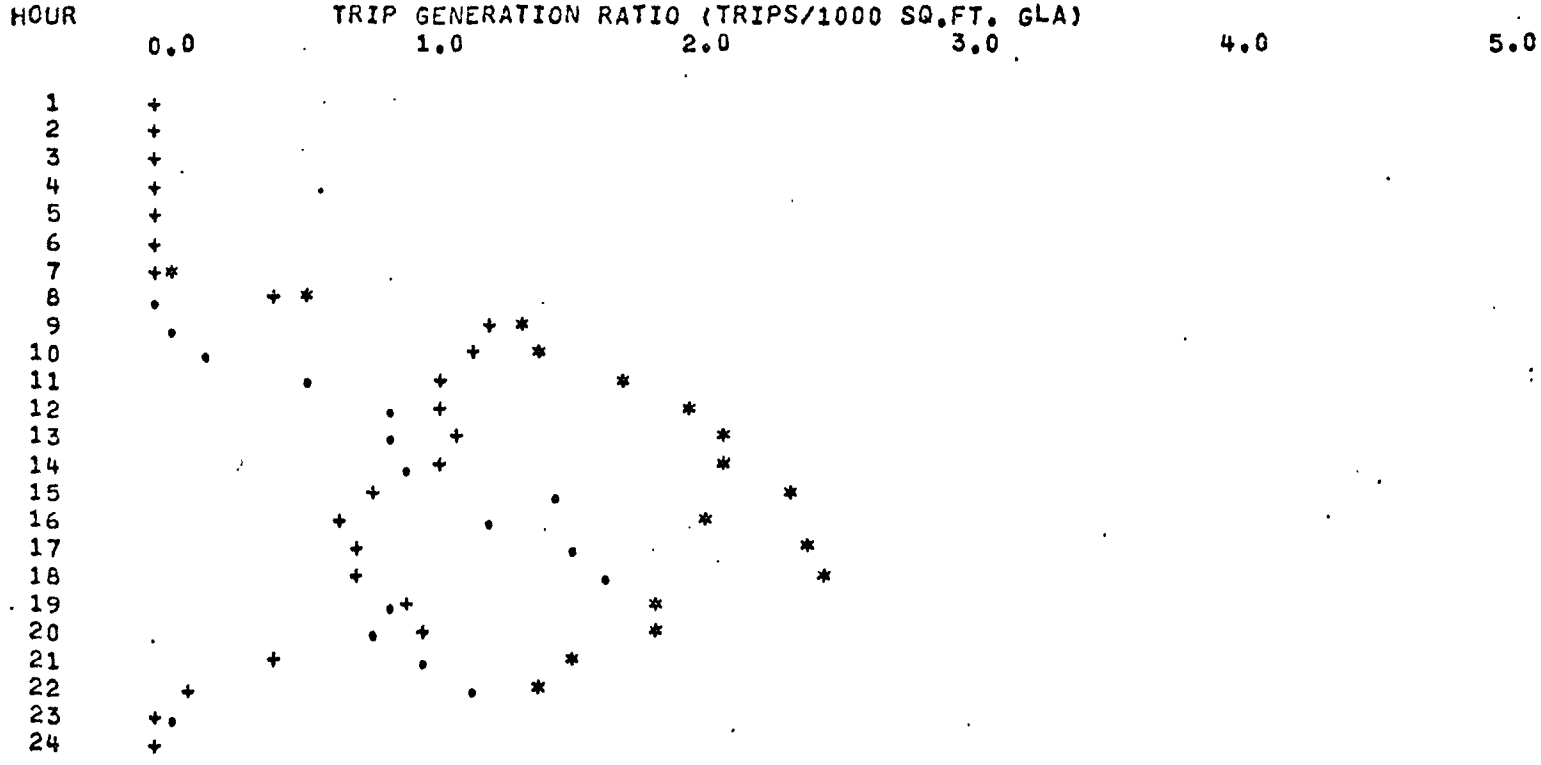
(2:00 P.M. to Midnight Only)

TOTAL INBOUND = 6487 TOTAL OUTBOUND = 11135 TOTAL DAILY TRIPS = 17622

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-14-74 DAY OF WEEK= THURSDAY

SHOPPING CENTER GENERATION RATES APPROXIMATED
FROM COUNTS TAKEN AT GATES 8 AND 10

*=TOTAL +=INBOUND .=OUTBOUND

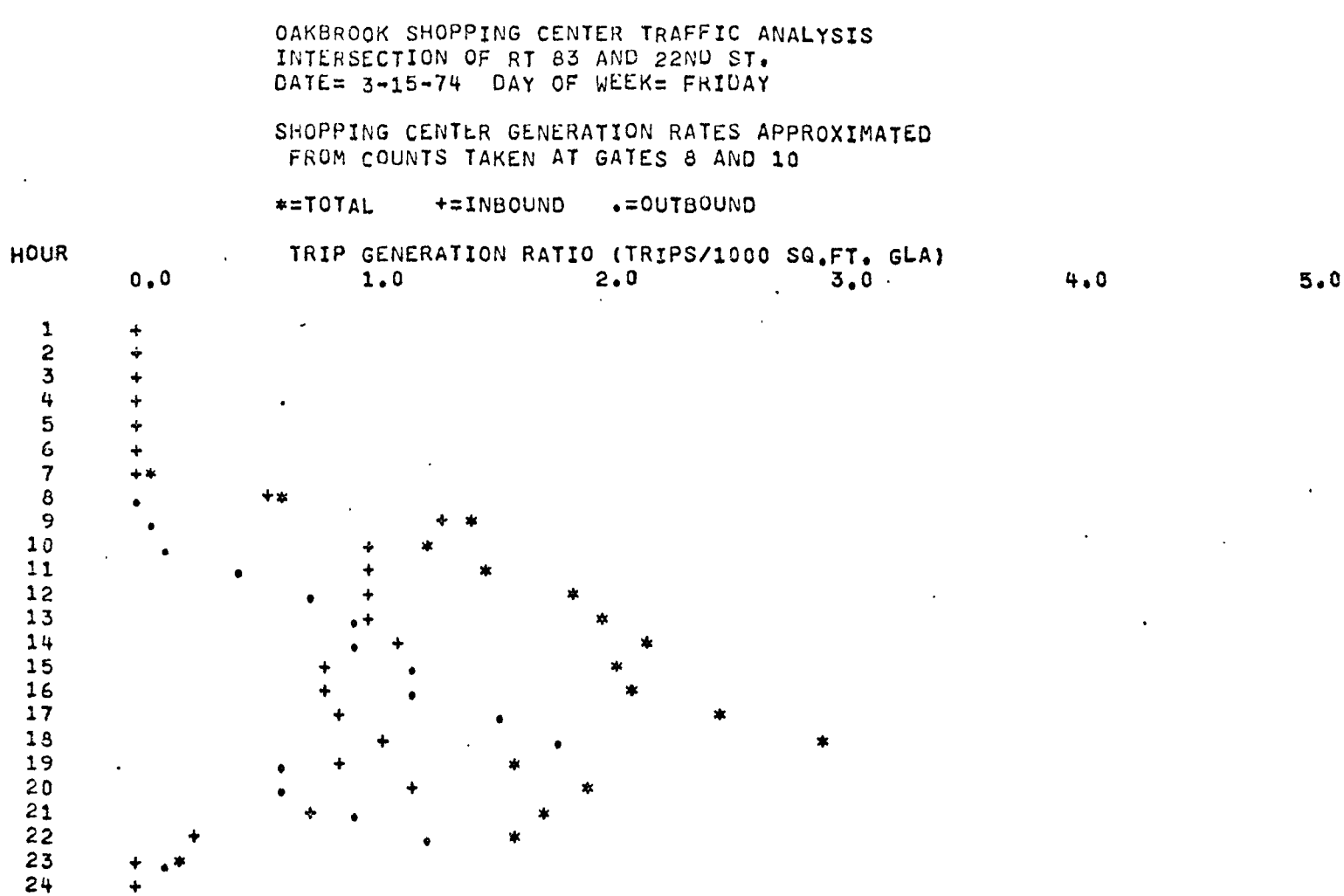


TOTAL INBOUND = 17924 TOTAL OUTBOUND = 18818 TOTAL DAILY TRIPS = 36742

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-15-74 DAY OF WEEK= FRIDAY

SHOPPING CENTER GENERATION RATES APPROXIMATED
FROM COUNTS TAKEN AT GATES 8 AND 10

*=TOTAL +=INBOUND .=OUTBOUND

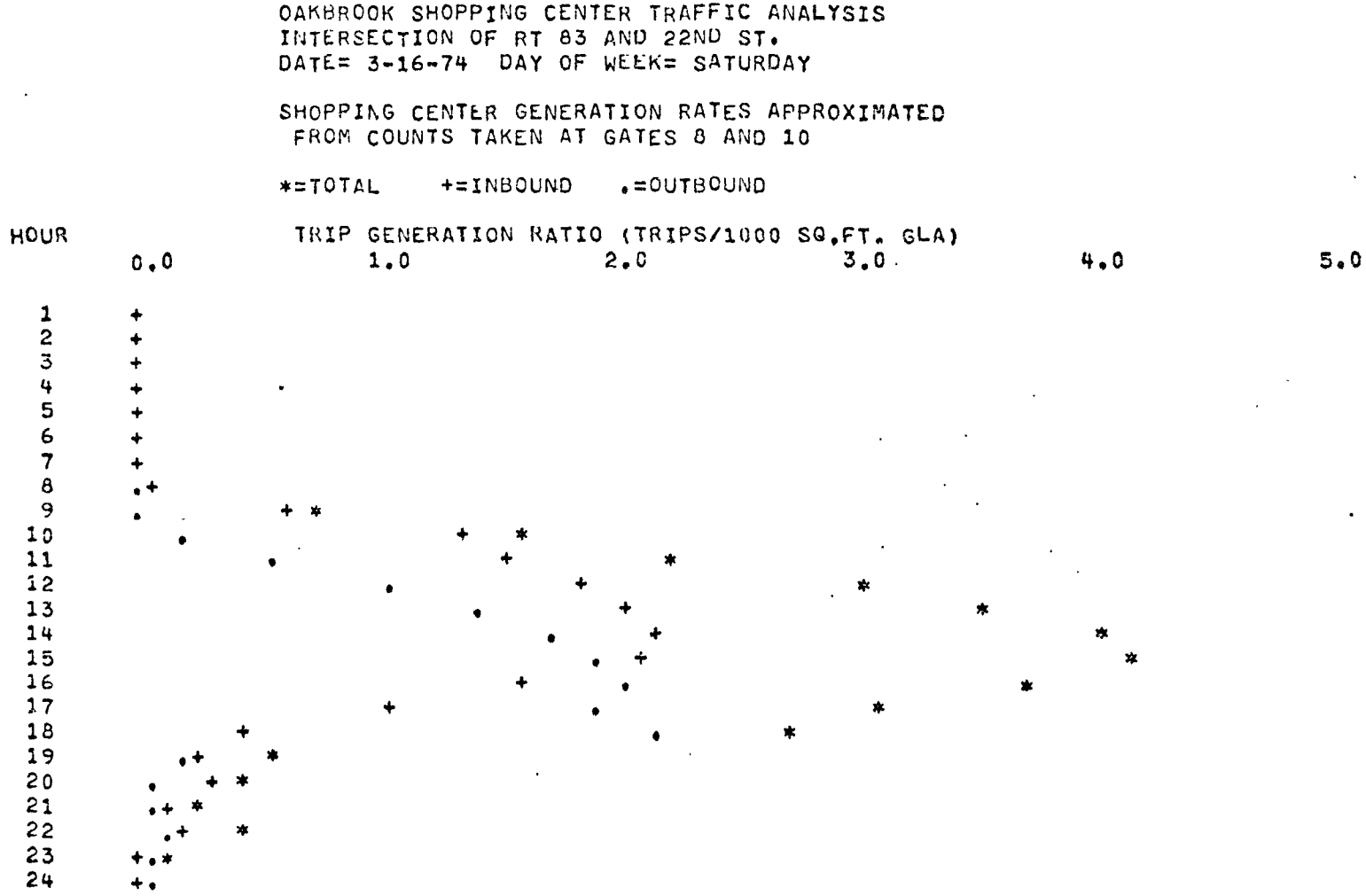


TOTAL INBOUND = 19069 TOTAL OUTBOUND = 17787 TOTAL DAILY TRIPS = 36856

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-16-74 DAY OF WEEK= SATURDAY

SHOPPING CENTER GENERATION RATES APPROXIMATED
FROM COUNTS TAKEN AT GATES 8 AND 10

*=TOTAL +=INBOUND .=OUTBOUND

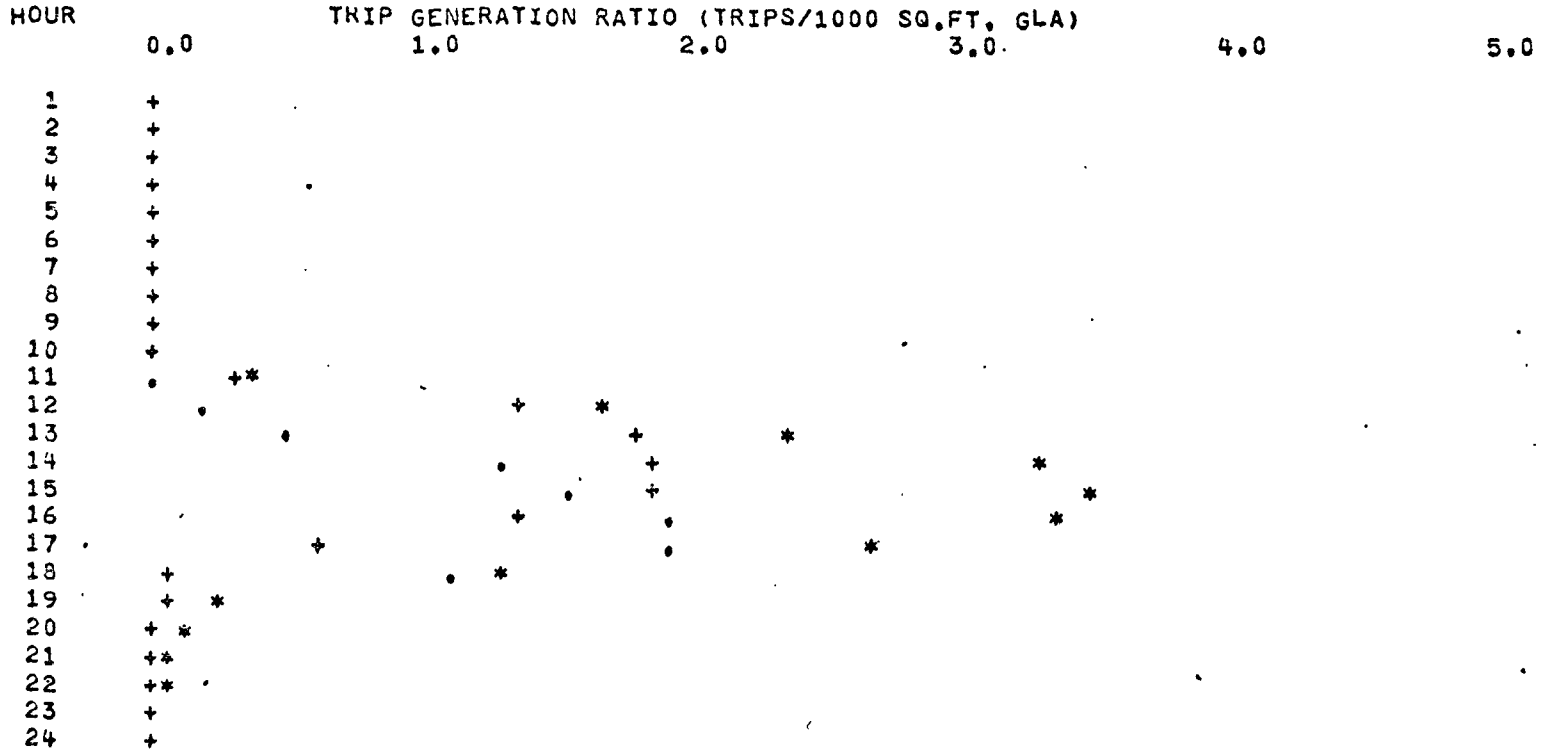


TOTAL INBOUND = 21884 TOTAL OUTBOUND = 19095 TOTAL DAILY TRIPS = 40979

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-17-74 DAY OF WEEK= SUNDAY

SHOPPING CENTER GENERATION RATES APPROXIMATED
FROM COUNTS TAKEN AT GATES 8 AND 10

*=TOTAL +=INBOUND .=OUTBOUND

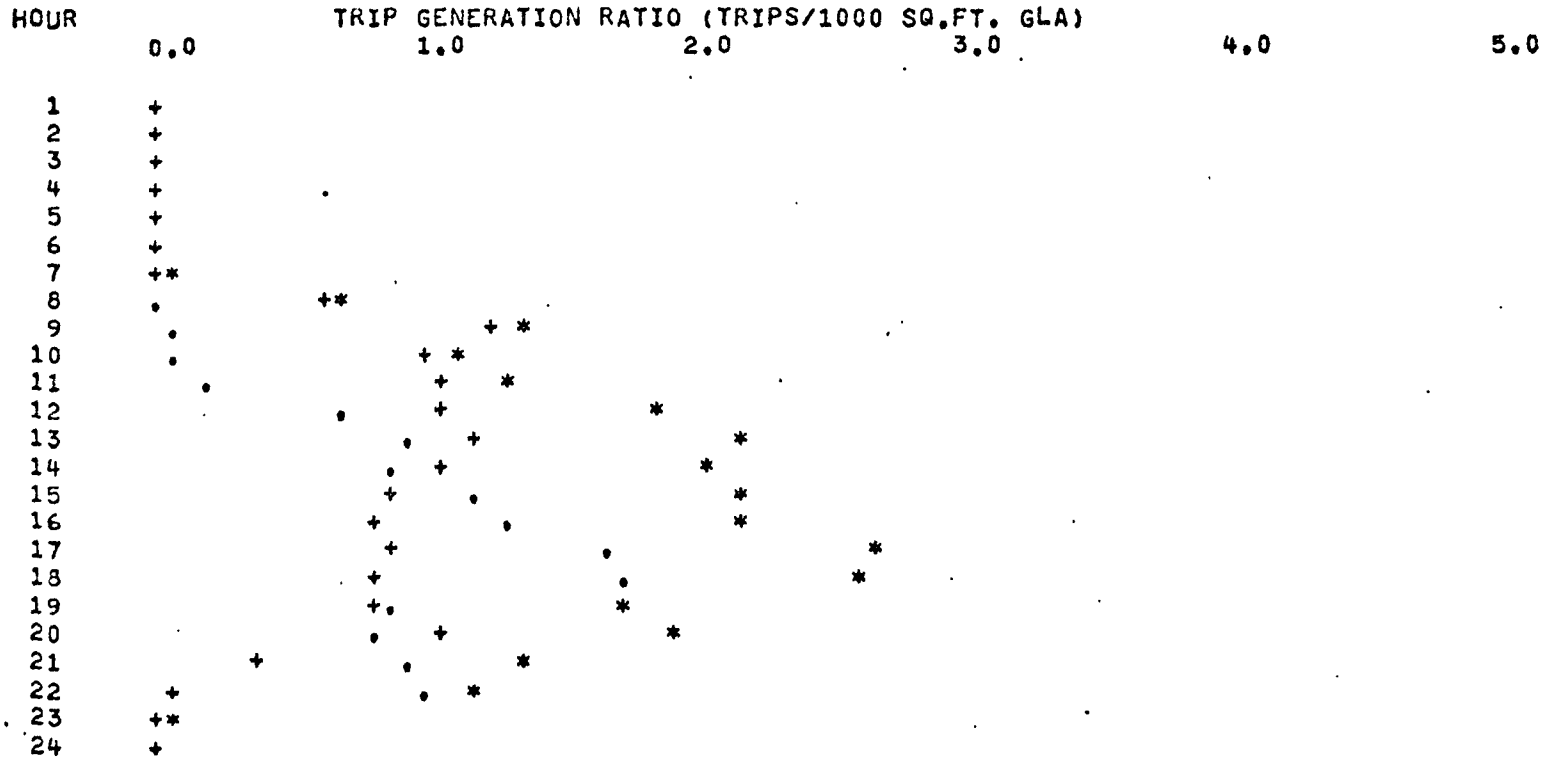


TOTAL INBOUND = 13265 TOTAL OUTBOUND = 12425 TOTAL DAILY TRIPS = 25690

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-18-74 DAY OF WEEK= MONDAY

SHOPPING CENTER GENERATION RATES APPROXIMATED
FROM COUNTS TAKEN AT GATES 8 AND 10

*=TOTAL +=INBOUND .=OUTBOUND

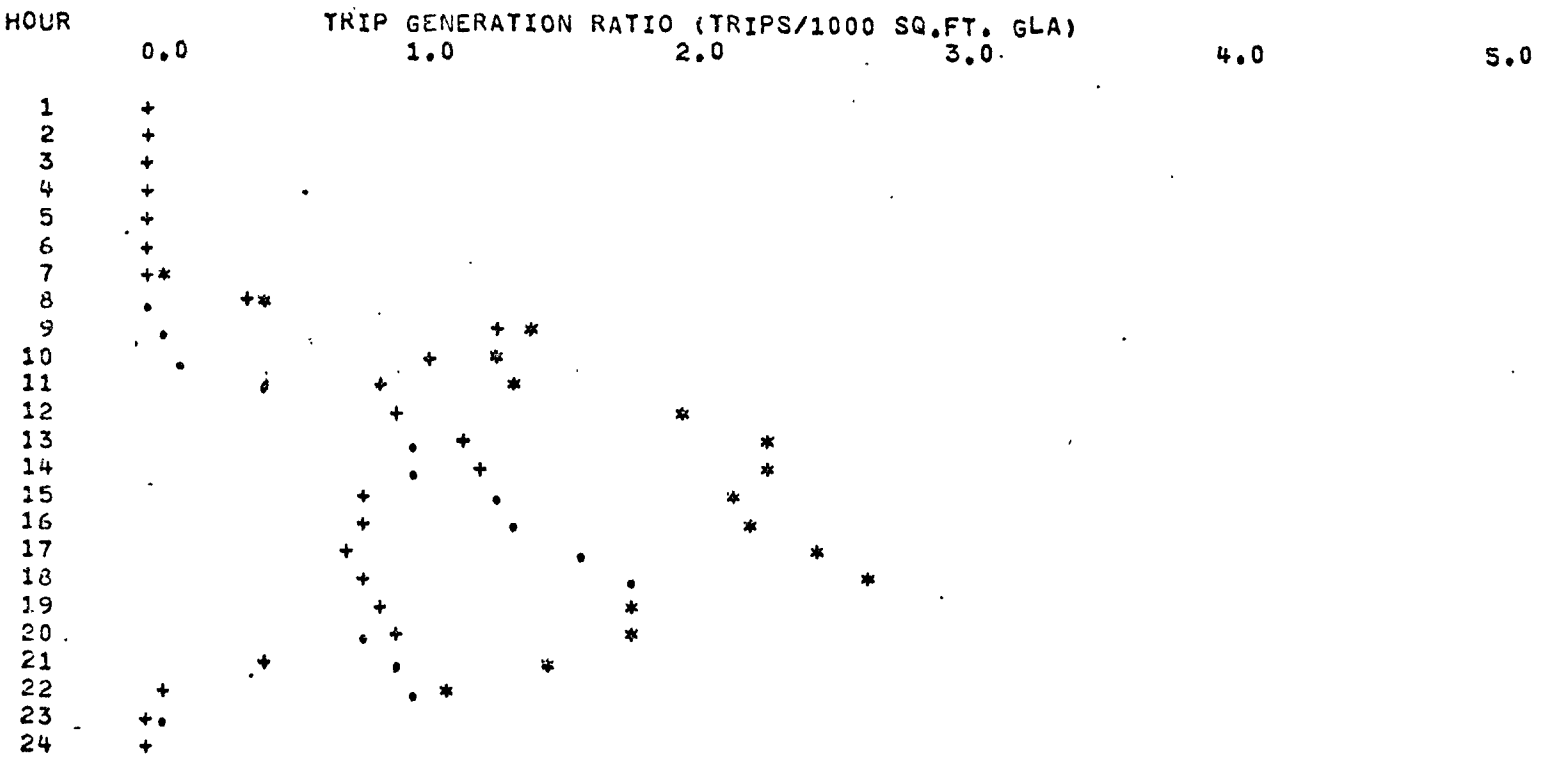


TOTAL INBOUND = 18103 TOTAL OUTBOUND = 17354 TOTAL DAILY TRIPS = 35457

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-19-74 DAY OF WEEK= TUESDAY

SHOPPING CENTER GENERATION RATES APPROXIMATED
FROM COUNTS TAKEN AT GATES 8 AND 10

*=TOTAL +=INBOUND .=OUTBOUND

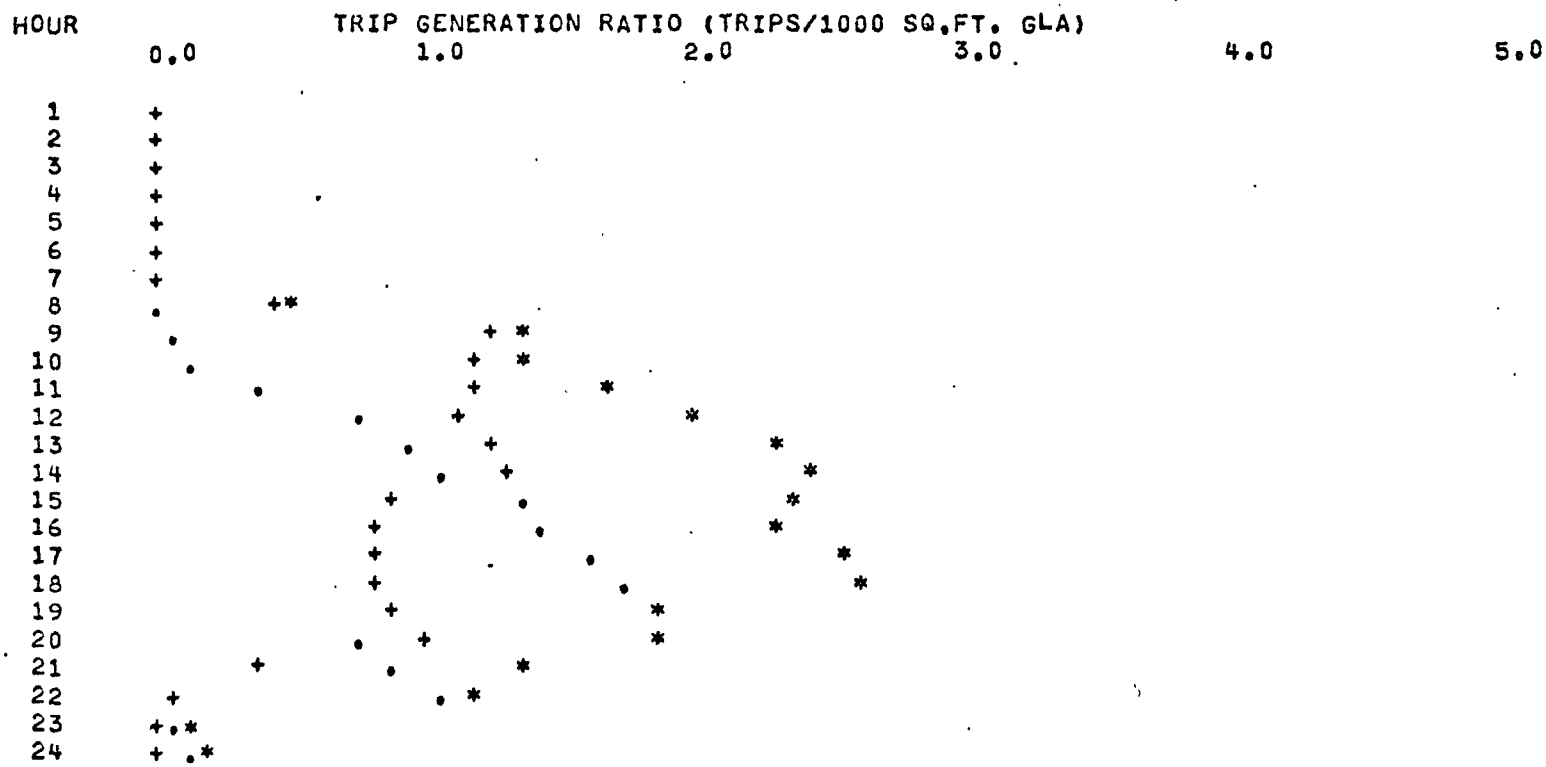


TOTAL INBOUND = 17562 TOTAL OUTBOUND = 18471 TOTAL DAILY TRIPS = 36033

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-20-74 DAY OF WEEK= WEDNESDAY

SHOPPING CENTER GENERATION RATES APPROXIMATED
FROM COUNTS TAKEN AT GATES 8 AND 10

*=TOTAL +=INBOUND .=OUTBOUND

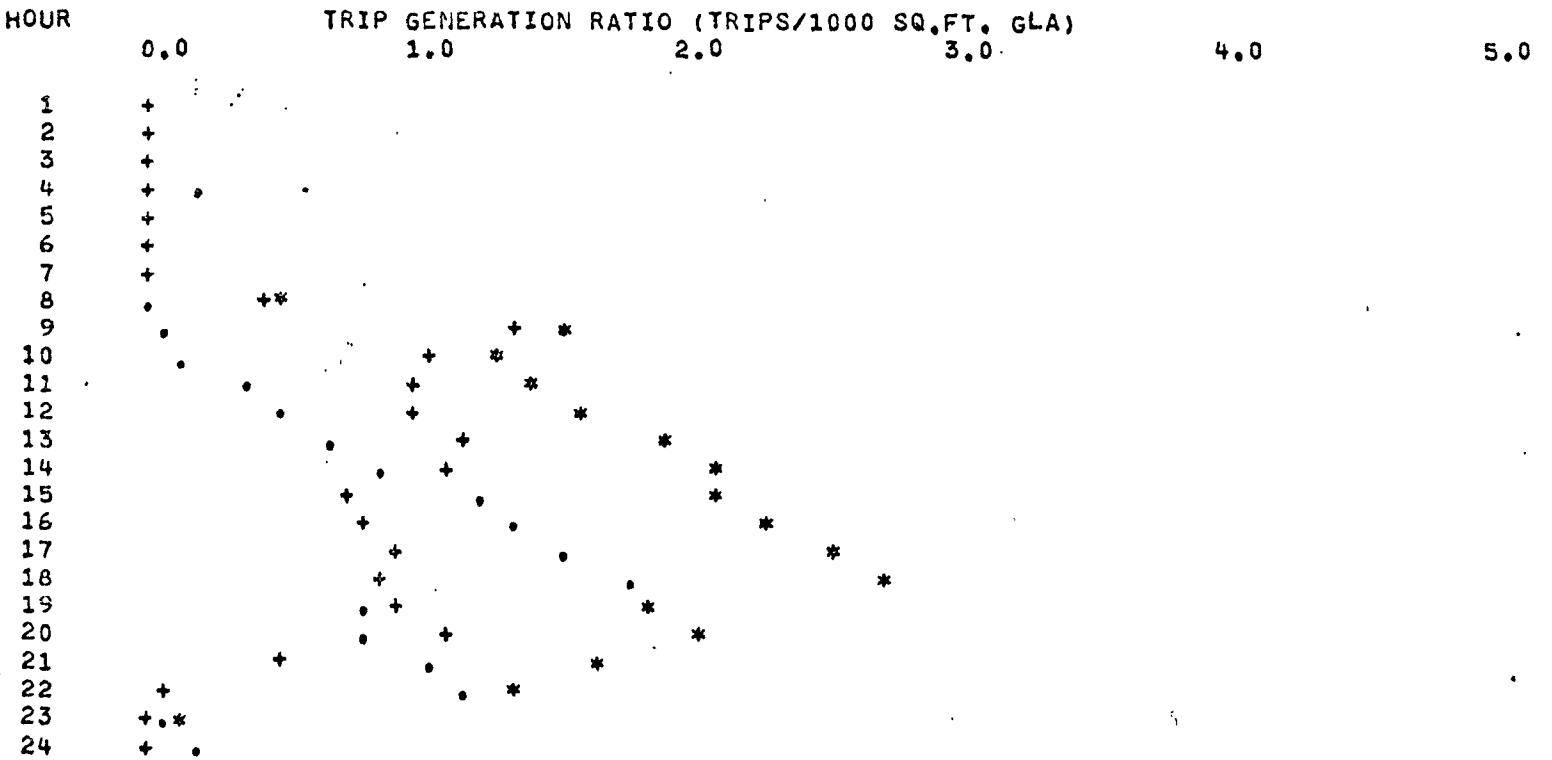


TOTAL INBOUND = 18822 TOTAL OUTBOUND = 18828 TOTAL DAILY TRIPS = 37650

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-21-74 DAY OF WEEK= THURSDAY

SHOPPING CENTER GENERATION RATES APPROXIMATED
FROM COUNTS TAKEN AT GATES 8 AND 10

*=TOTAL +=INBOUND .=OUTBOUND

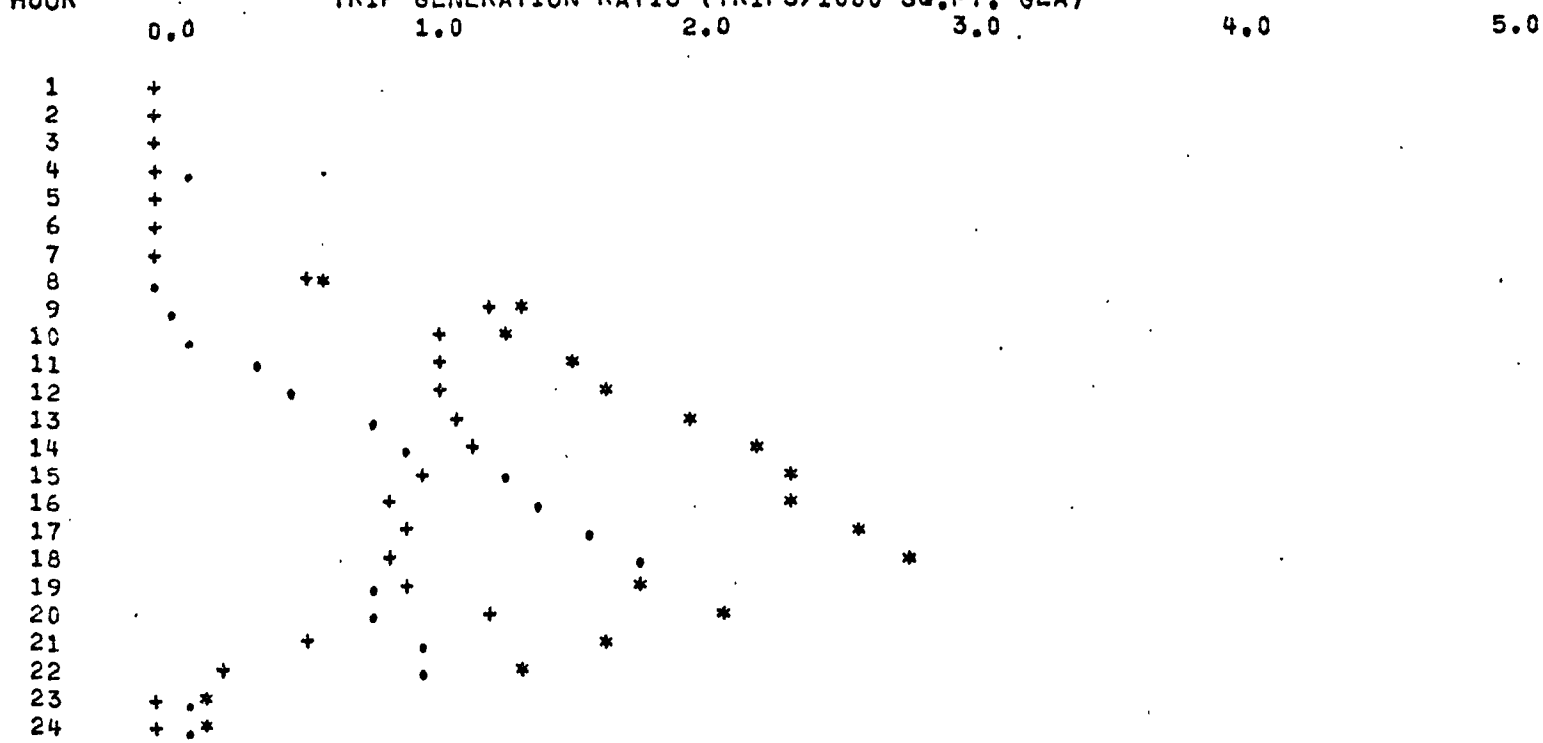


TOTAL INBOUND = 18460 TOTAL OUTBOUND = 18614 TOTAL DAILY TRIPS = 37074

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-22-74 DAY OF WEEK= FRIDAY

SHOPPING CENTER GENERATION RATES APPROXIMATED
FROM COUNTS TAKEN AT GATES 8 AND 10

*=TOTAL +=INBOUND .=OUTBOUND

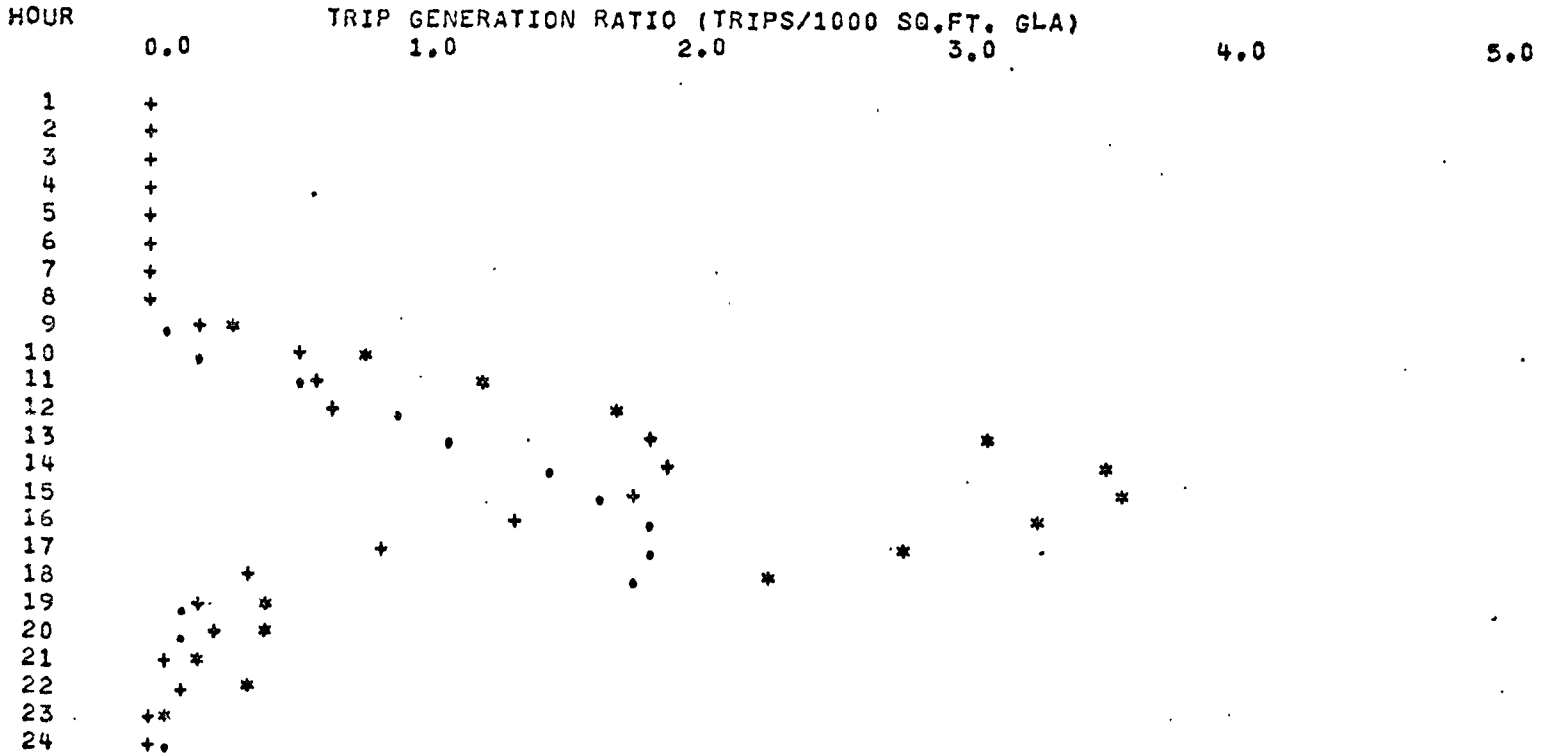


TOTAL INBOUND = 19551 TOTAL OUTBOUND = 18550 TOTAL DAILY TRIPS = 38101

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-23-74 DAY OF WEEK= SATURDAY

SHOPPING CENTER GENERATION RATES APPROXIMATED
FROM COUNTS TAKEN AT GATES 8 AND 10

*=TOTAL +=INBOUND .=OUTBOUND

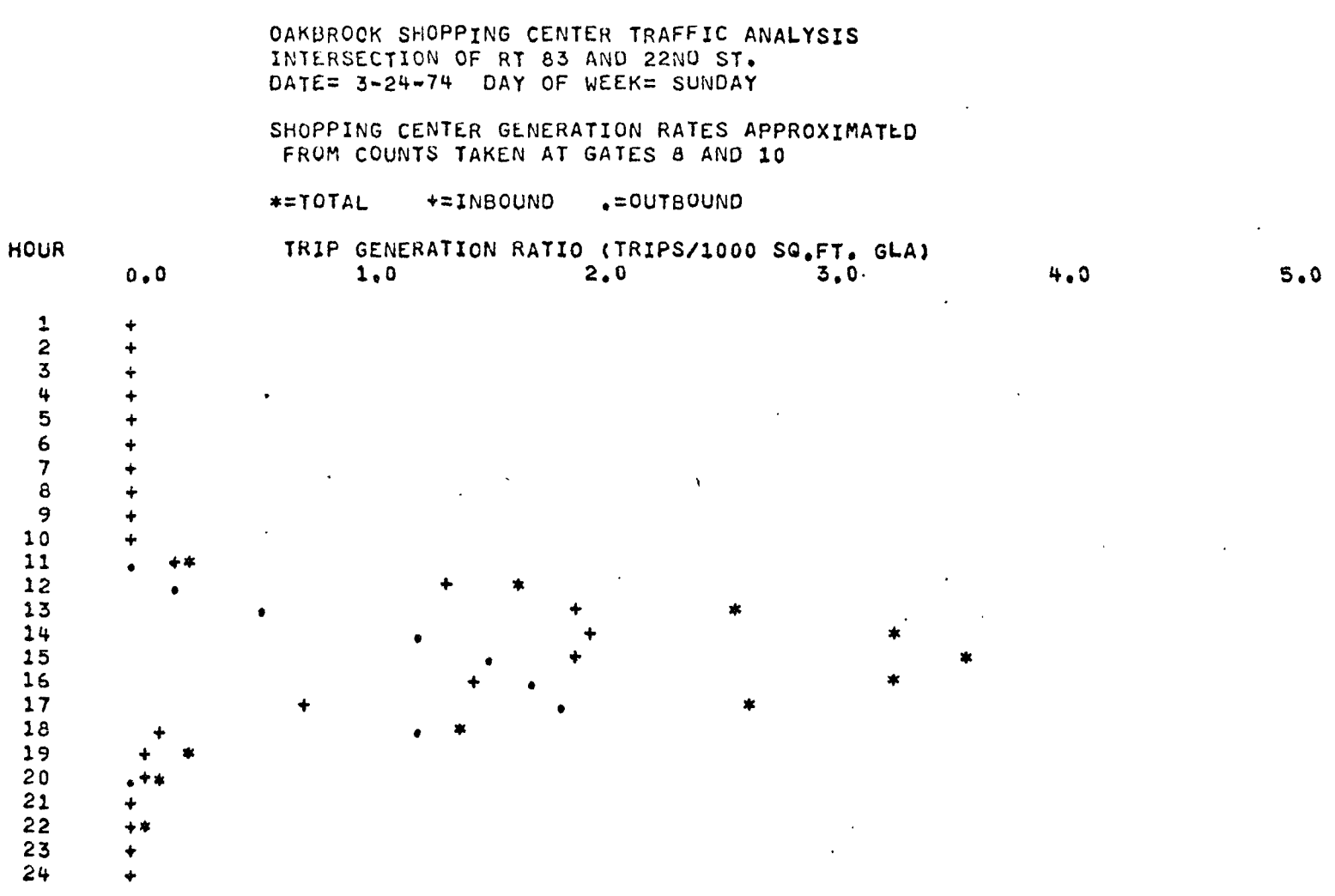


TOTAL INBOUND = 15533 TOTAL OUTBOUND = 17195 TOTAL DAILY TRIPS = 32728

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-24-74 DAY OF WEEK= SUNDAY

SHOPPING CENTER GENERATION RATES APPROXIMATED
FROM COUNTS TAKEN AT GATES 8 AND 10

*=TOTAL +=INBOUND .=OUTBOUND

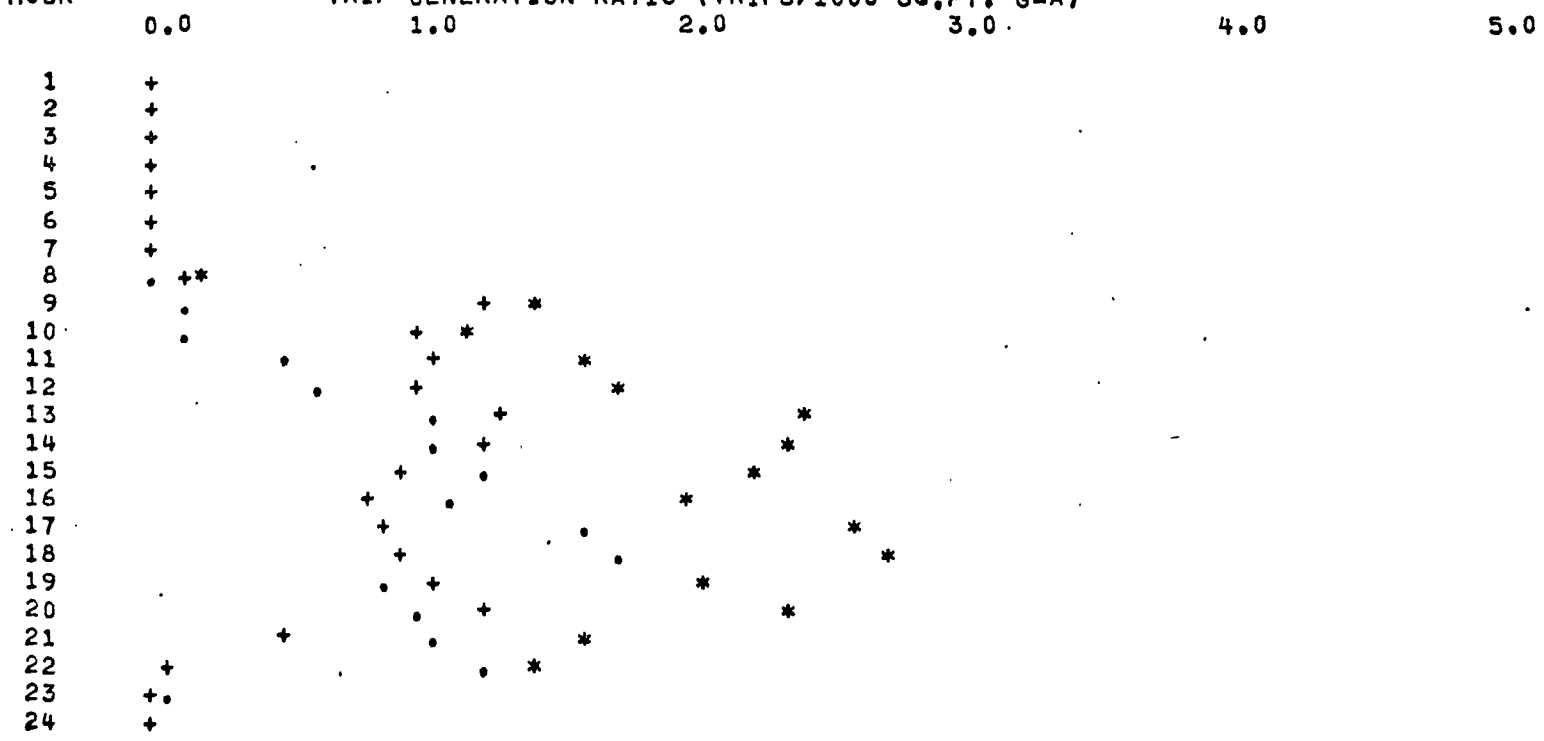


TOTAL INBOUND = 13792 TOTAL OUTBOUND = 12159 TOTAL DAILY TRIPS = 25951

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-25-74 DAY OF WEEK= MONDAY

SHOPPING CENTER GENERATION RATES APPROXIMATED
FROM COUNTS TAKEN AT GATES 8 AND 10

*=TOTAL +=INBOUND .=OUTBOUND

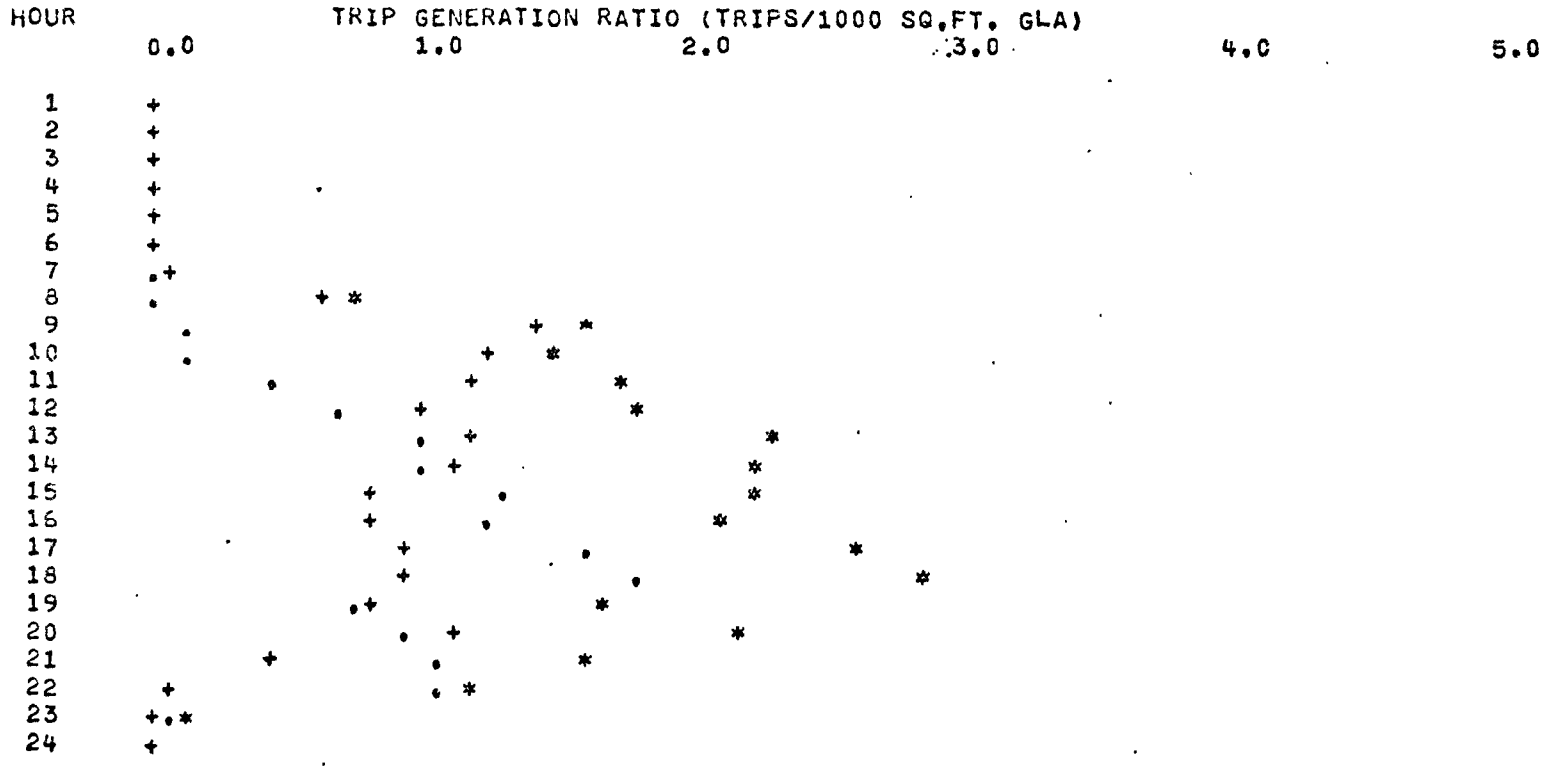


TOTAL INBOUND = 18526 TOTAL OUTBOUND = 18808 TOTAL DAILY TRIPS = 37334

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-26-74 DAY OF WEEK= TUESDAY

SHOPPING CENTER GENERATION RATES APPROXIMATED
FROM COUNTS TAKEN AT GATES 8 AND 10

*=TOTAL +=INBOUND .=OUTBOUND

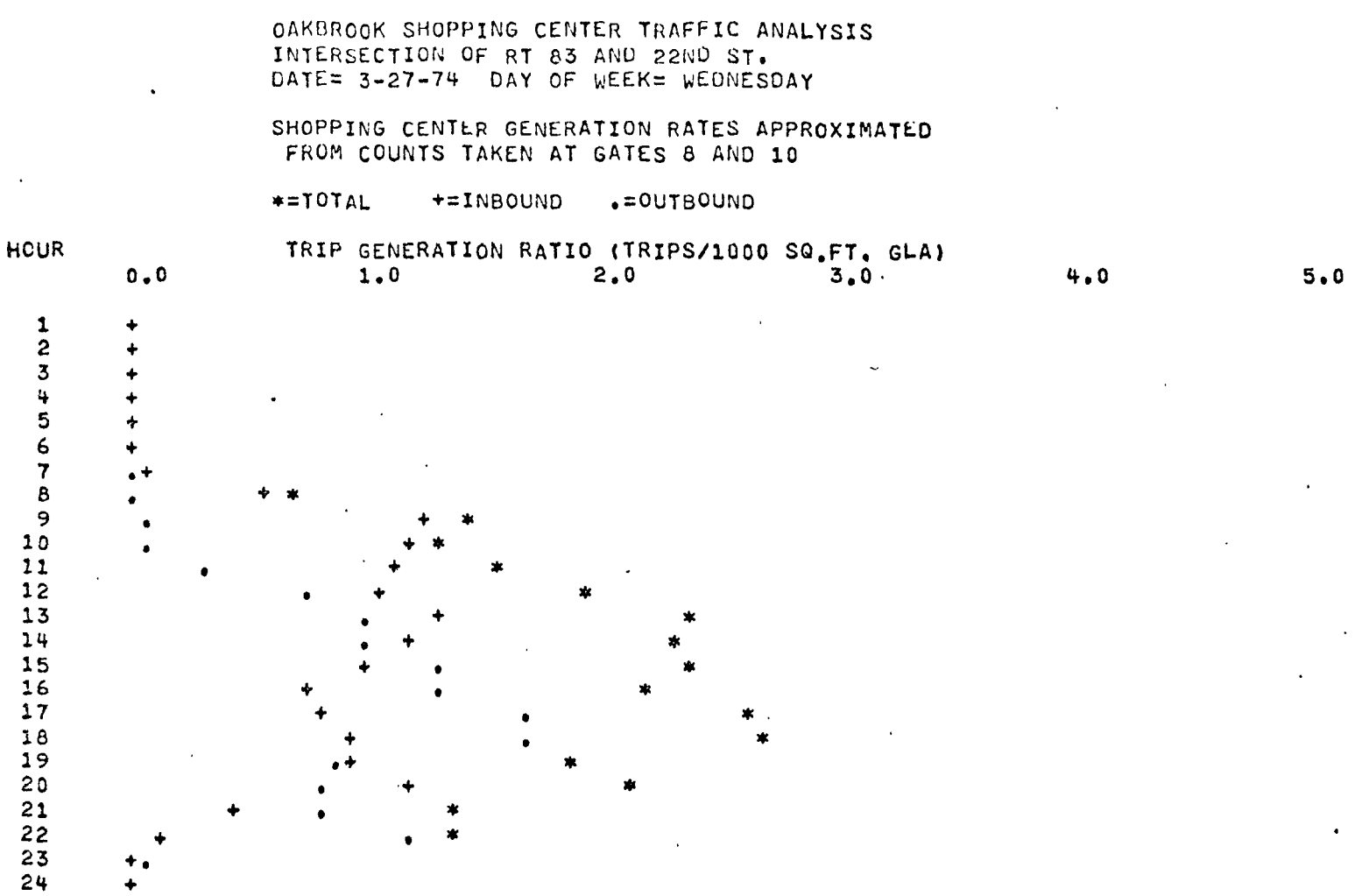


TOTAL INBOUND = 19195 TOTAL OUTBOUND = 18713 TOTAL DAILY TRIPS = 37908

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-27-74 DAY OF WEEK= WEDNESDAY

SHOPPING CENTER GENERATION RATES APPROXIMATED
FROM COUNTS TAKEN AT GATES 8 AND 10

*=TOTAL +=INBOUND .=OUTBOUND

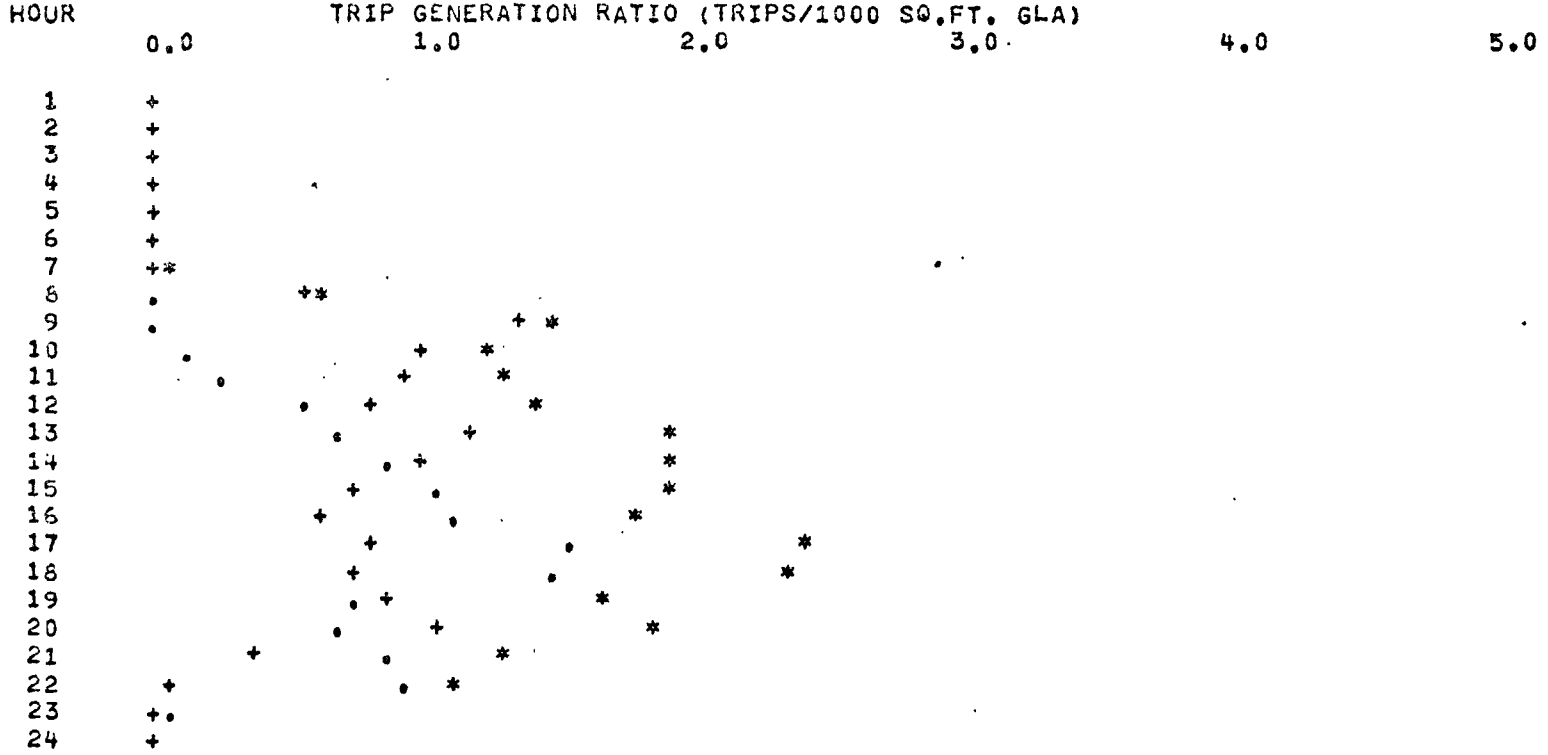


TOTAL INBOUND = 19344 TOTAL OUTBOUND = 18304 TOTAL DAILY TRIPS = 37648

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-28-74 DAY OF WEEK= THURSDAY

SHOPPING CENTER GENERATION RATES APPROXIMATED
FROM COUNTS TAKEN AT GATES 8 AND 10

*=TOTAL +=INBOUND .=OUTBOUND

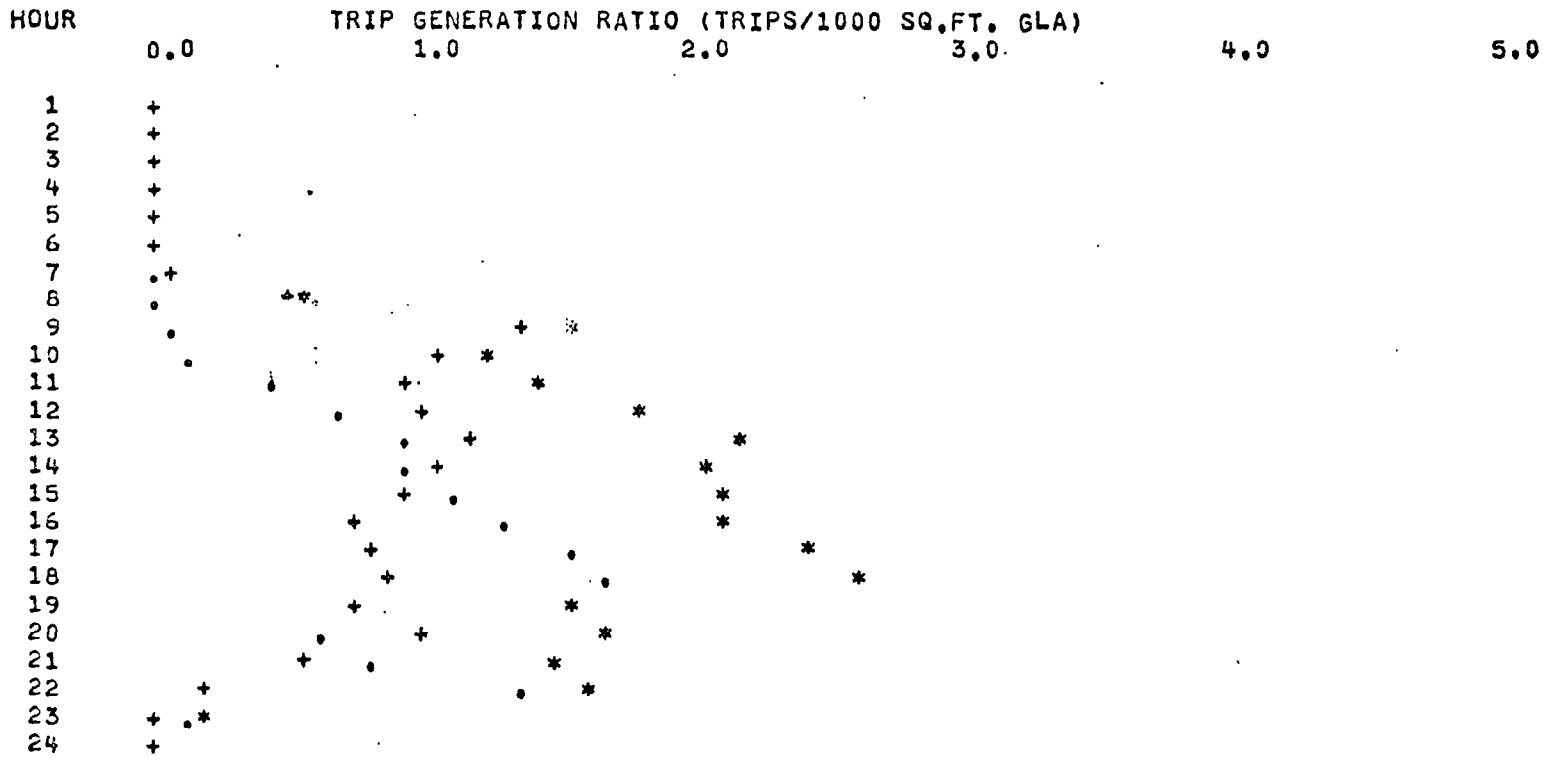


TOTAL INBOUND = 17136 TOTAL OUTBOUND = 15966 TOTAL DAILY TRIPS = 33102

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-29-74 DAY OF WEEK= FRIDAY

SHOPPING CENTER GENERATION RATES APPROXIMATED
FROM COUNTS TAKEN AT GATES 8 AND 10

*=TOTAL +=INBOUND .=OUTBOUND

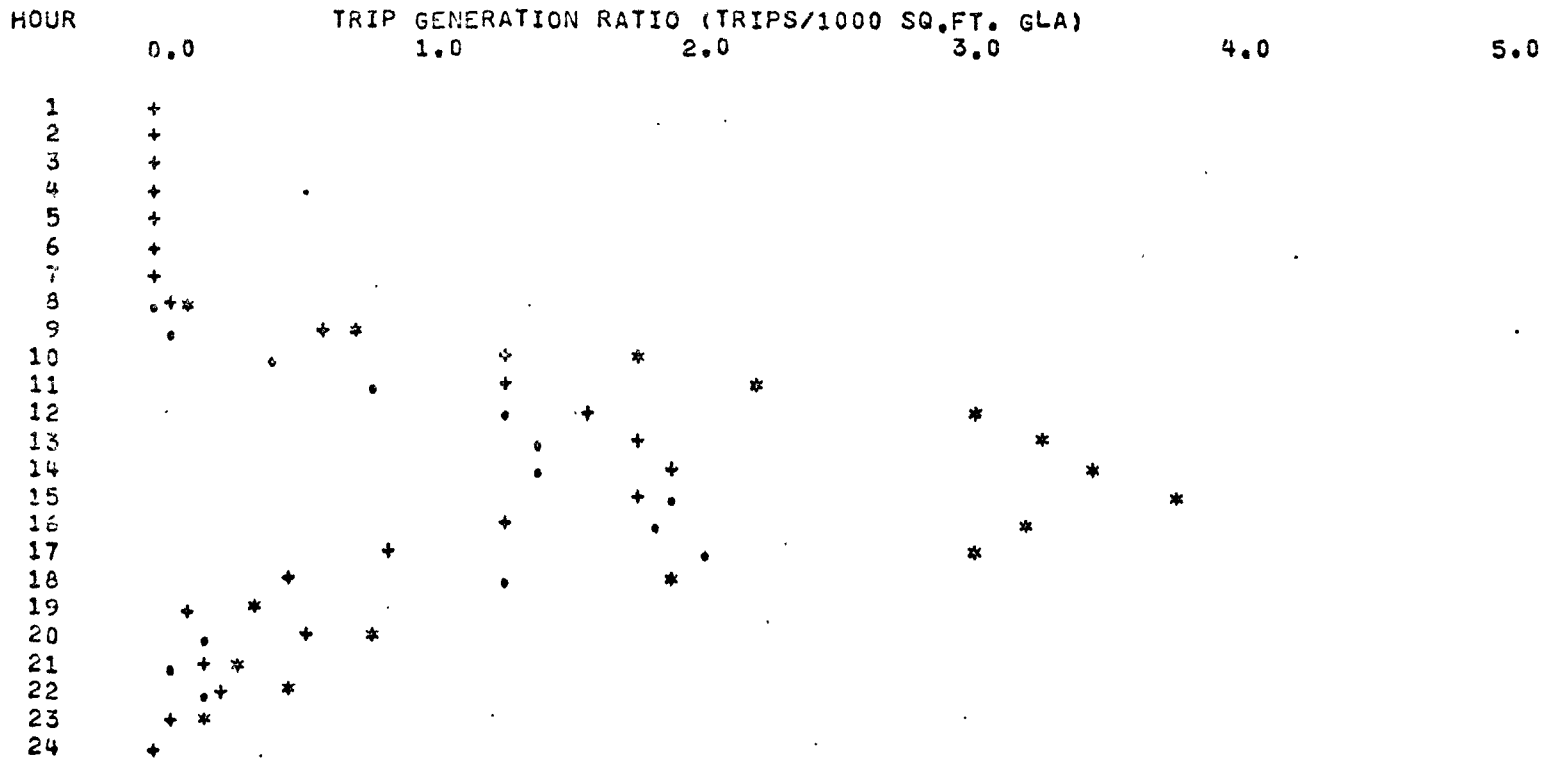


TOTAL INBOUND = 18234 TOTAL OUTBOUND = 17586 TOTAL DAILY TRIPS = 35820

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-30-74 DAY OF WEEK= SATURDAY

SHOPPING CENTER GENERATION RATES APPROXIMATED
FROM COUNTS TAKEN AT GATES 8 AND 10

*=TOTAL +=INBOUND .=OUTBOUND

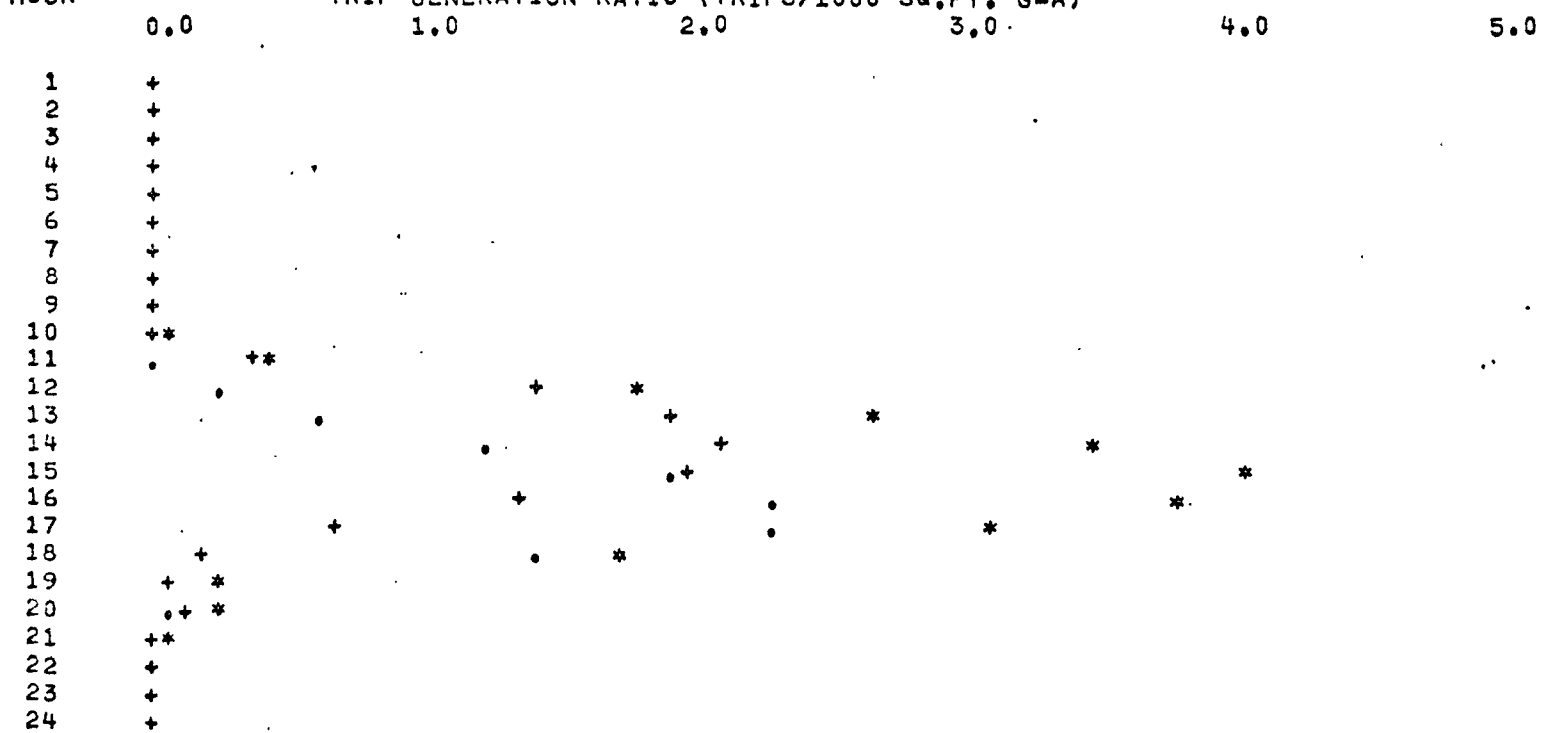


TOTAL INBOUND = 20139 TOTAL OUTBOUND = 18726 TOTAL DAILY TRIPS = 38865

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-31-74 DAY OF WEEK= SUNDAY

SHOPPING CENTER GENERATION RATES APPROXIMATED
FROM COUNTS TAKEN AT GATES 8 AND 10

*=TOTAL +=INBOUND .=OUTBOUND

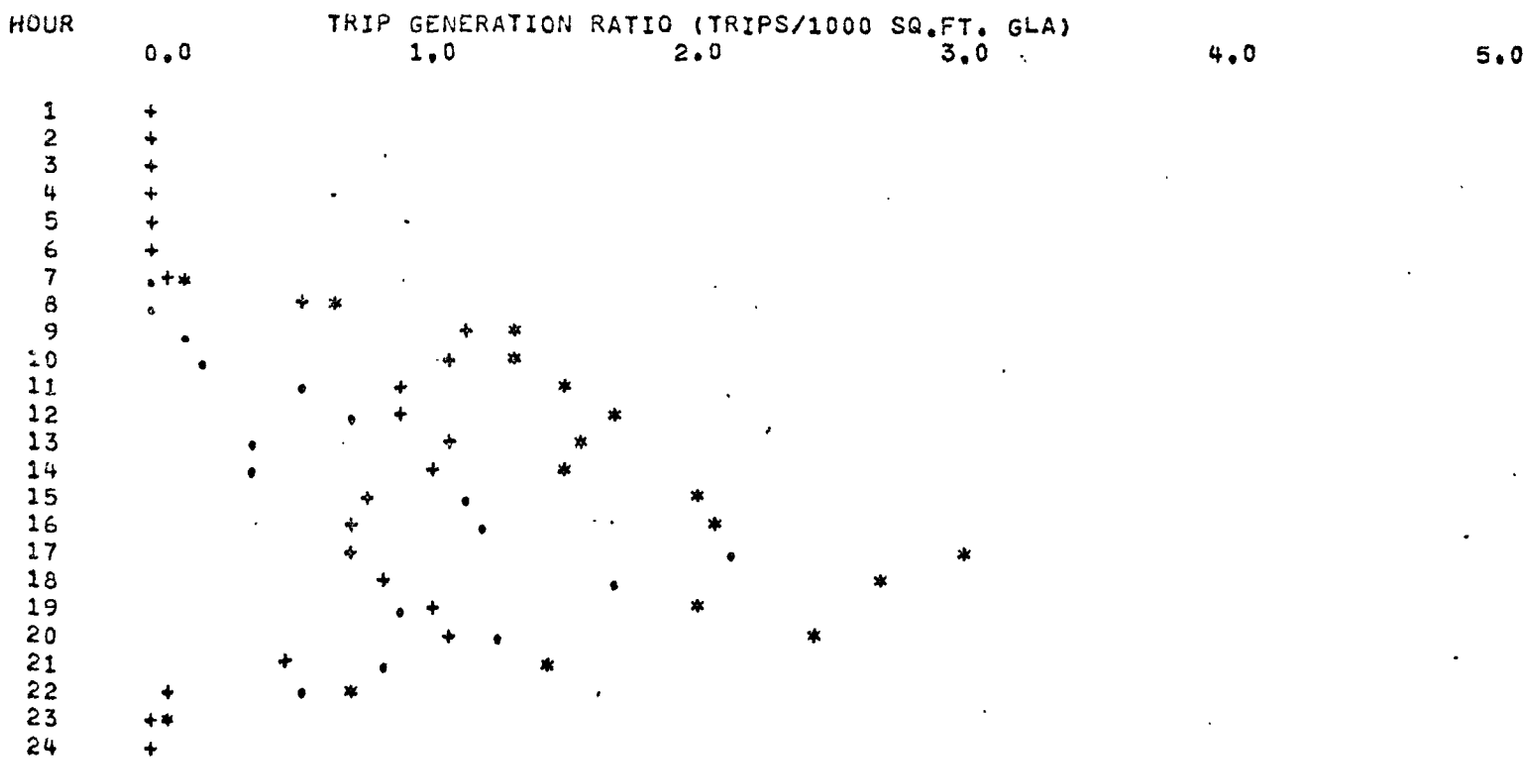


TOTAL INBOUND = 14529 TOTAL OUTBOUND = 14526 TOTAL DAILY TRIPS = 29055

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 1-74 DAY OF WEEK= MONDAY

SHOPPING CENTER GENERATION RATES APPROXIMATED
FROM COUNTS TAKEN AT GATES 8 AND 10

*=TOTAL +=INBOUND .=OUTBOUND

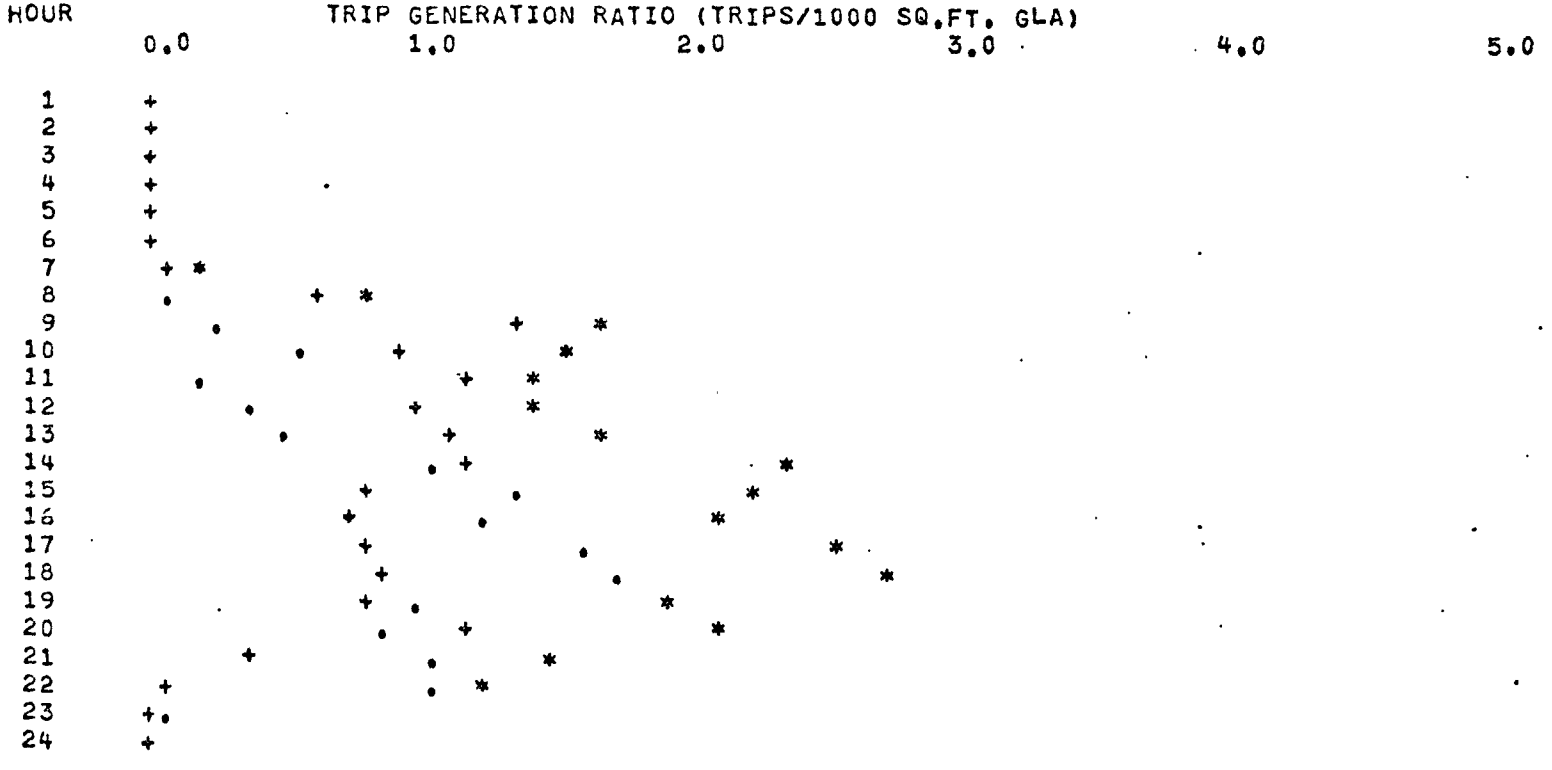


TOTAL INBOUND = 18195 TOTAL OUTBOUND = 17535 TOTAL DAILY TRIPS = 35730

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 2-74 DAY OF WEEK= TUESDAY

SHOPPING CENTER GENERATION RATES APPROXIMATED
FROM COUNTS TAKEN AT GATES 8 AND 10

*=TOTAL +=INBOUND .=OUTBOUND

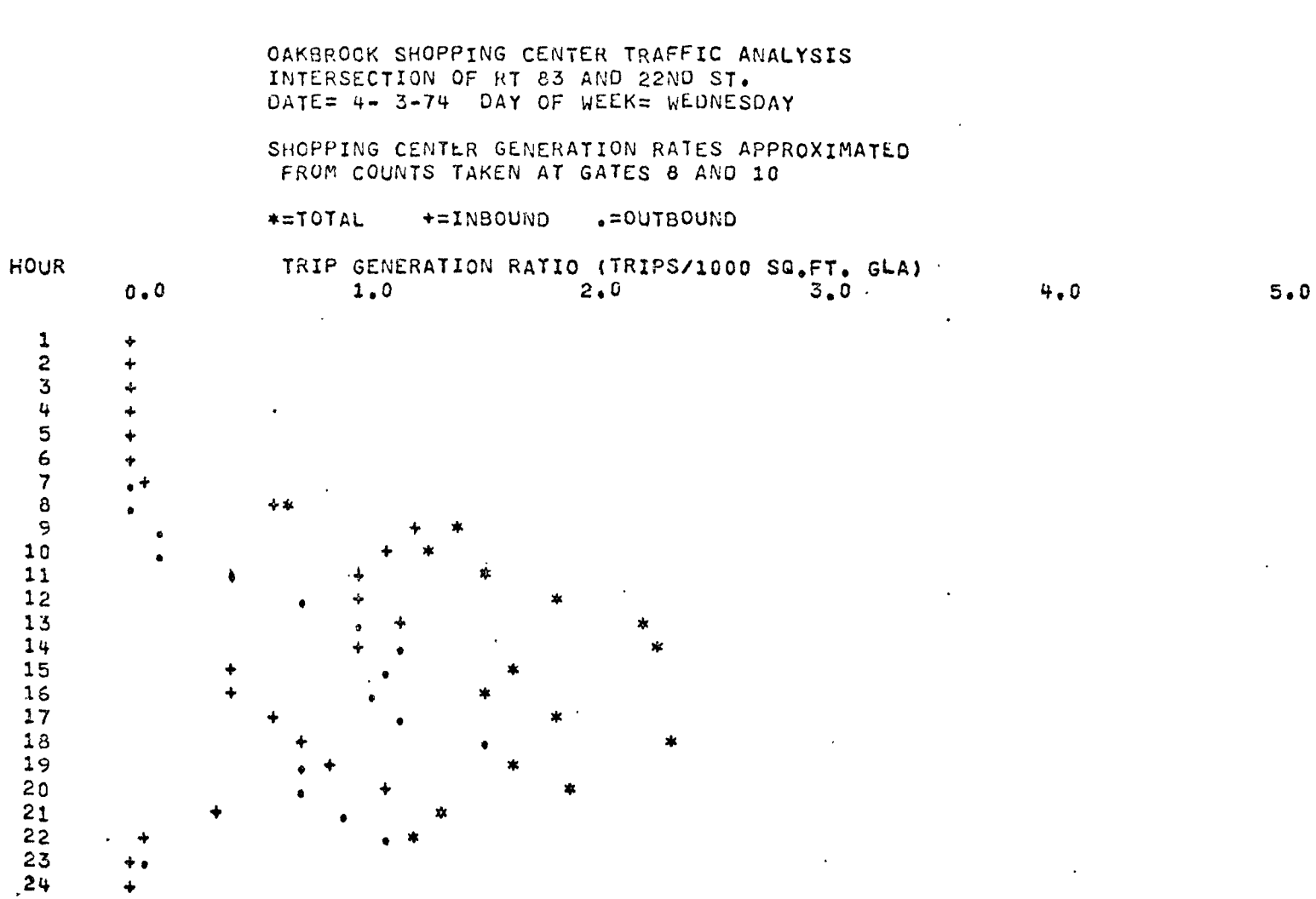


TOTAL INBOUND = 18414 TOTAL OUTBOUND = 18475 TOTAL DAILY TRIPS = 36889

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 3-74 DAY OF WEEK= WEDNESDAY

SHOPPING CENTER GENERATION RATES APPROXIMATED
FROM COUNTS TAKEN AT GATES 8 AND 10

*=TOTAL +=INBOUND .=OUTBOUND

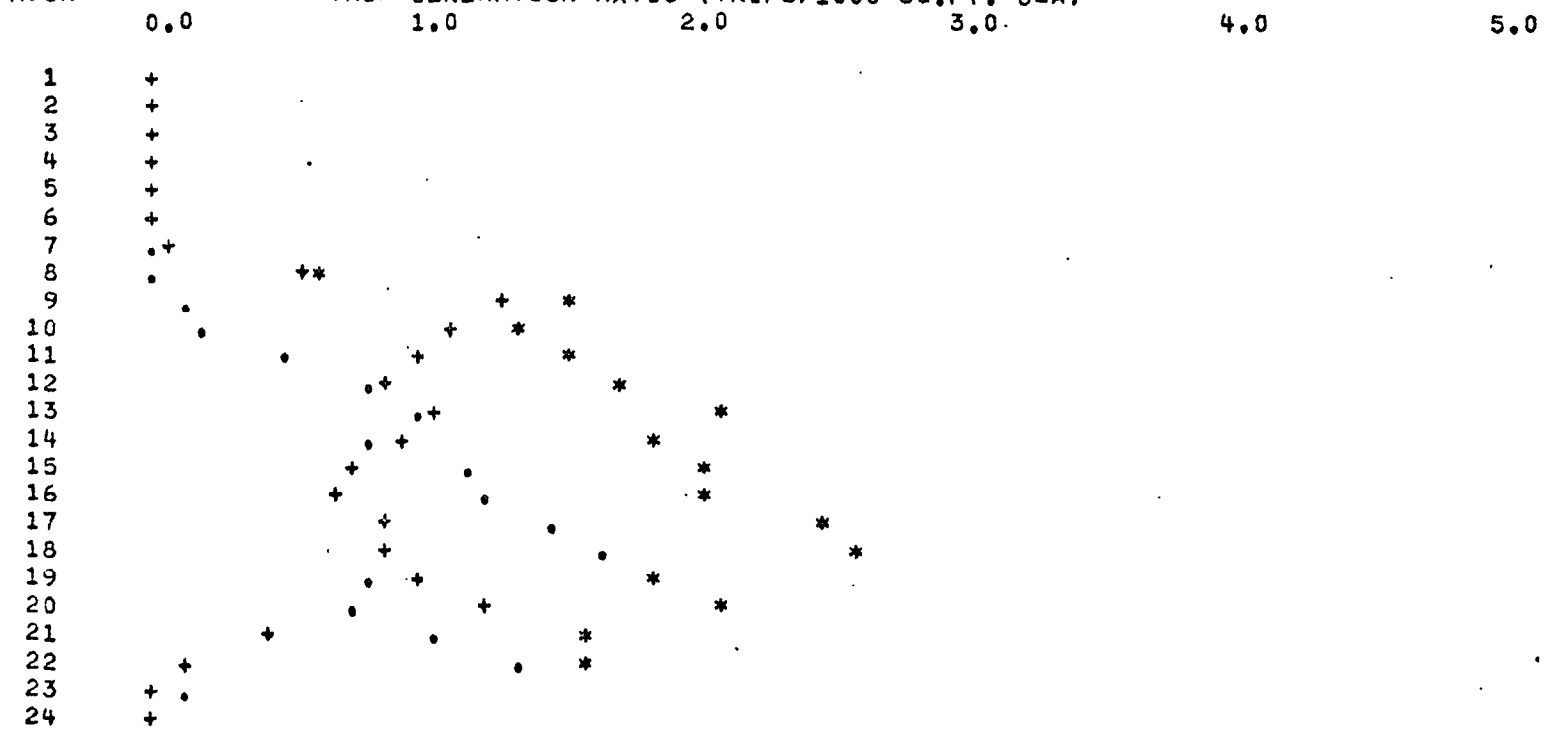


TOTAL INBOUND = 16851 TOTAL OUTBOUND = 17108 TOTAL DAILY TRIPS = 33959

OAKBROCK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 4-74 DAY OF WEEK= THURSDAY

SHOPPING CENTER GENERATION RATES APPROXIMATED
FROM COUNTS TAKEN AT GATES 8 AND 10

*=TOTAL +=INBOUND .=OUTBOUND

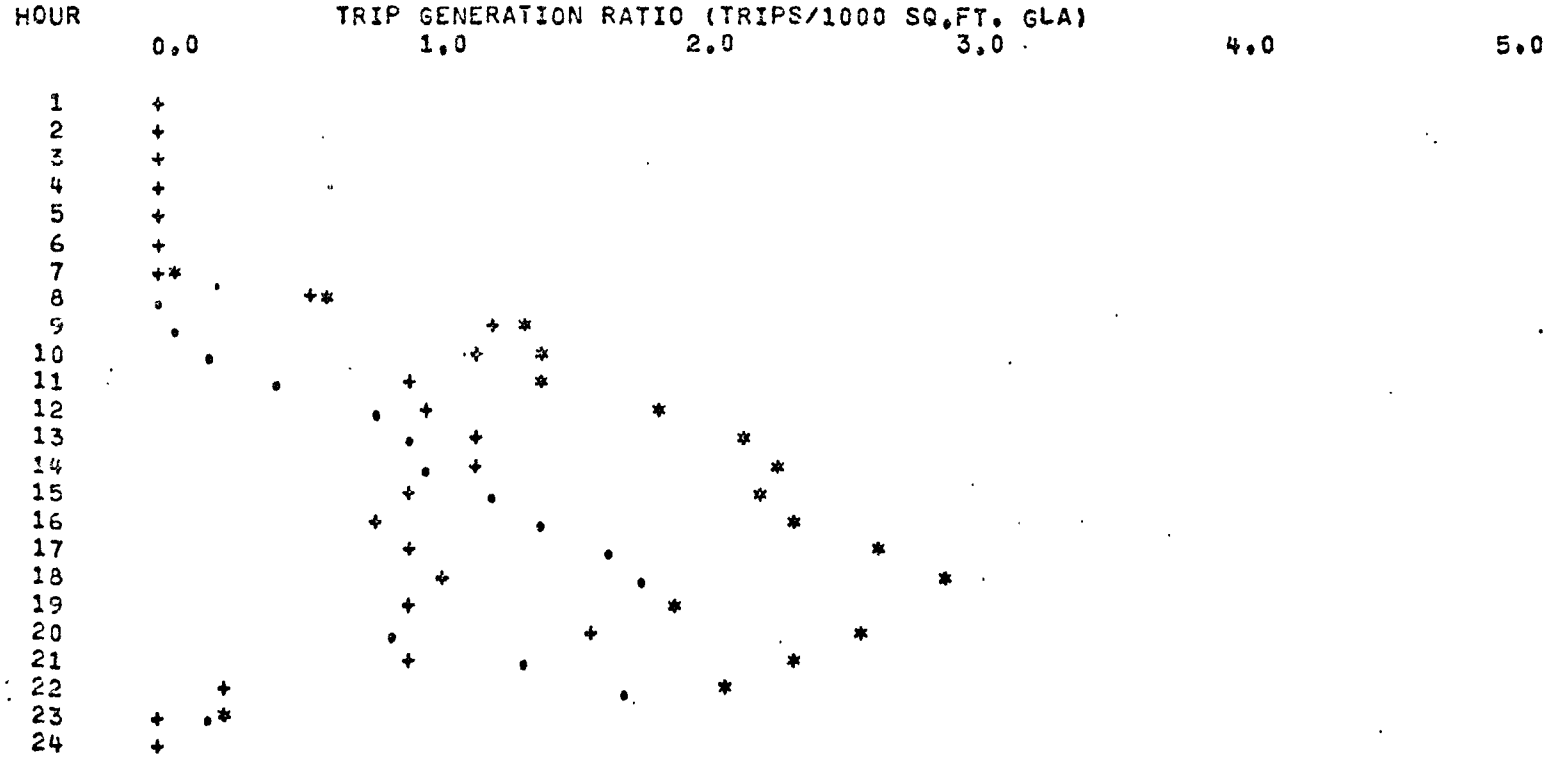


TOTAL INBOUND = 18156 TOTAL OUTBOUND = 18298 TOTAL DAILY TRIPS = 36454

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 5-74 DAY OF WEEK= FRIDAY

SHOPPING CENTER GENERATION RATES APPROXIMATED
FROM COUNTS TAKEN AT GATES 8 AND 10

*=TOTAL +=INBOUND .=OUTBOUND

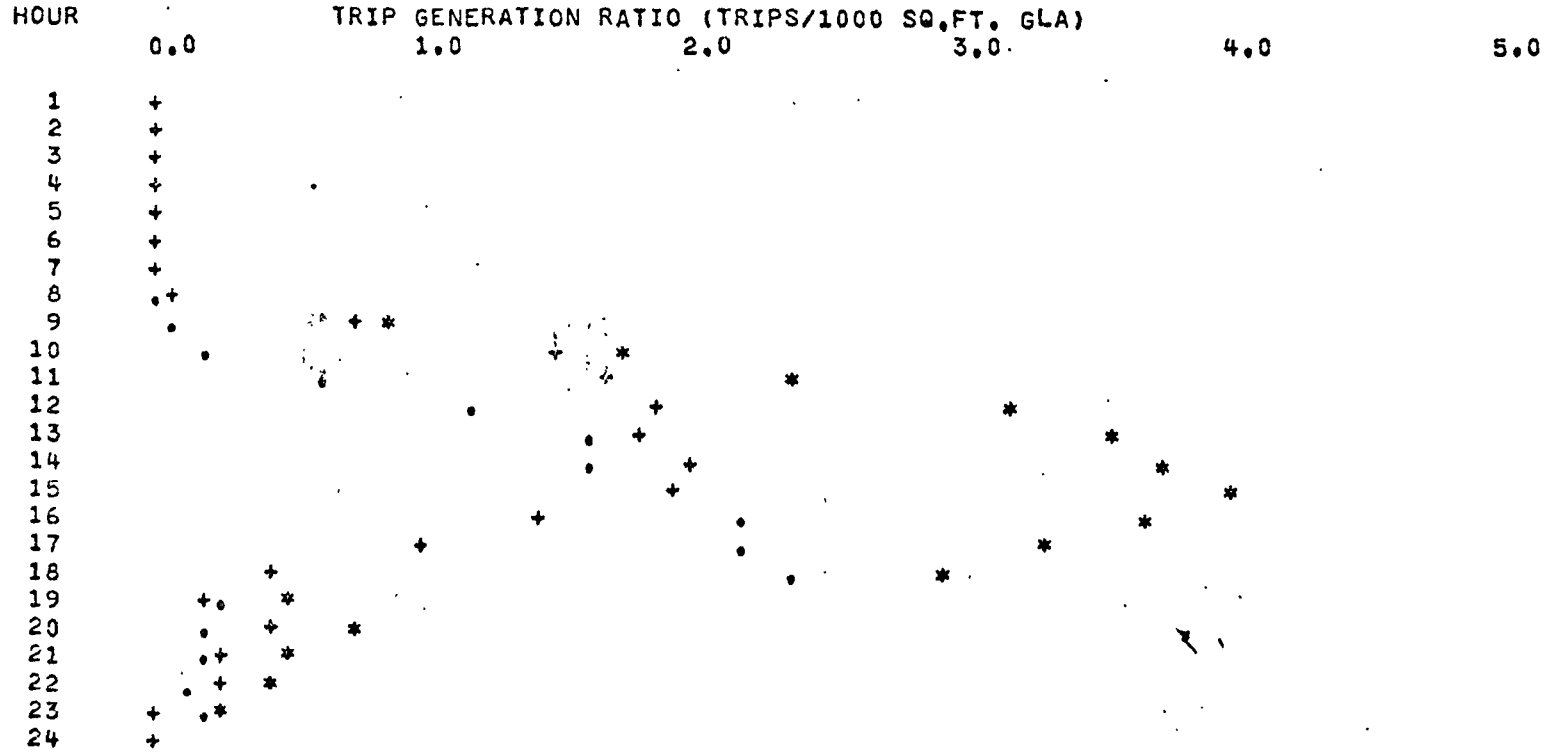


TOTAL INBOUND = 20452 TOTAL OUTBOUND = 20401 TOTAL DAILY TRIPS = 40853

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 6-74 DAY OF WEEK= SATURDAY

SHOPPING CENTER GENERATION RATES APPROXIMATED
FROM COUNTS TAKEN AT GATES 8 AND 10

*=TOTAL +=INBOUND .=OUTBOUND

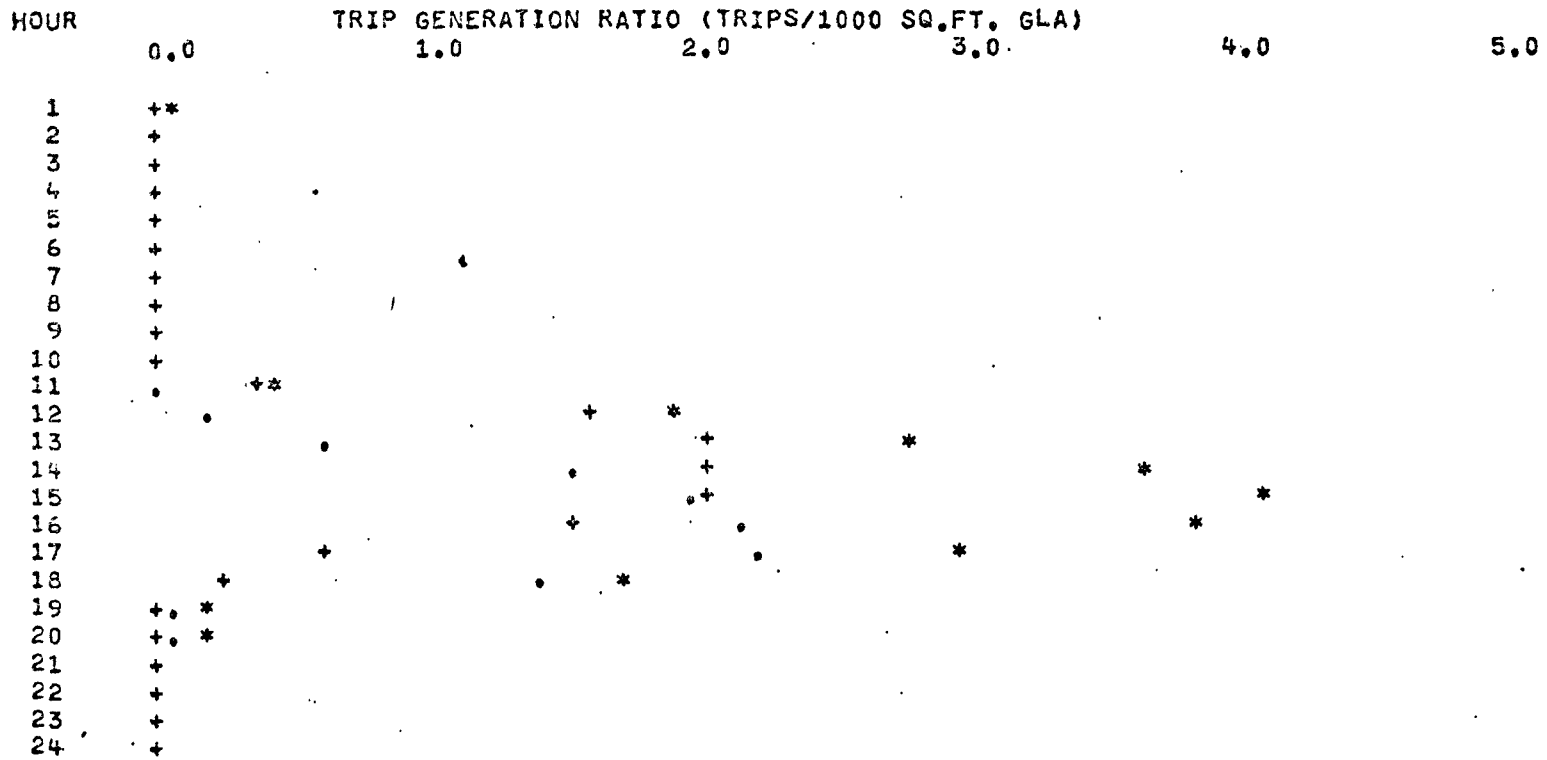


TOTAL INBOUND = 21366 TOTAL OUTBOUND = 20746 TOTAL DAILY TRIPS = 42112

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 7-74 DAY OF WEEK= SUNDAY

SHOPPING CENTER GENERATION RATES APPROXIMATED
FROM COUNTS TAKEN AT GATES 8 AND 10

*=TOTAL +=INBOUND .=OUTBOUND

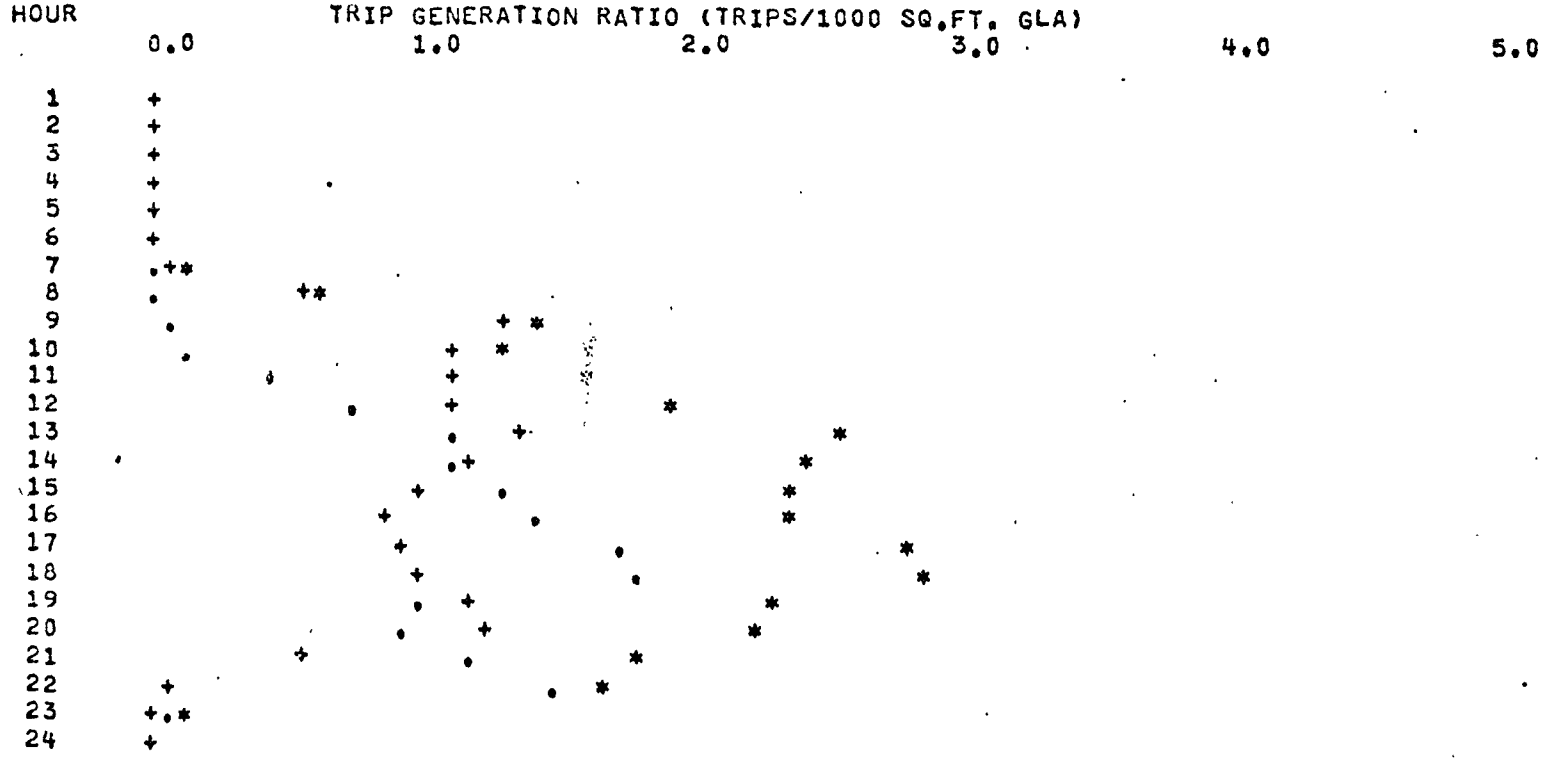


TOTAL INBOUND = 14801 TOTAL OUTBOUND = 14670 TOTAL DAILY TRIPS = 29471

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 8-74 DAY OF WEEK= MONDAY

SHOPPING CENTER GENERATION RATES APPROXIMATED
FROM COUNTS TAKEN AT GATES 8 AND 10

*=TOTAL +=INBOUND .=OUTBOUND

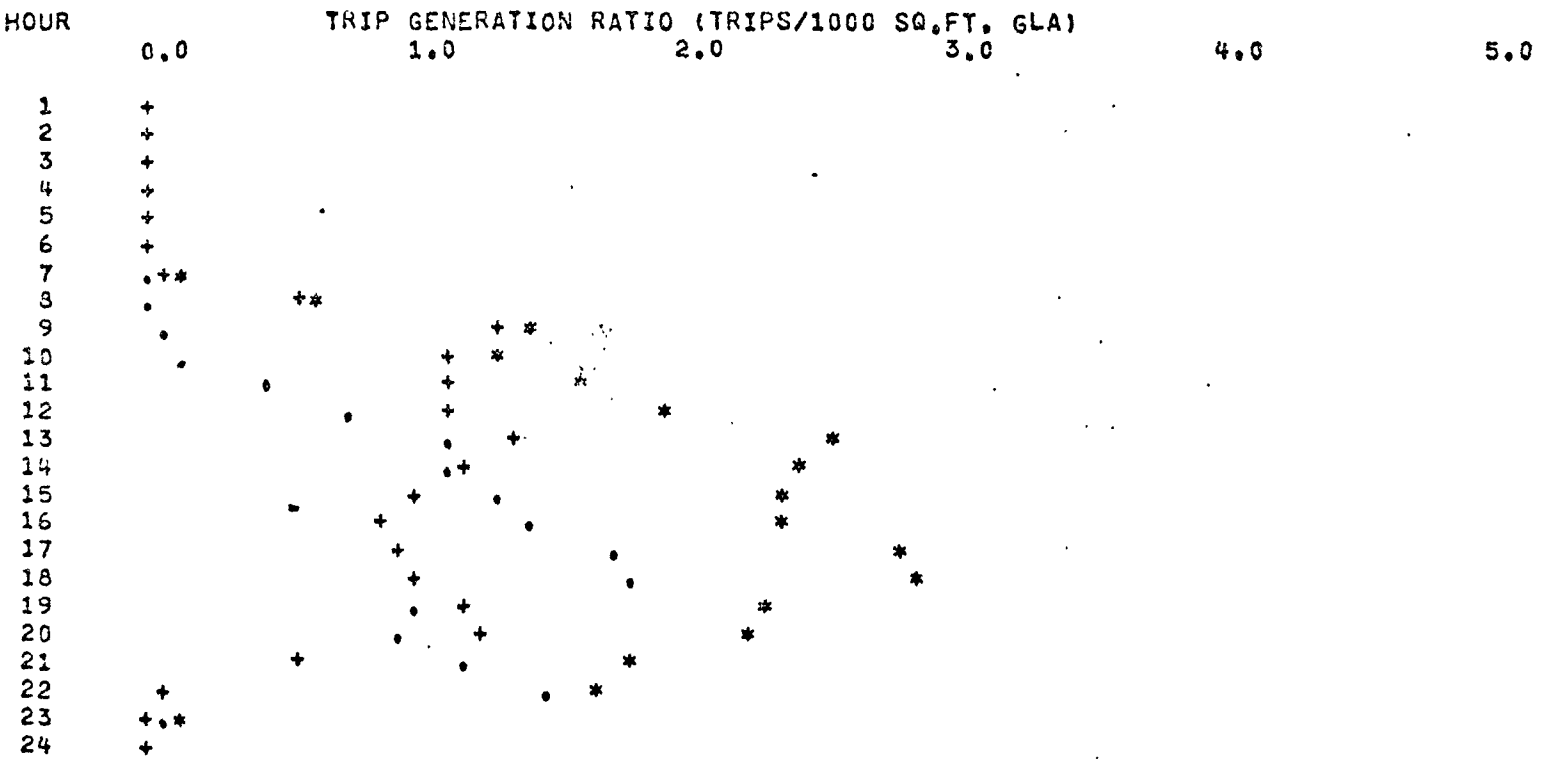


TOTAL INBOUND = 20234 TOTAL OUTBOUND = 20283 TOTAL DAILY TRIPS = 40517

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 8-74 DAY OF WEEK= MONDAY

SHOPPING CENTER GENERATION RATES APPROXIMATED
FROM COUNTS TAKEN AT GATES 8 AND 10

*=TOTAL +=INBOUND .=OUTBOUND

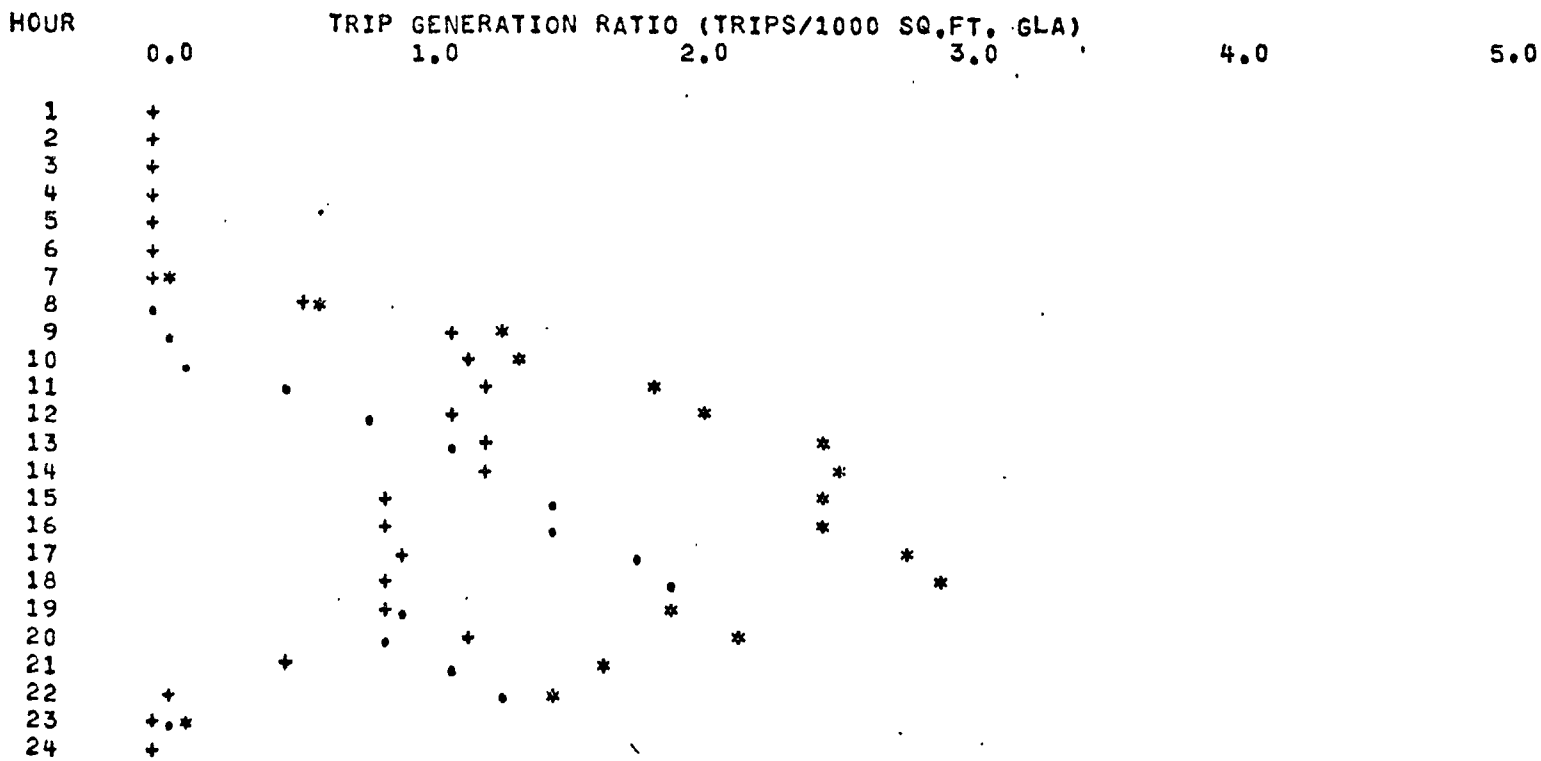


TOTAL INBOUND = 20234 TOTAL OUTBOUND = 20283 TOTAL DAILY TRIPS = 40517

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 9-74 DAY OF WEEK= TUESDAY

SHOPPING CENTER GENERATION RATES APPROXIMATED
FROM COUNTS TAKEN AT GATES 8 AND 10

*=TOTAL +=INBOUND .=OUTBOUND

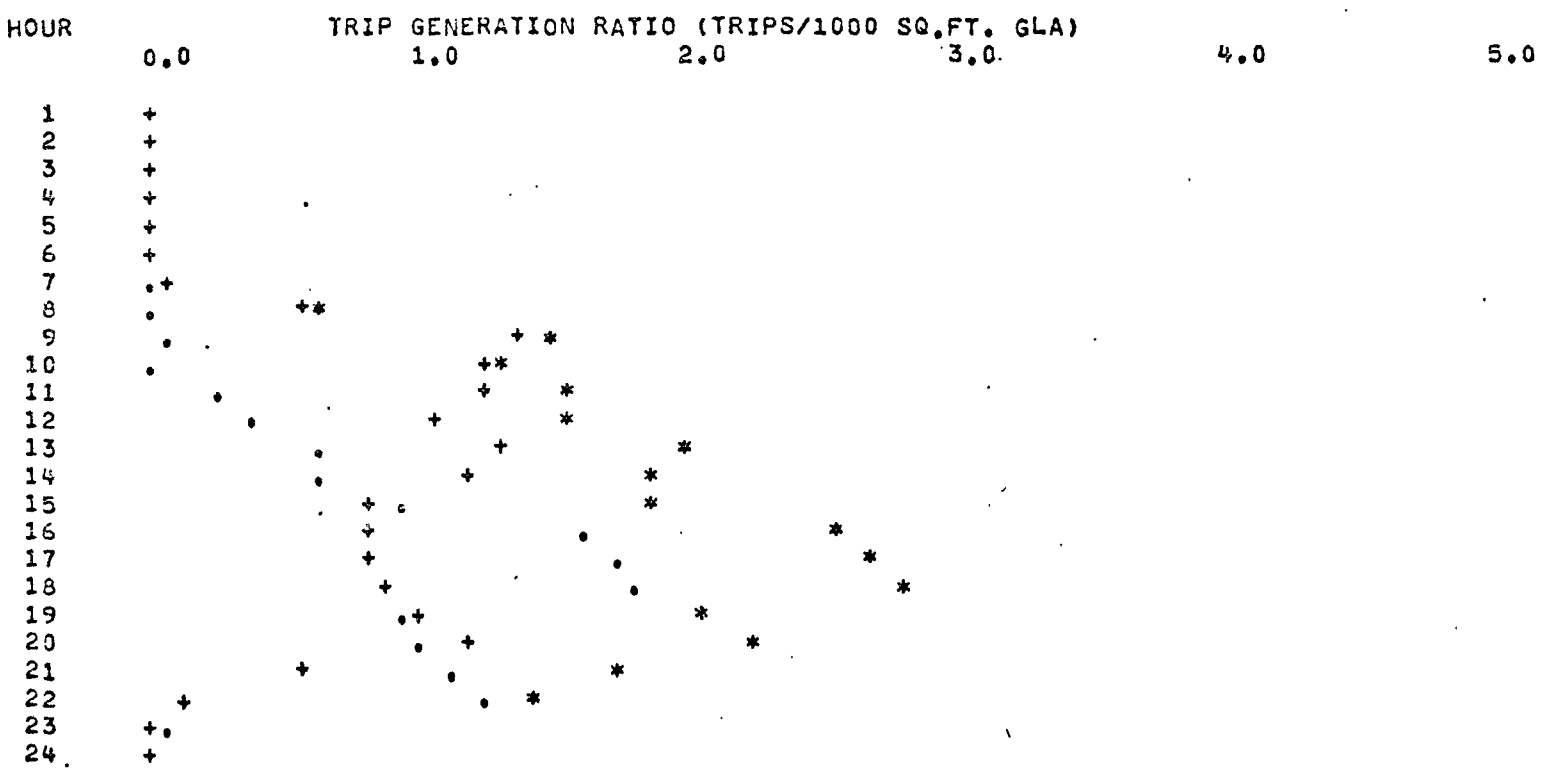


TOTAL INBOUND = 19565 TOTAL OUTBOUND = 20792 TOTAL DAILY TRIPS = 40357

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4-10-74 DAY OF WEEK= WEDNESDAY

SHOPPING CENTER GENERATION RATES APPROXIMATED
FROM COUNTS TAKEN AT GATES 8 AND 10

*=TOTAL +=INBOUND .=OUTBOUND

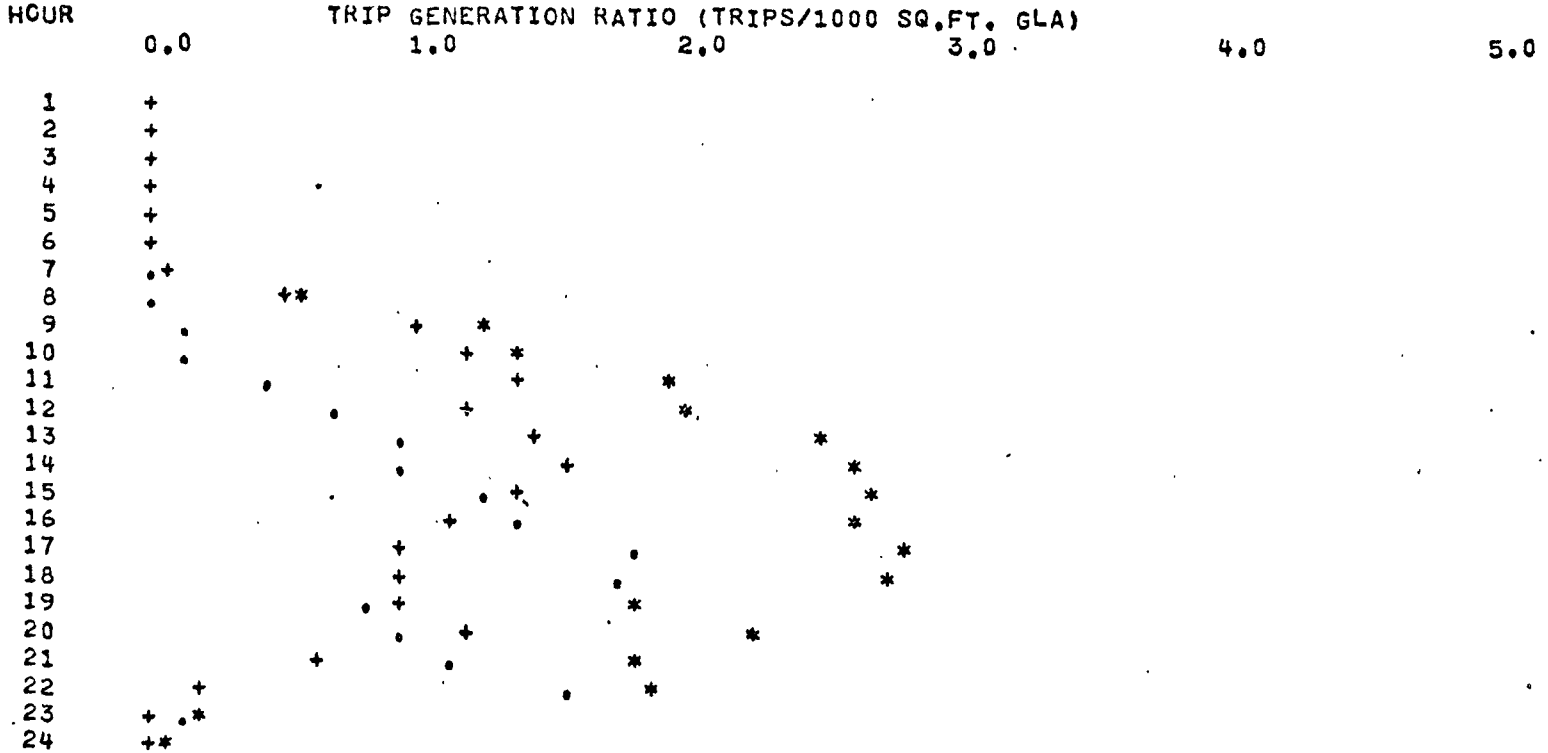


TOTAL INBOUND = 19819 TOTAL OUTBOUND = 17523 TOTAL DAILY TRIPS = 37342

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4-11-74 DAY OF WEEK= THURSDAY

SHOPPING CENTER GENERATION RATES APPROXIMATED
FROM COUNTS TAKEN AT GATES 8 AND 10

*=TOTAL +=INBOUND .=OUTBOUND

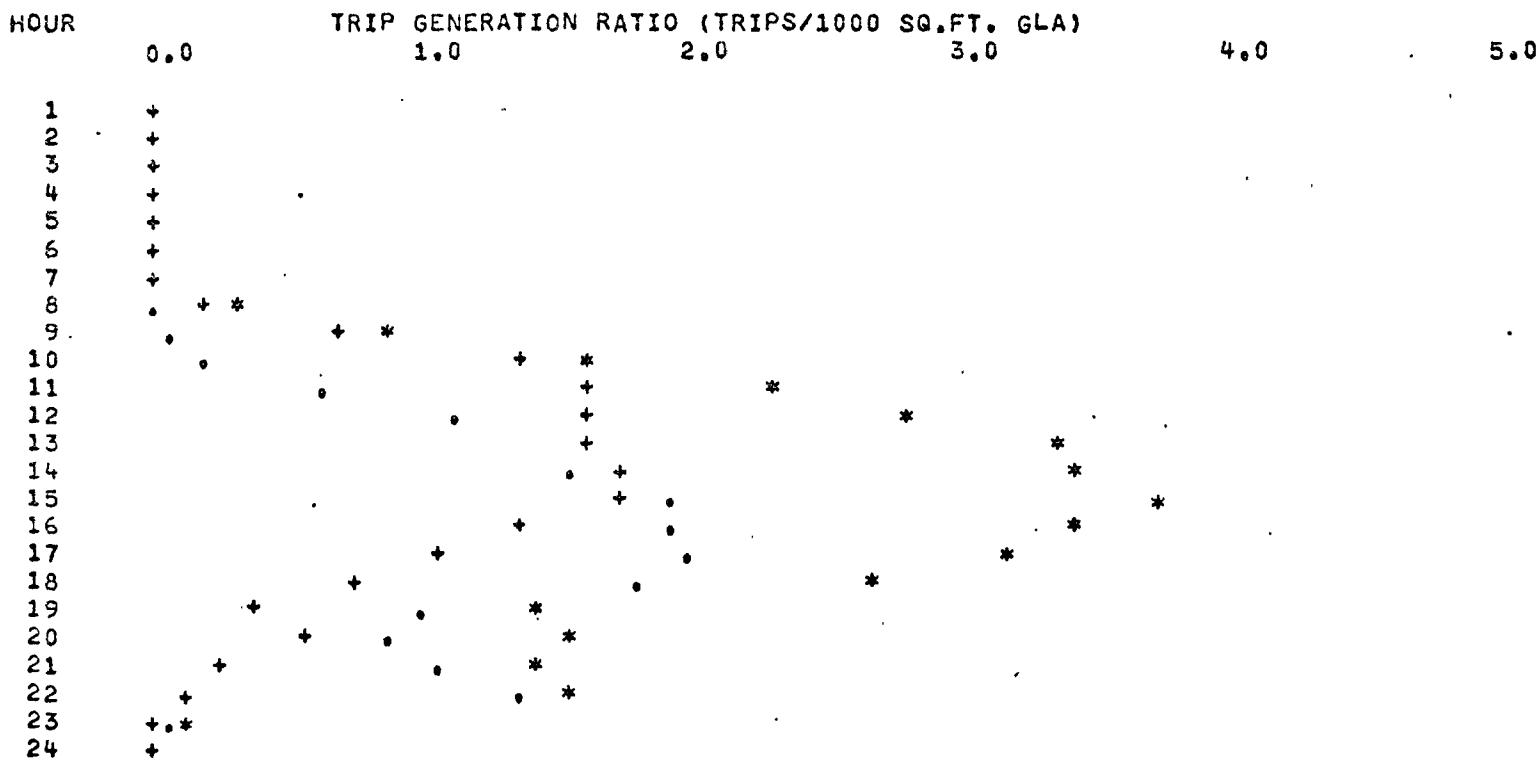


TOTAL INBOUND = 21398 TOTAL OUTBOUND = 19761 TOTAL DAILY TRIPS = 41159

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4-12-74 DAY OF WEEK= FRIDAY

SHOPPING CENTER GENERATION RATES APPROXIMATED
FROM COUNTS TAKEN AT GATES 8 AND 10

*=TOTAL +=INBOUND .=OUTBOUND

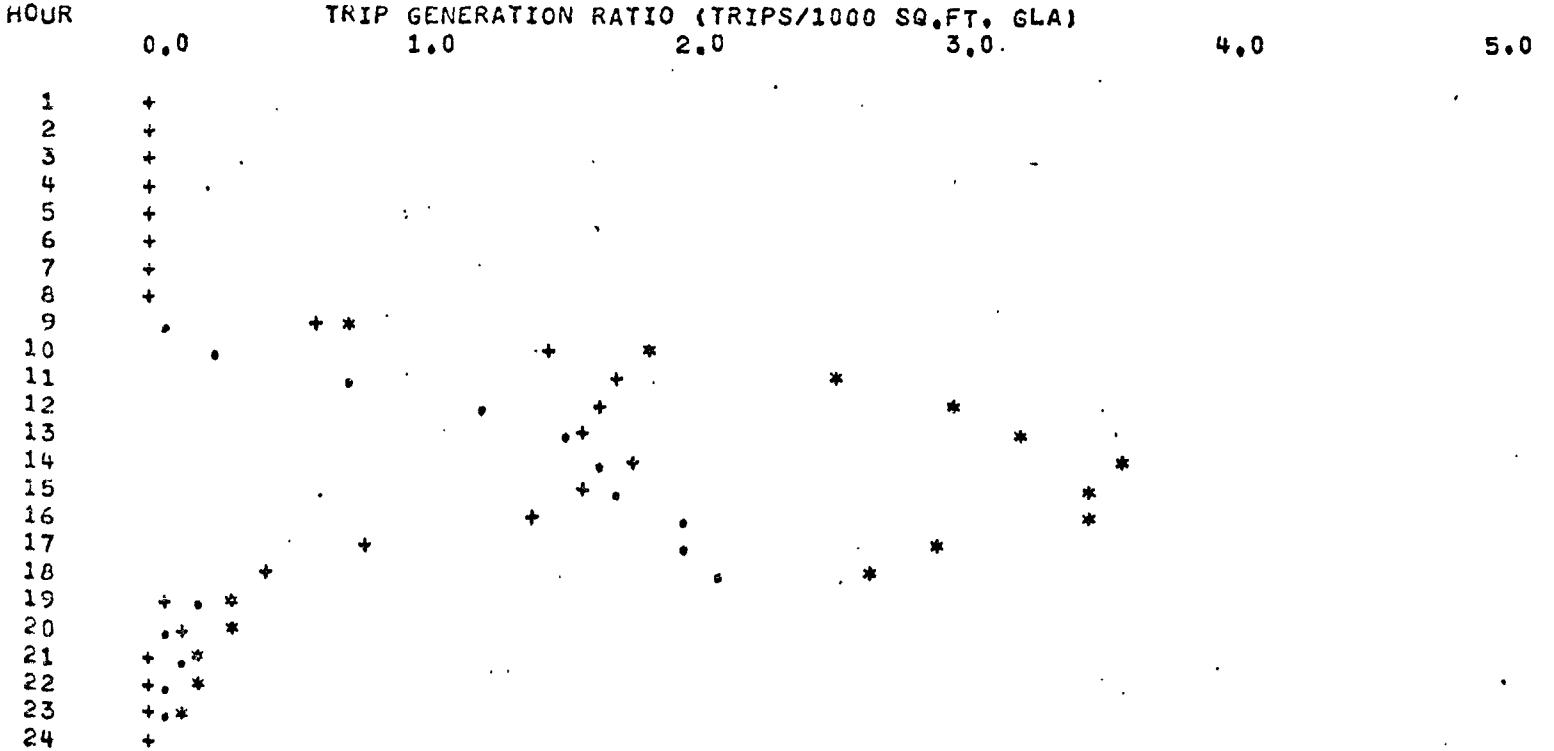


TOTAL INBOUND = 20913 TOTAL OUTBOUND = 23799 TOTAL DAILY TRIPS = 44712

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4-13-74 DAY OF WEEK= SATURDAY

SHOPPING CENTER GENERATION RATES APPROXIMATED
FROM COUNTS TAKEN AT GATES 8 AND 10

*=TOTAL +=INBOUND .=OUTBOUND



TOTAL INBOUND = 18748 TOTAL OUTBOUND = 19446 TOTAL DAILY TRIPS = 38194

APPENDIX F

TRIP DISTRIBUTION ANALYSES AND PROCEDURES

DISTRIBUTION OF SHOPPING CENTER TRAFFIC

One of the specific characteristics of shopping center traffic which must be determined to evaluate the requirements of the transportation system serving the shopping center site is the expected distribution of site-generated traffic on the street network. This distribution can best be estimated by measuring the relative use of the existing streets in the area by traffic generated by a comparable commercial facility. However, direct measurement of distribution characteristics is usually not possible, since proposed regional shopping centers are usually located far from comparable shopping facilities. Instead, the distribution must be estimated based upon analysis of the factors which are most directly responsible for the vehicle distribution pattern.

The determination of site traffic distribution typically requires the following three-step analysis:

1. Definition of the trade area (traffic) and the direction of traffic approaching the center.
2. Traffic (shopping center only) assignment to individual arterials.
3. Hourly traffic assignment including turning movements to each driveway to the center.

The methods described herein represent the basic means of doing each of the three analysis steps. More or less precision may be required depending upon the complexity of the site and traffic conditions.

Step 1: Trade Area and Direction of Approach Analysis

The trade area represents the area in which the majority of potential shopping patrons reside. Typically, this area is defined to contain 85 to 90 percent of all trip origins and destinations for the shopping center generated traffic.

The size and configuration of this area depends on a number of characteristics. Among these are population density, household income levels, travel time from the shopping center, and locations of competing shopping facilities. This area is best defined by the economic consultant who performs the market analysis for the proposed shopping center. However, when a market analysis has not been performed, the traffic planner should estimate the area of influence for the shopping center using the characteristics listed above.

When the trade area (or area of influence) is defined, a traffic analysis is performed to determine the relative efficiencies of the various major streets in the area. This analysis includes both the existing street system and proposed improvements to the street system which are expected to occur within the design year period. A travel time study is conducted to determine the paths of least travel time to the site, and an evaluation is made of how travel times will change when the proposed improvements to the street system are completed.

The expected traffic direction of approach and departure is estimated as follows:

1. The trade area (or area of influence) is divided into many subareas according to the geographic boundaries by which household (or population) data are available. These areas may be census tracts, zip code areas and subareas, or traffic assignment zones as defined in a typical regional transportation study.

2. When the market analysis defines the trade area in terms of primary, secondary, and tertiary, or when a detailed travel time analysis has been performed on the area street system, the various subareas can be weighted by factors which reflect their propensities to produce shopping center trips.
3. The percentages of the total number of households (or population) contained in each subarea are assigned to the street system according to the paths which provide the most direct connection and the least travel time between the subareas and the shopping center site.
4. If turning restrictions and/or one-way street patterns exist, separate analyses must be performed for approaching and departing traffic because different patterns are likely to result.
5. The percentages are totaled for each of the approach (departure) routes to the site. These percentages are assumed to represent the direction of approach and departure for site-generated traffic.

Step 2: Traffic Assignment

Given the direction of approach and departure, the site-generated traffic volumes are then assigned to the roadways. The total inbound and outbound traffic volumes generated by the proposed center for the time period being analyzed (maximum one-hour or average of eight-hours for the estimation of emissions) are then divided among the roadways serving the site according to the percents indicated in the direction of approach analysis. This gives the hourly traffic volumes on each of the approach arterials adjacent to the site.

Step 3: Entrance Distribution

Traffic approaching a center has a strong tendency to use the approach arterial until the first boundary entrance is encountered rather than turning at an arterial intersection and then entering the site. The reason for this is that it is typically easier and faster to circulate inside a well-designed perimeter road within the center than to make turns at an arterial intersection.

When the total volume approaching along the boundary arterials is determined, one may assume that 70 percent will enter the site at the first available entrance, 20 percent at the second, and 10 percent at the third or subsequent entrances. If only two entrances are available, 70 percent will use the first entrance opportunity.

The exiting traffic volumes are different numbers for each hour, but it can be assumed that the exiting percentages are the same as the entrance percentages of the total site traffic.

Assuming the distribution by entrance, the hourly through and turning movements for shopping center traffic at the various entrances and at any critical intersection adjacent to the site can be determined. This traffic distribution data can then be used for the evaluation of the proposed roadway system and its impact on air quality.

APPENDIX C

LEVEL OF SERVICE ANALYSES AND PROCEDURES

LEVEL OF SERVICE

The term level of service is a qualitative measure of operating conditions on a given lane or roadway when it is accommodating a certain level of traffic volume. The term describes the effects of numerous factors such as speed and travel time, traffic interruptions, freedom to maneuver, safety, driving comfort, and convenience and operating costs. The Highway Capacity Manual[4] defines level of service for two separate conditions: (1) uninterrupted flow (and ideal conditions) along a section of highway, and (2) interrupted flow at at-grade intersections. Because of the common occurrence of at-grade signalized intersections in connection with shopping center access design (and the infrequent occurrence of uninterrupted flow conditions), the term level of service in the remaining section of this report will be defined only in the context of intersection operating conditions.

The Highway Capacity Manual defines five levels of service for individual intersection approaches. These range from level of service A (free flow conditions) to level of service E (unstable flow conditions). These five levels of service are defined by the load factor, or the degree of utilization of an intersection approach.

The determination of the level of service or load factor at an intersection requires an analysis of several factors including width

of approach, parking conditions, one-way or two-way operation, peak-hour factor (the peak-hour volume divided by four times the highest 15-minute volume), metropolitan area population, location within the metropolitan area, turning movements, trucks and through buses, local transit buses, traffic signal control, and marking of approach lanes. The effect of each of these variables has been measured and charts have been constructed to assist in the calculations of level of service. These charts are presented in Chapter 6 of the Highway Capacity Manual.[4] Further refinement of these charts has resulted in a set of capacity nomographs for use in determining levels of service for signalized intersections.[8] This material is the basic tool for the analysis of operating conditions at the intersection.

The design of an intersection approach requires the determination of the ability for the approach to accommodate the predicted vehicular volume demand at a desired level of service. Suggested design conditions for average urban areas is level of service C (or a load factor of 0.30), although in many cases level of service D is acceptable. At signalized intersections, the level of service analysis requires a calculation of the green time required for each approach as a percent of the total cycle length (Required G/C Ratio). The total of the Required G/C Ratios for each leg plus the amber time/cycle time (Y/C) ratio must be $\leq$ 1.00 in order for the roadway to function as desired.

Given the desired level of service, the design year population and peak-hour factors, metropolitan area factor, the design year demand volumes (desired service volumes) including percent of trucks and turning movements for each approach, an approach width and appropriate signal phasing pattern for the intersection is assumed. Adjustment factors based on the above data are then applied to determine the approach capacity per hour of green for each approach movement having a separate phase. The Required G/C Ratio for the particular signal phase is equal to (the demand volume) / (calculated volume capacity

per hour of green). The G/C ratios for each approach movement having a separate green phase are totaled with the ratio of amber time to cycle time to determine the total cycle time utilized by the design year demand volumes. If the required green plus amber time is greater than the cycle time ($\frac{G+Y}{C} \geq 1.00$), then the intersection will not operate at the desired level of service, and modifications should be made to the approach width and/or the signal phasing until the desired level of service is attained. A more detailed description of this process can be found in references 4 and 8.

As an example of G/C calculations, suppose that all four approaches to an intersection with a demand actuated signal have an unimpeded capacity of 1600 veh/hr. That is, ignoring the signal and the conflicting traffic, each lane approaching the intersection can accommodate 1600 veh/hr at the desired level of service. Suppose further that the signal at this intersection has two green phases, one for east-west movements and one for north-south movements. The assumed volumes and the calculated required G/C's are:

	Approach	Volume	G/C
Phase 1	East leg	400 veh/hr	400/1600 = 0.25
	West leg	350 veh/hr	350/1600 ≈ 0.22
Phase 2	North leg	800 veh/hr	800/1600 = 0.50
	South leg	600 veh/hr	600/1600 ≈ 0.38

The G/C for the intersection is the sum of the higher G/C for each phase, or 0.25 + 0.50 = 0.75. The East and North legs are called critical approaches because they have the heavier volumes (and higher G/C) for each phase. These are the volumes which the signal must accommodate. Assuming that the amber phase is 0.10 signal cycle, then Y/C = 0.10, and $\frac{G+Y}{C}$ = 0.85 required for the intersection. Since this is $\leq$ 1.00, the intersection will operate at the desired level of service.

Now, there is G/C = 1.00 - 0.85 = 0.15 left over to be divided between the two phases. When this has been apportioned the result will be a G'/C' for each phase, or what is actually provided for each of the phases. Phase 1 is given its proportion of the 0.15 according to its Required G/C:

$$\left(\frac{0.25}{0.85}\right)\left(0.15\right) = 0.07.$$

Hence for Phase 1, $G'/C' = 0.25 + 0.07 = 0.32$. Similarly for Phase 2,

$$G'/C' = 0.50 + \left(\frac{0.50}{0.85}\right)\left(0.15\right) \approx 0.58.$$

This means that if the signal cycle length, C, is 100 seconds long, Phase 1 will be (0.32) (100), or 32 seconds, and Phase 2 will be (0.58) (100), or 58 seconds long. Note that G and C are now defined as the length of the green phase and the cycle length, respectively. The previous meanings of demand volume and unimpeded capacity which were applied to G and C were used to determine how the demand actuated signal would apportion the total cycle time to the two green phases. For a fixed time signal, for which the phase lengths are unvarying, this exercise would be accomplished by a traffic engineer before the signal is installed. For the demand actuated signal, the phase lengths change as the demand volumes on the different approaches change.

Now that the unimpeded capacity in this example is interrupted by the signal, the actual capacities under signalization can be computed by multiplying the 1600 veh/hr by the G'/C' values. For the east-west legs the capacity is (0.32) (1600) = 512 veh/hr. For the north-south legs the capacity is (0.58) (1600) = 928 veh/hr. (These capacities total 1440 veh/hr and not 1600 veh/hr because of the 0.10 cycle lost to the amber phase. If movement during amber were assumed, the 160 veh/hr would be regained and the capacities would total 1600 veh/hr.) The volume to capacity ratios under signalization are:

Approach	V/C
East leg	400/512 = 0.78
West leg	350/512 = 0.68
North leg	800/928 = 0.86
South leg	600/928 = 0.65

Appendix H presents G/C and V/C values for levels of service E and C at the intersection of Route 83 and 22nd Street. If calculations are made with the data in Appendix H following the method presented in this example, slight differences may result between calculated values and those listed in Appendix H. This is due to rounding in the listed values.

An analysis of existing level of service conditions at the intersection of Illinois Route 83 and 22nd Street was performed, and the results are given in Appendix H. The Required G/C Ratios for the various approaches are based upon the existing signal phasing and approach widths as indicated in Section IV of this report; a metropolitan population of 1,000,000 plus, a peak-hour-factor of 0.85 and 5 percent trucks and buses. Levels of service C and E were analyzed. The G/C calculations indicate that the intersection typically operates at a lower level of service in the morning 7:00 a.m. to 9:00 a.m. peak period than in the evening 4:00 p.m. to 6:00 p.m. period even though the total traffic volumes are heavier in the evening. The higher Required (G+Y)/C Ratio in the morning peak indicates a lower level of service for the intersection as a whole and therefore generally increased congestion and delay.

Similar calculations of the G/C ratio at level of service E were performed at two of the entrances to Oakbrook Shopping Center (Gates 8 and 10). These calculations indicate that these two gates should experience significantly less congestion and delay since the maximum Required (G+Y)/C Ratio at either of these two intersections for all the days surveyed was 0.72. (This is equivalent to a (G+Y)/C

of 0.93 at level of service C). Thus among these three intersections at least the critical congestion problems are experienced at the intersection of Illinois Route 83 and 22nd Street.

The Required (G+Y)/C Ratio is a useful tool for identifying the critical locations in the vicinity of a shopping center where congestion might create significant air quality problems. The higher the ratio, the more likely will be the occurrence of excessive queuing vehicles along with the accompanying acceleration and deceleration modes.

The two critical factors governing the level of service at an intersection are service volume (demand volume) and width of approach. Although it is possible to restrict volumes on an access road to a proposed shopping center through design, the result is normally to divert traffic onto less desirable routes (until travel times are nearly equivalent on all routes). The general policy of the traffic planner/engineer, however, is to accommodate the demand on the most direct (and most desirable) routes through the provision of adequate level of service at all points. This typically involves providing adequate roadway width (number of lanes) at the major intersections.

Tables G-1 and G-2 indicate the possible changes in the level of service at the Oakbrook Shopping Center intersection through the improvement of the east and west approach widths and signal phasings. Under existing conditions, the intersection of Illinois Route 83 and 22nd Street experiences significant congestion in the morning peak period. The calculations from Appendix H indicate that at 9:00 a.m. on March 13, 1974, the G/C ratios and volumes shown in Table G-1 were experienced.

The overall Required (G+Y)/C Ratio indicates the intersection as a whole is operating under conditions worse than level of service E.

Table G-1. ILLINOIS ROUTE 83-22ND STREET INTERSECTION LEVEL OF SERVICE--EXISTING CONDITIONS, 9:00 a.m., MARCH 13, 1974.

Approach leg	Volume	Required G/C Ratio(s) at level of service E			
		Phase 1	Phase 2	Phase 3	Phase 4
		North and south left-turn arrow	North and s. through green	East advanced green	East and west through green
North	525	0.10	0.10		
South	1,651	0.04	0.49		
East	260			0.06	0.01
West	874				0.34
Critical G/C:		0.10	0.49	0.06	$0.34 \frac{(G+Y)}{C} = 1.10$

Improvements to the level of service could be made with the provision of exclusive left-turn lanes on the east and west legs (in addition to two through lanes) and the use of an east-west left-turn phase instead of the east advanced green (Phase 3). The G/C ratios that would result are shown in Table G-2.

Other changes to improve the level of service at the intersection would be to widen the north and south approaches to provide three through lanes in each direction. The resulting Required (G+Y)/C Ratio at level of service E would then be 0.85, which is a significant improvement over existing conditions (this is equivalent to a Required (G+Y)/C Ratio of 0.94 calculated at level of service D). The intersection would therefore be operating in the C-D range during the peak hour instead of at level of service E.

Table G-2. ILLINOIS ROUTE 83-22ND STREET INTERSECTION LEVEL OF SERVICE--PROPOSED CONDITIONS, 9:00 a.m., MARCH 13,1974.

Approach leg	Volume	Required G/C Ratio(s) at level of service E			
		Phase 1	Phase 2	Phase 3	Phase 4
		North and south left-turn arrow	North and s. through green	E. and w. left-turn arrow	East and west through green
North	525	0.10	0.10		
South	1,651	0.04	0.49		
East	260			0.06	0.06
West	874			0.03	0.24
Critical G/C:		0.10	0.49	0.06	$0.24 \frac{(G+Y)}{C} = 1.00$

In addition to the G/C calculations, the Volume to Capacity Ratio (V/C) was determined for each approach for each hour of the day surveyed. The volumes used in the V/C ratio were the existing hourly volumes observed during the survey, while the capacity is the design capacity defined as (Approach Capacity Per hour of Green) x (Actual G/C Ratio Provided). The Actual G/C Ratio Provided by a vehicle actuated signal is not a constant factor during the day since the signal adjusts the green time for each phase according to the relative density of demand on each approach leg. (A fixed time signal has a constant G/C Ratio). The best approximation of the Actual G/C Ratio Provided comes from the calculated Required G/C Ratio. If the signal controller is working efficiently, the Actual G/C Ratio Provided for an approach will equal the (Required G/C Ratio) $\div$ (Total (G+Y)/C). The division distributes the unused green time (or the congestion if (G+Y)/C > 1.00) equally among the various signal phases. Thus, the V/C Ratio is based on the Required G/C Ratio and the Total (G+Y)/C, and it provides similar information.

The V/C Ratio gives an indication of the overall efficiency of the individual approaches but not of the intersection as a whole. It can be used to identify the critical approach in terms of congestion and possible signal phasing improvements.

APPENDIX H

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-13-74 DAY OF WEEK= WEDNESDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'E'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	95	0.00	0.02	84	0.00	0.02	98	0.02	0.00	51	0.02	328	0.17
2	49	0.00	0.01	71	0.00	0.01	28	0.00	0.00	37	0.01	185	0.14
3	39	0.00	0.01	46	0.00	0.01	28	0.00	0.00	4	0.00	117	0.12
4	25	0.00	0.00	36	0.00	0.00	13	0.00	0.00	6	0.00	80	0.11
5	39	0.00	0.01	39	0.00	0.01	7	0.00	0.00	8	0.00	93	0.11
6	65	0.00	0.01	165	0.00	0.05	22	0.00	0.00	51	0.02	303	0.18
7	325	0.03	0.07	681	0.01	0.20	100	0.02	0.00	223	0.08	1329	0.45
8	762	0.09	0.16	1581	0.07	0.45	280	0.06	0.01	764	0.30	3327	1.02
9	525	0.10	0.10	1651	0.04	0.49	260	0.06	0.01	874	0.34	3310	1.10
10	425	0.06	0.09	973	0.03	0.28	323	0.07	0.01	488	0.19	2209	0.72
11	514	0.04	0.12	782	0.03	0.22	599	0.10	0.08	465	0.18	2360	0.65
12	617	0.05	0.15	703	0.03	0.20	775	0.10	0.15	550	0.22	2645	0.67
13	651	0.05	0.16	705	0.02	0.20	730	0.10	0.17	696	0.27	2782	0.73
14	706	0.05	0.18	723	0.03	0.21	689	0.10	0.11	701	0.28	2819	0.74
15	745	0.05	0.19	709	0.03	0.20	706	0.10	0.11	601	0.24	2761	0.69
16	1066	0.05	0.28	711	0.04	0.20	762	0.10	0.13	571	0.22	3110	0.76
17	1270	0.04	0.34	930	0.04	0.26	1047	0.10	0.22	611	0.24	3858	0.83
18	1301	0.04	0.35	869	0.04	0.24	970	0.10	0.20	435	0.17	3575	0.80
19	956	0.04	0.25	815	0.05	0.23	666	0.10	0.11	428	0.17	2865	0.67
20	817	0.05	0.21	740	0.03	0.21	564	0.10	0.07	458	0.18	2579	0.65
21	619	0.02	0.16	424	0.02	0.12	460	0.10	0.04	386	0.15	1889	0.54
22	553	0.02	0.14	382	0.02	0.10	543	0.10	0.06	304	0.12	1782	0.49
23	328	0.01	0.08	279	0.01	0.08	275	0.06	0.01	86	0.03	968	0.30
24	268	0.01	0.07	200	0.00	0.06	215	0.05	0.00	86	0.03	769	0.26
	12700			14299			10160			8884		46043	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-14-74 DAY OF WEEK= THURSDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'E'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	142	0.01	0.03	119	0.00	0.03	109	0.02	0.00	49	0.01	419	0.19
2	57	0.00	0.01	80	0.00	0.02	49	0.01	0.00	28	0.01	214	0.14
3	28	0.00	0.00	35	0.00	0.01	29	0.00	0.00	3	0.00	95	0.12
4	28	0.00	0.00	25	0.00	0.00	25	0.00	0.00	9	0.00	87	0.11
5	33	0.00	0.00	47	0.00	0.01	17	0.00	0.00	8	0.00	105	0.12
6	77	0.00	0.01	137	0.00	0.04	21	0.00	0.00	51	0.02	286	0.17
7	319	0.02	0.07	613	0.01	0.18	68	0.01	0.00	240	0.09	1240	0.42
8	660	0.07	0.15	1579	0.07	0.45	267	0.06	0.01	686	0.27	3192	0.97
9	537	0.12	0.10	1604	0.03	0.48	232	0.05	0.01	599	0.23	2972	0.99
10	393	0.06	0.08	972	0.04	0.28	406	0.09	0.01	517	0.20	2288	0.74
11	433	0.04	0.10	925	0.05	0.26	531	0.10	0.06	494	0.19	2383	0.71
12	524	0.05	0.12	768	0.02	0.22	733	0.10	0.12	538	0.21	2563	0.69
13	491	0.04	0.12	765	0.04	0.22	665	0.10	0.10	665	0.26	2586	0.73
14	582	0.05	0.14	721	0.04	0.20	657	0.10	0.10	730	0.29	2690	0.75
15	779	0.05	0.19	763	0.03	0.22	724	0.10	0.12	611	0.24	2877	0.72
16	840	0.04	0.22	798	0.04	0.22	748	0.10	0.13	502	0.20	2897	0.67
17	1356	0.05	0.36	1053	0.06	0.30	1043	0.10	0.21	582	0.23	4034	0.85
18	1315	0.04	0.35	1142	0.06	0.32	1005	0.10	0.21	433	0.17	3895	0.83
19	958	0.04	0.26	820	0.04	0.23	637	0.10	0.09	393	0.15	2848	0.66
20	862	0.05	0.22	869	0.03	0.25	539	0.08	0.06	491	0.19	2761	0.69
21	703	0.01	0.21	448	0.02	0.12	487	0.08	0.03	397	0.15	2115	0.58
22	759	0.03	0.20	351	0.01	0.10	515	0.10	0.05	316	0.12	1940	0.56
23	394	0.02	0.10	283	0.02	0.07	175	0.03	0.01	140	0.05	992	0.31
24	293	0.00	0.07	210	0.00	0.06	196	0.03	0.01	59	0.02	758	0.24
	12691			15127			9878			8541		46237	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-15-74 DAY OF WEEK= FRIDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'E'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	229	0.01	0.06	134	0.00	0.03	122	0.02	0.01	80	0.03	565	0.22
2	132	0.00	0.03	83	0.00	0.02	52	0.00	0.00	39	0.01	306	0.16
3	77	0.00	0.02	32	0.00	0.00	31	0.00	0.00	14	0.00	154	0.13
4	43	0.00	0.01	38	0.00	0.01	10	0.00	0.00	14	0.00	105	0.12
5	43	0.00	0.01	39	0.00	0.01	11	0.00	0.00	7	0.00	100	0.11
6	124	0.00	0.03	137	0.00	0.04	25	0.00	0.00	57	0.02	343	0.17
7	434	0.03	0.10	593	0.01	0.17	92	0.01	0.00	207	0.08	1326	0.41
8	1009	0.08	0.25	1490	0.07	0.43	239	0.03	0.03	828	0.33	3566	0.98
9	940	0.12	0.21	1635	0.04	0.49	317	0.05	0.02	883	0.35	3775	1.11
10	692	0.06	0.17	1008	0.02	0.30	360	0.06	0.03	507	0.20	2567	0.72
11	673	0.05	0.17	817	0.04	0.23	442	0.07	0.04	477	0.19	2409	0.65
12	820	0.05	0.20	808	0.03	0.23	732	0.10	0.13	526	0.21	2886	0.70
13	768	0.06	0.19	801	0.03	0.23	748	0.10	0.20	628	0.25	2945	0.75
14	486	0.06	0.11	771	0.04	0.22	666	0.10	0.10	699	0.27	2622	0.76
15	746	0.05	0.19	805	0.03	0.23	657	0.10	0.10	541	0.21	2749	0.70
16	668	0.05	0.22	708	0.04	0.20	778	0.10	0.14	512	0.20	2866	0.68
17	1244	0.04	0.33	988	0.04	0.28	1043	0.10	0.22	601	0.24	3876	0.82
18	1290	0.03	0.35	1034	0.03	0.30	966	0.10	0.19	445	0.17	3735	0.79
19	862	0.04	0.23	1055	0.06	0.30	669	0.10	0.10	432	0.17	3038	0.73
20	777	0.05	0.20	1106	0.04	0.32	613	0.10	0.08	613	0.24	3109	0.82
21	474	0.03	0.12	607	0.02	0.17	526	0.10	0.06	495	0.19	2102	0.61
22	578	0.04	0.14	556	0.03	0.15	666	0.10	0.10	444	0.17	2244	0.58
23	268	0.02	0.07	325	0.02	0.09	329	0.07	0.01	269	0.10	1211	0.40
24	255	0.02	0.06	267	0.01	0.07	336	0.07	0.01	132	0.05	990	0.33
	13672			15837			10430			9450		49589	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-16-74 DAY OF WEEK= SATURDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'E'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	187	0.01	0.04	202	0.01	0.05	255	-0.00	0.06	196	0.07	840	0.24
2	192	0.00	0.05	172	0.00	0.04	74	0.01	0.00	83	0.03	521	0.20
3	139	0.00	0.03	138	0.00	0.04	44	0.01	0.00	37	0.01	358	0.17
4	59	0.00	0.01	60	0.00	0.01	35	0.00	0.00	20	0.00	174	0.13
5	45	0.00	0.01	34	0.00	0.00	14	0.00	0.00	7	0.00	100	0.12
6	57	0.00	0.01	80	0.00	0.02	17	0.00	0.00	20	0.00	174	0.14
7	125	0.01	0.03	197	0.00	0.06	29	0.00	0.00	62	0.02	413	0.20
8	219	0.01	0.05	332	0.01	0.09	63	0.01	0.00	137	0.05	751	0.28
9	291	0.02	0.07	523	0.01	0.15	169	0.03	0.00	287	0.11	1270	0.43
10	483	0.04	0.11	806	0.02	0.24	268	0.06	0.01	412	0.16	1949	0.60
11	484	0.03	0.12	881	0.02	0.26	442	0.10	0.03	519	0.20	2326	0.70
12	725	0.04	0.18	1043	0.03	0.30	597	0.10	0.08	577	0.23	2942	0.78
13	932	0.04	0.24	1308	0.05	0.38	851	0.10	0.20	732	0.29	3823	0.93
14	970	0.03	0.26	1058	0.04	0.30	772	0.10	0.17	688	0.27	3488	0.85
15	1008	0.05	0.26	1148	0.03	0.34	733	0.10	0.19	586	0.23	3475	0.82
16	1173	0.04	0.31	833	0.04	0.24	723	0.10	0.12	713	0.28	3442	0.84
17	1034	0.05	0.27	766	0.03	0.22	678	0.10	0.10	621	0.24	3099	0.77
18	1146	0.04	0.30	575	0.03	0.16	735	0.10	0.11	445	0.17	2901	0.73
19	476	0.05	0.11	607	0.03	0.17	319	0.07	0.01	308	0.12	1710	0.52
20	422	0.08	0.08	600	0.04	0.16	540	0.10	0.06	585	0.23	2147	0.68
21	339	0.07	0.06	595	0.03	0.17	270	0.06	0.01	317	0.12	1521	0.53
22	380	0.08	0.07	453	0.02	0.13	655	0.10	0.14	392	0.15	1880	0.56
23	264	0.02	0.06	292	0.01	0.08	338	0.07	0.01	270	0.10	1164	0.39
24	354	0.03	0.08	30	0.03	-0.00	351	0.05	0.04	170	0.06	905	0.34
	11484			12733			8972			8184		41373	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-17-74 DAY OF WEEK= SUNDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'E'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	320	0.03	0.07	222	0.00	0.06	351	0.08	0.01	191	0.07	1084	0.37
2	243	0.01	0.06	238	0.01	0.06	136	0.02	0.01	141	0.05	758	0.26
3	155	0.00	0.04	194	0.00	0.05	161	0.03	0.00	114	0.04	624	0.24
4	73	0.00	0.01	93	0.00	0.02	23	0.00	0.00	16	0.00	205	0.14
5	37	0.00	0.00	42	0.00	0.01	21	0.00	0.00	12	0.00	112	0.12
6	30	0.00	0.00	38	0.00	0.01	13	0.00	0.00	4	0.00	85	0.11
7	38	0.00	0.00	36	0.00	0.01	4	0.00	0.00	19	0.00	97	0.12
8	61	0.00	0.01	90	0.00	0.02	29	0.00	0.00	39	0.01	219	0.15
9	111	0.00	0.02	124	0.00	0.03	40	0.00	0.00	40	0.01	315	0.16
10	163	0.01	0.04	191	0.01	0.05	72	0.00	0.01	80	0.03	526	0.20
11	217	0.02	0.05	312	0.01	0.09	159	0.03	0.00	155	0.06	843	0.31
12	555	0.01	0.15	679	0.04	0.18	326	0.00	0.06	331	0.13	1891	0.47
13	641	0.05	0.15	1094	0.06	0.31	491	0.10	0.05	548	0.21	2774	0.79
14	886	0.05	0.23	1259	0.05	0.36	776	0.10	0.14	689	0.27	3610	0.90
15	898	0.05	0.23	1156	0.05	0.33	809	0.10	0.15	717	0.28	3580	0.87
16	946	0.04	0.24	941	0.04	0.27	797	0.10	0.14	713	0.28	3397	0.80
17	1027	0.04	0.27	713	0.03	0.20	666	0.10	0.10	648	0.25	3054	0.77
18	965	0.06	0.24	606	0.02	0.17	545	0.07	0.06	445	0.17	2561	0.66
19	554	0.04	0.13	460	0.02	0.13	293	0.06	0.01	236	0.09	1543	0.44
20	336	0.05	0.07	510	0.03	0.14	279	0.06	0.01	332	0.13	1457	0.49
21	261	0.03	0.06	399	0.01	0.11	195	0.04	0.00	151	0.06	1006	0.35
22	349	0.04	0.08	407	0.01	0.12	373	0.08	0.01	158	0.06	1287	0.41
23	300	0.01	0.07	329	0.01	0.09	141	0.03	0.00	169	0.06	939	0.31
24	193	0.01	0.05	204	0.00	0.05	113	0.02	0.00	61	0.02	571	0.22
	9379			10337			6813			6009		32538	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-18-74 DAY OF WEEK= MONDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'E'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	107	0.00	0.02	121	0.00	0.03	151	0.03	0.00	71	0.02	450	0.20
2	79	0.00	0.02	56	0.00	0.01	21	-0.00	0.00	12	0.00	168	0.12
3	17	0.00	0.00	26	0.00	0.00	14	0.00	0.00	8	0.00	65	0.11
4	18	0.00	0.00	28	0.00	0.00	16	0.00	0.00	9	0.00	71	0.11
5	31	0.00	0.00	28	0.00	0.00	8	0.00	0.00	3	0.00	70	0.11
6	79	0.00	0.02	108	0.00	0.03	18	0.00	0.00	51	0.02	256	0.16
7	342	0.03	0.08	509	0.01	0.15	77	0.01	0.00	232	0.09	1160	0.39
8	705	0.09	0.16	1279	0.07	0.36	233	0.05	0.01	859	0.34	3076	0.95
9	499	0.16	0.07	1548	0.02	0.47	275	0.06	0.01	865	0.34	3187	1.14
10	403	0.07	0.08	960	0.03	0.28	327	0.07	0.01	501	0.20	2191	0.73
11	429	0.05	0.09	820	0.02	0.24	447	0.10	0.03	425	0.17	2121	0.67
12	502	0.04	0.12	692	0.03	0.20	685	0.10	0.11	515	0.20	2394	0.64
13	512	0.04	0.12	783	0.03	0.22	757	0.10	0.13	709	0.28	2761	0.75
14	665	0.04	0.17	815	0.03	0.23	620	0.10	0.09	655	0.26	2755	0.74
15	658	0.04	0.17	736	0.03	0.21	666	0.10	0.10	535	0.21	2595	0.66
16	928	0.02	0.25	722	0.03	0.20	711	0.10	0.13	498	0.19	2859	0.69
17	1257	0.03	0.34	892	0.04	0.25	990	0.10	0.20	607	0.24	3746	0.83
18	1270	0.03	0.34	928	0.04	0.26	1064	0.10	0.22	349	0.13	3611	0.82
19	791	0.05	0.20	707	0.04	0.20	710	0.10	0.11	436	0.17	2644	0.63
20	569	0.02	0.15	710	0.03	0.20	488	0.10	0.05	409	0.16	2176	0.60
21	494	0.02	0.13	480	0.00	0.14	454	0.10	0.04	313	0.12	1741	0.49
22	437	0.02	0.11	289	0.01	0.08	483	0.10	0.04	250	0.10	1459	0.43
23	212	0.00	0.05	200	0.01	0.05	262	0.06	0.01	130	0.05	804	0.28
24	164	0.00	0.04	140	0.00	0.04	144	0.03	0.00	62	0.02	510	0.21
	11168			13577			9621			8504		42870	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-19-74 DAY OF WEEK= TUESDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'E'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	122	0.00	0.03	81	0.00	0.02	128	0.02	0.00	63	0.02	394	0.19
2	67	0.00	0.01	65	0.00	0.01	41	0.00	0.00	13	0.00	186	0.13
3	36	0.00	0.01	50	0.00	0.01	25	0.00	0.00	13	0.00	124	0.12
4	36	0.00	0.00	24	0.00	0.00	14	0.00	0.00	4	0.00	78	0.11
5	29	0.00	0.00	42	0.00	0.01	17	0.00	0.00	2	0.00	90	0.11
6	76	0.00	0.02	144	0.00	0.04	17	0.00	0.00	52	0.02	289	0.17
7	350	0.02	0.08	515	0.01	0.15	72	0.01	0.00	272	0.10	1209	0.40
8	759	0.11	0.16	1059	0.07	0.29	241	0.05	0.01	866	0.34	2925	0.91
9	548	0.13	0.09	857	0.03	0.25	306	0.07	0.01	871	0.34	2582	0.90
10	391	0.06	0.08	617	0.02	0.18	348	0.05	0.04	517	0.20	1873	0.60
11	408	0.05	0.09	726	0.05	0.20	458	0.07	0.05	478	0.19	2070	0.62
12	510	0.04	0.12	655	0.04	0.18	680	0.10	0.16	493	0.19	2338	0.62
13	534	0.06	0.12	592	0.03	0.17	739	0.10	0.16	748	0.29	2613	0.73
14	537	0.04	0.13	726	0.04	0.20	633	0.10	0.12	715	0.28	2611	0.73
15	722	0.05	0.18	662	0.02	0.19	677	0.10	0.13	555	0.22	2616	0.67
16	816	0.04	0.21	806	0.04	0.23	756	0.10	0.13	527	0.21	2905	0.69
17	1274	0.04	0.34	451	0.04	0.12	1041	0.07	0.15	615	0.24	3381	0.60
18	1166	0.03	0.31	829	0.05	0.23	1036	0.10	0.22	424	0.16	3455	0.78
19	699	0.06	0.17	733	0.05	0.20	648	0.10	0.10	384	0.15	2464	0.62
20	543	0.04	0.13	699	0.04	0.19	463	0.10	0.04	472	0.18	2177	0.63
21	432	0.00	0.12	384	0.01	0.11	443	0.10	0.03	381	0.15	1640	0.48
22	414	0.03	0.10	297	0.02	0.08	630	0.10	0.09	302	0.12	1643	0.45
23	253	0.02	0.06	213	0.01	0.06	179	0.04	0.00	86	0.03	731	0.25
24	186	0.01	0.04	182	0.00	0.05	154	0.03	0.00	81	0.03	603	0.23
	10908			11409			9746			8934		40997	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-20-74 DAY OF WEEK= WEDNESDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'E'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	156	0.01	0.03	7	0.00	-0.00	166	0.03	0.00	51	0.02	380	0.21
2	84	0.00	0.02	81	0.00	0.02	48	0.01	0.00	28	0.01	241	0.15
3	26	0.00	0.00	35	0.00	0.00	34	0.00	0.00	6	0.00	101	0.12
4	31	0.00	0.00	27	0.00	0.00	10	0.00	0.00	6	0.00	74	0.11
5	26	0.00	0.00	53	0.00	0.01	11	0.00	0.00	6	0.00	96	0.12
6	76	0.00	0.01	126	0.00	0.03	24	0.00	0.00	59	0.02	284	0.17
7	268	0.02	0.07	581	0.01	0.17	91	0.02	0.00	206	0.08	1166	0.40
8	615	0.09	0.13	1297	0.09	0.36	265	0.06	0.01	776	0.31	2953	0.92
9	552	0.13	0.09	1328	0.03	0.39	294	0.06	0.01	811	0.32	2985	1.02
10	462	0.06	0.08	952	0.02	0.28	347	0.08	0.01	507	0.20	2208	0.72
11	428	0.03	0.10	817	0.02	0.24	458	0.10	0.04	500	0.20	2203	0.68
12	631	0.05	0.15	735	0.03	0.21	682	0.10	0.12	552	0.22	2600	0.68
13	669	0.05	0.17	776	0.04	0.22	812	0.10	0.20	731	0.29	3008	0.77
14	681	0.04	0.17	764	0.03	0.22	671	0.10	0.13	709	0.28	2825	0.74
15	711	0.04	0.18	730	0.02	0.21	687	0.10	0.11	551	0.22	2679	0.68
16	992	0.05	0.26	774	0.04	0.21	784	0.10	0.15	530	0.21	3080	0.72
17	1330	0.05	0.35	892	0.05	0.25	1055	0.10	0.25	630	0.25	3907	0.86
18	1272	0.03	0.34	814	0.04	0.23	995	0.10	0.21	401	0.16	3482	0.81
19	711	0.04	0.18	782	0.04	0.22	634	0.10	0.09	437	0.17	2564	0.64
20	642	0.05	0.16	681	0.02	0.20	571	0.10	0.12	469	0.18	2363	0.64
21	438	0.03	0.11	382	0.02	0.10	446	0.10	0.03	317	0.12	1583	0.46
22	447	0.03	0.11	247	0.01	0.06	528	0.10	0.06	294	0.11	1516	0.46
23	287	0.02	0.07	227	0.00	0.06	227	0.05	0.01	142	0.05	883	0.30
24	198	0.01	0.05	165	0.00	0.04	214	0.04	0.01	87	0.03	664	0.24
	11712			13273			10054			8806		43845	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-21-74 DAY OF WEEK= THURSDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'E'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	163	0.00	0.04	94	0.00	0.02	55	0.01	0.00	63	0.02	375	0.18
2	65	0.00	0.02	85	0.00	0.02	54	0.01	0.00	32	0.01	255	0.15
3	37	0.00	0.01	34	0.00	0.01	34	0.00	0.00	11	0.00	116	0.12
4	33	0.00	0.00	19	0.00	0.00	10	0.00	0.00	5	0.00	67	0.11
5	24	0.00	0.00	38	0.00	0.01	11	0.00	0.00	8	0.00	81	0.12
6	69	0.00	0.02	136	0.00	0.04	23	0.00	0.00	61	0.02	309	0.17
7	308	0.03	0.07	542	0.01	0.16	79	0.01	0.00	248	0.09	1177	0.40
8	669	0.09	0.15	1286	0.08	0.36	243	0.05	0.01	812	0.32	3030	0.94
9	565	0.13	0.11	1400	0.03	0.42	336	0.07	0.01	836	0.33	3161	1.06
10	495	0.08	0.10	780	0.04	0.22	376	0.08	0.01	443	0.17	2094	0.67
11	398	0.04	0.09	743	0.04	0.21	415	0.09	0.01	453	0.18	2009	0.63
12	452	0.05	0.10	635	0.03	0.18	713	0.10	0.12	533	0.21	2333	0.65
13	533	0.06	0.12	716	0.02	0.21	723	0.10	0.12	654	0.26	2626	0.73
14	517	0.05	0.12	742	0.04	0.21	630	0.10	0.09	684	0.27	2573	0.73
15	667	0.04	0.17	706	0.02	0.20	691	0.10	0.11	535	0.21	2599	0.67
16	846	0.05	0.21	769	0.04	0.22	766	0.10	0.13	528	0.21	2909	0.68
17	1330	0.04	0.36	898	0.04	0.25	1008	0.10	0.24	601	0.24	3837	0.85
18	1210	0.05	0.32	834	0.05	0.23	1025	0.10	0.21	391	0.15	3460	0.79
19	790	0.06	0.19	787	0.04	0.22	715	0.10	0.13	453	0.18	2745	0.66
20	570	0.05	0.13	766	0.05	0.21	607	0.10	0.08	498	0.19	2441	0.67
21	513	0.03	0.13	467	0.02	0.13	500	0.10	0.05	392	0.15	1872	0.52
22	512	0.04	0.12	292	0.01	0.08	588	0.10	0.08	269	0.10	1661	0.47
23	336	0.01	0.08	225	0.01	0.06	260	0.05	0.01	160	0.06	981	0.32
24	211	0.01	0.05	194	0.01	0.05	187	0.04	0.00	86	0.03	678	0.24
	11397			13188			10049			8756		43390	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-22-74 DAY OF WEEK= FRIDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'E'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	134	0.00	0.03	122	0.01	0.03	143	0.03	0.00	67	0.02	466	0.20
2	75	0.00	0.02	72	0.00	0.02	60	0.01	0.00	36	0.01	243	0.15
3	36	0.00	0.00	37	0.00	0.01	28	0.00	0.00	10	0.00	111	0.12
4	36	0.00	0.00	28	0.00	0.00	8	0.00	0.00	6	0.00	78	0.11
5	44	0.00	0.01	40	0.00	0.01	16	0.00	0.00	4	0.00	104	0.12
6	88	0.01	0.01	113	0.00	0.03	24	0.00	0.00	58	0.02	281	0.17
7	314	0.02	0.07	556	0.01	0.16	85	0.01	0.00	260	0.10	1215	0.41
8	636	0.10	0.13	1314	0.07	0.37	248	0.05	0.01	831	0.33	3029	0.96
9	506	0.14	0.08	1413	0.03	0.42	279	0.06	0.01	830	0.33	3028	1.07
10	429	0.07	0.09	989	0.04	0.28	334	0.07	0.01	492	0.19	2244	0.73
11	596	0.05	0.14	824	0.04	0.23	484	0.10	0.06	477	0.19	2381	0.67
12	580	0.06	0.13	761	0.03	0.22	778	0.10	0.14	527	0.21	2646	0.69
13	685	0.05	0.17	732	0.03	0.21	777	0.10	0.18	709	0.28	2903	0.75
14	582	0.03	0.15	760	0.02	0.22	685	0.10	0.11	712	0.28	2739	0.74
15	830	0.02	0.22	729	0.03	0.21	738	0.10	0.15	581	0.23	2878	0.69
16	1033	0.02	0.28	813	0.03	0.23	887	0.10	0.21	552	0.22	3285	0.74
17	1426	0.03	0.39	941	0.02	0.28	1074	0.10	0.28	628	0.25	4068	0.91
18	1364	0.04	0.37	911	0.02	0.27	1028	0.10	0.26	403	0.16	3706	0.88
19	767	0.07	0.18	801	0.00	0.24	709	0.10	0.11	449	0.17	2726	0.69
20	749	0.05	0.19	955	0.07	0.26	599	0.09	0.08	706	0.28	3009	0.81
21	565	0.04	0.14	563	0.03	0.16	514	0.10	0.05	431	0.17	2093	0.58
22	682	0.08	0.15	458	0.01	0.13	732	0.10	0.12	465	0.18	2307	0.62
23	335	0.03	0.08	236	0.00	0.07	298	0.06	0.01	218	0.08	1087	0.37
24	268	0.01	0.07	236	0.00	0.07	285	0.05	0.02	168	0.06	972	0.31
	12762			14404			10813			9620		47599	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-23-74 DAY OF WEEK= SATURDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'E'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	251	0.01	0.06	228	0.01	0.06	396	0.09	0.01	141	0.05	1016	0.32
2	181	0.01	0.04	158	0.00	0.04	81	0.01	0.00	79	0.03	499	0.21
3	121	0.00	0.03	136	0.00	0.04	54	0.01	0.00	36	0.01	347	0.17
4	42	0.00	0.01	47	0.00	0.01	30	0.00	0.00	5	0.00	124	0.12
5	31	0.00	0.00	53	0.00	0.01	15	0.00	0.00	5	0.00	104	0.12
6	66	0.00	0.01	70	0.00	0.02	10	0.00	0.00	26	0.01	172	0.13
7	118	0.01	0.02	183	0.00	0.05	41	0.00	0.00	90	0.03	432	0.21
8	164	0.01	0.04	297	0.00	0.08	79	0.01	0.00	120	0.04	660	0.27
9	263	0.04	0.05	522	0.00	0.15	148	0.03	0.00	238	0.09	1171	0.43
10	325	0.04	0.07	818	0.02	0.24	303	0.07	0.01	440	0.17	1886	0.63
11	465	0.04	0.12	938	0.04	0.27	483	0.10	0.04	528	0.21	2434	0.72
12	648	0.05	0.16	961	0.03	0.28	703	0.10	0.11	490	0.19	2802	0.73
13	715	0.05	0.18	959	0.04	0.28	840	0.10	0.15	672	0.26	3186	0.80
14	798	0.04	0.20	943	0.05	0.26	811	0.10	0.15	708	0.28	3260	0.80
15	896	0.06	0.22	903	0.04	0.25	788	0.10	0.14	762	0.30	3349	0.83
16	797	0.05	0.20	726	0.04	0.20	774	0.10	0.13	688	0.27	2985	0.74
17	735	0.06	0.18	691	0.03	0.20	743	0.10	0.12	610	0.24	2779	0.70
18	959	0.04	0.25	579	0.03	0.16	685	0.10	0.11	444	0.17	2667	0.67
19	542	0.07	0.12	586	0.05	0.15	360	0.08	0.01	315	0.12	1803	0.54
20	507	0.10	0.09	702	0.07	0.18	507	0.10	0.05	523	0.20	2239	0.70
21	336	0.08	0.06	502	0.03	0.14	324	0.07	0.01	332	0.13	1494	0.52
22	298	0.11	0.03	399	0.04	0.10	815	0.10	0.15	391	0.15	1903	0.57
23	298	0.02	0.07	257	0.01	0.07	231	0.05	0.01	133	0.05	919	0.30
24	282	0.02	0.07	272	0.01	0.07	551	0.10	0.07	147	0.05	1252	0.37
	9858			11930			9772			7923		39483	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-24-74 DAY OF WEEK= SUNDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'E'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	264	0.02	0.06	270	0.01	0.07	193	0.04	0.00	189	0.07	915	0.32
2	210	0.01	0.05	199	0.01	0.05	112	0.02	0.00	87	0.03	608	0.23
3	90	0.00	0.02	186	0.00	0.05	97	0.02	0.00	28	0.01	401	0.19
4	55	0.00	0.01	91	0.00	0.02	24	0.00	0.00	16	0.00	186	0.14
5	25	0.00	0.00	32	0.00	0.00	13	0.00	0.00	7	0.00	77	0.11
6	22	0.00	0.00	26	0.00	0.00	8	0.00	0.00	5	0.00	61	0.11
7	38	0.00	0.00	54	0.00	0.01	8	0.00	0.00	20	0.00	120	0.12
8	75	0.00	0.01	93	0.00	0.02	18	0.00	0.00	36	0.01	222	0.15
9	120	0.01	0.02	95	0.00	0.02	27	0.00	0.00	47	0.01	289	0.16
10	157	0.02	0.03	221	0.01	0.06	52	0.01	0.00	74	0.02	504	0.22
11	201	0.02	0.04	268	0.01	0.07	92	0.02	0.00	162	0.05	723	0.28
12	336	0.03	0.08	596	0.03	0.16	166	0.03	0.00	300	0.12	1398	0.46
13	519	0.03	0.13	984	0.05	0.28	350	0.08	0.01	567	0.22	2420	0.74
14	731	0.04	0.19	1144	0.07	0.32	664	0.10	0.10	679	0.27	3218	0.86
15	842	0.05	0.20	1391	0.07	0.39	776	0.10	0.14	768	0.30	3777	0.99
16	1045	0.06	0.26	926	0.03	0.27	821	0.10	0.15	656	0.26	3448	0.80
17	1172	0.07	0.30	683	0.02	0.20	829	0.10	0.12	617	0.24	3301	0.82
18	723	0.05	0.18	539	0.05	0.14	626	0.10	0.09	420	0.16	2308	0.60
19	416	0.06	0.09	537	0.04	0.14	606	0.10	0.08	245	0.09	1804	0.51
20	306	0.05	0.06	544	0.05	0.14	303	0.07	0.01	402	0.16	1555	0.53
21	233	0.03	0.05	392	0.03	0.10	426	0.04	0.06	174	0.06	1225	0.35
22	254	0.03	0.05	360	0.03	0.09	240	0.05	0.01	198	0.07	1052	0.36
23	211	0.01	0.05	303	0.01	0.08	334	0.07	0.01	103	0.04	951	0.32
24	121	0.00	0.03	201	0.00	0.05	171	0.03	0.00	47	0.01	540	0.22
	8166			10135			6956			5847		31104	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-25-74 DAY OF WEEK= MONDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'E'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	62	0.00	0.01	120	0.00	0.03	68	0.01	0.00	52	0.02	302	0.17
2	32	0.00	0.00	49	0.00	0.01	15	0.00	0.00	8	0.00	104	0.12
3	18	0.00	0.00	26	0.00	0.00	9	0.00	0.00	6	0.00	59	0.11
4	12	0.00	0.00	20	0.00	0.00	14	0.00	0.00	3	0.00	49	0.11
5	26	0.00	0.00	35	0.00	0.01	8	0.00	0.00	5	0.00	74	0.11
6	77	0.01	0.01	75	0.00	0.02	21	0.00	0.00	47	0.01	220	0.15
7	356	0.04	0.08	356	0.01	0.10	94	0.02	0.00	255	0.10	1061	0.37
8	632	0.11	0.13	1134	0.09	0.31	262	0.06	0.01	737	0.29	2765	0.88
9	532	0.22	0.05	1525	0.04	0.45	276	0.06	0.01	655	0.26	2988	1.10
10	352	0.08	0.06	1043	0.04	0.30	342	0.07	0.01	501	0.20	2238	0.77
11	449	0.07	0.09	742	0.02	0.21	503	0.10	0.05	466	0.18	2160	0.67
12	523	0.05	0.12	661	0.03	0.19	720	0.10	0.12	540	0.21	2444	0.66
13	535	0.04	0.13	664	0.03	0.19	754	0.10	0.13	686	0.27	2639	0.71
14	577	0.05	0.14	741	0.04	0.21	683	0.10	0.11	730	0.29	2731	0.75
15	692	0.03	0.18	660	0.02	0.19	675	0.10	0.10	560	0.22	2587	0.65
16	764	0.04	0.20	719	0.04	0.20	843	0.10	0.16	537	0.21	2883	0.66
17	1275	0.05	0.34	824	0.05	0.23	1018	0.10	0.24	627	0.25	3744	0.84
18	1277	0.02	0.35	874	0.04	0.25	995	0.10	0.21	388	0.15	3534	0.81
19	749	0.06	0.18	723	0.04	0.20	683	0.10	0.11	407	0.16	2562	0.62
20	607	0.05	0.14	764	0.04	0.21	609	0.10	0.08	523	0.20	2503	0.68
21	527	0.03	0.13	464	0.02	0.13	487	0.10	0.05	360	0.14	1838	0.51
22	447	0.02	0.11	269	0.01	0.07	513	0.10	0.05	284	0.11	1513	0.45
23	225	0.02	0.05	194	0.01	0.05	288	0.06	0.01	123	0.04	830	0.29
24	155	0.00	0.04	155	0.00	0.04	147	0.03	0.00	67	0.02	524	0.21
	10921			12837			10027			8567		42352	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-26-74 DAY OF WEEK= TUESDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'E'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	107	0.00	0.02	112	0.00	0.03	143	0.03	0.00	51	0.02	413	0.19
2	64	0.00	0.01	76	0.00	0.02	38	0.00	0.00	19	0.00	197	0.13
3	27	0.00	0.00	36	0.00	0.01	31	0.00	0.00	6	0.00	100	0.12
4	23	0.00	0.00	25	0.00	0.00	23	0.00	0.00	4	0.00	75	0.11
5	42	0.00	0.01	45	0.00	0.01	13	0.00	0.00	4	0.00	104	0.12
6	95	0.01	0.02	71	0.00	0.02	26	0.00	0.00	55	0.02	247	0.15
7	373	0.04	0.08	372	0.02	0.10	82	0.01	0.00	268	0.10	1095	0.37
8	733	0.12	0.15	1114	0.07	0.31	246	0.05	0.01	865	0.34	2958	0.94
9	522	0.18	0.07	1550	0.03	0.46	272	0.06	0.01	914	0.36	3258	1.18
10	461	0.05	0.09	1121	0.02	0.33	405	0.09	0.01	517	0.20	2444	0.79
11	470	0.04	0.11	778	0.04	0.22	465	0.10	0.04	499	0.19	2212	0.66
12	503	0.04	0.12	736	0.03	0.21	659	0.10	0.10	557	0.22	2455	0.68
13	614	0.04	0.15	672	0.03	0.19	794	0.10	0.14	680	0.27	2760	0.71
14	674	0.04	0.17	699	0.02	0.20	693	0.10	0.13	708	0.28	2774	0.73
15	829	0.04	0.21	862	0.02	0.25	706	0.10	0.13	524	0.20	2921	0.71
16	924	0.03	0.24	725	0.03	0.20	765	0.10	0.13	526	0.21	2940	0.69
17	1298	0.04	0.35	867	0.04	0.25	1067	0.10	0.25	609	0.24	3841	0.84
18	1164	0.03	0.31	873	0.04	0.25	1114	0.10	0.24	397	0.15	3548	0.80
19	684	0.04	0.17	738	0.04	0.20	716	0.10	0.12	408	0.16	2546	0.61
20	578	0.06	0.16	695	0.04	0.19	642	0.10	0.12	498	0.19	2513	0.66
21	482	0.04	0.11	469	0.01	0.13	495	0.10	0.05	369	0.14	1795	0.52
22	520	0.03	0.13	319	0.02	0.08	535	0.10	0.06	343	0.13	1717	0.50
23	308	0.02	0.07	253	0.00	0.07	310	0.07	0.01	150	0.06	1021	0.33
24	210	0.01	0.05	188	0.00	0.05	184	0.03	0.01	103	0.04	685	0.24
	11725			13396			10424			9074		44619	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-27-74 DAY OF WEEK= WEDNESDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'E'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	122	0.00	0.03	117	0.00	0.03	143	0.03	0.00	74	0.02	456	0.20
2	52	0.00	0.01	68	0.00	0.01	52	0.01	0.00	31	0.01	203	0.14
3	30	0.00	0.00	31	0.00	0.00	23	0.00	0.00	9	0.00	93	0.12
4	38	0.00	0.01	35	0.00	0.00	19	0.00	0.00	13	0.00	105	0.12
5	41	0.00	0.01	40	0.00	0.01	16	0.00	0.00	7	0.00	104	0.11
6	78	0.00	0.01	82	0.00	0.02	25	0.00	0.00	57	0.02	242	0.15
7	364	0.04	0.08	452	0.01	0.13	82	0.01	0.00	255	0.10	1153	0.40
8	701	0.11	0.15	1274	0.06	0.36	287	0.06	0.01	840	0.33	3102	0.98
9	579	0.13	0.10	1426	0.04	0.42	301	0.07	0.01	775	0.31	3081	1.04
10	471	0.08	0.09	990	0.02	0.29	351	0.08	0.01	506	0.20	2318	0.76
11	418	0.05	0.09	794	0.03	0.23	468	0.10	0.04	509	0.20	2189	0.68
12	634	0.06	0.15	777	0.03	0.22	726	0.10	0.16	616	0.24	2753	0.74
13	609	0.06	0.14	729	0.03	0.21	764	0.10	0.13	756	0.30	2858	0.78
14	637	0.04	0.16	786	0.04	0.22	613	0.10	0.08	709	0.28	2745	0.75
15	670	0.04	0.17	678	0.02	0.20	713	0.10	0.12	610	0.24	2671	0.68
16	959	0.04	0.25	658	0.03	0.19	865	0.10	0.19	527	0.21	3009	0.70
17	1275	0.03	0.34	824	0.05	0.23	1063	0.10	0.25	582	0.23	3744	0.85
18	1261	0.03	0.34	864	0.04	0.24	963	0.10	0.22	402	0.16	3490	0.81
19	696	0.05	0.17	775	0.05	0.21	718	0.10	0.12	410	0.16	2599	0.63
20	561	0.04	0.14	808	0.03	0.23	572	0.10	0.07	540	0.21	2481	0.69
21	464	0.02	0.12	432	0.02	0.12	489	0.10	0.05	389	0.15	1774	0.50
22	456	0.01	0.12	310	0.01	0.09	617	0.10	0.09	270	0.10	1653	0.44
23	323	0.01	0.08	225	0.00	0.06	240	0.04	0.02	173	0.06	961	0.31
24	207	0.01	0.05	178	0.00	0.05	197	0.04	0.00	84	0.03	666	0.24
	11646			13353			10307			9144		44450	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-28-74 DAY OF WEEK= THURSDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'E'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	177	0.00	0.04	101	0.00	0.03	125	0.02	0.00	66	0.02	469	0.21
2	78	0.00	0.02	8	0.00	0.00	51	0.01	0.00	33	0.01	170	0.15
3	29	0.00	0.00	42	0.00	0.01	28	0.00	0.00	13	0.00	112	0.12
4	27	0.00	0.00	20	0.00	0.00	15	0.00	0.00	3	0.00	65	0.11
5	42	0.00	0.01	34	0.00	0.01	15	0.00	0.00	7	0.00	98	0.12
6	60	0.00	0.01	90	0.00	0.02	28	0.00	0.00	62	0.02	260	0.16
7	366	0.02	0.09	415	0.02	0.11	107	0.02	0.00	261	0.10	1149	0.37
8	795	0.07	0.19	1209	0.07	0.34	267	0.02	0.04	812	0.32	3083	0.86
9	595	0.09	0.12	1425	0.04	0.42	263	0.06	0.01	812	0.32	3095	1.01
10	542	0.06	0.12	947	0.03	0.27	379	0.08	0.01	489	0.19	2357	0.72
11	510	0.04	0.12	747	0.03	0.21	414	0.06	0.04	383	0.15	2054	0.57
12	608	0.05	0.15	669	0.02	0.19	689	0.10	0.13	469	0.18	2435	0.63
13	519	0.04	0.13	689	0.03	0.19	653	0.10	0.14	628	0.25	2489	0.69
14	638	0.04	0.16	703	0.03	0.20	583	0.10	0.10	622	0.24	2546	0.69
15	710	0.05	0.18	858	0.02	0.25	630	0.06	0.11	521	0.20	2719	0.67
16	914	0.05	0.23	699	0.04	0.19	738	0.10	0.12	479	0.19	2830	0.68
17	1242	0.05	0.33	800	0.03	0.23	1032	0.10	0.24	555	0.22	3629	0.82
18	1068	0.03	0.29	781	0.04	0.22	940	0.10	0.19	360	0.14	3149	0.73
19	884	0.05	0.23	706	0.04	0.19	653	0.07	0.09	357	0.14	2600	0.59
20	664	0.05	0.16	625	0.03	0.17	568	0.10	0.09	480	0.19	2337	0.62
21	465	0.02	0.12	371	0.01	0.10	453	0.10	0.04	345	0.13	1634	0.48
22	567	0.03	0.14	281	0.01	0.07	552	0.10	0.07	301	0.12	1701	0.50
23	284	0.01	0.07	240	0.02	0.06	219	0.05	0.01	129	0.05	872	0.29
24	191	0.00	0.05	175	0.00	0.05	266	0.06	0.01	84	0.03	716	0.25
	11995			12635			9668			8271		42569	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-29-74 DAY OF WEEK= FRIDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'E'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	170	0.00	0.04	97	0.00	0.02	129	0.02	0.00	89	0.03	485	0.21
2	68	0.00	0.01	94	0.00	0.02	62	0.01	0.00	32	0.01	256	0.15
3	40	0.00	0.01	34	0.00	0.01	30	0.00	0.00	9	0.00	113	0.12
4	28	0.00	0.00	23	0.00	0.00	7	0.00	0.00	7	0.00	65	0.11
5	30	0.00	0.00	43	0.00	0.01	18	0.00	0.00	9	0.00	100	0.12
6	92	0.01	0.02	142	0.00	0.04	24	0.00	0.00	57	0.02	315	0.18
7	364	0.03	0.09	555	0.01	0.16	94	0.02	0.00	239	0.09	1252	0.41
8	669	0.09	0.15	1335	0.08	0.37	270	0.06	0.01	870	0.34	3144	0.98
9	647	0.12	0.13	1368	0.02	0.41	273	0.06	0.01	823	0.32	3111	1.03
10	399	0.08	0.07	872	0.03	0.25	376	0.08	0.01	526	0.21	2173	0.73
11	407	0.07	0.08	707	0.03	0.20	464	0.10	0.04	463	0.18	2041	0.66
12	532	0.06	0.12	601	0.02	0.17	733	0.10	0.12	555	0.22	2421	0.66
13	675	0.06	0.16	727	0.03	0.21	834	0.10	0.23	699	0.27	2935	0.75
14	647	0.05	0.16	748	0.03	0.21	704	0.10	0.15	705	0.28	2804	0.75
15	711	0.06	0.17	726	0.03	0.21	705	0.10	0.11	488	0.19	2630	0.66
16	1043	0.04	0.27	858	0.04	0.24	825	0.10	0.19	488	0.19	3214	0.72
17	1344	0.03	0.36	882	0.03	0.25	1105	0.10	0.29	644	0.25	3975	0.89
18	1263	0.04	0.34	874	0.04	0.25	1041	0.10	0.27	378	0.15	3558	0.86
19	765	0.07	0.18	731	0.03	0.21	704	0.10	0.11	292	0.11	2492	0.60
20	685	0.06	0.16	830	0.04	0.23	677	0.10	0.14	397	0.15	2589	0.66
21	479	0.05	0.11	492	0.02	0.14	527	0.08	0.04	460	0.18	1958	0.56
22	659	0.06	0.16	386	0.02	0.10	668	0.10	0.13	428	0.17	2141	0.59
23	318	0.03	0.07	271	0.01	0.07	432	0.07	0.04	238	0.09	1259	0.37
24	260	0.02	0.07	200	0.01	0.05	324	0.05	0.03	165	0.06	969	0.31
	12317			13596			11026			9061		46000	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-30-74 DAY OF WEEK= SATURDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'E'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	226	0.01	0.05	148	0.00	0.04	397	0.06	0.04	160	0.06	931	0.30
2	160	0.00	0.04	129	0.00	0.03	114	0.01	0.01	69	0.02	492	0.20
3	111	0.00	0.02	82	0.00	0.02	61	0.01	0.00	31	0.01	285	0.15
4	63	0.00	0.01	58	0.00	0.01	58	0.01	0.00	16	0.00	195	0.14
5	57	0.00	0.01	56	0.00	0.01	24	0.00	0.00	19	0.00	156	0.13
6	61	0.00	0.01	82	0.00	0.02	18	0.00	0.00	20	0.00	181	0.14
7	116	0.00	0.02	217	0.00	0.06	48	0.00	0.00	45	0.01	426	0.20
8	235	0.02	0.05	348	0.01	0.10	81	0.01	0.00	95	0.03	759	0.27
9	324	0.03	0.07	557	0.01	0.16	181	0.03	0.02	261	0.10	1323	0.43
10	449	0.03	0.10	773	0.02	0.22	317	0.05	0.03	419	0.16	1958	0.59
11	459	0.04	0.11	875	0.04	0.25	448	0.07	0.04	502	0.20	2284	0.67
12	748	0.04	0.19	1005	0.05	0.28	659	0.10	0.11	556	0.22	2968	0.76
13	942	0.05	0.24	1075	0.05	0.30	801	0.10	0.09	350	0.14	3168	0.70
14	995	0.06	0.25	1084	0.04	0.31	750	0.10	0.18	714	0.28	3543	0.86
15	969	0.04	0.25	977	0.04	0.28	793	0.10	0.19	688	0.27	3427	0.80
16	1052	0.04	0.28	778	0.04	0.22	813	0.10	0.20	667	0.26	3310	0.79
17	1153	0.04	0.31	607	0.03	0.17	744	0.05	0.12	557	0.22	3061	0.72
18	912	0.05	0.23	514	0.03	0.14	769	0.10	0.13	545	0.21	2740	0.71
19	595	0.06	0.14	554	0.03	0.15	360	0.03	0.06	321	0.12	1830	0.48
20	523	0.10	0.10	801	0.03	0.23	698	0.10	0.15	836	0.33	2858	0.87
21	380	0.06	0.08	504	0.02	0.14	611	0.10	0.08	453	0.18	1948	0.59
22	415	0.11	0.07	516	0.02	0.14	658	0.10	0.12	570	0.22	2159	0.69
23	338	0.03	0.08	307	0.01	0.08	530	0.10	0.08	325	0.13	1500	0.45
24	330	0.03	0.07	237	0.01	0.06	414	0.08	0.01	271	0.10	1252	0.40
	11633			12284			10347			8490		42754	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-31-74 DAY OF WEEK= SUNDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'E'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	281	0.02	0.07	253	0.01	0.07	343	0.08	0.01	184	0.07	1061	0.34
2	244	0.01	0.06	219	0.01	0.06	68	0.01	0.00	99	0.03	630	0.23
3	172	0.00	0.04	139	0.00	0.03	165	0.03	0.00	72	0.02	548	0.22
4	53	0.00	0.01	57	0.00	0.01	26	0.00	0.00	21	0.00	157	0.13
5	26	0.00	0.00	33	0.00	0.00	21	0.00	0.00	7	0.00	87	0.11
6	27	0.00	0.00	35	0.00	0.01	13	0.00	0.00	6	0.00	81	0.11
7	56	0.00	0.01	61	0.00	0.01	15	0.00	0.00	17	0.00	149	0.13
8	94	0.01	0.02	94	0.00	0.02	27	0.00	0.00	47	0.01	262	0.16
9	62	0.02	0.01	133	0.00	0.03	70	0.01	0.00	68	0.02	353	0.20
10	228	0.03	0.05	228	0.01	0.06	99	0.02	0.00	94	0.03	649	0.25
11	333	0.02	0.08	412	0.01	0.11	170	0.03	0.02	190	0.07	1105	0.34
12	502	0.03	0.13	784	0.03	0.22	395	0.04	0.07	388	0.15	2069	0.56
13	628	0.05	0.15	1128	0.06	0.32	650	0.10	0.14	632	0.25	3038	0.84
14	918	0.03	0.24	1165	0.05	0.33	826	0.10	0.21	765	0.30	3674	0.90
15	1102	0.04	0.29	1211	0.06	0.34	824	0.10	0.20	762	0.30	3899	0.91
16	1170	0.05	0.31	920	0.05	0.26	884	0.10	0.19	731	0.29	3705	0.85
17	1161	0.05	0.30	734	0.03	0.21	718	0.10	0.14	655	0.26	3268	0.82
18	919	0.06	0.23	628	0.03	0.18	648	0.10	0.10	464	0.18	2659	0.68
19	481	0.05	0.11	525	0.02	0.15	271	0.04	0.03	246	0.09	1523	0.44
20	504	0.07	0.11	574	0.03	0.16	439	0.08	0.03	416	0.16	1933	0.58
21	295	0.03	0.07	390	0.02	0.11	289	0.06	0.01	177	0.07	1151	0.38
22	271	0.04	0.06	367	0.01	0.10	364	0.08	0.01	199	0.07	1201	0.41
23	299	0.02	0.07	278	0.00	0.08	213	0.04	0.00	161	0.06	951	0.31
24	153	0.01	0.03	176	0.01	0.05	153	0.02	0.01	77	0.03	559	0.21
	9999			10544			7691			6478		34712	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 1-74 DAY OF WEEK= MONDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'E'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	99	0.00	0.02	80	0.00	0.02	139	0.03	0.00	59	0.02	377	0.18
2	45	0.00	0.01	39	0.00	0.01	25	0.00	0.00	12	0.00	121	0.12
3	31	0.00	0.00	23	0.00	0.00	6	0.00	0.00	8	0.00	68	0.11
4	15	0.00	0.00	16	0.00	0.00	17	0.00	0.00	5	0.00	53	0.11
5	32	0.00	0.00	29	0.00	0.00	5	0.00	0.00	8	0.00	74	0.11
6	98	0.00	0.02	149	0.00	0.04	28	0.00	0.00	57	0.02	332	0.18
7	360	0.03	0.09	666	0.02	0.19	79	0.01	0.00	260	0.10	1385	0.44
8	827	0.07	0.20	1379	0.06	0.39	259	0.04	0.03	824	0.32	3289	0.95
9	543	0.09	0.11	1014	0.00	0.31	284	0.06	0.01	922	0.36	2768	0.94
10	442	0.04	0.10	933	0.03	0.27	323	0.04	0.03	527	0.21	2225	0.67
11	425	0.04	0.10	669	0.02	0.19	473	0.10	0.04	444	0.17	2011	0.62
12	575	0.04	0.14	623	0.02	0.18	681	0.10	0.14	465	0.18	2344	0.61
13	633	0.03	0.16	729	0.03	0.21	695	0.10	0.15	644	0.25	2701	0.70
14	670	0.04	0.17	697	0.03	0.20	631	0.10	0.10	699	0.27	2697	0.72
15	775	0.04	0.20	657	0.02	0.19	658	0.10	0.12	536	0.21	2626	0.66
16	917	0.03	0.24	697	0.03	0.20	745	0.10	0.12	483	0.19	2842	0.67
17	1289	0.03	0.35	879	0.04	0.25	1068	0.10	0.25	564	0.22	3800	0.84
18	1278	0.03	0.35	857	0.05	0.24	1059	0.10	0.25	395	0.15	3589	0.86
19	768	0.04	0.20	790	0.03	0.22	706	0.10	0.12	444	0.17	2728	0.65
20	684	0.03	0.18	758	0.04	0.21	586	0.10	0.10	483	0.19	2511	0.65
21	608	0.02	0.16	336	0.01	0.09	447	0.10	0.03	423	0.16	1814	0.55
22	560	0.03	0.14	239	0.01	0.06	620	0.10	0.09	327	0.13	1746	0.51
23	223	0.00	0.06	207	0.01	0.05	209	0.04	0.01	105	0.04	744	0.25
24	156	0.00	0.04	145	0.00	0.04	206	0.04	0.00	64	0.02	571	0.22
	12098			12611			9949			8758		43416	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 2-74 DAY OF WEEK= TUESDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'E'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	118	0.00	0.03	76	0.00	0.02	91	0.02	0.00	62	0.02	347	0.18
2	68	0.00	0.01	64	0.00	0.01	34	0.00	0.00	31	0.01	197	0.14
3	33	0.00	0.00	41	0.00	0.01	19	0.00	0.00	3	0.00	96	0.11
4	32	0.00	0.00	23	0.00	0.00	14	0.00	0.00	5	0.00	74	0.11
5	34	0.00	0.00	45	0.00	0.01	8	0.00	0.00	5	0.00	92	0.11
6	103	0.00	0.02	173	0.00	0.05	32	0.00	0.00	54	0.02	362	0.19
7	361	0.03	0.09	644	0.00	0.19	108	0.01	0.01	267	0.10	1400	0.44
8	849	0.06	0.20	1382	0.09	0.40	275	0.03	0.04	849	0.36	3355	0.97
9	679	0.05	0.15	1143	0.02	0.34	304	0.03	0.04	910	0.36	3036	0.94
10	500	0.05	0.12	854	0.03	0.25	413	0.09	0.02	493	0.19	2260	0.69
11	477	0.04	0.11	790	0.02	0.23	463	0.10	0.04	495	0.19	2225	0.67
12	630	0.03	0.16	693	0.02	0.20	801	0.10	0.17	523	0.20	2647	0.64
13	709	0.05	0.17	695	0.02	0.20	763	0.10	0.19	737	0.29	2904	0.75
14	623	0.04	0.15	694	0.02	0.20	677	0.10	0.10	97	0.03	2091	0.55
15	821	0.04	0.21	632	0.02	0.18	691	0.10	0.12	577	0.23	2721	0.69
16	949	0.03	0.25	741	0.05	0.20	758	0.10	0.13	523	0.20	2971	0.71
17	1307	0.03	0.35	953	0.04	0.27	1082	0.10	0.26	627	0.25	3969	0.86
18	1160	0.02	0.32	807	0.05	0.22	1026	0.10	0.21	408	0.16	3421	0.79
19	840	0.03	0.22	762	0.04	0.21	699	0.10	0.14	412	0.16	2713	0.63
20	681	0.03	0.18	700	0.03	0.20	554	0.10	0.09	524	0.20	2459	0.64
21	583	0.02	0.15	410	0.02	0.11	488	0.09	0.03	328	0.13	1809	0.50
22	562	0.02	0.15	294	0.01	0.08	545	0.10	0.06	267	0.10	1668	0.48
23	272	0.01	0.07	220	0.01	0.06	188	0.03	0.01	128	0.05	808	0.27
24	168	0.01	0.04	132	0.00	0.03	164	0.03	0.00	77	0.03	561	0.22
	12619			12968			10197			8402		44186	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 3-74 DAY OF WEEK= WEDNESDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'E'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	196	0.00	0.05	134	0.00	0.03	105	0.02	0.01	71	0.02	506	0.21
2	70	0.00	0.01	65	0.00	0.01	43	0.01	0.00	33	0.01	211	0.14
3	40	0.00	0.01	27	0.00	0.00	14	0.00	0.00	6	0.00	87	0.11
4	30	0.00	0.00	24	0.00	0.00	21	0.00	0.00	11	0.00	86	0.12
5	43	0.00	0.01	38	0.00	0.01	10	0.00	0.00	9	0.00	100	0.12
6	104	0.00	0.02	154	0.00	0.04	32	0.00	0.00	51	0.02	341	0.17
7	401	0.03	0.10	655	0.01	0.19	110	0.00	0.01	282	0.11	1448	0.44
8	739	0.08	0.17	1378	0.06	0.40	267	0.06	0.01	853	0.34	3237	0.98
9	692	0.11	0.14	1245	0.03	0.37	312	0.05	0.03	864	0.34	3113	0.98
10	460	0.04	0.11	853	0.04	0.24	374	0.07	0.03	509	0.20	2196	0.66
11	483	0.04	0.11	760	0.03	0.21	493	0.08	0.05	467	0.18	2203	0.63
12	684	0.06	0.15	684	0.03	0.19	735	0.10	0.14	556	0.22	2619	0.68
13	671	0.05	0.16	702	0.03	0.20	712	0.10	0.19	697	0.27	2782	0.74
14	751	0.08	0.18	764	0.04	0.21	372	0.08	0.01	701	0.28	2588	0.76
15	668	0.03	0.18	533	0.01	0.15	428	0.09	0.01	436	0.17	2085	0.58
16	685	0.07	0.21	669	0.05	0.18	588	0.08	0.07	404	0.16	2546	0.63
17	1106	0.04	0.29	717	0.04	0.20	1021	0.10	0.23	493	0.19	3337	0.77
18	1031	0.05	0.27	751	0.06	0.20	1005	0.10	0.21	388	0.15	3175	0.74
19	807	0.04	0.21	710	0.05	0.19	720	0.06	0.07	411	0.16	2648	0.58
20	577	0.03	0.15	723	0.05	0.20	666	0.10	0.12	569	0.22	2535	0.68
21	555	0.03	0.14	361	0.01	0.10	478	0.10	0.04	397	0.15	1791	0.53
22	557	0.02	0.15	252	0.01	0.07	623	0.10	0.14	331	0.13	1763	0.51
23	277	0.01	0.07	232	0.01	0.06	220	0.03	0.02	130	0.05	859	0.27
24	165	0.01	0.04	144	0.01	0.03	251	0.05	0.01	84	0.03	644	0.24
	11972			12575			9600			8753		42900	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 4-74 DAY OF WEEK= THURSDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'E'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	142	0.00	0.03	102	0.00	0.02	126	0.02	0.01	88	0.03	458	0.20
2	74	0.00	0.02	88	0.00	0.02	54	0.01	-0.00	41	0.01	257	0.15
3	38	0.00	0.01	26	0.00	0.00	26	0.00	0.00	8	0.00	98	0.11
4	38	0.00	0.00	27	0.00	0.00	24	0.00	0.00	4	0.00	93	0.11
5	36	0.00	0.00	39	0.00	0.01	16	0.00	0.00	9	0.00	100	0.12
6	98	0.00	0.02	154	0.00	0.04	27	0.00	0.00	55	0.02	334	0.17
7	364	0.01	0.09	582	0.01	0.17	83	-0.00	0.01	240	0.09	1269	0.38
8	767	0.06	0.19	1308	0.06	0.37	245	0.01	0.04	828	0.33	3168	0.88
9	690	0.08	0.16	1279	0.04	0.38	305	0.03	0.04	902	0.36	3176	0.95
10	527	0.05	0.12	832	0.05	0.23	371	0.06	0.03	503	0.20	2233	0.65
11	554	0.04	0.14	762	0.04	0.21	474	0.05	0.06	459	0.18	2249	0.59
12	639	0.04	0.16	627	0.02	0.18	691	0.10	0.14	494	0.19	2451	0.62
13	643	0.04	0.16	675	0.02	0.19	727	0.07	0.10	697	0.27	2742	0.70
14	697	0.05	0.17	741	0.03	0.21	658	0.10	0.13	696	0.27	2792	0.74
15	778	0.06	0.19	659	0.02	0.19	716	0.10	0.18	520	0.20	2673	0.66
16	953	0.04	0.25	691	0.02	0.20	770	0.10	0.13	462	0.18	2876	0.67
17	1299	0.03	0.35	932	0.03	0.27	995	0.10	0.25	622	0.24	3848	0.84
18	1101	0.02	0.30	819	0.04	0.23	981	0.10	0.20	361	0.14	3262	0.75
19	755	0.05	0.19	767	0.03	0.22	694	0.10	0.11	402	0.16	2618	0.63
20	683	0.05	0.17	788	0.05	0.22	655	0.06	0.10	576	0.23	2702	0.67
21	522	0.02	0.13	394	0.01	0.11	506	0.10	0.05	383	0.15	1805	0.51
22	717	0.04	0.18	270	0.01	0.07	648	0.10	0.08	370	0.14	2005	0.57
23	245	0.02	0.06	228	0.01	0.06	210	0.04	0.00	109	0.04	792	0.27
24	214	0.01	0.05	165	0.00	0.04	210	0.03	0.01	92	0.03	681	0.24
	12594			12955			10212			8921		44682	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 5-74 DAY OF WEEK= FRIDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'E'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	158	0.00	0.04	119	0.00	0.03	170	0.03	0.00	111	0.04	558	0.23
2	101	0.00	0.02	83	0.00	0.02	81	0.01	0.00	48	0.01	313	0.17
3	53	0.00	0.01	40	0.00	0.01	23	-0.00	0.00	9	0.00	125	0.11
4	33	0.00	0.00	31	0.00	0.00	26	0.00	0.00	13	0.00	103	0.12
5	40	0.00	0.01	39	0.00	0.01	14	0.00	0.00	7	0.00	100	0.11
6	103	0.01	0.02	161	0.00	0.04	23	0.00	0.00	30	0.01	317	0.17
7	388	0.02	0.09	639	0.02	0.19	96	-0.00	0.01	163	0.06	1286	0.38
8	832	0.08	0.20	1348	0.06	0.38	264	0.01	0.04	327	0.13	2771	0.72
9	761	0.09	0.15	1286	0.04	0.37	304	0.04	0.03	408	0.16	2699	0.79
10	444	0.05	0.10	841	0.04	0.24	356	0.08	0.01	436	0.17	2077	0.65
11	520	0.04	0.12	731	0.02	0.21	488	0.09	0.05	495	0.19	2234	0.66
12	606	0.04	0.15	682	0.04	0.19	797	0.10	0.19	571	0.22	2656	0.66
13	552	0.05	0.13	742	0.04	0.21	771	0.10	0.13	654	0.26	2719	0.72
14	765	0.04	0.19	768	0.03	0.22	686	0.10	0.14	702	0.28	2921	0.75
15	710	0.03	0.18	718	0.02	0.21	677	0.10	0.10	487	0.19	2592	0.64
16	1044	0.04	0.27	800	0.07	0.21	888	0.10	0.17	497	0.19	3229	0.75
17	1464	0.05	0.39	1013	0.07	0.28	1038	0.06	0.18	638	0.25	4153	0.89
18	1283	0.03	0.35	975	0.05	0.28	1044	0.10	0.25	458	0.18	3760	0.86
19	912	0.04	0.24	816	0.05	0.22	769	0.10	0.18	459	0.18	2956	0.68
20	842	0.07	0.21	1089	0.05	0.31	780	0.08	0.12	757	0.30	3468	0.87
21	816	0.05	0.21	708	0.03	0.20	754	0.10	0.06	601	0.24	2879	0.70
22	891	0.06	0.22	485	0.02	0.13	771	0.10	0.17	365	0.14	2512	0.66
23	389	0.02	0.09	294	0.01	0.08	471	0.10	0.06	265	0.10	1419	0.43
24	315	0.01	0.08	243	0.01	0.07	269	0.04	0.03	100	0.04	927	0.28
	13962			14651			11560			8601		48774	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 6-74 DAY OF WEEK= SATURDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'E'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	261	0.01	0.07	169	0.01	0.04	385	0.08	0.01	147	0.05	982	0.33
2	169	0.01	0.04	152	0.01	0.04	119	0.02	0.00	117	0.04	577	0.23
3	113	0.00	0.03	113	0.00	0.03	48	0.01	0.00	22	0.00	296	0.15
4	72	0.00	0.01	50	0.00	0.01	30	0.00	0.00	13	0.00	165	0.13
5	50	0.00	0.01	32	0.00	0.00	18	0.00	0.00	9	0.00	109	0.12
6	83	0.00	0.02	94	0.00	0.02	14	0.00	0.00	21	0.00	212	0.14
7	131	0.01	0.03	242	0.00	0.07	45	0.01	0.00	82	0.03	500	0.22
8	250	0.02	0.06	337	0.01	0.09	88	0.01	0.00	138	0.05	813	0.29
9	345	0.02	0.08	539	0.01	0.15	201	0.03	0.02	306	0.12	1391	0.43
10	448	0.02	0.11	808	0.03	0.23	319	0.04	0.04	451	0.18	2026	0.59
11	648	0.03	0.16	941	0.03	0.27	468	0.05	0.06	522	0.20	2579	0.68
12	765	0.03	0.21	1010	0.03	0.29	626	0.06	0.09	613	0.24	3034	0.74
13	1025	0.04	0.27	1061	0.04	0.31	759	0.10	0.14	708	0.28	3553	0.83
14	1123	0.03	0.30	998	0.05	0.28	769	0.04	0.14	721	0.28	3611	0.79
15	1034	0.03	0.28	959	0.03	0.28	782	0.10	0.17	678	0.27	3453	0.79
16	1257	0.04	0.34	917	0.06	0.25	791	0.05	0.12	643	0.25	3608	0.81
17	1103	0.04	0.29	717	0.03	0.20	688	0.10	0.13	604	0.24	3112	0.78
18	1048	0.04	0.27	613	0.03	0.17	756	0.10	0.13	514	0.20	2931	0.73
19	700	0.06	0.17	598	0.05	0.16	769	0.10	0.03	337	0.13	2404	0.57
20	540	0.12	0.10	782	0.03	0.22	619	0.10	0.09	653	0.26	2594	0.81
21	473	0.07	0.10	558	0.05	0.14	599	0.10	0.08	384	0.15	2014	0.57
22	452	0.09	0.08	497	0.01	0.14	695	0.07	0.10	627	0.25	2271	0.66
23	346	0.02	0.08	287	0.01	0.08	520	0.09	0.06	220	0.08	1373	0.39
24	359	0.03	0.08	280	0.01	0.08	320	0.04	0.02	187	0.07	1146	0.34
	12855			12754			10428			8717		44754	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 7-74 DAY OF WEEK= SUNDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'E'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	355	0.02	0.09	249	0.02	0.06	440	0.10	0.03	249	0.09	1293	0.41
2	265	0.01	0.07	185	0.01	0.05	128	0.02	0.01	112	0.04	690	0.24
3	166	0.00	0.04	135	0.00	0.03	167	0.03	0.00	82	0.03	550	0.22
4	48	0.00	0.01	63	0.00	0.01	24	0.00	0.00	44	0.01	179	0.14
5	34	0.00	0.00	20	0.00	0.00	13	0.00	0.00	10	0.00	77	0.11
6	29	0.00	0.00	42	0.00	0.01	8	0.00	0.00	5	0.00	84	0.11
7	51	0.00	0.01	83	0.00	0.02	18	0.00	0.00	22	0.00	174	0.14
8	97	0.01	0.02	108	0.00	0.03	27	0.00	0.00	29	0.01	261	0.15
9	164	0.01	0.04	148	0.00	0.04	52	0.00	0.00	55	0.02	419	0.18
10	214	0.01	0.05	226	0.00	0.06	92	0.02	0.00	91	0.03	623	0.23
11	286	0.01	0.07	337	0.01	0.09	166	0.01	0.04	165	0.06	954	0.29
12	402	0.01	0.10	767	0.03	0.22	350	0.06	0.03	416	0.16	1935	0.59
13	632	0.04	0.16	1100	0.05	0.32	664	0.10	0.18	654	0.26	3050	0.83
14	1054	0.03	0.28	1166	0.09	0.32	776	0.09	0.11	698	0.27	3694	0.88
15	1286	0.06	0.34	1151	0.05	0.33	821	0.02	0.16	716	0.28	3974	0.80
16	1242	0.05	0.32	871	0.04	0.25	829	0.06	0.14	720	0.28	3662	0.84
17	1018	0.05	0.26	581	0.03	0.16	626	0.10	0.09	596	0.23	2821	0.76
18	991	0.06	0.25	531	0.01	0.15	606	0.04	0.09	489	0.19	2617	0.65
19	490	0.04	0.11	477	0.02	0.13	303	0.05	0.03	235	0.09	1505	0.42
20	446	0.06	0.09	509	0.02	0.14	426	0.08	0.03	228	0.09	1609	0.48
21	297	0.02	0.07	323	0.02	0.08	240	0.04	0.03	117	0.04	977	0.31
22	261	0.02	0.06	326	0.02	0.08	334	0.07	0.01	161	0.06	1102	0.35
23	261	0.01	0.06	342	0.01	0.10	171	0.03	0.02	63	0.02	837	0.27
24	158	0.00	0.04	162	0.00	0.04	160	0.03	0.00	51	0.02	531	0.21
	10267			9902			7441			6008		33618	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 8-74 DAY OF WEEK= MONDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'E'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	69	0.00	0.02	76	0.00	0.02	68	0.01	0.00	53	0.02	286	0.16
2	30	0.00	0.00	47	0.00	0.01	15	0.00	0.00	11	0.00	103	0.12
3	17	0.00	0.00	24	0.00	0.00	9	0.00	0.00	9	0.00	59	0.11
4	18	0.00	0.00	21	0.00	0.00	14	0.00	0.00	1	0.00	54	0.11
5	36	0.00	0.00	35	0.00	0.01	8	0.00	0.00	7	0.00	86	0.11
6	61	0.01	0.01	130	0.00	0.03	21	0.00	0.00	48	0.01	280	0.17
7	361	0.02	0.09	610	0.01	0.18	94	0.01	0.00	230	0.09	1315	0.41
8	684	0.09	0.15	1294	0.05	0.37	262	0.06	0.01	710	0.28	2950	0.91
9	500	0.10	0.09	1326	0.04	0.39	276	0.06	0.01	901	0.36	3003	1.02
10	414	0.05	0.09	849	0.04	0.24	342	0.07	0.01	498	0.19	2103	0.67
11	432	0.03	0.10	775	0.03	0.22	503	0.10	0.05	463	0.18	2173	0.65
12	668	0.04	0.17	746	0.03	0.21	720	0.10	0.15	517	0.20	2651	0.67
13	710	0.04	0.18	770	0.04	0.22	754	0.08	0.13	707	0.28	2941	0.73
14	799	0.05	0.20	708	0.03	0.20	689	0.10	0.13	769	0.30	2965	0.76
15	670	0.03	0.17	756	0.04	0.21	665	0.10	0.10	570	0.22	2661	0.68
16	952	0.03	0.25	749	0.03	0.21	762	0.06	0.12	523	0.20	2986	0.66
17	1314	0.04	0.35	880	0.04	0.25	1037	0.10	0.25	670	0.26	3901	0.86
18	1314	0.03	0.36	796	0.03	0.23	1028	0.10	0.21	426	0.17	3564	0.81
19	806	0.05	0.20	836	0.04	0.24	734	0.10	0.15	468	0.18	2844	0.68
20	665	0.04	0.16	694	0.03	0.20	636	0.10	0.09	422	0.16	2417	0.61
21	620	0.02	0.16	394	0.01	0.11	515	0.10	0.06	373	0.14	1902	0.54
22	508	0.02	0.13	227	0.01	0.06	599	0.10	0.08	320	0.12	1654	0.48
23	276	0.01	0.07	177	0.01	0.04	298	0.05	0.02	89	0.03	840	0.27
24	156	0.00	0.04	139	0.00	0.04	166	0.03	0.00	50	0.02	511	0.20
	12140			13059			10215			8835		44249	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 9-74 DAY OF WEEK= TUESDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'E'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	113	0.00	0.02	87	0.00	0.02	116	0.02	0.00	52	0.02	368	0.18
2	39	0.00	0.01	50	0.00	0.01	30	0.00	0.00	15	0.00	134	0.13
3	32	0.00	0.00	20	0.00	0.00	25	0.00	0.00	3	0.00	80	0.11
4	36	0.00	0.00	25	0.00	0.00	14	0.00	0.00	6	0.00	81	0.11
5	39	0.00	0.01	50	0.00	0.01	20	0.00	0.00	8	0.00	117	0.12
6	99	0.00	0.02	117	0.00	0.03	34	0.00	0.00	49	0.01	299	0.16
7	369	0.04	0.09	586	0.02	0.17	107	0.01	0.00	236	0.09	1318	0.42
8	664	0.09	0.15	1404	0.07	0.40	267	0.06	0.01	678	0.27	3013	0.92
9	515	0.09	0.10	1292	0.02	0.39	304	0.07	0.01	882	0.35	2993	1.00
10	436	0.05	0.10	885	0.03	0.26	368	0.08	0.01	493	0.19	2182	0.70
11	515	0.03	0.13	817	0.03	0.23	549	0.10	0.09	507	0.20	2388	0.68
12	292	0.03	0.06	747	0.03	0.21	771	0.10	0.13	531	0.21	2341	0.66
13	743	0.04	0.19	755	0.03	0.22	738	0.10	0.18	707	0.28	2943	0.74
14	763	0.04	0.19	754	0.03	0.21	663	0.10	0.13	753	0.30	2933	0.76
15	854	0.04	0.22	726	0.01	0.21	705	0.10	0.15	568	0.22	2853	0.69
16	1032	0.04	0.27	716	0.04	0.20	796	0.10	0.15	512	0.20	3056	0.72
17	1396	0.03	0.38	922	0.05	0.26	928	0.09	0.13	625	0.25	3871	0.87
18	1360	0.03	0.38	867	0.03	0.25	1043	0.10	0.26	390	0.15	3680	0.87
19	604	0.03	0.21	735	0.04	0.20	726	0.10	0.12	395	0.15	2660	0.61
20	557	0.03	0.14	711	0.04	0.20	584	0.10	0.08	492	0.19	2344	0.64
21	477	0.02	0.12	416	0.02	0.11	475	0.10	0.04	359	0.14	1727	0.49
22	583	0.02	0.15	278	0.01	0.07	619	0.10	0.09	323	0.12	1803	0.51
23	292	0.01	0.07	244	0.01	0.07	229	0.05	0.01	165	0.06	930	0.31
24	224	0.00	0.06	179	0.01	0.05	185	0.02	0.01	93	0.03	681	0.23
	12274			13383			10296			8842		44795	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4-10-74 DAY OF WEEK= WEDNESDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'E'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	139	0.01	0.03	105	0.00	0.03	114	0.02	0.00	75	0.03	433	0.20
2	65	0.00	0.01	86	0.00	0.02	45	0.01	0.00	35	0.01	231	0.15
3	33	0.00	0.00	37	0.00	0.01	31	0.00	0.00	11	0.00	112	0.12
4	34	0.00	0.00	19	0.00	0.00	10	0.00	0.00	5	0.00	68	0.11
5	38	0.00	0.01	49	0.00	0.01	19	0.00	0.00	8	0.00	114	0.12
6	90	0.00	0.02	136	0.00	0.04	34	0.00	0.00	45	0.01	305	0.17
7	375	0.03	0.09	591	0.02	0.17	129	0.03	0.00	257	0.10	1352	0.43
8	759	0.07	0.18	1340	0.08	0.37	343	0.04	0.04	713	0.28	3155	0.88
9	702	0.09	0.15	1250	0.03	0.37	323	0.05	0.02	850	0.34	3125	0.97
10	497	0.05	0.11	1009	0.04	0.29	370	0.08	0.01	515	0.20	2391	0.74
11	462	0.04	0.11	969	0.04	0.28	529	0.10	0.06	498	0.19	2458	0.73
12	714	0.04	0.18	800	0.04	0.22	851	0.10	0.18	572	0.22	2937	0.70
13	786	0.04	0.20	698	0.03	0.20	736	0.10	0.19	727	0.29	2947	0.74
14	837	0.04	0.22	884	0.04	0.25	710	0.10	0.15	701	0.28	3132	0.78
15	843	0.04	0.22	676	0.03	0.19	590	0.10	0.14	571	0.22	2679	0.69
16	1007	0.04	0.26	705	0.03	0.20	752	0.10	0.14	570	0.22	3034	0.74
17	1384	0.04	0.37	888	0.04	0.25	1034	0.10	0.25	610	0.24	3916	0.87
18	1376	0.03	0.37	835	0.05	0.23	1010	0.10	0.24	440	0.17	3661	0.87
19	905	0.03	0.24	770	0.04	0.21	688	0.10	0.14	418	0.16	2781	0.65
20	659	0.05	0.16	775	0.03	0.22	607	0.10	0.08	586	0.23	2627	0.70
21	571	0.02	0.15	402	0.03	0.10	531	0.10	0.06	413	0.16	1917	0.55
22	592	0.03	0.15	338	0.03	0.09	582	0.10	0.08	333	0.13	1845	0.51
23	329	0.02	0.08	270	0.01	0.07	291	0.06	0.01	173	0.06	1063	0.34
24	195	0.01	0.05	180	0.01	0.05	171	0.03	0.00	85	0.03	631	0.23
	13391			13812			10500			9211		46914	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4-11-74 DAY OF WEEK= THURSDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'E'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	164	0.00	0.04	113	0.00	0.03	139	0.02	0.01	87	0.03	503	0.20
2	82	0.00	0.02	65	0.00	0.01	50	0.01	0.00	21	0.00	218	0.14
3	53	0.00	0.01	29	0.00	0.00	21	0.00	0.00	10	0.00	113	0.12
4	48	0.00	0.01	16	0.00	0.00	18	0.00	0.00	8	0.00	90	0.12
5	44	0.00	0.01	46	0.00	0.01	8	0.00	0.00	8	0.00	106	0.12
6	97	0.00	0.02	143	0.00	0.04	23	0.00	0.00	50	0.02	313	0.17
7	365	0.02	0.09	608	0.01	0.18	94	0.01	0.00	252	0.10	1319	0.42
8	772	0.06	0.19	1303	0.07	0.37	283	0.02	0.04	797	0.31	3155	0.89
9	716	0.08	0.16	1309	0.03	0.39	303	0.03	0.04	910	0.36	3238	0.97
10	509	0.05	0.12	802	0.03	0.23	367	0.06	0.04	464	0.18	2142	0.63
11	417	0.04	0.10	757	0.02	0.22	498	0.10	0.05	442	0.17	2114	0.63
12	612	0.04	0.15	679	0.03	0.19	663	0.10	0.11	474	0.18	2428	0.63
13	666	0.04	0.17	675	0.03	0.19	733	0.10	0.16	701	0.28	2775	0.72
14	716	0.05	0.18	812	0.06	0.22	611	0.10	0.08	668	0.26	2807	0.75
15	648	0.04	0.22	725	0.04	0.20	726	0.10	0.11	576	0.23	2875	0.70
16	1012	0.04	0.27	707	0.03	0.20	805	0.10	0.11	555	0.22	3079	0.73
17	456	0.04	0.11	852	0.04	0.24	1031	0.10	0.21	631	0.25	2969	0.74
18	1312	0.04	0.35	809	0.04	0.23	989	0.10	0.19	375	0.15	3485	0.79
19	821	0.04	0.21	804	0.05	0.22	625	0.10	0.08	424	0.16	2674	0.64
20	719	0.05	0.18	807	0.05	0.22	611	0.10	0.07	484	0.19	2621	0.67
21	615	0.01	0.16	497	0.02	0.14	522	0.10	0.06	394	0.15	2028	0.55
22	691	0.03	0.18	377	0.02	0.10	657	0.10	0.07	376	0.15	2101	0.56
23	287	0.02	0.07	271	0.02	0.07	229	0.04	0.01	152	0.06	939	0.29
24	235	0.01	0.06	168	0.00	0.04	243	0.05	0.01	90	0.03	736	0.26
	12256			13374			10249			8949		44828	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4-12-74 DAY OF WEEK= FRIDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'E'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	189	0.01	0.04	127	0.00	0.03	144	0.03	0.00	107	0.04	567	0.23
2	110	0.00	0.03	81	0.00	0.02	55	0.00	0.00	49	0.01	295	0.15
3	42	0.00	0.01	41	0.00	0.01	30	0.00	0.00	10	0.00	123	0.12
4	49	0.00	0.01	30	0.00	0.00	18	0.00	0.00	16	0.00	113	0.12
5	45	0.00	0.01	47	0.00	0.01	10	0.00	0.00	6	0.00	108	0.11
6	98	0.00	0.02	94	0.00	0.02	20	0.00	0.00	30	0.01	242	0.15
7	285	0.02	0.07	415	0.01	0.12	64	0.01	0.00	145	0.05	909	0.31
8	521	0.02	0.13	864	0.03	0.25	181	0.00	0.03	518	0.20	2084	0.60
9	524	0.05	0.12	902	0.02	0.27	266	0.04	0.02	598	0.23	2290	0.70
10	573	0.05	0.14	874	0.03	0.25	372	0.03	0.06	495	0.19	2314	0.64
11	737	0.04	0.19	946	0.04	0.27	571	0.07	0.08	585	0.23	2839	0.73
12	882	0.04	0.23	830	0.04	0.23	783	0.10	0.18	650	0.26	3145	0.74
13	1004	0.04	0.26	859	0.04	0.24	1033	0.10	0.29	702	0.28	3598	0.80
14	927	0.04	0.24	830	0.05	0.23	836	0.10	0.19	762	0.30	3355	0.80
15	1052	0.05	0.27	979	0.05	0.28	852	0.10	0.20	726	0.29	3609	0.82
16	1220	0.04	0.33	814	0.03	0.23	834	0.10	0.19	699	0.27	3567	0.85
17	1194	0.03	0.32	779	0.03	0.22	875	0.10	0.21	629	0.25	3477	0.81
18	1038	0.03	0.28	718	0.04	0.20	812	0.10	0.18	483	0.19	3051	0.72
19	801	0.03	0.21	676	0.04	0.19	550	0.07	0.07	444	0.17	2471	0.60
20	566	0.05	0.14	809	0.03	0.23	566	0.09	0.06	576	0.23	2517	0.70
21	607	0.03	0.15	514	0.03	0.14	585	0.08	0.07	450	0.18	2156	0.55
22	564	0.05	0.13	476	0.03	0.13	627	0.10	0.12	428	0.17	2095	0.56
23	240	0.02	0.06	213	0.01	0.06	323	0.05	0.03	238	0.09	1014	0.32
24	291	0.01	0.07	206	0.01	0.05	169	0.02	0.01	165	0.06	831	0.28
	13559			13124			10576			9511		46770	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4-13-74 DAY OF WEEK= SATURDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'E'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	227	0.00	0.06	161	0.01	0.04	352	0.08	0.01	156	0.06	896	0.31
2	168	0.00	0.04	128	0.00	0.03	64	0.01	0.00	69	0.02	429	0.19
3	114	0.00	0.02	82	0.00	0.02	36	0.00	0.00	31	0.01	263	0.15
4	60	0.00	0.01	44	0.00	0.01	35	0.00	0.00	168	0.06	307	0.19
5	40	0.00	0.01	26	0.00	0.00	19	0.00	0.00	6	0.00	91	0.11
6	55	0.00	0.01	53	0.00	0.01	8	0.00	0.00	19	0.00	135	0.12
7	112	0.00	0.03	183	0.00	0.05	41	0.00	0.00	48	0.01	384	0.18
8	228	0.00	0.06	265	0.00	0.07	69	0.01	0.00	95	0.03	657	0.24
9	322	0.01	0.08	453	0.00	0.13	145	0.00	0.02	258	0.10	1178	0.35
10	419	0.02	0.11	720	0.02	0.21	289	0.02	0.04	423	0.16	1851	0.53
11	678	0.02	0.18	864	0.04	0.25	429	0.03	0.07	536	0.21	2507	0.64
12	612	0.01	0.22	964	0.05	0.27	599	0.08	0.07	556	0.22	2931	0.73
13	916	0.02	0.25	891	0.04	0.25	701	0.10	0.14	615	0.24	3123	0.74
14	907	0.03	0.24	880	0.04	0.25	752	0.10	0.16	643	0.25	3182	0.75
15	872	0.03	0.23	878	0.03	0.25	663	0.10	0.10	641	0.25	3054	0.74
16	997	0.03	0.27	761	0.02	0.22	662	0.10	0.12	618	0.24	3038	0.75
17	955	0.03	0.25	637	0.02	0.18	614	0.10	0.09	505	0.20	2711	0.69
18	897	0.02	0.24	500	0.03	0.14	706	0.09	0.10	412	0.16	2515	0.63
19	497	0.03	0.12	471	0.04	0.12	308	0.03	0.04	244	0.09	1520	0.40
20	493	0.07	0.11	562	0.03	0.16	328	0.03	0.05	447	0.17	1830	0.54
21	335	0.02	0.08	431	0.02	0.12	401	0.04	0.07	242	0.09	1409	0.38
22	377	0.05	0.08	411	0.02	0.11	398	0.06	0.05	267	0.10	1453	0.44
23	268	0.03	0.06	270	0.01	0.07	386	0.06	0.03	252	0.10	1196	0.37
24	230	0.01	0.05	218	0.01	0.06	162	0.03	0.01	135	0.05	745	0.26
	10999			10853			8167			7386		37405	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-13-74 DAY OF WEEK= WEDNESDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'E'

	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
HOUR	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	6	0.14	89	0.17	7	0.17	77	0.16	98	0.10	51	0.17
2	9	0.14	40	0.08	9	0.14	62	0.14	28	0.05	37	0.14
3	0	0.00	39	0.10	4	0.12	42	0.12	28	0.12	4	0.12
4	3	0.05	22	0.08	7	0.11	29	0.11	13	0.08	6	0.11
5	1	0.02	38	0.11	4	0.11	35	0.11	7	0.04	8	0.11
6	6	0.18	59	0.05	2	0.06	163	0.18	22	0.04	51	0.18
7	46	0.45	279	0.17	16	0.15	665	0.45	100	0.11	223	0.45
8	141	1.02	561	0.35	119	0.86	1462	1.02	280	0.21	764	1.02
9	156	1.10	369	0.23	64	0.45	1587	1.10	260	0.19	874	1.10
10	100	0.72	325	0.23	57	0.41	916	0.72	323	0.24	488	0.72
11	69	0.65	445	0.37	59	0.56	723	0.65	599	0.42	465	0.65
12	75	0.67	542	0.51	55	0.49	648	0.67	775	0.54	550	0.67
13	75	0.73	576	0.57	35	0.34	670	0.73	730	0.53	696	0.73
14	75	0.74	631	0.63	46	0.45	677	0.74	689	0.41	701	0.74
15	75	0.69	670	0.65	54	0.50	655	0.69	706	0.44	601	0.69
16	81	0.76	985	0.76	66	0.62	645	0.54	762	0.54	571	0.76
17	64	0.72	1206	0.83	74	0.83	856	0.65	1047	0.79	611	0.83
18	65	0.71	1236	0.80	73	0.80	796	0.56	970	0.80	435	0.69
19	71	0.63	885	0.67	76	0.67	739	0.61	666	0.54	428	0.67
20	79	0.65	738	0.63	52	0.42	688	0.65	564	0.40	458	0.65
21	41	0.54	578	0.54	32	0.42	392	0.40	460	0.30	386	0.54
22	44	0.49	509	0.49	43	0.48	339	0.36	543	0.37	304	0.49
23	27	0.30	301	0.30	21	0.23	258	0.28	275	0.23	86	0.30
24	20	0.26	248	0.26	5	0.06	195	0.23	215	0.19	86	0.26
	1329		11371		980		13319		10160		8884	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-14-74 DAY OF WEEK= THURSDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'E'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	17	0.19	125	0.19	13	0.14	106	0.17	109	0.12	49	0.19
2	2	0.05	55	0.10	5	0.14	75	0.14	49	0.09	28	0.14
3	3	0.12	25	0.08	3	0.12	32	0.12	29	0.12	3	0.10
4	3	0.11	25	0.11	2	0.07	23	0.11	25	0.08	9	0.11
5	3	0.09	30	0.07	4	0.12	43	0.12	17	0.08	8	0.12
6	14	0.17	63	0.07	3	0.03	134	0.17	21	0.04	51	0.17
7	43	0.42	276	0.18	16	0.15	597	0.42	68	0.07	240	0.42
8	119	0.97	541	0.32	114	0.93	1465	0.97	267	0.21	686	0.97
9	180	0.99	357	0.21	59	0.32	1545	0.99	232	0.21	599	0.99
10	92	0.74	301	0.22	62	0.50	910	0.74	406	0.28	517	0.74
11	73	0.62	360	0.27	83	0.71	842	0.71	531	0.39	494	0.71
12	75	0.69	449	0.39	44	0.40	724	0.69	733	0.49	538	0.69
13	67	0.73	424	0.40	60	0.65	705	0.73	665	0.41	665	0.73
14	86	0.75	496	0.51	62	0.54	659	0.75	657	0.39	730	0.75
15	83	0.72	696	0.64	48	0.41	715	0.72	724	0.47	611	0.72
16	67	0.67	782	0.65	67	0.67	731	0.67	748	0.51	502	0.67
17	82	0.78	1274	0.85	90	0.85	963	0.70	1043	0.80	582	0.85
18	62	0.51	1253	0.83	101	0.83	1041	0.76	1005	0.83	433	0.68
19	63	0.66	935	0.66	61	0.64	759	0.59	637	0.51	393	0.66
20	84	0.69	778	0.60	55	0.45	814	0.69	539	0.37	491	0.69
21	29	0.43	754	0.58	39	0.58	409	0.34	487	0.28	397	0.58
22	46	0.56	712	0.56	16	0.19	335	0.28	515	0.38	316	0.56
23	34	0.31	360	0.31	30	0.27	253	0.24	175	0.17	140	0.31
24	14	0.24	279	0.24	9	0.15	201	0.19	196	0.20	59	0.24
	1341		11350		1046		14081		9878		8541	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-15-74 DAY OF WEEK= FRIDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'E'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	18	0.22	211	0.22	14	0.17	120	0.13	122	0.13	80	0.22
2	8	0.16	124	0.16	8	0.16	75	0.10	52	0.07	39	0.16
3	4	0.13	73	0.13	3	0.10	29	0.05	31	0.09	14	0.13
4	2	0.12	41	0.12	1	0.06	37	0.11	10	0.04	14	0.12
5	2	0.07	41	0.11	3	0.11	36	0.11	11	0.07	7	0.11
6	12	0.17	112	0.13	7	0.10	130	0.17	25	0.03	57	0.17
7	52	0.41	382	0.25	20	0.15	573	0.41	92	0.09	207	0.41
8	121	0.98	888	0.57	108	0.87	1382	0.98	239	0.19	828	0.98
9	183	1.11	757	0.49	66	0.40	1569	1.11	317	0.22	883	1.11
10	91	0.72	601	0.40	30	0.24	978	0.72	360	0.26	507	0.72
11	78	0.65	595	0.47	66	0.55	751	0.65	442	0.28	477	0.65
12	86	0.70	734	0.62	49	0.40	759	0.70	732	0.53	526	0.70
13	102	0.75	666	0.61	56	0.41	745	0.75	748	0.65	628	0.75
14	91	0.76	395	0.38	60	0.50	711	0.76	666	0.41	699	0.76
15	78	0.70	668	0.56	46	0.41	759	0.70	657	0.45	541	0.70
16	81	0.68	787	0.68	65	0.54	643	0.61	778	0.54	512	0.68
17	66	0.76	1178	0.82	71	0.82	917	0.70	1043	0.78	601	0.82
18	56	0.75	1234	0.79	59	0.79	975	0.68	966	0.79	445	0.70
19	66	0.51	816	0.57	95	0.73	960	0.73	669	0.55	432	0.73
20	77	0.82	700	0.50	68	0.72	1038	0.82	613	0.45	613	0.82
21	54	0.61	420	0.41	43	0.48	564	0.61	526	0.33	495	0.61
22	74	0.58	504	0.53	47	0.37	509	0.58	666	0.43	444	0.58
23	38	0.40	250	0.31	31	0.32	294	0.40	329	0.19	269	0.40
24	35	0.33	220	0.26	17	0.16	250	0.33	336	0.23	132	0.33
	1475		12397		1033		14804		10430		9450	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-16-74 DAY OF WEEK= SATURDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'E'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	25	0.24	162	0.19	21	0.20	181	0.24	255	0.17	196	0.24
2	12	0.19	180	0.20	13	0.20	159	0.20	74	0.08	83	0.20
3	11	0.17	128	0.15	8	0.12	130	0.17	44	0.08	37	0.17
4	6	0.08	53	0.13	10	0.13	50	0.13	35	0.08	20	0.13
5	6	0.12	39	0.12	5	0.10	29	0.09	14	0.08	7	0.12
6	8	0.14	49	0.08	2	0.03	78	0.14	17	0.05	20	0.14
7	15	0.20	110	0.10	3	0.04	194	0.20	29	0.05	62	0.20
8	15	0.21	204	0.16	20	0.28	312	0.28	63	0.07	137	0.28
9	31	0.43	260	0.20	22	0.30	501	0.43	169	0.13	287	0.43
10	60	0.60	403	0.29	35	0.35	771	0.60	268	0.19	412	0.60
11	55	0.70	429	0.32	40	0.51	841	0.70	442	0.31	519	0.70
12	71	0.78	654	0.47	57	0.63	986	0.78	597	0.43	577	0.78
13	74	0.82	858	0.59	84	0.93	1224	0.93	851	0.72	732	0.93
14	57	0.66	913	0.70	71	0.83	987	0.83	772	0.61	688	0.83
15	80	0.82	928	0.64	59	0.61	1089	0.82	733	0.74	586	0.82
16	74	0.84	1099	0.84	62	0.71	771	0.65	723	0.49	713	0.84
17	82	0.77	952	0.77	58	0.54	708	0.63	678	0.46	621	0.77
18	71	0.73	1075	0.73	50	0.51	525	0.39	735	0.57	445	0.73
19	79	0.52	397	0.34	56	0.37	551	0.52	319	0.23	308	0.52
20	127	0.68	295	0.34	67	0.36	533	0.68	540	0.34	585	0.68
21	115	0.53	224	0.20	45	0.21	550	0.53	270	0.21	317	0.53
22	124	0.56	256	0.31	36	0.16	417	0.56	655	0.55	392	0.56
23	38	0.39	226	0.30	27	0.28	265	0.39	338	0.19	270	0.39
24	55	0.34	299	0.34	55	0.34	-25	-0.03	351	0.28	170	0.34
	1291		10193		906		11827		8972		8184	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-17-74 DAY OF WEEK= SUNDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'E'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	56	0.37	264	0.37	12	0.07	210	0.32	351	0.22	191	0.37
2	21	0.25	222	0.25	22	0.26	216	0.26	136	0.13	141	0.26
3	11	0.20	144	0.18	13	0.24	181	0.24	161	0.13	114	0.24
4	10	0.14	63	0.09	5	0.07	88	0.14	23	0.07	16	0.14
5	4	0.12	33	0.09	2	0.06	40	0.12	21	0.07	12	0.12
6	4	0.11	26	0.08	3	0.08	35	0.11	13	0.09	4	0.11
7	8	0.12	30	0.10	2	0.03	34	0.12	4	0.01	19	0.12
8	10	0.15	51	0.08	6	0.09	84	0.15	29	0.05	39	0.15
9	14	0.16	97	0.13	10	0.12	114	0.16	40	0.07	40	0.16
10	19	0.17	164	0.18	23	0.20	168	0.20	72	0.12	80	0.20
11	31	0.31	186	0.17	16	0.16	296	0.31	159	0.13	155	0.31
12	29	0.18	526	0.37	72	0.47	607	0.47	326	0.21	331	0.47
13	83	0.66	558	0.40	100	0.79	994	0.79	491	0.37	548	0.79
14	78	0.78	808	0.56	89	0.90	1170	0.90	776	0.57	689	0.90
15	79	0.86	819	0.60	80	0.87	1076	0.87	809	0.56	717	0.87
16	73	0.80	873	0.73	63	0.69	878	0.80	797	0.51	713	0.80
17	60	0.77	967	0.77	50	0.64	663	0.58	666	0.44	648	0.77
18	95	0.66	870	0.66	44	0.30	562	0.46	545	0.37	445	0.66
19	72	0.44	482	0.44	43	0.26	417	0.42	293	0.22	236	0.44
20	79	0.49	257	0.25	58	0.36	452	0.49	279	0.19	332	0.49
21	49	0.35	212	0.18	16	0.11	383	0.35	195	0.18	151	0.35
22	62	0.41	287	0.27	17	0.11	390	0.41	373	0.28	158	0.41
23	22	0.26	278	0.26	26	0.31	303	0.31	141	0.12	169	0.31
24	16	0.22	177	0.18	14	0.19	190	0.22	113	0.13	61	0.22
	985		8394		786		9551		6813		6009	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-18-74 DAY OF WEEK= MONDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'E'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	8	0.18	99	0.16	9	0.20	112	0.20	151	0.13	71	0.20
2	6	0.12	73	0.12	1	0.02	55	0.10	21	0.12	12	0.08
3	1	0.02	16	0.08	5	0.11	21	0.11	14	0.07	8	0.11
4	3	0.08	15	0.06	4	0.11	24	0.11	16	0.07	9	0.11
5	3	0.11	28	0.10	1	0.03	27	0.11	8	0.09	3	0.11
6	8	0.16	71	0.09	1	0.02	107	0.16	18	0.03	51	0.16
7	49	0.39	293	0.21	20	0.16	489	0.39	77	0.07	232	0.39
8	140	0.95	565	0.42	116	0.79	1163	0.95	233	0.15	859	0.95
9	254	1.14	245	0.17	43	0.19	1505	1.14	275	0.21	865	1.14
10	119	0.73	284	0.21	52	0.32	908	0.73	327	0.24	501	0.73
11	86	0.67	343	0.27	43	0.33	777	0.67	447	0.34	425	0.67
12	64	0.64	438	0.40	52	0.52	640	0.64	685	0.44	515	0.64
13	73	0.75	439	0.41	55	0.57	728	0.75	757	0.46	709	0.75
14	69	0.74	596	0.53	57	0.61	758	0.74	620	0.39	655	0.74
15	60	0.66	598	0.53	49	0.54	687	0.66	666	0.43	535	0.66
16	36	0.44	892	0.69	56	0.69	666	0.56	711	0.53	498	0.69
17	51	0.58	1206	0.83	73	0.83	819	0.62	990	0.74	607	0.83
18	59	0.66	1211	0.82	73	0.82	855	0.63	1064	0.82	349	0.50
19	83	0.63	708	0.63	62	0.47	645	0.62	710	0.50	436	0.63
20	41	0.52	528	0.43	47	0.60	663	0.60	488	0.34	409	0.60
21	38	0.49	456	0.44	14	0.18	466	0.49	454	0.30	313	0.49
22	34	0.43	403	0.43	20	0.25	269	0.31	483	0.32	250	0.43
23	9	0.14	203	0.28	18	0.28	182	0.27	262	0.18	130	0.23
24	14	0.21	150	0.21	8	0.12	132	0.20	144	0.14	62	0.21
	1308		9860		879		12698		9621		8504	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-19-74 DAY OF WEEK= TUESDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'E'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	9	0.19	113	0.19	3	0.06	78	0.14	128	0.12	63	0.19
2	6	0.11	61	0.13	7	0.13	58	0.13	41	0.10	13	0.13
3	0	0.00	36	0.08	0	0.00	50	0.12	25	0.08	13	0.12
4	6	0.11	30	0.11	4	0.07	20	0.08	14	0.10	4	0.11
5	1	0.11	28	0.07	1	0.11	41	0.11	17	0.11	2	0.08
6	6	0.17	70	0.07	6	0.17	138	0.17	17	0.03	52	0.17
7	40	0.40	310	0.23	24	0.24	491	0.40	72	0.06	272	0.40
8	175	0.91	584	0.51	111	0.58	948	0.91	241	0.15	866	0.91
9	199	0.90	349	0.35	51	0.23	806	0.90	306	0.18	871	0.90
10	96	0.60	295	0.28	41	0.26	576	0.60	348	0.22	517	0.60
11	79	0.62	329	0.28	76	0.59	650	0.62	458	0.30	478	0.62
12	69	0.62	441	0.42	61	0.55	594	0.62	680	0.56	493	0.62
13	94	0.73	440	0.53	45	0.35	547	0.73	739	0.49	748	0.73
14	65	0.73	472	0.47	64	0.72	662	0.73	633	0.42	715	0.73
15	87	0.67	635	0.62	33	0.25	629	0.67	677	0.48	555	0.67
16	71	0.69	745	0.63	61	0.59	745	0.69	756	0.51	527	0.69
17	63	0.79	1211	0.80	64	0.80	387	0.28	1041	0.57	615	0.80
18	56	0.58	1110	0.78	75	0.78	754	0.58	1036	0.78	424	0.60
19	94	0.62	605	0.52	78	0.51	655	0.62	648	0.49	384	0.62
20	62	0.56	481	0.44	69	0.63	630	0.63	463	0.31	472	0.63
21	12	0.34	420	0.48	17	0.48	367	0.46	443	0.26	381	0.48
22	47	0.45	367	0.45	30	0.29	267	0.36	630	0.40	302	0.45
23	31	0.25	222	0.25	16	0.13	197	0.25	179	0.17	86	0.25
24	18	0.23	168	0.20	7	0.09	175	0.23	154	0.14	81	0.23
	1386		9522		944		10465		9746		8934	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-20-74 DAY OF WEEK= WEDNESDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'E'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	22	0.21	134	0.21	9	0.08	-2	-0.00	166	0.16	51	0.21
2	14	0.15	70	0.13	6	0.06	75	0.15	48	0.09	28	0.15
3	2	0.03	24	0.10	8	0.12	27	0.12	34	0.11	6	0.12
4	2	0.03	29	0.11	6	0.11	21	0.09	10	0.07	6	0.11
5	2	0.06	24	0.05	4	0.12	49	0.12	11	0.07	6	0.12
6	10	0.17	65	0.08	2	0.03	124	0.17	24	0.03	59	0.17
7	37	0.40	251	0.16	26	0.28	555	0.40	91	0.09	206	0.40
8	135	0.88	480	0.35	142	0.92	1155	0.92	265	0.18	776	0.92
9	209	1.02	343	0.25	58	0.28	1270	1.02	294	0.21	811	1.02
10	90	0.72	312	0.22	40	0.32	912	0.72	347	0.24	507	0.72
11	58	0.68	370	0.29	33	0.38	784	0.68	458	0.32	500	0.68
12	76	0.68	555	0.50	54	0.48	681	0.68	682	0.48	552	0.68
13	89	0.77	600	0.59	62	0.53	714	0.77	812	0.60	731	0.77
14	63	0.74	618	0.59	48	0.57	716	0.74	671	0.46	709	0.74
15	68	0.68	643	0.57	38	0.38	692	0.68	687	0.45	551	0.68
16	76	0.72	916	0.72	71	0.67	703	0.60	784	0.58	530	0.72
17	79	0.84	1251	0.86	81	0.86	811	0.61	1055	0.86	630	0.85
18	50	0.58	1222	0.81	69	0.81	745	0.54	995	0.81	401	0.59
19	66	0.62	645	0.53	68	0.64	714	0.64	634	0.45	437	0.64
20	79	0.64	563	0.51	35	0.28	646	0.64	571	0.50	469	0.64
21	46	0.46	392	0.46	32	0.32	350	0.45	446	0.28	317	0.46
22	45	0.46	402	0.46	29	0.29	218	0.27	528	0.34	294	0.46
23	31	0.30	256	0.30	13	0.12	214	0.27	227	0.17	142	0.30
24	16	0.24	182	0.24	11	0.16	154	0.22	214	0.17	87	0.24
	1365		10347		945		12328		10054		8806	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-21-74 DAY OF WEEK= THURSDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'E'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	12	0.18	151	0.18	10	0.15	84	0.11	55	0.07	63	0.18
2	5	0.07	80	0.15	11	0.15	74	0.15	54	0.09	32	0.15
3	0	0.00	37	0.12	1	0.12	33	0.11	34	0.09	11	0.12
4	1	0.05	32	0.11	2	0.11	17	0.06	10	0.07	5	0.11
5	5	0.12	19	0.05	1	0.02	37	0.12	11	0.06	8	0.12
6	8	0.17	81	0.09	5	0.11	131	0.17	23	0.03	61	0.17
7	45	0.40	263	0.18	23	0.20	519	0.40	79	0.07	248	0.40
8	145	0.94	544	0.40	126	0.81	1160	0.94	243	0.16	812	0.94
9	196	1.06	393	0.28	48	0.26	1352	1.06	336	0.24	836	1.06
10	130	0.67	365	0.31	72	0.37	708	0.67	376	0.26	443	0.67
11	63	0.63	335	0.28	62	0.62	681	0.63	415	0.26	453	0.63
12	82	0.65	370	0.37	51	0.40	584	0.65	713	0.45	533	0.65
13	93	0.73	440	0.43	39	0.30	677	0.73	723	0.45	654	0.73
14	76	0.73	441	0.43	64	0.61	678	0.73	630	0.38	684	0.73
15	72	0.67	595	0.54	35	0.32	671	0.67	691	0.45	535	0.67
16	77	0.68	769	0.68	63	0.55	706	0.68	766	0.52	528	0.68
17	62	0.71	1268	0.85	74	0.85	824	0.60	1008	0.85	601	0.84
18	77	0.79	1133	0.79	75	0.77	759	0.58	1025	0.79	391	0.57
19	95	0.66	695	0.59	72	0.50	715	0.66	715	0.56	453	0.66
20	86	0.67	484	0.43	76	0.59	690	0.67	607	0.42	498	0.67
21	48	0.52	465	0.51	38	0.41	429	0.52	500	0.31	392	0.52
22	66	0.47	446	0.47	29	0.21	263	0.30	588	0.41	269	0.47
23	28	0.32	308	0.32	19	0.22	206	0.23	260	0.19	160	0.32
24	21	0.24	190	0.24	20	0.23	174	0.24	187	0.16	86	0.24
	1493		9904		1016		12172		10049		8756	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-22-74 DAY OF WEEK= FRIDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'E'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	10	0.12	124	0.20	17	0.20	105	0.19	143	0.13	67	0.20
2	5	0.12	70	0.14	6	0.15	66	0.15	60	0.09	36	0.15
3	4	0.12	32	0.10	1	0.03	36	0.12	28	0.09	10	0.12
4	4	0.11	32	0.11	4	0.11	24	0.09	8	0.06	6	0.11
5	6	0.12	38	0.11	3	0.06	37	0.12	16	0.10	4	0.12
6	18	0.17	68	0.09	1	0.00	112	0.17	24	0.04	58	0.17
7	42	0.41	272	0.19	27	0.26	529	0.41	85	0.07	260	0.41
8	156	0.76	481	0.35	113	0.70	1201	0.96	248	0.17	831	0.96
9	224	1.17	282	0.20	56	0.26	1357	1.07	279	0.20	830	1.07
10	110	0.73	319	0.23	62	0.41	927	0.73	334	0.24	492	0.73
11	78	0.67	518	0.42	66	0.57	758	0.67	484	0.37	477	0.67
12	93	0.69	487	0.43	52	0.38	709	0.69	778	0.53	527	0.69
13	82	0.75	603	0.60	52	0.47	680	0.75	777	0.56	709	0.75
14	52	0.74	530	0.50	39	0.55	721	0.74	685	0.41	712	0.74
15	34	0.45	796	0.69	52	0.69	677	0.64	738	0.54	581	0.69
16	37	0.47	996	0.74	58	0.74	755	0.61	887	0.73	552	0.74
17	59	0.91	1366	0.91	43	0.66	898	0.65	1074	0.91	628	0.81
18	64	0.88	1300	0.88	43	0.59	868	0.64	1028	0.88	403	0.53
19	107	0.69	660	0.53	12	0.07	789	0.69	709	0.54	449	0.69
20	84	0.61	665	0.58	111	0.81	844	0.81	599	0.37	706	0.81
21	71	0.58	514	0.52	48	0.39	515	0.58	514	0.33	431	0.58
22	126	0.62	526	0.62	16	0.07	442	0.57	732	0.49	465	0.62
23	54	0.37	281	0.37	12	0.08	224	0.32	298	0.19	218	0.37
24	29	0.31	254	0.31	12	0.13	224	0.30	285	0.20	168	0.31
	1549		11213		906		13498		10813		9620	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-23-74 DAY OF WEEK= SATURDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'E'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	16	0.32	235	0.32	15	0.30	213	0.32	396	0.24	141	0.32
2	24	0.21	157	0.20	12	0.10	146	0.21	81	0.09	79	0.21
3	9	0.17	112	0.13	2	0.03	134	0.17	54	0.09	36	0.17
4	5	0.12	37	0.09	4	0.10	43	0.12	30	0.11	5	0.12
5	3	0.12	28	0.06	2	0.08	51	0.12	15	0.09	5	0.12
6	6	0.13	60	0.10	1	0.02	69	0.13	10	0.02	26	0.13
7	16	0.21	102	0.11	9	0.11	174	0.21	41	0.05	90	0.21
8	24	0.27	140	0.12	13	0.14	284	0.27	79	0.08	120	0.27
9	69	0.43	194	0.15	13	0.08	509	0.43	148	0.13	238	0.43
10	70	0.63	255	0.19	39	0.35	779	0.63	303	0.21	440	0.63
11	64	0.72	421	0.31	60	0.68	878	0.72	483	0.34	528	0.72
12	84	0.73	564	0.41	46	0.40	915	0.73	703	0.54	490	0.73
13	78	0.80	637	0.52	63	0.64	896	0.80	840	0.56	672	0.80
14	72	0.69	726	0.62	84	0.80	859	0.80	811	0.52	708	0.80
15	102	0.83	794	0.72	72	0.58	831	0.83	788	0.50	762	0.83
16	87	0.74	710	0.72	60	0.51	666	0.74	774	0.47	688	0.74
17	93	0.70	642	0.64	49	0.37	642	0.70	743	0.47	610	0.70
18	70	0.67	889	0.67	51	0.49	528	0.44	685	0.51	444	0.67
19	115	0.54	427	0.42	87	0.40	499	0.54	360	0.25	315	0.54
20	161	0.70	346	0.37	113	0.49	589	0.70	507	0.35	523	0.70
21	122	0.52	214	0.23	53	0.23	449	0.52	324	0.22	332	0.52
22	168	0.57	130	0.20	60	0.20	339	0.57	815	0.56	391	0.57
23	41	0.30	257	0.30	28	0.20	229	0.29	231	0.18	133	0.30
24	37	0.37	245	0.33	23	0.23	249	0.37	551	0.37	147	0.31
	1536		8322		959		10971		9772		7923	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-24-74 DAY OF WEEK= SUNDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'E'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	37	0.32	227	0.26	21	0.18	249	0.32	193	0.14	189	0.32
2	15	0.12	195	0.23	28	0.23	171	0.22	112	0.12	87	0.23
3	8	0.19	82	0.08	6	0.14	180	0.19	97	0.15	28	0.19
4	2	0.02	53	0.08	12	0.14	79	0.14	24	0.08	16	0.14
5	4	0.11	21	0.07	1	0.02	31	0.11	13	0.07	7	0.11
6	4	0.11	18	0.07	2	0.05	24	0.11	8	0.06	5	0.11
7	6	0.12	12	0.07	2	0.04	52	0.12	8	0.02	20	0.12
8	12	0.15	53	0.10	11	0.13	82	0.15	18	0.04	36	0.15
9	19	0.16	101	0.16	7	0.06	88	0.15	27	0.04	47	0.16
10	30	0.22	127	0.13	22	0.16	199	0.22	52	0.07	74	0.22
11	30	0.28	171	0.18	24	0.22	244	0.28	92	0.08	162	0.28
12	49	0.38	287	0.22	59	0.46	537	0.46	166	0.13	300	0.46
13	47	0.43	472	0.35	81	0.74	903	0.74	350	0.23	567	0.74
14	63	0.51	668	0.50	106	0.86	1038	0.86	664	0.47	679	0.86
15	130	0.99	712	0.50	115	0.87	1276	0.99	776	0.58	768	0.99
16	104	0.80	941	0.79	52	0.40	874	0.80	821	0.56	656	0.80
17	113	0.82	1059	0.82	34	0.24	649	0.55	829	0.52	617	0.82
18	79	0.60	644	0.60	78	0.59	461	0.47	626	0.43	420	0.60
19	99	0.51	317	0.31	63	0.32	474	0.51	606	0.48	245	0.51
20	83	0.53	223	0.23	78	0.50	466	0.53	303	0.19	402	0.53
21	45	0.33	188	0.17	48	0.35	344	0.35	426	0.35	174	0.35
22	53	0.36	201	0.21	46	0.31	314	0.36	240	0.18	198	0.36
23	27	0.32	184	0.19	22	0.26	281	0.32	334	0.25	103	0.32
24	9	0.20	112	0.12	10	0.22	191	0.22	171	0.18	47	0.22
	1068		7098		928		9207		6956		5847	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-25-74 DAY OF WEEK= MONDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'E'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	6	0.17	56	0.07	6	0.17	114	0.17	68	0.09	52	0.17
2	8	0.12	24	0.06	3	0.04	46	0.12	15	0.07	8	0.12
3	1	0.03	17	0.07	3	0.11	23	0.11	9	0.06	6	0.11
4	1	0.11	11	0.05	0	0.00	20	0.11	14	0.11	3	0.05
5	0	0.00	26	0.08	2	0.11	33	0.11	8	0.06	5	0.11
6	16	0.15	61	0.11	1	0.00	74	0.15	21	0.03	47	0.15
7	67	0.37	289	0.29	28	0.15	328	0.37	94	0.07	255	0.37
8	175	0.88	457	0.37	141	0.71	993	0.88	262	0.18	737	0.88
9	331	1.10	201	0.13	73	0.24	1452	1.10	276	0.25	655	1.10
10	133	0.77	219	0.15	68	0.39	975	0.77	342	0.26	501	0.77
11	105	0.67	344	0.30	44	0.28	698	0.67	503	0.36	466	0.67
12	82	0.66	441	0.43	51	0.41	610	0.66	720	0.46	540	0.66
13	73	0.71	462	0.49	51	0.49	613	0.71	754	0.44	666	0.71
14	78	0.75	499	0.50	61	0.59	680	0.75	683	0.40	730	0.75
15	49	0.65	643	0.61	39	0.51	621	0.65	675	0.41	560	0.65
16	63	0.60	721	0.66	69	0.66	650	0.65	843	0.55	537	0.66
17	77	0.83	1198	0.84	78	0.84	746	0.57	1018	0.82	627	0.84
18	44	0.54	1233	0.81	66	0.81	808	0.58	995	0.81	388	0.57
19	95	0.62	654	0.57	72	0.47	651	0.62	683	0.50	407	0.62
20	84	0.68	523	0.46	69	0.56	695	0.68	609	0.41	523	0.68
21	50	0.51	477	0.51	33	0.33	431	0.50	487	0.31	360	0.51
22	37	0.45	410	0.45	22	0.27	247	0.30	513	0.33	284	0.45
23	32	0.29	193	0.28	15	0.13	179	0.29	288	0.19	123	0.29
24	13	0.21	142	0.19	13	0.21	142	0.21	147	0.14	67	0.21
	1620		9301		1008		11829		10027		8567	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-26-74 DAY OF WEEK= TUESDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'E'

	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
HOUR	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	11	0.19	96	0.16	8	0.14	104	0.19	143	0.14	51	0.19
2	10	0.13	54	0.09	7	0.09	69	0.13	38	0.10	19	0.13
3	3	0.12	24	0.07	2	0.08	34	0.12	31	0.11	6	0.12
4	2	0.11	21	0.09	2	0.11	23	0.11	23	0.10	4	0.11
5	6	0.12	36	0.08	0	0.00	45	0.12	13	0.09	4	0.12
6	15	0.15	80	0.15	5	0.05	66	0.14	26	0.04	55	0.15
7	62	0.37	311	0.31	32	0.19	340	0.37	82	0.06	268	0.37
8	189	0.94	544	0.46	111	0.55	1003	0.94	246	0.16	865	0.94
9	275	1.18	247	0.17	52	0.22	1498	1.18	272	0.20	914	1.18
10	86	0.79	315	0.21	39	0.36	1082	0.79	405	0.29	517	0.79
11	69	0.66	401	0.34	60	0.58	718	0.66	465	0.32	499	0.66
12	69	0.68	434	0.39	54	0.53	682	0.68	659	0.43	557	0.68
13	72	0.71	542	0.56	46	0.45	626	0.71	794	0.47	680	0.71
14	74	0.73	600	0.61	43	0.42	656	0.73	693	0.45	708	0.73
15	71	0.71	758	0.60	42	0.42	820	0.71	706	0.53	524	0.71
16	58	0.69	866	0.69	54	0.64	671	0.59	765	0.53	526	0.69
17	65	0.83	1233	0.84	66	0.84	801	0.60	1067	0.84	609	0.82
18	56	0.64	1108	0.80	70	0.80	803	0.64	1114	0.80	397	0.52
19	71	0.60	613	0.52	73	0.61	665	0.61	716	0.52	408	0.61
20	101	0.66	577	0.55	68	0.44	627	0.66	642	0.49	498	0.66
21	61	0.52	401	0.43	26	0.22	443	0.52	495	0.32	369	0.52
22	55	0.50	465	0.50	34	0.31	285	0.33	535	0.35	343	0.50
23	37	0.33	271	0.33	12	0.10	241	0.32	310	0.21	150	0.33
24	18	0.24	192	0.23	11	0.14	177	0.24	184	0.16	103	0.24
	1536		10189		917		12479		10424		9074	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-27-74 DAY OF WEEK= WEDNESDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'E'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	12	0.20	110	0.19	9	0.15	108	0.20	143	0.12	74	0.20
2	1	0.01	51	0.11	9	0.14	59	0.14	52	0.08	31	0.14
3	3	0.12	27	0.09	0	0.00	31	0.12	23	0.08	9	0.12
4	1	0.02	37	0.12	6	0.12	29	0.10	19	0.10	13	0.12
5	2	0.07	39	0.11	3	0.11	37	0.11	16	0.08	7	0.11
6	12	0.15	66	0.12	7	0.09	75	0.15	25	0.03	57	0.15
7	72	0.40	292	0.25	29	0.16	423	0.40	62	0.07	255	0.40
8	174	0.98	527	0.40	96	0.54	1178	0.98	287	0.19	840	0.98
9	200	1.04	379	0.26	60	0.31	1366	1.04	301	0.22	775	1.04
10	126	0.76	345	0.25	32	0.19	958	0.76	351	0.26	506	0.76
11	79	0.68	339	0.28	57	0.49	737	0.68	468	0.32	509	0.68
12	103	0.74	561	0.49	48	0.34	729	0.74	726	0.56	616	0.74
13	104	0.78	505	0.53	47	0.35	682	0.78	764	0.46	756	0.78
14	69	0.75	568	0.54	68	0.74	718	0.75	613	0.37	709	0.75
15	62	0.68	608	0.59	32	0.35	646	0.68	713	0.44	610	0.68
16	65	0.70	894	0.70	47	0.51	611	0.53	865	0.67	527	0.70
17	57	0.63	1218	0.85	77	0.85	747	0.57	1063	0.85	582	0.78
18	53	0.60	1208	0.81	71	0.81	793	0.58	963	0.81	402	0.59
19	84	0.63	612	0.51	75	0.57	700	0.63	718	0.53	410	0.63
20	61	0.69	500	0.41	47	0.53	761	0.69	572	0.38	540	0.69
21	38	0.50	426	0.49	33	0.43	399	0.50	489	0.29	389	0.50
22	29	0.44	427	0.44	15	0.23	295	0.33	617	0.41	270	0.44
23	20	0.31	303	0.31	13	0.20	212	0.23	240	0.18	173	0.31
24	16	0.24	191	0.24	14	0.21	164	0.22	197	0.16	84	0.24
	1443		10203		895		12458		10307		9144	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-28-74 DAY OF WEEK= THURSDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'E'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	13	0.21	164	0.21	4	0.06	97	0.13	125	0.13	66	0.21
2	2	0.04	76	0.15	7	0.15	1	0.00	51	0.08	33	0.15
3	1	0.06	28	0.08	2	0.12	40	0.12	28	0.08	13	0.12
4	7	0.11	20	0.11	2	0.03	18	0.11	15	0.10	3	0.11
5	5	0.12	37	0.11	0	0.00	34	0.12	15	0.08	7	0.12
6	11	0.16	69	0.11	3	0.04	87	0.16	28	0.04	62	0.16
7	38	0.37	328	0.29	34	0.33	381	0.37	107	0.08	261	0.37
8	114	0.86	681	0.49	110	0.83	1099	0.86	267	0.16	812	0.86
9	148	1.01	447	0.30	60	0.41	1365	1.01	263	0.19	812	1.01
10	95	0.72	447	0.33	57	0.43	890	0.72	379	0.26	489	0.72
11	66	0.57	444	0.33	58	0.50	689	0.57	414	0.28	383	0.57
12	81	0.63	527	0.48	36	0.28	633	0.63	689	0.52	469	0.63
13	64	0.69	455	0.45	52	0.56	637	0.69	653	0.48	628	0.69
14	68	0.69	570	0.55	51	0.52	652	0.69	583	0.40	622	0.69
15	75	0.67	635	0.47	42	0.37	816	0.67	630	0.43	521	0.67
16	75	0.68	839	0.68	63	0.57	636	0.56	738	0.52	479	0.68
17	79	0.82	1163	0.82	58	0.60	742	0.57	1032	0.82	555	0.75
18	51	0.51	1017	0.73	73	0.73	708	0.55	940	0.73	360	0.55
19	75	0.59	809	0.59	70	0.55	636	0.51	653	0.45	357	0.59
20	77	0.62	587	0.58	59	0.47	566	0.62	568	0.40	480	0.62
21	38	0.48	427	0.48	27	0.34	344	0.42	453	0.28	345	0.48
22	48	0.50	519	0.50	27	0.28	254	0.26	552	0.38	301	0.50
23	25	0.21	259	0.29	34	0.29	206	0.26	219	0.17	129	0.29
24	11	0.25	180	0.24	6	0.13	169	0.25	266	0.19	84	0.25
	1267		10728		935		11700		9668		8271	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-29-74 DAY OF WEEK= FRIDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'E'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	13	0.21	157	0.21	4	0.06	93	0.14	129	0.12	89	0.21
2	5	0.15	63	0.10	5	0.15	89	0.15	62	0.10	32	0.15
3	0	0.00	40	0.12	2	0.12	32	0.10	30	0.09	9	0.12
4	1	0.05	27	0.11	2	0.11	21	0.09	7	0.05	7	0.11
5	4	0.12	26	0.07	2	0.06	41	0.12	18	0.08	9	0.12
6	15	0.18	77	0.09	6	0.07	136	0.18	24	0.04	57	0.18
7	47	0.41	317	0.22	24	0.21	531	0.41	94	0.09	239	0.41
8	144	0.98	525	0.39	124	0.84	1211	0.98	270	0.18	870	0.98
9	188	1.03	459	0.32	41	0.22	1327	1.03	273	0.20	823	1.03
10	122	0.73	277	0.22	52	0.31	820	0.73	376	0.25	526	0.73
11	107	0.66	300	0.27	51	0.31	656	0.66	464	0.33	463	0.56
12	94	0.66	438	0.46	35	0.24	566	0.66	733	0.46	555	0.66
13	94	0.75	581	0.59	51	0.40	676	0.75	834	0.66	699	0.75
14	77	0.75	570	0.55	48	0.46	700	0.75	704	0.50	705	0.75
15	91	0.66	620	0.55	45	0.33	681	0.66	705	0.49	488	0.66
16	64	0.65	979	0.72	70	0.72	788	0.63	825	0.71	488	0.72
17	56	0.86	1288	0.89	58	0.89	824	0.62	1105	0.89	644	0.79
18	72	0.84	1193	0.86	73	0.86	801	0.63	1041	0.86	378	0.47
19	111	0.60	654	0.53	58	0.31	673	0.60	704	0.60	292	0.59
20	102	0.66	583	0.46	67	0.43	763	0.66	677	0.62	397	0.66
21	78	0.56	401	0.45	34	0.24	458	0.56	527	0.26	460	0.56
22	93	0.59	566	0.59	36	0.23	350	0.40	668	0.52	426	0.59
23	51	0.37	267	0.37	22	0.16	249	0.37	432	0.27	238	0.37
24	31	0.31	249	0.31	25	0.25	175	0.23	324	0.23	165	0.31
	1660		10657		935		12661		11026		9061	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-30-74 DAY OF WEEK= SATURDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'E'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	23	0.30	203	0.30	14	0.18	134	0.21	397	0.25	160	0.30
2	11	0.20	169	0.20	7	0.12	122	0.15	114	0.13	69	0.20
3	10	0.15	101	0.15	6	0.09	76	0.12	61	0.11	31	0.15
4	6	0.07	57	0.14	11	0.14	47	0.12	58	0.12	16	0.14
5	6	0.13	51	0.11	3	0.06	53	0.13	24	0.07	19	0.13
6	8	0.14	53	0.08	0	0.00	82	0.14	18	0.06	20	0.14
7	14	0.20	102	0.08	7	0.10	210	0.20	48	0.10	45	0.20
8	34	0.27	201	0.15	20	0.16	328	0.27	81	0.12	95	0.27
9	51	0.43	273	0.20	23	0.19	534	0.43	181	0.18	261	0.43
10	75	0.59	374	0.28	42	0.33	731	0.59	317	0.24	419	0.59
11	60	0.63	399	0.30	63	0.67	812	0.67	448	0.29	502	0.67
12	70	0.66	678	0.51	80	0.76	925	0.76	659	0.50	556	0.76
13	80	0.65	862	0.56	86	0.70	989	0.70	801	0.56	350	0.70
14	99	0.86	896	0.70	72	0.63	1012	0.86	750	0.64	714	0.86
15	61	0.76	908	0.73	64	0.80	913	0.80	793	0.63	688	0.80
16	70	0.78	982	0.79	71	0.79	707	0.62	813	0.65	667	0.79
17	60	0.72	1093	0.72	48	0.58	559	0.40	744	0.45	557	0.72
18	83	0.71	829	0.71	47	0.40	467	0.43	769	0.53	545	0.71
19	99	0.48	496	0.43	54	0.26	500	0.48	360	0.30	321	0.48
20	162	0.87	361	0.38	55	0.29	746	0.87	698	0.51	836	0.87
21	99	0.59	281	0.33	44	0.26	460	0.59	611	0.39	453	0.59
22	169	0.69	246	0.32	38	0.15	478	0.69	658	0.47	570	0.69
23	54	0.45	284	0.42	27	0.22	280	0.45	530	0.37	325	0.45
24	54	0.40	276	0.40	18	0.13	219	0.35	414	0.21	271	0.40
	1458		10175		900		11384		10347		8490	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-31-74 DAY OF WEEK= SUNDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'E'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	31	0.34	250	0.34	21	0.23	232	0.34	343	0.21	184	0.34
2	26	0.23	218	0.23	19	0.17	200	0.23	68	0.08	99	0.23
3	10	0.15	162	0.22	14	0.22	125	0.18	165	0.15	72	0.22
4	5	0.13	48	0.11	4	0.10	53	0.13	26	0.06	21	0.13
5	3	0.11	23	0.08	3	0.11	30	0.11	21	0.09	7	0.11
6	4	0.11	23	0.06	0	0.00	35	0.11	13	0.09	6	0.11
7	11	0.13	45	0.09	1	0.01	60	0.13	15	0.05	17	0.13
8	19	0.16	75	0.13	8	0.06	86	0.16	27	0.04	47	0.16
9	40	0.20	42	0.06	7	0.03	126	0.20	70	0.09	68	0.20
10	45	0.25	183	0.20	19	0.10	209	0.25	99	0.11	94	0.25
11	32	0.34	301	0.24	29	0.31	383	0.34	170	0.16	190	0.34
12	46	0.46	456	0.32	55	0.56	729	0.56	395	0.32	388	0.56
13	75	0.63	553	0.41	99	0.84	1029	0.84	650	0.58	632	0.84
14	55	0.56	863	0.66	88	0.90	1077	0.90	826	0.70	765	0.90
15	74	0.68	1028	0.77	99	0.91	1112	0.91	824	0.69	762	0.91
16	83	0.84	1087	0.85	84	0.85	836	0.72	884	0.65	731	0.85
17	81	0.82	1080	0.82	57	0.58	677	0.56	718	0.55	655	0.82
18	99	0.68	820	0.68	45	0.31	583	0.53	648	0.48	464	0.68
19	76	0.44	405	0.33	30	0.17	495	0.44	271	0.25	246	0.44
20	110	0.58	394	0.40	53	0.28	521	0.58	439	0.28	416	0.58
21	49	0.38	246	0.24	37	0.28	353	0.38	289	0.22	177	0.38
22	61	0.41	210	0.23	24	0.16	343	0.41	364	0.25	199	0.41
23	32	0.31	267	0.29	14	0.13	264	0.31	213	0.16	161	0.31
24	16	0.21	137	0.17	16	0.21	160	0.21	153	0.14	77	0.21
	1083		8916		826		9718		7691		6478	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 1-74 DAY OF WEEK= MONDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'E'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	4	0.18	95	0.18	2	0.09	78	0.16	139	0.12	59	0.18
2	7	0.12	38	0.11	3	0.05	36	0.12	25	0.10	12	0.12
3	0	0.00	31	0.11	1	0.11	22	0.08	6	0.04	8	0.11
4	1	0.05	14	0.10	2	0.11	14	0.11	17	0.09	5	0.11
5	2	0.11	30	0.11	1	0.05	28	0.11	5	0.03	8	0.11
6	12	0.18	86	0.09	5	0.07	144	0.18	28	0.04	57	0.18
7	45	0.44	335	0.21	35	0.34	631	0.44	79	0.08	260	0.44
8	119	0.95	708	0.48	104	0.83	1275	0.95	259	0.19	824	0.95
9	142	0.94	406	0.34	13	0.08	1001	0.94	284	0.17	922	0.94
10	63	0.67	379	0.26	45	0.48	888	0.67	323	0.22	527	0.67
11	66	0.62	359	0.32	34	0.31	635	0.62	473	0.32	444	0.62
12	65	0.61	510	0.49	43	0.40	580	0.61	681	0.52	465	0.61
13	57	0.70	576	0.55	57	0.70	672	0.70	695	0.50	644	0.70
14	66	0.72	604	0.61	47	0.51	650	0.72	631	0.40	699	0.72
15	72	0.66	703	0.66	41	0.37	616	0.63	658	0.47	536	0.66
16	56	0.67	861	0.67	46	0.55	651	0.55	745	0.51	483	0.67
17	57	0.77	1232	0.84	62	0.84	817	0.61	1068	0.84	564	0.75
18	45	0.46	1233	0.86	83	0.86	774	0.59	1059	0.86	395	0.52
19	68	0.65	720	0.58	55	0.52	735	0.65	706	0.52	444	0.65
20	50	0.50	634	0.54	64	0.65	694	0.65	586	0.46	483	0.65
21	40	0.55	568	0.55	26	0.36	310	0.33	447	0.28	423	0.55
22	51	0.51	509	0.51	27	0.27	212	0.23	620	0.42	327	0.51
23	3	0.04	220	0.25	16	0.25	191	0.24	209	0.18	105	0.25
24	11	0.22	145	0.21	7	0.14	138	0.22	206	0.17	64	0.22
	1102		10996		819		11792		9949		8758	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 2-74 DAY OF WEEK= TUESDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'E'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	5	0.18	113	0.18	4	0.14	72	0.12	91	0.10	62	0.18
2	4	0.14	64	0.13	4	0.14	[illegible]	0.14	34	0.06	31	0.14
3	2	0.05	31	0.09	4	0.11	[illegible]	0.11	[illegible]	0.11	3	0.11
4	3	0.11	29	0.11	2	0.07	[illegible]	0.09	[illegible]	0.07	5	0.11
5	2	0.11	32	0.07	1	0.05	44	0.11	8	0.07	5	0.11
6	12	0.19	91	0.09	2	0.03	171	0.19	32	0.05	54	0.19
7	48	0.44	353	0.22	31	0.28	613	0.44	108	0.09	267	0.44
8	128	0.97	721	0.49	79	0.59	1303	0.97	275	0.20	849	0.97
9	142	0.94	537	0.41	30	0.19	1113	0.94	304	0.19	910	0.94
10	80	0.69	420	0.32	45	0.39	809	0.69	413	0.28	493	0.69
11	67	0.67	410	0.33	41	0.41	749	0.67	463	0.32	495	0.67
12	52	0.64	578	0.52	43	0.53	650	0.64	801	0.58	523	0.64
13	86	0.75	623	0.65	33	0.29	662	0.75	763	0.55	737	0.75
14	68	0.55	555	0.43	43	0.35	651	0.55	677	0.55	97	0.19
15	68	0.69	753	0.69	32	0.32	600	0.60	691	0.47	577	0.69
16	46	0.42	903	0.71	77	0.71	664	0.57	758	0.54	523	0.71
17	59	0.77	1248	0.86	66	0.86	887	0.67	1082	0.86	627	0.82
18	44	0.43	1136	0.79	80	0.79	727	0.55	1026	0.79	408	0.59
19	59	0.54	781	0.63	69	0.63	693	0.61	699	0.58	412	0.63
20	49	0.54	632	0.58	58	0.64	642	0.64	554	0.40	524	0.64
21	36	0.50	547	0.50	30	0.41	380	0.38	488	0.27	328	0.50
22	35	0.48	527	0.48	27	0.37	267	0.26	545	0.39	267	0.48
23	23	0.24	249	0.27	26	0.27	194	0.23	188	0.16	128	0.27
24	17	0.22	171	0.22	5	0.06	127	0.18	164	0.14	77	0.22
	1135		11484		832		12136		10197		8402	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 3-74 DAY OF WEEK= WEDNESDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'E'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	9	0.18	187	0.21	10	0.21	124	0.15	105	0.13	71	0.21
2	3	0.06	67	0.14	7	0.14	58	0.13	43	0.07	33	0.14
3	1	0.11	39	0.11	1	0.11	26	0.08	14	0.08	6	0.11
4	1	0.02	29	0.12	5	0.12	[illegible]	0.08	1	0.07	11	0.12
5	6	0.12	37	0.11	1	0.02	[illegible]	0.12	10	0.05	9	0.12
6	8	0.17	96	0.10	5	0.10	149	0.17	32	0.04	51	0.17
7	45	0.44	356	0.22	20	0.19	635	0.44	110	0.08	262	0.44
8	125	0.98	614	0.43	95	0.75	1283	0.98	267	0.18	853	0.98
9	169	0.98	573	0.39	50	0.29	1195	0.98	312	0.21	864	0.98
10	62	0.62	398	0.30	66	0.66	787	0.66	374	0.25	509	0.56
11	64	0.63	419	0.34	57	0.56	703	0.63	493	0.32	467	0.53
12	94	0.68	550	0.54	50	0.36	634	0.68	735	0.51	556	0.68
13	88	0.74	583	0.60	46	0.38	656	0.74	712	0.57	697	0.74
14	121	0.76	630	0.63	64	0.40	700	0.76	372	0.21	701	0.76
15	47	0.58	641	0.58	29	0.36	504	0.50	428	0.25	436	0.58
16	117	0.63	768	0.63	81	0.44	588	0.53	588	0.41	404	0.63
17	70	0.74	1036	0.77	73	0.77	644	0.52	1021	0.77	493	0.66
18	80	0.66	951	0.74	90	0.74	661	0.56	1005	0.74	388	0.54
19	60	0.47	747	0.58	75	0.58	635	0.54	720	0.35	411	0.58
20	50	0.45	527	0.50	75	0.68	648	0.68	666	0.45	569	0.68
21	50	0.53	505	0.53	27	0.28	334	0.38	478	0.30	397	0.53
22	30	0.51	527	0.51	21	0.35	231	0.24	623	0.51	331	0.47
23	20	0.24	257	0.27	23	0.27	209	0.24	220	0.20	130	0.27
24	20	0.24	145	0.24	17	0.20	127	0.23	251	0.18	84	0.24
	1340		10632		988		11587		9600		8753	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 5-74 DAY OF WEEK= FRIDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'E'

	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
HOUR	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	13	0.23	145	0.23	9	0.16	110	0.19	170	0.13	111	0.23
2	6	0.10	95	0.17	10	0.17	73	0.14	81	0.10	48	0.17
3	2	0.11	51	0.11	1	0.05	39	0.09	23	0.11	9	0.06
4	2	0.12	31	0.11	2	0.12	29	0.12	26	0.07	13	0.12
5	4	0.11	36	0.10	2	0.05	37	0.11	14	0.08	7	0.11
6	15	0.17	88	0.08	2	0.02	159	0.17	23	0.06	30	0.17
7	39	0.38	349	0.19	30	0.29	609	0.38	96	0.10	163	0.38
8	126	0.72	706	0.37	104	0.59	1244	0.72	264	0.32	327	0.72
9	149	0.79	552	0.32	74	0.39	1212	0.79	304	0.29	408	0.79
10	87	0.65	357	0.27	69	0.52	772	0.65	356	0.25	436	0.65
11	71	0.66	449	0.38	35	0.32	696	0.66	488	0.33	495	0.66
12	63	0.65	543	0.53	64	0.66	618	0.66	797	0.60	571	0.66
13	78	0.72	474	0.46	66	0.61	676	0.72	771	0.47	654	0.72
14	74	0.75	691	0.66	51	0.51	717	0.75	686	0.48	702	0.75
15	49	0.64	661	0.56	34	0.44	684	0.64	677	0.45	487	0.64
16	72	0.48	972	0.75	112	0.75	688	0.58	888	0.69	497	0.75
17	77	0.61	1387	0.89	111	0.89	902	0.63	1038	0.69	638	0.89
18	58	0.63	1225	0.86	79	0.86	896	0.69	1044	0.86	458	0.60
19	67	0.51	845	0.68	89	0.68	727	0.64	769	0.68	459	0.67
20	105	0.87	737	0.58	75	0.62	1014	0.87	780	0.48	757	0.87
21	75	0.70	741	0.70	56	0.52	652	0.67	754	0.33	601	0.70
22	95	0.66	796	0.66	38	0.26	447	0.40	771	0.66	365	0.55
23	40	0.43	349	0.43	29	0.31	265	0.35	471	0.35	265	0.43
24	27	0.28	288	0.28	18	0.18	225	0.24	269	0.25	100	0.28
	1394		12568		1160		13491		11560		8601	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 6-74 DAY OF WEEK= SATURDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'E'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	27	0.33	254	0.33	15	0.18	154	0.22	385	0.24	147	0.33
2	16	0.18	173	0.23	21	0.23	131	0.19	119	0.10	117	0.23
3	3	0.03	110	0.15	12	0.15	101	0.15	48	0.10	22	0.15
4	6	0.11	66	0.13	7	0.13	43	0.09	30	0.09	13	0.13
5	5	0.12	45	0.12	4	0.09	28	0.08	18	0.08	9	0.12
6	5	0.14	78	0.11	5	0.14	89	0.14	14	0.04	21	0.14
7	15	0.22	116	0.10	7	0.10	235	0.22	45	0.06	82	0.22
8	34	0.29	216	0.18	22	0.19	315	0.29	88	0.10	138	0.29
9	31	0.43	314	0.24	29	0.41	510	0.43	201	0.15	306	0.43
10	41	0.41	407	0.29	59	0.59	749	0.59	319	0.22	451	0.59
11	57	0.68	591	0.41	49	0.58	892	0.68	468	0.31	522	0.68
12	46	0.66	739	0.52	52	0.74	958	0.74	626	0.38	613	0.74
13	65	0.81	960	0.74	67	0.83	994	0.83	759	0.54	708	0.83
14	50	0.52	1073	0.79	75	0.79	923	0.74	769	0.45	721	0.79
15	50	0.69	984	0.78	57	0.79	902	0.79	782	0.58	678	0.79
16	60	0.48	1197	0.81	101	0.81	816	0.61	791	0.48	643	0.81
17	63	0.78	1040	0.78	58	0.71	659	0.54	688	0.54	604	0.78
18	72	0.73	976	0.73	49	0.49	564	0.46	756	0.56	514	0.73
19	98	0.57	602	0.57	76	0.44	522	0.54	769	0.33	337	0.57
20	190	0.81	350	0.36	59	0.25	723	0.81	619	0.43	653	0.81
21	108	0.57	365	0.40	82	0.43	476	0.57	599	0.41	384	0.57
22	141	0.66	311	0.40	27	0.12	470	0.66	695	0.36	627	0.66
23	43	0.39	303	0.39	28	0.26	259	0.37	520	0.35	220	0.39
24	58	0.34	301	0.34	15	0.08	265	0.33	320	0.20	187	0.34
	1284		11571		976		11778		10428		8717	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 7-74 DAY OF WEEK= SUNDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'E'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	36	0.41	319	0.41	32	0.36	217	0.30	440	0.28	249	0.41
2	16	0.24	249	0.24	16	0.24	169	0.18	128	0.12	112	0.24
3	7	0.19	159	0.22	8	0.22	127	0.19	167	0.14	82	0.22
4	2	0.03	46	0.11	8	0.14	55	0.14	24	0.04	44	0.14
5	1	0.11	33	0.11	0	0.00	20	0.07	13	0.06	10	0.11
6	2	0.04	27	0.07	5	0.11	37	0.11	8	0.07	5	0.11
7	5	0.14	46	0.07	4	0.11	79	0.14	18	0.05	22	0.14
8	15	0.15	82	0.12	9	0.09	99	0.15	27	0.06	29	0.15
9	18	0.18	146	0.17	8	0.08	140	0.18	52	0.08	55	0.18
10	20	0.23	194	0.19	12	0.14	214	0.23	92	0.11	91	0.23
11	29	0.29	257	0.22	19	0.19	318	0.29	166	0.20	165	0.29
12	23	0.27	379	0.28	49	0.59	718	0.59	350	0.26	416	0.59
13	69	0.76	563	0.41	75	0.83	1025	0.83	664	0.64	654	0.83
14	55	0.35	999	0.78	138	0.88	1028	0.88	776	0.49	698	0.88
15	92	0.80	1194	0.80	88	0.77	1063	0.78	821	0.48	716	0.80
16	88	0.84	1154	0.84	68	0.65	803	0.64	829	0.51	720	0.84
17	82	0.76	936	0.76	46	0.42	535	0.47	626	0.43	596	0.76
18	92	0.65	899	0.65	28	0.20	503	0.40	606	0.39	489	0.65
19	73	0.42	417	0.37	42	0.24	435	0.42	303	0.25	235	0.42
20	101	0.48	345	0.32	38	0.18	471	0.48	426	0.32	228	0.48
21	35	0.25	262	0.26	42	0.31	281	0.31	240	0.26	117	0.31
22	41	0.35	240	0.27	41	0.35	285	0.35	334	0.23	161	0.35
23	24	0.27	237	0.18	18	0.20	324	0.27	171	0.26	63	0.27
24	11	0.19	147	0.18	12	0.21	150	0.21	160	0.16	51	0.21
	937		9330		806		9096		7441		6008	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 8-74 DAY OF WEEK= MONDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'E'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	5	0.07	84	0.16	12	0.16	64	0.14	68	0.08	53	0.16
2	1	0.06	29	0.07	2	0.12	45	0.12	15	0.06	11	0.12
3	0	0.00	17	0.08	4	0.11	20	0.11	9	0.08	9	0.11
4	1	0.03	17	0.09	3	0.11	18	0.11	14	0.11	1	0.04
5	3	0.11	33	0.10	2	0.07	33	0.11	8	0.05	7	0.11
6	19	0.17	62	0.07	5	0.04	125	0.17	21	0.04	48	0.17
7	42	0.41	339	0.22	29	0.28	581	0.41	94	0.07	230	0.41
8	139	0.91	545	0.37	87	0.57	1207	0.91	262	0.19	710	0.91
9	154	1.02	346	0.25	64	0.42	1262	1.02	276	0.18	901	1.02
10	83	0.67	331	0.26	65	0.53	784	0.67	342	0.23	498	0.67
11	57	0.65	375	0.30	48	0.54	727	0.65	503	0.35	463	0.65
12	70	0.67	598	0.52	51	0.48	695	0.67	720	0.56	517	0.67
13	69	0.73	641	0.61	63	0.67	707	0.73	754	0.43	707	0.73
14	82	0.76	717	0.76	59	0.55	649	0.75	689	0.44	769	0.76
15	52	0.59	618	0.55	60	0.68	696	0.68	665	0.43	570	0.68
16	57	0.66	895	0.66	48	0.56	701	0.57	762	0.45	523	0.60
17	68	0.85	1246	0.86	69	0.86	811	0.61	1037	0.83	670	0.86
18	51	0.81	1263	0.81	48	0.76	748	0.52	1028	0.81	426	0.63
19	76	0.68	730	0.58	61	0.54	775	0.68	734	0.60	468	0.68
20	72	0.61	593	0.51	46	0.39	648	0.61	636	0.45	422	0.61
21	39	0.54	581	0.54	24	0.33	370	0.37	515	0.35	373	0.54
22	44	0.48	464	0.48	22	0.24	205	0.23	599	0.39	320	0.48
23	17	0.22	259	0.27	21	0.27	156	0.18	298	0.23	89	0.27
24	7	0.14	149	0.20	10	0.20	129	0.19	166	0.14	50	0.20
	1208		10932		903		12156		10215		8835	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 9-74 DAY OF WEEK= TUESDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'E'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	12	0.18	101	0.18	7	0.10	80	0.15	116	0.12	52	0.18
2	2	0.04	37	0.10	6	0.13	44	0.13	30	0.08	15	0.13
3	2	0.11	30	0.11	0	0.00	40	0.08	25	0.11	3	0.09
4	2	0.11	34	0.11	0	0.00	35	0.09	14	0.10	6	0.11
5	3	0.12	36	0.08	2	0.08	48	0.12	20	0.09	8	0.12
6	11	0.16	88	0.11	3	0.04	114	0.16	34	0.05	49	0.16
7	60	0.42	329	0.23	30	0.21	556	0.42	107	0.09	236	0.42
8	139	0.92	525	0.34	117	0.78	1287	0.92	267	0.20	678	0.92
9	140	1.00	375	0.27	42	0.30	1250	1.00	304	0.20	882	1.00
10	84	0.70	352	0.26	48	0.40	837	0.70	368	0.25	493	0.70
11	58	0.68	457	0.37	50	0.58	767	0.68	549	0.44	507	0.68
12	56	0.65	236	0.20	57	0.66	690	0.66	771	0.50	531	0.66
13	69	0.74	674	0.65	51	0.55	704	0.74	738	0.55	707	0.74
14	66	0.76	697	0.69	58	0.67	696	0.76	663	0.44	753	0.76
15	66	0.69	788	0.69	23	0.24	703	0.67	705	0.53	568	0.69
16	61	0.70	971	0.72	63	0.72	653	0.53	796	0.59	512	0.72
17	49	0.55	1347	0.87	77	0.87	845	0.60	928	0.58	625	0.87
18	45	0.74	1335	0.87	53	0.87	814	0.58	1043	0.87	390	0.52
19	59	0.54	745	0.61	66	0.61	669	0.60	726	0.53	395	0.61
20	55	0.49	502	0.46	71	0.64	640	0.64	584	0.39	492	0.64
21	40	0.49	437	0.49	37	0.45	379	0.46	475	0.29	359	0.49
22	40	0.51	543	0.51	26	0.33	252	0.25	619	0.42	323	0.51
23	24	0.31	268	0.31	19	0.24	225	0.28	229	0.16	165	0.31
24	13	0.20	211	0.23	15	0.23	164	0.19	185	0.14	93	0.23
	1156		11118		921		12462		10296		8842	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4-10-74 DAY OF WEEK= WEDNESDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'E'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	15	0.20	124	0.20	5	0.06	100	0.17	114	0.11	75	0.20
2	2	0.02	63	0.11	11	0.15	75	0.15	45	0.07	35	0.15
3	0	0.00	33	0.10	3	0.12	34	0.12	31	0.09	11	0.12
4	2	0.11	32	0.11	0	0.00	19	0.07	10	0.07	5	0.11
5	1	0.04	37	0.09	3	0.12	46	0.12	19	0.08	8	0.12
6	9	0.17	81	0.09	2	0.03	134	0.17	34	0.06	45	0.17
7	47	0.43	328	0.23	41	0.38	550	0.43	129	0.11	257	0.43
8	115	0.80	644	0.43	127	0.88	1213	0.88	343	0.22	713	0.88
9	149	0.97	553	0.41	53	0.34	1197	0.97	323	0.20	850	0.97
10	83	0.74	414	0.29	60	0.53	949	0.74	370	0.26	515	0.74
11	74	0.73	388	0.28	66	0.65	903	0.73	529	0.39	498	0.73
12	68	0.70	646	0.56	65	0.67	735	0.70	851	0.61	572	0.70
13	68	0.74	718	0.74	52	0.56	646	0.72	736	0.55	727	0.74
14	67	0.76	770	0.67	68	0.78	816	0.78	710	0.51	701	0.78
15	66	0.69	776	0.69	49	0.51	627	0.61	590	0.51	571	0.69
16	64	0.74	943	0.74	50	0.57	655	0.56	752	0.54	570	0.74
17	67	0.87	1317	0.87	65	0.84	823	0.59	1034	0.87	610	0.84
18	50	0.54	1326	0.87	80	0.87	755	0.54	1010	0.87	440	0.63
19	55	0.49	850	0.65	73	0.65	697	0.59	688	0.59	418	0.65
20	76	0.70	583	0.52	59	0.55	716	0.70	607	0.39	586	0.70
21	30	0.31	541	0.55	52	0.55	350	0.39	531	0.34	413	0.55
22	46	0.51	546	0.51	45	0.50	293	0.30	582	0.40	333	0.51
23	33	0.34	296	0.34	21	0.21	249	0.31	291	0.20	173	0.34
24	15	0.20	180	0.23	17	0.23	163	0.23	171	0.15	85	0.23
	1202		12189		1067		12745		10500		9211	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4-11-74 DAY OF WEEK= THURSDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'E'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	6	0.13	158	0.20	9	0.20	104	0.14	139	0.13	87	0.20
2	2	0.03	80	0.14	8	0.14	57	0.11	50	0.10	21	0.14
3	1	0.06	52	0.12	2	0.12	27	0.07	21	0.10	10	0.12
4	4	0.07	44	0.12	7	0.12	9	0.02	18	0.07	8	0.12
5	3	0.12	41	0.10	2	0.08	44	0.12	8	0.05	8	0.12
6	6	0.17	91	0.09	0	0.00	143	0.17	23	0.04	50	0.17
7	39	0.42	326	0.21	16	0.17	592	0.42	94	0.09	252	0.42
8	95	0.79	677	0.46	106	0.89	1197	0.89	283	0.19	797	0.89
9	127	0.97	589	0.41	51	0.39	1258	0.97	303	0.20	910	0.97
10	85	0.63	424	0.32	49	0.36	753	0.63	367	0.26	464	0.63
11	60	0.63	357	0.29	44	0.46	713	0.63	498	0.35	442	0.63
12	64	0.63	548	0.49	46	0.45	633	0.63	663	0.47	474	0.63
13	68	0.72	598	0.62	46	0.48	629	0.72	733	0.51	701	0.72
14	81	0.66	635	0.60	92	0.75	720	0.75	611	0.37	668	0.75
15	73	0.70	775	0.70	61	0.58	664	0.65	726	0.44	576	0.70
16	65	0.73	947	0.73	58	0.65	649	0.55	805	0.49	555	0.73
17	64	0.67	391	0.33	70	0.74	782	0.74	1031	0.67	631	0.74
18	60	0.68	1252	0.79	70	0.79	739	0.51	989	0.79	375	0.62
19	64	0.55	757	0.61	75	0.64	729	0.64	625	0.43	424	0.64
20	80	0.67	639	0.54	78	0.65	729	0.67	611	0.40	484	0.67
21	29	0.39	586	0.55	41	0.55	456	0.47	522	0.34	394	0.55
22	58	0.56	633	0.56	36	0.35	341	0.33	657	0.40	376	0.56
23	31	0.26	256	0.29	35	0.29	236	0.29	229	0.16	152	0.29
24	20	0.26	215	0.26	14	0.18	154	0.20	243	0.19	90	0.26
	1185		11071		1016		12358		10249		8949	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4-12-74 DAY OF WEEK= FRIDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'E'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	15	0.23	174	0.23	10	0.15	117	0.17	144	0.12	107	0.23
2	3	0.15	107	0.15	3	0.15	78	0.12	55	0.06	49	0.15
3	2	0.12	40	0.11	0	0.00	41	0.12	30	0.09	10	0.12
4	4	0.08	45	0.12	6	0.12	24	0.07	18	0.06	16	0.12
5	2	0.11	43	0.10	2	0.11	45	0.11	10	0.04	6	0.11
6	9	0.15	89	0.13	2	0.03	92	0.15	20	0.05	30	0.15
7	33	0.31	252	0.18	16	0.15	399	0.31	64	0.07	145	0.31
8	34	0.43	487	0.32	47	0.60	817	0.60	181	0.12	518	0.60
9	85	0.70	439	0.32	34	0.28	868	0.70	266	0.17	598	0.70
10	78	0.64	495	0.35	59	0.48	815	0.64	372	0.26	495	0.64
11	72	0.73	665	0.50	68	0.69	878	0.73	571	0.36	585	0.73
12	67	0.71	815	0.72	70	0.74	760	0.74	783	0.59	650	0.74
13	74	0.80	930	0.80	70	0.76	789	0.74	1033	0.80	702	0.77
14	73	0.66	854	0.80	88	0.80	742	0.76	836	0.59	762	0.80
15	84	0.82	968	0.81	76	0.74	903	0.82	852	0.64	726	0.82
16	60	0.85	1160	0.85	55	0.78	759	0.60	834	0.66	699	0.85
17	52	0.75	1142	0.81	56	0.81	723	0.56	875	0.72	629	0.81
18	46	0.49	992	0.72	67	0.72	651	0.51	812	0.71	483	0.72
19	55	0.55	746	0.60	60	0.60	616	0.54	550	0.35	444	0.60
20	75	0.70	491	0.42	59	0.55	750	0.70	566	0.34	576	0.70
21	57	0.55	550	0.55	47	0.45	467	0.51	585	0.33	450	0.55
22	81	0.56	483	0.56	46	0.31	430	0.54	627	0.46	428	0.56
23	30	0.32	210	0.32	18	0.19	195	0.32	323	0.20	238	0.32
24	29	0.28	262	0.28	16	0.15	190	0.22	169	0.14	165	0.28
	1120		12439		975		12149		10576		9511	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4-13-74 DAY OF WEEK= SATURDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'E'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	9	0.19	218	0.31	15	0.31	146	0.23	352	0.21	156	0.31
2	3	0.04	165	0.19	12	0.19	116	0.15	64	0.08	69	0.19
3	10	0.15	104	0.15	2	0.03	80	0.13	36	0.07	31	0.15
4	4	0.19	56	0.19	4	0.19	40	0.15	35	0.02	168	0.19
5	2	0.11	38	0.11	2	0.11	24	0.08	19	0.09	6	0.11
6	4	0.12	51	0.11	1	0.03	52	0.12	8	0.02	19	0.12
7	4	0.08	108	0.10	9	0.18	174	0.18	41	0.07	48	0.18
8	13	0.24	215	0.18	13	0.24	252	0.24	69	0.08	95	0.24
9	19	0.35	303	0.22	13	0.24	440	0.35	145	0.10	258	0.35
10	33	0.45	336	0.27	39	0.53	681	0.53	289	0.19	423	0.53
11	40	0.42	638	0.46	60	0.64	804	0.64	429	0.27	536	0.64
12	27	0.24	785	0.59	82	0.73	882	0.73	599	0.38	556	0.73
13	34	0.41	882	0.72	61	0.74	830	0.74	701	0.53	615	0.74
14	56	0.67	851	0.71	63	0.75	817	0.75	752	0.55	643	0.75
15	52	0.74	820	0.67	52	0.74	826	0.74	663	0.43	641	0.74
16	48	0.75	949	0.75	40	0.62	721	0.62	662	0.47	618	0.75
17	56	0.69	899	0.69	41	0.50	596	0.50	614	0.43	505	0.69
18	38	0.51	859	0.63	47	0.63	453	0.36	706	0.47	412	0.63
19	56	0.35	441	0.39	63	0.40	408	0.40	308	0.25	244	0.40
20	108	0.54	385	0.37	48	0.24	514	0.54	328	0.23	447	0.54
21	42	0.37	293	0.26	43	0.38	388	0.38	401	0.31	242	0.38
22	85	0.44	292	0.32	39	0.20	372	0.44	398	0.30	267	0.44
23	50	0.37	238	0.32	16	0.12	254	0.37	386	0.23	252	0.37
24	26	0.26	204	0.24	16	0.16	202	0.26	162	0.14	135	0.26
	819		10180		781		10072		8167		7386	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-13-74 DAY OF WEEK= WEDNESDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'C'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	95	0.00	0.03	84	0.00	0.02	98	0.02	0.00	51	0.02	328	0.19
2	49	0.00	0.01	71	0.00	0.02	28	0.00	0.00	37	0.01	185	0.15
3	39	0.00	0.01	46	0.00	0.01	28	0.00	0.00	4	0.00	117	0.12
4	25	0.00	0.00	36	0.00	0.01	13	0.00	0.00	6	0.00	80	0.12
5	39	0.00	0.01	39	0.00	0.01	7	0.00	0.00	8	0.00	93	0.12
6	65	0.00	0.02	165	0.00	0.06	22	0.00	0.00	51	0.02	303	0.19
7	325	0.03	0.09	681	0.01	0.25	100	0.02	0.00	223	0.1	1329	0.53
8	702	0.11	0.20	1581	0.09	0.56	280	0.08	0.01	764	0.38	3327	1.24
9	525	0.13	0.13	1651	0.05	0.61	260	0.07	0.01	874	0.43	3310	1.35
10	428	0.08	0.11	973	0.04	0.35	323	0.09	0.01	488	0.24	2209	0.87
11	514	0.05	0.15	782	0.04	0.27	599	0.10	0.12	465	0.23	2360	0.76
12	617	0.06	0.19	703	0.04	0.24	775	0.10	0.22	550	0.27	2645	0.78
13	651	0.06	0.20	705	0.02	0.25	730	0.10	0.23	696	0.34	2782	0.86
14	706	0.06	0.22	723	0.03	0.26	689	0.10	0.16	701	0.35	2819	0.87
15	745	0.06	0.23	709	0.04	0.25	706	0.10	0.16	601	0.30	2761	0.81
16	1066	0.06	0.35	711	0.05	0.24	762	0.10	0.19	571	0.28	3110	0.90
17	1270	0.05	0.43	930	0.06	0.32	1047	0.10	0.30	611	0.30	3858	0.99
18	1301	0.05	0.44	869	0.06	0.30	970	0.10	0.27	435	0.21	3575	0.97
19	956	0.05	0.31	815	0.06	0.28	666	0.10	0.16	428	0.21	2865	0.79
20	817	0.06	0.26	740	0.04	0.26	564	0.10	0.11	458	0.22	2579	0.75
21	619	0.03	0.20	424	0.02	0.15	460	0.10	0.07	386	0.19	1889	0.63
22	553	0.03	0.18	382	0.03	0.13	543	0.10	0.10	304	0.15	1782	0.57
23	328	0.02	0.10	279	0.01	0.09	275	0.08	0.01	86	0.04	968	0.35
24	268	0.01	0.08	200	0.00	0.07	215	0.06	0.01	86	0.04	769	0.31
	12700			14299			10160			8884		46043	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-14-74 DAY OF WEEK= THURSDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'C'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	142	0.01	0.04	119	0.01	0.04	109	0.03	0.00	49	0.02	419	0.21
2	57	0.00	0.01	80	0.00	0.02	49	0.01	0.00	28	0.01	214	0.16
3	28	0.00	0.00	35	0.00	0.01	29	0.00	0.00	3	0.00	95	0.12
4	28	0.00	0.00	25	0.00	0.00	25	0.00	0.00	9	0.00	87	0.12
5	33	0.00	0.01	47	0.00	0.01	17	0.00	0.00	8	0.00	105	0.12
6	77	0.01	0.02	137	0.00	0.05	21	0.00	0.00	51	0.02	286	0.19
7	319	0.03	0.09	613	0.01	0.22	68	0.01	0.00	240	0.12	1240	0.50
8	660	0.09	0.19	1579	0.09	0.56	267	0.07	0.01	686	0.34	3192	1.18
9	537	0.15	0.12	1604	0.04	0.59	232	0.06	0.01	599	0.29	2972	1.21
10	393	0.07	0.10	972	0.05	0.35	406	0.10	0.05	517	0.25	2288	0.88
11	433	0.06	0.12	925	0.06	0.32	531	0.10	0.10	494	0.24	2383	0.84
12	524	0.06	0.16	768	0.03	0.27	733	0.10	0.18	538	0.26	2563	0.80
13	491	0.05	0.15	765	0.05	0.27	665	0.10	0.15	665	0.33	2586	0.85
14	562	0.07	0.17	721	0.05	0.25	657	0.10	0.15	730	0.36	2690	0.89
15	779	0.06	0.24	763	0.04	0.27	724	0.10	0.17	611	0.30	2877	0.84
16	849	0.05	0.27	798	0.05	0.28	748	0.10	0.18	502	0.25	2897	0.78
17	1356	0.06	0.45	1053	0.07	0.37	1043	0.10	0.28	582	0.29	4034	1.02
18	1315	0.05	0.44	1142	0.08	0.40	1005	0.10	0.28	433	0.21	3895	1.01
19	998	0.05	0.33	820	0.05	0.29	637	0.10	0.14	393	0.19	2848	0.78
20	862	0.07	0.27	869	0.04	0.31	539	0.10	0.14	491	0.24	2761	0.82
21	783	0.02	0.26	448	0.03	0.15	487	0.10	0.07	397	0.19	2115	0.70
22	758	0.03	0.25	351	0.01	0.12	515	0.10	0.09	316	0.15	1940	0.65
23	394	0.02	0.12	283	0.02	0.09	175	0.04	0.01	140	0.07	992	0.36
24	293	0.01	0.09	210	0.00	0.07	196	0.04	0.01	59	0.02	758	0.28
	12691			15127			9878			8541		46237	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-15-74 DAY OF WEEK= FRIDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'C'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	229	0.01	0.07	134	0.01	0.04	122	0.02	0.01	80	0.04	565	0.25
2	132	0.00	0.04	83	0.00	0.02	52	0.01	0.00	39	0.01	306	0.18
3	77	0.00	0.02	32	0.00	0.01	31	0.00	0.00	14	0.00	154	0.14
4	43	0.00	0.01	38	0.00	0.01	10	0.00	0.00	14	0.00	105	0.12
5	43	0.00	0.01	39	0.00	0.01	11	0.00	0.00	7	0.00	100	0.12
6	124	0.01	0.04	137	0.00	0.05	25	0.00	0.00	57	0.02	343	0.19
7	434	0.04	0.13	593	0.01	0.22	92	0.01	0.00	207	0.10	1326	0.48
8	1009	0.10	0.31	1490	0.09	0.53	239	0.04	0.04	828	0.41	3566	1.19
9	940	0.15	0.27	1635	0.05	0.60	317	0.06	0.03	883	0.44	3775	1.36
10	692	0.07	0.21	1008	0.02	0.37	360	0.07	0.04	507	0.25	2567	0.88
11	673	0.06	0.21	817	0.05	0.28	442	0.09	0.05	477	0.23	2409	0.78
12	820	0.07	0.26	808	0.04	0.29	732	0.10	0.19	526	0.26	2886	0.82
13	768	0.08	0.23	801	0.04	0.28	748	0.10	0.28	628	0.31	2945	0.88
14	466	0.07	0.14	771	0.05	0.27	666	0.10	0.15	699	0.34	2622	0.89
15	746	0.06	0.23	805	0.03	0.29	657	0.10	0.15	541	0.27	2749	0.82
16	868	0.06	0.28	708	0.05	0.24	778	0.10	0.19	512	0.25	2866	0.80
17	1244	0.05	0.42	988	0.05	0.35	1043	0.10	0.29	601	0.30	3876	0.98
18	1290	0.04	0.44	1034	0.04	0.37	966	0.10	0.26	445	0.22	3735	0.95
19	882	0.05	0.29	1055	0.07	0.36	669	0.10	0.15	432	0.21	3038	0.86
20	777	0.06	0.25	1106	0.05	0.39	613	0.10	0.13	613	0.30	3109	0.96
21	474	0.04	0.15	607	0.03	0.21	526	0.10	0.10	495	0.24	2102	0.70
22	578	0.06	0.18	556	0.03	0.19	666	0.10	0.15	444	0.22	2244	0.67
23	268	0.03	0.08	325	0.02	0.11	329	0.09	0.01	269	0.13	1211	0.47
24	255	0.02	0.07	267	0.01	0.09	336	0.09	0.01	132	0.06	990	0.38
	13872			15837			10430			9450		49589	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-16-74 DAY OF WEEK= SATURDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'C'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	187	0.02	0.05	202	0.01	0.06	255	-0.01	0.07	196	0.09	840	0.27
2	192	0.01	0.06	172	0.01	0.06	74	0.02	0.00	83	0.04	521	0.23
3	139	0.00	0.04	138	0.00	0.05	44	0.01	0.00	37	0.01	358	0.19
4	59	0.00	0.01	60	0.00	0.01	35	0.01	0.00	20	0.01	174	0.14
5	45	0.00	0.01	34	0.00	0.01	14	0.00	0.00	7	0.00	100	0.12
6	57	0.00	0.01	80	0.00	0.03	17	0.00	0.00	20	0.01	174	0.15
7	125	0.01	0.03	197	0.00	0.07	29	0.00	0.00	62	0.03	413	0.22
8	219	0.01	0.07	332	0.01	0.12	63	0.01	0.00	137	0.06	751	0.32
9	291	0.02	0.09	523	0.01	0.19	169	0.04	0.00	287	0.14	1270	0.51
10	463	0.05	0.14	806	0.02	0.29	268	0.07	0.01	412	0.20	1949	0.73
11	464	0.04	0.15	881	0.03	0.32	442	0.10	0.06	519	0.25	2326	0.82
12	725	0.05	0.23	1043	0.04	0.37	597	0.10	0.12	577	0.28	2942	0.92
13	932	0.06	0.30	1308	0.07	0.47	851	0.10	0.27	732	0.36	3823	1.10
14	970	0.04	0.32	1058	0.05	0.37	772	0.10	0.24	688	0.34	3488	0.98
15	1008	0.06	0.33	1148	0.04	0.41	733	0.10	0.26	586	0.29	3475	0.97
16	1173	0.06	0.39	833	0.05	0.29	723	0.10	0.17	713	0.35	3442	1.01
17	1034	0.06	0.34	766	0.04	0.27	678	0.10	0.15	621	0.31	3099	0.91
18	1146	0.05	0.38	575	0.04	0.20	735	0.10	0.16	445	0.22	2901	0.86
19	476	0.06	0.14	607	0.04	0.21	319	0.09	0.01	308	0.15	1710	0.62
20	422	0.10	0.10	600	0.05	0.20	540	0.10	0.10	585	0.29	2147	0.80
21	339	0.09	0.08	595	0.03	0.21	270	0.07	0.01	317	0.15	1521	0.64
22	380	0.10	0.09	453	0.03	0.16	655	0.10	0.20	392	0.19	1880	0.67
23	264	0.03	0.08	292	0.02	0.10	338	0.09	0.01	270	0.13	1164	0.46
24	354	0.04	0.10	30	0.04	-0.00	351	0.06	0.05	170	0.08	905	0.40
	11484			12733			8972			8184		41373	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-17-74 DAY OF WEEK= SUNDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'C'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	320	0.04	0.09	222	0.01	0.08	351	0.10	0.03	191	0.09	1084	0.43
2	243	0.01	0.07	238	0.01	0.08	136	0.03	0.01	141	0.07	758	0.30
3	155	0.00	0.05	194	0.01	0.06	161	0.04	0.00	114	0.05	624	0.28
4	73	0.00	0.02	93	0.00	0.03	23	0.00	0.00	16	0.00	205	0.15
5	37	0.00	0.01	42	0.00	0.01	21	0.00	0.00	12	0.00	112	0.13
6	30	0.00	0.00	38	0.00	0.01	13	0.00	0.00	4	0.00	85	0.12
7	38	0.00	0.01	36	0.00	0.01	4	0.00	0.00	19	0.00	97	0.13
8	61	0.00	0.01	90	0.00	0.03	29	0.00	0.00	39	0.01	219	0.16
9	111	0.01	0.03	124	0.00	0.04	40	0.01	0.00	40	0.02	315	0.18
10	163	0.01	0.05	191	0.01	0.06	72	0.00	0.02	80	0.04	526	0.23
11	217	0.02	0.06	312	0.01	0.11	159	0.04	0.00	155	0.07	843	0.36
12	555	0.02	0.18	679	0.06	0.23	326	0.00	0.07	331	0.16	1891	0.55
13	641	0.06	0.19	1094	0.08	0.38	491	0.10	0.08	548	0.27	2774	0.93
14	866	0.06	0.28	1259	0.07	0.45	776	0.10	0.19	689	0.34	3610	1.06
15	898	0.06	0.29	1156	0.06	0.41	809	0.10	0.20	717	0.35	3580	1.03
16	946	0.06	0.31	941	0.05	0.33	797	0.10	0.20	713	0.35	3397	0.95
17	1027	0.05	0.34	713	0.04	0.25	666	0.10	0.15	648	0.32	3054	0.91
18	965	0.07	0.31	606	0.03	0.21	545	0.09	0.08	445	0.22	2561	0.80
19	554	0.06	0.17	460	0.03	0.16	293	0.08	0.01	236	0.11	1543	0.53
20	336	0.06	0.09	510	0.04	0.17	279	0.08	0.01	332	0.16	1457	0.58
21	261	0.04	0.07	399	0.01	0.14	195	0.05	0.01	151	0.07	1006	0.42
22	349	0.05	0.10	407	0.01	0.15	373	0.10	0.04	158	0.07	1287	0.48
23	300	0.01	0.09	329	0.02	0.11	141	0.04	0.00	169	0.08	939	0.36
24	193	0.01	0.06	204	0.01	0.07	113	0.03	0.00	61	0.03	571	0.24
	9379			10337			6813			6009		32538	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-18-74 DAY OF WEEK= MONDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'C'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	107	0.00	0.03	121	0.00	0.04	151	0.04	0.00	71	0.03	450	0.22
2	79	0.00	0.02	56	0.00	0.02	21	-0.00	0.00	12	0.00	168	0.13
3	17	0.00	0.00	26	0.00	0.00	14	0.00	0.00	8	0.00	65	0.11
4	18	0.00	0.00	28	0.00	0.00	16	0.00	0.00	9	0.00	71	0.12
5	31	0.00	0.01	28	0.00	0.01	8	0.00	0.00	3	0.00	70	0.11
6	79	0.00	0.02	108	0.00	0.04	18	0.00	0.00	51	0.02	256	0.17
7	342	0.04	0.10	509	0.01	0.18	77	0.02	0.00	232	0.11	1160	0.46
8	705	0.11	0.20	1279	0.09	0.44	233	0.06	0.01	859	0.42	3076	1.16
9	499	0.21	0.08	1548	0.03	0.57	275	0.08	0.01	865	0.43	3187	1.40
10	403	0.09	0.10	960	0.04	0.34	327	0.09	0.01	501	0.25	2191	0.89
11	429	0.07	0.12	820	0.03	0.29	447	0.10	0.07	425	0.21	2121	0.78
12	502	0.05	0.15	692	0.04	0.24	685	0.10	0.16	515	0.25	2394	0.75
13	512	0.06	0.15	783	0.04	0.28	757	0.10	0.18	709	0.35	2761	0.89
14	665	0.05	0.21	815	0.04	0.29	620	0.10	0.13	655	0.32	2755	0.87
15	658	0.05	0.21	736	0.04	0.26	666	0.10	0.15	535	0.26	2595	0.78
16	928	0.03	0.31	722	0.04	0.25	711	0.10	0.18	498	0.24	2859	0.81
17	1257	0.04	0.43	892	0.06	0.31	990	0.10	0.27	607	0.30	3746	0.99
18	1270	0.04	0.43	928	0.06	0.32	1064	0.10	0.30	349	0.17	3611	1.00
19	791	0.06	0.25	707	0.05	0.24	710	0.10	0.17	436	0.21	2644	0.74
20	569	0.03	0.18	710	0.03	0.25	488	0.10	0.08	409	0.20	2176	0.69
21	494	0.03	0.16	480	0.01	0.17	454	0.10	0.07	313	0.15	1741	0.56
22	437	0.02	0.14	289	0.01	0.10	483	0.10	0.08	250	0.12	1459	0.49
23	212	0.00	0.07	200	0.01	0.07	262	0.07	0.01	130	0.06	804	0.32
24	164	0.01	0.05	140	0.00	0.05	144	0.04	0.00	62	0.03	510	0.23
	11168			13577			9621			8504		42870	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-19-74 DAY OF WEEK= TUESDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'C'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	122	0.00	0.04	81	0.00	0.03	128	0.03	0.00	63	0.03	394	0.21
2	67	0.00	0.02	65	0.00	0.02	41	0.01	0.00	13	0.00	186	0.14
3	36	0.00	0.01	50	0.00	0.01	25	0.00	0.00	13	0.00	124	0.13
4	36	0.00	0.01	24	0.00	0.00	14	0.00	0.00	4	0.00	78	0.12
5	29	0.00	0.01	42	0.00	0.01	17	0.00	0.00	2	0.00	90	0.12
6	76	0.00	0.02	144	0.00	0.05	17	0.00	0.00	52	0.02	289	0.18
7	350	0.03	0.11	515	0.02	0.18	72	0.02	0.00	272	0.13	1209	0.47
8	759	0.14	0.20	1059	0.09	0.36	241	0.07	0.01	866	0.43	2925	1.11
9	548	0.16	0.12	857	0.04	0.31	306	0.08	0.01	871	0.43	2582	1.10
10	391	0.08	0.10	617	0.03	0.22	348	0.07	0.04	517	0.25	1873	0.73
11	408	0.06	0.11	726	0.06	0.25	458	0.09	0.06	478	0.23	2070	0.75
12	510	0.05	0.15	655	0.05	0.22	680	0.10	0.22	493	0.24	2338	0.73
13	534	0.07	0.15	592	0.03	0.21	739	0.10	0.23	748	0.37	2613	0.66
14	537	0.05	0.16	726	0.05	0.25	633	0.10	0.17	715	0.35	2611	0.86
15	722	0.07	0.22	662	0.02	0.24	677	0.10	0.18	555	0.27	2616	0.79
16	816	0.05	0.26	806	0.05	0.28	756	0.10	0.18	527	0.26	2905	0.80
17	1274	0.05	0.43	451	0.05	0.14	1041	0.09	0.19	615	0.30	3381	0.98
18	1166	0.04	0.39	829	0.06	0.29	1036	0.10	0.29	424	0.21	3455	0.95
19	699	0.07	0.21	733	0.06	0.25	648	0.10	0.14	384	0.19	2464	0.72
20	543	0.05	0.17	699	0.05	0.24	463	0.10	0.07	472	0.23	2177	0.73
21	452	0.01	0.15	384	0.01	0.14	443	0.10	0.06	381	0.19	1640	0.55
22	414	0.03	0.13	297	0.02	0.10	630	0.10	0.14	302	0.15	1643	0.52
23	253	0.02	0.07	213	0.01	0.07	179	0.05	0.01	86	0.04	731	0.29
24	166	0.01	0.06	182	0.00	0.06	154	0.04	0.00	81	0.04	603	0.26
	10908			11409			9746			8934		40997	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-20-74 DAY OF WEEK= WEDNESDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'C'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	156	0.01	0.04	7	0.00	-0.00	166	0.04	0.00	51	0.02	380	0.24
2	84	0.01	0.02	81	0.00	0.02	48	0.01	0.00	28	0.01	241	0.16
3	26	0.01	0.00	35	0.00	0.01	3[illegible]	0.00	0.00	6	0.00	101	0.12
4	31	0.01	0.01	27	[illegible]	0.00	10	0.00	0.00	6	0.00	74	0.12
5	26	0.00	0.00	53	0.00	0.01	[illegible]	0.00	0.00	6	0.00	96	0.12
6	75	0.00	0.02	126	0.00	0.04	24	0.00	0.00	59	0.02	284	0.19
7	268	0.0[illegible]	0.08	581	0.02	0.21	91	0.02	0.00	206	0.10	1166	0.47
8	615	0.1[illegible]	0.17	1297	0.11	0.44	265	0.07	0.01	776	0.38	2953	1.12
9	552	0.17	0.12	1328	0.04	0.48	294	0.08	0.01	811	0.40	2985	1.25
10	462	0.07	0.11	952	0.03	0.35	347	0.10	0.03	507	0.25	2208	0.87
11	428	0.04	0.13	817	0.02	0.30	458	0.10	0.07	500	0.25	2203	0.79
12	631	0.06	0.19	735	0.04	0.26	662	0.10	0.18	552	0.27	2600	0.80
13	669	0.07	0.21	776	0.05	0.27	812	0.10	0.28	731	0.36	3008	0.91
14	661	0.05	0.22	764	0.04	0.27	671	0.10	0.19	709	0.35	2825	0.88
15	711	0.05	0.22	730	0.03	0.26	687	0.10	0.16	551	0.27	2679	0.79
16	992	0.06	0.32	774	0.05	0.27	784	0.10	0.20	530	0.26	3080	0.65
17	1330	0.06	0.44	892	0.06	0.31	1055	0.10	0.33	630	0.31	3907	1.05
18	1272	0.04	0.43	814	0.05	0.28	995	0.10	0.29	401	0.20	3482	0.98
19	711	0.05	0.23	782	0.05	0.27	634	0.10	0.14	437	0.21	2564	0.74
20	642	0.06	0.20	681	0.02	0.24	571	0.10	0.17	469	0.23	2363	0.74
21	438	0.03	0.14	382	0.02	0.13	446	0.10	0.07	317	0.15	1583	0.53
22	447	0.03	0.14	247	0.02	0.08	528	0.10	0.10	294	0.14	1516	0.52
23	267	0.02	0.09	227	0.01	0.08	227	0.06	0.01	142	0.07	883	0.35
24	198	0.01	0.06	165	0.00	0.05	214	0.06	0.01	87	0.04	664	0.28
	11712			13273			10054			8806		43845	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-21-74 DAY OF WEEK= THURSDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'C'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	163	0.01	0.05	94	0.00	0.03	55	0.01	0.00	63	0.03	375	0.21
2	85	0.00	0.02	85	0.00	0.02	54	0.01	0.00	32	0.01	256	0.16
3	37	0.00	0.01	34	0.00	0.01	34	0.00	0.00	11	0.00	116	0.12
4	33	0.00	0.01	19	0.00	0.00	10	0.00	0.00	5	0.00	67	0.11
5	24	0.00	0.00	38	0.00	0.01	11	0.00	0.00	8	0.00	81	0.12
6	89	0.00	0.02	136	0.00	0.05	23	0.00	0.00	61	0.03	309	0.19
7	308	0.03	0.09	542	0.01	0.19	79	0.02	0.00	248	0.12	1177	0.48
8	669	0.12	0.19	1286	0.10	0.44	243	0.07	0.01	812	0.40	3030	1.14
9	589	0.16	0.14	1400	0.04	0.52	336	0.09	0.01	836	0.41	3161	1.29
10	495	0.10	0.13	780	0.06	0.27	376	0.10	0.04	443	0.22	2094	0.80
11	398	0.05	0.11	743	0.05	0.26	415	0.10	0.05	453	0.22	2009	0.74
12	459	0.06	0.13	635	0.04	0.22	713	0.10	0.17	533	0.26	2333	0.75
13	533	0.07	0.15	716	0.03	0.26	723	0.10	0.17	654	0.32	2626	0.86
14	537	0.06	0.15	742	0.05	0.26	630	0.10	0.14	604	0.34	2573	0.86
15	667	0.06	0.21	706	0.02	0.25	691	0.10	0.16	535	0.26	2599	0.78
16	846	0.06	0.27	769	0.05	0.27	766	0.10	0.19	528	0.26	2909	0.80
17	1350	0.05	0.45	898	0.06	0.31	1008	0.10	0.32	601	0.30	3837	1.03
18	1210	0.06	0.40	834	0.06	0.29	1025	0.10	0.29	391	0.19	3460	0.96
19	790	0.07	0.24	787	0.06	0.27	715	0.10	0.19	453	0.22	2745	0.78
20	570	0.07	0.17	766	0.06	0.26	607	0.10	0.13	498	0.24	2441	0.78
21	513	0.04	0.16	467	0.03	0.16	500	0.10	0.09	392	0.19	1872	0.60
22	512	0.05	0.15	292	0.02	0.10	588	0.10	0.12	269	0.13	1661	0.54
23	336	0.02	0.11	225	0.01	0.07	260	0.07	0.01	160	0.08	981	0.38
24	211	0.01	0.06	194	0.01	0.06	187	0.05	0.01	86	0.04	678	0.28
	11397			13188			10049			8756		43390	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-22-74 DAY OF WEEK= FRIDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'C'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	134	0.00	0.04	122	0.01	0.04	143	0.04	0.00	67	0.03	466	0.23
2	75	0.00	0.02	72	0.00	0.02	60	0.01	0.00	36	0.01	243	0.16
3	36	0.00	0.01	37	0.00	0.01	28	0.00	0.00	10	0.00	111	0.12
4	36	0.00	0.01	28	0.00	0.00	8	0.00	0.00	6	0.00	78	0.11
5	44	0.00	0.01	40	0.00	0.01	16	0.00	0.00	4	0.00	104	0.12
6	86	0.01	0.02	113	0.00	0.04	24	0.00	0.00	58	0.02	281	0.19
7	314	0.03	0.09	556	0.02	0.20	85	0.02	0.00	260	0.13	1215	0.49
8	636	0.13	0.17	1314	0.09	0.46	248	0.07	0.01	831	0.41	3029	1.17
9	506	0.18	0.10	1413	0.04	0.52	279	0.08	0.01	830	0.41	3028	1.30
10	429	0.09	0.11	989	0.05	0.35	334	0.09	0.01	492	0.24	2244	0.89
11	596	0.06	0.18	824	0.05	0.29	484	0.10	0.10	477	0.23	2381	0.79
12	560	0.07	0.17	761	0.04	0.27	778	0.10	0.19	527	0.26	2646	0.81
13	685	0.06	0.21	732	0.04	0.26	777	0.10	0.25	709	0.35	2903	0.88
14	562	0.04	0.18	760	0.03	0.27	685	0.10	0.16	712	0.35	2739	0.87
15	830	0.02	0.28	729	0.04	0.26	738	0.10	0.22	581	0.29	2878	0.81
16	1033	0.03	0.35	813	0.04	0.29	887	0.10	0.29	552	0.27	3285	0.89
17	1425	0.04	0.48	941	0.03	0.34	1074	0.10	0.37	628	0.31	4068	1.10
18	1364	0.05	0.46	911	0.03	0.33	1028	0.10	0.35	403	0.20	3706	1.07
19	767	0.08	0.23	801	0.01	0.30	709	0.10	0.17	449	0.22	2726	0.81
20	749	0.07	0.23	955	0.09	0.32	599	0.10	0.18	706	0.35	3009	0.97
21	585	0.05	0.18	563	0.04	0.19	514	0.10	0.09	431	0.21	2093	0.67
22	652	0.10	0.18	458	0.01	0.17	732	0.10	0.17	465	0.23	2307	0.72
23	335	0.04	0.10	236	0.01	0.08	298	0.08	0.01	218	0.10	1087	0.44
24	263	0.02	0.09	236	0.01	0.08	285	0.07	0.02	168	0.08	972	0.36
	12762			14404			10813			9620		47599	

OAKBROCK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-23-74 DAY OF WEEK= SATURDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'C'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	251	0.01	0.08	228	0.01	0.08	396	0.10	0.05	141	0.07	1016	0.36
2	161	0.02	0.05	158	0.01	0.05	81	0.02	0.00	79	0.06	499	0.23
3	121	0.00	0.04	136	0.00	0.05	54	0.01	0.00	36	0.01	347	0.19
4	42	0.00	0.01	47	0.00	0.01	30	0.00	0.00	5	0.00	124	0.13
5	31	0.00	0.01	53	0.00	0.01	15	0.00	0.00	5	0.00	104	0.12
6	66	0.00	0.02	70	0.00	0.02	10	0.00	0.00	26	0.01	172	0.14
7	118	0.00	0.03	183	0.00	0.06	41	0.01	0.00	90	0.04	432	0.23
8	164	0.02	0.05	297	0.02	0.10	79	0.02	0.00	120	0.06	660	0.31
9	263	0.05	0.06	522	0.01	0.19	148	0.04	0.00	238	0.11	1171	0.51
10	325	0.05	0.09	818	0.03	0.29	303	0.08	0.01	440	0.22	1886	0.76
11	466	0.05	0.15	938	0.05	0.33	483	0.10	0.08	528	0.26	2434	0.85
12	648	0.07	0.20	961	0.03	0.35	703	0.10	0.16	490	0.24	2802	0.86
13	715	0.06	0.22	959	0.05	0.34	840	0.10	0.22	672	0.33	3186	0.94
14	798	0.06	0.25	943	0.07	0.33	811	0.10	0.21	708	0.35	3260	0.95
15	896	0.06	0.28	903	0.06	0.31	788	0.10	0.20	762	0.38	3349	0.98
16	797	0.07	0.25	726	0.05	0.25	774	0.10	0.19	688	0.34	2985	0.87
17	735	0.07	0.22	691	0.04	0.24	743	0.10	0.18	610	0.30	2779	0.82
18	959	0.05	0.31	579	0.04	0.20	685	0.10	0.16	444	0.22	2667	0.79
19	542	0.09	0.15	586	0.07	0.19	360	0.10	0.03	315	0.15	1803	0.64
20	567	0.13	0.12	702	0.09	0.22	507	0.10	0.09	523	0.26	2239	0.82
21	336	0.10	0.07	502	0.04	0.17	324	0.09	0.01	332	0.16	1494	0.63
22	298	0.14	0.04	399	0.05	0.13	815	0.10	0.21	391	0.19	1903	0.68
23	298	0.03	0.09	257	0.02	0.08	231	0.06	0.01	133	0.06	919	0.35
24	282	0.03	0.08	272	0.01	0.09	551	0.10	0.11	147	0.07	1252	0.43
	9858			11930			9772			7923		39483	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-24-74 DAY OF WEEK= SUNDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'C'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	264	0.03	0.08	270	0.01	0.09	193	0.05	0.01	189	0.09	916	0.37
2	210	0.01	0.06	199	0.02	0.06	112	0.03	0.00	87	0.04	608	0.26
3	90	0.00	0.02	186	0.00	0.06	97	0.02	0.00	28	0.01	401	0.21
4	55	0.00	0.01	91	0.01	0.03	24	0.00	0.00	16	0.00	186	0.15
5	25	0.00	0.00	32	0.00	0.01	13	0.00	0.00	7	0.00	77	0.12
6	22	0.00	0.00	26	0.00	0.00	8	0.00	0.00	5	0.00	61	0.11
7	38	0.00	0.01	54	0.00	0.02	8	0.00	0.00	20	0.01	120	0.13
8	75	0.01	0.02	93	0.00	0.03	18	0.00	0.00	36	0.01	222	0.16
9	120	0.01	0.03	95	0.00	0.03	27	0.00	0.00	47	0.02	289	0.18
10	157	0.02	0.04	221	0.01	0.07	52	0.01	0.00	74	0.03	504	0.25
11	201	0.02	0.06	268	0.02	0.09	92	0.02	0.00	162	0.08	723	0.32
12	336	0.04	0.10	596	0.04	0.20	166	0.04	0.00	300	0.15	1398	0.55
13	519	0.03	0.16	984	0.06	0.34	350	0.10	0.03	567	0.28	2420	0.69
14	731	0.05	0.23	1144	0.08	0.39	664	0.10	0.15	679	0.33	3218	1.02
15	842	0.10	0.25	1391	0.09	0.49	776	0.10	0.19	768	0.38	3777	1.18
16	1045	0.08	0.33	926	0.04	0.33	821	0.10	0.21	656	0.32	3448	0.95
17	1172	0.09	0.37	683	0.02	0.24	829	0.10	0.17	617	0.30	3301	0.98
18	723	0.06	0.23	539	0.06	0.17	626	0.10	0.13	420	0.21	2308	0.70
19	416	0.08	0.11	537	0.05	0.18	606	0.10	0.13	245	0.12	1804	0.59
20	306	0.06	0.07	544	0.06	0.17	303	0.08	0.01	402	0.20	1555	0.63
21	233	0.03	0.06	392	0.04	0.13	426	0.05	0.08	174	0.08	1225	0.41
22	254	0.04	0.07	360	0.03	0.12	240	0.06	0.01	198	0.09	1052	0.43
23	211	0.02	0.06	303	0.01	0.10	334	0.09	0.01	103	0.05	951	0.37
24	121	0.00	0.04	201	0.00	0.07	171	0.04	0.00	47	0.02	540	0.25
	8166			10135			6956			5847		31104	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-25-74 DAY OF WEEK= MONDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'C'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	62	0.00	0.02	120	0.00	0.04	68	0.01	0.00	52	0.02	302	0.19
2	32	0.00	0.00	49	0.00	0.01	15	0.00	0.00	8	0.00	104	0.13
3	18	0.00	0.00	26	0.00	0.00	9	0.00	0.00	6	0.00	59	0.11
4	12	0.00	0.00	20	0.00	0.00	14	0.00	0.00	3	0.00	49	0.11
5	26	0.00	0.00	35	0.00	0.01	8	0.00	0.00	5	0.00	74	0.11
6	77	0.01	0.02	75	0.00	0.02	21	0.00	0.00	47	0.02	220	0.17
7	356	0.05	0.10	356	0.02	0.12	94	0.02	0.00	255	0.12	1061	0.43
8	632	0.14	0.16	1134	0.11	0.38	262	0.07	0.01	737	0.36	2765	1.07
9	532	0.27	0.07	1525	0.06	0.55	276	0.08	0.01	655	0.32	2988	1.34
10	352	0.11	0.07	1043	0.05	0.37	342	0.09	0.01	501	0.25	2238	0.93
11	449	0.08	0.12	742	0.03	0.26	503	0.10	0.09	466	0.23	2160	0.78
12	523	0.06	0.15	661	0.04	0.23	720	0.10	0.17	540	0.27	2444	0.77
13	535	0.06	0.16	664	0.04	0.23	754	0.10	0.18	686	0.34	2639	0.83
14	577	0.06	0.17	741	0.05	0.26	683	0.10	0.16	730	0.36	2731	0.89
15	692	0.04	0.22	660	0.03	0.23	675	0.10	0.15	560	0.28	2587	0.75
16	784	0.05	0.25	719	0.05	0.25	843	0.10	0.22	537	0.26	2883	0.78
17	1275	0.06	0.42	824	0.06	0.28	1018	0.10	0.32	627	0.31	3744	1.01
18	1277	0.03	0.44	874	0.05	0.31	995	0.10	0.29	388	0.19	3534	0.99
19	749	0.07	0.23	723	0.06	0.25	683	0.10	0.16	407	0.20	2562	0.73
20	607	0.07	0.18	764	0.05	0.26	609	0.10	0.13	523	0.26	2503	0.79
21	527	0.04	0.17	464	0.02	0.16	487	0.10	0.08	360	0.18	1838	0.59
22	447	0.03	0.14	269	0.01	0.09	513	0.10	0.09	284	0.14	1513	0.51
23	225	0.02	0.06	194	0.01	0.06	288	0.08	0.01	123	0.06	830	0.33
24	155	0.01	0.05	155	0.01	0.05	147	0.04	0.00	67	0.03	524	0.24
	10921			12837			10027			8567		42352	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-26-74 DAY OF WEEK= TUESDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'C'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQU.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	107	0.00	0.03	112	0.00	0.04	143	0.04	0.00	51	0.02	413	0.21
2	64	0.00	0.01	76	0.00	0.02	38	0.00	0.00	19	0.00	197	0.14
3	27	0.00	0.00	36	0.00	0.01	31	0.00	0.00	6	0.00	100	0.12
4	23	0.00	0.00	25	0.00	0.00	23	0.00	0.00	4	0.00	75	0.11
5	42	0.00	0.01	45	0.00	0.01	3	0.00	0.00	4	0.00	104	0.12
6	95	0.01	0.02	71	0.00	0.02	26	0.00	0.00	55	0.02	247	0.17
7	373	0.05	0.11	372	0.02	0.13	82	0.02	0.00	268	0.13	1095	0.43
8	733	0.10	0.19	1114	0.09	0.38	246	0.07	0.01	865	0.43	2958	1.14
9	522	0.22	0.08	1550	0.04	0.57	272	0.07	0.01	914	0.45	3258	1.44
10	401	0.07	0.11	1121	0.03	0.41	405	0.10	0.05	517	0.25	2444	0.94
11	470	0.05	0.14	778	0.05	0.27	465	0.10	0.07	499	0.24	2212	0.78
12	503	0.05	0.15	736	0.04	0.26	659	0.10	0.15	557	0.27	2455	0.79
13	614	0.06	0.19	672	0.03	0.24	794	0.10	0.20	680	0.34	2760	0.84
14	674	0.06	0.21	699	0.03	0.25	693	0.10	0.19	708	0.35	2774	0.85
15	829	0.05	0.27	862	0.03	0.31	706	0.10	0.18	524	0.26	2921	0.83
16	924	0.04	0.30	725	0.04	0.25	765	0.10	0.19	526	0.26	2940	0.82
17	1298	0.05	0.44	867	0.05	0.30	1067	0.10	0.33	609	0.30	3841	1.02
18	1164	0.04	0.39	873	0.05	0.30	1114	0.10	0.32	397	0.19	3548	0.97
19	664	0.05	0.21	738	0.06	0.25	716	0.10	0.17	408	0.20	2546	0.72
20	678	0.06	0.20	695	0.05	0.24	642	0.10	0.17	498	0.24	2513	0.77
21	462	0.05	0.14	469	0.02	0.17	495	0.10	0.08	369	0.18	1795	0.60
22	520	0.04	0.16	319	0.02	0.10	535	0.10	0.10	343	0.17	1717	0.58
23	308	0.03	0.09	253	0.01	0.09	310	0.09	0.01	150	0.07	1021	0.39
24	210	0.01	0.06	188	0.00	0.06	184	0.04	0.02	103	0.05	685	0.27
	11725			13396			10424			9074		44619	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-27-74 DAY OF WEEK= WEDNESDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'C'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	122	0.01	0.03	117	0.00	0.04	143	0.04	0.00	74	0.03	456	0.23
2	52	0.00	0.01	68	0.00	0.02	52	0.01	0.00	31	0.01	203	0.16
3	30	0.00	0.00	31	0.00	0.01	23	0.00	0.00	9	0.00	93	0.12
4	38	0.00	0.01	35	0.00	0.01	19	0.00	0.00	13	0.00	105	0.12
5	41	0.00	0.01	40	0.00	0.01	16	0.00	0.00	7	0.00	104	0.12
6	78	0.01	0.02	82	0.00	0.02	25	0.00	0.00	57	0.02	242	0.17
7	364	0.06	0.10	452	0.02	0.16	82	0.02	0.00	255	0.12	1153	0.47
8	701	0.14	0.18	1274	0.08	0.45	287	0.08	0.01	840	0.42	3102	1.20
9	579	0.16	0.13	1426	0.05	0.52	301	0.08	0.01	775	0.38	3081	1.26
10	471	0.10	0.12	990	0.02	0.36	351	0.10	0.03	506	0.25	2318	0.92
11	418	0.06	0.12	794	0.04	0.28	468	0.10	0.07	509	0.25	2189	0.80
12	634	0.08	0.18	777	0.04	0.28	726	0.10	0.22	616	0.30	2753	0.87
13	608	0.08	0.18	729	0.03	0.26	764	0.10	0.19	756	0.37	2858	0.92
14	637	0.05	0.20	786	0.05	0.27	613	0.10	0.13	709	0.35	2745	0.88
15	670	0.05	0.21	678	0.02	0.24	713	0.10	0.17	610	0.30	2671	0.80
16	959	0.05	0.31	658	0.03	0.23	865	0.10	0.26	527	0.26	3009	0.83
17	1275	0.04	0.43	824	0.06	0.28	1063	0.10	0.33	582	0.29	3744	1.03
18	1261	0.04	0.43	864	0.05	0.30	963	0.10	0.29	402	0.20	3490	0.98
19	696	0.07	0.21	775	0.06	0.26	718	0.10	0.17	410	0.20	2599	0.74
20	561	0.05	0.17	808	0.03	0.29	572	0.10	0.11	540	0.27	2481	0.81
21	464	0.03	0.15	432	0.02	0.15	489	0.10	0.08	389	0.19	1774	0.57
22	456	0.02	0.15	310	0.01	0.11	617	0.10	0.13	270	0.13	1653	0.51
23	323	0.01	0.10	225	0.01	0.08	240	0.05	0.02	173	0.08	961	0.36
24	207	0.01	0.06	178	0.01	0.06	197	0.05	0.01	84	0.04	666	0.28
	11646			13353			10307			9144		44450	

BLANK

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-28-74 DAY OF WEEK= THURSDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'C'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	177	0.01	0.05	101	0.00	0.03	125	0.03	0.00	66	0.03	469	0.23
2	78	0.00	0.02	8	0.00	0.00	51	0.01	0.00	33	0.01	170	0.16
3	29	0.00	0.01	42	0.00	0.01	28	0.00	0.00	13	0.00	112	0.13
4	27	0.00	0.00	20	0.00	0.00	15	0.00	0.00	3	0.00	65	0.11
5	42	0.00	0.01	34	0.00	0.01	15	0.00	0.00	7	0.00	98	0.12
6	80	0.00	0.02	90	0.00	0.03	28	0.00	0.00	62	0.03	260	0.18
7	366	0.03	0.11	415	0.02	0.14	107	0.03	0.00	261	0.13	1149	0.43
8	795	0.09	0.24	1209	0.09	0.42	267	0.02	0.05	812	0.40	3083	1.05
9	595	0.12	0.15	1425	0.05	0.52	263	0.07	0.01	812	0.40	3095	1.23
10	542	0.07	0.15	947	0.04	0.34	379	0.10	0.04	489	0.24	2357	0.86
11	510	0.05	0.15	747	0.04	0.26	414	0.07	0.05	383	0.19	2054	0.69
12	608	0.06	0.18	669	0.03	0.24	689	0.10	0.19	469	0.23	2435	0.74
13	519	0.05	0.16	689	0.04	0.24	653	0.10	0.20	628	0.31	2489	0.81
14	638	0.05	0.20	703	0.04	0.25	583	0.10	0.14	622	0.31	2546	0.81
15	710	0.06	0.22	858	0.03	0.31	630	0.07	0.14	521	0.26	2719	0.81
16	914	0.06	0.29	699	0.05	0.24	738	0.10	0.17	479	0.23	2830	0.80
17	1242	0.06	0.41	800	0.04	0.28	1032	0.10	0.32	555	0.27	3629	1.00
18	1068	0.04	0.36	781	0.06	0.27	940	0.10	0.25	360	0.18	3149	0.88
19	864	0.06	0.28	706	0.05	0.24	653	0.09	0.11	357	0.17	2600	0.72
20	664	0.06	0.20	625	0.04	0.21	568	0.10	0.13	480	0.24	2337	0.72
21	465	0.03	0.15	371	0.02	0.13	453	0.10	0.07	345	0.17	1634	0.55
22	567	0.04	0.18	281	0.02	0.09	552	0.10	0.11	301	0.15	1701	0.57
23	284	0.02	0.09	240	0.02	0.07	219	0.06	0.01	129	0.06	872	0.34
24	191	0.00	0.06	175	0.00	0.06	266	0.07	0.01	84	0.04	716	0.29
	11995			12635			9668			8271		42569	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-29-74 DAY OF WEEK= FRIDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'C'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	170	0.01	0.05	97	0.00	0.03	129	0.03	0.00	89	0.04	485	0.24
2	68	0.00	0.02	94	0.00	0.03	62	0.01	0.00	32	0.01	256	0.17
3	40	0.00	0.01	34	0.00	0.01	30	0.00	0.00	9	0.00	113	0.12
4	28	0.00	0.00	23	0.00	0.00	7	0.00	0.00	7	0.00	65	0.11
5	30	0.00	0.00	43	0.00	0.01	18	0.00	0.00	9	0.00	100	0.12
6	92	0.01	0.02	142	0.00	0.05	24	0.00	0.00	57	0.02	315	0.19
7	364	0.03	0.11	555	0.02	0.20	94	0.02	0.00	239	0.11	1252	0.48
8	669	0.12	0.18	1335	0.10	0.46	270	0.07	0.01	870	0.43	3144	1.19
9	647	0.15	0.16	1368	0.03	0.51	273	0.07	0.01	823	0.41	3111	1.25
10	399	0.10	0.09	872	0.04	0.31	376	0.10	0.04	526	0.26	2173	0.98
11	407	0.08	0.10	707	0.04	0.25	464	0.10	0.07	463	0.23	2041	0.77
12	532	0.07	0.15	601	0.02	0.21	733	0.10	0.18	555	0.27	2421	0.77
13	675	0.07	0.20	727	0.04	0.26	834	0.10	0.31	699	0.34	2935	0.88
14	647	0.06	0.20	748	0.04	0.26	704	0.10	0.21	705	0.35	2804	0.88
15	711	0.07	0.22	726	0.03	0.26	705	0.10	0.16	488	0.24	2630	0.78
16	1043	0.05	0.34	858	0.05	0.30	825	0.10	0.26	488	0.24	3214	0.85
17	1344	0.04	0.46	882	0.04	0.31	1105	0.10	0.38	644	0.32	3975	1.09
18	1265	0.06	0.42	874	0.06	0.30	1041	0.10	0.35	378	0.18	3558	1.04
19	765	0.09	0.23	731	0.04	0.25	704	0.10	0.16	292	0.14	2492	0.72
20	685	0.08	0.20	830	0.05	0.29	677	0.10	0.19	397	0.19	2589	0.77
21	479	0.06	0.14	492	0.02	0.17	527	0.10	0.09	460	0.23	1958	0.67
22	659	0.07	0.20	386	0.03	0.13	668	0.10	0.19	428	0.21	2141	0.69
23	318	0.04	0.09	271	0.01	0.09	432	0.09	0.06	238	0.11	1259	0.44
24	280	0.02	0.08	200	0.02	0.06	324	0.06	0.04	165	0.08	969	0.36
	12317			13596			11026			9061		46000	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-30-74 DAY OF WEEK= SATURDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'C'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	226	0.01	0.07	148	0.01	0.05	397	0.08	0.05	160	0.08	931	0.35
2	180	0.00	0.06	129	0.00	0.04	114	0.02	0.01	69	0.03	492	0.22
3	111	0.00	0.03	82	0.00	0.02	61	0.01	0.00	31	0.01	285	0.17
4	63	0.00	0.02	58	0.00	0.01	58	0.01	0.00	16	0.00	195	0.15
5	57	0.00	0.01	56	0.00	0.02	24	0.00	0.00	19	0.00	156	0.13
6	61	0.00	0.01	82	0.00	0.03	18	0.00	0.00	20	0.01	181	0.15
7	116	0.01	0.03	217	0.00	0.08	48	0.01	0.00	45	0.02	426	0.22
8	235	0.02	0.07	348	0.01	0.12	81	0.01	0.01	95	0.04	759	0.31
9	324	0.04	0.09	557	0.01	0.20	181	0.03	0.03	261	0.13	1323	0.51
10	449	0.06	0.13	773	0.03	0.28	317	0.06	0.04	419	0.20	1958	0.71
11	459	0.05	0.14	875	0.05	0.31	448	0.09	0.05	502	0.25	2284	0.80
12	748	0.05	0.24	1005	0.06	0.35	659	0.10	0.16	556	0.27	2968	0.90
13	949	0.06	0.30	1075	0.07	0.38	801	0.10	0.13	350	0.17	3168	0.82
14	995	0.08	0.32	1084	0.06	0.38	750	0.10	0.25	714	0.35	3543	1.02
15	969	0.05	0.32	977	0.05	0.35	793	0.10	0.26	688	0.34	3427	0.94
16	1059	0.05	0.35	778	0.05	0.27	813	0.10	0.27	667	0.33	3310	0.94
17	1153	0.05	0.39	607	0.04	0.21	744	0.06	0.14	557	0.27	3061	0.88
18	919	0.06	0.29	514	0.03	0.17	769	0.10	0.19	545	0.27	2740	0.83
19	595	0.08	0.17	554	0.04	0.19	360	0.04	0.08	321	0.16	1830	0.57
20	523	0.13	0.12	801	0.04	0.28	698	0.10	0.21	836	0.41	2858	1.03
21	360	0.08	0.10	504	0.03	0.17	611	0.10	0.13	453	0.22	1948	0.68
22	415	0.14	0.08	516	0.03	0.18	658	0.10	0.18	570	0.28	2159	0.80
23	338	0.04	0.10	307	0.02	0.10	530	0.10	0.13	325	0.16	1500	0.51
24	330	0.04	0.09	237	0.01	0.08	414	0.10	0.04	271	0.13	1252	0.47
	11633			12284			10347			8490		42754	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-31-74 DAY OF WEEK= SUNDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'C'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	261	0.02	0.08	253	0.01	0.08	343	0.10	0.03	184	0.09	1061	0.40
2	244	0.02	0.07	219	0.01	0.07	68	0.01	0.00	99	0.04	630	0.26
3	172	0.00	0.05	139	0.01	0.04	165	0.04	0.00	72	0.03	548	0.25
4	53	0.00	0.01	57	0.00	0.02	26	0.00	0.00	21	0.01	157	0.14
5	26	0.00	0.00	33	0.00	0.01	21	0.00	0.00	7	0.00	87	0.12
6	27	0.00	0.00	35	0.00	0.01	13	0.00	0.00	6	0.00	81	0.11
7	56	0.00	0.01	61	0.00	0.02	15	0.00	0.00	17	0.00	149	0.14
8	94	0.01	0.02	94	0.00	0.03	27	0.00	0.00	47	0.02	262	0.17
9	62	0.03	0.01	133	0.00	0.04	70	0.02	0.00	68	0.03	353	0.23
10	229	0.03	0.06	228	0.01	0.08	99	0.02	0.00	94	0.04	649	0.29
11	333	0.02	0.10	412	0.02	0.14	170	0.03	0.02	190	0.09	1105	0.40
12	502	0.03	0.16	784	0.04	0.28	395	0.05	0.08	388	0.19	2069	0.67
13	628	0.06	0.19	1128	0.08	0.39	630	0.10	0.20	632	0.31	3038	0.99
14	918	0.04	0.30	1165	0.07	0.41	826	0.10	0.29	765	0.38	3674	1.07
15	1102	0.06	0.36	1211	0.08	0.42	824	0.10	0.27	762	0.38	3899	1.09
16	1170	0.06	0.38	920	0.07	0.32	884	0.10	0.26	731	0.36	3705	1.02
17	1161	0.06	0.38	734	0.04	0.26	718	0.10	0.20	655	0.32	3268	0.98
18	919	0.08	0.29	628	0.03	0.22	648	0.10	0.14	464	0.23	2659	0.80
19	461	0.06	0.14	525	0.02	0.19	271	0.05	0.04	246	0.12	1523	0.52
20	504	0.09	0.14	574	0.04	0.20	439	0.10	0.07	416	0.20	1933	0.70
21	295	0.04	0.08	390	0.03	0.13	289	0.08	0.01	177	0.08	1151	0.44
22	271	0.05	0.07	367	0.02	0.13	364	0.10	0.03	199	0.09	1201	0.48
23	299	0.02	0.09	278	0.01	0.10	213	0.06	0.01	161	0.08	951	0.37
24	153	0.01	0.04	176	0.01	0.06	153	0.03	0.01	77	0.03	559	0.24
	9999			10544			7691			6478		34712	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 1-74 DAY OF WEEK= MONDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'C'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	99	0.00	0.03	80	0.00	0.03	139	0.04	0.00	59	0.02	377	0.20
2	45	0.00	0.01	39	0.00	0.01	25	0.00	0.00	12	0.00	121	0.12
3	31	0.00	0.01	23	0.00	0.00	6	0.00	0.00	8	0.00	68	0.11
4	15	0.00	0.00	16	0.00	0.00	17	0.00	0.00	5	0.00	53	0.11
5	32	0.00	0.01	29	0.00	0.01	5	0.00	0.00	8	0.00	74	0.11
6	58	0.01	0.03	149	0.00	0.05	28	0.00	0.00	57	0.02	332	0.19
7	380	0.03	0.11	666	0.02	0.24	79	0.02	0.00	260	0.13	1385	0.53
8	827	0.09	0.25	1379	0.08	0.49	259	0.05	0.03	824	0.41	3289	1.15
9	548	0.11	0.14	1014	0.01	0.38	284	0.08	0.01	922	0.46	2768	1.14
10	442	0.05	0.13	933	0.03	0.34	323	0.06	0.04	527	0.26	2225	0.81
11	425	0.05	0.12	669	0.02	0.24	473	0.10	0.08	444	0.22	2011	0.72
12	575	0.05	0.18	623	0.03	0.22	681	0.10	0.20	465	0.23	2344	0.70
13	633	0.04	0.20	729	0.04	0.25	695	0.10	0.21	644	0.32	2701	0.82
14	670	0.05	0.21	697	0.03	0.25	631	0.10	0.15	699	0.34	2697	0.85
15	775	0.06	0.25	657	0.03	0.23	658	0.10	0.17	536	0.26	2626	0.77
16	917	0.04	0.30	697	0.03	0.25	745	0.10	0.17	483	0.24	2842	0.79
17	1289	0.04	0.44	879	0.05	0.31	1068	0.10	0.33	564	0.28	3800	1.02
18	1278	0.03	0.44	857	0.06	0.29	1059	0.10	0.34	395	0.19	3589	1.05
19	768	0.05	0.25	790	0.04	0.28	706	0.10	0.17	444	0.22	2728	0.76
20	664	0.04	0.22	758	0.05	0.26	586	0.10	0.15	483	0.24	2511	0.76
21	609	0.03	0.20	336	0.02	0.11	447	0.10	0.07	423	0.21	1814	0.64
22	560	0.04	0.18	239	0.02	0.08	620	0.10	0.13	327	0.16	1746	0.58
23	223	0.00	0.07	207	0.01	0.07	209	0.05	0.01	105	0.05	744	0.29
24	156	0.00	0.05	145	0.00	0.05	206	0.06	0.01	64	0.03	571	0.25
	12098			12611			9949			8758		43416	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 2-74 DAY OF WEEK= TUESDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'C'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	118	0.00	0.04	76	0.00	0.02	91	0.02	0.00	62	0.03	347	0.20
2	68	0.00	0.02	64	0.00	0.02	34	0.00	0.00	31	0.01	197	0.15
3	33	0.00	0.01	41	0.00	0.01	19	0.00	0.00	3	0.00	96	0.12
4	32	0.00	0.01	23	0.00	0.00	14	0.00	0.00	5	0.00	74	0.11
5	34	0.00	0.01	45	0.00	0.01	8	0.00	0.00	5	0.00	92	0.12
6	103	0.01	0.03	173	0.00	0.06	32	0.00	0.00	54	0.02	362	0.21
7	361	0.04	0.11	644	0.02	0.23	108	0.01	0.01	267	0.13	1400	0.52
8	849	0.10	0.25	1382	0.06	0.50	275	0.04	0.05	849	0.42	3355	1.18
9	679	0.11	0.19	1143	0.02	0.42	304	0.04	0.05	910	0.45	3036	1.15
10	500	0.06	0.15	854	0.03	0.31	413	0.10	0.07	493	0.24	2260	0.82
11	477	0.05	0.14	790	0.03	0.28	463	0.10	0.07	495	0.24	2225	0.79
12	630	0.04	0.20	693	0.03	0.25	801	0.10	0.24	523	0.26	2647	0.75
13	769	0.07	0.22	695	0.02	0.25	763	0.10	0.25	737	0.36	2904	0.89
14	623	0.05	0.19	694	0.03	0.25	677	0.10	0.15	97	0.04	2091	0.66
15	821	0.05	0.26	632	0.02	0.23	691	0.10	0.18	577	0.28	2721	0.81
16	949	0.03	0.32	741	0.06	0.25	758	0.10	0.18	523	0.26	2971	0.84
17	1307	0.04	0.44	953	0.05	0.34	1082	0.10	0.34	627	0.31	3969	1.04
18	1160	0.03	0.40	807	0.06	0.27	1026	0.10	0.29	408	0.20	3421	0.96
19	840	0.04	0.27	762	0.05	0.26	699	0.10	0.20	412	0.20	2713	0.74
20	661	0.04	0.22	700	0.04	0.24	554	0.10	0.13	524	0.26	2459	0.75
21	563	0.03	0.19	410	0.02	0.14	488	0.10	0.07	328	0.16	1809	0.58
22	562	0.02	0.18	294	0.02	0.10	545	0.10	0.10	267	0.13	1668	0.55
23	272	0.01	0.08	220	0.02	0.07	188	0.04	0.01	128	0.06	808	0.32
24	168	0.01	0.06	132	0.00	0.04	164	0.04	0.00	77	0.03	561	0.25
	12619			12968			10197			8402		44186	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 3-74 DAY OF WEEK= WEDNESDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'C'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	196	0.00	0.06	134	0.00	0.04	105	0.02	0.01	71	0.03	506	0.23
2	70	0.00	0.02	65	0.00	0.02	43	0.01	0.00	33	0.01	211	0.15
3	40	0.00	0.01	27	0.00	0.01	14	0.00	0.00	6	0.00	87	0.12
4	30	0.00	0.01	24	0.00	0.00	21	0.00	0.00	11	0.00	86	0.12
5	43	0.00	0.01	38	0.00	0.01	10	0.00	0.00	9	0.00	100	0.12
6	104	0.00	0.03	154	0.00	0.05	32	0.00	0.00	51	0.02	341	0.19
7	401	0.03	0.12	655	0.01	0.24	110	0.00	0.02	282	0.14	1448	0.52
8	739	0.10	0.21	1378	0.07	0.49	267	0.07	0.01	853	0.42	3237	1.20
9	692	0.14	0.18	1245	0.04	0.45	312	0.06	0.04	864	0.43	3113	1.19
10	460	0.05	0.14	853	0.05	0.30	374	0.09	0.04	509	0.25	2196	0.80
11	463	0.05	0.14	760	0.04	0.27	493	0.10	0.12	467	0.23	2203	0.75
12	644	0.07	0.19	684	0.04	0.24	735	0.10	0.20	556	0.27	2619	0.80
13	671	0.07	0.20	702	0.03	0.25	712	0.10	0.26	697	0.34	2782	0.67
14	751	0.10	0.22	764	0.05	0.26	372	0.10	0.04	701	0.35	2588	0.92
15	688	0.03	0.22	533	0.02	0.19	428	0.10	0.06	436	0.21	2085	0.68
16	865	0.09	0.27	669	0.06	0.22	588	0.10	0.16	404	0.20	2546	0.77
17	1106	0.05	0.37	717	0.06	0.24	1021	0.10	0.30	493	0.24	3337	0.93
18	1031	0.06	0.33	751	0.07	0.25	1005	0.10	0.28	388	0.19	3175	0.89
19	807	0.05	0.26	710	0.06	0.24	720	0.07	0.09	411	0.20	2648	0.71
20	577	0.04	0.18	723	0.06	0.24	666	0.10	0.17	569	0.28	2535	0.79
21	555	0.04	0.18	361	0.02	0.12	478	0.10	0.08	397	0.19	1791	0.62
22	557	0.02	0.18	252	0.01	0.08	623	0.10	0.19	331	0.16	1763	0.61
23	277	0.01	0.09	232	0.01	0.08	220	0.04	0.03	130	0.06	859	0.32
24	165	0.01	0.05	144	0.01	0.04	251	0.07	0.01	84	0.04	644	0.28
	11972			12575			9600			8753		42900	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 4-74 DAY OF WEEK= THURSDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'C'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	142	0.00	0.04	102	0.00	0.03	126	0.03	0.01	88	0.04	458	0.23
2	74	0.00	0.02	88	0.00	0.03	54	0.01	-0.00	41	0.02	257	0.17
3	38	0.00	0.01	26	0.00	0.00	26	0.00	0.00	8	0.00	98	0.12
4	38	0.00	0.01	27	0.00	0.00	24	0.00	0.00	4	0.00	93	0.12
5	36	0.00	0.01	39	0.00	0.01	16	0.00	0.00	9	0.00	100	0.12
6	98	0.00	0.03	154	0.00	0.05	27	0.00	0.00	55	0.02	334	0.19
7	364	0.02	0.12	582	0.02	0.21	83	-0.00	0.02	240	0.12	1269	0.45
8	767	0.07	0.24	1308	0.08	0.46	245	0.01	0.05	828	0.41	3168	1.07
9	650	0.10	0.20	1279	0.05	0.46	305	0.03	0.05	902	0.45	3176	1.16
10	527	0.07	0.15	832	0.06	0.28	371	0.08	0.04	503	0.25	2233	0.79
11	554	0.05	0.17	762	0.05	0.27	474	0.06	0.08	459	0.22	2249	0.71
12	639	0.05	0.20	627	0.03	0.22	691	0.10	0.20	494	0.24	2451	0.72
13	643	0.05	0.20	675	0.03	0.24	727	0.09	0.13	697	0.34	2742	0.84
14	697	0.07	0.21	741	0.04	0.26	658	0.10	0.18	696	0.34	2792	0.89
15	778	0.07	0.24	659	0.03	0.23	716	0.10	0.25	520	0.26	2673	0.78
16	953	0.05	0.31	691	0.03	0.24	770	0.10	0.18	462	0.23	2876	0.79
17	1299	0.04	0.44	932	0.04	0.33	995	0.10	0.33	622	0.31	3848	1.02
18	1101	0.03	0.37	819	0.05	0.28	981	0.10	0.27	361	0.18	3262	0.90
19	755	0.06	0.24	767	0.04	0.27	694	0.10	0.16	402	0.20	2618	0.73
20	663	0.06	0.21	788	0.06	0.27	655	0.08	0.12	576	0.28	2702	0.81
21	522	0.03	0.17	394	0.01	0.14	506	0.10	0.09	383	0.19	1805	0.59
22	717	0.05	0.23	270	0.01	0.09	648	0.10	0.12	370	0.18	2005	0.67
23	245	0.02	0.07	228	0.01	0.08	210	0.06	0.01	109	0.05	792	0.32
24	214	0.02	0.06	165	0.01	0.05	210	0.04	0.02	92	0.04	681	0.27
	12594			12955			10212			8921		44682	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 5-74 DAY OF WEEK= FRIDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'C'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	158	0.01	0.05	119	0.00	0.04	170	0.04	0.00	111	0.05	558	0.26
2	101	0.00	0.03	83	0.00	0.02	81	0.02	0.00	48	0.02	313	0.18
3	53	0.00	0.01	40	0.00	0.01	23	-0.00	0.00	9	0.00	125	0.12
4	33	0.00	0.01	31	0.00	0.01	26	0.00	0.00	13	0.00	103	0.12
5	40	0.00	0.01	39	0.00	0.01	14	0.00	0.00	7	0.00	100	0.12
6	103	0.01	0.03	161	0.00	0.06	23	0.00	0.00	30	0.01	317	0.19
7	388	0.03	0.12	639	0.02	0.23	96	-0.00	0.02	163	0.08	1286	0.44
8	832	0.10	0.25	1348	0.08	0.47	264	0.02	0.05	327	0.16	2771	0.87
9	701	0.12	0.19	1286	0.06	0.46	304	0.06	0.03	408	0.20	2699	0.95
10	444	0.07	0.12	841	0.05	0.29	356	0.10	0.03	436	0.21	2077	0.78
11	520	0.05	0.16	731	0.02	0.26	488	0.10	0.12	495	0.24	2234	0.77
12	606	0.05	0.19	682	0.05	0.23	797	0.10	0.26	571	0.28	2656	0.77
13	552	0.06	0.16	742	0.05	0.26	771	0.10	0.19	654	0.32	2719	0.85
14	765	0.06	0.24	768	0.04	0.27	686	0.10	0.20	702	0.35	2921	0.88
15	710	0.04	0.23	718	0.02	0.26	677	0.10	0.15	487	0.24	2592	0.74
16	1044	0.06	0.34	800	0.09	0.26	888	0.10	0.23	497	0.24	3229	0.88
17	1464	0.06	0.49	1013	0.09	0.34	1038	0.08	0.22	638	0.31	4153	1.09
18	1263	0.04	0.43	975	0.06	0.34	1044	0.10	0.34	458	0.22	3760	1.04
19	912	0.05	0.30	816	0.07	0.27	769	0.10	0.25	459	0.22	2956	0.83
20	842	0.08	0.26	1089	0.06	0.39	780	0.10	0.26	757	0.37	3468	1.05
21	816	0.06	0.26	708	0.04	0.25	754	0.10	0.10	601	0.30	2879	0.82
22	891	0.07	0.28	485	0.03	0.17	771	0.10	0.24	365	0.18	2512	0.80
23	389	0.03	0.12	294	0.02	0.10	471	0.10	0.10	265	0.13	1419	0.49
24	315	0.02	0.10	243	0.01	0.08	269	0.05	0.03	100	0.05	927	0.33
	13962			14651			11560			8601		48774	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 6-74 DAY OF WEEK= SATURDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'C'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	281	0.02	0.09	169	0.01	0.05	385	0.10	0.04	147	0.07	982	0.38
2	169	0.01	0.06	152	0.01	0.05	119	0.03	0.00	117	0.05	577	0.27
3	113	0.00	0.03	113	0.01	0.03	48	0.01	0.00	22	0.01	296	0.17
4	72	0.00	0.02	50	0.00	0.01	30	0.00	0.00	13	0.00	165	0.14
5	50	0.00	0.01	32	0.00	0.01	18	0.00	0.00	9	0.00	109	0.12
6	83	0.00	0.02	94	0.00	0.03	14	0.00	0.00	21	0.01	212	0.15
7	131	0.01	0.04	242	0.00	0.09	45	0.01	0.00	82	0.04	500	0.25
8	250	0.02	0.07	337	0.01	0.12	88	0.02	0.00	138	0.06	813	0.34
9	345	0.02	0.11	539	0.02	0.19	201	0.04	0.02	306	0.15	1391	0.51
10	448	0.03	0.14	808	0.04	0.28	319	0.05	0.05	451	0.22	2026	0.71
11	648	0.04	0.21	941	0.04	0.34	468	0.07	0.07	522	0.26	2579	0.82
12	765	0.03	0.26	1010	0.04	0.36	626	0.08	0.11	613	0.30	3034	0.90
13	1025	0.05	0.34	1061	0.05	0.38	759	0.10	0.20	708	0.35	3553	0.99
14	1123	0.04	0.38	998	0.06	0.35	769	0.06	0.17	721	0.36	3611	0.96
15	1034	0.04	0.35	959	0.04	0.34	782	0.10	0.23	678	0.33	3453	0.93
16	1257	0.05	0.42	917	0.08	0.31	791	0.06	0.16	643	0.32	3608	0.99
17	1103	0.05	0.37	717	0.04	0.25	688	0.10	0.19	604	0.30	3112	0.92
18	1048	0.06	0.34	613	0.04	0.21	756	0.10	0.18	514	0.25	2931	0.86
19	700	0.08	0.21	598	0.06	0.20	769	0.10	0.07	337	0.16	2404	0.66
20	540	0.15	0.12	782	0.04	0.27	619	0.10	0.13	653	0.32	2594	0.96
21	473	0.09	0.13	558	0.06	0.18	599	0.10	0.12	384	0.19	2014	0.66
22	452	0.11	0.11	497	0.02	0.18	695	0.09	0.12	627	0.31	2271	0.80
23	346	0.03	0.10	287	0.02	0.09	520	0.10	0.15	220	0.11	1373	0.49
24	359	0.04	0.10	280	0.01	0.10	320	0.05	0.02	187	0.09	1146	0.40
	12855			12754			10428			8717		44754	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 7-74 DAY OF WEEK= SUNDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'C'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	355	0.03	0.11	249	0.02	0.06	440	0.10	0.06	249	0.12	1293	0.46
2	265	0.01	0.08	185	0.01	0.06	128	0.02	0.01	112	0.05	690	0.28
3	166	0.00	0.05	135	0.00	0.04	167	0.04	0.00	82	0.04	550	0.25
4	48	0.00	0.01	63	0.00	0.02	24	0.00	0.00	44	0.02	179	0.15
5	34	0.00	0.01	20	0.00	0.00	13	0.00	0.00	10	0.00	77	0.12
6	29	0.00	0.00	42	0.00	0.01	8	0.00	0.00	5	0.00	84	0.12
7	51	0.00	0.01	83	0.00	0.03	18	0.00	0.00	22	0.01	174	0.15
8	97	0.01	0.02	108	0.00	0.03	27	0.00	0.00	29	0.01	261	0.17
9	164	0.01	0.05	148	0.00	0.05	52	0.00	0.01	55	0.02	419	0.20
10	214	0.01	0.06	226	0.01	0.08	92	0.02	0.00	91	0.04	623	0.27
11	266	0.02	0.09	337	0.01	0.12	166	0.01	0.05	165	0.08	954	0.34
12	402	0.01	0.13	767	0.04	0.27	350	0.08	0.04	416	0.20	1935	0.70
13	632	0.05	0.20	1100	0.06	0.39	664	0.10	0.24	654	0.32	3050	0.98
14	1054	0.04	0.35	1166	0.11	0.39	776	0.10	0.25	698	0.34	3694	1.05
15	1266	0.07	0.42	1151	0.07	0.40	821	0.02	0.20	716	0.35	3974	0.98
16	1242	0.07	0.41	871	0.05	0.30	829	0.08	0.18	720	0.36	3662	1.02
17	1018	0.06	0.33	581	0.03	0.20	626	0.10	0.13	596	0.29	2821	0.90
18	991	0.07	0.32	531	0.02	0.19	606	0.05	0.12	489	0.24	2617	0.79
19	490	0.06	0.14	477	0.03	0.16	303	0.06	0.04	235	0.11	1505	0.50
20	446	0.08	0.12	509	0.03	0.18	426	0.10	0.06	228	0.11	1609	0.57
21	297	0.02	0.09	323	0.03	0.10	240	0.06	0.03	117	0.05	977	0.36
22	281	0.03	0.08	326	0.03	0.10	334	0.09	0.01	161	0.08	1102	0.42
23	261	0.02	0.08	342	0.01	0.12	171	0.04	0.02	63	0.03	837	0.32
24	158	0.00	0.05	162	0.01	0.05	160	0.04	0.00	51	0.02	531	0.23
	10267			9902			7441			6008		33618	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 8-74 DAY OF WEEK= MONDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'C'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	89	0.00	0.03	76	0.01	0.02	68	0.01	0.00	53	0.02	286	0.18
2	30	0.00	0.01	47	0.00	0.01	15	0.00	0.00	11	0.00	103	0.12
3	17	0.00	0.00	24	0.00	0.00	9	0.00	0.00	9	0.00	59	0.11
4	16	0.01	0.00	21	0.00	0.00	14	0.00	0.00	1	0.00	54	0.11
5	36	0.03	0.01	35	0.00	0.01	8	0.00	0.00	7	0.00	86	0.12
6	61	0.01	0.02	130	0.00	0.04	21	0.00	0.00	48	0.02	280	0.19
7	381	0.03	0.12	610	0.02	0.22	94	0.01	0.00	230	0.11	1315	0.48
8	684	0.11	0.19	1294	0.07	0.46	262	0.07	0.01	710	0.35	2950	1.11
9	500	0.1[illegible]	0.12	1326	0.05	0.48	276	0.08	0.01	901	0.45	3003	1.24
10	414	0.06	0.11	849	0.05	0.30	342	0.09	0.01	498	0.24	2103	0.81
11	432	0.04	0.13	775	0.04	0.27	503	0.10	0.09	463	0.23	2173	0.75
12	668	0.05	0.21	746	0.04	0.26	720	0.10	0.21	517	0.25	2651	0.78
13	710	0.05	0.22	770	0.05	0.27	754	0.10	0.28	707	0.35	2941	0.88
14	799	0.06	0.25	708	0.04	0.24	689	0.10	0.18	769	0.38	2965	0.90
15	670	0.04	0.22	756	0.05	0.26	665	0.10	0.15	570	0.28	2661	0.80
16	952	0.04	0.31	749	0.04	0.26	762	0.08	0.14	523	0.26	2986	0.81
17	1314	0.05	0.44	880	0.05	0.31	1037	0.10	0.33	670	0.33	3901	1.03
18	1314	0.04	0.45	796	0.04	0.28	1028	0.10	0.29	426	0.21	3564	0.98
19	806	0.06	0.26	836	0.05	0.29	734	0.10	0.21	468	0.23	2844	0.79
20	665	0.06	0.21	694	0.03	0.24	636	0.10	0.14	422	0.21	2417	0.72
21	620	0.03	0.20	394	0.02	0.14	515	0.10	0.09	373	0.18	1902	0.62
22	508	0.03	0.16	227	0.01	0.07	599	0.10	0.12	320	0.16	1654	0.56
23	276	0.01	0.09	177	0.01	0.06	298	0.06	0.02	89	0.04	840	0.32
24	156	0.00	0.05	139	0.00	0.04	166	0.04	0.00	50	0.02	511	0.23
	12140			13059			10215			8835		44249	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 9-74 DAY OF WEEK= TUESDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'C'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	113	0.01	0.03	87	0.00	0.03	116	0.03	0.00	52	0.02	368	0.20
2	39	0.00	0.01	50	0.00	0.01	30	0.00	0.00	15	0.00	134	0.13
3	32	0.00	0.01	20	0.00	0.00	25	0.00	0.00	3	0.00	80	0.12
4	36	0.00	0.01	25	0.00	0.00	14	0.00	0.00	6	0.00	81	0.11
5	39	0.00	0.01	50	0.00	0.01	20	0.00	0.00	8	0.00	117	0.12
6	59	0.00	0.03	117	0.00	0.04	34	0.00	0.00	49	0.02	299	0.18
7	309	0.03	0.11	586	0.02	0.21	107	0.02	0.00	236	0.11	1318	0.50
8	664	0.11	0.16	1404	0.09	0.49	267	0.07	0.01	678	0.33	3013	1.12
9	515	0.11	0.13	1292	0.03	0.48	304	0.08	0.01	882	0.44	2993	1.22
10	436	0.07	0.12	865	0.04	0.32	368	0.10	0.04	493	0.24	2182	0.83
11	515	0.04	0.16	817	0.04	0.29	549	0.10	0.14	507	0.25	2388	0.79
12	292	0.04	0.08	747	0.04	0.26	771	0.10	0.19	531	0.26	2341	0.77
13	743	0.05	0.24	755	0.04	0.27	738	0.10	0.24	707	0.35	2943	0.88
14	763	0.05	0.24	754	0.04	0.26	663	0.10	0.19	753	0.37	2933	0.89
15	854	0.05	0.28	726	0.01	0.27	705	0.10	0.21	568	0.28	2853	0.82
16	1032	0.05	0.34	716	0.05	0.25	796	0.10	0.21	512	0.25	3056	0.85
17	1396	0.04	0.48	922	0.06	0.32	928	0.10	0.29	625	0.31	3871	1.05
18	1360	0.03	0.47	867	0.04	0.31	1043	0.10	0.34	390	0.19	3680	1.06
19	804	0.04	0.26	735	0.05	0.25	726	0.10	0.17	395	0.19	2660	0.71
20	557	0.04	0.17	711	0.05	0.24	584	0.10	0.12	492	0.24	2344	0.75
21	477	0.03	0.15	416	0.03	0.14	475	0.10	0.08	359	0.17	1727	0.56
22	563	0.03	0.19	278	0.02	0.09	619	0.10	0.13	323	0.16	1803	0.58
23	292	0.02	0.09	244	0.01	0.08	229	0.06	0.01	165	0.08	930	0.36
24	224	0.01	0.07	179	0.01	0.06	185	0.03	0.01	93	0.04	681	0.26
	12274			13383			10296			8842		44795	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4-10-74 DAY OF WEEK= WEDNESDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'C'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	139	0.01	0.04	105	0.00	0.03	114	0.03	0.00	75	0.03	433	0.22
2	65	0.00	0.02	86	0.00	0.02	45	0.01	0.00	35	0.01	231	0.16
3	33	0.00	0.01	37	0.00	0.01	31	0.00	0.00	11	0.00	112	0.12
4	34	0.00	0.01	19	0.00	0.00	10	0.00	0.00	5	0.00	68	0.11
5	38	0.00	0.01	49	0.00	0.01	19	0.00	0.00	8	0.00	114	0.12
6	90	0.00	0.02	136	0.00	0.05	34	0.00	0.00	45	0.02	305	0.19
7	375	0.03	0.11	591	0.03	0.21	129	0.03	0.00	257	0.12	1352	0.51
8	759	0.09	0.23	1340	0.10	0.46	343	0.05	0.05	713	0.35	3155	1.07
9	702	0.12	0.19	1250	0.04	0.46	323	0.07	0.03	850	0.42	3125	1.18
10	497	0.06	0.14	1009	0.05	0.36	370	0.10	0.04	515	0.25	2391	0.89
11	462	0.06	0.13	969	0.05	0.34	529	0.10	0.10	498	0.24	2458	0.85
12	714	0.05	0.23	800	0.05	0.28	851	0.10	0.25	572	0.28	2937	0.82
13	766	0.05	0.25	698	0.04	0.24	736	0.10	0.26	727	0.36	2947	0.87
14	837	0.05	0.27	884	0.05	0.31	710	0.10	0.21	701	0.35	3132	0.92
15	842	0.05	0.27	676	0.04	0.24	590	0.10	0.20	571	0.28	2679	0.81
16	1007	0.05	0.33	705	0.04	0.25	752	0.10	0.19	570	0.28	3034	0.87
17	1384	0.05	0.47	888	0.05	0.31	1034	0.10	0.33	610	0.30	3916	1.06
18	1376	0.04	0.47	835	0.06	0.29	1010	0.10	0.32	440	0.22	3661	1.06
19	905	0.04	0.30	770	0.06	0.26	688	0.10	0.19	418	0.20	2781	0.77
20	659	0.06	0.20	775	0.04	0.27	607	0.10	0.13	586	0.29	2627	0.83
21	571	0.02	0.19	402	0.04	0.13	531	0.10	0.10	413	0.20	1917	0.64
22	592	0.03	0.19	338	0.03	0.11	582	0.10	0.12	333	0.16	1845	0.59
23	329	0.02	0.10	270	0.01	0.09	291	0.08	0.01	173	0.08	1063	0.40
24	195	0.01	0.06	180	0.01	0.06	171	0.04	0.00	85	0.04	631	0.27
	13391			13812			10500			9211		46914	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4-11-74 DAY OF WEEK= THURSDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'C'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	164	0.00	0.05	113	0.00	0.04	139	0.02	0.01	87	0.04	503	0.23
2	82	0.00	0.02	65	0.00	0.02	50	0.01	0.00	21	0.01	218	0.15
3	53	0.00	0.01	29	0.00	0.01	21	0.00	0.00	10	0.00	113	0.13
4	48	0.00	0.01	16	0.00	0.00	18	0.00	0.00	8	0.00	90	0.12
5	44	0.00	0.01	46	0.00	0.01	8	0.00	0.00	8	0.00	106	0.12
6	97	0.00	0.03	143	0.00	0.05	23	0.00	0.00	50	0.02	313	0.18
7	365	0.03	0.11	608	0.01	0.22	94	0.02	0.01	252	0.12	1319	0.50
8	772	0.07	0.24	1303	0.08	0.46	283	0.03	0.06	797	0.39	3155	1.08
9	716	0.10	0.21	1309	0.04	0.48	303	0.04	0.05	910	0.45	3238	1.19
10	509	0.07	0.15	802	0.04	0.28	367	0.07	0.05	464	0.23	2142	0.76
11	417	0.05	0.12	757	0.03	0.27	498	0.10	0.09	442	0.22	2114	0.74
12	612	0.05	0.19	679	0.03	0.24	663	0.10	0.17	474	0.23	2428	0.73
13	666	0.05	0.21	675	0.03	0.24	733	0.10	0.23	701	0.35	2775	0.84
14	716	0.06	0.22	812	0.07	0.27	611	0.10	0.12	668	0.33	2807	0.88
15	848	0.06	0.27	725	0.05	0.25	726	0.10	0.16	576	0.28	2875	0.82
16	1012	0.05	0.33	707	0.04	0.24	805	0.10	0.17	555	0.27	3079	0.86
17	456	0.05	0.13	852	0.05	0.30	1031	0.10	0.29	631	0.31	2969	0.87
18	1312	0.05	0.44	809	0.05	0.28	989	0.10	0.26	375	0.18	3485	0.96
19	821	0.05	0.27	804	0.06	0.28	625	0.10	0.12	424	0.21	2674	0.75
20	719	0.06	0.22	807	0.06	0.28	611	0.10	0.11	484	0.24	2621	0.78
21	615	0.02	0.20	497	0.03	0.17	522	0.10	0.09	394	0.19	2028	0.64
22	691	0.04	0.22	377	0.03	0.13	657	0.10	0.11	376	0.18	2101	0.66
23	267	0.02	0.09	271	0.02	0.09	229	0.05	0.01	152	0.07	939	0.34
24	235	0.01	0.07	168	0.01	0.05	243	0.07	0.01	90	0.04	736	0.30
	12256			13374			10249			8949		44828	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4-12-74 DAY OF WEEK= FRIDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'C'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	189	0.01	0.06	127	0.00	0.04	144	0.03	0.01	107	0.05	567	0.26
2	110	0.00	0.03	81	0.00	0.03	55	0.00	0.00	49	0.02	295	0.17
3	42	0.00	0.01	41	0.00	0.01	30	0.00	0.00	10	0.00	123	0.13
4	49	0.00	0.01	30	0.00	0.00	18	0.00	0.00	16	0.00	113	0.13
5	45	0.00	0.01	47	0.00	0.01	10	0.00	0.00	6	0.00	108	0.12
6	98	0.00	0.03	94	0.00	0.03	20	0.00	0.00	30	0.01	242	0.16
7	285	0.02	0.09	415	0.01	0.15	64	0.01	0.00	145	0.07	909	0.36
8	521	0.02	0.17	864	0.03	0.31	181	0.01	0.04	518	0.25	2084	0.72
9	524	0.07	0.15	902	0.02	0.33	266	0.05	0.03	598	0.29	2290	0.85
10	573	0.06	0.17	874	0.04	0.31	372	0.04	0.07	495	0.24	2314	0.77
11	737	0.06	0.23	946	0.05	0.33	571	0.09	0.09	585	0.29	2839	0.88
12	862	0.05	0.29	830	0.05	0.29	783	0.10	0.25	650	0.32	3145	0.87
13	1004	0.06	0.33	859	0.05	0.30	1033	0.10	0.38	702	0.35	3598	0.97
14	927	0.06	0.30	830	0.07	0.28	836	0.10	0.26	762	0.38	3355	0.95
15	1052	0.07	0.34	979	0.06	0.34	852	0.10	0.27	726	0.36	3609	0.98
16	1220	0.05	0.41	814	0.04	0.29	834	0.10	0.26	699	0.34	3567	1.01
17	1194	0.04	0.40	779	0.04	0.27	875	0.10	0.28	629	0.31	3477	0.96
18	1038	0.03	0.35	718	0.05	0.25	812	0.10	0.25	483	0.24	3051	0.86
19	801	0.04	0.26	676	0.05	0.23	550	0.09	0.08	444	0.22	2471	0.73
20	566	0.06	0.17	809	0.04	0.28	566	0.10	0.15	576	0.28	2517	0.83
21	607	0.04	0.19	514	0.03	0.17	585	0.10	0.15	450	0.22	2156	0.66
22	564	0.06	0.17	476	0.03	0.16	627	0.10	0.17	428	0.21	2095	0.65
23	240	0.02	0.07	213	0.01	0.07	323	0.06	0.04	238	0.11	1014	0.38
24	291	0.02	0.09	206	0.01	0.07	169	0.03	0.02	165	0.08	831	0.33
	13559			13124			10576			9511		46770	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4-13-74 DAY OF WEEK= SATURDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

G/C RATIOS AT LEVEL OF SERVICE 'C'

	NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		TOTAL	
		G/C REQUIRED			G/C REQUIRED			G/C REQUIRED			G/C REQD.		(G+Y)/C
HOUR	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 1	PHASE 2	VOLUME	PHASE 3	PHASE 4	VOLUME	PHASE 4	VOLUME	REQUIRED
1	227	0.00	0.07	161	0.01	0.05	352	0.10	0.03	156	0.07	896	0.36
2	168	0.00	0.05	128	0.01	0.04	64	0.01	0.00	69	0.03	429	0.22
3	114	0.00	0.03	82	0.00	0.03	36	0.01	0.00	31	0.01	263	0.17
4	60	0.00	0.02	44	0.00	0.01	35	0.01	0.00	168	0.08	307	0.21
5	40	0.00	0.01	26	0.00	0.00	19	0.00	0.00	6	0.00	91	0.12
6	55	0.00	0.01	53	0.00	0.02	8	0.00	0.00	19	0.00	135	0.13
7	112	0.00	0.03	183	0.00	0.06	41	0.01	0.00	48	0.02	384	0.21
8	228	0.01	0.07	265	0.01	0.09	69	0.02	0.00	95	0.04	657	0.27
9	322	0.01	0.10	453	0.01	0.16	145	0.00	0.03	258	0.12	1178	0.41
10	419	0.02	0.13	720	0.03	0.26	289	0.03	0.05	423	0.21	1851	0.63
11	678	0.03	0.22	864	0.05	0.30	429	0.04	0.08	536	0.26	2507	0.77
12	812	0.02	0.28	964	0.06	0.33	599	0.10	0.16	556	0.27	2931	0.88
13	916	0.02	0.31	891	0.05	0.31	701	0.10	0.20	615	0.30	3123	0.87
14	907	0.04	0.30	880	0.05	0.31	752	0.10	0.22	643	0.32	3182	0.88
15	872	0.04	0.29	878	0.04	0.31	663	0.10	0.15	641	0.32	3054	0.88
16	997	0.04	0.33	761	0.03	0.27	662	0.10	0.17	618	0.30	3038	0.88
17	955	0.04	0.32	637	0.03	0.22	614	0.10	0.13	505	0.25	2711	0.82
18	897	0.03	0.30	500	0.03	0.17	706	0.10	0.22	412	0.20	2515	0.76
19	457	0.04	0.15	471	0.05	0.15	308	0.04	0.06	244	0.12	1520	0.47
20	493	0.09	0.13	562	0.04	0.19	328	0.04	0.07	447	0.22	1830	0.65
21	335	0.03	0.10	451	0.03	0.14	401	0.05	0.08	242	0.12	1409	0.45
22	377	0.07	0.10	411	0.03	0.14	398	0.08	0.06	267	0.13	1453	0.53
23	268	0.04	0.08	270	0.01	0.09	386	0.08	0.04	252	0.12	1196	0.44
24	230	0.02	0.07	218	0.01	0.07	162	0.04	0.01	135	0.06	745	0.31
	10999			10853			8167			7386		37405	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-13-74 DAY OF WEEK= WEDNESDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'C'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	6	0.16	89	0.19	7	0.19	77	0.17	98	0.12	51	0.19
2	9	0.15	40	0.09	9	0.15	62	0.15	28	0.05	37	0.15
3	0	0.00	39	0.11	4	0.12	42	0.12	28	0.12	4	0.12
4	3	0.05	22	0.08	7	0.12	29	0.12	13	0.08	6	0.12
5	1	0.03	38	0.12	4	0.12	35	0.12	7	0.04	8	0.12
6	6	0.19	59	0.06	2	0.06	163	0.19	22	0.04	51	0.19
7	46	0.53	279	0.20	16	0.18	665	0.53	100	0.13	223	0.53
8	141	1.24	561	0.44	119	1.04	1462	1.24	280	0.25	764	1.24
9	156	1.35	369	0.29	64	0.55	1587	1.35	260	0.23	874	1.35
10	100	0.87	325	0.28	57	0.49	916	0.87	323	0.28	488	0.87
11	69	0.76	445	0.43	59	0.65	723	0.76	599	0.52	465	0.76
12	75	0.78	542	0.61	55	0.57	648	0.78	775	0.67	550	0.78
13	75	0.86	576	0.69	35	0.40	670	0.86	730	0.65	696	0.86
14	75	0.87	631	0.75	46	0.53	677	0.87	689	0.51	701	0.87
15	75	0.81	670	0.77	54	0.58	655	0.81	706	0.54	601	0.81
16	81	0.90	985	0.90	66	0.73	645	0.63	762	0.68	571	0.90
17	64	0.86	1206	0.99	74	0.99	856	0.76	1047	0.99	611	0.99
18	65	0.86	1236	0.97	73	0.97	796	0.67	970	0.97	435	0.78
19	71	0.74	885	0.79	76	0.79	739	0.71	666	0.67	428	0.79
20	79	0.75	738	0.75	52	0.49	688	0.75	564	0.49	458	0.75
21	41	0.63	578	0.63	32	0.49	392	0.46	460	0.38	386	0.63
22	44	0.57	509	0.57	43	0.55	339	0.40	543	0.46	304	0.57
23	27	0.35	301	0.35	21	0.27	258	0.32	275	0.27	86	0.35
24	20	0.31	248	0.31	5	0.07	195	0.26	215	0.21	86	0.31
	1329		11371		980		13319		10160		8884	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-14-74 DAY OF WEEK= THURSDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'C'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	17	0.21	125	0.21	13	0.16	106	0.19	109	0.14	49	0.21
2	2	0.06	55	0.10	5	0.16	75	0.16	49	0.09	28	0.16
3	3	0.12	25	0.09	3	0.12	32	0.12	29	0.12	3	0.11
4	3	0.12	25	0.12	2	0.08	23	0.12	25	0.09	9	0.12
5	3	0.09	30	0.08	4	0.12	43	0.12	17	0.08	8	0.12
6	14	0.19	63	0.08	3	0.04	134	0.19	21	0.04	51	0.19
7	43	0.50	276	0.21	16	0.18	597	0.50	68	0.08	240	0.50
8	119	1.18	541	0.40	114	1.13	1465	1.18	267	0.25	686	1.13
9	180	1.21	357	0.25	59	0.39	1545	1.21	232	0.26	599	1.21
10	92	0.88	301	0.27	62	0.59	910	0.88	406	0.38	517	0.88
11	73	0.73	360	0.33	83	0.84	842	0.84	531	0.49	494	0.84
12	75	0.80	449	0.46	44	0.47	724	0.80	733	0.61	538	0.80
13	67	0.85	424	0.47	60	0.76	705	0.85	665	0.50	665	0.85
14	86	0.89	496	0.62	62	0.64	659	0.89	657	0.48	730	0.89
15	83	0.84	696	0.76	48	0.49	715	0.84	724	0.58	611	0.84
16	67	0.78	782	0.78	67	0.78	731	0.78	748	0.64	502	0.78
17	82	0.93	1274	1.02	90	1.02	963	0.83	1043	1.01	582	1.02
18	62	0.62	1253	1.01	101	1.01	1041	0.90	1005	1.01	433	0.77
19	63	0.78	955	0.78	61	0.75	759	0.68	637	0.64	393	0.78
20	84	0.82	778	0.73	55	0.54	814	0.82	539	0.58	491	0.82
21	29	0.52	754	0.70	39	0.70	409	0.40	487	0.40	397	0.70
22	46	0.65	712	0.65	16	0.22	335	0.32	515	0.48	316	0.65
23	34	0.36	360	0.36	30	0.32	253	0.27	175	0.20	140	0.36
24	14	0.28	279	0.28	9	0.18	201	0.22	196	0.23	59	0.28
	1341		11350		1046		14081		9878		8541	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-15-74 DAY OF WEEK= FRIDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'C'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	18	0.25	211	0.25	14	0.19	120	0.15	122	0.15	80	0.25
2	8	0.18	124	0.18	8	0.18	75	0.11	52	0.08	39	0.18
3	4	0.14	73	0.14	3	0.10	29	0.06	31	0.09	14	0.14
4	2	0.12	41	0.12	1	0.06	37	0.12	10	0.04	14	0.12
5	2	0.08	41	0.12	3	0.12	36	0.11	11	0.07	7	0.12
6	12	0.19	112	0.15	7	0.11	130	0.19	25	0.04	57	0.19
7	52	0.48	362	0.30	20	0.18	573	0.48	92	0.11	207	0.48
8	121	1.19	888	0.71	108	1.06	1382	1.19	239	0.23	828	1.19
9	183	1.36	757	0.61	66	0.49	1569	1.36	317	0.27	883	1.36
10	91	0.88	601	0.50	30	0.29	978	0.88	360	0.31	507	0.88
11	78	0.78	595	0.57	66	0.66	751	0.78	442	0.33	477	0.78
12	86	0.82	734	0.74	49	0.47	759	0.82	732	0.66	526	0.82
13	102	0.88	666	0.73	56	0.48	745	0.88	748	0.81	628	0.88
14	91	0.89	395	0.46	60	0.59	711	0.89	666	0.50	699	0.89
15	78	0.82	668	0.67	46	0.48	759	0.82	657	0.56	541	0.82
16	81	0.80	787	0.80	65	0.64	643	0.70	778	0.67	512	0.80
17	66	0.91	1178	0.98	71	0.98	917	0.82	1043	0.97	601	0.98
18	56	0.91	1234	0.95	59	0.95	975	0.81	966	0.95	445	0.79
19	66	0.60	816	0.68	95	0.86	960	0.86	669	0.69	432	0.86
20	77	0.96	700	0.60	68	0.85	1038	0.96	613	0.55	613	0.96
21	54	0.70	420	0.49	43	0.56	564	0.70	526	0.41	495	0.70
22	74	0.67	504	0.62	47	0.43	509	0.67	666	0.53	444	0.67
23	38	0.47	250	0.37	31	0.38	294	0.47	329	0.23	269	0.47
24	35	0.38	220	0.31	17	0.18	250	0.38	336	0.27	132	0.38
	1475		12397		1033		14804		10430		9450	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-16-74 DAY OF WEEK= SATURDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'C'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	25	0.27	162	0.23	21	0.23	181	0.27	255	0.20	196	0.27
2	12	0.21	180	0.23	13	0.23	159	0.22	74	0.09	83	0.23
3	11	0.19	128	0.17	8	0.13	130	0.19	44	0.09	37	0.19
4	6	0.08	53	0.14	10	0.14	50	0.14	35	0.08	20	0.14
5	6	0.12	39	0.12	5	0.10	29	0.10	14	0.08	7	0.12
6	8	0.15	49	0.08	2	0.03	78	0.15	17	0.05	20	0.15
7	15	0.22	110	0.11	3	0.04	194	0.22	29	0.05	62	0.22
8	15	0.24	204	0.19	20	0.32	312	0.32	63	0.08	137	0.32
9	31	0.51	250	0.24	22	0.36	501	0.51	169	0.15	287	0.51
10	60	0.73	403	0.35	35	0.42	771	0.73	268	0.23	412	0.73
11	55	1.82	429	0.39	40	0.60	841	0.82	442	0.38	519	0.82
12	71	0.92	654	0.57	57	0.74	986	0.92	597	0.54	577	0.92
13	74	0.97	858	0.72	84	1.10	1224	1.10	851	0.89	732	1.10
14	57	0.78	913	0.84	71	0.98	987	0.98	772	0.75	688	0.98
15	80	0.97	928	0.77	59	0.72	1089	0.97	733	0.91	586	0.97
16	74	1.01	1099	1.01	62	0.84	771	0.76	723	0.61	713	1.01
17	82	0.91	952	0.91	58	0.64	708	0.73	678	0.58	621	0.91
18	71	0.86	1075	0.86	50	0.60	525	0.45	735	0.71	445	0.86
19	79	0.62	397	0.41	56	0.44	551	0.62	319	0.27	308	0.62
20	127	0.80	295	0.41	67	0.42	533	0.80	540	0.42	585	0.80
21	115	0.64	224	0.24	45	0.25	550	0.64	270	0.25	317	0.64
22	124	0.67	256	0.38	36	0.19	417	0.67	655	0.67	392	0.63
23	38	0.46	226	0.36	27	0.33	265	0.46	338	0.23	270	0.46
24	55	0.40	299	0.40	55	0.40	-25	-0.03	351	0.32	170	0.40
	1291		10193		906		11827		8972		8184	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-17-74 DAY OF WEEK= SUNDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'C'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	56	0.43	264	0.43	12	0.09	210	0.37	351	0.29	191	0.43
2	21	0.29	222	0.29	22	0.30	216	0.30	136	0.15	141	0.30
3	11	0.24	144	0.20	13	0.28	181	0.28	161	0.15	114	0.28
4	10	0.15	63	0.10	5	0.07	88	0.15	23	0.08	16	0.15
5	4	0.13	33	0.10	2	0.06	40	0.13	21	0.07	12	0.13
6	4	0.12	26	0.08	3	0.09	35	0.12	13	0.09	4	0.12
7	8	0.13	30	0.10	2	0.03	34	0.13	4	0.01	19	0.13
8	10	0.16	51	0.09	6	0.10	84	0.16	29	0.06	39	0.16
9	14	0.18	97	0.14	10	0.13	114	0.18	40	0.08	40	0.18
10	19	0.19	164	0.20	23	0.23	168	0.23	72	0.13	80	0.23
11	31	0.36	186	0.21	16	0.18	296	0.36	159	0.16	155	0.36
12	29	0.22	526	0.44	72	0.55	607	0.55	326	0.25	331	0.55
13	83	0.77	558	0.48	100	0.93	994	0.93	491	0.47	548	0.93
14	78	0.93	808	0.68	89	1.06	1170	1.06	776	0.71	689	1.06
15	79	1.02	819	0.73	80	1.03	1076	1.03	809	0.70	717	1.03
16	73	0.95	873	0.88	63	0.82	878	0.95	797	0.63	713	0.95
17	60	0.91	967	0.91	50	0.76	663	0.67	666	0.55	648	0.91
18	95	0.80	870	0.80	44	0.37	562	0.55	545	0.45	445	0.80
19	72	0.53	482	0.53	43	0.31	417	0.49	293	0.26	236	0.53
20	79	0.58	257	0.30	58	0.43	452	0.58	279	0.22	332	0.58
21	49	0.42	212	0.21	16	0.13	383	0.42	195	0.21	151	0.42
22	62	0.48	287	0.32	17	0.13	390	0.48	373	0.38	158	0.48
23	22	0.30	278	0.30	26	0.36	303	0.36	141	0.14	169	0.36
24	16	0.24	177	0.21	14	0.21	190	0.24	113	0.15	61	0.24
	985		8394		786		9551		6813		6009	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-18-74 DAY OF WEEK= MONDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'C'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	8	0.20	99	0.18	9	0.22	112	0.22	151	0.15	71	0.22
2	6	0.13	73	0.13	1	0.02	55	0.10	21	0.13	12	0.09
3	1	0.02	16	0.08	5	0.11	21	0.11	14	0.07	8	0.11
4	3	0.09	15	0.07	4	0.12	24	0.12	16	0.07	9	0.12
5	3	0.11	28	0.11	1	0.03	27	0.11	8	0.09	3	0.11
6	8	0.17	71	0.10	1	0.02	107	0.17	18	0.03	51	0.17
7	49	0.[illegible]	293	0.25	20	0.19	489	0.46	77	0.08	232	0.46
8	140	1.[illegible]	565	0.52	16	0.96	1163	1.16	233	0.18	859	1.16
9	254	1.[illegible]	245	0.21	43	0.23	1505	1.40	275	0.26	865	1.40
10	119	0.09	284	0.25	52	0.39	908	0.89	327	0.29	501	0.89
11	86	0.78	343	0.32	43	0.39	777	0.78	447	0.42	425	0.78
12	64	0.75	438	0.48	52	0.61	640	0.75	685	0.55	515	0.75
13	73	0.89	439	0.50	55	0.67	728	0.89	757	0.57	709	0.89
14	69	0.87	596	0.63	57	0.72	758	0.87	620	0.48	655	0.87
15	60	0.76	598	0.63	49	0.63	687	0.78	666	0.54	535	0.78
16	36	0.52	892	0.81	56	0.81	666	0.65	711	0.66	498	0.81
17	51	0.69	1206	0.99	73	0.99	819	0.72	990	0.93	607	0.99
18	59	0.80	1211	1.00	73	1.00	855	0.76	1064	1.00	349	0.56
19	83	0.74	708	0.74	62	0.55	645	0.72	710	0.63	436	0.74
20	41	0.60	528	0.51	47	0.69	663	0.69	488	0.42	409	0.69
21	38	0.56	456	0.51	14	0.20	466	0.56	454	0.38	313	0.56
22	34	0.49	403	0.49	20	0.29	269	0.35	483	0.40	250	0.49
23	9	0.16	203	0.32	18	0.32	182	0.31	262	0.21	130	0.32
24	14	0.23	150	0.23	8	0.13	132	0.22	144	0.16	62	0.23
	1308		9860		879		12698		9621		8504	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-19-74 DAY OF WEEK= TUESDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'C'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	9	0.21	113	0.21	3	0.07	78	0.16	128	0.13	63	0.21
2	6	0.12	61	0.14	7	0.14	58	0.14	41	0.11	13	0.14
3	0	0.00	36	0.08	0	0.00	50	0.13	25	0.08	13	0.13
4	6	0.12	30	0.12	4	0.08	20	0.08	14	0.10	4	0.12
5	1	0.12	28	0.07	1	0.12	41	0.12	17	0.12	2	0.08
6	6	0.18	70	0.08	6	0.18	138	0.18	17	0.03	52	0.18
7	40	0.47	310	0.28	24	0.28	491	0.47	72	0.07	272	0.47
8	175	1.11	584	0.63	111	0.70	948	1.11	241	0.18	866	1.11
9	199	1.10	349	0.44	51	0.28	806	1.10	306	0.22	871	1.10
10	96	0.73	295	0.34	41	0.31	576	0.73	348	0.27	517	0.73
11	79	0.75	329	0.35	76	0.72	650	0.75	458	0.36	478	0.75
12	69	0.73	441	0.50	61	0.64	594	0.73	680	0.69	493	0.73
13	94	0.86	440	0.64	45	0.41	547	0.86	739	0.60	748	0.86
14	65	0.86	472	0.57	64	0.85	662	0.86	633	0.52	715	0.86
15	87	0.79	635	0.74	33	0.30	629	0.79	677	0.59	555	0.79
16	71	0.80	745	0.75	61	0.69	745	0.80	756	0.64	527	0.80
17	63	0.96	1211	0.98	64	0.98	387	0.33	1041	0.69	615	0.98
18	56	0.71	1110	0.95	75	0.95	754	0.69	1036	0.95	424	0.68
19	94	0.72	605	0.61	78	0.59	655	0.72	648	0.61	384	0.72
20	62	0.66	481	0.52	69	0.73	630	0.73	463	0.38	472	0.73
21	12	0.39	420	0.55	17	0.55	367	0.52	443	0.32	381	0.55
22	47	0.52	367	0.52	30	0.33	267	0.40	630	0.50	302	0.52
23	31	0.29	222	0.29	16	0.15	197	0.28	179	0.19	86	0.29
24	18	0.26	168	0.23	7	0.10	175	0.26	154	0.16	81	0.26
	1386		9522		944		10465		9746		8934	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-20-74 DAY OF WEEK= WEDNESDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'C'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	22	0.24	134	0.24	9	0.09	-2	-0.00	166	0.18	51	0.24
2	14	0.16	70	0.14	6	0.07	75	0.16	48	0.10	28	0.16
3	2	0.03	24	0.10	8	0.12	27	0.12	34	0.12	6	0.12
4	2	0.04	29	0.12	6	0.12	21	0.09	10	0.07	6	0.12
5	2	0.06	24	0.05	4	0.12	49	0.12	11	0.08	6	0.12
6	10	0.19	65	0.09	2	0.03	124	0.19	24	0.04	59	0.19
7	37	0.47	251	0.19	26	0.33	555	0.47	91	0.11	206	0.47
8	135	1.07	480	0.43	142	1.12	1155	1.12	265	0.22	776	1.12
9	209	1.25	343	0.31	58	0.34	1270	1.25	294	0.25	811	1.25
10	90	0.87	312	0.27	40	0.39	912	0.87	347	0.33	507	0.87
11	58	0.79	370	0.35	33	0.45	784	0.79	458	0.40	500	0.79
12	76	0.80	555	0.60	54	0.56	681	0.80	682	0.60	552	0.80
13	89	0.91	600	0.71	62	0.63	714	0.91	812	0.74	731	0.91
14	63	0.88	618	0.70	48	0.67	716	0.88	671	0.57	709	0.88
15	68	0.79	643	0.68	38	0.44	692	0.79	687	0.55	551	0.79
16	76	0.85	916	0.85	71	0.79	703	0.70	784	0.72	530	0.85
17	79	1.02	1251	1.05	81	1.05	811	0.73	1055	1.05	630	0.98
18	50	0.71	1222	0.98	69	0.98	745	0.64	995	0.98	401	0.67
19	66	0.72	645	0.62	68	0.74	714	0.74	634	0.57	437	0.74
20	79	0.74	563	0.60	35	0.33	646	0.74	571	0.62	469	0.74
21	46	0.53	392	0.53	32	0.37	350	0.51	446	0.35	317	0.53
22	45	0.52	402	0.52	29	0.34	218	0.30	528	0.43	294	0.52
23	31	0.35	256	0.35	13	0.14	214	0.31	227	0.20	142	0.35
24	16	0.28	182	0.28	11	0.19	154	0.25	214	0.19	87	0.28
	1365		10347		945		12328		10054		8806	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-21-74 DAY OF WEEK= THURSDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'C'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	12	0.21	151	0.21	10	0.17	84	0.12	55	0.08	63	0.21
2	5	0.07	80	0.16	11	0.16	74	0.16	54	0.10	32	0.16
3	0	0.00	37	0.12	1	0.12	33	0.12	34	0.10	11	0.12
4	1	0.05	32	0.11	2	0.11	17	0.06	10	0.07	5	0.11
5	5	0.12	19	0.05	1	0.02	37	0.12	11	0.06	8	0.12
6	8	0.19	81	0.11	5	0.12	131	0.19	23	0.04	61	0.19
7	45	0.48	263	0.22	23	0.24	519	0.48	79	0.08	248	0.48
8	145	1.14	544	0.49	126	0.99	1160	1.14	243	0.20	812	1.14
9	196	1.29	393	0.35	48	0.31	1352	1.29	336	0.29	836	1.29
10	130	0.80	365	0.38	72	0.44	708	0.80	376	0.35	443	0.80
11	63	0.74	335	0.33	62	0.72	681	0.74	415	0.36	453	0.74
12	82	0.75	370	0.44	51	0.47	584	0.75	713	0.56	533	0.75
13	93	0.86	440	0.52	39	0.36	677	0.86	723	0.55	654	0.86
14	76	0.86	441	0.52	64	0.72	678	0.86	630	0.47	684	0.86
15	72	0.78	595	0.64	35	0.38	671	0.78	691	0.56	535	0.78
16	77	0.80	769	0.80	63	0.65	706	0.79	766	0.64	528	0.80
17	62	0.86	1268	1.03	74	1.03	824	0.72	1008	1.03	601	0.96
18	77	0.96	1133	0.96	75	0.93	759	0.69	1025	0.96	391	0.64
19	95	0.78	695	0.70	72	0.59	715	0.78	715	0.70	453	0.78
20	86	0.78	484	0.51	76	0.69	690	0.78	607	0.52	498	0.78
21	48	0.60	465	0.60	38	0.47	429	0.59	500	0.38	392	0.60
22	66	0.54	446	0.54	29	0.24	263	0.34	588	0.52	269	0.54
23	28	0.38	308	0.38	19	0.26	206	0.27	260	0.22	160	0.38
24	21	0.28	190	0.28	20	0.26	174	0.27	187	0.18	86	0.28
	1493		9904		1016		12172		10049		8756	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-22-74 DAY OF WEEK= FRIDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'C'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	10	0.13	124	0.23	17	0.23	105	0.21	143	0.15	67	0.23
2	5	0.13	70	0.16	6	0.16	66	0.16	60	0.09	36	0.16
3	4	0.12	32	0.10	1	0.03	36	0.12	28	0.09	10	0.12
4	4	0.11	32	0.11	4	0.11	24	0.09	8	0.06	6	0.11
5	6	0.12	38	0.11	3	0.06	37	0.12	16	0.10	4	0.12
6	18	0.19	68	0.10	1	0.01	112	0.19	24	0.04	58	0.19
7	42	0.49	272	0.23	27	0.31	529	0.49	85	0.09	260	0.49
8	156	1.[illegible]	480	0.43	13	0.85	1201	1.17	248	0.20	831	1.17
9	224	1.30	282	0.25	56	0.32	1357	1.30	279	0.25	830	1.30
10	110	0.89	319	0.28	52	0.50	927	0.89	334	0.29	492	0.89
11	78	0.79	518	0.50	66	0.67	758	0.79	484	0.46	477	0.79
12	93	0.81	487	0.51	52	0.45	709	0.81	778	0.66	527	0.81
13	82	0.88	603	0.72	52	0.56	680	0.88	777	0.69	709	0.88
14	52	0.87	530	0.59	39	0.65	721	0.87	685	0.50	712	0.87
15	34	0.53	796	0.81	52	0.81	677	0.74	738	0.67	581	0.81
16	37	0.57	996	0.89	58	0.89	755	0.73	887	0.89	552	0.84
17	59	1.10	1366	1.10	43	0.80	898	0.78	1074	1.10	628	0.93
18	64	1.07	1300	1.07	43	0.71	868	0.77	1028	1.07	403	0.61
19	107	0.81	660	0.63	12	0.09	789	0.81	709	0.68	449	0.81
20	84	0.73	665	0.70	111	0.97	844	0.97	599	0.60	706	0.97
21	71	0.67	514	0.62	48	0.45	515	0.67	514	0.41	431	0.67
22	126	0.72	526	0.72	16	0.09	442	0.65	732	0.61	465	0.72
23	54	0.44	281	0.44	12	0.09	224	0.37	298	0.23	218	0.44
24	29	0.36	254	0.36	12	0.15	224	0.35	285	0.23	168	0.36
	1549		11213		906		13498		10813		9620	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-23-74 DAY OF WEEK= SATURDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'C'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	16	0.36	235	0.36	15	0.34	213	0.35	396	0.32	141	0.36
2	24	0.23	157	0.23	12	0.11	146	0.23	81	0.10	79	0.23
3	9	0.19	112	0.14	2	0.04	134	0.19	54	0.10	36	0.19
4	5	0.13	37	0.10	4	0.10	43	0.13	30	0.12	5	0.13
5	3	0.12	28	0.06	2	0.08	51	0.12	15	0.09	5	0.12
6	6	0.14	60	0.11	1	0.02	69	0.14	10	0.03	26	0.14
7	16	0.23	102	0.12	9	0.13	174	0.23	41	0.05	90	0.23
8	24	0.31	140	0.14	13	0.16	284	0.31	79	0.10	120	0.31
9	69	0.51	194	0.18	13	0.09	509	0.51	148	0.16	238	0.51
10	70	0.76	255	0.23	39	0.42	779	0.76	303	0.26	440	0.76
11	64	0.85	421	0.38	60	0.80	878	0.85	483	0.43	528	0.85
12	84	0.86	564	0.49	46	0.47	915	0.86	703	0.67	490	0.86
13	78	0.94	637	0.62	63	0.76	896	0.94	840	0.69	672	0.94
14	72	0.81	726	0.74	84	0.95	859	0.95	811	0.65	708	0.95
15	102	0.98	794	0.87	72	0.69	831	0.98	788	0.61	762	0.98
16	87	0.87	710	0.86	60	0.60	666	0.87	774	0.58	688	0.87
17	93	0.82	642	0.77	49	0.43	642	0.82	743	0.58	610	0.82
18	70	0.79	889	0.79	51	0.58	528	0.51	685	0.64	444	0.79
19	115	0.64	427	0.51	87	0.48	499	0.64	360	0.34	315	0.64
20	161	0.82	346	0.44	113	0.57	589	0.82	507	0.44	523	0.82
21	122	0.63	214	0.28	53	0.27	449	0.63	324	0.27	332	0.63
22	168	0.68	130	0.24	60	0.24	339	0.68	815	0.68	391	0.63
23	41	0.35	257	0.35	28	0.24	229	0.34	231	0.21	133	0.35
24	37	0.43	245	0.39	23	0.27	249	0.43	551	0.43	147	0.29
	1536		8322		959		10971		9772		7923	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-24-74 DAY OF WEEK= SUNDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'C'

	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
HOUR	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	37	0.37	227	0.31	21	0.21	249	0.37	193	0.16	189	0.37
2	15	0.14	195	0.26	28	0.26	171	0.25	112	0.13	87	0.26
3	8	0.21	82	0.09	6	0.16	180	0.21	97	0.17	28	0.21
4	2	0.02	53	0.09	12	0.15	79	0.15	24	0.08	16	0.15
5	4	0.12	21	0.07	1	0.03	31	0.12	13	0.07	7	0.12
6	4	0.11	18	0.08	2	0.05	24	0.11	8	0.07	5	0.11
7	6	0.13	32	0.07	2	0.04	52	0.13	8	0.02	20	0.13
8	12	0.16	63	0.11	11	0.15	82	0.16	18	0.04	36	0.16
9	19	0.18	101	0.18	7	0.06	88	0.17	27	0.05	47	0.18
10	30	0.25	127	0.15	22	0.18	199	0.25	52	0.08	74	0.25
11	30	0.32	171	0.21	24	0.26	244	0.32	92	0.09	162	0.32
12	49	0.46	287	0.27	59	0.55	537	0.55	166	0.16	300	0.55
13	47	0.52	472	0.43	81	0.89	903	0.89	350	0.31	567	0.89
14	63	0.61	668	0.61	106	1.02	1038	1.02	664	0.59	679	1.02
15	130	1.18	712	0.61	115	1.04	1276	1.18	776	0.72	768	1.18
16	104	0.95	941	0.95	52	0.47	874	0.95	821	0.69	656	0.95
17	113	0.98	1059	0.98	34	0.29	649	0.64	829	0.65	617	0.98
18	79	0.70	644	0.70	78	0.69	461	0.54	626	0.54	420	0.70
19	99	0.59	317	0.37	63	0.37	474	0.59	606	0.59	245	0.55
20	83	0.63	223	0.28	78	0.59	466	0.63	303	0.23	402	0.63
21	45	0.39	188	0.21	48	0.41	344	0.41	426	0.41	174	0.41
22	53	0.43	201	0.25	46	0.37	314	0.43	240	0.21	198	0.43
23	27	0.37	184	0.23	22	0.30	281	0.37	334	0.29	103	0.37
24	9	0.22	112	0.13	10	0.25	191	0.25	171	0.20	47	0.25
	1068		7098		928		9207		6956		5847	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-25-74 DAY OF WEEK= MONDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'C'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	6	0.19	56	0.08	6	0.19	114	0.19	68	0.09	52	0.19
2	8	0.13	24	0.06	3	0.04	46	0.13	15	0.08	8	0.13
3	1	0.03	17	0.08	3	0.11	23	0.11	9	0.06	6	0.11
4	1	0.11	11	0.05	0	0.00	20	0.11	14	0.11	3	0.06
5	0	0.00	26	0.08	2	0.11	33	0.11	8	0.07	5	0.11
6	16	0.17	61	0.13	1	0.01	74	0.17	21	0.04	47	0.17
7	67	0.43	289	0.35	28	0.18	328	0.43	94	0.09	255	0.43
8	175	1.07	457	0.45	141	0.86	993	1.07	262	0.21	737	1.07
9	331	1.34	201	0.17	73	0.29	1452	1.34	276	0.31	655	1.34
10	133	0.93	219	0.19	68	0.47	975	0.93	342	0.31	501	0.93
11	105	0.78	344	0.36	44	0.33	698	0.78	503	0.45	466	0.78
12	82	0.77	441	0.51	51	0.48	610	0.77	720	0.57	540	0.77
13	73	0.83	462	0.58	51	0.58	613	0.83	754	0.54	686	0.83
14	78	0.89	499	0.60	61	0.69	680	0.89	683	0.50	730	0.89
15	49	0.75	643	0.73	39	0.60	621	0.75	675	0.51	560	0.75
16	63	0.71	721	0.78	69	0.78	650	0.76	843	0.68	537	0.78
17	77	1.00	1198	1.01	78	1.01	746	0.68	1018	1.01	627	0.98
18	44	0.66	1233	0.99	66	0.99	808	0.69	995	0.99	388	0.65
19	95	0.73	654	0.68	72	0.55	651	0.73	683	0.63	407	0.73
20	84	0.79	523	0.55	69	0.65	695	0.79	609	0.51	523	0.79
21	50	0.59	477	0.59	33	0.39	431	0.57	487	0.39	360	0.59
22	37	0.51	410	0.51	22	0.30	247	0.33	513	0.42	284	0.51
23	32	0.33	193	0.33	15	0.15	179	0.33	288	0.22	123	0.33
24	13	0.24	142	0.22	13	0.24	142	0.24	147	0.16	67	0.24
	1620		9301		1008		11829		10027		8567	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-26-74 DAY OF WEEK= TUESDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'C'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	11	0.21	96	0.18	8	0.15	104	0.21	143	0.15	51	0.21
2	10	0.14	54	0.10	7	0.10	69	0.14	38	0.11	19	0.14
3	3	0.12	24	0.08	2	0.08	34	0.12	31	0.11	6	0.12
4	2	0.11	21	0.10	2	0.11	23	0.11	23	0.10	4	0.11
5	6	0.12	36	0.09	0	0.00	45	0.12	13	0.10	4	0.12
6	15	0.17	80	0.17	5	0.05	66	0.15	26	0.04	55	0.17
7	62	0.43	311	0.37	32	0.22	340	0.43	82	0.07	268	0.43
8	189	1.14	544	0.57	111	0.67	1003	1.14	246	0.19	865	1.14
9	275	1.44	247	0.22	52	0.27	1498	1.44	272	0.25	914	1.44
10	86	0.94	315	0.25	39	0.42	1082	0.94	405	0.40	517	0.94
11	69	0.78	401	0.40	60	0.68	718	0.78	465	0.39	499	0.78
12	69	0.79	434	0.47	54	0.62	682	0.79	659	0.53	557	0.79
13	72	0.84	542	0.67	46	0.53	626	0.84	794	0.58	680	0.84
14	74	0.86	600	0.73	43	0.50	656	0.86	693	0.55	708	0.86
15	71	0.83	758	0.71	42	0.49	820	0.83	706	0.65	524	0.83
16	58	0.82	866	0.82	54	0.76	671	0.68	765	0.66	526	0.82
17	65	1.01	1233	1.02	66	1.02	801	0.71	1067	1.02	609	0.94
18	56	0.78	1108	0.97	70	0.97	803	0.76	1114	0.97	397	0.59
19	71	0.70	613	0.61	73	0.72	665	0.72	716	0.64	408	0.72
20	101	0.77	577	0.66	68	0.52	627	0.77	642	0.61	498	0.77
21	61	0.60	401	0.50	26	0.25	443	0.60	495	0.40	369	0.60
22	55	0.58	465	0.58	34	0.36	285	0.38	535	0.43	343	0.58
23	37	0.39	271	0.39	12	0.12	241	0.37	310	0.25	150	0.39
24	18	0.27	192	0.27	11	0.16	177	0.27	184	0.19	103	0.27
	1536		10189		917		12479		10424		9074	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-27-74 DAY OF WEEK= WEDNESDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'C'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	12	0.23	110	0.21	9	0.17	108	0.23	143	0.14	74	0.23
2	1	0.01	51	0.12	9	0.16	59	0.16	52	0.09	31	0.16
3	3	0.12	27	0.10	0	0.00	31	0.12	23	0.08	9	0.12
4	1	0.02	37	0.12	6	0.12	29	0.10	19	0.10	13	0.12
5	2	0.08	39	0.12	3	0.12	37	0.12	16	0.08	7	0.12
6	12	0.17	66	0.14	7	0.10	75	0.17	25	0.04	57	0.17
7	72	0.47	292	0.30	29	0.19	423	0.47	82	0.08	255	0.47
8	174	1.20	527	0.49	96	0.66	1178	1.20	287	0.23	840	1.20
9	200	1.26	379	0.32	60	0.38	1366	1.26	301	0.27	775	1.26
10	126	0.92	345	0.30	32	0.23	958	0.92	351	0.35	506	0.92
11	79	0.80	339	0.34	57	0.57	737	0.80	468	0.40	509	0.80
12	103	0.87	531	0.59	48	0.40	729	0.87	726	0.69	616	0.87
13	104	0.92	505	0.63	47	0.41	682	0.92	764	0.56	756	0.92
14	69	0.88	568	0.65	68	0.87	718	0.88	613	0.45	709	0.88
15	62	0.80	608	0.70	32	0.41	646	0.80	713	0.54	610	0.80
16	65	0.83	894	0.83	47	0.60	611	0.61	865	0.83	527	0.83
17	57	0.76	1218	1.03	77	1.03	747	0.68	1063	1.03	582	0.89
18	53	0.73	1208	0.98	71	0.98	793	0.69	963	0.98	402	0.67
19	84	0.74	612	0.60	75	0.66	700	0.74	718	0.66	410	0.74
20	61	0.81	500	0.49	47	0.62	761	0.81	572	0.48	540	0.81
21	38	0.57	426	0.57	33	0.50	399	0.57	489	0.36	389	0.57
22	29	0.51	427	0.51	15	0.26	295	0.38	617	0.51	270	0.50
23	20	0.36	303	0.36	13	0.23	212	0.27	240	0.21	173	0.36
24	16	0.28	191	0.28	14	0.24	164	0.25	197	0.19	84	0.28
	1443		10203		895		12458		10307		9144	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-28-74 DAY OF WEEK= THURSDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'C'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	13	0.23	164	0.23	4	0.07	97	0.15	125	0.14	66	0.23
2	2	0.04	76	0.16	7	0.16	1	0.00	51	0.09	33	0.16
3	1	0.06	28	0.08	2	0.13	40	0.13	28	0.08	13	0.13
4	7	0.11	20	0.11	2	0.03	18	0.11	15	0.10	3	0.11
5	5	0.12	37	0.12	0	0.00	34	0.12	15	0.08	7	0.12
6	11	0.18	69	0.13	3	0.04	87	0.18	28	0.04	62	0.18
7	38	0.43	328	0.35	34	0.39	381	0.43	107	0.10	261	0.43
8	114	1.05	681	0.60	110	1.01	1099	1.05	267	0.19	812	1.05
9	148	1.23	447	0.37	60	0.49	1365	1.23	263	0.23	812	1.23
10	95	0.86	447	0.40	57	0.51	890	0.86	379	0.36	489	0.86
11	66	0.69	444	0.41	58	0.60	689	0.69	414	0.33	383	0.69
12	81	0.74	527	0.57	36	0.33	633	0.74	689	0.64	469	0.74
13	64	0.81	455	0.53	52	0.66	637	0.81	653	0.60	628	0.81
14	68	0.81	570	0.66	51	0.61	652	0.81	583	0.49	622	0.81
15	75	0.81	635	0.58	42	0.45	816	0.81	630	0.52	521	0.81
16	75	0.80	839	0.80	63	0.67	636	0.65	738	0.65	479	0.80
17	79	1.00	1163	1.00	58	0.73	742	0.68	1032	1.00	555	0.86
18	51	0.61	1017	0.88	73	0.88	708	0.66	940	0.88	360	0.61
19	75	0.72	809	0.72	70	0.67	636	0.61	653	0.54	357	0.72
20	77	0.72	587	0.69	59	0.55	566	0.72	568	0.50	480	0.72
21	38	0.55	427	0.55	27	0.39	344	0.48	453	0.35	345	0.55
22	48	0.57	519	0.57	27	0.32	254	0.30	552	0.48	301	0.57
23	25	0.25	259	0.34	34	0.34	206	0.29	219	0.20	129	0.34
24	11	0.29	180	0.29	6	0.16	169	0.29	266	0.22	84	0.29
	1267		10728		935		11700		9668		8271	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-29-74 DAY OF WEEK= FRIDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'C'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	13	0.24	157	0.24	4	0.07	93	0.15	129	0.14	89	0.24
2	5	0.17	63	0.11	5	0.17	89	0.17	62	0.10	32	0.17
3	0	0.00	40	0.12	2	0.12	32	0.11	30	0.10	9	0.12
4	1	0.05	27	0.11	2	0.11	21	0.09	7	0.05	7	0.11
5	4	0.12	26	0.07	2	0.06	41	0.12	18	0.08	9	0.12
6	15	0.19	77	0.10	6	0.07	136	0.19	24	0.04	57	0.19
7	47	0.48	317	0.27	24	0.24	531	0.48	94	0.10	239	0.48
8	144	1.19	525	0.48	124	1.03	1211	1.19	270	0.21	870	1.19
9	188	1.25	459	0.40	41	0.27	1327	1.25	273	0.24	823	1.25
10	122	0.88	277	0.27	52	0.37	820	0.88	376	0.34	526	0.88
11	107	0.77	300	0.32	51	0.36	656	0.77	464	0.41	463	0.77
12	94	0.77	438	0.55	35	0.28	566	0.77	733	0.57	555	0.77
13	94	0.88	581	0.70	51	0.48	676	0.88	834	0.82	699	0.88
14	77	0.88	570	0.66	48	0.55	700	0.88	704	0.61	705	0.88
15	91	0.78	620	0.66	45	0.38	681	0.78	705	0.61	488	0.78
16	64	0.79	979	0.86	70	0.86	788	0.75	825	0.86	488	0.81
17	56	1.05	1288	1.09	58	1.09	824	0.75	1105	1.09	644	0.91
18	72	1.03	1193	1.04	73	1.04	801	0.75	1041	1.04	378	0.55
19	111	0.72	654	0.65	58	0.37	673	0.72	704	0.72	292	0.62
20	102	0.77	583	0.55	67	0.51	763	0.77	677	0.77	397	0.77
21	78	0.67	401	0.54	34	0.29	458	0.67	527	0.39	460	0.67
22	93	0.69	566	0.69	36	0.26	350	0.46	668	0.65	428	0.69
23	51	0.44	267	0.44	22	0.19	249	0.44	432	0.32	238	0.44
24	31	0.36	249	0.36	25	0.29	175	0.27	324	0.27	165	0.36
	1660		10657		935		12661		11026		9061	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-30-74 DAY OF WEEK= SATURDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'C'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	23	0.35	203	0.35	14	0.21	134	0.25	397	0.30	160	0.35
2	11	0.22	169	0.22	7	0.14	122	0.17	114	0.15	69	0.22
3	10	0.17	101	0.17	6	0.10	76	0.13	61	0.12	31	0.17
4	6	0.08	57	0.15	11	0.15	47	0.13	58	0.13	16	0.15
5	6	0.13	51	0.12	3	0.06	53	0.13	24	0.08	19	0.13
6	8	0.15	53	0.09	0	0.00	82	0.15	18	0.06	20	0.15
7	14	0.22	102	0.10	7	0.11	210	0.22	48	0.11	45	0.22
8	34	0.31	201	0.18	20	0.18	328	0.31	81	0.14	95	0.31
9	51	0.51	273	0.24	23	0.23	534	0.51	181	0.21	261	0.51
10	75	0.71	374	0.34	42	0.40	731	0.71	317	0.28	419	0.71
11	60	0.77	399	0.36	63	0.80	812	0.80	448	0.35	502	0.80
12	70	0.78	678	0.61	80	0.90	925	0.90	659	0.63	556	0.90
13	80	0.76	862	0.66	86	0.82	989	0.82	801	0.71	350	0.82
14	99	1.02	896	0.84	72	0.74	1012	1.02	750	0.79	714	1.02
15	61	0.90	908	0.87	64	0.94	913	0.94	793	0.78	688	0.94
16	70	0.93	982	0.94	71	0.94	707	0.73	813	0.81	667	0.94
17	60	0.88	1093	0.88	48	0.70	559	0.48	744	0.54	557	0.88
18	83	0.83	829	0.83	47	0.47	467	0.50	769	0.66	545	0.83
19	99	0.57	496	0.53	54	0.31	500	0.57	360	0.36	321	0.57
20	162	1.03	361	0.46	55	0.35	746	1.03	698	0.63	836	1.03
21	99	0.68	281	0.38	44	0.30	460	0.68	611	0.49	453	0.68
22	169	0.80	246	0.38	38	0.18	478	0.80	658	0.59	570	0.80
23	54	0.51	284	0.48	27	0.25	280	0.51	530	0.45	325	0.51
24	54	0.47	276	0.47	18	0.15	219	0.40	414	0.28	271	0.47
	1458		10175		900		11384		10347		8490	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 3-31-74 DAY OF WEEK= SUNDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'C'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	31	0.40	250	0.40	21	0.27	232	0.40	343	0.27	184	0.40
2	26	0.26	218	0.26	19	0.19	200	0.26	68	0.09	99	0.26
3	10	0.18	162	0.25	14	0.25	125	0.21	165	0.17	72	0.25
4	5	0.14	48	0.11	4	0.11	53	0.14	26	0.07	21	0.14
5	3	0.12	23	0.08	3	0.12	30	0.12	21	0.09	7	0.12
6	4	0.11	23	0.07	0	0.00	35	0.11	13	0.09	6	0.11
7	11	0.14	45	0.10	1	0.01	60	0.14	15	0.05	17	0.14
8	19	0.17	75	0.14	8	0.07	86	0.17	27	0.05	47	0.17
9	40	0.23	42	0.07	7	0.04	126	0.23	70	0.10	68	0.23
10	45	0.29	183	0.23	19	0.12	209	0.29	99	0.13	94	0.29
11	32	0.40	301	0.29	29	0.36	383	0.40	170	0.19	190	0.40
12	46	0.56	456	0.39	55	0.67	729	0.67	395	0.38	388	0.67
13	75	0.75	553	0.49	99	0.99	1029	0.99	650	0.72	632	0.99
14	55	0.66	863	0.79	88	1.07	1077	1.07	826	0.87	765	1.07
15	74	0.81	1028	0.93	99	1.09	1112	1.09	824	0.85	762	1.09
16	83	1.01	1087	1.02	84	1.02	836	0.84	884	0.81	731	1.02
17	81	0.98	1080	0.98	57	0.69	677	0.66	718	0.69	655	0.98
18	99	0.80	820	0.80	45	0.36	583	0.61	648	0.60	464	0.80
19	76	0.52	405	0.40	30	0.20	495	0.52	271	0.29	246	0.52
20	110	0.70	394	0.49	53	0.33	521	0.70	439	0.40	416	0.70
21	49	0.44	246	0.29	37	0.33	353	0.44	289	0.26	177	0.44
22	61	0.48	210	0.27	24	0.18	343	0.48	364	0.33	199	0.48
23	32	0.37	267	0.34	14	0.16	264	0.37	213	0.19	161	0.37
24	16	0.24	137	0.19	16	0.24	160	0.24	153	0.15	77	0.24
	1083		8916		826		9718		7691		6478	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 1-74 DAY OF WEEK= MONDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'C'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	4	0.20	95	0.20	2	0.10	78	0.18	139	0.14	59	0.20
2	7	0.12	38	0.12	3	0.05	36	0.12	25	0.11	12	0.12
3	0	0.00	31	0.11	1	0.11	22	0.08	6	0.05	8	0.11
4	1	0.05	14	0.10	2	0.11	14	0.11	17	0.09	5	0.11
5	2	0.11	30	0.11	1	0.05	28	0.11	5	0.03	8	0.11
6	12	0.19	86	0.11	5	0.08	144	0.19	28	0.04	57	0.19
7	45	0.53	335	0.26	35	0.41	631	0.53	79	0.10	260	0.53
8	119	1.15	708	0.59	104	1.01	1275	1.15	259	0.23	824	1.15
9	142	1.14	406	0.43	13	0.10	1001	1.14	284	0.20	922	1.14
10	63	0.81	379	0.32	45	0.58	888	0.81	323	0.27	527	0.81
11	66	0.72	359	0.37	34	0.37	635	0.72	473	0.40	444	0.72
12	65	0.70	510	0.57	43	0.46	580	0.70	681	0.65	465	0.70
13	57	0.82	576	0.65	57	0.82	672	0.82	695	0.62	644	0.82
14	66	0.85	604	0.73	47	0.60	650	0.85	631	0.49	699	0.85
15	72	0.77	703	0.77	41	0.44	616	0.73	658	0.58	536	0.77
16	56	0.79	861	0.79	46	0.65	651	0.64	745	0.64	483	0.79
17	57	0.94	1232	1.02	62	1.02	817	0.73	1068	1.02	564	0.86
18	45	0.57	1233	1.05	83	1.05	774	0.71	1059	1.05	395	0.60
19	68	0.76	720	0.69	55	0.61	735	0.76	706	0.65	444	0.76
20	50	0.59	634	0.64	64	0.76	694	0.76	586	0.56	483	0.76
21	40	0.64	568	0.64	26	0.42	310	0.38	447	0.35	423	0.64
22	51	0.58	509	0.58	27	0.31	212	0.26	620	0.52	327	0.58
23	3	0.05	220	0.29	16	0.29	191	0.27	209	0.20	105	0.29
24	11	0.25	145	0.24	7	0.16	138	0.25	206	0.19	64	0.25
	1102		10996		819		11792		9949		8758	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 2-74 DAY OF WEEK= TUESDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'C'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	5	0.20	113	0.20	4	0.16	72	0.13	91	0.11	62	0.20
2	4	0.15	64	0.14	4	0.15	60	0.15	34	0.07	31	0.15
3	2	0.06	61	0.09	4	0.12	37	0.12	19	0.12	3	0.12
4	3	0.11	29	0.11	2	0.07	21	0.09	14	0.08	5	0.11
5	2	0.12	32	0.08	1	0.06	44	0.12	8	0.07	5	0.12
6	12	0.21	91	0.10	2	0.03	171	0.21	32	0.06	54	0.21
7	48	0.52	333	0.26	31	0.33	613	0.52	108	0.10	267	0.52
8	128	1.18	721	0.60	79	0.72	1303	1.18	275	0.25	849	1.18
9	142	1.15	537	0.51	30	0.24	1113	1.15	304	0.23	910	1.15
10	80	0.82	420	0.39	45	0.46	809	0.82	413	0.40	493	0.82
11	67	0.79	410	0.40	41	0.48	749	0.79	463	0.40	495	0.79
12	52	0.75	578	0.62	43	0.62	650	0.75	801	0.72	523	0.75
13	86	0.89	623	0.78	33	0.34	662	0.89	763	0.68	737	0.89
14	68	0.66	555	0.52	43	0.42	651	0.66	677	0.66	97	0.20
15	68	0.81	753	0.81	32	0.38	600	0.69	691	0.59	577	0.81
16	46	0.50	903	0.84	77	0.84	664	0.67	758	0.67	523	0.84
17	59	0.93	1248	1.04	66	1.04	887	0.80	1082	1.04	627	0.94
18	44	0.53	1136	0.96	80	0.96	727	0.66	1026	0.96	408	0.67
19	59	0.63	781	0.74	69	0.74	693	0.70	699	0.73	412	0.74
20	49	0.63	632	0.69	58	0.75	642	0.75	554	0.49	524	0.75
21	36	0.58	547	0.58	30	0.49	380	0.44	488	0.39	328	0.58
22	35	0.55	527	0.55	27	0.42	267	0.30	545	0.49	267	0.55
23	23	0.28	249	0.32	26	0.32	194	0.26	188	0.18	128	0.32
24	17	0.25	171	0.25	5	0.07	127	0.20	164	0.15	77	0.25
	1135		11484		832		12136		10197		8402	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 3-74 DAY OF WEEK= WEDNESDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'C'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	9	0.21	187	0.23	10	0.23	124	0.17	105	0.15	71	0.23
2	3	0.06	67	0.15	7	0.15	58	0.14	43	0.08	33	0.15
3	1	0.12	39	0.12	1	0.12	26	0.08	14	0.08	6	0.12
4	1	0.02	29	0.12	5	0.12	19	0.08	21	0.07	11	0.12
5	6	0.12	37	0.11	1	0.02	37	0.12	10	0.05	9	0.12
6	8	0.19	96	0.11	5	0.11	149	0.19	32	0.04	51	0.19
7	45	0.52	356	0.27	20	0.23	635	0.52	110	0.10	282	0.52
8	125	1.20	674	0.53	95	0.91	1283	1.20	267	0.21	853	1.20
9	169	1.19	523	0.48	50	0.35	1195	1.19	312	0.25	864	1.19
10	62	0.75	398	0.37	66	0.80	787	0.80	374	0.30	509	0.80
11	64	0.75	419	0.41	57	0.67	703	0.75	493	0.50	467	0.75
12	94	0.80	550	0.64	50	0.42	634	0.80	735	0.64	556	0.80
13	88	0.87	583	0.72	46	0.45	656	0.87	712	0.70	697	0.87
14	121	0.92	630	0.76	64	0.48	700	0.92	372	0.29	701	0.92
15	47	0.68	641	0.68	29	0.42	504	0.58	428	0.35	436	0.68
16	117	0.77	768	0.77	81	0.53	588	0.63	588	0.66	404	0.77
17	70	0.90	1036	0.93	73	0.93	644	0.62	1021	0.93	493	0.75
18	80	0.79	951	0.89	90	0.89	661	0.67	1005	0.89	388	0.61
19	60	0.56	747	0.71	75	0.71	635	0.65	720	0.42	411	0.71
20	50	0.53	527	0.60	75	0.79	648	0.79	666	0.56	569	0.79
21	50	0.62	505	0.62	27	0.33	334	0.44	478	0.37	397	0.62
22	30	0.61	527	0.61	21	0.42	231	0.28	623	0.61	331	0.50
23	20	0.28	257	0.32	23	0.32	209	0.28	220	0.23	130	0.32
24	20	0.28	145	0.28	17	0.24	127	0.26	251	0.21	84	0.28
	1340		10632		988		11587		9600		8753	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 4-74 DAY OF WEEK= THURSDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'C'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	5	0.11	137	0.23	10	0.23	92	0.16	126	0.14	88	0.23
2	2	0.05	72	0.13	6	0.17	82	0.17	54	0.06	41	0.17
3	1	0.04	67	0.12	3	0.12	23	0.08	26	0.12	8	0.11
4	4	0.12	34	0.12	3	0.09	24	0.09	24	0.11	4	0.12
5	3	0.12	33	0.10	1	0.04	38	0.12	16	0.07	9	0.12
6	6	0.19	92	0.11	6	0.19	148	0.19	27	0.05	55	0.19
7	27	0.45	337	0.25	25	0.41	557	0.45	83	0.07	240	0.45
8	95	1.03	692	0.57	99	1.07	1209	1.07	245	0.17	823	1.07
9	127	1.16	563	0.49	61	0.55	1218	1.16	305	0.22	902	1.16
10	85	0.79	442	0.43	83	0.77	749	0.79	371	0.31	503	0.79
11	60	0.71	494	0.46	60	0.71	702	0.71	474	0.36	459	0.71
12	64	0.72	575	0.65	36	0.40	591	0.72	691	0.63	494	0.72
13	68	0.84	575	0.71	38	0.47	637	0.84	727	0.43	697	0.84
14	86	0.88	611	0.73	56	0.57	685	0.88	658	0.57	696	0.88
15	94	0.78	684	0.78	39	0.32	620	0.76	716	0.76	520	0.78
16	60	0.79	893	0.79	44	0.58	647	0.62	770	0.69	462	0.79
17	57	1.02	1242	1.02	54	0.97	878	0.78	995	1.02	622	0.95
18	40	0.55	1061	0.90	66	0.90	753	0.69	981	0.90	361	0.59
19	75	0.73	680	0.65	53	0.52	714	0.73	694	0.65	402	0.73
20	75	0.78	608	0.64	78	0.81	710	0.81	655	0.46	576	0.81
21	40	0.59	482	0.59	19	0.28	375	0.50	506	0.39	383	0.59
22	66	0.67	651	0.67	21	0.21	249	0.27	648	0.53	370	0.67
23	31	0.32	214	0.30	17	0.17	211	0.32	210	0.20	109	0.32
24	24	0.27	190	0.27	12	0.13	153	0.24	210	0.20	92	0.27
	1195		11399		890		12065		10212		8921	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 5-74 DAY OF WEEK= FRIDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'C'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	13	0.26	145	0.26	9	0.18	110	0.21	170	0.14	111	0.26
2	6	0.11	95	0.18	10	0.18	73	0.15	81	0.11	48	0.18
3	2	0.12	51	0.12	1	0.06	39	0.10	23	0.12	9	0.07
4	2	0.12	31	0.12	2	0.12	29	0.12	26	0.08	13	0.12
5	4	0.12	36	0.11	2	0.06	37	0.12	14	0.08	7	0.12
6	15	0.19	88	0.09	2	0.02	159	0.19	23	0.06	30	0.19
7	39	0.44	349	0.23	30	0.34	609	0.44	96	0.11	163	0.44
8	126	0.87	706	0.45	104	0.71	1244	0.87	264	0.38	327	0.87
9	149	0.95	552	0.40	74	0.47	1212	0.95	304	0.35	408	0.95
10	87	0.78	357	0.33	69	0.62	772	0.78	356	0.33	436	0.78
11	71	0.77	449	0.46	35	0.38	696	0.77	488	0.50	495	0.77
12	63	0.76	543	0.63	64	0.77	618	0.77	797	0.74	571	0.77
13	78	0.85	474	0.55	66	0.72	676	0.85	771	0.58	654	0.85
14	74	0.88	691	0.79	51	0.61	717	0.88	686	0.59	702	0.88
15	49	0.74	661	0.67	34	0.51	684	0.74	677	0.56	487	0.74
16	72	0.57	972	0.88	112	0.88	688	0.67	888	0.86	497	0.88
17	77	0.75	1387	1.09	111	1.09	902	0.76	1038	0.84	638	1.09
18	58	0.76	1225	1.04	79	1.04	696	0.82	1044	1.04	458	0.69
19	67	0.62	845	0.83	89	0.83	727	0.76	769	0.83	459	0.74
20	105	1.05	737	0.71	75	0.75	1014	1.05	780	0.81	757	1.05
21	75	0.82	741	0.82	56	0.61	652	0.78	754	0.42	601	0.82
22	95	0.80	796	0.80	38	0.32	447	0.48	771	0.80	365	0.61
23	40	0.49	349	0.49	29	0.35	265	0.40	471	0.43	265	0.49
24	27	0.33	288	0.33	18	0.22	225	0.27	269	0.29	100	0.33
	1394		12568		1160		13491		11560		8601	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 6-74 DAY OF WEEK= SATURDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'C'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	27	0.36	254	0.38	15	0.21	154	0.25	385	0.32	147	0.38
2	16	0.20	173	0.27	21	0.27	131	0.22	119	0.12	117	0.27
3	3	0.04	110	0.17	12	0.17	101	0.17	48	0.11	22	0.17
4	6	0.12	66	0.14	7	0.14	43	0.10	30	0.09	13	0.14
5	5	0.12	45	0.12	4	0.10	28	0.08	18	0.08	9	0.12
6	5	0.15	78	0.12	5	0.15	89	0.15	14	0.05	21	0.15
7	15	0.25	116	0.11	7	0.11	235	0.25	45	0.07	82	0.25
8	34	0.34	216	0.21	22	0.22	315	0.34	88	0.12	138	0.34
9	31	0.51	314	0.29	29	0.48	510	0.51	201	0.18	306	0.51
10	41	0.49	407	0.36	59	0.71	749	0.71	319	0.27	451	0.71
11	57	0.82	591	0.50	49	0.70	892	0.82	468	0.37	522	0.82
12	46	0.79	739	0.64	52	0.90	958	0.90	626	0.46	613	0.90
13	65	0.96	960	0.88	67	0.99	994	0.99	759	0.66	708	0.99
14	50	0.64	1073	0.96	75	0.96	923	0.89	769	0.55	721	0.96
15	50	0.82	984	0.93	57	0.93	902	0.92	782	0.72	678	0.93
16	60	0.59	1197	0.99	101	0.99	816	0.73	791	0.58	643	0.99
17	63	0.92	1040	0.92	58	0.85	659	0.63	688	0.67	604	0.92
18	72	0.86	976	0.86	49	0.58	564	0.53	756	0.70	514	0.86
19	98	0.66	602	0.66	76	0.51	522	0.62	769	0.42	337	0.66
20	190	0.96	350	0.43	59	0.29	723	0.96	619	0.53	653	0.96
21	108	0.66	365	0.47	82	0.50	476	0.66	599	0.52	384	0.66
22	141	0.80	311	0.49	27	0.15	470	0.80	695	0.44	627	0.80
23	43	0.49	303	0.49	28	0.32	259	0.45	520	0.49	220	0.35
24	58	0.40	301	0.40	15	0.10	265	0.38	320	0.23	187	0.40
	1284		11571		976		11778		10428		8717	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 7-74 DAY OF WEEK= SUNDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'C'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	36	0.46	319	0.46	32	0.41	217	0.34	440	0.35	249	0.46
2	16	0.28	249	0.28	16	0.28	169	0.20	128	0.14	112	0.28
3	7	0.22	159	0.25	8	0.25	127	0.21	167	0.16	82	0.25
4	2	0.03	46	0.12	8	0.15	55	0.15	24	0.04	44	0.15
5	1	0.12	33	0.12	0	0.00	20	0.07	13	0.06	10	0.12
6	2	0.04	27	0.08	5	0.12	37	0.12	8	0.07	5	0.12
7	5	0.15	46	0.08	4	0.12	79	0.15	18	0.05	22	0.15
8	15	0.17	82	0.13	9	0.10	99	0.17	27	0.07	29	0.17
9	18	0.20	146	0.19	8	0.08	140	0.20	52	0.09	55	0.20
10	20	0.27	194	0.22	12	0.16	214	0.27	92	0.13	91	0.27
11	29	0.34	257	0.25	19	0.22	318	0.34	166	0.23	165	0.34
12	23	0.33	379	0.34	49	0.70	718	0.70	350	0.31	416	0.70
13	69	0.90	563	0.50	75	0.98	1025	0.98	664	0.80	654	0.98
14	55	0.42	999	0.95	138	1.05	1028	1.05	776	0.83	698	1.05
15	92	0.98	1194	0.98	88	0.94	1063	0.94	821	0.58	716	0.98
16	88	1.02	1154	1.02	68	0.79	803	0.77	829	0.61	720	1.02
17	82	0.90	936	0.90	46	0.50	535	0.55	626	0.54	596	0.90
18	92	0.79	899	0.79	28	0.24	503	0.48	606	0.46	489	0.79
19	73	0.50	417	0.45	42	0.29	435	0.50	303	0.29	235	0.50
20	101	0.57	345	0.39	38	0.21	471	0.57	426	0.45	228	0.57
21	35	0.30	262	0.31	42	0.36	281	0.36	240	0.30	117	0.36
22	41	0.42	240	0.32	41	0.42	285	0.42	334	0.27	161	0.42
23	24	0.32	237	0.21	18	0.24	324	0.32	171	0.30	63	0.32
24	11	0.21	147	0.21	12	0.23	150	0.23	160	0.18	51	0.23
	937		9330		806		9096		7441		6008	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 8-74 DAY OF WEEK= MONDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'C'

	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
HOUR	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	5	0.07	84	0.18	12	0.18	64	0.15	68	0.09	53	0.18
2	1	0.06	29	0.07	2	0.12	45	0.12	15	0.06	11	0.12
3	0	0.00	17	0.09	4	0.11	20	0.11	9	0.08	9	0.11
4	1	0.03	17	0.09	3	0.11	18	0.11	14	0.11	1	0.04
5	3	0.12	33	0.11	2	0.08	33	0.12	8	0.05	7	0.12
6	19	0.19	62	0.08	5	0.05	125	0.19	21	0.04	48	0.19
7	42	0.48	339	0.26	29	0.33	581	0.48	94	0.09	230	0.48
8	139	1.11	545	0.46	87	0.69	1207	1.11	262	0.23	710	1.11
9	154	1.24	346	0.31	64	0.51	1262	1.24	276	0.22	901	1.24
10	83	0.81	331	0.38	65	0.64	784	0.81	342	0.27	498	0.81
11	57	0.75	375	0.36	48	0.63	727	0.75	503	0.44	463	0.75
12	70	0.78	598	0.62	51	0.57	695	0.78	720	0.69	517	0.78
13	69	0.88	641	0.74	63	0.80	707	0.88	754	0.74	707	0.88
14	82	0.90	717	0.90	59	0.65	649	0.88	689	0.54	769	0.90
15	52	0.69	618	0.66	60	0.80	696	0.80	665	0.53	570	0.80
16	57	0.81	895	0.81	48	0.68	701	0.68	762	0.54	523	0.81
17	68	1.02	1246	1.03	69	1.03	811	0.72	1037	1.03	670	1.03
18	51	0.98	1263	0.98	48	0.92	748	0.62	1028	0.98	426	0.71
19	76	0.79	730	0.69	61	0.63	775	0.79	734	0.75	468	0.79
20	72	0.72	593	0.61	46	0.46	648	0.72	636	0.56	422	0.72
21	39	0.62	581	0.62	24	0.38	370	0.42	515	0.43	373	0.62
22	44	0.56	464	0.56	22	0.28	205	0.26	599	0.49	320	0.56
23	17	0.26	259	0.32	21	0.32	156	0.20	298	0.27	89	0.32
24	7	0.16	149	0.23	10	0.23	129	0.21	166	0.16	50	0.23
	1208		10932		903		12156		10215		8835	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4- 9-74 DAY OF WEEK= TUESDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'C'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	12	0.20	101	0.20	7	0.11	80	0.17	116	0.13	52	0.20
2	2	0.04	57	0.10	6	0.13	44	0.13	30	0.08	15	0.13
3	2	0.12	30	0.12	0	0.00	20	0.08	25	0.12	3	0.10
4	2	0.11	34	0.11	0	0.00	25	0.09	14	0.10	6	0.11
5	3	0.12	36	0.09	2	0.08	48	0.12	20	0.09	8	0.12
6	11	0.18	88	0.13	3	0.05	114	0.18	34	0.06	49	0.18
7	60	0.50	329	0.27	30	0.25	556	0.50	107	0.10	236	0.50
8	139	1.12	525	0.42	117	0.94	1287	1.12	267	0.24	678	1.12
9	140	1.22	375	0.34	42	0.36	1250	1.22	304	0.24	882	1.22
10	84	0.83	352	0.32	48	0.47	837	0.83	368	0.34	493	0.83
11	58	0.79	457	0.44	50	0.68	767	0.79	549	0.55	507	0.79
12	56	0.76	236	0.24	57	0.77	690	0.77	771	0.62	531	0.77
13	69	0.88	674	0.78	51	0.65	704	0.88	738	0.67	707	0.88
14	66	0.89	697	0.83	58	0.79	696	0.89	663	0.55	753	0.89
15	66	0.82	788	0.82	23	0.28	703	0.78	705	0.66	568	0.82
16	61	0.82	971	0.85	63	0.85	653	0.61	796	0.74	512	0.85
17	49	0.67	1347	1.05	77	1.05	845	0.71	928	1.00	625	1.05
18	45	0.90	1335	1.06	53	1.06	814	0.70	1043	1.06	390	0.59
19	59	0.64	745	0.71	66	0.71	669	0.69	726	0.67	395	0.71
20	55	0.58	502	0.54	71	0.75	640	0.75	584	0.48	492	0.75
21	40	0.56	437	0.56	37	0.52	379	0.53	475	0.36	359	0.56
22	40	0.58	543	0.58	26	0.38	252	0.29	619	0.53	323	0.58
23	24	0.36	268	0.36	19	0.28	225	0.32	229	0.19	165	0.36
24	13	0.23	211	0.26	15	0.26	164	0.22	185	0.16	93	0.26
	1156		11118		921		12462		10296		8842	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4-10-74 DAY OF WEEK= WEDNESDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'C'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	15	0.22	124	0.22	5	0.07	100	0.19	114	0.12	75	0.22
2	2	0.03	63	0.13	11	0.16	75	0.16	45	0.08	35	0.16
3	0	0.00	33	0.11	3	0.12	34	0.12	31	0.09	11	0.12
4	2	0.11	32	0.11	0	0.00	19	0.07	10	0.07	5	0.11
5	1	0.04	37	0.09	3	0.12	46	0.12	19	0.09	8	0.12
6	9	0.1[illegible]	8[illegible]	0.10	2	0.04	134	0.19	34	0.06	45	0.19
7	47	0.5[illegible]	320	0.28	41	0.45	550	0.51	129	0.13	257	0.51
8	115	0.[illegible]	644	0.53	27	1.07	1213	1.07	343	0.27	713	1.07
9	149	1.18	553	0.50	53	0.42	1197	1.18	323	0.24	850	1.18
10	83	0.89	414	0.36	60	0.64	949	0.89	370	0.35	515	0.89
11	74	0.85	388	0.34	66	0.76	903	0.85	529	0.49	498	0.85
12	68	0.82	646	0.67	65	0.78	735	0.82	851	0.75	572	0.82
13	68	0.87	718	0.87	52	0.67	646	0.84	736	0.68	727	0.87
14	67	0.90	770	0.80	68	0.92	816	0.92	710	0.63	701	0.92
15	66	0.81	776	0.81	49	0.60	627	0.71	590	0.63	571	0.81
16	64	0.87	943	0.87	50	0.68	655	0.65	752	0.67	570	0.87
17	67	1.06	1317	1.06	65	1.02	823	0.71	1034	1.06	610	0.96
18	50	0.66	1326	1.06	80	1.06	755	0.65	1010	1.06	440	0.72
19	55	0.58	850	0.77	73	0.77	697	0.68	688	0.74	418	0.77
20	76	0.83	583	0.62	59	0.64	716	0.83	607	0.49	586	0.83
21	30	0.37	541	0.64	52	0.64	350	0.44	531	0.42	413	0.64
22	46	0.59	546	0.59	45	0.58	293	0.34	582	0.50	333	0.59
23	33	0.40	296	0.40	21	0.25	249	0.36	291	0.23	173	0.40
24	15	0.23	180	0.27	17	0.27	163	0.26	171	0.17	85	0.27
	1202		12189		1067		12745		10500		9211	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4-11-74 DAY OF WEEK= THURSDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'C'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	6	0.15	158	0.23	9	0.23	104	0.16	139	0.15	87	0.23
2	2	0.03	80	0.15	8	0.15	57	0.12	50	0.11	21	0.15
3	1	0.06	52	0.13	2	0.13	27	0.07	21	0.10	10	0.13
4	4	0.07	44	0.12	7	0.12	9	0.02	18	0.07	8	0.12
5	3	0.12	41	0.10	2	0.08	44	0.12	8	0.05	8	0.12
6	6	0.18	91	0.11	0	0.00	143	0.18	23	0.04	50	0.18
7	39	0.50	326	0.25	16	0.20	592	0.50	94	0.10	252	0.50
8	95	0.96	677	0.56	106	1.08	1197	1.08	283	0.23	797	1.08
9	127	1.19	589	0.51	51	0.47	1258	1.19	303	0.24	910	1.19
10	85	0.76	424	0.40	49	0.44	753	0.76	367	0.31	464	0.76
11	60	0.74	357	0.34	44	0.54	713	0.74	498	0.44	442	0.74
12	64	0.73	548	0.58	46	0.52	633	0.73	663	0.58	474	0.73
13	68	0.84	598	0.74	46	0.57	629	0.84	733	0.62	701	0.84
14	81	0.78	635	0.72	92	0.88	720	0.88	611	0.45	668	0.88
15	73	0.82	775	0.82	61	0.68	664	0.76	726	0.55	576	0.82
16	65	0.86	947	0.86	58	0.77	649	0.64	805	0.62	555	0.86
17	64	0.79	391	0.40	70	0.87	782	0.87	1031	0.82	631	0.87
18	60	0.82	1252	0.96	70	0.96	739	0.61	989	0.96	375	0.69
19	64	0.64	757	0.72	75	0.75	729	0.75	625	0.54	424	0.75
20	80	0.78	639	0.64	78	0.76	729	0.78	611	0.49	484	0.78
21	29	0.45	586	0.64	41	0.64	456	0.53	522	0.43	394	0.64
22	58	0.66	633	0.66	36	0.41	341	0.38	657	0.50	376	0.66
23	31	0.30	256	0.34	35	0.34	236	0.34	229	0.18	152	0.34
24	20	0.30	215	0.30	14	0.21	154	0.23	243	0.22	90	0.30
	1185		11071		1016		12358		10249		8949	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4-12-74 DAY OF WEEK= FRIDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'C'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	15	0.26	174	0.26	10	0.17	117	0.19	144	0.13	107	0.26
2	3	0.17	107	0.17	3	0.17	78	0.13	55	0.07	49	0.17
3	2	0.13	40	0.11	0	0.00	41	0.13	30	0.10	10	0.13
4	4	0.08	45	0.13	6	0.13	24	0.07	18	0.06	16	0.13
5	2	0.12	43	0.10	2	0.12	45	0.12	10	0.04	6	0.12
6	9	0.16	89	0.14	2	0.03	92	0.16	20	0.05	30	0.16
7	33	0.36	252	0.21	16	0.17	399	0.36	64	0.08	145	0.36
8	34	0.52	487	0.40	47	0.72	817	0.72	181	0.14	518	0.72
9	85	0.85	439	0.40	34	0.34	868	0.85	266	0.20	598	0.85
10	78	0.77	495	0.43	59	0.58	815	0.77	372	0.32	495	0.77
11	72	0.88	665	0.62	68	0.83	878	0.88	571	0.44	585	0.88
12	67	0.83	815	0.87	70	0.87	760	0.87	783	0.73	650	0.87
13	74	0.97	930	0.97	70	0.92	789	0.89	1033	0.97	702	0.89
14	73	0.79	854	0.95	88	0.95	742	0.89	836	0.73	762	0.95
15	84	0.98	968	0.97	76	0.88	903	0.98	852	0.79	726	0.98
16	60	1.01	1160	1.01	55	0.92	759	0.71	834	0.82	699	1.01
17	52	0.89	1142	0.96	56	0.96	723	0.66	875	0.90	629	0.96
18	46	0.59	992	0.86	67	0.86	651	0.61	812	0.86	483	0.81
19	55	0.67	746	0.73	60	0.73	616	0.64	550	0.42	444	0.73
20	75	0.83	491	0.51	59	0.65	750	0.83	566	0.54	576	0.83
21	57	0.66	550	0.66	47	0.55	467	0.61	585	0.53	450	0.66
22	81	0.65	483	0.65	46	0.37	430	0.62	627	0.57	428	0.65
23	30	0.38	210	0.38	18	0.23	195	0.38	323	0.23	238	0.38
24	29	0.33	262	0.33	16	0.18	190	0.26	169	0.16	165	0.33
	1120		12439		975		12149		10576		9511	

OAKBROOK SHOPPING CENTER TRAFFIC ANALYSIS
INTERSECTION OF RT 83 AND 22ND ST.
DATE= 4-13-74 DAY OF WEEK= SATURDAY

INTERSECTION LEVEL OF SERVICE BY HOUR OF DAY

V/C RATIOS AT LEVEL OF SERVICE 'C'

HOUR	NORTH LEG				SOUTH LEG				EAST LEG		WEST LEG	
	LEFT TURN		THRU + RIGHT		LEFT TURN		THRU + RIGHT		ALL MOVEMENTS		ALL MOVEMENTS	
	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C	VOL.	V/C
1	9	0.22	218	0.36	15	0.36	146	0.26	352	0.27	156	0.36
2	3	0.05	165	0.22	12	0.22	116	0.16	64	0.09	69	0.22
3	10	0.17	104	0.17	2	0.03	80	0.14	36	0.08	31	0.17
4	4	0.21	56	0.21	4	0.21	40	0.16	35	0.02	168	0.21
5	2	0.12	38	0.12	2	0.12	24	0.08	19	0.09	6	0.12
6	4	0.13	51	0.12	1	0.03	52	0.13	8	0.03	19	0.13
7	4	0.09	108	0.12	9	0.21	174	0.21	41	0.08	48	0.21
8	13	0.27	21[illegible]	0.21	13	0.27	252	0.27	69	0.09	95	0.27
9	19	0.41	30[illegible]	0.26	13	0.28	440	0.41	145	0.12	258	0.41
10	33	0.53	386	0.33	39	0.63	681	0.63	289	0.23	423	0.63
11	40	0.51	638	0.56	60	0.77	804	0.77	429	0.32	536	0.77
12	27	0.29	785	0.73	82	0.88	882	0.88	599	0.61	556	0.88
13	34	0.48	882	0.86	61	0.87	830	0.87	701	0.65	615	0.87
14	56	0.78	851	0.85	63	0.88	817	0.88	752	0.68	643	0.88
15	52	0.88	820	0.81	52	0.88	826	0.88	663	0.53	641	0.88
16	48	0.88	949	0.88	40	0.73	721	0.72	662	0.59	618	0.88
17	56	0.82	899	0.82	41	0.60	596	0.58	614	0.54	505	0.82
18	38	0.62	859	0.76	47	0.76	453	0.43	706	0.76	412	0.71
19	56	0.42	441	0.47	63	0.47	408	0.47	308	0.30	244	0.47
20	108	0.65	385	0.45	48	0.29	514	0.65	328	0.28	447	0.65
21	42	0.44	293	0.31	43	0.45	388	0.45	401	0.36	242	0.45
22	85	0.53	292	0.38	39	0.24	372	0.53	398	0.35	267	0.53
23	50	0.44	238	0.38	16	0.14	254	0.44	386	0.27	252	0.44
24	26	0.31	204	0.29	16	0.19	202	0.31	162	0.16	135	0.31
	819		10180		781		10072		8167		7386	

ERRATA

Figure	Page	
2	5	On and off ramps from Spring Road to Westbound lanes of East-West Tollway are missing.
3	7	Median missing from south leg of intersection of Route 83 and 22nd Street.
18	38	Outside lane markings on north leg should indicate an optional through or right turn movement.
19	39	West leg of Entrance 10 intersection should indicate only one lane in each direction. Phasing diagram (Phase 2) should indicate exclusive left turn lane.
20	40	Outside lane markings on north leg should indicate an optional through and right turn movement. Counter #13 is monitoring right turn only.
21	41	Center median missing from east leg of Entrance 10 intersection and south leg of Route 83-22nd Street intersection.
22	45	Median missing from south leg on intersection on Route 83 and 22nd Street.
23	46	Median missing from south leg on intersection on Route 83 and 22nd Street.

TECHNICAL REPORT DATA
(Please read Instructions on the reverse before completing)

1. REPORT NO. EPA-450/3-74-058	2.	3. RECIPIENT'S ACCESSION NO.
4. TITLE AND SUBTITLE Monitoring and Analysis of Carbon Monoxide and Traffic Characteristics at Oakbrook		5. REPORT DATE November 1974
		6. PERFORMING ORGANIZATION CODE
7. AUTHOR(S) R. M. Patterson and F. A. Record		8. PERFORMING ORGANIZATION REPORT NO. GCA-TR-74-20-G
9. PERFORMING ORGANIZATION NAME AND ADDRESS GCA Corporation GCA/Technology Division Bedford, Mass. 01730		10. PROGRAM ELEMENT NO. 68X0108 512953DDD1
		11. CONTRACT/GRANT NO. 68-02-1376 Task Order 7
12. SPONSORING AGENCY NAME AND ADDRESS U.S. Environmental Protection Agency Office of Air and Waste Management Office of Air Quality Planning and Standards Research Triangle Park, N.C. 27711		13. TYPE OF REPORT AND PERIOD COVERED Final
		14. SPONSORING AGENCY CODE

15. SUPPLEMENTARY NOTES

16. ABSTRACT

A study was conducted to observe traffic and ambient concentrations at a major at-grade signalized intersection located in the vicinity of a regional shopping center. A procedure for estimating queue lengths and emissions at the intersection approach is developed and used to estimate the impact of the intersection on ambient CO concentrations using the EPA HIWAY model. Twenty-two of twenty-seven estimated impacts agree within a factor of two of observed impacts. Linear correlation between estimated and observed data sets was significant at better than the 10% level of confidence.

17. KEY WORDS AND DOCUMENT ANALYSIS

a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group
Air pollution, traffic engineering, urban transportation, transportation models, vehicular traffic	Indirect sources Indirect source review Signalized intersections	13B

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