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Bus Ridership: An Analysis of a Survey in the Omaha Metropolitan Area

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BUS RIDERSHIP: AN ANALYSIS OF A SURVEY IN THE OMAHA METROPOLITAN AREA

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As customary, the author accepts all responsibility for any errors. Any value judgments made or implied in this report are also his responsibility and do not represent those of the Center for Applied Urban Research, the University of Nebraska at Omaha, or Metro Area Transit (MAT).

Table of Contents

List of Tables

List of Tables (Continued)

I. Introduction

Metro Area Transit (MAT), the operator of the bus system in the Omaha metropolitan area, perceived an acceleration of a continuing long term trend of reduced ridership. They asked the Center for Applied Urban Research at the University of Nebraska at Omaha to design a study to help them develop a strategy that would halt and reverse these patterns.

MAT decided that their first study priority was a survey of the general public in their three-county service area (Douglas and Sarpy Counties in Nebraska and the city of Council Bluffs in Pottawattamie County, Iowa). They also gave high priority to an on-board study of riders which they conducted while CAUR's study was being completed.

The CAUR survey was purposely designed with a relatively large sample size (1,200) in order to result in sufficient numbers of riders and former riders of the MAT system whose responses would help MAT achieve its goals of improved service and increased ridership. The relatively large sample size proved to be necessary, as only 159 riders and 155 ex-riders were found among the 1,082 respondents. These sub-samples proved to be of sufficient size to provide insights even though the maximum sampling error based on their responses is approximately $\pm$ 8%. The sampling error for results based on the entire sample is only $\pm$ 3%. See Table A-1 in the Appendix for sampling errors for different sub-sample sizes.

The surveys were conducted by telephone in the period between September 28 and November 15, 1983. Survey responses were coded

and entered into the computer, preliminary analyses performed, and briefings given to MAT while interviewing continued. The stability of the results was notable. Results and briefings when 300 interviews had been completed differed almost not at all from those with 600 or 900 completed interviews. As a result, interviewing was terminated after 1,082 respondents had been surveyed.

The original research design contemplated weighting the results to correct for variations in the size of households (and therefore in the probabilities of being selected randomly for an interview) and for any distortions in the representativeness of the sample. Analyses of several key variables, however, indicated only minor differences would result. In addition, results based on all adults in the responding households were not significantly different from those based on respondents. Therefore the results were not weighted despite some over-representation of female respondents.

The report is organized around two major questions: 1) What is the extent and nature of bus ridership in the Omaha metropolitan area at the time of the survey? 2) What is the extent and nature of the loss of ridership at that time? A final section presents conclusions and some recommendations based on the results of the survey.

II. Ridership

A. Extent of Ridership

The survey provides several estimates of the extent of bus ridership in the MAT service area. One estimate is based on the respondents to the survey, while another estimate is based on all adults (14 and over) in the respondents' households.

Of the 1,082 respondents in the survey, 14.3% reported they had ridden a MAT bus in the previous month. Approximately the same proportion (14.7%) reported that although they had not ridden in the previous month they had used the bus in the past two years. These persons are referred to in the text as ex-riders. The remainder (71.0%) had not used a MAT bus in at least two years and are referred to as non-riders. See Table 1.

Approximately 6.1% of the respondents reported making at least one work trip in the month prior to their interviews, while 10.4% reported a bus trip for some other purpose.

Since respondents were asked about the bus riding behavior of the other adults (14 years old or over) in their households, estimating bus ridership based on these data was possible. The results were not very different. Approximately 12.7% of all adults 14 years old or over (respondents and others in their households) had ridden the bus in the previous month, and 11.9% had ridden it during the previous two years but not in the past month Three-fourths (75.4%) had not used the bus in the last two years. See Table 2. Differences are due in part to differing demographic characteristics of the two groups (e.g.,

TABLE 1

RESPONDENTS' BUS RIDING TYPE BY DEMOGRAPHIC CHARACTERISTICS

	Rode in Past Month Percent	Rode in Past Two Years But Not Past Month Percent	Did Not Ride in Past Two Years Percent	Total Percent	Total Number
Total	14.3	14.7	71.0	100.0	1,080
Sex					
Male	11.4	11.7	76.9	100.0	359
Female	16.0	16.0	68.0	100.0	705
Age					
18-29	17.4	23.1	59.5	100.0	264
30-39	6.5	13.8	79.7	100.0	246
40-49	10.4	9.7	79.9	100.0	144
50-59	7.0	11.3	81.7	100.0	142
60-64	17.2	15.6	67.2	100.0	164
65+	25.2	11.7	63.1	100.0	206
Income					
<$10,000	33.0	16.5	50.5	100.0	103
$10,000-19,999	16.8	14.2	69.0	100.0	268
(under $20,000)*	(21.1)	(15.0)	(63.9)	(100.0)	(393)
$20 000-29,999	9.5	15.2	75.3	100.0	296
$30,000+	7.5	13.3	79.3	100.1	241
($20,000+)*	(8.4)	(14.5)	(77.1)	(100.0)	(558)
Location					
East	31.7	17.0	51.3	100.0	224
Central	14.0	15.8	70.1	99.9	278
West	5.7	13.9	80.4	100.0	332
Sarpy	3.4	10.1	86.5	100.0	89
Pottawattamie	14.9	13.0	72.1	100.0	154
Car Ownership					
0	68.1	8.3	23.6	100.0	72
1	15.6	19.0	65.3	99.9	326
2+	7.8	13.4	78.8	100.0	670
Cars per Adult (18+)					
0	66.2	9.5	24.3	100.0	74
Less than 1.0	17.8	19.3	63.0	100.1	270
1.0	8.2	13.8	78.0	100.0	601
More than 1.0	6.6	12.4	81.0	100.0	137

*Includes respondents giving only partial information about their earnings.

TABLE 2

BUS RIDING PATTERNS OF ADULTS
(RESPONDENTS AND FAMILIES)
BY DEMOGRAPHIC CHARACTERISTICS

	Rode Bus in Past Month Percent	Rode Bus in Past Two Years But Not Past Month Percent	Did Not Ride Bus in Past Two Years Percent	Total Percent	Total Number
Total	12.7	11.9	75.4	100.0	2,299
Sex					
Male	9.7	9.6	80.8	100.1	1,088
Female	15.2	14.0	70.8	100.0	1,182
Age*					
14-19	17.7	17.7	64.6	100.0	164
20-29	14.3	15.5	70.2	100.0	560
30-39	7.1	12.4	80.6	100.1	453
40-49	10.0	7.3	82.7	100.0	341
50-59	6.1	9.2	84.6	99.9	293
60-64	12.4	11.6	76.0	100.0	121
65+	21.3	10.3	68.4	100.0	329
Car Ownership					
0	67.4	8.7	23.9	100.0	92
1	18.2	17.5	64.3	100.0	521
2+	7.8	10.3	81.8	99.9	1,662
Cars per Adult (14+)					
0	67.4	8.7	23.9	100.0	92
< 1	17.0	13.4	69.6	100.0	887
1	6.0	11.3	82.7	100.0	1,100
> 1	6.4	10.0	83.6	100.0	220
Location					
East	24.9	14.2	60.8	99.9	457
Central	14.1	13.0	72.9	100.0	583
West	6.7	10.8	82.5	100.0	713
Sarpy	1.8	5.5	92.6	99.9	217
Pottawattamie	13.8	12.5	73.8	100.1	320
Income					
< $10,000	29.8	15.2	55.0	100.0	151
$10 000-19,999	15.7	12.4	71.9	100.0	523
(< $20,000)**	(18.7)	(12.9)	(68.4)	(100.0)	(713)
$20,000-29,999	9.0	12.3	78.7	100.0	676
$30,000+	7.8	10.7	81.5	100.0	589
($20,000+)**	(8.4)	(11.6)	(80.0)	(100.0)	(1,313)

*Youngest age category for respondents was 18-29; all responses here are classified as 20-29.
**Includes respondents giving only partial information about their earnings.

people 65 years or older constituted 19.3% of the respondents but only 14.6% of all adults), and in part to the fact that an informant is more likely than the individual involved to report no bus use in the past month or two years if riding the bus were a rare or unusual event. Of all households in the sample, 21.0% had at least one adult rider in the month prior to the survey.

Ridership may also be classified on the basis of frequency of use. Some riders use the bus to go to work each work day. Assuming five-day work-weeks and four weeks per month, reports of daily use were coded as 20 round trips. Others use the bus only rarely, perhaps when their car needs repair or the weather is inclement. When bus usage during the previous month was classified into three levels--regular use (20 times or more per month), moderate (10-19 times per month), and light (1-9 times per month)--then most riders were only light users. Almost two-thirds (63.9%) of all riders used the bus fewer than 10 times a month; only one-fourth (23.2%) used it regularly (at least 20 times a month). These regular riders constituted only 3.3% of all respondents compared to 71.0% who had not used the bus at all in two years and 85.7% who had not used it in the previous month. See Table 3.

When the data on all adults (respondents and others in their households) were used, regular users constituted 3.6%, moderate users 1.4%, light users 7.0%, former users 11.9%, and people who had not ridden the bus in at least two years totaled 75.4%.*

*Users with trip frequency unreported constituted .7%.

TABLE 3

RESPONDENTS' BUS USE IN PAST MONTH
BY DEMOGRAPHIC CHARACTERISTICS

	Usage in Last Month						
	Regular (20+/mo.) Percent	Moderate (10-19/mo.) Percent	Light (<10/mo.) Percent	Total Percent	Total Number	Total Users Percent	No Use (0/mo.) Percent
Total	23.2	12.9	63.9	100.0	155	14.3	85.7
Sex							
Male	24.4	12.2	63.4	100.0	41	11.4	88.6
Female	23.0	12.4	64.6	100.0	113	16.0	84.0
Age							
18-29	32.6	13.0	54.3	99.9	46	17.4	82.6
30-39	12.5	12.5	75.0	100.0	16	6.5	93.5
40-49	26.7	6.7	66.7	100.1	15	10.4	89.6
50-59	30.0	—	70.0	100.0	10	7.0	93.0
60-64	36.4	9.1	54.5	100.0	11	17.2	82.8
65+	13.5	19.2	67.3	100.0	52	25.2	74.8
Income							
<$10,000	17.6	26.5	55.9	100.0	34	33.0	67.0
$10,000-19,999	20.0	11.1	68.9	100.0	45	16.8	83.2
(< $20,000)	(18.1)	(16.9)	(65.1)	(100.1)	(83)	(21.1)	(78.9)
$20,000-29,999	42.9	10.7	46.4	100.0	28	9.5	90.5
$30,000 +	22.2	5.6	72.2	100.0	18	7.5	92.5
($20,000+)	(34.0)	(8.5)	(57.4)	(99.9)	(47)	(8.4)	(91.6)
Car Ownership							
0	22.4	20.4	57.1	99.9	49	68.1	31.8
1	23.5	9.8	66.7	100.0	51	15.6	84.4
2+	23.1	9.6	67.3	100.0	52	7.8	92.2

B. Demographic Characterics

The bus-riding patterns of various demographic groups can be seen in Table 1 for respondents and Table 2 for all adults (respondents and families). These tables indicate women were more likely than men to use the bus (e.g., 16.0% of female respondents rode a bus in the month prior to the survey, but only 11.4% of the men did). This was true for both working women and non-working women. See Table 4 which shows that 14.0% of working women rode the bus compared to 10.3% of working men.

Bus ridership was least among the middle age groups--30-59. Younger persons and older persons were more likely to ride, with the highest proportion of ridership occurring in the oldest age group (65+), but ridership for the latter age group did not mean frequent use of the bus. Of all riders 65 years or older, only 13.5% were classified as regular riders (20 or more uses per month); this compares to 36.4% of the riders 60-64 years of age. See Table 3.

Women respondents without children under 14 were more likely to ride the bus than female respondents with children that age (18.5% and 10.6%, respectively). The difference was even larger for women with and without children under eight years old. Those without young children had a ridership proportion of 18.3% compared to 8.3% of the women respondents with children under eight years of age.

TABLE 4

RESPONDENTS' BUS RIDING TYPE BY WORK STATUS AND SEX

	Rode Bus in Past Month Percent	Rode Bus in Past Two Years But Not Past Month Percent	Did Not Ride Bus in Past Two Years Percent	Total Percent	Total Number
Work	(12.3)	(16.3)	(71.4)	(100.0)	(576)
Male	10.3	12.6	77.1	100.0	262
Female	14.0	19.4	66.6	100.0	314
Do Not Work	(16.9)	(12.6)	(70.5)	(100.0)	(484)
Male	14.6	9.4	76.0	100.0	96
Female	17.5	13.4	69.1	100.0	388

One of the demographic characteristics most strongly linked to ridership was household income. As income increased, bus ridership declined. For example, Table 1 indicates 33.0% of those earning less than $10,000 rode the bus, compared to 16.8% of those earning $10,000-$19,999, 9.5% of those earning $20,000-$29,999, and 7.5% of those earning $30,000 or more. The proportion of riders among those earning less than $20,000 was 2.5 times as large as those earning $20,000 or more (21.1% compared to 8.4%, respectively).

Similarly, use of public transit declined with car ownership. For example, Table 2 (which reports data for all adults in the household) indicates that two-thirds (67.4%) of the persons in households without a car used the bus in the month before the survey, but this proportion dropped sharply to 18.2% of persons in households with only one car, and still further to 7.8% of persons in households with two or more cars. Unfortunately for MAT, very few households in the Omaha area are without a car; only 6.7% of the households in the survey (U.S. Census data for 1980 indicate 10.9% of the households did not have a motor vehicle), and only 4.0% of the adult population in this survey were in such households. In contrast, almost three-fourths--73.1%--of all adults in the survey were from households with two or more cars. Bus ridership also declined as the number of cars per adult increased.

Residential location, another characteristic linked to income, also affected bus ridership. Respondents who lived in

Douglas County east of 42nd Street were more likely to have used the bus in the prior month than residents of other locations. Almost one-third (31.7%) of the respondents living in the eastern part of the county rode the bus, compared to 14.0% of the respondents residing in the central area (42nd to 72nd Streets). Suburban respondents were least likely to ride the bus--only 5.7% of those living west of 72nd Street and only 3.4% of those living in Sarpy County. Bus ridership in the sample of respondents from Pottawattamie County was 14.9%. MAT's success was lowest in the rapidly growing areas and greatest in the declining area.

Table 5 reports bus ridership for respondents by the location of their residences and places of work. The six zones in Douglas county are separated by Dodge Street into northern and southern sectors.* A downtown or central business district (CBD) was also coded for work locations. According to the data, MAT did very well among workers reporting a downtown or CBD work location, attracting more than a third (36%) to buses. Downtown workers, however, were only a small proportion of all workers--only 10% of those giving a location in the Omaha metropolitan area worked downtown.** The proportion of riders among workers with suburban work locations was much less. For example, only 3% of those working in the southwest zone (Douglas County south of Dodge and

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*All locations reporting Dodge Street as one of the nearest streets were coded as a northern location--i.e., northeast, north central, or northwest.

**This proportion is very similar to the 1980 Census data, where 10.2% of all SMSA resident workers reported they worked in the Omaha CBD.

TABLE 5

PERCENTAGE OF BUS RIDERS IN PAST MONTH BY LOCATION

	Residence Zone		Employment Zone	
		(N)*		(N)*
Central Business District (CBD)	—		36%	(61)
Northeast (NE)	30%	(91)	20%	(40)
Southeast (SE)	33%	(133)	10%	(72)
North central (NC)	15%	(176)	19%	(53)
South central (SC)	12%	(102)	9%	(55)
Northwest (NW)	6%	(134)	8%	(73)
Southwest (SW)	6%	(198)	3%	(95)
Sarpy	3%	(89)	2%	(45)
Pottawattamie	15%	(154)	11%	(95)
Total	14%	(1,077)	12%	(589)

*(N) represents the total number of residents or workers upon which percentages are based.

west of 72nd Street) used the bus. This low ridership zone was the largest in the survey with 16% of the workers.

This analysis linking demographic characteristics and bus use patterns has focused on the proportion of bus riders in a group with a particular characteristic. For example, the proportion of bus riders in the past month among respondents without a car was 68.1%, while the proportion of riders among those who owned two or more cars was only 7.8%.

An analysis providing profiles of the rider, ex-rider, and non-rider provides a different perspective. For example, Table 6 based on respondents to the survey indicates that approximately one-third (34.2%) of the riders owned two or more cars, and Table 7, based on respondents and their families, indicates an even larger proportion of riders (45.3%) were in households with two or more cars.

Similarly, although ridership declined with income, Table 6 indicates almost half of the riders (45.3%) were in households earning $20,000 or more.

Table 8 presents the profile of the regular bus rider in comparison to the moderate and light rider.

C. Perceptions of Motivations

Bus riders were asked via an open-ended question why they rode the bus. As many as three responses were coded for each respondent. The reason mentioned most often (37.5% of the reasons offered) suggested that many of MAT's riders are "captured," i.e., they have no alternative means of transportation available. The second most frequent reason given was

TABLE 6

PROFILE OF RIDERS, EX-RIDERS, AND NON-RIDERS
(RESPONDENTS)

	Rode in Past Month Percent	Rode in Past Two Years But Not Past Month Percent	Did Not Ride in Past Two Years Percent
Sex (Total N)	(154)	(155)	(755)
Male	26.6	27.1	36.6
Female	74.4	72.9	63.4
Age (Total N)	(150)	(159)	(757)
18-29	30.7	38.4	20.7
30-39	10.7	21.4	25.9
40-49	10.0	8.8	15.2
50-59	6.7	10.1	15.3
60-64	7.3	6.3	5.7
65+	34.7	15.1	17.2
Income (Total N)	(130)	(140)	(681)
<$10,000	26.2	12.1	7.6
$10,000-19,999	34.6	27.1	27.2
(under $20,000)*	(63.8)	(42.1)	(36.9)
$20,000-29,999	21.5	32.1	32.7
$30,000+	13.8	22.9	28.0
($20,000+)*	(36.2)	(57.9)	(63.1)
Location (Total N)	(155)	(157)	(765)
East	45.8	24.2	15.0
Central	25.2	28.0	25.5
West	12.3	29.3	34.9
Sarpy	1.9	5.7	7.1
Pottawattamie	14.8	12.7	14.5
Car Ownership (Total N)	(152)	(158)	(758)
0	32.2	3.8	2.2
1	33.6	39.2	28.1
2+	34.2	57.0	69.7
Cars per Adult (18+) (Total N)	(155)	(159)	(768)
0	31.6	4.4	2.3
Less than 1.0	31.0	32.7	22.1
1.0	31.6	52.2	61.1
More than 1.0	5.8	10.7	14.5

*Includes respondents giving only partial information about their earnings.

TABLE 7

PROFILE OF RIDERS, EX-RIDERS, AND NON-RIDERS
(RESPONDENTS AND FAMILIES)

	Rode Bus in Past Month Percent	Rode Bus in Past Two Years But Not Past Month Percent	Did Not Ride Bus in Past Two Years Percent
Sex (Total N)	(285)	(269)	(1,716)
Male	36.8	38.7	51.2
Female	63.2	61.3	48.8
Age* (Total N)	(278)	(272)	(1,711)
14-19	22.7	25.7	11.1
20-29	26.6	23.0	24.7
30-39	12.5	19.5	17.7
40-49	14.8	9.7	17.5
50-59	6.3	9.7	13.8
60-64	3.1	3.5	5.1
65+	14.1	8.8	10.0
Car Ownership (Total N)	(287)	(271)	(1,717)
0	21.6	3.0	1.3
1	33.1	33.6	19.5
2+	45.3	63.4	79.2
Cars per Adult (14+) (Total N)	(293)	(273)	(1,733)
0	21.2	2.9	1.3
< 1	51.5	43.6	35.6
1	22.5	45.4	52.5
> 1	4.8	8.1	10.6
Location (Total N)	(292)	(270)	(1,728)
East	39.0	24.1	16.1
Central	28.1	28.1	24.6
West	16.4	28.5	34.0
Sarpy	1.4	4.4	11.6
Pottawattamie	15.1	14.8	13.7
Income (Total N)	(243)	(244)	(1,539)
< $10,000	18.5	9.4	5.4
$10,000-19,999	33.7	26.6	24.4
(< $20,000)**	(54.7)	(37.7)	(31.7)
$20,000-29,999	25.1	34.0	34.6
$30,000+	18.9	25.8	31.2
($20,000+)**	(45.3)	(62.3)	(68.3)

*Youngest age category for respondents was 18-29; all responses here are classified as 20-29.
**Includes respondents giving only partial information about their earnings.

TABLE 8

PROFILE OF REGULAR, MODERATE, AND LIGHT BUS RIDERS

	Usage in Last Month				
	Regular (20+/mo.) Percent	Moderate (10-19/mo.) Percent	Light (<9/mo.) Percent	Total Users Percent	No Use (0/mo.) Percent
Sex (Total N)	(36)	(19)	(99)	(154)	(910)
Male	27.8	26.3	26.3	26.6	34.9
Female	72.2	73.7	73.7	74.4	65.1
Age (Total N)	(35)	(20)	(95)	(150)	(916)
18-29	42.9	30.0	26.3	30.7	23.8
30-39	5.7	10.0	12.6	10.7	25.1
40-49	11.4	5.0	10.5	10.0	14.1
50-59	8.6	—	7.4	6.7	14.4
60-64	11.4	5.0	6.3	7.3	5.8
65+	20.0	50.0	36.8	34.7	16.8
Income (Total N)	(31)	(18)	(81)	(130)	(821)
<$10,000	19.4	50.0	23.5	26.2	8.4
$10,000-19,999	29.0	27.8	38.3	34.6	27.2
(<$20,000)	(48.4)	(77.8)	(66.7)	(63.8)	(37.8)
$20,000-29,999	38.7	16.7	16.0	21.5	32.6
$30,000 +	12.9	5.6	16.0	13.8	27.2
($20,000+)	(51.6)	(22.2)	(33.3)	(36.2)	(62.2)
Car Ownership (Total N)	(35)	(20)	(97)	(152)	(916)
0	31.4	50.0	28.9	32.2	2.5
1	34.3	25.0	35.1	33.6	30.0
2+	34.3	25.0	36.1	34.2	67.5
Location (Total N)	(36)	(20)	(99)	(155)	(922)
East	44.4	55.0	44.4	45.8	16.6
Central	22.2	20.0	27.3	25.2	25.9
West	11.1	15.0	12.1	12.3	33.9
Sarpy County	0.0	5.0	2.0	1.9	9.3
Pottawattamie County	22.2	5.0	14.1	14.8	14.2

convenience (29.5%), and cost considerations constituted 15.5% of the reasons. A fourth major motive offered for riding the bus was that it avoided the hassles associated with driving or finding a parking place. See Table 9.

The perception of bus riders as "captured" riders without alternative transportation available was held by approximately half (50.7%) of the ex-riders and by 44.7% of the non-riders. See Table 10.

A broader range of reasons was offered for not riding the bus, but more than half (53.3%) of the reasons stressed that the respondent had a car. Many persons gave only this reason, and the response was often as brief as "car" or "have car." See Table 11. Also see the Appendix for the complete range of responses and recoding decisions.

Although the predominant reason given for not riding the bus was not directly related to MAT or buses, the second most frequent response did relate to an aspect of public transportation. Almost one-sixth of the responses (15.5%) were related to routes--either they were too far from the respondent's home or from his or her destination or too many transfers were involved. In addition, 3.3% of the reasons were complaints about scheduling, and another 5.6% pointed to the inconvenience of riding a bus. A variety of other bus-related reasons (e.g., inadequate information) accounted for 3.2% of the reasons offered. At a maximum, therefore, approximately 28% of the reasons were directly linked to MAT or buses. The respondent's

TABLE 9

REASONS FOR RIDING BUS

	Number	Percent
No transportation alternative	75	37.5
Convenience	59	29.5
Cost	31	15.5
Avoid driving/parking hassle	27	13.5
Other	8	4.0

Percentages based on reasons offered (N=200)

TABLE 10

PERCEPTION OF BUS RIDERS
AS PERSONS WITHOUT CARS*

	Ex-riders Percent	Non-riders Percent
Agree	50.7	44.7
Disagree	49.3	55.3
Total	100.0 (140)	100.0 (684)

*Proportion of those with an opinion only.

TABLE 11

RESPONDENTS' REASONS FOR NOT RIDING BUS

	Ex-riders Percent	Non-riders Percent	Total Percent
Route-related	12.4	16.1	15.5
Schedule-related	4.5	3.0	3.3
Inconvenient	6.2	5.5	5.6
Has car	50.6	53.8	53.3
Carpool/other transportation	9.6	5.0	5.8
Personal characteristics/situation	7.9	8.1	8.1
"No need"	3.9	5.0	4.8
Other bus-related	3.4	3.1	3.2
Other	1.7	.3	.6

*Percentages based on reasons offered (N for ex-riders = 178, non-riders = 898, total = 1,076).

personal characteristics or situation (e.g., his/her age or health) accounted for 8.1% of the reasons given. Another 4.8% said they had no need for public transportation (e.g., they lived close to their workplace). The use of carpools, other persons' cars, or other means of transportation (e.g., walking) constituted 5.8% of the responses.

Table 11 presents the data on reasons offered for not riding the bus by non-riders and by ex-riders. Differences were only minor--e.g., route-related reasons were more likely to be mentioned by non-riders (16.1%) than by ex-riders (12.4%); ex-riders were more likely to refer to carpools or other transporation alternatives (9.6% of the reasons given by ex-riders but only 5.0% of the reasons offered by non-riders).

III. Loss of Ridership

A. Extent

The loss of ridership is best determined from MAT's farebox records. These indicated, for example, a 10.7% decline in the first nine months of 1983 compared to the same period in 1982.

This survey measured loss of ridership differently. It indicates what proportion of the public did not ride the bus in the month prior to the survey but had used the bus at least once in the two years prior to the survey. These data were reported earlier--14.7% of the respondents were classified as ex-riders, using this operational definition. When respondents were combined with other adults (aged 14+) in their households, the data indicated 11.9% were ex-riders.

Most of these ex-riders, however, did not ride the bus very often. Table 12 indicates that more than two-thirds (70.5%) of them formerly used the bus less than 10 times a month. Only about one-fourth (23.1%) were high users (i.e., 20 times or more per month).

Loss of ridership may also stem from decreased frequency of use by current riders. Although some respondents reported fewer trips, the loss was compensated for by reported increased usage by others. For example, 7.8% of the riders reported decreased usage for work-trips, compared to 13.1% who reported an increase for that purpose. Similarly, although 11.7% of the riders reported decreased ridership for non-work-trips, 12.3% reported increased usage. When work-trips and other trips were combined,

TABLE 12

EX-RIDERS' PRIOR USE OF BUS

	Prior Use of Bus				
	Low (< 10/mo.) Percent	Moderate (10-19/mo.) Percent	High (20+/mo.) Percent	Total Percent	Number
Total	70.5	7.1	23.1	100.0	156
Sex					
Male	63.4	7.3	29.3	100.0	41
Female	76.8	5.4	17.9	100.1	112
Age					
18-29	57.4	11.5	31.1	100.0	61
30-39	81.8	6.1	12.1	100.0	33
40-49	84.6	0.0	15.4	100.0	14
50-59	75.0	6.3	18.8	100.1	16
60-64	60.0	0.0	40.0	100.0	10
65 +	95.8	4.2	0.0	100.0	24
Income					
< $10,000	76.5	11.8	11.8	100.1	17
$10,000-19,999	65.8	7.9	26.3	100.0	38
(< $20,000)	(69.5)	(8.5)	(22.0)	(100.0)	(59)
$20,000-29,999	75.0	2.3	22.7	100.0	44
$30,000+	67.7	12.9	19.4	100.0	31
($20,000+)	(70.9)	(7.6)	(21.5)	(100.0)	(79)
Car Ownership					
0	83.3	0.0	16.7	100.0	6
1	80.0	8.3	11.7	100.0	60
2+	67.8	6.7	25.6	100.1	90

23.9% were classified as increasing riders and 14.8% as declining riders (with the remaining 61.3% indicating no change). Most of the shifts were within the low usage category, however; for example, 60% of the declining riders shifted from a low number of rides per month (less than 10 round trips) to a still lower number, and 65% of those who increased their patronage were still classified as low users. The net change in rides was actually a net gain.

B. Demographic Characteristics

The demographic characteristics of the ex-rider can be compared to all respondents by examining the second column in Table 1. For example, that column indicates that 15.0% of all respondents reporting incomes of less than $20,000 were ex-riders, and the proportion of ex-riders among those earning $20,000 or more was almost the same--14.5%.

A more fruitful approach, however, is to compare the ex-rider only to respondents who have used a bus in the past two years (i.e., the sum of riders and ex-riders). Of those making under $20,000 and who have used the bus at all in the past two years, more were still riding the bus than became ex-riders (21.1% is larger than 15.0%). Among those earning $20,000 or more, however, more were ex-riders than riders (14.5% is larger than 8.4%). The ratio of ex-riders to riders, therefore, can be called a Desertion Index (or it could be put less negatively by

using the ratio of riders to ex-riders and calling it a Retention Index).*

The use of these indices indicates that desertion of the bus riding routine was slightly higher among men than women (Desertion Index of 1.03 compared to 1.00, respectively). More significant, however, is the indication that younger persons (18-39) were more likely to desert the riding habit than older persons (60+). Similarly, desertion increased with income, the number of cars, and the number of cars per adult. Desertion was also greatest among those now living in Sarpy County and Douglas County west of 72nd Street and least in the area of Douglas County east of 42nd Street. See Table 13.

Table 12 provides some insights into the characteristics of the frequent bus riders who stopped riding the bus. For example, men were more likely than women to be classified as high use ex-riders (29.3% of male ex-riders were high users compared to 17.9% of female ex-riders).

Table 14 provides a profile of this rider directly. For instance, it indicates that more than half of the high-use ex-riders were 18-29 years old.

C. Perception of Motivations

Most of the reasons offered by ex-riders for not riding the bus in the previous month were not related to bus company actions or bus-related factors. Among the reasons offered by these respondents (up to two reasons coded, although they rarely

*The ratio of ex-riders to the sum of riders and ex-riders, of course, is simply the proportion of ex-riders in the population of those who reported riding the bus at least once in the past two years. This can be calculated from the Desertion Index by dividing the index by itself plus one.

TABLE 13

BUS RIDER RETENTION AND DESERTION INDICES*

	Retention Index	Desertion Index
Total	.97	1.03
Sex		
Male	.97	1.03
Female	1.00	1.00
Age		
18-29	.75	1.33
30-39	.47	2.12
40-49	1.07	.93
50-59	.62	1.61
60-64	1.10	.91
65+	2.15	.46
Income		
<$10,000	2.00	.50
$10.000-19,999	1.18	.85
(under $20,000)*	(1.41)	(.71)
$20,000-29,999	.63	1.60
$30,000+	.56	1.77
($20,000+)*	(.58)	(1.73)
Location		
East	1.86	.54
Central	.89	1.13
West	.41	2.44
Sarpy	.34	2.97
Pottawattamie	1.15	.87
Car Ownership		
0	8.20	.12
1	.82	1.22
2+	.58	1.72
Cars per Adult (18+)		
0	6.97	.14
Less than 1.0	.92	1.08
1.0	.59	1.68
More than 1.0	.53	1.88

*Calculated from percentages reported in Table 1.

**Includes respondents giving only partial information about their earnings.

TABLE 14

PROFILE OF HIGH-USE, MODERATE-USE, AND LOW-USE EX-RIDERS

	Prior Use of Bus		
	Low (< 10/mo.) Percent	Moderate (10-19/mo.) Percent	High (20+/mo.) Percent
Sex (Total N)	(112)	(9)	(32)
Male	23.2	33.3	37.5
Female	76.8	66.7	62.5
Age (Total N)	(114)	(11)	(32)
18-29	30.7	63.6	59.4
30-39	23.7	18.2	12.5
40-49	9.6	0.0	6.3
50-59	10.5	9.1	9.4
60-64	5.3	0.0	12.5
65 +	20.2	9.1	0.0
Income (Total N)	(97)	(11)	(30)
< $10,000	13.4	18.2	6.7
$10,000-19,999	25.8	27.3	33.3
(< $20,000)	(42.3)	(45.5)	(43.3)
$20,000-29,999	34.0	9.1	33.3
$30,000+	21.6	36.4	20.0
($20,000+)	(57.7)	(54.5)	(56.7)
Car Ownership (Total N)	(114)	(11)	(31)
0	4.4	0.0	3.2
1	42.1	45.5	22.6
2+	53.5	54.5	74.2
Location (Total N)	(109)	(11)	(31)
East	22.9	27.3	22.6
Central	30.3	27.3	25.8
West	29.4	18.2	32.3
Sarpy	5.5	9.1	3.2
Pottawattamie	11.9	18.2	16.1

offered more than one reason) only 14.1% were bus-related (e.g., revised routes or schedules, discontinued service, discourteous drivers, price increases). The largest proportion (22.7%) were related to a change in the respondent's personal situation (e.g., moving, changing employment or school situation, declining health). Almost as many (19.6%) reasons related to fixing or purchasing a car, suggesting their bus use was only occasional or necessitated by a temporary emergency related to their car. Other responses, indicating occasional use and no further need including improved weather, constituted 22.1% of the reasons. Other car-related reasons (e.g., now carpools or simply "uses car") constituted 15.3% of the reasons offered. Inconvenience, which may or may not reflect bus operations, was 4.3% of all responses. See Table 15. Also see the Appendix for the complete range of responses and recoding decisions.

Further evidence that ex-riders were not antagonistic to MAT can be seen in the fact that more than 9 out of 10 (90.9%) said they would use the bus system again while only 9.1% said they would not. Responses to the question about when they would ride again reinforced the impression that the loss of ridership reflected personal factors or occasional use rather than unhappiness with the bus system; the two most frequent responses given for when they would ride again were when bad weather re-occurred (26.9%) and when the car broke down again (19.4%). Even of those who said they would not ride the bus again, personal factors such as poor health were given by 3 of the 10 persons stating a reason.

TABLE 15

REASONS OFFERED FOR CEASING TO RIDE BUS*

	Respondents		Other Adults in Household	
	No.	%	No.	%
Personal situation changed	37	22.7	22	23.9
Occasional use (no further need)	36	22.1	17	18.5
Bought/fixed car	32	19.6	17	18.5
Other car-related reasons	25	15.3	24	26.1
Bus company actions	23	14.1	8	8.7
Inconvenient	7	4.3	2	2.2
Other	3	1.8	2	2.2

*Percentages are based on the number of reasons offered; these N's are reported in the table.

Information about other adults in the household was also solicited. Few respondents attributed the failure of ex-riders in the household to ride the bus in the previous month to bus company actions. Only 8.7% of the responses were in this category.

Declines in use by current riders also were not related to bus system factors. Only one of the seven persons giving reasons for a decline in their work-trips by bus referred to bus service (an additional rider indicated he/she moved, which could reflect inadequate service at his/her new residential location). Similarly, only 2 of 13 riders who gave reasons for their decreased use of buses for non-work-trips referred to bus operations as a factor.

D. Attitudinal Relationships

Both current and former riders were asked what they liked and disliked about riding the bus.* The responses were not very different; e.g., 40.8% of the dislikes noted by ex-riders were related to waiting and schedule inadequacies compared to 40.7% of the reasons offered by current riders. Ex-riders, however, were more likely to mention uncomfortable conditions (e.g., crowded, lack of air conditioning, diesel fumes) than were riders--23.3% of the dislikes mentioned by ex-riders compared to 17.8% of those given by current riders. Inconvenience was also a more frequent

*A pre-test indicated that asking about dislikes first elicited more responses to the question about what they liked about riding the bus.

response among ex-riders than riders (9.7% and 4.2%, respectively), as were route-related factors (7.8% compared to 5.9% of riders' dislikes). Riders, on the other hand, were more likely to mention drivers' actions (11.0% of riders' dislikes but only 4.9% of ex-riders' complaints). Transfering also was more disturbing to riders than ex-riders (9.3% of riders' dislikes but 5.8% of ex-riders'). Cost was mentioned more often by riders than ex-riders (5.9% of riders' complaints but only 1.9% of ex-riders'). See Table 16. Also see the Appendix for the complete range of responses and recoding decisions.

What ex-riders liked about the bus was not much different from the responses of riders. For example, the three most popular attributes mentioned by riders also headed the list offered by ex-riders, although the proportions differed somewhat. Convenience was mentioned most frequently, constituting 34.7% of the likes mentioned by riders and 29.5% of the responses offered by ex-riders. Avoiding the hassle of driving and finding a parking place was the second most frequently given response by each group--constituting 17.9% of the riders' likes and 24.6% of the ex-riders'. This difference is not surprising given that almost one-third of the bus riders did not have a car available while only 4% of the ex-riders did not have a car. Favorable cost considerations were 15.6% of the likes offered by riders but 18.0% of those given by ex-riders. The fun of riding a bus (e.g., reading, relaxing, and meeting other people) was stressed more often by riders (10.4% of their likes) than ex-riders

TABLE 16

LIKES AND DISLIKES OF BUS USE*

	Riders Percent	Ex-riders Percent	Total Percent
Likes			
Convenient	34.7	29.5	32.3
Avoidance of driving/parking hassle	17.9	24.6	21.5
Economical	15.6	18.0	17.0
Fun	10.4	3.8	7.1
Safe/dependable alternate	8.1	6.0	7.1
Drivers	5.8	7.7	6.8
Service	3.5	5.5	4.5
Clean and comfortable	3.5	4.4	4.0
Other	.6	.5	.6
Dislikes			
Waiting/schedule-related	40.7	40.8	40.7
Uncomfortable	17.8	23.3	20.4
Drivers	11.0	4.9	8.1
Transfering	9.3	5.8	7.7
Route-related	5.9	7.8	6.8
Inconvenient	4.2	9.7	6.8
Cost	5.9	1.9	4.1
Other	5.1	5.8	5.4

*Percentages are based on likes and dislikes. For likes, N for riders = 173, ex-riders = 183, total = 356. For dislikes, N for riders = 118, ex-riders = 103, total = 221.

(3.8%). See Table 16. Also see the Appendix for the complete range of responses and recoding decisions.

Ex-riders were not more critical of the bus system than riders. In fact, they averaged more likes (1.15) than riders (1.12) and fewer dislikes (.65) than riders (.76). As these numbers indicate, ex-riders as well as riders stated more likes than dislikes.

Generally, the attitudes of ex-riders toward bus operations were less favorable than riders but not as negative as non-riders. However, even the attitudes of non-riders can be considered favorable towards MAT and bus riding.

For example, Table 17 indicates that of those rating MAT as either very good, good, fair, poor, or very poor, only 4.7% of non-riders, 3.9% of ex-riders, and 1.4% of riders gave MAT a poor or very poor rating. In contrast, 77.4% of non-riders, 79.4% of ex-riders, and 90.9% of riders rated MAT as very good or good. On a five-point scale (with very poor as 1 and very good as 5) the average ratings were 3.82 for non-riders, 3.97 for ex-riders, and 4.23 for current riders.

All three groups were much more likely to view MAT as improving in the past year, with non-riders slightly more favorable. One third (33.4%) of the non-riders who answered this question felt the bus system had improved in the past year, and only 7.5% thought it had declined (for a ratio of 4.5:1). Among ex-riders 30.6% felt it had improved while 9.9% thought it had declined (a ratio of 3:1). Riders, surprisingly, were less optimistic (27.4% seeing the system as improved and 7.4% as

TABLE 17

RATING OF MAT

	Riders		Ex-riders		Non-riders	
Very good	34.0%		21.3%		11.1%	
Good	56.9%		58.1%		66.3%	
Fair	7.8%		16.8%		17.9%	
Poor	.7%		3.9%		3.0%	
Very poor	.7%		0.0%		1.7%	
Total	100.1%	(153)	100.1%	(155)	100.0%	(603)
Average Score	4.23		3.97		3.82	

(Very good = 5, Good = 4, Fair = 3 Poor = 2, Very poor = 1)

worse), but they already had a highly favorable attitude towards the bus system. See Table 18.

Table 19 indicates that riders who said the system had improved in the past year were most likely to point to schedule/service improvements (40.4% of the improvements listed), with route improvement second (17.0%). These two elements also were cited as either the most frequent or second most frequent reason for improvement by other respondents. For ex-riders routes drew 34.9% of the reasons for improvement while schedule/service gained 25.6% of the mentions; for non-riders it was 27.7% and 23.2%, respectively.

Non-riders rated new buses as evidence of improvement 20.0% of the time and bus condition and other equipment (e.g., shelters) 20.0% of the time. Among all respondents, 18.0% of all improvements cited were new buses and 14.7% involved bus condition and equipment. Improvement in driver behavior was cited 12.8% of the time by riders, 4.7% by ex-riders, and 1.9% by non-riders.

Reasons for perceptions of a decline in MAT's rating focused largely on deterioration of routes and schedules. Riders were most concerned about deterioration of schedules--this constituted 41.7% of their small number of complaints (12 factors cited by 10 riders). Decline in routes constituted 35.7% of the 14 reasons for decline cited by the 12 ex-riders who saw the bus system getting worse in the past year, and 38.2% of the 34 problems

TABLE 18

CHANGE IN MAT'S PERFORMANCE*

	Riders Percent	Ex-Riders Percent	Non-riders Percent	Total Percent
Improving	27.4	30.6	33.4	31.7
Same	65.2	59.5	59.1	60.4
Declining	7.4	9.9	7.5	7.9
Total	100.0 (135)	100.0 (121)	100.0 (413)	100.0 (669)

*Percentages based on those reporting an opinion on the question.

TABLE 19

PERCEPTIONS OF IMPROVEMENTS*

	Riders Percent	Ex-riders Percent	Non-riders Percent	Total Percent
New buses	12.8	16.3	20.0	18.0
Bus condition and other equipment	14.9	9.3	20.0	14.7
Routes	17.0	34.9	27.7	26.9
Schedule/service	40.4	25.6	23.2	26.9
Drivers	12.8	4.7	1.9	4.5
P.R./information	—	4.7	3.2	2.9
Other	2.1	4.7	7.7	6.1

*Percentages based on number of perceptions reported (N for riders = 47, ex-riders = 43, non-riders = 155, total = 245).

cited by the 28 non-riders who said conditions had worsened in the past year. See Table 20.

Further evidence of relatively favorable attitudes can be seen in Table 21. More than 9 of 10 respondents in each of the three groups with an opinion agreed with the statement, "Buses are usually clean." Similarly, agreement with the statement, "Getting information is fairly easy," ranged from 83.5% to 90.7% of the persons in each group who expressed an attitude on that factor. Also only small minorities in each group believed that the cost of a bus trip was more than making the same trip by car (the proportions ranged from 6.3% to 11.8%).

Differences among the three groups were evident, however, on some questions. For example, 85.2% of the riders with an opinion agreed with the statement, "Existing routes and schedules are generally convenient for me," but only 69.1% of the ex-riders and 46.5% of the non-riders did.

Similarly, non-riders were more likely than ex-riders who were more likely than riders to agree with the statement, "It generally takes too long by bus to get where I want to go," (68.7% of the non-riders, 48.6% of the ex-riders, and 25.5% of the current riders agreed).

The perceived personal hardship if no bus service existed also varied with bus riding experience. Almost three-fourths (71.1%) of current riders agreed, "It would create a hardship for me if I could not ride the bus," while only 20.3% of the

TABLE 20

PERCEPTIONS OF REASONS FOR DECLINE IN MAT'S RATING*

	Riders Percent	Ex-riders Percent	Non-riders Percent	Total Percent
Routes	25.0	35.7	38.2	35.0
Schedule	41.7	21.4	32.4	31.7
Drivers	8.3	7.1	2.9	5.0
Other bus-related factors	16.7	21.4	17.6	18.3
Other	8.3	14.3	8.8	10.0

*Percentages based on the number of perceptions reported (N for riders = 12, ex-riders = 14, non-riders = 34, total = 60).

TABLE 21

ATTITUDES TOWARD BUS

	Percent Agreeing*		
	Riders	Ex-riders	Non-riders
Bus trip costs more than car trip	6.3 (143)	11.8 (152)	9.5 (663)
Routes and schedules are convenient	85.2 (149)	69.1 (149)	46.5 (516)
Buses are usually clean	96.1 (153)	93.4 (152)	94.0 (430)
Takes too long by bus	25.5 (145)	48.6 (148)	68.7 (572)
Bus information easy to get	90.7 (151)	83.5 (139)	88.0 (585)
Not riding bus is (would be) hardship	71.1 (152)	20.3 (148)	8.6 (694)

*Proportion of those agreeing or disagreeing with statement. N's represent total upon which proportions are based.

ex-riders and 8.6% of the non-riders agreed, "Not riding the bus creates some hardship for me."

Riders were asked several other questions about bus service and gave overwhelming approval of the system. Riders were asked to agree or disagree with the statement, "Buses are generally on time," and 88.0% agreed. Another statement said, "MAT maps and schedules are hard to understand," and only 20.4% agreed while 79.6% disagreed. The statement, "Transfering is fairly easy," drew agreement from 81.3% while only 17.4% agreed with the statement, "Bus schedules change too often." These favorable views by riders reflected their satisfaction with operations, but favorable attitudes toward bus operations by riders might reflect some rationalization to overcome any dissonance between their perceptions and the fact that they continued to use the service. As Golob, Horowitz, and Wachs noted,

> The effect of choice upon attitudes can be studied within the framework of the psychological theory of cognitive dissonance. The theory asserts that after an individual makes a choice between alternatives, he will align his stated attitudes to his choice, upgrading the satisfaction with both the positive and negative attributes of the chosen alternative and downgrading those of the rejected alternative.*

The favorable responses of riders, therefore, were not unexpected. However, the relatively low level of negative attitudes of ex-riders and non-riders may be seen as evidence

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*Thomas Golob, Abraham Horowitz, and Martin Wachs, "Attitude Behaviour Relationships in Travel-demand Modeling," in: David Hensher and Peter Stopher, (eds.), Behavioural Travel Modeling (London: Groom Helm, 1979), p. 739.

that the low level of ridership is not a function of specific problems in bus operations but may reflect more general societal attitudes.

Some evidence for this view can be seen in the data on perceptions for the reasons for decline in bus ridership. See Table 22. Respondents were asked, "As you may know, bus ridership has decreased. What do you think are the reasons for this?" Up to two answers were coded, resulting in 920 responses in approximately 75 coded categories. These suggested causes for the decline in ridership were regrouped into three broad categories. Many persons framed their reasons in terms of the primary competing mode of travel--cars. Almost two of every five suggested causes (39.0%) were related to automobiles, e.g., more people have more cars today, more carpooling, the convenience of cars, increasingly efficient cars, and improved parking. Some respondents answered with a single word: "Cars."

Another set of factors was classified as societal, but they were not necessarily unrelated to cars. For instance, approximately 10.5% of all of the reasons given cited the downward shift or stabilization of gasoline prices or made references to a perceived easing of the energy crisis. Another set of factors classified as societal referred to the economy--some seeing the decline in ridership related to a dip in the economy (e.g., more unemployment) while others saw improving economic conditions related to the decline in ridership (e.g, less concerned with

TABLE 22

PERCEPTIONS OF DECREASE IN BUS RIDERSHIP*

	Riders Percent	Ex-riders Percent	Non-riders Percent	Total Percent
Car-related Factors	(38.0)	(31.4)	(41.1)	(39.0)
More cars	14.0	9.4	12.5	12.2
Carpooling	9.3	11.3	9.7	9.9
Car's convenience	4.7	4.4	9.8	8.2
Cars (not specific)	5.4	3.1	7.1	6.2
Other car related factors	4.7	3.1	2.1	2.6
Societal Factors	(24.0)	(25.8)	(23.1)	(23.7)
Gas/energy crisis	9.3	9.4	11.1	10.5
Economic conditions	7.8	7.5	4.6	5.5
Locational	3.9	3.8	4.0	3.9
Less travel/need	.8	.6	.6	.7
Other values/behaviors	1.6	1.3	1.1	1.2
Crime/unsafe bus stops	.8	3.1	1.7	1.8
Bus-related Factors	(38.0)	(42.8)	(35.8)	(37.3)
Cost	16.3	11.3	10.0	11.1
Schedule	6.2	5.0	6.8	7.9
Route	3.9	11.3	9.5	7.5
Service	2.3	.6	2.1	1.8
Takes too long	2.3	5.7	2.7	3.2
Maintenance/facilities	2.3	.6	1.9	1.7
Other bus-related	4.7	8.2	2.8	4.0

*Percentages are based on the number of reasons given by each group (riders = 129, ex-riders = 159, non-riders = 632, total = 920).

costs). Others saw locational shifts (e.g., increased suburbanization of homes, jobs, and shopping) contributing to the decline of bus ridership. References to other values (e.g., impatience, too lazy to walk) which might or might not be related to auto ownership, and other behavior (e.g., alternate means of transportation such as walking and bicycling), reduced travel, and crime were included in this broad category. Totally, 23.7% of the reasons given were classified as societal factors.

Finally, a set of factors was related to the bus system. Primary among these were references to increased fares including the policy of charging for transfers; 11.1% of the reasons cited were in this sub-category. Others (7.9%) were references to schedules directly (e.g., their general inadequacy) or indirectly (i.e., the burden of waiting for a bus--usually made by non-riders). Others pointed to the inadequacy of current routes--either their inconvenience, distance to bus stop, or the burden of transfering; 7.5% of the reasons were classified as route-related. Another 1.8% of the reasons were about poor or declining service. The complaint about buses taking too long constituted 3.2% of the factors cited. Poor maintenance or comments related to poor facilities (e.g., shelters) constituted 1.7% of the responses. Totally, only 37.3% of the reasons were related to buses.* See the Appendix for the complete range of responses and recoding decisions.

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*An analysis based on respondents rather than reasons given produced similar results. Approximately 35% of the respondents referred only to cars, 33% only to bus service, and 19% only to societal reasons. The remaining 13% gave reasons in two categories, resulting in a total of about 45% of the respondents citing cars, 40% citing buses, and 28% citing societal factors.

Although 12.7% of the respondents who offered reasons for the decline in bus ridership volunteered that the stabilization or decline of gas prices was a factor, responses to a closed-ended question about the impact of gas prices on the respondent's own behavior indicated a smaller impact. Almost 95% of those who answered the question, "Did the price of gas affect how often you rode the bus?" said it did not. Only 1.4% answered that question by saying yes and then indicating the decrease in gasoline prices decreased their bus usage (3.7% indicated the earlier increase in gasoline prices increased their bus usage). See Table 23.

Similarly, although an increase in the number and efficiency of cars was seen by a number of respondents as a factor contributing to a decline in bus ridership, an analysis of data from the survey examining changes in auto status and a decline in bus riding was not so dramatic.

A very large proportion of the respondents changed their auto status during the previous two years--either added to the number of cars they owned or traded one car for another. Of all current car owners who answered the question, 54.1% reported no change in either the number of cars or car model they owned; 18.1% increased the number of cars they owned, 25.1% changed models, and 2.7% did both. With a large number of people changing car status and a decline in bus ridership, speculating that the former is a cause of the latter is tempting.

TABLE 23

REPORTED IMPACT OF GAS PRICES

	Riders		Ex-riders		Non-riders		Total	
	No.	%	No.	%	No.	%	No.	%
No impact	127	83.0	147	93.6	687	97.6	961	94.8
Increased bus use	20	13.1	7	4.5	9	1.3	36	3.6
Decreased bus use	4	2.6	2	1.3	7	1.0	13	1.3
Both increased and decreased bus use	—	—	—	—	1	.1	1	.1
Impact, but direction unknown	2	1.3	1	.6	—	—	3	.3
Total respondents	153	100.0	157	100.0	704	100.0	1,014	100.1

This is especially so when noting that a majority (58%) of the ex-riders who were classified as regular or frequent bus riders (i.e., 20 or more times a month) reported a change in their car status. A closer examination, however, of the 17 frequent riders who became ex-riders and who gave both a date for when they last rode the bus and when they changed their car status indicated that approximately one-third--6 of the 17 (35%)--reported their bus ridership ended before their car status changed. For 8 of the 17 (47%) their bus riding patterns changed after their car status changed, and another 3 (or 18%) gave the same month for the time changes. Therefore, although a majority of the frequent riders who became ex-riders also changed their car status, the group who changed their car status before they changed their bus riding patterns constituted only a small proportion of all ex-riders in the survey.

After being asked about perceived causes for the decline in bus ridership, respondents were asked how MAT could increase ridership. Most people added another dimension to their answer rather than merely repeating the same thought. In other words, if a respondent said poor schedules led to the decline in ridership he/she rarely offered better schedules as the solution. More than 90 solutions were offered. These responses were placed in seven broad categories.

The most frequently mentioned category (27.5% of all suggestions) involved improving MAT's route structure. These

included some suggestions mentioned by many persons and others by only one respondent. Examples of suggestions involving routes included: more express routes, more routes to suburban locations, more direct routes, as well as routes to Offutt, Westroads, high schools, large employers (e.g., Kellogg), and special routes to major events. Route suggestions were more likely to come from ex-riders (33.9% of their suggestions) and non-riders (28.7% of their proposals) than riders (15.0% of theirs). An additional 2.9% of the suggestions specifically referred to improving or avoiding transfers. These ideas could be seen as route-related or schedule-related. Responses specifically mentioning schedule improvements totaled 17.2% of the suggestions. Examples included: extended hours (including proposals for 24-hour service), Sunday and/or improved weekend schedules, and reduction of headway or waiting time by increasing the number of buses. See Table 24. Also see the Appendix for the complete range or responses and recoding decisions.

Another frequently mentioned category of suggestions referred to the need to maintain or even reduce fares. This category constituted 21.3% of the responses with riders more likely to cite it than non-riders or ex-riders. This is an example of the fact that responses to the question elicited suggestions to increase service which were not necessarily mirror images of responses to the question on the causes of the decline in ridership. Only 11.1% of the perceived causes of decline referred to costs while 21.3%--more than double--of the solutions

TABLE 24

SUGGESTIONS FOR INCREASING RIDERSHIP*

	Riders Percent	Ex-riders Percent	Non-riders Percent	Total Percent
Public relations/information	15.0	14.0	22.1	19.8
Maintain/reduce fares	28.0	15.7	21.1	21.3
Improve schedule (service)	21.5	22.3	15.0	17.2
Improve routes	15.0	33.9	28.7	27.5
Improve buses/facilities	9.3	5.0	6.9	6.9
Better training/other policies	6.5	3.3	2.8	3.4
Improve/avoid transfers	3.7	4.1	2.4	2.9
Other	.9	1.7	1.0	1.1
Total	99.9	100.0	100.0	100.0

*Perceptions based on solutions offered (N for riders = 107, ex-riders = 121, non-riders = 506, total = 734)

referred to costs of the service. In addition to a general suggestion to reduce or maintain fares, other ideas included more tax support, special weekend or non-peak hour fares, scaled or zoned fares, free transfers, weekly passes with unlimited rides, as well as contradicting pleas for increased discounts and the elimination of discounts.

Almost one-fifth (19.8%) of the suggestions involved more advertising, PR (public relations), and increased efforts to provide information. Examples of the latter included more information operators, more frequent printing of revised schedules, and the posting of schedules at bus stops. Examples of PR campaigns included free rides, doughnuts and coffee, and free newspapers on the buses.

Other categories included improved buses or facilities--these constituted 6.9% of the suggestions. Specifics included references to air conditioning, larger buses on heavily traveled routes, use of smaller or mini-buses, using newer buses on express routes, more shelters, and more parking for the park and ride concept. Others made reference to better training of drivers and information operators, and to modifying MAT's policy on having exact change for fares. These suggestions represented 3.4% of all proposals. Riders were more likely to refer to improvements of buses, facilities, and training than were non-riders or ex-riders.

IV. Conclusions and Recommendations

The data from the survey of the public in the three-county area served by MAT are simultaneously both good news and bad news for MAT. The good news is that the lack of ridership and, more importantly, the loss of ridership are not MAT's fault. The bad news is that since the lack of ridership and loss of ridership are not MAT's fault, attracting new riders or winning back old ones will be much more difficult.

The lack of ridership--only 14.3% of the respondents (and only 12.7% of all adults) rode the bus in the month before the survey--was strongly related to income, the number of cars available, and the location of residences or places of work.

The lack of ridership was not due to negative attitudes toward MAT but rather to the American love affair with the auto. More than three-fourths (77.4%) of the non-riders who stated an opinion rated MAT as very good or good; more than four times as many non-riders felt the service had improved rather than declined. Large majorities of non-riders thought bus trip costs were not higher than the same trip by car (90.5%), buses were clean (94.0%), and bus information was easy to get (88.0%). Non-riders, however, were critical of the convenience of routes and schedules. A majority (53.5%) said they were not convenient, and 68.7% said the amount of time a trip takes by bus is too long.

The importance of the car as a factor in the choice of travel mode is evident in the fact that a majority (53.3%) of the reasons offered by non-riders and ex-riders for not riding the bus centered on owning a car. Similarly, non-riders gave more factors involving cars than buses when asked to speculate about the causes of the decline in bus ridership. More that two-fifths (41.1%) of the reasons were car-related compared to 35.8% bus-related reasons. The remaining 23.1% were societal factors.

The loss of ridership (14.7% of the respondents and 11.9% of all adults were ex-riders) was not strongly related to dissatisfaction with the bus system. Only 14.1% of the reasons respondents offered for stopping their bus use were directly related to bus characteristics. Many of these ex-riders were occasional users ("snow birds" or those with their car being repaired)--70.5% had used the bus less than 10 times a month, and only 23.1% of the ex-riders had been frequent bus users (20+ round trips per month). They still rated MAT favorably (79.4% giving it a very good or good rating) with three times as many ex-riders saying it had improved than said it had declined.

If the decline is not due to MAT's errors but rather to broader factors, MAT will have difficulty taking corrective action. What MAT can do to overcome the impact of continuing suburbanization of residences, jobs, and shopping will be only minimal.

Some of the data, however, suggest steps MAT might take to improve the situation. For instance, respondents were asked what MAT could do to increase ridership. More than one-fourth (27.5%)

of the suggestions related to improvement of routes while 17.2% of the responses involved improved schedules and service. These remedies may be difficult to carry out, however, if revenue declines because of a declining ridership. Income, however, could be increased via increased support from taxes.* MAT could make a case for tax support on several grounds including its contributions to the public good by serving those without cars and its benefits to non-riders (e.g., reduced road congestion) and the occasional user who needs the bus in an emergency or who wishes to avoid the hassles of driving in bad weather. Similarly, net income could be increased by cutting costs through greater productivity or efficiency.

Approximately one-fifth (21.3%) of the suggestions were to reduce or at least maintain fares. The importance of this remedy, however, may be limited. Not only does a vast body of literature suggest that public transit is not very cost-sensitive, but the data in this study rarely found cost considerations a problem. This factor constituted only 11.1% of the reasons given by respondents for the decline in ridership, and it was rarely mentioned as a reason for ceasing to ride the bus or for not riding the bus, and most (88.2% to 93.7% of the three

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*Support--financial or otherwise--for public transit could also be increased via greater cooperation with the private sector, as well as with public agencies such as the Omaha Planning Department. The latter, for instance, could be encouraged to provide zoning incentives for developments providing assistance to public transit (e.g., parking requirements could be eased for commercial or industrial centers providing park and ride facilities or bus shelters).

groups of respondents) recognized that a bus trip was cheaper than the same trip by car.

Approximately one-fifth (19.8%) of the suggested remedies revolved around more advertising and public relations and improved information services. Specific suggestions included giving free rides as a sample of service. This could be successful since 75.4% of the adults in the area had not been on a MAT bus in at least two years. The advertising campaign could focus on some of the factors mentioned most often as attributes liked by riders as well as ex-riders. These include the opportunity to avoid the hassle of driving and/or finding a parking place (21.5% of the "likes") and the fun of riding (7.1% of the things liked about public transit included the chance to relax, read, and meet other people). Almost one-third (32.3%) of the references were to the convenience of riding the bus.

Increased availability of information about routes and schedules could be helpful, although general knowledge of MAT was high (76.2% of all respondents identified MAT as the operator of the Omaha-area bus system, and even 72.3% of non-riders could identify MAT correctly).

The data in the survey also support the suggestion to focus upon transit market segmentation made in recent public transportation literature.* The data in the survey suggest several

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*For example, see several papers in Richard Robinson and Christopher Lovelock (eds.), Marketing Public Transportation: Policies, Strategies, Research Needs for the 1980's (Chicago: American Marketing Association, 1981).

distinct market segments. For instance, 36% of the workers reporting they worked in downtown Omaha rode the bus in the month prior to the survey. Unfortunately for MAT, central business district workers were only about 10% of all workers. However, if MAT can be attractive to over one-third of the downtown workers, perhaps it can attract more of them. A campaign to reach these workers through their employers (or perhaps direct mail) might prove successful.

Similarly, a campaign could be aimed at a second market segment--the people (or households) who already use the system at least occasionally. Again, unfortunately for MAT, these occasional users were the predominant type of rider. Light users (less than 10 round trips per month) were 63.9% of all riders while frequent users (20 or more round trips a month) constituted only 23.2% of all riders. Even some of the riders who used the bus regularly to go to work rarely used it for other purposes. For example, 63.0% of the riders reporting regular bus use for work-trips reported no non-work-trips by bus, and another 25.9% used it less than 10 times a month for non-work-trips. These are riders familiar with the bus-riding routine and not burdened by unfavorable attitudes. Therefore they might be easier to entice into more frequent use. Similarly, although 21.0% of all households had at least one adult rider, only 12.7% of all adults were classified as riders, suggesting a great potential for other riders in these households. In addition to these user house-

holds, most non-user households were not antagonistic to MAT or bus-riding. Most simply preferred to use a car, some because a bus route was not available. These might become riders if the right inducements could be found, e.g., express routes.

Even multiple-car owners might be a fruitful market to pursue. Although only 7.8% of respondents who owned two or more cars chose to ride the bus, this group represented more than one-third (34.2%) of the bus riding respondents in the survey.

Other segments of the total public transit market may reflect specific residential, work, or other high density destination locations (e.g., UNO), or particular age groups (e.g., elderly or teenagers), or persons with a particular trip-purpose.

Developing a plan to attract these segments might require additional research. More can be learned from focus-group or in-depth studies with riders, ex-riders, and non-riders. Similarly, the recent on-board survey of bus riders provides a major source of data, as does the special urban transportation planning package (UTPP) and public use microdata file (PUMS) tape from the 1980 Census. New studies of potential market segments would also be fruitful.

MAT can keep its current riders and attract new ones, but the task will not be easy in the face of the trends throughout America.

Appendix

Appendix 1

Sampling Error

Sampling Error

Table A-1 presents the approximate sampling error of a proportion reported in random samples of various sizes. The formula, $1.96\sqrt{\frac{pq}{n}}$, where p equals the reported proportion, q equals 1 - p, and n equals the number of interviews upon which the proportion is based, can be used to estimate the sampling error for any proportion or percentage reported in the text.

TABLE A-1

APPROXIMATE SAMPLING ERROR[a/]

Number of Interviews Upon Which Percentage Is Based (n)	Reported Percentage (p or q)			
	50	70 or 30	80 or 20	90 or 10
30	18	16	14	11
50	14	13	11	8
75	11	10	9	7
100	10	9	8	6
150	8	7	6	5
200	7	6	6	4
350	5	5	4	3
500	4	4	4	3
700	4	3	3	2
1,080	3	3	2	2

[a/] The chances are 95 in 100 that in a random sample the value being estimated lies within a range equal to the reported percentage plus or minus the number of percentage points shown. The formula used to calculate these values is: $1.96\sqrt{\frac{pq}{n}}$

Appendix 2

Original Codes and Recodes of Open-ended Questions

Q. 17 and 45: Why do not ride bus?

Recode Category	Original Code	
1	1	Inadequate routes; no service
2	2	Inadequate schedule
8	3	Inadequate information
4	4	Have car; use other transportation
3	5	Inconvenient
5	6	Carpool; someone else in family drives
6	7	Too old; retired
8	8	Takes too long
8	9	Too expensive
6	10	Physical disability; health
5	11	Others drive; non-driver
5	12	Line close enough to walk; everything is close
7	13	No need
6	14	Work schedule varies
9	15	Do not like to rely on bus
1	16	Live in LaVista
6	17	Never rode bus; 20 years since rode bus
6	18	Commute between two jobs
9	19	Do not feel safe
1	20	Too far to bus stop
6	21	Need car at work
3	22	Inconvenient with children; need car for emergency; have children
8	23	Crowded
8	24	Do not know bus routes
9	25	Weather
1	26	Inaccessible
8	27	Image
6	28	Do not work in Omaha
4	29	Company car
2	30	Do not like to wait
1	31	Too many transfers
4	32	Short drive to work
6	33	Take kids to babysitter
2	34	Poor service
5	35	Close to work
8	36	Do not know how
6	37	Work location varies
6	38	Not able
6	39	Work at home; work from home
8	40	Cannot depend on schedule
2	41	Work nightshift
9	42	Hates bus
1	43	Bad connections

Q. 17 and 45: Why do not ride bus? (continued)

6	44	Make other stops
5	45	Company van
1	46	Route changed
8	47	Not enough buses
6	48	Work will not permit it

Recode Categories

1 Routes
2 Schedule
3 Inconvenient
4 Has car
5 Car pool/other transportation
6 Personal characteristics/situation
7 No need
8 Other bus-related
9 Other

Q. 21 and 46c: Why stopped riding?

Recode Category	Original Code	
2	1	No further need; occasional rider
1	2	Moved
3	3	Bought car; fixed car
1	4	Physical disability; illness; health; age; retired
5	5	Route not available any more
4	6	Others take non-driver
5	7	Inadequate schedule
5	8	Driver discourteous
5	9	Had to pay full fare
2	10	Weather improved
1	11	Changed employment situation
7	12	Crime; not safe
7	13	Walk now
4	14	Carpoool
5	15	Expensive
5	16	Other passengers
6	17	Inconvenient
5	18	Did not like waiting
1	19	Graduated
4	20	Can drive now
6	21	Inconvenient with young children
4	22	Need car at work
4	23	Uses car
1	24	Began school
1	25	Changed school
2	26	Used bus to go downtown only
5	27	Inadequate routes
5	28	Takes too long
1	29	Hours changed
5	30	Task too long
5	31	Hard to board bus
5	32	Had to walk too far
5	33	Inadequate routes
5	34	Service cut
1	35	Work schedule varies
5	36	No air conditioning
4	37	Drove to park-and-ride anyway

Recode Categories

1 Personal situation changed
2 Occasional use (no further need)
3 Bought/fixed car
4 Other car-related reasons
5 Bus company actions
6 Inconvenient
7 Other

Q. 10 and 25: Like about riding bus?

Recode Category	Original Code	
2	1	Not having to drive
1	2	Convenience
7	3	Bus drivers
1	4	Stops right at the door
3	5	Save on gas
1	6	Do not have to walk
2	7	No parking problems
3	8	Economical; inexpensive
4	9	Fun
9	10	Clean
8	11	Fast
5	12	Dependable; make sure of getting there
5	13	Safe
10	14	Do not have to rely on others
4	15	Meet people
8	16	On time
9	17	Cool in summer; warm in winter; temperature-controlled ride
5	18	Takes you where you want to go
9	19	Comfortable seats; comfortable
4	20	Interesting
8	21	Good service
1	22	Close to home
4	23	Relaxing
8	24	Comes frequently
4	25	Can read while riding
1	26	Easy
4	27	See sights; looking outside
5	28	Alternative if needed
1	29	Avoid bad weather

Recode Categories

1 Convenient
2 Avoid driving/parking hassle
3 Economical
4 Fun
5 Safe/dependable alternative
7 Drivers
8 Service
9 Clean and comfortable
10 Other

Q. 9 and 24: Dislike about riding bus?

Recode Category	Original Code	
2	1	No seat; had to stand
2	2	Repairs needed; no air conditioning
6	3	Too many stops
5	4	Doesn't go out far enough
1	5	Waiting
1	6	Schedules not current
6	7	Inconvenient
2	8	Crowded
1	9	Inadequate scheduling
4	10	Transfering
8	11	Children; other passengers
3	12	Driver discourteous/impersonal
2	13	New buses
8	14	Didn't know where bus was going
1	15	No Sunday service
5	16	Does not go where desired; does not stop where desired
2	17	Dirty bus
1	18	Takes too long
1	19	Waiting for late bus
3	20	Poor driver
1	21	Waiting in poor weather
2	22	Diesel fumes
1	23	Slow schedules
1	24	Late; not on time
5	25	Walking
4	26	Waiting when transfering
8	27	Was left once
7	28	Cost
1	29	Have to get up earlier
8	30	Fears crime
2	31	Rough ride
8	32	Service
2	33	Hard to use bus steps
2	34	Leaves too quickly
2	35	Opening windows
6	36	Hard to board with children
5	37	Detours change bus stops
2	38	Bus rattles; noise
7	39	Paying for transfer
6	40	Inflexible
8	41	Hard to get information
8	42	Inadequate information
5	43	Too far to bus stop

Q. 9 and 24: Dislike about riding bus? (continued)

8	44	Do not like to depend on others
2	45	Not enough shelters
6	46	Exact fare policy
2	47	Problem with back doors
5	48	No crosstown buses

Recode Categories

1 Waiting/schedule-related
2 Uncomfortable
3 Drivers
4 Transfering
5 Route-related
6 Inconvenient
7 Cost
8 Other

Q. 14 and 29: Why ridership has decreased?

Recode Category	Original Code	
2a	1	Gas prices; believe energy crisis over
3a	2	Fare hikes; fares; cost
2b	3	Economic conditions declined
1b	4	Carpooling
1c	5	More convenient to take car
2c	6	More people live in suburbs
1a	7	More own a car; more have more cars
3e	8	Takes too long by bus
3b	9	Inadequate schedules
1e	10	Fewer parking problems
2e	11	More people walking
3c	12	Inconvenient routes
3d	13	Poor service
3b	14	Schedules change often
2d	15	People staying home
3f	16	Buses not well maintained
3g	17	Other passengers; ill-mannered passengers
3b	18	Buses not on time
2c	19	People moving out of city
3g	20	Discourteous drivers
3g	21	People treated badly
3d	22	Less service to poor areas
3b	23	Schedule reduction
3f	24	Stand in open
3c	25	Transfers handled badly; too many transfers; transfers
3g	26	No PR
2c	27	Fewer work in CBD; workplace decentralized
2b	28	Economic conditions improved
2d	29	People do not ride at night
3g	30	Exact fare policy
3f	31	Dirty buses
2b	32	Higher incomes
2c	33	More people work in suburbs
2f	34	Unsafe bus stops; crime
1d	35	Cars (unspecified); more people drive
3b	36	Waiting
2d	37	Less need
3a	38	Charge for transfers
1e	39	More efficient (smaller) cars
3f	40	Poor air conditioning
3d	41	Service cutback
2c	42	Increased use of shopping centers
2e	43	Availability of cabs
3g	44	Image (only poor ride bus)
3g	45	Wrong information provided
2c	46	People make multiple-destination trips
3a	47	Discount fares subsidized by other riders

Q. 14 and 29: Why ridership has decreased? (continued)

3c	48	Bus stop too far
3g	49	Lack knowledge about system
2d	50	Lack of incentive
2b	51	Economic reasons
3b	52	Crowded buses
2e	53	Bicycles
2e	54	People too lazy to walk to bus stop
3f	55	Too hard to open back doors
1a	56	Lack of energy concern
2e	57	No patience; spoiled
1e	58	Attitude toward cars
2b	59	Inflation
3c	60	Inadequate north-south routes
3d	61	Service terminated
2d	62	Weather
3c	63	Changed routes
3g	64	Attitudes toward bus
3c	65	No access
2d	66	Less travel
3g	67	Inefficient
1e	68	Cars are affordable
3g	69	Buses are too big
3c	70	Not enough stops
2e	71	Children travel by school bus
2e	72	People are independent
2c	73	People live far from work
2e	74	More kinetic society
3b	75	Crowded at peak hour

Recode Categories

1 Car-related factors
- 1a More cars
- 1b Carpooling
- 1c Car's convenience
- 1d Cars (not specified)
- 1e Other car-related factors

2 Societal factors
- 2a Gas energy crisis
- 2b Economic conditions
- 2c Locational
- 2d Less travel/need
- 2e Other values/behaviors
- 2f Crime/unsafe bus stops

3 Bus-related factors
- 3a Cost
- 3b Schedule
- 3c Route
- 3d Service
- 3e Takes too long
- 3f Maintenance/facilities
- 3g Other bus-related

Appendix 3

Questionnaire

MAT SURVEY

Center for Applied Urban Research
University of Nebraska at Omaha

ID# _____

VERSION # _____

INTRODUCTION: Hello, I'm _____ from the University of Nebraska at Omaha and we're conducting a study on public transit. May I ask you a few questions?

1. First, could you tell me what M.A.T. or MAT is?
   _____ correct answer _____ incorrect answer/don't know

2A. How many persons in your household 18 years or older rode a Metro Area Transit bus in the past month? _____

2B. How many in your household 18 years or older did not ride a MAT bus in the past month? _____

Total 2A and 2B _____

[Add the numbers in 2A and 2B together. If it sums to 1, GO TO QUESTION 3. If 2 or more, consult your CONSECUTIVE VERSION number and chart to determine person to be interviewed.]

May I talk to _____ ?
[If not available: When can I call back to speak to him or her? What is the person's name so I can ask for him or her directly?]

Person's Name	Day/Time to Call	Day/Time Called	No Answer	Refusals Before Q. 2C	Refusals After Q. 2C	Other Incompletion

2G. Could you tell me what M.A.T. or MAT is? ____ correct answer ____ incorrect answer/don't know

3. In the past month, have you used the local bus system (MAT)?
_____Yes (1) _____ No (GO TO QUESTION 17) (2)

4. On how many days in the past month did you use the bus to go to or from work? _____ days

5. Is _____ days a month (more), or less or the same as you usually rode the bus in the past 2 years to get to work?

_____ More (1) _____ Same (2) _____ Less (3)

a) How many days a month did you usually ride the bus to go to work? _____ days

b) Is there any particular reason you are riding the bus more to go to work?

_____

_____

c) How many days a month did you usually ride the bus to go to work? _____ days

d) Is there any date you can say you began to use the bus less to get to work?
_____Yes (1) _____ No (2)

e) When was that?

_____
(month) (year)

f) Is there any reason you are riding the bus less to go to work?

_____

6. In the past month, on how many days did you use the bus for non-work trips? _____days

7. Is _____days a month (more), the same, or less than you usually rode the bus in the past 2 years for non-work trips?

_____ More (1) _____ Same (2) _____ Less (3)

a) How many days a month did you usually use the bus for non-work trips? _____ days

b) Is there any particular reason you are riding the bus more for this type of trip?

_____

_____

c) How many days a month did you usually use the bus for non-work trips? _____days

d) Is there any date you can say you began to use the bus less for non-work trips?
_____Yes (1) _____ No (2)

e) When was that?

_____
(month) (year)

f) Is there any reason you are using the bus less for non-work trips?

_____

8. Why do you ride the bus?

DO NOT READ:

a) No other transportation _____ 1
b) It's economical _____ 2
c) It's convenient _____ 3
d) Avoid driving hassle _____ 4
e) Avoid bad weather _____ 5

9. What do you dislike most about riding the bus?

10. What do you like the most about riding the bus?

11. I am going to read some statements about public transit. Please tell me whether you strongly agree, agree, disagree, or strongly disagree with the statement.

	SA 1	A 2	? 3	D 4	SD 5
a) Taking the bus costs more than making the same trip by car.					
b) Existing routes and schedules are generally convenient for me.					
c) Buses are usually clean.					
d) It generally takes too long by bus to get where I want to go.					
e) Getting bus information is fairly easy.					
f) Buses are generally on time.					
g) MAT maps and schedules are hard to understand.					
h) Transferring is fairly easy.					
i) Bus schedules change too often.					
j) It would create a hardship for me if I could not ride the bus.					

12. Overall, what do you think of the bus system in the metropolitan area—is it very good, good, fair, poor, or very poor?

1 _____ Very good
2 _____ Good
3 _____ Fair
4 _____ Poor
5 _____ Very poor
9 _____ Don't know/no opinion

13. Do you think it has gotten better, stayed the same, or gotten worse in the past year?

_____ Better (1) _____ Same (2) _____ Worse (3) _____ Don't know (9)

a) In what way has it improved? _____

b) In what way has it gotten worse? _____

14. As you may know, bus ridership has decreased. What do you think are the reasons for this?

15. Did the price of gas affect how often you rode the bus?

_____ Yes (1) ↓ _____ No (2)

15a. How? _____ rising price increased use _____ stable/decreasing price decreased use

16. What is the best thing MAT could do to increase ridership?

_____

_____

GO TO QUESTION 32

*** 17. What are the reasons you haven't used the bus? _____

_____

_____

18. What about in the last 2 years—did you ride the bus at all?

_____ Yes (1) ↓ _____ No (GO TO QUESTION 26) (2)

19. About how many days each month did you use the bus to get to or from work? _____ days

20. About how many days each month did you use the bus for non-work related trips? _____ days

21. Why did you stop using the bus? _____

_____

_____

22. When was the last time you rode the bus? _____
(month) (year)

23. Do you think you will ride the bus again?

_____ Yes (1) ↓ _____ No (2) ↓ _____ Don't know (9)

a) When might that be? b) Why not?

_____ _____

24. What did you dislike most about riding the bus? _____

_____

25. What did you like most about riding the bus? _____

_____

*** 26. I am going to read some statements about public transit. Please tell me whether you strongly agree, agree, disagree, or strongly disagree with the statement.

		SA (1)	A (2)	? (3)	D (4)	SD (5)
a)	Taking the bus costs more than making the same trip by car.	____	____	____	____	____
b)	Existing routes and schedules are generally convenient for me.	____	____	____	____	____
c)	Buses are usually clean.	____	____	____	____	____
d)	It generally takes too long by bus to get where I want to go.	____	____	____	____	____
e)	Getting bus information is fairly easy.	____	____	____	____	____
f)	Most bus riders have to use the bus because they don't have cars.	____	____	____	____	____
g)	Not riding the bus creates some hardship for me.	____	____	____	____	____

27. Overall, what do you think of the bus system in the metropolitan area—is it very good, good, fair, poor, or very poor?

1 ____ Very good
2 ____ Good
3 ____ Fair
4 ____ Poor
5 ____ Very poor
9 ____ Don't know/no opinion

28. Do you think it has gotten better, stayed the same, or gotten worse in the past 2 years?

____ Better (1) ____ Same (2) ____ Worse (3) ____ Don't know (9)

a) In what way has it improved? ____

b) In what way has it gotten worse? ____

29. As you may know, bus ridership has decreased. What do you think are the reasons for this? ____

30. Did the price of gas affect how often you rode the bus?

____ Yes (1) ____ No (2)

a) How? ____ rising price increased use ____ stable/decreasing price decreased use

31. What do you think is the best thing MAT could do to increase ridership? ____

*** 32. Just a few more questions we can use to compare your answers to other persons. How many cars does your household have? ____ 0 ____ 1 ____ 2 ____ 3 ____ Other (specify) ____

GO TO QUESTION 34

32a. How many licensed drivers are there in your household? ____

32b. Are you a licensed driver? ____ Yes ____ No

33. In the past 2 years did your household get a new or different car?

1 ____ Added a car (new or used)
2 ____ Changed model
3 ____ Both
4 ____ No change in car status

33a. About when was that? ____ (month) (year) ____ (month) (year)

34. In the past 2 years did you change where you lived or worked?
    1 ___ Yes where I worked (include become employed or unemployed)
    2 ___ Yes where I lived
    3 ___ Yes where I worked and lived
    4 ___ No

    34a. About when was that?
    _____ _____ _____ _____
    (month) (year) (month) (year)

35. What city do you live in?
    01 ___ Omaha
    02 ___ Bellevue
    03 ___ Council Bluffs
    04 ___ LaVista
    05 ___ Papillion
    06 ___ Ralston
    _____ Other (specify _____)
    _____ Not in city limits
    07 _____ Douglas County
    08 _____ Sarpy County
    09 _____ Pottawattamie County

36. What is the nearest intersection to where you live? _____ and _____

    a) How far is that to the nearest bus stop? _____ blocks _____ Don't know

37. Are you employed? ___ Yes (1) ___ No (2) ↓ GO TO QUESTION 38

    a) What city is that? _____

    b) What is the nearest intersection to where you work? _____ and _____

    c) How far is that to the nearest bus stop? _____ blocks _____ Don't know

    d) Is there some flexibility in your hours or is the time you start or leave fairly rigid?

    _____ Flexible (1) _____ Rigid (2)

    e) Do you start work between 7-9 a.m.? ___ Yes (1) ___ No (2)

    f) Do you leave work between 4-6 p.m.? ___ Yes (1) ___ No (2)

    g) Do you ever use your own vehicle at work? ___ Yes (1) ___ No (2)

    h) Do you ever carpool to get to work? ___ Yes (1) ___ No (2)

    ↓

    i) Regularly or only occasionally?
    ___ regularly (1) ___ occasionally (2)

38. Is your race or ethnic group white, black, Hispanic, or other minority?
    1 ___ White
    2 ___ Black
    3 ___ Hispanic
    4 ___ Other minority

39. How old are you?
    2 ___ 18-29
    3 ___ 30-39
    4 ___ 40-49
    5 ___ 50-59
    6 ___ 60-64
    7 ___ 65+

40. I'd like to ask a few questions about the others in your household. First how many persons (including yourself) are in your household? _____ [IF 1, GO TO QUESTION 47]

41. a. How many of these are under 8? _____

b. How many of these are 8-13? _____

c. How many of these are 14 and over? _____ [IF 1, GO TO QUESTION 47]

42. Now except for yourself—of those 14 and over, how old is the oldest person. . ., next oldest. . .?

43. Is the oldest person a male or female. . . next oldest. . .?

*** 44. Did the oldest person ride the bus at all in the past 2 years?

[If No IF YES, GO TO QUESTION 46]

Put Answers in Chart Below

45. What do you think is the most important reason (he/she) did not ride the bus?
[GO TO QUESTION 44 FOR NEXT PERSON 14+ OR GO TO QUESTION 47]

46. What about in the past month, did (he/she) ride the bus?

1 Yes

a) How many days in the past month did (he/she) use the bus? [Put answer in chart]

b) Was the major purpose 1) to go to work, 2) school, 3) shopping, 4) some other reason?

[GO TO QUESTION 44 FOR NEXT PERSON 14+]

2 No

a) When (he/she) used the bus, how many days each month did (he/she) ride it? [Put answer in chart]

b) Was the major purpose 1) to go to work, 2) school, 3) shopping, 4) some other reason?

c) Why do you think (he/she) stopped using the bus?

[GO TO QUESTION 44 FOR NEXT PERSON 14+]

Person	42 Age	43 Sex	44 Ride in Past 2 Years (Y/N)	46 Ride in Past Month (Y/N)	46a Freq. (Days Per Month)	46b Trip Purpose (1)(2)(3)(4)	45 or 46c Reason
1							
2							
3							
4							
5							

*** 47. Is your household income over or under $20,000?

_____ Under
5
↓
Is it over or under $10,000?
1 _____ < $10,000
2 _____ $10,000-$20,000

_____ Over
6
↓
Is it over or under $30,000
3 _____ $20,000-$30,000
4 _____ $30,000+

THANK YOU FOR YOUR COOPERATION!

48. DO NOT ASK:
_____ male
1
_____ female
2

49. Date interview completed. _____
(month) (day) (year)

50. Telephone # _____

51. Interviewer _____