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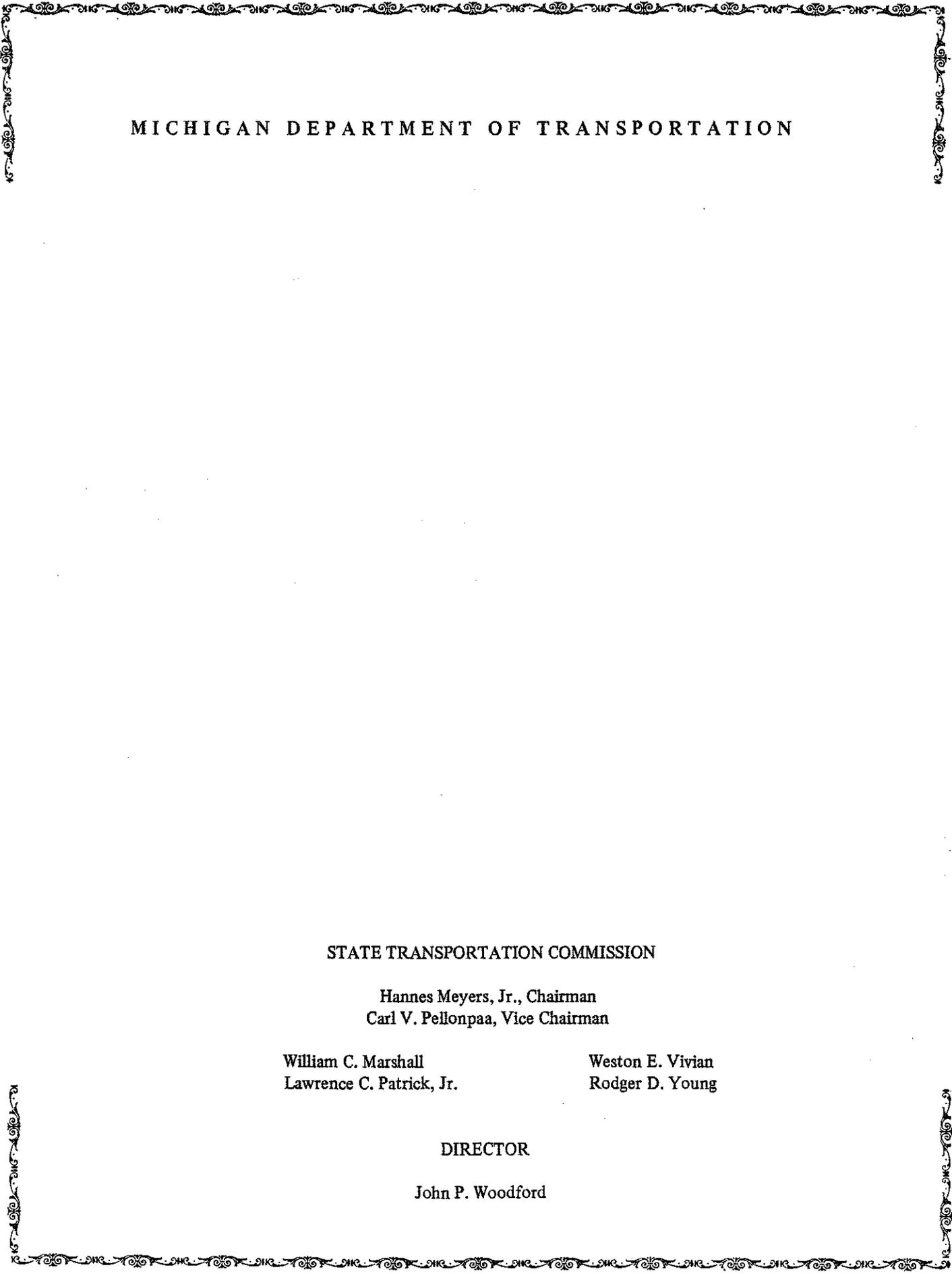
# MICHIGAN PUBLIC TRANSIT ATTITUDE AND AWARENESS SURVEY

Initial and Follow-up Report for the:



By  
Marketing and Consumer Services Section  
Governmental Relations and Consumer Affairs Division  
Bureau of Urban and Public Transportation  
Michigan Department of Transportation

September, 1982



MICHIGAN DEPARTMENT OF TRANSPORTATION

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16. Abstract  This report summarizes the results of an initial and follow-up telephone survey of the general public in ANN ARBOR, Michigan. The purpose of the initial survey was to determine public attitudes toward, and awareness of, the Ann Arbor Transportation Authority (AATA). The purpose of the follow-up survey was to evaluate the effectiveness of AATA marketing efforts during the time from the initial survey to the follow-up survey. This report compares the results from the follow-up survey conducted in 1981 with those of the initial survey conducted in 1980. The comparison indicates which marketing efforts have been most successful and highlights significant changes in attitude and awareness levels.  The major objectives of this research were threefold:  1. To develop and implement a methodology that could be used by other state transportation departments to survey public attitude and awareness levels regarding transit systems in their states.  2. To provide relevant market data to AATA for use in developing effective marketing efforts for public transportation services.  3. To assist the Michigan Department of Transportation in determining the type of marketing efforts which might be appropriate at the state level.					
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## INTRODUCTION

The major objective of this research was to develop and implement a methodology that could be used by other state transportation departments to measure public attitudes toward, and awareness of, fixed-route public transit systems. The information gathered would be used to assist these systems in developing effective marketing efforts for public transportation services, as well as determine the type of marketing efforts which might be appropriate at the state level. This project involved five selected Michigan communities with transit systems receiving assistance under terms of Section 5 of the Urban Mass Transportation Act.

In order to design public transportation services to better meet the public's needs, it was necessary first to collect market data which identified these needs. With this information it would then be possible to design service to meet these needs and to prepare promotional material to inform and persuade the public about existing service. A methodology was necessary to collect this information.

The initial survey results on a particular community were provided to the transit system in that community. The transit system was encouraged to use these results in planning and developing its marketing efforts, e.g., the definition of target markets and formulation of goals and strategies for each target segment. Each system was encouraged to develop marketing projects based on this information. The effectiveness of these projects was evaluated by a follow-up survey conducted approximately 21 months after the initial survey to determine the extent to which attitudes and awareness had changed.

The intent of the methodology developed and employed in this project is that it will be adaptable to other state transportation departments' marketing efforts throughout the country. Special Report 181 of the Transportation Research Board suggests that "some agency with an overview capability" develop "a common set of survey questions." It states that "some uniformity along these lines would help develop a common data base that could be used by all

systems in further research." It suggests that a state department of transportation is one of the "most likely collection centers."

While some Michigan transit systems already are doing some type of telephone marketing research, the value of this type of research conducted at the state level is primarily that of standardization, similar to that developed for what is now the Federal Highway Administration in highway travel surveys during the 1940s. Current efforts to compare marketing research conducted in different communities throughout the country have been severely hampered by the fact that each urbanized area used different questionnaires and techniques. This approach ensures that questions are uniform, that the administration of the survey is consistent in its quality, and that other factors remain stable from community to community.

The approach taken in this research project, to the best of our knowledge, has not been undertaken to date. It is, thus, intended to contribute to the development of a research methodology which is applicable to other state transportation departments throughout the country, as well as provide information which will benefit the State of Michigan and the marketing efforts of Michigan transit systems. Further, this procedure should be relatively easy to implement, given the existence of similar transportation departments throughout the United States.

## SURVEY METHODOLOGY

In preparing for this project, several alternative survey methods were considered. One of the most direct surveys would have been to conduct a home interview of residents in the study areas. However, setting up offices in five different cities, training personnel, and incurring travel-related expenses made this option impractical for the time allotted. Instead, it was decided that a telephone interview survey would be best.

The goal for each community was to collect 1,000 interviews. It was estimated that meeting this goal would require about twice as many telephone calls to account for number changes, no answers, interview refusals, etc. Each interview solicited responses to a 38-item questionnaire (Appendix A) regarding attitudes and awareness of local public transportation services. In order to ensure that the interviews were adequately distributed throughout the transit service area, a systematic sample selection process was used. This process established a sample universe made up of those telephone exchanges that correspond geographically with the existing transit service area. A copy of the telephone exchanges used for drawing the sample for Ann Arbor is provided in Appendix B of this report.

The actual telephone numbers were selected by using a separate ratio developed for each city. This ratio was determined by counting the total number of directory pages containing the universe exchanges and then multiplying this amount by the average number of residential telephone numbers per page (businesses, governmental agencies and other nonresidential services were excluded). This latter figure was then divided by 2,000 and produced the ratio of 1:20 for Ann Arbor.

This ratio meant that one telephone number was selected for each of 20 numbers on the telephone directory page. The results of this selection process produced both an alphabetical and geographical distribution of samples. Results of this selection process, indicating how many telephone numbers were called for each exchange prefix, are shown for Ann Arbor in Appendix B.

Appendix C provides a breakdown of the actual number of interviews completed versus the number attempted.

All interviews were conducted from the Lansing office over state leased lines. Additional telephone lines were installed with special headset attachments to aid the interviewer in recording citizen responses. Because the questionnaire was quite extensive, experimental interviews were conducted prior to starting the initial survey. Modifications were made and interviewing commenced January 23, 1980, and ended June 6, 1980. The interviews were conducted during the hours of 12 noon - 8 p.m., Monday through Thursday. Post-survey interviewing started October 12, 1981, and ended December 8, 1981, during the hours of 9 a.m. to 6 p.m., Monday through Thursday and 9 a.m. to 4:30 p.m. on Friday. Each interview took about five minutes to complete and, in general, the public was very cooperative with this effort.

Data from completed questionnaires were edited and coded on to special coding forms designed especially for this survey. Data from the coding forms were keydisked onto a magnetic tape. Quantitative data, read from the magnetic tape, were entered onto a disk file. The editing program was run and data were read to determine if any data were invalid. Corrections were made to invalid data in an effort to obtain as many valid interviews as possible. The report program was run on validated data, and frequency distributions were established for the total sample. The frequency distributions indicate the number and percentage of respondents answering in each specific way to a specific question. (Computer printouts of data are available for inspection at the Bureau of Urban and Public Transportation, Michigan Department of Transportation, Transportation Building, Lansing, Michigan.)

The data in this report are analyzed by demographic factors and frequency of bus usage. As used in this report, the terms heavy user, moderate user, light user, other user, and nonriders are defined as follows:

- Heavy user - Daily or almost every day
- Moderate user - Once a week
- Light user - Once a month or once a year
- Other user - A frequency mentioned other than the above frequencies
- Nonriders - Respondents who have not used the bus service during the past year

The Statistical Package for the Social Sciences (SPSS) was used for the analysis of the quantitative data. This statistical computer package was used in conjunction with the Burroughs 7700 computer. The data were crosstabulated into contingency tables and subsequently statistically analyzed by means of the chi-square test. Crosstabulation provides a joint frequency distribution of cases according to two or more classificatory variables. The chi-square test determines the significance of deviations from the expected frequencies. Given the nature of a pre- and post-survey, and because the number of interviews taken differed, pre to post, this type of statistical analysis was deemed appropriate to test the data.

Throughout this report many tables summarize the crosstabulations, basically by ridership groups. Only in areas of significant crosstabulations are the findings discussed in detail.

## SUMMARY OF MAJOR FINDINGS

The major findings of the study are summarized below. Each is discussed more fully in the body of the report and is accompanied by tables displaying the relevant data.

### Transit Awareness

Awareness of a bus system in the Ann Arbor area among respondents was at 87 percent in the pre-survey and 93 percent in the post-survey.

Sixty percent (60%) of the pre-survey respondents and 81 percent of the post-survey respondents correctly identified the Ann Arbor Transportation Authority name.

The majority of bus riders were aware of the cost to ride the bus. Most nonriders, however, did not know the cost for a ride on the bus.

The majority of bus riders knew how often the bus came by. Most nonriders, though, indicated "no" or "don't know" to this question.

Both bus riders and nonriders reported they knew how to obtain bus information.

The majority of bus riders and nonriders were aware of special bus services for elderly people and handicapped people.

### Transportation Patterns

Most respondents, pre and post (62 percent each), had not used the bus service during the preceding year.

Of those who had used the bus service, light users comprised 52 percent of pre-survey riders and 43 percent in the post-survey.

Heavy users rode the bus mainly for work purposes, whereas moderate and light users rode basically to go shopping.

Other household members of bus riders and nonriders rode basically for work, shopping, and school purposes in both pre- and post-surveys.

Most bus riders and nonriders live within one or two blocks of the nearest bus route.

"Car" was cited as the usual means of transportation. The highest percentage occurred for nonriders, followed by other, light, moderate, and heavy users.

The number of automobiles in a household varied by bus rider groups:

1 car -	43%, pre-survey heavy users
	44%, post-survey heavy users
	55%, pre-survey moderate users
	46%, post-survey light users
2 or more cars -	39%, post-survey moderate users
	45%, pre-survey light users
	60%, pre-survey nonriders
	61%, post-survey nonriders

The majority of bus riders and nonriders normally have a vehicle available to them.

#### Transportation Attitudes

The most frequently mentioned reason nonriders cited for not riding the bus was "don't need to, I have a car."

Overall, most bus riders and nonriders believed the bus fare was "just right."

The majority of bus riders and nonriders indicated they would not use the bus more if the bus routes were closer or if the bus came by more frequently.

Bus riders, and to a lesser extent, nonriders, believed the bus system serves the areas to which they most frequently travel.

Most pre- and post-survey bus riders had considered riding the bus more because of rising gasoline prices. The reverse was true for nonriders.

Most bus riders and nonriders indicated they had not considered getting in a carpool because of rising gasoline prices.

Most bus riders and nonriders had considered driving less with the rising gasoline prices.

Gasoline prices apparently affected both bus riders and nonriders.

An overwhelming majority of pre- and post-survey bus riders and nonriders view the bus service as a viable, valuable energy conservation measure.

The opinion of most bus riders and nonriders toward improvements in AATA's bus service is that no changes were needed. Opinions regarding two improvements showed an overall decline in the follow-up survey. Only three improvements showed an increased need.

### Demographics

#### Sex:

In general, female bus riders and nonriders outnumbered male bus riders and nonriders in both surveys.

Pre-survey males traveled by bus, primarily for shopping, work, and school, purposes. Post-survey males and females in both surveys traveled by bus for shopping, work, and when I don't have a car/when car is in garage purposes.

#### Age:

-16-20 year-old riders used the bus primarily for shopping purposes

-21-39 year-old riders rode for shopping and work needs.

-40-60 year-old riders also rode for shopping and work needs.

-Older than 60 years riders used the bus primarily for shopping purposes.

As the age groups increased in years, the percentage of males comprising each age group tended to decrease. The reverse was true for females; as the age groups increased in years, so did the percentage of females comprising each age group.

The 21-39 year-old age group contained the highest percentage of bus riders and nonriders.

Occupation:

Thirty-six percent (36%) of the pre-survey males were students, followed by the professional, and retired categories. Thirty-nine percent (39%) of the post-survey males indicated they were students, followed by the retired, and professional occupations.

Twenty-three percent (23%) of the pre-survey females were homemakers, followed by the student and professional categories. Twenty-seven percent (27%) of the post-survey females were homemakers, followed by the retired, and student categories.

-Students comprised the following age groups:

83 %, pre-survey 16-20 years old

82 %, post-survey 16-20 years old

32 %, pre-survey 21-39 years old

35 %, post-survey 21-39 years old

-Homemakers, comprised the following:

30 %, pre-survey 40-60 years old

41 %, post-survey 40-60 years old

-Retirees were reflected more in the older than 60 age group.

Student, professional, retired, and homemaker were the four most frequently mentioned occupations by bus riders and nonriders.

## Advertising Awareness

Note: Please see specific sections on "Advertising Awareness" (pg. 41) and "Conclusions" (pg. 52) for more detailed findings.

Radio - Even though the majority of bus riders and nonriders indicated they regularly listen to the radio, most reported that they had not heard any AATA radio announcements.

Those bus riders and nonriders who did hear AATA radio announcements heard them more frequently on WAAM, WPAG, and WIQB.

Television - Even though the majority of bus riders and nonriders indicated they regularly watch TV, most reported that they had not seen any AATA television announcements.

Those bus riders and nonriders who did see AATA TV announcements reported each of the following TV stations at least once: WJIN-TV, WJBK-TV, WDIV-TV, and WXYZ-TV.

Newspapers - The majority of bus riders and nonriders indicated they regularly read a local newspaper. When asked if they had seen any AATA newspaper ads, most of the bus riders and nonriders replied "yes or think so." The only exceptions were for pre-survey light users and nonriders.

Those bus riders and nonriders who did see AATA newspaper ads reported the Ann Arbor News more than any other newspaper.

### Other Media

Exposure - When respondents were asked if there were any other places they had seen, heard or read advertisements or otherwise obtained information about AATA, "billboards", "other" media, "displays," and "ads for stores/institutions which mention that

they can be reached by bus," were the most common sources given.

Pre to post increases in overall recognition were noted for "displays," "news articles," and "ads for stores/institutions which mention that they can be reached by bus."

## TRANSIT AWARENESS

### Bus System Awareness

The first question in the survey asked respondents, "Is there a city bus system in the Ann Arbor area?" An overwhelming majority of respondents in both the initial and follow-up survey were aware of the existence of a bus system in the Ann Arbor area. Responses are summarized below:

<u>City Bus System?</u>	<u>Total Respondents</u>	
		<u>%</u>
Yes or think so	Pre	87
	Post	93
No	Pre	12
	Post	3*
Don't know	Pre	1
	Post	<u>4*</u>
Totals	Pre	100% (N = 1,141)
	Post	100% (N = 1,000)

\*There is a significant difference at the .001 level between the two surveys regarding the "no" response, and at the .005 level for the "don't know" response. Post-survey results show an increased awareness of AATA over pre-survey results.

Bus System Name

The second question asked respondents to name the bus system in the Ann Arbor area. Summarized below are the responses to this question.

<u>Response</u>		<u>Total Respondents</u> <u>%</u>
Ann Arbor Transportation Authority	Pre	60
	Post	81*
Other responses (included names which sound similar to the Ann Arbor Transportation Authority, route destination names, and incorrect responses)	Pre	11
	Post	8
Don't know	Pre	29
	Post	<u>11*</u>
Totals	Pre	100% (N = 990)
	Post	100% (N = 933)

\*There is a significant difference at the .001 level between the two surveys regarding the "Ann Arbor Transportation Authority" and the "don't know" responses. Post-survey recognition of AATA was 21 percent higher than that of pre-survey recall.

## Cost for Bus Ride

The following table summarizes responses to the question, "How much does it cost for a ride on the bus?" The results indicate the majority of bus riders were aware of the cost to ride the bus, with awareness highest for heavy and moderate users. At the time of the initial survey, March 1980, the cash fare was 50 cents. In October 1981 the fare was raised to 60 cents. The 10-cent fare increase went into effect just prior to the follow-up survey, which was conducted in November, 1981. The post-survey results show a larger percentage of moderate and other bus riders who knew the current cash fare compared to pre-survey results.

Among the nonriders, 60 percent in the initial survey and 66 percent in the follow-up survey did not know the cost for a ride on the bus.

Cost		Bus Rider Usage				Non-riders	Total Respondents
		Heavy	Moderate	Light	Other		
		%	%	%	%	%	%
More than 50¢	Pre	11	16	19	0	6	9
More than 60¢	Post	0	0	3*	2	2*	2
50¢	Pre	55	43	43	35	22	31
60¢	Post	47	50	27	39	13*	22
Less than 50¢	Pre	4	12	16	30	8	10
Less than 60¢	Post	11	16	40*	35	16*	21
Senior Citizen Rate	Pre	8	17	5	3	2	4
	Post	24	18	8	9	2	6
Pass/Punch Card	Pre	16	5	2	11	2	3
	Post	12	7	2	4	0	2
Don't know	Pre	1	5	13	21	60	42
	Post	3	5	19	11	66	46
Other	Pre	5	2	2	0	0	1
	Post	3	4	1	0	1	1
Totals	Pre	100% (N = 97)	100% (N = 42)	100% (N = 193)	100% (N = 37)	100% (N = 614)	100% (N = 983)
	Post	100% (N = 62)	100% (N = 56)	100% (N = 151)	100% (N = 80)	100% (N = 579)	100% (N = 928)

\*Among the light users there is a significant difference at the .005 level between the pre and post "more than current cash fare" and "less than current cash fare" responses. Nonriders recorded a significant difference between the pre and post "more than current cash fare" (.05 level), "cash fare" (.05 level), and "less than current cash fare" (.01 level) responses.

The results suggest that fewer post-survey light users and nonriders were aware of the 60¢ cash fare, since the fare increase occurred just one month prior to post-survey interviewing.

Bus Frequency

Respondents were asked if they knew how often the bus came by. The majority of bus riders indicated "yes" to this question. Most nonriders, though, indicated "no" or "don't know," as the following table shows:

<u>Bus Frequency</u>		<u>Bus Rider Usage</u>					<u>Non-riders</u>	<u>Total Respondents</u>
		<u>Heavy</u>	<u>Moderate</u>	<u>Light*</u>	<u>Other</u>	<u>%</u>		
		<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	
Yes	Pre	85	69	55	70	20	37	
	Post	94	80	60	68	25	42	
No	Pre	4	14	24	19	44	34	
	Post	0	2	4	0	16*	11	
Don't know	Pre	9	12	20	8	35	28	
	Post	5	16	36	31	58*	46	
Doesn't seem to follow schedule/it varies	Pre	1	0	0	3	1	0	
	Post	0	2	0	0	1	1	
Others	Pre	1	5	1	0	0	1	
	Post	<u>1</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	
Totals	Pre	100% (N = 97)	100% (N = 42)	100% (N = 193)	100% (N = 37)	100% (N = 614)	100% (N = 983)	
	Post	100% (N = 62)	100% (N = 56)	100% (N = 151)	100% (N = 80)	100% (N = 579)	100% (N = 928)	

\*There is a significant difference at the .001 level between the two surveys due to a change in the distribution of light user responses. Nonriders, pre to post, reported a decrease in the percentage of "no" responses, and an increase in "don't know" responses. Both response categories are significant at the .001 level.

Post-survey results show a slight increase in bus frequency awareness.

## Bus Information

The item "Do you know how to obtain bus information?" produced the following results. The majority of bus riders indicated they knew how to obtain bus information, with the amount of usage not an issue.

<u>Bus Information</u>		<u>Bus Rider Usage</u>					<u>Non-riders</u>	<u>Total Respondents</u>
		<u>Heavy</u>	<u>Moderate</u>	<u>Light</u>	<u>Other</u>			
		<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	
Yes	Pre	100	98	93	92	74	82	
	Post	97	100	93	90	80	85	
No	Pre	0	2	6	5	23	16	
	Post	2	0	6	9	16*	12	
Don't know	Pre	0	0	1	3	3	2	
	Post	<u>1</u>	<u>0</u>	<u>1</u>	<u>1</u>	<u>4</u>	<u>3</u>	
Totals	Pre	100% (N = 97)	100% (N = 42)	100% (N = 193)	100% (N = 37)	100% (N = 614)	100% (N = 983)	
	Post	100% (N = 62)	100% (N = 56)	100% (N = 150)	100% (N = 79)	100% (N = 576)	100% (N = 923)	

\*There is a significant difference between the pre and post "no" response for nonriders (.05 level). Most pre-survey nonriders (74 percent) and significantly more post-survey nonriders (80 percent) replied they knew how to obtain bus information, yet chose not to use their local bus service.

Special Services for the Elderly

Respondents were asked if AATA had special bus services for elderly people. The majority of bus riders and nonriders were aware of these services as the following table indicates:

<u>Elderly Services</u>		<u>Bus Rider Usage</u>					<u>Non-riders</u>	<u>Total Respondents</u>
		<u>Heavy</u>	<u>Moderate</u>	<u>Light</u>	<u>Other</u>			
		<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	
Yes or think so	Pre	97	100	91	89	79	80	
	Post	88	93	87	83	81	80	
No	Pre	0	0	5	0	11	10	
	Post	0	2	4	1	3*	4	
Don't know	Pre	3	0	4	11	10	10	
	Post	<u>12</u>	<u>5</u>	<u>9</u>	<u>16</u>	<u>16*</u>	<u>16</u>	
Totals	Pre	100% (N = 97)	100% (N = 42)	100% (N = 193)	100% (N = 37)	100% (N = 614)	100% (N = 983)	
	Post	100% (N = 62)	100% (N = 56)	100% (N = 151)	100% (N = 80)	100% (N = 580)	100% (N = 929)	

\*Nonriders recorded a percentage decrease, pre to post, in the "no" response (.001 level), and an increase in the "don't know" response. (.05 level). Pre to post results show a significant shift between these two response categories.

Special Services for Handicappers

As with elderly services, respondents were asked if AATA had special bus services for handicapped people. The pattern of responses is about the same as the previous question. The majority of bus riders and nonriders were aware of these services as the following table indicates:

<u>Handicapper Services</u>		<u>Bus Rider Usage</u>				<u>Non-riders</u>	<u>Total Respondents</u>
		<u>Heavy</u>	<u>Moderate</u>	<u>Light</u>	<u>Other</u>		
		<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
Yes or think so	Pre	97	98	91	86	81	80
	Post	93	95	92	91	86	84
No	Pre	0	0	5	0	10	10
	Post	0	0	3	3	2*	4
Don't know	Pre	3	2	4	14	9	10
	Post	7	5	5	6	12	12
Totals	Pre	100% (N = 97)	100% (N = 42)	100% (N = 193)	100% (N = 37)	100% (N = 614)	100% (N = 983)
	Post	100% (N = 62)	100% (N = 56)	100% (N = 151)	100% (N = 80)	100% (N = 580)	100% (N = 929)

\*Among nonriders, there is a significant difference at the .001 level between the pre and post "no" response. More post-survey nonriders were aware of special bus services for handicapped people, compared to pre-survey results.

TRANSPORTATION PATTERNS

Transit Usage

In response to the statement, "Have you personally used the bus service during the past year?" the majority of respondents said "no" in both the pre- and post-surveys.

<u>Used Bus Service?</u>	<u>Total Respondents</u>	
		<u>%</u>
Yes	Pre	37
	Post	38
No	Pre	62
	Post	62
Don't know	Pre	1
	Post	<u>0</u>
Totals	Pre	100% (N = 990)
	Post	100% (N = 934)

Those respondents who indicated they had used the bus service during the past year were characterized as heavy, moderate, light or other users based upon their frequency of using bus services. Following is a breakdown of bus usage patterns:

<u>Usage</u>		<u>%</u>
Heavy - Daily or almost every day	Pre	26
	Post	18
Moderate - Once a week	Pre	12
	Post	16
Light - Once a month or once a year	Pre	52
	Post	43
Other - A frequency mentioned other than the above frequencies	Pre	10
	Post	<u>23*</u>
Totals	Pre	100% (N = 369)
	Post	100% (N = 349)

\*Differences between the pre- and post-survey results for other users is significant at the .001 level.

Trip Purpose

Question No. 6, "For what purpose(s) do you use the bus service?" provided for four choices. The major (first choice) trip categories for travel by public transit bus are shown in the following table:

(First Choice) Purpose		Bus Rider Usage				Total Respondents %
		Heavy %	Moderate %	Light %	Other %	
Work	Pre	54	10	10	14	22
	Post	42	20	14	14	20
Personal Business	Pre	7	10	6	0	6
	Post	10	11	10	4	9
Shopping	Pre	13	48	52	40	40
	Post	21	52	39	46	39
School	Pre	20	14	3	16	10
	Post	18	12	4	4	8
Visits or Recreation	Pre	5	9	3	3	4
	Post	5	3	9	6	7
Dining	Pre	0	0	0	0	0
	Post	0	0	0	1	0
Medical	Pre	0	2	4	8	3
	Post	1	2	4	2	3
When I don't have a car/ when car is in garage	Pre	0	2	17	16	11
	Post	3	0	17	19	12
Other	Pre	1	5	5	3	4
	Post	0	0	3	4	2
Totals	Pre	100% (N = 97)	100% (N = 42)	100% (N = 193)	100% (N = 37)	100% (N = 369)
	Post	100% (N = 62)	100% (N = 56)	100% (N = 151)	100% (N = 80)	100% (N = 349)

Fifty-four percent (54%) of the pre-survey heavy users rode the bus for work purposes, although less so during the post-survey (42 percent). Most moderate and light users rode the bus mainly for shopping uses.

### Other Household Members Transit Usage

Given that a respondent rides the bus, is it likely that other household members also ride? Most bus riders and nonriders reported a higher percentage of "no" responses in both the pre- and post-surveys. Pre-survey moderate users and post-survey other users were the only exceptions (see Appendix D).

Those respondents who indicated that other members of their household had used the bus service during the past year were asked "who" this member was. Slightly more than a third of pre- and post-survey heavy and light users reported "children." A third of the moderate users indicated "roommate." Nonriders primarily reported "children" (see Appendix E).

Respondents were then asked: "How often do other members use the bus service?" Heavy users indicated in both pre- and post-surveys a higher percentage of heavy usage by other household members. Pre-survey moderate users indicated primarily light usage by other household members; post survey results showed moderate usage. And light users reported light usage by other members of the household (see Appendix F).

Question No. 9, "For what purpose(s) do the other members use the bus service?" provided for four choices. Appendix G shows the major (first choice) trip categories for travel by public transit bus. Other household members of bus riders and nonriders rode basically for work, shopping, and school purposes in both pre- and post-surveys.

Nearness of Bus Route

The item, "How far do you live from the nearest bus route?" revealed that overall, the majority of bus riders live within one or two blocks of the nearest bus route (see table below):

		Bus Rider Usage					Non-riders*	Total Respondents
<u>Distance</u>		<u>Heavy</u>	<u>Moderate</u>	<u>Light</u>	<u>Other</u>			
		<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	
1 or 2 blocks	Pre	72	74	59	81	43	52	
	Post	71	70	65	79	53	60	
3 or 4 blocks	Pre	17	12	20	11	11	13	
	Post	13	18	17	5	12	12	
1/4 to 1/2 mile	Pre	6	9	9	3	6	7	
	Post	11	5	6	8	8	7	
1/2 - 1 mile	Pre	1	0	5	0	3	3	
	Post	5	3	6	6	2	4	
1 mile or more	Pre	2	0	4	0	18	12	
	Post	0	0	5	1	13	9	
Don't know	Pre	2	5	3	0	19	13	
	Post	0	4	1	1	12	8	
Totals	Pre	100% (N = 97)	100% (N = 42)	100% (N = 193)	100% (N = 37)	100% (N = 614)	100% (N = 983)	
	Post	100% (N = 62)	100% (N = 56)	100% (N = 151)	100% (N = 80)	100% (N = 580)	100% (N = 929)	

\*Among nonriders there is a significant difference at the .05 level between the two surveys due to a change in the distribution of responses. More post-survey nonriders lived within one or two blocks of the nearest bus route, than was recorded during the pre-survey. Despite this, most nonriders had not used the bus service during the previous year.

Usual Transportation Mode

Question No. 34, "What is your usual means of transportation?" provide for two choices. The major (first choice) responses are shown below:

(First Choice) Usual Mode		Bus Rider Usage				Non- riders	Total Respondents
		Heavy %	Moderate %	Light %	Other %		
Car	Pre	42	57	66	78	83	77
	Post	45	44	72	66	82	75
Bus	Pre	40	14	3	3	1	5
	Post	42	11	3	3	1	4
Taxi	Pre	0	0	0	0	0	0
	Post	1	2	1	1	0	1
Friends or relatives take me	Pre	2	2	4	5	2	3
	Post	0	9	3	0	2	2
Bike, motor- cycle	Pre	3	3	4	3	1	2
	Post	2	11	6	6	3	4
Senior Citizen's or Handicapper Van	Pre	1	0	0	3	0	0
	Post	0	7	0	1	0	1
Usually walk	Pre	7	24	23	8	11	12
	Post	10	16	15	23	11	12
I go a vari- ety of ways	Pre	2	0	0	0	0	0
	Post	0	0	0	0	0	0
Other	Pre	3	0	0	0	2	1
	Post	0	0	0	0	1	1
Totals	Pre	100% (N = 97)	100% (N = 42)	100% (N = 193)	100% (N = 37)	100% (N = 613)	100% (N = 982)
	Post	100% (N = 62)	100% (N = 56)	100% (N = 151)	100% (N = 80)	100% (N = 580)	100% (N = 929)

"Car" was cited as the usual means of transportation. The highest percentage occurred for nonriders, followed by other, light, moderate, and heavy users.

Heavy users, pre and post, were about evenly distributed between "car" and "bus" responses.

Number of Automobiles

The item, "How many automobiles does your household have?" resulted in the following breakdown:

<u>Number of Automobiles</u>		<u>Bus Rider Usage</u>				<u>Non-riders</u>	<u>Total Respondents</u>
		<u>Heavy</u>	<u>Moderate</u>	<u>Light</u>	<u>Other</u>		
		<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
1	Pre	43	55	39	57	36	39
	Post	44	34	46	43	36	39
2	Pre	27	19	32	30	46	40
	Post	23	28	28	31	44	37
3	Pre	8	2	7	11	10	9
	Post	3	9	13	4	12	10
4 or more	Pre	4	5	6	0	4	4
	Post	3	2	2	6	5	5
0	Pre	18	19	16	2	4	8
	Post	27	27	11	16	3	9
Totals	Pre	100% (N = 97)	100% (N = 42)	100% (N = 193)	100% (N = 37)	100% (N = 614)	100% (N = 983)
	Post	100% (N = 62)	100% (N = 56)	100% (N = 151)	100% (N = 80)	100% (N = 580)	100% (N = 929)

Heavy users, pre and post, basically reported only one automobile in their household. Fifty-five percent (55%) of the pre-survey moderate users reported one auto; however, post-survey results were about equal between those who reported one auto and those who had two or more cars.

Light users were about evenly split in both the pre- and post-surveys between those who had only one auto and those who reported two or more cars.

As expected, nonriders reported two or more cars.

Availability of Vehicle

The question, "Is a vehicle normally available for your use?" produced the following results:

<u>Vehicle Available</u>		<u>Bus Rider Usage</u>				<u>Non-riders</u>	<u>Total Respondents</u>
		<u>Heavy</u>	<u>Moderate</u>	<u>Light</u>	<u>Other</u>		
		<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
Yes	Pre	68	53	71	81	89	82
	Post	52	45	77	63	90	80
No	Pre	27	33	18	14	7	12
	Post	37	43	18	26	6	14
Sometimes	Pre	3	14	6	3	3	4
	Post	11	12	5	9	3	5
Other	Pre	2	0	5	2	1	2
	Post	0	0	0	2	1	1
Totals	Pre	100% (N = 97)	100% (N = 42)	100% (N = 193)	100% (N = 37)	100% (N = 614)	100% (N = 983)
	Post	100% (N = 62)	100% (N = 56)	100% (N = 151)	100% (N = 80)	100% (N = 580)	100% (N = 929)

Even though the majority of the bus riders indicated they did normally have a vehicle available for their use, the percentage was lower for heavy users and moderate users, compared to light users and other users. The percentage of "no" responses was reported more by heavy and moderate users than for light or other users.

As expected, most nonriders normally have a vehicle available to them.

## TRANSPORTATION ATTITUDES

### Reasons for Not Riding the Bus

The respondents classified as nonriders, i.e., those who had not used the bus service during the previous year, were asked, "Is there any particular reason why you don't ride the bus?" Pre- and post-survey results indicate "don't need to, have a car" as the primary reason for not riding the bus by nonriders.

Pre-survey second ranking was nearly tied between "no reason" and "doesn't stop near me or I live in the country." Post-survey second ranking was "doesn't stop near me or I live in the country," followed by "other" reasons.

This question provided for four choices. The following table summarizes the responses for nonriders first choice:

(First Choice) <u>Reasons for Not Riding the Bus</u>	<u>Pre %*</u>	<u>Post %*</u>
Don't need to, have a car	49	56
No reason	17	8
Doesn't stop near me or I live in the country	16	12
Doesn't go <u>where</u> I want to go	7	4
It's inconvenient	5	6
Other	4	10
Just never thought about it or got around to it	1	1
Takes too long	1	1
Doesn't go <u>when</u> I want to go	0	1
I don't like buses	<u>0</u>	<u>1</u>
Totals	100% (N = 614)	100% (N = 570)

\*There is a significant difference at the .05 level between the two surveys due to a change in the distribution of responses for nonriders. Pre to post results show a significant decrease in "no reason" responses, and an increase in "other" responses.

Fairness of Cost

Respondents were asked their opinions regarding the cost for a bus ride. The following table shows that most bus riders and nonriders believed the fare was "just right."

Do You Think This Fare is:		<u>Bus Rider Usage</u>				<u>Non-riders</u>	<u>Total Respondents</u>
		<u>Heavy</u>	<u>Moderate</u>	<u>Light</u>	<u>Other</u>		
		<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
Too much	Pre	20	20	26	21	13	19
	Post	21	25	14	23	15	18
Not enough	Pre	2	3	1	3	2	2
	Post	0	2	2	4	0	1
Just right	Pre	74	69	67	72	79	73
	Post	70	71	78	69	73	73
Don't Know	Pre	3	3	1	0	4	3
	Post	2	2	5	3	11	6
Other	Pre	1	5	5	4	2	3
	Post	7	0	1	1	1	2
Totals	Pre	100% (N = 91)	100% (N = 39)	100% (N = 163)	100% (N = 29)	100% (N = 240)	100% (N = 562)
	Post	100% (N = 57)	100% (N = 52)	100% (N = 119)	100% (N = 70)	100% (N = 196)	100% (N = 494)

Closer Routes

Question 13 asked respondents, "Would you use the bus more if the bus routes were closer?" The table below highlights the results:

<u>Closer Routes</u>		<u>Bus Rider Usage</u>					<u>Non-riders</u>	<u>Total Respondents</u>
		<u>Heavy</u>	<u>Moderate</u>	<u>Light</u>	<u>Other</u>			
		<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	
Yes	Pre	4	10	10	0	12	10	
	Post	13	6	9	8	10	9	
No	Pre	79	75	74	92	70	73	
	Post	74	85	78	72	71	73	
Don't know	Pre	1	2	0	0	0	0	
	Post	0	0	0	0	1	1	
Maybe	Pre	3	8	5	3	7	6	
	Post	0	0	5	5	7	6	
Probably not	Pre	9	5	10	5	9	9	
	Post	2	6	7	9	10	8	
Other	Pre	4	0	1	0	2	2	
	Post	<u>11</u>	<u>3</u>	<u>1</u>	<u>6</u>	<u>1</u>	<u>3</u>	
Totals	Pre	100% (N = 95)	100% (N = 40)	100% (N = 187)	100% (N = 37)	100% (N = 496)	100% (N = 855)	
	Post	100% (N = 62)	100% (N = 53)	100% (N = 149)	100% (N = 79)	100% (N = 508)	100% (N = 851)	

Considering the response categories of "no" and "probably not" together, the majority of bus riders and nonriders indicated that closer bus routes would not induce them to use the bus more.

Frequency of Service

Respondents were asked if they would use the bus more if it came by more frequently. The results, as shown below, indicate that bus riders and nonriders would not use the bus more if it came by more frequently:

<u>More Frequent Service</u>		<u>Bus Rider Usage</u>				<u>Non-riders</u>	<u>Total Respondents</u>
		<u>Heavy</u>	<u>Moderate</u>	<u>Light</u>	<u>Other</u>		
		<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
Yes	Pre	10	10	6	4	3	6
	Post	7	7	6	9	1	5
No	Pre	70	76	72	81	77	74
	Post	69	74	81	76	86	80
Don't know	Pre	1	0	1	0	1	1
	Post	0	0	1	2	2	1
Maybe	Pre	1	7	5	4	6	4
	Post	8	6	3	2	3	4
Probably not	Pre	14	7	15	11	11	13
	Post	7	9	9	11	7	8
Other	Pre	4	0	1	0	2	2
	Post	9	4	0	0	1	2
Totals	Pre	100% (N = 83)	100% (N = 29)	100% (N = 106)	100% (N = 27)	100% (N = 126)	100% (N = 371)
	Post	100% (N = 58)	100% (N = 46)	100% (N = 97)	100% (N = 54)	100% (N = 223)	100% (N = 478)

## Travel Areas Served

The item, "Does the bus system serve the areas to which you most frequently travel?" revealed the following results. There is a difference in response between riders and nonriders. The majority of riders replied that the bus system served the areas they frequently traveled (pre = 78% - 92%; post = 85% - 95%), whereas, this was only true for 47 percent of the pre-survey nonriders and 62 percent of the post-survey nonriders.

<u>Serve Areas</u>		<u>Bus Rider Usage</u>				<u>Non-riders</u>	<u>Total Respondents</u>
		<u>Heavy</u>	<u>Moderate</u>	<u>Light</u>	<u>Other</u>		
		<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
Yes	Pre	92	90	78	89	47	61
	Post	95	86	85	89	62*	72
No	Pre	5	10	16	8	34	26
	Post	2	3	12	9	18*	14
Don't know	Pre	3	0	6	3	19	13
	Post	3	11	3	2	20	14
Totals	Pre	100% (N = 97)	100% (N = 42)	100% (N = 193)	100% (N = 37)	100% (N = 614)	100% (N = 983)
	Post	100% (N = 62)	100% (N = 56)	100% (N = 151)	100% (N = 80)	100% (N = 579)	100% (N = 928)

\*Among nonriders there is a significant difference, pre to post, between the "yes" response (.005 level) and the "no" response (.001 level). Significantly more post-survey nonriders indicated that the bus system served the areas they frequently traveled.

## Effects of Gasoline Prices

Question 18 was a four-part question relating to the rising gasoline prices of the last few weeks before the survey. Respondents were asked if they had considered: a) riding the bus, b) getting in a carpool, c) driving less, or d) if gas prices affect them?

The attitude of most pre- and post-survey bus riders was that they had considered riding the bus more because of rising gasoline prices. (Those bus riders who indicated "no" to this question had evidently not considered riding the bus more than their current riding patterns.) Most nonriders, however, replied "no" to this question (see Appendix H).

Most bus riders and nonriders indicated they had not considered getting in a carpool because of rising gasoline prices (see Appendix I).

In general, bus riders and nonriders had considered driving less with the rising gasoline prices (see Appendix J).

The results indicate that gasoline prices apparently affected both bus riders and nonriders. Those bus riders who indicated "no" to this question may depend on AATA for their primary transportation needs (see Appendix K).

## Energy Conservation Measure

Respondents were asked if they thought of the bus service as a viable, valuable energy conservation measure. The table, as shown in Appendix L, indicates an overwhelming majority of bus riders and nonriders view the bus service as a viable, valuable energy conservation measure.

## Improvements

Question 20 asked respondents what improvements they would like to see in the city bus system that would cause them to use the bus more often. This question provided for four choices. The results, as shown below, indicate most bus riders and nonriders, pre and post, replied "no changes needed."

Overall, two improvements in AATA since the initial survey appear to be meeting the needs of Ann Arbor's residents. Opinions regarding expanded service hours and better route and schedule information declined in the follow-up survey. More bus shelters, more courteous drivers, and "other" improvements were the only areas showing an increased need among Ann Arbor's residents.

Bus Rider Usage

<u>(First Choice)</u> <u>Improvements</u>		<u>Heavy</u> <u>%</u>	<u>Moderate</u> <u>%</u>	<u>Light</u> <u>%</u>	<u>Other</u> <u>%</u>	<u>Non- riders</u> <u>%</u>	<u>Total</u> <u>Respondents</u> <u>%</u>
Lower fares	Pre	4	0	2	0	0	1
	Post	3	3	2	2	1	1
More conven- ient routes	Pre	3	7	3	5	4	4
	Post	3	7	5	5	3	4
Closer stops	Pre	2	0	4	3	6	5
	Post	2	2	3	1	6	5
More frequent service	Pre	5	5	4	5	1	2
	Post	0	4	3	4	1	2
More bus shelters	Pre	0	0	0	0	0	0
	Post	3	0	1	2	0	1
Faster service	Pre	2	0	1	5	1	1
	Post	2	0	1	0	1	1
More courteous drivers	Pre	1	3	0	0	0	0
	Post	3	2	2	0	0	1
Expanded service hours	Pre	10	7	5	5	2	4
	Post	10	4	6	4	2	3
Available change	Pre	0	2	1	0	0	0
	Post	0	0	1	0	0	0
Better trans- fer system	Pre	1	7	0	3	1	1
	Post	0	0	1	0	1	1
Better route and schedule information	Pre	3	0	6	3	1	3
	Post	0	2	4	0	3	2
Other	Pre	19	24	9	19	12	13
	Post	14	22	12	18	15	15
No changes needed	Pre	50	43	64	52	70	65
	Post	60	54	58	64	61	60
I would not use the bus in any case	Pre	0	2	1	0	2	1
	Post	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>6</u>	<u>4</u>
Totals	Pre	100% (N = 97)	100% (N = 42)	100% (N = 193)	100% (N = 37)	100% (N = 614)	100% (N = 983)
	Post	100% (N = 62)	100% (N = 55)	100% (N = 151)	100% (N = 80)	100% (N = 577)	100% (N = 925)

## DEMOGRAPHICS

### Sex

In general, female bus riders and nonriders outnumbered male bus riders and nonriders in both surveys. The table, as shown in Appendix M, illustrates the percentage of male and female respondents across ridership and nonrider groups.

The table below shows the percentage of male and female bus riders and their first choice for purpose of using the bus service:

<u>(First Choice) Purpose</u>	<u>Bus Riders</u>			
	<u>Pre (%)</u>	<u>Male</u> <u>Post (%)</u>	<u>Pre (%)</u>	<u>Female</u> <u>Post (%)</u>
Shopping	36	38	43	41
Work	23	25	21	18
School	15	9	7	7
When I don't have a car/ when car is in garage	10	11	11	12
Personal business	7	8	6	9
Visits or recreation	3	5	5	8
Medical	3	2	3	3
Other	<u>3</u>	<u>2</u>	<u>4</u>	<u>2</u>
Totals	100% (N = 145)	100% (N = 114)	100% (N = 224)	100% (N = 234)

Males, pre to post, reported an increase in "shopping," "work," "when I don't have a car/when car is in garage," "personal business," and "visits or recreation" purposes. Females, pre to post, reported an increase in "when I don't have a car/when car is in garage," "personal business," and "visits or recreation."

Pre-survey males mentioned "shopping," "work," and "school" as their three highest ranking purposes for using the bus service. In rank order, post-survey males and pre- and post-survey females traveled by bus for "shopping," "work," and "when I don't have a car/when car is in garage" purposes.

Age

By purpose, the following distribution of age groups was found for all respondents in the surveys:

<u>(First Choice)</u> <u>Purpose</u>		<u>Age Groups</u>			
		<u>16-20</u>	<u>21-39</u>	<u>40-60</u>	<u>Older Than</u>
		<u>Years</u>	<u>Years</u>	<u>Years</u>	<u>60 Years</u>
		<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
Work	Pre	16	24	24	13
	Post	15	25	25	6
Personal business	Pre	7	6	9	5
	Post	5	6	10	18
Shopping	Pre	47	38	39	46
	Post	44	41	32	40
School	Pre	15	12	2	3
	Post	17	6	7	3
Visits or recreation	Pre	9	3	5	5
	Post	10	5	5	11
Medical	Pre	2	1	2	15
	Post	2	2	3	6
When I don't have a car/ when car is in garage	Pre	0	13	15	10
	Post	4	14	18	11
Other	Pre	4	3	4	3
	Post	3	1	0	5
Totals	Pre	100% (N = 55)	100% (N = 229)	100% (N = 46)	100% (N = 39)
	Post	100% (N = 59)	100% (N = 167)	100% (N = 60)	100% (N = 65)

Sixteen to 20 year-old riders used the bus primarily for shopping purposes. Twenty-one to 39 year-old riders rode for shopping and work needs. Forty to 60 year-old riders also rode for shopping and work needs. The older than 60 years group used the bus primarily for shopping purposes.

As the age groups increased in years, the percentage of males comprising each age group tended to decrease. For example, 43 percent of the pre-survey males were in the 16-20 year-old group compared with 29 percent, older than 60

years. The reverse was true for females, i.e., as the age groups increased in years, so did the percentage of females comprising each age group. Fifty-seven percent (57%) of the pre-survey females were in the 16-20 year-old group compared with 71 percent, older than 60 years (see Appendix N).

Appendix O lists the various age groups with the percentage of bus riders and nonriders comprising each age group. The 21-39 year-old age group contained the highest percentage of bus riders and nonriders.

### Occupation

By sex, the distribution of occupations is shown in Appendix P. In rank order, 36 percent of the pre-survey males were students, 17 percent professional, and 8 percent retired. Thirty-nine percent (39%) of the post-survey males were students, 17 percent retired, and 13 percent professional. Twenty-three percent (23%) of the pre-survey females were homemakers, 19 percent students, and 17 percent professional. Twenty-seven percent (27%) of the post-survey females were homemakers, 20 percent retired, and 18 percent students.

By age groups, the distribution of occupations is shown in Appendix Q. As expected, the majority of respondents between the ages of 16-20 were students. Approximately a third of the pre- and post-survey respondents between the ages of 21-39 were also students. The second ranking was the professional category.

First ranking for 40-60 year-old respondents was homemaker, followed by the professional category.

Retirees comprised 77 percent of the pre-survey respondents, older than 60 years, increasing to 81 percent during the post-survey.

Based upon ridership groups, the distribution of occupations is shown in the following table.

Student, professional, retired, and homemaker were the four most frequently mentioned occupations by bus riders and nonriders.

Bus Rider Usage

(First Choice) Occupation		Bus Rider Usage					Non- riders*	Total Respondents
		Heavy %	Moderate %	Light %	Other %			
General office/ clerical	Pre	8	0	6	5	4	5	
	Post	3	3	4	4	3	3	
Management	Pre	2	5	3	3	2	3	
	Post	2	0	2	3	1	1	
Government	Pre	1	0	2	0	1	1	
	Post	0	0	1	2	1	1	
University	Pre	4	0	3	0	3	3	
	Post	2	0	4	4	3	3	
Proprietor	Pre	0	2	1	0	2	1	
	Post	0	2	2	0	2	2	
Professional	Pre	21	7	17	11	19	17	
	Post	9	13	12	12	14	13	
Sales	Pre	2	3	2	0	5	3	
	Post	3	3	4	1	4	3	
Skilled/semi- skilled	Pre	1	0	3	3	3	3	
	Post	3	2	0	8	2	2	
Technical	Pre	2	0	3	3	5	4	
	Post	3	2	3	0	3	3	
Service worker	Pre	3	5	3	5	4	4	
	Post	5	2	5	4	3	4	
Unskilled labor	Pre	2	0	3	5	2	3	
	Post	3	0	1	0	1	1	
High school or college student	Pre	33	51	40	46	21	26	
	Post	24	35	33	35	21	25	
Homemaker	Pre	2	10	7	16	17	14	
	Post	7	11	14	10	22	18	
Retired	Pre	12	17	6	3	10	11	
	Post	27	25	13	16	19	19	
Not employed	Pre	7	0	1	0	2	2	
	Post	9	2	2	1	1	2	
Totals	Pre	100% (N = 93)	100% (N = 41)	100% (N = 191)	100% (N = 37)	100% (N = 606)	100% (N = 968)	
	Post	100% (N = 59)	100% (N = 55)	100% (N = 149)	100% (N = 77)	100% (N = 569)	100% (N = 909)	

\*There is a significant difference at the .05 level between the two surveys due to a change in the distribution of nonrider responses. Significant changes include a decrease, pre to post, in the percentage of professional occupations, and an increase in the percentage of homemaker and retired categories.

## ADVERTISING AWARENESS

### Radio Station Listening

Respondents were asked if they had heard any AATA radio announcements. The majority of bus riders and nonriders indicated they had not heard any AATA radio announcements.

The following table shows the results to the question:

<u>Heard Announcements?</u>		<u>Bus Rider Usage</u>				<u>Non-riders</u>	<u>Total Respondents</u>
		<u>Heavy</u>	<u>Moderate</u>	<u>Light</u>	<u>Other</u>		
		<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
Yes or think so	Pre	19	7	15	16	17	17
	Post	8	9	15	13	17	15
No	Pre	80	91	83	84	82	82
	Post	92	87	79	86	79	81
Don't know	Pre	1	2	2	0	1	1
	Post	<u>0</u>	<u>4</u>	<u>6</u>	<u>1</u>	<u>4*</u>	<u>4</u>
Totals	Pre	100% (N = 97)	100% (N = 42)	100% (N = 193)	100% (N = 37)	100% (N = 613)	100% (N = 982)
	Post	100% (N = 62)	100% (N = 56)	100% (N = 151)	100% (N = 80)	100% (N = 579)	100% (N = 928)

\*There is a significant difference at the .005 level between the pre and post "don't know" response for nonriders.

Listed below are Ann Arbor radio stations with the percentages of respondents who heard announcements on specific radio stations.

The most frequently mentioned stations by pre-survey heavy users were WAAM and WPAG; post-survey heavy users more often reported WIQB. Moderate and light users and nonriders basically reported WAAM.

<u>Radio Stations</u>		<u>Bus Rider Usage</u>				<u>Non-riders</u>	<u>Total Respondents</u>
		<u>Heavy</u>	<u>Moderate</u>	<u>Light</u>	<u>Other</u>		
		<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
WAAM	Pre	22	67	44	17	34	35
	Post	0	20	25	40	36	33
WCBN	Pre	0	0	0	0	0	0
	Post	0	0	0	10	0	1
WEMU	Pre	0	0	0	0	0	0
	Post	0	0	5	0	0	1
WIQB	Pre	0	0	10	17	4	5
	Post	25	0	0	0	3	3
WNRS	Pre	0	0	0	0	1	0
	Post	0	0	0	0	1	1
WPAG	Pre	17	0	3	0	7	7
	Post	0	0	15	0	15	12
WYFC	Pre	0	0	10	0	2	3
	Post	0	0	5	10	0	1
Other	Pre	11	0	3	16	6	7
	Post	25	0	10	0	7	7
Don't know	Pre	50	33	30	50	46	43
	Post	50	80	40	40	38	41
Totals	Pre	100% (N = 18)	100% (N = 3)	100% (N = 30)	100% (N = 6)	100% (N = 106)	100% (N = 163)
	Post	100% (N = 4)	100% (N = 5)	100% (N = 20)	100% (N = 10)	100% (N = 89)	100% (N = 128)

Respondents were asked if they regularly listen to the radio. The majority of bus riders and nonriders replied "yes." The only exception was for post-survey heavy users, as shown in the table below:

Regularly Listen?		Bus Rider Usage					Total Respondents
		Heavy*	Moderate	Light*	Other	Non-riders	
		%	%	%	%	%	%
Yes	Pre	74	74	77	73	79	78
	Post	44	57	61	59	62*	60
No	Pre	24	24	22	27	20	21
	Post	52	39	35	41	36*	38
Radio is broken or don't have radio	Pre	0	0	0	0	0	0
	Post	0	2	0	0	0	0
Other	Pre	2	2	1	0	1	1
	Post	4	2	4	0	2	2
Totals	Pre	100% (N = 97)	100% (N = 42)	100% (N = 193)	100% (N = 37)	100% (N = 614)	100% (N = 983)
	Post	100% (N = 62)	100% (N = 56)	100% (N = 150)	100% (N = 80)	100% (N = 579)	100% (N = 927)

\*There is a significant difference between the two surveys due to a change in the distribution of responses for heavy users (.001 level) and light users (.05 level). Nonriders also recorded a change, pre to post, in the "yes" response (.005 level) and "no" response (.001 level). The results indicate that fewer post-survey respondents are regular radio listeners, compared to pre-survey findings.

## Television Station Viewing

As with radio, respondents were asked if they had seen any AATA television announcements. Most bus riders and nonriders replied "no," as shown in the following table:

<u>Seen Announcements?</u>		<u>Bus Rider Usage</u>				<u>Non-riders</u>	<u>Total Respondents</u>
		<u>Heavy</u>	<u>Moderate</u>	<u>Light</u>	<u>Other</u>		
		<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
Yes or think so	Pre	4	0	3	3	4	4
	Post	7	5	4	3	2	3
No	Pre	95	98	96	97	95	95
	Post	92	93	95	97	95	95
Don't know	Pre	1	2	1	0	1	1
	Post	1	2	1	0	3	2
Totals	Pre	100% (N = 97)	100% (N = 42)	100% (N = 193)	100% (N = 37)	100% (N = 613)	100% (N = 982)
	Post	100% (N = 62)	100% (N = 56)	100% (N = 151)	100% (N = 80)	100% (N = 579)	100% (N = 928)

Listed below are Ann Arbor TV stations with the percentage of respondents who saw announcements on specific TV stations.

<u>TV Stations</u>		<u>Bus Rider Usage</u>				<u>Non-riders</u>	<u>Total Respondents</u>
		<u>Heavy</u>	<u>Moderate</u>	<u>Light</u>	<u>Other</u>		
		<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
WJIN	Pre	25	0	0	0	4	5
Ch. 6	Post	0	0	0	0	0	0
WJBK	Pre	0	0	0	0	0	0
Ch. 2	Post	50	0	0	0	20	17
WDIV	Pre	0	0	0	0	4	3
Ch. 4	Post	0	0	0	0	10	11
WXYZ	Pre	0	0	17	0	4	6
Ch. 7	Post	0	100	33	0	0	11
Other	Pre	0	0	0	100	4	5
	Post	0	0	0	0	10	5
Don't know	Pre	75	0	83	0	84	81
	Post	<u>50</u>	<u>0</u>	<u>67</u>	<u>100</u>	<u>60</u>	<u>56</u>
Totals	Pre	100% (N = 4)	0% (N = 0)	100% (N = 6)	100% (N = 1)	100% (N = 25)	100% (N = 36)
	Post	100% (N = 2)	100% (N = 1)	100% (N = 3)	100% (N = 1)	100% (N = 10)	100% (N = 17)

Given the small sample size, each of the TV stations above were mentioned at least once by the various bus rider groups and by nonriders.

Respondents were asked if they regularly watch television. As with radio, the majority of bus riders and nonriders indicated they regularly watch TV. The responses to this question are tabulated as follows:

		Bus Rider Usage					Non-riders	Total Respondents
<u>Regularly Watch?</u>		<u>Heavy</u> %	<u>Moderate</u> %	<u>Light</u> %	<u>Other*</u> %	<u>Non-riders</u> %	<u>Total Respondents</u> %	
Yes	Pre	78	67	72	76	81	78	
	Post	68	64	66	40	64*	62	
No	Pre	19	26	24	24	19	20	
	Post	28	27	29	51	32*	32	
TV's broken or don't have TV	Pre	1	5	3	0	0	1	
	Post	0	9	4	4	2	3	
Other	Pre	2	2	1	0	0	1	
	Post	4	0	1	5	2	3	
Totals	Pre	100% (N = 97)	100% (N = 42)	100% (N = 193)	100% (N = 37)	100% (N = 614)	100% (N = 983)	
	Post	100% (N = 62)	100% (N = 56)	100% (N = 151)	100% (N = 80)	100% (N = 578)	100% (N = 927)	

\*There is a significant difference at the .05 level between the two surveys due to a change in the distribution of responses for other users. Nonriders also recorded a change, pre to post, in the "yes" response (.01 level) and the "no" response (.001 level). This indicates that fewer post-survey respondents watched TV on a regular basis, compared to pre-survey results.

## Newspaper Readership

Respondents were asked if they had seen any AATA newspaper ads. Most of the bus riders and nonriders said "yes or think so." The only exceptions were pre-survey light users and nonriders. The following table shows the responses to this question.

<u>Seen Ads?</u>		<u>Bus Rider Usage</u>				<u>Non-riders</u>	<u>Total Respondents</u>
		<u>Heavy</u>	<u>Moderate</u>	<u>Light</u>	<u>Other</u>		
		<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
Yes or think so	Pre	58	52	47	49	44	46
	Post	57	55	62	69	58*	60
No	Pre	41	43	53	49	54	52
	Post	40	41	35*	27	37*	36
Don't know	Pre	1	5	0	2	2	2
	Post	3	4	3	4	5	4
Totals	Pre	100% (N = 97)	100% (N = 42)	100% (N = 193)	100% (N = 37)	100% (N = 614)	100% (N = 983)
	Post	100% (N = 62)	100% (N = 56)	100% (N = 151)	100% (N = 80)	100% (N = 579)	100% (N = 928)

\*There is a significant difference at the .05 level between the pre and post "no" response for light users. Nonriders also recorded a change, pre to post, in the "yes or think so" response (.005 level) and the "no" response (.001 level). The results indicate that more post-survey light users and nonriders saw AATA newspaper ads, compared to pre-survey results.

Listed below are Ann Arbor area newspapers with the percentages of respondents who saw ads in specific newspapers. An overwhelming majority of bus riders and nonriders saw AATA newspaper ads more often in the Ann Arbor News than in any other newspaper.

<u>Newspapers</u>		<u>Bus Rider Usage</u>				<u>Non-riders</u>	<u>Total Respondents</u>
		<u>Heavy</u>	<u>Moderate</u>	<u>Light</u>	<u>Other</u>		
		<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
Ann Arbor News	Pre	98	96	92	89	92	93
	Post	97	97	93	89	97	95
Michigan Daily	Pre	0	0	4	0	1	2
	Post	0	3	3	5	1	2
Ypsilanti Press	Pre	0	0	1	0	4	2
	Post	0	0	0	0	0*	0
Other	Pre	0	4	2	11	2	2
	Post	3	0	2	4	2	2
Don't know	Pre	2	0	1	0	1	1
	Post	0	0	2	2	0	1
Totals	Pre	100% (N = 56)	100% (N = 22)	100% (N = 90)	100% (N = 18)	100% (N = 267)	100% (N = 453)
	Post	100% (N = 33)	100% (N = 31)	100% (N = 87)	100% (N = 55)	100% (N = 328)	100% (N = 534)

\*There is a significant difference at the .05 level between the pre and post "Ypsilanti Press" response for nonriders. Their recognition of ads in this newspaper dropped from 4 percent in the pre-survey to no recognition in the post-survey.

Respondents were asked if they regularly read a local newspaper. The majority of bus riders and nonriders replied "yes," as indicated in the table below:

Regularly Read?		Bus Rider Usage				Non-riders	Total Respondents
		Heavy	Moderate	Light	Other		
		<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
Yes	Pre	70	60	62	76	67	66
	Post	71	59	69	73	74	72
No	Pre	20	31	28	22	25	25
	Post	18	25	24	20	19	20
Sometimes	Pre	10	9	10	2	8	9
	Post	11	16	7	7	6	8
Other	Pre	0	0	0	0	0	0
	Post	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>
Totals	Pre	100% (N = 97)	100% (N = 42)	100% (N = 193)	100% (N = 37)	100% (N = 614)	100% (N = 983)
	Post	100% (N = 62)	100% (N = 56)	100% (N = 151)	100% (N = 80)	100% (N = 579)	100% (N = 928)

Other Media Exposure

Respondents were asked if there were any other places they had seen, heard, or read advertisements or otherwise obtained information about AATA. Most of the bus riders and nonriders indicated they had not obtained information about AATA from any other source than those previously listed.

The following table shows the responses to this question:

<u>Other Places?</u>		<u>Bus Rider Usage</u>				<u>Non-riders</u>	<u>Total Respondents</u>
		<u>Heavy</u>	<u>Moderate</u>	<u>Light</u>	<u>Other</u>		
		<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
Yes or think so	Pre	36	33	37	41	29	32
	Post	27	31	43	39	32	34
No	Pre	58	60	60	51	67	64
	Post	63	58	50	57	60	58
Don't know	Pre	6	7	3	5	4	4
	Post	10	11	7	4	8*	8
Other	Pre	0	0	0	3	0	0
	Post	0	0	0	0	0	0
Totals	Pre	100% (N = 97)	100% (N = 42)	100% (N = 193)	100% (N = 37)	100% (N = 613)	100% (N = 982)
	Post	100% (N = 62)	100% (N = 55)	100% (N = 150)	100% (N = 80)	100% (N = 577)	100% (N = 924)

\*There is a significant difference at the .01 level between the pre and post "don't know" response for nonriders. The results indicate that more post-survey nonriders had obtained information about AATA from other sources, compared to pre-survey findings.

Of those who had obtained information from another place, the particular medium varied, depending on the ridership group reporting.

The two most frequently mentioned mediums for pre-survey bus riders and nonriders was "billboards" and "other" places. Post-survey heavy and moderate users and nonriders indicated "displays" and "other" places. Post-survey light users mentioned "other" places and equal reporting of "billboards" and "ads for stores/institutions which mention that they can be reached by bus."

Pre to post increases in overall recognition were noted for "displays," "news articles," and "ads for stores/institutions which mention that they can be reached by bus."

The specific breakdown is as follows:

<u>Places?</u>		<u>Bus Rider Usage</u>				<u>Non-riders</u>	<u>Total Respondents</u>
		<u>Heavy</u>	<u>Moderate</u>	<u>Light</u>	<u>Other</u>		
		<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
Billboards	Pre	43	43	34	20	38	37
	Post	6	19	17	29	16*	17
Bulletin boards	Pre	6	7	11	0	6	7
	Post	12	6	11	3	4	6
Displays	Pre	9	7	14	0	6	8
	Post	35	25	14	26	18	20
News articles	Pre	8	0	7	0	9	8
	Post	18	13	15	16	15	15
Other	Pre	31	36	28	60	34	33
	Post	23	31	26	23	38	32
Ad for stores/ institutions which mention that they can be reached by bus	Pre	3	7	6	20	7	7
	Post	<u>6</u>	<u>6</u>	<u>17</u>	<u>3</u>	<u>9</u>	<u>10</u>
Totals	Pre	100% (N = 35)	100% (N = 14)	100% (N = 71)	100% (N = 15)	100% (N = 178)	100% (N = 313)
	Post	100% (N = 17)	100% (N = 16)	100% (N = 65)	100% (N = 31)	100% (N = 175)	100% (N = 304)

\*There is a significant difference at the .005 level between the pre and post "billboards" response for nonriders. Recognition of "billboards" dropped from 38 percent in the pre-survey to 16 percent in the post-survey.

## CONCLUSIONS

The main purpose of the follow-up survey was to evaluate the effectiveness of AATA marketing efforts during the time from the initial survey to the follow-up survey. The section on "Advertising Awareness" clearly shows that newspapers were remembered by more respondents, followed by "other" media, radio and television. Inspection of the Total Respondents column in the table below, shows that pre-survey recall of newspaper ads was 46 percent, increasing to 60 percent in the post-survey. "Other" media followed with 32 percent recall in the pre-survey, increasing to 34 percent in the post-survey. Radio, on the other hand, decreased overall in pre to post recognition from 17 percent to 15 percent. This also was true for television, dropping from 4 percent to 3 percent.

The medium which received the most increase in recognition, pre to post, varied depending on the ridership group reporting. Follow-up results for newspapers show a higher percentage of recall over initial survey results for light and other users and nonriders. For light users there was a 15 percent increase; other users, 20 percent; and nonriders, 14 percent. Follow-up results for television show a higher percentage of recall over initial survey results for heavy users (3 percent increase) and moderate users (5 percent increase).

The table below highlights these findings and summarizes parts from four tables in the section on "Advertising Awareness:"

MEDIUM Respondents Who Heard Saw, or Read Ads		Bus Rider Usage					Non- riders	Total Respondents
		Heavy %	Moderate %	Light %	Other %			
RADIO								
"Yes or think so"	Pre	19	7	16	16	17	17	
	Post	8	9	15	13	17	15	
TELEVISION								
"Yes or think so"	Pre	4	0	3	3	4	4	
	Post	7	5	4	3	2	3	
NEWSPAPER								
"Yes or think so"	Pre	58	52	47	49	44	46	
	Post	57	55	62	69	58	60	
"OTHER"								
"Yes or think so"	Pre	36	33	37	41	29	32	
	Post	27	31	43	39	32	34	

Newspapers may have received more recognition, pre to post, by light and other users and nonriders, because it was used extensively as part of AATA's marketing efforts. Just prior to post-survey interviewing, newspapers were used to inform both current and new riders about the installation of 782 new AATA bus stop signs and 25 new bus shelters. Fifteen separate newspaper ads were placed in the Ann Arbor News, featuring one particular route in each ad. Each ad graphically showed the location of new bus stop signs along the route, assuring passengers of on-time pick-ups and drop-offs. Ad copy also mentioned that the new bus stop signs would feature AATA's new burgundy, blue and white logo. AATA's slogan, "The Ride . . . more than just a bus" was the headline.

Newspapers were an effective medium for the bus riders and nonriders previously mentioned, because the survey results indicated that overall, newspaper readership increased, while radio and television use declined. Those respondents who regularly read the newspaper increased, pre to post, from 66 percent to 72 percent. Radio and television use, declined, from 78 percent to 60 percent, and 78 percent to 62 percent, respectively. The table below highlights these findings and summarizes parts from three tables in the section on "Advertising Awareness:"

MEDIUM	Respondents Who regularly listened, watched or read medium	Bus Rider Usage					Non-riders	Total Respondents
		Heavy	Moderate	Light	Other			
		%	%	%	%	%		
RADIO	Pre	74	74	77	73	79	78	
	"Yes" Post	44	57	61	59	62	60	
TELEVISION	Pre	78	67	72	76	81	78	
	"Yes" Post	68	64	66	40	64	62	
NEWSPAPER	Pre	70	60	62	76	67	66	
	"Yes" Post	71	59	69	73	74	72	

AATA implemented an aggressive marketing program during the interim from pre-survey to post-survey interviewing. In addition to radio, television, and newspapers, they also made use of a variety of other mediums. These include the following:

Schedules

Printed materials

Slide presentation for business, social, and civic groups

On-board surveys

Drivers' uniforms

"AATA Mirror" - internal newsletter for AATA's employees

Downtown Information Center, which includes a waiting room, lost and found and token sales outlet, and telephone information service for route and schedule information.

AATA's Marketing Plan during this time featured two specific goals. The first goal was to increase awareness of AATA services and continue strengthening AATA's public image. The second goal was to increase ridership of infrequent and nonriders by targeting promotions to specific target markets.

While it is difficult to measure the first goal, the second goal was achieved, despite the fact that a 10-cent fare increase went into effect on October 1, 1981. The new fare structure had the opposite effect on AATA ridership from what transit authorities have traditionally experienced. During October and November 1981, total monthly ridership increased 12 percent and 13.6 percent respectively, over the 1980 figures. This was attributable not only to the marketing efforts, but also to the quality of the AATA fleet and the efficiency of the Authority. Especially noteworthy were the efforts of the Maintenance Department in helping to achieve this increase in ridership. Improvements in the Maintenance Department included the number of new and renovated buses in the fleet together with an improved preventive maintenance program.

## IMPLICATIONS FOR FUTURE RESEARCH

The first objective of this research was to develop and implement a methodology that could be used by other state transportation departments to survey public attitude and awareness levels regarding transit systems in their states. In light of this, it appears appropriate to identify the following limitations of this marketing research survey in an effort to assist these departments, should they attempt to replicate this study.

1. It is suggested that the follow-up survey be conducted during the same time of year as the initial survey. This would prevent any seasonal fluctuation from affecting the results, such as a heavier expenditure of advertising dollars in one part of the year over another. The original intention of this study was that the follow-up survey be conducted one year after the initial survey; however, a lapse of approximately 21 months occurred. This was due to departmental personnel cuts in the Surveys Section and the longer than expected lead time to install additional temporary telephone lines.
2. The initial and follow-up telephoning should be conducted on the same days, and during the same time of day, i.e., consistent interviewing days and hours from pre-survey to post-survey. Interviews for the initial survey were conducted during the hours of 12 noon - 8 p.m., Monday through Thursday. Post-survey interviewing was conducted during the hours of 9 a.m. to 6 p.m., Monday through Thursday and 9 a.m. to 4:30 p.m. on Friday. Again, this was due to scheduling problems in the Surveys Section.
3. Use of a closed-end questionnaire, one in which the possible answers are prescribed for the respondents, limits valuable information that could be gained if an open-end questionnaire had been used. An open-end questionnaire is one to which the respondent is free to answer in his own words. (Question 2., which asks for the specific name of the transit system in each city, was the only open-end question; all other questions

were closed-end.) The sheer size of the sample and scope of the study precluded the use of an open-end questionnaire.

4. The marketing efforts from the initial survey to the follow-up survey were not consistent among the five transit systems. This also was due to personnel cuts, budget cutbacks, and the independent marketing efforts of each transit system. If the marketing efforts had been consistent, a comparison could be made among the transit systems in an attempt to obtain insights about transit marketing effectiveness. Nevertheless, each transit system was provided with the reports of the other four systems. In this way, an exchange of information took place, which led to a sharing of strengths and weaknesses among the systems. Improvement in awareness, image, and ridership are goals shared by all transit systems.

APPENDICES

APPENDIX A

2nd 3rd 4th PUBLIC TRANSIT "ATTITUDE AND AWARENESS" SURVEY

RESPONDENT: \_\_\_\_\_

ADDRESS: \_\_\_\_\_ REFUSAL:

PHONE NUMBER: \_\_\_\_\_ COMPLETION:

INTERVIEWER INITIALS:

\*\* INSTRUCTIONS TO INTERVIEWERS \*\* RESCHEDULE:

ALL INSTRUCTIONS TO INTERVIEWERS ARE 1.  
CAPITALIZED. DO NOT READ THESE 2.  
THINGS TO THE RESPONDENT. EVERY- 3.  
THING PRINTED IN this typeface IS TO  
BE READ TO THE RESPONDENT. BELOW  
THE RESPONDENT IS INDICATED BY "R."

\* \* \* \* \*

EACH TIME YOU TRY A PHONE NUMBER, NOTE IN THE BOXES (UPPER LEFT) THE DAY AND THE HOUR OF THE DAY. IF NO ONE ANSWERS, GO ON TO THE NEXT PERSON TO BE CALLED. IF THE PHONE IS ANSWERED, BUT NO "R" WHO IS OLD ENOUGH (I.E., OLDER THAN 16) IS THERE, ATTEMPT TO FIND OUT THE BEST TIME TO CALL AGAIN AND NOTE THAT TIME AND DAY DOWN IN THE RESCHEDULE BOX (MID-RIGHT).

IF AN APPROPRIATE "R" DOES ANSWER, INTRODUCE YOURSELF AS A REPRESENTATIVE OF THE STATE OF MICHIGAN - AND SAY . . .

Hello, my name is \_\_\_\_\_, with the Department of Transportation. The Department of Transportation is conducting a survey to help in planning bus service in the \_\_\_\_\_ area. Your assistance will be greatly appreciated. The questions will take a few minutes of your time. Is this a convenient time for me to speak with you? IF "YES," CONTINUE. IF "NO," ASK FOR RESCHEDULE TIME AND NOTE ABOVE. My first question is: (DETERMINE WITHOUT ASKING) "R" is \_\_\_ MALE, \_\_\_ FEMALE):

1. Is there a city bus system in the \_\_\_\_\_ area?

A \_\_\_\_\_ YES OR THINK SO

B \_\_\_\_\_ NO (IF NO, GO TO QUESTION 32)

C \_\_\_\_\_ DON'T KNOW (GO TO QUESTION 32)

2. What is the name of it?

\_\_\_\_\_

3. Have you personally used the bus service in \_\_\_\_\_ during the past year?

A \_\_\_\_\_ YES (IF YES, GO TO 5)

B \_\_\_\_\_ NO (IF NO, GO TO 4 THEN 7)

C \_\_\_\_\_ DON'T KNOW (GO TO 4 THEN 7)

4. Is there any particular reason why you don't ride the bus?

A \_\_\_\_\_ NO

B \_\_\_\_\_ DON'T NEED TO, HAVE A CAR

C \_\_\_\_\_ DOESN'T STOP NEAR ME, (OR) I LIVE IN THE COUNTRY

D \_\_\_\_\_ DOESN'T GO WHERE I WANT TO GO

E \_\_\_\_\_ DOESN'T GO WHEN I WANT TO GO

F \_\_\_\_\_ TAKES TOO LONG

G \_\_\_\_\_ COSTS TOO MUCH

H \_\_\_\_\_ IT'S INCONVENIENT

I \_\_\_\_\_ IT'S UNRELIABLE

J \_\_\_\_\_ IT'S UNCOMFORTABLE

K \_\_\_\_\_ IT'S NOT SAFE

L \_\_\_\_\_ I DON'T LIKE BUSES

M \_\_\_\_\_ I DON'T LIKE THE PEOPLE WHO RIDE BUSES

N \_\_\_\_\_ JUST NEVER THOUGHT ABOUT IT OR GOT AROUND TO IT

O \_\_\_\_\_ OTHER

5. How often do you use the bus service? (MENTION THE 5 OPTIONS)

- A \_\_\_\_\_ ONCE A YEAR
- B \_\_\_\_\_ ONCE A MONTH
- C \_\_\_\_\_ ONCE A WEEK
- D \_\_\_\_\_ ALMOST EVERY DAY
- E \_\_\_\_\_ DAILY
- F \_\_\_\_\_ OTHER

6. For what purpose(s) do you use the bus service?

- A \_\_\_\_\_ WORK
- B \_\_\_\_\_ PERSONAL BUSINESS
- C \_\_\_\_\_ SHOPPING
- D \_\_\_\_\_ SCHOOL
- E \_\_\_\_\_ VISITS OR RECREATION
- F \_\_\_\_\_ DINING
- G \_\_\_\_\_ MEDICAL
- H \_\_\_\_\_ WHEN I DON'T HAVE A CAR/WHEN CAR IS IN GARAGE
- I \_\_\_\_\_ OTHER (SPECIFY \_\_\_\_\_)

7. Have any other members of your household used the bus service during the past year?

- A \_\_\_\_\_ YES
- B \_\_\_\_\_ NO (IF NO, GO TO 10)
- C \_\_\_\_\_ DON'T KNOW (GO TO 10)

IF THEY MENTION WHO, CHECK:

- 7a.
- A \_\_\_\_\_ HUSBAND/WIFE
  - B \_\_\_\_\_ SON/DAUGHTER/CHILDREN
  - C \_\_\_\_\_ MOTHER/FATHER
  - D \_\_\_\_\_ ROOMMATE
  - E \_\_\_\_\_ OTHER (SPECIFY \_\_\_\_\_)

8. How often do other members use the bus service? (MENTION THE 5 OPTIONS)

- A \_\_\_\_\_ ONCE A YEAR
- B \_\_\_\_\_ ONCE A MONTH
- C \_\_\_\_\_ ONCE A WEEK
- D \_\_\_\_\_ ALMOST EVERY DAY
- E \_\_\_\_\_ DAILY
- F \_\_\_\_\_ OTHER

9. For what purpose(s) do the other members use the bus service?

- A \_\_\_\_\_ WORK
- B \_\_\_\_\_ PERSONAL BUSINESS
- C \_\_\_\_\_ SHOPPING
- D \_\_\_\_\_ SCHOOL
- E \_\_\_\_\_ VISITS OR RECREATION
- F \_\_\_\_\_ DINING
- G \_\_\_\_\_ MEDICAL
- H \_\_\_\_\_ WHEN I DON'T HAVE A CAR/WHEN CAR IS IN GARAGE
- I \_\_\_\_\_ OTHER (SPECIFY \_\_\_\_\_)

10. How much does it cost for a ride on the bus?

- A \_\_\_\_\_ MORE THAN \_\_\_\_\_¢
- B \_\_\_\_\_¢
- C \_\_\_\_\_ LESS THAN \_\_\_\_\_¢
- D \_\_\_\_\_ SENIOR CITIZEN RATE
- E \_\_\_\_\_ PASS/PUNCH CARD
- F \_\_\_\_\_ DON'T KNOW (GO TO 12)
- G \_\_\_\_\_ OTHER (GO TO 12)

11. Do you think this fare is:

- A \_\_\_\_\_ TOO MUCH
- B \_\_\_\_\_ NOT ENOUGH
- C \_\_\_\_\_ JUST RIGHT

D \_\_\_\_\_ DON'T KNOW

E \_\_\_\_\_ OTHER

12. How far do you live from the nearest bus route?

A \_\_\_\_\_ ONE OR TWO BLOCKS

B \_\_\_\_\_ THREE OR FOUR BLOCKS

C \_\_\_\_\_ QUARTER MILE TO HALF MILE

D \_\_\_\_\_ HALF MILE TO ONE MILE

E \_\_\_\_\_ ONE MILE OR MORE

F \_\_\_\_\_ DON'T KNOW (GO TO 14)

13. Would you use the bus more if the bus routes were closer?

A \_\_\_\_\_ YES

B \_\_\_\_\_ NO

C \_\_\_\_\_ DON'T KNOW

D \_\_\_\_\_ MAYBE

E \_\_\_\_\_ PROBABLY NOT

F \_\_\_\_\_ OTHER

14. Do you know how often the bus comes by?

A \_\_\_\_\_ YES

B \_\_\_\_\_ NO

C \_\_\_\_\_ DON'T KNOW (GO TO 16)

D \_\_\_\_\_ DOESN'T SEEM TO FOLLOW SCHEDULE/IT VARIES

E \_\_\_\_\_ OTHER (GO TO 16)

15. Would you use the bus more if it came by more frequently?

A \_\_\_\_\_ YES

B \_\_\_\_\_ NO

C \_\_\_\_\_ DON'T KNOW

D \_\_\_\_\_ MAYBE

E \_\_\_\_\_ PROBABLY NOT

F \_\_\_\_\_ OTHER

16. Does the bus system serve the areas to which you most frequently travel?

A \_\_\_\_\_ YES

B \_\_\_\_\_ NO

C \_\_\_\_\_ DON'T KNOW

17. Do you know how to obtain bus information?

A \_\_\_\_\_ YES

B \_\_\_\_\_ NO

C \_\_\_\_\_ DON'T KNOW

18. With the rising gas prices of the last few weeks, have you considered:

A \_\_\_\_\_ RIDING THE BUS?

B \_\_\_\_\_ GETTING IN A CARPOOL?

C \_\_\_\_\_ DRIVING LESS?

D \_\_\_\_\_ DO GAS PRICES AFFECT YOU?

Response:

A \_\_\_\_\_ DON'T KNOW

B \_\_\_\_\_ HAVEN'T THOUGHT ABOUT IT

C \_\_\_\_\_ OTHER

D \_\_\_\_\_ YES

E \_\_\_\_\_ NO

19. Do you think of the bus service as a viable, valuable energy conservation measure?

A \_\_\_\_\_ YES

B \_\_\_\_\_ NO

C \_\_\_\_\_ DON'T KNOW

20. What improvements would you like to see in the city bus system that would cause you to use the bus more often?

- A  LOWER FARES
- B  MORE CONVENIENT ROUTES
- C  CLOSER STOPS
- D  MORE FREQUENT SERVICE
- E  MORE BUS SHELTERS
- F  FASTER SERVICE
- G  MORE COURTEOUS DRIVERS
- H  EXPANDED SERVICE HOURS
- I  AVAILABLE CHANGE
- J  BETTER TRANSFER SYSTEM
- K  BETTER ROUTE AND SCHEDULE INFORMATION
- L  OTHER
- M  NO CHANGES NEEDED
- N  I WOULD NOT USE THE BUS IN ANY CASE

21. During the past year the transit authority has advertised its service in local newspapers and on radio stations:

Have you heard any \_\_\_\_\_ radio announcements?

- A  YES (GO TO QUESTION 22) OR THINK SO
- B  NO (GO TO QUESTION 23)
- C  DON'T KNOW (GO TO QUESTION 23)
- D  OTHER

("R" MAY ALSO ANSWER Q.23 HERE. IF SO, COMPLETE 23 AND GO TO Q.24.)

22. On which station(s) did you hear the announcements? (CHECK ALL THAT APPLY)

<u>LANSING</u>		<u>GR</u>		<u>KZOO</u>		<u>AA</u>		<u>SAGINAW</u>	
A	_____ WCER	A	_____ WCUZ	A	_____ WAOP	A	_____ WAAM	A	_____ W106
B	_____ WFMK	B	_____ WFFX	B	_____ WBUK	B	_____ WCBN	B	_____ WGER
C	_____ WILS	C	_____ WFUR	C	_____ WIDR	C	_____ WEMU	C	_____ WHNN
D	_____ WITL	D	_____ WCSG	D	_____ WKMI	D	_____ WIQB	D	_____ WKCQ
E	_____ WJIM	E	_____ WEHB	E	_____ WKPR	E	_____ WNRS	E	_____ WKNX
F	_____ WKAR	F	_____ WGRD	F	_____ WKZO	F	_____ WPAG	F	_____ WMPX
G	_____ WUNN	G	_____ WJBL	G	_____ WMLK	G	_____ WRCN	G	_____ WRCI
H	_____ WVIC	H	_____ WJFM	H	_____ WQLR	H	_____ WSDS	H	_____ WRDD
I	_____ OTHER	I	_____ WJPW	I	_____ WYYY	I	_____ WYFC	I	_____ WSAM
J	_____ DON'T KNOW	J	_____ WKWM	J	_____ OTHER	J	_____ OTHER	J	_____ WSGW
		K	_____ WLAV	K	_____ DON'T KNOW	K	_____ DON'T KNOW	K	_____ WWWS
		L	_____ WMAX					L	_____ WXOX
		M	_____ WOOD					M	_____ OTHER
		N	_____ WVGR					N	_____ DON'T KNOW
		O	_____ WYGR						
		P	_____ WZZM						
		Q	_____ OTHER						
		R	_____ DON'T KNOW						

23. Do you regularly listen to the radio?

- A \_\_\_\_\_ YES  
 B \_\_\_\_\_ NO  
 C \_\_\_\_\_ RADIO IS BROKEN OR DON'T HAVE RADIO  
 D \_\_\_\_\_ OTHER

24. Have you seen any \_\_\_\_\_ TV announcements?

- A \_\_\_\_\_ YES (GO TO QUESTION 25) OR THINK SO  
 B \_\_\_\_\_ NO (GO TO QUESTION 26)  
 C \_\_\_\_\_ DON'T KNOW (GO TO QUESTION 26)

("R" MAY ALSO ANSWER Q.26 HERE. IF SO, COMPLETE 26 AND GO TO Q.27.)

25. On which station(s) did you see the announcements? (CHECK ALL THAT APPLY)

<u>LANSING</u>		<u>GR</u>		<u>KZOO</u>		<u>AA</u>		<u>SAGINAW</u>	
A	WILX (Ch.10)	A	WOTV (Ch.8)	A	WKZO (Ch.3)	A	WTVS (Ch. 56)	A	WEYI (Ch.25)
B	WJIM (Ch.6)	B	WKZO (Ch. 3)	B	WUHQ (Ch.41)	B	WJIM (Ch. 6)	B	WJRT (Ch.12)
C	WJRT (Ch.12)	C	WUHQ (Ch.41)	C	WOTV (Ch.8)	C	WILX (Ch. 10)	C	WUCM (Ch.19)
D	WKAR (Ch. 23)	D	WZZM (Ch. 13)	D	WZZM (Ch.13)	D	WJBK (Ch. 2)	D	WNEM (Ch.5)
E	WUHQ (Ch. 41)	E	OTHER	E	OTHER	E	WDIV (Ch. 4)	E	OTHER
F	OTHER	F	DON'T KNOW	F	DON'T KNOW	F	WXYZ (Ch. 7)	F	DON'T KNOW
G	DON'T KNOW					G	OTHER		
						H	DON'T KNOW		

26. Do you regularly watch TV?

A  YES  
 B  NO  
 C  TV IS BROKEN OR DON'T HAVE TV  
 D  OTHER

27. Have you seen any \_\_\_\_\_ newspaper ads?

A  YES (GO TO QUESTION 28) OR THINK SO  
 B  NO (GO TO QUESTION 29)  
 C  DON'T KNOW (GO TO QUESTION 29)  
 D  OTHER

("R" MAY ALSO ANSWER Q.29 HERE. IF SO, COMPLETE 29 AND GO TO Q.30.)

28. In which of the papers did you see the ads? (CHECK ALL THAT APPLY)

<u>LANSING</u>		<u>GR</u>	
A	STATE JOURNAL	A	GRAND RAPIDS PRESS
B	MSU STATE NEWS	B	GRAND RAPIDS TIMES
C	E.L. TOWNE COURIER	C	GRAND VALLEY SHOPPERS' GUIDE
D	LANSING STAR	D	NORTH KENT LEADER
E	WHEELER DEALER	E	THE PHOTO REPORTER
F	OTHER	F	OTHER
G	DON'T KNOW	G	DON'T KNOW

KZOO

- A  KZOO GAZETTE
- B  PORTAGE HERALD-HEADLINER
- C  THREE RIVERS COMMERCIAL
- D  OTHER
- E  DON'T KNOW

AA

- A  A.A. NEWS
- B  E.M.U. EASTERN ECHO
- C  MICHIGAN DAILY
- D  YPSILANTI PRESS
- E  OTHER
- F  DON'T KNOW

SAGINAW

- A  SAGINAW NEWS
- B  OTHER
- C  DON'T KNOW

29. Do you regularly read a local newspaper?

- A  YES
- B  NO
- C  SOMETIMES
- D  OTHER

30. Are there any other places that you have seen, heard or read advertisements or information about the transit system?

- A  YES (GO TO QUESTION 31) OR THINK SO
- B  NO (GO TO QUESTION 32)
- C  DON'T KNOW (GO TO QUESTION 32)
- D  OTHER

31. Where?

- A  BILLBOARDS
- B  BULLETIN BOARDS
- C  DISPLAYS
- D  NEWS ARTICLES
- E  OTHER \_\_\_\_\_
- F  AD FOR STORES/INSTITUTIONS WHICH MENTION THAT THEY CAN BE REACHED BY BUS

32. Does \_\_\_\_\_ have special bus services for elderly people?

- A  YES
- B  NO
- C  THINK SO
- D  DON'T KNOW

33. Does \_\_\_\_\_ have special bus services for handicapped people?

- A  YES
- B  NO
- C  THINK SO
- D  DON'T KNOW

34. What is your usual means of transportation?

- A  CAR
- B  BUS
- C  DART
- D  TAXI
- E  FRIENDS OR RELATIVES TAKE ME
- F  BIKE, MOTORCYCLE
- G  SENIOR CITIZEN'S OR HANDICAPPER VAN
- H  USUALLY WALK
- I  HITCHHIKE
- J  OTHER \_\_\_\_\_
- K  I GO A VARIETY OF WAYS

35. How many automobiles does your household have?

- A  1
- B  2
- C  3
- D  4 or more
- E  0

36. Is a vehicle normally available for your use?

- A  YES
- B  NO
- C  SOMETIMES
- D  OTHER

37. Which of these age groups are you in?

- A  OLDER THAN 60 YEARS
- B  BETWEEN 40 AND 60 YEARS
- C  BETWEEN 21 AND 39 YEARS
- D  BETWEEN 16 AND 20 YEARS
- E  NO RESPONSE

38. What is your occupation?

- A  GENERAL OFFICE/CLERICAL
- B  MANAGEMENT
- C  GOVERNMENT
- D  UNIVERSITY
- E  PROPRIETOR
- F  PROFESSIONAL
- G  SALES
- H  SKILLED/SEMI-SKILLED
- I  TECHNICAL
- J  SERVICE WORKER
- K  UNSKILLED LABOR
- L  HIGH SCHOOL OR COLLEGE STUDENT
- M  HOMEMAKER
- N  RETIRED
- O  NOT EMPLOYED
- P  OTHER
- Q  REFUSED

That was my last question . . . thank you so much for your time! Good-bye!

APPENDIX B  
ANN ARBOR  
TELEPHONE EXCHANGES SURVEYED

<u>Exchange Prefix</u>	<u>Numbers Called</u>	
	<u>Pre-Survey</u>	<u>Post-Survey</u>
429	180	
434	72	
481	14	
482	73	
483	50	
484	10	
485	43	
487	24	
495	7	
662	253	566
663	249	574
665	155	526
668	135	282
761	87	253
769	132	424
971	224	
973	114	
994	181	
995	94	
Totals	2,097	2,625

APPENDIX C

ANN ARBOR  
INTERVIEW SAMPLING RESULTS

	<u>Pre-Survey</u>	<u>Post-Survey</u>
Start Date	March 6, 1980	November 13, 1981
Finish Date	March 18, 1980	November 24, 1981
Ratio	1:20	1:20
Interviews Taken	1,193	1,000
Disconnected or Changed	183	541
Refusals	180	206
Businesses*	21	110
No Answer**	<u>520</u>	<u>768</u>
Numbers Called	2,097	2,625

\*Businesses were not included in the surveys.

\*\*Numbers tried three times with no answer.

APPENDIX D

OTHER MEMBERS' TRANSIT USAGE

<u>Other Members' Transit Usage</u>		<u>Bus Rider Usage</u>					<u>Non- riders</u>	<u>Total Respondents</u>
		<u>Heavy</u>	<u>Moderate</u>	<u>Light</u>	<u>Other</u>			
		<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	
Yes	Pre	42	50	38	35	14	24	
	Post	44	46	41	49	20*	29	
No	Pre	57	48	59	65	84	74	
	Post	52	54	55	44	76	67	
Don't know	Pre	1	2	3	0	2	2	
	Post	4	0	4	7	4	4	
Totals	Pre	100% (N = 97)	100% (N = 42)	100% (N = 193)	100% (N = 37)	100% (N = 612)	100% (N = 981)	
	Post	100% (N = 62)	100% (N = 54)	100% (N = 147)	100% (N = 80)	100% (N = 578)	100% (N = 921)	

\*There is a significant difference at the .05 level between the pre and post "yes" response for nonriders. Significantly more post-survey nonriders reported that other household members had used the bus service, compared to pre-survey results.

APPENDIX E  
WHO OTHER MEMBER?

Who Other Member?		<u>Bus Rider Usage</u>					Non-riders	Total Respondents
		<u>Heavy</u>	<u>Moderate</u>	<u>Light</u>	<u>Other</u>			
		<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	
Husband/wife	Pre	20	24	21	23	30	25	
	Post	22	29	30	38	25	29	
Son/daughter/ children	Pre	39	10	34	38	46	38	
	Post	34	10	34	38	51	39	
Mother/father	Pre	0	9	3	0	6	4	
	Post	0	9	10	3	3	5	
Roommate	Pre	19	33	23	8	10	17	
	Post	22	33	16	17	15	18	
Other	Pre	22	24	19	31	8	16	
	Post	<u>22</u>	<u>19</u>	<u>10</u>	<u>4</u>	<u>6</u>	<u>9</u>	
Totals	Pre	100% (N = 41)	100% (N = 21)	100% (N = 74)	100% (N = 13)	100% (N = 87)	100% (N = 236)	
	Post	100% (N = 18)	100% (N = 21)	100% (N = 50)	100% (N = 29)	100% (N = 93)	100% (N = 211)	

APPENDIX F  
OFTEN OTHER MEMBERS?

		<u>Bus Rider Usage</u>				Non-riders	Total Respondents
		Heavy	Moderate	Light	Other		
<u>Often Other Members?</u>		<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
Heavy usage	Pre	76	23	24	16	30	35
	Post	52	19	27	16	30	28
Moderate usage	Pre	7	29	16	8	23	18
	Post	18	65	11	5	17	19
Light usage	Pre	12	48	57	23	40	40
	Post	11	4	52	5	24	25
Other usage	Pre	5	0	3	53	7	7
	Post	<u>19</u>	<u>12</u>	<u>10</u>	<u>74</u>	<u>29*</u>	<u>28</u>
Totals	Pre	100% (N = 41)	100% (N = 21)	100% (N = 74)	100% (N = 13)	100% (N = 87)	100% (N = 236)
	Post	100% (N = 27)	100% (N = 26)	100% (N = 62)	100% (N = 38)	100% (N = 117)	100% (N = 270)

\*Among nonriders there is a significant difference at the .05 level between the pre and post "other usage" response. Significantly more post-survey nonriders reported "other usage" by other household members, compared to pre-survey results.

APPENDIX G

OTHER MEMBERS' TRIP PURPOSE?

(First Choice) Other Member's Trip Purpose		Bus Rider Usage					Non- riders	Total Respondents
		Heavy %	Moderate %	Light %	Other %			
Work	Pre	27	33	27	23	28	27	
	Post	33	19	14	23	26	24	
Personal business	Pre	0	0	4	0	2	2	
	Post	8	15	10	13	5	8	
Shopping	Pre	37	43	38	31	39	39	
	Post	26	50	42	38	36	38	
School	Pre	25	9	17	15	15	17	
	Post	33	16	23	5	20	19	
Visits or recreation	Pre	7	5	7	8	6	6	
	Post	0	0	3	10	8	6	
Medical	Pre	2	5	3	8	5	4	
	Post	0	0	2	3	0	1	
When I don't have a car/ When car is in garage	Pre	0	5	3	15	2	3	
	Post	0	0	3	3	5	3	
Other	Pre	2	0	1	0	3	2	
	Post	0	0	3	5	0	1	
Totals	Pre	100% (N = 41)	100% (N = 21)	100% (N = 74)	100% (N = 13)	100% (N = 87)	100% (N = 236)	
	Post	100% (N = 27)	100% (N = 26)	100% (N = 62)	100% (N = 39)	100% (N = 117)	100% (N = 271)	

APPENDIX H  
CONSIDERED RIDING THE BUS?

Considered Riding the Bus?		Bus Rider Usage					Non-riders	Total Respondents
		Heavy	Moderate	Light	Other			
		<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	
Don't know	Pre	0	0	1	0	1	1	
	Post	0	0	0	0	0	0	
Haven't thought about it	Pre	1	2	1	0	2	2	
	Post	5	13	7	13	6	7	
Other	Pre	13	7	4	3	4	5	
	Post	11	5	1	2	2	3	
Yes	Pre	63	72	54	59	33	43	
	Post	66	62	51	46	31	40	
No	Pre	23	19	40	38	60	49	
	Post	<u>18</u>	<u>20</u>	<u>41</u>	<u>39</u>	<u>61</u>	<u>50</u>	
Totals	Pre	100% (N = 97)	100% (N = 42)	100% (N = 193)	100% (N = 37)	100% (N = 614)	100% (N = 983)	
	Post	100% (N = 62)	100% (N = 56)	100% (N = 151)	100% (N = 80)	100% (N = 576)	100% (N = 925)	

APPENDIX I

CONSIDERED GETTING IN A CARPOOL?

Considered Getting in a Carpool?		Bus Rider Usage				Non-riders	Total Respondents
		Heavy %	Moderate %	Light %	Other %		
Dont' know	Pre	0	0	2	0	0	0
	Post	0	0	0	0	1	0
Haven't thought about it	Pre	1	5	1	0	1	1
	Post	18	10	9*	15	5*	8
Other	Pre	9	5	4	8	4	5
	Post	3	2	1	4	1*	1
Yes	Pre	23	28	32	22	39	35
	Post	16	11	20	22	25*	23
No	Pre	67	62	61	70	56	59
	Post	63	77	70	59	68	68
Totals	Pre	100% (N = 97)	100% (N = 42)	100% (N = 193)	100% (N = 37)	100% (N = 614)	100% (N = 983)
	Post	100% (N = 62)	100% (N = 56)	100% (N = 151)	100% (N = 80)	100% (N = 576)	100% (N = 925)

\*There is a significant difference between the pre and post "haven't thought about it" response for light users (.01 level) and nonriders (.001 level). Also among nonriders there is a significant difference between the "other" response (.05 level) and "yes" response (.001 level).

APPENDIX J

CONSIDERED DRIVING LESS?

<u>Considered Driving Less?</u>		<u>Bus Rider Usage</u>					<u>Non-riders</u>	<u>Total Respondents</u>
		<u>Heavy</u> <u>%</u>	<u>Moderate</u> <u>%</u>	<u>Light</u> <u>%</u>	<u>Other</u> <u>%</u>	<u>%</u>		
Haven't thought about it	Pre	0	0	0	0	0	0	
	Post	16	7	4	10	1	4	
Other	Pre	14	5	7	8	4	6	
	Post	6	11	6	14	3	5	
Yes	Pre	69	71	73	46	78	75	
	Post	52	50	64	55	75	68	
No	Pre	17	24	20	46	18	19	
	Post	<u>26</u>	<u>32</u>	<u>26</u>	<u>21</u>	<u>21</u>	<u>23</u>	
Totals	Pre	100% (N = 97)	100% (N = 42)	100% (N = 193)	100% (N = 37)	100% (N = 614)	100% (N = 983)	
	Post	100% (N = 62)	100% (N = 56)	100% (N = 151)	100% (N = 80)	100% (N = 576)	100% (N = 925)	

APPENDIX K

DO GAS PRICES AFFECT YOU?

<u>Do Gas Prices Affect You?</u>		<u>Bus Rider Usage</u>				<u>Non-riders</u>	<u>Total Respondents</u>
		<u>Heavy*</u>	<u>Moderate</u>	<u>Light</u>	<u>Other</u>		
		<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
Haven't thought about it	Pre	1	0	2	0	2	2
	Post	3	2	5	6	1	2
Other	Pre	9	2	4	3	3	4
	Post	3	4	1	1	1	2
Yes	Pre	74	79	78	84	85	82
	Post	57	55	69	67	76	71
No	Pre	16	19	16	13	10	12
	Post	<u>37</u>	<u>39</u>	<u>25</u>	<u>26</u>	<u>22*</u>	<u>25</u>
Totals	Pre	100% (N = 97)	100% (N = 42)	100% (N = 193)	100% (N = 37)	100% (N = 614)	100% (N = 983)
	Post	100% (N = 62)	100% (N = 56)	100% (N = 149)	100% (N = 80)	100% (N = 576)	100% (N = 923)

\*There is a significant difference at the .05 level between the two surveys due to a change in the distribution of heavy user responses. Pre to post changes were noted for the "yes" and "no" responses. Nonriders witnessed a significant difference at the .001 level between the pre and post "no" response. This indicates that post-survey heavy users and nonriders were less affected by gasoline prices, than pre-survey results indicated.

APPENDIX L

ENERGY CONSERVATION MEASURE

		<u>Bus Rider Usage</u>						
<u>Energy Measure</u>		<u>Heavy</u>	<u>Moderate</u>	<u>Light</u>	<u>Other</u>	<u>Non-riders</u>	<u>Total Respondents</u>	
		<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	
Yes	Pre	92	98	96	95	93	94	
	Post	98	91	93	93	89	90	
No	Pre	3	2	2	5	4	3	
	Post	2	4	4	6	6	6	
Don't know	Pre	5	0	2	0	3	3	
	Post	<u>0</u>	<u>5</u>	<u>3</u>	<u>1</u>	<u>5</u>	<u>4</u>	
Totals	Pre	100% (N = 97)	100% (N = 42)	100% (N = 193)	100% (N = 37)	100% (N = 614)	100% (N = 983)	
	Post	100% (N = 61)	100% (N = 55)	100% (N = 149)	100% (N = 80)	100% (N = 577)	100% (N = 922)	

APPENDIX M

SEX BY USAGE

		<u>Bus Rider Usage</u>					<u>Non-</u>	<u>Total</u>
<u>Sex</u>		<u>Heavy</u>	<u>Moderate</u>	<u>Light</u>	<u>Other</u>	<u>riders</u>	<u>Respondents</u>	
		<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	
Male	Pre	41	24	41	43	40	39	
	Post	31	29	32	39	33*	33	
Female	Pre	59	76	59	57	60	61	
	Post	<u>69</u>	<u>71</u>	<u>68</u>	<u>61</u>	<u>67</u>	<u>67</u>	
Totals	Pre	100%	100%	100%	100%	100%	100%	
		(N = 97)	(N = 42)	(N = 193)	(N = 37)	(N = 613)	(N = 982)	
	Post	100%	100%	100%	100%	100%	100%	
		(N = 62)	(N = 55)	(N = 150)	(N = 79)	(N = 580)	(N = 926)	

\*There is a significant difference at the .05 level between the pre and post percentage of male nonriders. Significantly fewer males were interviewed during the post-survey than was the case during the pre-survey.

APPENDIX N

SEX BY AGE

<u>Sex</u>		<u>Age Groups</u>				
		<u>16-20</u>	<u>21-39</u>	<u>40-60</u>	<u>Older than</u>	<u>No</u>
		<u>Years</u>	<u>Years</u>	<u>Years</u>	<u>60 Years</u>	<u>Response</u>
		<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
Male	Pre	43	44	32	29	25
	Post	47	39	22	28	0
Female	Pre	57	56	68	71	75
	Post	<u>53</u>	<u>61</u>	<u>78</u>	<u>72</u>	<u>100</u>
Totals	Pre	100%	100%	100%	100%	100%
		(N = 99)	(N = 659)	(N = 220)	(N = 158)	(N = 4)
	Post	100%	100%	100%	100%	100%
		(N = 102)	(N = 448)	(N = 232)	(N = 213)	(N = 2)

APPENDIX O

AGE BY USAGE

		<u>Bus Rider Usage</u>						
<u>Age Group</u>		<u>Heavy*</u> <u>%</u>	<u>Moderate</u> <u>%</u>	<u>Light*</u> <u>%</u>	<u>Other</u> <u>%</u>	<u>Non-riders</u> <u>%</u>	<u>Total Respondents</u> <u>%</u>	
16-20 years	Pre	9	31	15	11	6	9	
	Post	16	21	18	11	6	10	
21-39 years	Pre	66	47	63	62	61	58	
	Post	44	38	48	56	45*	45	
40-60 years	Pre	12	5	13	22	20	19	
	Post	14	21	18	15	27	23	
Older than 60 years	Pre	13	17	9	5	13	14	
	Post	<u>26</u>	<u>20</u>	<u>16</u>	<u>18</u>	<u>22*</u>	<u>22</u>	
Totals	Pre	100% (N = 97)	100% (N = 42)	100% (N = 193)	100% (N = 37)	100% (N = 614)	100% (N = 983)	
	Post	100% (N = 62)	100% (N = 56)	100% (N = 151)	100% (N = 80)	100% (N = 580)	100% (N = 929)	

\*There is a significant difference at the .05 level between the two surveys due to a change in the distribution of responses for heavy and light users. Also, among nonriders, there is a significant difference between the pre and post responses for 21-39 years (.005 level) and the older than 60 years (.01 level). Compared to pre-survey results, fewer post-survey respondents were between the ages of 21-39, while more were noted older than 60 years.

APPENDIX P  
OCCUPATION BY SEX

<u>(First Choice)</u> <u>Occupations</u>	Sex			
	<u>Pre (%)</u>	<u>Male</u> <u>Post (%)</u>	<u>Pre (%)</u>	<u>Female</u> <u>Post (%)</u>
General office/clerical	1	0	7	5
Management	4	2	2	1
Government	1	1	1	1
University	4	5	2	2
Proprietor	2	3	1	1
Professional	17	13	17	13
Sales	5	5	3	3
Skilled/semi-skilled	4	4	2	1
Technical	7	6	2	2
Service worker	3	3	4	4
Unskilled labor	5	0	2	1
High school or college student	36	39	19	18
Homemaker	0	0	23	27
Retired	8	17	13	20
Not employed	<u>3</u>	<u>2</u>	<u>2</u>	<u>1</u>
Totals	100% (N = 438)	100% (N = 323)	100% (N = 681)	100% (N = 651)

## APPENDIX Q

OCCUPATION BY AGE

<u>(First Choice)</u> <u>Occupations</u>		<u>Age Groups</u>				
		<u>16-20</u> <u>Years</u>	<u>21-39</u> <u>Years</u>	<u>40-60</u> <u>Years</u>	<u>Older than</u> <u>60 Years</u>	<u>No</u> <u>Response</u>
		<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
General office/ clerical	Pre	2	5	5	2	0
	Post	2	4	5	1	0
Management	Pre	1	3	4	1	0
	Post	0	2	2	0	0
Government	Pre	0	1	1	1	0
	Post	0	1	1	0	0
University	Pre	0	2	7	2	0
	Post	0	3	6	1	0
Proprietor	Pre	0	1	4	0	0
	Post	0	2	4	1	0
Professional	Pre	1	21	23	3	0
	Post	0	21	13	2	0
Sales	Pre	1	5	3	0	25
	Post	4	3	5	2	0
Skilled/ semi-skilled	Pre	1	3	4	1	0
	Post	0	2	5	1	0
Technical	Pre	0	5	3	1	0
	Post	1	6	2	0	0
Service worker	Pre	4	4	3	2	25
	Post	6	4	5	2	0
Unskilled labor	Pre	1	3	8	0	0
	Post	2	1	0	0	0
High school or college student	Pre	83	32	2	1	0
	Post	82	35	3	0	0
Homemaker	Pre	2	13	30	8	50
	Post	1	14	41	9	0
Retired	Pre	0	0	1	77	0
	Post	0	0	6	81	0
Not employed	Pre	4	2	2	1	0
	Post	<u>2</u>	<u>2</u>	<u>2</u>	<u>0</u>	<u>0</u>
Totals	Pre	100% (N = 98)	100% (N = 647)	100% (N = 214)	100% (N = 158)	100% (N = 4)
	Post	100% (N = 101)	100% (N = 442)	100% (N = 224)	100% (N = 210)	0% (N = 0)