

Iowa City Transit
On-Board Ridership Survey

Prepared by the Johnson County Council of Governments

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TABLE OF CONTENTS:

Introduction. 1
Survey Design and Sampling Methodology. 3
Results 4
Summary 14
Appendix. 15

INTRODUCTION:

Iowa City Transit provides fixed route transit service on 14 routes Monday through Saturday, from 6 a.m. to 10:30 p.m. On most routes Monday through Friday service is at half-hour headways and at hourly headways on Saturday. Night service is hourly Monday through Saturday. The base fare is 50¢ and an unlimited ride monthly pass is available for \$18.

For the past several years Iowa City Transit has been experiencing annual operating deficits due to declining ridership and increasing operating costs. This resulted in a decision by the Iowa City City Council in February 1987 to implement the following service reductions:

1. Cut Saturday night service after 7:00.
2. Reduce mid-day service 50%.
3. Reduce night service 50%.
4. Reduce Seventh Avenue route service 50%.
5. Combine North Dubuque and Manville Heights routes.
6. Increase price of monthly pass and Saturday fare.

The intention of this survey is two-fold. First, it is desired to collect general information pertaining to the characteristics of Iowa City Transit users and to learn the perceptions users have of the system. Accordingly, a questionnaire (Figure 1) was developed to address the following specific points:

1. How often do people ride the bus each week?
2. For what purpose do they ride?
3. Of what significance is transit to CBD shopping activity?
4. How do people pay their fare?
5. What is the main reason people ride Iowa City Transit?
6. What are riders' perceptions of Iowa City Transit?
7. What is the age and income distribution of persons who ride Iowa City Transit?

The second purpose of the survey is to record "before" information prior to the service reductions being implemented on July 1, 1987. This will allow the survey to be given again next year and a comparison made to assess the impacts of the service reductions.

On-Board Survey 1987

Iowa City Transit is conducting a survey of bus riders. Please take a few minutes to complete this survey, and place it in the containers provided at the front and rear of the bus as you leave. If you have previously completed this survey, you need not complete another one. Thank you for your cooperation.

1. How often do you ride the bus? (One-way trips)
 Once a week 2-4 5-7 8-10 10+

2. (a) What is the primary purpose of your trip? (Check one)
 Work Shopping Recreation
 School Medical Other _____

- (b) If you answered "Shopping" in part (a), how much do you expect to spend while shopping today?
 Less than \$10 \$10-\$49 \$50-\$74 \$75+

- (c) If you answered that your primary trip purpose is other than shopping, but also expect to do some shopping today, how much do you expect to spend?
 Less than \$10 \$10-\$49 \$50-\$74 \$75+

3. How did you pay your fare?
 Cash Monthly Pass Other _____
 Transfer Strip Ticket

4. What is your main reason for choosing to ride the bus? (Check one)
 I have no other means of transportation.
 I feel it is more economical to ride the bus.
 Parking is a problem.
 I prefer not to cope with traffic.
 I think the bus is better for the environment.
 The bus is more convenient.
 Other reasons _____

5. How do you rate the following aspects of Iowa City Transit?

	<u>Very Good</u>	<u>Good</u>	<u>Fair</u>	<u>Poor</u>	<u>Very Poor</u>
a. Frequency of buses	_____	_____	_____	_____	_____
b. Schedule reliability	_____	_____	_____	_____	_____
c. Amount of fare	_____	_____	_____	_____	_____
d. Walking distance to bus stop	_____	_____	_____	_____	_____
e. Driver courtesy	_____	_____	_____	_____	_____

6. What is your age?
 Under 18 18-25 26-60 60+

7. What is your approximate family income?
 Under \$10,000 \$10,000-\$19,999 \$20,000-\$39,999 \$40,000+

8. Additional Comments: _____

SURVEY DESIGN & SAMPLING METHODOLOGY

Sampling theory is based on the concept that to assess the characteristics of a given population, it is not necessary to survey the entire population. A sample, selected in a statistically valid manner, will provide an accurate representation of the population as a whole.

The population to be surveyed for this project was persons who ride Iowa City Transit during the week from 6:00 a.m. to 6:00 p.m. The sample size was developed from the total number of weekday transit trips, and separated into the various routes by using the actual average daily ridership by route pair. A 20% sample was selected and yielded 62 trips to be surveyed.

The number of trips to be surveyed during peak periods and off-peak periods was determined by using the actual number of transit trips during each of these periods: 70% peak and 30% off-peak. This resulted in 43 peak period trips and 19 off-peak period trips to be surveyed. The number of trips to be surveyed on each route pair was then calculated based on the route pair's percentage of average daily ridership. Peak period surveying was done entirely in the AM peak so that the data reflected persons traveling into the CBD.

The survey was conducted by JCCOG staff and Iowa City Transit operators on Wednesday, March 18, and Thursday, March 19, 1987. Each passenger was given a questionnaire when boarding the bus and was asked to complete it while on board. The questionnaires were collected at the end of each trip and coded with the route name and departure time of the trip. A total of 1,420 questionnaires were distributed during the two days. The number returned was 1,340, a response rate of 94.4%.

RESULTS:
Q-1 How often do you ride the bus?

Overall Response

	<u>Freq.</u>	<u>%</u>
Once/week	72	5
2-4/week	167	13
5-7/week	292	22
8-10/week	361	27
10+/week	441	33
	<u>1333</u>	<u>100</u>

The responses to this question indicate most users of Iowa City Transit ride the system on a regular basis. 82% of the respondents use Iowa City Transit at least five times a week.

Specific information was calculated relating how often persons who use monthly passes ride the bus. 83% of the persons using monthly passes indicated they ride at least eight times per week. 97% ride at least five times per week.

Specific information was calculated relating frequency of usage and income level. The analysis shows nearly half the respondents ride ICT at least five times per week and have a family income of less than \$20,000/year. 34% ride at least five times a week and have a family income of \$20,000/year or more.

Specific information was calculated relating frequency of usage and age. 46% of the persons responding indicated they ride at least five times a week and are between the ages of 26 and 60. 25% ride at least five times a week and are between the ages of 18 and 25.

The crosstabulation tables containing the above information are included in the appendix.

RESULTS:

Q-2 What is the primary purpose of your trip?

<u>Overall Response</u>		
	<u>Freq.</u>	<u>%</u>
Work	697	52
School	592	44
Shopping	26	2
Medical	2	<1
Recreation	13	1
Other	7	1
	<u>1,337</u>	<u>100</u>

Response to this question shows overwhelmingly that persons are using Iowa City Transit to travel to work and to school. When controlled for age the data indicates most "school" respondents are of college age (18-25), and most "work" respondents are between 26 and 60.

Of the 2% of the respondents indicating shopping as their primary trip purpose, 60% said they would be spending between \$10 and \$49. 32% said they would spend less than \$10. Over half of the survey respondents (54%) indicated that shopping was not their primary trip purpose, but that they would be doing some shopping during the day. Most (72%) said they would spend less than \$10. The shopping trends were the same when the data were controlled for persons going to work and for persons going to school (see appendix for crosstabulation tables).

The data for persons travelling to work were also controlled for income and indicated a fairly even distribution across the income scale:

Income Level of Persons Using ICT to Travel to Work

	<u>Freq.</u>	<u>%</u>
Under \$10,000	109	17
\$10-\$19,999	177	27
\$20-39,999	240	36
\$40,000+	132	20
	<u>648</u>	<u>100</u>

RESULTS:
Q-3 How did you pay your fare?

Overall Response

	<u>Freq.</u>	<u>%</u>
Cash	584	44
Monthly pass	697	52
Transfer	15	1
Strip ticket	29	2
Other	9	1
	<u>1334</u>	<u>100</u>

The responses indicate a majority (52%) of riders using a monthly pass to pay their fare. 96% of the respondents used either a monthly pass or cash to pay their fare.

The "other" responses consisted of eight persons using an elderly or handicapped pass and one Bus & Shop validation.

RESULTS:

Q-4 What is your main reason for riding the bus?

Overall Response

	<u>Freq.</u>	<u>%</u>
I have no other means of transportation	467	27
Parking is a problem	398	23
I feel it is more economical to ride the bus	341	19
The bus is more convenient	320	18
The bus is better for the environment	92	5
I prefer not to cope with traffic	83	5
Other	46	3
	<u>1747</u>	<u>100</u>

The existence of transit-dependent persons is indicated here, with 27% of the survey respondents indicating they have no other means of transportation besides ICT. Financial considerations, convenience, and parking problems were the other primary reasons listed for using ICT. Traffic and environmental considerations were of less importance.

The total number of responses is greater than the number of persons surveyed because some respondents checked more than one item. Although this may over-represent the frequency of one response versus another, it still indicates the primary reasons persons are utilizing ICT.

RESULTS:

Q-5 How do you rate the following aspects of ICT?

The following responses indicate a favorable user perception of Iowa City Transit.

a. Frequency of Buses

	<u>Freq.</u>	<u>%</u>
Very good	724	55
Good	461	35
Fair	117	9
Poor	19	1
Very poor	5	<1
	<u>1,326</u>	<u>100</u>

90% of the respondents indicated the frequency (headway) of ICT buses is good or very good.

b. Schedule Reliability

	<u>Freq.</u>	<u>%</u>
Very good	788	60
Good	441	33
Fair	82	6
Poor	10	1
Very poor	2	<1
	<u>1,323</u>	<u>100</u>

93% of the respondents indicated ICT's schedule reliability is good or very good.

c. Amount of Fare

	<u>Freq.</u>	<u>%</u>
Very good	443	34
Good	537	41
Fair	291	22
Poor	39	3
Very poor	7	<1
	<u>1,317</u>	<u>100</u>

75% of the respondents indicated the fare level is good or very good.

d. Walking Distance to Bus Stop

	<u>Freq.</u>	<u>%</u>
Very good	833	63
Good	398	30
Fair	68	5
Poor	14	1
Very poor	6	1
	<u>1,319</u>	<u>100</u>

93% of the respondents indicated the distance they are required to walk to the bus stop is not unreasonable (good or very good).

e. Driver Courtesy

	<u>Freq.</u>	<u>%</u>
Very good	618	47
Good	517	40
Fair	144	11
Poor	25	2
Very poor	6	<1
	<u>1,310</u>	<u>100</u>

87% of the respondents indicated driver courtesy is good or very good.

RESULTS:
Q-6 What is your age?

	<u>Freq.</u>	<u>%</u>
Under 18	123	9
18-25	418	31
26-60	745	56
60+	48	4
	<u>1334</u>	<u>100</u>

The majority of persons utilizing Iowa City Transit are between the ages of 26 and 60. Only 9% are under age 18.

RESULTS:

Q-7 What is your approximate family income?

<u>Overall Response</u>		
	<u>Freq.</u>	<u>%</u>
Under \$10,000	404	32
\$10,000-\$19,999	314	25
\$20,000-\$39,999	330	26
\$40,000+	201	16
	<u>1249</u>	<u>100</u>

There is a relatively broad spectrum of income levels among persons utilizing ICT. 57% have family incomes of less than \$20,000 per year.

Specific information was calculated relating income level to transit dependency (those who answered "I have no other means of transportation" to question #4). The information indicates transit dependent persons tend toward the lower end of the income scale. 44% of transit dependent persons have family incomes of less than \$10,000.

<u>Income Levels of Transit Dependent Persons</u>		
	<u>Freq.</u>	<u>%</u>
Under \$10,000	190	44
\$10,000-\$19,999	97	23
\$20,000-\$39,999	78	18
\$40,000+	67	15
	<u>432</u>	<u>100</u>

Specific information was calculated relating income level to elderly persons who use Iowa City Transit. The responses indicate a broad range of income levels for persons over 60 years of age who use ICT.

<u>Income Levels of Respondents at least 60 Years of Age</u>		
	<u>Freq.</u>	<u>%</u>
Under \$10,000	11	26
\$10,000-\$19,999	11	26
\$20,000-\$39,999	16	37
\$40,000+	5	11
	<u>43</u>	<u>100</u>

SURVEY COMMENTS

Questionnaire respondents were given the opportunity to comment on any aspect of the system. 488 comments were received, and all with a frequency of at least three are listed following. Nearly half of the comments were either that the proposed service cuts should not be implemented, or that Iowa City Transit is a very good system. Also notable are certain comments which had a low response frequency. For example, only three persons commented that more bus shelters are needed.

	<u>Frequency</u>
1. The proposed service cuts should not be implemented.	114
2. The bus system is very good.	100
3. Would support increased fares.	29
4. If service reductions are implemented I will not ride the bus.	26
5. Bus service should be increased, not reduced.	21
6. Bus drivers are rude.	20
7. Buses should operate on Sundays.	18
8. Bus drivers are courteous.	17
9. Bus drivers are reckless.	16
10. Hourly service on Saturday is an inconvenience.	15
11. Night service should operate later/more frequently.	15
12. Transit is a needed/essential public service.	15
13. Fares should not be raised.	13
14. Fares should be reduced.	6
15. The proposed service cuts are justified.	6
16. Buses do not run on schedule.	6
17. Need more advertising about the benefits of transit.	5

18. Depend on bus service to get to work. 4
19. Buses are too crowded. 4
20. Iowa City Transit should combine with CAMBUS. 3
21. Older people need the bus. 3
22. The bus is better for the environment. 3
23. Need more bus shelters. 3

SUMMARY:

- * Most riders are regular users: 82% of the people who ride Iowa City Transit use the system at least five times a week.
- * The most predominant use of Iowa City Transit is for persons going to work or to school.
- * Most persons using ICT to go to school are college age.
- * Very few persons use Iowa City Transit when their primary trip purpose is to go shopping, but over half of ICT riders do some shopping as a secondary activity.
- * There is a wide range of income levels for persons using ICT, although over half have family incomes of less than \$20,000 per year.
- * Persons using ICT to travel to work, and persons over age 60 tend to be in the middle income categories (family income \$10,000-\$40,000).
- * 27% of the ICT riders are "transit dependent," i.e., they have no other means of transportation besides Iowa City Transit. Nearly half of the persons indicating they are transit dependent have family incomes of \$10,000 per year or less.
- * Most persons pay their fare with cash (44%) or a monthly pass (52%).
- * Environmental and traffic concerns are not primary reasons that people use ICT.
- * The user perception of ICT with regard to frequency of bus service, schedule reliability, amount of fare, walking distance to bus stops, and driver courtesy is quite favorable.
- * Most people who ride ICT (87%) are between age 18 and 60. School children and retired persons make up a small percentage.
- * When given the opportunity to comment on any aspect of ICT, most persons responded that it is a good system and service should not be reduced.

APPENDIX:

Crosstabulation Tables

Frequency of Use x Use Monthly Pass

---Use Monthly Pass---

	<u>Freq.</u>	<u>%</u>
Once/week	1	<1
2-4	17	2
5-7	102	15
8-10	207	30
10+	368	53
<u>Total</u>	<u>695</u>	<u>100</u>

Frequency of Use x Income Level

---Income---

	<u><\$10,000</u>	<u>\$10-19,999</u>	<u>\$20-39,999</u>	<u>\$40,000+</u>
Once/Wk.	20	11	24	12
2-4	52	34	43	26
5-7	70	65	69	57
8-10	91	89	104	60
10+	170	113	90	46
<u>Total (%)</u>	<u>403 (32)</u>	<u>312 (25)</u>	<u>330 (27)</u>	<u>201 (16)</u>

Frequency of Use x Age

---Age---

	<u><18</u>	<u>18-25</u>	<u>26-60</u>	<u>60+</u>
Once/Wk.	4	29	36	3
2-4	10	55	90	12
5-7	32	83	164	12
8-10	22	103	232	3
10+	55	147	220	18
<u>Total (%)</u>	<u>123 (9)</u>	<u>417 (31)</u>	<u>742 (56)</u>	<u>46 (4)</u>

Trip Purpose "Work" x Also Will Shop

	<u>Freq.</u>	<u>%</u>
Under \$10	247	67
\$10-\$49	115	31
\$50-\$74	8	2
\$75+	1	<1
<u>Total</u>	<u>371</u>	<u>100</u>

Trip Purpose "School" x Also Will Shop

	<u>Freq.</u>	<u>%</u>
Under \$10	265	78
\$10-\$49	75	22
\$50-\$74	1	<1
\$75+	0	0
<u>Total</u>	<u>341</u>	<u>100</u>

Trip Purpose "Work" x Age

	<u>Freq.</u>	<u>%</u>
Under 18	114	19
18-25	292	50
26-60	185	31
60+	0	0
<u>Total</u>	<u>591</u>	<u>100</u>

Trip Purpose "School" x Age

	<u>Freq.</u>	<u>%</u>
Under 18	5	1
18-25	110	16
26-60	547	79
60+	32	4
<u>Total</u>	<u>694</u>	<u>100</u>

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