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Portland Self-Service Fare Collection Evaluation Implementation Technical Memorandum: Pre- Implementation Data Collection and Analysis

Transportation Systems Center

Peat, Marwick, Mitchell & Co.

Tri-County Metropolitan Transportation District of Oregon

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PORTLAND SELF-SERVICE FARE COLLECTION
EVALUATION IMPLEMENTATION

TECHNICAL MEMORANDUM



Peat, Marwick, Mitchell & Co.

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I. OVERVIEW

The evaluation of the self-service fare collection demonstration has three principal purposes. The first is to determine how well, or to what extent, the project accomplished its stated objectives. The second is to measure the impacts of the project on the transit operator, transit users, persons who do not use transit, and the general community. The third purpose is to explain why the project succeeded or failed and why certain effects occurred while others did not. The latter is particularly important for determining the legal, institutional, social, and political circumstances under which a similar project would work in other areas or its transferability.

OBJECTIVES

This memorandum describes data collection activities undertaken by Tri-Met and its contractors prior to implementation of self-service fare collection and presents the preliminary analyses of this data. Analyzing the pre-implementation data at an early enough stage will permit the Transportation Systems Center (TSC), Peat, Marwick, Mitchell & Co., and Tri-Met to refine post-implementation data collection techniques and focus on those areas which the pre-implementation studies suggest are likely to be most fruitful.

MEMORANDUM ORGANIZATION

The remainder of this memorandum discusses data collection and analysis used to evaluate operator attitudes and effects, rider attitudes and effects, and operating impacts prior to the implementation of self-service fare collection. The technical appendices contain copies of the survey instruments, computer printouts of the response to the surveys, and also a copy of Tri-Met's study of fare compliance. The latter is currently being reviewed as it was received too late for substantive evaluation or discussion in this memorandum.

II. PRE-IMPLEMENTATION DATA COLLECTION AND ANALYSIS

OPERATOR ATTITUDES AND EFFECTS

Tri-met expects self-service fare collection to help clarify driver roles and responsibilities in collecting fares, reducing fare collection tasks, and also reducing absenteeism and stress related to fare disputes. Drivers will continue to monitor and collect cash fares, and also issue receipts, under self-service fare collection. Fare disputes, however, which are often cited as a primary source of rider/operator friction will be eliminated. This in turn may reduce driver absenteeism and stress.

The evaluation effort focuses on:

- . comparing operator responsibilities and tasks before and after the implementation of self-service fare collection;
- . determining operator attitudes toward fare violations prior to the implementation of self-service fare collection; and
- . assessing the attitudes of operators toward self-service fare collection.

Data Collection and Analysis Approach

The primary means of obtaining data on operator attitudes toward fare collection and fare evasion, and more specifically the impacts of self-service fare collection on them, is through the administration of before and after surveys to Tri-Met operators. Areas to be covered by the surveys include:

- . operator perceptions of the extent and type of fare evasion and their responses;
- . operator attitudes toward their role and responsibilities in collecting fares and toward fare evaders;
- . operator perceptions of fare evader characteristics; and
- . rider-operator interactions related to fare collection.

A draft pre-implementation survey instrument was developed by Tri-Met. After receipt of the Transportation Systems Center's and Peat Marwick's comments, and subsequent

pre-testing, Tri-Met refined the survey instrument.¹ It was administered during February and March 1982 when operators were taking instructional classes on self-service fare collection. Tri-Met reported that operators were very cooperative in answering the survey questions, as evidenced by the receipt of 800 completed surveys representing more than 82 percent of the operator work force. A post-implementation survey is planned for April or May 1983 to assess changes in operator perceptions of the extent and type of fare evasion, their responsibilities in the new fare collection process, and their overall attitude toward self-service fare collection. No problems are anticipated in obtaining the cooperation of operators in providing this data.

The high number of completed surveys suggests that the sample is representative of the total Tri-Met operator work force, therefore the results of the survey and its interpretation are discussed in that context. Furthermore, the high response rate to nearly all of the individual survey questions permits an analogous assumption regarding their interpretation.

Survey Results and Interpretation²

The results of this survey are discussed in the following order:

- . extent and type of fare evasion;
- . operator fare collection responsibilities and rider-operator interactions;
- . operator perceptions of fare evader and other rider characteristics; and
- . operator attitudes toward self-service fare collection and the prior (existing) system.

Extent and Type of Fare Evasion

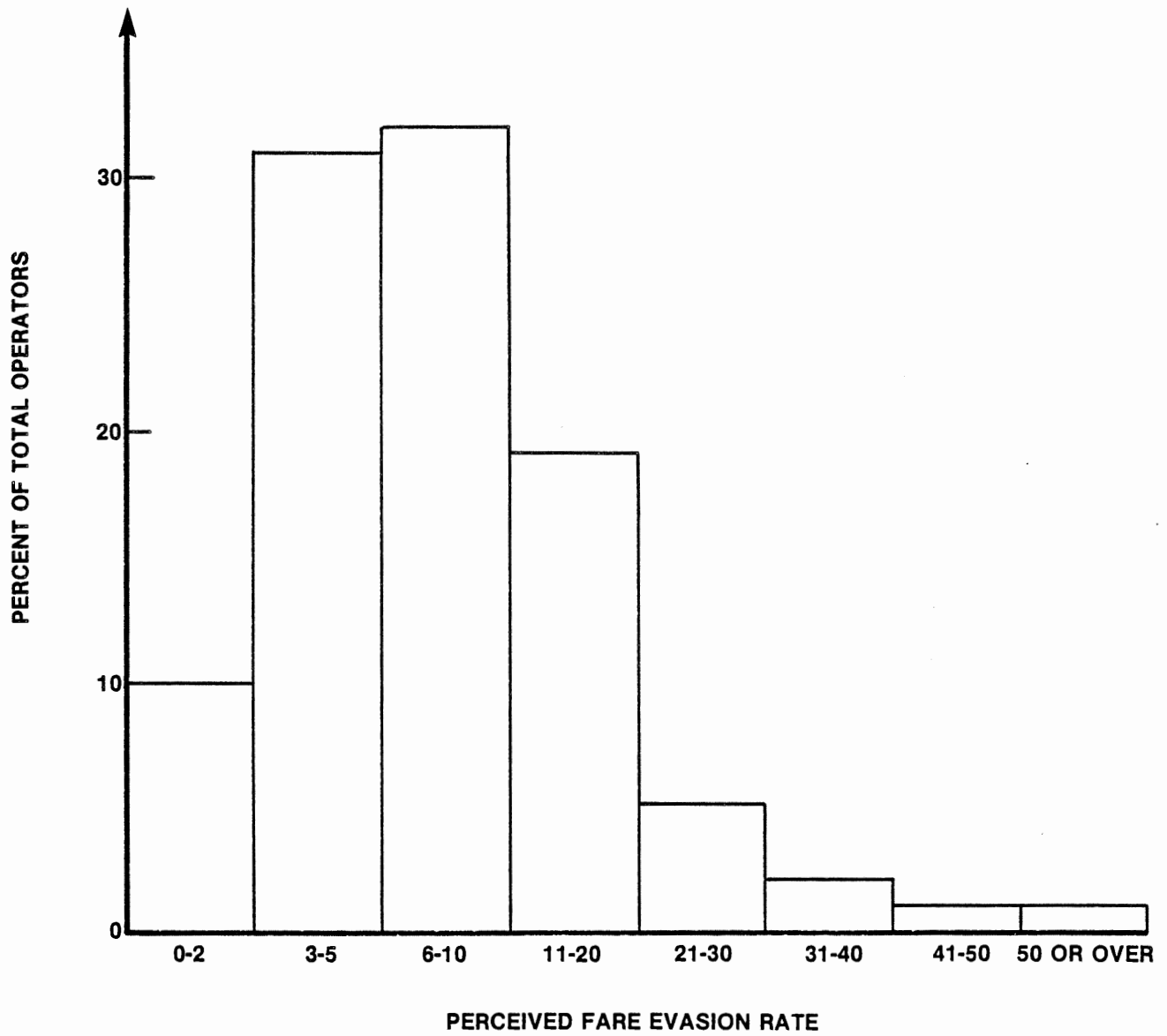
Exhibit II-1 presents the distribution of fare evasion rates, that is the percent of total riders who misuse or cheat the fare system on purpose or by mistake, as perceived by

¹ A copy of the pre-implementation operator survey may be found in Appendix A of this memorandum.

² The response to each question on the pre-implementation survey may be found in the attached computer printout in Appendix B.

EXHIBIT II-1

**FARE EVASION RATE PERCEIVED
BY TRI-MET OPERATORS**



Source: Tri-Met Bus Operator Attitude Survey, February, 1982

Tri-Met operators. The largest proportion of operators, approximately 33 percent, feel that the fare evasion rate is between 6 and 10 percent. The majority of operators, accounting for 63 percent of the respondents, feel that the fare evasion rate lies between 3 and 10 percent. The perceived fare evasion rate tapers off drastically beyond the 11 to 20 percent category, only 8 percent of the operators believing that the fare evasion rate exceeds 20 percent.

Tri-Met operators were asked "When misuse or cheating of the fare system occurs, how often or frequently does it occur for various types of cheating?" Exhibit II-2 is a graphic representation of the extent of fare evasion, by type, as perceived by operators. The survey questionnaire permitted operators to check one of the following five choices: very rarely; rarely; sometimes; often; and very often. In order to display the results in a comprehensible manner, the responses rarely and very rarely have been combined as have the responses often and very often.¹ The most common types of fare evasion are thought to be the use of bad transfers and the incorrect use of two-zone passes for three zones. Between 56 and 59 percent of all operators feel that this type of fare evasion occurs often or very often. It is noteworthy that operators feel that the use of forged passes, mutilated currency (e.g., slugs, half bills), or no payment at all, is the least likely type of fare evasion to occur, about 81 percent of operators indicating that it occurs rarely or very rarely. In the case of the most common types of fare evasion, i.e., misuse of two-zone passes for three-zone and the use of bad transfers, self-service fare collection appears to offer an opportunity for reducing their occurrence.

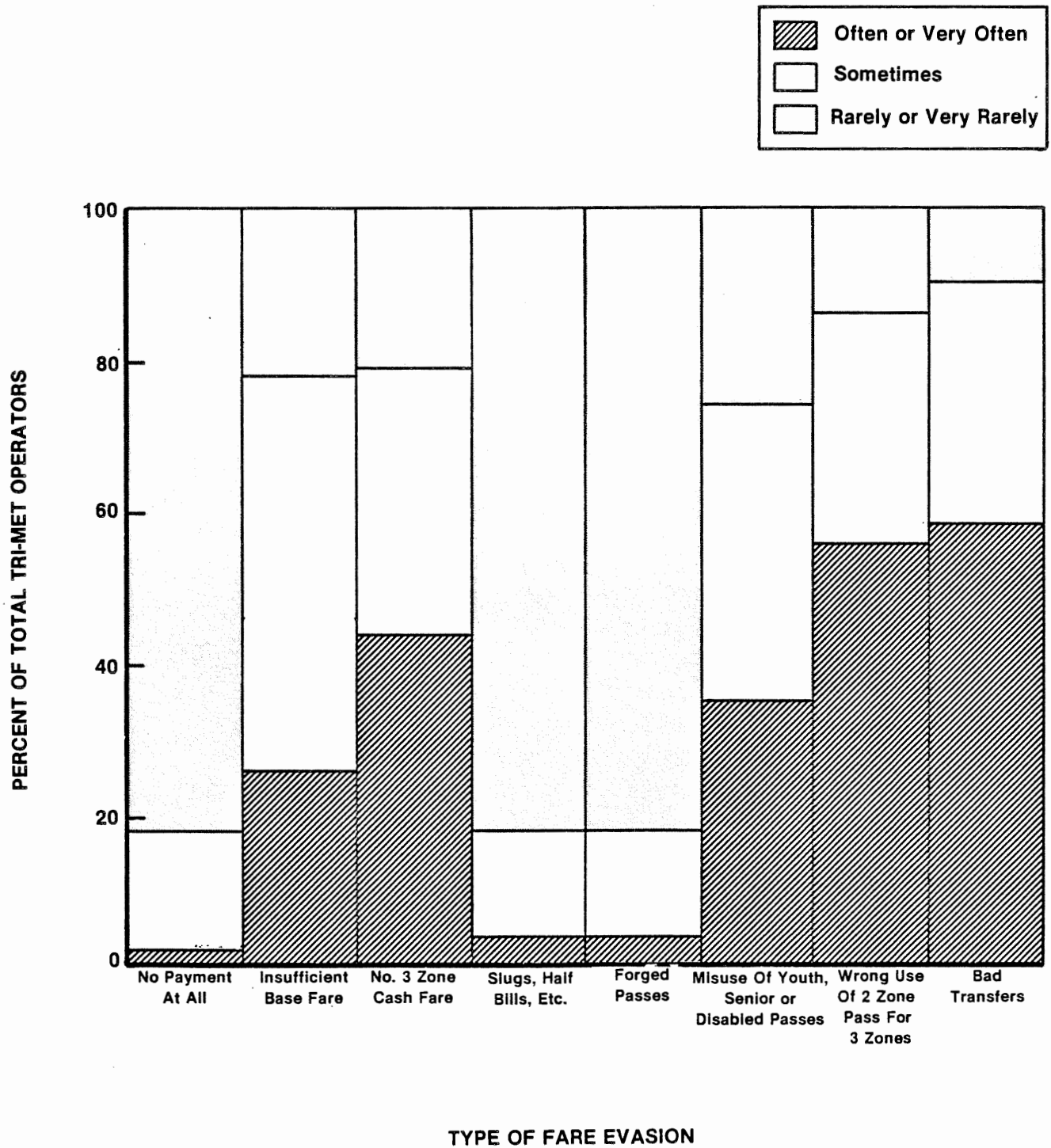
Operator Fare Collection Responsibilities and Rider-Operator Interaction

Operators were asked how often they question or confront a rider for various types of fare evasion when a rider misuses or cheats the fare system. Exhibit II-3 summarizes the likelihood of Tri-Met operators questioning or confronting fare evaders according to specific fare evasion categories. Operators are most likely to confront riders when they evade fares by not making a payment at all or by use of a bad transfer. Nearly 60 percent of all operators indicated that they frequently or very frequently question riders for these

¹ The more detailed response to questions may be found in the attached computer printout in Appendix B.

EXHIBIT II-2

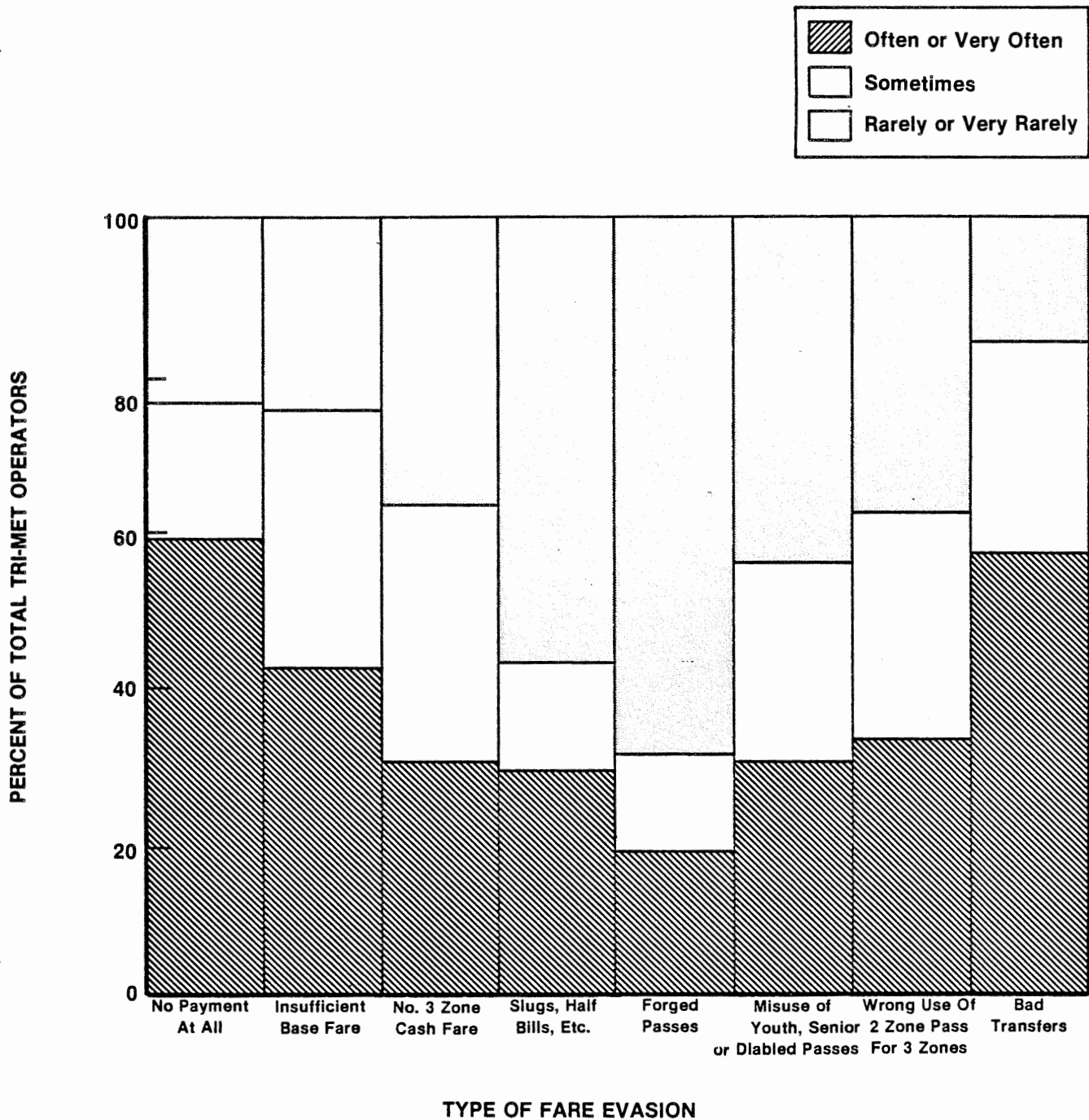
EXTENT OF FARE EVASION BY TYPE AS PERCEIVED BY TRI-MET OPERATORS



Source: Tri-Met Bus Operator Attitude Survey, February 1982

EXHIBIT II-3

LIKLIHOOD OF TRI-MET OPERATORS CONFRONTING OR QUESTIONING FARE EVADERS BY TYPE OF FARE EVASION



Source: Tri-Met Bus Operator Attitude Survey, February, 1982

types of fare evasion. In comparing Exhibit II-3 with II-2, the following observations may be made:

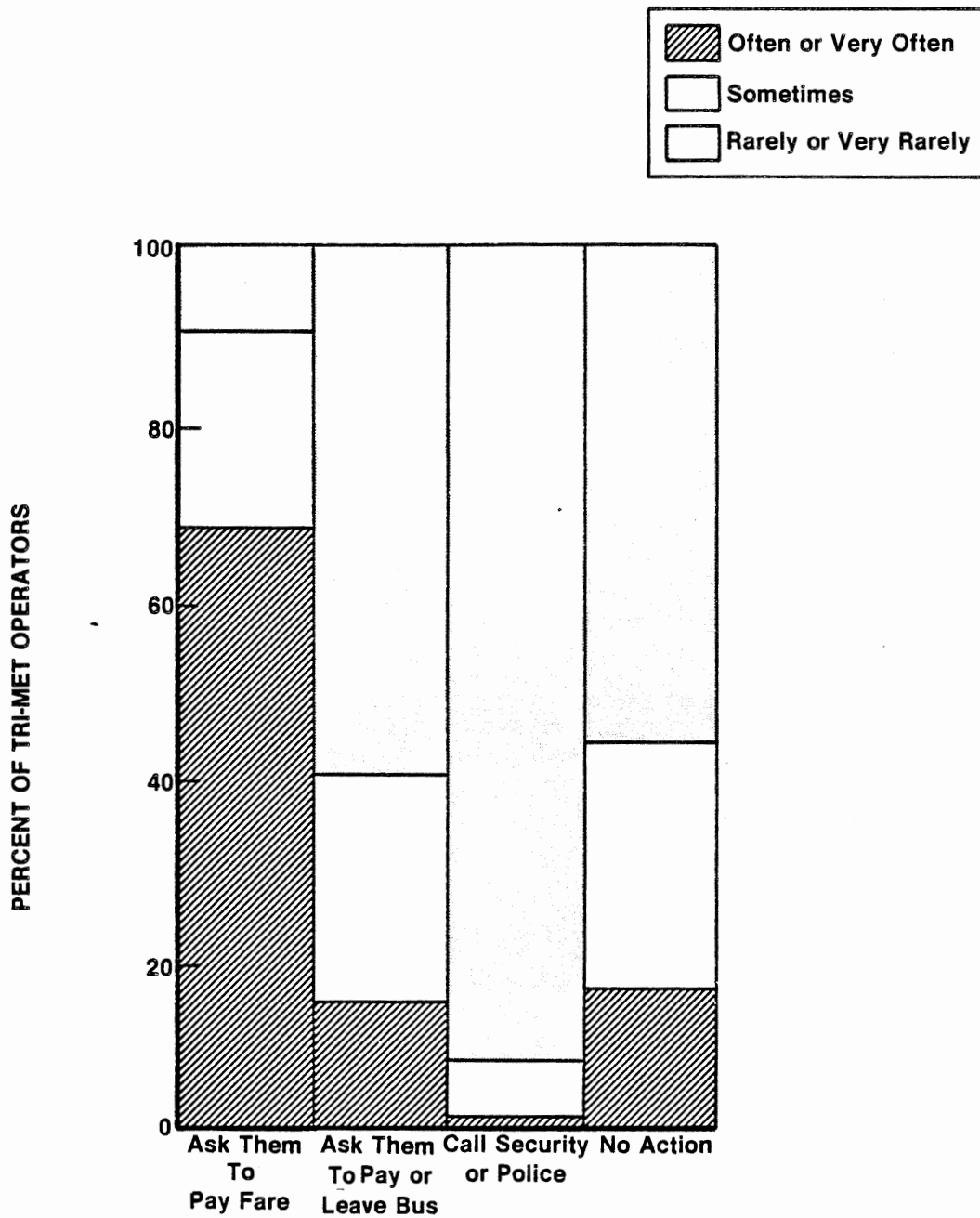
- . The low perceived incidence of riders making no payment at all (81 percent of all operators feeling that this type of fare evasion occurs rarely or vary rarely as compared to a mere 2 percent that feel it occurs often) is quite consistent with the high probability of operators confronting riders who pay no fare at all under the former fare system;
- . The high perceived incidence of bad transfers and the misuse of two-zone passes for three zones, despite the relatively high likelihood of being challenged by operators (57 percent and 30 percent of all operators, respectively, indicated that they often or very often challenge this type of fare evasion) suggests that the former fare system wasn't well suited to curbing this type of fare evasion;
- . As a general rule, it appears that the more complicated the type of fare evasion, i.e., those types that are related to the amount or sufficiency of the fare paid and those related to the misuse of the zone fare structure, are the least likely to be questioned by operators. Moreover, they appear to be the least susceptible to enforcement or control under the former fare system.

Exhibits II-4 and II-5 describe, respectively, the range of actions taken by operators when an attempt at fare evasion is encountered and the various reactions of riders to operator requests to pay the proper fare. The most common action taken by operators when they observe a rider attempting to evade a fare is to request the proper fare. This is reflected in Exhibit II-4 which shows that nearly 70 percent of all operators often, or very often, pursue this course of action. Operators generally agree that they very rarely, if ever, call security or police.

When riders are requested by operators to pay the proper fare, almost 50 percent of all operators feel that most riders comply. Riders are least likely to leave the bus with no fare payment. Between 20 to 26 percent of all operators feel that they frequently encounter riders who respond to their requests for paying the proper fare by remaining on the bus with no fare payment, verbally abusing or swearing at them, or complaining about poor service or high fares. This latter finding may be significant insofar as it could account for part of the stress associated with driving a bus.

EXHIBIT II-4

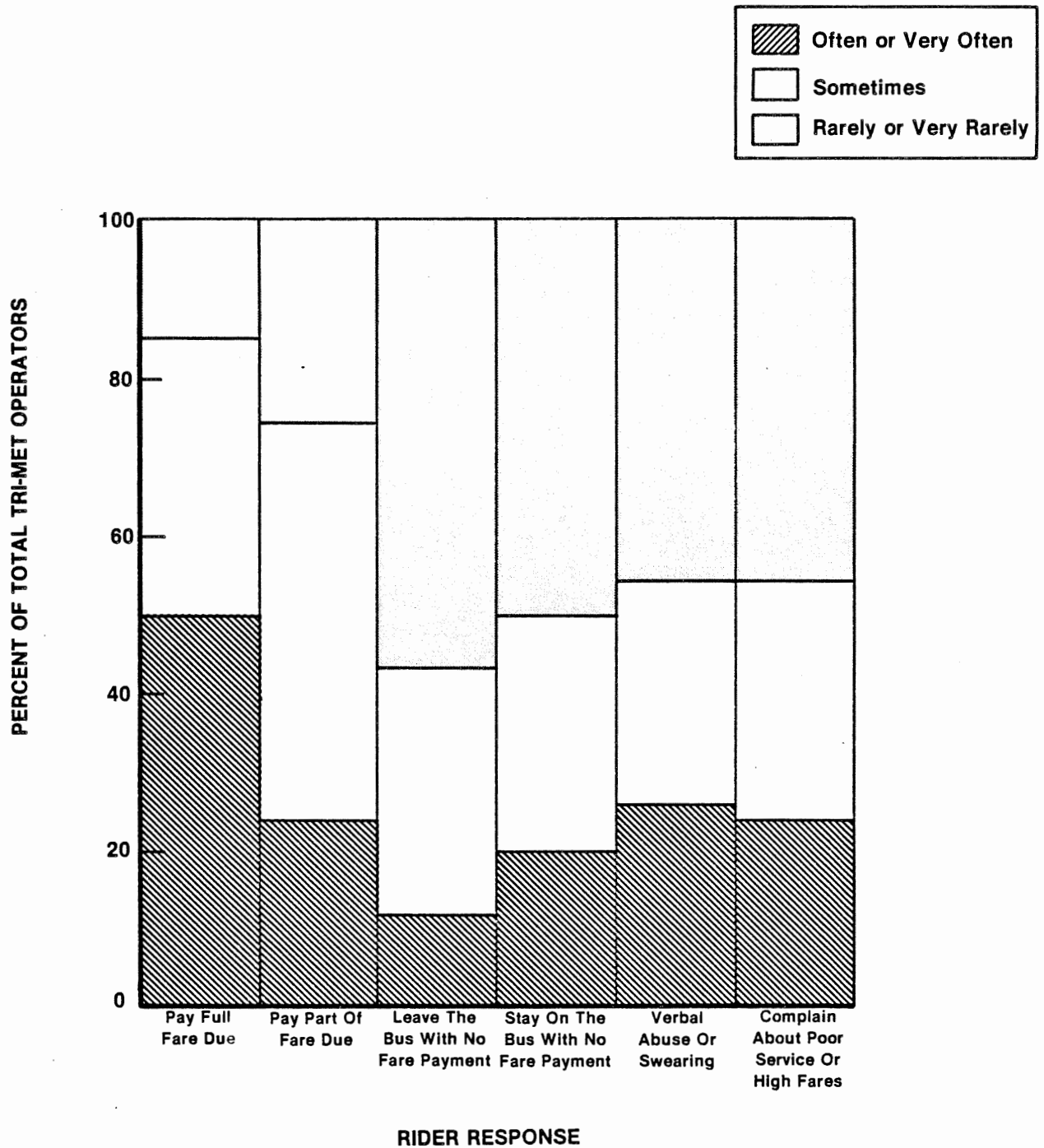
OPERATOR ACTIONS WHEN RIDERS MISUSE THE FARE SYSTEM



Source: Tri-Met Bus Operator Attitude Survey, February, 1982

EXHIBIT II-5

REACTIONS OF RIDERS WHO MISUSE THE FARE SYSTEM TO OPERATOR REQUESTS TO PAY THE PROPER FARE ACCORDING TO TRI-MET OPERATORS



Source: Tri-Met Bus Operator Attitude Survey, February, 1982

At least one factor which may influence what actions are likely to be taken by operators when encountering attempts to evade fares is the operators' perceptions of the attitudes of other riders when they confront potential fare evaders. Exhibit II-6 summarizes operator perceptions of the attitudes of other riders in those situations where a fare evader is questioned. Fifty percent of all operators perceive the reactions of other riders to the attempt to collect fares as one of quiet disapproval, while an additional 33 percent feel riders are apathetic. Only 10 percent of all operators perceive other riders as actively voicing anger at the cheater, and an even smaller minority, totalling less than 8 percent, feel riders quietly voice disapproval of the operator or support the cheater.

It has been suggested that operator tasks related to fare collection tend to be relatively more difficult or unpleasant than other operator tasks involved in driving a bus. Exhibit II-7 presents operator perceptions of the relative ease of bus operating tasks. Of the many tasks involved in operating a bus, the largest percentages of operators feel that dealing with fights on the bus, overcrowding, and students is the most difficult. Operator tasks relating to fare collection, transfers, and rider complaints, all of which relate to dealing with riders, tend to be perceived as more difficult than those relating to mechanical tasks or intra-organizational relationships, i.e., staying on schedule, helping the elderly or handicapped, paperwork (load counts, reports, trip sheets, etc.) and dealing with supervisors. To the extent that self-service fare collection clarifies, or reduces, operator responsibilities in the fare collection process, operators may perceive their work as becoming easier. These findings suggest that a larger portion of Tri-Met operators would benefit from improvements in the fare collection system than from improvements related to reducing driving in traffic, reducing paperwork, or improving relations between supervisors and operators.

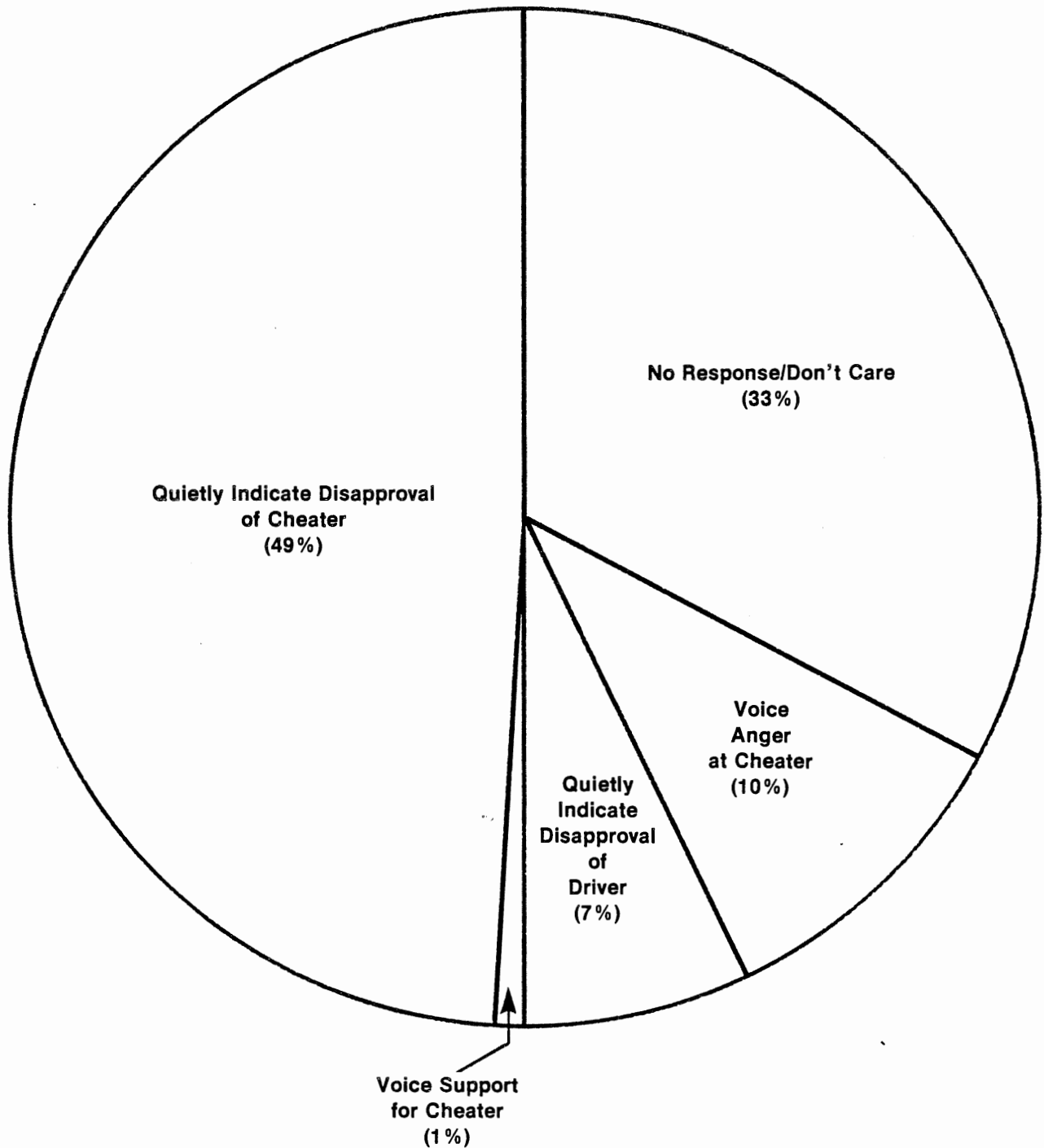
Operator Perceptions of Fare Evader and Other Rider Characteristics

Operators were asked why they feel riders pay the wrong fare. The reason cited most frequently was "they know the operator can't do anything if they are caught." Exhibit II-8 shows the distribution of responses to this question. Assigning fare inspectors specific enforcement powers under self-service fare collection would appear to meet the need for greater enforcement authority to discourage cheating

Operators feel that fare violations are most likely to occur: with persons under the age of 25; with repeat cheaters; and during the rush and evening hours. Exhibit II-9 shows the distribution of age characteristics of fare evaders as perceived by Tri-Met operators. Fifty-seven percent of all operators

EXHIBIT II-6

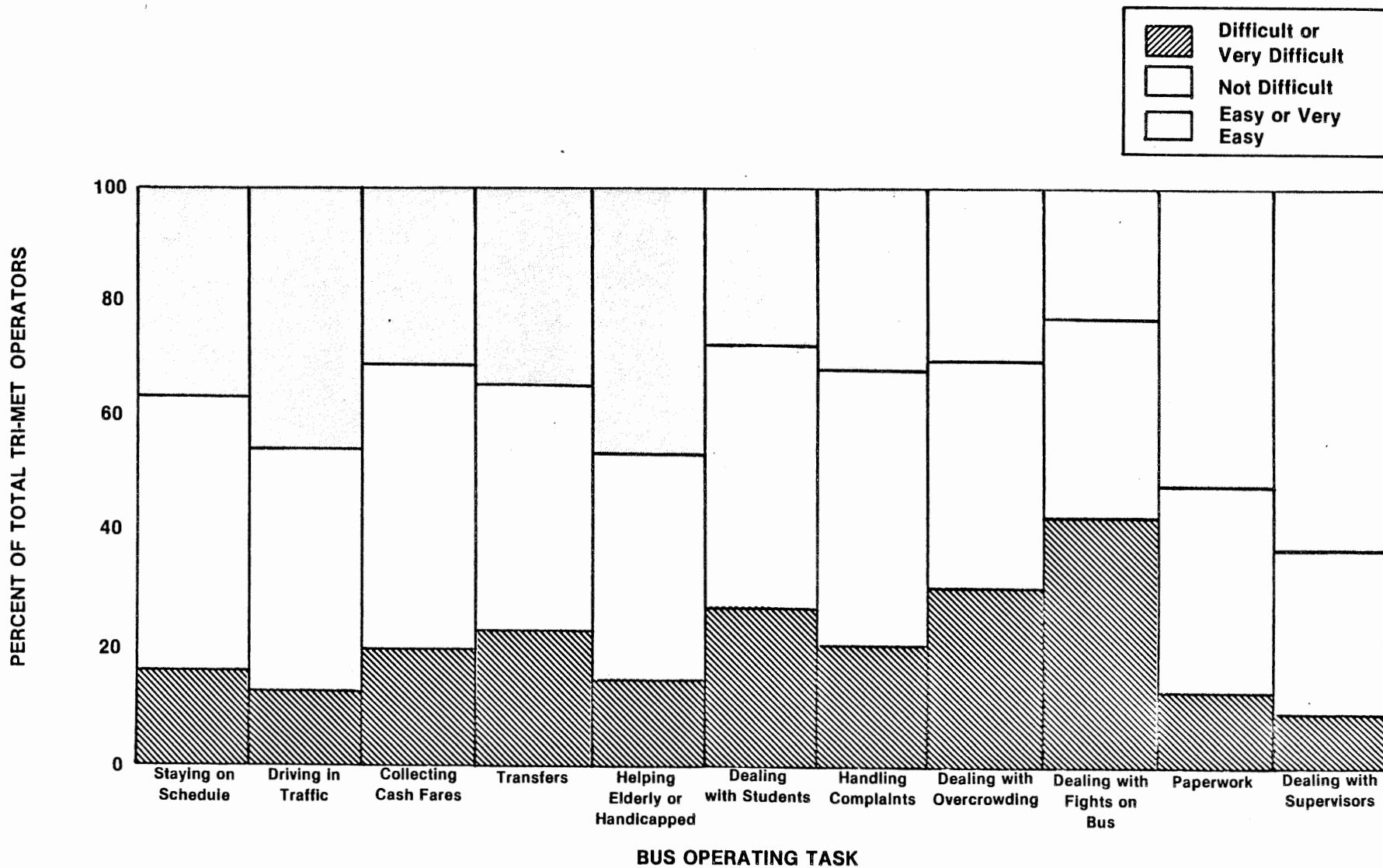
**ATTITUDES OF OTHER RIDERS WHEN
OPERATORS TRY TO COLLECT FARES FROM
CHEATERS AS PERCEIVED BY TRI-MET OPERATORS**



Source: Tri-Met Bus Operator Attitude Survey, February 1982

EXHIBIT II-7

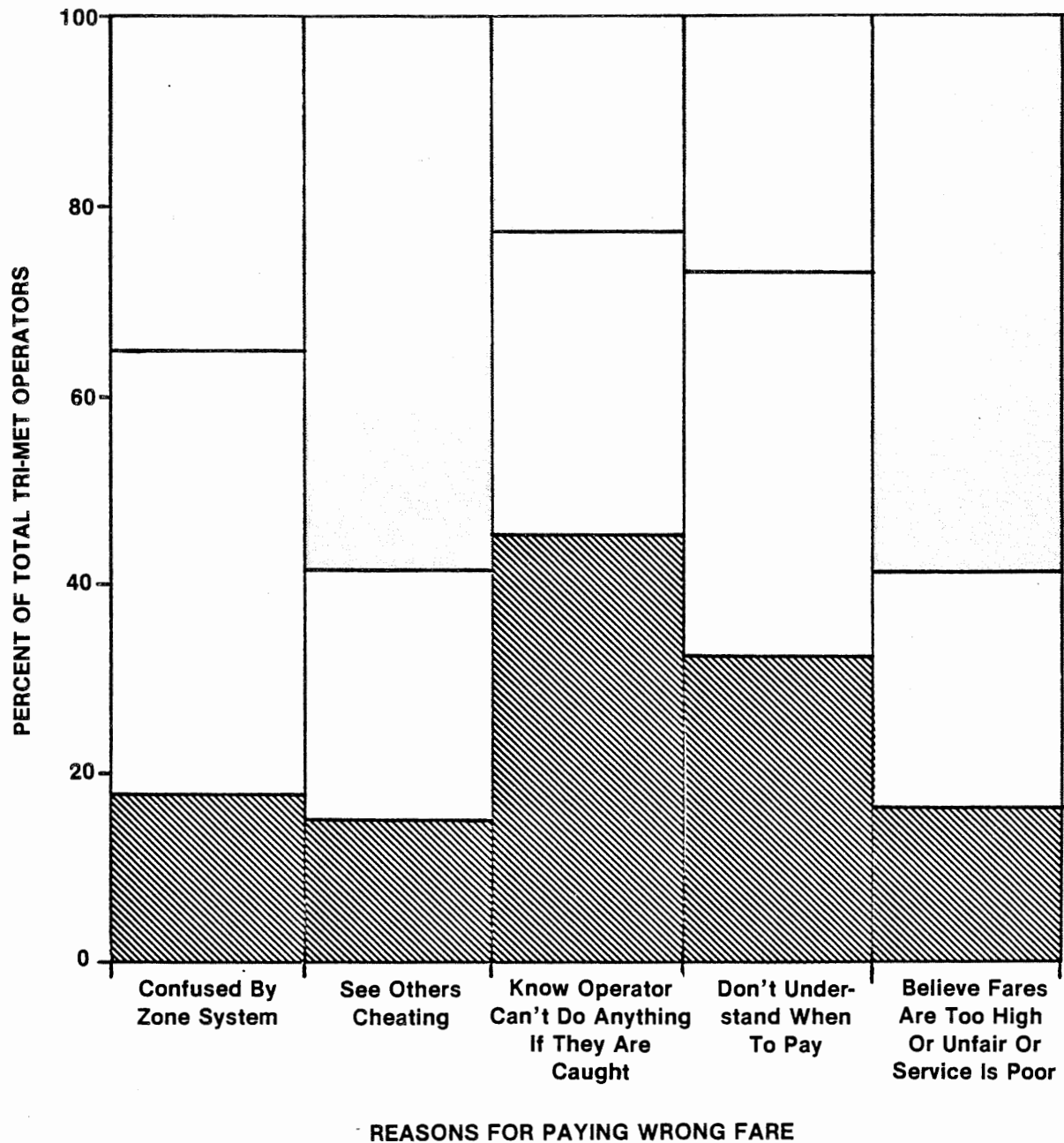
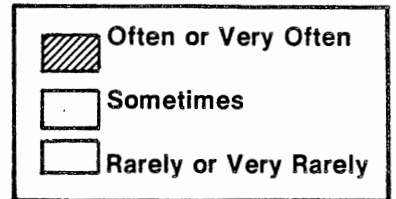
**OPERATOR PERCEPTIONS OF THE
RELATIVE DIFFICULTY OR EASE OF BUS OPERATING TASKS**



Source: Tri-Met Bus Operator Attitude Survey, February, 1982

EXHIBIT II-8

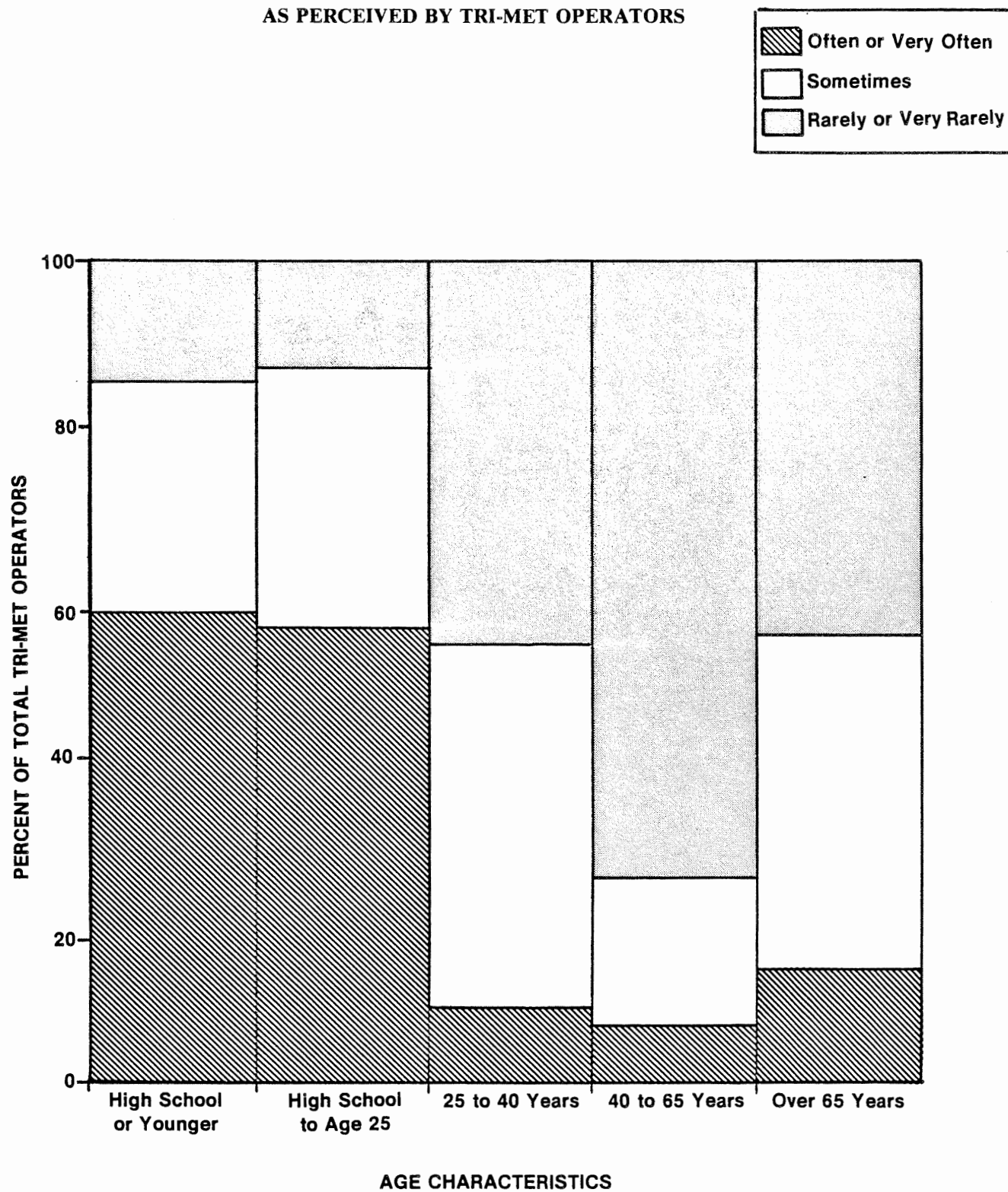
REASONS FOR RIDERS PAYING THE WRONG FARE AS PERCEIVED BY TRI-MET OPERATORS



Source: Tri-Met Bus Operator Attitude Survey, February, 1982

EXHIBIT II-9

AGE CHARACTERISTICS OF FARE EVADERS AS PERCEIVED BY TRI-MET OPERATORS



Source: Tri-Met Bus Operator Attitude Survey, February, 1982

feel that riders age 25 or less often, or very often, cheat the fare system. They generally feel that cheating declines with increasing rider age until 65 years, after which their perception of the amount of fare evasion begins to rise.

Exhibit II-10 presents operator perceptions of the time of day when fare evasion is most likely to occur. The largest percentages of operators believe cheating is most predominant during the rush (39 percent feel cheating occurs often or very often) and evening (37 percent feel cheating occurs often or very often) hours. The least fare evasion is believed to occur during the midday travel period.

Operators were asked to indicate their perception of the level of fare evasion in various parts of Tri-Met's service area (city, suburban, and downtown). Their response to this question is summarized in Exhibit II-11. The broad service area classifications and the high proportion of responses in the sometime category limits the validity of any observations that can be made; however, the highest percentage of operators (36 percent) feel that fare evasion occurs most often on suburban routes.¹

The issue of repeat offenders is usually raised when considering the occurrence of any crime or violation and is basic to structuring an appropriate enforcement and penalty program. Exhibit II-12 provides an indication of the seriousness with which Tri-Met operators perceive the problem of repeat cheaters. More than 58 percent of all operators feel that the same riders cheat the fare system. If repeat cheating is found to occur, Tri-Met's fare inspection and enforcement program can be tailored to target and control this type of fare evader.

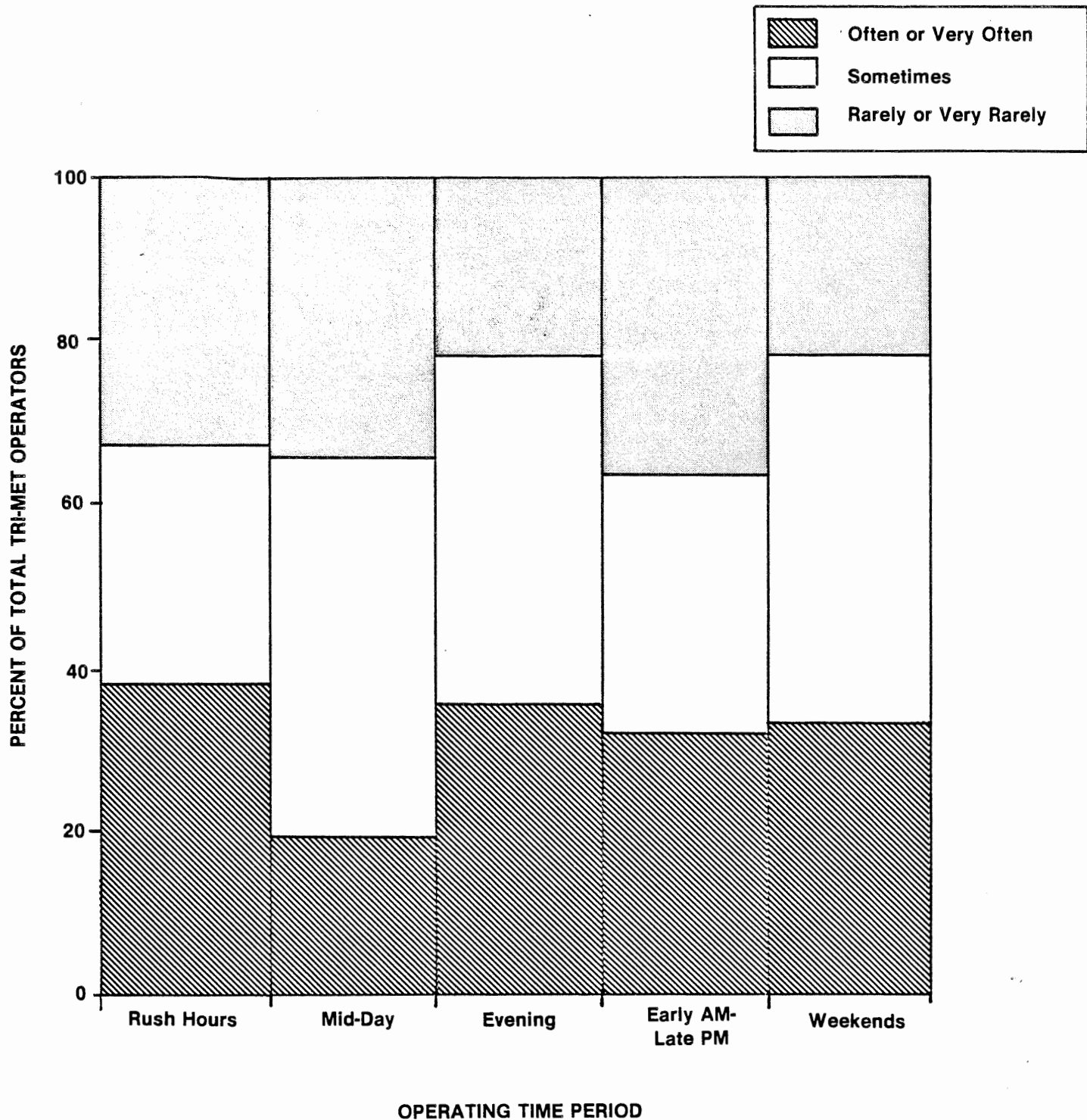
Operator Attitudes Toward Self-Service Fare Collection and the Prior (Existing) System

The strong support of transit operators is a prerequisite to the successful implementation of most new transit programs affecting operations or fare collection procedures. When asked to describe their feelings toward fare evasion, most operators

¹ A crosstabulation between the perceived extent of fare evasion (Question 1 of the Operator Survey) and those routes operators were most familiar with (Question 13 of the Operator Survey) didn't reveal any relationship between the perceived level of fare evasion and the type of route (regional, urban radial, local radial, feeder, peak-hour). A copy of this crosstabulation may be found in Appendix B.

EXHIBIT II-10

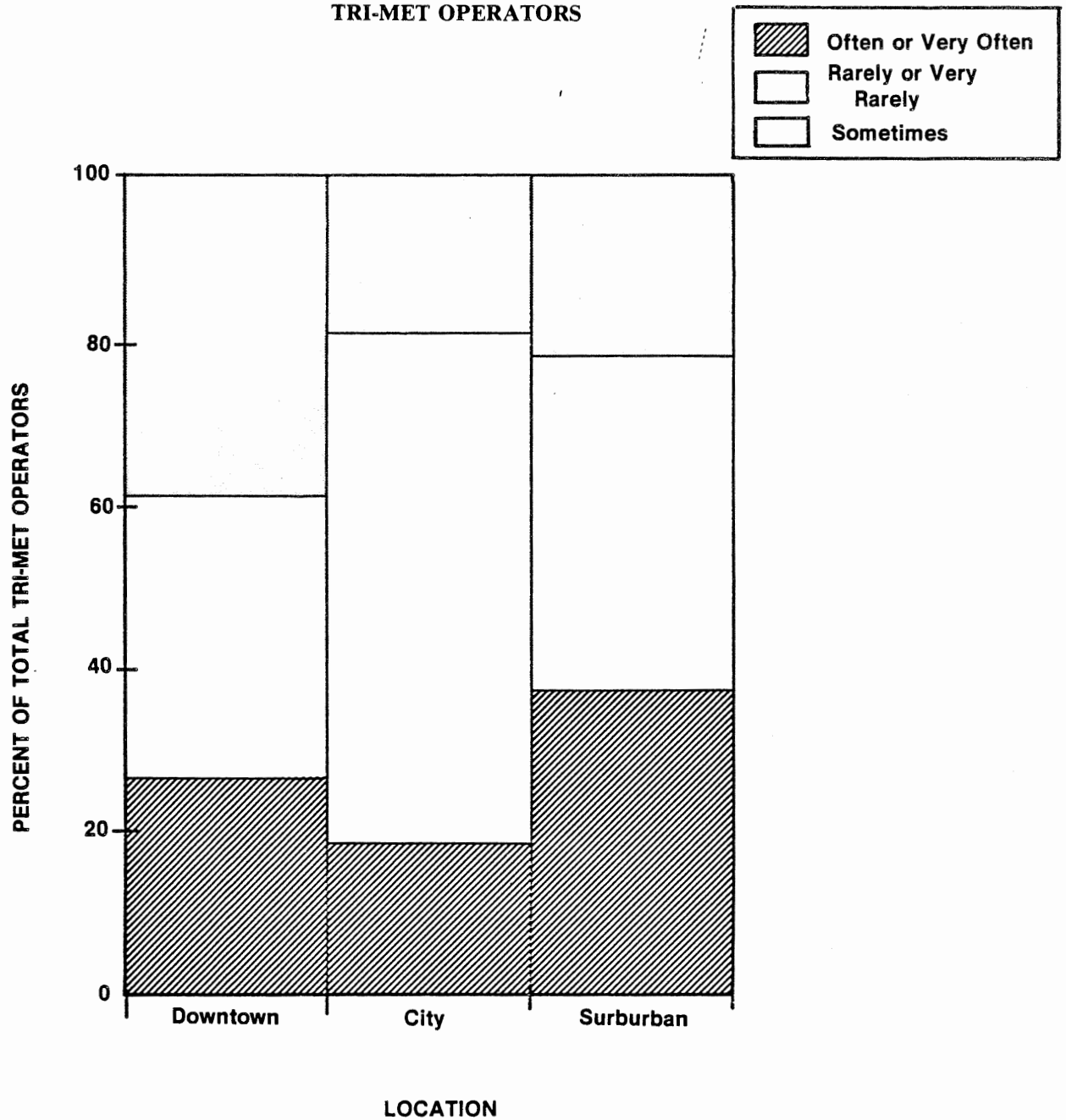
TIME OF DAY CHARACTERISTICS OF FARE EVADERS
AS PERCEIVED BY TRI-MET OPERATORS



Source Tri-Met Bus Operator Survey, February, 1982

EXHIBIT II-11

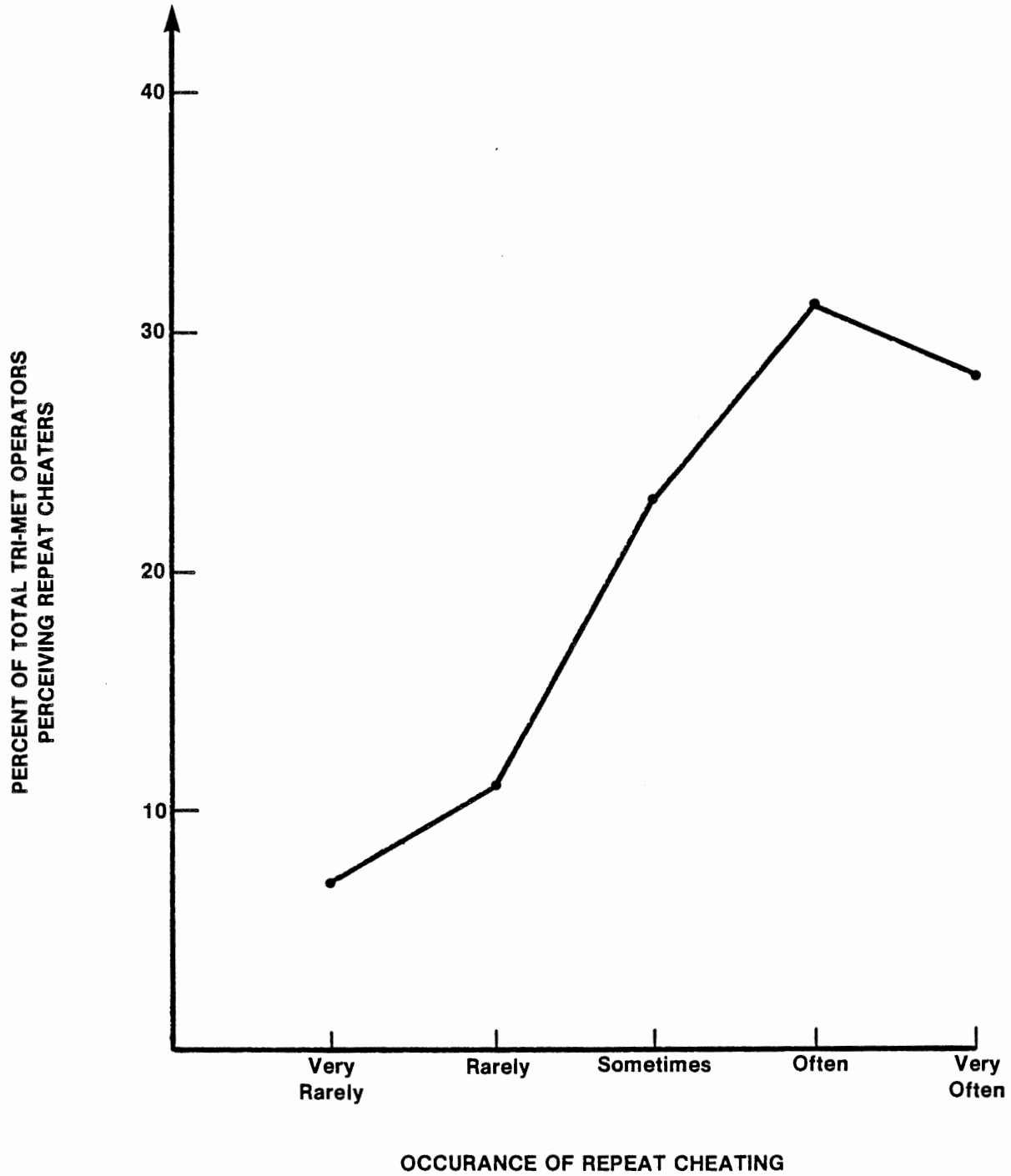
**LOCATIONAL CHARACTERISTICS OF
FARE EVADERS AS PERCEIVED BY
TRI-MET OPERATORS**



Source: Tri-Met Bus Operator Attitude Survey, February, 1982

EXHIBIT II-12

OBSERVATION OF REPEAT CHEATERS AS PERCEIVED
BY TRI-MET OPERATORS



Source: Tri-Met Bus Operator Attitude Survey, February, 1982

(33 percent) responded that "better enforcement is needed but not by the operator." This is quite consistent with operator responses to other questions which suggests that riders know that the operator can't do anything to them if they are caught cheating. Exhibit II-13 summarizes operator attitudes toward misuse of the fare system and self-service fare collection. Examination of the pattern of responses in Exhibit II-13 shows that operators overwhelmingly support better fare collection enforcement but perceive shortcomings in their powers and capabilities to assume this responsibility.

When asked whether self-service fare collection will be an improvement over the current system, 87 percent of all operators answered yes. Of course, since this survey was administered during a training course on the new fare collection system, some positive bias in this response is likely. The most common reasons cited by operators who feel self-service fare collection would be an improvement were: reduced cheating; easier for riders to use; and more equitable fares. The small minority of operators who feel self-service fare collection would not be an improvement cited problems related to increased cheating, greater complexity for the rider, and higher fares.

RIDER ATTITUDES AND EFFECTS

The main purpose of this part of the evaluation is to measure and assess the attitudes of transit riders toward the fare collection system before and after self-service fare collection implementation. Additional information on rider travel behavior, fare payment characteristics, and rider perceptions of the level of fare evasion is also needed in order to more thoroughly analyze rider attitudes toward the fare collection system. A secondary purpose is to measure the effectiveness of Tri-Met's marketing program with respect to promotion, instruction, and information related to self-service fare collection.

In order to analyze rider attitudes toward the fare collection system, the approach chosen involves conducting the following surveys:

- . pre-implementation rider on-board/mailback survey (May 1982);
- . post-implementation rider on-board/mailback survey (March 1983);
- . post-implementation household survey (October 1982); and
- . post-implementation panel survey (March 1983).

**TRI-MET OPERATOR ATTITUDES
TOWARD MISUSE OF THE FARE
SYSTEM AND SELF SERVICE
FARE COLLECTION**

(a) Best Description of Operator Feelings Toward Misuse of the Fare System

MOST CHARACTERISTIC FEELING	PERCENT OF TOTAL TRI-MET OPERATORS
Better Enforcement Needed But Not By Operator	33%
Don't Want To Enforce Because Management Doesn't Support Or Encourage	22%
Angry When Cheating Observed But Feel Enforcement Useless	16%
Angry When Cheating Observed And Try To Catch Fare Evaders	10%
Don't Want To Enforce Because Of Threat Of Verbal Abuse Or Violence	7%
Don't Want To Enforce Since Operators Can't Do Much	6%
Enforce The Worst Cheating But Feel Enforcement Is A Waste Of Time	4%
Other	2%

(b) Whether Self Service Fare Collection Will Be An Improvement Over The Current Systems and Why

It Will Be An Improvement - 87 Percent Of Operators		
REASONS CITED	NO. OF TIMES CITED	PERCENT OF TOTAL TIMES CITED
• Reduced Cheating	409	26
• Easier For Rider To Use	291	18
• More Equitable Fares	279	18
• Easier For Driver	246	16
• Will Improve Operations	239	15
• Will Reduce Costs	115	7
It Will Not Be An Improvement - 13 Percent Of Operators		
REASONS CITED	NO. OF TIMES CITED	PERCENT OF TOTAL TIMES CITED
• Increased Cheating	43	31
• Too Complicated For Rider	42	30
• Fare Too High	18	13
• More Complicated For The Driver	17	12
• Too Expensive	12	8
• Unreliable Equipment	8	6

Source: Tri-Met Bus Operator Attitude Survey, February, 1982

Tri-Met issued a Request for Proposal and subsequently awarded a contract to a firm to carry out these four surveys. The remainder of this discussion deals exclusively with the pre-implementation rider on-board/mailback survey.

Data Collection and Analysis

A two-part bus rider survey questionnaire, one part to be filled out onboard the bus and the other to be mailed back within a few weeks, was prepared by Tri-Met. The mailback survey was a separable portion of the on-board survey which requested additional information on rider attitudes toward the fare collection system as well as their names, addresses and telephone numbers if they desired to participate in a follow-up survey. An incentive of two bus tickets was offered to riders who would complete both the on-board and mailback portions of the survey, and a further incentive of five bus tickets was promised to those riders agreeing to participate in post-implementation surveys. After a review of the questionnaires by the Transportation Systems Center and Peat Marwick, and subsequent pretesting, the final survey instrument was prepared. A copy of this survey form may be found in Appendix A of this memorandum.

The on-board survey was conducted over a two week period in May 1982. The contract issued by Tri-Met to the survey firm required that a minimum of 5,000 usable on-board surveys and 2,000 mailback surveys be completed and returned. The total number of surveys distributed by the survey firm to bus riders was 13,308. Of these, 6,108 or 46 percent were analyzed. Although 4,176 mailback surveys were completed only 3,365 were analyzed. This difference may be attributed to the elimination of 311 mailback surveys when corresponding on-board surveys were not coded because of budget limitations and a higher survey return rate than anticipated, and also to the elimination of 500 mailback surveys where the age and/or sex of the person completing it didn't match that from the on-board survey. In summary, of the average 167,028 boarding rides (excluding Owl Service), 8 percent were sampled. Useful responses to the on-board survey accounted for 3.7 percent of average weekday ridership as compared to 2.0 percent for the mailback portion.

Sampling Procedures

Routes and buses on which the rider survey was distributed were randomly selected within stratifications by route type, and were representative of Tri-Met ridership. The survey sampling frame was checked for day of the week (weekday/Saturday or Sunday); time of day (peak hour or off-peak); geographic sector of the city; and type of route (regional trunkline, urban radial, local radial, grid feeder, or crosstown). The sampling

process was conducted by surveyors operating in three work shifts: 6 a.m. to 2 p.m.; 2 p.m. to 10 p.m.; and a split 6 a.m. to 10 a.m./3 p.m. to 7 p.m. shift over a two week period. Surveyors were assigned to a simple bus all day.

Validation of Rider Survey Data

At the time Peat Marwick received the data from Tri-Met, the raw rider survey data had not yet been validated against actual ridership characteristics. Therefore, Peat Marwick compared the distribution of returned on-board surveys according to their route, geographic, and weekday/weekend characteristics with data from Tri-Met's Quarterly Line Performance Report (Spring 1982). Exhibit II-14 summarizes the results of this comparison. The characteristics of riders returning surveys reasonably approximate the comparable actual ridership characteristics with the following two exceptions: (1) weekend riders are over-represented as compared to weekday riders; and (2) feeder bus route riders are under-represented, while local radial routes are over-represented. Tri-Met has hypothesized that the lower survey response rate from feeder bus riders may be partly due to the relatively shorter average travel distances, and therefore limited time, such riders would have to complete an on-board survey.¹ Although Peat Marwick didn't compare the time-of-day distribution of returned surveys with the actual distribution, Tri-Met did and found an excellent fit for the a.m. and p.m. peaks.²

In the following section the results of the on-board and mailback portions of the survey will be discussed. In this preliminary analysis, all survey responses have been analyzed as a single group, i.e., no attempt has been made to separately analyze weekend and weekday riders or surveys from a particular geographic area or group thereof. After the completion of post-implementation data collection, if it is deemed desirable to stratify and analyze the survey results in this manner, it can be easily done. Moreover, this survey sample has not been expanded for the preliminary analysis. Therefore, all results should be referenced to the survey sample rather than the total ridership. The survey sample, however, appears representative of total Tri-Met ridership based on the previously cited, albeit limited, comparisons of rider characteristics.

¹ Telephone conversation with Mr. Phil Selinger, Tri-Met, November 4, 1982.

² Telephone conversation with Mr. Phil Selinger, Tri-Met, October 25, 1982.

EXHIBIT II-14

**PRELIMINARY VALIDATION OF RAW RIDER DATA FROM PRE-IMPLEMENTATION
ON-BOARD SURVEY WITH TRI-MET QUARTERLY LINE PERFORMANCE REPORT (SPRING 1982)**

ROUTE TYPE	QUARTERLY LINE PERFORMANCE REPORT		ON-BOARD SURVEY RESPONSE	
	AVERAGE WEEKDAY RIDERS	PERCENT	RIDERS	PERCENT
REGIONAL	41069	24.6	1646	26.9
URBAN RADIAL	88198	52.8	3022	49.5
PEAK	3586	2.2	114	1.9
LOCAL RADIAL	17392	10.4	914	15.0
FEEDER	16783	10.0	412	6.7

GEOGRAPHIC REGION	QUARTERLY LINE PERFORMANCE REPORT		ON-BOARD SURVEY RESPONSE	
	AVERAGE WEEKDAY RIDERS	PERCENT	RIDERS	PERCENT
EAST	103300	62.5	3897	63.8
SOUTHEAST	8670	5.2	507	8.3
SOUTHWEST	23274	14.1	884	14.5
NORTHWEST	8933	5.4	104	1.7
WEST	21062	12.7	716	11.7

DAY-OF-WEEK	QUARTERLY LINE PERFORMANCE REPORT	ON-BOARD SURVEY RESPONSE
	PERCENT OF RIDERS	PERCENT OF RIDERS
WEEKDAY	89.8	84.7
WEEKEND DAY	10.2	15.3

Source: Tri-Met Bus Rider Survey, May and June, 1982 (ON-BOARD)

Survey Results and Interpretation¹

The results of the on-board and mailback surveys are presented together in order to discuss the findings in a topical or issue-oriented format. Findings are presented in the following order:

- . Survey Demographics and General Travel Characteristics;
- . Fare Payment Characteristics and Rider Attitudes Toward the Fare Collection System;
- . Rider Attitudes toward Fare Evasion and Enforcement; and
- . Effectiveness of Tri-Met Marketing and Public Information Efforts.

Survey Demographics and General Travel Characteristics

In order to gauge how representative the on-board and mailback portions of the rider survey are of the actual Tri-Met rider population, and also to examine possible relationships between demographic variables (e.g., income, sex, age, etc.) and rider travel behavior or attitudes, demographic and travel behavior data was collected. Exhibits II-15 and II-16 present this data. Examination of Exhibit II-15 shows that with respect to age and gender, respondents to both the on-board and mailback portions of the survey had relatively similar characteristics. Moreover, these results are generally consistent with those reported in a Spring 1980 transit ridership survey which showed that 52 percent of all riders are female (compared to 57.2 percent of riders completing the on-board survey and 59.9 percent of riders completing the mailback survey) and 70 percent of all transit trips are made by persons between the ages of 16 and 44 (compared to 75 percent of riders completing the on-board survey and 73 percent of riders completing the mailback survey).² Data on rider income was requested only in the on-board portion of the survey. The distribution of rider incomes shows that Tri-Met draws its ridership from a broad spectrum of income groups.

¹ The response to each question on the pre-implementation surveys may be found in the computer printout in Appendix C.

² Tri-Met, Five Year TDP 1980-1985, Reference to Tri-Met Attitude and Awareness Study, April 1980, p. III.7.

EXHIBIT II-15**TRI-MET BUS RIDER SURVEY DEMOGRAPHICS**

CHARACTERISTICS	ON-BOARD (%)	MAIL BACK (%)
GENDER		
MALE	42.8	40.1
FEMALE	57.2	59.9
AGE		
15 OR UNDER	4.4	3.4
16 TO 24	34.6	29.8
25 TO 44	40.4	43.2
45 TO 64	14.7	17.2
65 OR OVER	5.8	6.3
INCOME		
UNDER \$5000	19.5	
\$5000 TO \$9,999	18.2	
\$10,000 TO \$14,999	18.9	
\$15,000 TO 24,999	21.2	
\$25,000 OR MORE	22.2	

Source: Tri-Met Bus Rider Survey, May and June, 1982 (On-Board/Mail Back)

EXHIBIT II-16

TRI-MET BUS RIDER SURVEY
TRAVEL CHARACTERISTICS

Average Number of Bus Trips Per Week By Purpose (Each Direction)	
Work	7.12
Shopping	2.05
School	4.10
Social/Recreational	3.24
Usual Time Bus Ridden Percent Of Riders	
Rush Hour	56.3
Mid-Day	21.7
Evening/Night	4.2
Saturday or Sunday	15.9
Most Frequently Used Bus Routes Percent Of Riders*	
Regional	47.3
Urban Radial	28.4
Peak	3.4
Local Radial	6.7
Feeder	14.3
* Based on the first of three bus lines cited by riders in response to this question	

Source: Tri-Met Bus Rider Survey, May and June, 1982 (On-Board)

Exhibit II-16 highlights some basic travel characteristics of Tri-Met bus riders. It should be noted that the questions asking the usual travel times of riders, and the bus routes they use most frequently are primarily indicators of rider familiarity, therefore they do not correspond exactly to comparable distributions based on survey responses.¹ When riders were asked in the on-board survey to cite the three bus lines they used most often, the distribution of responses for the first bus line cited, by route type, was nearly identical to the comparable distribution from the returned on-board surveys.

Fare Payment Characteristics and Rider
Attitudes toward the Fare Collection
System

Both the on-board and mailback portions of the rider survey asked riders to indicate their usual means of fare payment; however, more than one answer was permitted on the on-board portion of the survey. This somewhat limits the comparability of responses from the two surveys. Exhibit II-17 summarizes the fare payment characteristics of Tri-Met riders who responded to the survey. Of the 6,108 riders who completed the on-board portion of the survey; 40.5 percent usually paid their fare by cash; 12.9 percent usually paid by ticket; and 53.0 percent usually paid by pass.² Comparable figures for the mailback survey, based on 3,365 responses, were 33.4, 10.1 and 56.5 percent, respectively.

Riders were asked, in the on-board survey, to indicate their usual fare amount and means of payment. Their response to this question is shown at the bottom of Exhibit II-17. Nearly one-half of all riders usually pay a two-zone or \$0.65 fare, and an additional 25 percent of all riders pay a three-zone or \$.90 fare. It may also be observed that within the groups of pass and ticket users, greater proportions of fares (29.3 percent for passes and 27.3 percent for tickets) are used for three-zone or \$0.90 fares than those for cash fares (only 17.2 percent). This suggests that riders paying three-zone or \$0.90 rides tend to rely more heavily on passes and tickets than riders traveling two-zones or less or at lower fares.

¹ The returned survey distributions were discussed earlier in the section "Validation of Rider Survey Data."

² The total doesn't add to 100 percent since more than one response was permitted.

EXHIBIT II-17

**FARE PAYMENT CHARACTERISTICS
OF TRI-MET BUS RIDERS**

FARE PAYMENT TYPE	ON-BOARD	MAIL BACK
	PERCENT OF RIDERS	
CASH	40.5	33.4
TICKET	12.9	10.1
PASS	53.0	56.5

FARE AMOUNT	PERCENT OF ALL RIDERS	PERCENT OF CASH RIDERS	PERCENT OF TICKET RIDERS	PERCENT OF PASS RIDERS
\$0.65 (2-Zone)	48.9	49.7	50.7	47.9
\$0.90 (3-Zone)	24.5	17.2	27.3	29.3
\$0.45 (Youth)	15.3	16.1	10.9	15.7
\$0.25 (Honored Citizen)	5.6	7.9	6.0	3.8
\$1.00 (Vancouver)	0.8	1.1	0.6	0.6
Multiple	3.3	7.1	3.7	0.4
Other	1.6	1.0	0.8	2.3

The On-Board Survey total doesn't add to 100% since multiple answers allowed. The mail back survey total is slightly under 100% since 24 riders didn't answer the question.

Source: Tri-Met Bus Rider Survey, May and June, 1982 (On-Board/Mail Back)

Several crosstabulations were performed relating the type of fare payment (i.e., cash, ticket, or pass) to various rider characteristics.¹ Key findings are highlighted below:

- . In a crosstabulation of the type of fare payment with rider age, it was found that cash use is higher for riders age 65 or more than other age groups (51.2 percent versus 34.8 percent overall). Moreover, pass use for riders age 65 or more tends to be correspondingly lower than that for other age groups (28.2 percent versus 48.6 percent overall);
- . In crosstabulating the type of fare payment with family annual income, it was found that the use of cash fares declines dramatically with rising income. Cash fares decline from 40 percent for riders with family incomes under \$5,000 to 29 percent for riders with family incomes over \$25,000 or by more than 27 percent. Ticket and pass use rise with increasing family income, ticket use rising from 6 percent for incomes below \$5,000 to 13 percent for incomes above \$25,000 and pass use rising from 43 to 53 percent over the comparable range of family incomes.

Transfer Usage and Rider Attitudes

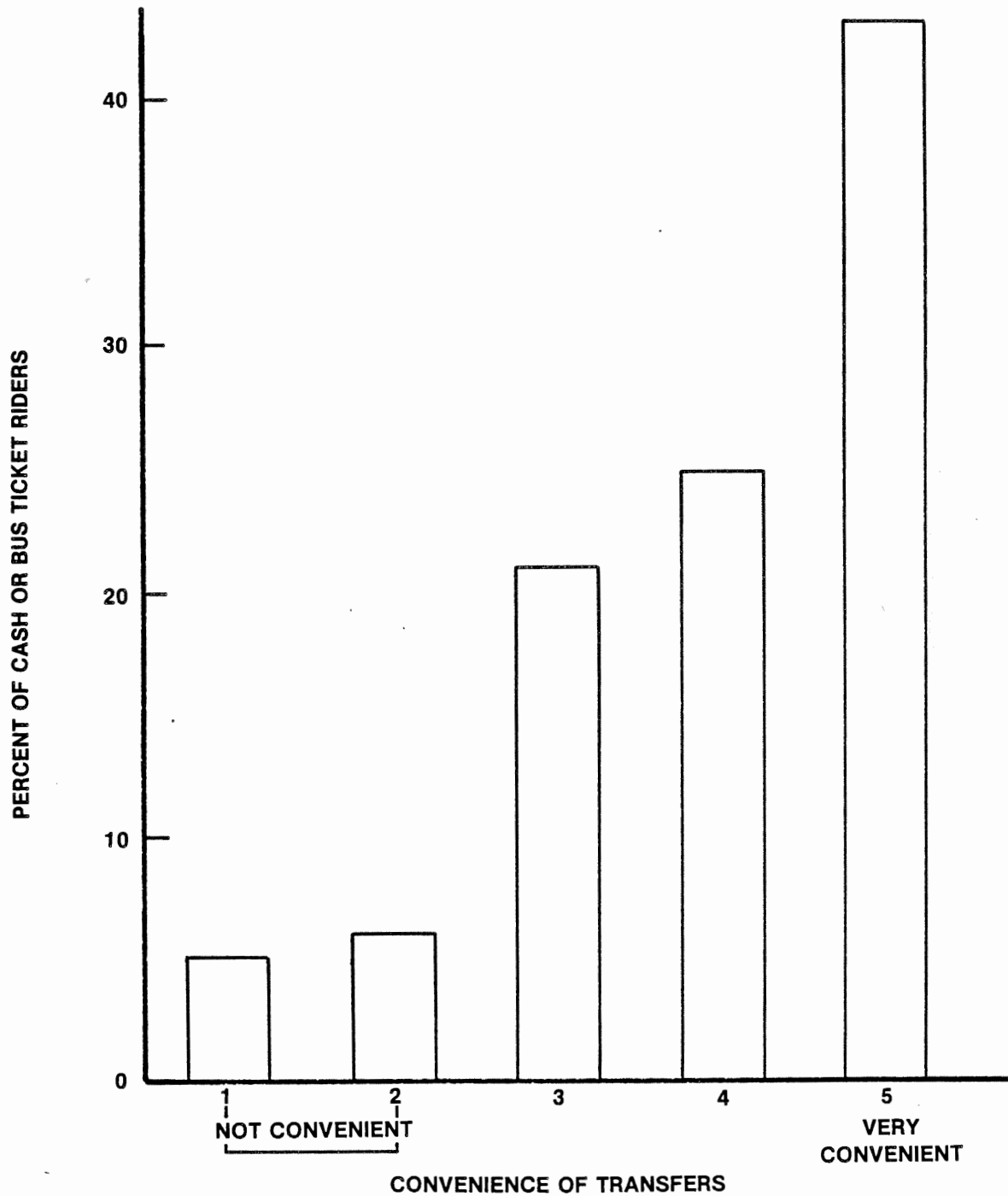
Tri-Met riders use 4 transfer slips per week on the average. It has been suggested by various transit professionals and others that transfers are viewed by many riders as a major inconvenience in using transit. When those riders who normally use cash or bus tickets to pay fares were asked whether they found transfers inconvenient, 44 percent of those responding indicated that they feel transfers are very convenient. A relatively small percentage, less than 11 percent, considered transfers inconvenient. The remaining 45 percent were somewhat more uncertain in their attitudes, although there was a definite tendency to perceive transfers as being a convenient mechanism for changing buses. Exhibit II-18 portrays the attitudes of those riders who pay their fare through the use of cash or tickets toward transfers.

Riders who felt that transfers were inconvenient were asked, "Why do you feel that way?" Exhibit II-19 summarizes their response. Lack of understanding of how or when to use

¹ These crosstabulations maybe found in the computer printout for the Tri-Met Bus Rider Survey in Appendix B.

EXHIBIT II-18

CONVENIENCE OF TRANSFERS
TO TRI-MET RIDERS USING CASH OR BUS TICKET FARES



Source: Tri-Met Bus Rider Survey, May and June, 1982 (On-Board)

EXHIBIT II-19

**PRINCIPAL REASONS TRI-MET RIDERS
FIND TRANSFERS INCONVENIENT**

REASON FOR TRANSFER INCONVENIENCE	PERCENT OF TIMES CITED BY RIDERS
I FORGET TO ASK FOR TRANSFER	26%
I LOSE THE TRANSFER OR CAN'T FIND IT	33%
I DO NOT UNDERSTAND WHEN TO USE THEM	9%
OTHER	32%

Source: Tri-Met Bus Rider Survey, May and June, 1982 (On-Board)

transfers appears to be relatively less significant reason for finding transfers inconvenient than forgetting to ask for them or losing them.

Pass and Bus Ticket Purchase Patterns and Attitudes

In order to ensure that the potential benefits of self-service fare collection are realized, it is vital that the vending distribution system for tickets and passes be designed to encourage their purchase by transit riders. Tri-Met ticket and pass riders were asked, "Where do you usually buy your pass or bus tickets?" Their response is shown in Exhibit II-20. Tri-Met's customer assistance offices provide tickets or passes to nearly 34 percent of such riders and they are the primary vendors. Another 25 percent of those riders usually purchase tickets and passes from bank and savings and loan offices. Together, these two sources distribute tickets or passes to 59 percent of ticket and pass users that responded to the survey.

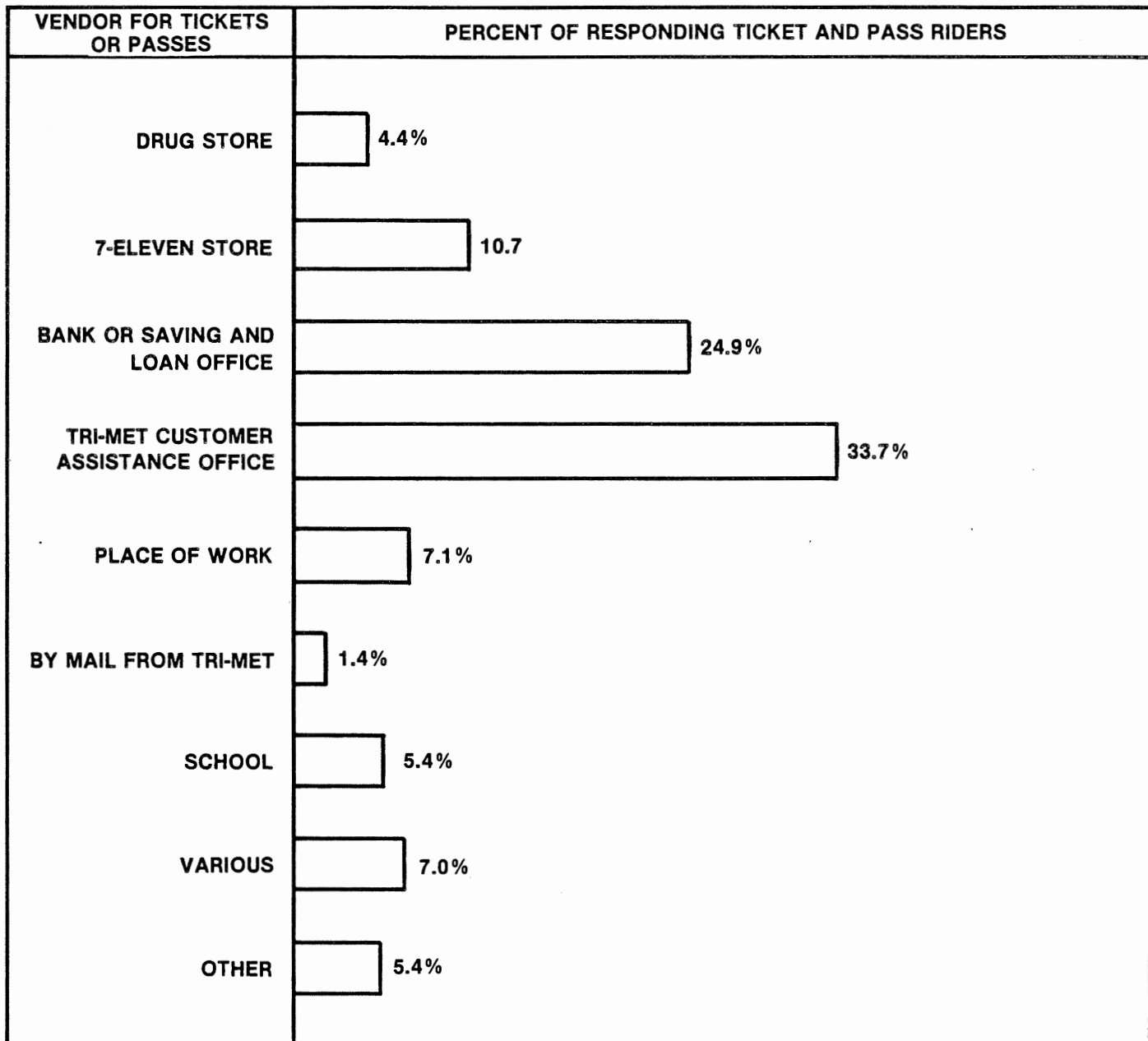
Crosstabulating the fare level, and then the type of pass, with the vendor source showed that:

- . Tri-Met's customer assistance offices provide tickets and passes to a much broader range of fare levels than bank and savings and loan offices, i.e., 93 percent of bank and savings and loan pass and ticket sales are \$0.65 or \$0.90 as compared to 80 percent for customer assistance offices; and
- . Bank and savings and loan offices in combination with customer assistance offices provide 61 percent of two-zone passes and 63 percent of three-zone passes.

Increasing the market penetration or share of pass and multi-ride ticket users may require that additional vending sources; characterized by high availability, more convenience and low operating or maintenance costs, be promoted or provided by Tri-Met. Cash riders were asked about their willingness to purchase bus tickets or passes if they were readily available from vending machines. Sixty-seven percent of current cash riders said they would be more likely to purchase passes or tickets under such circumstances, their primary reasons being greater convenience (67 percent) and increased availability (66 percent). Of those cash riders who said they would not purchase tickets or passes from vending machines, 52 percent prefer paying cash, 40 percent don't trust vending machines, and 21 percent felt comfortable with their current practice of paying cash. Although marketing and public information efforts, and also increased positive experience in using vending

EXHIBIT II-20

VENDOR DISTRIBUTION OF BUS TICKETS AND PASSES



Source: Tri-Met Bus Rider Survey, May and June, 1982 (On-Board)

machines, may be used to encourage people to purchase bus tickets and passes from vending machines, convincing cash users who prefer to pay in cash or who are comfortable with their current practice presents a greater challenge. Exhibit II-21 illustrates these points.

It has been hypothesized that if transit riders could purchase bus tickets or passes through the use of major credit cards from vending machines more riders would elect to do so. When asked this question, only 31 percent of responding riders said they would use a credit card to purchase bus tickets or passes. As shown in Exhibit II-22, the major categories of riders who would not use a major credit card for purchasing bus tickets or passes from vending machines comprise those who do not have a credit card (39 percent) and those who prefer cash (25 percent). Only 7 percent of survey respondents felt they would not use a credit card to purchase tickets from a vending machine because of limited confidence in the technology.

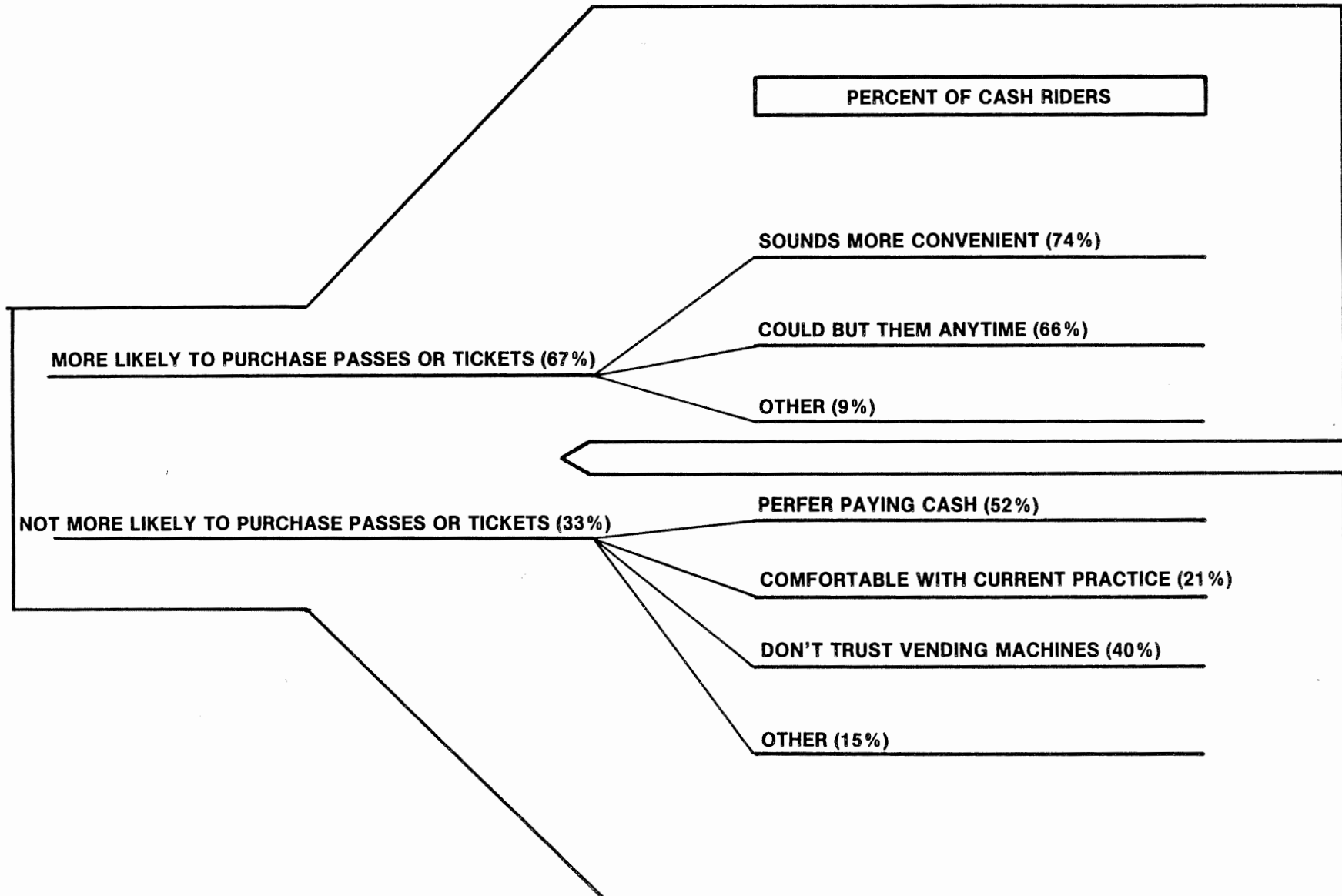
In trying to increase and maintain the proportion of transit riders using monthly passes, which is a prerequisite for maximizing the potential benefits of self-service fare collection, Tri-Met sought to obtain information on current barriers to using passes. Pass users were asked if showing their passes to drivers is inconvenient. Slightly more than 8 percent of those riders who answered this question answered in the affirmative. For these people, self-service fare collection may make using a pass a more attractive option; nevertheless, they comprise a relatively small fraction of total pass users who usually do not mind showing their passes to drivers.

Cash and bus ticket riders were asked, "Why do you pay for individual rides rather than purchase a monthly pass?" Exhibit II-23 presents their response. Nearly one-half responded that they don't ride the bus often enough to need a pass. No more than 10 percent of responding riders cited any other single reason, although 10 percent felt that bus passes were too expensive and 8 percent felt that pass outlets were inconvenient to access.

Tri-Met riders were asked, "What discount, if any, do you think purchasers of ten-ride tickets should receive?" About 91 percent of those riders responding felt a discount should be offered to riders purchasing ten-ride tickets in advance. Of these, 59 percent felt a 10 to 20 percent discount would be most appropriate, while 30 percent didn't know what discount should be provided. Exhibit II-24 presents the distribution of rider responses to this question. When self-service fare collection was initiated, Tri-Met began to offer ten-ride tickets for two

EXHIBIT II-21

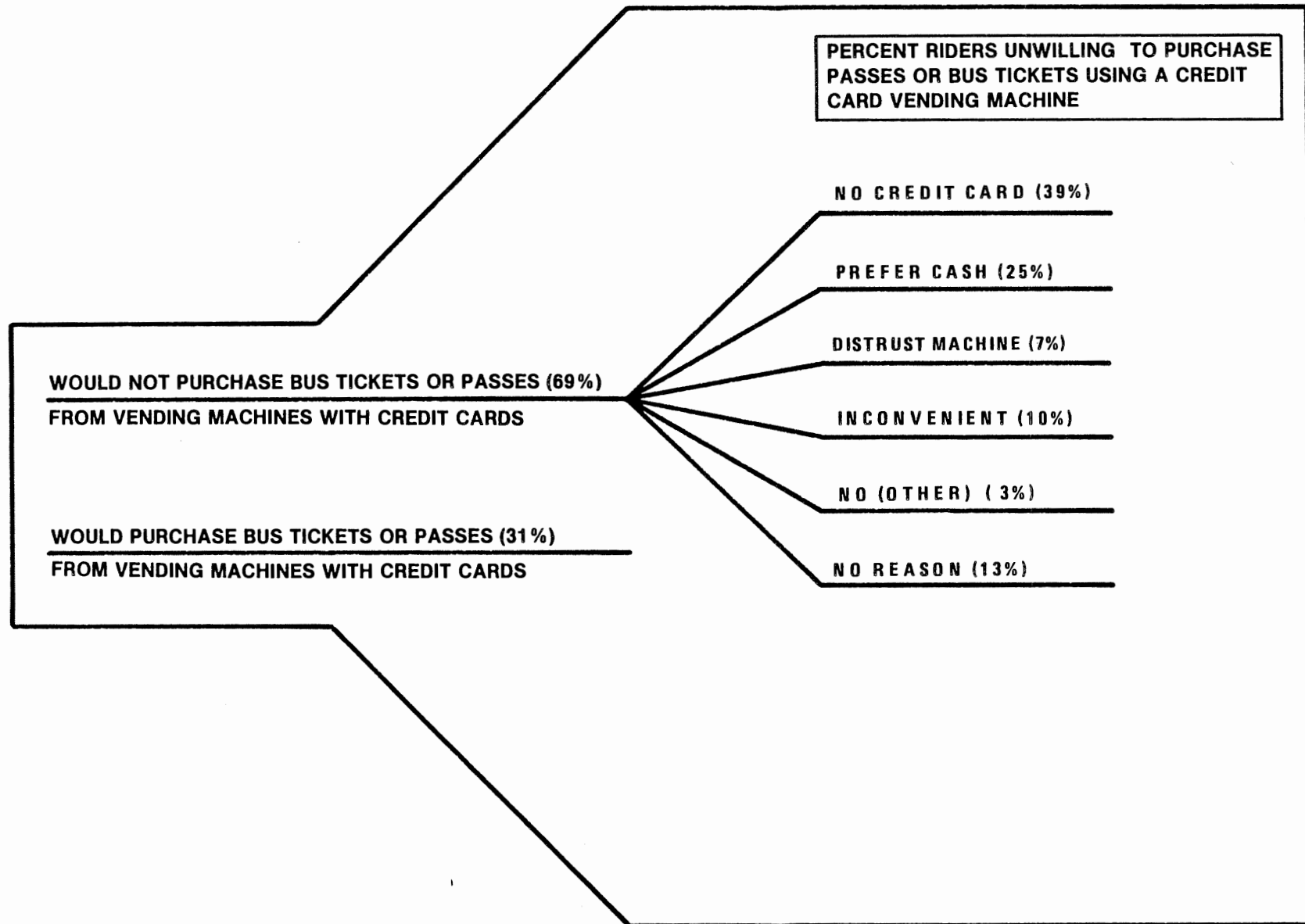
**LIKLIHOOD OF CASH RIDERS PURCHASING BUS TICKETS
OR PASSES IF READILY AVAILABLE FROM VENDING MACHINES
AND THEIR REASONS**



Source: Tri-Met Bus Rider Survey, May and June, 1982 (Mail Back)

EXHIBIT II-22

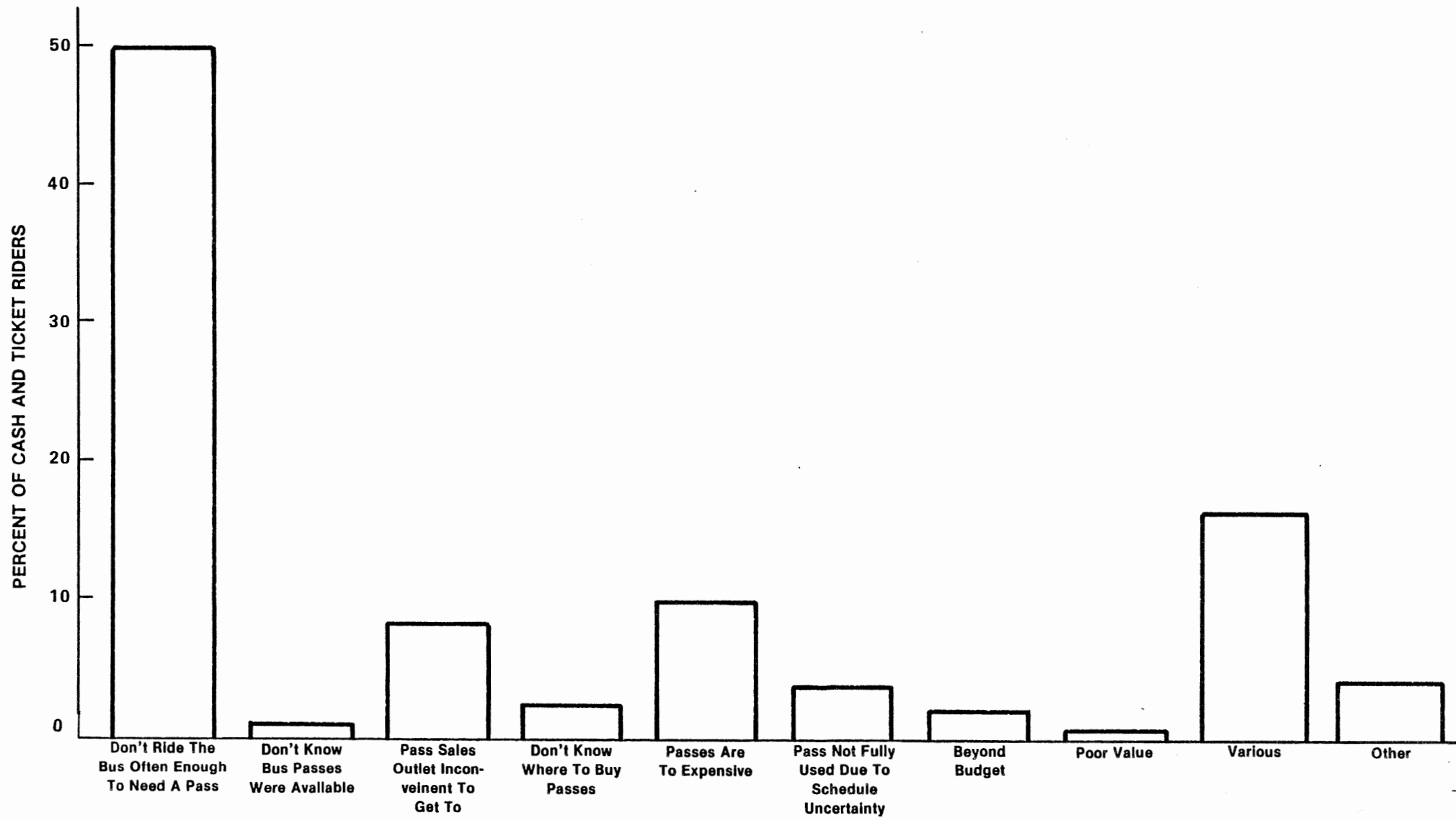
WILLINGNESS OF TRI-MET RIDERS TO PURCHASE
BUS TICKETS OR PASSES FROM VENDING MACHINES
ACCEPTING MAJOR CREDIT CARDS



Source: Tri-Met Bus Rider Survey, May and June 1982 (Mail Back)

EXHIBIT II-23

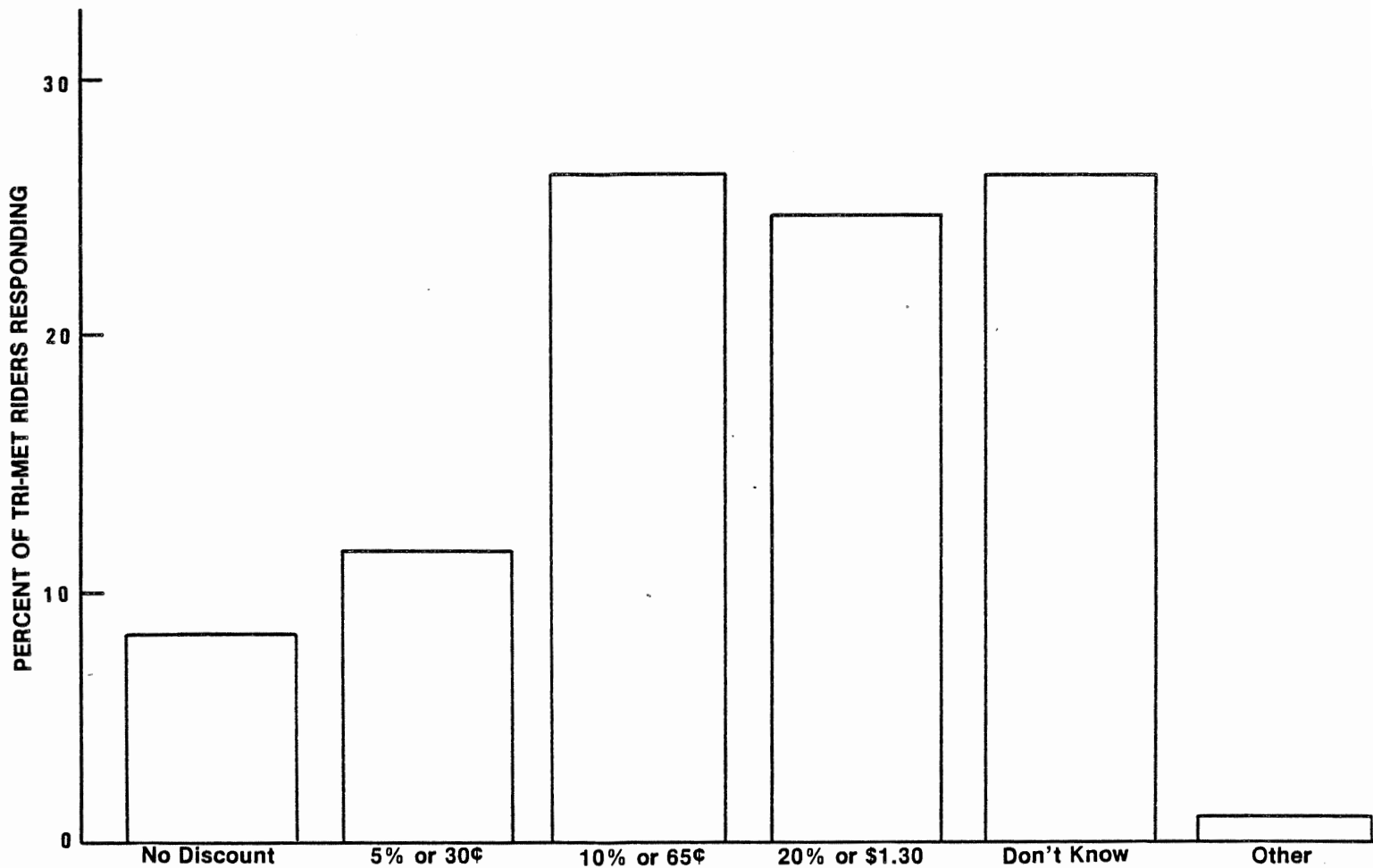
**TRI-MET BUS RIDER REASONS FOR PAYING
INDIVIDUAL RIDES RATHER THAN PURCHASING A MONTHLY PASS**



Source: Tri-Met Bus Rider Survey, May and June, 1982 (Mail Back)

EXHIBIT II-24

**RIDER ATTITUDES ON DISCOUNTS
FOR ADVANCE PURCHASE OF TEN-RIDE TICKETS**



Source: Tri-Met Bus Rider Survey, May and June, 1982 (On-Board)

zones at a 13.3 percent discount, for three zones at a 10.0 percent discount, and for four or more zones at a 8.0 percent discount. These discounts seem to conservatively approximate the feelings of transit riders on the appropriate discount level.

Rider Attitudes toward the Fare Collection System and the Fare Structure

Tri-Met riders were asked their opinion on fare collection problems, and also on aspects of the fare structure, i.e., the number of zones, incremental fares, and factors which should be used in determining or setting fares. Exhibit II-25 highlights their opinions on five fare collection system problems often associated with the traditional fare collection system. A major problem is the additional delay imposed upon other riders while waiting for passengers to search for their fares. About 52 percent of responding bus riders agreed this was a problem with the fare collection system. It is generally believed that the introduction of high capacity articulated buses would have heightened the seriousness of this problem if the fare collection system was not changed to self-service fare collection. Forty-seven percent of responding riders found it inconvenient to have the correct change while 43 percent cited problems in determining zone boundaries and when to pay the extra fare. To the extent that self-service fare collection succeeds in shifting fare payment from single cash fares to passes and ten-ride tickets, these problems are likely to diminish.

When asked to indicate those factors which should be considered in determining fares, most riders indicated distance of the trip (62 percent of riders surveyed) and age (61 percent of riders surveyed). The refined zone structure accompanying the introduction of self-service fare collection (four or more zones versus only three under the prior fare collection system) and the continuation of reduced fare Honored Citizen and Youth fares suggest that the new fare structure is responsive to those criteria Tri-Met riders feel should be considered in setting fares. Exhibit II-26 summarizes the attitudes of Tri-Met riders on these and other factors.

Tri-Met riders were asked, in two sequential questions which were related, "What do you feel the ideal number of fare zones should be and also what the incremental fare should be for each zone?" The largest percentage of responding riders, almost 33 percent, preferred three zones (e.g., downtown Portland, inside Portland, and outside Portland), however, more than 34 percent felt five or more zones would be most desirable. Only 10 percent felt that a single zone, i.e., a flat fare for everyone, was preferable. The distribution of rider attitudes on the optimal zone structure is shown in Exhibit II-27.

EXHIBIT II-25

RIDER OPINIONS ON FARE COLLECTION SYSTEM PROBLEMS

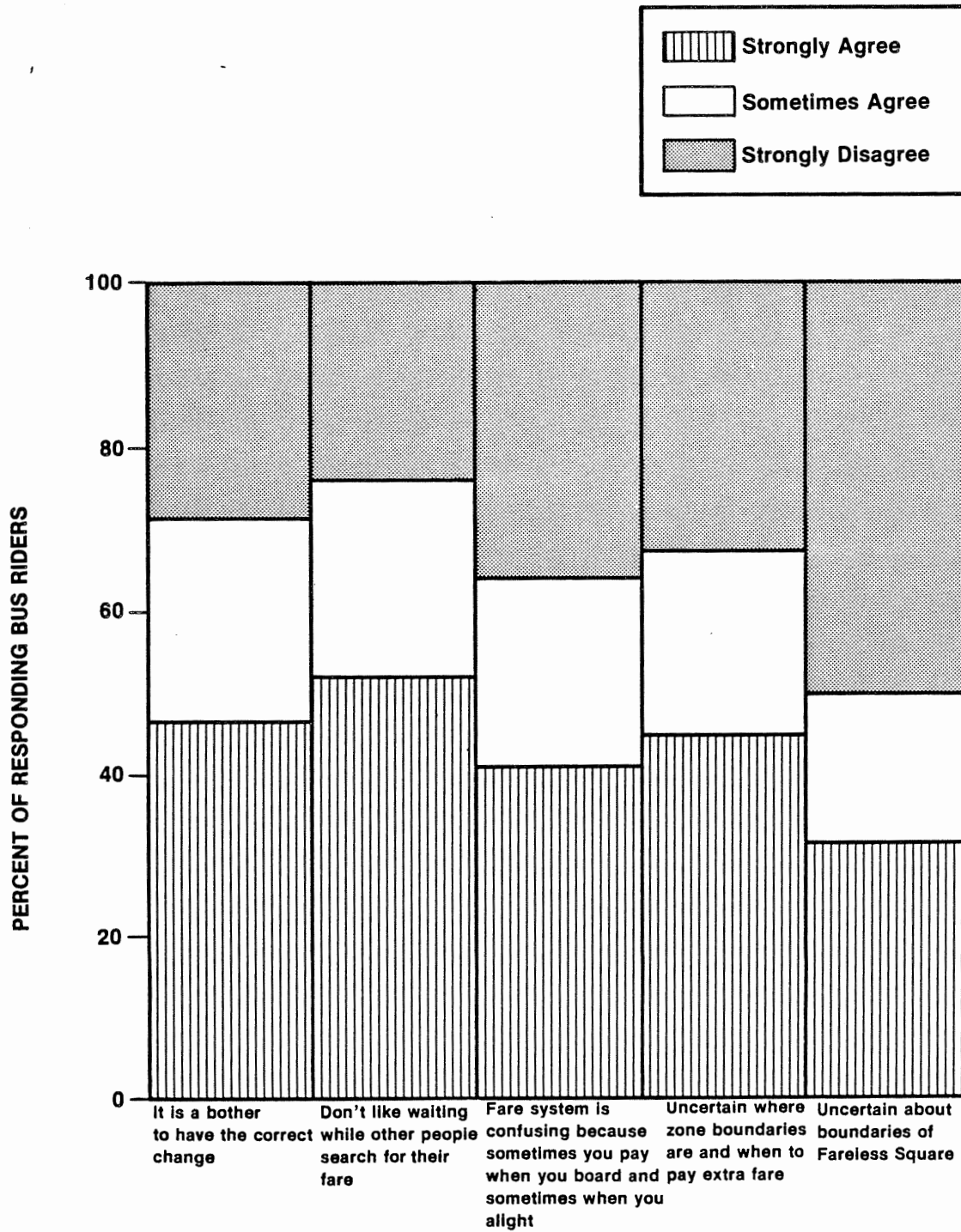
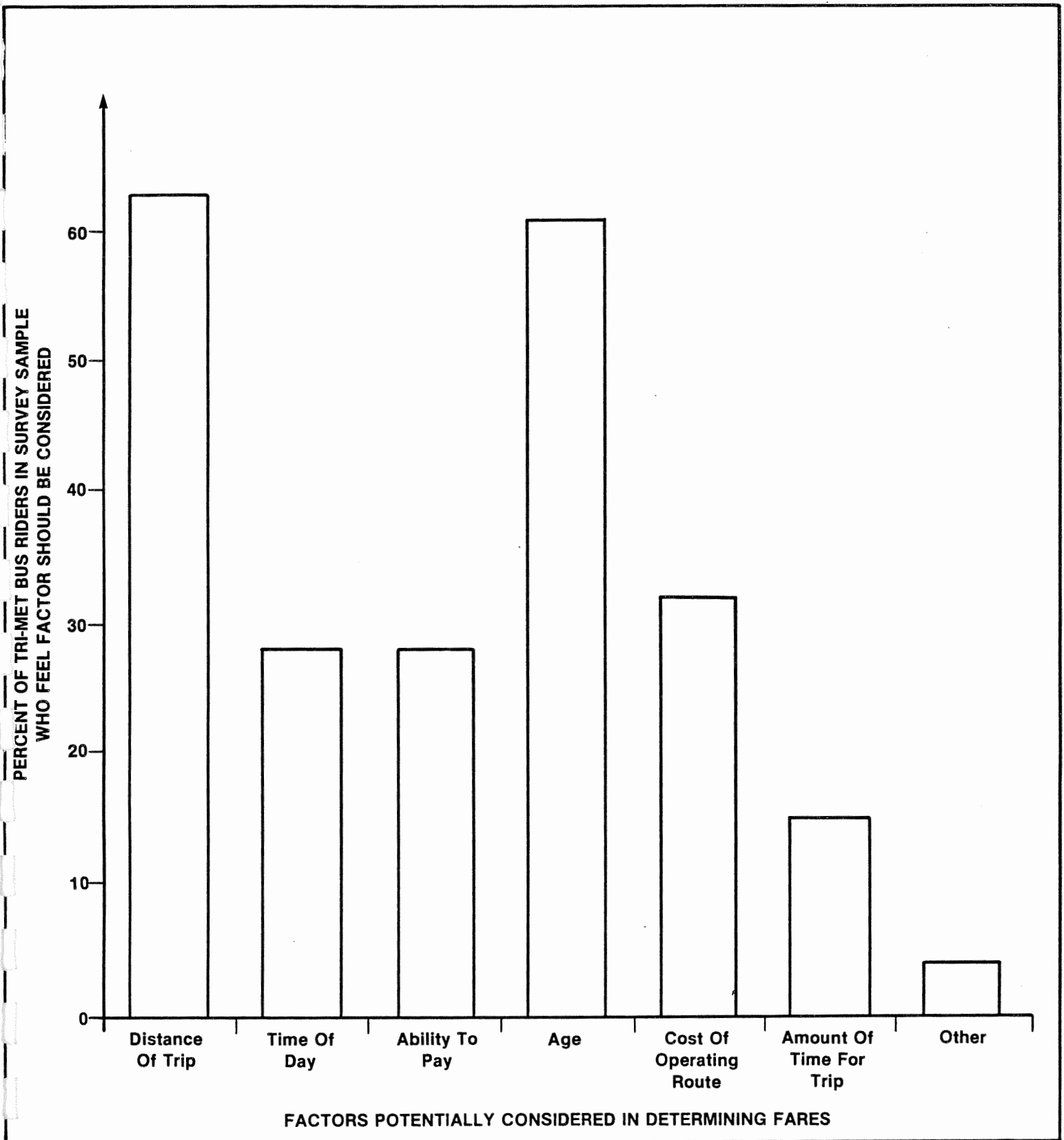


EXHIBIT II-26

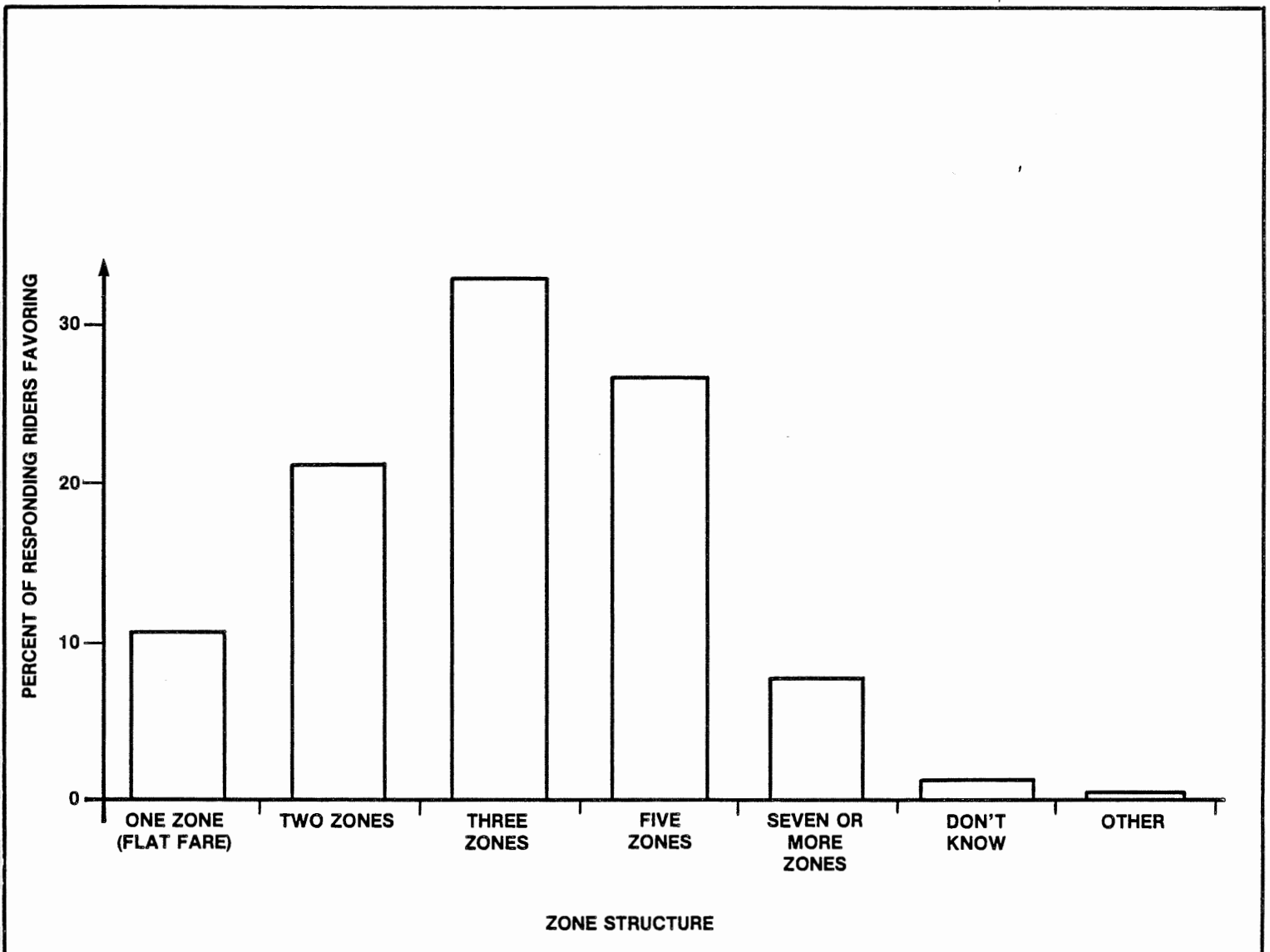
PERCENT OF TRI-MET RIDERS IN SURVEY SAMPLE
WHO FEEL FACTOR SHOULD BE CONSIDERED IN DETERMINING FARES



Source: Tri-Met Rider Survey, May and June, 1982 (Mail Back)

EXHIBIT II-27

TRI-MET RIDER ATTITUDES ON
OPTIMAL ZONE STRUCTURE



SOURCE: TRI-MET BUS RIDER SURVEY, MAY AND JUNE, 1982 (MAIL BACK)

Tri-Met's choice of a five-zone system, only the first four of which count toward determining the fare, appears to balance the desire of riders to be charged fares on the basis of distance traveled with their overall concern for a simple zone structure.

Given their attitudes on the optimal number of zones, riders were asked to indicate what incremental fare was most appropriate for each additional zone traversed. Most riders, about 24 percent, felt a \$0.10 incremental fare should be imposed. Overall, 74 percent of responding riders favored imposing incremental zone fares, while the remainder felt that fares should not change. Exhibit II-28 displays rider attitudes on incremental zone fares. It can be observed that more than 48 percent of riders favored incremental zones fares between \$0.15 and \$0.25. Tri-Met has decided to charge an incremental zone fare of \$0.25, more than most riders felt appropriate.

A crosstabulation of the preferred number of zones with the suggested fare for each additional zone revealed the following:

- . Of those riders that felt one zone was preferred, 77 percent felt that fares should not change for each additional zone and 11 percent felt that a \$0.05 incremental fare would be appropriate;¹
- . As the number of preferred zones increase from two to seven or more, there is a gradual increase in the percentage of riders favoring lower incremental fares; i.e., for two zones 31 percent of riders feel \$0.05 or \$0.10 is appropriate versus 50 percent at seven or more zones; and
- . Concurrently, as the number of preferred zones increase from two to seven, there is a gradual decrease in the percentage of riders favoring higher incremental fares; i.e., for two zones 32 percent of riders feel \$0.20 or \$0.25 is appropriate versus 17 percent at seven or more zones.

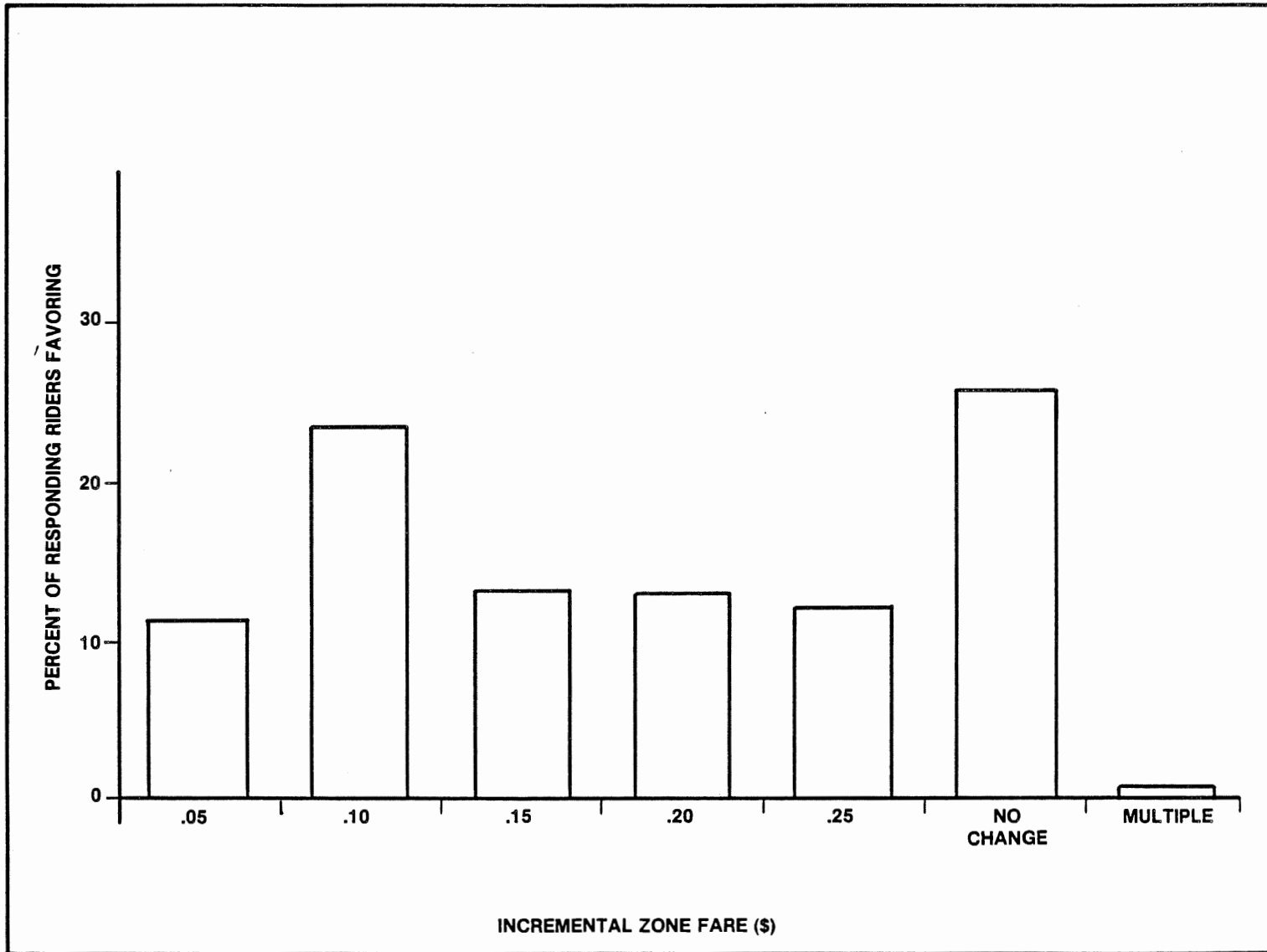
Rider Attitudes toward Fare Evasion and Enforcement

Exhibit II-29 characterizes the rate of fare evasion perceived by Tri-Met riders. Fifty-six percent of those riders

¹ There may have been confusion in how riders interpreted the response "SHOULD NOT CHANGE" when asked how much they think fares should increase for each additional zone (i.e., in addition to the first zone or in addition to the number of preferred zones).

EXHIBIT II-28

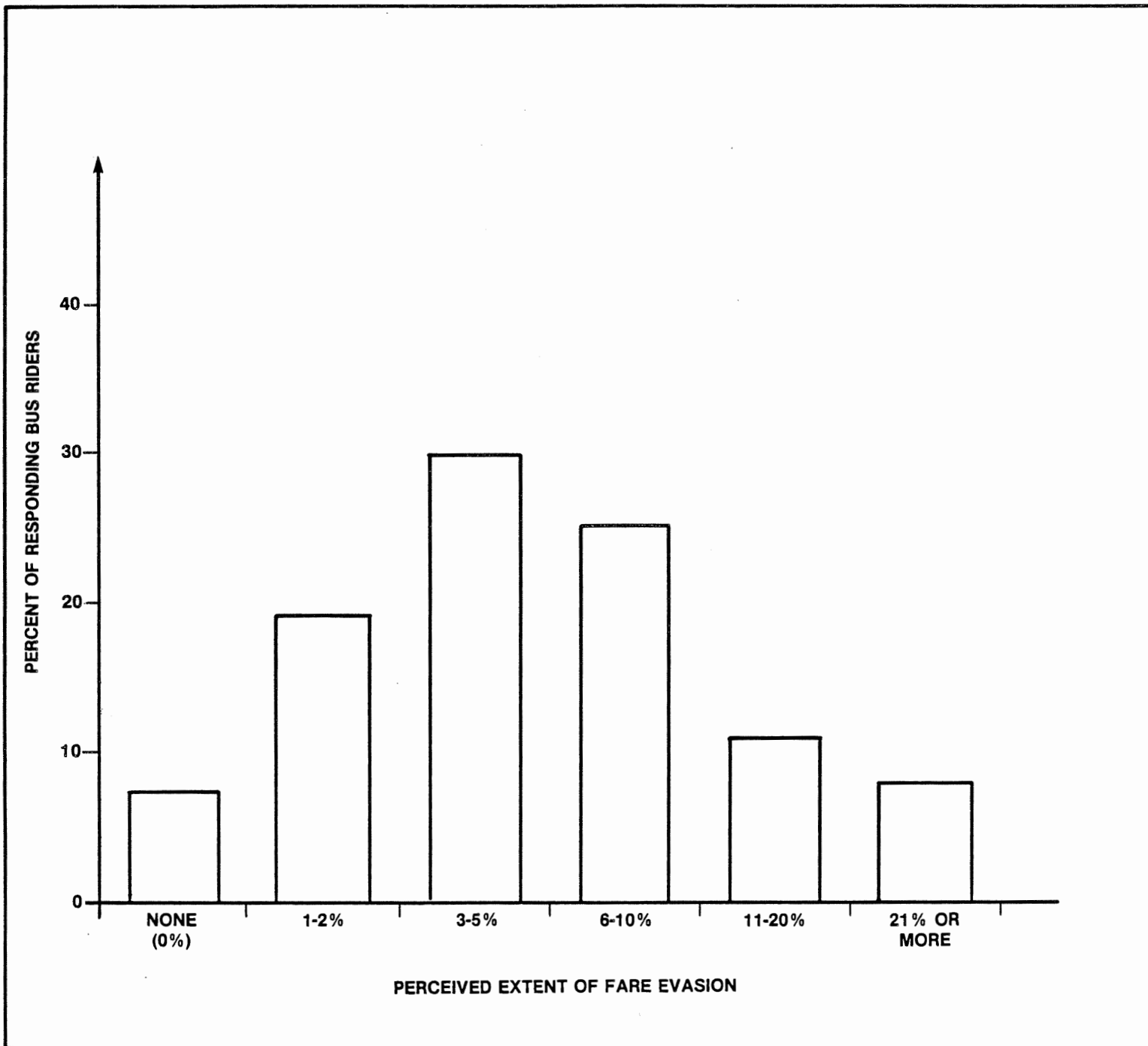
**TRI-MET RIDER ATTITUDES ON
INCREMENTAL ZONE FARES**



SOURCE: TRI-MET BUS RIDER SURVEY, MAY AND JUNE, 1982 (MAIL BACK)

EXHIBIT II-29

**TRI-MET RIDER PERCEPTIONS OF THE
EXTENT OF FARE EVASION**



SOURCE: TRI-MET BUS RIDER SURVEY, MAY AND JUNE, 1982 (MAIL BACK)

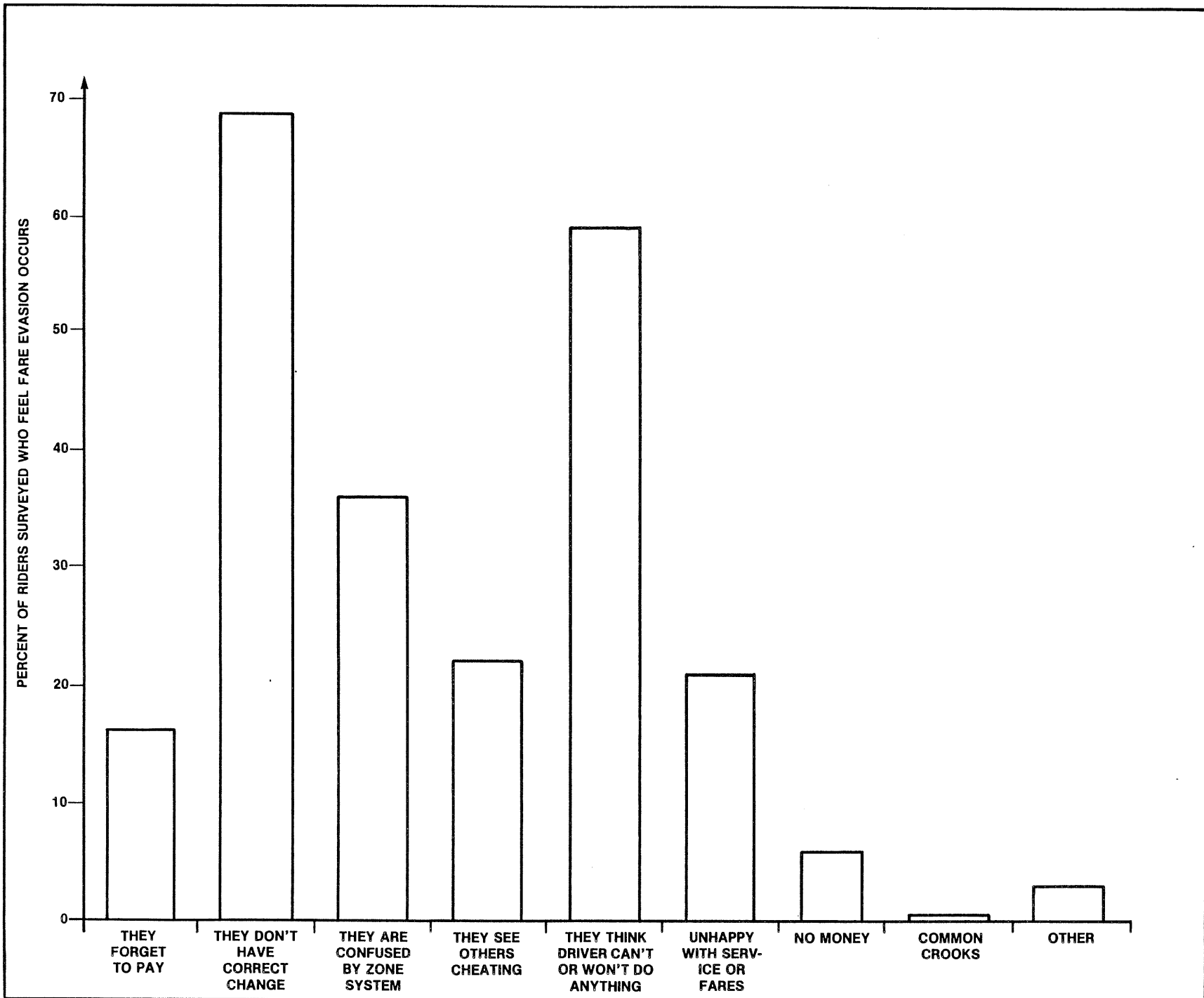
responding to a question on the likely fare evasion rate felt that it was between 3 and 10 percent, and of these more than half felt it was between 3 to 5 percent. These findings are consistent with those found in the Tri-Met Bus Operator Survey (February 1982). Slightly less than 7 percent of riders felt that no fare evasion occurs.

Riders were asked, "Why do you think riders fail to pay the correct fare?" Of those riders who feel that fare evasion occurs, 69 percent felt that lack of correct change was a key reason for failing to pay the proper fare while 59 percent felt that others think that drivers can't or won't do anything. The latter reason is consistent with the results of the Tri-Met Bus Operator Survey (February 1982) in which more than 40 percent of Tri-Met's operators said they felt riders often or very often cheated because they "know the operator can't do anything if they are caught." The use of fare inspectors for monitoring and enforcement of fare payment under self-service fare collection may reduce fare evasion attributable to rider attitudes that "operators can't or won't do anything. Exhibit II-30 presents rider perceptions of the reasons for fare evasion.

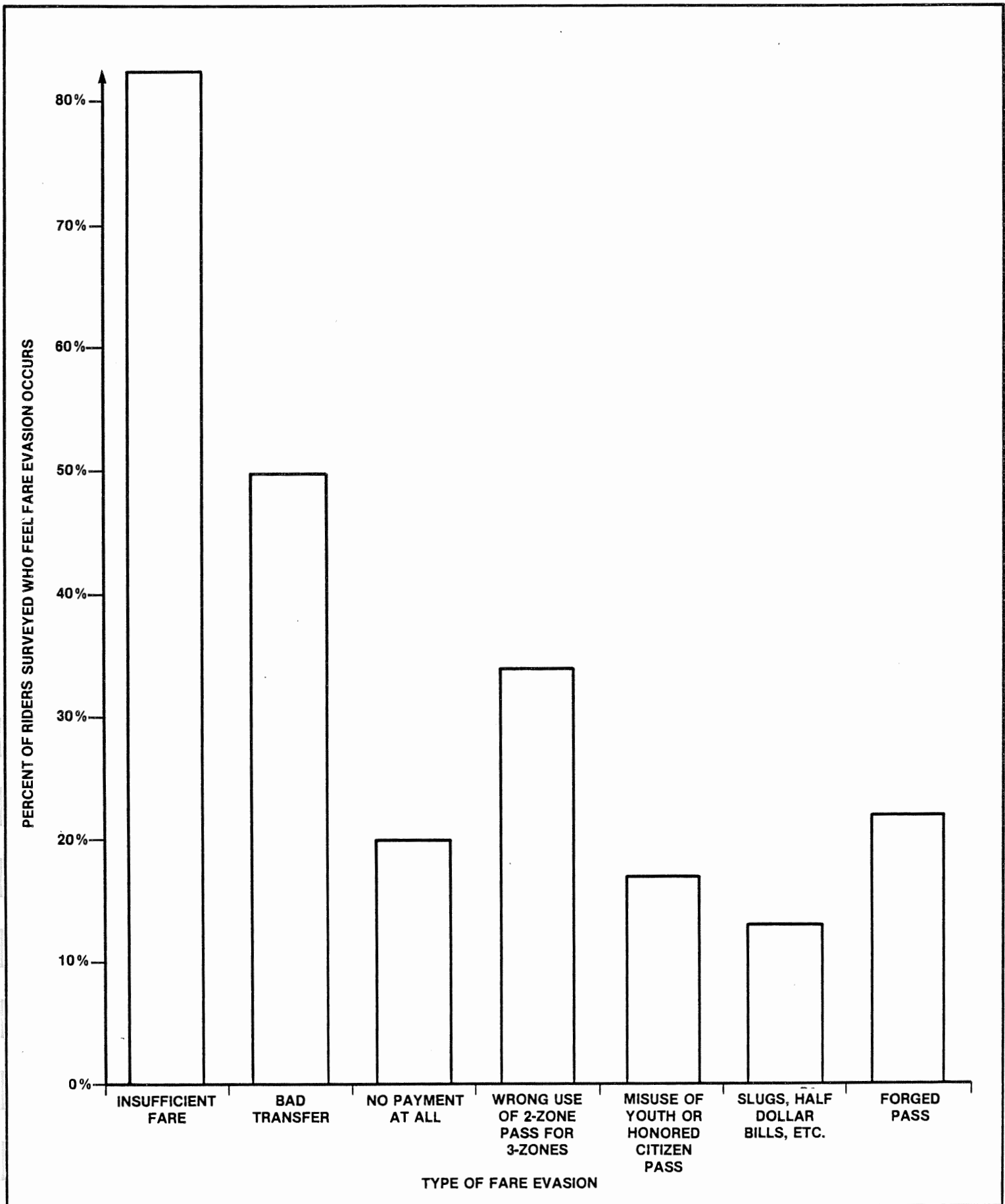
Riders who believe fare evasion occurs were asked, "How do fare evaders typically underpay their fares?" Eighty-three percent believe that insufficient fare payment is one of the primary means. Forty-four percent of riders feel that the use of bad transfers is also frequently used to evade fares. Comparable results from the Tri-Met Bus Operator Attitude Survey (February 1982) reinforce the notion that bad transfers comprise a major means of fare evasion; however, operators tend to perceive wrong use of a two-zone pass for three zones and no three-zone cash fare as a more common occurrence than riders, while riders tend to perceive insufficient fare payment as a more common occurrence than operators. These different perceptions may result partly from the difficulty operators would be likely to have in estimating the number of passengers who pay insufficient fares. Exhibit II-31 highlights rider perceptions of the extent of fare evasion by type.

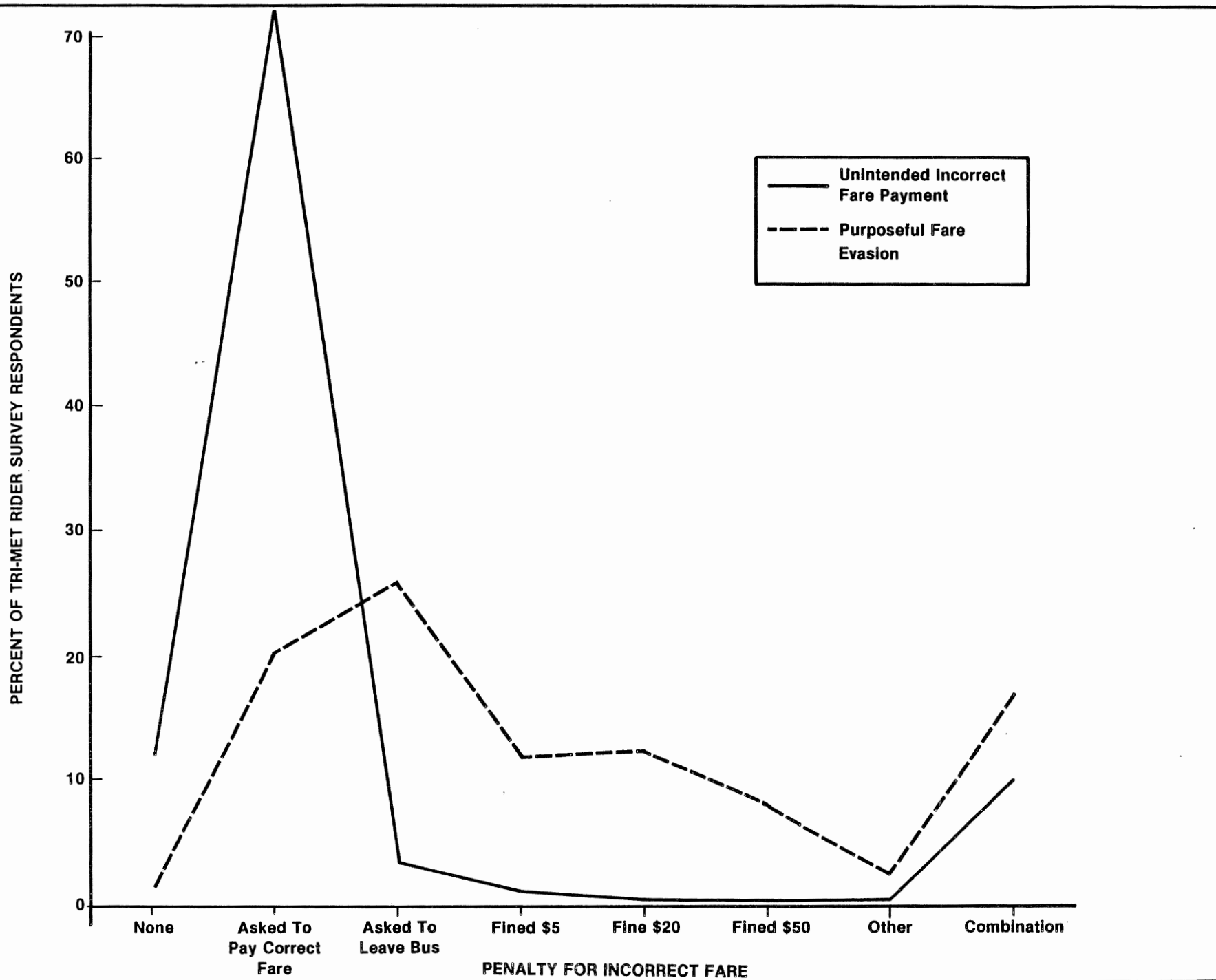
Exhibit II-32 compares rider attitudes on penalties for unintended fare evasion with their attitudes on penalties for purposeful fare evasion. The sharp differences between the two curves point out the need for Tri-Met to consider the general sympathy riders feel toward those who unintentionally pay incorrect fares and make sure that the enforcement and penalty system differentiate between intended fare evasion and unintended incorrect fare payment. For unintended incorrect fare evasion, 72 percent of riders feel that the fare evader should simply be asked to pay the correct fare. For willful fare evasion, the largest percentage of riders, nearly 26 percent, felt that the rider should be asked to leave the bus. Of the 33 percent of responding riders favoring imposition of a fine for purposeful cheating, 40 percent favored a \$20 penalty.

TRI-MET RIDER PERCEPTIONS OF REASONS FOR FARE EVASION



SOURCE: TRI-MET BUS RIDER SURVEY, MAY AND JUNE, 1982 (MAIL BACK)

**TRI-MET RIDER PERCEPTIONS OF THE
EXTENT OF FARE EVASION BY TYPE**

**TRI-MET RIDER ATTITUDES TOWARD
PENALTIES FOR INCORRECT FARE PAYMENT**

Source: Tri-Met Rider Survey, May and June, 1982 (Mail Back)

Although the survey allowed riders to select only one penalty, 17 percent of riders checked a combination of measures. If this had been clearly permitted, it is likely that the proportion of riders favoring this option would have been higher. Nevertheless, in view of the response of riders on appropriate penalties for fare evasion, the \$20 penalty selected by Tri-Met is likely to be perceived by most riders as a relatively tough penalty.

Effectiveness of Tri-Met Public Information and Marketing Efforts

Tri-Met has expended considerable time and resources in trying to inform both its ridership and the general public about the planned shift to self-service fare collection and its potential benefits to riders and Tri-Met. Although the rider survey comprises only one aspect of the evaluation of the public information and marketing efforts for self-service fare collection, the results of the survey provide an early indication of their success.

Exhibit II-33 shows the findings of the rider survey most pertinent to Tri-Met's marketing and public information programs. Nearly 80 percent of those riders surveyed were aware of Tri-Met's plan to introduce self-service fare collection. Moreover, 67 percent had heard or read about Tri-Met's bus school program to inform and educate both riders and the general public on the use of self-service fare collection equipment. Unfortunately, the fraction of riders familiar with plans to change the fare collection system exceeded those believing the new changes will work. Of those riders answering the question on whether or not self-service fare collection will be successful, 60 percent feel it would. These riders feel self-service fare collection will be successful because it will be faster boarding and alighting (52 percent) and less confusing (46 percent). Of those riders that believe self-service fare collection will not be successful, most felt that it would be more confusing.

OPERATING IMPACT STUDY¹

It has been hypothesized that the introduction of high-capacity articulated buses on Tri-Met's more heavily patronized

¹ Peat Marwick received three memorandums prepared by Tri-Met and relied heavily upon them for insight into dwell time and run time impacts: Mall Dwell Time Survey (Spring 1981), Mall Running Time Survey (Spring 1981), and SSFC Operating Impact Study: Phases I and II (September 23, 1982). All analyses were redone and checked, and some modifications were made.

**SOME INDICATORS OF THE EFFECTIVENESS OF
TRI-MET'S MARKETING AND PUBLIC INFORMATION
EFFORTS AS RELATED TO SELF-SERVICE
FARE COLLECTION**

QUESTIONS	RIDER AWARENESS	
	YES (PERCENT)	NO (PERCENT)
HAVE YOU SEEN OR HEARD ABOUT TRI-MET'S PLAN TO CHANGE IT'S FARE COLLECTION SYSTEM BEFORE NOW?	79.7	20.3
HAVE YOU HEARD OR READ ABOUT TRI-MET'S BUS SCHOOL?	67.1	32.8
BASED ON THE ABOVE AND OTHER INFORMATION DO YOU THINK THE NEW FARE PAYMENT SYSTEM WILL WORK?	60.5	39.5

YES, BECAUSE	PERCENT OF "YES" RIDERS CITING
IT WILL BE LESS CONFUSING	46%
MORE RIDERS WILL PAY CORRECT FARES	42%
IT WIL BE FASTER GETTING ON THE BUS	57%
IT WILL SAVE MONEY FOR TRI-MET	31%
NEW SYSTEM, ONLY TIME WILL TELL	1%
OTHER	6%

NO, BECAUSE	PERCENT OF "NO RIDERS CITING
IT WILL BE MORE CONFUSING	62%
MORE RIDERS WILL PAY INCORRECT FARES	44%
IT WILL TAKE LONGER TO GET ON THE BUS	43%
IT WILL COST TRI-MET MONEY	
OTHER	19%

SOURCE: Tri-Met Bus Rider Survey, May and June 1982 (On-Board)

routes will increase overall bus travel times because of (1) higher dwell times from increased boarding and alighting volumes past a single door and (2) greater bus interference from operational difficulties associated with longer articulated buses. In recommending the adoption of self-service fare collection, Tri-Met argued that it would counter the effects of increasing travel times on articulated buses by decreasing dwell time per passenger, i.e., passengers would be able to board through all doors. Moreover, it was pointed out that dwell time per passenger on standard buses would also be reduced. If lower dwell times, and therefore bus travel times were realized, a decrease in total driver hours while maintaining existing service levels would be possible. This would permit operator productivity to rise.

The operating impact study consists of the following three phases or stages:

- . Phase I - Mall Dwell and Running Time Survey. Conducted prior to placing articulated buses in service and before implementation of self-service fare collection to measure dwell and running times of standard buses in the traditional fare collection mode (Spring 1981);
- . Phase II - Mall and Non-Mall Dwell and Running Time Survey. Conducted before self-service fare collection but with a large proportion of the 87 articulated buses in service to measure dwell and running times of a mix of buses in the traditional fare collection mode. Select combined line dwell and running time studies were also conducted (Spring 1982); and
- . Phase III - Dwell and Running Time Survey. Conducted after implementation of self-service fare collection and all articulated buses are in revenue service, to measure a mix of buses in self-service fare collection operation. Select combined line dwell and running time studies on the same routes as in Phase II will also be conducted before and after comparison (Spring 1983).

Data Collection and Analysis Approach

Phase I and II of the operating impact study have been completed; however, data from the Phase II survey dealing with combined line dwell and running times is not in a suitable form for analysis at this time. Both Phase I and Phase II focused largely on the Downtown Transit Mall since this is where the greatest travel volumes occur, and therefore where the greatest operating impacts of self-service fare collection and articulated buses are likely to be observed.

Dwell Time Survey

The dwell time survey is designed to measure the impacts of self-service fare collection and articulated bus operation on bus dwell times. The following two hypotheses will be tested:

- . Operation of articulated buses in a traditional fare collection mode increases bus dwell times because of higher passenger boarding and alighting volumes past a single door, relative to that for standard buses; and
- . Self-service fare collection reduces average bus dwell time, particularly for articulated buses, because of the use of all doors for boarding and alighting.

Dwell time is the total time a vehicle spends stopped at a station or stop. Dwells may influence headway, patronage, and average travel speeds. Boarding and alighting comprise the largest portion of total dwell and have a high variability based on the fare structure and passenger queuing. Passenger queuing, in turn, is influenced by the bus load, vehicle design (particularly the number, width and placement of doors), and stop or station design (e.g., passenger waiting area).

Phases I and II survey locations and the number of bus lines passing each location are summarized in Exhibit II-34. The survey was conducted for two time periods: Midday (10:00 a.m. - 11:30 a.m.--lunch hour was avoided to eliminate Fareless Square activity) and P.M. Peak (4:30 p.m. - 5:30 p.m.). Observers were positioned at the locations specified in Exhibit II-34 and asked to record route and bus numbers, boarding and alighting counts through front and back doors, estimated bus loads (upon departing a stop) and bus dwell time. Timing began after the bus came to a complete stop or the front door was opened; however, for those rare cases where the only activity was rear door alighting (requiring the passenger to manually open the door) timing began when the bus came to a complete stop (usually simultaneous with rear door opening, but occasionally there was a delay due to standing passenger loads or tardiness of the passengers queuing to alight).

Timing was terminated based on various conditions. Since drivers often keep the front door open while waiting for traffic signals, closing the front door cannot be used in all cases to end timings. Therefore, if boarding passengers constituted the end of dwell time activity, timing would end when the final boarding passenger (excluding stragglers) paid a fare, collected a transfer slip or generally cleared their presence with the driver. If alighting passengers constituted the final dwell

EXHIBIT II-34

DWELL TIME SURVEY LOCATIONS

PHASE I SURVEY LOCTIONS

BUS LINES

On-Mall

Beaver stop: S.W. 5th at Alder	9
Beaver stop: S.W. 5th at Salmon	9
Snowflake stop: S.W. 6th at Morrison	8
Snowflake stop: S.W. 6th at Oak	8

Cross-Mall

S.W. Morrison at 6th	6
S.W. Yamhill at 4th	6

PHASE II SURVEY LOCATIONS

On-Mall

Rose stop: S.W. 5th at Taylor	8
Deer stop: S.W. 5th at Alder	8
Fish stop: S.W. 6th at Alder	6
Snowflake stop: S.W. 6th at Morrison	6

Cross-Mall

S.W. Washington at 5th	6
S.W. Salmon at 3rd	6

Major Transfer Points

Barbur Transit Center	4
S.E. 39th and Hawthorne	3
N.W. 23rd and Lovejoy	2
N.E. 42nd and Sandy Blvd.	4
S.W. Commercial and Main, Tigard	4
S.W. Capital Highway and Sunset Blvd.	4

Shopping Center

Lloyd Center: N.E. 11th and Multnomah	
---------------------------------------	--

activity, timing ended as soon as the last passenger exited the front or rear door. Surveyors were asked to exclude not only stragglers but also others boarding while a bus waited for a traffic signal. In addition, they were asked to note excessive time spent by drivers giving instructions to riders and eliminate this time so as to avoid skewing the results.

Oftentimes groups of buses arrive at stops simultaneously. Survey observers were asked to select the first bus in each group to keep the data more random.

Running Time Survey

The objective of the running time survey is to measure the impacts of self-service fare collection and articulated bus operation on run times. The following two hypotheses will be tested:

- . Operation of articulated buses in a traditional mode of fare collection increases bus dwell times because of higher boarding and alighting volumes past a single door relative to that experienced with standard buses; and
- . Self-service fare collection reduces average bus dwell time and overall run time, particularly for high capacity articulated buses, because of the use of all doors for boarding and alighting.

The method of fare collection has a direct effect on bus dwell time and a consequent effect on run time. The running time survey is measuring the same time changes as the dwell time survey except the time impact is measured over a distance, and the effect of changes in dwell time on vehicle movement in and out of bus stops is also measured.

Observers were positioned on Fifth Street, at the intersections of Pine and Madison, and on Sixth Street at the intersections of Main and Burnside. The survey was conducted for two time periods: Midday (10:30 a.m. - 12:30 p.m.) and P.M. Peak (4:00 p.m. - 6:00 p.m.). Elapsed time was measured by placing observers at both ends of the Mall to record bus line number, bus number, time, and estimated load. During the Midday period, all buses passing the observer were included. However, during the P.M. Peak, because of the large volume of buses on the Mall, checks were only made for buses with odd number routes and lines #44 and #88 which used articulated buses during Phase II. Checks for bus density were made by counting all buses even though not all were checked.

Time was recorded when the bus proceeded through an intersection. Therefore, at the end of the section (Fifth and Madison and Sixth and Burnside), the time spent waiting for the signal was included, but it wasn't at the beginning of the section (Fifth and Pine and Sixth and Main). The signal waiting time at Sixth and Burnside was sometimes relatively long due to traffic at Burnside blocking the intersection. The bus counts for Phase II were also verified against scheduled buses and found to be accurate.

Survey Results and Interpretation

The results of the dwell time survey will be discussed first. Then, the discussion of the running time survey will follow.

Dwell Time Survey Results¹

Tri-Met tested various relationships between the volumes of boarding and alighting passengers and total dwell time using regression analysis. Regression equations were determined two ways: first using total passenger activity and then using front door activity only. Tri-Met found, as one might expect, that back door passenger activity (alighting passengers) has little effect on dwell time. Peat Marwick replicated the regression analyses conducted by Tri-Met in order to verify their findings. The resulting equations are summarized in Exhibit II-35 and generally are consistent with Tri-Met's analyses with some minor modifications to the constant term in the Phase I equation they derived.

For the Phase I equation relating total dwell time at a stop to passenger boarding and alighting activity, the coefficient of determination (R^2) equals 0.88, indicating that 88 percent of variation in dwell time is explained by variables in the equation. If it can be assumed that the observed dwell times are normally distributed around the predicted dwell time values, and also if the variance of the distributions around

¹ Peat, Marwick, Mitchell & Co. didn't repeat the early investigations conducted by Tri-Met on the relationship between dwell time and various ways of stratifying boarding and alighting passengers. These have been adequately documented by Tri-Met in their earlier technical memoranda. During Phase I Tri-Met tested the hypothesis that an individual getting off the front door would cause a greater than normal dwell. By stratifying the data; i.e., separating those cases where no one got off the front from those where one or more did get off from the front, it was found that this hypothesis wasn't true.

EXHIBIT II-35

RELATIONSHIP BETWEEN BUS DWELL TIME AND BOARDING AND ALIGHTING PASSENGERS

PHASE I	$T_D = 2.82 + 2.65 \text{ TOT.ON} + 1.39 \text{ TOT.OFF}$	$R^2 = 0.88$	$N = 295$	$S.E.E. = 6.32$
	$T_D = 2.49 + 2.64 \text{ ON FRONT} + 2.79 \text{ OFF FRONT}$	$R^2 = 0.88$	$N = 295$	$S.E.E. = 6.28$
		$\text{TOT.ON} = 6.41$	$\text{MIN.} = 0$	$\text{MAX.} = 44$
		$\text{TOT.OFF} = 2.43$	$\text{MIN.} = 0$	$\text{MAX.} = 28$
		$\text{ON FRONT} = 6.41$	$\text{MIN.} = 0$	$\text{MAX.} = 44$
		$\text{OFF FRONT} = 1.35$	$\text{MIN.} = 0$	$\text{MAX.} = 13$
PHASE II	$T_D = 5.95 + 2.46 \text{ TOT.ON.} + 1.17 \text{ TOT.OFF}$	$R^2 = 0.82$	$N = 567$	$S.E.E. = 8.06$
	$T_D = 5.68 + 2.48 \text{ ON FRONT} + 2.16 \text{ OFF FRONT}$	$R^2 = 0.83$	$N = 567$	$S.E.E. = 7.76$
		$\text{TOT.ON} = 5.71$	$\text{MIN.} = 0$	$\text{MAX.} = 36$
		$\text{TOT.OFF} = 3.05$	$\text{MIN.} = 0$	$\text{MAX.} = 56$
		$\text{ON FRONT} = 5.68$	$\text{MIN.} = 0$	$\text{MAX.} = 36$
		$\text{OFF FRONT} = 1.79$	$\text{MIN.} = 0$	$\text{MAX.} = 29$

T_D = dwell time at a stop
 TOT.ON = passengers boarding at a stop
 TOT.OFF = passengers alighting at a stop
 ON FRONT = passengers boarding through the front door
 OFF FRONT = passengers alighting through the front door
 N = number of observations
 R^2 = coefficient of determination
 $S.E.E.$ = standard error of estimate

each possible value of predicted dwell time is the same, then the value of the standard error of estimate can be used as an approximate prediction interval. With a 90 percent confidence level we can feel certain that the actual dwell time is within plus or minus 10.4 seconds of the value predicted by the regression equation.¹ The form of the regression equation, that is, the presence of a constant term in regression equation and the positive signs on the independent variables, suggests that average dwell time per passenger will decrease with increasing passenger boarding and alighting activity at a declining rate. This may reflect the assumption that as passengers queue at a bus stop, more rapid or efficient boarding occurs.

The relationship developed using the dwell time survey data from Phase II also shows a good fit; however, somewhat less than that in Phase I. This may reflect, at least partly, the effect of making measuring dwell time on a less homogeneous fleet consisting of both articulated and standard buses rather than just standard buses. If the same assumptions are made in Phase II as in Phase I, then the value of the standard error of estimate can be used as an approximate prediction interval. Therefore, with a 90 percent confidence level we can feel certain that the actual dwell time in Phase II is within plus or minus 13.3 seconds of the value predicted by the regression equation. The form of the equation and the signs of the independent variables are identical to those in Phase I, again suggesting that average dwell time per passenger will decline with increasing passenger boarding or alighting activity.

The dwell time regression relationships may merit further investigation, particularly with respect to examining separate equations for articulated versus standard buses under a traditional fare collection mode. Pending discussions with Tri-Met and the Transportation Systems Center, Peat Marwick may undertake additional investigations of these relationships.

Exhibit II-36 compares bus dwell times before and after articulated buses were placed in service while Exhibit II-37 compares standard and articulated bus dwell times. As Tri-Met stated in its study memorandum, it can be observed that²:

- . The average boarding (dwell) time per passenger is not generally greater during pay-as-you-enter

¹ 10.4 seconds is equal to 1.645 times the standard error of estimates and may be considered an approximate confidence interval.

² Tri-Met, SSFC Operating Impact Study Memorandum, September 1982.

EXHIBIT II-36

COMPARISON OF BUS DWELL TIME BEFORE AND AFTER
ARTICULATED BUSES PLACED IN SERVICE

<u>PHASE I (Pre-Articulated, Spring 1981)</u>	<u>Average Dwell Time (Seconds)</u>	<u>Average Passengers¹</u>	<u>Average Dwell Time² Per Passenger</u>	<u>Average Ratio of³ Dwell Time Per Passenger</u>
On-Mall (22)	20.70	7.94	2.61	2.95
Cross-Mall (73)	31.05	11.66	2.66	3.11
Fareless Square (118)	22.06	8.89	2.48	2.97
Non-Fareless Square (175)	24.10	8.86	2.72	3.01
Average Total (293)	23.28 (σ = 18.25)	8.87 (σ = 7.50)	2.62	2.99 (σ = 1.20)
<u>PHASE II (Post-Articulated, Spring 1982)</u>				
On-Mall (270)	21.63	7.61	2.84	3.22
Cross-Mall (122)	42.22	17.76	2.32	2.57
Transfer Points (134)	12.61	4.13	3.06	3.96
Shopping Centers (39)	22.05	5.46	3.67	4.45
Fareless Square (391)	24.40	8.94	2.73	3.36
Non-Fareless Square (174)	22.54	8.58	2.63	3.30
Average Total (565)	23.83 (σ = 19.00)	8.83 (σ = 8.40)	2.70	2.34 (σ = 2.15)

() = Number of observations σ = Standard Deviation

¹ Total on and Total off (front and back)

² $\frac{\text{Cumulative Dwell time}}{\text{Cumulative Passengers}} = \frac{\text{Average Dwell Time}}{\text{Average Number of Passengers}}$ "System Average" or Ratio of Averages

³ Average Ratio of Dwell Time Per Passenger = $\frac{\text{Average Dwell Time Per Bus}}{\text{Passengers Boarding/Alighting}}$ "Average of Ratios"

EXHIBIT II-37

COMPARISON OF STANDARD AND ARTICULATED BUS DWELL TIMES (PHASE II - POST-ARTIC DATA, SPRING 1982)

<u>Standard Buses</u>	<u>Average Dwell Time (Seconds)</u>	<u>Average Passengers¹</u>	<u>Average Dwell Time² Per Passenger</u>	<u>Average Ratio of³ Dwell Time Per Passenger</u>
On-Mall (228)	20.83	7.38	2.82	3.16
Cross-Mall (121)	42.51	17.89	2.38	2.58
Transfer Points (119)	11.99	3.68	3.26	3.70
Shopping Centers (37)	19.49	5.51	3.54	4.08
Average Total (505)	23.86 (σ = 19.46)	8.89 (σ = 8.57)	2.68	3.22 (σ = 1.80)
<u>Articulated Buses</u>				
On-Mall (42)	25.98	8.90	2.92	3.56
Cross-Mall (X)	N/A	N/A	N/A	N/A
Transfer Points (15)	17.53	7.66	2.29	5.99
Shopping Centers (2)	30.50	4.50	6.78	11.32
Average Total (59)	23.98 (σ = 14.66)	8.44 (σ = 6.90)	2.84	4.44 (σ = 3.92)

() = Number of observations σ = Standard Deviation
¹ Total on and Total off (front and back)

² $\frac{\text{Cumulative Dwell time}}{\text{Cumulative Passengers}} = \frac{\text{Average Dwell Time}}{\text{Average Number of Passengers}}$ "System Average" or Ratio of Averages

³ $\frac{\text{Average Ratio of Dwell Time Per Passenger}}{\text{Dwell Time Per Passenger}} = \frac{\text{Average Dwell Time Per Bus}}{\text{Passengers Boarding/Alighting}}$ "Average of Ratios"

- . operation (non-Fareless Square PM Peak) than pay-as-you-leave operation. Although contrary to expectation, Tri-Met partly attributes this to the fact that pay-as-you-enter operation occurs during the peak hours when regular riders, many with passes, use the system;
- . Average total dwell time for articulated buses tends to be greater for articulated buses than standard buses (reflecting greater passenger boarding and alighting activity). Average dwell time on the Mall is 25 percent higher for articulated buses than for standard ones. Average dwell time per passenger, however, is only slightly greater for articulated buses. While dwell time per passenger is nearly the same for both types of buses, the larger total dwell time of articulated buses slows the operation of the articulated buses and those that queue behind it at the same stop. This is anticipated to become a more serious problem when articulated buses are fully utilized. The delays due to higher loads were not fully felt because schedules were not completely adjusted to utilize articulated buses; however, the probable delay under full utilization and traditional fare collection can be estimated when post-implementation boarding counts are recorded in Phase III; and
- . Average dwell time per passenger is generally lower on the Mall or Cross-Mall stops than at non-Mall locations. This may be due to a variety of reasons including the large number of commuters on the Mall or Cross-Mall who are regular riders, the better visibility of approaching buses on the Mall, and improved bus operation on the Mall.

Running Time Survey Results

Exhibit II-38 presents the results of the Phase I and Phase II running time survey. It can be observed that:

- . Articulated buses operated at nearly the same speed as standard buses during the day base period and at slightly faster speeds during the peak; and
- . Although it was anticipated that the introduction of articulated buses would slow the Mall, the Mall operated at slightly faster speeds with articulated buses than without. This is true despite the fact that bus density was slightly greater.

The survey didn't measure the effect of passenger activity on bus speed since measurements were made at the ends of the Mall. It is assumed that bus density is also a factor; however, it is

EXHIBIT II-38

COMPARISON OF PHASE I AND PHASE II MALL RUN TIMES
AND ARTICULATED VERSUS STANDARD BUS RUN TIMES

	<u>Day Base (10:30 a.m. - 12:30 p.m.)</u>			<u>P.M. Peak (4:00 p.m. - 6:00 p.m.)</u>		
<u>PHASE I (Spring 1981)</u>	<u>Observations</u>	<u>Speed (MPH)</u>	<u>Density (Buses Per Minute)¹</u>	<u>Observations</u>	<u>Speed (MPH)</u>	<u>Density (Buses Per Minute)¹</u>
Standard	223	5.4 ($\sigma = 1.3$)	1.9	300	4.7 ($\sigma = 0.9$)	4.0
<u>PHASE II (Spring 1982)</u>						
Standard	287	5.6 ($\sigma = 1.8$)	2.4	254	4.8 ($\sigma = 1.6$)	4.1
Articulated	26	5.5 ($\sigma = 1.3$)	0.2	46	5.3 ($\sigma = 1.4$)	0.6
Average Total	313	5.6 ($\sigma = 1.8$)	2.6	300	4.9 ($\sigma = 1.7$)	4.7

¹ Buses per minute combined for both 5th and 6th Avenues

σ = Standard Deviation

difficult to separate their effects. It appears that the presence of articulated buses on the Mall did not lower overall operating speeds.

The Mall run time survey is perceived as a second way to measure the effects of self-service fare collection on dwell time, since it is unlikely that self-service fare collection will affect actual bus running time between stops. Phase III of the running time survey is expected to yield results similar to those from the dwell time survey.

A. SURVEY INSTRUMENTS

OPERATOR SURVEY

Please answer all questions as completely and honestly as you can. Answers should be your own and reflect the average situation based on your experience. For questions 1 to 8, please check one box for each line of the question.

1. Bus riders can make mistakes paying the fare, either on purpose or because they are confused by the fare system. Of every 100 riders who board the bus, please estimate how many riders misuse or cheat the fare system: (Check one)

0 - 2	<input type="checkbox"/>	21 - 30	<input type="checkbox"/>
3 - 5	<input type="checkbox"/>	31 - 40	<input type="checkbox"/>
6 - 10	<input type="checkbox"/>	41 - 50	<input type="checkbox"/>
11 - 20	<input type="checkbox"/>	50 or over	<input type="checkbox"/>

2. Misuse or cheating of the fare system can occur in several ways. When misuse or cheating happens, how often is it done for each of these types of misuse or cheating:

	VERY RARELY	RARELY	SOMETIMES	OFTEN	VERY OFTEN
No payment at all	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Insufficient base fare	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No 3-zone cash fare	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Slugs, half bills, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Forged passes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Misuse of youth, senior or disabled pass	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wrong use of 2-zone pass for 3 zones	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bad transfer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. How often do you question or confront a rider when they misuse or cheat the fare system for each of these types of misuse or cheating:

	VERY RARELY	RARELY	SOMETIMES	OFTEN	VERY OFTEN
No payment at all	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Insufficient base fare	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No 3-zone cash fare	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Slugs, half bills, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Forged passes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Misuse of youth, senior or disabled pass	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wrong use of 2-zone pass for 3 zones	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bad transfer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

VERY RARELY RARELY SOMETIMES OFTEN VERY OFTEN

4. Do your riders pay the wrong fare because:

- They are confused by the zone system?
- They see others cheating?
- They know the operator can't do anything if they are caught?
- They don't understand when to pay?
- They believe fares are too high or unfair or service is poor?
- Other _____

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. How often do you think the following types of riders misuse the fare system?

Age:

- High school or younger
- High school to age 25
- 25 to 40 years
- 40 to 65 years
- Over 65 years

VERY RARELY	RARELY	SOMETIMES	OFTEN	VERY OFTEN
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Time of Day:

- Rush hours
- Mid-day
- Evening
- Early AM/Late PM
- Weekends

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Part of Service Area:

- Downtown
- City
- Suburban

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Repeat Cheaters

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

6. What action do you usually use with riders who misuse the fare system?

- Ask them to pay the fare
- Ask them to pay or leave the bus
- Call security/police
- No action
- Other _____

VERY RARELY	RARELY	SOMETIMES	OFTEN	VERY OFTEN
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

-

- [illegible]

- [illegible]

10. What are the usual feelings of other riders when you try to collect fares from cheaters? (Check one):

- Voice anger at the cheater ☐
- Quietly indicate disapproval of cheater ☐
- No response/don't care ☐
- Quietly indicate disapproval of driver ☐
- Voice support for the cheater ☐

11. Based on what you have heard about the Self Service Fare Collection System, do you believe that it will be an improvement over today's system?

Yes ☐ No ☐

If "yes", why? (Check those that apply)

- More equitable fares ☐
- Reduced cheating ☐
- Easier to use for rider ☐
- Will reduce costs ☐
- Will improve operations ☐
- Easier for driver ☐

Other _____

If "no", why? (Check those that apply)

- Fare too high ☐
- Increased cheating ☐
- Too complicated for rider ☐
- Too expensive ☐
- Unreliable equipment ☐
- More complicated for driver ☐

Other _____

12. Are you:

- Full Time Operator ☐
- Regular Schedule ☐
- Extra Board ☐
- Mini Run Operator ☐

What is your age?

- Under 30 ☐
- 30 - 39 ☐
- 40 - 49 ☐
- 50 - 59 ☐
- 60/over ☐

13. List three routes you are most familiar with: # _____ # _____ # _____

Thank you for your assistance. Please give us any further comments regarding the fare collection process or driver fare collection responsibilities below:

8. How much discount do you think people should get for purchasing ten-ride tickets in advance?

1 NO DISCOUNT

4 20% (or \$1.30)

2 5% (or 30¢)

5 DON'T KNOW

3 10% (or 65¢)

9. Please circle the rating number below which best describes your opinion of the following statements regarding fare collection.

	STRONGLY DISAGREE				STRONGLY AGREE
a. It is a bother to have the correct change.	1	2	3	4	5
b. I don't like waiting while other people search for their fare.	1	2	3	4	5
c. The fare system is confusing because sometimes I pay when getting on and sometimes when getting off.	1	2	3	4	5
d. I'm uncertain about where zone boundaries are and when to pay the extra fare.	1	2	3	4	5
e. I'm uncertain of the boundaries of fareless square.	1	2	3	4	5

9a. What other problems do you have with the method of collecting fares? (Write "none" if you have no problems.)

Tri-Met is changing its fare payment system in September. You, the rider, will be responsible for paying the correct fare when entering the bus and having proof that you did pay that fare (a pass or receipt). Inspectors will occasionally enter buses and check to see if you have paid.

10. Before now, had you seen or heard about these changes?

1 YES

2 NO

10a. Have you heard or read about Tri-Met's Bus School?

1 YES

2 NO

11. Based on the explanation above and anything else you may have heard, do you think this type of fare system would work? (Circle YES or NO.)

YES, BECAUSE

(Circle all that apply.)

1 IT WILL BE LESS CONFUSING

2 MORE RIDERS WILL PAY CORRECT FARES

3 IT WILL BE FASTER GETTING ON BUS

4 IT WILL SAVE MONEY FOR TRI-MET

5 OTHER _____

(PLEASE SPECIFY)

NO, BECAUSE

(Circle all that apply.)

1 IT WILL BE MORE CONFUSING

2 MORE RIDERS WILL PAY INCORRECT FARES

3 IT WILL TAKE LONGER TO GET ON THE BUS

4 IT WILL COST TRI-MET MONEY

5 OTHER _____

(PLEASE SPECIFY)

THE FOLLOWING QUESTIONS ARE FOR CLASSIFICATION PURPOSES.

12. Are you:

1 MALE

2 FEMALE

13. What is your age?

1 15 OR UNDER

4 45 TO 64

2 16 TO 24

5 65 OR OVER

3 25 TO 44

14. What was your approximate family income in 1981?

1 UNDER \$5,000

4 \$15,000 TO \$24,999

2 \$5,000 TO \$9,999

5 \$25,000 OR OVER

3 \$10,000 TO \$14,999

AGAIN, THANK YOU! PLEASE TEAR OFF THE WHITE FORM AND RETURN IT TO THE PERSON WHO GAVE IT TO YOU OR PUT IT IN THE BOX NEAR THE REAR DOOR. PLEASE FILL OUT THE YELLOW FORM AT YOUR CONVENIENCE AND MAIL (POSTAGE FREE) TO TRI-MET BY JUNE 10, 1982. IN RETURN FOR YOUR HELP ON BOTH PORTIONS, TRI-MET WOULD LIKE TO SEND YOU TWO FREE BUS TICKETS. WE APPRECIATE YOUR HELP!

BUS RIDERS MAIL-BACK SURVEY

Your responses to the second portion of this survey will help us determine how well the fare collection system is working. In return for your time and cooperation, Tri-Met would like to send you two free bus tickets. Please fill out the following questions and return, free of postage, to Tri-Met by June 10, 1982. Thank you!

1. How do you usually pay your fare? (Circle the one number next to your answer.)
 - 1 CASH (PLEASE GO TO QUESTION #2.)
 - 2 BUS TICKET (PLEASE GO TO QUESTION #3.)
 - 3 BUS PASS (PLEASE GO TO QUESTION #4.)
2. Would you be more likely to buy bus tickets or passes if they were readily available from vending machines? (Circle YES or NO, then circle reasons below that answer.)

YES, BECAUSE	NO, BECAUSE
1 SOUNDS MORE CONVENIENT	1 PREFER PAYING CASH
2 COULD BUY THEM AT ANY TIME	2 HAVE A COMFORTABLE WAY OF DOING THINGS
3 OTHER _____	3 DON'T TRUST VENDING MACHINES
(PLEASE SPECIFY)	4 OTHER _____
	(PLEASE SPECIFY)
3. Why do you pay for individual rides rather than buy a monthly pass?
 - 1 DON'T RIDE THE BUS OFTEN ENOUGH TO NEED A PASS
 - 2 DIDN'T KNOW BUS PASSES WERE AVAILABLE
 - 3 PASS SALES OUTLETS ARE NOT CONVENIENT TO GET TO
 - 4 DON'T KNOW WHERE TO BUY PASSES
 - 5 PASSES ARE TOO EXPENSIVE
 - 6 OTHER _____

(PLEASE SPECIFY)

IF YOU DO NOT USE A PASS, PLEASE GO TO QUESTION #5.

4. Is showing your pass to the driver an inconvenience?
 - 1 YES IF YES, WHY? _____
 - 2 NO
5. Would you buy bus tickets or a pass from a conveniently locating vending machine if it accepted major credit cards only (such as a VISA, MasterCard, or a banking card)?
 - 1 YES
 - 2 NO IF NO, WHY NOT? _____
6. What factors should be considered in determining fares? (Circle all that apply.)
 - 1 DISTANCE OF TRIP (PAY BY THE MILE)
 - 2 TIME OF DAY (RUSH HOUR, NIGHT, WEEKEND)
 - 3 ABILITY TO PAY
 - 4 AGE (UNDER 6 YEARS, STUDENTS, ADULTS, OVER 65 YEARS)
 - 5 COST OF OPERATING THE ROUTE
 - 6 AMOUNT OF TIME FOR THE TRIP
 - 7 OTHER _____
7. Fares are set according to the length of trip by using fare zones. How many zones would you consider best? (Circle one choice.)
 - 1 ONE ZONE: the same fare for everyone
 - 2 TWO ZONES: for example (a) inside Portland; (b) outside Portland
 - 3 THREE ZONES: for example (a) downtown Portland; (b) inside Portland; (c) outside Portland
 - 4 FIVE ZONES: for example (a) downtown Portland; (b) inner-city; (c) outer-city; (d) suburbs (such as Beaverton or Gresham; (e) outlying areas (such as Vancouver or Forest Grove)
 - 5 SEVEN OR MORE ZONES: based on actual miles travelled
8. Based on your answer to the last question, how much do you think fares should increase for each additional zone?

1 \$.05	4 \$.20
2 \$.10	5 \$.25
3 \$.15	6 SHOULD NOT CHANGE
9. Based on your best estimate, of every 100 riders who get on the bus, how many do you think do not pay the correct fare?
 - 1 NONE (PLEASE GO TO QUESTION #12.)
 - 2 1 - 2
 - 3 3 - 5
 - 4 6 - 10
 - 5 11 - 20
 - 6 21 OR MORE
10. Of those persons who pay too little fare, why do you think they fail to pay the correct fare? (Circle all that apply.)
 - 1 THEY FORGET TO PAY
 - 2 THEY DON'T HAVE THE CORRECT CHANGE
 - 3 THEY ARE CONFUSED BY THE ZONE SYSTEM
 - 4 THEY SEE OTHERS CHEATING
 - 5 THEY THINK THE DRIVER WON'T OR CAN'T DO ANYTHING ABOUT IT
 - 6 UNHAPPY WITH SERVICE OR FARES
 - 7 OTHER _____

(please complete other side)

11. How do you think these people usually underpay their fares? (Circle all that apply.)

- 1 INSUFFICIENT FARE
- 2 BAD TRANSFER
- 3 NO PAYMENT AT ALL
- 4 WRONG USE OF 2-ZONE PASS FOR 3-ZONES OF TRAVEL
- 5 MISUSE OF YOUTH OR HONORED CITIZEN PASS
- 6 SLUGS, HALF DOLLAR BILLS, ETC.
- 7 FORGED PASS

12. What kind of penalty, if any, should there be for people who do not know they paid the wrong fare? (Circle the one number next to your answer.)

- | | |
|---------------------------------|-----------------|
| 1 NONE | 5 FINED \$20.00 |
| 2 ASKED TO PAY THE CORRECT FARE | 6 FINED \$50.00 |
| 3 ASKED TO LEAVE THE BUS | 7 OTHER _____ |
| 4 FINED \$5.00 | |

13. What kind of penalty, if any, should there be for people who do not pay the correct fares on purpose? (Circle the one number next to your answer.)

- | | |
|---------------------------------|-----------------|
| 1 NONE | 5 FINED \$20.00 |
| 2 ASKED TO PAY THE CORRECT FARE | 6 FINED \$50.00 |
| 3 ASKED TO LEAVE THE BUS | 7 OTHER _____ |
| 4 FINED \$5.00 | |

----- Fold Here -----

14. Are you:

- | | |
|--------|----------|
| 1 MALE | 2 FEMALE |
|--------|----------|

15. What is your age?

- 1 15 OR UNDER
- 2 16 TO 24
- 3 25 TO 44
- 4 45 TO 64
- 5 65 OR OLDER

In return for your time and cooperation, Tri-Met would like to mail you two bus tickets. Please fill in your name and address below.

NAME _____

STREET ADDRESS _____

CITY _____ STATE _____ ZIP CODE _____

Tri-Met will be conducting a similar survey in ten months. Participants in the second survey will be contacted by mail or phone. In return for your time and cooperation, you would be sent five bus tickets. Would you be willing to help us in the second portion of this survey?

- 1 YES (Please include phone number.) _____
- 2 NO

THANK YOU!

----- Fold Here -----



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

Business Reply Mail

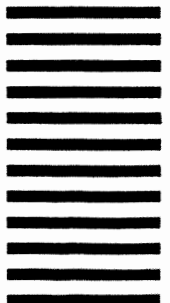
FIRST CLASS

PERMIT NO. A-40

PORTLAND, OR

POSTAGE WILL BE PAID BY ADDRESSEE

Tri-Met Rider Survey
4012 S.E. 17th Avenue
Portland, Oregon 97202



B. OPERATOR SURVEY COMPUTER PRINTOUTS

SPSS FOR OS/360, VERSION M, RELEASE 9.0, JUNE 10, 1981

CURRENT DOCUMENTATION FOR THE SPSS BATCH SYSTEM

ORDER FROM MCGRAW-HILL:	SPSS, 2ND ED. (PRINCIPAL TEXT)	ORDER FROM SPSS INC.:	SPSS STATISTICAL ALGORITHMS
	SPSS UPDATE 7-9 (USE W/SPSS, 2ND FOR REL. 7, 8, 9)		KEYWORDS: THE SPSS INC. NEWSLETTER
	SPSS POCKET GUIDE, RELEASE 9		
	SPSS PRIMER (BRIEF INTRO TO SPSS)		

DEFAULT SPACE ALLOCATION..	ALLOWS FOR..	102 TRANSFORMATIONS
WORKSPACE 71680 BYTES		409 RECODE VALUES + LAG VARIABLES
TRANSPACE 10240 BYTES		1641 IF/COMPUTE OPERATIONS

1	NUMBERED	YES	00001700
2	RUN NAME	ON BOARD - UNFACTORED	00001800
3	FILE NAME	ONBRD	00001900
4	VARIABLE LIST	TYPE, ID, Q1A, Q1B, Q1C, Q1D, Q2, Q3A, Q3B, Q3C, Q4A, Q4B, Q4C, Q5,	00002000
5		Q6, Q6A, Q6B, Q6C, Q6D, Q7, Q8, Q9A, Q9B, Q9C, Q9D, Q9E, Q9F, Q10, Q10A	00002100
6		, Q11, Q11A, Q11B, Q11C, Q11D, Q11E, Q11F, Q12, Q13, Q14	00002200
7	INPUT MEDIUM	TAPE	00002300
8	INPUT FORMAT	FIXED (F1.0, F5.0, 4F2.0, F1.0, 3F3.0, 3F1.0, F2.0, 25F1.0)	00002400

ACCORDING TO YOUR INPUT FORMAT, VARIABLES ARE TO BE READ AS FOLLOWS

VARIABLE	FORMAT	RECORD	COLJMNS	
TYPE	F 1. 0	1	1-	1
ID	F 5. 0	1	2-	6
Q1A	F 2. 0	1	7-	8
Q1B	F 2. 0	1	9-	10
Q1C	F 2. 0	1	11-	12
Q1D	F 2. 0	1	13-	14
Q2	F 1. 0	1	15-	15
Q3A	F 3. 0	1	16-	18
Q3B	F 3. 0	1	19-	21
Q3C	F 3. 0	1	22-	24
Q4A	F 1. 0	1	25-	25
Q4B	F 1. 0	1	26-	26
Q4C	F 1. 0	1	27-	27
Q5	F 2. 0	1	28-	29
Q6	F 1. 0	1	30-	30
Q6A	F 1. 0	1	31-	31
Q6B	F 1. 0	1	32-	32
Q6C	F 1. 0	1	33-	33
Q6D	F 1. 0	1	34-	34
Q7	F 1. 0	1	35-	35

ACCORDING TO YOUR INPUT FORMAT, VARIABLES ARE TO BE READ AS FOLLOWS

VARIABLE	FORMAT	RECORD	COLUMNS
Q8	F 1. 0	1	36- 36
Q9A	F 1. 0	1	37- 37
Q9B	F 1. 0	1	38- 38
Q9C	F 1. 0	1	39- 39
Q9D	F 1. 0	1	40- 40
Q9E	F 1. 0	1	41- 41
Q9F	F 1. 0	1	42- 42
Q10	F 1. 0	1	43- 43
Q10A	F 1. 0	1	44- 44
Q11	F 1. 0	1	45- 45
Q11A	F 1. 0	1	46- 46
Q11B	F 1. 0	1	47- 47
Q11C	F 1. 0	1	48- 48
Q11D	F 1. 0	1	49- 49
Q11E	F 1. 0	1	50- 50
Q11F	F 1. 0	1	51- 51
Q12	F 1. 0	1	52- 52
Q13	F 1. 0	1	53- 53
Q14	F 1. 0	1	54- 54

THE INPUT FORMAT PROVIDES FOR 39 VARIABLES. 39 WILL BE READ
 IT PROVIDES FOR 1 RECORDS ('CARDS') PER CASE. A MAXIMUM OF 54 'COLUMNS' ARE USED ON A RECORD.

9 N OF CASES	UNKNOWN	00002500
10 COMPUTE	PAY=0	00002600
11 IF	(Q4A NE 0) PAY=1	00002700
12 IF	(Q4B NE 0 AND PAY EQ 0) PAY=2	00002800
13 IF	(Q4B NE 0 AND PAY EQ 1) PAY=4	00002900
14 IF	(Q4C NE 0 AND PAY NE 0) PAY=4	00003000
15 IF	(Q4C NE 0 AND PAY EQ 0) PAY=3	00003100
16 VAR LABELS	Q1A,WORK TRIPS/Q1B,SHOPPING TRIPS/Q1C,SCHOOL TRIPS/	00003200
17	Q1D,RECREATION TRIPS/Q2,USUAL TIME OF DAY OF TRIP/	00003300
18	Q3A,BUS LINE/Q3B,BUS LINE/Q3C,BUS LINE/Q4A,CASH FARE/	00003400
19	Q4B,TICKET FARE/Q4C,TYPE OF PASS/Q5,NUMBER OF WEEKLY TRANS	00003500
20	SFERS/Q6,CONVENIENCE OF TRANSFERS/Q6A,REASON,FORGOT TO	00003600
21	ASK FOR ONE/Q6B,REASON, LOSE TRANSFER/Q6C,REASON, DO NOT	00003700
22	UNDERSTAND TRANSFERS/Q6D,OTHER/Q7,LOCATION OF PURCHASE OF	00003800
23	TICKETS/Q8,AMOUNT OF DISCOUNT FOR BOOK OF 10/Q9A,ATTITJDE	00003900
24	ON NEEDING CORRECT FARE CHANGE/Q9B,ATTITUDE TOWARDS	00004000
25	WAITING FOR OTHER TO FIND FARE/Q9C,THE FARE SYSTEM IS	00004100
26	CONFUSING/Q9D,ATTITUDE,UNCERTAIN OF ZONE BOUNDARIES/	00004200
27	Q9E,ATTITUDE, UNCERTAIN OF BOUNDARIES TO FARELESS SQUARE/	00004300
28	Q9F,OTHER PROBLEMS WITH FARE COLLECTION/Q10,AWARENESS OF	00004400
29	NEW FARE SYSTEM/Q10A,AWARENESS OF BUS SCHOOL/Q11,WILL	00004500
30	NEW FARE SYSTEM WORK/Q11A,NEW SYSTEM MORE-LESS CONFUSING/	00004600
31	Q11B,NEW SYSTEM MORE-LESS RIDERS PAY RIGHT FARE/	00004700
32	Q11C,NEW SYSTEM FASTER-SLOWER GETTING ON BUS/	00004800

33	Q11D, NEW SYSTEM COST-SAVE MONEY FOR TRI-MET/	00004900
34	Q11E, NEW SYSTEM OTHER/Q11F, NEW SYSTEM NOT SURE-TICKETS	00005000
35	INCONVENIENCE/Q12, GENDER/Q13, AGE/Q14, INCOME/	00005100
36	VALUE LABELS Q2 (1) RUSH HOUR (2) MIDDAY (3) EVENING-NIGHT (4) WEEKEND	00005200
37	(5) OTHER/Q4A, Q4B (1) .65 (2) .90 (3) .45 (4) .25 (5) 1.00	00005300
38	(6) OTHER (7) MULT. FARES/Q4C (1) 2 ZONE (2) 3 ZONE (3) YOUTH	00005400
39	(4) HONORED CITIZEN (5) VANCOUVER (6) OTHER (7) MORE THAN	00005500
40	ONE/Q6 (1) NOT CONVENIENT (5) VERY CONVENIENT/Q6A TO Q6D,	00005600
41	Q10, Q10A, Q11 (1) YES (2) NO (3) NO RESPONSE (4) CONFLICTING	00005700
42	ANSWERS/Q7 (1) DRUG STORE (2) 7-11 STORE (3) BANK-SL	00005800
43	(4) CUSTOMER ASSISTANCE (5) WORK (6) MAIL (7) OTHER (8) SCHOOL	00005900
44	(9) VARIOUS/Q8 (1) NO DISCOUNT (2) 5% (3) 10% (4) 20% (5) DONT	00006000
45	KNOW (6) OTHER/Q9A TO Q9E (1) STRONGLY AGREE (5) STRONGLY	00006100
46	DISAGREE/Q9F (1) DRIVERS NOT UNDST. (2) DRIVERS UNWIL.	00006200
47	(3) TIME CONSUMING (4) SOME DONT PAY (9) OTHER/ Q12 (1) MALE	00006300
48	(2) FEMALE/Q13 (1) UNDER 16 (2) 16-24 (3) 25-44 (4) 45-64	00006400
49	(5) OVER 64/ Q14 (1) UNDER \$5K (2) \$5 TO 10K (3) \$10 TO 15K	00006500
50	(4) 15 TO \$25K (5) OVER \$25K/PAY (1) USE CASH (2) USE TICKET	00006600
51	(3) USE PASS (4) USE MULTIPLE/	00006700
52	MISSING VALUES Q1A TO Q14 (0)	00006800
53	FREQUENCIES INTEGER=Q1A TO Q1D, Q5 (0,99)/Q2, Q4A TO Q4C, Q6 TO Q11, Q12	00006900
54	TO Q14 (0,9)/Q3A TO Q3C (0,255)	00007000
55	STATISTICS 1,6	00007100

FREQUENCIES PROBLEM REQUIRES 11116 BYTES OF SPACE

56 READ INPUT DATA

00007200

AFTER READING 6108 CASES FROM SUBFILE ONBRD , END OF DATA WAS ENCOUNTERED ON LOGICAL UNIT # 8

ON BOARD - UNFACTORED

FILE ONBRD (CREATION DATE = 09/30/82)

Q1A WORK TRIPS

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ. FREQ (PERCENT)
	0	883	14.5	17.9	17.9
	1	81	1.3	1.6	19.5
	2	211	3.5	4.3	23.8
	3	96	1.6	1.9	25.8
	4	213	3.5	4.3	30.1
	5	366	6.0	7.4	37.5
	6	188	3.1	3.8	41.3
	7	48	0.8	1.0	42.3
	8	252	4.1	5.1	47.4
	9	42	0.7	0.9	48.3
	10	2192	35.9	44.5	92.7
	11	14	0.2	0.3	93.0
	12	137	2.2	2.8	95.8
	13	4	0.1	0.1	95.9
	14	63	1.0	1.3	97.1
	15	19	0.3	0.4	97.5
	16	12	0.2	0.2	97.8
	17	4	0.1	0.1	97.9
	18	2	0.0	0.0	97.9
	19	1	0.0	0.0	97.9
	20	63	1.0	1.3	99.2
	21	3	0.0	0.1	99.2

UNFACTORED ONBOARD SURVEY

FILE ONBRD (CREATION DATE = 11/09/82)

22	3	0.0	0.1	95.3
24	6	0.1	0.1	95.4
25	6	0.1	0.1	95.6
28	1	0.0	0.0	95.6
30	5	0.1	0.1	95.7
35	1	0.0	0.0	95.7
38	1	0.0	0.0	95.7
40	8	0.1	0.2	95.9
44	2	0.0	0.0	95.9
45	1	0.0	0.0	95.9
48	1	0.0	0.0	100.0
50	1	0.0	0.0	100.0
60	1	0.0	0.0	100.0
100	1177	19.3	MISSING	100.0
TOTAL	6108	100.0	100.0	

MEAN 7.124

VALID CASES 4931 MISSING CASES 1177

ON BOARD - UNFACTORED

FILE ONBRD (CREATION DATE = 09/30/82)

Q18 SHOPPING TRIPS

CATEGORY	CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
		0	1388	22.7	37.6	37.6
		1	443	7.3	12.0	49.6
		2	868	14.2	23.5	73.1
		3	174	2.8	4.7	77.8
		4	412	6.7	11.2	89.0
		5	88	1.4	2.4	91.4
		6	134	2.2	3.6	95.0
		7	27	0.4	0.7	95.7
		8	50	0.8	1.4	97.1
		9	6	0.1	0.2	97.2
		10	57	0.9	1.5	98.8
		11	4	0.1	0.1	98.9
		12	8	0.1	0.2	99.1
		13	1	0.0	0.0	99.1
		14	9	0.1	0.2	99.4
		15	5	0.1	0.1	99.5
		16	2	0.0	0.1	99.6
		18	2	0.0	0.1	99.6
		20	8	0.1	0.2	99.8
		21	1	0.0	0.0	99.9
		24	1	0.0	0.0	99.9
		25	1	0.0	0.0	99.9

27	1	0.0	0.0	99.9
30	1	0.0	0.0	100.0
40	1	0.0	0.0	100.0
100	2416	39.6	MISSING	100.0
	-----	-----	-----	
TOTAL	6108	100.0	100.0	

MEAN 2.046

VALID CASES 3692 MISSING CASES 2416

ON BOARD - UNFACTORED

FILE ONBRD (CREATION DATE = 09/30/82)

Q1C SCHOOL TRIPS

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
	0	1776	29.1	53.2	53.2
	1	46	0.8	1.4	54.6
	2	121	2.0	3.6	58.2
	3	41	0.7	1.2	59.5
	4	93	1.5	2.8	62.3
	5	175	2.9	5.2	67.5
	6	73	1.2	2.2	69.7
	7	24	0.4	0.7	70.4
	8	55	0.9	1.6	72.1
	9	6	0.1	0.2	72.2
	10	716	11.7	21.5	93.7
	11	2	0.0	0.1	93.8
	12	43	0.7	1.3	95.1
	13	4	0.1	0.1	95.2
	14	30	0.5	0.9	96.1
	15	21	0.3	0.6	96.7
	16	6	0.1	0.2	96.9
	17	1	0.0	0.0	96.9
	18	1	0.0	0.0	96.9
	19	1	0.0	0.0	97.0
	20	72	1.2	2.2	99.1
	21	1	0.0	0.0	99.2

UNFACTORED ONBOARD SURVEY

11/01/82

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FILE ONHRD (CREATION DATE = 11/09/82)

24	2	0.0	0.1	99.2
25	7	0.1	0.2	99.4
27	1	0.0	0.0	99.5
28	3	0.0	0.1	99.6
30	11	0.2	0.3	99.9
40	3	0.0	0.1	100.0
50	1	0.0	0.0	100.0
100	2772	45.4	MISSING	100.0
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TOTAL	6108	100.0	100.0	

MEAN 4.103

VALID CASES 3336 MISSING CASES 2772

Q1D

RECREATION TRIPS

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ. FREQ (PERCENT)
	0	1242	20.3	32.4	32.4
	1	357	5.8	9.3	41.7
	2	751	12.3	19.6	61.3
	3	185	3.0	4.8	66.1
	4	451	7.4	11.8	77.9
	5	136	2.2	3.5	81.4
	6	200	3.3	5.2	86.6
	7	46	0.8	1.2	87.8
	8	94	1.5	2.5	90.3
	9	8	0.1	0.2	90.5
	10	169	2.8	4.4	94.9
	11	4	0.1	0.1	95.0
	12	36	0.6	0.9	95.9
	13	3	0.0	0.1	96.0
	14	32	0.5	0.8	96.8
	15	30	0.5	0.8	97.6
	16	9	0.1	0.2	97.9
	18	9	0.1	0.2	98.1
	20	45	0.7	1.2	99.3
	22	1	0.0	0.0	99.3
	24	1	0.0	0.0	99.3
	25	3	0.0	0.1	99.4

26	1	0.0	0.0	99.0
28	6	0.1	0.2	99.6
30	12	0.2	0.3	99.9
35	1	0.0	0.0	99.9
40	1	0.0	0.0	99.9
42	1	0.0	0.0	100.0
80	1	0.0	0.0	100.0
100	2273	37.2	MISSING	100.0
TOTAL	6108	100.0	100.0	

MEAN 3.240

VALID CASES 3835 MISSING CASES 2273

FILE ONBRD (CREATION DATE = 09/30/82)

Q5 EXAMINATION OF TRANSFERS

FILE TRANS (CREATION DATE = 11/08/82)

Q5

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
	0	941	15.4	34.6	34.6
	1	219	3.6	8.0	42.6
	2	285	4.7	10.5	53.1
	3	117	1.9	4.3	57.4
	4	194	3.2	7.1	64.5
	5	248	4.1	9.1	73.6
	6	125	2.0	4.6	78.2
	7	44	0.7	1.6	79.8
	8	67	1.1	2.5	82.3
	9	15	0.2	0.6	82.8
	10	279	4.6	10.2	93.1
	11	19	0.3	0.7	93.8
	12	44	0.7	1.6	95.4
	13	3	0.0	0.1	95.5
	14	22	0.4	0.8	96.3
	15	23	0.4	0.8	97.2
	16	9	0.1	0.3	97.5
	17	2	0.0	0.1	97.6
	18	4	0.1	0.1	97.7
	19	2	0.0	0.1	97.8
	20	34	0.6	1.2	99.0
	21	2	0.0	0.1	99.1

FILE ONBRD (CREATION DATE = 11/09/82)

22	2	0.0	0.1	95.2
24	3	0.0	0.1	95.3
25	7	0.1	0.3	95.6
26	2	0.0	0.1	95.6
28	1	0.0	0.0	95.7
30	5	0.1	0.2	95.9
35	1	0.0	0.0	95.9
50	2	0.0	0.1	100.0
94	1	0.0	0.0	100.0
100	3386	.55.4	MISSING	100.0
TOTAL	6108	100.0	100.0	

MEAN 3.991

VALID CASES 2722 MISSING CASES 3386

FILE ONBRD (CREATION DATE = 09/30/82)

Q2 USUAL TIME OF DAY OF TRIP

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
RUSH HOUR	1	3251	53.2	56.3	56.3
MIDDAY	2	1251	20.5	21.7	78.0
EVENING-NIGHT	3	244	4.0	4.2	82.2
WEEKEND	4	108	1.8	1.9	84.1
OTHER	5	918	15.0	15.9	100.0
	9	2	0.0	0.0	100.0
	0	334	5.5	MISSING	100.0
	TOTAL	6108	100.0	100.0	
MEAN	1.996	VARIANCE	2.128		
VALID CASES	5774	MISSING CASES	334		

FILE ONBRD (CREATION DATE = 09/30/82)

Q4A CASH FARE

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
.65	1	1229	20.1	49.7	49.7
.90	2	425	7.0	17.2	66.9
.45	3	398	6.5	16.1	83.0
.25	4	195	3.2	7.9	90.9
1.00	5	27	0.4	1.1	92.0
OTHER	6	24	0.4	1.0	92.9
MULT. FARES	7	175	2.9	7.1	100.0
	0	3635	59.5	MISSING	100.0
	TOTAL	6108	100.0	100.0	

MEAN 2.247 VARIANCE 2.936

VALID CASES 2473 MISSING CASES 3635

FILE ONBRD (CREATION DATE = 09/30/82)

Q4B TICKET FARE

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
.65	1	399	6.5	50.7	50.7
.90	2	215	3.5	27.3	78.0
.45	3	86	1.4	10.9	88.9
.25	4	47	0.8	6.0	94.9
1.00	5	5	0.1	0.6	95.6
OTHER	6	6	0.1	0.8	96.3
MULT. FARES	7	29	0.5	3.7	100.0
	0	5321	87.1	MISSING	100.0
	TOTAL	6108	100.0	100.0	

MEAN	1.956	VARIANCE	1.956
VALID CASES	787	MISSING CASES	5321

FILE ONBRD (CREATION DATE = 09/30/82)

Q4C TYPE OF PASS

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
2 ZONE	1	1550	25.4	47.9	47.9
3 ZONE	2	949	15.5	29.3	77.2
YOUTH	3	509	8.3	15.7	93.0
HONORED CITIZEN	4	122	2.0	3.8	96.8
VANCOUVER	5	19	0.3	0.6	97.3
OTHER	6	74	1.2	2.3	99.6
MORE THAN ONE	7	12	0.2	0.4	100.0
	0	2873	47.0	MISSING	100.0
	TOTAL	6108	100.0	100.0	

MEAN 1.881 VARIANCE 1.285

VALID CASES 3235 MISSING CASES 2873

FILE ONBRD (CREATION DATE = 09/30/82)

Q6 CONVENIENCE OF TRANSFERS

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
NOT CONVENIENT	1	110	1.8	4.9	4.9
	2	127	2.1	5.6	10.5
	3	475	7.8	21.0	31.5
	4	556	9.1	24.6	56.1
VERY CONVENIENT	5	991	16.2	43.9	100.0
	0	3849	63.0	MISSING	100.0
TOTAL		6108	100.0	100.0	

MEAN 3.970 VARIANCE 1.312

VALID CASES 2259 MISSING CASES 3849

FILE ONBRD (CREATION DATE = 09/30/82)

Q6A REASON, FORGOT TO ASK FOR ONE

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
YES	1	66	1.1	98.5	98.5
	5	1	0.0	1.5	100.0
	0	6041	98.9	MISSING	100.0
	TOTAL	6108	100.0	100.0	

MEAN 1.060 VARIANCE 0.239

VALID CASES 67 MISSING CASES 6041

FILE ONBRD (CREATION DATE = 09/30/82)

Q6B REASON, LOSE TRANSFER

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
YES	2	83	1.4	98.8	98.8
CONFLICTING ANSWERS	4	1	0.0	1.2	100.0
	0	6024	98.6	MISSING	100.0
	TOTAL	6108	100.0	100.0	

MEAN	2.024	VARIANCE	0.048
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VALID CASES	84	MISSING CASES	6024
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FILE ONBRD (CREATION DATE = 09/30/82)

Q6C REASON, DO NOT UNDERSTAND TRANSFERS

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
YES	3	24	0.4	100.0	100.0
	0	6084	99.6	MISSING	100.0
	TOTAL	6108	100.0	100.0	

MEAN 3.000 VARIANCE 0.0

VALID CASES 24 MISSING CASES 6084

FILE ONBRD (CREATION DATE = 09/30/82)

Q6D OTHER

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
YES	4	80	1.3	100.0	100.0
	0	6028	98.7	MISSING	100.0
	TOTAL	6108	100.0	100.0	

MEAN	4.000	VARIANCE	0.0
VALID CASES	80	MISSING CASES	6028

FILE ONBRD (CREATION DATE = 09/30/82)

Q7 LOCATION OF PURCHASE OF TICKETS

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
DRUG STORE	1	166	2.7	4.4	4.4
7-11 STORE	2	402	6.6	10.7	15.1
BANK-SL	3	937	15.3	24.9	40.0
CUSTOMER ASSISTANCE	4	1270	20.8	33.7	73.7
WORK	5	267	4.4	7.1	80.8
MAIL	6	53	0.9	1.4	82.2
OTHER	7	205	3.4	5.4	87.7
SCHOOL	8	202	3.3	5.4	93.0
VARIOUS	9	262	4.3	7.0	100.0
	0	2344	38.4	MISSING	100.0
TOTAL		6108	100.0	100.0	

MEAN 4.230 VARIANCE 4.237

VALID CASES 3764 MISSING CASES 2344

FILE ONBRD (CREATION DATE = 09/30/82)

Q8 AMOUNT OF DISCOUNT FOR BOOK OF 10

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
NO DISCOUNT	1	489	8.0	8.5	8.5
5%	2	603	9.9	10.4	18.9
10%	3	1566	25.6	27.1	46.0
20%	4	1520	24.9	26.3	72.3
DONT KNOW	5	1581	25.9	27.3	99.6
OTHER	6	22	0.4	0.4	100.0
	7	1	0.0	0.0	100.0
	0	326	5.3	MISSING	100.0
	TOTAL	6108	100.0	100.0	

MEAN 3.548 VARIANCE 1.536

VALID CASES 5782 MISSING CASES 326

FILE ONBRD (CREATION DATE = 09/30/82)

Q9A ATTITUDE ON NEEDING CORRECT FARE CHANGE

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
STRONGLY DISAGREE	1	845	13.8	15.3	15.3
	2	745	12.2	13.5	28.8
	3	1339	21.9	24.2	53.0
	4	971	15.9	17.6	70.6
STRONGLY AGREE	5	1622	26.6	29.4	100.0
	0	586	9.6	MISSING	100.0
TOTAL		6108	100.0	100.0	

MEAN 3.322 VARIANCE 1.994

VALID CASES 5522 MISSING CASES 586

FILE ONBRD (CREATION DATE = 09/30/82)

Q9B ATTITUDE TOWARDS WAITING FOR OTHER T

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
STRONGLY DISAGREE	1	620	10.2	11.3	11.3
	2	700	11.5	12.7	24.0
	3	1348	22.1	24.5	48.5
	4	940	15.4	17.1	65.6
STRONGLY AGREE	5	1890	30.9	34.4	100.0
	0	610	10.0	MISSING	100.0
TOTAL		6108	100.0	100.0	
MEAN	3.506	VARIANCE	1.869		
VALID CASES	5498	MISSING CASES	610		

FILE ONBRD (CREATION DATE = 09/30/82)

Q9C THE FARE SYSTEM IS CONFUSING

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
STRONGLY DISAGREE	1	1132	18.5	20.5	20.5
	2	860	14.1	15.6	36.1
	3	1240	20.3	22.5	58.6
	4	848	13.9	15.4	74.0
STRONGLY AGREE	5	1431	23.4	26.0	100.0
	0	597	9.8	MISSING	100.0
TOTAL		6108	100.0	100.0	

MEAN 3.106 VARIANCE 2.159

VALID CASES 5511 MISSING CASES 597

FILE ONBRD (CREATION DATE = 09/30/82)

Q9D ATTITUDE, UNCERTAIN OF ZONE BOUNDARIES

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
STRONGLY DISAGREE	1	1032	16.9	19.2	19.2
	2	710	11.6	13.2	32.4
	3	1202	19.7	22.3	54.7
	4	983	16.1	18.3	73.0
STRONGLY AGREE	5	1454	23.8	27.0	100.0
	0	727	11.9	MISSING	100.0
TOTAL		6108	100.0	100.0	
MEAN	3.208	VARIANCE	2.120		
VALID CASES	5381	MISSING CASES	727		

FILE ONBRD (CREATION DATE = 09/30/82)

Q9E ATTITUDE, UNCERTAIN OF BOUNDARIES TO FAR

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
STRONGLY DISAGREE	1	1789	29.3	33.7	33.7
	2	865	14.2	16.3	50.0
	3	1033	16.9	19.5	69.4
	4	664	10.9	12.5	81.9
STRONGLY AGREE	5	959	15.7	18.1	100.0
	0	798	13.1	MISSING	100.0
TOTAL		6108	100.0	100.0	

MEAN 2.650 VARIANCE 2.236

VALID CASES 5310 MISSING CASES 798

FILE ONBRD (CREATION DATE = 09/30/82)

Q9F OTHER PROBLEMS WITH FARE COLLECTION

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
DRIVERS NOT UNDS.	1	11	0.2	2.6	2.6
DRIVERS UNWIL.	2	21	0.3	4.9	7.5
TIME CONSUMING	3	12	0.2	2.8	10.3
SOME DONT PAY	4	33	0.5	7.7	18.0
	5	1	0.0	0.2	18.2
	8	1	0.0	0.2	18.5
OTHER	9	349	5.7	81.5	100.0
NONE	0	5680	93.0	MISSING	100.0
	TOTAL	6108	100.0	100.0	

MEAN 7.886 VARIANCE 5.797

VALID CASES 428 MISSING CASES 5680

FILE ONBRD (CREATION DATE = 09/30/82)

Q10 AWARENESS OF NEW FARE SYSTEM

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
YES	1	4785	78.3	79.7	79.7
NO	2	1222	20.0	20.3	100.0
	0	101	1.7	MISSING	100.0
	TOTAL	6108	100.0	100.0	

MEAN 1.203 VARIANCE 0.162

VALID CASES 6007 MISSING CASES 101

FILE ONBRD (CREATION DATE = 09/30/82)

Q10A AWARENESS OF BUS SCHOOL

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
YES	1	3965	64.9	67.1	67.1
NO	2	1940	31.8	32.8	100.0
	3	1	0.0	0.0	100.0
	4	1	0.0	0.0	100.0
	0	201	3.3	MISSING	100.0
	TOTAL	6108	100.0	100.0	

MEAN 1.329 VARIANCE 0.222

VALID CASES 5907 MISSING CASES 201

FILE ONBRD (CREATION DATE = 09/30/82)

Q11 WILL NEW FARE SYSTEM WORK

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
YES	1	2968	48.6	52.9	52.9
NO	2	1937	31.7	34.5	87.4
NO RESPONSE	3	219	3.6	3.9	91.3
CONFLICTING ANSWERS	4	489	8.0	8.7	100.0
	0	495	8.1	MISSING	100.0
	TOTAL	6108	100.0	100.0	

MEAN 1.684 VARIANCE 0.817

VALID CASES 5613 MISSING CASES 495

FILE ONBRD (CREATION DATE = 09/30/82)

Q12 GENDER

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
MALE	1	2531	41.4	42.8	42.8
FEMALE	2	3388	55.5	57.2	100.0
	4	1	0.0	0.0	100.0
	0	188	3.1	MISSING	100.0
	TOTAL	6108	100.0	100.0	
MEAN	1.573	VARIANCE	0.246		
VALID CASES	5920	MISSING CASES	188		

FILE ONBRD (CREATION DATE = 09/30/82)

Q13 AGE

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
UNDER 15	1	261	4.3	4.4	4.4
16-24	2	2058	33.7	34.6	39.0
25-44	3	2403	39.3	40.4	79.5
45-64	4	875	14.3	14.7	94.2
OVER 64	5	344	5.6	5.8	100.0
	0	167	2.7	MISSING	100.0
	TOTAL	6108	100.0	100.0	

MEAN 2.829 VARIANCE 0.872

VALID CASES 5941 MISSING CASES 167

FILE ONBRD (CREATION DATE = 09/30/82)

Q14 INCOME

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
UNDER \$5K	1	1057	17.3	19.5	19.5
\$5 TO 10K	2	988	16.2	18.2	37.7
\$10 TO 15K	3	1028	16.8	18.9	56.6
15 TO \$25K	4	1151	18.8	21.2	77.8
OVER \$25K	5	1204	19.7	22.2	100.0
	0	680	11.1	MISSING	100.0
	TOTAL	6108	100.0	100.0	

MEAN 3.084 VARIANCE 2.054

VALID CASES 5428 MISSING CASES 680

FILE ONBRD (CREATION DATE = 09/30/82)

Q11A NEW SYSTEM LESS CONFUSING

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
	1	1357	45.7	99.7	99.7
	2	4	0.1	0.3	100.0
	0	1607	54.1	MISSING	100.0
	TOTAL	2968	100.0	100.0	

VALID CASES 1361 MISSING CASES 1607

FILE ONBRD (CREATION DATE = 09/30/82)

Q11B NEW SYSTEM MORE RIDERS PAY RIGHT FARE

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
	1	1	0.0	0.1	0.1
	2	1261	42.5	99.7	99.8
	3	3	0.1	0.2	100.0
	0	1703	57.4	MISSING	100.0
	TOTAL	2968	100.0	100.0	

VALID CASES 1265 MISSING CASES 1703

FILE ONBRD (CREATION DATE = 09/30/82)

Q11C NEW SYSTEM FASTER GETTING ON BUS

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
	2	3	0.1	0.2	0.2
	3	1687	56.8	99.6	99.8
	4	3	0.1	0.2	100.0
	0	1275	43.0	MISSING	100.0
	TOTAL	2968	100.0	100.0	

VALID CASES 1693 MISSING CASES 1275

FILE ONBRD (CREATION DATE = 09/30/82)

Q11D NEW SYSTEM SAVE MONEY FOR TRI-MET

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
	3	2	0.1	0.2	0.2
	4	931	31.4	99.7	99.9
	5	1	0.0	0.1	100.0
	0	2034	68.5	MISSING	100.0
	TOTAL	2968	100.0	100.0	

VALID CASES 934 MISSING CASES 2034

FILE ONBRD (CREATION DATE = 09/30/82)

Q11E NEW SYSTEM OTHER

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
	5	187	6.3	100.0	100.0
	0	2781	93.7	MISSING	100.0
	TOTAL	2968	100.0	100.0	

VALID CASES 187 MISSING CASES 2781

FILE ONBRD (CREATION DATE = 09/30/82)

Q11F NEW SYSTEM NOT SURE-

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
	6	40	1.3	100.0	100.0
	0	2928	98.7	MISSING	100.0
	TOTAL	2968	100.0	100.0	

VALID CASES 40 MISSING CASES 2928

FILE ONBRD (CREATION DATE = 09/30/82)

Q11A NEW SYSTEM MDRE- , CONFUSING

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
	1	1206	62.3	99.9	99.9
	2	1	0.1	0.1	100.0
	0	730	37.7	MISSING	100.0
	TOTAL	1937	100.0	100.0	

VALID CASES 1207 MISSING CASES 730

FILE ONBRD (CREATION DATE = 09/30/82)

Q118 NEW SYSTEM -LESS RIDERS PAY RIGHT FARE

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
	1	1	0.1	0.1	0.1
	2	761	39.3	99.9	100.0
	0	1175	60.7	MISSING	100.0
	TOTAL	1937	100.0	100.0	

VALID CASES 762 MISSING CASES 1175

FILE ONBRD (CREATION DATE = 09/30/82)

Q11C NEW SYSTEM -SLOWER GETTING ON BUS

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
	3	861	44.5	100.0	100.0
	0	1076	55.5	MISSING	100.0
		<u> </u>	<u> </u>	<u> </u>	
	TOTAL	1937	100.0	100.0	

VALID CASES 861 MISSING CASES 1076

FILE ONBRD (CREATION DATE = 09/30/82)

Q110 NEW SYSTEM COST MONEY FOR TRI-MET

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
	4	829	42.8	100.0	100.0
	0	1108	57.2	MISSING	100.0
	TOTAL	1937	100.0	100.0	

VALID CASES 829 MISSING CASES 1108

FILE ONBRD (CREATION DATE = 09/30/82)

Q11E NEW SYSTEM OTHER

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
	5	376	19.4	100.0	100.0
	0	1561	80.6	MISSING	100.0
	TOTAL	1937	100.0	100.0	

VALID CASES 376 MISSING CASES 1561

FILE ONBRD (CREATION DATE = 09/30/82)

Q11F NEW SYSTEM NOT SURE-TICKETS INCONVENIE

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
	6	5	0.3	100.0	100.0
	0	1932	99.7	MISSING	100.0
		-----	-----	-----	
	TOTAL	1937	100.0	100.0	

VALID CASES 5 MISSING CASES 1932

***** C R O S S T A B U L A T I O N O F *****
 PAY BY Q14 INCOME
 ***** PAGE 1 OF 1

NUMBER OF MISSING OBSERVATIONS = 680

FILE ONBRD (CREATION DATE = 10/01/82)

***** CRUSSTABULATION OF *****
 PAY BY Q13 AGE
 ***** PAGE 1 OF 1

		Q13										ROW TOTAL			
		COUNT	I		UNDER 16		16-24		25-44		45-64		OVER 64		
		ROW PCT	I		COL PCT		I		I		I		I		
PAY		TOT PCT	I		I		I		I		I		I		
NO ANSWER	0	I	4	I	35	I	26	I	11	I	5	I		81	
		I	4.9	I	43.2	I	32.1	I	13.6	I	6.2	I		1.4	
		I	1.5	I	1.7	I	1.1	I	1.3	I	1.5	I			
		I	0.1	I	0.6	I	0.4	I	0.2	I	0.1	I			
USE CASH	1	I	100	I	788	I	782	I	219	I	176	I		2065	
		I	4.8	I	38.2	I	37.9	I	10.6	I	8.5	I		34.8	
		I	38.3	I	38.3	I	32.5	I	25.0	I	51.2	I			
		I	1.7	I	13.3	I	13.2	I	3.7	I	3.0	I			
USE TICKET	2	I	11	I	122	I	210	I	138	I	24	I		505	
		I	2.2	I	24.2	I	41.6	I	27.3	I	4.8	I		8.5	
		I	4.2	I	5.9	I	8.7	I	15.8	I	7.0	I			
		I	0.2	I	2.1	I	3.5	I	2.3	I	0.4	I			
USE PASS	3	I	123	I	960	I	1236	I	473	I	97	I		2889	
		I	4.3	I	33.2	I	42.8	I	16.4	I	3.4	I		48.6	
		I	47.1	I	46.6	I	51.4	I	54.1	I	28.2	I			
		I	2.1	I	16.2	I	20.8	I	8.0	I	1.6	I			
USE MULTIPLE	4	I	23	I	153	I	149	I	34	I	42	I		401	
		I	5.7	I	38.2	I	37.2	I	8.5	I	10.5	I		6.7	
		I	8.8	I	7.4	I	6.2	I	3.9	I	12.2	I			
		I	0.4	I	2.6	I	2.5	I	0.6	I	0.7	I			
COLUMN TOTAL			261		2058		2403		875		344		5941		
			4.4		34.6		40.4		14.7		5.8		100.0		

NUMBER OF MISSING OBSERVATIONS = 167

FILE ONBRD (CREATION DATE = 09/30/82)

***** CROSSTABULATION OF *****

Q4B TICKET FARE BY Q7 LOCATION OF PURCHASE OF TICKETS

***** PAGE 1 OF 1

Q7															
COUNT		I													
ROW	PCT	DRUG	STO	7-11	STO	BANK-SL	CUSTOMER WORK			MAIL	OTHER	SCHOOL	VARIOUS	ROW	
COL	PCT	IRE	RE		ASSISTA		5		6		7		8		TOTAL
TOT	PCT	1	2	3	4	5	6	7	8	9	10	11	12	13	
Q4B		1	12	23	110	101	32	1	15	16	32			342	
	.65		3.5	6.7	32.2	29.5	9.4	0.3	4.4	4.7	9.4			53.1	
			50.0	48.9	57.3	51.8	61.5	25.0	41.7	59.3	47.8				
			1.9	3.6	17.1	15.7	5.0	0.2	2.3	2.5	5.0				
		2	2	9	68	54	18	0	9	7	15			182	
	.90		1.1	4.9	37.4	29.7	9.9	0.0	4.9	3.8	8.2			28.3	
			8.3	19.1	35.4	27.7	34.6	0.0	25.0	25.9	22.4				
			0.3	1.4	10.6	8.4	2.8	0.0	1.4	1.1	2.3				
		3	9	10	5	13	0	1	4	4	13			59	
	.45		15.3	16.9	8.5	22.0	0.0	1.7	6.8	6.8	22.0			9.2	
			37.5	21.3	2.6	6.7	0.0	25.0	11.1	14.8	19.4				
			1.4	1.6	0.8	2.0	0.0	0.2	0.6	0.6	2.0				
		4	0	3	2	14	0	2	3	0	2			26	
	.25		0.0	11.5	7.7	53.8	0.0	7.7	11.5	0.0	7.7			4.0	
			0.0	6.4	1.0	7.2	0.0	50.0	8.3	0.0	3.0				
			0.0	0.5	0.3	2.2	0.0	0.3	0.5	0.0	0.3				
		5	0	0	2	1	0	0	0	0	0			3	
	1.00		0.0	0.0	66.7	33.3	0.0	0.0	0.0	0.0	0.0			0.5	
			0.0	0.0	1.0	0.5	0.0	0.0	0.0	0.0	0.0				
			0.0	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0				
OTHER		6	0	0	1	2	1	0	0	0	0			4	
			0.0	0.0	25.0	50.0	25.0	0.0	0.0	0.0	0.0			0.6	
			0.0	0.0	0.5	1.0	1.9	0.0	0.0	0.0	0.0				
			0.0	0.0	0.2	0.3	0.2	0.0	0.0	0.0	0.0				
MULT. FARES		7	1	2	4	10	1	0	5	0	5			28	
			3.6	7.1	14.3	35.7	3.6	0.0	17.9	0.0	17.9			4.3	
			4.2	4.3	2.1	5.1	1.9	0.0	13.9	0.0	7.5				
			0.2	0.3	0.6	1.6	0.2	0.0	0.8	0.0	0.8				
COLUMN TOTAL			24	47	192	195	52	4	36	27	67			644	
			3.7	7.3	29.8	30.3	8.1	0.6	5.6	4.2	10.4			100.0	

NUMBER OF MISSING OBSERVATIONS = 5464

* * * * * C R O S S T A B U L A T I O N O F * * * * *

Q4C	TYPE OF PASS	BY Q7	LOCATION OF PURCHASE OF TICKETS
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* * * * * PAGE 1 OF 1

NUMBER OF MISSING OBSERVATIONS = 3055

ACCORDING TO YOUR INPUT FORMAT, VARIABLES ARE TO BE READ AS FOLLOWS

VARIABLE	FORMAT	RECORD	COLUMNS
Q8	F 1. 0	1	24- 24
Q9	F 1. 0	1	25- 25
Q10A	F 1. 0	1	26- 26
Q10B	F 1. 0	1	27- 27
Q10C	F 1. 0	1	28- 28
Q10D	F 1. 0	1	29- 29
Q10E	F 1. 0	1	30- 30
Q10F	F 1. 0	1	31- 31
Q10G	F 1. 0	1	32- 32
Q11A	F 1. 0	1	33- 33
Q11B	F 1. 0	1	34- 34
Q11C	F 1. 0	1	35- 35
Q11D	F 1. 0	1	36- 36
Q11E	F 1. 0	1	37- 37
Q11F	F 1. 0	1	38- 38
Q11G	F 1. 0	1	39- 39
Q12	F 1. 0	1	40- 40
Q13	F 1. 0	1	41- 41
Q14	F 1. 0	1	42- 42
Q15	F 1. 0	1	43- 43
F3Q3A	F 3. 0	2	16- 18
F3Q3B	F 3. 0	2	19- 21
F3Q3C	F 3. 0	2	22- 24
SEX	F 1. 0	2	52- 52
AGE	F 1. 0	2	53- 53

THE INPUT FORMAT PROVIDES FOR 44 VARIABLES. 44 WILL BE READ
IT PROVIDES FOR 2 RECORDS ('CARDS') PER CASE. A MAXIMUM OF 53 'COLUMNS' ARE USED ON A RECORD.

10 N OF CASES	UNKNOWN
11 COMPUTE	REG=0
12 CCMPUTE	UR=0
13 COMPUTE	LR=0
14 COMPUTE	F=0
15 COMPUTE	PEAK=0
16 RECODE	F3Q3A TO F3Q3C (1,55,31,101,37,155,15,17,18,66,34,42,43,
17	144,45,46,51,63,66,201,234,244,144=4)
18	(2,3,6,8,9,19,20,21,26 THRU 29,40,41,53,12,106,206,109,
19	209,112,108,208,119,219,126,226,128,228,129,229,140,240,
20	120,220=4)
21	(30,38,87,88,89,91=3)
22	(5,14,114,214,33,36,54,56,57,59,44=1)
23	(52,60,65,67,70 THRU 78,80,81,134=5)
24 IF	(F3Q3A EQ 1 OR F3Q3B EQ 1 OR F3Q3C EQ 1) REG=1
25 IF	(F3Q3A EQ 2 OR F3Q3B EQ 2 OR F3Q3C EQ 2) UR=1
26 IF	(F3Q3A EQ 3 OR F3Q3B EQ 3 OR F3Q3C EQ 3) PEAK=1
27 IF	(F3Q3A EQ 4 OR F3Q3B EQ 4 OR F3Q3C EQ 4) LR=1

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26 IF F3Q3A EQ 5 OR F3Q3B EQ 5 OR F3Q3C EQ 5) F=1
29 CCMPUTE NO=0
30 IF (AGE NE 415) NO=1
31 IF (SEX NE 414) NO=1
32 VAR LABELS Q1,MEANS OF PAYMENT/Q2,INCLINATION TO USE MACHINES/
33 Q2A,REASONS FOR-AGAINST VENDING/Q2B,REASONS FOR-AGAINST
34 VENDING/Q2C,REASONS FOR-AGAINST VENDING/Q2D,REASONS FOR-
35 AGAINST VENDING/Q3,WHY PASS ISNT BOUGHT/ Q4,PERCEPTION
36 OF PASS INCONVENIENCE/Q5,INCLINATION TO USE MACHINE/
37 Q6A,FACTORS TO DETERMINE FARES/Q6B,FACTORS TO DETERMINE
38 FARES/Q6C,FACTORS TO DETERMINE FARES/Q6D,FACTORS TO
39 DETERMINE FARES/Q6E,FACTORS TO DETERMINE FARES/Q6F,
40 FACTORS TO DETERMINE FARES/Q6G,FACTORS TO DETERMINE
41 FARES/Q7,PREFERED NUMBER OF ZONES/Q8,SUGGESTED ZONE
42 SURCHARGE/Q9,ESTIMATED CHEATERS/Q10A,REASONS FOR WRONG
43 FARE/Q10B,REASONS FOR WRONG FARE/Q10C,REASONS FOR WRONG
44 FARE/Q10D,REASONS FOR WRONG FARE/Q10E,REASONS FOR WRONG
45 FARE/Q10F,REASONS FOR WRONG FARE/Q10G,REASONS FOR WRONG
46 FARE/Q11A,HOW FARE UNDERPAID/Q11B,HOW FARE UNDER PAID/
47 Q11C,HOW FARE UNDER PAID/Q11D,HOW FARE UNDER PAID/Q11E,
48 HOW FARE UNDER PAID/Q11F,HOW FARE UNDER PAID/Q11G,HOW
49 FARE IS UNDER PAID/Q12,PENALTY SHOULD BE/Q13,PENALTY
50 FOR INTENTIONAL MISPAYMENT/Q14,GENDER/Q15,AGE/
51 F3Q3A,BUS REGIONS/F3Q3B,BUS REGIONS/F3Q3C,BUS REGIONS/
52 UR,URBAN RADIAL/LR,LOCAL RADIAL/F,FEEDER/REG,REGIONAL/
53 PEAK,PEAK BUS/
54 VALUE LABELS Q1 (1)CASH (2)BUS TICKET (3)BUS PASS/Q2 (1)YES (2)NO/
55 Q3 (1)SELDOM RIDE (2)DID NOT KNOW OF (3)OUTLETS INCONV.
56 (4)DONTKNOW CUTLETS (5)EXPENSIVE (6)OTHER (7)SCHEDULE
57 UNCER. (8)BEYOND BUDGET (9)POOR VALUE (10)VARIOUS/
58 Q6A TO Q6G (1)DISTANCE (2)TIME OF DAY (3)ABILITY TO PAY
59 (4)AGE (5)ROUTE COST (6)TRIP TIME(7)OTHER/
60 Q7 (1)ONE (2)TWO (3)THREE (4)FIVE (5)SEVEN + (6)OTHER
61 (7)DONT KNOW/Q8 (1).05 (2).10 (3).15 (4).20 (5).25
62 (6)NO CHANGE (7)MULTIPLE/Q9 (1)NONE (2)1-2 (3)3-5
63 (4)6-10 (5)11-20 (6)21 OR MORE/Q10A TO Q10G (1)FORGOT
64 (2)INCORRECT CHANGE (3)ZONE CONFUSION (4)OTHER CHEATING
65 (5)DRIVER NO HELP (6)POOR SERVICE (7)OTHER (8)NO MONEY
66 (9)CROOKS/Q11A TO Q11G (1)SHORT FARE (2)BAD TRANSFER
67 (3)DONT PAY (4)WRONG PASS (5)BAD AGE PASS (6)SLUGS
68 (7)FORGE PASS/Q12 (1)NONE (2)PAY FARE (3)LEAVE BUS (4)
69 FINED 5 (5)FINED 20 (6)FINED 50 (7)OTHER (8)COMBINATION/
70 Q14 (1)MALE (2)FEMALE/Q15 (1)15 OR UNDER (2) 16-24
71 (3)25-44 (4)45-64 (5)65 AND UP/Q5 (1)YES (2)NO
72 (3)NO CREDIT CARD (4)PREFER CASH (5)DISTRUST MACHINE
73 (6)INCONVENIENT (9)NO, OTHER
74 /F3Q3A TO F3Q3C (1)REGIONAL (2)URBAN
75 RADIAL (3)PEAK (4)LOCAL RADIAL (5)FEEDER/
76 REG TO PEAK (1)YES (0)NO/
77 MISSING VALUES Q1 TO Q2D,Q4 TO F3Q3C(0)
78 SELECT IF (NO EQ 0)
79 FREQUENCIES INTEGER=Q1,Q2,Q3 TO Q15(0,10)
80 STATISTICS 1,6

```

'FREQUENCIES' PROBLEM REQUIRES 1676 BYTES OF SPACE

81 READ INPUT DATA

AFTER READING 3676 CASES FROM SUBFILE MAIL , END OF DATA WAS ENCOUNTERED ON LOGICAL UNIT # 8

FILE MAIL (CREATION DATE = 10/29/82)

Q1 MEANS OF PAYMENT

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
CASH	1	1116	33.2	33.4	33.4
BUS TICKET	2	336	10.0	10.1	43.5
BUS PASS	3	1889	56.1	56.5	100.0
	0	24	0.7	MISSING	100.0
		-----	-----	-----	
TOTAL		3365	100.0	100.0	

MEAN 2.231 VARIANCE 0.846

VALID CASES 3341 MISSING CASES 24

FILE MAIL (CREATION DATE = 10/29/82)

Q2 INCLINATION TO USE MACHINES

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
YES	1	733	21.8	67.3	67.3
NO	2	356	10.6	32.7	100.0
	0	2276	67.6	MISSING	100.0
		-----	-----	-----	
	TOTAL	3365	100.0	100.0	

MEAN 1.327 VARIANCE 0.220

VALID CASES 1089 MISSING CASES 2276

FILE COMB1 (CREATION DATE = 11/03/82)

Q3

WHY PASS ISNT BOUGHT

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VARIOUS	0	234	7.0	17.1	17.1
SELDOM RIDE	1	707	21.0	51.5	68.6
DID NO KNOW OF	2	8	0.2	0.6	69.2
OUTLETS INCONV.	3	113	3.4	8.2	77.4
DONTKNOW OUTLETS	4	28	0.8	2.0	79.4
EXPENSIVE	5	135	4.0	9.8	89.3
OTHER	6	60	1.8	4.4	93.7
SCHEDULE UNCER.	7	52	1.5	3.8	97.4
BEYOND BUDGET	8	28	0.8	2.0	99.5
POOR VALUE	9	7	0.2	0.5	100.0
OUT OF RANGE		1993	59.2	MISSING	100.0
	TOTAL	3365	100.0	100.0	

VALID CASES 1372 MISSING CASES 1993

FILE MAIL (CREATION DATE = 10/29/82)

Q4 PERCEPTION OF PASS INCONVENIENCE

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
	1	19	0.6	1.0	1.0
	2	1698	50.5	91.6	92.7
	3	49	1.5	2.6	95.3
	9	87	2.6	4.7	100.0
	0	1512	44.9	MISSING	100.0
		-----	-----	-----	
	TOTAL	3365	100.0	100.0	

MEAN 2.345 VARIANCE 2.220

VALID CASES 1853 MISSING CASES 1512

FILE MAIL (CREATION DATE = 10/29/82)

Q5 INCLINATION TO USE MACHINE

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
YES	1	995	29.6	30.9	30.9
NO	2	305	9.1	9.5	40.3
NO CREDIT CARD	3	885	26.3	27.5	67.8
PREFER CASH	4	581	17.3	18.0	85.8
DISTRUST MACHINE	5	159	4.7	4.9	90.8
INCONVENIENT	6	219	6.5	6.8	97.5
NO, OTHER	9	79	2.3	2.5	100.0
	0	142	4.2	MISSING	100.0
		-----	-----	-----	
	TOTAL	3365	100.0	100.0	
MEAN	2.918	VARIANCE	3.195		
VALID CASES	3223	MISSING CASES	142		

FILE MAIL (CREATION DATE = 10/29/82)

Q6A FACTORS TO DETERMINE FARES

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
DISTANCE	1	2114	62.8	100.0	100.0
	0	1251	37.2	MISSING	100.0
		-----	-----	-----	
	TOTAL	3365	100.0	100.0	

MEAN 1.000 VARIANCE 0.0

VALID CASES 2114 MISSING CASES 1251

FILE MAIL (CREATION DATE = 10/29/82)

Q68 FACTORS TO DETERMINE FARES

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
TIME OF DAY	2	925	27.5	100.0	100.0
	0	2440	72.5	MISSING	100.0
		-----	-----	-----	
	TOTAL	3365	100.0	100.0	

MEAN 2.000 VARIANCE 0.0

VALID CASES 925 MISSING CASES 2440

FILE MAIL (CREATION DATE = 10/29/82)

Q6C FACTORS TO DETERMINE FARES

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
ABILITY TO PAY	3	955	28.4	100.0	100.0
	0	2410	71.6	MISSING	100.0
		-----	-----	-----	
	TOTAL	3365	100.0	100.0	

MEAN	3.000	VARIANCE	0.0
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VALID CASES	955	MISSING CASES	2410
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FILE MAIL (CREATION DATE = 10/29/82)

Q6D FACTORS TO DETERMINE FARES

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
AGE	4	2037	60.5	100.0	100.0
	0	1328	39.5	MISSING	100.0
		-----	-----	-----	
	TOTAL	3365	100.0	100.0	

MEAN	4.000	VARIANCE	0.0
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VALID CASES	2037	MISSING CASES	1328
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FILE MAIL (CREATION DATE = 10/29/82)

Q6E FACTORS TO DETERMINE FARES

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
ROUTE COST	5	1074	31.9	100.0	100.0
	0	2291	68.1	MISSING	100.0
		-----	-----	-----	
	TOTAL	3365	100.0	100.0	

MEAN 5.000 VARIANCE 0.0

VALID CASES 1074 MISSING CASES 2291

FILE MAIL (C) ION = 10/29/82

Q6F FACTORS TO DETERMINE FARES

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
TRIP TIME	6	487	14.5	100.0	100.0
	0	2878	85.5	MISSING	100.0
		-----	-----	-----	
TOTAL		3365	100.0	100.0	

MEAN 6.000 VARIANCE 0.0

VALID CASES 487 MISSING CASES 2878

FILE MAIL (CREATION DATE = 10/29/82)

Q6G FACTORS TO DETERMINE FARES

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
OTHER	7	139	4.1	100.0	100.0
	0	3226	95.9	MISSING	100.0
		-----	-----	-----	
	TOTAL	3365	100.0	100.0	

MEAN 7.000 VARIANCE 0.0

VALID CASES 139 MISSING CASES 3226

FILE MAIL (CREATION DATE = 10/29/82)

Q7

PREFERED NUMBER OF ZONES

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
ONE	1	339	10.1	10.4	10.4
TWO	2	690	20.5	21.2	31.5
THREE	3	1070	31.8	32.8	64.3
FIVE	4	866	25.7	26.5	90.9
SEVEN +	5	252	7.5	7.7	98.6
OTHER	6	7	0.2	0.2	98.8
DONT KNOW	7	38	1.1	1.2	100.0
	0	103	3.1	MISSING	100.0
		-----	-----	-----	
TOTAL		3365	100.0	100.0	

MEAN 3.054 VARIANCE 1.405

VALID CASES 3262 MISSING CASES 103

FILE MAIL (CREATION DATE = 10/29/82)

Q8 SUGGESTED ZONE SURCHARGE

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
.05	1	359	10.7	11.4	11.4
.10	2	742	22.1	23.6	35.1
.15	3	413	12.3	13.2	48.2
.20	4	407	12.1	13.0	61.2
.25	5	382	11.4	12.2	73.4
NO CHANGE	6	806	24.0	25.7	99.1
MULTIPLE	7	29	0.9	0.9	100.0
	0	227	6.7	MISSING	100.0
		-----	-----	-----	
	TOTAL	3365	100.0	100.0	

MEAN 3.715 VARIANCE 3.259

VALID CASES 3138 MISSING CASES 227

FILE MAIL (CREATION DATE = 10/29/82)

29

ESTIMATED CHEATERS

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
NONE	1	217	6.4	6.8	6.8
1-2	2	601	17.9	18.9	25.7
3-5	3	954	28.4	29.9	55.6
6-10	4	813	24.2	25.5	81.1
11-20	5	352	10.5	11.0	92.2
21 OR MORE	6	250	7.4	7.8	100.0
	0	178	5.3	MISSING	100.0
		-----	-----	-----	
TOTAL		3365	100.0	100.0	

MEAN 3.387 VARIANCE 1.715

VALID CASES 3187 MISSING CASES 178

FILE MAIL (CREATION DATE = 10/29/82)

Q10A REASONS FOR WRONG FARE

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
• JRGOT	1	464	13.8	100.0	100.0
	0	2901	86.2	MISSING	100.0
		-----	-----	-----	
TOTAL		3365	100.0	100.0	

MEAN	1.000	VARIANCE	0.0
VALID CASES	464	MISSING CASES	2901

ILL MAIL (CATION) = 10/29/82

108 REASONS FOR WRONG FARE

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
INCORRECT CHANGE	2	2040	60.6	100.0	100.0
	0	1325	39.4	MISSING	100.0
		-----	-----	-----	
	TOTAL	3365	100.0	100.0	

MEAN 2.000 VARIANCE 0.0
VALID CASES 2040 MISSING CASES 1325

FILE MAIL (CREATION DATE = 10/29/82)

10C REASONS FOR WRONG FARE

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
ZONE CONFUSION	3	1068	31.7	100.0	100.0
	0	2297	68.3	MISSING	100.0
		-----	-----	-----	
	TOTAL	3365	100.0	100.0	

EAN 3.000 VARIANCE 0.0

ALID CASES 1068 MISSING CASES 2297

FILE MAIL (CREATION DATE = 10/29/82)

10D REASONS FOR WRONG FARE

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
OTHER CHEATING	4	643	19.1	100.0	100.0
	0	2722	80.9	MISSING	100.0
		-----	-----	-----	
TOTAL		3365	100.0	100.0	

EAN 4.000 VARIANCE 0.0

ALID CASES 643 MISSING CASES 2722

FILE MAIL (CREATION DATE = 10/29/82)

10E REASONS FOR WRONG FARE

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
DRIVER NO HELP	5	1745	51.9	100.0	100.0
	0	1620	48.1	MISSING	100.0
		-----	-----	-----	
TOTAL		3365	100.0	100.0	

SEAN	5.000	VARIANCE	0.0
ALID CASES	1745	MISSING CASES	1620

IL MAIL (C) ION E = 10.29/82

10F REASONS FOR WRONG FARE

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
POOR SERVICE	6	612	18.2	100.0	100.0
	0	2753	81.8	MISSING	100.0
		-----	-----	-----	
	TOTAL	3365	100.0	100.0	

EAN 6.000 VARIANCE 0.0
ALID CASES 612 MISSING CASES 2753

FILE MAIL (CREATION DATE = 10/29/82)

106 REASONS FOR WRONG FARE

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
OTHER	7	81	2.4	19.3	19.3
NO MONEY	8	178	5.3	42.4	61.7
CROOKS	9	161	4.8	38.3	100.0
	0	2945	87.5	MISSING	100.0
		-----	-----	-----	
	TOTAL	3365	100.0	100.0	
MEAN	8.190	VARIANCE	0.541		
VALID CASES	420	MISSING CASES	2945		

FILE MAIL (COLLECTION DATE = 10/29/82)

Q11A HOW FARE UNDERPAID

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
SHORT FARE	1	2471	73.4	100.0	100.0
	0	894	26.6	MISSING	100.0
		-----	-----	-----	
	TOTAL	3365	100.0	100.0	

MEAN	1.000	VARIANCE	0.0
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VALID CASES	2471	MISSING CASES	894
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FILE MAIL (CREATION DATE = 10/29/82)

Q118 HOW FARE UNDER PAID

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
BAD TRANSFER	2	1475	43.8	100.0	100.0
	0	1890	56.2	MISSING	100.0
		-----	-----	-----	
TOTAL		3365	100.0	100.0	

MEAN 2.000 VARIANCE 0.0

VALID CASES 1475 MISSING CASES 1890

FILE MAIL (CREATION DATE = 10/29/82)

Q11C HOW FARE UNDER PAID

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
DONT PAY	3	587	17.4	100.0	100.0
	0	2778	82.6	MISSING	100.0
		-----	-----	-----	
TOTAL		3365	100.0	100.0	

MEAN	3.000	VARIANCE	0.0
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VALID CASES	587	MISSING CASES	2778
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FILE MAIL (CREATION DATE = 10/29/82)

Q11D HOW FARE UNDER PAID

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
WRONG PASS	4	996	29.6	100.0	100.0
	0	2369	70.4	MISSING	100.0
		-----	-----	-----	
	TOTAL	3365	100.0	100.0	

MEAN 4.000 VARIANCE 0.0

VALID CASES 996 MISSING CASES 2369

FILL MAIL (CREATION DATE = 10/29/82)

Q11E HOW FARE UNDER PAID

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
BAD AGE PASS	5	502	14.9	100.0	100.0
	0	2863	85.1	MISSING	100.0
		-----	-----	-----	
	TOTAL	3365	100.0	100.0	

MEAN	5.000	VARIANCE	0.0
VALID CASES	502	MISSING CASES	2863

FILE MAIL (CREATION DATE = 10/29/82)

Q11F HOW FARE UNDER PAID

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
SLUGS	6	374	11.1	100.0	100.0
	0	2991	88.9	MISSING	100.0
		-----	-----	-----	
TOTAL		3365	100.0	100.0	

MEAN 6.000 VARIANCE 0.0

VALID CASES 374 MISSING CASES 2991

FILE MAIL (CREATION DATE = 10/29/82)

Q11G HOW FARE IS UNDER PAID

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
FORGE PASS	7	650	19.3	100.0	100.0
	0	2715	80.7	MISSING	100.0
		-----	-----	-----	
TOTAL		3365	100.0	100.0	

MEAN 7.000 VARIANCE 0.0

VALID CASES 650 MISSING CASES 2715

FILE MAIL (CREATION DATE = 10/29/82)

Q12 PENALTY SHOULD BE

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
NONE	1	394	11.7	11.9	11.9
PAY FARE	2	2374	70.5	71.5	83.3
LEAVE BUS	3	120	3.6	3.6	86.9
FINED 5	4	39	1.2	1.2	88.1
FINED 20	5	27	0.8	0.8	88.9
FINED 50	6	16	0.5	0.5	89.4
OTHER	7	17	0.5	0.5	89.9
COMBINATION	8	335	10.0	10.1	100.0
	0	43	1.3	MISSING	100.0
		-----	-----	-----	
TOTAL		3365	100.0	100.0	
MEAN	2.615	VARIANCE	3.733		
VALID CASES	3322	MISSING CASES	43		

FILE MAIL (CREATION DATE = 10/29/82)

Q13 PENALTY FOR INTENTIONAL MISPAYMENT

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
	1	53	1.6	1.6	1.6
	2	670	19.9	20.3	21.9
	3	855	25.4	25.9	47.8
	4	402	11.9	12.2	59.9
	5	412	12.2	12.5	72.4
	6	264	7.8	8.0	80.4
	7	85	2.5	2.6	83.0
	8	562	16.7	17.0	100.0
	0	62	1.8	MISSING	100.0
		-----	-----	-----	
TOTAL		3365	100.0	100.0	

MEAN 4.330 VARIANCE 4.506

VALID CASES 3303 MISSING CASES 62

FILE MAIL (CREATION DATE = 10/29/82)

Q14 GENDER

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
MALE	1	1347	40.0	40.1	40.1
FEMALE	2	2012	59.8	59.9	100.0
	0	6	0.2	MISSING	100.0
		-----	-----	-----	
TOTAL		3365	100.0	100.0	
MEAN	1.599	VARIANCE	0.240		
VALID CASES	3359	MISSING CASES	6		

FILE MAIL (CREATION DATE = 10/29/82)

Q15 AGE

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
15 OR UNDER	1	115	3.4	3.4	3.4
16-24	2	1000	29.7	29.8	33.2
25-44	3	1452	43.2	43.2	76.4
45-64	4	579	17.2	17.2	93.7
65 AND UP	5	212	6.3	6.3	100.0
	0	7	0.2	MISSING	100.0
		-----	-----	-----	
TOTAL		3365	100.0	100.0	

MEAN 2.932 VARIANCE 0.855

VALID CASES 3358 MISSING CASES 1

FILE MAIL (CREATION DATE = 10/29/82)

***** C R O S S T A B U L A T I O N O F *****

Q7 PREFERRED NUMBER OF ZONES BY Q8 SUGGESTED ZONE SURCHARGE

***** PAGE 1 OF 1

		Q8														ROW TOTAL	
		COUNT															
		ROW PCT															
		COL PCT															
		TOT PCT	1.05	.10	.15	.20	.25	NO CHANG	MULTIPLE								
			1	2	3	4	5	6	7								
Q7			1	1	1	1	1	1	1	1	1	1	1	1			
ONE	1	I	35	I	21	I	8	I	3	I	5	I	238	I	0	310	
		I	11.3	I	6.8	I	2.6	I	1.0	I	1.6	I	76.8	I	0.0	10.0	
		I	9.9	I	2.9	I	1.9	I	0.7	I	1.3	I	30.3	I	0.0		
		I	1.1	I	0.7	I	0.3	I	0.1	I	0.2	I	7.7	I	0.0		
TWO	2	I	70	I	136	I	74	I	80	I	134	I	175	I	3	672	
		I	10.4	I	20.2	I	11.0	I	11.9	I	19.9	I	26.0	I	0.4	21.7	
		I	19.8	I	18.6	I	18.0	I	19.8	I	35.2	I	22.3	I	10.3		
		I	2.3	I	4.4	I	2.4	I	2.6	I	4.3	I	5.7	I	0.1		
THREE	3	I	86	I	249	I	149	I	160	I	152	I	231	I	4	1031	
		I	8.3	I	24.2	I	14.5	I	15.5	I	14.7	I	22.4	I	0.4	33.3	
		I	24.4	I	34.0	I	36.2	I	39.5	I	39.9	I	29.4	I	13.8		
		I	2.8	I	8.0	I	4.8	I	5.2	I	4.9	I	7.5	I	0.1		
FIVE	4	I	114	I	241	I	148	I	138	I	70	I	91	I	14	816	
		I	14.0	I	29.5	I	18.1	I	16.9	I	8.6	I	11.2	I	1.7	26.3	
		I	32.3	I	32.9	I	35.9	I	34.1	I	18.4	I	11.6	I	48.3		
		I	3.7	I	7.8	I	4.8	I	4.5	I	2.3	I	2.9	I	0.5		
SEVEN +	5	I	43	I	72	I	30	I	20	I	19	I	42	I	5	231	
		I	18.6	I	31.2	I	13.0	I	8.7	I	8.2	I	18.2	I	2.2	7.5	
		I	12.2	I	9.8	I	7.3	I	4.9	I	5.0	I	5.4	I	17.2		
		I	1.4	I	2.3	I	1.0	I	0.6	I	0.6	I	1.4	I	0.2		
OTHER	6	I	1	I	5	I	0	I	0	I	0	I	0	I	0	6	
		I	16.7	I	83.3	I	0.0	I	0.0	I	0.0	I	0.0	I	0.0	0.2	
		I	0.3	I	0.7	I	0.0	I	0.0	I	0.0	I	0.0	I	0.0		
		I	0.0	I	0.2	I	0.0	I	0.0	I	0.0	I	0.0	I	0.0		
DONT KNOW	7	I	4	I	8	I	3	I	4	I	1	I	8	I	3	31	
		I	12.9	I	25.8	I	9.7	I	12.9	I	3.2	I	25.8	I	9.7	1.0	
		I	1.1	I	1.1	I	0.7	I	1.0	I	0.3	I	1.0	I	10.3		
		I	0.1	I	0.3	I	0.1	I	0.1	I	0.0	I	0.3	I	0.1		
COLUMN TOTAL			353	732	412	405	381	785	29					3097			
			11.4	23.6	13.3	13.1	12.3	25.3	0.9					100.0			

NUMBER OF MISSING OBSERVATIONS = 268

GGGGGGGGGG	5555555555	00000000	5555555555	TTTTTTTTTT	MM	MM	00000000	YY
GGGGGGGGGG	5555555555	00000000	5555555555	TTTTTTTTTT	MM	MM	00000000	YY
GG	55	00	55	TT	MM	MM	00	YY
GG	55	00	55	TT	MM	MM	00	YY
GG	55	00	55	TT	MM	MM	00	YY
GG	55555555	00	55555555	TT	MM	MM	00	YYYY
GG	GGGGG	00	55555555	TT	MM	MM	00	YY
GG	GGGGG	55	55	TT	MM	MM	00	YY
GG	GG	55	55	TT	MM	MM	00	YY
GG	GG	55	55	TT	MM	MM	00	YY
GGGGGGGGGG	5555555555	00000000	5555555555	TT	MM	MM	00000000	YY
GGGGGGGGGG	5555555555	00000000	5555555555	TT	MM	MM	00000000	YY

GGGGGGGGGG	5555555555	00000000	5555555555	TTTTTTTTTT	MM	MM	00000000	UU
GGGGGGGGGG	5555555555	00000000	5555555555	TTTTTTTTTT	MM	MM	00000000	UU
GG	55	00	55	TT	MM	MM	00	UU
GG	55	00	55	TT	MM	MM	00	UU
GG	55	00	55	TT	MM	MM	00	UU
GG	55555555	00	55555555	TT	MM	MM	00	UU
GG	GGGGG	00	55555555	TT	MM	MM	00	UU
GG	GGGGG	55	55	TT	MM	MM	00	UU
GG	GG	55	55	TT	MM	MM	00	UU
GG	GG	55	55	TT	MM	MM	00	UU
GGGGGGGGGG	5555555555	00000000	5555555555	TT	MM	MM	00000000	UUUUUUUU
GGGGGGGGGG	5555555555	00000000	5555555555	TT	MM	MM	00000000	UUUUUUUU

AAAAAAAAAA	LL	PPPPPPPPPP	HH	HH	AAAAAAAAAA
AAAAAAAAAA	LL	PPPPPPPPPP	HH	HH	AAAAAAAAAA
AA	AA	PP	PP	HH	AA
AA	AA	PP	PP	HH	AA
AA	AA	PP	PP	HH	AA
AAAAAAAAAA	LL	PPPPPPPPPP	HHHHHHHHHH	HH	AAAAAAAAAA
AAAAAAAAAA	LL	PPPPPPPPPP	HHHHHHHHHH	HH	AAAAAAAAAA
AA	AA	PP	HH	HH	AA
AA	AA	PP	HH	HH	AA
AA	AA	PP	HH	HH	AA
AA	AA	PP	HH	HH	AA
AA	AA	PP	HH	HH	AA
AA	AA	PP	HH	HH	AA

AAAAAAAAAA	00000000	5555555555	444	00000000	22222222	7777777777
AAAAAAAAAA	00000000	5555555555	4444	00000000	2222222222	7777777777
AA	AA	00	55	00	22	77
AA	AA	00	55	00	22	77
AA	AA	00	55	00	22	77
AAAAAAAAAA	00	55555555	4444444444	00	22	77
AAAAAAAAAA	00	55555555	4444444444	00	22	77
AA	AA	00	55	00	22	77
AA	AA	00	55	00	22	77
AA	AA	00	55	00	22	77
AA	AA	00000000	5555555555	00000000	2222222222	77
AA	AA	00000000	5555555555	00000000	2222222222	77

C. RIDER ON-BOARD/MAILBACK
COMPUTER PRINTOUTS

ACCORDING TO YOUR INPUT FORMAT, VARIABLES ARE TO BE READ AS FOLLOWS

VARIABLE	FORMAT	RECORD	COLUMNS
Q26	F 1. 0	1	26- 26
Q27	F 1. 0	1	27- 27
Q28	F 1. 0	1	28- 28
Q29	F 1. 0	1	29- 29
Q30	F 1. 0	1	30- 30
Q31	F 1. 0	1	31- 31
Q32	F 1. 0	1	32- 32
Q33	F 1. 0	1	33- 33
Q34	F 1. 0	1	34- 34
Q35	F 1. 0	1	35- 35
Q36	F 1. 0	1	36- 36
Q37	F 1. 0	1	37- 37
Q38	F 1. 0	1	38- 38
Q39	F 1. 0	1	39- 39
Q40	F 1. 0	1	40- 40
Q41	F 1. 0	1	41- 41
Q42	F 1. 0	1	42- 42
Q43	F 1. 0	1	43- 43
Q44	F 1. 0	1	44- 44
Q45	F 1. 0	1	45- 45
Q46	F 1. 0	1	46- 46
Q47	F 1. 0	1	47- 47
Q48	F 1. 0	1	48- 48
Q49	F 1. 0	1	49- 49
Q50	F 1. 0	1	50- 50
Q51	F 1. 0	1	51- 51
Q52	F 1. 0	1	52- 52
Q53	F 1. 0	1	53- 53
Q54	F 1. 0	1	54- 54
Q55	F 1. 0	1	55- 55
Q56	F 1. 0	1	56- 56
Q57	F 1. 0	1	57- 57
Q58	F 1. 0	1	58- 58
Q59	F 1. 0	1	59- 59
Q60	F 1. 0	1	60- 60
Q61	F 1. 0	1	61- 61
Q62	F 1. 0	1	62- 62
Q63	F 1. 0	1	63- 63
Q64	F 1. 0	1	64- 64
Q65	F 1. 0	1	65- 65
Q66	F 1. 0	1	66- 66

ACCORDING TO YOUR INPUT FORMAT, VARIABLES ARE TO BE READ AS FOLLOWS

VARIABLE	FORMAT	RECORD	COLUMNS
Q67	F 1. 0	1	67- 67
Q68	F 1. 0	1	68- 68
Q69	F 1. 0	1	69- 69
Q70	F 1. 0	1	70- 70
Q71	F 1. 0	1	71- 71
Q72	F 1. 0	1	72- 72
Q73	F 1. 0	1	73- 73
Q74	F 1. 0	1	74- 74
Q75	F 1. 0	1	75- 75
Q76	F 1. 0	1	76- 76
Q77	F 1. 0	1	77- 77
Q78	F 1. 0	1	78- 78
Q79	F 1. 0	1	79- 79

THE INPUT FORMAT PROVIDES FOR 76 VARIABLES. 76 WILL BE READ
 IT PROVIDES FOR 1 RECORDS ('CARDS') PER CASE. A MAXIMUM OF 79 'COLUMNS' ARE USED ON A RECORD.

7 N OF CASES	UNKNOWN	00002300
8 VAR LABELS	Q5,PERCENT FARE EVASION/Q6,HOW OFTEN IS THERE NO PAYMENT	00002400
9	/Q7, HOW OFTEN IS THE BASE FARE INSUFFICIENT/	00002500
10	Q8, HOW OFTEN IS THERE NO THREE ZONE CASH FARE/	00002600
11	Q9,HOW OFTEN ARE THERE SLUGS, HALF BILLS/	00002700
12	Q10,HOW OFTEN ARE THERE FORGED PASSES/	00002800
13	Q11,HOW OFTEN ARE THERE MISUSED YOUTH,SENIOR,PASSES/	00002900
14	Q12,HOW OFTEN ARE THERE WRONGLY USED TWO ZONE PASSES/	00003000
15	Q13, HOW OFTEN ARE THERE MISUSED TRANSFERS/	00003100
16	Q14,YOU CONFRONT PASSENGERS FOR NO PAYMENT AT ALL/	00003200
17	Q15,YOU CONFRONT RIDERS FOR INSUFFICIENT BASE FARE/	00003300
18	Q16,YOU CONFRONT RIDERS FOR NO THREE ZONE CASH FARE/	00003400
19	Q17,YOU CONFRONT RIDERS FOR SLUGS, HALF BILLS/	00003500
20	Q18,YOU CONFRONT RIDERS FOR FORGED PASSES/	00003600
21	Q19,YOU CONFRONT RIDERS FOR MISUSED YOUTH,SENIOR PASSES/	00003700
22	Q20,YOU CONFRONT RIDERS FOR WRONGLY USED TWO ZONE PASS/	00003800
23	Q21,YOU CONFRONT RIDERS FOR BAD TRANSFERS/	00003900
24	Q22,WRONG FARES ARE PAID BECAUSE OF ZONE SYSTEM CONFUSION/	00004000
25	/Q23,WRONG FARES HAPPEN BECAUSE OTHER ARE SEEN CHEATING/	00004100
26	Q24,WRONG FARES HAPPEN BECAUSE OPERATOR CANT DO ANYTHING	00004200
27	/Q25,WRONG FARES HAPPEN WHEN THEY DONT UNDERSTAND WHEN	00004300
28	TO PAY/Q26,WRONG FARES HAPPEN BECAUSE THE FARES ARE TOO	00004400
29	HIGH/Q27,WRONG FARES HAPPEN FOR OTHER REASONS/	00004500
30	Q28,HIGH SCHOOL AGES MISUSE THE SYSTEM/Q29,HIGH SCHOOL	00004600
31	TO 25 MISUSE THE SYSTEM/Q30,25 TO 40 YEARS MISUSE THE	00004700
32	SYSTEM/Q31,41 TO 65 MISUSE THE SYSTEM/Q32, OVER 65	00004800
33	MISUSE THE SYSTEM/Q33,RUSH HOUR RIDERS MISUSE THE SYSTEM	00004900
34	/Q34,MIDDAY RIDERS MISUSE THE SYSTEM/ Q35,EVENING RIDERS	00005000
35	MISUSE THE SYSTEM/Q36,EARLY AM-LATE PM RIDERS MISUSE	00005100
36	THE SYSTEM/Q37,WEEKEND RIDERS MISUSE THE SYSTEM/	00005200

37	Q38,DOWNTOWN RIDERS MISUSE THE SYSTEM/Q39,CITY RIDERS	00005300
38	MISUSE THE SYSTEM/Q40,SUBURBAN RIDERS MISUSE THE SYSTEM/	00005400
39	Q41,REPEAT CHEATERS MISUSE THE SYSTEM/Q42,YOU ASK THEM	00005500
40	TO PAY FULL FARE/Q43,YOU ASK THEM TO LEAVE THE BUS OR	00005600
41	PAY FULL FARE/Q44,YOU CALL SECURITY/Q45,YOU TAKE NO	00005700
42	ACTION/Q46,YOU DO OTHER/Q47,RIDER THEN PAYS FULL FARE/	00005800
43	Q48,RIDER THEN PAYS PART OF FULL FARE/Q49, RIDER THEN	00005900
44	LEAVES BUS/Q50,RIDF THEN STAYS ON BUS WITHOUT PAYMENT/	00006000
45	Q51,RIDER THEN SWEARS AT YOU/Q52,RIDER THEN COMPLAINS/	00006100
46	Q53,RIDER THEN DOES OTHERWISE/Q54, HARD-EASY,KEEP SCHED.	00006200
47	Q55,HARD-EASY,DRIVING IN TRAFFIC/Q56,HARD-EASY COLLECTING	00006300
48	CASH FARES/Q57,HARD-EASY,TRANSFERS/Q58,HARD-EASY HELPING	00006400
49	THE HANDICAPPED/Q59,HARD-EASY,DEALING WITH STUDENTS/	00006500
50	Q60,HARD-EASY,HANDLING COMPLAINTS/Q61,HARD-EASY, DEALING	00006600
51	WITH OVERCROWDING/Q62,HARD-EASY,DEALING WITH FIGHTS/Q63,	00006700
52	HARD-EASY, PAPERWORK/Q64,HARD-EASY, DEALING WITH SUPERVISOR	00006800
53	OPS/Q65,HARD-EASY, OTHER/Q66,FEELINGS TOWARDS FARE SYSTEM	00006900
54	MISUSE/Q67,RIDERS FEELINGS TOWARDS YOU CONFRONTING	00007000
55	CHEATERS/Q68,WILL SSFC BE AN IMPROVEMENT/Q69, WHY YES/	00007100
56	Q70,WHY YES/Q71,WHY YES/Q72,WHY NO/Q73,WHY NO/Q74,WHY NO	00007200
57	/Q75,EMPLOYMENT STATUS/Q76,AGE/Q77,ROUTE TYPES/Q78,ROUTE	00007300
58	TYPES/Q79,ROUTE TYPES/	00007400
59	VALUE LABELS Q6 TO Q53 (1)VERY RARELY (2)RARELY (3)SOMETIMES (4)OFTEN	00007500
60	(5)VERY OFTEN/Q5 (1)0-2% (2)3-5% (3)6-10% (4)11-20%	00007600
61	(5)21-30% (6)31-40% (7)41-50% (8)OVER 50%/Q54 TO Q65	00007700
62	(1)VERY EASY (2)EASY (3)NOT DIFFICULT (4)DIFFICULT	00007800
63	(5)VERY HARD/Q67 (1)ANGER AT CHEATER	00007900
64	(2)DISAPPROVE CHEATER (3)NO RESPONSE (4)DISAPPROVE DRIVER	00008000
65	(5)SUPPORT CHEATER/Q66 (1)ANGRY TRY TO STOP	00008100
66	(2)ANGRY DONT ENFORCE (3)NEED NON DRIVER HELP	00008200
67	(4)ENFOR. WASTED EFFORT (5)DRIVER CANT DO MUCH	00008300
68	(6)NO MANAG. SUPPORT (7)THREATENED VIOLENCE	00008400
69	(8)OTHER/Q68 (1)YES (2)NO/ Q69 TO Q71 (1)EQUITABLE FARES	00008500
70	(2)REDUCE CHEATING (3)EASIER FOR RIDER	00008600
71	(4)REDUCE COSTS (5)IMPROVE OPERATIONS	00008700
72	(6)EASIER FOR DRIVER (7)OTHER/	00008800
73	Q72 TO Q74 (1)FARE HIGH (2)INCREASE CHEATING	00008900
74	(3)TOO COMPLICATED (4)TOO EXPENSIVE (5)POOR EQUIPMENT	00009000
75	(6)HARDER FOR DRIVER (7)OTHER/Q75 (1)FULL TIME	00009100
76	(2)FULL TIME EXTRA (3) MINI RUN /	00009200
77	Q76 (1)UNDER 30 (2)31-39 (3)40-49 (4)50-59 (5)OVER 60	00009300
78	/Q77 TO Q79 (1)REGIONAL (2)URBAN RADIAL (3)PEAK	00009400
79	(4)LOCAL RADIAL (5)GRID-FEEDER/	00009500
80	MISSING VALUES Q5 TO Q79 (0)	00009600
81	FREQUENCIES INTEGER=Q5 TO Q79(0,9)	00009700
82	STATISTICS 1,6	00009800

FREQUENCIES PROBLEM REQUIRES 3204 BYTES OF SPACE

P3 READ INPUT DATA

00009900

AFTER READING P00 CASES FROM SUBFILE DRIVER , END OF DATA WAS ENCOUNTERED ON LOGICAL UNIT # 8

FILE DRIVER (CREATION DATE = 09/29/82)

05 PERCENT FARE EVASION

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
0-2%	1	79	9.9	10.0	10.0
3-5%	2	246	30.7	31.1	41.0
6-10%	3	252	31.5	31.8	72.9
11-20%	4	151	18.9	19.1	91.9
21-30%	5	42	5.2	5.3	97.2
31-40%	6	12	1.5	1.5	98.7
41-50%	7	4	0.5	0.5	99.2
OVER 50%	8	5	0.6	0.6	99.9
	9	1	0.1	0.1	100.0
	0	8	1.0	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 2.891 VARIANCE 1.523
VALID CASES 792 MISSING CASES 8

FILE DRIVER (CREATION DATE = 09/29/82)

06 HOW OFTEN IS THERE NO PAYMENT

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RAPPLY	1	405	50.6	51.9	51.9
RARELY	2	226	28.2	28.9	80.8
SOMETIMES	3	132	16.5	16.9	97.7
OFTEN	4	14	1.7	1.8	99.5
VERY OFTEN	5	4	0.5	0.5	100.0
	0	19	2.4	MISSING	100.0
		-----	-----	-----	
TOTAL		800	100.0	100.0	

MEAN 1.702 VARIANCE 0.717

VALID CASES 781 MISSING CASES 19

FILE DRIVER (CREATION DATE = 09/29/82)

Q7 HOW OFTEN IS THE BASE FARE INSUFFICIENT

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY PARELY	1	47	5.9	6.1	6.1
RARELY	2	126	15.7	16.2	22.3
SOMETIMES	3	401	50.1	51.7	74.0
OFTEN	4	166	20.7	21.4	95.4
VERY OFTEN	5	36	4.5	4.6	100.0
	0	24	3.0	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN	3.023	VARIANCE	0.805
VALID CASES	776	MISSING CASES	24

FILE DRIVER (CREATION DATE = 09/29/82)

08 HOW OFTEN IS THERE NO THREE ZONE CASH FA

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	57	7.1	7.5	7.5
RARELY	2	101	12.6	13.3	20.9
SOMETIMES	3	261	32.6	34.5	55.4
OFTEN	4	240	30.0	31.7	87.1
VERY OFTEN	5	98	12.2	12.9	100.0
	0	43	5.4	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 3.292 VARIANCE 1.186

VALID CASES 757 MISSING CASES 43

FILE DRIVER (CREATION DATE = 09/29/82)

9 HOW OFTEN ARE THERE SLUGS, HALF BILLS

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	385	48.1	51.1	51.1
RARELY	2	223	27.9	29.6	80.6
SOMETIMES	3	115	14.4	15.3	95.9
OFTEN	4	28	3.5	3.7	99.6
VERY OFTEN	5	3	0.4	0.4	100.0
	0	46	5.7	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN	1.728	VARIANCE	0.775
VALID CASES	754	MISSING CASES	46

FILE DRIVER (CREATION DATE = 09/29/82)

Q10 HOW OFTEN ARE THERE FORGED PASSES

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	381	47.6	53.2	53.2
RARELY	2	201	25.1	28.1	81.3
SOMETIMES	3	103	12.9	14.4	95.7
OFTEN	4	27	3.4	3.8	99.4
VERY OFTEN	5	4	0.5	0.6	100.0
	0	84	10.5	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 1.704 VARIANCE 0.791

VALID CASES 716 MISSING CASES 84

FILE DRIVER (CREATION DATE = 09/29/82)

Q11 HOW OFTEN ARE THERE MISUSED YOUTH, SENIO

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	78	9.7	10.1	10.1
RARELY	2	124	15.5	16.1	26.2
SOMETIMES	3	298	37.2	38.7	64.9
OFTEN	4	202	25.2	26.2	91.1
VERY OFTEN	5	69	8.6	8.9	100.0
	0	29	3.6	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 3.078 VARIANCE 1.181

VALID CASES 771 MISSING CASES 29

FILE DRIVER (CREATION DATE = 09/29/82)

Q12 HOW OFTEN ARE THERE WRONGLY USED TWO ZON

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	41	5.1	5.4	5.4
RARELY	2	62	7.7	8.2	13.6
SOMETIMES	3	229	28.6	30.2	43.8
OFTEN	4	280	35.0	36.9	80.7
VERY OFTEN	5	146	18.2	19.3	100.0
	0	42	5.2	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 3.565 VARIANCE 1.121

VALID CASES 758 MISSING CASES 42

FILE DRIVER (CREATION DATE = 09/29/82)

Q13 HOW OFTEN ARE THERE MISUSED TRANSFERS

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	26	3.2	3.3	3.3
RARELY	2	54	6.7	6.9	10.3
SOMETIMES	3	236	29.5	30.3	40.6
OFTEN	4	241	30.1	31.0	71.6
VERY OFTEN	5	221	27.6	28.4	100.0
	0	22	2.7	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 3.742 VARIANCE 1.100

VALID CASES 778 MISSING CASES 22

FILE DRIVER (CREATION DATE = 09/29/82)

Q14 YOU CONFRONT PASSENGERS FOR NO PAYMENT A

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	119	14.9	15.1	15.1
RARELY	2	72	9.0	9.2	24.3
SOMETIMES	3	132	16.5	16.8	41.1
OFTEN	4	176	22.0	22.4	63.5
VERY OFTEN	5	287	35.9	36.5	100.0
	0	14	1.7	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 3.560 VARIANCE 2.071

VALID CASES 786 MISSING CASES 14

FILE DRIVER (CREATION DATE = 09/29/82)

015 YOU CONFRONT RIDERS FOR INSUFFICIENT BAS

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	79	9.9	10.2	10.2
RARELY	2	116	14.5	15.0	25.2
SOMETIMES	3	257	32.1	33.2	58.3
OFTEN	4	220	27.5	28.4	86.7
VERY OFTEN	5	103	12.9	13.3	100.0
	0	25	3.1	MISSING	100.0
		-----	-----	-----	
TOTAL		800	100.0	100.0	

MEAN 3.196 VARIANCE 1.336

VALID CASES 775 MISSING CASES 25

FILE DRIVER (CREATION DATE = 09/29/82)

Q16 YOU CONFRONT RIDERS FOR NO THREE ZONE CA

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	119	14.9	15.7	15.7
RARELY	2	163	20.4	21.5	37.3
SOMETIMES	3	246	30.7	32.5	69.7
OFTEN	4	150	18.8	19.8	89.6
VERY OFTEN	5	79	9.9	10.4	100.0
	0	43	5.4	MISSING	100.0
	TOTAL	800	100.0	100.0	
MEAN	2.877	VARIANCE	1.447		
VALID CASES	757	MISSING CASES	43		

FILE DRIVER (CREATION DATE = 09/29/82)

Q17 YOU CONFRONT RIDERS FOR SLUGS, HALF BILL

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	290	36.2	38.7	38.7
RARELY	2	135	16.9	18.0	56.7
SOMETIMES	3	104	13.0	13.9	70.6
OFTEN	4	94	11.7	12.6	83.2
VERY OFTEN	5	126	15.7	16.8	100.0
	0	51	6.4	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 2.507 VARIANCE 2.288

VALID CASES 749 MISSING CASES 51

FILE DRIVER (CREATION DATE = 09/29/82)

018 YOU CONFRONT RIDERS FOR FORGED PASSES

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	353	44.1	48.8	48.8
RARELY	2	143	17.9	19.8	68.6
SOMETIMES	3	87	10.9	12.0	80.6
OFTEN	4	64	8.0	8.9	89.5
VERY OFTEN	5	76	9.5	10.5	100.0
	0	77	9.6	MISSING	100.0
		-----	-----	-----	
TOTAL		800	100.0	100.0	
MEAN	2.124	VARIANCE	1.896		
VALID CASES	723	MISSING CASES	77		

FILE DRIVER (CREATION DATE = 09/29/82)

019 YOU CONFRONT PIVERS FOR MISUSED YOUTH,SE

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	151	18.9	19.9	19.9
RARELY	2	180	22.5	23.7	43.6
SOMETIMES	3	199	24.9	26.2	69.8
OFTEN	4	141	17.6	18.6	88.4
VERY OFTEN	5	88	11.0	11.6	100.0
	0	41	5.1	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 2.783 VARIANCE 1.637

VALID CASES 759 MISSING CASES 41

FILE DRIVER (CREATION DATE = 09/29/82)

Q20 YOU CONFRONT RIDERS FOR WRONGLY USED TWO

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	132	16.5	17.5	17.5
RARELY	2	153	19.1	20.3	37.8
SOMETIMES	3	220	27.5	29.2	67.0
OFTEN	4	165	20.6	21.9	88.9
VERY OFTEN	5	84	10.5	11.1	100.0
	0	46	5.7	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 2.889 VARIANCE 1.557

VALID CASES 754 MISSING CASES 46

FILE DRIVER (CREATION DATE = 09/29/82)

021 YOU CONFRONT RIDERS FOR BAD TRANSFERS

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	60	7.5	7.7	7.7
RARELY	2	66	8.2	8.5	16.2
SOMETIMES	3	212	26.5	27.3	43.5
OFTEN	4	231	28.9	29.7	73.2
VERY OFTEN	5	208	26.0	26.8	100.0
	0	23	2.9	MISSING	100.0
	TOTAL	800	100.0	100.0	
MEAN	3.593	VARIANCE	1.412		
VALID CASES	777	MISSING CASES	23		

FILE DRIVER (CREATION DATE = 09/29/82)

Q22 WRONG FARES ARE PAID BECAUSE OF ZONE SYS

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	135	16.9	17.4	17.4
RARELY	2	141	17.6	18.2	35.6
SOMETIMES	3	364	45.5	47.0	82.6
OFTEN	4	101	12.6	13.0	95.6
VERY OFTEN	5	34	4.2	4.4	100.0
	0	25	3.1	MISSING	100.0
		-----	-----	-----	
	TOTAL	800	100.0	100.0	
MEAN	2.688	VARIANCE	1.088		
VALID CASES	775	MISSING CASES	25		

FILE DRIVER (CREATION DATE = 09/29/82)

23 WRONG FARES HAPPEN BECAUSE OTHER ARE SEE

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	215	26.9	28.9	28.9
RARELY	2	219	27.4	29.4	58.3
SOMETIMES	3	217	27.1	29.1	87.4
OFTEN	4	72	9.0	9.7	97.0
VERY OFTEN	5	22	2.7	3.0	100.0
	0	55	6.9	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 2.285 VARIANCE 1.153

VALID CASES 745 MISSING CASES 55

FILE DRIVER (CREATION DATE = 09/29/82)

Q24 WRONG FARES HAPPEN BECAUSE OPERATOR CANT

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	89	11.1	11.7	11.7
RARELY	2	96	12.0	12.6	24.3
SOMETIMES	3	209	26.1	27.4	51.7
OFTEN	4	193	24.1	25.3	77.0
VERY OFTEN	5	175	21.9	23.0	100.0
	0	38	4.7	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 3.353 VARIANCE 1.643

VALID CASES 762 MISSING CASES 38

FILE DRIVER (CREATION DATE = 09/29/82)

025 WRONG FARES HAPPEN WHEN THEY DONT UNDERS

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	95	11.9	12.4	12.4
RARELY	2	123	15.4	16.1	28.5
SOMETIMES	3	290	36.2	37.9	66.3
OFTEN	4	175	21.9	22.8	89.2
VERY OFTEN	5	83	10.4	10.8	100.0
	0	34	4.2	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 3.037 VARIANCE 1.319

VALID CASES 766 MISSING CASES 34

FILE DRIVER (CREATION DATE = 09/29/82)

Q26 WRONG FARES HAPPEN BECAUSE THE FARES ARE

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	208	26.0	28.0	28.0
RARELY	2	231	28.9	31.1	59.2
SOMETIMES	3	198	24.7	26.7	85.8
OFTEN	4	71	8.9	9.6	95.4
VERY OFTEN	5	34	4.2	4.6	100.0
	0	58	7.2	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 2.315 VARIANCE 1.245

VALID CASES 742 MISSING CASES 58

FILE DRIVER (CREATION DATE = 09/29/82)

Q27 WRONG FARES HAPPEN FOR OTHER REASONS

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	12	1.5	10.9	10.9
RARELY	2	9	1.1	8.2	19.1
SOMETIMES	3	27	3.4	24.5	43.6
OFTEN	4	30	3.7	27.3	70.9
VERY OFTEN	5	32	4.0	29.1	100.0
	0	690	86.2	MISSING	100.0
	TOTAL	800	100.0	100.0	
MEAN	3.555	VARIANCE	1.662		
VALID CASES	110	MISSING CASES	690		

FILE DRIVER (CREATION DATE = 09/29/82)

Q28 HIGH SCHOOL AGES MISUSE THE SYSTEM

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	40	5.0	5.1	5.1
RARELY	2	59	7.4	7.5	12.7
SOMETIMES	3	245	30.6	31.3	44.0
OFTEN	4	273	34.1	34.9	78.9
VERY OFTEN	5	165	20.6	21.1	100.0
	0	18	2.2	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 3.593 VARIANCE 1.123

VALID CASES 782 MISSING CASES 18

FILE DRIVER (CREATION DATE = 09/29/82)

Q29 HIGH SCHOOL TO 25 MISUSE THE SYSTEM

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	21	2.6	2.7	2.7
RARELY	2	71	8.9	9.1	11.8
SOMETIMES	3	268	33.5	34.3	46.1
OFTEN	4	265	33.1	33.9	80.0
VERY OFTEN	5	156	19.5	20.0	100.0
	0	19	2.4	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN	3.594	VARIANCE	0.985
VALID CASES	781	MISSING CASES	19

FILE DRIVER (CREATION DATE = 09/29/82)

Q30 25 TO 40 YEARS MISUSE THE SYSTEM

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	104	13.0	13.6	13.6
RARELY	2	270	33.7	35.4	49.0
SOMETIMES	3	309	38.6	40.5	89.5
OFTEN	4	66	8.2	8.7	98.2
VERY OFTEN	5	14	1.7	1.8	100.0
	0	37	4.6	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 2.497 VARIANCE 0.807

VALID CASES 763 MISSING CASES 37

FILE DRIVER (CREATION DATE = 09/29/82)

031 41 TO 65 MISUSE THE SYSTEM

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	252	31.5	32.6	32.6
RARELY	2	330	41.2	42.7	75.3
SOMETIMES	3	158	19.7	20.4	95.7
OFTEN	4	21	2.6	2.7	98.4
VERY OFTEN	5	12	1.5	1.6	100.0
	0	27	3.4	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 1.979 VARIANCE 0.779

VALID CASES 773 MISSING CASES 27

FILE DRIVER (CREATION DATE = 09/29/82)

Q32 OVER 65 MISUSE THE SYSTEM

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	314	39.2	40.4	40.4
RARELY	2	213	26.6	27.4	67.7
SOMETIMES	3	148	18.5	19.0	86.8
OFTEN	4	68	8.5	8.7	95.5
VERY OFTEN	5	35	4.4	4.5	100.0
	0	22	2.7	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 2.096 VARIANCE 1.341

VALID CASES 778 MISSING CASES 22

FILE DRIVEP (CREATION DATE = 09/29/82)

033 RUSH HOUR RIDERS MISUSE THE SYSTEM

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	107	13.4	14.0	14.0
RARELY	2	135	16.9	17.6	31.6
SOMETIMES	3	228	28.5	29.8	61.4
OFTEN	4	195	24.4	25.5	86.8
VERY OFTEN	5	101	12.6	13.2	100.0
	0	34	4.2	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 3.063 VARIANCE 1.515

VALID CASES 766 MISSING CASES 34

FILE DRIVER (CREATION DATE = 09/29/82)

034 MIDDAY RIDERS MISUSE THE SYSTEM

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	69	8.6	9.2	9.2
RARELY	2	178	22.2	23.6	32.8
SOMETIMES	3	364	45.5	48.3	81.1
OFTEN	4	108	13.5	14.3	95.5
VERY OFTEN	5	34	4.2	4.5	100.0
	0	47	5.9	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 2.814 VARIANCE 0.894
VALID CASES 753 MISSING CASES 47

FILE DRIVER (CREATION DATE = 09/29/82)

Q35 EVENING RIDERS MISUSE THE SYSTEM

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	52	6.5	7.2	7.2
RARELY	2	115	14.4	15.9	23.1
SOMETIMES	3	291	36.4	40.2	63.3
OFTEN	4	188	23.5	26.0	89.3
VERY OFTEN	5	77	9.6	10.7	100.0
	0	77	9.6	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 3.170 VARIANCE 1.105

VALID CASES 723 MISSING CASES 77

FILE DRIVER (CREATION DATE = 09/29/82)

Q36 EARLY AM-LATE PM RIDERS MISUSE THE S

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	102	12.7	14.0	14.0
RARELY	2	156	19.5	21.5	35.5
SOMETIMES	3	246	30.7	33.9	69.4
OFTEN	4	155	19.4	21.3	90.8
VERY OFTEN	5	67	8.4	9.2	100.0
	0	74	9.2	MISSING	100.0
		-----	-----	-----	
	TOTAL	800	100.0	100.0	
MEAN	2.902	VARIANCE	1.352		
VALID CASES	726	MISSING CASES	74		

FILE DRIVER (CREATION DATE = 09/29/82)

Q37 WEEKEND RIDERS MISUSE THE SYSTEM

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	65	8.1	9.8	9.8
RARELY	2	87	10.9	13.2	23.0
SOMETIMES	3	298	37.2	45.2	68.2
OFTEN	4	147	18.4	22.3	90.5
VERY OFTEN	5	63	7.9	9.5	100.0
	0	140	17.5	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN	3.085	VARIANCE	1.125
VALID CASES	660	MISSING CASES	140

FILE DRIVER (CREATION DATE = 09/29/82)

Q38 DOWNTOWN RIDERS MISUSE THE SYSTEM

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	119	14.9	16.6	16.6
RARELY	2	150	18.8	21.0	37.6
SOMETIMES	3	255	31.9	35.7	73.3
OFTEN	4	137	17.1	19.2	92.4
VERY OFTEN	5	54	6.7	7.6	100.0
	0	85	10.6	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 2.800 VARIANCE 1.331

VALID CASES 715 MISSING CASES 85

FILE DRIVER (CREATION DATE = 09/29/82)

039 CITY RIDERS MISUSE THE SYSTEM

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	49	6.1	6.8	6.8
RARELY	2	85	10.6	11.7	18.5
SOMETIMES	3	345	43.1	47.7	66.2
OFTEN	4	181	22.6	25.0	91.2
VERY OFTEN	5	64	8.0	8.8	100.0
	0	76	9.5	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN	3.174	VARIANCE	0.963
VALID CASES	724	MISSING CASES	76

FILE DRIVER (CREATION DATE = 09/29/82)

Q40 SUPURBAN RIDERS MISUSE THE SYSTEM

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	57	7.1	7.8	7.8
RARELY	2	99	12.4	13.5	21.3
SOMETIMES	3	315	39.4	43.0	64.3
OFTEN	4	184	23.0	25.1	89.5
VERY OFTEN	5	77	9.6	10.5	100.0
	0	68	8.5	MISSING	100.0
		-----	-----	-----	
TOTAL		800	100.0	100.0	

MEAN 3.171 VARIANCE 1.091

VALID CASES 732 MISSING CASES 68

FILE DRIVER (CREATION DATE = 09/29/82)

041 REPEAT CHEATEPS MISUSE THE SYSTEM

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RAPELY	1	51	6.4	7.2	7.2
RARELY	2	77	9.6	10.9	18.1
SOMETIMES	3	163	20.4	23.1	41.2
OFTEN	4	216	27.0	30.6	71.7
VERY OFTEN	5	200	25.0	28.3	100.0
	0	93	11.6	MISSING	100.0
		-----	-----	-----	
TOTAL		800	100.0	100.0	

MEAN	3.618	VARIANCE	1.455
VALID CASES	707	MISSING CASES	93

FILE DRIVER (CREATION DATE = 09/29/82)

Q42 YOU ASK THEM TO PAY FULL FARE

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	36	4.5	4.6	4.6
RARELY	2	28	3.5	3.6	8.1
SOMETIMES	3	178	22.2	22.6	30.7
OFTEN	4	296	37.0	37.6	68.4
VERY OFTEN	5	249	31.1	31.6	100.0
	0	13	1.6	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 3.882 VARIANCE 1.084

VALID CASES 787 MISSING CASES 13

FILE DRIVER (CREATION DATE = 09/29/82)

Q43 YOU ASK THEM TO LEAVE THE BUS OR PAY

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	250	31.3	34.5	34.5
RARELY	2	176	22.0	24.3	58.8
SOMETIMES	3	188	23.5	26.0	84.8
OFTEN	4	69	8.6	9.5	94.3
VERY OFTEN	5	41	5.1	5.7	100.0
	0	76	9.5	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 2.275 VARIANCE 1.422

VALID CASES 724 MISSING CASES 76

FILE DRIVER (CREATION DATE = 09/29/82)

044 YOU CALL SECURITY

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RAPELY	1	541	67.6	76.5	76.5
RAPELY	2	112	14.0	15.8	92.4
SOMETIMES	3	48	6.0	6.8	99.2
OFTEN	4	5	0.6	0.7	99.9
VERY OFTEN	5	1	0.1	0.1	100.0
	0	93	11.6	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 1.321 VARIANCE 0.414
VALID CASES 707 MISSING CASES 93

FILE DRIVER (CREATION DATE = 09/29/82)

045 YOU TAKE NO ACTION

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	261	32.6	37.3	37.3
RARELY	2	129	16.1	18.5	55.8
SOMETIMES	3	187	23.4	26.8	82.5
OFTEN	4	70	8.7	10.0	92.6
VERY OFTEN	5	52	6.5	7.4	100.0
	0	101	12.6	MISSING	100.0
		-----	-----	-----	
TOTAL		800	100.0	100.0	

MEAN 2.318 VARIANCE 1.612

VALID CASES 699 MISSING CASES 101

FILE DRIVER (CREATION DATE = 09/29/82)

Q46 YOU DO OTHER

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	30	3.7	27.3	27.3
RARELY	2	14	1.7	12.7	40.0
SOMETIMES	3	25	3.1	22.7	62.7
OFTEN	4	22	2.7	20.0	82.7
VERY OFTEN	5	19	2.4	17.3	100.0
	0	690	86.2	MISSING	100.0
		-----	-----	-----	
	TOTAL	800	100.0	100.0	

MEAN 2.873 VARIANCE 2.112

VALID CASES 110 MISSING CASES 690

FILE DRIVER (CREATION DATE = 09/29/82)

D47 RIDER THEN PAYS FULL FARE

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	54	6.7	7.1	7.1
RARELY	2	61	7.6	8.0	15.1
SOMETIMES	3	266	33.2	34.9	50.0
OFTEN	4	272	34.0	35.7	85.7
VERY OFTEN	5	109	13.6	14.3	100.0
	0	38	4.7	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 3.421 VARIANCE 1.117

VALID CASES 762 MISSING CASES 38

FILE DRIVER (CREATION DATE = 09/29/82)

Q48 RIDER THEN PAYS PART OF FULL FARE

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	86	10.7	11.6	11.6
RARELY	2	109	13.6	14.7	26.2
SOMETIMES	3	368	46.0	49.5	75.8
OFTEN	4	141	17.6	19.0	94.8
VERY OFTEN	5	39	4.9	5.2	100.0
	0	57	7.1	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 2.917 VARIANCE 1.004

VALID CASES 743 MISSING CASES 57

FILE DRIVER (CREATION DATE = 09/29/82)

49 RIDER THEN LEAVES BUS

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	228	28.5	30.5	30.5
RARELY	2	200	25.0	26.8	57.3
SOMETIMES	3	227	28.4	30.4	87.7
FTEN	4	66	8.2	8.8	96.5
ERY OFTEN	5	26	3.2	3.5	100.0
	0	53	6.6	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 2.280 VARIANCE 1.199

VALID CASES 747 MISSING CASES 53

FILE DRIVER (CREATION DATE = 09/29/82)

Q50 RIDER THEN STAYS ON BUS WITHOUT PAYMENT

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	212	26.5	28.4	28.4
RARELY	2	160	20.0	21.4	49.8
SOMETIMES	3	226	28.2	30.3	80.1
OFTEN	4	100	12.5	13.4	93.4
VERY OFTEN	5	49	6.1	6.6	100.0
	0	53	6.6	MISSING	100.0
		-----	-----	-----	
TOTAL		800	100.0	100.0	

MEAN 2.483 VARIANCE 1.481

VALID CASES 747 MISSING CASES 53

FILE DRIVER (CREATION DATE = 09/29/82)

051 RIDER THEN SWEARS AT YOU

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	169	21.1	22.6	22.6
RARELY	2	173	21.6	23.1	45.7
SOMETIMES	3	213	26.6	28.5	74.2
OFTEN	4	119	14.9	15.9	90.1
VERY OFTEN	5	74	9.2	9.9	100.0
	0	52	6.5	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN	2.674	VARIANCE	1.586
VALID CASES	748	MISSING CASES	52

FILE DRIVER (CREATION DATE = 09/29/82)

Q52 RIDER THEN COMPLAINS

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	170	21.2	23.9	23.9
RARELY	2	156	19.5	21.9	45.9
SOMETIMES	3	216	27.0	30.4	76.2
OFTEN	4	97	12.1	13.6	89.9
VERY OFTEN	5	72	9.0	10.1	100.0
	0	89	11.1	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 2.641 VARIANCE 1.591

VALID CASES 711 MISSING CASES 89

FILE DRIVER (CREATION DATE = 09/29/82)

53 RIDER THEN DOES OTHERWISE

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY RARELY	1	9	1.1	14.1	14.1
RARELY	2	18	2.2	28.1	42.2
SOMETIMES	3	25	3.1	39.1	81.3
FTEN	4	10	1.2	15.6	96.9
VERY OFTEN	5	2	0.2	3.1	100.0
	0	736	92.0	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 2.656 VARIANCE 1.023

VALID CASES 64 MISSING CASES 736

DRIVER SURVEY RESPONSES

09/29/82

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FILE DRIVER (CREATION DATE = 09/29/82)

Q54 HARD-EASY,KEEP SCHED.

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY EASY	1	92	11.5	12.1	12.1
EASY	2	187	23.4	24.6	36.7
NOT DIFFICULT	3	359	44.9	47.2	83.8
DIFFICULT	4	98	12.2	12.9	96.7
VERY HARD	5	25	3.1	3.3	100.0
	0	39	4.9	MISSING	100.0
		-----	-----	-----	
	TOTAL	800	100.0	100.0	

MEAN 2.707 VARIANCE 0.905

VALID CASES 761 MISSING CASES 39

FILE DRIVER (CREATION DATE = 09/29/82)

Q55 Driving in Traffic

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY EASY	1	95	11.9	12.3	12.3
EASY	2	248	31.0	32.2	44.5
NOT DIFFICULT	3	334	41.7	43.3	87.8
DIFFICULT	4	84	10.5	10.9	98.7
VERY HARD	5	10	1.2	1.3	100.0
	0	29	3.6	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 2.567 VARIANCE 0.789

VALID CASES 771 MISSING CASES 29

FILE DRIVER (CREATION DATE = 09/29/82)

57 HARD-EASY, TRANSFERS

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY EASY	1	72	9.0	9.4	9.4
EASY	2	193	24.1	25.3	34.8
NOT DIFFICULT	3	326	40.7	42.8	77.6
DIFFICULT	4	128	16.0	16.8	94.4
VERY HARD	5	43	5.4	5.6	100.0
	0	38	4.7	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 2.839 VARIANCE 1.000

VALID CASES 762 MISSING CASES 38

FILE DRIVER (CREATION DATE = 09/29/82)

Q56 HARD-EASY COLLECTING CASH FARES

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY EASY	1	57	7.1	7.4	7.4
EASY	2	172	21.5	22.4	29.8
NOT DIFFICULT	3	382	47.7	49.7	79.6
DIFFICULT	4	129	16.1	16.8	96.4
VERY HARD	5	28	3.5	3.6	100.0
	0	32	4.0	MISSING	100.0
		-----	-----	-----	
TOTAL		800	100.0	100.0	

MEAN 2.868 VARIANCE 0.818

VALID CASES 768 MISSING CASES 32

FILE DRIVER (CREATION DATE = 09/29/82)

Q58 HARD-EASY HELPING THE HANDICAPPED

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY EASY	1	115	14.4	15.1	15.1
EASY	2	232	29.0	30.4	45.5
NOT DIFFICULT	3	311	38.9	40.8	86.2
DIFFICULT	4	86	10.7	11.3	97.5
VERY HARD	5	19	2.4	2.5	100.0
	0	37	4.6	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 2.557 VARIANCE 0.924

VALID CASES 763 MISSING CASES 37

FILE DRIVER (CREATION DATE = 09/29/82)

059 HARD-EASY, DEALING WITH STUDENTS

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY EASY	1	42	5.2	5.5	5.5
EASY	2	174	21.7	22.7	28.1
NOT DIFFICULT	3	358	44.7	46.6	74.7
DIFFICULT	4	166	20.7	21.6	96.4
VERY HARD	5	28	3.5	3.6	100.0
	0	32	4.0	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 2.953 VARIANCE 0.806

VALID CASES 768 MISSING CASES 32

FILE DRIVER (CREATION DATE = 09/29/82)

Q60 HARD-EASY,HANDLING COMPLAINTS

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY EASY	1	59	7.4	7.8	7.8
EASY	2	187	23.4	24.6	32.4
NOT DIFFICULT	3	364	45.5	47.9	80.3
DIFFICULT	4	128	16.0	16.8	97.1
VERY HARD	5	22	2.7	2.9	100.0
	0	40	5.0	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 2.825 VARIANCE 0.811

VALID CASES 760 MISSING CASES 40

FILE DRIVER (CREATION DATE = 09/29/82)

61 HARD-EASY, DEALING WITH OVERCROWDING

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY EASY	1	67	8.4	8.8	8.8
EASY	2	161	20.1	21.2	30.0
NOT DIFFICULT	3	321	40.1	42.2	72.2
DIFFICULT	4	177	22.1	23.3	95.5
VERY HARD	5	34	4.2	4.5	100.0
	0	40	5.0	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 2.934 VARIANCE 0.973

VALID CASES 760 MISSING CASES 40

FILE DRIVER (CREATION DATE = 09/29/82)

C62 HARD-EASY, DEALING WITH FIGHTS

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY EASY	1	66	8.2	9.1	9.1
EASY	2	102	12.7	14.0	23.1
NOT DIFFICULT	3	248	31.0	34.1	57.2
DIFFICULT	4	218	27.2	30.0	87.2
VERY HARD	5	93	11.6	12.8	100.0
	0	73	9.1	MISSING	100.0
		-----	-----	-----	
TOTAL		800	100.0	100.0	

MEAN 3.234 VARIANCE 1.262

VALID CASES 727 MISSING CASES 73

FILE DRIVER (CREATION DATE = 09/29/82)

063 HARD-EASY, PAPERWORK

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY EASY	1	148	18.5	19.4	19.4
EASY	2	228	28.5	30.0	49.4
NOT DIFFICULT	3	293	36.6	38.5	87.9
DIFFICULT	4	69	8.6	9.1	97.0
VERY HARD	5	23	2.9	3.0	100.0
	0	39	4.9	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 2.463 VARIANCE 1.002

VALID CASES 761 MISSING CASES 39

FILE DRIVER (CREATION DATE = 09/29/82)

Q64 HARD-EASY, DEALING WITH SUPERVISORS

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY EASY	1	191	23.9	26.8	26.8
EASY	2	243	30.4	34.0	60.8
NOT DIFFICULT	3	226	28.2	31.7	92.4
DIFFICULT	4	38	4.7	5.3	97.8
VERY HARD	5	16	2.0	2.2	100.0
	0	86	10.7	MISSING	100.0
		-----	-----	-----	
	TOTAL	800	100.0	100.0	

MEAN 2.223 VARIANCE 0.950

VALID CASES 714 MISSING CASES 86

FILE DRIVER (CREATION DATE = 09/29/82)

065 HARD-EASY, OTHER

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
VERY EASY	1	17	2.1	16.2	16.2
EASY	2	21	2.6	20.0	36.2
NOT DIFFICULT	3	28	3.5	26.7	62.9
DIFFICULT	4	13	1.6	12.4	75.2
VERY HARD	5	18	2.2	17.1	92.4
	6	8	1.0	7.6	100.0
	0	695	86.9	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 3.171 VARIANCE 2.336
VALID CASES 105 MISSING CASES 695

FILE DRIVER (CREATION DATE = 09/29/82)

Q66 FEELINGS TOWARDS FARE SYSTEM MISUSE

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
ANGRY TPY TO STOP	1	70	8.7	10.2	10.2
ANGRY DONT ENFORCE	2	107	13.4	15.6	25.7
NEED NON DRIVER HELP	3	226	28.2	32.8	58.6
ENFOR. WASTED EFFORT	4	29	3.6	4.2	62.8
DRIVER CANT DO MUCH	5	39	4.9	5.7	68.5
ND MANAG. SUPPORT	6	153	19.1	22.2	90.7
THREATENED VIOLENCE	7	46	5.7	6.7	97.4
OTHER	8	18	2.2	2.6	100.0
	0	112	14.0	MISSING	100.0
	TOTAL	800	100.0	100.0	
MEAN	3.862	VARIANCE	3.819		
VALID CASES	688	MISSING CASES	112		

FILE DRIVER (CREATION DATE = 09/29/82)

067 RIDERS FEELINGS TOWARDS YOU CONFRONTING

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
DANGER AT CHEATER	1	79	9.9	10.6	10.6
DISAPPROVE CHEATER	2	362	45.2	48.7	59.3
NO RESPONSE	3	245	30.6	32.9	92.2
DISAPPROVE DRIVER	4	51	6.4	6.9	99.1
SUPPORT CHEATER	5	6	0.7	0.8	99.9
	6	1	0.1	0.1	100.0
	0	56	7.0	MISSING	100.0
		-----	-----	-----	
TOTAL		800	100.0	100.0	

MEAN 2.390 VARIANCE 0.653

VALID CASES 744 MISSING CASES 56

FILE DRIVER (CREATION DATE = 09/29/82)

Q68 WILL SSFC BE AN IMPROVEMENT

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
YES	1	628	78.5	85.1	85.1
NO	2	93	11.6	12.6	97.7
	3	6	0.7	0.8	98.5
	4	2	0.2	0.3	98.8
	5	4	0.5	0.5	99.3
	6	5	0.6	0.7	100.0
	0	62	7.7	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 1.206 VARIANCE 0.397

VALID CASES 738 MISSING CASES 62

FILE DRIVER (CREATION DATE = 09/29/82)

69 WHY YES

ATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)	Total For These Variables
QUITABLE FARES	1	273	34.1	41.4	41.4	279
EDUCE CHEATING	2	194	24.2	29.4	70.8	409
ASIER FOR RIDER	3	64	8.0	9.7	80.5	291
EDUCE COSTS	4	20	2.5	3.0	83.5	115
MPROVE OPERAPIONS	5	55	6.9	8.3	91.8	239
ASIER FOR DRIVER	6	53	6.6	8.0	99.8	246
	8	1	0.1	0.2	100.0	
	0	140	17.5	MISSING	100.0	
		-----	-----	-----		
TOTAL		800	100.0	100.0		

EAN 2.324 VARIANCE 2.620
ALID CASES 660 MISSING CASES 140

FILE DRIVER (CREATION DATE = 09/29/82)

Q70 WHY YES

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
EQUITABLE FARES	1	5	0.6	1.0	1.0
REDUCE CHEATING	2	210	26.2	40.5	41.5
EASIER FOR RIDER	3	104	13.0	20.1	61.6
REDUCE COSTS	4	41	5.1	7.9	69.5
IMPROVE OPERARIONS	5	95	11.9	18.3	87.8
EASIER FOR DRIVER	6	63	7.9	12.2	100.0
	0	282	35.2	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 3.386 VARIANCE 2.207

VALID CASES 518 MISSING CASES 282

DRIVER SURVEY RESPONSES

09/29/82

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FILE DRIVER (CREATION DATE = 09/29/82)

Q71 WHY YES

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
EQUITABLE FARES	1	1	0.1	0.2	0.2
REDUCE CHEATING	2	5	0.6	1.2	1.5
EASIER FOR RIDER	3	123	15.4	30.6	32.1
REDUCE COSTS	4	54	6.7	13.4	45.5
IMPROVE OPERATIONS	5	89	11.1	22.1	67.7
EASIER FOR DRIVER	6	130	16.2	32.3	100.0
	0	398	49.7	MISSING	100.0
	TOTAL	800	100.0	100.0	
MEAN	4.530	VARIANCE	1.616		
VALID CASES	402	MISSING CASES	398		

DRIVER SURVEY RESPONSES

09/29/82

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FILE DRIVER (CREATION DATE = 09/29/82)

Q72 WHY NO

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
FARE HIGH	1	18	2.2	23.4	23.4
INCREASE CHEATING	2	31	3.9	40.3	63.6
TOO COMPLICATED	3	14	1.7	18.2	81.8
TOO EXPENSIVE	4	3	0.4	3.9	85.7
POOR EQUIPMENT	5	2	0.2	2.6	88.3
HARDER FOR DRIVER	6	9	1.1	11.7	100.0
	0	723	90.4	MISSING	100.0
		-----	-----	-----	
TOTAL		800	100.0	100.0	

Totals
From 3 Questions

18
43
42
12
8
17

MEAN 2.571 VARIANCE 2.380
VALID CASES 77 MISSING CASES 723

FILE DRIVER (CREATION DATE = 09/29/82)

73 WHY NO

ATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
NCREASE CHEATING	2	12	1.5	31.6	31.6
DD COMPLICATED	3	19	2.4	50.0	81.6
DD EXPENSIVE	4	5	0.6	13.2	94.7
DDR EQUIPMENT	5	1	0.1	2.6	97.4
ARDER FOR DRIVER	6	1	0.1	2.6	100.0
	0	762	95.2	MISSING	100.0
	TOTAL	800	100.0	100.0	

EAN 2.947 VAPIANCE 0.808
ALID CASES 38 MISSING CASES 762

FILE DRIVER (CREATION DATE = 09/29/82)

074 WHY NO

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
TDD COMPLICATED	3	9	1.1	36.0	36.0
TDD EXPENSIVE	4	4	0.5	16.0	52.0
POOR EQUIPMENT	5	5	0.6	20.0	72.0
HARDER FOR DRIVER	6	7	0.9	28.0	100.0
	0	775	96.9	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 4.400 VARIANCE 1.583

VALID CASES 25 MISSING CASES 775

FILE DRIVER (CREATION DATE = 09/29/82)

075 EMPLOYMENT STATUS

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
FULL TIME	1	580	72.5	74.1	74.1
FULL TIME EXTRA	2	202	25.2	25.8	99.9
MINI RUN	3	1	0.1	0.1	100.0
	0	17	2.1	MISSING	100.0
		-----	-----	-----	
TOTAL		800	100.0	100.0	

MEAN	1.261	VARIANCE	0.195
VALID CASES	783	MISSING CASES	17

FILE DRIVER (CREATION DATE = 09/29/82)

076 AGE

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
UNDER 30	1	104	13.0	13.5	13.5
31-39	2	295	36.9	38.3	51.8
40-49	3	226	28.2	29.4	81.2
50-59	4	121	15.1	15.7	96.9
OVER 60	5	24	3.0	3.1	100.0
	0	30	3.7	MISSING	100.0
		-----	-----	-----	
	TOTAL	800	100.0	100.0	

MEAN 2.566 VARIANCE 1.018

VALID CASES 770 MISSING CASES 30

FILE DRIVER (CREATION DATE = 09/29/82)

77 ROUTE TYPES

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)	Total For These Variables
REGIONAL	1	218	27.2	29.5	29.5	633
URBAN RADIAL	2	356	44.5	48.2	77.7	1076
FEEDER	3	7	0.9	0.9	78.6	25
LOCAL RADIAL	4	65	8.1	8.8	87.4	203
TRUCK-FEEDER	5	92	11.5	12.4	99.9	266
	6	1	0.1	0.1	100.0	
	0	61	7.6	MISSING	100.0	
	TOTAL	800	100.0	100.0		

MEAN 2.269 VARIANCE 1.728
VALID CASES 739 MISSING CASES 61

FILE DRIVER (CREATION DATE = 09/29/82)

078 ROUTE TYPES

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
REGIONAL	1	221	27.6	30.0	30.0
URBAN RADIAL	2	362	45.2	49.1	79.1
PEAK	3	10	1.2	1.4	80.5
LOCAL RADIAL	4	60	7.5	8.1	88.6
GRID-FEEDER	5	84	10.5	11.4	100.0
	0	63	7.9	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN 2.218 VARIANCE 1.619

VALID CASES 737 MISSING CASES 63

DRIVER SURVEY RESPONSES

09/29/82

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FILE DRIVER (CREATION DATE = 09/29/82)

079 ROUTE TYPES

CATEGORY LABEL	CODE	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (PERCENT)	ADJUSTED FREQUENCY (PERCENT)	CUMULATIVE ADJ FREQ (PERCENT)
REGIONAL	1	194	24.2	26.6	26.6
URBAN RADIAL	2	358	44.7	49.1	75.7
PEAK	3	8	1.0	1.1	76.8
LOCAL RADIAL	4	78	9.7	10.7	87.5
GRID-FEEDER	5	90	11.2	12.3	99.9
	6	1	0.1	0.1	100.0
	0	71	8.9	MISSING	100.0
	TOTAL	800	100.0	100.0	

MEAN	2.335	VARIANCE	1.728
VALID CASES	729	MISSING CASES	71

D. TRI-MET FARE COMPLIANCE
SURVEY AND ANALYSIS

TRI-MET
SELF-SERVICE FARE COLLECTION
PRE-IMPLEMENTATION FARE COMPLIANCE STUDY
MAY 1982

Management Information and Analysis
Debra Hardmeyer
Philip Selinger
November 15, 1982

PRE-SELF-SERVICE FARE COLLECTION

FARE COMPLIANCE STUDY

Introduction

The collection of fares has always been a difficult but essential part of public transit service operation. Many means have been tried--some more successfully than others. The more successful methods have generally been the most expensive, usually due to labor costs (conductors), provision of structural barriers (turnstiles) or time delays (drivers). As shown in Figure 1, there is a direct trade-off between the fare collection level of effort and the loss of fare revenues due to fare violations. It is desirable for transit operators to minimize both the fare collection effort and the number of undetected fare violations.

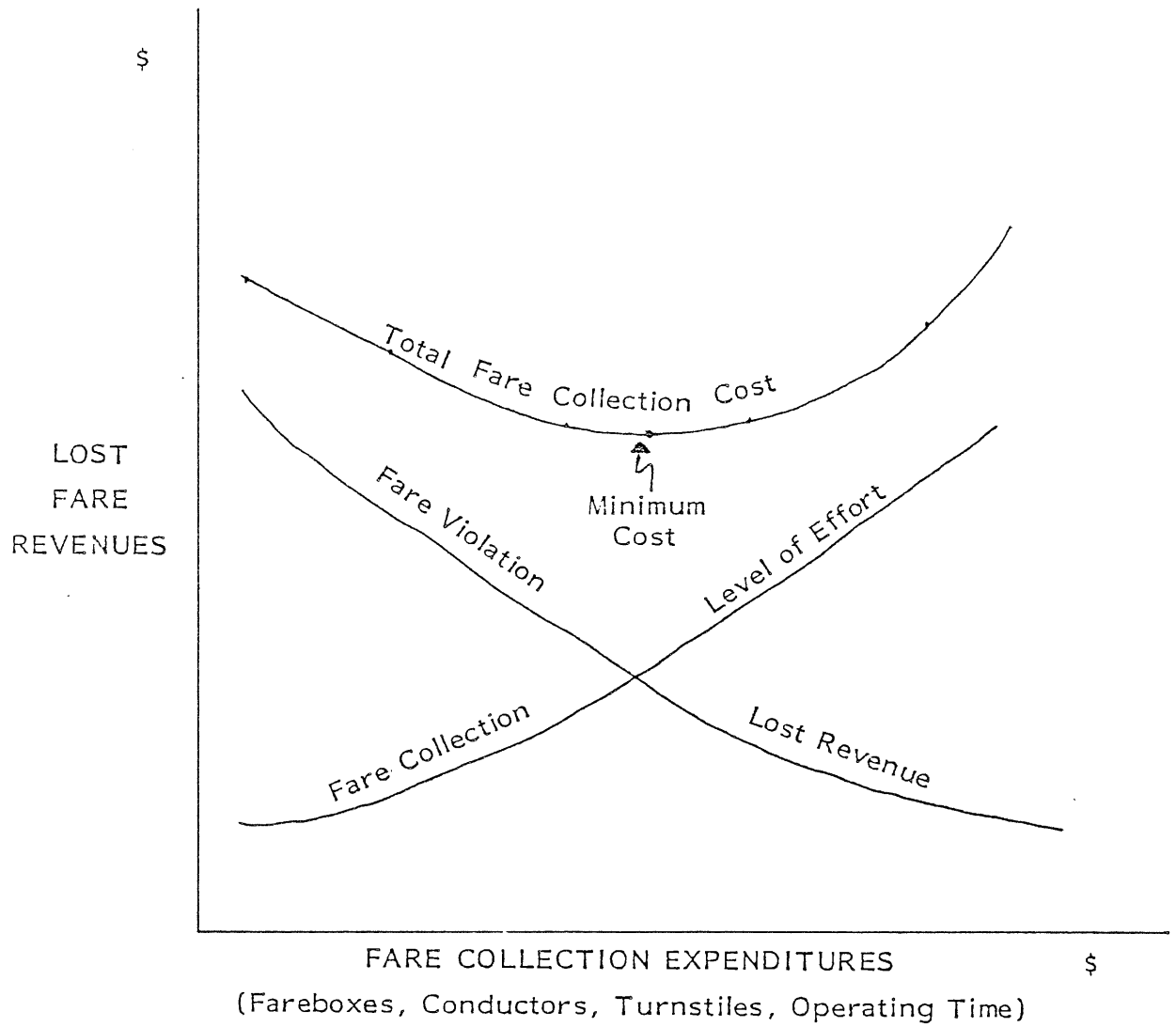
North American bus transit operators have generally used fareboxes to collect fare, with payment checked by the bus driver. This approach is a practical one, but is not without problems. Drivers cannot always count a passenger's coin payment to verify correct fare payment; they must check many fares in a short time; they do not have time to closely check passes or transfers for misuse or counterfeit use; and in zone systems, they cannot always track the passenger's length of travel. The introduction of electronic registering fareboxes makes counting change easier, but other problems remain and electronic fareboxes are expensive. Transit operators, however, have come to largely accept these flaws and the accompanying loss of transit fare revenue. Fare revenue losses, depending on the capacity of the fare structure, are not usually assumed to be great.

Faced with similar problems, many European transit operators have approached the fare collection task with the introduction of Self-Service Fare Collection, where the responsibility for correct fare payment is turned over to the transit rider. Realizing that riders will not always comply with the fare system, they are randomly spot-checked, unannounced by a fare inspector who issues penalties for incorrect or non-payment of fare. In Europe and, to a lesser extent, in North America, it was found that this method was closer to the optimization of minimal collection effort and minimal fare violation. The system made operations more efficient by allowing drivers to focus attention on operating the bus and by allowing passengers to enter or leave the bus by any door. Peer pressure and inspectors were able to minimize non-compliance with the fare system.

With the objective of improving the operation of large capacity articulated buses and light rail trains, Tri-Met has turned to self-service fare collection, the first application of such a system to bus operations in North America. While significant operational benefits are expected, it is hoped that, despite fears of many transit operators, the level of fare compliance would remain the same or even improve.

FIGURE 1

FARE COLLECTION EXPENDITURE TRADE-OFF



While it was known that people do violate the fare system, no one at Tri-Met knew how much fare evasion was occurring and, in fact, there was very little such information anywhere in the United States. A quick study had been conducted at Tri-Met using drivers, which placed the violation rate at about nine percent, but the study was not considered to be particularly accurate.

In anticipation of the new fare collection system at Tri-Met and, as part of its evaluation, a pre-Self-Service Fare Collection Fare Compliance Study was initiated to measure the extent of the fare evasion problem. It was quickly realized that the greatest barrier to conducting such a study was collecting violation data without violators knowing that they were being checked more closely than they usually were. It was recognized that drivers are often unable to spot violations and do not always confront riders when they spot one. On a survey conducted in Spring, 1982, Tri-Met operators said, on the average, that they "sometimes" confront a rider who cheats the fare system. A fare compliance study, then, would require closer scrutiny of fare payment and a complete recording of all violations, no matter how small or what the excuse. For Tri-Met, the task included checking for fare zone travel and checking for counterfeit passes, which had already been identified as a problem. A post-Self-Service Fare Collection Fare Compliance Study would be easier to conduct since fare inspectors would be a direct source of data.

The pre-Self-Service Fare Collection phase of the Fare Compliance Study, conducted in May, 1982, was designed with three objectives:

1. To determine systemwide incidence of fare evasion.
2. To estimate loss in revenue from fare evasion.
3. To establish a basis for estimating the impact of Self-Service Fare Collection on fare evasion at Tri-Met.

This paper discusses the design and results of the pre-implementation portion of the Fare Compliance Study.

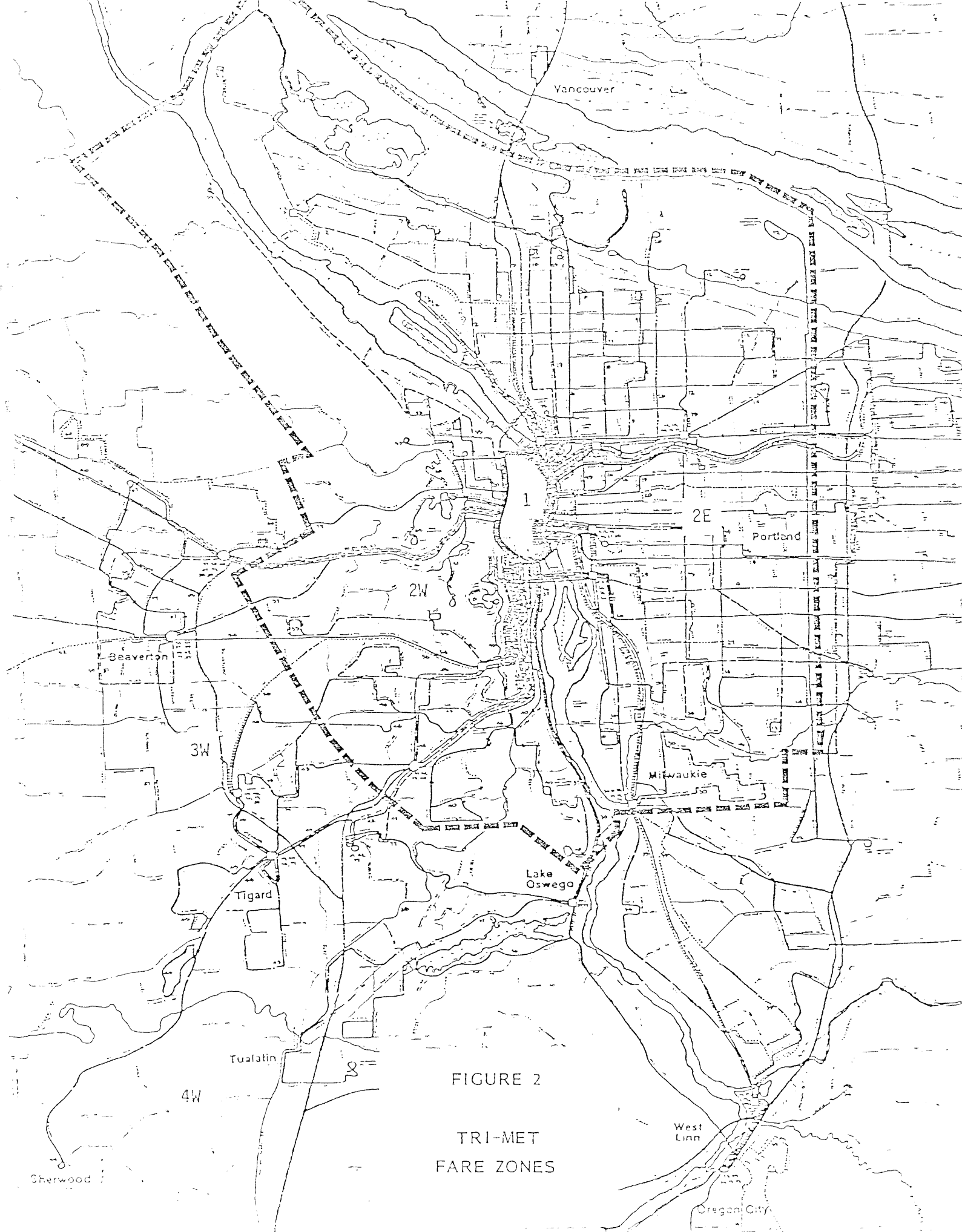


FIGURE 2
TRI-MET
FARE ZONES

Tri-Met Fare Structure

The extent and form of fare evasion is very much dependent on the fare structure and, to some extent, the design of transit routes. Tri-Met's fare structure prior to the introduction of Self-Service Fare Collection included cash fares, monthly transit passes, prepaid tickets and transfer slips. A three-zone fare system (Figure 2) consisted of an inner zone (central business district), an urban zone (most of the city of Portland) and a suburban/rural zone. Two-zone travel required a \$.65 base cash fare and a premium cash fare of \$.90 was charged for three-zone travel. Travel within the 300-square-block inner zone was free (Fareless Square) except from 3:00 to 7:00 PM when full base fare was required. Transfers were provided free of charge, but were not valid for return travel. Special fare was available for senior citizens, handicapped persons and students. Payment was made on entering the bus inbound and when leaving the bus outbound, except from 3:00 to 7:00 PM when all fares were paid upon entering the bus. Fares were always paid on entering the bus on crosstown routes.

TRI-MET FARES

The Tri-Met district is divided into three fare zones.

Fareless Square in Downtown Portland is Zone 1. N.W. Hoyt St. is the boundary to the north. The Willamette River is the boundary to the east. The Stadium Freeway is the boundary to the south and west.

The outer boundary between Zones 2 and 3 is at a designated point for each route.

Fare Structure:

Monthly Pass (Vancouver - Portland)	\$35.00
Monthly Pass (travel through 3 zones)	\$29.00
Monthly Pass (travel through 2 zones)	\$21.00
Youth Pass (monthly pass for youths through high school)	\$14.00
Adults (travel through 3 zones)	\$.90
Adults (travel through 2 zones)	\$.65
Youth Fare (through high school)	\$.45

Children under six years ride free with a fare-paying passenger. Limit of three children per passenger.

Vancouver-Portland	\$ 1.00
(all other trips on Line 5 are \$.65)	

The use of the various types of fare payment for Spring, 1982 is shown in Table 1. A large percentage of Tri-Met riders used a monthly pass (44%). Slightly over half (53%) paid cash. A small percentage of the ridership rode free in Fareless Square (1.5%), used special employee or Multnomah County passes or were assumed to evade fare payment (1%). Three-zone riders accounted for 24% of total ridership. Saturday ridership is characterized with a higher percentage of cash riders and fewer three-zone riders.

TABLE 1
SYSTEMWIDE FARE CATEGORY DISTRIBUTION

	WEEKDAY			SATURDAY
	All Day	Daybase	Peak	All Day
Cash	53	54	52	60
Pass	44	43	44	38
Three-Zone	24	23	26	15

Estimates shown in Table 1 are based on driver rider counts and fare revenues received. They use a conservative one-percent evasion rate. A detailed report of Fare Category Distribution for Spring, 1982 is included in the appendix.

The fare system in use at Tri-Met includes the use of zone-premium fares and monthly passes. Some transit agencies have eased the fare collection effort by eliminating these features. Both are difficult for the driver to enforce since passes are quickly flashed and drivers are unable to check zonal travel of many riders. The counterfeiting of monthly passes has been a recent concern of Tri-Met's Transit Police. Despite enforcement difficulties, the monthly pass is a great user convenience and reduces processing of coins by Tri-Met. A zone structure is desirable as it helps relate fares to distance traveled. Equity of fare payment has, in the past, been an issue with Tri-Met riders and local government.

Methodology

The task of doing fare checks of all riders for all types of violations is a formidable one when the fare structure includes zone payment and use of passes, particularly during rush hours. To ease this task, types of fare evasion were grouped and checked separately. These groups are:

Cash Evasion: passengers who shortchange the base cash fare, use an invalid transfer slip, use coin slugs or half-dollar bills, or make no payment at all.

Pass Evasion: passengers who use a fraudulent (counterfeit) pass or who misuse a pass (i.e. adult using a student pass).

Zone Evasion: passengers who travel through three zones but only pay for two zones of travel.

Instruction and tally sheets were designed for data particular to each type of evasion. The study utilized volunteer drivers and fare-inspectors-in-training for checking fare payment and recording evasion data. The methodology is summarized as follows:

Cash Check: The bus operator was responsible for recording the total number of cash-paying passengers and those passengers who evaded the cash fare by short-changing the farebox, not paying the fare, using bad cash or using an invalid transfer slip. This check required close inspection of money deposited into the farebox.

Zone Check: A fare inspector and operator worked as a team to identify the number of riders who traveled three zones. Through this identification process, the fare inspector was able to take a count of those riders who paid for two-zone travel and rode three zones. A count was also taken of total three-zone riders.

Pass Check: A uniformed fare inspector made an inspection of all passes that were displayed by the rider upon boarding. It was only possible to inspect passes when the mode of fare payment was "pay as you enter".

Driver Selection

In order to get an accurate picture of fare evasion, it is necessary to observe passenger behavior, introducing as little disruption as possible to the regular flow of operation. Therefore, regular route operators were selected to be responsible for collecting the data. It was necessary for fare inspectors to work with the operators in the zone and pass check.

Only operators who had indicated an interest in assisting with the study were considered (about one-half of the operators). A random selection of those drivers was made based on their work assignments, until the predetermined sample size was covered.

Once the operator and trip selections were completed, the types of checks that the operator was responsible for were determined. Each bus route in the sample was assigned a cash, zone and/or pass check by (a) the number of days the operator had the route as a work assignment, and (b) the number of zones the route transversed. The cash check was taken during the first week followed by the zone and pass check in the second week.

Sample Determination

The sample for each of the three checks was based on five percent of trips selected randomly among those driven by volunteer drivers. A trip is defined as travel from one end of the route to the other end (one-half of a round trip). The time of day sampled was broken down into three categories: AM Peak (7:00 - 9:00 AM); Daybase (9:00 AM - 4:00 PM), and PM Peak (4:00 - 6:00 PM).

Sampled routes were classified as regional, urban radial, local radial or crosstown, based on the Quarterly Performance Report.

Tables identifying actual trip sampling rates for each time period and route type are shown in the appendix and are summarized in Table 2.

TABLE 2
FARE COMPLIANCE STUDY TRIP SAMPLING RATES

BUS TRIP SAMPLING RATES	WEEKDAY			SATURDAY
	Peak %	Daybase %	Total %	Total %
Cash Check	5.6	5.3	5.4	4.5
Zone Check	3.1	5.3	4.3	2.5
Pass Check	4.9	4.2	4.5	2.7

Due to the variable distribution of riders among routes, the sampling indicated in Table 2 produced less than a five-percent sample of boarding riders, however, three percent is considered reliable for systemwide analysis of ridership. A summary of sampled ridership is shown in Table 3.

TABLE 3
FARE COMPLIANCE STUDY
BOARDING RIDER SAMPLING RATES

RIDER SAMPLING RATES	WEEKDAY			SATURDAY
	Peak %	Daybase %	Total %	Total %
Cash Check	4.5	3.5	3.9	3.4
Zone Check	4.2	3.3	3.8	2.3
Pass Check	5.4	2.8	3.7	2.9

Results

A tabulation of results, included in the appendix, shows actual numbers of riders observed and numbers of fare violations. This data was transformed as percentages presented in the following summary tables.

The results of this study indicate an evasion rate between eight and nine percent. One out of every 12 bus riders evade the fare to some extent, intentionally or unknowingly. Most evasion was in the form of shortchanging the farebox or failure to pay for travel beyond two fare zones. Table 4 shows the evasion rate among all riders for each fare category.

TABLE 4
FARE EVASION AS PERCENT OF
TOTAL RIDERSHIP

	<u>Cash</u>	<u>Zone</u>	<u>Pass</u>	<u>Total</u>
Weekday	3.1	4.0	1.0	8.1
Saturday	3.1	4.6	0.7	8.4

There is little variation between weekday and Saturday evasion rates, with Saturdays experiencing slightly higher zone evasion and lower pass evasion, due to different ridership patterns and demographics. Pass evasion is a small portion of the number of fare evasions, but as noted later, accounts for a large portion of lost revenue.

TABLE 5
WEEKDAY PERCENT FARE EVASION BY
TIME OF DAY

	<u>Cash</u>	<u>Zone</u>	<u>Pass</u>
Peak Hour	3.4	2.3	1.0
Daybase	2.9	5.4	1.0

Table 5 shows the fare evasion rate by time of day. While there is no variation in pass evasion rates, there are significantly greater zone evasions during the daybase period. This may in part be explained by more varied ridership habits with riders less knowledgeable of the zone boundaries. Cash evasion during the daybase is one-half of one percent less than during the peak period, perhaps because drivers have more time to inspect cash fares as they are deposited.

TABLE 6
PERCENT FARE EVASION BY
LINE TYPE

<u>Weekday</u>	<u>Zone</u>	<u>Pass</u>	<u>Cash</u>	<u>Total</u>
Local	1.4	1.4	4.1	6.9
Regional	5.1	0.3	3.1	8.5
Urban	4.3	1.2	2.9	8.4
Crosstown	N/A	0.8	3.4	4.2
<u>Saturday</u>	<u>Zone</u>	<u>Pass</u>	<u>Cash</u>	<u>Total</u>
Local	4.3	0.0	1.5	5.8
Regional	2.3	0.0	3.7	6.0
Urban	8.8	1.3	3.1	13.2
Crosstown	N/A	0.4	1.9	2.3

Table 6 shows fare evasion percentages for each of four line types. Because regional and urban routes have a greater portion of three-zone riders, zone evasion is highest among those routes (5.1% and 4.3% respectively); however, it is interesting to note that zone evasion on regional routes is very low on Saturdays (2.3%), perhaps due to fewer riders on board at a time, making it easier for drivers to check passengers (and perhaps because all fares are paid at the outbound end of the trip). In contrast, Saturday zone evasion on urban routes is particularly high (8.8%).

Pass fare evasion rates are similar on all route types although slightly higher than average on local and urban routes. This may correspond to routes most often used by students.

Cash fare evasion rates are similar among the various route types with some shift in comparing weekday to Saturday evasion rates. Cash violations drop for local and crosstown routes on Saturday with no apparent explanation.

Total evasion rates are highest for regional routes (8.5%) and urban routes (8.4%), largely due to three-zone travel. Rates are lowest for crosstown routes (4.2%) with no three-zone travel--except transfers.

TABLE 7

METHOD OF FARE EVASION BY
FARE CATEGORY

<u>CASH EVASION</u>			<u>ZONE EVASION</u>		
	<u>Weekday</u>	<u>Saturday</u>		<u>Weekday</u>	<u>Saturday</u>
Shortchange	76%	56%	Cash	45%	56%
No Payment	9%	16%	Transfer	19%	22%
Bad Transfer	15%	28%	Pass	36%	22%
Bad Cash	0%	0%			
TOTAL	<u>100%</u>	<u>100%</u>		<u>100%</u>	<u>100%</u>

<u>PASS EVASION</u>		
	<u>Weekday</u>	<u>Saturday</u>
2-Zone	10%	0%
3-Zone	5%	20%
Student	76%	60%
Employee	0%	0%
Senior	10%	20%
TOTAL	<u>100%</u>	<u>100%</u>

Fare evasion within each evasion group is shown in Table 7. Shortchanging the farebox accounts for over three-fourths of all cash evasion. Shortchanging can range from less than \$.05 to over \$.50. Failure to pay any fare accounts for nine percent of the cash violations. The remaining 15% is accounted for by bad transfer slips. No bad cash was detected in the study, although the practice of depositing crumpled halves of dollar bills in the farebox for the \$1.00 fare on the Vancouver, Washington Line 5 route has been common. On Saturday, there is an increased relative incidence of no payment and bad transfers which may again reflect rider characteristics and trip patterns of Saturday riders.

Zone fare violations roughly reflect the overall fare distribution, although a disproportionately large share of zone evasion is made with transfer slips. As monthly transit pass users are generally familiar with the fare system, violations among this group may be largely intentional. This is less certain among cash fare violations as many may be occasional, uninformed riders.

Pass fare violations not related to zone overriding are either due to counterfeit passes or misrepresentation in the use of a special pass. Misrepresentation accounts for 86% of pass fare evasion, 76% being adults presenting themselves as students, and 10% being adults under age 65 presenting themselves as "honored" (senior citizens). It should be noted that failure to possess required identification with the special pass was included as an evasion.

Approximately 15% of pass evasions are counterfeits of varying degrees of quality. Most bad passes are very difficult for a driver to detect and even trainee fare inspectors had some difficulty making positive identification of bad passes although many were quite obvious. (No arrests or confiscations were made to avoid unusual influence on the study.) It should also be noted that there were 11 refusals to present the monthly pass to the trainee fare inspectors. Because fare inspection had not been officially introduced, no insistence was used to see all passes. Refusals are not included in the evasion totals.

TABLE 8
FARE EVASION RATES
WITHIN EACH FARE CATEGORY

	<u>Cash</u>	<u>Zone</u>	<u>Pass</u>
Weekday	5.9%	13.6%	7.3%
Saturday	5.2%	22.5%	1.8%

Fare evasion rates within each group are shown in Table 8. Between five and six percent of all cash riders violate the fare in some way. A larger percentage of zone riders cheat on their zone fare--approximately 14% on weekdays and 23% on Saturdays. Of every seven three-zone riders, one failed to pay for the third zone of travel. On Saturday, better than one-in-five three-zone riders were fare violators. Pass riders tend to be fairly honest, excluding any zone violators. Because the fare is already paid, there is less opportunity to cheat the system, however, a fake pass represents a potentially large loss of revenue.

These results do not explain how many riders are intentional fare violators versus unintentional violators. The results of the onboard bus rider survey also conducted in Spring, 1982 should provide some insight into rider behavior and perception with respect to fare violations. These results are very much in accord with the results of the bus driver survey conducted early in the Spring, 1982 when drivers, on the average, felt that six to ten percent of the ridership evaded fares in some form. The results of the operator survey will be documented separately.

The study results do indicate that fare evasion most frequently occurs in areas not easily detected by drivers. Drivers have great difficulty tracking three-zone-fare-paying riders and also have trouble counting fistfuls of change deposited in the farebox. These are the most common forms of fare evasion.

Financial Impact

The fare evasion rates indicated here have significant financial implications. Table 9 shows the daily and annual revenue loss due to fare evasion using calculations and assumptions noted in the appendix. Total fare evasion costs an estimated \$775,466 annually. For the 1981 fiscal year, Tri-Met collected \$18,291,348 in passenger revenues. Fare evasion, therefore, accounts for a

four percent loss of revenue. Because much of the overall eight to nine percent fare evasion is failure to pay only part of the fare, the financial impact is less than the evasion rate alone would suggest.

TABLE 9

REVENUE LOSS*
DUE TO FARE EVASION

	<u>Cash</u>	<u>Pass</u>	<u>Zone</u>	
Weekday	\$1208	\$1073	\$ 335	
Saturday	\$ 686	\$ 522	\$ 111	
Annual Weekday Revenue Loss				\$ 667,210
Annual Weekend Revenue Loss				\$ 108,256
Total Annual Revenue Loss				<hr/> \$ 775,466

* Revenue loss assumptions are in the appendix.

It is hoped that Self-Service Fare Collection will reduce fare evasion and the subsequent loss of revenue. While this awaits later analysis, it is notable that much of the pre-Self-Service Fare Collection evasion is in the form of insufficient cash fare payment. While fewer cash riders are expected to use the self-service system, cash riders will continue to pay their fare as before and can be expected to continue to shortchange the farebox, undetected by the driver or the fare inspector.

GLOSSARY OF TERMS

AM Peak: The hours from 7:00 AM to 9:00 AM.

Base Fare: (\$.65) Good for one- or two-zone travel.

Daybase: The hours from 9:00 AM to 4:00 PM.

Fare Distribution Rate: Ridership stratified by mode and amount of fare payment.

Grid/Feeder: Service providing connections between non-downtown locations and between other transit service.

Inbound: The bus is traveling toward the central business district.

Local Radial: Local service on neighborhood streets providing connections to central transit centers and other transit service

Outbound: Bus is traveling from the central business district.

"Pay-As-You-Enter": Mode of fare payment. Payment is made when a person boards the bus.

"Pay-As-You-Leave": Mode of fare payment. Payment is made when a person leaves the bus.

Peak Hour: Commuter-oriented service operating in AM and PM peak time periods only.

PM Peak: The hours from 4:00 PM to 7:00 PM.

Premium Fare: (\$.90) Good for three-zone travel.

Regional Route: Direct, frequent bus service between major trip centers, principally downtown Portland and suburban centers.

Trip: From one end of the route to the other end of the route.

Urban Radial: Local, frequent bus service within the urbanized areas operating principally on major arterial streets.

A P P E N D I X

CALCULATION OF FARE EVASION

Cash

A revenue loss of \$.10 for shortchanging the farebox assumes that most people will shortchange by \$.05 to \$.15. In all other categories (no payment, bad transfer, bad cash), the revenue loss is assumed to be the entire base fare (\$.65).

Pass

The amount of revenue loss was determined by dividing the cost of the pass by the average number of trips per month of a pass user. For adults, the number was 50; for students, 35; for seniors, 42. For students and senior passes, the loss was further determined by finding the difference between the cost of the adult pass and the cost of the discounted pass assuming that the evasion is by misrepresentation and that the discounted pass was paid for.

Zone

Zone evasions were assumed to be the difference between the base fare and premium fare for both the cash and transfer portions. For the pass difference, it was the cost difference between the two passes divided by the average number of uses of the pass (50).

$$\text{Systemwide percent of zone evasion} = (Z / (T / F)) * 100$$

where Z = total number of zone evasions
T = total number of three-zone passengers
F = fare distribution ratio of zone three passengers

$$\text{Systemwide percent of pass evasion} = (P / (T / F)) * 100$$

where P = total number of pass evasions
T = total number of pass passengers
F = fare distribution ratio of pass passengers

$$\text{Systemwide percent of cash evasion} = (C / ((x + y + T) / F)) * 100$$

where C = total number of cash evasions
x = number of cash no-payments
y = number of bad transfers
T = total number of cash-paying passengers
F = Fare Distribution ratio for cash-paying passengers

Evasion rate within each fare group

$$\% \text{ Pass passengers who evade} = (P \div T) * 100$$

where P = total number of pass evasions
T = total number of pass passengers

% Cash-paying passengers who evade = $C \div T * 100$

where C = total number of cash evasions

T = total number of cash-paying passengers

% 3-Zone passengers who evade = $Z \div (Z + T) * 100$

where Z = total number of zone-3 evasions

T = total number of zone-3 passengers

CALCULATION OF LOST REVENUE DUE TO FARE EVASION

Assumed Revenue Loss Per Evasion

CASH		PASS		ZONE	
Shortchange	\$.10	2-Zone	\$.42	Cash	\$.25
No Payment	.65	3-Zone	.58	Transfer	.25
Bad Transfer	.65	Student	.14	Pass	.15
Bad Cash	.65	Senior	.30		

Revenue Calculations

Revenue loss by subgroup = $(E \div W) * (G \div E) * M$
for cash and pass evasion

where E = number of total evasions in a group
W = number of average daily ridership
G = number of evasions in a subgroup of a group
M = revenue loss for the subgroup

Revenue loss by subgroup = $(E \div ((R \div F) * T) * (W \div 1.32 * R) * M$
for zone evasion

where E = number of total evasions in the
R = Fare Distribution ratio for the subgroup
F = Fare Distribution ratio for the
T = total number of group passengers
W = number of average weekday riders
M = revenue loss for the subgroup
1.32 = transfer rate

FARE COMPLIANCE STUDY SAMPLE SELECTION

TABLE I

TOTAL AND DESIGN SAMPLE BUS TRIP BY TIME AND ROUTE TYPE

BUS TRIPS	MORNING PEAK		DAYBASE		EVENING PEAK		SATURDAY	
	TOTAL	5%	TOTAL	5%	TOTAL	5%	TOTAL	5%
Regional	217	11	421	21	209	11	406	20
Urban	542	27	1270	64	490	25	1228	61
Peak	40	2	--	--	43	2	--	--
Local	146	7	376	19	135	7	356	18
Grid	160	8	448	22	158	8	374	19
Total	1105	55	2515	126	1035	52	2364	118

TABLE II

CASH CHECK NUMBER AND PERCENT BUS TRIPS SAMPLED

BUS TRIPS	MORNING PEAK		DAYBASE		EVENING PEAK		SATURDAY	
	#	%	#	%	#	%	#	%
Regional	13	6	23	5	8	4	22	5
Urban	25	5	69	5	38	8	66	5
Peak	0	0	--	--	0	0	--	--
Local	10	7	21	6	10	7	4	1
Grid	9	6	20	4	6	4	14	4
Total	57	5	133	5	62	6	106	4

TABLE III
PASS CHECK NUMBER AND PERCENT BUS TRIPS SAMPLED

BUS TRIPS	MORNING PEAK		DAYBASE		EVENING PEAK		SATURDAY	
	#	%	#	%	#	%	#	%
Regional	8	4	12	3	11	5	11	3
Urban	19	4	49	4	26	5	25	2
Peak	0	0	--	--	0	0	--	--
Local	7	5	16	4	12	9	9	3
Grid	12	8	28	6	10	6	19	5
Total	46	4	105	4	59	6	64	3

TABLE IV
ZONE CHECK NUMBER AND PERCENT BUS TRIPS SAMPLED

BUS TRIPS	MORNING PEAK		DAYBASE		EVENING PEAK		SATURDAY	
	#	%	#	%	#	%	#	%
Regional	12	6	34	8	10	5	11	3
Urban ¹	12	2	55	4	4	1	30	2
Peak	0	0	--	--	0	0	--	--
Local ¹	12	8	21	6	6	4	8	2
Grid ²	NA	NA	NA	NA	NA	NA	NA	NA
Total	36	4	110	5	20	2	49	2

¹Not all routes transverse 3 zones. Percent of 3-zone routes would be higher.

²None of these routes transverse 3 zones. Not included in total percentages.

FARE COMPLIANCE STUDY TABULATED DATA

ZONE EVASION: SAMPLED RIDERS

BUS RIDERS SAMPLED	WEEKDAY			SATURDAY
	PEAK	DAYBASE	TOTAL	TOTAL
Non-Evasion	666	638	1304	224
Cash Evasion	24	68	92	37
Transfer Evasion	10	30	40	14
Pass Evasion	25	49	74	14
Zone Riders Observed	725	785	1510	289
Bus Trips	56	110	166	49

PASS EVASION: SAMPLED RIDERS

BUS RIDERS SAMPLED	WEEKDAY			SATURDAY
	PEAK	DAYBASE	TOTAL	TOTAL
Non-Evasion	1549	1156	2705	558
2-Zone Pass	5	1	6	0
3-Zone Pass	2	1	3	2
Student Pass	2	1	3	2
Honored Citizen Pass	1	5	6	2
Employee Pass	0	0	0	0
Refusal	6	5	11	1
Pass Riders Observed	1589	1190	2779	569
Bus Trips	105	105	210	64

CASH EVASION: SAMPLED RIDERS

BUS RIDERS SAMPLED	WEEKDAY			SATURDAY
	PEAK	DAYBASE	TOTAL	TOTAL
Non-Evasion	1466	1812	3278	1256
Short-change	73	83	156	39
No Payment	13	5	18	11
Bad Cash	0	0	0	0
Bad Transfer	15	16	31	19
Cash Riders Observed	1567	1916	3483	1325
Bus Trips	119	133	252	106

FARE DISTRIBUTION REPORT

FARE CATEGORY DISTRIBUTION

SPRING, 1982 F. 1

DAY TYPE=WEEKDAY LINE TYPE=ALL

TIME PERIOD=ALL

<u>FARE CATEGORY</u>	<u>REPORTED DISTRIBUTION</u>	<u>ADJUSTED DISTRIBUTION</u>	<u>FARE</u>
FARE NON-COMPLIANCE	1.00%	0.64%	0.0 ¢
FARELESS SQUARE	2.44%	1.55%	0.0 ¢
TRI-MET EMPLOYEES	0.81%	0.52%	0.0 ¢
25¢ HONORED CITIZENS	15.90%	10.12%	25.00¢
45¢ YOUTH	17.40%	11.08%	45.00¢
65¢ ADULT	34.17%	21.75%	65.00¢
90¢ ADULT	15.84%	10.08%	90.00¢
\$1.00 VANCOUVER	0.63%	0.40%	100.00¢
\$14 YOUTH PASS	12.41%	7.90%	31.90¢
\$21 ADULT PASS	33.15%	21.10%	50.14¢
\$29 ADULT PASS	21.42%	13.64%	53.62¢
\$35 VANCOUVER PASS	0.41%	0.26%	123.54¢
COUNTY PASS	0.18%	0.11%	88.23¢
\$6 HONORED CITIZEN PASS	<u>1.32%</u>	<u>0.84%</u>	51.21¢
	157.08%	100.00%	

AVERAGE FARE = 52.40¢
 BOARDING FARE = 39.14¢
 TRANSFER SLIP RATE = 1.267
 TOTAL TRANSFER RATE = 1.339

AVERAGE CASH FARE = 58.25¢
 % FREE PASSENGERS = 2.71%

PASS USES PER DAY = 1.789
 \$14 YOUTH = 1.807
 \$21 ADULT = 1.717
 \$29 ADULT = 2.342
 \$35 VANC. = 1.196
 \$6 ELDERLY = 0.465

FARE CATEGORY DISTRIBUTION

SPRING, 1982 F. 2

DAY TYPE=SATURDAY LINE TYPE=ALL

TIME PERIOD=ALL

<u>FARE CATEGORY</u>	<u>REPORTED DISTRIBUTION</u>	<u>ADJUSTED DISTRIBUTION</u>	<u>FARE</u>
FARE NON-COMPLIANCE	1.00%	0.69%	0.0 ¢
FARELESS SQUARE	1.55%	1.06%	0.0 ¢
TRI-MET EMPLOYEES	1.35%	0.93%	0.0 ¢
25¢ HONORED CITIZENS	20.02%	13.74%	25.00¢
45¢ YOUTH	15.49%	10.63%	45.00¢
65¢ ADULT	39.76%	27.29%	65.00¢
90¢ ADULT	11.12%	7.63%	90.00¢
\$1.00 VANCOUVER	0.75%	0.51%	100.00¢
\$14 YOUTH PASS	12.57%	8.62%	31.90¢
\$21 ADULT PASS	29.83%	20.47%	50.14¢
\$29 ADULT PASS	10.09%	6.92%	53.62¢
\$35 VANCOUVER PASS	0.45%	0.31%	123.54¢
COUNTY PASS	0.06%	0.04%	88.23¢
\$6 HONORED CITIZEN PASS	<u>1.67%</u>	<u>1.15%</u>	51.21¢
	145.71%	100.00%	

AVERAGE FARE = 51.07¢
 BOARDING FARE = 38.41¢
 TRANSFER SLIP RATE = 1.273
 TOTAL TRANSFER RATE = 1.330

AVERAGE CASH FARE = 55.75¢
 % FREE PASSENGERS = 2.68%

PASS USES PER DAY = 0.602
 \$14 YOUTH = 0.776
 \$21 ADULT = 0.655
 \$29 ADULT = 0.468
 \$35 VANC. = 0.557
 \$6 ELDERLY = 0.250

FARE CATEGORY DISTRIBUTION

SPRING, 1982 F. 3

DAY TYPE=SUNDAY LINE TYPE=ALL

TIME PERIOD=ALL

<u>FARE CATEGORY</u>	<u>REPORTED DISTRIBUTION</u>	<u>ADJUSTED DISTRIBUTION</u>	<u>FARE</u>
FARE NON-COMPLIANCE	1.00%	0.98%	0.0 ¢
FARELESS SQUARE	1.46%	1.44%	0.0 ¢
TRI-MET EMPLOYEES	2.44%	2.40%	0.0 ¢
25¢ HONORED CITIZENS	13.45%	13.23%	25.00¢
45¢ YOUTH	13.18%	12.95%	45.00¢
65¢ ADULT	22.68%	22.30%	65.00¢
90¢ ADULT	2.84%	2.79%	90.00¢
\$1.00 VANCOUVER	0.0 %	0.0 %	100.00¢
\$14 YOUTH PASS	7.14%	7.02%	31.90¢
\$21 ADULT PASS	27.14%	26.68%	50.14¢
\$29 ADULT PASS	9.10%	8.95%	53.62¢
\$35 VANCOUVER PASS	0.0 %	0.0 %	123.54¢
COUNTY PASS	0.06%	0.06%	88.23¢
\$6 HONORED CITIZEN PASS	<u>1.22%</u>	<u>1.20%</u>	51.21¢
	101.72%	100.00%	

AVERAGE FARE = 47.23¢
 BOARDING FARE = 38.59¢
 TRANSFER SLIP RATE = 1.105
 TOTAL TRANSFER RATE = 1.224

AVERAGE CASH FARE = 50.99¢
 % FREE PASSENGERS = 4.82%

PASS USES PER DAY = 0.352
 \$14 YOUTH = 0.316
 \$21 ADULT = 0.427
 \$29 ADULT = 0.302
 \$35 VANC. = 0.0
 \$6 ELDERLY = 0.130

FARE CATEGORY DISTRIBUTION

SPRING, 1982 F. 5

DAY TYPE=WEEKDAY LINE TYPE=URBAN RADIAL

TIME PERIOD=ALL

<u>FARE CATEGORY</u>	<u>REPORTED DISTRIBUTION</u>	<u>ADJUSTED DISTRIBUTION</u>	<u>FARE</u>
FARE NON-COMPLIANCE	1.00%	0.65%	0.0 ¢
FARELESS SQUARE	2.44%	1.57%	0.0 ¢
TRI-MET EMPLOYEES	0.81%	0.52%	0.0 ¢
25¢ HONORED CITIZENS	16.82%	10.86%	25.00¢
45¢ YOUTH	17.56%	11.33%	45.00¢
65¢ ADULT	33.95%	21.91%	65.00¢
90¢ ADULT	11.42%	7.37%	90.00¢
\$1.00 VANCOUVER	0.0 %	0.0 %	100.00¢
\$14 YOUTH PASS	12.74%	8.22%	31.90¢
\$21 ADULT PASS	37.89%	24.45%	50.14¢
\$29 ADULT PASS	18.80%	12.13%	53.62¢
\$35 VANCOUVER PASS	0.0 %	0.0 %	123.54¢
COUNTY PASS	0.18%	0.12%	88.23¢
\$6 HONORED CITIZEN PASS	<u>1.36%</u>	<u>0.88%</u>	51.21¢
	154.98%	100.00%	

AVERAGE FARE = 50.62¢
 BOARDING FARE = 36.88¢
 TRANSFER SLIP RATE = 1.277
 TOTAL TRANSFER RATE = 1.373

.009

.008

FARE CATEGORY DISTRIBUTION

SPRING, 1982 F. 6

DAY TYPE=WEEKDAY LINE TYPE=PEAK HOUR

TIME PERIOD=ALL

<u>FARE CATEGORY</u>	<u>REPORTED DISTRIBUTION</u>	<u>ADJUSTED DISTRIBUTION</u>	<u>FARE</u>
FARE NON-COMPLIANCE	1.00%	0.53%	0.0 ¢
FARELESS SQUARE	2.44%	1.29%	0.0 ¢
TRI-MET EMPLOYEES	0.81%	0.43%	0.0 ¢
25¢ HONORED CITIZENS	31.74%	16.72%	25.00¢
45¢ YOUTH	0.78%	0.41%	45.00¢
65¢ ADULT	24.77%	13.05%	65.00¢
90¢ ADULT	45.31%	23.87%	90.00¢
\$1.00 VANCOUVER	0.0 %	0.0 %	100.00¢
\$14 YOUTH PASS	3.64%	1.92%	31.90¢
\$21 ADULT PASS	21.30%	11.22%	50.14¢
\$29 ADULT PASS	55.06%	29.01%	53.62¢
\$35 VANCOUVER PASS	0.0 %	0.0 %	123.54¢
COUNTY PASS	0.18%	0.09%	88.23¢
\$6 HONORED CITIZEN PASS	<u>2.80%</u>	<u>1.48%</u>	51.21¢
	189.84%	100.00%	

AVERAGE FARE = 56.96¢
 BOARDING FARE = 45.26¢
 TRANSFER SLIP RATE = 1.267
 TOTAL TRANSFER RATE = 1.259

FARE CATEGORY DISTRIBUTION

SPRING, 1982 F. 7

DAY TYPE=WEEKDAY LINE TYPE=LOCAL RADIAL TIME PERIOD=ALL

<u>FARE CATEGORY</u>	<u>REPORTED DISTRIBUTION</u>	<u>ADJUSTED DISTRIBUTION</u>	<u>FARE</u>
FARE NON-COMPLIANCE	1.00%	0.69%	0.0 ¢
FARELESS SQUARE	2.44%	1.69%	0.0 ¢
TRI-MET EMPLOYEES	0.81%	0.56%	0.0 ¢
25¢ HONORED CITIZENS	11.99%	8.31%	25.00¢
45¢ YOUTH	16.44%	11.39%	45.00¢
65¢ ADULT	31.48%	21.81%	65.00¢
90¢ ADULT	17.86%	12.37%	90.00¢
\$1.00 VANCOUVER	0.0 %	0.0 %	100.00¢
\$14 YOUTH PASS	12.91%	8.94%	31.90¢
\$21 ADULT PASS	29.67%	20.56%	50.14¢
\$29 ADULT PASS	18.49%	12.81%	53.62¢
\$35 VANCOUVER PASS	0.0 %	0.0 %	123.54¢
COUNTY PASS	0.18%	0.12%	88.23¢
\$6 HONORED CITIZEN PASS	<u>1.07%</u>	<u>0.74%</u>	51.21¢
	144.34%	100.00%	

AVERAGE FARE = 53.03¢
 BOARDING FARE = 42.73¢
 TRANSFER SLIP RATE = 1.178
 TOTAL TRANSFER RATE = 1.241

FARE CATEGORY DISTRIBUTION

SPRING, 1982 F. 8

DAY TYPE=WEEKDAY LINE TYPE=GRID / FEEDER TIME PERIOD=ALL

<u>FARE CATEGORY</u>	<u>REPORTED DISTRIBUTION</u>	<u>ADJUSTED DISTRIBUTION</u>	<u>FARE</u>
FARE NON-COMPLIANCE	1.00%	0.66%	0.0 ¢
FARELESS SQUARE	2.44%	1.62%	0.0 ¢
TRI-MET EMPLOYEES	0.81%	0.54%	0.0 ¢
25¢ HONORED CITIZENS	17.62%	11.67%	25.00¢
45¢ YOUTH	21.91%	14.52%	45.00¢
65¢ ADULT	34.98%	23.17%	65.00¢
90¢ ADULT	10.55%	6.99%	90.00¢
\$1.00 VANCOUVER	0.0 %	0.0 %	100.00¢
\$14 YOUTH PASS	13.39%	8.87%	31.90¢
\$21 ADULT PASS	23.59%	15.62%	50.14¢
\$29 ADULT PASS	23.11%	15.31%	53.62¢
\$35 VANCOUVER PASS	0.0 %	0.0 %	123.54¢
COUNTY PASS	0.18%	0.12%	88.23¢
\$6 HONORED CITIZEN PASS	<u>1.40%</u>	<u>0.92%</u>	51.21¢
	150.96%	100.00%	

AVERAGE FARE = 50.25¢
BOARDING FARE = 35.82¢
TRANSFER SLIP RATE = 1.323
TOTAL TRANSFER RATE = 1.403

FARE CATEGORY DISTRIBUTION

SPRING, 1982 F. 9

DAY TYPE=SATURDAY LINE TYPE=REGIONAL

TIME PERIOD=ALL

<u>FARE CATEGORY</u>	<u>REPORTED DISTRIBUTION</u>	<u>ADJUSTED DISTRIBUTION</u>	<u>FARE</u>
FARE NON-COMPLIANCE	1.00%	0.55%	0.0 ¢
FARELESS SQUARE	1.55%	0.86%	0.0 ¢
TRI-MET EMPLOYEES	1.35%	0.75%	0.0 ¢
25¢ HONORED CITIZENS	26.59%	14.71%	25.00¢
45¢ YOUTH	16.84%	9.32%	45.00¢
65¢ ADULT	32.59%	18.03%	65.00¢
90¢ ADULT	48.66%	26.92%	90.00¢
\$1.00 VANCOUVER	0.0 %	0.0 %	100.00¢
\$14 YOUTH PASS	5.17%	2.86%	31.90¢
\$21 ADULT PASS	29.60%	16.37%	50.14¢
\$29 ADULT PASS	15.10%	8.36%	53.62¢
\$35 VANCOUVER PASS	0.0 %	0.0 %	123.54¢
COUNTY PASS	0.06%	0.03%	88.23¢
\$6 HONORED CITIZEN PASS	<u>2.25%</u>	<u>1.25%</u>	51.21¢
	180.76%	100.00%	

AVERAGE FARE = 58.09¢
 BOARDING FARE = 44.27¢
 TRANSFER SLIP RATE = 1.421
 TOTAL TRANSFER RATE = 1.312

FARE CATEGORY DISTRIBUTION

SPRING, 1982 F. 10

DAY TYPE=SATURDAY LINE TYPE=URBAN RADIAL

TIME PERIOD=ALL

<u>FARE CATEGORY</u>	<u>REPORTED DISTRIBUTION</u>	<u>ADJUSTED DISTRIBUTION</u>	<u>FARE</u>
FARE NON-COMPLIANCE	1.00%	0.74%	0.0 ¢
FARELESS SQUARE	1.55%	1.15%	0.0 ¢
TRI-MET EMPLOYEES	1.35%	1.00%	0.0 ¢
25¢ HONORED CITIZENS	20.30%	15.08%	25.00¢
45¢ YOUTH	14.07%	10.45%	45.00¢
65¢ ADULT	38.11%	28.31%	65.00¢
90¢ ADULT	3.06%	2.27%	90.00¢
\$1.00 VANCOUVER	0.0 %	0.0 %	100.00¢
\$14 YOUTH PASS	15.10%	11.22%	31.90¢
\$21 ADULT PASS	33.85%	25.15%	50.14¢
\$29 ADULT PASS	4.41%	3.28%	53.62¢
\$35 VANCOUVER PASS	0.0 %	0.0 %	123.54¢
COUNTY PASS	0.06%	0.04%	88.23¢
\$6 HONORED CITIZEN PASS	<u>1.73%</u>	<u>1.29%</u>	51.21¢
	134.59%	100.00%	

AVERAGE FARE = 47.57¢
 BOARDING FARE = 36.55¢
 TRANSFER SLIP RATE = 1.212
 TOTAL TRANSFER RATE = 1.301

FARE CATEGORY DISTRIBUTION

SPRING, 1982 F. 11

DAY TYPE=SATURDAY LINE TYPE=LOCAL RADIAL

TIME PERIOD=ALL

<u>FARE CATEGORY</u>	<u>REPORTED DISTRIBUTION</u>	<u>ADJUSTED DISTRIBUTION</u>	<u>FARE</u>
FARE NON-COMPLIANCE	1.00%	0.78%	0.0 ¢
FARELESS SQUARE	1.55%	1.21%	0.0 ¢
TRI-MET EMPLOYEES	1.35%	1.06%	0.0 ¢
25¢ HONORED CITIZENS	23.13%	18.09%	25.00¢
45¢ YOUTH	14.28%	11.17%	45.00¢
65¢ ADULT	27.34%	21.38%	65.00¢
90¢ ADULT	15.51%	12.13%	90.00¢
\$1.00 VANCOUVER	0.0 %	0.0 %	100.00¢
\$14 YOUTH PASS	6.31%	4.93%	31.90¢
\$21 ADULT PASS	25.19%	19.70%	50.14¢
\$29 ADULT PASS	9.92%	7.76%	53.62¢
\$35 VANCOUVER PASS	0.0 %	0.0 %	123.54¢
COUNTY PASS	0.06%	0.05%	88.23¢
\$6 HONORED CITIZEN PASS	<u>2.23%</u>	<u>1.74%</u>	51.21¢
	127.87%	100.00%	

AVERAGE FARE = 50.91¢
BOARDING FARE = 44.08¢
TRANSFER SLIP RATE = 1.121
TOTAL TRANSFER RATE = 1.155

FARE CATEGORY DISTRIBUTION

SPRING, 1982 F. 12

DAY TYPE=SATURDAY LINE TYPE=GRID / FEEDER TIME PERIOD=ALL

<u>FARE CATEGORY</u>	<u>REPORTED DISTRIBUTION</u>	<u>ADJUSTED DISTRIBUTION</u>	<u>FARE</u>
FARE NON-COMPLIANCE	1.00%	0.70%	0.0 ¢
FARELESS SQUARE	1.55%	1.08%	0.0 ¢
TRI-MET EMPLOYEES	1.35%	0.94%	0.0 ¢
25¢ HONORED CITIZENS	5.18%	3.62%	25.00¢
45¢ YOUTH	20.23%	14.14%	45.00¢
65¢ ADULT	56.27%	39.33%	65.00¢
90¢ ADULT	4.53%	3.17%	90.00¢
\$1.00 VANCOUVER	0.0 %	0.0 %	100.00¢
\$14 YOUTH PASS	12.60%	8.81%	31.90¢
\$21 ADULT PASS	21.81%	15.24%	50.14¢
\$29 ADULT PASS	18.14%	12.68%	53.62¢
\$35 VANCOUVER PASS	0.0 %	0.0 %	123.54¢
COUNTY PASS	0.06%	0.04%	88.23¢
\$6 HONORED CITIZEN PASS	<u>0.37%</u>	<u>0.26%</u>	51.21¢
	143.10%	100.00%	

AVERAGE FARE = 53.10¢
 BOARDING FARE = 33.99¢
 TRANSFER SLIP RATE = 1.450
 TOTAL TRANSFER RATE = 1.562

FARE CATEGORY DISTRIBUTION

SPRING, 1982 F. 13

DAY TYPE=SUNDAY LINE TYPE=REGIONAL

TIME PERIOD=ALL

<u>FARE CATEGORY</u>	<u>REPORTED DISTRIBUTION</u>	<u>ADJUSTED DISTRIBUTION</u>	<u>FARE</u>
FARE NON-COMPLIANCE	1.00%	0.68%	0.0 ¢
FARELESS SQUARE	1.46%	1.00%	0.0 ¢
TRI-MET EMPLOYEES	2.44%	1.67%	0.0 ¢
25¢ HONORED CITIZENS	10.13%	6.92%	25.00¢
45¢ YOUTH	17.05%	11.65%	45.00¢
65¢ ADULT	38.64%	26.40%	65.00¢
90¢ ADULT	26.77%	18.29%	90.00¢
\$1.00 VANCOUVER	0.0 %	0.0 %	100.00¢
\$14 YOUTH PASS	10.06%	6.87%	31.90¢
\$21 ADULT PASS	28.47%	19.45%	50.14¢
\$29 ADULT PASS	9.42%	6.43%	53.62¢
\$35 VANCOUVER PASS	0.0 %	0.0 %	123.54¢
COUNTY PASS	0.06%	0.04%	88.23¢
\$6 HONORED CITIZEN PASS	<u>0.87%</u>	<u>0.60%</u>	51.21¢
	146.37%	100.00%	

AVERAGE FARE = 56.33¢
BOARDING FARE = 43.74¢
TRANSFER SLIP RATE = 1.261
TOTAL TRANSFER RATE = 1.288

FARE CATEGORY DISTRIBUTION

SPRING, 1982 F. 14

DAY TYPE=SUNDAY

LINE TYPE=URBAN RADIAL

TIME PERIOD=ALL

<u>FARE CATEGORY</u>	<u>REPORTED DISTRIBUTION</u>	<u>ADJUSTED DISTRIBUTION</u>	<u>FARE</u>
FARE NON-COMPLIANCE	1.00%	1.01%	0.0 ¢
FARELESS SQUARE	1.46%	1.47%	0.0 ¢
TRI-MET EMPLOYEES	2.44%	2.45%	0.0 ¢
25¢ HONORED CITIZENS	13.09%	13.17%	25.00¢
45¢ YOUTH	9.71%	9.76%	45.00¢
65¢ ADULT	26.20%	26.35%	65.00¢
90¢ ADULT	1.36%	1.36%	90.00¢
\$1.00 VANCOUVER	0.0 %	0.0 %	100.00¢
\$14 YOUTH PASS	3.15%	3.17%	31.90¢
\$21 ADULT PASS	28.87%	29.04%	50.14¢
\$29 ADULT PASS	10.88%	10.94%	53.62¢
\$35 VANCOUVER PASS	0.0 %	0.0 %	123.54¢
COUNTY PASS	0.06%	0.06%	88.23¢
\$6 HONORED CITIZEN PASS	<u>1.22%</u>	<u>1.22%</u>	51.21¢
	99.44%	100.00%	

AVERAGE FARE = 48.16¢

BOARDING FARE = 40.28¢

TRANSFER SLIP RATE = 1.090

TOTAL TRANSFER RATE = 1.196

FARE CATEGORY DISTRIBUTION

SPRING, 1982 F. 15

DAY TYPE=SUNDAY

LINE TYPE=LOCAL RADIAL

TIME PERIOD=ALL

<u>FARE CATEGORY</u>	<u>REPORTED DISTRIBUTION</u>	<u>ADJUSTED DISTRIBUTION</u>	<u>FARE</u>
FARE NON-COMPLIANCE	1.00%	0.72%	0.0 ¢
FARELESS SQUARE	1.46%	1.05%	0.0 ¢
TRI-MET EMPLOYEES	2.44%	1.76%	0.0 ¢
25¢ HONORED CITIZENS	9.42%	6.79%	25.00¢
45¢ YOUTH	20.34%	14.66%	45.00¢
65¢ ADULT	31.75%	22.89%	65.00¢
90¢ ADULT	18.01%	12.98%	90.00¢
\$1.00 VANCOUVER	0.0 %	0.0 %	100.00¢
\$14 YOUTH PASS	5.23%	3.77%	31.90¢
\$21 ADULT PASS	29.67%	21.39%	50.14¢
\$29 ADULT PASS	18.49%	13.33%	53.62¢
\$35 VANCOUVER PASS	0.0 %	0.0 %	123.54¢
COUNTY PASS	0.06%	0.04%	88.23¢
\$6 HONORED CITIZEN PASS	<u>0.85%</u>	<u>0.61%</u>	51.21¢
	138.72%	100.00%	

AVERAGE FARE	=	54.28¢
BOARDING FARE	=	43.97¢
TRANSFER SLIP RATE	=	1.178
TOTAL TRANSFER RATE	=	1.235

FARE CATEGORY DISTRIBUTION

SPRING, 1982 F. 16

DAY TYPE=SUNDAY LINE TYPE=GRID / FEEDER TIME PERIOD=ALL

<u>FARE CATEGORY</u>	<u>REPORTED DISTRIBUTION</u>	<u>ADJUSTED DISTRIBUTION</u>	<u>FARE</u>
FARE NON-COMPLIANCE	1.00%	0.63%	0.0 ¢
FARELESS SQUARE	1.46%	0.92%	0.0 ¢
TRI-MET EMPLOYEES	2.44%	1.53%	0.0 ¢
25¢ HONORED CITIZENS	33.88%	21.30%	25.00¢
45¢ YOUTH	16.08%	10.11%	45.00¢
65¢ ADULT	20.15%	12.67%	65.00¢
90¢ ADULT	10.98%	6.91%	90.00¢
\$1.00 VANCOUVER	0.0 %	0.0 %	100.00¢
\$14 YOUTH PASS	10.88%	6.84%	31.90¢
\$21 ADULT PASS	36.07%	22.67%	50.14¢
\$29 ADULT PASS	23.11%	14.53%	53.62¢
\$35 VANCOUVER PASS	0.0 %	0.0 %	123.54¢
COUNTY PASS	0.06%	0.04%	88.23¢
\$6 HONORED CITIZEN PASS	<u>2.95%</u>	<u>1.86%</u>	51.21¢
	159.06%	100.00%	

AVERAGE FARE = 46.65¢
BOARDING FARE = 36.59¢
TRANSFER SLIP RATE = 1.212
TOTAL TRANSFER RATE = 1.275

FARE CATEGORY DISTRIBUTION

SPRING, 1982 F. 17

DAY TYPE=WEEKDAY LINE TYPE=ALL

TIME PERIOD=PEAK HOURS

<u>FARE CATEGORY</u>	<u>REPORTED DISTRIBUTION</u>	<u>ADJUSTED DISTRIBUTION</u>	<u>FARE</u>
FARE NON-COMPLIANCE	1.00%	0.79%	0.0 ¢
FARELESS SQUARE	2.44%	1.93%	0.0 ¢
TRI-MET EMPLOYEES	0.81%	0.64%	0.0 ¢
25¢ HONORED CITIZENS	11.67%	9.22%	25.00¢
45¢ YOUTH	13.81%	10.90%	45.00¢
65¢ ADULT	26.35%	20.81%	65.00¢
90¢ ADULT	13.66%	10.79%	90.00¢
\$1.00 VANCOUVER	0.63%	0.50%	100.00¢
\$14 YOUTH PASS	10.08%	7.96%	31.90¢
\$21 ADULT PASS	26.99%	21.31%	50.14¢
\$29 ADULT PASS	17.62%	13.92%	53.62¢
\$35 VANCOUVER PASS	0.41%	0.32%	123.54¢
COUNTY PASS	0.18%	0.14%	88.23¢
\$6 HONORED CITIZEN PASS	<u>0.98%</u>	<u>0.78%</u>	51.21¢
	126.65%	100.00%	

AVERAGE FARE	=	52.55¢
BOARDING FARE	=	39.86¢
TRANSFER SLIP RATE	=	1.188
TOTAL TRANSFER RATE	=	1.318

FARE CATEGORY DISTRIBUTION

SPRING, 1982 F. 18

DAY TYPE=WEEKDAY LINE TYPE=REGIONAL

TIME PERIOD=PEAK HOURS

<u>FARE CATEGORY</u>	<u>REPORTED DISTRIBUTION</u>	<u>ADJUSTED DISTRIBUTION</u>	<u>FARE</u>
FARE NON-COMPLIANCE	1.00%	0.74%	0.0 ¢
FARELESS SQUARE	2.44%	1.80%	0.0 ¢
TRI-MET EMPLOYEES	0.81%	0.60%	0.0 ¢
25¢ HONORED CITIZENS	8.84%	6.52%	25.00¢
45¢ YOUTH	14.01%	10.34%	45.00¢
65¢ ADULT	29.45%	21.73%	65.00¢
90¢ ADULT	20.16%	14.87%	90.00¢
\$1.00 VANCOUVER	0.0 %	0.0 %	100.00¢
\$14 YOUTH PASS	8.66%	6.39%	31.90¢
\$21 ADULT PASS	23.91%	17.65%	50.14¢
\$29 ADULT PASS	25.27%	18.65%	53.62¢
\$35 VANCOUVER PASS	0.0 %	0.0 %	123.54¢
COUNTY PASS	0.18%	0.13%	88.23¢
\$6 HONORED CITIZEN PASS	<u>0.77%</u>	<u>0.57%</u>	51.21¢
	135.51%	100.00%	

AVERAGE FARE = 55.09¢
 BOARDING FARE = 43.12¢
 TRANSFER SLIP RATE = 1.187
 TOTAL TRANSFER RATE = 1.278

FARE CATEGORY DISTRIBUTION

SPRING, 1982 F. 19

DAY TYPE=WEEKDAY LINE TYPE=URBAN RADIAL

TIME PERIOD=PEAK HOURS

<u>FARE CATEGORY</u>	<u>REPORTED DISTRIBUTION</u>	<u>ADJUSTED DISTRIBUTION</u>	<u>FARE</u>
FARE NON-COMPLIANCE	1.00%	0.82%	0.0 ¢
FARELESS SQUARE	2.44%	1.99%	0.0 ¢
TRI-MET EMPLOYEES	0.81%	0.66%	0.0 ¢
25¢ HONORED CITIZENS	12.51%	10.22%	25.00¢
45¢ YOUTH	13.73%	11.22%	45.00¢
65¢ ADULT	26.95%	22.01%	65.00¢
90¢ ADULT	9.50%	7.76%	90.00¢
\$1.00 VANCOUVER	0.0 %	0.0 %	100.00¢
\$14 YOUTH PASS	11.98%	9.79%	31.90¢
\$21 ADULT PASS	28.88%	23.59%	50.14¢
\$29 ADULT PASS	13.42%	10.96%	53.62¢
\$35 VANCOUVER PASS	0.0 %	0.0 %	123.54¢
COUNTY PASS	0.18%	0.15%	88.23¢
\$6 HONORED CITIZEN PASS	<u>1.02%</u>	<u>0.83%</u>	51.21¢
	122.43%	100.00%	

AVERAGE FARE = 50.28¢
 BOARDING FARE = 36.86¢
 TRANSFER SLIP RATE = 1.201
 TOTAL TRANSFER RATE = 1.364

FARE CATEGORY DISTRIBUTION

SPRING, 1982 F. 20

DAY TYPE=WEEKDAY LINE TYPE=PEAK HOUR

TIME PERIOD=PEAK HOURS

<u>FARE CATEGORY</u>	<u>REPORTED DISTRIBUTION</u>	<u>ADJUSTED DISTRIBUTION</u>	<u>FARE</u>
FARE NON-COMPLIANCE	1.00%	0.60%	0.0 ¢
FARELESS SQUARE	2.44%	1.48%	0.0 ¢
TRI-MET EMPLOYEES	0.81%	0.49%	0.0 ¢
25¢ HONORED CITIZENS	26.82%	16.22%	25.00¢
45¢ YOUTH	0.0 %	0.0 %	45.00¢
65¢ ADULT	18.03%	10.91%	65.00¢
90¢ ADULT	43.74%	26.46%	90.00¢
\$1.00 VANCOUVER	0.0 %	0.0 %	100.00¢
\$14 YOUTH PASS	3.64%	2.20%	31.90¢
\$21 ADULT PASS	16.00%	9.68%	50.14¢
\$29 ADULT PASS	50.37%	30.47%	53.62¢
\$35 VANCOUVER PASS	0.0 %	0.0 %	123.54¢
COUNTY PASS	0.18%	0.11%	88.23¢
\$6 HONORED CITIZEN PASS	<u>2.27%</u>	<u>1.37%</u>	51.21¢
	165.30%	100.00%	

AVERAGE FARE = 57.66¢
BOARDING FARE = 43.94¢
TRANSFER SLIP RATE = 1.267
TOTAL TRANSFER RATE = 1.312

FARE CATEGORY DISTRIBUTION

SPRING, 1982 F. 21

DAY TYPE=WEEKDAY LINE TYPE=LOCAL RADIAL

TIME PERIOD=PEAK HOURS

<u>FARE CATEGORY</u>	<u>REPORTED DISTRIBUTION</u>	<u>ADJUSTED DISTRIBUTION</u>	<u>FARE</u>
FARE NON-COMPLIANCE	1.00%	0.83%	0.0 ¢
FARELESS SQUARE	2.44%	2.03%	0.0 ¢
TRI-MET EMPLOYEES	0.81%	0.67%	0.0 ¢
25¢ HONORED CITIZENS	11.42%	9.49%	25.00¢
45¢ YOUTH	13.82%	11.48%	45.00¢
65¢ ADULT	21.30%	17.69%	65.00¢
90¢ ADULT	16.22%	13.48%	90.00¢
\$1.00 VANCOUVER	0.0 %	0.0 %	100.00¢
\$14 YOUTH PASS	9.63%	8.00%	31.90¢
\$21 ADULT PASS	23.33%	19.38%	50.14¢
\$29 ADULT PASS	19.19%	15.94%	53.62¢
\$35 VANCOUVER PASS	0.0 %	0.0 %	123.54¢
COUNTY PASS	0.18%	0.15%	88.23¢
\$6 HONORED CITIZEN PASS	<u>1.06%</u>	<u>0.88%</u>	51.21¢
	120.39%	100.00%	

AVERAGE FARE = 52.56¢
 BOARDING FARE = 44.11¢
 TRANSFER SLIP RATE = 1.112
 TOTAL TRANSFER RATE = 1.191

FARE CATEGORY DISTRIBUTION

SPRING, 1982 F. 22

DAY TYPE=WEEKDAY LINE TYPE=GRID / FEEDER TIME PERIOD=PEAK HOURS

<u>FARE CATEGORY</u>	<u>REPORTED DISTRIBUTION</u>	<u>ADJUSTED DISTRIBUTION</u>	<u>FARE</u>
FARE NON-COMPLIANCE	1.00%	0.78%	0.0 ¢
FARELESS SQUARE	2.44%	1.90%	0.0 ¢
TRI-MET EMPLOYEES	0.81%	0.63%	0.0 ¢
25¢ HONORED CITIZENS	14.49%	11.31%	25.00¢
45¢ YOUTH	19.90%	15.53%	45.00¢
65¢ ADULT	27.11%	21.16%	65.00¢
90¢ ADULT	9.79%	7.64%	90.00¢
\$1.00 VANCOUVER	0.0 %	0.0 %	100.00¢
\$14 YOUTH PASS	12.30%	9.60%	31.90¢
\$21 ADULT PASS	22.64%	17.67%	50.14¢
\$29 ADULT PASS	16.33%	12.74%	53.62¢
\$35 VANCOUVER PASS	0.0 %	0.0 %	123.54¢
COUNTY PASS	0.18%	0.14%	88.23¢
\$6 HONORED CITIZEN PASS	<u>1.14%</u>	<u>0.89%</u>	51.21¢
	128.13%	100.00%	

AVERAGE FARE = 49.78¢
 BOARDING FARE = 35.26¢
 TRANSFER SLIP RATE = 1.262
 TOTAL TRANSFER RATE = 1.412

FARE CATEGORY DISTRIBUTION

SPRING, 1982 F. 23

DAY TYPE=WEEKDAY LINE TYPE=ALL

TIME PERIOD=DAY BASE

<u>FARE CATEGORY</u>	<u>REPORTED DISTRIBUTION</u>	<u>ADJUSTED DISTRIBUTION</u>	<u>FARE</u>
FARE NON-COMPLIANCE	1.00%	0.79%	0.0 ¢
FARELESS SQUARE	2.44%	1.93%	0.0 ¢
TRI-MET EMPLOYEES	0.81%	0.64%	0.0 ¢
25¢ HONORED CITIZENS	13.63%	10.80%	25.00¢
45¢ YOUTH	13.70%	10.86%	45.00¢
65¢ ADULT	28.06%	22.24%	65.00¢
90¢ ADULT	11.95%	9.47%	90.00¢
\$1.00 VANCOUVER	0.63%	0.50%	100.00¢
\$14 YOUTH PASS	11.04%	8.75%	31.90¢
\$21 ADULT PASS	25.73%	20.39%	50.14¢
\$29 ADULT PASS	15.46%	12.25%	53.62¢
\$35 VANCOUVER PASS	0.41%	0.32%	123.54¢
COUNTY PASS	0.18%	0.14%	88.23¢
\$6 HONORED CITIZEN PASS	<u>1.14%</u>	<u>0.90%</u>	51.21¢
	126.18%	100.00%	

AVERAGE FARE = 51.64¢
 BOARDING FARE = 38.80¢
 TRANSFER SLIP RATE = 1.201
 TOTAL TRANSFER RATE = 1.331

FARE CATEGORY DISTRIBUTION

SPRING, 1982 F. 24

DAY TYPE=WEEKDAY LINE TYPE=REGIONAL

TIME PERIOD=DAY BASE

<u>FARE CATEGORY</u>	<u>REPORTED DISTRIBUTION</u>	<u>ADJUSTED DISTRIBUTION</u>	<u>FARE</u>
FARE NON-COMPLIANCE	1.00%	0.80%	0.0 ¢
FARELESS SQUARE	2.44%	1.95%	0.0 ¢
TRI-MET EMPLOYEES	0.81%	0.65%	0.0 ¢
25¢ HONORED CITIZENS	9.27%	7.42%	25.00¢
45¢ YOUTH	13.39%	10.72%	45.00¢
65¢ ADULT	29.13%	23.32%	65.00¢
90¢ ADULT	20.88%	16.71%	90.00¢
\$1.00 VANCOUVER	0.0 %	0.0 %	100.00¢
\$14 YOUTH PASS	8.01%	6.41%	31.90¢
\$21 ADULT PASS	20.84%	16.68%	50.14¢
\$29 ADULT PASS	18.16%	14.53%	53.62¢
\$35 VANCOUVER PASS	0.0 %	0.0 %	123.54¢
COUNTY PASS	0.18%	0.14%	88.23¢
\$6 HONORED CITIZEN PASS	<u>0.81%</u>	<u>0.65%</u>	51.21¢
	124.92%	100.00%	

AVERAGE FARE = 55.54¢
 BOARDING FARE = 43.90¢
 TRANSFER SLIP RATE = 1.180
 TOTAL TRANSFER RATE = 1.265

FARE CATEGORY DISTRIBUTION

SPRING, 1982 F. 25

DAY TYPE=WEEKDAY LINE TYPE=URBAN RADIAL

TIME PERIOD=DAY BASE

<u>FARE CATEGORY</u>	<u>REPORTED DISTRIBUTION</u>	<u>ADJUSTED DISTRIBUTION</u>	<u>FARE</u>
FARE NON-COMPLIANCE	1.00%	0.82%	0.0 ¢
FARELESS SQUARE	2.44%	1.99%	0.0 ¢
TRI-MET EMPLOYEES	0.81%	0.66%	0.0 ¢
25¢ HONORED CITIZENS	14.72%	12.02%	25.00¢
45¢ YOUTH	13.93%	11.37%	45.00¢
65¢ ADULT	27.36%	22.33%	65.00¢
90¢ ADULT	7.82%	6.38%	90.00¢
\$1.00 VANCOUVER	0.0 %	0.0 %	100.00¢
\$14 YOUTH PASS	10.92%	8.91%	31.90¢
\$21 ADULT PASS	28.05%	22.89%	50.14¢
\$29 ADULT PASS	14.09%	11.50%	53.62¢
\$35 VANCOUVER PASS	0.0 %	0.0 %	123.54¢
COUNTY PASS	0.18%	0.15%	88.23¢
\$6 HONORED CITIZEN PASS	<u>1.21%</u>	<u>0.98%</u>	51.21¢
	122.54%	100.00%	

AVERAGE FARE = 49.50¢
 BOARDING FARE = 36.50¢
 TRANSFER SLIP RATE = 1.201
 TOTAL TRANSFER RATE = 1.356

FARE CATEGORY DISTRIBUTION

SPRING, 1982 F. 26

DAY TYPE=WEEKDAY LINE TYPE=PEAK HOUR

TIME PERIOD=DAY BASE

<u>FARE CATEGORY</u>	<u>REPORTED DISTRIBUTION</u>	<u>ADJUSTED DISTRIBUTION</u>	<u>FARE</u>
FARE NON-COMPLIANCE	1.00%	0.59%	0.0 ¢
FARELESS SQUARE	2.44%	1.43%	0.0 ¢
TRI-MET EMPLOYEES	0.81%	0.47%	0.0 ¢
25¢ HONORED CITIZENS	10.14%	5.94%	25.00¢
45¢ YOUTH	0.0 %	0.0 %	45.00¢
65¢ ADULT	25.81%	15.11%	65.00¢
90¢ ADULT	41.66%	24.40%	90.00¢
\$1.00 VANCOUVER	0.0 %	0.0 %	100.00¢
\$14 YOUTH PASS	1.92%	1.13%	31.90¢
\$21 ADULT PASS	33.15%	19.42%	50.14¢
\$29 ADULT PASS	52.80%	30.92%	53.62¢
\$35 VANCOUVER PASS	0.0 %	0.0 %	123.54¢
COUNTY PASS	0.18%	0.11%	88.23¢
\$6 HONORED CITIZEN PASS	<u>0.82%</u>	<u>0.48%</u>	51.21¢
	170.73%	100.00%	

AVERAGE FARE = 60.29¢
 BOARDING FARE = 43.91¢
 TRANSFER SLIP RATE = 1.267
 TOTAL TRANSFER RATE = 1.373

FARE CATEGORY DISTRIBUTION

SPRING, 1982 F. 27

DAY TYPE=WEEKDAY LINE TYPE=LOCAL RADIAL

TIME PERIOD=DAY BASE

<u>FARE CATEGORY</u>	<u>REPORTED DISTRIBUTION</u>	<u>ADJUSTED DISTRIBUTION</u>	<u>FARE</u>
FARE NON-COMPLIANCE	1.00%	0.95%	0.0 ¢
FARELESS SQUARE	2.44%	2.33%	0.0 ¢
TRI-MET EMPLOYEES	0.81%	0.77%	0.0 ¢
25¢ HONORED CITIZENS	9.47%	9.04%	25.00¢
45¢ YOUTH	13.81%	13.18%	45.00¢
65¢ ADULT	25.80%	24.63%	65.00¢
90¢ ADULT	12.45%	11.89%	90.00¢
\$1.00 VANCOUVER	0.0 %	0.0 %	100.00¢
\$14 YOUTH PASS	9.73%	9.29%	31.90¢
\$21 ADULT PASS	21.12%	20.16%	50.14¢
\$29 ADULT PASS	7.14%	6.81%	53.62¢
\$35 VANCOUVER PASS	0.0 %	0.0 %	123.54¢
COUNTY PASS	0.18%	0.17%	88.23¢
\$6 HONORED CITIZEN PASS	<u>0.81%</u>	<u>0.78%</u>	51.21¢
	104.76%	100.00%	

AVERAGE FARE = 52.17¢

BOARDING FARE = 40.32¢

TRANSFER SLIP RATE = 1.163

TOTAL TRANSFER RATE = 1.294

FARE CATEGORY DISTRIBUTION

SPRING, 1982 F.. 28

DAY TYPE=WEEKDAY LINE TYPE=GRID / FEEDER TIME PERIOD=DAY BASE

<u>FARE CATEGORY</u>	<u>REPORTED DISTRIBUTION</u>	<u>ADJUSTED DISTRIBUTION</u>	<u>FARE</u>
FARE NON-COMPLIANCE	1.00%	0.80%	0.0 ¢
FARELESS SQUARE	2.44%	1.94%	0.0 ¢
TRI-MET EMPLOYEES	0.81%	0.64%	0.0 ¢
25¢ HONORED CITIZENS	16.29%	12.96%	25.00¢
45¢ YOUTH	20.92%	16.64%	45.00¢
65¢ ADULT	21.56%	17.16%	65.00¢
90¢ ADULT	9.12%	7.26%	90.00¢
\$1.00 VANCOUVER	0.0 %	0.0 %	100.00¢
\$14 YOUTH PASS	11.54%	9.19%	31.90¢
\$21 ADULT PASS	20.59%	16.38%	50.14¢
\$29 ADULT PASS	20.00%	15.91%	53.62¢
\$35 VANCOUVER PASS	0.0 %	0.0 %	123.54¢
COUNTY PASS	0.18%	0.14%	88.23¢
\$6 HONORED CITIZEN PASS	<u>1.22%</u>	<u>0.97%</u>	51.21¢
	125.68%	100.00%	

AVERAGE FARE = 48.72¢
 BOARDING FARE = 32.86¢
 TRANSFER SLIP RATE = 1.284
 TOTAL TRANSFER RATE = 1.483