

1982

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 similiar 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

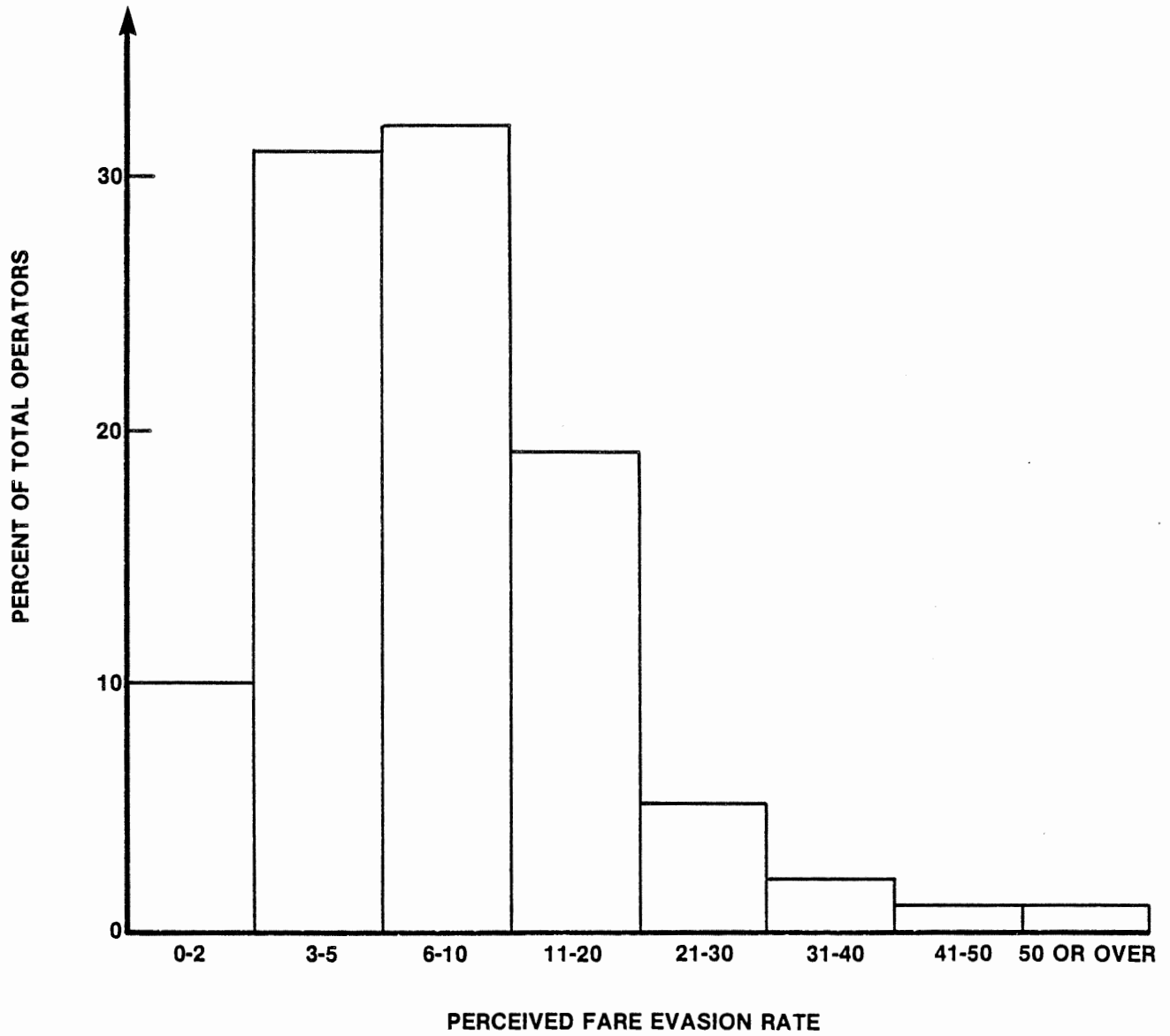
Exhibit II-1 presents the distribution of fare evasion rates, that is the percent of total riders who misuse or cheat the fare system on purpose or by mistake, as perceived by

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.

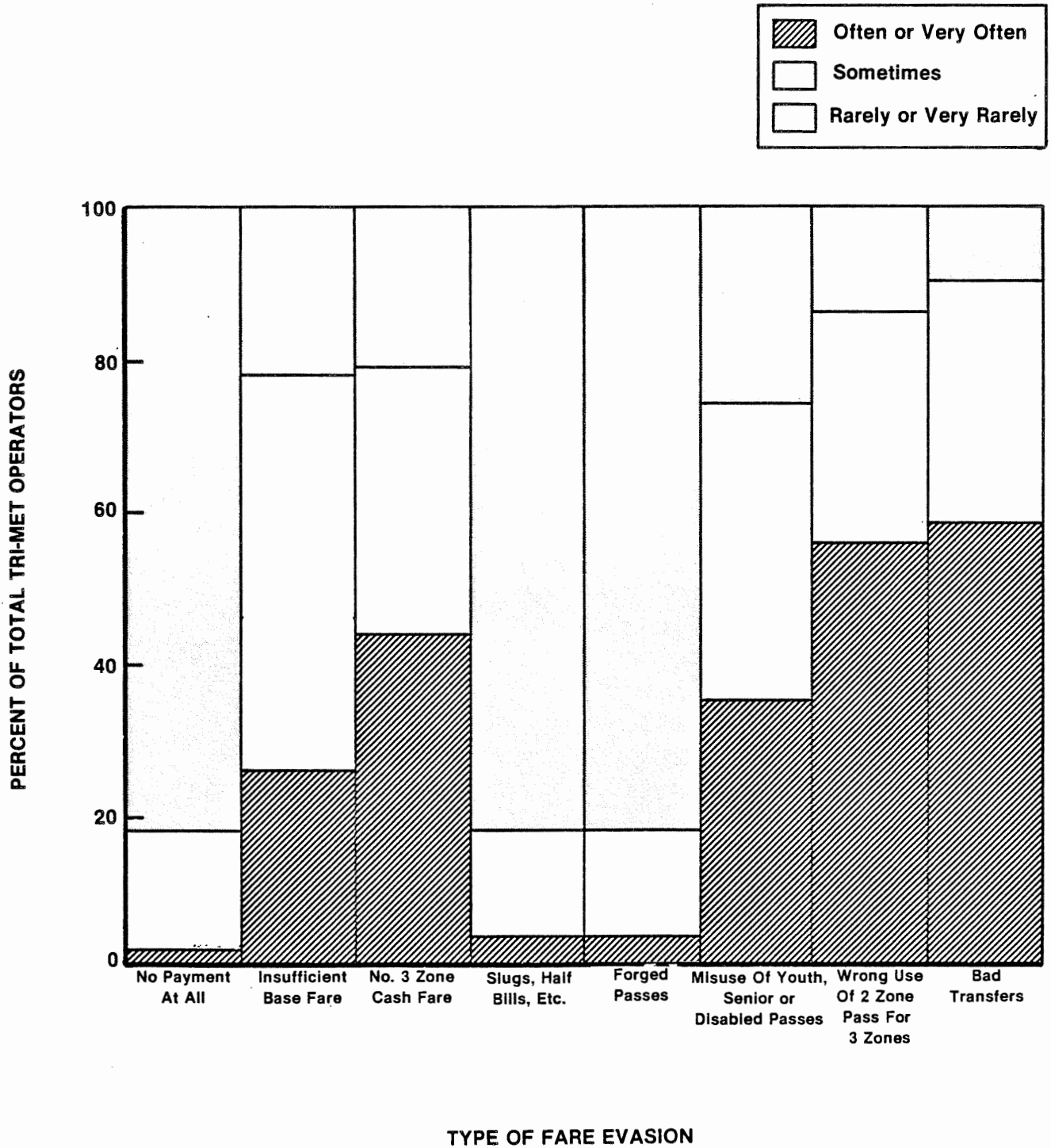
Operator Fare Collection Responsibilities and Rider-Operator Interaction

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

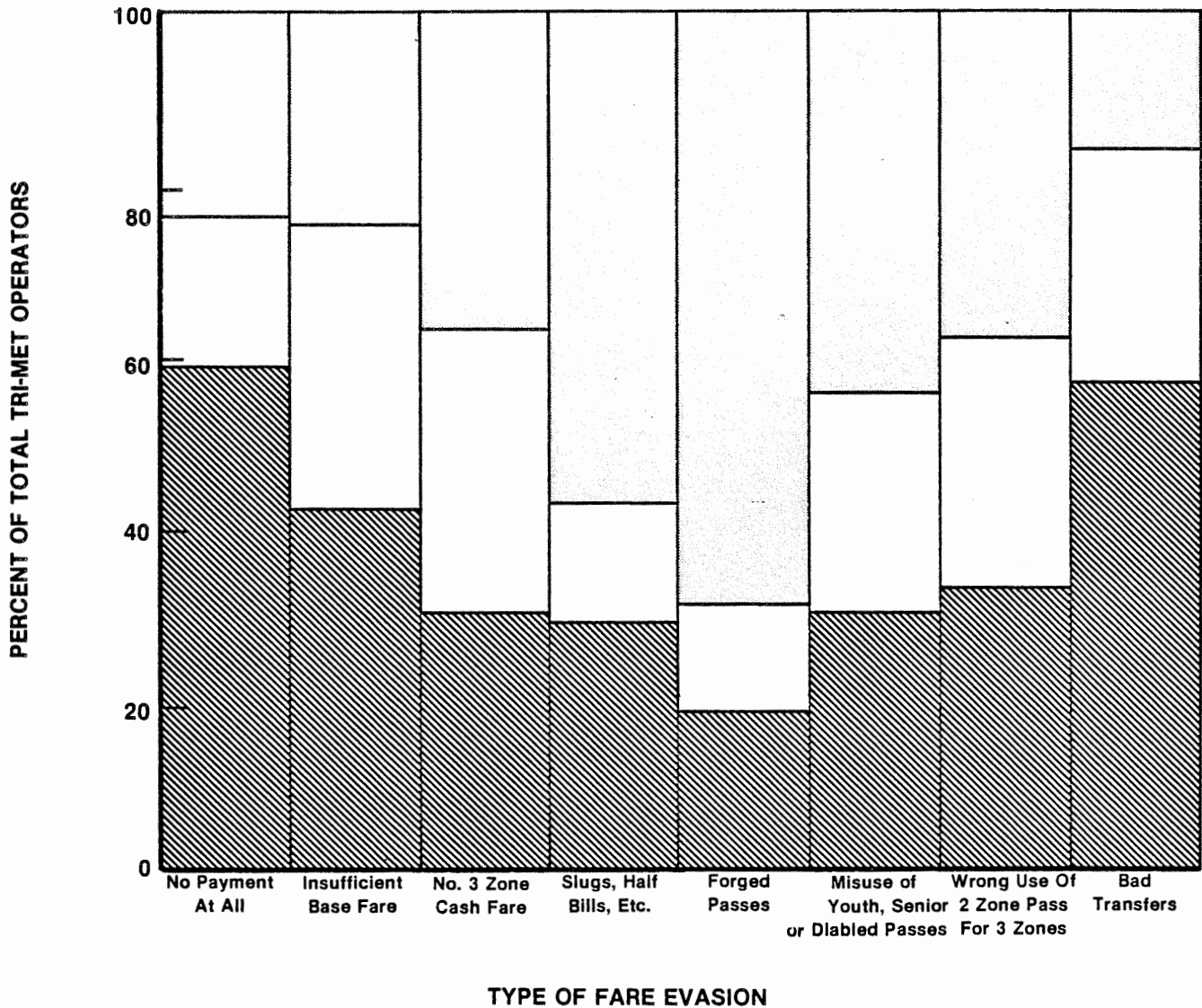
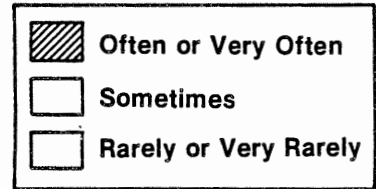
EXTENT OF FARE EVASION BY TYPE AS PERCEIVED
BY TRI-MET OPERATORS



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:

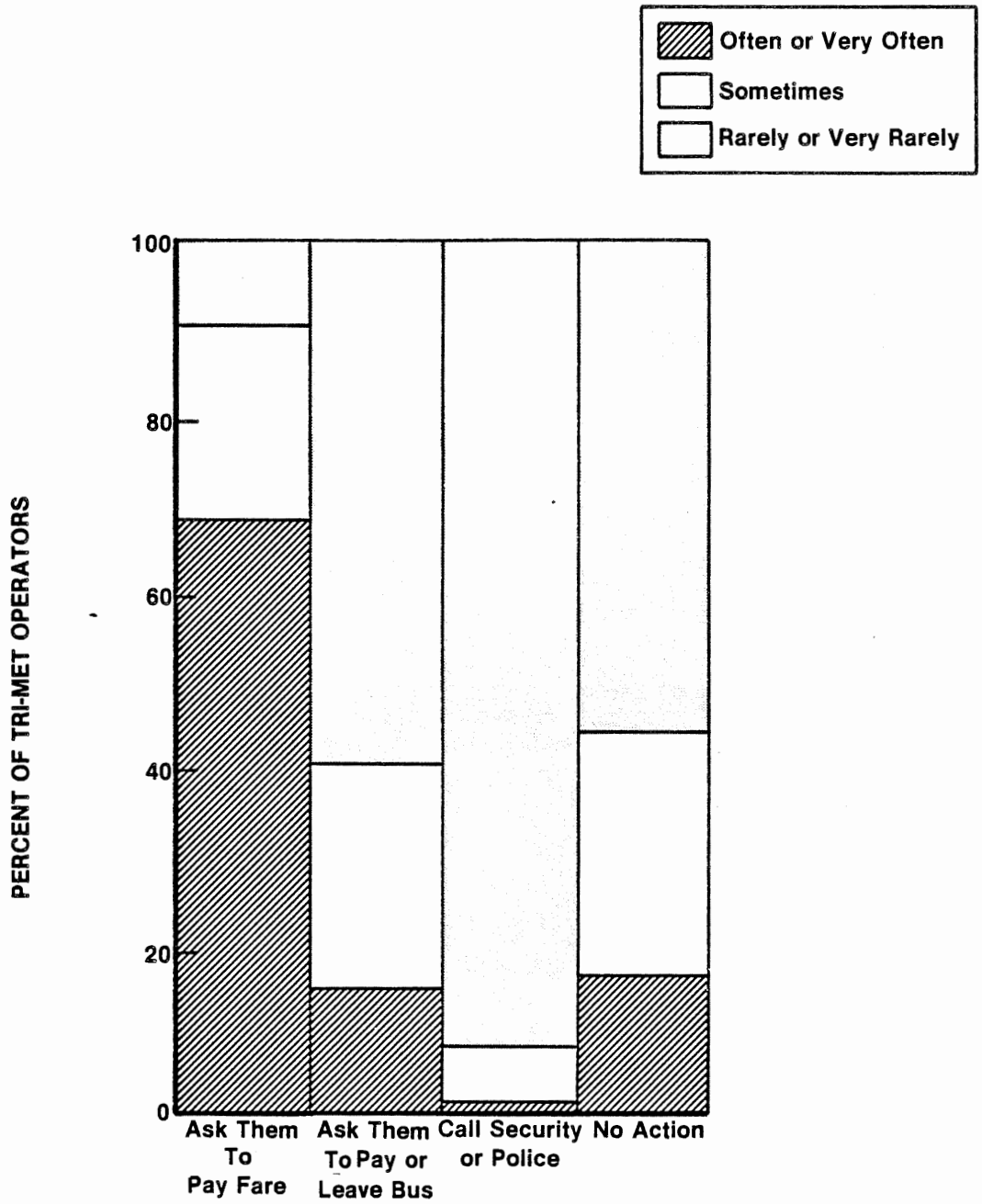
- . The low perceived incidence of riders making no payment at all (81 percent of all operators feeling that this type of fare evasion occurs rarely or vary rarely as compared to a mere 2 percent that feel it occurs often) is quite consistent with the high probability of operators confronting riders 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

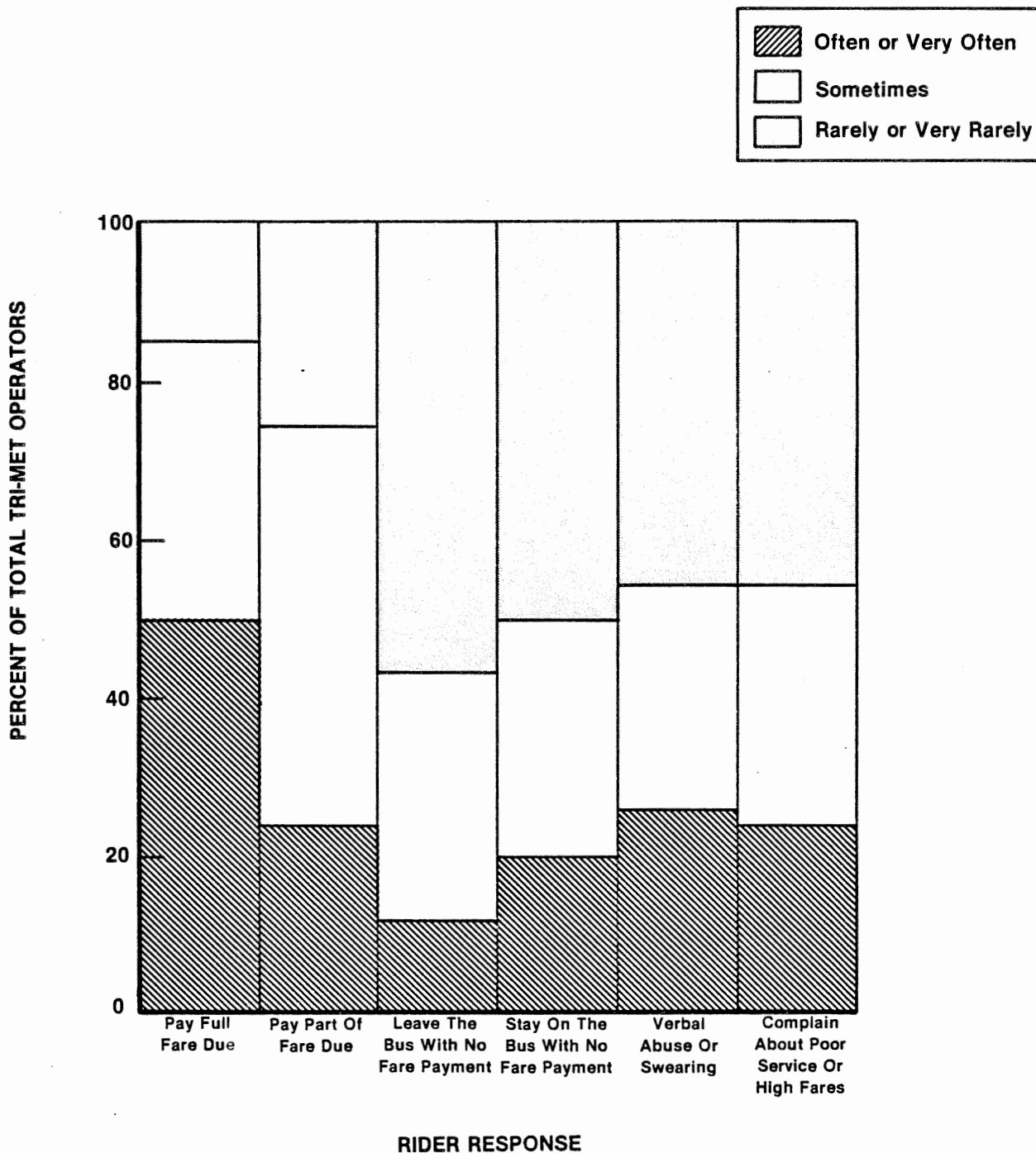
OPERATOR ACTIONS WHEN RIDERS MISUSE THE FARE SYSTEM



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.

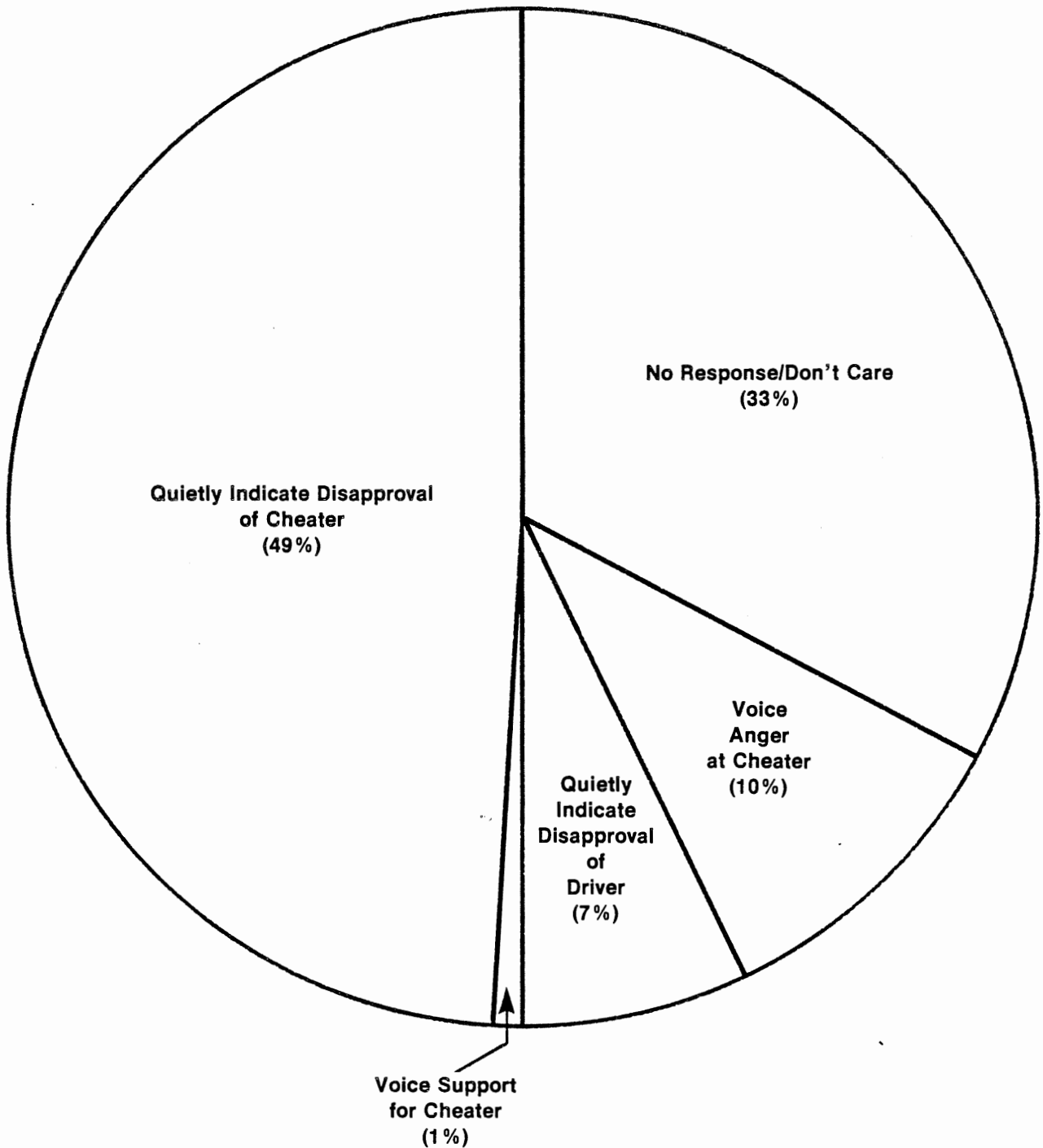
Operator Perceptions of Fare Evader and Other Rider Characteristics

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

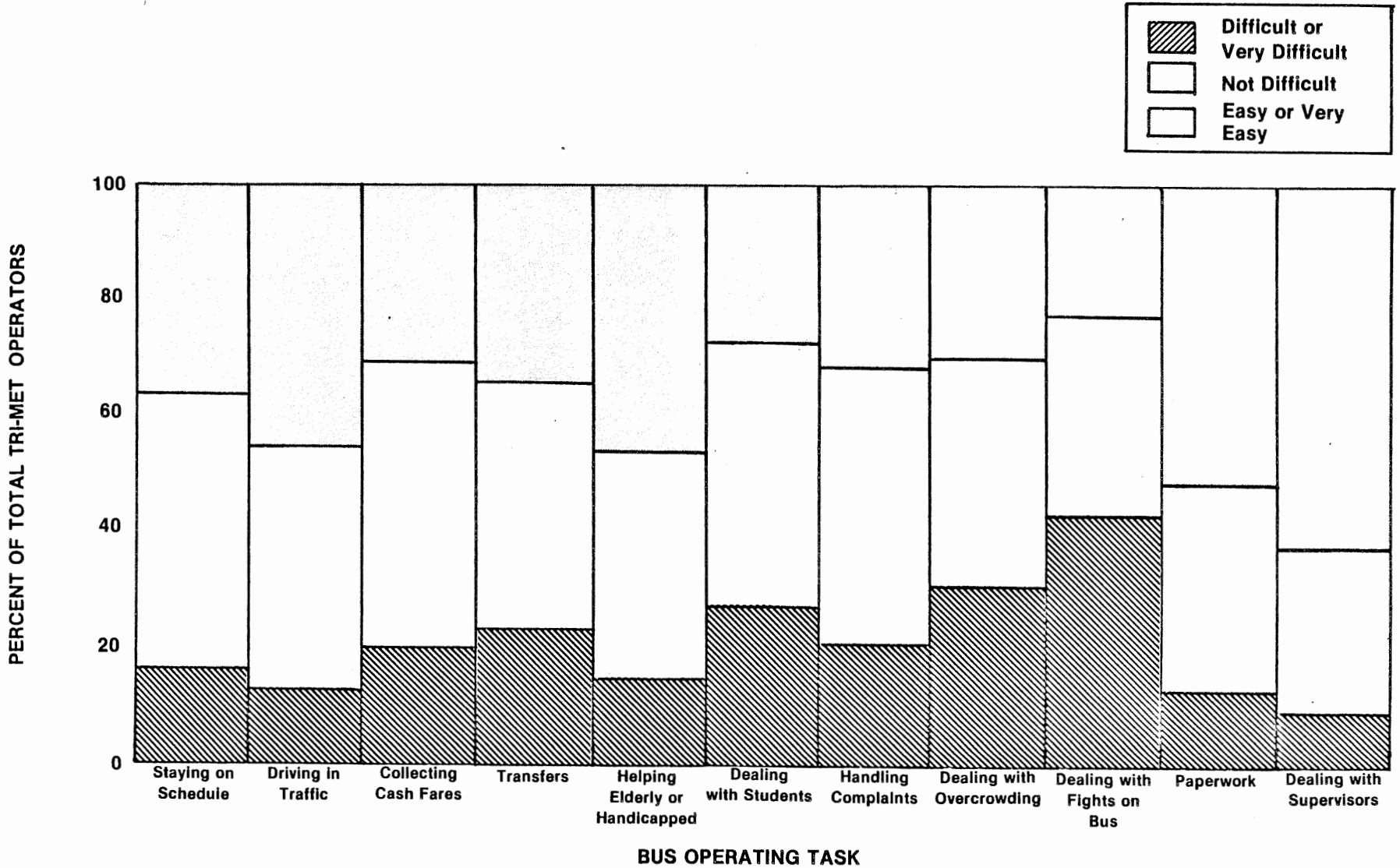
ATTITUDES OF OTHER RIDERS WHEN
OPERATORS TRY TO COLLECT FARES FROM
CHEATERS AS PERCEIVED BY TRI-MET OPERATORS



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

EXHIBIT II-7

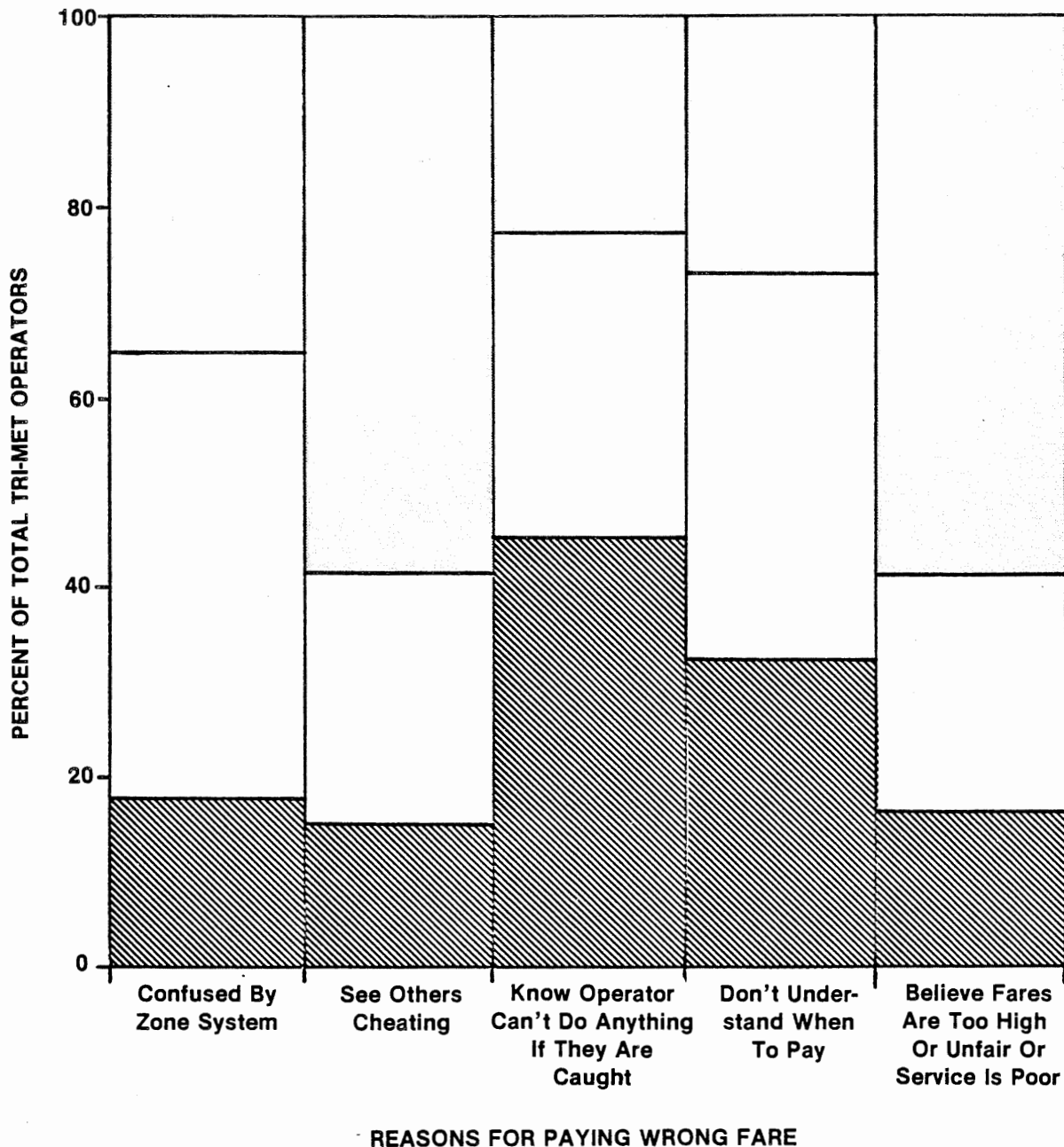
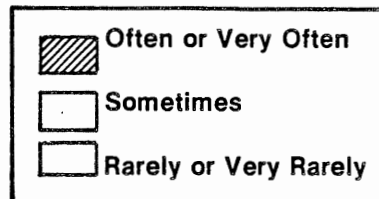
OPERATOR PERCEPTIONS OF THE
RELATIVE DIFFICULTY OR EASE OF BUS OPERATING TASKS



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

EXHIBIT II-8

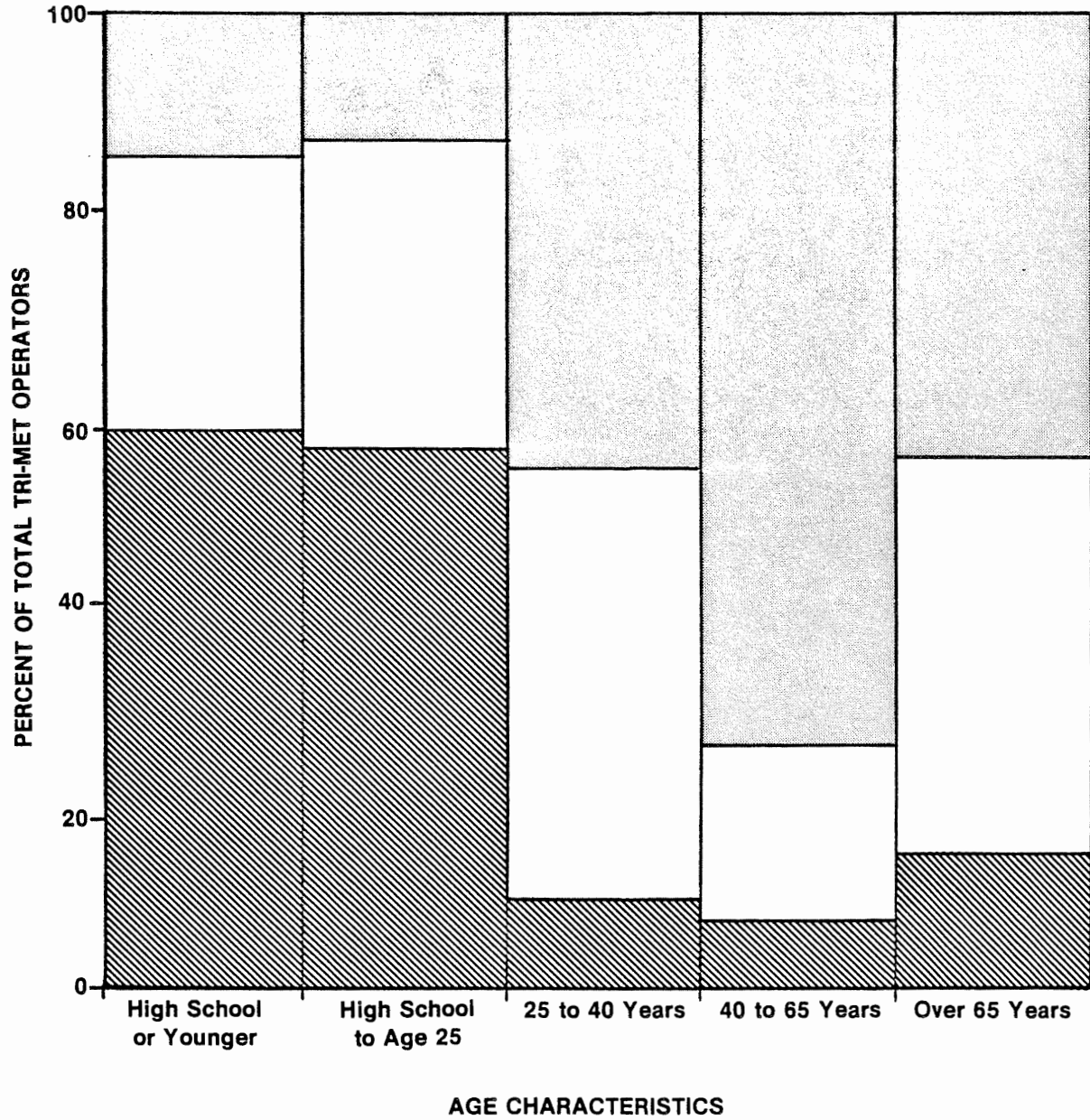
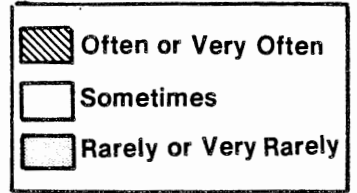
REASONS FOR RIDERS PAYING THE WRONG FARE AS PERCEIVED BY TRI-MET OPERATORS



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.

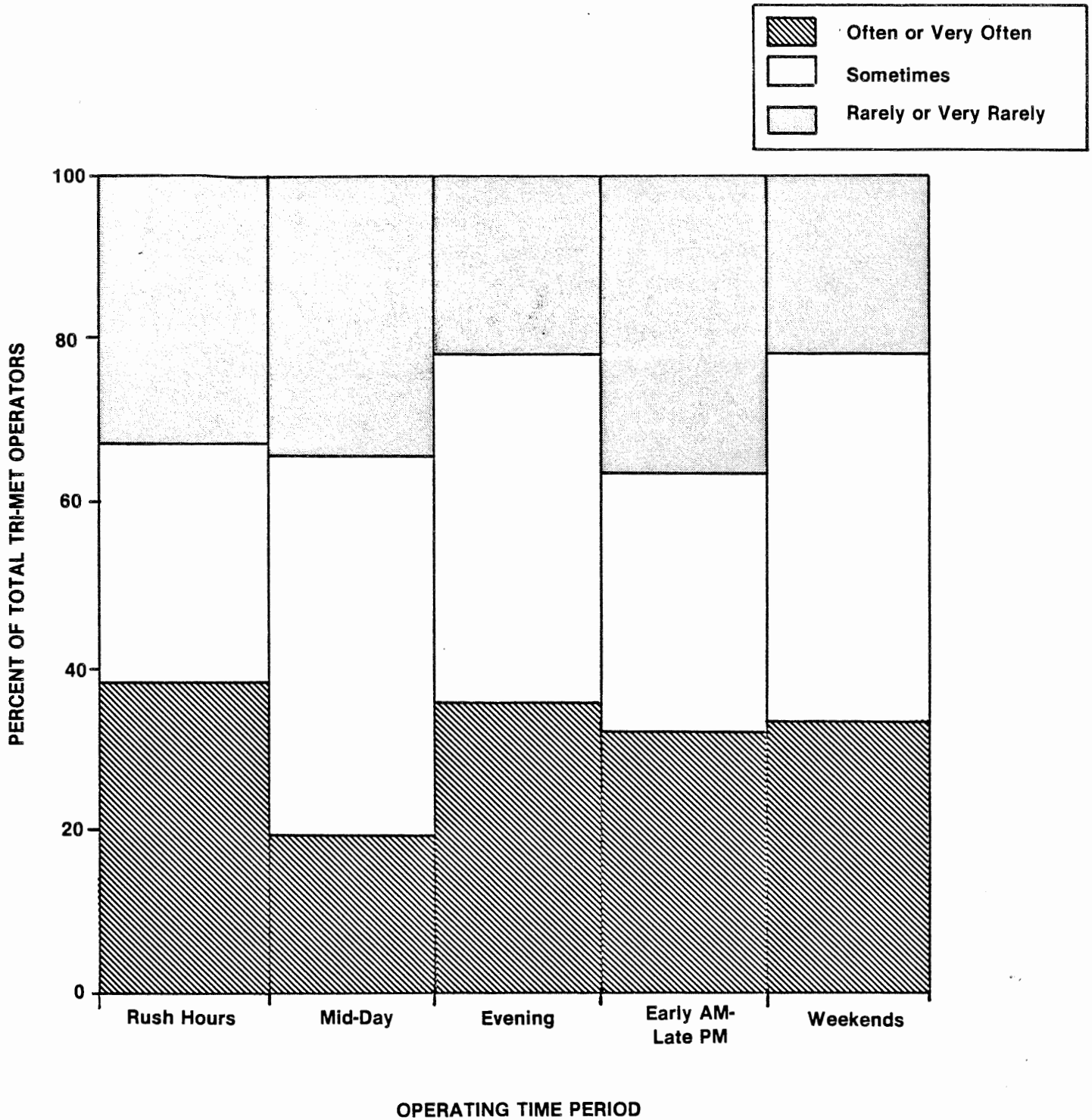
Operator Attitudes Toward Self-Service Fare Collection and the Prior (Existing) System

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

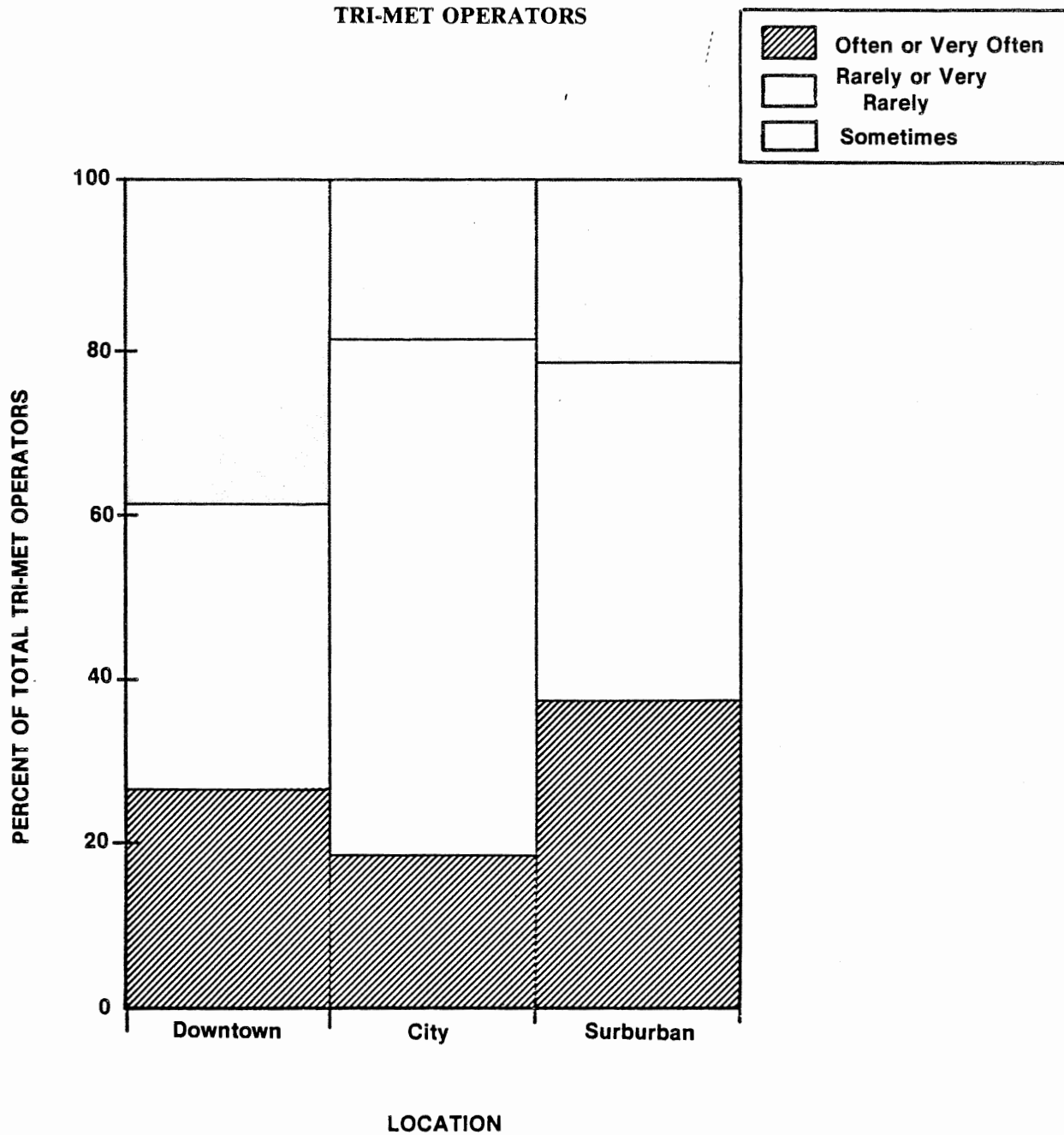
TIME OF DAY CHARACTERISTICS OF FARE EVADERS
AS PERCEIVED BY TRI-MET OPERATORS



Source Tri-Met Bus Operator Survey, February, 1982

EXHIBIT II-11

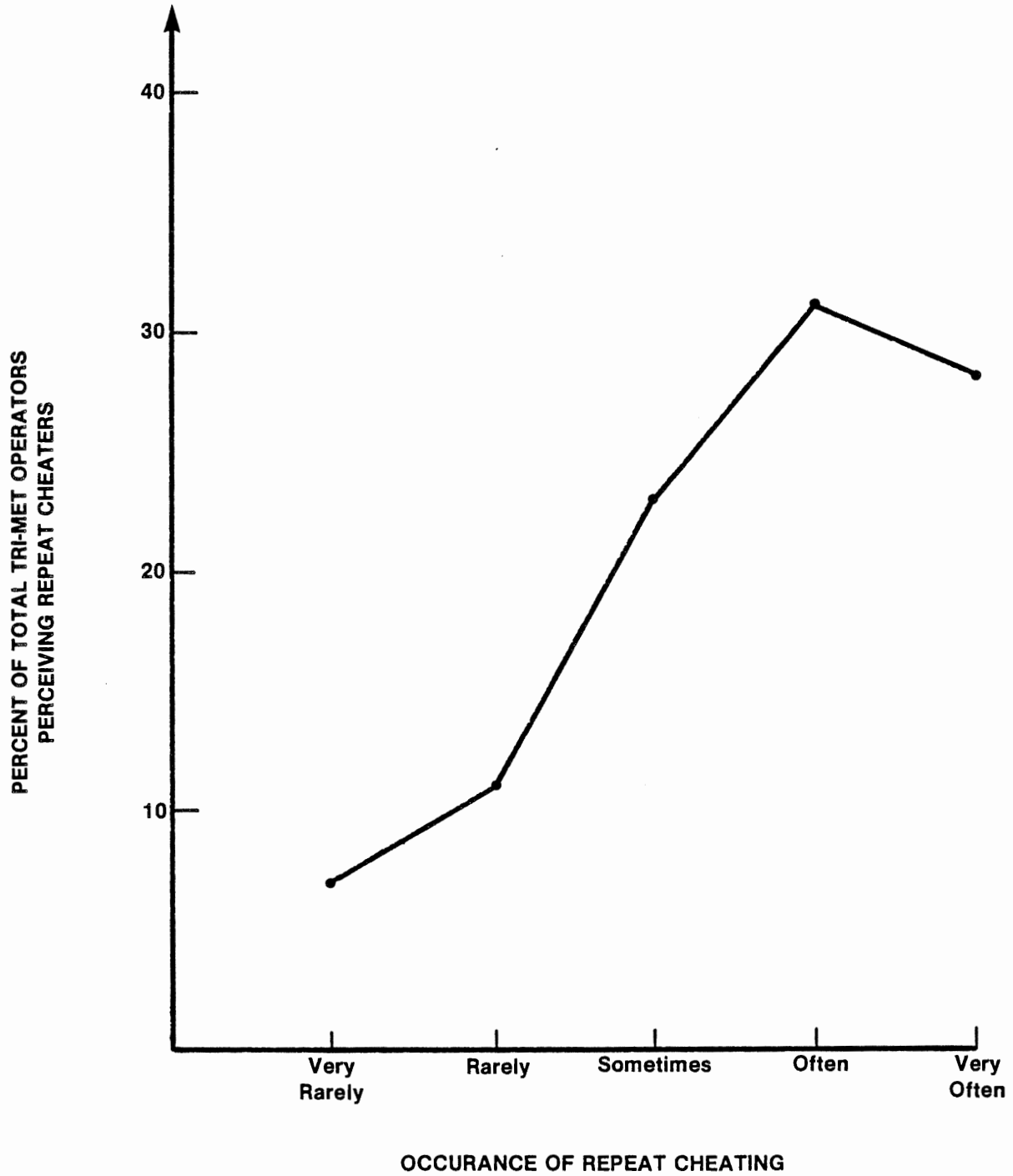
LOCATIONAL CHARACTERISTICS OF
FARE EVADERS AS PERCEIVED BY
TRI-MET OPERATORS



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

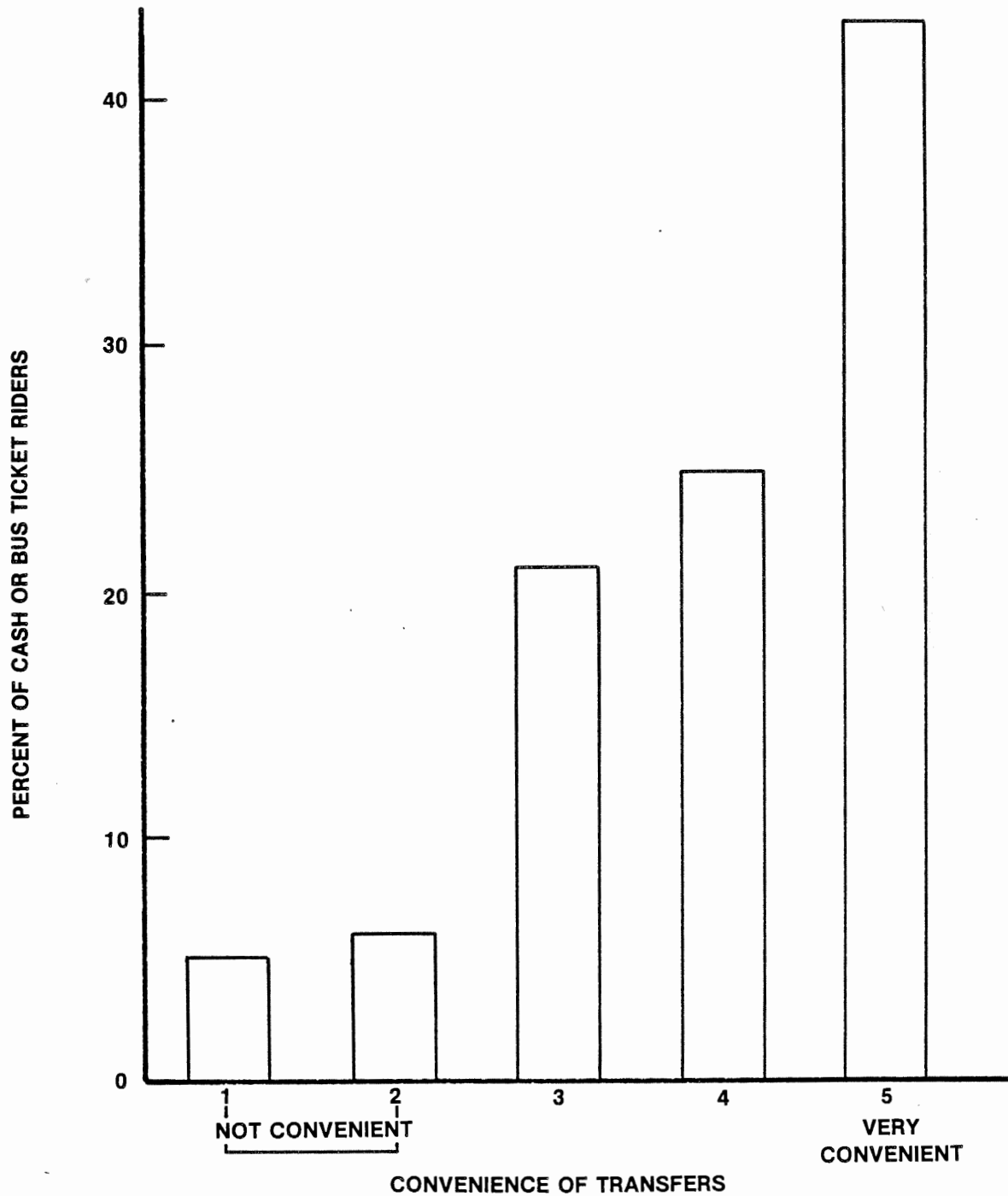
Tri-Met riders use 4 transfer slips per week on the average. It has been suggested by various transit professionals and others that transfers are viewed by many riders as a major inconvenience in using transit. When those riders who normally use cash or bus tickets to pay fares were asked whether they 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.

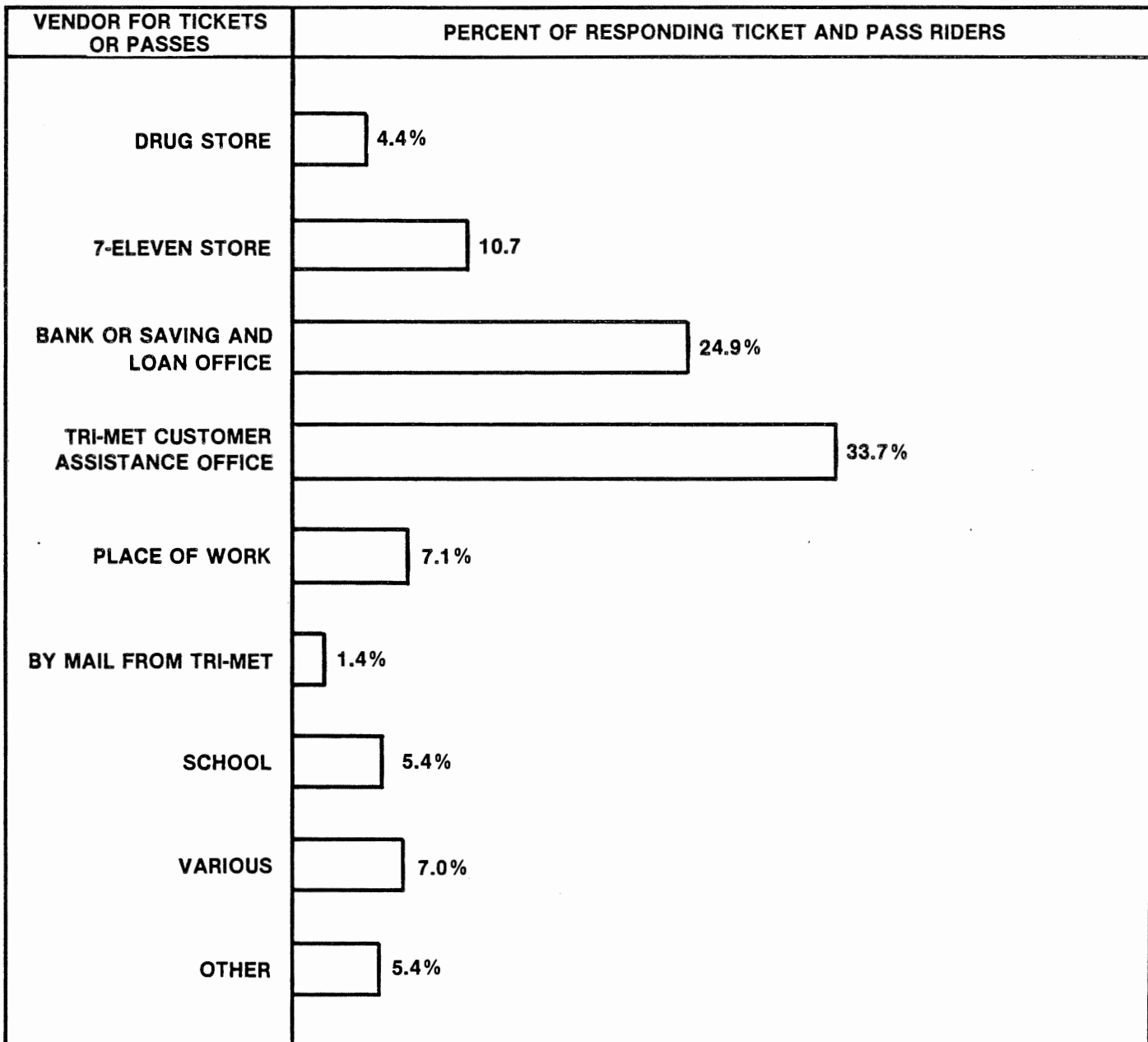
Crosstabulating the fare level, and then the type of pass, with the vendor source showed that:

- . 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.

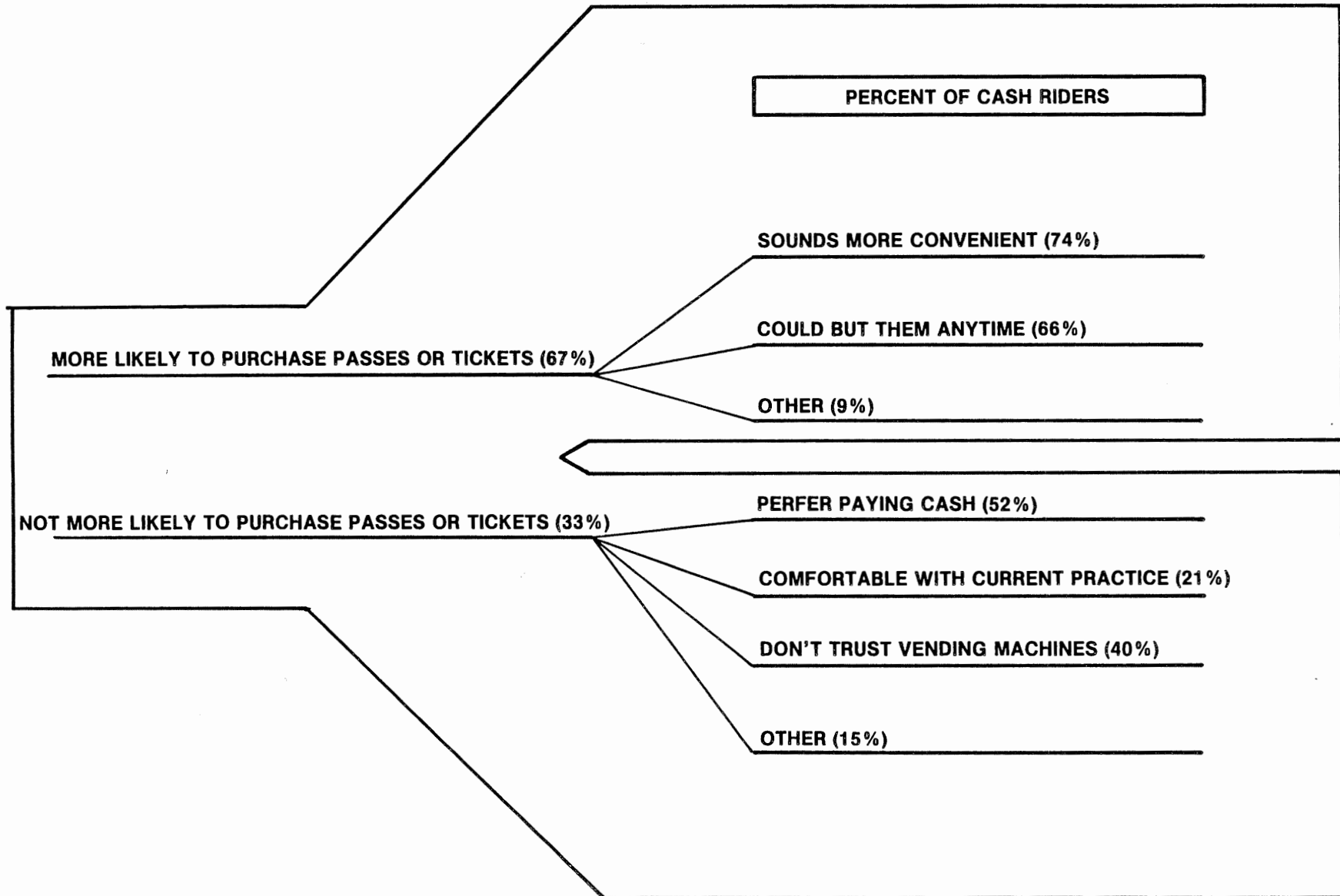
In trying to increase and maintain the proportion of transit riders using monthly passes, which is a prerequisite for maximizing the potential benefits of self-service fare collection, Tri-Met sought to obtain information on current barriers to using passes. Pass users were asked if showing their passes 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

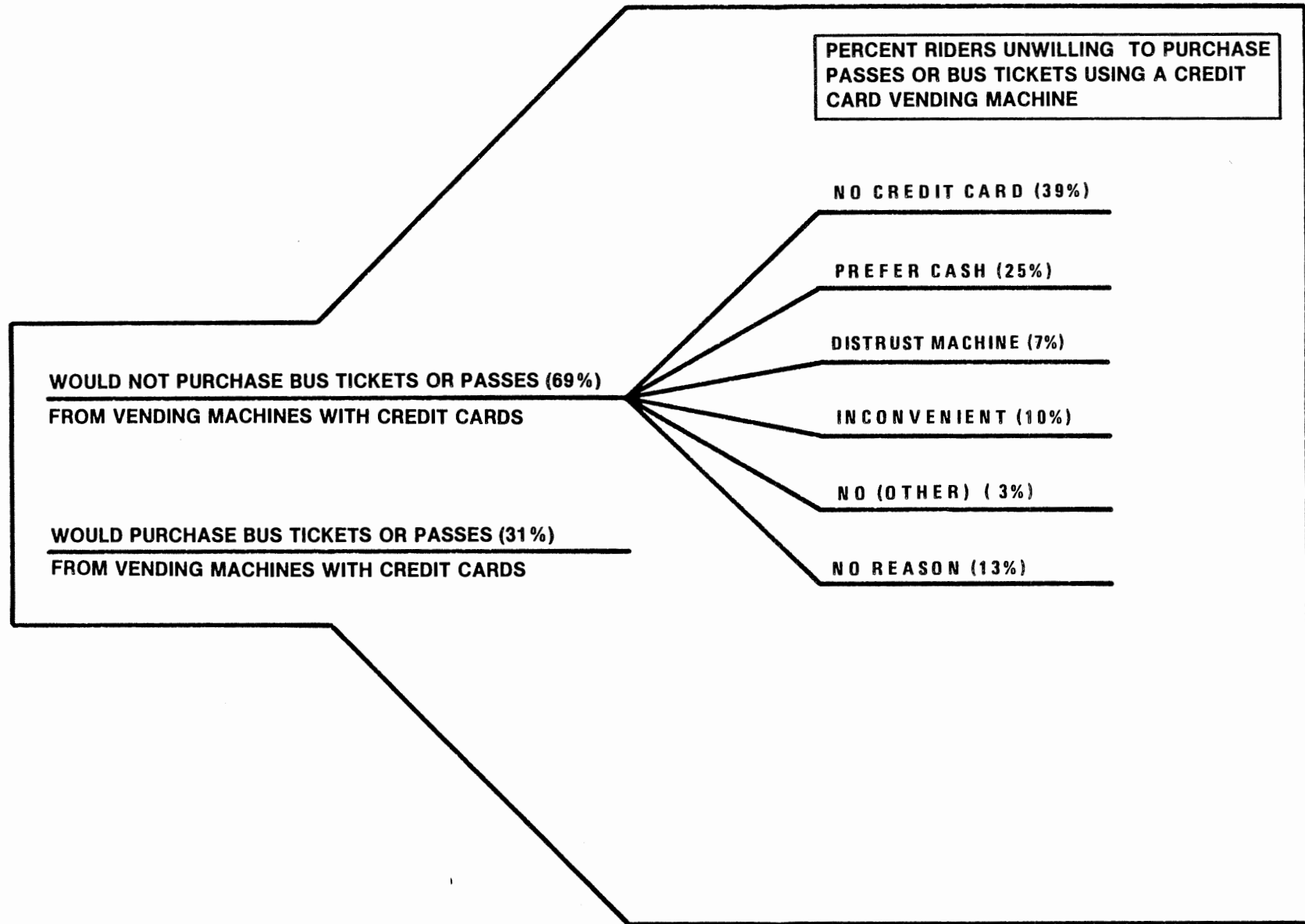
**LIKLIHOOD OF CASH RIDERS PURCHASING BUS TICKETS
OR PASSES IF READILY AVAILABLE FROM VENDING MACHINES
AND THEIR REASONS**



II.35

EXHIBIT II-22

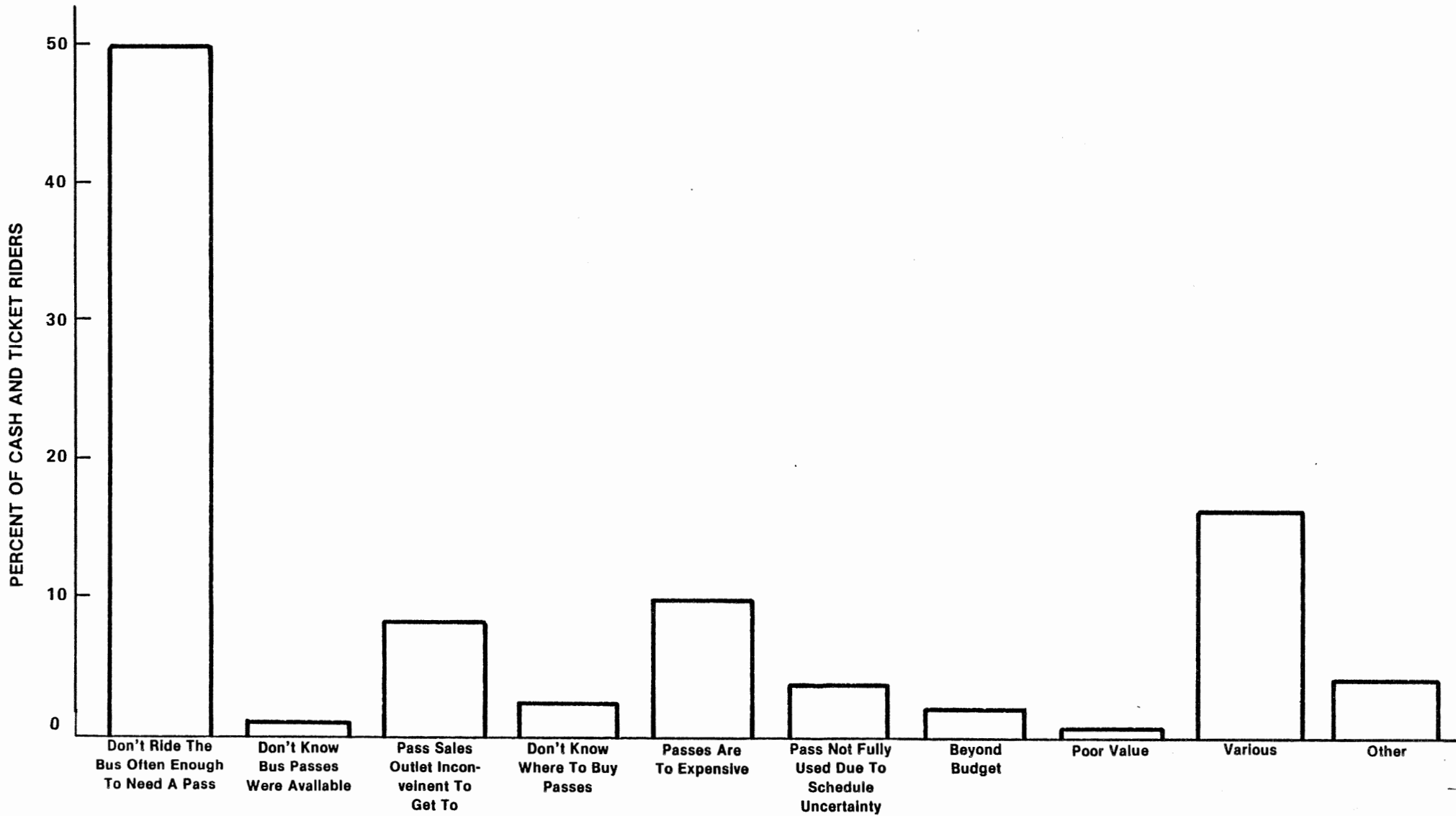
WILLINGNESS OF TRI-MET RIDERS TO PURCHASE
BUS TICKETS OR PASSES FROM VENDING MACHINES
ACCEPTING MAJOR CREDIT CARDS



II.36

EXHIBIT II-23

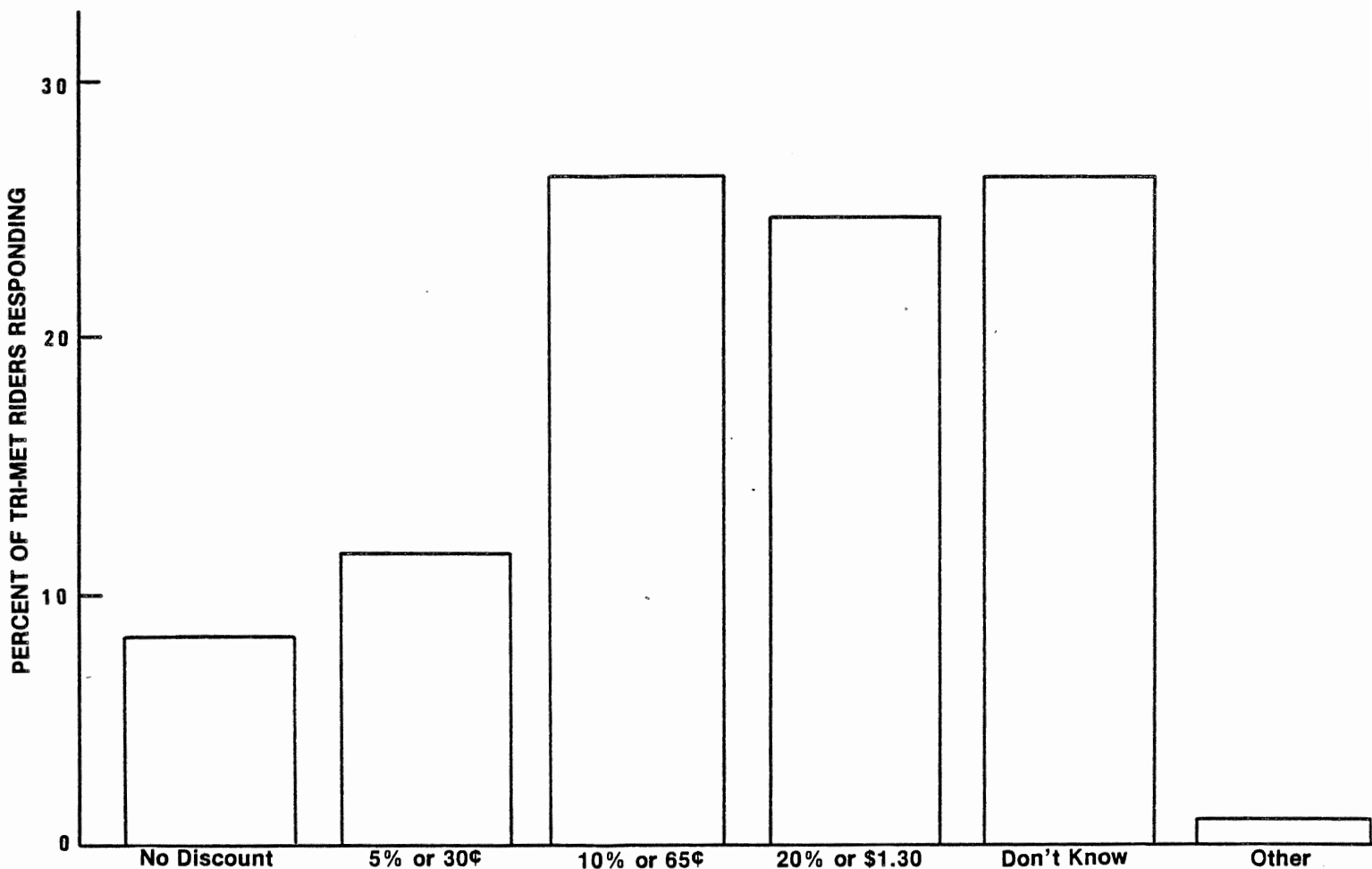
TRI-MET BUS RIDER REASONS FOR PAYING
INDIVIDUAL RIDES RATHER THAN PURCHASING A MONTHLY PASS



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

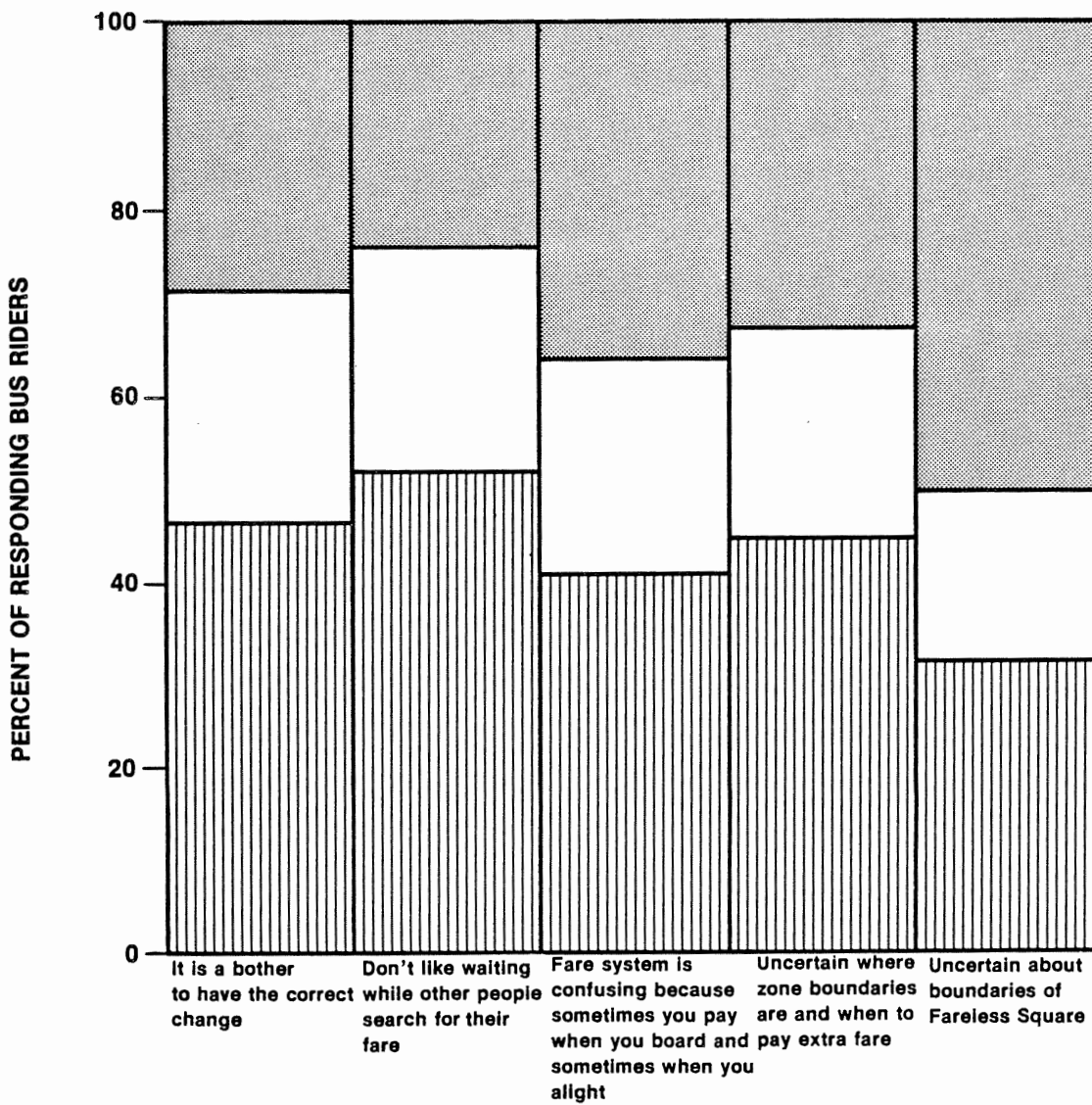
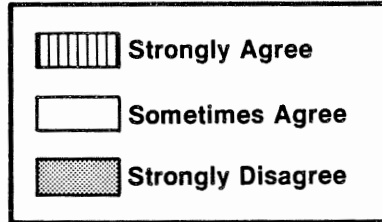
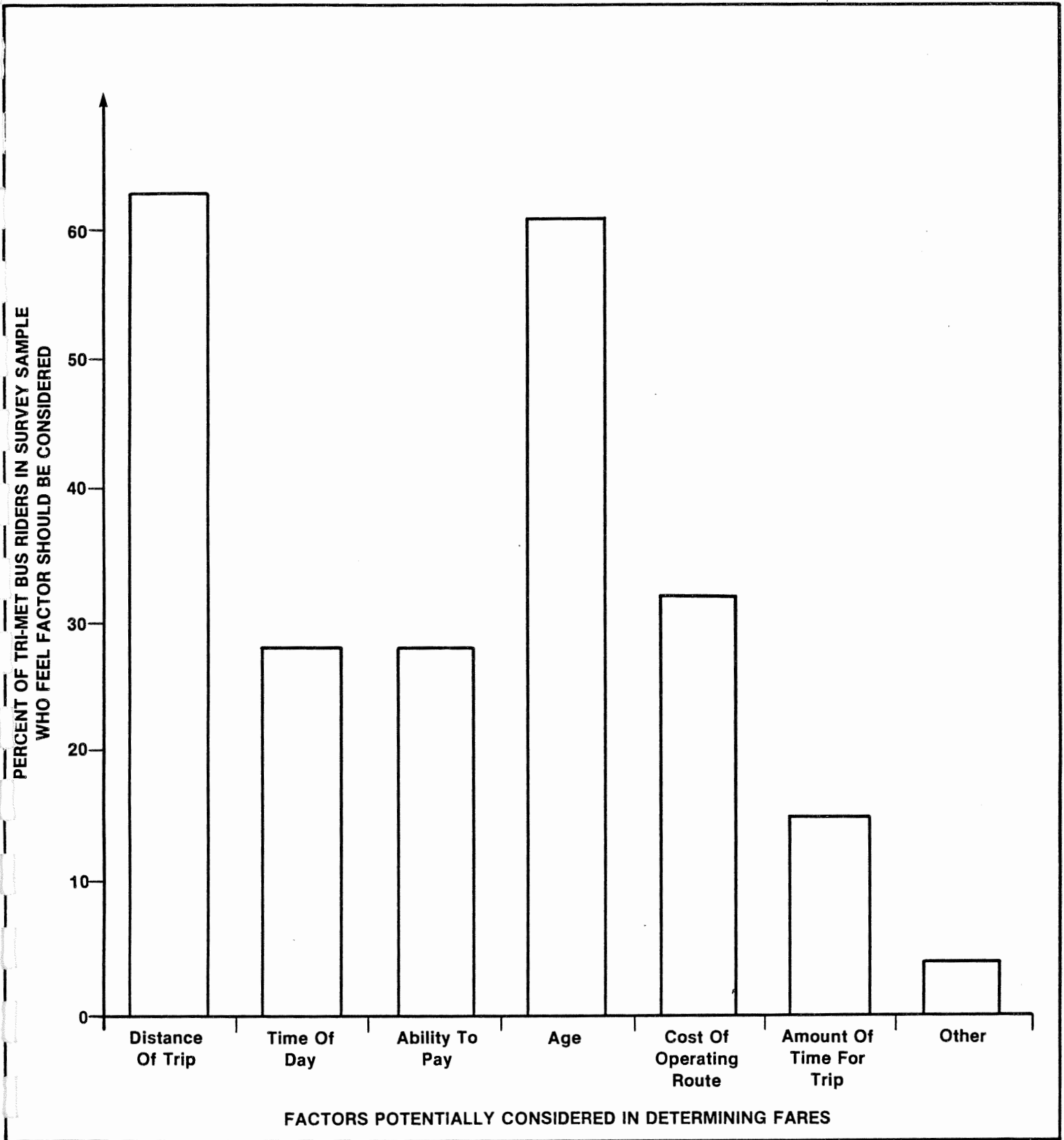


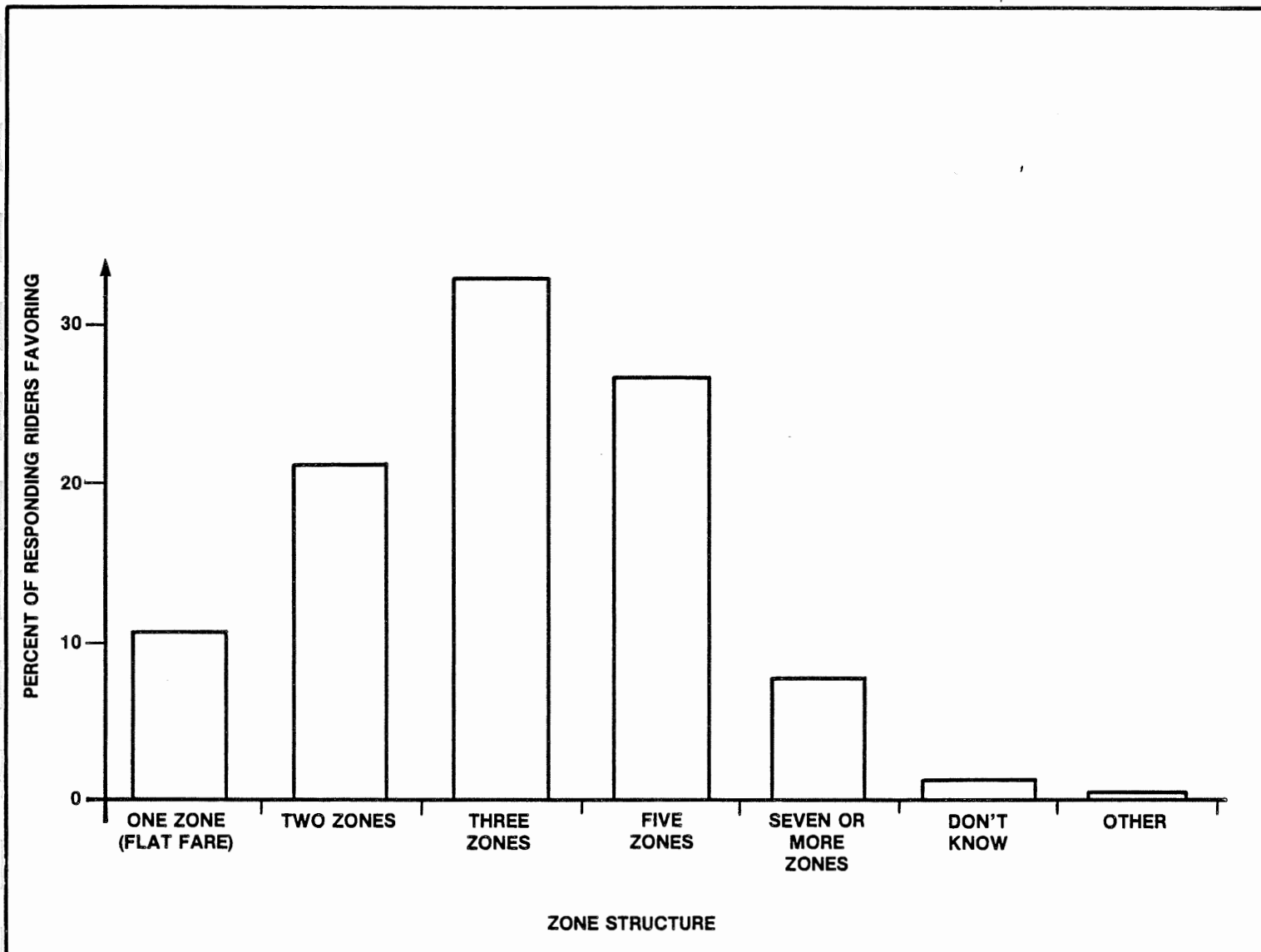
EXHIBIT II-26

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)

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 zone 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.

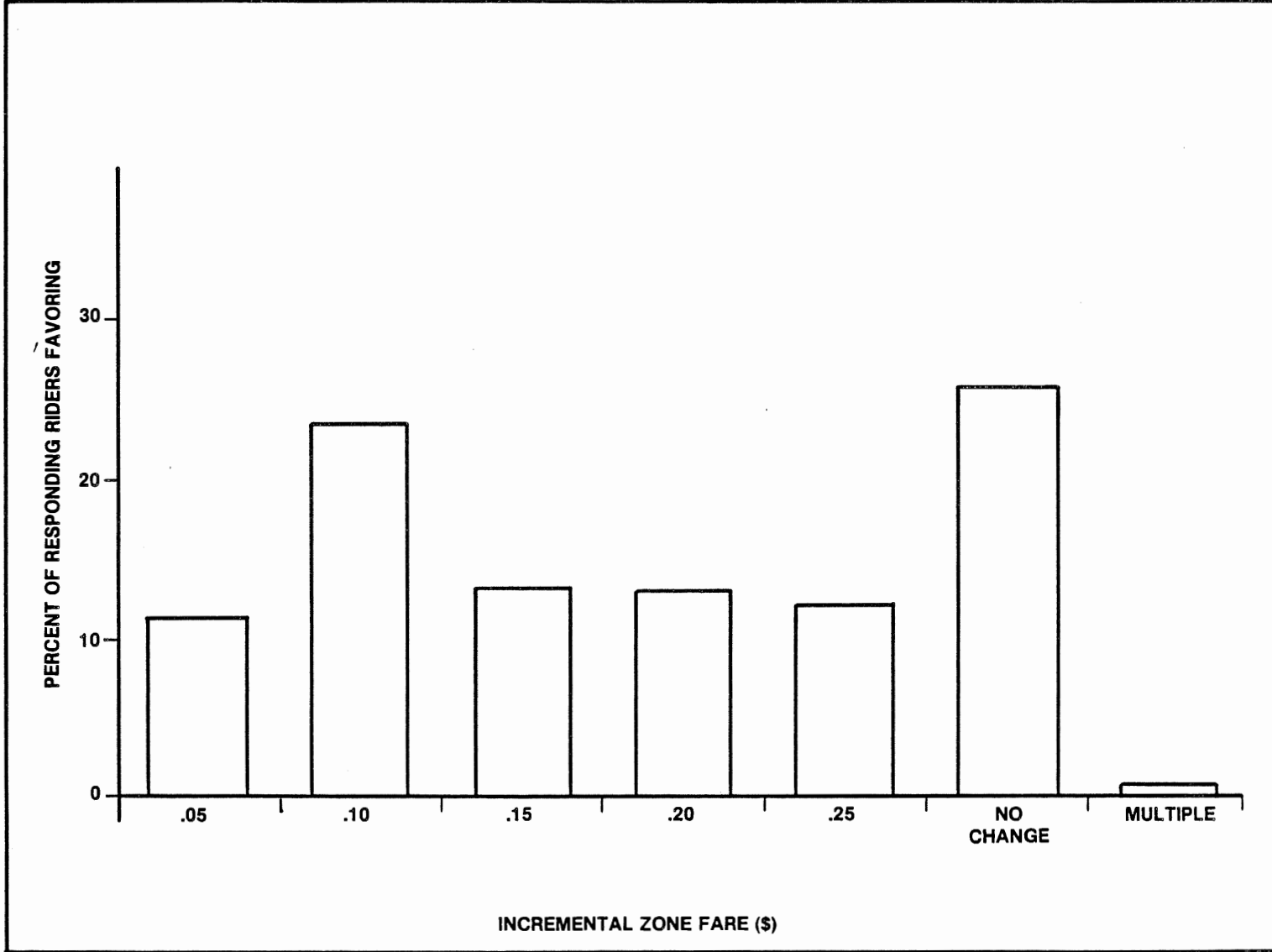
Rider Attitudes toward Fare Evasion and Enforcement

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

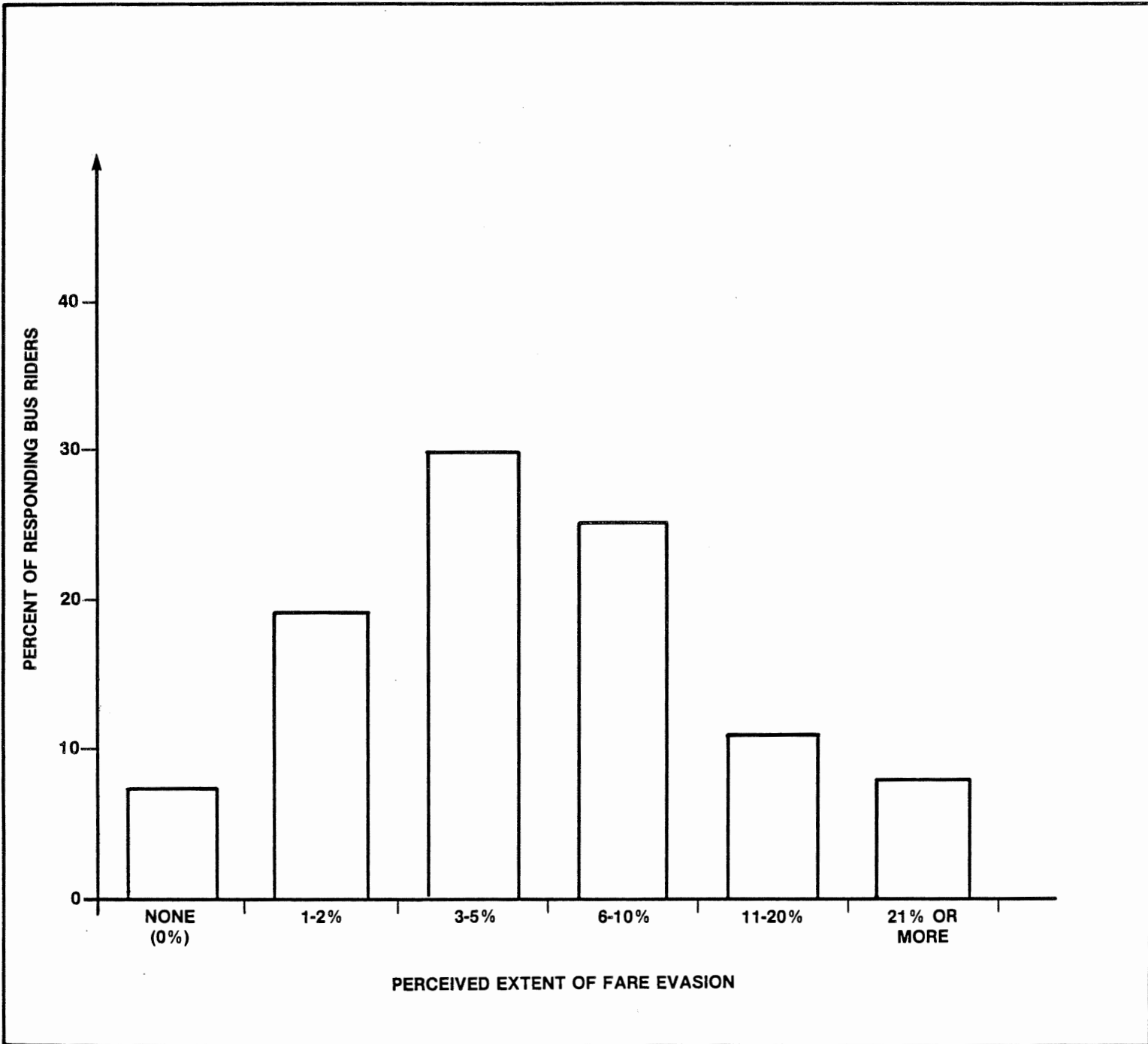
TRI-MET RIDER ATTITUDES ON
INCREMENTAL ZONE FARES



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)

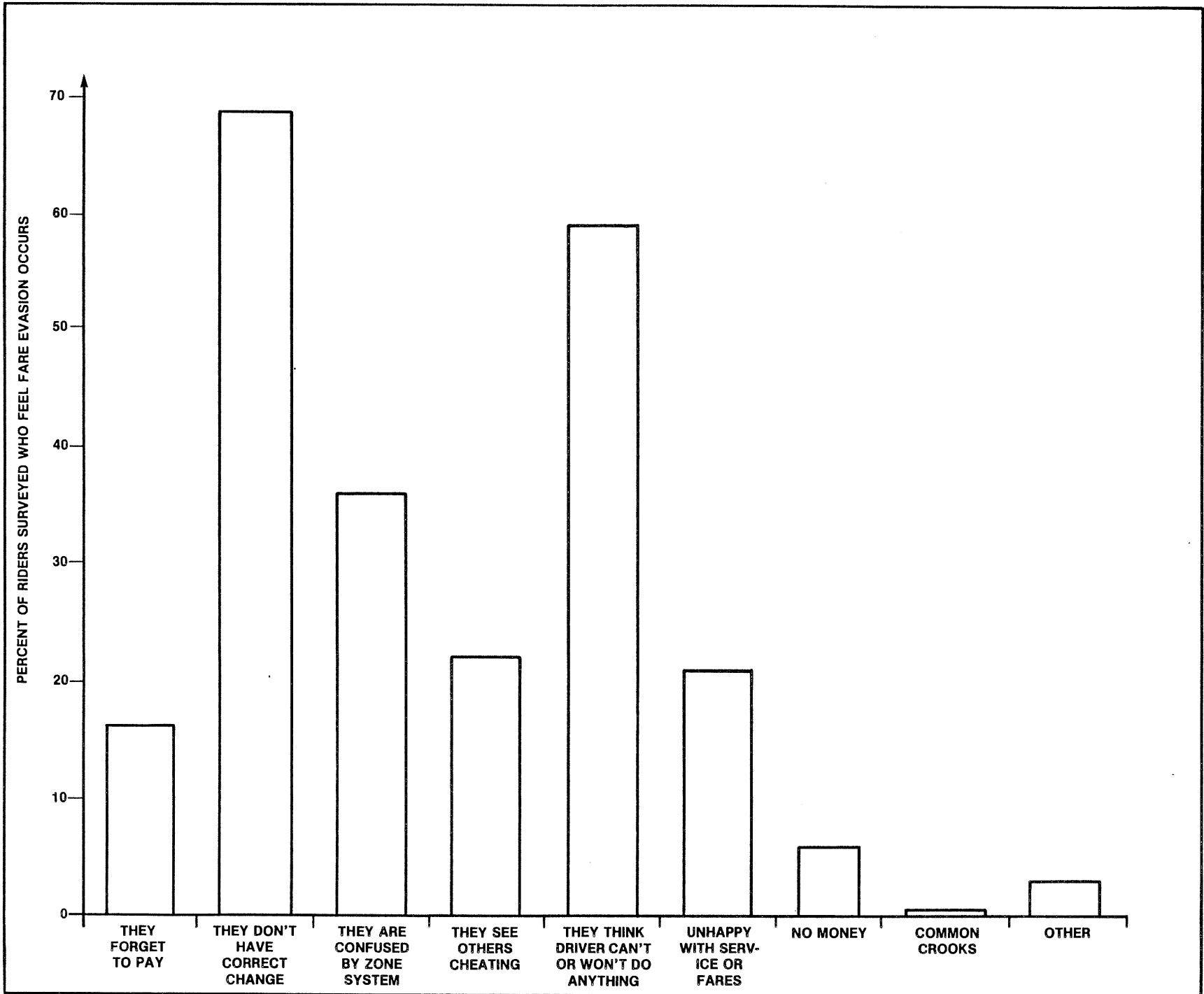
responding to a question on the likely fare evasion rate felt that it was between 3 and 10 percent, and of these more than half felt it was between 3 to 5 percent. These findings are consistent with those found in the Tri-Met Bus Operator Survey (February 1982). Slightly less than 7 percent of riders 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.

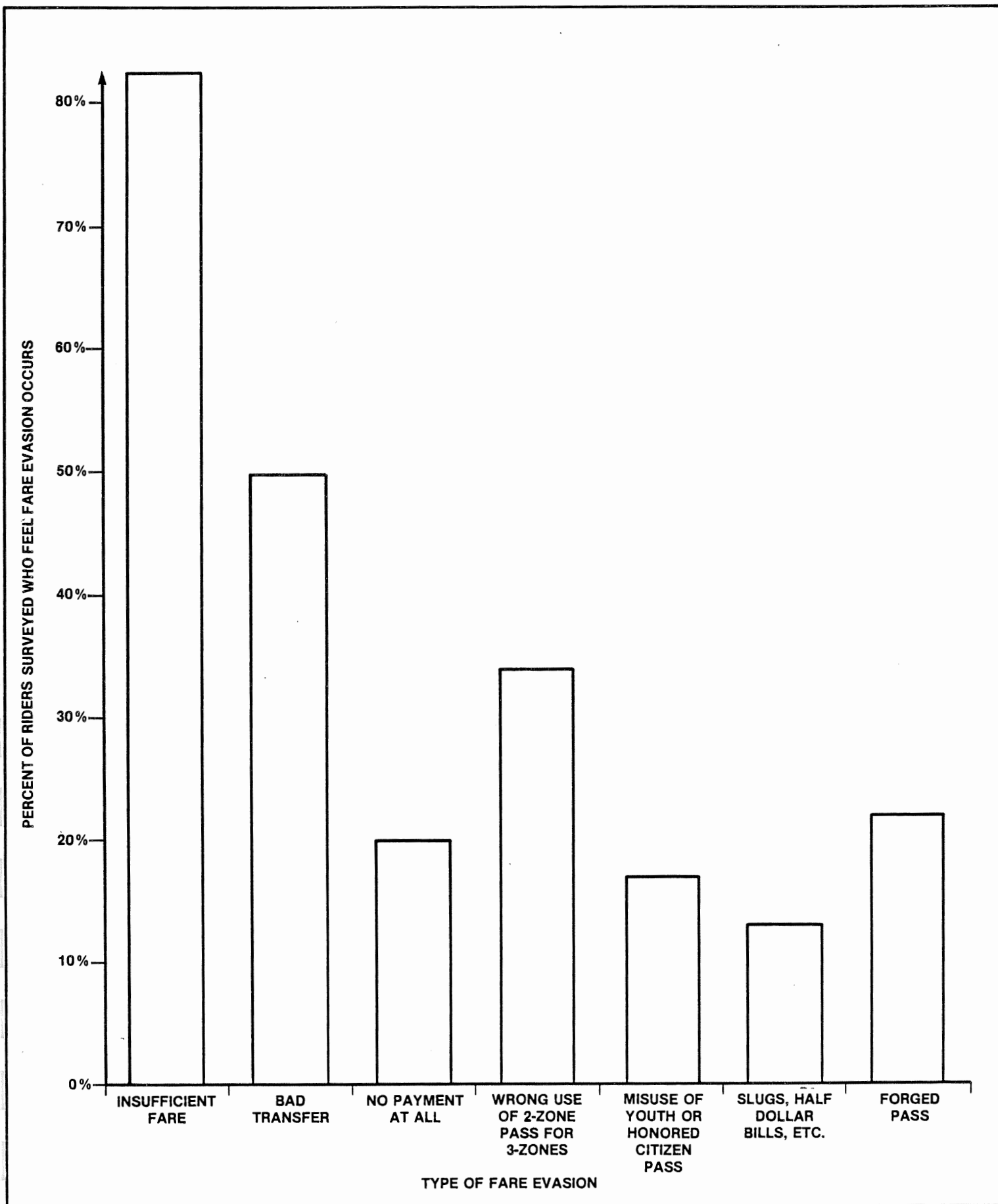
TRI-MET RIDER PERCEPTIONS OF REASONS FOR FARE EVASION



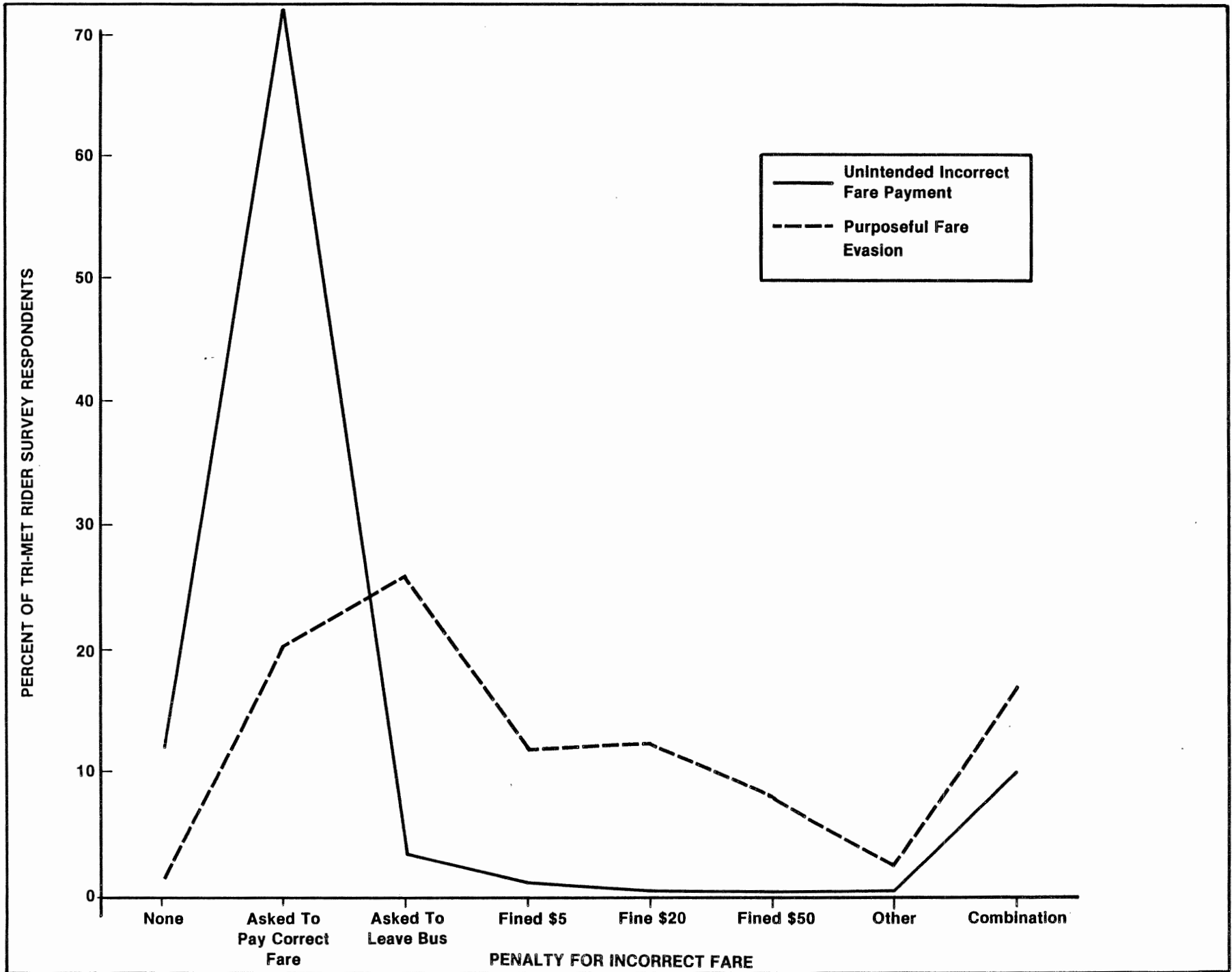
II.47

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**



64.11

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.

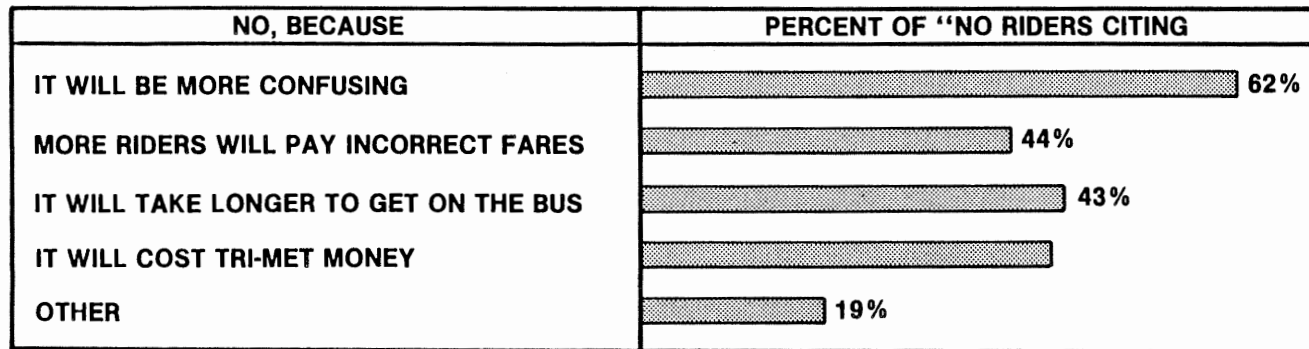
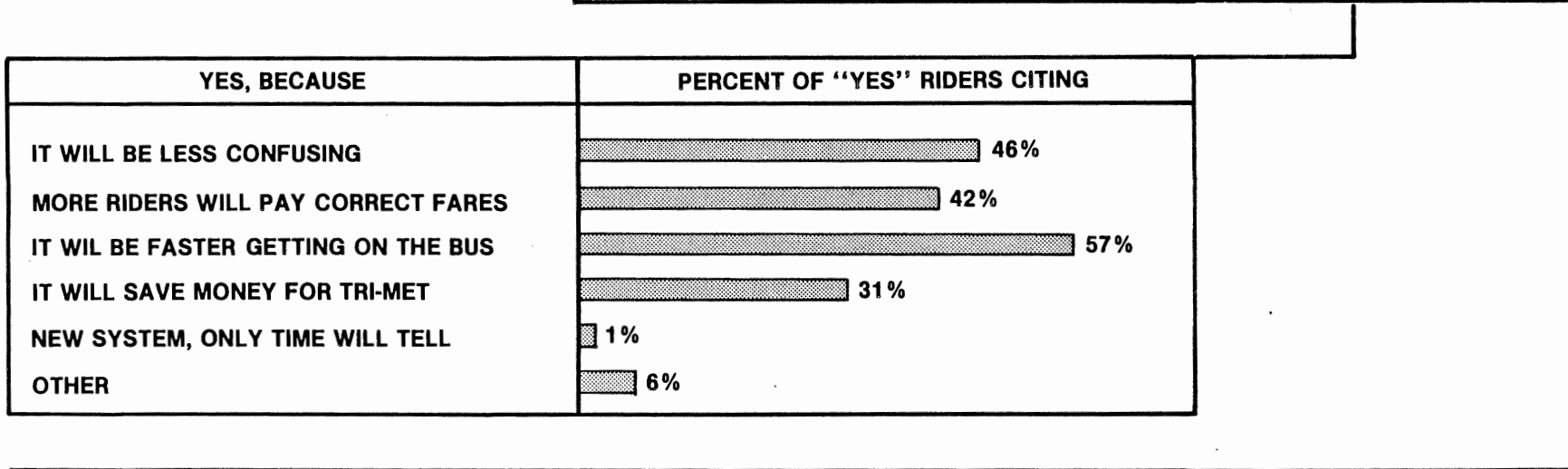
OPERATING IMPACT STUDY¹

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 |



II.51

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

| <u>PHASE I SURVEY LOCTIONS</u> | <u>BUS LINES</u> |
|---------------------------------------|------------------|
| <u>On-Mall</u> | |
| 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 |
| <u>Cross-Mall</u> | |
| S.W. Morrison at 6th | 6 |
| S.W. Yamhill at 4th | 6 |
| <u>PHASE II SURVEY LOCATIONS</u> | |
| <u>On-Mall</u> | |
| 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 |
| <u>Cross-Mall</u> | |
| S.W. Washington at 5th | 6 |
| S.W. Salmon at 3rd | 6 |
| <u>Major Transfer Points</u> | |
| 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 |
| <u>Shopping Center</u> | |
| 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 | $T_D = 2.82 + 2.65 \text{ TOT.ON} + 1.39 \text{ TOT.OFF}$ | $R^2 = 0.88$ | $N = 295$ | $S.E.E. = 6.32$ |
| | $T_D = 2.49 + 2.64 \text{ ON FRONT} + 2.79 \text{ OFF FRONT}$ | $R^2 = 0.88$ | $N = 295$ | $S.E.E. = 6.28$ |
| | | TOT.ON = 6.41 | MIN. = 0 | MAX. = 44 |
| | | TOT.OFF = 2.43 | MIN. = 0 | MAX. = 28 |
| | | ON FRONT = 6.41 | MIN. = 0 | MAX. = 44 |
| | | OFF FRONT = 1.35 | MIN. = 0 | MAX. = 13 |
| PHASE II | $T_D = 5.95 + 2.46 \text{ TOT.ON.} + 1.17 \text{ TOT.OFF}$ | $R^2 = 0.82$ | $N = 567$ | $S.E.E. = 8.06$ |
| | $T_D = 5.68 + 2.48 \text{ ON FRONT} + 2.16 \text{ OFF FRONT}$ | $R^2 = 0.83$ | $N = 567$ | $S.E.E. = 7.76$ |
| | | TOT.ON = 5.71 | MIN. = 0 | MAX. = 36 |
| | | TOT.OFF = 3.05 | MIN. = 0 | MAX. = 56 |
| | | ON FRONT = 5.68 | MIN. = 0 | MAX. = 36 |
| | | OFF FRONT = 1.79 | MIN. = 0 | 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) |

II-59

() = 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 ($\sigma = 19.46$) | 8.89 ($\sigma = 8.57$) | 2.68 | 3.22 ($\sigma = 1.80$) |
| <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 ($\sigma = 14.66$) | 8.44 ($\sigma = 6.90$) | 2.84 | 4.44 ($\sigma = 3.92$) |

II.60

() = 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 $\text{Average Ratio of Dwell Time Per Passenger} = \text{Average} \frac{\text{Dwell Time Per Bus}}{\text{Passengers Boarding/Alighting}}$ "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>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> |
| <u>PHASE I (Spring 1981)</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 _____

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

VERY RARELY RARELY SOMETIMES OFTEN VERY OFTEN

Age:

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

Time of Day:

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

Part of Service Area:

- Downtown
- City
- Suburban

Repeat Cheaters

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

VERY RARELY RARELY SOMETIMES OFTEN VERY OFTEN

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

7. What is the response of riders who misuse the fare system to your asking for full fare?

- Pay the full fare due
- Pay part of the fare due
- Leave the bus with no payment
- Stay on the bus with no payment
- Verbal abuse/swearing
- Complain about poor service or high fares
- Other _____

8. What are the hardest or easiest parts of operating the bus for you?

- Staying on schedule
- Driving in traffic
- Collecting cash fares
- Transfers
- Helping elderly or handicapped
- Dealing with students
- Handling complaints
- Dealing with overcrowding
- Dealing with fights on the bus
- Paper work (load counts, reports, trip sheets, etc.)
- Dealing with supervisors
- Other _____

9. What best describes your feelings towards misuse of the fare system? (Check one):

- Feel very angry when you see cheating and try to catch anyone who cheats?
- Feel very angry when you see cheating but feel enforcement is useless?
- Think better enforcement is needed but not by the operator?
- Enforce the worst cheating but feel that enforcement is a waste of time?
- Don't want to enforce because operators can't do much anyway?
- Don't want to enforce because management doesn't encourage or support operators?
- Don't want to enforce because of threat of violence or verbal abuse from the rider?
- Other _____

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:

BUS RIDERS SURVEY

IF YOU HAVE ALREADY COMPLETED THIS SURVEY, PLEASE RETURN THIS QUESTIONNAIRE TO THE SURVEYOR WITHOUT FILLING IT OUT.

The purpose of the following questions is to evaluate Tri-Met's fare collection system. Your answers will help Tri-Met understand how well the current fare system is working and whether the new fare collection system will be an improvement for riders like you.

Since you are part of a relatively small number of riders being surveyed, your answers are very important to the accuracy of this study. Tri-Met has hired an outside research firm to gather this information. You can be assured that the information you give is confidential, and will only be used in combination with the answers from other riders.

We would like you to complete the white part of the survey while on the bus and return it to the surveyor or place it in the box near the rear door. The yellow portion is to be completed as soon as possible and mailed postage free to Tri-Met.

THANK YOU FOR YOUR TIME AND HELP.

1. How many bus trips on the average do you usually take each week for each of the following trip purposes? (PLEASE COUNT EACH DIRECTION AS A SEPARATE TRIP.) (Write your answer on the line. Put "0" if none.)

| | |
|--------------------------------|---|
| _____ NUMBER OF WORK TRIPS | _____ NUMBER OF SCHOOL TRIPS |
| _____ NUMBER OF SHOPPING TRIPS | _____ NUMBER OF SOCIAL/RECREATION TRIPS |

2. At what time do you usually ride the bus? (Circle the one number next to your answer.)

| | |
|--------------------------------------|------------------------------------|
| 1 RUSH HOUR (7-9 a.m. & 4-6 p.m.) | 3 EVENING/NIGHT (6 p.m.-7 a.m.) |
| 2 MID-DAY (9 a.m.-4 p.m.) | 4 SATURDAY OR SUNDAY |

3. What bus lines do you ride most often?
NUMBER LINE NAME

| | |
|-------|-------|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

4. How do you usually pay your fare? (Circle the number under the proper column.)

| CASH | BUS TICKET | PASS |
|----------------------------|----------------------------|--------------------------|
| 1 \$.65 (2-zone) | 1 \$.65 (2-zone) | 1 \$21 (2-zone) |
| 2 \$.90 (3-zone) | 2 \$.90 (3-zone) | 2 \$29 (3-zone) |
| 3 \$.45 (Youth) | 3 \$.45 (Youth) | 3 \$14 (Youth) |
| 4 \$.25 (Honored Citizen) | 4 \$.25 (Honored Citizen) | 4 \$ 6 (Honored Citizen) |
| 5 \$1.00 (Vancouver) | 5 \$1.00 (Vancouver) | 5 \$35 (Vancouver) |
| 6 Other | 6 Other | 6 Other |

IF YOU USE A PASS, PLEASE SKIP TO QUESTION #7

5. How many transfer slips do you use on an average in a week? _____
6. How convenient is it to use transfer slips with 1 being "not at all convenient" and 5 being "very convenient"? (Please circle the number which corresponds to your reply.)

| | | | | |
|----------------|---|---|---|-----------------|
| NOT CONVENIENT | | | | VERY CONVENIENT |
| 1 | 2 | 3 | 4 | 5 |

6a. Which of the reasons below best describes why you rated the convenience of transfer slips as you did in Question #6?

- 1 I FORGET TO ASK FOR THE TRANSFER
- 2 I LOSE THE TRANSFER OR HAVE TROUBLE FINDING IT
- 3 I DO NOT UNDERSTAND WHEN TO USE THEM
- 4 OTHER _____

IF YOU PAY CASH FARES, PLEASE GO TO QUESTION #8 (PLEASE SPECIFY)

7. Where do you usually buy your pass or bus tickets? (Circle the one number next to your answer.)

| | |
|--------------------------------------|------------------------|
| 1 DRUG STORE | 5 PLACE OF WORK |
| 2 7-ELEVEN STORE | 6 BY MAIL FROM TRI-MET |
| 3 BANK OR SAVINGS & LOAN OFFICE | 7 OTHER _____ |
| 4 TRI-MET CUSTOMER ASSISTANCE OFFICE | |

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 | | |
|---|-------------------|---|---|----------------|---|--|
| | 1 | 2 | 3 | 4 | 5 | |
| 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!

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
- 2 ASKED TO PAY THE CORRECT FARE
- 3 ASKED TO LEAVE THE BUS
- 4 FINED \$5.00
- 5 FINED \$20.00
- 6 FINED \$50.00
- 7 OTHER _____

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
- 2 ASKED TO PAY THE CORRECT FARE
- 3 ASKED TO LEAVE THE BUS
- 4 FINED \$5.00
- 5 FINED \$20.00
- 6 FINED \$50.00
- 7 OTHER _____

----- 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 -----



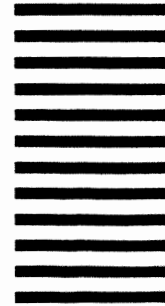
NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

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
 TRANSPLACE 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/ Q1D,RECREATION TRIPS/Q2,USUAL TIME OF DAY OF TRIP/ Q3A,BUS LINE/Q3B,BUS LINE/Q3C,BUS LINE/Q4A,CASH FARE/ Q4B,TICKET FARE/Q4C,TYPE OF PASS/Q5,NUMBER OF WEEKLY TRANS- FERS/Q6,CONVENIENCE OF TRANSFERS/Q6A,REASON,FORGOT TO ASK FOR ONE/Q6B,REASON, LOSE TRANSFER/Q6C,REASON, DO NOT UNDERSTAND TRANSFERS/Q6D,OTHER/Q7,LOCATION OF PURCHASE OF TICKETS/Q8,AMOUNT OF DISCOUNT FOR BOOK OF 10/Q9A,ATTITUDE ON NEEDING CORRECT FARE CHANGE/Q9B,ATTITUDE TOWARDS WAITING FOR OTHER TO FIND FARE/Q9C,THE FARE SYSTEM IS CONFUSING/Q9D,ATTITUDE,UNCERTAIN OF ZONE BOUNDARIES/ Q9E,ATTITUDE, UNCERTAIN OF BOUNDARIES TO FARELESS SQUARE/ Q9F,OTHER PROBLEMS WITH FARE COLLECTION/Q10,AWARENESS OF NEW FARE SYSTEM/Q10A,AWARENESS OF BUS SCHOOL/Q11,WILL NEW FARE SYSTEM WORK/Q11A,NEW SYSTEM MORE-LESS CONFUSING/ Q11B,NEW SYSTEM MORE-LESS RIDERS PAY RIGHT FARE/ Q11C,NEW SYSTEM FASTER-SLOWER GETTING ON BUS/ | 00003200 00003300 00003400 00003500 00003600 00003700 00003800 00003900 00004000 00004100 00004200 00004300 00004400 00004500 00004600 00004700 00004800 |

| | | |
|-------------------|--|----------|
| 33 | Q11D, NEW SYSTEM CJST-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 UNDS. (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) | CUMLLATIVE ALJ. 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 : | ABSOLUTE | RELATIVE | ADJUSTED | CUMULATIVE |
|----------------|-----------|-----------|-----------|------------|
| CATEGORY LABEL | FREQUENCY | FREQUENCY | FREQUENCY | ADJ FREQ |
| | | (PERCENT) | (PERCENT) | (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)

QIC SCHOOL TRIPS

| QIC | SCHOOL TRIPS | | | | |
|----------------|--------------|-----------------------|------------------------------------|------------------------------------|-------------------------------------|
| CATEGORY LABEL | CODE | ABSOLUTE FREQUENCY | RELATIVE FREQUENCY (PERCENT) | ADJUSTED FREQUENCY (PERCENT) | CUMULATIVE AUS 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

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 |
| TOTAL | 6108 | 100.0 | 100.0 | |

MEAN 4.103

VALID CASES 3336 MISSING CASES 2772



QID

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 | 99.4 |
| 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 | | |
| VALID CASES | 84 | MISSING CASES | 6024 | | |

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) |
|----------------|-------|-----------------------|------------------------------------|------------------------------------|-------------------------------------|
| <i>YES</i> | 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 |
| | TOTAL | 1937 | 100.0 | 100.0 | |

VALID CASES 861 MISSING CASES 1076

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

Q11D 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

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

***** CROSSTABULATION OF *****
 PAY BY Q14 INCOME
 ***** PAGE 1 OF 1

| | | Q14 | | | | | | | | | | |
|--------------|-----|-----------|-----------|------------|---------|-----------|----|---|---|---|-----|-------|
| | | COUNT | I | | K | | 5K | | K | | ROW | |
| ROW | PCT | UNDER \$5 | \$5 TO 10 | \$10 TO 15 | TO \$25 | OVER \$25 | | | | | | TOTAL |
| COL | PCT | IK | | | | | | | | | | |
| TOT | PCT | I | I | I | I | I | I | I | I | I | | |
| PAY | 0 | 18 | 19 | 10 | 10 | 9 | | | | | | 66 |
| | | 27.3 | 28.8 | 15.2 | 15.2 | 13.6 | | | | | | 1.2 |
| NO ANSWER | | 1.7 | 1.9 | 1.0 | 0.9 | 0.7 | | | | | | |
| | | 0.3 | 0.4 | 0.2 | 0.2 | 0.2 | | | | | | |
| USE CASH | 1 | 418 | 385 | 351 | 373 | 343 | | | | | | 1870 |
| | | 22.4 | 20.6 | 18.8 | 19.9 | 18.3 | | | | | | 34.5 |
| | | 39.5 | 39.0 | 34.1 | 32.4 | 28.5 | | | | | | |
| | | 7.7 | 7.1 | 6.5 | 6.9 | 6.3 | | | | | | |
| USE TICKET | 2 | 62 | 69 | 85 | 95 | 152 | | | | | | 463 |
| | | 13.4 | 14.9 | 18.4 | 20.5 | 32.8 | | | | | | 8.5 |
| | | 5.9 | 7.0 | 8.3 | 8.3 | 12.6 | | | | | | |
| | | 1.1 | 1.3 | 1.6 | 1.8 | 2.8 | | | | | | |
| USE PASS | 3 | 449 | 438 | 515 | 622 | 642 | | | | | | 2666 |
| | | 16.8 | 16.4 | 19.3 | 23.3 | 24.1 | | | | | | 49.1 |
| | | 42.5 | 44.3 | 50.1 | 54.0 | 53.3 | | | | | | |
| | | 8.3 | 8.1 | 9.5 | 11.5 | 11.8 | | | | | | |
| USE MULTIPLE | 4 | 110 | 77 | 67 | 51 | 58 | | | | | | 363 |
| | | 30.3 | 21.2 | 18.5 | 14.0 | 16.0 | | | | | | 6.7 |
| | | 10.4 | 7.8 | 6.5 | 4.4 | 4.8 | | | | | | |
| | | 2.0 | 1.4 | 1.2 | 0.9 | 1.1 | | | | | | |
| COLUMN TOTAL | | 1057 | 988 | 1028 | 1151 | 1204 | | | | | | 5428 |
| | | 19.5 | 18.2 | 18.9 | 21.2 | 22.2 | | | | | | 100.0 |

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 | | UNDER 16 | 16-24 | 25-44 | 45-64 | OVER 64 | |
| ROW | PCT | 1 | 2 | 3 | 4 | 5 | |
| COL | PCT | | | | | | |
| TOT | PCT | | | | | | |
| PAY | 0 | 4 | 35 | 26 | 11 | 5 | 81 |
| | | 4.9 | 43.2 | 32.1 | 13.6 | 6.2 | 1.4 |
| NO ANSWER | | 1.5 | 1.7 | 1.1 | 1.3 | 1.5 | |
| | | 0.1 | 0.6 | 0.4 | 0.2 | 0.1 | |
| USE CASH | 1 | 100 | 788 | 782 | 219 | 176 | 2065 |
| | | 4.8 | 38.2 | 37.9 | 10.6 | 8.5 | 34.8 |
| | | 38.3 | 38.3 | 32.5 | 25.0 | 51.2 | |
| | | 1.7 | 13.3 | 13.2 | 3.7 | 3.0 | |
| USE TICKET | 2 | 11 | 122 | 210 | 138 | 24 | 505 |
| | | 2.2 | 24.2 | 41.6 | 27.3 | 4.8 | 8.5 |
| | | 4.2 | 5.9 | 8.7 | 15.8 | 7.0 | |
| | | 0.2 | 2.1 | 3.5 | 2.3 | 0.4 | |
| USE PASS | 3 | 123 | 960 | 1236 | 473 | 97 | 2889 |
| | | 4.3 | 33.2 | 42.8 | 16.4 | 3.4 | 48.6 |
| | | 47.1 | 46.6 | 51.4 | 54.1 | 28.2 | |
| | | 2.1 | 16.2 | 20.8 | 8.0 | 1.6 | |
| USE MULTIPLE | 4 | 23 | 153 | 149 | 34 | 42 | 401 |
| | | 5.7 | 38.2 | 37.2 | 8.5 | 10.5 | 6.7 |
| | | 8.8 | 7.4 | 6.2 | 3.9 | 12.2 | |
| | | 0.4 | 2.6 | 2.5 | 0.6 | 0.7 | |
| 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 | | DRUG | STO | 7-11 | STO | BANK-SL | CUSTOMER | WORK | MAIL | OTHER | SCHOOL | VARIOUS | ROW | | |
| ROW | PCT | IRE | RE | RE | RE | RE | ASSISTA | ASSISTA | ASSISTA | ASSISTA | ASSISTA | ASSISTA | ASSISTA | TOTAL | |
| COL | PCT | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | |
| 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 | 0.0 | 0.5 | | | |
| | | 0.0 | 0.0 | 1.0 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | |
| | | 0.0 | 0.0 | 0.3 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | |
| | | 6 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 4 | | | |
| OTHER | | 0.0 | 0.0 | 25.0 | 50.0 | 25.0 | 0.0 | 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 | 0.0 | 0.2 | 0.3 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | |
| | | 7 | 1 | 2 | 4 | 10 | 1 | 0 | 5 | 0 | 5 | 28 | | | |
| MULT. FARES | | 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 | 24 | 47 | 192 | 195 | 52 | 4 | 36 | 27 | 67 | 644 | | | |
| | | TOTAL | 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

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

CROSS TABULATION OF Q4C TYPE OF PASS BY Q7 LOCATION OF PURCHASE OF TICKETS

PAGE 1 OF 1

Table with columns: Q4C, COUNT, ROW PCT, COL PCT, Q7 (DRUG, STO 7-11, STO BANK-SL, CUSTOMER WORK, MAIL, OTHER, SCHOOL, VARIOUS), ROW TOTAL. Rows include categories like 2 ZONE, 3 ZONE, YOUTH, HONORED CITIZEN, VANCOUVER, OTHER, MORE THAN ONE.

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 | CCMPUTE | LR=0 |
| 14 | COMPUTE | F=0 |
| 15 | CCMPUTE | PEAK=0 |
| 16 | RECODE | F3Q3A TO F3Q3C (1,55,31,101,37,155,15,17,18,66,34,42,43, 144,45,46,51,63,66,201,234,244,144=4) |
| 17 | | (2,3,6,8,9,19,20,21,26 THRU 29,40,41,53,12,106,206,109, 209,112,108,208,119,219,126,226,128,228,129,229,140,240, 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 |

```

26 IF F3Q3A EQ 5 OR F3Q3B EQ 5 OR F3Q3C EQ 5) F=1
29 COMPUTE NO=0
30 IF (AGE NE W15) NO=1
31 IF (SEX NE W14) 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=W1,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 COMB (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 | <u>3365</u> | <u>100.0</u> | <u>100.0</u> | |

MEAN 1.000 VARIANCE 0.0

VALID CASES 2114 MISSING CASES 1251

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

Q6B 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 |
|------|-------|----------|-----|

| | | | |
|-------------|-----|---------------|------|
| VALID CASES | 955 | MISSING CASES | 2410 |
|-------------|-----|---------------|------|

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

VALID CASES 2037 MISSING CASES 1328

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 (CONDITION = 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)

09 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) |
|----------------|------|-----------------------|------------------------------------|------------------------------------|-------------------------------------|
| FORGOT | 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 |

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)

100 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 | |

MEAN 5.000 VARIANCE 0.0

VALID CASES 1745 MISSING CASES 1620

IL MAIL (CONTINUED) DATE = 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)

10G 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

VALID CASES 2471 MISSING CASES 894

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

VALID CASES 587 MISSING CASES 2778

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

FILE 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 (CORRECTION 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

| Q7 | Q8 | | | | | | | | | | | | ROW TOTAL | | | | |
|--------------|---------|------|------|------|------|------|------|------|------|------|------|------|-----------|---------------|----------|-----------|-------|
| | COUNT | 1 | | | 2 | | | 3 | | | 4 | | | NO CHANG E | MULTIPLE | ROW TOTAL | |
| | ROW PCT | .10 | | | .15 | | | .20 | | | .25 | | | | | | |
| | COL PCT | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 1 | 2 | 3 | 4 | | 5 | 6 | 7 | |
| ONE | 1 | 35 | 21 | 8 | 3 | 5 | 238 | 0 | 310 | 11.3 | 6.8 | 2.6 | 1.0 | 1.6 | 76.8 | 0.0 | 10.0 |
| | | 9.9 | 2.9 | 1.9 | 0.7 | 1.3 | 30.3 | 0.0 | | 1.1 | 0.7 | 0.3 | 0.1 | 0.2 | 7.7 | 0.0 | |
| TWO | 2 | 70 | 136 | 74 | 80 | 134 | 175 | 3 | 672 | 10.4 | 20.2 | 11.0 | 11.9 | 19.9 | 26.0 | 0.4 | 21.7 |
| | | 19.8 | 18.6 | 18.0 | 19.8 | 35.2 | 22.3 | 10.3 | | 2.3 | 4.4 | 2.4 | 2.6 | 4.3 | 5.7 | 0.1 | |
| THREE | 3 | 86 | 249 | 149 | 160 | 152 | 231 | 4 | 1031 | 8.3 | 24.2 | 14.5 | 15.5 | 14.7 | 22.4 | 0.4 | 33.3 |
| | | 24.4 | 34.0 | 36.2 | 39.5 | 39.9 | 29.4 | 13.8 | | 2.8 | 8.0 | 4.8 | 5.2 | 4.9 | 7.5 | 0.1 | |
| FIVE | 4 | 114 | 241 | 148 | 138 | 70 | 91 | 14 | 816 | 14.0 | 29.5 | 18.1 | 16.9 | 8.6 | 11.2 | 1.7 | 26.3 |
| | | 32.3 | 32.9 | 35.9 | 34.1 | 18.4 | 11.6 | 48.3 | | 3.7 | 7.8 | 4.8 | 4.5 | 2.3 | 2.9 | 0.5 | |
| SEVEN + | 5 | 43 | 72 | 30 | 20 | 19 | 42 | 5 | 231 | 18.6 | 31.2 | 13.0 | 8.7 | 8.2 | 18.2 | 2.2 | 7.5 |
| | | 12.2 | 9.8 | 7.3 | 4.9 | 5.0 | 5.4 | 17.2 | | 1.4 | 2.3 | 1.0 | 0.6 | 0.6 | 1.4 | 0.2 | |
| OTHER | 6 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 6 | 16.7 | 83.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 |
| | | 0.3 | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| DONT KNOW | 7 | 4 | 8 | 3 | 4 | 1 | 8 | 3 | 31 | 12.9 | 25.8 | 9.7 | 12.9 | 3.2 | 25.8 | 9.7 | 1.0 |
| | | 1.1 | 1.1 | 0.7 | 1.0 | 0.3 | 1.0 | 10.3 | | 0.1 | 0.3 | 0.1 | 0.1 | 0.0 | 0.3 | 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 | YY | | | | | |
| GGGGGGGGGG | 5555555555 | 00000000 | 5555555555 | TTTTTTTTTT | MM | MM | 00000000 | YY | YY | | | | | |
| GG | GG | 55 | 00 | 00 | 55 | TT | MM | MM | 00 | 00 | YY | YY | | |
| GG | | 55 | 00 | 00 | 55 | TT | MM | MM | MM | MM | 00 | 00 | YY | YY |
| GG | | 55 | 00 | 00 | 55 | TT | MM | MM | MM | MM | 00 | 00 | YY | YY |
| GG | | 55555555 | 00 | 00 | 55555555 | TT | MM | MM | MM | MM | 00 | 00 | YY | YY |
| GG | GGGG | 55555555 | 00 | 00 | 55555555 | TT | MM | MM | MM | MM | 00 | 00 | YY | YY |
| GG | GGGG | 55 | 00 | 00 | 55 | TT | MM | MM | MM | MM | 00 | 00 | YY | YY |
| GG | GG | 55 | 00 | 00 | 55 | TT | MM | MM | MM | MM | 00 | 00 | YY | YY |
| GG | GG | 55 | 00 | 00 | 55 | TT | MM | MM | MM | MM | 00 | 00 | YY | YY |
| GGGGGGGGGG | 5555555555 | 00000000 | 5555555555 | TTTTTTTTTT | MM | MM | 00000000 | YY | YY | | | | | |
| GGGGGGGGGG | 5555555555 | 00000000 | 5555555555 | TTTTTTTTTT | MM | MM | 00000000 | YY | YY | | | | | |

| | | | | | | | | | | | | | | |
|------------|------------|----------|------------|------------|----------|----|----------|----|----|----|----|----|----|----|
| GGGGGGGGGG | 5555555555 | 00000000 | 5555555555 | TTTTTTTTTT | MM | MM | 00000000 | UU | UU | | | | | |
| GGGGGGGGGG | 5555555555 | 00000000 | 5555555555 | TTTTTTTTTT | MM | MM | 00000000 | UU | UU | | | | | |
| GG | GG | 55 | 00 | 00 | 55 | TT | MM | MM | 00 | 00 | UU | UU | | |
| GG | | 55 | 00 | 00 | 55 | TT | MM | MM | MM | MM | 00 | 00 | UU | UU |
| GG | | 55 | 00 | 00 | 55 | TT | MM | MM | MM | MM | 00 | 00 | UU | UU |
| GG | | 55555555 | 00 | 00 | 55555555 | TT | MM | MM | MM | MM | 00 | 00 | UU | UU |
| GG | GGGG | 55555555 | 00 | 00 | 55555555 | TT | MM | MM | MM | MM | 00 | 00 | UU | UU |
| GG | GGGG | 55 | 00 | 00 | 55 | TT | MM | MM | MM | MM | 00 | 00 | UU | UU |
| GG | GG | 55 | 00 | 00 | 55 | TT | MM | MM | MM | MM | 00 | 00 | UU | UU |
| GG | GG | 55 | 00 | 00 | 55 | TT | MM | MM | MM | MM | 00 | 00 | UU | UU |
| GGGGGGGGGG | 5555555555 | 00000000 | 5555555555 | TTTTTTTTTT | MM | MM | 00000000 | UU | UU | | | | | |
| GGGGGGGGGG | 5555555555 | 00000000 | 5555555555 | TTTTTTTTTT | MM | MM | 00000000 | UU | UU | | | | | |

| | | | | | | | |
|------------|----|------------|------------|------------|------------|----|----|
| AAAAAAAAAA | LL | PPPPPPPPP | HH | HH | AAAAAAAAAA | | |
| AAAAAAAAAA | LL | PPPPPPPPP | HH | HH | AAAAAAAAAA | | |
| AA | AA | PP | PP | HH | HH | AA | AA |
| AA | AA | LL | LL | HH | HH | AA | AA |
| AA | AA | LL | LL | HH | HH | AA | AA |
| AAAAAAAAAA | LL | PPPPPPPPP | HHHHHHHHHH | AAAAAAAAAA | | | |
| AAAAAAAAAA | LL | PPPPPPPPP | HHHHHHHHHH | AAAAAAAAAA | | | |
| AA | AA | LL | LL | HH | HH | AA | AA |
| AA | AA | LL | LL | HH | HH | AA | AA |
| AA | AA | LL | LL | HH | HH | AA | AA |
| AA | AA | LLLLLLLLLL | PP | HH | HH | AA | AA |
| AA | AA | LLLLLLLLLL | PP | HH | HH | AA | AA |

| | | | | | | | | | | | | |
|------------|----------|------------|------------|------------|------------|------------|----|----|----|----|----|----|
| AAAAAAAAAA | 00000000 | 5555555555 | 444 | 00000000 | 22222222 | 7777777777 | | | | | | |
| AAAAAAAAAA | 00000000 | 5555555555 | 4444 | 00000000 | 2222222222 | 7777777777 | | | | | | |
| AA | AA | 00 | 00 | 55 | 44 | 44 | 00 | 00 | 22 | 22 | 77 | 77 |
| AA | AA | 00 | 00 | 55 | 44 | 44 | 00 | 00 | 22 | 22 | 77 | 77 |
| AA | AA | 00 | 00 | 55 | 44 | 44 | 00 | 00 | 22 | 22 | 77 | 77 |
| AAAAAAAAAA | 00 | 00 | 55555555 | 4444444444 | 00 | 00 | 00 | 00 | 22 | 22 | 77 | 77 |
| AAAAAAAAAA | 00 | 00 | 55555555 | 4444444444 | 00 | 00 | 00 | 00 | 22 | 22 | 77 | 77 |
| AA | AA | 00 | 00 | 55 | 44 | 44 | 00 | 00 | 22 | 22 | 77 | 77 |
| AA | AA | 00 | 00 | 55 | 44 | 44 | 00 | 00 | 22 | 22 | 77 | 77 |
| AA | AA | 00 | 00 | 55 | 44 | 44 | 00 | 00 | 22 | 22 | 77 | 77 |
| AA | AA | 00000000 | 5555555555 | 44 | 00000000 | 2222222222 | 77 | 77 | | | | |
| AA | AA | 00000000 | 5555555555 | 44 | 00000000 | 2222222222 | 77 | 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, RIDER 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

E3 READ INPUT DATA

00009900

AFTER READING 000 CASES FROM SUBFILE DRIVER , END OF DATA WAS ENCOUNTERED ON LOGICAL UNIT # 8

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

PERCENT FARE EVASION

| CATEGORY LABEL | CODE | ABSOLUTE FREQUENCY | RELATIVE FREQUENCY (PERCENT) | ADJUSTED FREQUENCY (PERCENT) | CUMULATIVE ADJ FRFQ (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 RARELY | 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 RARELY | 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)

011 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)

012 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 DPIVER (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)

D27 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)

032 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 RARELY | 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)

043 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 RARELY | 1 | 541 | 67.6 | 76.5 | 76.5 |
| RARELY | 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 |
| OFTEN | 4 | 66 | 8.2 | 8.8 | 96.5 |
| VERY 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 THEM 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 DRIVER 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 |
| FREQUENTLY | 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

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)

062 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 | 3.662 | 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 |
| ND | 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

| CATEGORY 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 | | |

MEAN 2.324 VARIANCE 2.620
 VALID 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

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 OPERARIONS | 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 |

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 |
| TOD COMPLICATED | 3 | 14 | 1.7 | 18.2 | 81.8 |
| TOD 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) |
|-------------------|-------|-----------------------|------------------------------------|------------------------------------|-------------------------------------|
| INCREASE CHEATING | 2 | 12 | 1.5 | 31.6 | 31.6 |
| TOO COMPLICATED | 3 | 19 | 2.4 | 50.0 | 81.6 |
| TOO EXPENSIVE | 4 | 5 | 0.6 | 13.2 | 94.7 |
| TOO EQUIPMENT | 5 | 1 | 0.1 | 2.6 | 97.4 |
| ORDER FOR DRIVER | 6 | 1 | 0.1 | 2.6 | 100.0 |
| | 0 | 762 | 95.2 | MISSING | 100.0 |
| | TOTAL | 800 | 100.0 | 100.0 | |

MEAN 2.947 VARIANCE 0.808

VALID 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 AGF

| 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

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

D79 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.

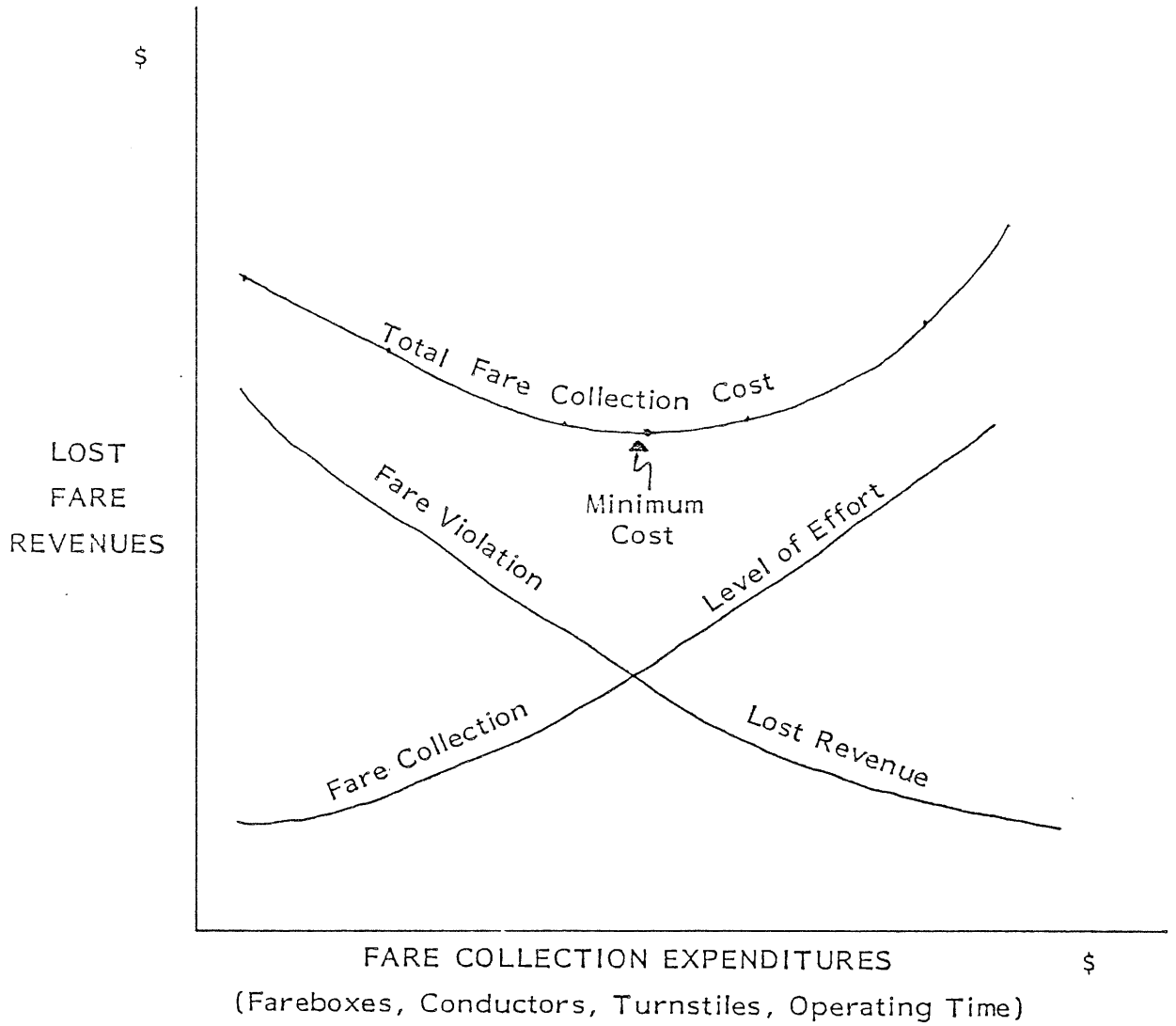
North American bus transit operators have generally used fareboxes to collect fare, with payment checked by the bus driver. This approach is a practical one, but is not without problems. Drivers cannot always count a passenger's coin payment to verify correct fare payment; they must check many fares 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.

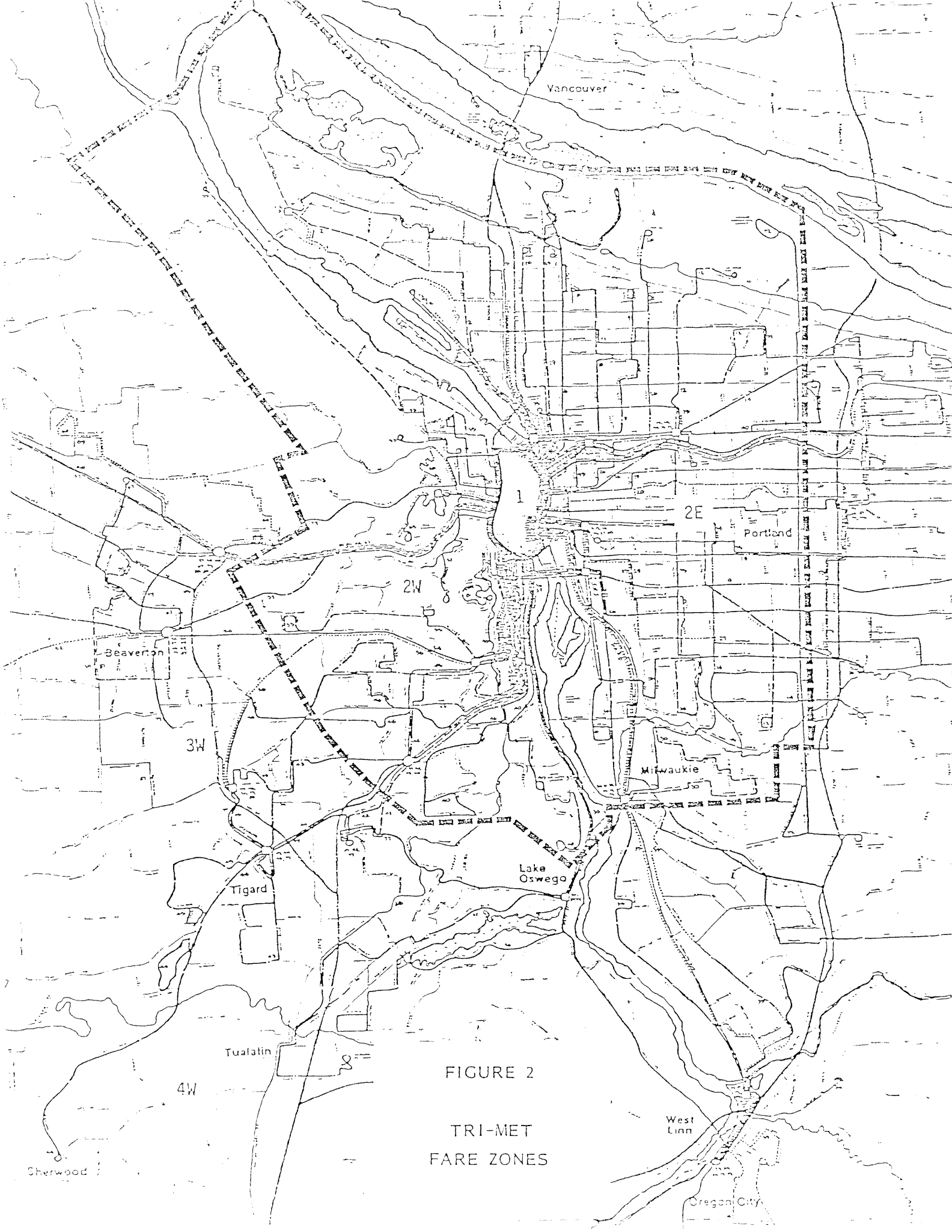


FIGURE 2
TRI-MET
FARE ZONES

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

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 | | | | <u>\$ 775,466</u> |

* 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

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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