

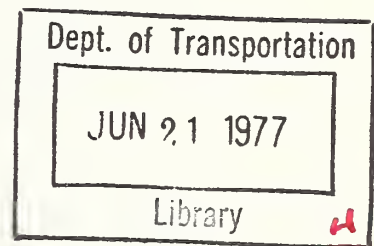
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REPORT NO. UMTA/MA-06-0026-76/1, II

PRT IMPACT STUDY
PRE-PRT PHASE
Volume II -- Data Collection Procedure and Coding Manual

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MORGANTOWN WV 26506



MARCH 1976

FINAL REPORT

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16. Abstract This report describes the procedures utilized for collection of data on transportation demand and supply prior to the revenue operation of the Personal Rapid Transit (PRT) System in Morgantown, West Virginia. It is anticipated that similar data will be collected after the commencement of revenue operation, and that analysis of the two sets of data will be performed which will yield measures of the impact on the community of installing the PRT. The bulk of the data described in this report was collected during the time period March through May, 1975. Most of the report is devoted to describing various surveys which were conducted to obtain information about travel patterns, attitudes, and demographic characteristics of residents of the Morgantown area. Several survey techniques were utilized, including telephone interview, bus on-board questionnaire, mailback questionnaire, home interview, and auto intercept survey. The report also discusses the collection of data reflecting the volume of transportation usage, such as traffic counts, bus ridership counts, and speeds of autos and buses. Also described are the costs of operating an automobile in Morgantown and costs and revenues of the bus systems operating in the Morgantown area. The report includes documentation of the format and codes used for placing the survey data on magnetic tape. This is the second in a series of three published volumes. Volume I: Travel Analysis; Volume III: Frequency Tabulations from Four Transportation-Related Surveys.					
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PREFACE

In October, 1975, the Personal Rapid Transit (PRT), a revolutionary public transportation system built as a research development and demonstration project by the Urban Mass Transportation Administration, commenced passenger service in Morgantown, WV. Because the PRT is the first system of its kind ever operated in a city, it provides an opportunity to study the interaction between a new mode and its service area.

The PRT Impact Study was developed to record the effects of PRT system operation in order to provide information useful in assisting cities to determine if they could utilize such a PRT system to satisfy their transportation needs. The study consists of two data collection phases; the Pre-PRT Phase, prior to passenger service, and the Post-PRT Phase.

The PRT Impact Study, Pre-PRT Phase, has been completed and is reported in three volumes;

- I --Travel Analysis,
- II --Data Collection Procedure and Coding
Manual,
- III--Frequency Tabulations from Four
Transportation-Related Surveys.

This work was sponsored by the Transportation Systems Center, United States Department of Transportation, Cambridge, MA, under Contract Number DOT-TSC-985.

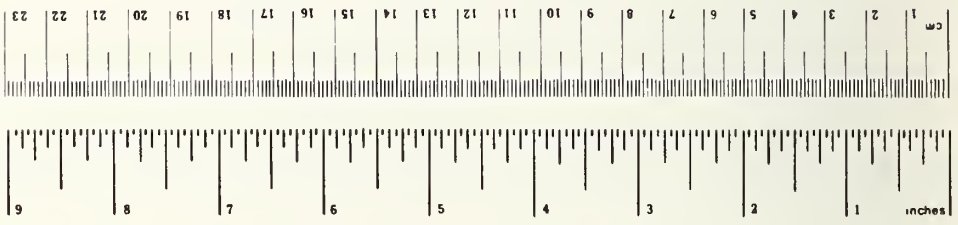
Several agencies and individuals cooperated in making the PRT Impact Study, Pre-PRT Phase possible. They include Mr. K. H. Schaeffer and Dr. Mary Stearns of TSC, Mr. Doc Ashburn, Manager of the City of Morgantown, and Mr. Richard Davies, President of Monongalia County Court. The institutional Research Office of WVU cooperated in making data for completing the study.

The students who worked with our staff included Mr. Charles Bao, Mr. A. Z. Sohrwardy, Ms. Judy Brannon, and Ms. Barbara Slonneger. Ms. Charmaine DuBois and Ms. Donna Maughan were responsible for the typing.

METRIC CONVERSION FACTORS

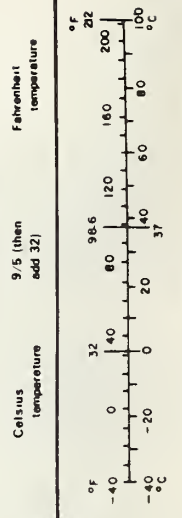
Approximate Conversions to Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
LENGTH				
in	inches	2.5	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0.9	meters	m
mi	miles	1.6	kilometers	km
AREA				
in ²	square inches	6.5	square centimeters	cm ²
ft ²	square feet	0.09	square meters	m ²
yd ²	square yards	0.8	square meters	m ²
mi ²	square miles	2.6	square kilometers	km ²
	acres	0.4	hectares	ha
MASS (weight)				
oz	ounces	28	grams	g
lb	pounds	0.45	kilograms	kg
	short tons	0.9	tonnes	t
			(2000 lb)	
VOLUME				
tsp	teaspoons	5	milliliters	ml
Tbsp	tablespoons	15	milliliters	ml
fl oz	fluid ounces	30	milliliters	ml
c	cups	0.24	liters	l
pt	pints	0.47	liters	l
qt	quarts	0.95	liters	l
gal	gallons	3.8	liters	l
ft ³	cubic feet	0.03	cubic meters	m ³
yd ³	cubic yards	0.76	cubic meters	m ³
TEMPERATURE (exact)				
°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C



Approximate Conversions from Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
LENGTH				
mm	millimeters	0.04	inches	in
cm	centimeters	0.4	inches	in
m	meters	3.3	feet	ft
m	meters	1.1	yards	yd
km	kilometers	0.6	miles	mi
AREA				
cm ²	square centimeters	0.16	square inches	in ²
m ²	square meters	1.2	square yards	yd ²
km ²	square kilometers	0.4	square miles	mi ²
ha	hectares (10,000 m ²)	2.5	acres	acres
MASS (weight)				
g	grams	0.035	ounces	oz
kg	kilograms	2.2	pounds	lb
t	tonnes (1000 kg)	1.1	short tons	short tons
VOLUME				
ml	milliliters	0.03	fluid ounces	fl oz
l	liters	2.1	pints	pt
l	liters	1.06	quarts	qt
l	liters	0.26	gallons	gal
m ³	cubic meters	35	cubic feet	ft ³
m ³	cubic meters	1.3	cubic yards	yd ³
TEMPERATURE (exact)				
°C	Celsius temperature	9/5 (then add 32)	Fahrenheit temperature	°F



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1. INTRODUCTION

1.1 Objective of Report

This report documents the procedures used by researchers at West Virginia University (WVU) in collecting data which describes transportation-related conditions in Morgantown, WV, prior to the commencement of passenger service by the Personal Rapid Transit (PRT) System. The record of data collection and data processing decisions given here provides essential documentation for researchers performing subsequent analysis of the data. This report will also assist other researchers in collecting similar data after the commencement of PRT passenger service.

1.2 Organization of Report

The organization of this report is as follows: The remainder of this chapter defines some fundamental terminology which is unique to this study. Chapter 2 describes the various surveys which were conducted. Chapter 3 discusses the traffic counts and the bus ridership counts which were taken to describe the level of usage of various modes. The costs of operating an automobile and the operating costs and revenues for bus systems in the Morgantown area are given in Chapter 4. Chapter 5 presents estimates of the sizes of various sub-populations in Morgantown. Finally, some brief remarks on the general limitations of the reliability of the data are given in Chapter 6. The report has three appendices. Appendix A delineates each of the 46 zones into which the Morgantown area was divided for purposes of the study. The forms used for the various surveys are given in Appendix B. Appendix C details the format of the survey data made available on Tape Number 001850, a nine-track, 800 bits per inch reel of magnetic tape written in IBM standard format.

1.3 Definitions

The major impact of the installation of the PRT is expected to be on what has come to be known as the PRT Corridor, which for purposes of this report can be defined as follows:

- a) All properties within approximately a ten-minute walking distance of one of the five PRT stations.
- b) The route segments of the City, County, and University bus systems which are parallel to the PRT guideway, including the Phase II guideway.
- c) The auto routes that parallel the PRT guideway on Beechurst and University Avenues.
- d) Parking facilities within a one-quarter mile radius of a PRT station.

For analysis purposes, the Morgantown area was divided into 46 zones by the research team. The zonal boundaries were based on land use, topographic considerations, and uniform socio-economic characteristics. Precise zonal boundaries are delineated in Appendix A.

The research team designated a certain subset of the 46 zones as comprising the Primary Market Area (PMA). The PMA zones are those zones which are within approximately a ten-minute walking distance of a PRT station. Thus, the PMA is a part of the PRT Corridor, but the PRT Corridor is a broader concept in that it includes bus route segments and city streets parallel to the PRT route.

2. TRAVEL-AND-ATTITUDE SURVEYS

2.1 Introduction

Travel in Morgantown before the revenue operation of the PRT system basically involved the use of automobile and bus systems consisting of the city, county and university bus systems. In order to collect information on travel behavior of Morgantown residents for these two modes, travel surveys were necessary.

The automobile travel data was collected utilizing a telephone interview survey. This survey was designed to obtain information on automobiles resulted also in data on the travel behavior of residents utilizing city, university and county buses in the PRT Corridor. The On-Board Surveys were conducted on all the bus systems resulting in travel behavior data for these modes.

Though there was some overlap in the telephone survey and the On-Board Surveys, the data for bus modes was considered more reliable as it included residents not living in the PMA, whereas the telephone interview survey was limited to PMA residents.

Other surveys utilized, consisted of the faculty/staff travel survey, the community attitude survey and the student attitude survey. These surveys were conducted primarily to gain insight on the travel behavior of special groups and their attitude towards general travel in Morgantown.

2.2 On-Board and Telephone Interview Surveys

Background

The objective of the On-Board Surveys was to gather travel behavior and socio-economic information about persons riding buses on routes which were expected to be impacted by the PRT. Three separate bus systems operate in the Morgantown area: University, City and County. Thus, it was desired to conduct On-Board Surveys on the routes which would be most affected by the PRT for all three systems.

The objective of the Telephone Interview Survey was to obtain travel behavior and socio-economic information about persons residing in the PMA. The Telephone Interview Survey evolved from a desire to obtain trip length, trip purpose, trip origin and destination, age, sex, and occupation of auto occupants in the PRT corridor. Undoubtedly the most direct way of obtaining such data is to set up a cordon line survey, but this approach was rejected by the research team on the basis that the nature of the streets in Morgantown is such that the necessary cordon lines would unduly obstruct traffic flows. Several alternative methods of obtaining information about auto occupants were considered, but it was decided that the Telephone Interview Survey was the most promising approach, taking in consideration such factors as cost-effectiveness, response rate, probable bias, and capability of obtaining delicate socio-economic information such as income level. Budgetary restrictions necessitated limiting the sample size, which gave rise to the philosophy of restricting the sample frame to those persons residing within walking distance of a PRT station on the assumption that these persons would be most heavily impacted by the PRT.

Drawing the Samples

A sample of approximately 2000 bus passengers within the PRT corridor was desired. Only one route, the Suncrest route, of the City bus was expected to be impacted by the PRT. This route is shown in Figure 2.1. Even though only a portion of the route is directly competitive with the PRT route, it was decided to conduct the On-Board Survey throughout the entire route. Similarly, only one route, the Star City route (shown in Figure 2.2), of the County bus might be impacted by the PRT. Again, the On-Board Survey was conducted throughout the entire route, even though only a small portion of the route competes with the PRT. All routes of the University bus system will be affected by the PRT, and all routes were considered in scheduling data collection. A sampling schedule which would encompass the desired routes and achieve the sample size objective was determined through examining ridership counts for each of the three systems. (The daily sampling schedules are given later in Tables 2.2 and 2.3). There were 1895 respondents to the On-Board Surveys, including 1740 University, 63 City and 92 County passengers.

For the Telephone Interview Survey it was desired to interview approximately 1500 persons living within walking distance of a PRT station. For purposes of drawing the sample for this survey, a household was taken to be "within walking distance of a PRT station" if and only if it was located within a PMA zone. Initially, a sample of approximately 2000 telephone numbers for PMA households was drawn with the expectation that this would yield the desired number of respondents. The expected response rate was based primarily on previous experience with telephone surveys conducted in the Morgantown area on nontransportation related topics. However, the response rate for the Pre-PRT Impact Study Telephone Interview Survey fell below what had been anticipated, and even though the initial sample of 2000 was later supplemented with an additional 400 telephone numbers of PMA households, the total number of respondents was only 1220.

A random sample of approximately 1,400 residential telephone numbers from PMA zones was drawn from Polk's 1974 Morgantown City Directory. Initially, a sample of size approximately 1000 was drawn, and this was later supplemented with an additional sample of size, 400. The supplementary sample was drawn when it was realized that the non-response due to disconnects was substantially greater than had been expected. The low response rate arose from the unexpectedly large number of housing changes in the PMA zones between the preparation of Polk's Directory (which claims itself to be current as of August, 1974) and the beginning of the Telephone Interview Survey in February, 1975. Ultimately, the total sample of 1400 yielded 640 respondents.

Another random sample of approximately 1000 West Virginia University dormitory resident telephone numbers was taken from the directory of the WVU housing office. The directory reflected dormitory residency as of the close of registration for the Spring semester of 1975, making it current as of about February 1, 1975. The sample yielded 580 respondents.

The periodic random sample from Polk's Directory was drawn as follows: Exploiting the property that Polk's Directory is ordered by street, those streets which were within each PMA zone were identified. For streets running through more than one zone, the limiting addresses were determined for each PMA zone. The number of households listed in Polk's

TABLE 2.1

COMPARABILITY OF QUESTIONNAIRE ITEMS

<u>Question Topic</u>	<u>Telephone Interview Question Item</u>	<u>Second Person Question Item</u>	<u>University Bus Question Item</u>	<u>City and County Question Item</u>
Address	A	known	22	2
Trips made in last 24 hours	B	B	known	known
Trip origin	C	C	known	3
Bus stop (origin)	-	-	1	1
Trip time (start)	D	D	4	5
Destination	E	E	5	6
PRT Corridor	F	F	known	known
Trip purpose	G	G	6	7
Travel mode to bus stop	-	-	3	4
Vehicular mode	H	H	known	known
Reason for mode	I	I	8	9
Waiting time for bus	-	-	9	10
Auto availability for trip	J	J	-	-
Transportation alternatives	K	K	7	8
Kind of parking space	L	L	N.A.*	N.A.
Licensed driver	M	known	10	11
Autos owned	N	-	11	12
Auto generally available	O	-	12	13
Occupation	P	known	13	14
Employee of WVU	Q	known	14	15
Sex	R	R	15	16
Age	S	S	16	17
Marital Status	T	T	17	18
(The next four questions refer to family members living at the address)				
Relationship	U	known	18	19
Occupation	V	known	19	20
Employee of WVU	W	known	20	21
Licensed driver	X	known	21	22
Family income	Y ₁	known	-	-
Family income	Y ₂	known	-	-
Full-time student income	Y ₃	known	-	-
Relationship to 1st person	N.A.	AA	N.A.	N.A.

*N.A. signifies not applicable.

Directory in each PMA zone were then counted. The sampling interval for each PMA zone was determined so that the number of households sampled from each zone would be proportional to the population of non-dormitory residents in the zone. The population estimates given in Table 2.1 were used in drawing the Telephone Interview Survey samples.

Development of Questionnaires

The basic instrument used in the Telephone Interview Survey was Form PRT-1a. (See Appendix A). This form was used for interviewing the first respondent in the household. Other household residents of age 16 or older who were present at the conclusion of the interview with the first respondent were interviewed using Form PRT-1b, known as the Second Person Form. As many Second Person Forms as necessary were used to interview all respondents in the household. Both Forms PRT-1a and PRT-1b record the same kind of trip data, but sex, age, and marital status is the only socio-economic information recorded on PRT-1b, while several other pieces of demographic information are recorded on PRT-1a.

Form PRT-2 was used for the University Bus On-Board Survey, and Form PRT-3 was used for the City and County Bus On-Board Survey. Forms PRT-2 and PRT-3 record essentially the same kinds of data, the main difference in the two forms being that the lists of likely entry and exit locations reflect the differences in routes.

In order to facilitate comparisons of data collected from the three types of questionnaires, care was taken to assure comparability of the questions asked of all respondents. As is shown in Table 2.1, the questionnaires were extremely similar in terms of question items covered by each. Fundamentally, the University Bus Questionnaire, and the City and County Bus Questionnaire are identical, with the Telephone Interview Questionnaire (and its modified form, the Second Person Form) differing only in that the latter included questions on respondent income and excluded questions pertaining solely to bus travel.

Questionnaire Pretests and Training of Field Personnel

In order to assure that questionnaires could be understood and answered accurately by the respondents, a pretest of each of the three questionnaires was conducted.

Both the University Bus On-Board Survey Questionnaire and the City and County Bus On-Board Survey Questionnaire were tested by having interviewers actually distribute the forms to 5-10 passengers on representative runs for all three bus systems. Approximately 75 completed questionnaires were obtained during the pretest period. The interviewers were asked to give especially close attention to any difficulties the respondents encountered in completing the forms. Departing from the format which they would use when formal data collection began, the interviewers asked the respondents if the forms were understandable, readable, sufficiently impersonal and otherwise non-threatening, interesting and short enough to be completed during the bus trip. On all counts, the forms received favorable evaluations from the respondents - with two qualifications:

- a) Several elderly respondents required that the forms be read to them, either because of poor eyesight or their illiteracy.

- b) Some student riding the University Bus found themselves pressed for time in which to complete the questionnaire. This problem was easily overcome, however, when in most instances the questionnaire forms could be distributed in the bus stop "waiting area", thereby permitting an additional few minutes in which the forms could be completed. The sole exception was the Medical Center/Coliseum shuttle, which did not allow most riders sufficient time for completion of the questionnaire. Thus, there are few responses from that route.

Pretesting the Telephone Interview Questionnaires was undertaken after the interviewers had received about four hours of formal training in the use of the questionnaires through lectures and role-playing exercises. All pretesting was conducted during the last two weeks in February. For the pretest, each interviewer was given a five address calling list of respondents whose names were drawn from residents in the sampling area for the study. The callers were asked to conduct the interviews, as they had been trained to do, and to carefully record any difficulties they encountered, such as resistance to a question or the survey as a whole, apparent lack of understanding of certain questions, length of the interview time, inability to complete the call (i.e., disconnected phones, no answer, change of address, etc.) Somewhat more than 100 pretest interviews were conducted during the last two weeks in February.

Information gathered from this pretest was used to refine the final version of the Telephone Interview Survey Questionnaire (e.g., the addition of income question Y₂) and to improve the content of a follow-up training session of the interviewers. Also the information helped to resolve the concerns which the interviewers expressed with regard to administering the questionnaires.

Administering the Questionnaires

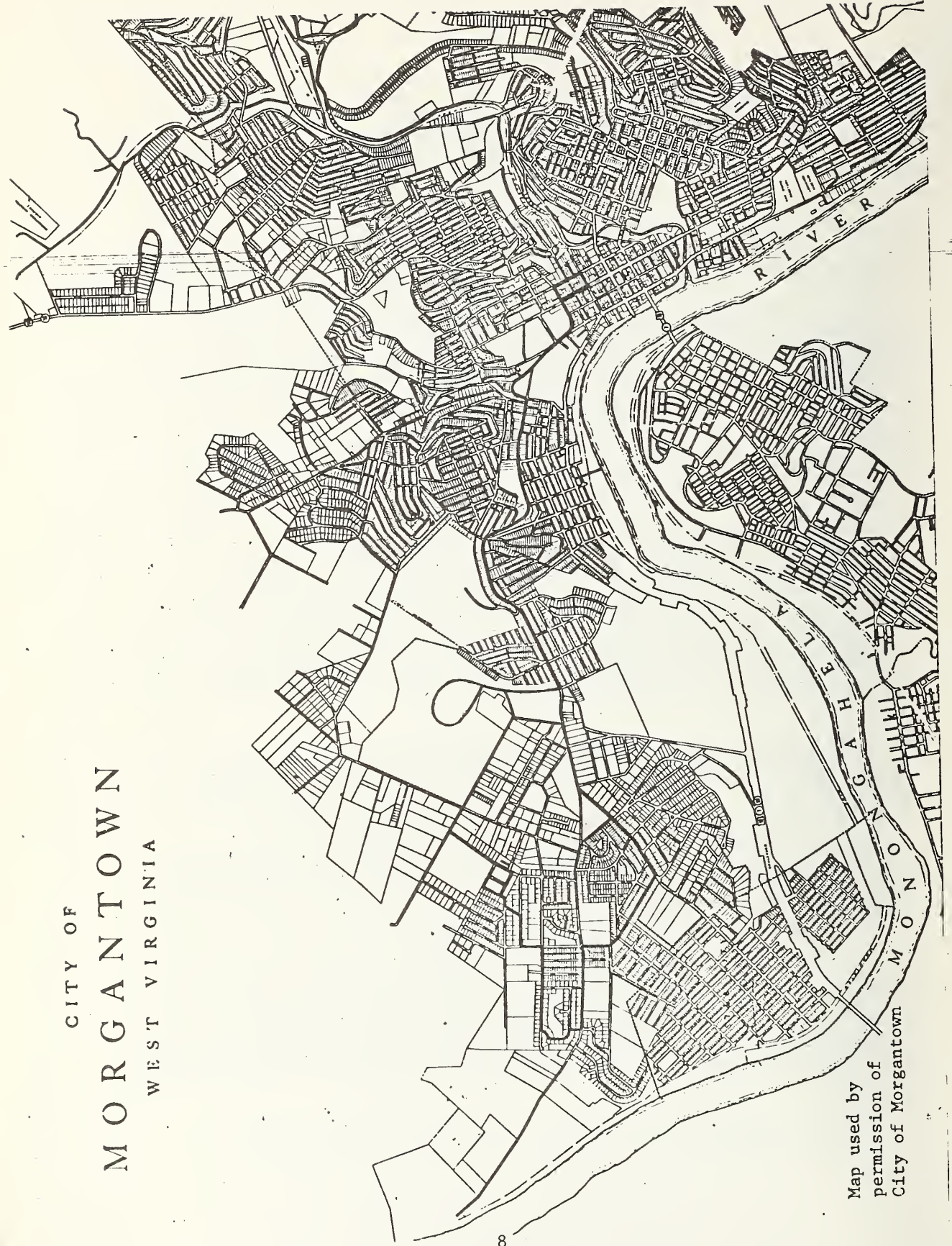
Both the University Bus On-Board Survey Questionnaire, and the City and County Bus On-Board Survey Questionnaire were designed to be self-administered. That is, either of the forms could be completed by the respondent (bus traveler) without assistance from an interviewer.

Therefore, as prospective respondents entered the bus, they were handed a copy of an appropriate survey form by the interviewer, and simply asked, "Would you please complete this questionnaire and return it to me as you leave the bus?"

As can be seen from a study of Forms PRT-2 and PRT-3, no further instructions were required by the respondent.

The Telephone Interview Survey Questionnaire was designed to guide the interviewer making the call. At the top of Form PRT-1a the interviewer recorded information provided to him in advance of the call concerning the resident's (respondent's) name, address zone, whether it is a dormitory address, the date and time when the call or recall was attempted, and the household number (a filing number). The interviewer also recorded his own name.

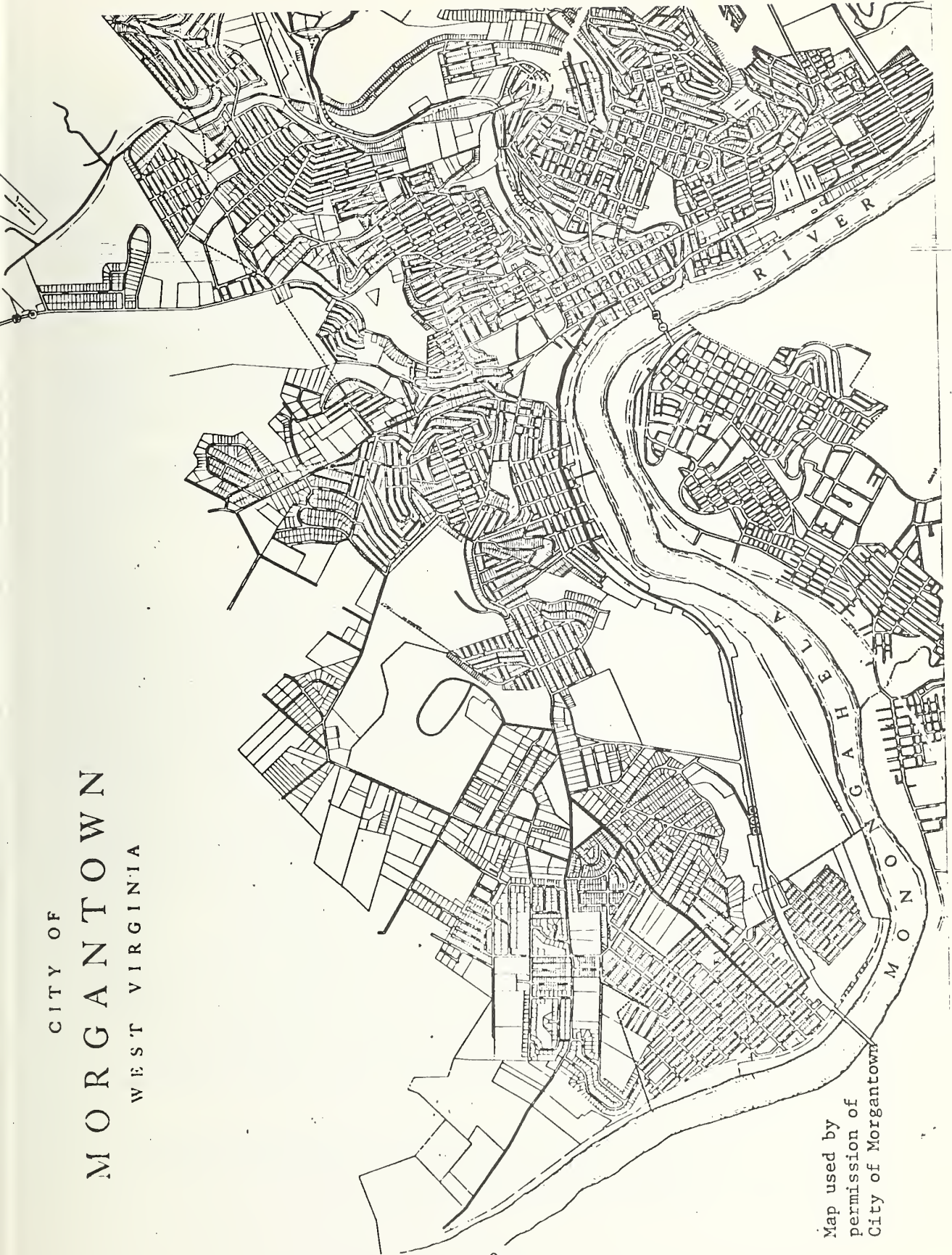
CITY OF
MORGANTOWN
WEST VIRGINIA



Map used by
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Figure 2.1
CITY BUS ROUTE --SUNCREST RUN

CITY OF
MORGANTOWN
WEST VIRGINIA



Map used by
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Figure 2.2
COUNTY BUS ROUTE --STAR CITY RUM

After reading the "Introduction" to the respondent, the interviewer next verified the respondent's address (if the address had changed the interviewer was terminated) and that a vehicular trip* had been made during the previous day (if not the interviewer skipped to non-trip related questions.)

When a trip had been made, the interviewer proceeded through questions C to L. These questions were repeated for each separate trip.

After a study of all trips had been completed, the interviewer covered non-trip questions M through Y with the respondent. Question Y, on household income, had three versions: Y_1 for all non-students
 Y_2 for all non students who would not answer Y_1
 Y_3 for all full-time students

The interviewer next asked to speak with other members of the family sixteen or older. If there was another such person, the interviewer used the "Second Person Form," Form PRT-1b to gather information on that individual's trips. This pattern continued until all possible interviews had been completed.

Having concluded the interview(s), the interviewer recorded the remaining required information on the top of the front page of Form PRT-1a: number of attached 2nd person forms, number of trips by the 1st person, number of trips by the household.

Data Collection

Both On-Board and Telephone Interview Surveys were implemented with a group of student field interviewers, initially comprised of five teams of five members each. One member of each team served as team captain and had the additional tasks of assigning and supervising day-to-day data collection activities, verifying completed Telephone Interview Survey questionnaires, and coding and collecting completed forms from his team. Nominally, one call in ten was verified by a call back from the captain, unless he found evidence of excessive error or intentional falsification. These did not turn out to be significant problems, however.

The On-Board Surveys were conducted during the time period April 21 through May 1, 1975, approximately two weeks before the end of the second academic semester at West Virginia University. No unusual conditions or events which might have led to a biased sample occurred during the data collection period. The daily sampling schedule and route/time codes are shown in Tables 2.2 and 2.3. No questionnaires were administered on the Coliseum-Main Campus route of the University Bus System. However, the ridership on this route is so small as to be negligible.

The Telephone Interview Survey was conducted during the time period April 2 through April 30, 1975. The interviews were conducted by interviewers assigned to one-hour time blocks. Initially each telephone number was assigned randomly to a one-hour time slot between 9 a.m. and 9 p.m., Tuesday through Saturday, except no calls were scheduled for Saturday evenings or Sunday mornings. However, as it became apparent that the response rate was substantially less than had been anticipated,

* For this research, a vehicular trip was defined as the movement of a respondent by a wheeled conveyance in order to engage in an activity (e.g., shopping, recreation, eating, etc.)

TABLE 2.2

ROUTE/TIME CODES FOR ROUTES OF UNIVERSITY BUS ON-BOARD SURVEY

<u>ROUTE/TIME CODE</u>	<u>TIME</u>	<u>ROUTE</u>	<u>DATES DATA COLLECTED</u>
01	8 - 9 A.M.	Campus Drive to Towers	April 22,23,24,25,29,May 1
02	9 - 10 A.M.	" " " "	April 22,23,24,25,29
03	10 - 11 A.M.	" " " "	April 22,23,24,25,26,29,May 1
04	11 - 12 A.M.	" " " "	April 22,23,24,25,29,May 1
05	1 - 2 P.M.	" " " "	April 22,23,24,25,26,29
06	2 - 3 P.M.	" " " "	April 22,23,25,26,29
07	3 - 4 P.M.	" " " "	April 22,23,29,May 1
08	4 - 5 P.M.	" " " "	April 22,23,May 1
09	5 - 6 P.M.	" " " "	April 22,23,May 1
10	6 - 7 P.M.	" " " "	April 22,May 1
11	7 P.M. and later	" " " "	April 22,25
12	8 - 9 A.M.	Towers to Campus Drive	April 22,24,25
13	9 - 10 A.M.	" " " "	April 22,23,24,25,29,May 1
14	10 - 11 A.M.	" " " "	April 22,23,24,25,26,May 1
15	11 - 12 Noon	" " " "	April 23,24,25,29,May 1
16	12 - 1 P.M.	" " " "	April 22,23,24,25,26,29,May 1
17	1 - 2 P.M.	" " " "	April 22,23,24,25,26,29,May 1
18	2 - 3 P.M.	" " " "	April 22,23,24,25,26,29
19	3 - 4 P.M.	" " " "	April 21, 22,23,29
20	4 - 5 P.M.	" " " "	April 22,23
21	5 - 6 P.M.	" " " "	April 22, May 1
22	6 - 7 P.M.	" " " "	April 22, May 1
23	7 P.M. and later	" " " "	April 22,23,26,May 1
24	12 - 1 P.M.	Campus Drive to Towers	April 22,23,24,25,29
65	10 - 11 A.M.	Medical Center/Coliseum	April 23
68	1 - 2 P.M.	" " " "	April 25
70	3 - 4 P.M.	" " " "	April 29

TABLE 2.3

CODES FOR ROUTES OF CITY/COUNTY BUSES FOR ON-BOARD SURVEY

<u>ROUTE/TIME</u> <u>CODE</u>	<u>TIME</u>	<u>TYPE OF BUS</u>	<u>ROUTE</u>	<u>DATES DATA COLLECTED</u>
25	7 - 8 A.M.	County	Star City Outbound	April 22
26	8 - 9 A.M.	"	" " "	April 22,23,24,May 1
27	9 - 10 A.M.	"	" " "	April 23
28	10 - 11 A.M.	"	" " "	April 30
29	11 - 12 Noon	"	" " "	April 23,24,26,30,May 1
30	12 - 1 P.M.	"	" " "	April 22,23,24,30,May 1
31	1 - 2 P.M.	"	" " "	April 23
33	3 - 4 P.M.	"	" " "	April 22,24
35	7 - 8 A.M.	"	Star City Inbound	April 23
36	8 - 9 A.M.	"	" " "	April 30
37	9 - 10 A.M.	"	" " "	April 23,24,30
38	10 - 11 A.M.	"	" " "	April 23
39	11 - 12 Noon	"	" " "	April 23
40	12 - 1 P.M.	"	" " "	April 23,26
41	1 - 2 P.M.	"	" " "	April 22,24
48	10 - 11 A.M.	City	Suncrest Outbound	April 23
49	11 - 12 Noon	"	" "	April 26
50	12 - 1 P.M.	"	" "	April 22,28
51	1 - 2 P.M.	"	" "	April 23
52	2 - 3 P.M.	"	" "	April 24,25
53	3 - 4 P.M.	"	" "	April 24
54	4 - 5 P.M.	"	" "	April 24
57	9 - 10 A.M.	"	Suncrest Inbound	April 22
59	11 - 12 Noon	"	" "	April 26
61	1 - 2 P.M.	"	" "	April 23,24
62	2 - 3 P.M.	"	" "	April 24
63	3 - 4 P.M.	"	" "	April 24

Note: All buses listed above provided service daily except Sundays and holidays.

interviewers were permitted to call at any time since it was felt that it was more important to obtain more respondents than to preserve the randomness of the calling times. No unusual external events or conditions which might have biased the results were encountered during the survey period.

2.3 1975 Faculty/Staff Mailback

A questionnaire was distributed to West Virginia University employees to gather information about trips they had made on Thursday, May 1, 1975. The questionnaires were hand-delivered to secretaries around the campus, and each secretary was asked to distribute them among the employees whom she served. Many questionnaires were delivered on Friday, May 2, but some were not delivered until Monday, May 5. The distribution method, chosen for its speed, appeared to be fairly effective except perhaps where potential respondents do not work out of an office (for example, certain Medical Center and maintenance personnel).

The questionnaire, which is form PRT-4, was patterned after a questionnaire which had been previously used in the PRT Feasibility Study.¹ 1,028 respondents mailed back completed questionnaires in the 1975 survey.

2.4 Community Attitude Survey

The earliest concepts of the Pre-PRT Impact Study recognized that it would be desirable to obtain attitudinal information, but the original estimates of the costs of the study made it appear that the level of funding was inadequate to support the collection of attitudinal data. However, in June 1975, when most of the data collection for the study had been completed, West Virginia University re-evaluated the financial position of the study and concluded that sufficient funds remained to collect a limited amount of attitudinal information and reduce this data to machine-readable form. Analysis of this data within budgetary constraints was clearly impossible.

In order to provide a base line for investigating changing community attitudes toward the PRT, nonstudent heads of households in Morgantown, Star City, Westover and Granville were interviewed at home using Form PRT-9 between July 1 and August 8, 1975. The head of the household or either of the co-heads, depending on availability and willingness, was interviewed.

An initial sample of 518 households was reduced to 427 by the exclusion of student households. A student household was defined to be a household for which the head was enrolled full-time for summer school in 1975 or had been enrolled full-time in the Spring 1975 or semester or expected to be enrolled full-time for the Fall 1975 semester. The determination of whether a potential respondent was a student was incorporated into the interview by a series of questions on the first page of the interview form. (See the first page of Form PRT-9, Appendix A.) If the potential respondent was a student, the interview was immediately aborted.

¹"A Feasibility Study of an Integrated City and University Transportation System", West Virginia University Bulletin 97, PB 193-721, August, 1970.

The sample frame consisted of a list of all households in the target area taken from the Polk City Directory for 1974. Household addresses were selected on a systematic basis; this procedure yields essentially a simple random sample. Eighty-nine (21 per cent) of the 427 non-student households could not be contacted even though the mean number of attempted contacts was 3.5, and no fewer than 3 contacts were attempted for every household. Most of the non-contact households probably were the homes of vacationers since many local employers scheduled vacations during July when we were interviewing. Many of the non-contacted households may have belonged to students who maintained a residence in the Morgantown area over the summer. Houses which were apparently vacant or were said to be vacant by a neighbor were replaced with an adjacent house. There is no way of knowing how many non-contacted houses were vacant or occupied by students. Thus, we cannot determine the extent of sampling bias resulting from non-contact.

Of the 338 eligible households which were contacted, 33 (10 per cent) refused an interview. This refusal ratio is fairly low. In sum, interviews were completed with 305 eligible heads of household.

Interviewers gathered superficial information on non-respondents including sex, race, estimated age, and reason for refusal. Non-respondents did not vary significantly from respondents in race, age, and proportion male and female. The mean age of respondents was 49 years as against 52 years estimated for nonrespondents. Sixty-eight per cent of the respondents were female compared with 73 per cent female for non-respondents. Most non-respondents (82 per cent) refused to be interviewed because they were too busy, were unable, or were not interested and did not want to be bothered. The remaining 18 per cent includes those who were about to move from the Morgantown area and those who were under the influence of some drug, including alcohol. Therefore, most of the refusers should have been included and represent a self-selection bias, but refusers and non-refusers appear to be similar in age and sex.

2.5 Student Attitude Survey

Recognizing that most of the PRT ridership would be West Virginia University students and that this group was specifically excluded by design from the Community Attitude Survey, West Virginia University sought some measure of student attitudes toward the PRT prior to revenue operation. It appeared that the most practical way to survey students' attitudes within time, manpower, and budgetary constraints was to distribute a questionnaire during registration. Consideration was given to administering such a survey during registration for the 1975 fall semester, but this was ruled out since the PRT was scheduled to begin revenue operation at about that time, which would have an immediate effect on student attitudes. Hence, it was decided that the only suitable time for the survey was during summer school registration. Subsequent delays pushed the start-up of PRT revenue operation several weeks beyond Fall registration, but the survey was not repeated at Fall registration for two reasons:

- a) Funding and manpower were not available to repeat the survey.
- b) Adverse publicity caused by delays in the PRT start-up would have made the results suspect.

On June 16, 1975, a questionnaire was distributed to West Virginia University students as they were being processed through registration at the Coliseum for the 1975 Summer Session(s). Permission to administer the questionnaire was given by the Dean of Admissions and Records. The questionnaire, which was developed by giving unstructured interviews to students, was form PRT-10.

Students who registered that day were given a copy of the questionnaire either as they just entered the Coliseum or while they were waiting in line to enter the Coliseum. Persons distributing the questionnaires were wearing identification badges and operated from a table placed just inside the Coliseum entry point. A sign on the table bore the words "PICK UP PRT IMPACT HERE." Drop-off points were provided at two locations in the Coliseum--one near the exit point, the other near where the students paid their fees, which was approximately midway between the entry and exit points. Many students declined to accept the proffered blank questionnaires, and many others discarded their questionnaires on the Coliseum floor without filling them out. 1,325 completed questionnaires were obtained from the approximately 6,000 students who passed through the Coliseum that day.

3. MODAL UTILIZATION

The data collected in this category reflects the level of utilization of the transportation modes in Morgantown and their level of service. The three modes for which this data was collected are the automobile mode, University Bus mode and the City/County Bus Mode.

The data collected under modal utilization consists of volumes, speeds and levels of operation for transit modes such as actual frequencies of operation in relation to scheduled frequencies. Data collection procedures for various modes are as follows.

3.1 Automobile Mode

The data required for this mode consisted of traffic volumes, automobile occupancy data and automobile speeds. The techniques utilized for modal utilization data are described in following section.

3.1.1 Traffic Counts

The University Avenue and the Beechurst Avenue are the major North and South thoroughfares paralleling the PRT route in Morgantown. An automobile trip in the PMA that could be taken by PRT will most probably utilize either the University Avenue or the Beechurst Avenue.

In order to determine the level of automobile usage traffic counts were taken on both the Beechurst Avenue and University Avenue.

The traffic counts were taken at four locations. The counts were collected for both North and South directions on Beechurst Avenue and University Avenue. The exact locations of the automatic counters are given below.

Beechurst Avenue: Just South of Eighth Street

University Avenue: Just North of Stewart Street.

The counts were collected by the West Virginia Department of Highways. These counts were taken for the time period March 17, 1975 to March 23, 1975. The counts are displayed in Table 3.1.

3.1.2 Intercept Survey

This survey was intended primarily to obtain auto occupancy information. The occupancy data was collected by observers. Since occupancy figures for automobile traffic in the PRT corridor are of primary interest, the occupancy figures needed to be separated based on the origins and destinations of the automobile trip makers.

To achieve this an intercept survey was conducted in the study area. The object of this survey being occupancy counts and not a cordon line survey, this was accomplished without disturbing the flow of traffic. The observers questioned the automobile drivers at four signalized intersections on the red signal phase. The intersections were as follows:

- a) Beechurst Avenue - University Avenue: Northbound traffic
- b) Monongahela Boulevard - Patteson Drive: Southbound traffic.

TRAFFIC COUNTS

TABLE 3.1

MORGANTOWN PRE PRT IMPACT STUDY
AUTOMATIC COUNT
(COUNTER FACTOR = 0.08)

SITE NAME : UNIVERSITY AVENUE
LOCATION : N OF STEWART ST.
DIRECTION : NORTHBND

SITE TYPE : PRT CORRIDOR
SITE NUMBER : 1

MONDAY 03-17-75	TUESDAY 03-18-75	WEDNESDAY 03-19-75	THURSDAY 03-20-75	FRIDAY 03-21-75	AVERAGE WEEKDAY COUNT	SATURDAY 03-22-75	SUNDAY 03-23-75	AVERAGE DAY OF WEEK COUNT
12- 39	101	100	104	170	113	272	254	155
1- 13	140	155	156	134	60	188	174	105
2- 15	15	21	21	18	21	146	1	161
3- 18	17	21	15	11	19	47	68	28
4- 28	19	15	13	24	23	27	15	14
5- 14	20	15	13	17	23	18	15	102
6- 32	29	25	25	24	29	58	33	122
7- 31	25	25	25	27	28	121	55	298
8- 20	25	25	25	27	28	121	55	298
9- 32	25	25	25	27	28	121	55	298
10- 32	25	25	25	27	28	121	55	298
11- 32	25	25	25	27	28	121	55	298
12- 34	25	25	25	27	28	121	55	298
1- 34	25	25	25	27	28	121	55	298
2- 34	25	25	25	27	28	121	55	298
3- 35	25	25	25	27	28	121	55	298
4- 35	25	25	25	27	28	121	55	298
5- 35	25	25	25	27	28	121	55	298
6- 35	25	25	25	27	28	121	55	298
7- 35	25	25	25	27	28	121	55	298
8- 35	25	25	25	27	28	121	55	298
9- 35	25	25	25	27	28	121	55	298
10- 35	25	25	25	27	28	121	55	298
11- 35	25	25	25	27	28	121	55	298
12- 35	25	25	25	27	28	121	55	298
TOTAL	6010	5745	5708	6607	6041	5994	5943	5020
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

* PERCENTAGES MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING

TABLE 3.1 (continued)

MORGANTOWN PRE-PRTI IMPACT STUDY
 AUTOMATIC COUNT
 (COUNTER FACTOR = 0.98)

SITE NAME : UNIVERSITY AVENUE
 LOCATION : N OF STEWART ST.
 DIRECTION : SOUTHBOUND

SITE TYPE : PRT CORRIDOR
 SITE NUMBER :

HOUR	MONDAY 03-17-75		TUESDAY 03-18-75		WEDNESDAY 03-19-75		THURSDAY 03-20-75		FRIDAY 03-21-75		SATURDAY 03-22-75		SUNDAY 03-23-75		AVERAGE DAY OF WEEK	
	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%
12-1	170	2.1	135	1.3	142	2.5	101	1.5	142	1.9	274	1.9	248	3.9	168	2.5
1-2	224	1.0	43	0.7	47	1.7	37	0.5	48	0.5	252	1.3	311	4.9	142	2.1
2-3	114	0.2	19	0.2	14	0.1	16	0.2	15	0.2	196	0.5	205	3.2	84	1.3
3-4	146	0.7	13	0.2	37	0.5	19	0.2	12	0.2	49	0.2	152	0.9	25	0.4
4-5	86	1.4	30	1.7	108	1.9	124	1.8	126	1.8	38	0.2	29	0.4	58	0.9
5-6	321	5.3	146	3.0	374	5.9	168	2.5	148	1.8	58	0.3	49	0.3	28	0.4
6-7	370	4.8	377	5.4	374	5.9	327	5.0	345	4.3	174	1.0	81	0.5	288	4.5
7-8	334	5.0	308	4.0	313	4.9	284	4.2	375	5.0	246	1.3	99	0.6	303	4.5
8-9	349	5.1	348	4.6	374	5.6	274	4.0	345	4.6	247	1.3	246	1.5	305	4.6
9-10	347	5.5	385	5.5	422	6.5	325	4.8	332	4.4	337	1.8	337	2.0	333	4.8
10-11	387	5.7	408	5.5	412	6.5	393	5.8	392	5.2	415	2.2	414	2.6	340	4.7
11-12	400	7.1	430	6.2	429	6.7	430	6.4	444	6.0	354	1.9	424	2.9	393	5.9
1-2-3-4-5-6-7	495	11.6	467	6.4	452	6.7	453	6.7	447	6.0	377	1.9	406	2.7	447	6.7
7-8-9-10-11-12	495	6.0	459	6.3	452	6.7	453	6.7	447	6.0	377	1.9	406	2.7	447	6.7
TOTAL	6988	100.0	6969	100.0	6422	100.0	6758	100.0	7043	100.0	6506	100.0	6344	100.0	6718	100.0

* PERCENTAGES MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING

TABLE 3.1 (continued)

MORGANTOWN PRE PRT IMPACT STUDY
AUTOMATIC COUNT
(COUNTER FACTOR = 0.98)

SITE NAME : REECHURST AVENUE
LOCATION : S OF 8TH STREET
DIRECTION : NORTHBND

SITE TYPE : PRT CORRIDOR
SITE NUMBER : 1

HR	MONDAY 03-17-75	TUESDAY 03-18-75	WEDNESDAY 03-19-75	THURSDAY 03-20-75	FRIDAY 03-21-75	AVERAGE WEEKDAY COUNT	%	SATURDAY 03-22-75	SUNDAY 03-23-75	AVERAGE DAY OF WEEK COUNT
1	78	82	85	140	158	109	0.4	289	290	160
2	40	83	43	176	156	58	0.2	196	179	93
3	19	21	29	35	49	29	0.1	128	140	59
4	157	123	12	20	33	19	0.2	47	28	32
5	309	60	373	362	384	351	0.3	154	57	281
6	868	609	627	781	617	696	0.4	172	86	505
7	627	617	673	787	626	630	0.5	217	140	624
8	708	949	717	673	625	730	0.2	615	399	601
9	852	862	845	837	1022	823	0.7	738	721	855
10	848	863	813	824	1022	823	0.3	704	605	857
11	968	884	923	837	1022	823	0.9	767	605	857
12	1028	1074	942	1022	1022	1023	0.6	767	605	857
1	844	918	842	836	1022	823	0.7	766	605	857
2	790	818	765	836	1022	823	0.3	731	681	841
3	740	880	795	834	1022	823	0.6	731	681	841
4	585	682	621	574	774	612	0.8	541	525	686
5	330	440	413	301	621	478	0.3	370	335	472
6	137	328	182	240	375	243	0.2	357	183	251
TOTAL	12542	12566	12239	12423	13624	12318	100.0	11115	8909	12016

* PERCENTAGES MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING

TABLE 3.1 (continued)

MORGANTOWN PRE PRT IMPACT STUDY
AUTOMATIC COUNT
(COUNTER FACTOR = 0.99)

SITE NAME : BECHURST AVENUE
LOCATION : S. OF 14TH STREET
DIRECTION : SOUTHBND

SITE TYPE : PRT CORRIDOR
SITE NUMBER : 2

HR	MONDAY 03-17-75 COUNT	TUESDAY 03-18-75 COUNT	WEDNESDAY 03-19-75 COUNT	THURSDAY 03-20-75 COUNT	FRIDAY 03-21-75 COUNT	AVERAGE WEEKDAY COUNT	%	SATURDAY 03-22-75 COUNT	SUNDAY 03-23-75 COUNT	%	AVERAGE DAY OF WEEK COUNT
12	75	149	195	145	190	148	1.3	301	254	3.3	187
1	49	83	49	179	95	48	1.5	223	118	2.6	115
2	21	25	14	53	25	21	0.5	150	118	1.5	168
3	18	29	13	17	27	22	0.2	24	38	0.4	24
4	24	50	53	37	54	50	0.2	78	31	0.2	47
5	25	25	23	33	29	23	0.7	18	31	0.4	35
6	27	27	23	37	29	23	0.2	10	10	0.1	12
7	27	60	73	77	71	72	2.2	180	105	1.3	150
8	27	97	53	54	62	59	0.8	51	27	0.3	39
9	27	97	53	54	62	59	0.8	51	27	0.3	39
10	27	97	53	54	62	59	0.8	51	27	0.3	39
11	27	97	53	54	62	59	0.8	51	27	0.3	39
12	27	97	53	54	62	59	0.8	51	27	0.3	39
1	27	97	53	54	62	59	0.8	51	27	0.3	39
2	27	97	53	54	62	59	0.8	51	27	0.3	39
3	27	97	53	54	62	59	0.8	51	27	0.3	39
4	27	97	53	54	62	59	0.8	51	27	0.3	39
5	27	97	53	54	62	59	0.8	51	27	0.3	39
6	27	97	53	54	62	59	0.8	51	27	0.3	39
7	27	97	53	54	62	59	0.8	51	27	0.3	39
8	27	97	53	54	62	59	0.8	51	27	0.3	39
9	27	97	53	54	62	59	0.8	51	27	0.3	39
10	27	97	53	54	62	59	0.8	51	27	0.3	39
11	27	97	53	54	62	59	0.8	51	27	0.3	39
12	27	97	53	54	62	59	0.8	51	27	0.3	39
TOTAL	11615	11319	11115	11755	12834	11717	100.0	10700	7950	100.0	11034

* PERCENTAGES MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING

- c) University Avenue - Campus Drive: Northbound traffic
- d) University Avenue - Stewart Street: Southbound traffic.

Figure 3.1 describes the actual locations of these intersections.

This survey was conducted for two week days, Tuesday and Wednesday. The data was collected for a total of 8 hours at each of the four intersections. The time periods during which this data was collected were as follows:

- 8:00 A.M. - 10:00 A.M.: 2 hours
- 11:00 A.M. - 2:00 P.M.: 3 hours
- 3:00 P.M. - 6:00 P.M.: 3 hours.

There were at least 3 observers at each of the intersections. The auto drivers were asked questions regarding their Origins, and Destinations also occupancies were noted by observation. Form PRT-5, in Appendix, was to collect data for the intercept survey. The survey was conducted during the dates of April 22-23, 1975.

3.1.3 Auto Speeds

Auto speeds were computed based on a travel time study. The data collected for this study is summarized in Table 3.2.

The travel time study was conducted on the two routes parallel to the PRT corridor. These are the University Avenue and Beechurst Avenue. Speeds were computed at various times of the day for both north-bound and south-bound travel on these routes.

Observers drove the automobiles on University Avenue between Towers and Mountainlair, a distance of about 1.5 miles for the south-bound travel and reversed their run for the northbound travel. On the Beechurst Avenue the runs were made between the Coliseum and CBD PRT station, a distance of 2.1 miles.

Travel times collected include the delays occurring at various signals and stop signs along the routes.

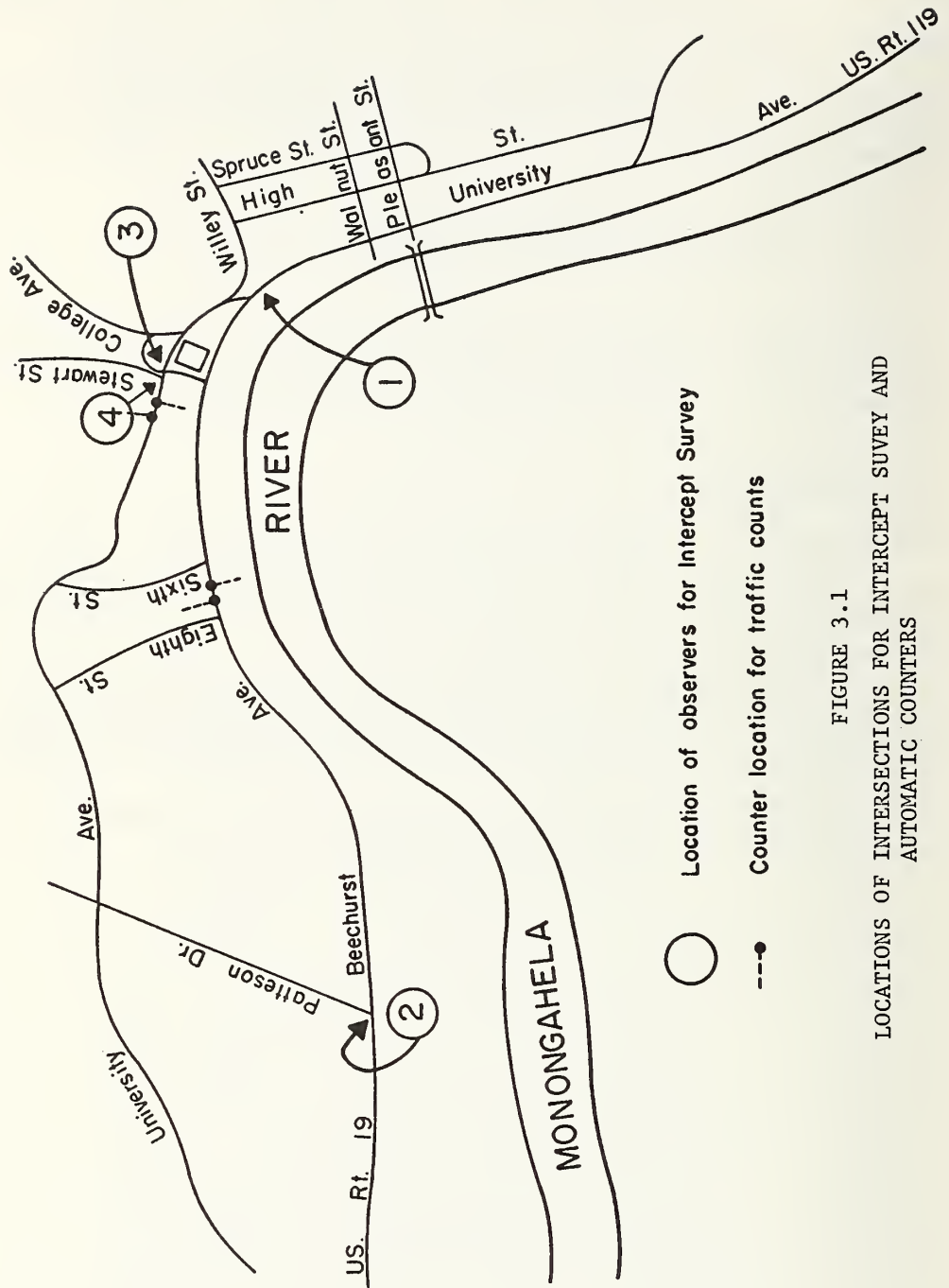


FIGURE 3.1
 LOCATIONS OF INTERSECTIONS FOR INTERCEPT SURVEY AND
 AUTOMATIC COUNTERS

TABLE 3.2
 AUTO-TRAVEL SPEEDS IN PRT CORRIDOR
 TRAVEL TIME (MINUTES)

ROUTE	UNIVERSITY AVENUE		BEECHURST AVENUE	
	Lair-Towers NORTH-BOUND	Towers-Lair SOUTH-BOUND	Walnut-Coliseum NORTH-BOUND	Coliseum-Walnut SOUTH-BOUND
7:00 A.M.	4:30	6:15	--	--
8:00 A.M.	--	6:30	5:30	6:15
9:00 A.M.	5:30	7:30	6:30	6:30
10:00 A.M.	--	--	--	--
11:00 A.M.	4:45	11:15*	10:30*	7:30
12:00 P.M.	6:45*	--	--	--
1:00 P.M.	--	--	00	--
2:00 P.M.	4:45	6:45	00	8:45
3:00 P.M.	4:05	8:30	6:30	6:30
4:00 P.M.	5:45	9:30	7:15	10:45
5:00 P.M.	--	5:30	6:45	--
AVERAGE TIME	5.16	7.72	7.17	7.71
DISTANCE MILES	1.5	1.5	2.1	2.1
AVERAGE SPEED MPH	18.00	11.25	17.57	16.34
MINIMUM SPEED MPH	14.40	8.00	12.00	11.72

* Travel Time for Slowest Trip

TABLE 3.3 BUS SCHEDULES

WVU Inter-Campus Schedule

Bus loading zones are at Campus Drive, Mountainlair, Engineering Sciences Building, Creative Arts Center, Agricultural Sciences Building, Percival-Allen Halls, Coliseum, Towers, Law Center, on Medical Center Drive near Medical Center entrance, and Basic Sciences wing of Medical Center. Evening and weekend bus stop is at Mountainlair. For bus information, call 293-5627.

Passengers cannot be picked up between bus stops. Buses will depart at scheduled times.

Faculty and staff may ride buses on University business only.

Buses depart Campus Drive loading zone, except during evenings, Saturday afternoons, and Sundays, when they depart from Mountainlair loading zone.

Buses return to Campus Drive loading zone, except during evenings, Saturday afternoons, and Sundays, when they return to Mountainlair loading zone.

When evening examinations, special meetings, and other similar functions are scheduled, the faculty member in charge should call the Bus Office, 293-5627, at least 24 hours in advance so that sufficient buses can be provided.

MONDAY THROUGH FRIDAY (Daytime)

Every five minutes from 7:30 a.m. until 5:15 p.m. from Campus Drive, Creative Arts Center, Engineering, Towers, and Medical Center.

MONDAY THROUGH FRIDAY (Evening)

From Mountainlair to Coliseum, Creative Arts Center, Engineering, Towers, and Medical Center:

6:00 p.m.	9:00 p.m.	Midnight **
6:45 p.m.	9:45 p.m.	12:30 a.m.
7:30 p.m.	10:30 p.m.	(Friday only)
8:15 p.m.	11:15 p.m.	

SATURDAY

From Campus Drive to Creative Arts Center, Engineering, Percival-Allen Halls, Towers, and Medical Center; beginning at 12:30 p.m., loading is at Mountainlair:

7:30 a.m.	Noon	7:30 p.m.
8:00 a.m.	12:30 p.m.	8:00 p.m.
8:30 a.m.	1:00 p.m.	9:00 p.m.
9:00 a.m.	2:00 p.m.	10:00 p.m.
9:30 a.m.	3:00 p.m.	11:00 p.m.
10:00 a.m.	4:00 p.m.	11:30 p.m.
10:30 a.m.	5:00 p.m.	Midnight
11:00 a.m.	6:00 p.m.	12:30 a.m.
11:30 a.m.	7:00 p.m.	1:30 a.m.

SUNDAY

From Mountainlair to Creative Arts Center, Engineering, Percival-Allen Halls, Towers, and Medical Center:

8:15 a.m.	2:30 p.m.	8:30 p.m.
9:15 a.m.	3:30 p.m.	9:30 p.m.
10:15 a.m.	4:30 p.m.	10:30 p.m.
11:15 a.m.	5:30 p.m.	11:30 p.m.
12:30 p.m.	6:30 p.m.	
1:30 p.m.	7:30 p.m.	

COLISEUM SHUTTLE BUS

Shuttle service between Coliseum and Downtown Campus is scheduled 15 minutes before each hour and 15 minutes after each hour beginning at 7:45 a.m. and terminating at 5:15 p.m., Monday through Friday. *Parking is FREE at the Coliseum. Students are urged to park there and use the shuttle service because of scarcity of parking spaces on the Downtown Campus.*

MEDICAL CENTER SHUTTLE BUS

Shuttle service is provided between Coliseum, Towers, and Medical Center every 15 minutes from 8:00 a.m. until 5:00 p.m., Monday through Friday—except from noon until 12:15 and from 12:45 to 1:00 p.m. when service is provided every five minutes.

LAW CENTER SHUTTLE BUS

Shuttle service between the Towers and the Law Center, Monday through Friday. Depart the Towers for Law Center at the following times and return to Towers:

7:55 a.m.	10:55 a.m.	2:55 p.m.
8:25 a.m.	11:55 a.m.	3:55 p.m.
8:55 a.m.	12:55 p.m.	4:55 p.m.
9:55 a.m.	1:55 p.m.	

SUMMER SESSION SCHEDULE

Buses depart every 15 minutes from 7:30 a.m. to 5:15 p.m. from Campus Drive and return to Campus Drive, effective the first day of registration and ending on last day of classes. Buses stop at Creative Arts Center, Engineering, Percival-Allen Halls, Towers, Law Center, and Medical Center.

TABLE 3.3 (continued)

Monongalia County Transit Schedule

(Used by permission of Monongalia County Transit System)

CASSVILLE

5:30 a.m.—Lv. Morgantown. Arr. Cassville 6:00 a.m. Lv. Cassville 6:00 a.m., Arr. Morgantown 6:25 a.m. (Continues to Evansdale Campus and University and Monongalia General hospitals.)

6:30 a.m.—Lv. Walnut Street PRT for University and Monongalia General hospitals, Star City, arr. Cassville 7:00 a.m.

7:00 a.m.—Lv. Cassville. Arr. Morgantown via Morgan Heights 7:40 a.m.

8:00, 9:00, 10:00, 11:00 a.m.—Lv. Morgantown. Arr. Cassville 30 min. after the hr.

8:30, 9:30, 10:30, 11:30 a.m.—Lv. Cassville. Arr. Morgantown 5 min. before the hr.

1:00, 2:00, 3:00, 4:00, 5:10 p.m.—Lv. Morgantown. Arr. Cassville 20 min. after the hr.

1:30, 2:30, 3:30, 4:30, 5:30 p.m.—Lv. Cassville Arr. Morgantown 5 min. before the hr.

To Cassville—

Lv. Westover 10 min. after departure..

Lv. Granville 15 min. after departure.

Lv. Osage 20 min. after departure

To Morgantown—

Lv. Osage 10 min. after departure.

Lv. Granville 15 min. after departure.

Lv. Westover 20 min. after departure

OVER CHEAT

(Brookhaven, Tyrone, Imperial Woods, Canyon, Easton, Mileground, and Cheat Rd. to State Line)

8:00 a.m.—Lv. State Line (Over Cheat) to Tyrone Rd., Dellslow, Richard, and Brookhaven. Arr. Morgantown 8:45 a.m.

9:30 a.m.—Lv. Morgantown. Arr. Brookhaven 9:35 a.m., Richard 9:38 a.m., Dellslow 9:40 a.m., Field Park and Tyrone Rd. 9:45 a.m., Avery Rd. 9:50 a.m., and Rockley Rd. 9:55 a.m. Turn at Rockley Rd. and return to Imperial Woods Rd. Arr. Imperial Woods Rd. and Avery Rd. 10:00 a.m., Cheat Rd. 10:05 a.m., Canyon 10:10 a.m., Rt. 119 10:12 a.m., Mileground 10:15 a.m., Morgantown 10:20 a.m.

11:30 a.m.—Lv. Morgantown for Mileground, Easton, Pierpont to State Line. Lv. State Line 12:00 noon for Tyrone, Dellslow, Richard, Brookhaven. Arr. Morgantown 12:45 p.m.

2:00 p.m.—Lv. Morgantown. Arr. Brookhaven 2:05 p.m., Richard 2:08 p.m. Dellslow 2:10 p.m., Field Park and Tyrone Rd. 2:15 p.m., Avery Rd. 2:20 p.m., Rockley Rd. 2:25 p.m. Return to Imperial Woods Rd. and arr. Imperial Woods and Avery Rd. 2:30 p.m., Cheat Rd. 2:35 p.m., Canyon 2:40 p.m., Rt. 119 2:42 p.m., Mileground 2:45 p.m., Morgantown 2:50 p.m.

4:00 p.m.—Lv. Morgantown for Brookhaven, Richard, Dellslow, Tyrone Rd., Cheat Rd., Easton, Mileground, and return. Arr. Morgantown 4:45 p.m.

5:10 p.m.—Lv. Morgantown for Brookhaven, Richard, Dellslow, Tyrone Rd., Over Cheat to State Line.

STAR CITY

7:40 a.m.—Lv. Morgantown for Star City, Suncrest, University and Monongalia General hospitals, Chestnut Ridge Rd., Point Marion Rd., Canyon to Tyrone Rd. on Cheat Rd. Return Cheat Rd. to Mileground to Morgantown.

9:00 a.m., 10:00 a.m., 11:00 a.m., 12:00 noon, 1:00 p.m., 2:00 p.m., 3:00 p.m., 4:00 p.m.—Lv. Morgantown, Arr. Hills 5 min. after the hour, Star City Town Hall 10 min. after the hr., and University Hospital 15 min. after the hr. (10:00 a.m., 12:00 noon, and 2:00 p.m. buses continue to Chestnut Ridge Rd. to Stewart St. Stewart St. 20 min. after the hr. Return via Stewart St., Willowdale Rd., University Hospital.) (Lv. University Hospital 9:30 a.m., 10:30 a.m., 11:30 a.m., 12:30 p.m., 2:30 p.m., 3:30 p.m., and 4:30 p.m., Arr. at Star City Town Hall 25 til the hour. Arr. Hills 20 til the hour. Travel Monongahela Blvd. and Beechurst Ave. to Morgantown.)

5:10 p.m. Lv. Morgantown for Hills, Star City, Suncrest, University and Monongalia General hospitals, Chestnut Ridge Rd., Point Marion Rd., Canyon to Tyrone Rd., Cheat Rd. Return Cheat Rd. to Mileground to Morgantown.

GRAFTON AND FAIRMONT ROADS

(Wednesday and Saturday only)

10:30 a.m.—Lv. Morgantown. Arr. Fairmont and Halleck Rd. 10:50 a.m., Grafton and Halleck Rd. 11:10 a.m., Morgantown, 11:30

3:30 p.m.—Lv. Morgantown. Arr. Grafton and Halleck Rd. 3:50 p.m., Fairmont and Halleck Rd. 4:10 p.m., Morgantown 4:30 p.m.

CROWN

(Morgan Heights, Booth, National, Everettville, Arnettsville, Crown)

7:25 a.m.—Lv. Morgan Heights. Arr. Morgantown 7:40 a.m.,

7:30 a.m.—Lv. Morgantown, travel by Fairmont Rd. Arr. Crown 8:00 a.m.

8:00 a.m.—Lv. Crown for Arnettsville, Everettville, National, Booth. Arr. Morgantown 8:45 a.m.

1:00 p.m.—Lv. Morgantown for Booth, National, Everettville. Lv. Everettville 1:30 p.m., National, Booth. Arr. Morgantown 2:00 p.m.

3:40 p.m.—Lv. Morgantown for Morgan Heights, and return. Arr. Morgantown 4:05 p.m.

5:10 p.m.—Lv. Morgantown for Morgan Heights, Booth, National, Everettville. Arr. Crown 5:50 p.m. Lv. Crown 5:50 p.m., travel by Fairmont Rd., arr. Morgantown 6:20 p.m.

TABLE 3.3 (Continued)
BLACKSVILLE

MOUNTAIN HEIGHTS

(Wednesday and Saturday only)

Wednesday: Lv. Morgantown 12 Noon via Kingwood Pike, Arr. Mountain Heights 12:30 p.m.; returns via Summers School Rd, Arr. Morgantown 1:15 p.m. Lv. Morgantown 4:30 p.m. via Summers School Rd., returns via Kingwood Pike.

Saturday: Lv. Morgantown 9:00 a.m. via Kingwood Pike, Arr. Mountain Heights 9:30 a.m.; returns via Summers School Rd., Arr. Morgantown 10:15 a.m. Lv. Morgantown 2:00 p.m. via Summers School Rd. to Mountain Heights; returns via Kingwood Pike.

8:30 a.m.—Lv. Morgantown. Arr. Cassville 8:45 a.m., Core 8:50 a.m., Pentress 8:55 a.m., Blacksville 9:00 a.m.
9:00 a.m.—Lv. Blacksville. Arr. Pentress 9:05 a.m., Core 9:10 a.m., Cassville 9:15 a.m., Morgantown 9:30 a.m.
2:00 p.m.—Lv. Morgantown. Arr. Cassville 2:15 p.m., Core 2:20 p.m., Pentress 2:25 p.m., Blacksville 2:30 p.m.
2:30 p.m.—Lv. Blacksville. Arr. Pentress 2:35 p.m., Core 2:40 p.m., Cassville 2:45 p.m., Morgantown 3:00 p.m.

Morgantown Transit Schedule

(Used by permission of Morgantown Transit System)

(All starting times originate from the downtown bus stops except where otherwise designated.)

Loading Information

Suncrest 10 til the hour buses, South Park & South Side buses will load at Court House; Seneca buses will load at Met Theatre; all others will load on Fayette Street.

SUNCREST

Monday thru Friday: 7:10 a.m., 7:30 a.m., 7:50 a.m., 8:10 a.m., 8:30 a.m., 8:50 a.m., 9:10 a.m., 9:30 a.m., 9:50 a.m., 10:10 a.m., 10:30 a.m., 10:50 a.m., 11:10 a.m., 11:30 a.m., 11:50 a.m., 12:10 p.m., 12:30 p.m., 12:50 p.m., 1:10 p.m., 1:30 p.m., 1:50 p.m., 2:10 p.m., 2:30 p.m., 2:50 p.m., 3:10 p.m., 3:30 p.m., 3:50 p.m., 4:10 p.m., 4:30 p.m., 4:50 p.m., 5:10 p.m., 5:20 p.m.

(7:50 a.m. and all 10-till-the-hour buses leave from Court House—all others Fayette Street.)

Saturday: 7:10 a.m. thru 5:10 p.m. hourly

Out		Back	
U. Hosp. 10 Min.	—	U. Hosp. 35 Min.	
Dairy Mart 20 Min.	—	8th St. 40 Min.	

Monday Evening 6:10 p.m. - 7:10 p.m. 8:10 p.m. - 9:10 p.m.

Dairy Mart turn around

SABRATON

Monday thru Saturday: 7:20 a.m. Leave Sabraton

8:05 a.m. thru 4:05 p.m. hourly

5:10 p.m. No Return to City

Marilla, 7:20 a.m., 1:05 p.m., 5:10 p.m. All trips out and return thru Jerome Park.

Hecks 12 min. later · Connors Grocery 20 min. later

(turn around) Return - Jerome Park light - 30 min. later.

6:05 p.m., 7:05 p.m., 8:05 p.m., 9:10 p.m.

STEWART STREET

Monday thru Saturday: 7:00 a.m. thru 4:00 p.m. hourly & 5:10 p.m.

Keys' - Shorty Andersons - 10 min. later - North Side Fire Station 15 min. later.

Monday Evening: 7:00 p.m. and 9:05 p.m.

SOUTH PARK

Monday thru Friday: 8:00 a.m. thru 4:00 p.m. hourly & 5:05 p.m.

2nd Ward School - 7 min. later.

Saturday: 8:00 a.m., 9:00 a.m., 11:00 a.m., 1:00 p.m., 3:00 p.m., 4:00 p.m., 5:05 p.m.

Monday Evening: 6:00 p.m. and 8:00 p.m.

SENECA

Monday thru Saturday: 7:45 a.m., 9:45 a.m., 11:45 a.m., 1:45 p.m., 3:45 p.m., 4:45 p.m.

7th & Beechurst - 5 min. later.

Monday Evening: 7:45 p.m.

SOUTH SIDE

Monday thru Saturday: 7:30 a.m. thru 5:30 p.m. hourly

Mundys Place 6 min. later

GRAND STREET 8:30 a.m., 11:30 a.m., 3:30 p.m., 5:30 p.m. Top of Grand 10 min. later.

Monday Evening: 7:30 p.m. and 9:30 p.m.

WOODBURN

Monday thru Friday: 7:20 a.m. thru 5:20 p.m. hourly

Mileground Medical Center 10 min. later (turn around)

Saturday: 8:20 a.m., 9:20 a.m., 11:20 a.m., 1:20 p.m., 3:20 p.m., 4:20 p.m., 5:20 p.m.

Monday Evening: 6:20 p.m. and 8:20 p.m.

3.2 Bus Ridership Counts

The Bus Riderships were counted for the University Bus System by observers located at various stops. The ridership counts on the city/county buses were collected by observers, who actually boarded the bus.

The data was collected for the following routes of the University System between 8:00 A.M. and 5:00 P.M.

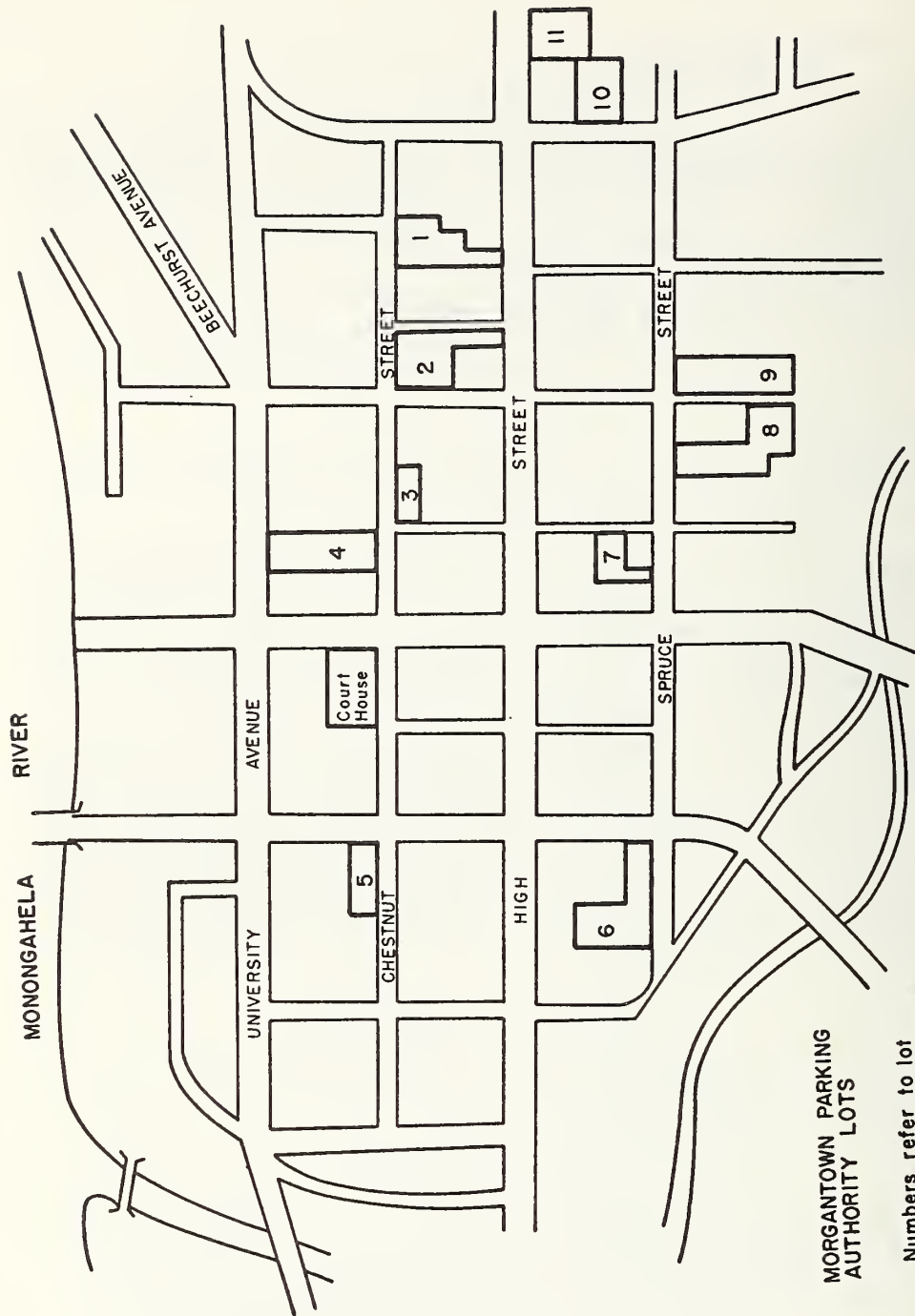
1. Campus Drive to Towers
2. Towers to Campus Drive
3. Medical Center to Coliseum
4. Coliseum to Medical Center
5. Campus Drive to Coliseum
6. Coliseum to Campus Drive

After 5:00 P.M. the bus travels for Mountainlair to all stops on the Evansdale Campus and back, counts were collected for this run of bus by boarded observers.

The Suncrest route of the city bus system is the only route that is parallel to the PRT route. This run starts in downtown Morgantown and goes to Suncrest Area and back to downtown Morgantown. The County Bus System also has one run which parallels the PRT route, the Star City route. This route is from Court House in CBD and goes to Star City and returns. The ridership data was collected also on these two routes of City and County buses. Figure 2.1 and 2.2 describe the routes of the city/county bus systems respectively.

The data at various stops on ridership surveys included number on, number off, ratio of standees to riders, arrival time and departure time. Thus, the data gives the actual frequency of service of the buses.

The forms used for University and City/County buses were PRT-6 and PRT-7, respectively. This data was collected during the period of March 18, 1975 through March 22, 1975. The data on computer tape refers to actual data collected at each stop. The schedules for various bus systems are given on Table 3.3.



MORGANTOWN PARKING AUTHORITY LOTS

Numbers refer to lot numbers on questionnaire

FIGURE 4.1
CENTRAL BUSINESS DISTRICT
 Morgantown, West Virginia
 Parking Authority of Morgantown
 MORGANTOWN PARKING AUTHORITY LOTS

4. TRANSPORTATION COSTS

4.1 Automobile Costs

The cost of using automobile in Morgantown involves operating costs, maintenance costs and parking costs. Operating and maintenance costs include the cost of gasoline, depreciation of automobile, insurance costs and the maintenance costs.

The data collected on costs for automobiles was collected based on prevailing costs in Morgantown during April 1975. A parking survey was conducted to determine the parking cost in CBD and public lots at the downtown campus.

4.1.1 Cost and Availability of Gasoline

During the month of April 1975, when travel surveys were being conducted, gasoline was available in adequate quantities and no long lines or queues were encountered at any filling stations.

The retail prices of gasoline varied quite a lot in the PRT corridor. In order to determine the average price a gasoline price survey was conducted. Seven stations in the PRT corridor were visited by our staff and prices for 3 types of gasoline - Regular, Hi-Test and Unleaded gasolines were noted. The results of this survey are as follows:

Price per gallon in cents

Gas Station	Regular	Hi-Test	Unleaded
1. Amoco	55.9	59.9	60.9
2. Bonded	47.9	47.9	48.9
3. Boron	52.9	56.9	52.9
4. Arco	52.9	56.9	54.9
5. Texaco	54.9	58.9	58.9
6. Sunoco	56.9	60.9	55.9
7. Exxon	53.9	58.9	55.9

4.1.2 Automobile Operation and Maintenance Costs

There is a lot of variation in operating costs per mile of automobile driven, from individual to individual. The variables affecting this cost can be identified mainly as the size of the car and annual miles driven. Other factors influencing this cost are the way an individual drives, the breakdown of city and highway mileage driven and weight of the total load driven in the automobile. Depreciation cost, constituting a significant proportion of automobile operating cost is influenced largely by the age of automobile.

To simplify the procedure to determine the automobile operating cost several assumptions have been made. They are as follows:

- a) Typical 1975 models using unleaded gasoline were chosen in the category of standard and compact cars to determine operating costs for automobiles.

- b) An average of 10,000 miles of driving is assumed with 60% highway driving.
- c) MPG was assumed to be 10% lower than EPA figures for 1975 automobiles considered.
- d) Average price of gasoline at six service stations during April 1975 was assumed to be the price of gasoline.
- e) The time value of money was assumed to be 8 per cent which is a weighted average of two-thirds capital at 12% rate and one-third equity.
- f) The car was assumed to have a life of 10 years.
- g) The insurance rates for Morgantown, considerably lower than metropolitan areas, are used in analysis.
- h) The parking charges are also those for Morgantown area and are also lower than other areas.
- i) The repairs and maintenance costs are based on typical automotive shops in Morgantown area.
- j) Driving in Morgantown requires use of snow tires for at least 4 months in a year.

The results are summarized in Tables 4.1 and 4.2.

4.1.3 Parking Costs for Automobiles

Automobile parking on a limited basis is available at various WVU campuses. The Evansdale Campus has parking lots which serve both the students and faculty of WVU based on permits issued by WVU on a first come first served basis. However, very limited faculty/staff permits are issued at the Downtown Campus. The Downtown Campus has two public lots at the Mountainlair. Several free lots are available at Towers, Coliseum and Medical Center on the Evansdale Campus.

Parking in the CBD of Morgantown is provided by Morgantown Parking Authority run by the City of Morgantown. An inventory of parking spaces in Morgantown was conducted by field inspection for the city lots and data WVU Parking Lots was collected from WVU Parking Control Office. Table 4.3 describes the capacities of various lots in Morgantown.

A parking survey was conducted to determine average time to park, empty parking spaces and average parking duration of automobile users in the CBD and the public lots of the University on Downtown Campus.

The survey was conducted during the weekdays of April 15, 1975 through April 21, 1975. Data was collected for 8 hours from 8:00 a.m. to 4:00 p.m. for 3 days on the CBD lots and 2 days for the University Lots.

Form PRT-8 was utilized for this survey. Staffing requirements consisted of one interviewer at the University Lot and 2 at the CBD lots. The interviewers moved from lot to lot in the CBD area on a random basis.

The parking fees charged by WVU for permit holders is \$24 per year. The public lots on the Downtown Campus cost \$0.35 for each parking opportunity.

The city lots charge \$0.10 for 40 minutes and multiples thereof. Figure 4.1 shows the CBD parking lots.

4.1.4 Automobile Accidents

The records of accidents involving automobiles are recorded by the Morgantown City Police Department. Accidents from these records

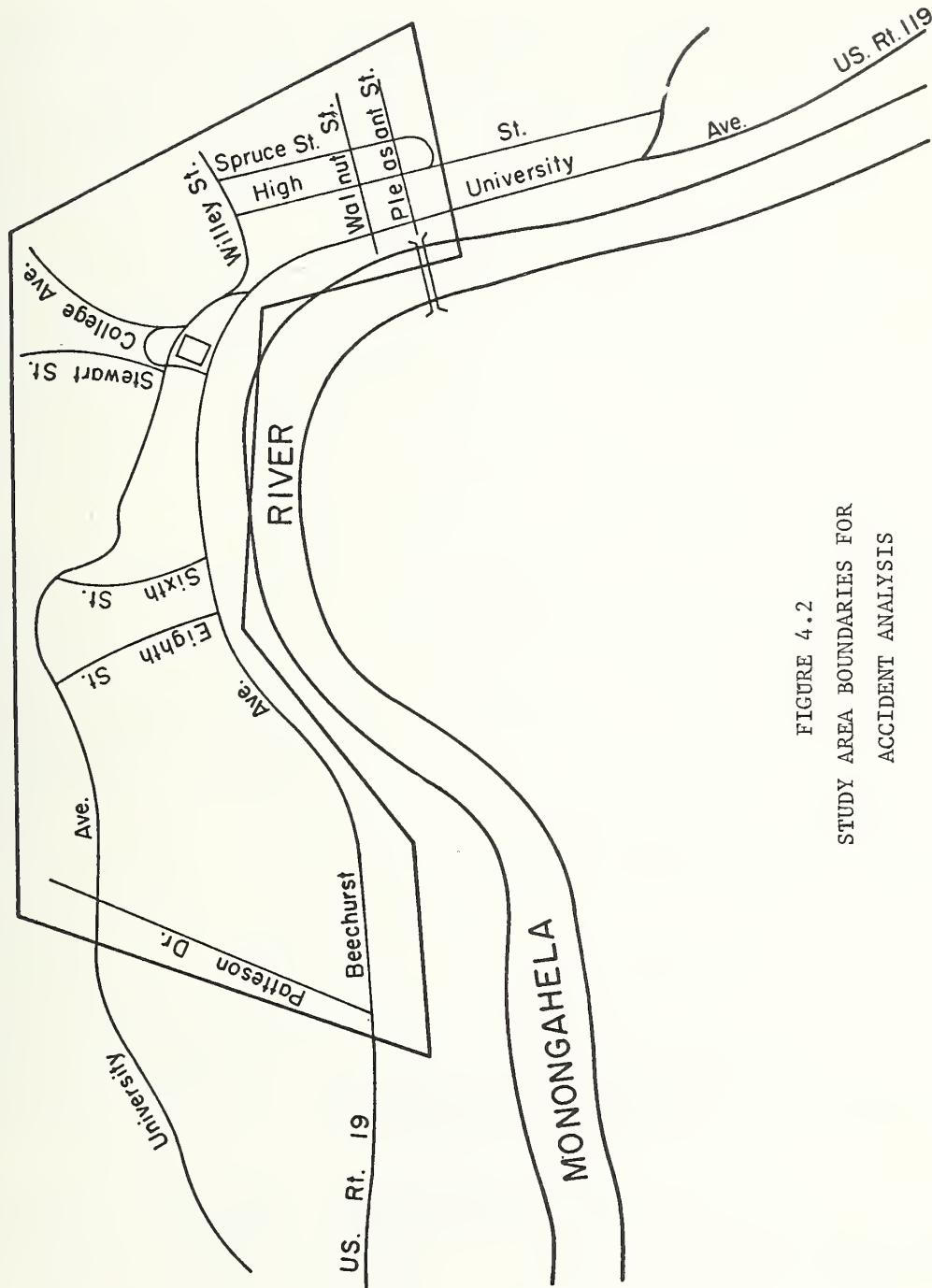


FIGURE 4.2
 STUDY AREA BOUNDARIES FOR
 ACCIDENT ANALYSIS

TABLE 4.1

COST OF STANDARD-SIZE CAR OPERATION
(MARCH 1975)

Initial Cost:

Considering 1975 PLY-Fury with V-8 engine, automatic trans., power steering, power brakes, air conditioning, tinted glass, radio, clock, whitewall tires, including destination charge, and all taxes: \$5,250.

Equivalent annual cost @ 8% cost of money = 5250 (A/P, 8%, 10) - \$782.41

Repairs & Maintenance

a. Need 15 additional tires including snow tires @ 40 each = \$600 in 10 years i.e. annual average tire cost =	\$60.	
b. Oil, lubrication, oil filter 3 times per year @ 13.75 =	\$41.25	
c. Tune-up, 2 @28. plus air filter once a year =	\$60.	
d. State inspection =	\$ 3.59	
e. Muffler & tail pipe once in 2 years =	\$20.	
f. Brakes, shocks, wiper, hoses fan belts, ball joints: annual cost =	\$37.50	
g. Front end alignment, wheel balancing & mounting and tire changes in winter and summer =	\$30.	
h. Carburetor - average annual cost =	\$10.	
i. Antifreeze & car wash =	\$32.50	
j. Catalytic converter - annual cost =	\$75.00	
k. Miscellaneous parts and labor: including freon in air conditioner, brake fluid, power steering fluid, transmission fluid =	\$20.	
Subtotal.....	\$389.84	\$389.84

Gasoline

6,000 miles @ 16 miles/gallon =	375 gallons
4,000 miles @ 11 miles/gallon =	<u>363 gallons</u>
total =	738 gallons

add on EPA ratings	<u>74 gallons</u>
total =	812 gallons

Unleaded gasoline @55.47
cents/gallon for 812 gallons per year = 450.42
(Average gasoline price in March, 1975)

TABLE 4.1 (continued)

Insurance

Average estimated annual premium = 175.00
 (A large student population of age less than 25)

Parking, Garaging, Tools, etc. = 100.00

Registration & Property Taxes = 39.00

Total = 1,936.67

Average 10,000 miles per year driving

Average cost per mile = \$1937/10,000 miles = 19.37 cents/mile

Summary

	Cost/Year \$	Cost/Mile ¢	% of Total Cost
1. Capital recovery	782.41	7.824	40.4%
2. Repairs & Maintenance	389.84	3.898	20.1%
3. Gasoline as of March, 1975	450.42	4.504	23.3%
4. Insurance, parking, registration, property tax etc.	314.00	3.140	16.2%
TOTAL	1,936.67	19.366	100%

NOTES:

1. It must be realized that the cost of operating any car per mile does not remain constant over its 10 years operating life. As a car gets old, annual capital recovery cost (item 1) and insurance, property tax (item 4) will reduce and repair and maintenance (item 2) will increase. In the first year, capital recovery is much higher than the average estimated and repair costs are very low because normally parts are guaranteed during the first year.

2. It is expected that operating costs will increase due to upward pressure on gasoline price in years to come. Gasoline prices in the PRT Corridor during the month of April 1975 at seven stations were as follows. (item IV of 1A).

- Station 1 60.9¢ per 1 gallon
- Station 2 48.9¢ per 1 gallon
- Station 3 57.9¢ per 1 gallon
- Station 4 59.9¢ per 1 gallon
- Station 5 58.9¢ per 1 gallon
- Station 6 55.9¢ per 1 gallon
- Station 7 55.9¢ per 1 gallon

TABLE 4.2

COST OF COMPACT-SIZE CAR OPERATION

MARCH 1975)

Initial Cost:

Considering 1975 PLY-Duster with 6-cylinder, automatic transmission, A.M. radio body side molding, white wall tires, poser steering, dealer preparation charge, destination charge, and all taxes: \$4,595.71

Equivalent Annual Cost @8% cost of money = 4595.71 (A/P, 8%, 10) = \$684.90

Repairs & Maintenance:

a.	15 tires Including snowtires)		
	@ 40.00 each = \$600.00 in 10 years,		
	yearly average time cost =	\$60.00	
b.	Oil, oilfilter, and lubrication		
	3 times per year @13.75 =	\$41.25	
c.	Tune-up twice a year		
	@26.00		
	plus air filter once a		
	year =	\$56.00	
d.	State inspection =	\$ 3.59	
e.	Yearly cost of biannual muffler		
	and tailpipe replacement =	\$20.00	
f.	Brakes, shocks, wiper, hoses,		
	fan belts, ball joints,		
	etc. =	\$37.50	
g.	Front end alignment, wheel balancing,		
	mounting, and tire changing in		
	winter and summer =	\$30.00	
h.	Carburetor - average		
	annual cost =	\$10.00	
i.	Antifreeze and car wash =	\$32.50	
j.	Catalytic converter		
	biannual @150.00 =	\$75.00	
k.	Miscellaneous parts and labor:		
	(i.e. brake fluid, power steering		
	fluid, transmission fluid,		
	etc.) =	\$15.00	
	Sub total.....	\$389.84	\$389.84

Gasoline

6000 miles highway driving @ 23 miles/gallon	=	261 gallons
4000 miles city driving @18 miles/gallon	=	<u>222 gallons</u>
Sub-total		483 gallons
10% under rating of EPA ratings		<u>48 gallons</u>
Total	=	<u>531 gallons</u>

TABLE 4.2 (continued)

Gasoline (continues)

Unleaded gasoline @ 55.47 cents/gal.
for 531 gallons (Average gasoline price
of 7 stations surveyed in March, 1975) included
taxes = \$ 294.55

Insurance

Average estimated annual premium = \$175.00

Parking, Garaging, Tolls, etc. = \$100.00

Registration and Property = \$ 37.00

Total = \$1672.29

Average 10,000 miles per year driving cost \$1672.29

Average cost per mile = $1672/10,000$ = 16.72 cents/mile

Summary

	Cost/year \$	Cost/mile ¢	% of Total Cost
1. Capital recovery	684.90	6.849	41.0%
2. Repairs and Maintenance	380.84	3.808	22.8%
3. Gasoline as of March	294.55	2.945	17.6%
4. Insurance, parking registration, property tax, etc.	312.00	3.120	18.6%
TOTAL	\$ 1672.29	16.72 ¢	100%

TABLE 4.3

PARKING LOT CAPACITIESMorgantown Parking Authority Lots:

<u>Parking Lot No.</u>	<u>Name</u>	<u>No. of Spaces</u>
1	Beside Massulo's	86
2	Fayette - Chestnut	81
3	Ruff Stone - Chestnut	22
4	University - Wall Street (R.S.)	76
5	Chestnut - Pleasant	67
6	Pleasant - Spruce	67
7	Wall - Spruce	25
8	Spruce Street South	71
9	Spruce Street North	72
10	Wiley Street	39
11	North High	37

MAIN CAMPUS PARKING

1	Appalachian	30
2	Woodburn Hall	22
3	Science Hall	20
4	Personnel	20
5	Falling Run	75
6	Maiden Lane	58
7	Tennis Courts	24
8	Beechurst	12
9	Old Forestry	15
10	Stadium Outside	25
11	I. A. B.	50
12	Oglebay Hall	18
13	Spruce Street	10
14	Armstrong Hall	2
15	Music School	6
16	Health Service	7
17	College Avenue	10
18	Old Bookstore	3
19	Bookstore	4
20	M. I. Building	4
21	Speech and Hearing	10
22	Old Mountainlair	18
23	Administration Building	16
24	Woman's Hall	8
25	Mountainlair	18
26	Stadium Inside	15
27	Glasscock House	2
28	New Computer Center	35
29	Beechurst Avenue	10

UNIVERSITY LOTS FOR PUBLIC

Mountain Lair	Upper	250
Mountain Lair	Lower	250

TABLE 4.3 (Continued)

EVANSDALE CAMPUS

<u>Parking Lot Number</u>	<u>Name</u>	<u>No. of Spaces</u>
40	Engineering Faculty	141
41	Engineering Rear	45
43	Agriculture Science Side	219
44	Agriculture Science Front	35
45	Creative Arts Center	185
46	Forestry	119
47	Engineering Student Lot	220
48	Twin Towers	78
49	Communications	38
50	Forestry Tower	161

MEDICAL CENTER

60	Lot A	65
61	Lot B	59
62	Lot C	13
63	Lot F	222
64	Lot D	12
65	Lot E	342
66		10

	Law School	169
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FREE PARKING LOTS

	Towers	400
	Coliseum	1200
	CAC	100
	Medical Center	700

were separated to reflect accidents in the PRT corridor by our staff. Figure 4.2 describes the area included for accident analysis.

The time period considered for collection of data of automobile accidents was from January 1972 through June 1975. The data collected for each accident included the following:

- a) Location of accident (Zone No.)
- b) Type of injury, if any.
- c) Damage of automobiles and property, if any in dollars.

4.2 University Bus System Costs

All full time students pay \$4.25 per semester for the use of University Bus System run by WVU. Faculty/Staff and other students are entitled for free rides on the University Bus runs, which are essentially between campuses.

Cost data collected from WVU bus operators was as follows:

a) OPERATING COSTS

Total operating cost/year	\$121,646
Estimated platform hours/day	61
Estimated Number of Operating days/year	246
Estimated Number of revenue miles	75,230
Operating Cost/platform hour	\$ 8.11
Operating Cost/revenue mile	\$ 1.62

b) ANNUALIZED CAPITAL COSTS

The university operates 9 buses costing \$25,000 each. In 1974 the University leased 7 buses at \$7.80 per hour. The annualized cost can be computed, assuming an interest rate of 7% and an estimated salvage value of \$2000 at the end of 10 years

Annualized Capital Cost	= \$30,733.00
Annualized Capital Cost/Platform Hour	= \$ 2.05
Annualized Capital Cost/Revenue Hour	= \$ 0.41

ANNUAL REVENUES:

Total revenue from student fees	= \$126,702.00
Annual revenue per platform four	= \$ 8.44
Annual revenue per revenue mile	= \$ 1.68

Administrative, Advertising and Insurance Costs

Administrative cost was estimated \$15,000 per year. Advertising Cost is negligible. Insurance Cost can be estimated at \$20,000 per year. Insurance cost is really borne by the State and all state vehicles have blanket coverage. The estimated figure is an approximation based on costs elsewhere.

TABLE 4.4
COST ANALYSIS--WVU CAMPUS-BUS SYSTEM

Capital Investment:

9 Buses @ 25,000 each	=	\$225,000.
Estimated Life	=	10 years
Estimated Salvage Value at the end of 10 years @ 2000 each	=	\$ 18,000.

Assuming 7% cost on capital investment, annualized capital cost

= 207,000 (A/P, 7%, 10) + .07 (18000)	=	\$ 30,733.
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Operating Expenses (Annual)

Labor:	\$ 59,890.	
Fuel, parts, etc.:	\$ 19,900;	
Unclassified		
(Benefits, insurance, etc.)	<u>\$ 41,856.</u>	
TOTAL	\$121,646	= \$121,646.

Total annualized capital and operating cost	=	\$152,379.
---------------------------------------------	---	------------

Leased contract: 14,000 hours of operation @ \$7.80/hour	=	<u>\$109,200.</u>
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Total annualized system cost	=	\$261,579.
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Number of operating days/year	=	246
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Average system cost/day	=	\$1063.33
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Total estimated platform hours/day (29000 hours per year)	=	118
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Average system cost/platform hour	= \$	9.01
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Number of miles driven/year	=	145,444
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Average system cost/mile	= \$	<u>1.80</u>
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TABLE 4.5
COST ANALYSIS--MORGANTOWN CITY-TRANSIT SYSTEM

Capital Investment:

6 Buses @ \$13,000 each	=	\$ 78,000.
Estimated Life	=	10 years
Estimated Salvage Value at the end of 10 years @ \$2000 each	=	\$ 12,000.

Assuming 7% cost on Capital Investment, annualized Capital Cost

= 66,000 (A/P, 7%, 10) + .07 (12,000)	=	\$ 10,237.
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Operating Expenses (Annual

Labor:	\$ 95,673.	
Fuel, Parts, etc.:	29,900.	
Unclassified (Benefits, insurance, etc.)	<u>26,441.</u>	
Total	\$152,014.	= \$152,014.

Total annualized capital and operating cost	=	\$162,251.
---------------------------------------------	---	------------

Number of operating days/year	=	308 days
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Average system cost/day	=	\$ 526.79
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Number of Platform hours/day		66.5
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Average system cost/platform hour	=	\$ 7.92
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Number of miles driven/year	=	160,000
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Average system cost/mile	=	\$ 1.01
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292,600 passengers/year

Average cost per passenger per trip	=	\$.55
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Average revenue per passenger per trip	=	\$.36
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The summary of cost and revenue operations of WVU Bus System is described on Table 4.4 and city bus is described on Table 4.5.

4.3 City/County Bus-System Costs

Cost and revenue operation for these systems was collected from the operators.

Fares for both City and County Bus System are 0.40 per ride. However, bulk tickets can be bought at 3 for \$1.00.

Both city and county have only one route parallel to the PRT corridor. Cost analysis presented in this section refers to total cost and revenue operations of these systems along all its routes. Any comparisons to PRT except fares is misleading as all costs to the route parallel to PRT can not be actually computed.

The cost and revenue data collected from these operators is as follows:

OPERATING COSTS

	City	County
Total Operating Cost	\$152,014	\$ 92,000
Number of Platform Hours/day	66.5	38.5
Number of Operating Days/year	308	306
Annual revenue mileage	160,000	182,000
Operating Cost/platform hour	\$ 7.42	\$ 7.81
Operating Cost/revenue mile	\$ 0.95	\$ 0.51

5. PRT TRAVEL POTENTIAL AND ESTIMATION OF SUBPOPULATIONS

This chapter deals with two items. The first item consists of utilizing a procedure developed in 1970 at WVU to determine the maximum travel potential for student trips between campuses. The procedure would yield demand estimates based on Spring 1975 WVU data on student enrollment. The second item consists of estimates of various subpopulations such as Morgantown population, non-dorm student population, faculty/staff population and employments at various zones. Some of these populations were estimated based on sample surveys as described in this chapter.

5.1 Maximum Travel Potential for Student Trips between Campuses

The methodology and computer programs given in Iskander's 1971 M.S.I.E. thesis¹ were used to generate matrices related to the estimated potential demand for student travel on the PRT. The data input consists of two tapes obtained from the West Virginia University Admissions and Records Center, which reflected enrollments as of March, 1975. One tape gives class schedules, while the other tape gives personal information about each student, including the student's major and rank. There are approximately 16 steps involved in the data processing, including FORTRAN and PL/I programs and IBM/360 utility programs such as IEBGENER and SORT/MERGE. The final results of the processing are estimates of the maximum potential student trips between each of 6 zones, which are based on proximity to six PRT stations, at 5-minute intervals from 7 A.M. to 6 P.M. on a Wednesday.

The student trips are assumed to be:

- a) Trips from home to the first class.
- b) Trips between classes.
- c) Trips from class to lunch.
- d) Trips from lunch to class.
- e) Trips from the last class to home.

Wednesday was chosen for the study based on the assumption that classes are scheduled on that day more than any other day of the week, and therefore maximum peak demands for student trips are expected to occur on Wednesday. Each student is assumed to ride the PRT from home to his first class and from his last class to home. For this purpose 100 percent of the students' residences were assigned to one of the six zones as follows:

¹W. H. Iskander, "Development and Solution of a Model for Classification of Students' Trips Between Campuses", unpublished MSIE thesis, West Virginia University, 1971.

<u>Activity Center</u>	<u>Home Distribution (Percent)</u>
CBD	9
Main Campus	52
Coliseum	1
CAC, Engineering	0
Towers, Forestry	33
Medical Center	5

Also, if a student finishes a class before 1200 hours and his next class starts after 1200 hours, it is assumed that the student would take the PRT home for lunch and return to his afternoon class on the PRT. This distribution of student residences is taken from page 54 of Iskander, and is apparently based on 1970 patterns. Iskander states that the distribution is based on data which was collected, but he gives no additional information about the source of these figures.

Intraclass trips are handled as follows: If a student finishes a class at say, 0850 on the main campus and his next class starts at 1100 in, say, the Engineering Building, the model assumes that the PRT is used to travel between classes with the time of the trip being determined according to a probability distribution. Two of the six zones, Main Campus and Towers, are classified as major activity centers. A different probability distribution is used to determine the time of each of the four possible types of inter-zone trips: major to major, major to minor, minor to major, and minor to minor. Iskander does not clearly explain his rationale for classifying zones as either major or minor, but apparently the general philosophy was as follows: A major zone would be an area where a student would prefer to spend as much time as possible, while a minor zone would be an area where a student would prefer to spend as little time as possible. For example, if a student finishes a class on Main Campus and his next class is at the Engineering Building, he will linger as long as he can at the Main Campus (major zone) before going to the Engineering Building (in a minor zone).

The processing of March, 1975 data is detailed by Singalavanija.¹ A summary of the results of the processing for the 13-hour time period is given in Table 5.1. A summary of the results of the processing broken down into one-hour intervals is given in Table 5.2.

5.2 Sample of Residences of Students Not Living In a University Dormitory

Realizing that the residential distribution of West Virginia University students might change after the PRT becomes operational, the researchers recognized that it was important to determine the pre-PRT residential distribution. The residences of all dormitory residents were known from West Virginia University Housing Office data; thus, only the residential distribution of non-dormitory students remained to be determined. The residential distribution of students was envisioned as also having at least two possible applications in the Pre-PRT Impact Study:

¹Singalavanija Rachada, "Data Processing for Classification of Students' Trips Between Campuses", unpublished M.S.E. problem report, West Virginia University, 1975.

TABLE 5.1
ESTIMATED POTENTIAL TRAVEL DEMAND

ORIGINS	DESTINATIONS					
	CBD	MAIN CAMPUS	COLISEUM	CAC, ENGINEERING	TOWERS & FORESTRY	MEDICAL CENTER
CBD	0	1131	111	31	172	26
MAIN CAMPUS	1120	0	1768	629	5470	852
COLISEUM	108	1699	0	26	738	62
CAC, ENGINEERING	32	600	16	0	278	16
TOWERS & FORESTRY	174	5516	705	241	0	242
MEDICAL CENTER	17	864	62	15	225	0

Total of all numbers = 22,946 trips

Estimated maximal potential demand for student travel on a 6-station PRT for class-related purposes in a 13-hour day. (Source: Singalavanija, Rachada, "Data Processing for Classification of Students' Trips Between Campuses", unpublished M.S.E. problem report, West Virginia University, 1975, p. 14).

TABLE 5.2

ESTIMATED HOURLY POTENTIAL TRAVEL DEMAND

Estimated maximal potential demand for student travel on a 6-station PRT for class-related purposes for each hour of a 13-hour day. (Source: One-hour summaries prepared manually from 5-minute Trip Tables, Appendix T, Singalavanija Rachada, "Data Processing for Classification of Students' Trips Between Campuses").

	CBD	MAIN CAMPUS	COLISEUM	CAC, ENGINEERING	TOWERS & FORESTRY	MEDICAL CENTER
7:00 - 8:00 A.M.						
CBD	0	213	15	7	10	0
MAIN CAMPUS	0	0	182	89	57	0
COLISEUM	0	24	0	1	0	0
CAC, ENGINEERING	0	0	0	0	0	0
TOWERS & FORESTRY	0	719	110	54	0	0
MEDICAL CENTER	0	117	9	4	5	0
	0	299	19	8	37	11
8:00 - 9:00 A.M.	11	0	280	113	290	129
	1	59	0	1	14	0
	0	18	8	0	22	0
	3	1114	138	60	0	80
	0	167	10	4	21	0
	0	158	10	2	20	1
9:00 - 10:00 A.M.	46	0	286	85	356	36
	3	112	0	2	34	2
	1	50	1	0	18	1
	9	712	100	38	0	13
	2	102	6	1	20	0
	0	83	7	1	14	1
10:00 - 11:00 A.M.	112	0	210	63	572	73
	9	216	0	1	60	7
	4	110	3	0	47	1
	19	549	61	12	0	15
	1	57	44	1	15	0
	0	39	4	1	11	0
11:00 - 12:00 A.M.	304	0	148	37	1216	170
	38	395	0	1	173	21
	8	114	1	0	49	4
	28	368	39	6	0	17
	8	75	3	0	38	0

TABLE 5.2 (Continued)

Hourly Trip Estimates

	CBD	MAIN CAMPUS	COLISEUM	CAC, ENGINEERING	TOWERS & FORESTRY	MEDICAL CENTER
	0	296	54	12	67	13
	87	0	454	124	780	135
12:00 - 1:00 P.M.	7	155	0	6	81	6
	2	47	1	0	15	1
	13	1207	219	54	0	62
	0	167	28	5	39	0
	0	30	1	0	8	0
	152	0	115	75	645	85
1:00 - 2:00 P.M.	13	255	0	5	108	7
	2	74	1	0	20	1
	34	374	20	10	0	19
	10	131	1	0	77	0
	0	13	1	1	5	0
	170	0	67	43	677	95
2:00 - 3:00 P.M.	13	209	0	9	101	7
	1	26	0	0	8	1
	23	219	13	7	0	13
	1	16	1	0	7	0
	0	0	0	0	0	0
	144	0	17	0	533	78
3:00 - 4:00 P.M.	9	105	0	0	60	4
	10	118	1	0	72	5
	31	190	5	0	0	16
	3	33	0	0	3	0
	0	0	0	0	0	0
	87	0	9	0	318	48
4:00 - 5:00 P.M.	12	138	0	0	86	6
	4	43	0	0	27	2
	11	67	1	0	0	6
	0	0	0	0	0	0
	0	0	0	0	0	0
	7	0	0	0	26	3
5:00 - 6:00 P.M.	3	31	0	0	20	2
	0	0	0	0	0	0
	3	20	0	0	0	1
	0	0	0	0	0	0

- a) The representativeness of the residential patterns of student respondents to surveys could be tested.
- b) Population estimates of zones could be given in terms of student and non-student populations, making it possible to consider demand models which distinguish between student and non-student travel.

West Virginia University Admissions and Records Center furnished a magnetic tape which contained the Morgantown area addresses of the 16,210 students enrolled in the University as of March, 1975. The address for every tenth student whose housing code indicated that he did not live in a University dormitory was printed out, and the zones of residence for this sample were tabulated as shown in Table 5.3. It is important to understand that only those students who lived in University dormitories (Towers, Boreman, Arnold, Stalnaker, Dadisman) were excluded from the sample. Students living in privately-operated boarding houses, such as Summit and Pierpont, were included in the sample. A total of 1250 students were included in the sample.

For the location of zones numbered 1-46, see the map of zones. The meaning of zones numbered larger than 46 is given in Table 20.7.

5.3 Faculty/Staff Phonebook Sample

A sample was taken of every fifth entry in the 1975 West Virginia University telephone directory. However, employees listed as working outside the greater Morgantown area, such as extension agents or those at Potomac State, were excluded from the sample. Also excluded were persons who were obviously not active employees, such as retired academic personnel of M.D.'s who were clinical professors. The total sample consisted of 878 employees. Based on information in the telephone directory, the employees in the sample were classified according to job function, work location, and residence location. The results are given in Tables 5.4 to 5.6.

5.4 Estimate of Working Population

This data was collected from the University and West Virginia Department of employment security in Charleston. This data is summarized in Table 5.7.

5.5 Estimate of Morgantown Population

The population of the Primary Market Area zones was first estimated based on University dormitory figures, and the 1970 census data. This data is summarized in Table 5.8.

Table 5.9 describes the estimates developed for the Morgantown area and vicinity. These estimates were developed from the 1970 Census records. The campus zones have no residential population and are thus described. Populations of Westover, Star City and Granville comprising of Morgantown area are also estimated.

TABLE 5.3
RESIDENCE LOCATIONS OF NONDORMITORY STUDENTS
 (From Admissions and Records Tape)

<u>ZONE</u>	<u>FREQUENCY</u>	<u>PERCENT</u>	<u>ZONE</u>	<u>FREQUENCY</u>	<u>PERCENT</u>	<u>ZONE</u>	<u>FREQUENCY</u>	<u>PERCENT</u>
1*	27	2.26	45	10	0.84	111	1	0.08
3*	75	6.27	46	26	2.17	112	2	0.17
4*	110	9.20	50	1	0.08	113	1	0.08
7*	8	0.67	52	1	0.08	114	3	0.25
8*	2	0.17	54	1	0.08	115	2	0.17
10	9	0.75	55	2	0.17	116	1	0.08
13*	5	0.42	56	29	2.43	117	2	0.17
14	40	3.34	57	1	0.08	118	1	0.08
15	56	4.68	58	2	0.17	119	1	0.08
16	2	0.17	60	4	0.33	120	1	0.08
17	2	0.17	62	1	0.08	121	1	0.08
18*	9	0.75	64	6	0.50	122	1	0.08
19*	50	4.18	65	2	0.17	123	3	0.25
20	4	0.33	66	3	0.25	124	1	0.08
21	72	6.02	70	2	0.17	125	1	0.08
22	4	0.33	71	1	0.08	126	1	0.08
23	41	3.43	72	3	0.25	127	1	0.08
24	38	3.18	73	1	0.08	128	1	0.08
25*	73	6.10	74	1	0.08	129	1	0.08
26*	37	3.09	77	4	0.33	130	1	0.08
27*	65	5.44	81	5	0.42	131	1	0.08
28	2	0.17	82	1	0.08	132	1	0.08
29	21	1.76	83	2	0.17	133	1	0.08
31	3	0.25	87	1	0.08	134	1	0.08
32	41	3.43	91	1	0.08	135	1	0.08
33	42	3.51	93	2	0.17	136	1	0.08
34	19	1.59	94	1	0.08	137	2	0.17
35	25	2.09	100	2	0.17	138	1	0.08
36	12	1.00	101	1	0.08	139	1	0.08
37	26	2.17	102	2	0.17	141	1	0.08
38	32	2.68	103	1	0.08	150	2	0.17
39	4	0.33	104	2	0.17	151	1	0.08
40	1	0.08	105	1	0.08	152	1	0.08
41	3	0.25	106	4	0.33	153	1	0.08
42	41	3.43	107	7	0.59	154	1	0.08
44	9	0.75	108	1	0.08	155	1	0.08
			109	3	0.25	156	1	0.08
			110	1	0.08	157	1	0.08

- NOTES: 1. Zones marked with * are PMA zones.
 2. Zones 1-46 can be located on the map of zones.
 Zones 47-157 can be located using Table 20.7.

TABLE 5.4

JOB FUNCTION OF WVU EMPLOYEES FROM PHONEBOOK SAMPLE

<u>JOB FUNCTION</u>	<u>FREQUENCY</u>
Administrative	66
Teaching and/or research	237
Research only	22
Medical	103
Secretarial, clerical	207
Maintenance	105
Other (including food service worker, librarian, security, bus driver, WVU-TV)	138
TOTAL	878

TABLE 5.5

WORK LOCATION OF WVU EMPLOYEES FROM PHONEBOOK SAMPLE

<u>WORK LOCATION</u>	<u>FREQUENCY</u>
CBD*	30
Main Campus	265
Engineering	34
Coliseum	18
Towers, Forestry	73
Medical Center	273
Other (including Computer Center, Communications, ACOSH)	137
Agriculture	38
C.A.C.	10
TOTAL	878

* Predominantly WVU-TV and persons in Office of Personnel.

TABLE 5.6

RESIDENCE LOCATION OF WVU EMPLOYEES
FROM PHONEBOOK SAMPLE

<u>ZONE</u>	<u>FREQUENCY</u>	<u>ZONE</u>	<u>FREQUENCY</u>	<u>ZONE</u>	<u>FREQUENCY</u>
1	7	35	13	68	1
2	1	36	21	69	1
3	6	37	11	70	2
4	4	38	61	71	3
7	12	39	2	72	1
8	2	40	4	73	1
10	14	41	3	74	1
11	1	42	46	75	1
13	7	44	26	76	1
14	18	45	3	77	1
15	114	46	36	80	5
16	4	50	1	81	5
17	5	51	1	82	18
18	5	52	4	83	4
19	9	53	1	84	3
21	28	54	3	85	1
22	5	55	2	86	3
23	14	56	7	87	1
24	13	57	5	88	1
25	24	58	2	89	2
26	20	59	5	90	1
27	69	60	10	91	2
28	6	61	1	92	1
29	32	62	3	93	3
31	9	63	2	94	3
32	45	64	5	95	1
33	21	65	1	96	1
34	8	66	2	97	1
		67	4	99	1
				UNKNOWN	20
				TOTAL	858

NOTE: Zones 1-46 can be located on map of zones.
Zones 47-99 are given in Table 20.7.

TABLE 5.7

ESTIMATE OF WORKING POPULATION IN THE PMA

<u>ZONE</u>	<u>WORKING POPULATION</u>
1	1261
2	1193
3	75
4	41
5	446
6	476
7	56
8	232
9	235
10	26
11	9
12	266
18	1554
19	25
20	589
26	67
27	17
28	270

TABLE 5.8

POPULATION ESTIMATES OF PRIMARY MARKET AREA

<u>ZONE</u>	<u>DORM STUDENT</u>	<u>NON-DORM STUDENT</u>	<u>FAC/ STAFF</u>	<u>RESIDENTS</u>	<u>TOTAL</u>
1	0	967	35	860	1862
3	950	710	30	160	1850
4	670	110	60	430	1270
7	0	80	120	80	280
8	1733	0	0	0	1733
9	0	0	10	130	140
10	0	90	70	120	280
11	0	0	25	105	130
13	0	40	40	55	135
18	0	90	25	220	335
19	0	500	45	20	565
25	0	730	120	2547	3397
26	0	370	100	1253	1723
27	0	650	345	2005	3000
TOTAL	3353	4337	1025	7985	16570

(16,570) PMA POPULATION

TABLE 5.9

POPULATION ESTIMATES OF MORGANTOWN

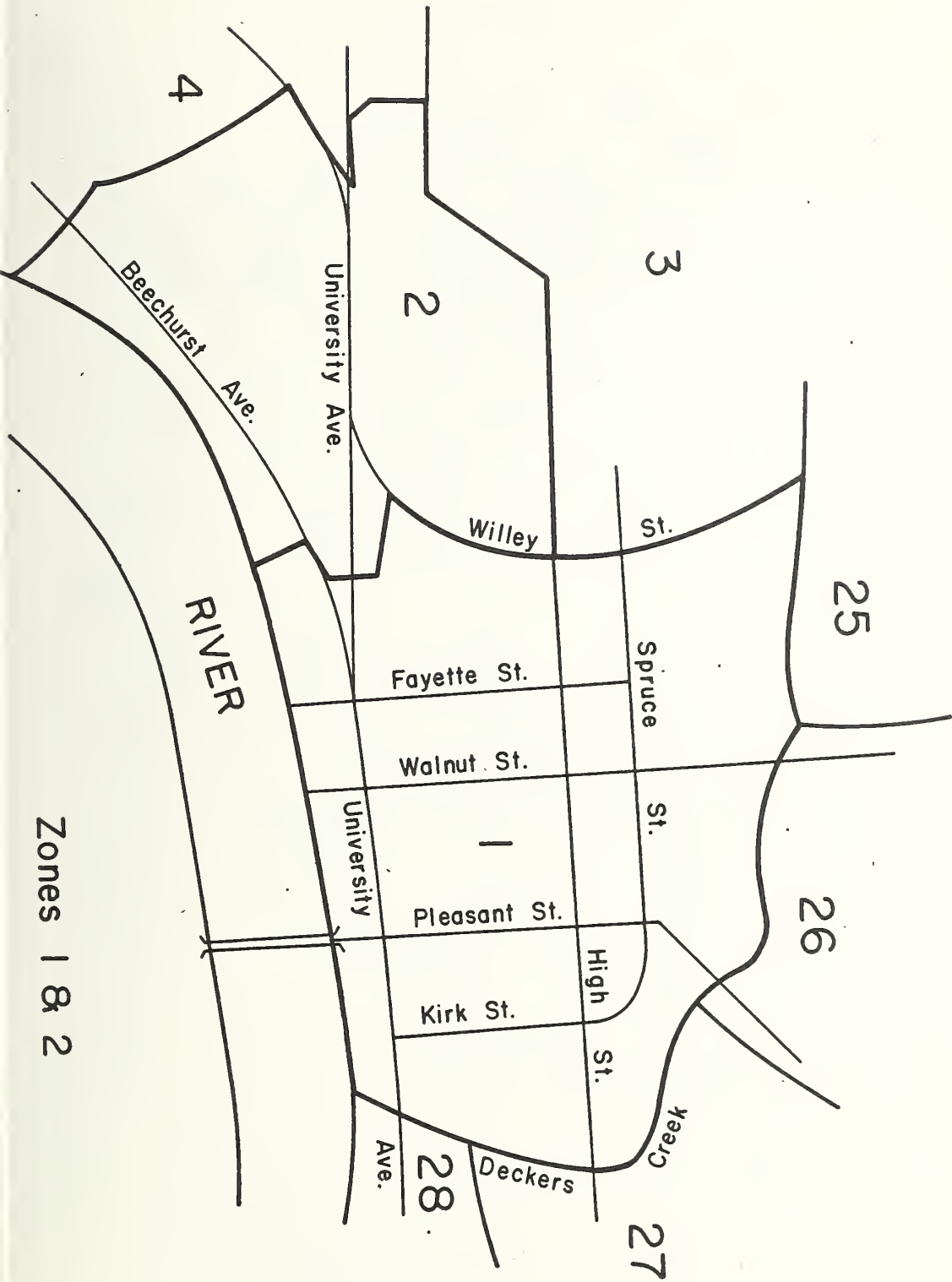
<u>ZONE</u>	<u>POPULATION</u>	<u>ZONE</u>	<u>POPULATION</u>
1	1862	27	3000
2	Campus	28	189
3	1850	29	1585
4	1270	30	(under. zone)
5	Campus	31	288
6	Campus	32	2872
7	280	33	180
8	235	34	150
9	110	35	175
10	280	36	ext. zone
11	130	37	ext. zone
12	Campus	38	ext. zone
13	135	39	420
14	1312 (Star City)	40	125
15	3007	41	289
16	497	42	5086 (Westover)
17	500	43	external
18	335	44	external
19	268	45	Star City
20	193	46	external
21	2061	--	--
22	Campus		
23	1107		
24	984	TOTAL 28,872	DOES NOT INCLUDE
25	3397		WESTOVER & STAR CITY
26	1723		

6. GENERAL LIMITATIONS OF RELIABILITY OF DATA

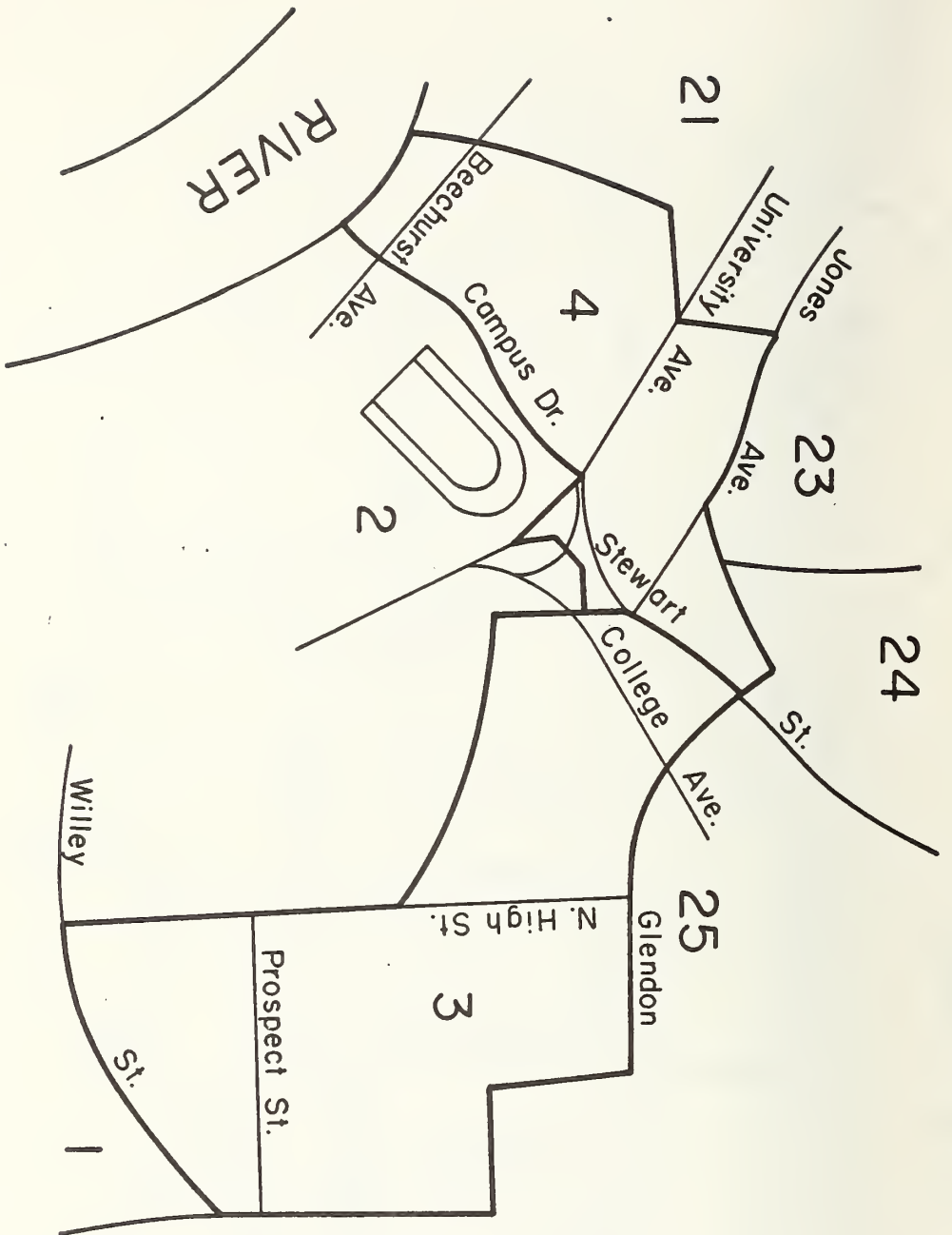
Some of the problems encountered with the collection of the data might be characterized as follows:

- a) Very few students (54) of the more than 12,000 WVU students not living in dormitories were reached in the Telephone Interview Survey. Presumably the population of such students generates a great many trips in the PRT corridor. It is estimated that 4,377 students live in the Primary Market Area outside of dormitories. From the traditional transportation modeling point of view, it would appear to be unreliable to expand the small sample.
- b) The nature of the data to be collected in the University Bus On-Board Survey necessitated the use of a questionnaire which was too lengthy to be completed on the Medical Center/Coliseum shuttle. Thus, only a handful of questionnaires were completed on that route. To the extent that passengers on that route differ from passengers on other routes, a bias was introduced.
- c) The response to the Faculty/Staff Mailback questionnaire appeared to be disproportionately low for Medical Center personnel. This was probably partly due to an inadequate distribution scheme and partly caused by the fact that many of these personnel do not work out of an office.
- d) The Student Attitude Survey was probably biased by the fact that it was administered to students attending the Summer Session. It is generally believed that the proportion of graduate students and education-related majors is much higher in summer than during the regular school year.
- e) Many of the recorded times of observation taken during the Bus Ridership Counts were somewhat incorrect. This was partly due to the lack of synchronization of watches by field personnel at different locations and partly due to faulty data recording. Some adjustments to these times were necessary in order to give the actual frequency of service. The data was analyzed by going through records manually for each bus run.

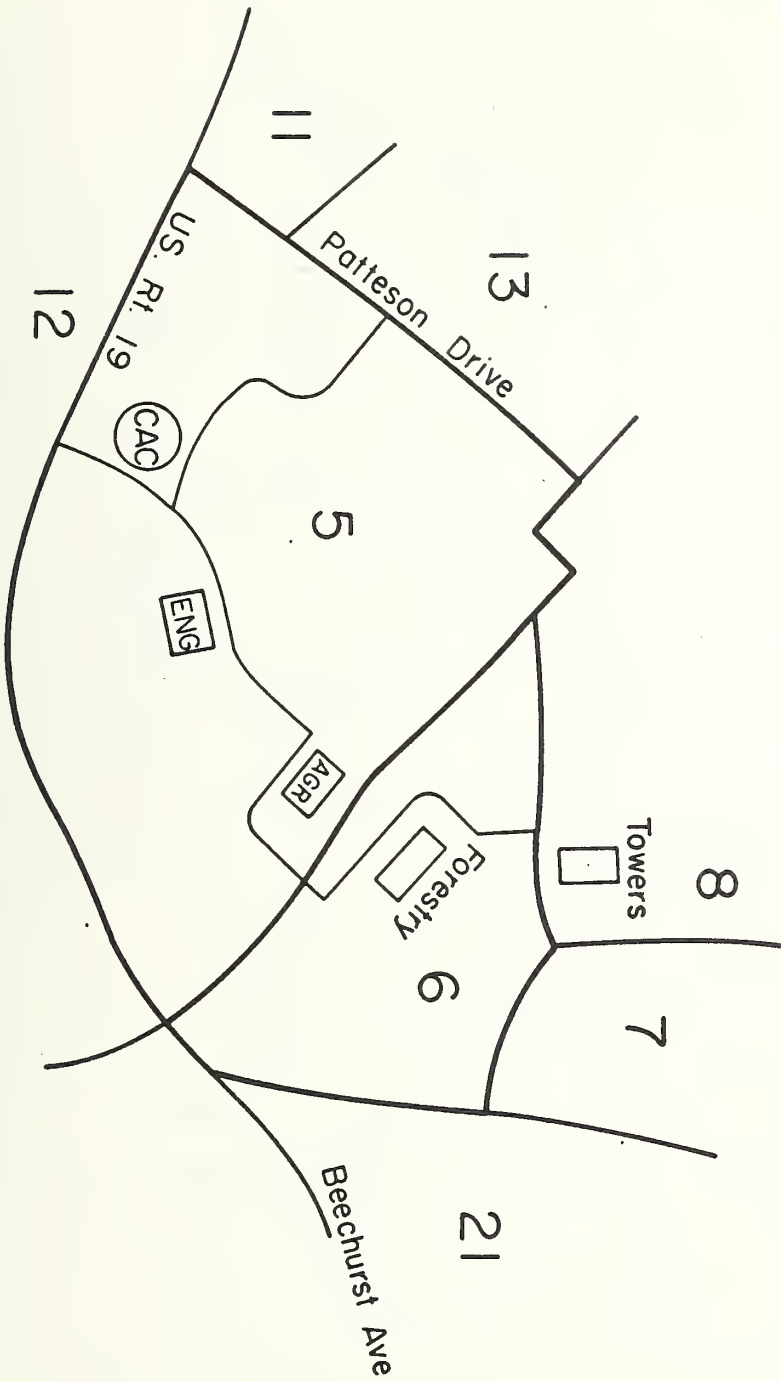
APPENDIX A
DETAILED MAPS OF ZONES IN STUDY AREA



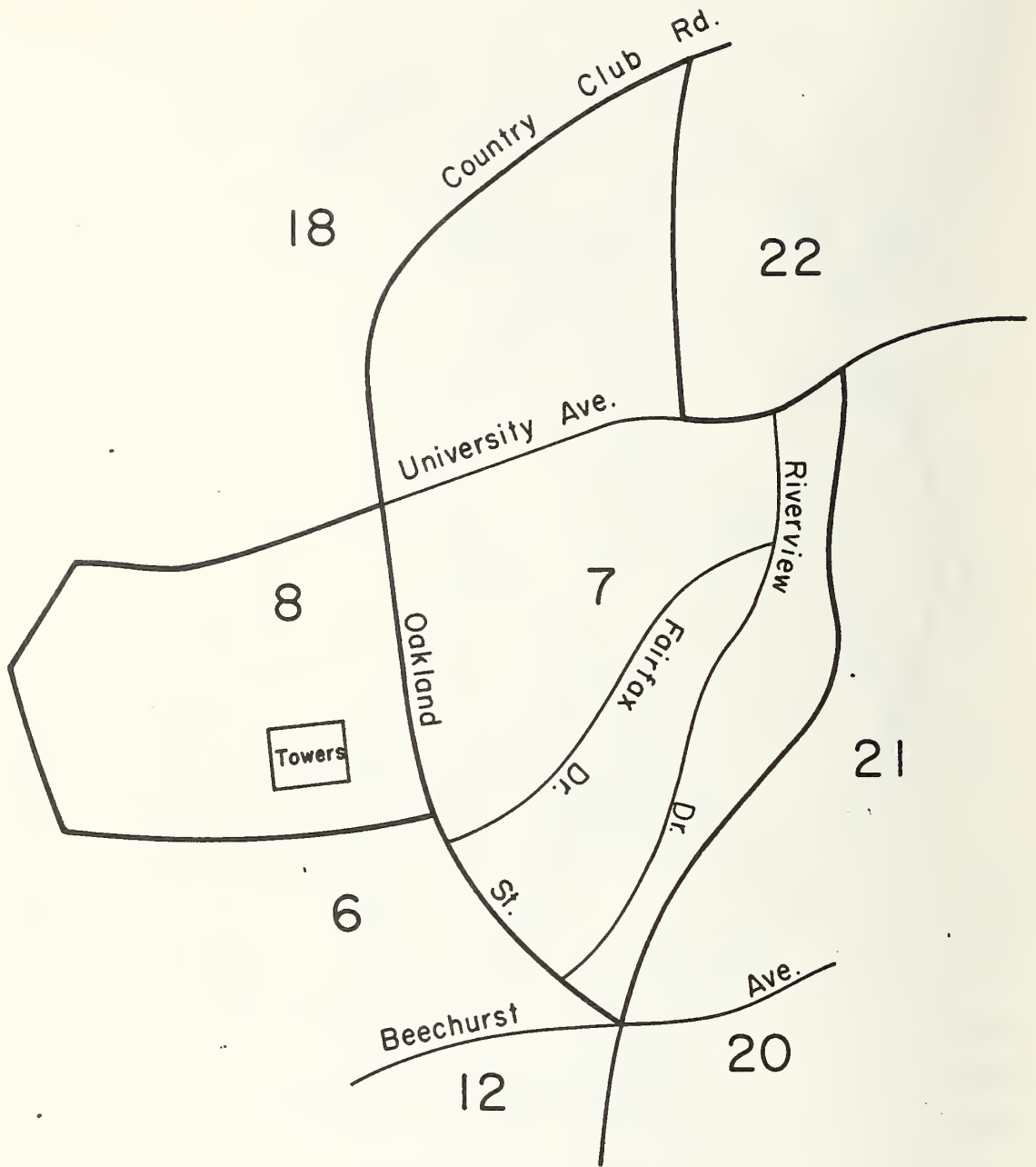
Zones 1 & 2



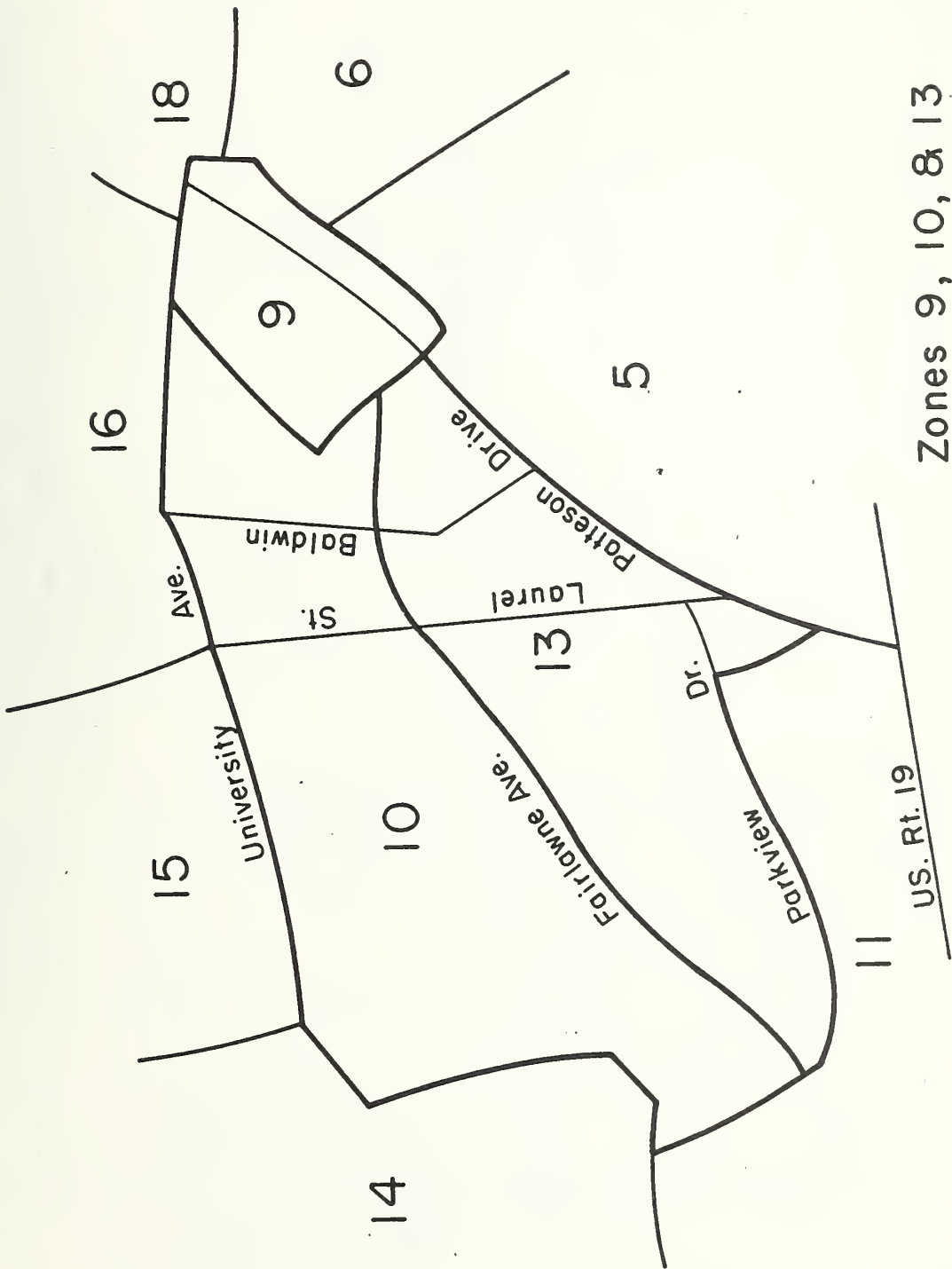
Zones 3 & 4



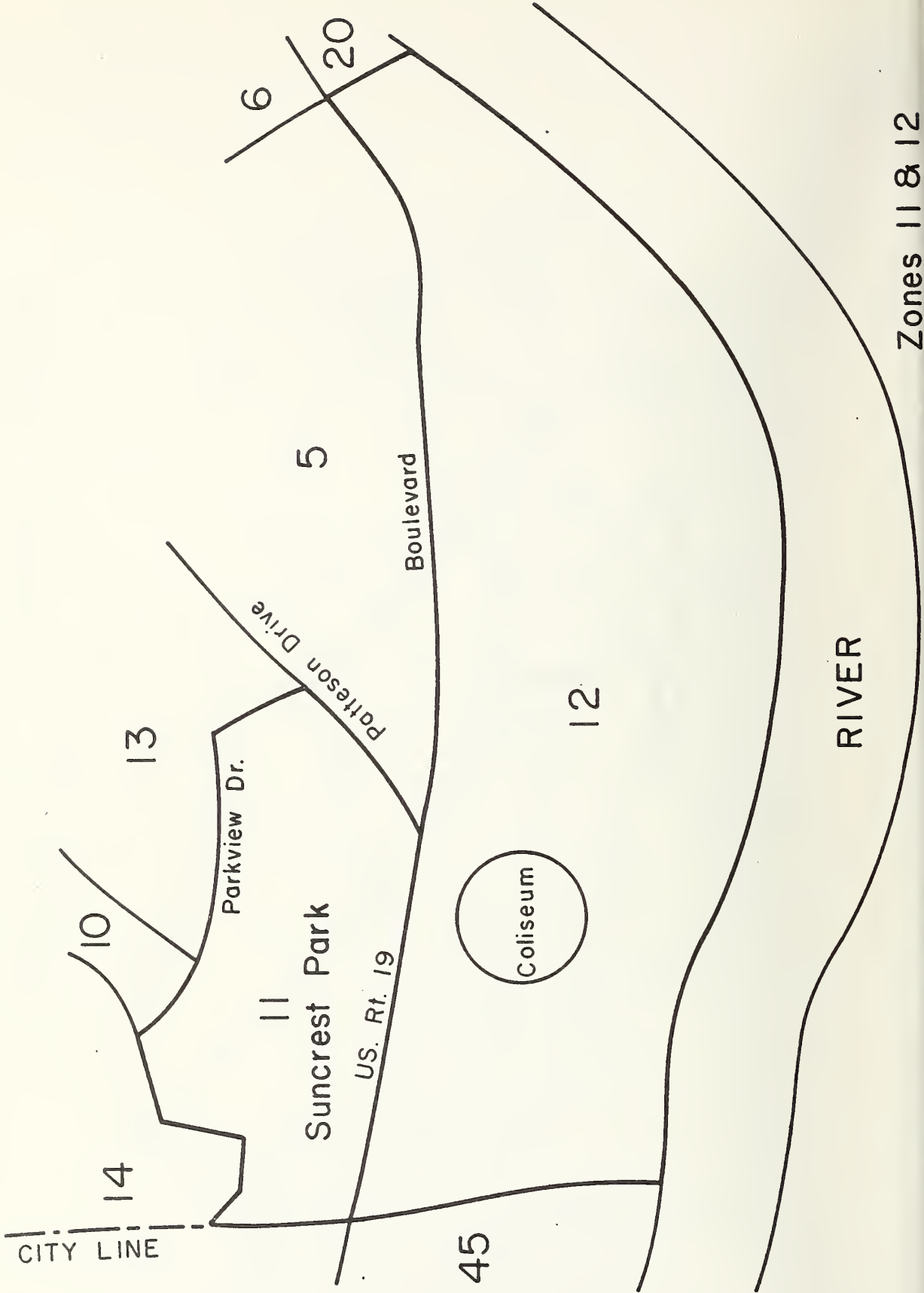
Zones 5 & 6



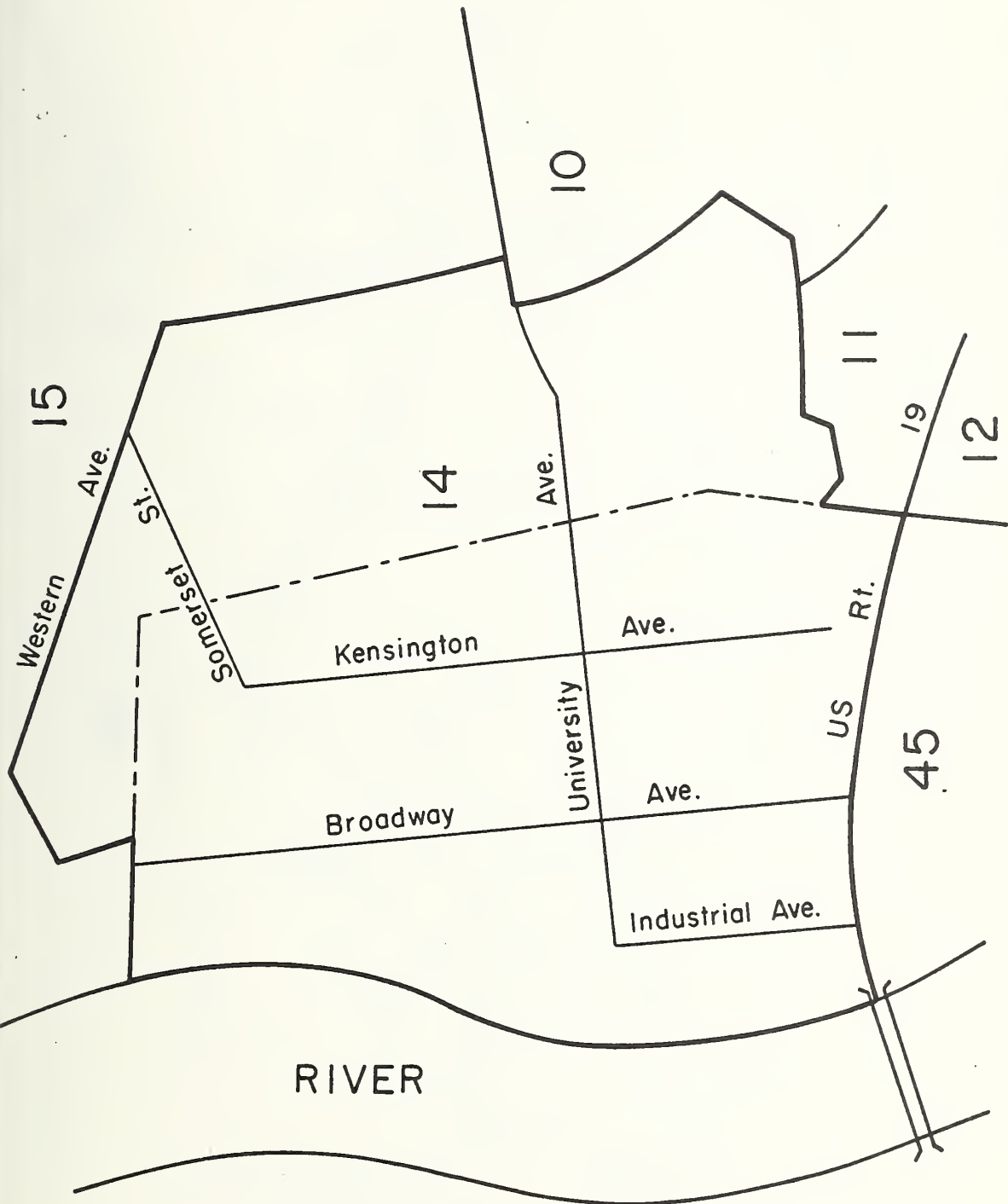
Zones 7 & 8



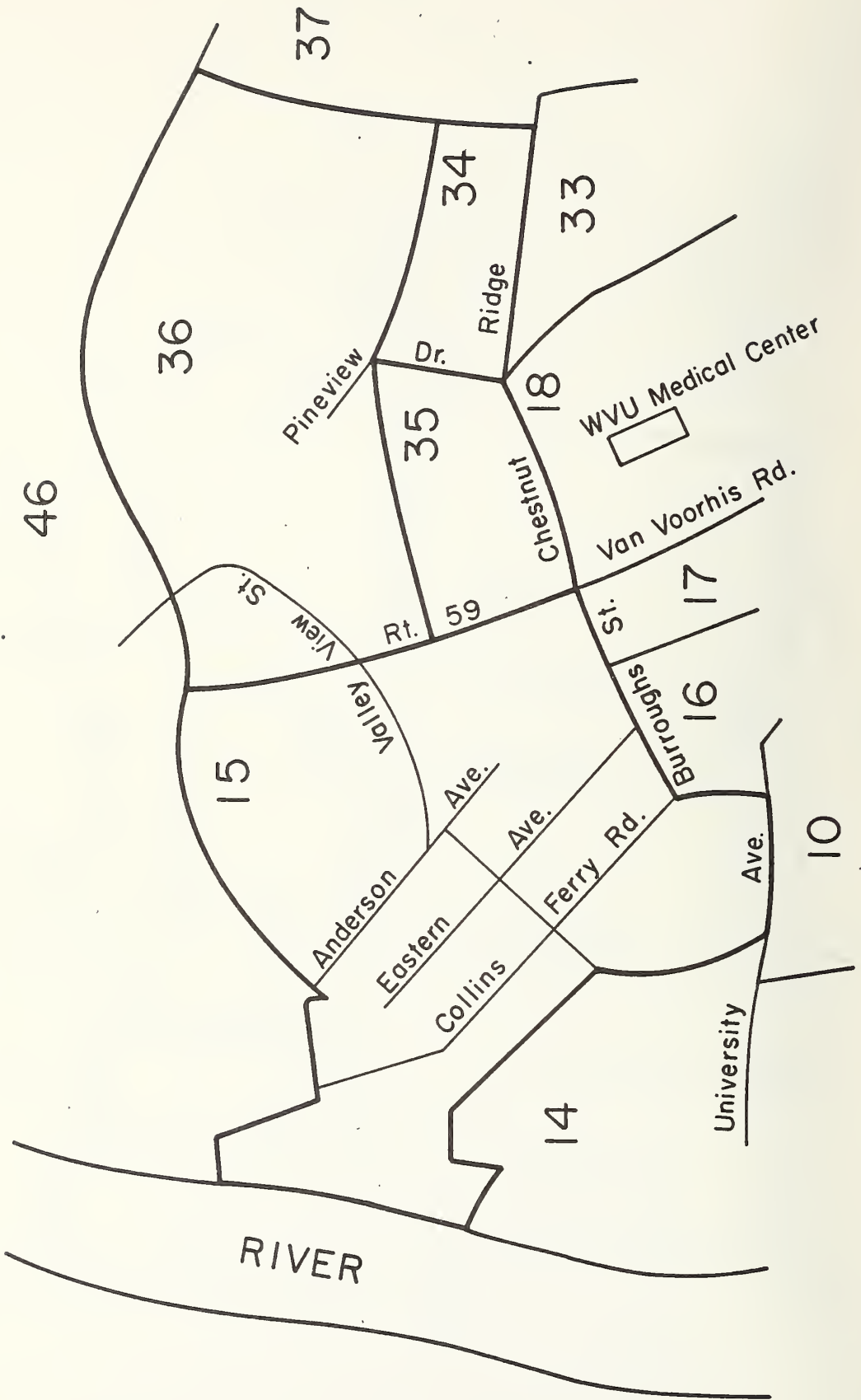
Zones 9, 10, & 13



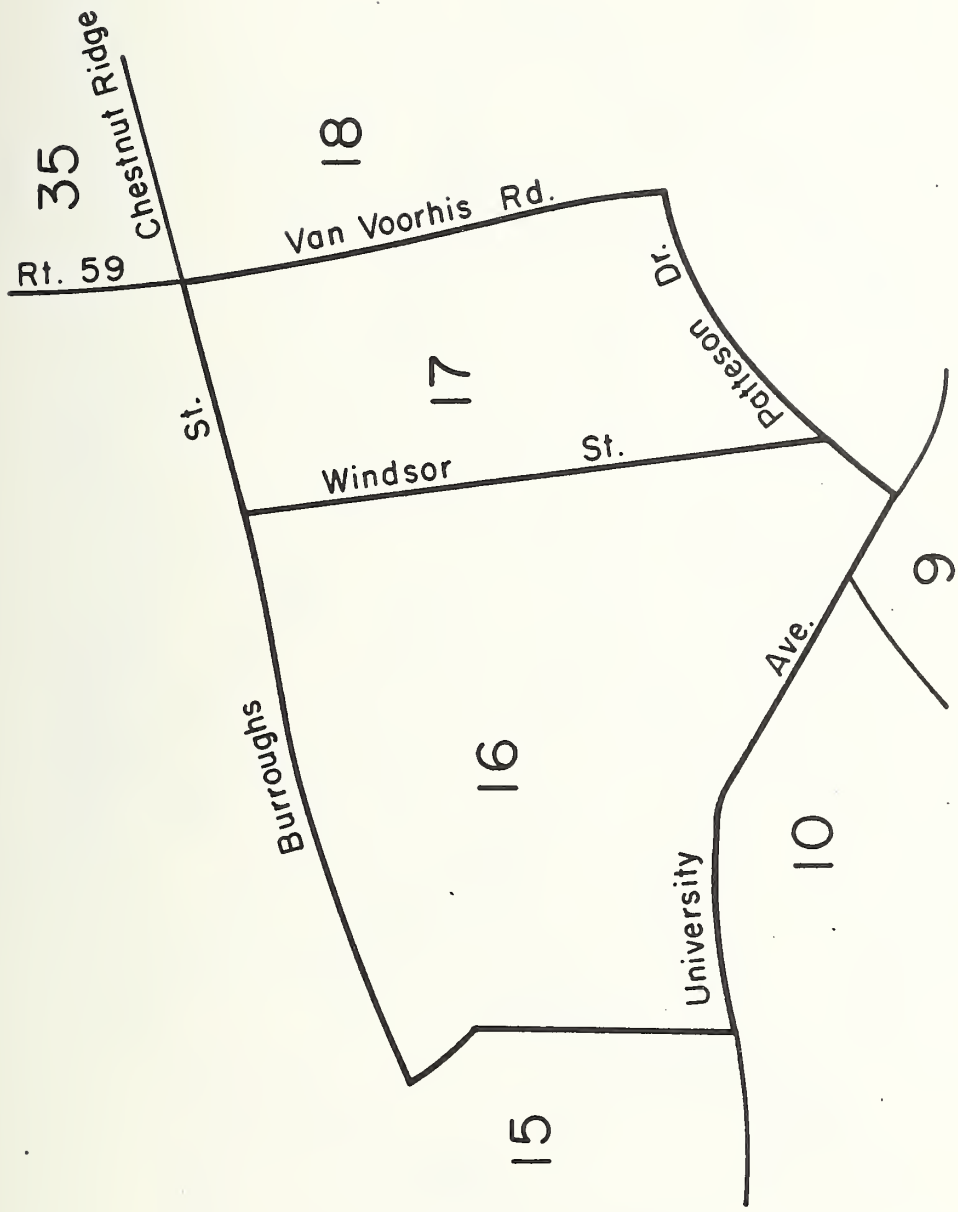
Zones 11 & 12



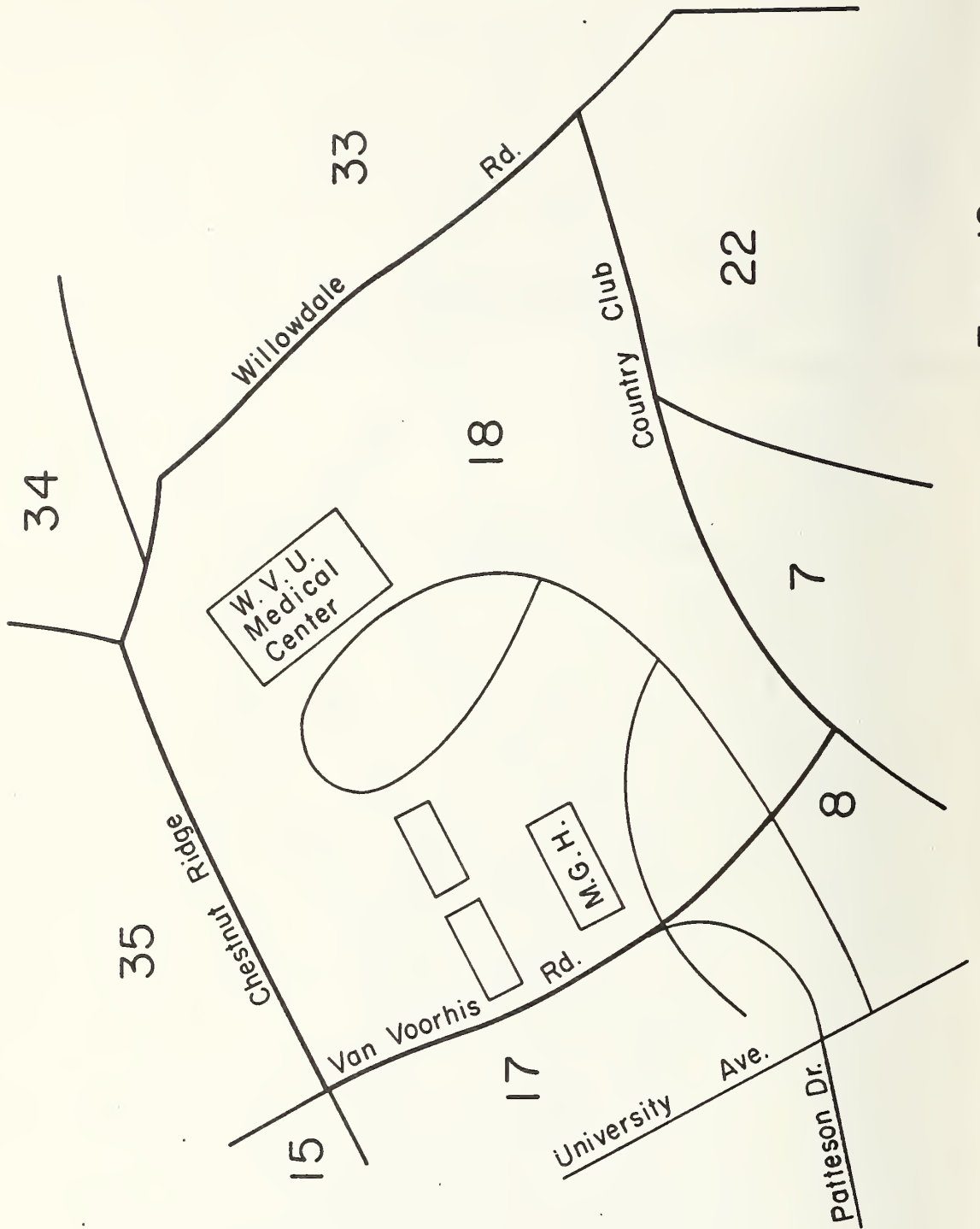
Zone 14



Zones 15, 34, 35, 36, & 46

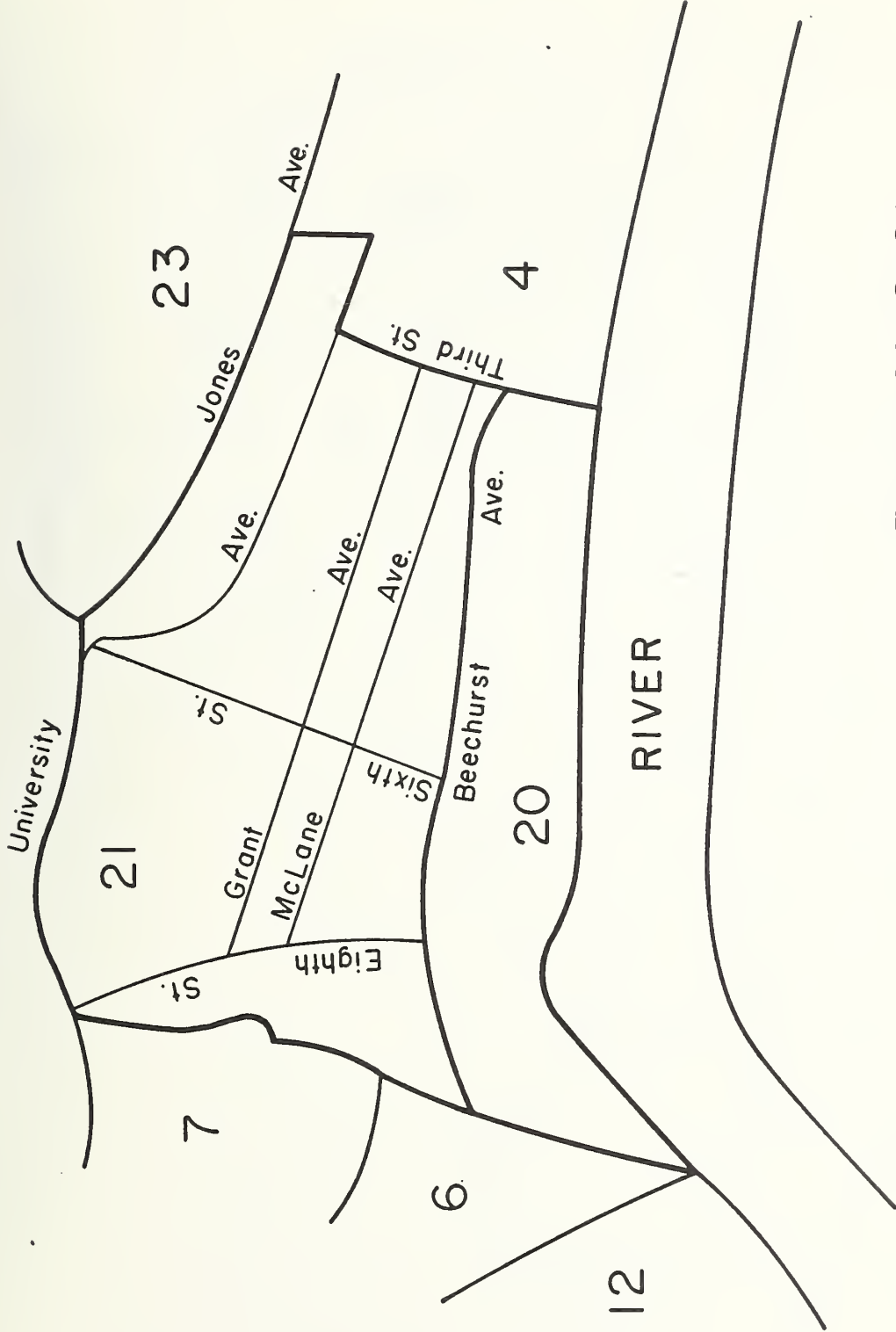


Zones 16 & 17

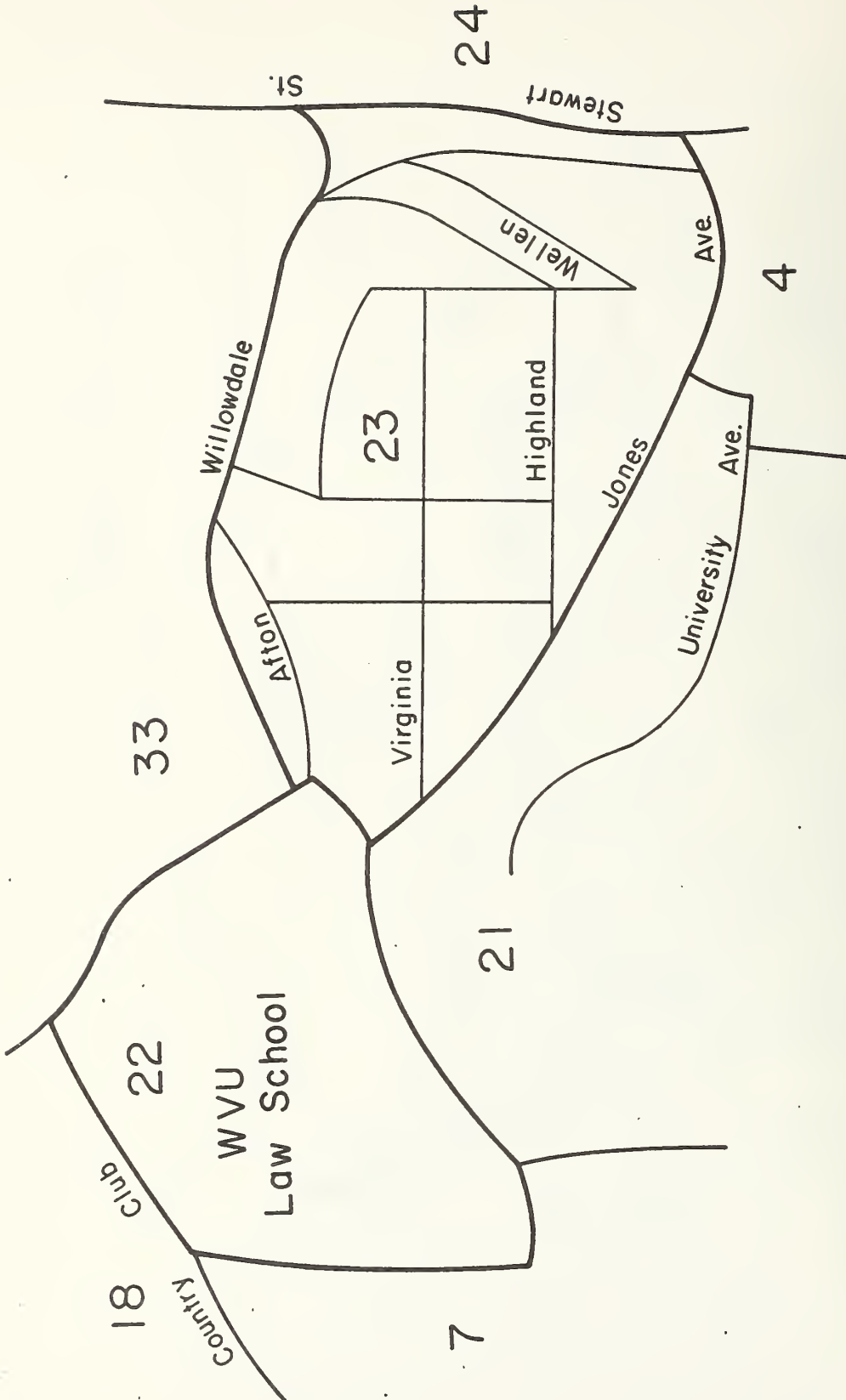


Zone 18

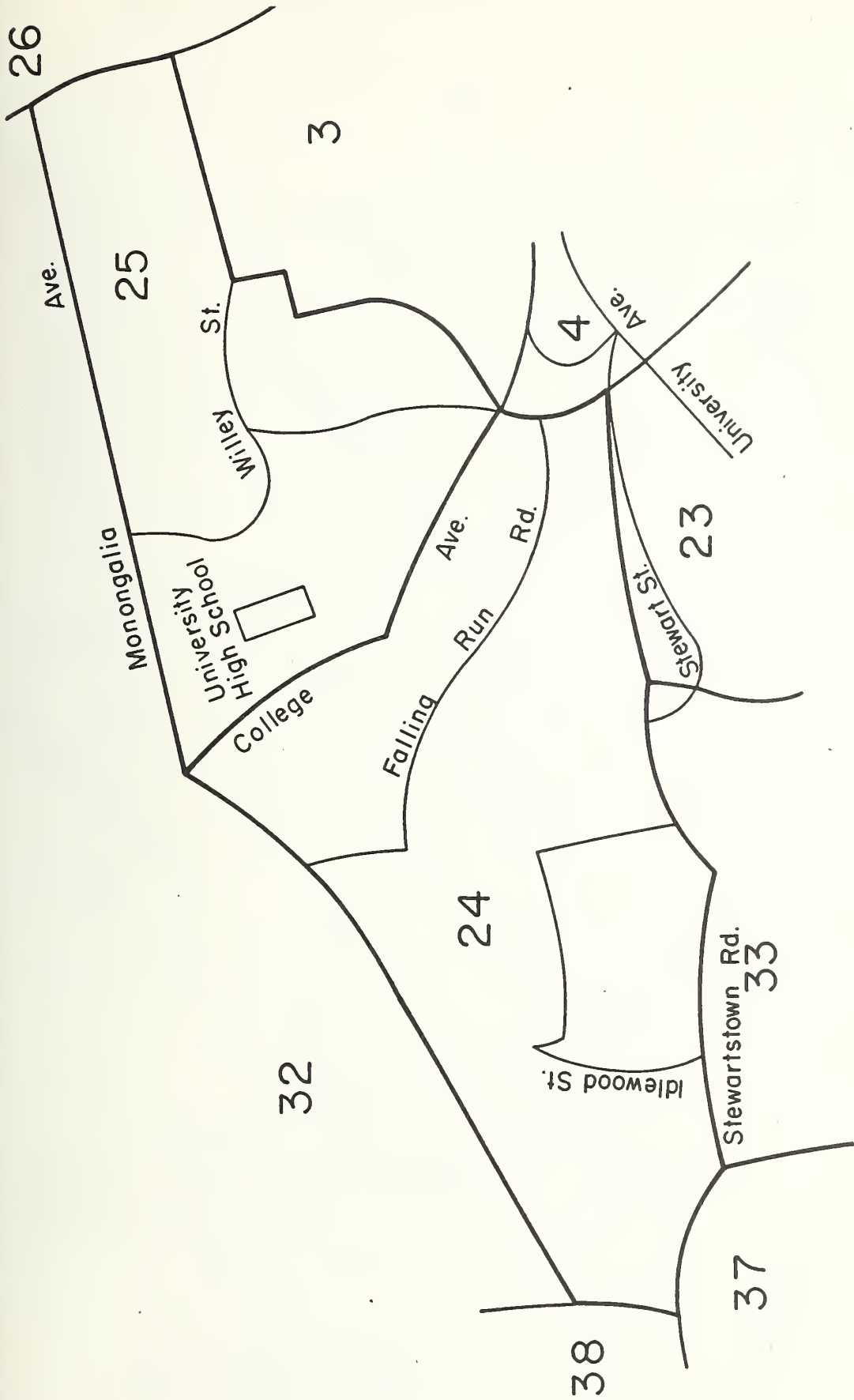
22



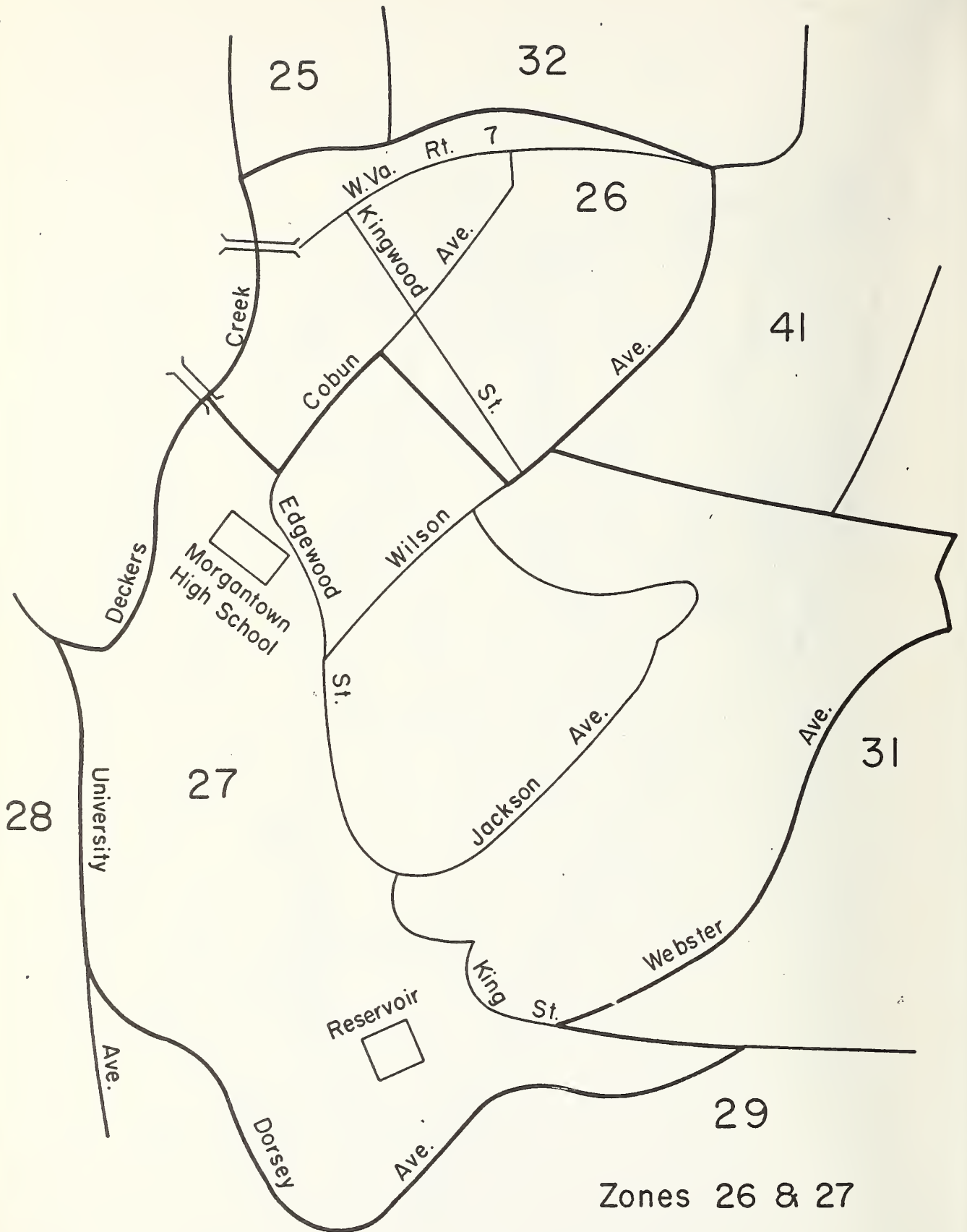
Zones 20 & 21

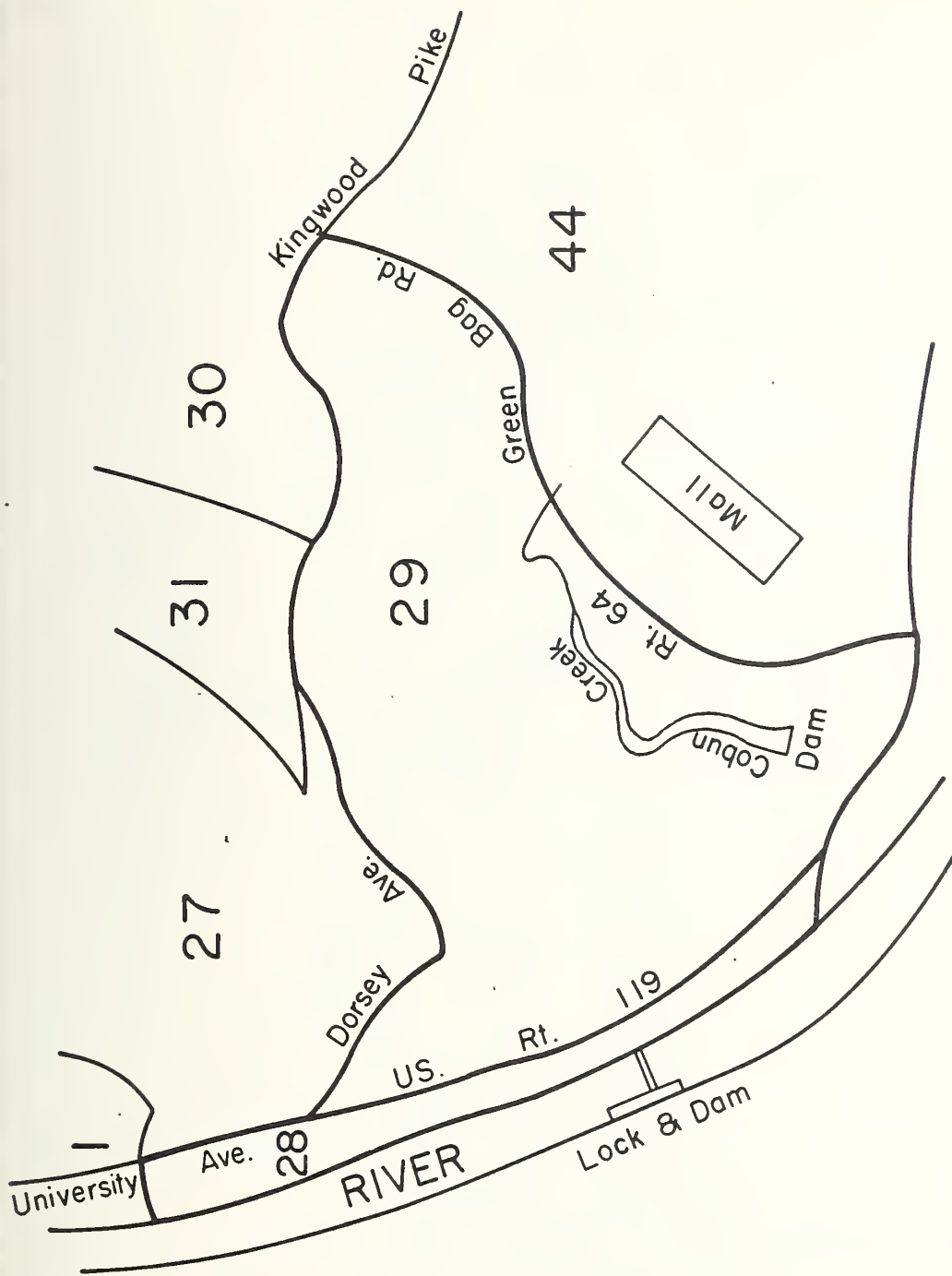


Zones 22 & 23

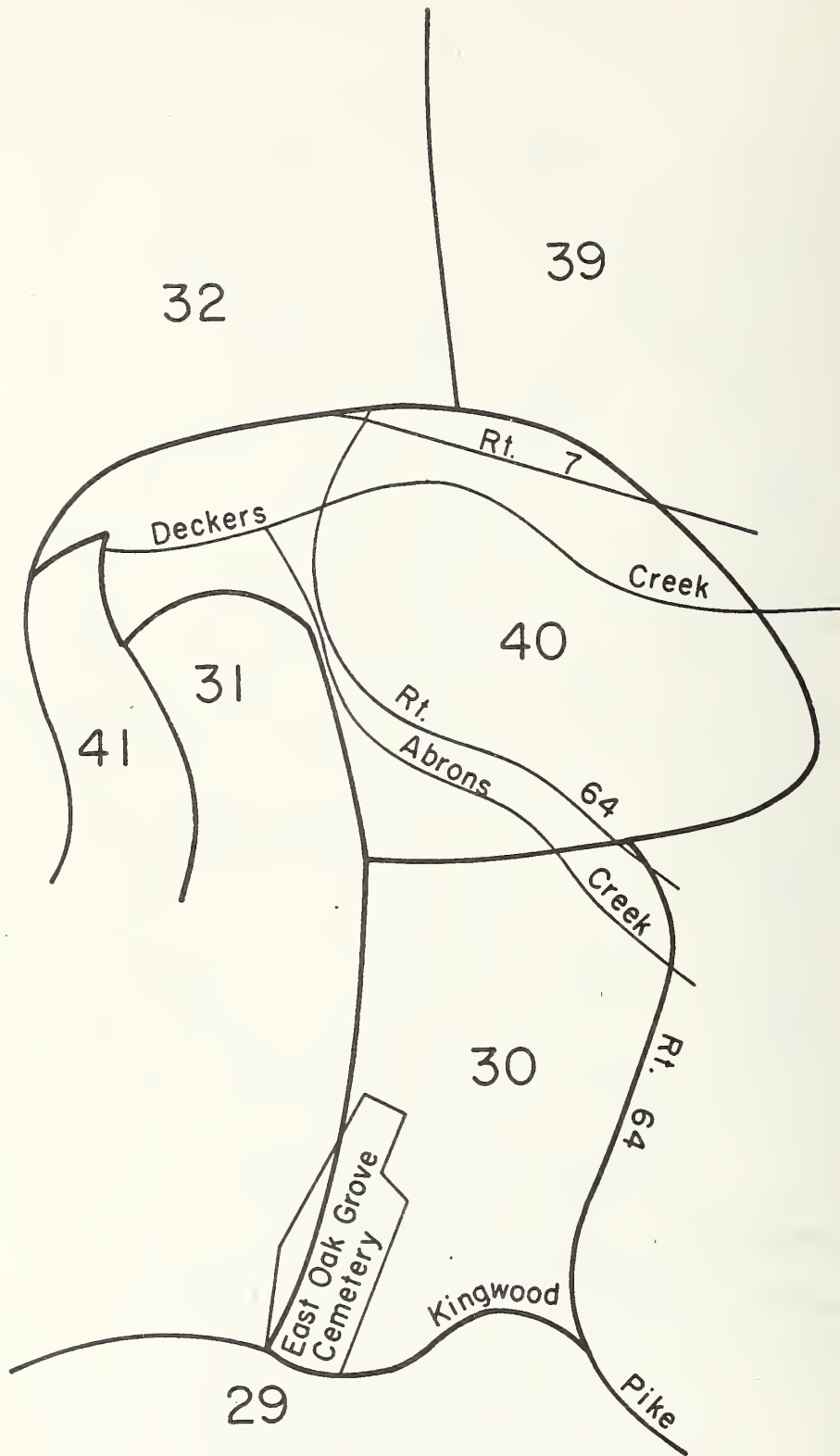


Zones 24 & 25





Zones 29 & 44



Zones 30, 39, & 40

Rt. 7

Deckers Creek

White Ave.

East Brockway

Vandlia Rd.

White Ave.

Webster Ave.

Sheldon Ave.

32

41

40

26

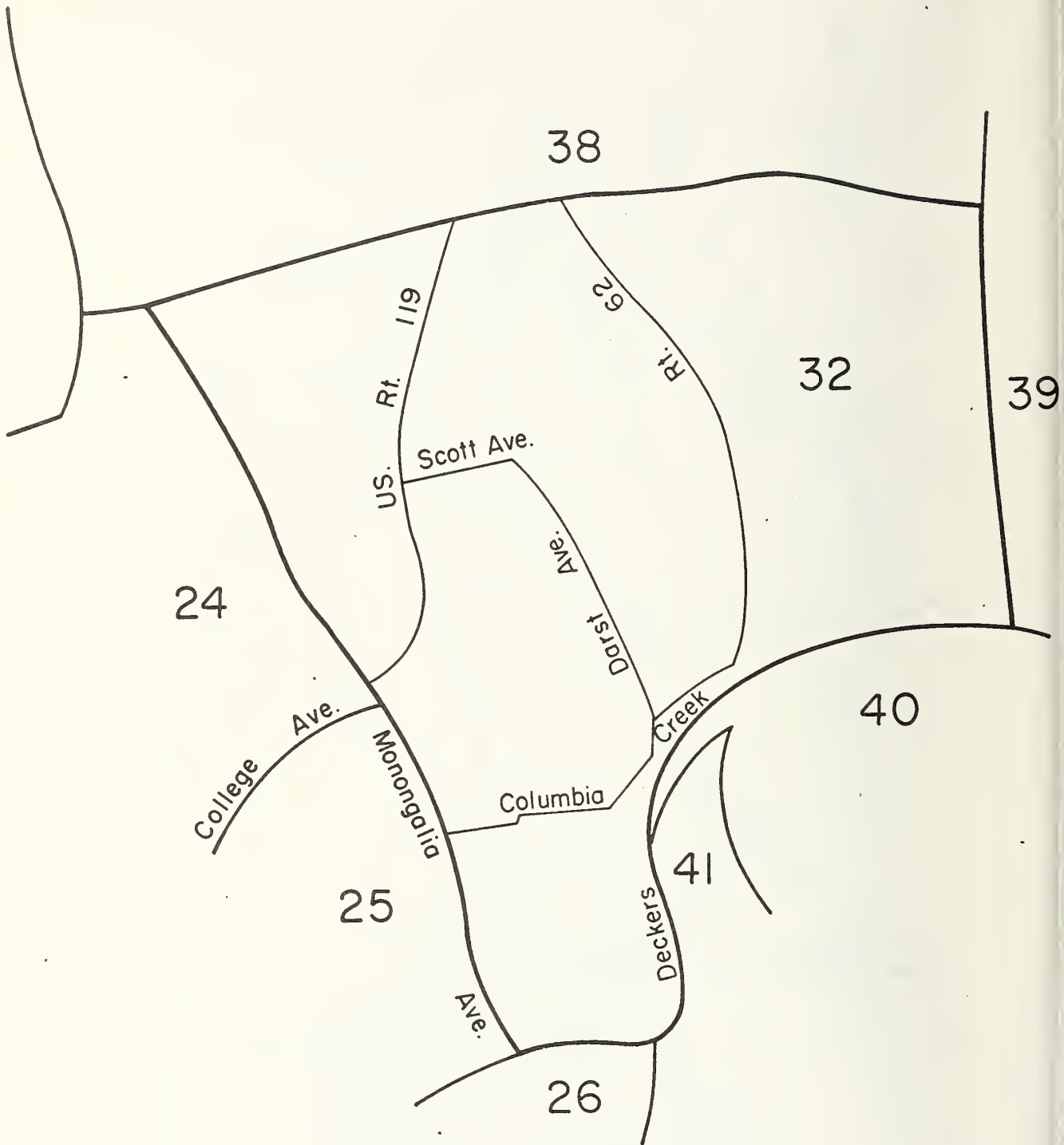
31

27

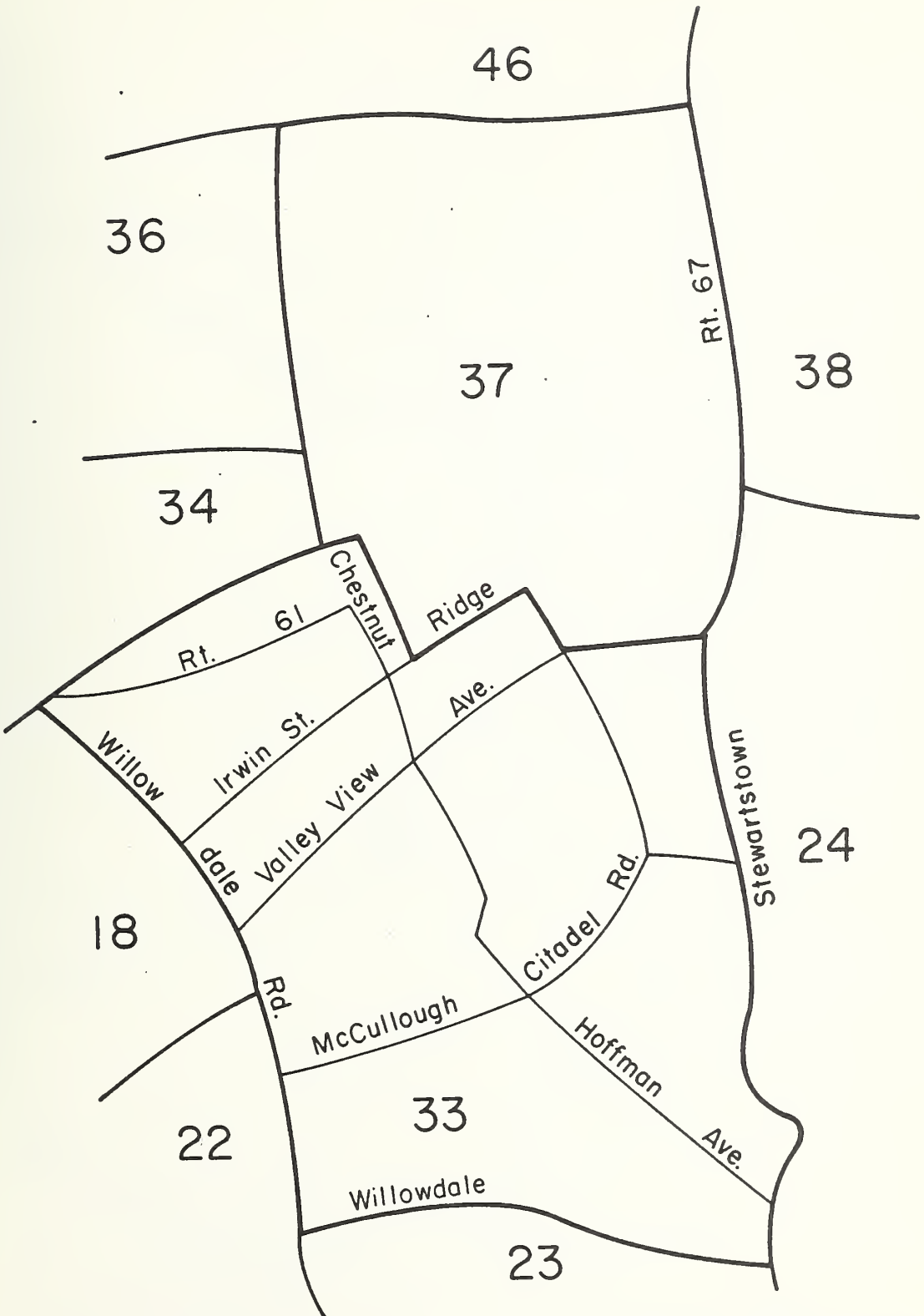
30

29

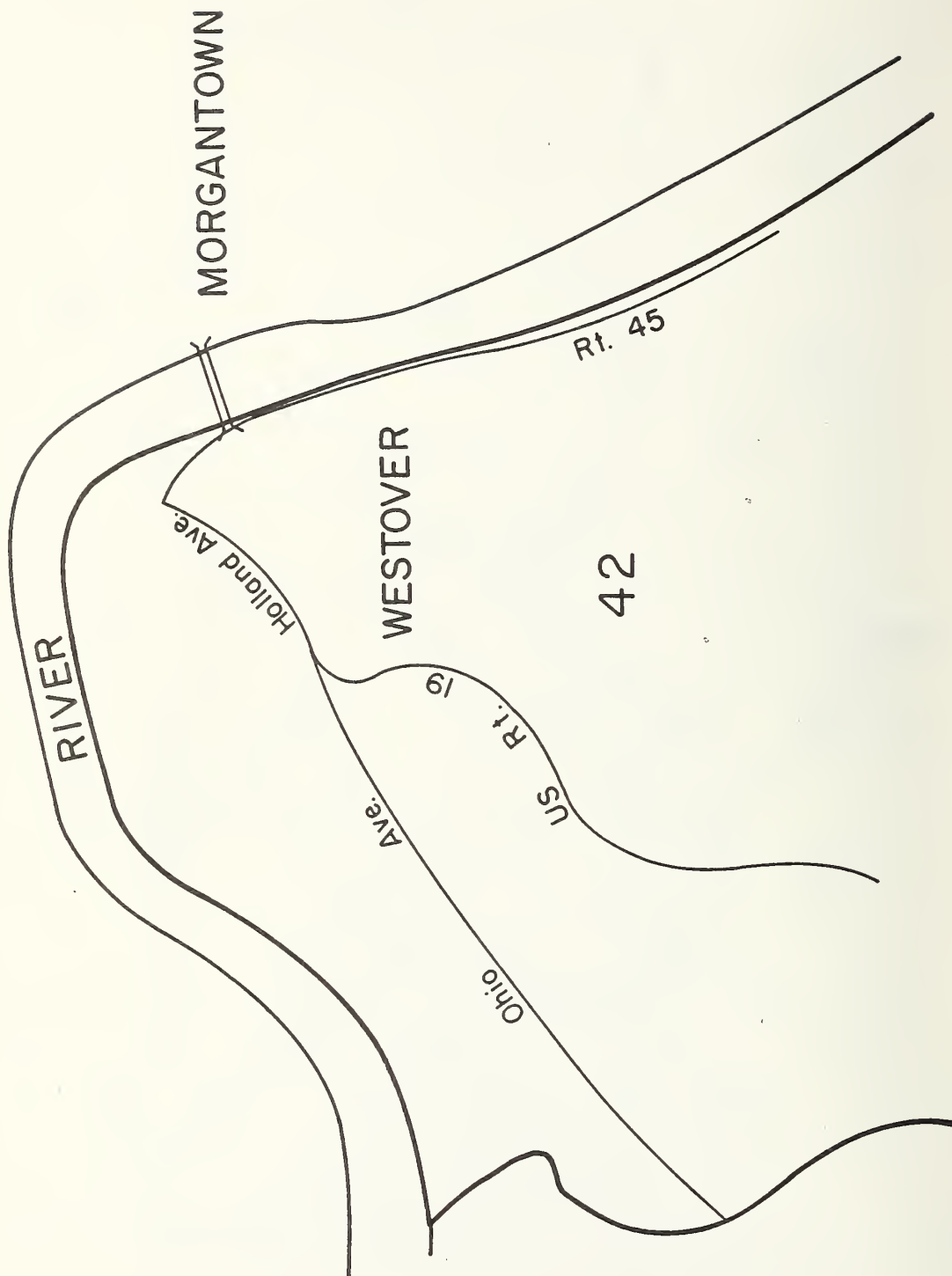
Zones 31 & 41



Zones 32 & 38



Zones 33 & 37



Zone 42

STAR CITY

43

RIVER

Main St.

GRANVILLE

US. Rt. 19

US. Rt. 19

ZONE 43

APPENDIX B

FORMS USED IN TRAVEL SURVEYS

FORM PRT-1a

E. Where was your destination?
(Probe to make sure no stops were made--each stop constitutes a destination.)

ADDRESS

TRIP 1 _____
 TRIP 2 _____
 TRIP 3 _____
 TRIP 4 _____
 TRIP 5 _____
 TRIP 6 _____

F. (If from or to North or N-W zones;) Which route did you take on this trip: 1. University Ave.; 2. Beechhurst-Monongahelia Blvd.; 3. Willowdale and Stewart Streets?

(If NONE or 3 go to C and discuss other trips)

TRIP 1 _____
 TRIP 2 _____
 TRIP 3 _____
 TRIP 4 _____
 TRIP 5 _____
 TRIP 6 _____

G. What was the purpose of your trip?

TRIP 1 _____
 TRIP 2 _____
 TRIP 3 _____
 TRIP 4 _____
 TRIP 5 _____
 TRIP 6 _____

CARD NO.

1. returning home
2. school related (class, library studying, etc.)
3. work related
4. shopping
5. social-recreational
6. to transfer to another means of travel
7. medical-dental
8. eat meal
9. personal business
10. to transport another person
11. other

H. What kind of transportation means did you use to make trip?

TRIP 1 _____
 TRIP 2 _____
 TRIP 3 _____
 TRIP 4 _____
 TRIP 5 _____
 TRIP 6 _____

- | | |
|-------------------|---------------|
| 1. auto-driver | 6. taxi |
| 2. auto-passenger | 7. hitchhike |
| 3. bus-county | 8. motorcycle |
| 4. bus-city | 9. bicycle |
| 5. bus-university | |

Do not write in this column

NONE

<input type="checkbox"/>	<input type="checkbox"/>	60-61
<input type="checkbox"/>	<input type="checkbox"/>	62-63
<input type="checkbox"/>	<input type="checkbox"/>	64-65
<input type="checkbox"/>	<input type="checkbox"/>	66-67
<input type="checkbox"/>	<input type="checkbox"/>	68-69
<input type="checkbox"/>	<input type="checkbox"/>	70-71

ROUTE

<input type="checkbox"/>	72
<input type="checkbox"/>	73
<input type="checkbox"/>	74
<input type="checkbox"/>	75
<input type="checkbox"/>	76 HH No.

<input type="checkbox"/>	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5
--------------------------	---	--------------------------	--------------------------	--------------------------	--------------------------	---

<input type="checkbox"/>	<input type="checkbox"/>	6-7	P
<input type="checkbox"/>	<input type="checkbox"/>	8-9	U R
<input type="checkbox"/>	<input type="checkbox"/>	10-11	P O
<input type="checkbox"/>	<input type="checkbox"/>	12-13	S E
<input type="checkbox"/>	<input type="checkbox"/>	14-15	
<input type="checkbox"/>	<input type="checkbox"/>	16-17	

MODE

<input type="checkbox"/>	18
<input type="checkbox"/>	19
<input type="checkbox"/>	20
<input type="checkbox"/>	21
<input type="checkbox"/>	22
<input type="checkbox"/>	23

Do not write

in this column

I. What was your main reason for choosing a (Kind of vehicle) to make this trip?

- TRIP 1 _____
- TRIP 2 _____
- TRIP 3 _____
- TRIP 4 _____
- TRIP 5 _____
- TRIP 6 _____

- 1. convenience
- 2. low cost
- 3. speed
- 4. no other transportation available
- 5. safety
- 6. I do not drive
- 7. other; specify:

<input type="checkbox"/>	24
<input type="checkbox"/>	25
<input type="checkbox"/>	26
<input type="checkbox"/>	27
<input type="checkbox"/>	28
<input type="checkbox"/>	29

J. (If not obvious) Was a car of yours available for your use during the time you took this trip?

- 1. YES 2. NO

- TRIP 1 _____
- TRIP 2 _____
- TRIP 3 _____
- TRIP 4 _____
- TRIP 5 _____
- TRIP 6 _____

<input type="checkbox"/>	30
<input type="checkbox"/>	31
<input type="checkbox"/>	32
<input type="checkbox"/>	33
<input type="checkbox"/>	34
<input type="checkbox"/>	35

K. What other kinds of transportation were available to you for this trip? (Record 2 alternatives - Do not prompt)

- TRIP 1 _____
- TRIP 2 _____
- TRIP 3 _____
- TRIP 4 _____
- TRIP 5 _____
- TRIP 6 _____

- 1. auto-driver
- 2. auto-passenger
- 3. bus-county
- 4. bus-city
- 5. bus-university
- 6. taxi
- 7. hitchhike
- 8. motorcycle
- 9. bicycle

<input type="checkbox"/>	<input type="checkbox"/>	36-37
<input type="checkbox"/>	<input type="checkbox"/>	38-39
<input type="checkbox"/>	<input type="checkbox"/>	40-41
<input type="checkbox"/>	<input type="checkbox"/>	42-43
<input type="checkbox"/>	<input type="checkbox"/>	44-45
<input type="checkbox"/>	<input type="checkbox"/>	46-47

L. (If the respondent was an auto driver) What kind of parking space did you use?

- TRIP 1 _____
- TRIP 2 _____
- TRIP 3 _____
- TRIP 4 _____
- TRIP 5 _____
- TRIP 6 _____

- 1. at residence
- 2. university lot
- 3. on-street metered
- 4. on-street non-metered
- 5. private paid lot
- 6. off-street metered city lot
- 7. off-street non-metered lot
- 8. other; please specify

<input type="checkbox"/>	48
<input type="checkbox"/>	49
<input type="checkbox"/>	50
<input type="checkbox"/>	51
<input type="checkbox"/>	52
<input type="checkbox"/>	53

Did you make any other trips within the city of Morgantown yesterday? (If yes go to question C; if no, go to question M. But be sure to probe to get all trips, including those while at work.)

In order to complete our survey, I would like to get a little information about you.

Do not write
in this
column

M. (If not obvious) Are you a licensed driver?

1. YES
2. NO

	54
--	----

N. How many automobiles do you and your spouse own?

1. 0
2. 1
3. 2
4. 3
5. 4 or more

	55
--	----

O. How many automobiles do you have available for your personal use here in Morgantown?

1. 0
2. 1
3. 2
4. 3
5. 4 or more

	56
--	----

P. Would you please tell me your occupation?

1. housewife
2. student
3. miner
4. professional (teacher, doctor, engineer, nurse, etc.)
5. proprietor, manager
6. sales
7. clerical
8. skilled, semi-skilled worker (secretary, mechanic, factory worker, waitress, etc.)
9. farmer, farm worker
10. not employed
11. other; please specify: _____

	57-58
--	-------

Q. Are you an employee of West Virginia University?

1. YES
2. NO

	59
--	----

R. (If not obvious) What is your sex?

1. Female
2. Male

	60
--	----

S. What is your age?

1. 14 years or under
2. 15-19
3. 20-24
4. 25-34
5. 35-44
6. 45-54
7. 55-64
8. 65 or older

	61
--	----

T. What is your marital status?

1. married
2. single
3. widowed
4. separated
5. divorced

	62
--	----

U. Would you please name the relationship of any members of your family who live with you, giving their occupation, if any?

RELATIONSHIP

- a. _____
- b. _____
- c. _____
- d. _____
- e. _____
- f. _____

- 1. husband
- 2. wife
- 3. father
- 4. mother
- 5. son
- 6. daughter
- 7. other; please specify:

Do not write in this column

- 63
- 64
- 65
- 66
- 67
- 68

V. OCCUPATION: What is the occupation of this member of your family?

- a. _____
- b. _____
- c. _____
- d. _____
- e. _____
- f. _____

- 1. housewife
- 2. student (check to be sure the student lives at home 1/2 or more of the year. If not, eliminate.)
- 3. miner
- 4. professional (teacher, doctor, engineer, nurse, etc.)
- 5. proprietor, manager
- 6. sales
- 7. clerical
- 8. skilled, semi-skilled worker (secretary, mechanic, factory worker, waitress, etc.)
- 9. farmer
- 10. not employed

- 69-70
- 71-72
- 73-74
- 75-76
- 77-78
- 79-80

CARD NO. HH No.

3				
1				5

W. UNIVERSITY EMPLOYEE: Is this member of your family a university employee? (1. YES 2. NO)

- a. _____
- b. _____
- c. _____
- d. _____
- e. _____
- f. _____

- 6
- 7
- 8
- 9
- 10
- 11

X. LICENSED DRIVER: Is this member of your family a licenced driver? (1. YES 2. NO)

- a. _____
- b. _____
- c. _____
- d. _____
- e. _____
- f. _____

- 12
- 13
- 14
- 15
- 16
- 17

FORM PRT-1a

Y1 (For students use Y3, for all others use Y1 and/or Y2

Do not write
in this
column

Would you please estimate your total (family) income for the past twelve (12) months:

1. under \$3000
2. \$3000-\$3999
3. \$4000-\$4999
4. \$5000-\$5999
5. \$6000-\$6999
6. \$7000-\$7999
7. \$8000-\$8999
8. \$9000-\$9999
9. \$10,000-\$12,499
10. \$12,500-\$14,999
11. \$15,000-\$24,000
12. over \$25,000

18-19

Y2 Would your total (family be

1. more than \$15,000/yr.
2. more than \$10,000/yr.
3. more than \$5,000/yr.
4. below \$5,000

20

Y3. (For full-time students)

May I ask how much rent you pay?

(check here if this includes meals:) _____ per _____

Approximately how much do you (your spouse and dependents) spend on food? (If not included in rent) _____ per _____

21

Approximately how much do you (your spouse and dependents) spend each month on all other purchases?

[including transportation, recreation, clothes, books, records - but not tuition]. _____ per month

[Interviewer: calculate the respondent's average expenses and expenditures for 4 months (one semester) and record the total in the box below].

\$ _____ /4months

After Y (1,2, or 3)

May I please speak to any other member of your family who is sixteen or older to ask them a few questions about the trips they have taken?

(If there is another person use the special "Second Person Form"; if there is no other person, conclusion the interview.)

conclusion: Thank you (resident) for your participation in our study. We appreciate your cooperation.

1

HOUSEHOLD NUMBER: _____

Do not write in this column

Second Person Form

Number of trips by this person: _____

6

[To be used when interviewing an additional family member.]

Introduction: Hello, my name is (Interviewer's name) and I am calling you as part of a study on local transportation being conducted by West Virginia University. We are studying the means of transportation people use and we would like to ask you about trips you have made recently (If asked, assure the resident of confidentiality.)

AA. What is your relationship to the (woman/man) to whom I just spoke?

- 1. husband
- 2. wife
- 3. father
- 4. mother
- 5. son
- 6. daughter
- 7. other; please specify:

7

B. First of all, did you make a vehicular trip within the city of Morgantown yesterday?

- 1. No (skip to question R)
- 2. Yes

8

C. Where did the trip begin?

ADDRESS

TRIP 1 _____

TRIP 2 _____

TRIP 3 _____

TRIP 4 _____

TRIP 5 _____

TRIP 6 _____

ZONE

9-10

11-12

13-14

15-16

17-18

19-20

D. Approximately what time did you start this trip?

TRIP 1 _____ (21-25)

TRIP 2 _____ (26-30)

TRIP 3 _____ (31-35)

TRIP 4 _____ (36-40)

TRIP 5 _____ (41-45)

TRIP 6 _____ (46-50)

_____ (51-55)

HRS MTS AM PM

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

E. Where was your destination?

(Probe to make sure no stops were made--each stop constitutes a destination.)

ADDRESS

TRIP 1 _____

TRIP 2 _____

TRIP 3 _____

TRIP 4 _____

TRIP 5 _____

TRIP 6 _____

ZONE

56-57

58-59

60-61

62-63

64-65

66-67

FORM PRT-1b

- F. (If from or to North or N-W zones;) Which route did you take on this trip:
1. University Ave.
 2. Beechhurst Ave.-Monongalia Boulevard
 3. Willodale and Stewart Streets

(If NONE or 3 go to C and discuss other trips.)

TRIP 1 _____

TRIP 2 _____

TRIP 3 _____

TRIP 4 _____

TRIP 5 _____

TRIP 6 _____

- G. What was the purpose of your trip?

CARD NO. 1

TRIP 1 _____

TRIP 2 _____

TRIP 3 _____

TRIP 4 _____

TRIP 5 _____

TRIP 6 _____

1. returning home
2. school related (class, library studying, etc.)
3. work related
4. shopping
5. social-recreational
6. to transfer to another means of travel
7. medical-dental
8. eat meal
9. personal business
10. to transport another person
11. other

- H. What kind of transportation means did you use to make the trip?

TRIP 1 _____

TRIP 2 _____

TRIP 3 _____

TRIP 4 _____

TRIP 5 _____

TRIP 6 _____

1. auto-driver
2. auto-passenger
3. bus-county
4. bus-city
5. bus-university
6. taxi
7. hitchhike
8. motorcycle
9. bicycle

Do not write in this column

<input type="checkbox"/>	68
<input type="checkbox"/>	69
<input type="checkbox"/>	70
<input type="checkbox"/>	71
<input type="checkbox"/>	72
<input type="checkbox"/>	73
<input type="checkbox"/>	HH No.
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	PURPOSE 5
<input type="checkbox"/>	6-7
<input type="checkbox"/>	8-9
<input type="checkbox"/>	10-11
<input type="checkbox"/>	12-13
<input type="checkbox"/>	14-15
<input type="checkbox"/>	16-17
<input type="checkbox"/>	18
<input type="checkbox"/>	19
<input type="checkbox"/>	20
<input type="checkbox"/>	21
<input type="checkbox"/>	22
<input type="checkbox"/>	23

I. What was your main reason for choosing a (Kind of vehicle) to make this trip?

Do not write in this column

TRIP 1	<input type="checkbox"/>	24
TRIP 2	<input type="checkbox"/>	25
TRIP 3	<input type="checkbox"/>	26
TRIP 4	<input type="checkbox"/>	27
TRIP 5	<input type="checkbox"/>	28
TRIP 6	<input type="checkbox"/>	29

1. convenience
2. low cost
3. speed
4. safety
5. no other vehicle transportation available
6. I do not drive
7. other; specify:

J. (If not obvious) Was a car of yours available for your use during the time you took this trip?

1. YES 2. NO

TRIP 1	<input type="checkbox"/>	30
TRIP 2	<input type="checkbox"/>	31
TRIP 3	<input type="checkbox"/>	32
TRIP 4	<input type="checkbox"/>	33
TRIP 5	<input type="checkbox"/>	34
TRIP 6	<input type="checkbox"/>	35

K. What other kinds of transportation were available to you for this trip? (Record 2 alternatives - Do not prompt)

TRIP 1	<input type="checkbox"/>	<input type="checkbox"/>	36-37
TRIP 2	<input type="checkbox"/>	<input type="checkbox"/>	38-39
TRIP 3	<input type="checkbox"/>	<input type="checkbox"/>	40-41
TRIP 4	<input type="checkbox"/>	<input type="checkbox"/>	42-43
TRIP 5	<input type="checkbox"/>	<input type="checkbox"/>	44-45
TRIP 6	<input type="checkbox"/>	<input type="checkbox"/>	46-47

1. auto-driver
2. auto-passenger
3. bus-county
4. bus-city
5. bus-university
6. taxi
7. hitchhike
8. motorcycle
9. bicycle

L. (If the respondent was an auto driver) What kind of parking space did you use?

Do not write in this column

TRIP 1 _____

TRIP 2 _____

TRIP 3 _____

TRIP 4 _____

TRIP 5 _____

TRIP 6 _____

48

49

50

51

52

53

1. at residence
2. university lot
3. on-street metered
4. on-street non-metered
5. private paid lot
6. off-street metered city lot
7. off-street non-metered lot
8. other; please specify:

R. (If not obvious) What is your sex?

1. Female
2. Male

54

S. What is your age?

1. 14 years and under
2. 15-19
3. 20-24
4. 25-34
5. 35-44
6. 45-54
7. 55-64
8. 65 or older

55

T. What is your marital status?

1. married
2. single
3. widowed
4. separated
5. divorced

56

May I please speak to any other member of your family who is sixteen or older to ask them a few questions about the trips they have taken? (If there is another person use another "Second person form"; if there is no other person, conclude the interview.)

Thank you (Resident) _____ for your participation in our study. We appreciate your cooperation.

NOTE: Be sure to staple this form to the main interview form.

UNIVERSITY BUS-SYSTEM QUESTIONNAIRE

The few minutes you will spend in completing this questionnaire will help to provide answers that are very important in a study on the means of transportation available in the city of Morgantown. Your completed form will be collected as you leave the bus. Thank you for your assistance.

Place a check mark (✓) on the line next to the appropriate answer for each question.

1. At what location did you enter this bus?

- 1. Towers
- 2. Campus Drive
- 3. Mountainlair
- 4. Engineering
- 5. C.A.C.
- 6. Forestry
- 7. Coliseum
- 8. Medical Center
- 9. Other, please specify: _____

2. On the lines below, please place the address, or establishment name, of the place from where you were coming (for example, Mountainlair, Morgantown Post Office, Engineering Building):

3. How did you travel from the address listed above to the bus location?

- 1. walk
- 2. auto (as the driver)
- 3. auto (as the passenger)
- 4. county bus
- 5. city bus
- 6. university bus
- 7. taxi
- 8. hitchhike
- 9. motorcycle
- 10. bicycle
- 11. other, please specify: _____

Do not write
in this
column

cc

1		2	RT
---	--	---	----

	3	Day
--	---	-----

			DATE
--	--	--	------

4 M DATE 6

		8
--	--	---

7

		10
--	--	----

9

		12
--	--	----

11

Do not write
in this
column

9. Approximately how many minutes did you wait at the bus stop for this bus?

- 1. 0-5
- 2. 6-10
- 3. 11-15
- 4. 16-20
- 5. 21-25
- 6. 26-30
- 7. longer than 30 minutes

31

10. Are you a licensed driver?

- 1. yes
- 2. no

32

11. How many automobiles do you (and your spouse) own?

- 1. 0
- 2. 1
- 3. 2
- 4. 3
- 5. 4 or more

33

12. Did you have a car available that you could have used for this trip? (For example, in addition to your own cars, you may have the use of a car owned by a friend or relative.)

- 1. yes
- 2. no

34

13. What is your occupation?

- 1. housewife
- 2. student
- 3. miner
- 4. professional (teacher, doctor, engineer, nurse, etc.)
- 5. proprietor, manager
- 6. sales
- 7. clerical
- 8. skilled, semi-skilled worker (mechanic, waitress, factory worker, etc.)
- 9. farmer, farm-worker
- 10. not employed
- 11. other, please specify: _____

35-36

14. Are you a full-time University employee?

- 1. yes
- 2. no

37

22. Please place your local residence address on the lines below:

Do not write
in this
column

--	--

66-67

ZONE

CITY AND COUNTY BUS SYSTEM QUESTIONNAIRE

The few minutes you will spend in completing this questionnaire will help to provide answers that are very important in a study on the means of transportation available in the city of Morgantown. Your completed form will be collected as you leave the bus. Thank you for your assistance.

Place a check mark (✓) on the line next to the appropriate answer for each question.

1. On the lines below, please place the names of streets or roads of the intersection nearest the location where you entered this bus.

2. Is the location above your approximate home address?

_____ 1. Yes

_____ 2. No, please place your address on the lines below:

3. Where were you coming from when you got on this bus?

- _____ 1. Home
- _____ 2. Morgantown downtown shopping area
- _____ 3. West Virginia University (downtown campus)
- _____ 4. Evansdale capmus
- _____ 5. University Medical Center
- _____ 6. Suncrest area
- _____ 7. Star City--- downtown area
- _____ 8. Star City--- Hill's Plaza area
- _____ 9. Other, please specify the location (address if possible) on the lines below:

Do not write
in this
cc column

1 2 RT

3 DAY
M DATE

4 6

ZONE

7 8

ZONE

9 10

11-12

4. How did you travel from the location listed above (in question 3) to the location where you got on this bus?

- 1. Walk
- 2. Auto (as the driver)
- 3. Auto (as a passenger)
- 4. County bus
- 5. City bus
- 6. University Bus
- 7. Taxi
- 8. Hitchhike
- 9. Motorcycle
- 10. Bicycle
- 11. Other, please specify: _____

5. What was the approximate time of day when you started this trip? _____ AM
 _____ PM

6. Where will you leave this bus?

- 1. Home
- 2. Morgantown downtown shopping area
- 3. West Virginia University (downtown campus)
- 4. Evansdale campus
- 5. University Medical Center
- 6. Suncrest area
- 7. Star City---downtown area
- 8. Star City---Hill's Plaza area
- 9. Other, please specify the location (address if possible) on the lines below:

7. What is the purpose of this trip? (Please check only one answer.)

- 1. Returning home
- 2. School related (class, library studying, etc.)
- 3. Work related
- 4. Shopping
- 5. Social-recreational
- 6. To get to another means of transportation
- 7. Medical-dental
- 8. Eat meal
- 9. Personal business
- 10. To transport another person
- 11. Other, please specify: _____

Do not write
in this
column

--	--

13-14

--	--	--	--	--

HR

MTS

AM

PM

15-19

--	--

20-21

--	--

22-23

Do not write
in this
column

8. What other kinds of vehicular transportation were available to you for this trip? (check as many as necessary)

- 1. Auto: as driver
- 2. Auto: as passenger
- 3. Hitchhike
- 4. Taxi
- 5. Bus---county
- 6. Bus---city
- 7. Motorcycle
- 8. Bicycle
- 9. Bus---university
- 10. None

- 24
- 25
- 26
- 27
- 28
- 29
- 30
- 31
- 32
- 33

9. What was your main reason for choosing this city or county bus to make this trip? (Please check only one)

- 1. Convenience
- 2. Low cost
- 3. Speed
- 4. Safety
- 5. No other vehicle transportation available
- 6. I do not drive
- 7. Other; specify: _____

10. Approximately how many minutes did you have to wait at the bus stop for this bus?

- 1. 0-5
- 2. 6-10
- 3. 11-15
- 4. 16-20
- 5. 21-25
- 6. 26-30
- 7. longer than 30 minutes

- 34
- 35

11. Are you a licensed driver?

- 1. yes
- 2. no

- 36

12. How many automobiles do you (and your spouse) own?

- 1. 0
- 2. 1
- 3. 2
- 4. 3
- 5. 4 or more

- 37

Do not write
in this
column

13. Did you have a car available that you could have used for this trip? (For example, in addition to your own cars, you may have the use of a car owned by a friend or relative.)

- 1. yes
- 2. no

	38
--	----

14. What is your occupation?

- 1. housewife
- 2. student
- 3. miner
- 4. professional (teacher, doctor, engineer, nurse, etc.)
- 5. proprietor, manager
- 6. sales
- 7. clerical
- 8. skilled, semi-skilled worker (mechanic, waitress, factory worker, etc.)
- 9. farmer, farm-worker
- 10. not employed
- 11. other, please specify: _____

--	--

39-40

15. Are you a full-time University employee?

- 1. yes
- 2. no

--

41

16. What is your sex?

- 1. female
- 2. male

--

42

17. What is your age?

- 1. 14 years or under
- 2. 15-19
- 3. 20-24
- 4. 25-34
- 5. 35-44
- 6. 45-54
- 7. 55-64
- 8. 65 or older

--

43

18. What is your marital status?

- 1. married
- 2. single
- 3. widowed
- 4. separated
- 5. divorced

--

44

Do not write
in this
column

19 - 22. State the relationship of any members of your family who live with you, giving the occupation, if any, and stating whether or not they are full-time University employees and have driver's licenses. (Please show your answer by placing a number from the list of choices on the correct line above each list.)

	RELATIONSHIP TO YOU	OCCUPATION	UNIV. EMPLOYEE	LIC. DRIVER
1st person				
2nd person				
3rd person				
4th person				
5th person				

- | | | | |
|-------------|--------------------------------------------------------------------------------------|--------|---------|
| 1. husband | 1. housewife | 1. yes | 1. yes |
| 2. wife | 2. student | 2. no | 2. no |
| 3. father | 3. miner | | |
| 4. mother | 4. professional
(doctor, teacher,
engineer, nurse,
etc.) | | (45-49) |
| 5. son | | | |
| 6. daughter | 5. proprietor,
manager | | (50-55) |
| 7. other | 6. sales | | |
| | 7. clerical | | (56-60) |
| | 8. skilled, semi-
skilled worker
(mechanic, waitress,
factory worker, etc.) | | (61-65) |
| | 9. farmer, farm-worker | | |
| | 10. not employed | | (66-69) |

R	OCC-	VE	LD

FORM PRT-4
PRE - PRT IMPACT STUDY

FACULTY/STAFF NONHOME-BASED TRAVEL SURVEY

I. Which of the following best describes your primary job function? (Circle one only).

- | | | | | | | |
|----------------|------------------------------|------------------|---------|-------------------------|-------------|----------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Administrative | Teaching and/
or Research | Research
Only | Medical | Secretarial
Clerical | Maintenance | Other
_____ |

II. What is your home address? _____

III. Circle the campus or general area which is nearest to or is your principal place of work (Circle one only).

- | | |
|-------------------------------------------|--------------------|
| 0 Home | 4 Coliseum |
| 1 Morgantown Central Business District | 5 Towers, Forestry |
| 2 Main University Campus | 6 Medical Center |
| 3 Engineering, Agriculture, Creative Arts | 7 Other _____ |

IV. As accurately as possible, record all of the trips, in order of occurrence, which you made on May 1, 1975 between any of the areas listed under Item III above. With the exception of time, record your trips using the code numbers. To record your trips, follow the example given below.

	FROM	TO	PURPOSE OF TRIP	APPROX. TIME TRIP STARTED	MODE OF TRAVEL	IF YOU USED AUTO WHERE DID YOU PARK?	IF YOU DID NOT USE AUTO, WAS AUTO AVAILABLE FOR THIS TRIP?
TRIP NUMBER			1. Returning home 2. Work related 3. Shopping 4. Eat Meal 5. Personal Business 6. Medical/Dental 7. Social/Recreational 8. Other		1. Auto-Driver 2. Auto-Pass. 3. Bus County, City 4. Bus-University 5. Taxi 6. Motor-cycle 7. Bicycle	1. University Lot 2. On Street-metered 3. On Street non-metered 4. Private Paid Lot 5. Off Street Metered-lot 6. Other (Specify)	1. Yes 2. NO 3. Not Applicable
EXAMPLE	0	3	2	8:30 AM	1	1	3
1							
2							
3							
4							
5							

PRT Impact Study

COMMUNITY-ATTITUDE SURVEY

Date: _____

Interviewer: _____

Starting Time: _____

Sample # _____ Area # _____

Hello, I am _____. Your household has been selected for an interview by the United States Department of Transportation. I'd like to take a few minutes of your time to get your opinion on the transportation problems in the area.

Characteristics of refuser:

1. Sex: M F
2. Race: W B O
3. Estimated Age: _____
4. Condition of dwelling and surrounding grounds:
 - a. well-kept and in good repair _____
 - b. moderately well-kept and in moderately good repair _____
 - c. unkept and in bad repair _____
5. Reason for refusal: _____

* * * * *

(Use as many of the following qualifying questions as necessary)

1. Are you the lady/man of the house? _____
2. Are you a full-time student at West Virginia University? _____
3. Were you a full-time student there this Spring? _____
4. Do you plan to be a full-time student at the University this fall? _____

FORM PRT-9

Some people are planning to use Morgantown's Personal Rapid Transit system for transportation.

1. Do you think you will be able to use it to get around Morgantown?

_____yes, _____no, _____don't know

(if yes or don't know)

1a. What kinds of places might you go? _____

(if no)

1b. Why not? _____

2. How do you usually get around Morgantown now? _____

3. If you couldn't use _____ (answer #2), what other means of transportation could you use?

private vehicle _____

walk _____

city bus _____

hitchhike _____

county bus _____

bike _____

taxi _____

motorcycle _____

carpool _____

other _____

4. Do you ever use the: (if less than once a month)

4a. the city bus _____ (if yes) about how many times a month _____

4b. county bus _____ (if yes) about how many times a month _____

4c. taxi _____ (if yes) about how many times a month _____

5. What is your marital status? _____ married, _____ never married,
_____ widowed, _____ divorced, _____ separated. (Code on Background chart)

(If married, use questions 6 thru 8)

6. Do you think your husband/wife will be able to use the Rapid Transit System to get around Morgantown? yes, no, don't know
(if yes or don't know)

6a. What kinds of places might he/she go? _____

(if no)

6b. Why not? _____

7. How does he/she usually get around Morgantown? _____

8. Does he/she ever use:

8a. the city bus (if yes) about how many times a month _____

8b. county bus (if yes) about how many times a month _____

8c. a taxi (if yes) about how many times a month _____

9. Where do you buy most of your groceries? Name _____
Location _____

(if more than one) Name _____ Location _____

No main place _____

10. Where do you do most of your general merchandise shopping?

Name _____ Location _____

(if more than one) Name _____ Location _____

No main place _____

11. What are your main sources of information about Morgantown's Personal Rapid Transit system? _____

12. What magazines do you and the members of your household subscribe to or buy frequently? (i.e. more than 6 times per year)

(SEE NEXT PAGE)

13. If gasoline goes up to a dollar a gallon, what will you do? (Do not prompt)
Check as many as apply:

- | | | |
|-------------------------------------------------|----------------------------------------|-------------------------------------|
| <input type="checkbox"/> No car, not applicable | <input type="checkbox"/> Join car pool | <input type="checkbox"/> No change |
| <input type="checkbox"/> Reduce no. of autos | <input type="checkbox"/> Buy small car | <input type="checkbox"/> Drive less |
| <input type="checkbox"/> Other _____ | <input type="checkbox"/> Take a bus | <input type="checkbox"/> Move |

14. Do you regularly read a local newspaper? Yes No

I'm going to ask you some other questions now. Most of them you can answer "yes" or "no" to. However, it is perfectly alright to say "I don't know" if you don't know enough about it.

Some people say that there have been a lot of changes in Morgantown in the last few years.

- | | Yes | Neutral
Don't know | No |
|------------------------------------------------------------------------------------------------------------------|-----|-----------------------|----|
| 15. Do you think Morgantown is becoming more like a big city?
(If <u>yes</u> , go to question 15a) | Y | DK | N |
| 15a. Do you think this represents progress for Morgantown? | Y | DK | N |
| 16. Do you think that West Virginia University has too much influence over Morgantown? | Y | DK | N |
| 17. Do you think that when government is involved in big projects, they tend to take too long and cost too much? | Y | DK | N |
| 18. Do you think progress requires big changes in society? | Y | DK | N |
| 19. Do you think ecologists and environmentalists stand in the way of progress? | Y | DK | N |
| 20. Have you ever wanted to do something about a public issue? | Y | DK | N |
| 21. Considering the energy crisis, do you think the government should develop new mass transit systems? | Y | DK | N |

FORM PRT-9

IF THE ANSWER TO ANY OF THE QUESTIONS 22 THRU 26 IS "I DON'T KNOW", ASK THE RESPONDENT TO PLEASE TAKE A GUESS.

22. Now then, could you please tell me how many stations are now on the Personal Rapid Transit system? _____ Guess _____
23. Where are the stations located? _____ Guess _____
24. Will each rapid transit car have a driver? _____ Guess _____
25. How much do you think the Personal Rapid Transit system cost to build? _____ Guess _____
26. Who paid for the rapid transit system---the Federal Government, the state of West Virginia or the University? _____ Guess _____

I REALIZE YOU HAVE NEVER RIDDEN ON THE PERSONAL RAPID TRANSIT SYSTEM; HOWEVER....

	YES	QUAL. YES	NEUTRAL DON'T KNOW	QUAL. NO	NO
27. Do you think the rapid transit system will be fun to ride?	Y	QY	DK	QN	N
28. Do you think there is much chance of an accident happening on it?	Y	QY	DK	QN	N
29. Do you think the Personal Rapid Transit system is an eyesore?	Y	QY	DK	QN	N
30. Do you think it will be comfortable to ride on?	Y	QY	DK	QN	N
31. Do you think the Personal Rapid Transit system represents progress for Morgantown?	Y	QY	DK	QN	N
32. Do you think it will get people from station to station quickly?	Y	QY	DK	QN	N
33. Do you think tourists will come to Morgantown to see it?	Y	QY	DK	QN	N
34. Do you think the rapid transit system will help to reduce air pollution in Morgantown?	Y	QY	DK	QN	N
35. Do you think it took too long to build?	Y	QY	DK	QN	N
36. Do you think the rapid transit system will ease the traffic problems in Morgantown?	Y	QY	DK	QN	N
37. Do you think it has brought favorable national attention to Morgantown?	Y	QY	DK	QN	N

FORM PRT-9

38. Do you think that more people will go to athletic events after the rapid transit is running? Y QY DK QN N
39. Do you think it will increase business downtown? Y QY DK QN N
40. Do you think more people will attend cultural events at the Creative Arts Center? Y QY DK QN N
41. Do you think the rapid transit system will ease the parking problems in Morgantown? Y QY DK QN N
42. Do you think the rapid transit system will make Morgantown seem more like a big city? Y QY DK QN N
(If yes or qualified yes, go to question 42a)

42a. Do you consider this good or bad? _____

GO TO CENSUS

43. Let me see, then altogether _____ people live in this house (apartment, trailer)?
44. Would you consider your background to be mainly big city (Charleston), small city (Morgantown), small town (Kingwood, Mt. Morris), or rural?

BC SC ST R

45. (SHOW CARD) Here is a card showing amounts of monthly or yearly incomes. Would you tell me what letter represents the income you made before taxes in 1974, considering all sources such as wages, profits, interest and so on. (If not married, go on to question 47) _____
(letter)

46. Would you tell me what letter represents the income your (husband/wife) made before taxes in 1974, considering all sources such as wages, profits, interest and so on? _____
(letter)

1. Note: Between questions 42 and 43, the interviewer recorded census-type information about the household using the page of the Form given on the next page.

RESPONDENT	MARITAL STATUS	RACE	SFX	YEAR OF BIRTH	HIGHEST GRADE COMPLETED 1-16+	YEARS IN PORTLAND	OCCUPATION F/T; P/T; WHAT; WHERE
	MARRIED WIDOW NEVER SEPARATED DIVORCED	W B O	M F				
SPOUSE	MARRIED WIDOW NEVER SEPARATED DIVORCED	W B O	M F				
CHILD	MARRIED WIDOW NEVER SEPARATED DIVORCED	W B O	M F				
CHILD	MARRIED WIDOW NEVER SEPARATED DIVORCED	W B O	M F				
CHILD	MARRIED WIDOW NEVER SEPARATED DIVORCED	W B O	M F				
CHILD	MARRIED WIDOW NEVER SEPARATED DIVORCED	W B O	M F				
CHILD	MARRIED WIDOW NEVER SEPARATED DIVORCED	W B O	M F				
OTHERS:	MARRIED WIDOW NEVER SEPARATED DIVORCED	W B O	M F				
OTHERS:	MARRIED WIDOW NEVER SEPARATED DIVORCED	W B O	M F				
OTHERS:	MARRIED WIDOW NEVER SEPARATED DIVORCED	W B O	M F				

Now, I'd like to ask about the people who live here. We have to ask these questions to find out whether people who will use public transportation are different from other people. In this way, the Department of Transportation will know if any particular groups in the community aren't being served.

FORM PRT-9

47. We may want to call back by phone after a year or so just to ask a few questions about how people we have interviewed have ch. need. To do this we need to be sure we can get in touch with you --- can you give me your telephone number?

Phone # : _____

48. Many people move, of course, and we would like to be sure we can get in touch with you if you move. Can you give me the name, address and telephone number of a close relative or friend who would be likely to know where you have moved if we lose track of you?

Name _____ Relationship _____

Address _____
(NO.) (STREET)

_____ Phone _____
(CITY) (STATE) (ZIP CODE)

FINISH TIME : _____

COMMENTS (include anything necessary for the interpretation of this interview) :

PRT IMPACT STUDY
STUDENT-ATTITUDE SURVEY

Dear Student,

This is a questionnaire to determine the attitude of students toward the PRT System. Your cooperation in responding to this questionnaire will be greatly appreciated. Please indicate how you feel about the following statements by checking your most suitable response.

	<u>STRONGLY</u> <u>AGREE</u>	<u>AGREE</u>	<u>NEUTRAL</u>	<u>DISAGREE</u>	<u>STRONGLY</u> <u>DISAGREE</u>
1. The PRT will make it more convenient to move among the campuses for classes and other activities.	SA	A	N	D	SD
2. The PRT will help alleviate Morgantown's traffic tie-ups.	SA	A	N	D	SD
3. The PRT will help alleviate the parking shortage in the local area.	SA	A	N	D	SD
4. I believe the PRT will be safe.	SA	A	N	D	SD
5. When the PRT is running, students will spend less time traveling between campuses.	SA	A	N	D	SD
6. The PRT has brought favorable national attention to West Virginia University.	SA	A	N	D	SD
7. The PRT is visually attractive.	SA	A	N	D	SD
8. The PRT will be more comfortable than a bus.	SA	A	N	D	SD
9. In general, I am glad the PRT was built here at West Virginia University.	SA	A	N	D	SD

Based on whatever knowledge you have about the PRT, please check one answer to each of the following questions.

10. When the PRT first begins carrying passengers, how many stations will be in operation?

_____ 2 _____ 3 _____ 4 _____ 5

11. Approximately how much will it cost West Virginia University students to ride the PRT?

_____ FREE _____ 10¢ per ride _____ 25¢ per ride
_____ \$15 per semester _____ \$25 per semester

12. To date, approximately how much has been spent building the PRT?

_____ \$15 million _____ \$30 million _____ \$65 million
_____ \$110 million _____ \$150 million

FORM PRT-10

13. Who is bearing the major cost of constructing the PRT?

_____ WVU Student Body _____ State of West Virginia
 _____ Monongalia County _____ Federal Government

14. What is your one major source of information about the PRT (Check only one)?

_____ Daily Athenaeum _____ Classes _____ TV
 _____ Local Morgantown newspapers _____ Radio
 _____ Talking with acquaintances _____ Other (Please specify: _____)

15. What is your sex? _____ Female _____ Male

16. What is your age? _____

17. What year are you in school?

_____ Freshman _____ Sophomore _____ Junior
 _____ Senior _____ Graduate Student

18. What is your major field of studies? (i.e., your "Major")? _____

19. Did you reside in the local Morgantown area during most of the last school year, (i.e., 5 months or more)?

_____ YES _____ NO

20. Did you attend classes during the regular spring semester last school year?

_____ YES _____ NO

21. Do you plan to attend classes in the regular fall semester this coming school year?

_____ YES _____ NO _____ Not Sure

If answer to above is yes, please answer the following:

21a. Will you own or have access to a car during the fall term?

_____ YES _____ NO _____ Not Sure

21b. During the fall semester, where will you probably live in Morgantown?

_____ Suncrest _____ Downtown & Sunnyside _____ Sabraton
 _____ South Park _____ Westover Area _____ Star City Area
 _____ Mileground _____ Med Center Area _____ Evansdale (including Towers & Pierpont)
 _____ Not Sure _____ Other (Please specify: _____)

APPENDIX C
CODES AND FORMATS FOR SURVEYS

TAPE FORMAT FOR TELEPHONE INTERVIEW

File 1 of Tape Number 001850. DSNNAME=PREMPACT.TELINT.
 RECFM = FB, LRECL = 255, BLKSIZE = 5100.

NOTE: 1 logical record = 1 respondent. If 3 respondents in one household, tape contains 3 logical records.

BYTE NUMBERS	DESCRIPTION	EXPLANATION	LOCATION ON QUESTIONNAIRE
1-4	Control number	Household - peculiar	1st page
5	Person number within household	1=first respondent in household 2=2nd " " " " 3=3rd " " " "	- - -
6-7	Zone in which household located	From map of zones	1st page
8	Dorm code	1=lives in dorm 2=does not live in dorm	1st page
9-11	Date of interview	406=April 6, 1975	1st page
12-13	Total number of trips recorded for this respondent		- - -
14	Sex	1=female 2=male	R
15	Age	1=14 years or under 2=15-19 3=20-24 4=25-34 5=35-44 6=45-54 7=55-64 8=65 or older	S
16	Marital status	1=married 2=single	T

Table C-1 (continued)

215	Relationship to first respondent in household	AA
		1=husband 2=wife 3=father 4=mother 5=son 6=daughter 7=other
216	Is respondent licensed driver?	M
		1=yes 2=no
217	Number autos owned by respondent and spouse	N
		1=0 autos 2=1 auto 3=2 auto 4=3 auto 5=4 or more autos
218	Number autos available for personal use of respondent in Morgantown.	O
		1=0 autos 2=1 auto 3=2 auto 4=3 auto 5=4 or more autos
219-220	Occupation of respondent	P
		1=housewife 2=student 3=miner 4=professional (teacher, doctor, engineer, nurse, etc.) 5=proprietor, manager 6=sales 7-clerical 8=skilled, semi-skilled worker (secretary, mechanic, factory worker, waitress, etc.) 9=farmer, farm worker 10=not employed 11=other 12=retired
221	Is respondent an employee of West Virginia University?	Q
		1=yes 2=no

Table C-1 (continued)

215	Relationship to first respondent in household	1=husband 2=wife 3=father 4=mother 5=son 6=daughter 7=other	AA
216	Is respondent licensed driver?	1=yes 2=no	N
217	Number autos owned by respondent and spouse	1=0 autos 2=1 auto 3=2 auto 4=3 auto 5=4 or more autos	N
218	Number autos available for personal use of respondent in Morgantown.	1=0 autos 2=1 auto 3=2 auto 4=3 auto 5=4 or more autos	0
219-220	Occupation of respondent	1=housewife 2=student 3=miner 4=professional (teacher, doctor, engineer, nurse, etc.) 5=proprietor, manager 6=sales 7-clerical 8=skilled, semi-skilled worker (secretary, mechanic, factory worker, waitress, etc.) 9=farmer, farm worker 10=not employed 11=other 12=retired	P
221	Is respondent an employee of West Virginia University?	1=yes 2=no	Q

Table C-1 (continued)

236-237	Occupation of 3rd member of family	"	"	"	"	3=trainer
.	"	"	"	"	"	4=professional (teacher, doctor, engineer, nurse, etc.)
242-243	Occupation of 6th member of family	"	"	"	"	5=profiteer, manager
.	"	"	"	"	"	6=sales
.	"	"	"	"	"	7=clerical
.	"	"	"	"	"	8=skilled, semi-skilled worker (secretary, mechanic, factory worker, waitress, etc.)
.	"	"	"	"	"	9=farmer, farm work
249	Is 1st member of family employed by W.V.U.?	"	"	"	"	10=not employed
244	Is 2nd member of family employed by W.V.U.?	"	"	"	"	11=other
245	"	"	"	"	"	12=retired
.	"	"	"	"	"	
.	"	"	"	"	"	
.	"	"	"	"	"	
249	Is 6th member of family employed by W.V.U.?	"	"	"	"	
250	Is 1st member of family a licensed driver?	"	"	"	"	1=yes
251	Is 2nd member of family a licensed driver?	"	"	"	"	2=no
.	"	"	"	"	"	
.	"	"	"	"	"	
.	"	"	"	"	"	
255	Is 6th member of family a licensed driver?	"	"	"	"	

W

X

Ex

TAPE FORMAT FOR UNIVERSITY BUS ON-BOARD SURVEY

File 2 of Tape Number 001850. DSN=PRETRACT.UBUS.
 RECFM = FB, LRECL = 71, BLKSIZE = 7100.

BYTE NUMBERS	QUESTION	DESCRIPTION	EXPLANATION
1-2	-	Route number.	See codes for University bus routes.
3	-	Day questionnaire filled out.	1=Monday 2=Tuesday 3=Wednesday 4=Thursday 5=Friday
4-6	-	Date questionnaire filled out	424=April 24, 1975
7-8	1	Location respondent entered bus.	1=Towers 2=Campus Drive 3=Mountainlair 4=Engineering 5=C.A.C. 6=Forestry 7=Coliseum 8=Med. Center 99=Outside Morgantown area Other=Zone number. See map of zones.
9-10	2	Place from where respondent was coming.	See map of zones.
11-12	3	Mode of travel from response to Question 2 bus location.	1=walk 2=auto (as driver) 3=auto (as passenger) 4=county bus 5=city bus 6=University bus 7=taxi 8=hitchhike 9=motorcycle 10=bicycle 11=other

Table C-2 (continued)

28	Was bicycle available as alternate mode?	
29	Was no alternate mode available?	
30	Main reason for choosing University bus to make this trip.	1=convenience 2=low cost 3=speed 4=safety 5=no other vehicle transportation available 6=respondent does not drive 7=other
31	Minutes respondent waited at bus stop for bus.	1=0-5 minutes 2=6-10 minutes 3=11-15 minutes 4=16-20 minutes 5=21-25 minutes 6=26-30 minutes 7=more than 30 minutes
32	Is respondent licensed driver?	1=yes 2=no
33	Number autos owned by respondent and spouse.	1=0 autos 2=1 auto 3=2 autos 4=3 autos 5=4 or more autos
34	Did respondent have car available which could have been used for this trip?	1=yes 2=no
35-36	Respondent's occupation	See occupation codes for bus on-board surveys.
37	Is respondent a full-time WVU employee?	1=yes 2=no
38	Sex of respondent.	1=female 2=male

Table C-2 (continued)

39	16	Age of respondent.	1=14 years or under 2=15-19 3=20-24 4=25-34 5=35-44 6=45-54 7=55-64 8=65 or older
40	17	Respondent's marital status.	1=married 2=single 3=widowed 4=separated 5=divorced
41	18	Relationship of 1st person living with respondent.	1=husband 2=wife 3=father 4=mother 5=son 6=daughter 7=other
42-43		Occupation of 1st person living with respondent.	See occupation codes for bus on-board surveys.
44		Is 1st person living with respondent a W.V.U. employee?	1=yes 2=no
45		Is 1st person living with respondent a licensed driver?	1=yes 2=no
46		Relationship of 2nd person living with respondent.	Coded same as for 1st person.
47-48		Occupation of 2nd person living with respondent.	" " " " " "
49		Is 2nd person living with respondent a W.V.U. employee?	" " " " " "
50		Is 2nd person living with respondent a licensed driver?	" " " " " "

TABLE C-3
OCCUPATION CODES FOR BUS ON-BOARD SURVEYS

<u>CODE</u>	<u>OCCUPATION</u>
1	housewife
2	student
3	miner
4	professional (teacher, doctor, engineer, nurse, etc.)
5	proprietor, manager
6	sales
7	clerical
8	skilled, semi-skilled worker (mechanic, waitress, factory worker, etc.)
9	farmer, farm worker
10	not employed
11	other
12	retired

TAPE FORMAT FOR CITY/COUNTY BUS ON-BOARD SURVEY

File 3 of Tape Number 001850. DSNNAME=PREMPACT.CCBUS.
 RECFM=FB, LRECL=72, BLKSIZE=7200.

BYTE NUMBERS	QUESTION	DESCRIPTION	EXPLANATION
1-2	--	Route number.	See codes for routes of city and county buses for on-board survey.
3	--	Day questionnaire filled out.	1=Monday 2=Tuesday 3=Wednesday 4=Thursday 5=Friday
4-6	--	Date questionnaire filled out.	422=April 22, 1975
7-8	1	Zone where respondent entered bus.	See map of zones
9-10	2	Location of respondent's residence.	91=respondent resides in zone in bytes 7-8 92=respondent does not reside in zone in bytes 7-8, but zone of residence not given Other=Zone of residence. See map of zones.
11-12	3	Where respondent was coming from when he got on bus.	91=zone respondent resides in 92=CBD 93=main campus 94=Evansdale campus 95=Medical Center 96=Suncrest area 97=Star City downtown area 98=Star City-Hill's Plaza area 99=outside greater Morgantown area Other=zone number. See map of zones.

Table C-4 (continued)

13-14 4 Mode of travel used by respondent to get from location in Question 3 to location where he got on bus.

- 1=walk
- 2=auto (as driver)
- 3=auto (as passenger)
- 4=county bus
- 5=city bus
- 6=University bus
- 7=taxi
- 8=hitchhike
- 9=motorcycle
- 10=bicycle
- 11=other

15-19 5 Time this trip started.

Hours (2 bytes), minutes (2 bytes), A.M./P.M. code (1 byte)--1 A.M. 2=P.M. Example: 03052=3:05 P.M.

20-21 6 Where respondent will leave this bus

Coded same as for bytes 11-12

22-23 7 Trip purpose.

- 1=returning home
- 2=school related (class, library, etc.)
- 3=work related
- 4=shopping
- 5=social-recreational
- 6=to get to another means of transportation
- 7=medical-dental
- 8=eat meal
- 9=personal business
- 10=to transport another person
- 11=other

24 8 Was auto (as driver) available as alternate mode?

0 or blank = no
1 = yes

- 25 " " (as passenger) " " " "
- 26 " hitchhike " " " "
- 27 " taxi " " " "
- 28 " county bus " " " "
- 29 " city bus " " " "
- 30 " motorcycle " " " "
- 31 " bicycle " " " "
- 32 " University bus " " " "

Table C-4 (continued)

33	Was no alternate mode available?	
34	Main reason for choosing this bus to make this trip.	1=convenience 2=low cost 3=speed 4=safety 5=no other vehicle transportation available 6=respondent does not drive 7=other
35	Minutes respondent waited at bus stop for bus.	1=0-5 minutes 2=6-10 " 3=11-15 " 4=16-20 " 5=21-25 " 6=26-30 " 7=more than 30 minutes
36	11 Is respondent licensed driver?	1=yes 2=no
37	12 Number autos owned by respondent and spouse.	1=0 autos 2=1 auto 3=2 auto 4=3 auto 5=4 or more autos
38	13 Did respondent have car available which could have been used for this trip?	1=yes 2=no
39-40	14 Respondent's occupation.	See occupation codes for bus on-board surveys.
41	15 Is respondent a full-time W.V.U. employee?	1=yes 2=no
42	16 Sex of respondent.	1=female 2=male
43	17 Age of respondent.	1=14 years or under 2=15-19 3=20-24

Table C-4 (continued)

44	18	Respondent's marital status.	4=25-34 5=35-44 6=45-54 7=55-64 8=65 or older 1=married 2=single 3=widowed 4=separated 5=divorced
45	19	Relationship of 1st person living with respondent.	1=husband 2=wife 3=widowed 4=separated 5=divorced
46-47		Occupation of 1st person living with respondent.	See occupation codes for bus other
48		Is 1st person living with respondent a WVU employee?	1=yes 2=no
49		Is 1st person living with respondent a licensed driver	1=yes 2=no
50		Relationship of 2nd person living with respondent.	Coded same as for 1st person.
51-52		Occupation of 2nd person living with respondent.	Coded same as for 1st person.
53		Is 2nd person living with respondent a WVU employee?	
54		Is 2nd person living with respondent a licensed driver?	
55		Relationship of 3rd person living with respondent.	Coded same as 1st person.
56-57		Occupation of 3rd person living with respondent.	Coded same as 1st person.
58		Is 3rd person living with respondent a WVU employee?	
59		Is 3rd person living with respondent a licensed driver?	
60		Relationship of 4th person living with respondent.	Coded same as for 1st person.
61-62		Occupation of 4th person living with respondent.	Coded same as for 1st person.
63		Is 4th person living with respondent a WVU employee?	
64		Is 4th person living with respondent a licensed driver?	

Table C-4 (continued)

		Coded same as 1st person.
65	Relationship of 5th person living with respondent.	
66-67	Occupation of 5th person living with respondent.	
68	Is 5th person living with respondent a WVU employee?	
69	Is 5th person living with respondent a licensed driver?	
70-72	Control number.	

TABLE C-5

TAPE FORMAT FOR FACULTY/STAFF 1975 MAILBACK SURVEY

File 4 of Tape Number 001850. DSNNAME=PREMPACT.FS75.
 RECFM = FB, LRECL = 131, BLKSIZE = 6550

BYTE NUMBER	DESCRIPTION	EXPLANATION
1-4	Control number.	
5-6	Date	Day of the month in May when completed questionnaire was received by Dept. of Industrial Engineering.
7	Primary job function of respondent.	1=administrative 2=teaching and/or research 3=research only 4=medical 5=secretarial, clerical 6=maintenance 7=other (including food service worker, security, bus driver, WWVU-TV)
8-9	Zone in which respondent resides.	See map of zones.
10	Respondent's principal place of work	0=home 1=CBD 2=Main Campus 3=Engineering, Agr., C.A.C. 4=Colliseum 5=Towers, Forestry 6=Medical Center 7=other (including Computer Center, Communication ACOSH)
11	Number of trips reported by respondent.	
12	Trip #1 trip number.	Always 1.
13	Origin of trip #1.	Coded same as byte 10.

Table C-5 (continued)

14	Destination of trip #1.	Coded same as byte 10.
15	Purpose of trip #1.	1=returning home 2=work related 3=shopping 4=eat meal 5=personal business 6=medical/dental 7=social/recreational 8=other
16-20	Time trip #1 started.	Hours (2 bytes), minutes (2 bytes), A.M./P.M. code (1 byte) -- 1=A.M., 2=P.M., Example: 08301 = 8:30 A.M.
21	Mode of travel for trip #1.	1=auto-driver 2=auto-passenger 3=city or county bus 4=University bus 5=taxi 6=motorcycle 7=bicycle 8=walk
22	If auto used for trip #1, where respondent parked.	1=University lot 2=on street - metered 3=on street - non-metered 4=private paid lot 5=off street - metered lot 6=other
23	If auto not used for trip #1, was auto available?	1=yes 2=no 3=not applicable
24	Trip #2 number.	Always 2.
25	Origin of trip #2.	Coded same as byte 10.
26	Destination of trip #2.	Coded same as byte 10.
27	Purpose of trip #2.	Coded same as byte 15.

Table C-5 (continued)

28-32	Time trip #2 started.		Coded same as bytes 16-20.
33	Mode of travel for trip #2.		Coded same as byte 21.
34	If auto used for trip #2, where respondent parked.		Coded same as byte 22.
35	If auto not used for trip #3, was auto available?		Coded same as byte 23.
36-47	Information for trip #3.		Coded same as for trip #1.
48-59	" " " #4.	" " " "	" " " "
60-71	" " " #5.	" " " "	" " " "
72-83	" " " #6.	" " " "	" " " "
84-95	" " " #7.	" " " "	" " " "
96-107	" " " #8.	" " " "	" " " "
108-119	" " " #9.	" " " "	" " " "
120-131	Not used.		" " " "

Table C-6 (continued)

16	12	How much has been spent building PRT?	1=\$15 million 2=\$30 million 3=\$65 million 4=\$110 million 5=\$150 million
17	13	Who is bearing major cost of constructing PRT?	1=WVU student body 2=State of West Virginia 3=Monongalia County 4=Federal Government
18	14	Major source of information about PRT.	1=Daily Athenaeum 2=classes 3=TV 4=local Morgantown newspapers 5=radio 6=acquaintances 7=other
19	15	Sex of respondent.	1=female 2=male
20-21	16	Age of respondent.	
22	17	Respondent's year in school.	1=freshman 2=sophomore 3=junior 4=senior 5=graduate student
23-26	18	Respondent's major.	See codes for majors.
27	19	Did respondent live in Morgantown 5 months or more during last school year?	1=yes 2=no
28	20	Did respondent attend classes during spring semester of preceding school year?	1=yes 2=no
29	21	Does respondent plan to attend class in fall semester of coming school year?	1=yes 2=no 3=not sure

Table C-6 (continued)

30	21a	If answer to question 21 is yes, will respondent own or have access to a car during fall term?	1=yes 2=no 3=not sure
31-32	21b	If answer to question 21 is yes, where will respondent probably live in Morgantown during the fall semester?	01=Suncrest 02=Downtown & Sunnyside 03=Sabraton 04=South Park 05=Westover area 06=Star City area 07=Mileground 08=Medical Center area 09=Evansdale (Including Towers & Pierpont) 10=not sure 11=other

TABLE C-7

CODES FOR MAJOR FIELD OF STUDY--STUDENT-ATTITUDE SURVEY

Response to Question Number 20
 Bytes 23-26 on Tape
 (Code is standard Admissions and Records Code.)

<u>CODE</u>	<u>MAJOR</u>	<u>CODE</u>	<u>MAJOR</u>
0700	Agriculture and Forestry	1467	Swahili
0701	Agriculture Biochemistry	1470	Social Science
0702	Agriculture Business	1472	Sociology
0703	Agriculture Economics	1473	Spanish
0704	Agriculture Education	1474	Speech
0709	Agriculture	1476	Special
0711	Plant and Soil Science	1477	General Studies
0713	Animal and Vet Science	1482	Statistics
0714	Animal Science	1483	Computer Science
0727	Forest Science	1484	Public Administration
0729	Forestry	1614	Military Science Engineering
0731	Genetics	2100	Business and Economics
0741	Landscape Archetecture	2107	Accounting
0747	Plant Pathology	2110	Business Administration
0751	Recreation	2121	Business General
0753	Reproductive Physiology	2135	Economics
0754	Pre-Veterinary Medicine	2142	Finances
0757	Wildlife Fish Management	2149	Industrial Relations
1401	Pre-Forestry	2156	Management
1402	Pre-Biology Zoological Botany	2163	Marketing
1405	Pre-Dentistry	2170	Special
1408	Pre-Ed Secondary & Undesgt.	2503	Art
1421	Pre-Medical Technology	2507	Drama
1424	Pre-Nursing	2524	Music
1428	Pre-Pharmacy	2525	Music Education
1431	Pre-Physical Theropy	2526	Musicology
1436	Biology	2513	Piano Applied
1439	Chemistry	2543	Theory & Composition
1440	Classics	3500	Engineering
1441	Communications	3507	Aerospact Engineering
1442	English	2510	Agriculture Engineering
1443	French	3521	Chemical Engineering
1444	Geography	3528	Civil Engineering
1445	Geology	3535	Electrical Engineering
1446	German	3537	Forestry Engineering
1449	Histroy	3549	Industrial Engineering
1454	Latin	3563	Mechanical Engineering & Mechanics
1455	Library Science	4500	Human Research & Education
1456	Linguistics Foreign Language	4502	Administration
1457	Mathematics	4507	Counsel & Guide
1461	Philosophy	4510	Curriculum & Instruction
1463	Physics	4510	Speech & Hearing
1464	Political Science	4512	Early Childhood
1466	Psychology	4514	Education

Table C-7 (continued)

4516	Educational Psychology
4521	Elementary School Classroom Technique
4528	Elementary School Principle
4533	Health Education
4535	Reading
4536	Child Development & Farm Relation
4537	Food & Nutrition
4539	Housing & Design
4540	Family Resources
4541	Textiles and Clothing
4545	Language Arts
4570	Secondary School Classroom Technique
4577	Social Studies
4584	Special
4585	Special Education
4598	Rehabilitation Counseling
4900	Journalism
5607	Coal Mining
5614	Petroleum Engineering
5621	Mining Engineering
6800	Physical Education
6849	Safety
7200	Social Work
7700	Law Medicine
8306	Bacteriology Medicine
8318	Biochemistry
8330	Medical Technology
8375	Physical Therapy
8600	Nursing
8900	Pharmacy

TABLE C-8

TAPE FORMAT FOR COMMUNITY ATTITUDE SURVEY

File 6 of Tape Number 001850. DSNAM=PREMPACT.COMMATT.
 RECFM = FB, LRECL = 220, BLKSIZE = 6600.

BYTE NUMBERS	DESCRIPTION	EXPLANATION	LOCATION ON QUESTIONNAIRE
1-3	Control number.	Household-peculiar	1st page
4-6	Date of interview	709=July 9, 1975	1st page
7	Interviewer Code		1st page
8-9	Household zone	See map of zones	1st page
10-11	Duration of interview in minutes	Finish time minus starting time	1st and last page
12	Overall quality of interview	1=OK 2=old, disabled, foreign 3=others present 4=hostile, reticent 5=background, noise	
13	Does respondent think he will be able to use PRT?	1=no 2=yes 3=don't know 9=no answer	Question 1
14-15	Kinds of places respondent might go - 1st response	0=not sure	Question 1a
16-17	Kinds of places respondent might go - 2nd response	1=Medical Center	
18-19	Kinds of places respondent might go - 3rd response	2=games, Coliseum 3=CBD 4=between campuses 5=CAC, Evansdale 6=work 7=main campus 8=shopping 9=other 99=no answer	

Table C-8 (continued)

20	Why respondent cannot use PRT.	Question lb
21-22	How respondent gets around Morgantown - 1st response?	2
23-23	" " " " - 2nd "	
25-26	What mode would respondent use if couldn't use present mode - 1st response?	3
27-28	What mode would respondent use if couldn't use present mode - 2nd response?	
29-30	What mode would respondent use if couldn't use present mode - 3rd response?	
31-32	Number of times per month respondent uses city bus	4a
33-34	Number of times per month respondent uses county bus	4b
35-36	Number of times per month respondent uses taxi	4c
37	Will respondent's spouse be able to use PRT?	6

1=no benefit
 2=not convenient
 3=use other means
 4=afraid, unsafe
 5=moving soon or work away
 6=not able
 9=not applicable

1=private vehicle
 2=city bus
 3=county bus
 4=taxi
 5=carpool
 6=walk
 10=other
 99=not applicable

1=private vehicle
 2=city bus
 3=county bus
 4=taxi
 5=carpool
 6=walk
 7=hitchhike
 8=bike
 9=motorcycle
 10=other
 98=no answer
 99=not applicable

1=no
 2=yes
 3=don't know
 9=no answer

Table C-8 (continued)

38-39	Kinds of places spouse might go - 1st response	0=not sure	6a
40-41	Kinds of places spouse might go - 2nd response	1=Medical Center	
42-43	Kinds of places spouse might go - 3rd response	2=games, Coliseum 3=CBD 4=between campuses 5=CAC, Evansdale 6=work 7=main campus 8=shopping 99=no answer	
44	Why spouse cannot use PRT	1=no benefit 2-not convenient 3=use other means 4=afraid, unsafe 5=moving soon or work away 6=not able 7=not applicable	6b
45-46	How spouse gets around Morgantown - 1st response	1=private vehicle	7
47-48	" " " - 2nd "	2=city bus	
49-50	" " " - 3rd "	3=county bus 4=taxi 5=carpool 6=walk 7=hitchhike 8=bike 9=motorcycle 10=other 98=no answer 99=not applicable	
49-50	Number of times per month spouse uses city bus		8a
51-52	" " " " County bus		8b
53-54	" " " " taxi		8c
55-56	Main location respondent buys groceries - 1st response	1=A&P (CBD), High St. Mkt.	9
57-58	" " " " - 2nd "	4=Phillip's, Sunnyside Sup. 9=A&P, Kroger (Suncrest) 10=Foodland (Suncrest) 14=Thorofare (Star City) 15=Harry's	

Table C-8 (continued)

- 23=Austin's
- 25=Thorofare (Richmond)
- 26=Foodway, Bailey's
- 27=Acme
- 28=Big B
- 32=Friend's
- 40=Kroger (Sabraton)
- 42=Shop & Save
- 44=Giant Eagle
- 97=no main location
- 98=not applicable
- 99=no answer

- 0=Suncrest
- 1=CBD
- 2=Sabraton
- 3=Mountaineer Mall
- 4=Star City
- 5=Fairmont Mall
- 6=Pittsburgh area
- 7=Catalogues
- 8=no main place
- 9=no answer

- 1=newspaper
- 2=radio
- 3=friends, relatives
- 4=acquaintance or self
- 5=Daily Athenaeum
- 6=TV
- 7=speakers or brochures
- 8=none
- 9=no answer

See codes for magazines

59 Where respondent does most general merchandise shopping
1st response

60 Where respondent does most general merchandise shopping
2nd response

61 Main sources of info about PRT-1st response
62 " " " " -2nd
63 " " " " -3rd

64-65 Magazines frequently bought - 1st response
66-67 " " " " - 2nd
.
.
.
88-89 " " " " - 13th response

Table C-8 (continued)

90	Does respondent regularly read local newspaper?	1=no 2=yes 3=no answer 4=sometimes	14
91	Action if gas goes to \$1 per gallon - 1st response	0=no answer	
92	" " " " - 2nd "	1=no car, not applicable	
93	" " " " - 3rd "	2=reduce no. of autos 3=other 4=join car pool 5=buy small car 6=take a bus 7=no change 8=drive less 9=move	
94	Think Morgantown is like a big city?	1=no	15
95	Think this represents progress for Morgantown?	2=neutral, don't know	15a
96	Think WVU has too much influence over Morgantown?	3=yes	16
97	Think big government projects take too long, cost too much?	4=not applicable	17
98	Think progress requires big changes in society?		18
99	Think environmentalists impede progress?		19
100	Ever want to do something about public issue?		20
101	Think government should develop new mass transit systems?		21
102-103	How many stations now on PRT?	99=no idea	22
104-105	If answer to above "I don't know," guess		
106-107	Where are stations located - 1st response	1=Courthouse, CBD	23
108-109	" " " " - 2nd "	2=Main Campus	
110-111	" " " " - 3rd "	3=Engineering, CAC, Evansdale	
112-113	" " " " - 4th "	4=Coliseum	
114-115	" " " " - 5th "	5=Medical Center	
116-117	If answer to above "I don't know," -1st response	6=Towers	
118-119	" " " " - 2nd "	7=Agr., Forestry	
120-121	" " " " - 3rd "	8=Eight Street	
122-123	" " " " - 4th "	9=Suncrest	
124-125	" " " " - 5th "	10=Grumbein's Island 99=no response	
126	Will each PRT car have a driver?	1=no	24
127	If answer to above is "I don't know," guess	2=yes 3=don't know	

Table C-8 (continued)

128-130	Estimate of cost of PRT in millions of \$	25
131-133	If answer to above, "I don't know," guess	
134	Who paid for PRT?	26
135	If answer to above, "I don't know," guess	
136	Think PRT fun to ride?	27
137	Think much chance of PRT accident?	28
138	Think PRT an eyesore?	29
139	Think PRT comfortable to ride?	30
140	Think PRT represents progress for Morgantown?	31
141	Think PRT will get people quickly from station to station?	32
142	Think tourists will come to see PRT?	33
143	Think PRT will reduce air pollution in Morgantown?	34
144	Think PRT took too long to build?	35
145	Think PRT will ease traffic problem in Morgantown?	36
146	Think PRT has brought favorable national attention to Morgantown?	37
147	Think more people will go the athletic events when PRT opens?	38
148	Think PRT will increase business in CBD?	39
149	Think more people will go to cultural events at CAC when PRT opens?	40
150	Think PRT will ease parking problems?	41
151	Think PRT makes Morgantown seem more like a big city?	42
152	If answer to 42 is yes or qualified yes, consider this good or bad?	42a
153	Number of people living in this housing unit	43

Table C-8 (continued)

154	Is respondent's background mainly big city, small city, small town, rural?	1=rural 2=small town 3=small city 4=big city. 9=no answer	44
155	Respondent's 1974 income.	0=not applicable 1=under \$2000 2=\$2000-\$4999 3=\$5000-\$7999 4=\$8000-\$10,000 5=\$11,000-\$13,999 6=\$14,000-\$16,999 7=\$17,000 or more 8=refused to answer	45
156	Respondent's spouse's 1974 income.	Same code as above	46
157	Race	1=White 2=Black	--
158	Marital status of respondent.	1=married 2=never married 3=divorced 4=widowed 5=separated	next to last page
159	Sex of respondent.	1=male 2=female	next to last page
160-161	Respondent's age.		next to last page
162-163	Highest grade completed by respondent.		next to last page
164-165	Number of years respondent in Morgantown.		next to last page

Table C-8 (continued)

166	Does respondent work full-time or part-time?	1=full-time 2= part-time	next to last page
167-169	Respondent's occupation	1=prof., tech 2=business management, propri. 4=clerical 5=sales workers 6=craftsman, foremen 7=operatives 8=private house 9=service (not house) 11=labor (not farm) 12=not labor, disabled, retired 14=housewife 97=unemployed 98=not applicable, student 99=no response	next to last page
170-171	Respondent's main work location	97=no main place 98=outside Morgantown area 99=not applicable Others--see map of zones	next to last page
172	Marital status of respondent's spouse	Coded same as respondent, except 9 or 99 means no spouse.	next to last page
173	Sex of respondent's spouse.		
174-175	Age of respondent's spouse.		
176-177	Highest grade completed by respondent's spouse		
178-179	Number years respondent's spouse in Morgantown		
180	Does spouse work full-time or part-time?		
181-183	Spouse's occupation		
184-185	Spouse's mainwork location		
186	Marital status of 1st non-respondent, non-spouse in household.	Coded same as respondent except 9=not applicable	next to last page
187	Sex of 1st non-respondent, non-spouse in household	Coded same as respondent except 9=not applicable	next to last page

Table C-8 (continued)

188	Relationship of 1st non-respondent, non-spouse to respondent.	1=child 2=parent, in-law 4=no relation 5=siblings 6=grandparent 7=grandchild 9=not applicable
189-190	Age of 1st non-respondent, non-spouse in household.	Coded same as respondent, except 99=not applicable
191	Marital status of 2nd non-respondent, non-spouse in household.	Coded same as for 1st non-respondent, non-spouse.
192	Sex of 2nd non-respondent, non-spouse in household.	
193	Relationship 2nd non-respondent, non-spouse to respondent.	
194-195	Age of 2nd non-respondent, non-spouse to respondent.	
196	Same information as above for 3rd non-respondent,	
197	non-spouse in household.	
198		
199-200		
201	Same information as above for 4th non-respondent,	
202	non-spouse in household.	
203		
204-205		
206	Same information as above for 5th non-respondent,	
207	non-spouse in household.	
208		
209-210		
211	Same information as above for 6th non-respondent,	
212	non-spouse in household.	
213		
214-215		
216	Same information as above for 7th non-respondent,	
217	non-spouse in household.	
218		
219-220		

Table C-9

CODES FOR MAGAZINES--COMMUNITY-ATTITUDE SURVEY

Question 12 on questionnaire

Columns 65-78, Card 1 and Columns 5-16, Card 2 on Punched Cards

Bytes 64-89 on tape.

Null Code = 99

News, Commentary, Arts

News

Time = 01
 Newsweek = 02
 U.S. News & World Report = 03

Now Elsewhere Classified (N.E.C.)

Reader's Digest = 04
 Changing Times = 05
 People = 06
 Saturday Review = 07
 Miscellaneous N.E.C. = 08

Business = 09

Nature, History, Science, Geography

Travel

National Geographic = 11
 Southern Living = 12
 Miscellaneous travel, camping = 13

Science/Nature

Smithsonian = 14
 Popular Science = 15
 Psychology Today = 16
 Miscellaneous science/nature, but not professional = 17

History

American Heritage = 18
 Miscellaneous History = 19

Women's/Fashion

McCall's = 21
 Ladies' Home Journal = 22
 Good Housekeeping = 23
 Redbook = 24
 Better Homes and Gardens = 25
 Family Circle = 26
 Woman's Day = 27
 Cosmopolitan = 28
 Miscellaneous Women's = 29

Men's

All = 31

Hobby/Garden/Home/Family/Health

Hobby

All (including Popular Mechanics, Workbasket, Mechanics Illustrated = 32

Table C-9 (continued)

Home		
	All (including Apartment Life)	= 33
Garden		
	All (including Farm)	= 34
Family		
	All (including Parents, (including Mother Earth)	= 35
Health		
	All (including Prevention)	= 36
Sports		
Hunting/Fishing		
	Field and Stream	= 41
	Outdoor Life	= 42
	Miscellaneous hunting & fishing	= 43
	Sports Illustrated	= 46
Auto		
	All (including Motor Trend, Dirt Bike)	= 45
Not Elsewhere Classified (N.E.C.)		
	All (including Golf, Action, Rifleman)	= 45
House Organs		
Armed Forces		
	All (including American Legion, D.A.V., V.F.W.)	= 51
Fraternal		
	All	= 52
N.E.C.		
	All (including N.E.A., N.A.R.T., Alumni)	= 53
Professional Journals		
	All (including M.L.A., Nation, Cities, Civil War Journal)	= 61
TV/Stars/Gossip/Sensation		
	All (including True, TV Talk, but not People or TV Guide)	= 71
Children's		
	Seventeen	= 76
	Miscellaneous (including Mad, Highlights, Coed)	= 77
Religion		
	Guidepost	= 81
	Miscellaneous (including Logos, Powers)	= 82
Special Interests Not Elsewhere Classified		
	Sphere	= 91
	Miscellaneous (including Gourmet, Retirement, Art Mag, Foreign Language, Good Old Days, Modern Maternity, Stereo, Weight Watchers, National Lampoon)	= 92

Table C-10

TAPE FORMAT FOR INTERCEPT SURVEY

File 7 or Tape Number 001850, DSNNAME=PREMPACT.ODINT.
 RECFM= FB, LRECL= 15, BLKSIZE= 6000.

BYTE NUMBERS	DESCRIPTION	EXPLANATION
1-4	Control number.	
5-6	Zone of origin of trip.	See map of zones.
7-8	Zone of destination of trip	See map of zones.
9	Number of occupants.	
10-13	Time.	Hours (2 bytes), minutes (2 bytes).
14-15	Code for location, day and time slot.	See Location/Time codes.

TABLE C-11

LOCATION/TIME CODES FOR INTERCEPT SURVEY

<u>CODE</u>	<u>LOCATION</u>	<u>DAY</u>	<u>DATE</u>	<u>TIME SLOT</u>
1	University North	Tuesday	April 22	8:00-10:00 A.M.
2	" "	"	"	11:00 A.M.-2:00 P.M.
3	" "	Wednesday	April 23	3:00-6:00 P.M.
4	" South	"	"	8:00-10:00 A.M.
5	" "	"	"	11:00 A.M.-2:00 P.M.
6	" "	Tuesday	April 22	3:00-6:00 P.M.
7	Beechurst North	Wednesday	April 23	8:00-10:00 A.M.
8	" "	"	"	11:00 A.M.-2:00 P.M.
9	" "	"	"	3:00-6:00 P.M.
10	Patteson South	Tuesday	April 22	8:00-10:00 A.M.
11	" "	Wednesday	April 23	11:00 A.M.-2:00 P.M.
12	" "	"	"	3:00-6:00 P.M.
13	" "	"	"	" " "

TABLE C-12

TAPE FORMAT FOR PARKING SURVEY

File 8 on Tape Number 001850, DSNNAME= PREMPACT.PARK.
 RECFM= FB, LRECL= 16, BLKSIZE= 3200.

BYTE NUMBERS	DESCRIPTION	EXPLANATION
1	Day of week.	1=Monday 2=Tuesday 3=Wednesday 4=Thursday 5=Friday
2-5	Time.	Hours (2 bytes), minutes (2 bytes).
6-7	Lot number.	Coded as shown at top of survey form PRT-8.
8	Destination zone	See map of zones. (All parking lots in survey were located in zone of one digit.)
9	Trip purpose.	1=returning home 2=school related (class, library, etc.) 3=work related 4=shopping 5=social-recreational 6=to transfer to another means of travel 7=medical-dental 8=eat meal 9=personal business
10-11	Time required to find a parking place.	In minutes
12-14	Parking duration.	In minutes
15-16	Zone of origin of trip.	See map of zones.

TABLE C-13

TAPE FORMAT FOR CITY/COUNTY RIDERSHIP SURVEY

File 9 of Tape Number 001850, DSNAME= PREMPACT.CCBUSRID.
 RECFM= FB, LRECL= 28, BLKSIZE= 5600.

BYTE NUMBERS	DESCRIPTION	EXPLANATION
1	Bus type.	1=City 2=County
2-5	ID Number.	
6	Run Number.	1=Suncrest 2=Star City
7	Day of week.	1=Monday 2=Tuesday 3=Wednesday 4=Thursday 5=Friday
8-9	Month	Example: 03=March
10-11	Day of Month.	
12-13	Stop number.	A running count of the number of stops made by bus.
14-17	Time of this stop	Hours (2 bytes), minutes (2 bytes)
18-19	Number of passengers boarding bus at this stop.	
20-21	Number of passengers leaving bus at this stop.	
22	Number of standees.	
23-24	Zone number of this stop.	See map of zones.
25-28	Time at which bus scheduled to start its run from CBD terminal.	Hours (2 bytes), minutes (2 bytes)

TAPE FORMAT FOR UNIVERSITY BUS RIDERSHIP SURVEY

File 10 on Tape Number 001850, DSNAM= PREMPACT.UBUSRID.
 RECFM= FB, LRECL= 30, BIKSIZE= 6000.

BYTE NUMBERS	DESCRIPTION	EXPLANATION
1	Day of week data collected.	1=Monday 2=Tuesday 3=Wednesday 4=Thursday 5=Friday
2-7	Date on which data collected.	180275=February 18, 1975
8	Bus stop number	1=Campus Drive 2=CAC 3=Engineering 4=Forestry 5=Towers 6=Medical Center 7=Coliseum 8=Lair
9-12	License plate number of the bus.	
13-14	Number of passengers boarding bus.	
15-16	Number of passengers leaving bus.	
17-18	Number of standees.	
19-23	Arrival time of bus.	Hours (2bytes), minutes (2 bytes) and A.M./P.M. Code (1 byte) - - 1=A.M. 2=P.M.
24-28	Departure time of bus.	Coded same as bytes 19-23
29	Route number.	10=Coliseum-Campus Drive 1=Campus Drive-Towers 4=Towers-Campus Drive 5=Medical Center-Coliseum 6=Coliseum-Medical Center 9=Campus Drive-Coliseum

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