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Madison Peak-Period Parking Pricing Demonstration Project

**Final Report
May 1984**

UMTA Technical Assistance Program
Office of Management Research and Transit Service
UMTA/TSC Project Evaluation Series

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16. Abstract

This report describes the impacts of instituting a peak-period parking surcharge along with introducing a park-ride shuttle bus sytem in Madison, Wisconsin. The objective of the demonstration, which was funded through the UMTA Service & Methods Demonstration Program, was to improve the utilization of parking spaces in the downtown area by discouraging individuals from making commuter trips to the CBD by automobiles, thereby increasing the availability of parking spaces for midday shopping and personal business trips. A complementary shuttle bus system serving three fringe-area parking lots was also introduced in order to make transit use more attractive to commuters.

The institution of the $1.00 parking surcharge resulted in a significant (40 percent) decrease in the number of spaces occupied at the four surcharge facilities during the morning peak period. Of the commuters faced with paying the surcharge, about 22 percent switched to a nonsurcharge parking location while 6 percent entered the facility after 9:30 a.m. when the surcharge period ended. Between 5 and 8 percent of the commuters who previously parked in a surcharge facility changed modes, but predominantly to the regular bus system rather than the park-ride buses. While some individuals did form carpools, auto occupancies for all users of the surcharge parking facilities increased by only 3 percent. It is estimated that the peak-period surcharge program increased parking revenues by between $6,000 and $10,000 per month.

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PREFACE

This evaluation of the Madison Peak-Period Parking Pricing Demonstration Project was prepared in the Boston, Massachusetts office of Charles River Associates Incorporated (CRA) for the Transportation Systems Center (TSC) of the U.S. Department of Transportation (DOT) under Contract Number DOT-TSC-1757. The evaluation was undertaken as part of the Service and Methods Demonstration (SMD) Program sponsored by the Urban Mass Transportation Administration (UMTA). Thomas E. Parody served as CRA's evaluation manager and principal investigator. Larry Doxsey of TSC served as technical advisor and monitor for the evaluation and provided many useful comments throughout the period of the demonstration. Marion Ott, formerly with TSC, served in this capacity during the initial demonstration planning phase. The UMTA project manager for the demonstration was Stewart McKeown.

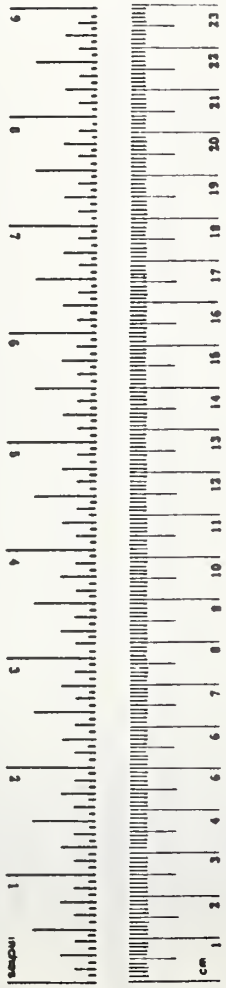
Many individuals contributed to the development of this evaluation report. Within CRA, Thomas E. Parody directed the evaluation and was the principal author of this report. Robert Hirschey performed the computer tabulation work. Other CRA contributors included members of the Publications Department, as well as Sharon Ayres and Susan Novich, graphic artists. The efforts of all of these individuals were supervised by Daniel Brand, CRA's Officer-in-Charge of work conducted for the SMD program, who provided overall guidance and many helpful suggestions.

Although CRA accepts full responsibility for the information and conclusions presented in this report, the evaluation would not have been possible without the cooperation and assistance of Ross Patronsky, Duane Hinz, and Warren Somerfeld of the Madison Department of Transportation, and Bud Sharp and the staff of the Wisconsin Survey Research Laboratory, who were involved in most of the data collection activities.

METRIC CONVERSION FACTORS

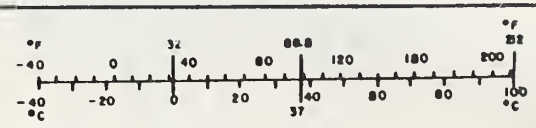
Approximate Conversions to Metric Measures

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 (2000 lb)	0.9	tonnes	t
		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	0.96	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	
		MASS (weight)		
g	grams	0.035	ounces	oz
kg	kilograms	2.2	pounds	lb
t	tonnes (1000 kg)	1.1	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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EXECUTIVE SUMMARY

INTRODUCTION

The Madison Peak-Period Parking Pricing Demonstration Project was instituted with the assistance of the Urban Mass Transportation Administration's Service and Methods Demonstration (SMD) Program, in order to evaluate the impacts of parking pricing policies aimed at discouraging the use of automobiles during peak commuting hours. A complementary park-ride shuttle bus system serving three fringe-area lots was also introduced in order to make transit use more attractive to commuters. The overall concept of the demonstration was based, in part, on the belief that transit incentives by themselves, whether they be price- or service-related, may not be completely effective in obtaining significant mode shifts from single-passenger automobiles to transit or, in general, to any high-occupancy mode. Thus, it was felt that pricing strategies directed at the use of the automobile during certain hours of the day would encourage the use of transit and other high-occupancy vehicles, as well as achieve other local goals and objectives.

DEMONSTRATION OVERVIEW

The demonstration project in Madison involved instituting a series of changes to the parking operation and pricing structure of certain municipally-controlled parking facilities in the Madison central business district (CBD). In particular, five public parking facilities were converted from meter operation to attendant control (with some meters remaining). Subsequently, a peak-period parking surcharge (or as it was called in Madison, a "Prime Time Charge") of $1.00 was levied on all vehicles entering two of the attendant parking ramps and two attendant parking lots between the hours of 7:00 a.m. and 9:30 a.m. and parking for three or more hours.

The main objective of the demonstration was to improve the utilization of parking spaces in the downtown area by discouraging individuals from making commuter trips to the CBD by automobile, thereby increasing the availability of parking spaces for midday shopping and personal business trips. Park-ride shuttle buses serving three fringe-area parking lots were also instituted in order to make transit use more attractive to commuters. The demonstration was evaluated using data from before and after parking surveys, a panel of commuters using surcharge parking facilities, a control panel of commuters using nonsurcharge parking facilities, and standard occupancy and duration counts.

The entire Madison Parking Pricing Demonstration was implemented in four separate phases. (Table S-1 presents a chronology of major events that occurred over the course of the demonstration.) In the first phase, all four of the city-controlled parking ramps and one of the parking lots were converted from various combinations of short-, medium-, and long-term parking meters to attendant operation. These five parking facilities have a combined capacity of about 2,400 spaces, which represents 76 percent of the off-street spaces controlled by the Madison Parking Utility, or 10.6 percent of the approximately 23,000 legal public and private parking spaces located in the central area.

The second phase of the demonstration involved selling monthly transit passes at a 75 percent discount to certain employees located in the CBD area. This three-month sale occurred about one year before the start of the prime time charge; given that these types of TFP programs were the subject of evaluations elsewhere, their impacts are not analyzed here.

In the third phase of the demonstration, three fringe parking lots were opened and were served by a newly-instituted, all-day shuttle bus system. This service began about one month prior to the start of the attendant parking operation described above. These fringe-area parking spaces were set up to provide an alternative for individuals who desire to continue using their automobiles for a portion of their trips destined to the CBD but who want to avoid paying the peak-period parking surcharge.

The fourth and most important phase of the demonstration was the institution of the peak-period parking surcharge. The $1.00 "prime time" charge began to be collected in late December 1980, about nine months after certain of the parking facilities began attendant operation. Initially, the prime time charge was to apply to all individuals entering any one of the surcharge facilities between 7:00 a.m. and 9:30 a.m. However, in deference to Madison officials, who did not wish to penalize short-term parkers also parking at these hours, the $1.00 surcharge was restricted to vehicles entering at these times and parking three or more hours.

Apparently, this was the first introduction of this particular type of pricing mechanism in the United States. Other cities, such as San Francisco, have imposed a parking tax on all vehicles, including those that park in the peak and offpeak periods. In directing the surcharge just at the peak period, the program was to provide an incentive for commuters not to drive and park in the CBD during the morning peak period, thereby freeing up parking spaces for midday use (e.g., by shoppers), and increasing the likelihood that transit would be used for the commuter trip to work. This demonstration falls in the general SMD program area of pricing and service innovations.

TABLE S-1. CHRONOLOGY OF DEMONSTRATION ACTIONS AND EVENTS

1978:	September	Final application for demonstration grant submitted
	December	Demonstration grant signed
1979:	April 30	Project manager begins
	September 24	Start of three-month discount pass sale to state employees
	October 17	Ramp conversion begins
	November 15	All-day parking occupancy and duration count
	November	Bus pass user survey conducted
1980:	January 1	Bus fares increase $0.05 to $0.35
	March 3	Shuttle bus service to three park-ride lots begins
	March 24	First of five attended parking facilities opens
	April 1	Validated parking program starts
	May 1	Start of transit strike
	July 20	End of transit strike
	August 4	Shuttle bus off-peak headways increase from 15 to 30 minutes
	September 30	Parking Utility Committee recommends rejecting surcharge (5-1)
	October 7	Public hearing on surcharge
	October 14	Transportation Commission rejects surcharge (8-0)
	October 14	Before all-day parking survey conducted
	October 20	Midday and evening shuttle bus service discontinued

Table continued on following page.

TABLE S-1 (Continued). CHRONOLOGY OF DEMONSTRATION ACTIONS AND EVENTS

	November 13	All-day parking occupancy and duration count
	November 18	Board of Estimates rejects surcharge (4-2)
	December 16	City Council approves surcharge (12-9)
	December 29	$1.00 prime time charge begins
1981:	January 1	Bus fares increase $0.10 to $0.45
	April 6	Additional reductions in park-ride bus service
	April 14	All-day parking occupancy and duration count
	April 17	After telephone surveys begin
	April 28	After all-day parking and park-ride surveys conducted
	June 12	Shuttle bus service discontinued
1982:	January 1	Bus fares increase $0.10 to $0.55
	January 4	Prime time charge discontinued; parking rates increase from $0.20 to $0.35/hour

SOURCE: Madison Department of Transportation.

The analysis and evaluation of the Madison demonstration has been organized into the following three issue categories:

1. Responses to transportation supply changes;

2. User impacts and changes in travel behavior; and

3. Implementation concerns and operator impacts.

The following sections summarize the key findings pertaining to the above issues and assess the transferability of the demonstration results to other areas.

SUMMARY OF FINDINGS

Responses to Transportation Supply Changes

The $1.00 prime time charge was put into effect at over 1,000 parking spaces, representing approximately 22 percent of all public, off-street parking supply available in the Madison central area. The institution of the surcharge resulted in a major and immediate impact in peak-period occupancy characteristics at the four surcharge parking facilities. Occupancies as of 9 a.m. in three surcharge facilities declined by an average of about 40 percent, reflecting a reduction of about 330 cars per day. Conversely, at two nonsurcharge attendant facilities located nearby, 9 a.m. occupancies increased by about 15 percent or by an average of 80 cars per day. Potentially even more cars would have switched to one of these facilities were it not for the fact that it fills to capacity by 9 a.m. on a regular basis.

By midday (measured as of 11 a.m.), occupancies at three surcharge facilities had made a rapid rebound and were down by an average of only 7 percent after the surcharge began. Occupancies at this time of day at the two nonsurcharge attended facilities remained essentially unchanged. Thus, on balance, more spaces were made available for midday parkers because of the surcharge, even after it is considered that observed occupancies already reflect any new trips that may have been attracted to the downtown area.

The shuttle bus system to the three fringe area lots carried an average of about 330 persons (or 660 one-way trips) per day before the surcharge was implemented. Taking into consideration the introduction of the surcharge and a $0.10 increase in bus fares, one can estimate that at most the shuttle buses attracted 13 persons per day as a result of the surcharge. It would appear that, at least in this setting, the shuttle buses provided little complementarity to the peak-period parking surcharge.

User Impacts and Changes in Travel Behavior

Restricting the prime time charge to those peak-period users that park for three or more hours was found to be an effective way of targeting the surcharge to long-term parkers who, almost exclusively, are making work or, as was particularly the case in Madison, school trips. In this way, generally shorter-term, shopping, and/or personal business trips were not adversely affected by the additional cost of parking. Because the users that were directly affected were making such "high value" trips, it was discovered that very few individuals discontinued traveling to the CBD because of the surcharge.

In comparing the parking and travel behavior characteristics of a panel of peak-period commuters who used surcharge facilities prior to the introduction of the prime time charge to those of a similar panel who used nonsurcharge facilities, it was observed that the panel of parkers facing the surcharge were much more likely to have switched parking locations (either to another facility or to a parking meter at the same facility) and to have increased their use of the bus and walk modes. In addition, the prime time facility users were much more likely to have delayed the time they entered the parking facility to after 9:30 a.m., the end of the surcharge period. What also clearly emerged from examining the commuting behavior of individuals who had parked for at least one day was the degree of diversity they exhibited in their travel behavior for a specific work or school trip purpose during a period of one week.

Relatively few individuals who parked in the surcharge facilities switched, in order to avoid the surcharge, to one of the three park-ride lots that were opened as part of the demonstration. Although about 5 to 8 percent of the work or school trips made by commuters who once parked in a surcharge facility shifted to transit, the vast majority of these (90 percent) were made via regular bus. Perhaps this is to be expected, given that the regular bus routes cover, and offer, proportionately much more service compared to the three shuttle bus routes. Of those users of the shuttle bus, only 6.6 percent indicated that they were using the shuttle bus service because of the $1.00 surcharge. Similarly, therefore, the great majority of park-ride users selected this mode without any direct connection to the prime time parking charge.

While a number of individuals changed their carpooling behavior (i.e., either by forming or disbanding a carpool) during the six-month time span of the before and after surveys, only about one-quarter of those in the panel of prime time parkers who increased auto occupancies said that the surcharge was a major reason for doing so. This finding indicates that carpooling arrangements are more heavily influenced by factors external to the pricing incentives of this demonstration. Basically, about 6 percent of the surcharge panel of parkers increased auto occupancies from an average of 1.06 to 2.78. Assuming that auto occupancies for other parkers remained

unchanged, auto occupancies for all users of surcharge parking facilities increased by 3 percent while they increased by only 1 percent for all users of public, off-street facilities in the CBD.

With regard to the socioeconomic characteristics of various groups of parkers, it was observed that males with lower incomes were more likely to avoid the surcharge by using another mode or by changing the time they entered the prime time facility. Higher-income individuals were more likely to park at a meter or use another parking facility, while females were more likely to continue parking at the same facility and pay the surcharge. Age was not found to vary significantly among the various groups of individuals who paid the surcharge or adjusted their travel behavior in some fashion because of the surcharge.

Perceptions of parking availability during both the morning peak period (7:00 a.m. to 9:00 a.m.) and the midday (11:00 a.m. to 2:00 p.m.) improved significantly (on the order of about 10 percent) after the introduction of the surcharge. However, the primary motivating factor apparently resulted from the type and amount of publicity and advertising that was undertaken to explain the introduction and objectives of the prime time charge program as well as the availability of the park-ride shuttle buses. The only individuals who reported that parking was more difficult to find after the surcharge began were those commuters who switched and parked at a nonsurcharge location. However, this same group said that parking was easier to find during the midday. Thus, the objective of freeing up some spaces was achieved both in actuality (as indicated above) and in the altered perceptions of various parkers. About 30 percent of the prime time panel of commuters felt that the surcharge did in fact free up spaces for midday use. In general, however, both panels of commuters favored continuing the program on the grounds that it is more likely to cause individuals to try other modes of travel rather than to achieve the objective of freeing up spaces for midday use.

Implementation Concerns and Operator Impacts

The prime time parking charge program evolved from an earlier proposal by the City of Madison to institute a roadway/congestion pricing project, which was studied and later rejected. The implementation of the parking surcharge program, while proceeding smoothly in the beginning, did eventually have to clear several hurdles that one might have expected in a program about to be implemented for the first time in the United States.

Initial public hearings held for the purposes of the demonstration grant application received favorable reviews from groups such as the League of Women Voters, but representatives of the large college student population generally voiced their opposition. Business groups were in favor of the present demonstration as well as new parking lot construction if these actions would ensure additional parking capacity for shoppers. As the actual

implementation date approached, however, various governmental agencies concerned with parking matters in Madison decided against instituting the surcharge as initially proposed. The details of the surcharge were modified and after a series of high-level negotiations, an agreement was reached to institute the surcharge. It is quite likely, however, that without the impetus provided by the demonstration, the peak-period parking surcharge would not have been implemented strictly for the purpose of meeting local objectives.

Surprisingly, very little public opposition was voiced against the surcharge after it was implemented. During the first month of operation, only seven complaints and one compliment were received by Madison's Department of Transportation. No "letters to the editor" or newspaper articles were printed. Even after the six-month "trial" period of operation ended, few, if any, public or political calls were heard to discontinue the program.

It was estimated that the surcharge resulted in an increase of at least $6,000 to $10,000 per month in parking revenues. Thus, although many individuals continued to drive, (finding ways to avoid the surcharge), on balance, parkers exhibited an inelastic demand.

In Madison, the additional cost involved in operating the attendant facilities averaged about $17,800 per month. It is estimated that about $15,000 per month in new parking revenues was being received because attendants had replaced meters. Thus, even with the additional labor costs, the combination of revenues generated from attendants and the $1.00 surcharge provided a positive revenue gain. As described in more detail in the following section, these costs could vary considerably in other localities.

TRANSFERABILITY OF FINDINGS

This section of the report describes various conditions or factors that may be more or less specific to the Madison demonstration, and assesses how these factors may influence the transferability or generality of the findings presented in this report. Since it is difficult to imagine the many different types of environments that could exist in areas considering the implementation of a peak-period parking program of this type, it is not possible to anticipate all eventualities. Being so notified, the reader should feel free to make similar assessments based on the site characteristics evident in the Madison demonstration and the subject area under consideration.

Perhaps the most notable factors that will affect a prime time parking charge program are the number and location of parking spaces to be included in the program, and the choice set of available alternatives. In Madison, the surcharge was applied at four parking facilities affecting over 1,000

parking spaces. Still, since the surcharge was not imposed at all major parking facilities, there was ample opportunity for many commuters to continue to drive and park in the CBD without paying the surcharge. A fairly compact core, coupled with a dense transit network in Madison, also provided a competitive alternative to commuting by automobile. It is possible to hypothesize that a more extensive application of the surcharge would result in much less switching between parking locations, more diversion to alternative modes, and, quite possibly, more vociferous reaction from the public and those governmental agencies responsible for setting parking policy.

That such a low percentage of parkers who were users of the surcharge facilities switched to the park-ride mode, and/or that few park-ride users were former surcharge facility parkers appear to be typical findings. Clearly, diversion to this mode is a function of the number and location of the park-ride lots, the frequency and hours of service operated by the shuttle bus, the level of service offered by the regular bus system, and the cost to the user. In Madison, there was no cost to use any of the three park-ride lots, but shuttle bus patrons were charged the regular express bus fare of $0.50 (reduced fares were charged to the elderly and handicapped).

A similar finding, likely to be applicable in other areas, was that discontinuation of park-ride shuttle service during the off-peak hours resulted in only minor reductions in ridership, since the majority of users were commuters. However, even the net cost of providing the service during peak hours was thought to be excessive, and the separate shuttle service was eventually discontinued. The park-ride lots were kept open and were served by making minor adjustments to certain of the regular bus routes.

As discussed in Section 6, the capital and operating costs of implementing a peak-period surcharge program can vary substantially, depending on the current methods used to collect parking fees. Clearly, the highest costs are required if it is necessary to convert from meters to attendant operation. However, the resources required if attendants are already in use would be negligible in comparison.

The institution of the $1.00 surcharge resulted in a net increase in parking revenues, implying that the demand for parking at surcharge lots is inelastic at these price levels and given the prices charged at the other facilities. While this finding is likely to hold elsewhere, the actual change in parking revenues will vary according to the proportion of parking supply covered by the surcharge and the type (i.e., long- vs. short-term) and occupancy characteristics of parking spaces not included in the surcharge program. That is, the less opportunity there is for individuals to simply switch from a surcharge to a nonsurcharge parking facility, the larger will be the increase in parking revenues, all other factors equal.

The demonstration findings indicated that the parking surcharge did not contribute to a large increase in carpooling. While a fairly substantial amount of turnover occurred in carpool activity during the six-month interval between the before and after surveys, this apparently resulted from normal patterns inherent in carpooling arrangements rather than from the prime time charge. It should be noted that the prime time charge in and of itself did not provide a particularly strong monetary incentive to form a carpool. For example, each individual in a two-person carpool would save only $0.50 per day in parking costs. As a greater carpooling stimulus, other areas might consider exempting carpools from any surcharge. While this action might result in a somewhat greater shift to this mode, individual carpool patterns would still likely be more heavily influenced by other factors.

1. DEMONSTRATION BACKGROUND AND OBJECTIVES

1.1 INTRODUCTION

Pricing strategies directed at reducing the use of automobiles during peak periods have been proposed at various times over the past two decades as one way of improving the flow of vehicles and personal travel in congested urban areas. The concept is based in part on the belief that transit incentives by themselves, whether they be price- or service-related, may not be completely effective in obtaining significant mode shifts from single-passenger automobiles to transit (or more generally, to any high-occupancy mode). Consequently, it has often been suggested that implementing pricing policies directed at low- or single-occupancy automobiles, possibly coupled with the introduction or enhancement of existing public transportation services, will result in the desired change in travel behavior. Charges applied to parking and automobile use especially during peak hours of the day, therefore, have the potential of encouraging the use of transit and other high-occupancy vehicles as well as achieving other stated local goals and objectives. The concept is consistent with the notion of implementing "congestion fees" when marginal costs exceed marginal benefits or average costs.

In order to test and evaluate automobile pricing disincentive policies, the Urban Mass Transportation Administration (UMTA) in 1976 initiated procedures for selecting sites to conduct demonstrations of the road pricing (or congestion pricing) concept. Based on letters of interest that were received from cities across the United States in response to a request for expressions of interest, three cities were selected for further study: Berkeley, California; Madison, Wisconsin; and Honolulu, Hawaii. However, after only the completion of very preliminary studies, the emergence of some unfavorable publicity resulted in the City of Berkeley declining to continue its examination of the feasibility of implementing this type of demonstration. The City of Madison also decided against a road pricing project, but did opt for studying, and later instituting, a peak-period, or prime time parking surcharge demonstration, for which this report describes the principal findings. In Honolulu, the concept of road pricing has been discussed on and off during the last six years. As recently as 1981, the Hawaii Department of Transportation took steps to retain a consultant to evaluate and develop a coordinated demonstration of the road pricing concept. However, firm proposals for a specific demonstration have yet to be developed.

1.2 DEMONSTRATION OVERVIEW

The Madison Parking Pricing Demonstration involved instituting a series of changes to the parking operation and pricing structure of certain

municipally-controlled parking facilities in the Madison central business district (CBD). In particular, five public parking facilities were converted from meter operation to attendant control (with some meters remaining). Subsequently, a peak-period parking surcharge (or as it was called in Madison, a "Prime Time Charge") of $1.00 was levied on all vehicles entering two of the attendant parking ramps and two attendant parking lots between the hours of 7:00 a.m. and 9:30 a.m. and parking for three or more hours. ("Ramps" are multi-story parking garages that, at the beginning of the demonstration, were controlled using parking meters of various time durations.)

The main objective of the demonstration was to improve the utilization of parking spaces in the downtown area by discouraging individuals from making commuter trips to the CBD by automobile, thereby increasing the availability of parking spaces for midday shopping and personal business trips. Park-ride shuttle buses serving three fringe-area parking lots were also instituted in order to make transit use more attractive to commuters. The evaluation presented herein focuses principally on the impacts attributable to the parking pricing changes. The effects of other demonstration components are included in the evaluation to the extent necessary to separate out and isolate their contributory impacts.

The entire Madison Parking Pricing Demonstration was implemented in four separate phases. In the first phase, all four of the city-controlled parking ramps and one of the parking lots were converted from various combinations of short-, medium-, and long-term parking meters to attendant operation. However, because of design constraints, about 25 percent of the parking spaces remained under meter operation. These five parking facilities have a combined capacity of about 2,400 spaces, which represents 76 percent of the off-street spaces controlled by the Madison Parking Utility; 57.5 percent of all publicly available off-street parking spaces; or 10.6 percent of the approximately 23,000 legal public and private parking spaces located in the central area.

Prior to the beginning of attendant operations, a new office building for government employees opened in the CBD. The existing monthly transit pass was sold to these employees at a 75 percent discount for the first three months after the building opened. The employer (i.e., the State) contributed 25 percent toward the pass cost with 50 percent of the cost provided as part of the demonstration. Employees were able to purchase passes over-the-counter during the week prior to the sale month. (This second phase of the demonstration occurred about one year before the start of the prime time charge; given that these types of TFP programs were the subject of evaluations elsewhere,* their impacts are not analyzed here.)

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*For example, see Charles River Associates, Jacksonville Transit Fare Prepayment Demonstration, Final Evaluation Report, prepared for the Transportation Systems Center (UMTA-FL-06-0016-82-1, September 1982).

In the third phase of the demonstration, three fringe parking lots were opened and were served by a newly-instituted, all-day shuttle bus system. This service began about one month prior to the start of the attendant parking operation described above. These fringe-area parking spaces were set up to provide an alternative for individuals who desire to continue using their automobiles for a portion of their trips destined to the CBD but who want to avoid paying the peak-period parking surcharge.

The fourth and most important phase of the demonstration was the institution of the peak-period parking surcharge. The $1.00 "prime time" charge began to be collected in late December 1980, about nine months after certain of the parking facilities began attendant operation. The main reason for the delay was a "last-minute" reluctance on the part of various city agencies and elected officials in Madison to implement the program as originally designed. However, after a series of high-level negotiating sessions between UMTA and Madison officials, a slightly-revised version of the prime time charge demonstration was agreed upon and implemented on December 29, 1980.

Except for the addition of the $1.00 surcharge, the hourly price of parking in the four prime time facilities remained unchanged. Initially, the prime time charge was to apply to all individuals entering any one of the surcharge facilities between 7:00 a.m. and 9:30 a.m. However, in deference to Madison officials, who did not wish to penalize short-term parkers also parking at these hours, the $1.00 surcharge was restricted to vehicles entering at these times and parking three or more hours.

1.3 PROJECT INNOVATIONS AND SMD OBJECTIVES

The primary innovation of the Madison demonstration was the institution of a morning peak-period surcharge at four parking facilities operated by the City of Madison. This apparently was the first time that this particular type of pricing mechanism has been introduced in the United States. Other cities, such as San Francisco, have imposed a parking tax on all vehicles including those that park in the peak and offpeak periods. By directing the surcharge just at the peak period, the main objective of the program was to provide a disincentive to commuters who drive and park in the CBD during the morning peak period, thereby freeing up parking spaces for midday use (e.g., by shoppers) and increasing the likelihood that transit is used for the commuter trip to work. This demonstration falls in the general SMD program area of pricing and service innovations.

Other aspects of the demonstration served to complement and reinforce the main objectives of the parking surcharge but are themselves subject to more detailed evaluation in other demonstrations. Therefore, these components, such as the introduction of a discount transit fare prepayment (TFP) pass plan and a park-ride shuttle bus to fringe parking lots were not as intensively monitored as were the effects of the peak-period parking surcharge.

The peak-period parking surcharge element of the Madison demonstration was directed at satisfying both local and national goals (e.g., less reliance on the use of automobiles for commuter work trips). The principal SMD objective was to bring about the use of local regulatory and pricing policies to encourage ridesharing and transit use. This would occur if automobile users were to begin carpools or switch to transit during the peak period to fill existing bus capacity. However, because the treatment is targeted at the journey-to-work travel market, a remote possibility existed of exacerbating peak-period transit supply requirements. In addition, if the demonstration helped to increase the number of parking spaces available during the midday, individuals who once used the bus to make offpeak trips to the CBD could find the automobile more convenient to use. This action would have a negative effect on transit vehicle utilization.

1.4 DEMONSTRATION OBJECTIVES AND ISSUES

The Madison demonstration project had several elements structured as incentives and disincentives to advance the following transportation policy objectives:

- Facilitate short-term parking for shoppers and visitors in the central city and downtown commercial district.
- Encourage multiple-occupancy automobiles to use long-term parking in the central city.
- Encourage mass transit as the preferred transportation mode during peak travel hours, particularly for individuals employed in the central city.

As described in Section 1.2 above, the demonstration consisted of four specific elements or phases to achieve these broad goals. This Evaluation Report, however, focuses on the most innovative aspect of the demonstration, the peak-period parking surcharge. Therefore, the major concerns of interest include the following:

- Does individual traveler behavior change, particularly with respect to mode choice?
- Is the project effective in changing the use of existing municipally-controlled parking spaces?
- Is there an increase in the number of spaces available for midday shoppers?
- If there is an increase, are the spaces being used and by whom?

The analysis and evaluation of these and other concerns have been organized into the following four issue categories:

1. Responses to transportation supply changes;

2. User impacts and changes in travel behavior;

3. Operator/Agency impacts; and

4. Implementation activities and responses.

Each of these general issue categories is discussed briefly below.

1.4.1 Responses to Transportation Supply Changes

This issue focuses on how the use of the municipally-controlled parking ramps and lots change over the course of the demonstration as well as on ridership on the shuttle bus system. (As such, the issue is not as broad as the title may imply, nor is it intended to denote only the supply-side changes that cause impacts in a supply/demand framework.) The parking facilities that were monitored included the four surcharge facilities (Brayton, Dayton, Lake, and 600 University Avenue) and seven of the largest nonsurcharge facilities (Doty, McCormick, the Dane County Ramp, Block 53, Block 54, Frances Street, and Buckeye) as well as other small parking lots.

The usage characteristics that are documented include: 1) the number of parking spaces that are occupied, and those available by time of day; and 2) the average parking duration and trip purpose of individuals parking at the facility. Except for trip purpose information that was obtained from surveys of parking ramp/lot users, the data used to examine this issue were gathered from standard parking occupancy and duration counts and from daily records of vehicles accumulated at the attendant facilities. For the shuttle bus system, information on daily boardings was used.

1.4.2 User Impacts and Changes in Travel Behavior

Since the demonstration is directed at conditions that directly affect long-term parkers who arrive downtown during the morning peak period, an examination of commuter travel changes (for either work or school trips) is very important. Under a typical cause-and-effect framework, it could be expected that an individual faced with paying a surcharge to park at his or her usual parking location might make one of the following choices. First, the individual could pay the surcharge and travel as before. Second, the user might elect to enter the facility either before or after the surcharge period, thereby avoiding the surcharge. This would be more likely to occur

if the person worked according to a flexitime schedule, either formally or informally. Third, the individual could choose to park at one of the remaining metered spaces or at a different parking facility. Fourth, the user might form (or already be a member of) a carpool, thereby reducing the average increase in parking price. Fifth, the individual could park-ride at one of six (three new and three existing) fringe area lots and use a shuttle bus. Lastly, the commuter could switch to another mode (e.g., bus, bicycle) and avoid the driving, parking, and surcharge fee altogether.

Depending on the travel behavior changes of commuters, a different set of alternatives may exist for midday travelers to the CBD. Clearly, if the work trip commuters do not alter their behavior in response to the surcharge, one would not expect to observe a change in the availability of CBD parking spaces for midday trips. Similarly, individuals who arrive after the surcharge or park at another CBD parking facility do not contribute to a net increase in CBD parking availability. Thus, parking availability for midday trips will be expanded only if work trip commuters switch modes (either transit carpool, or park-ride) or park at "private" spaces in or near the CBD.

1.4.3 Operator/Agency Impacts

One question that other cities or agencies considering implementing a program similar to Madison's may well ask is, "What are the impacts that are likely to affect my operation?" To address this concern, the evaluation examines the following: 1) changes in parking revenues at the surcharge and nonsurcharge CBD parking facilities; 2) changes in operating costs at the surcharge facilities; and 3) costs and revenues involved in operating the shuttle bus service.

1.4.4 Implementation Activities and Responses

One main implementation issue concerns the public, political, and institutional actions and roles that are taken to bring about the introduction of a new parking charge that is to be applied to certain peak-period automobile commuters. A second and related issue involves the nature and extent of reactions from users of the parking lots, such as students at either the Madison Area Technical College (MATC) or the University of Wisconsin, as well as from the community at-large. The amount and direction of this reaction will provide useful feedback in determining how easy or difficult it may be to implement this type of program in another city.

1.5 ORGANIZATIONAL ROLES OF EVALUATION PARTICIPANTS

The organizations that were involved in the Madison Parking Pricing Demonstration and their relationship to one another are shown in Figure 1-1. The role that each organization played in the demonstration and evaluation is briefly described below.

1.5.1 City of Madison, Wisconsin

The City of Madison was the recipient of the demonstration grant from UMTA and was responsible for administrative and budgetary control of the project, as well as for overseeing the data collection activities used to support monitoring and evaluation activities.

The city was also responsible for planning and implementing the various phases of the demonstration. Among other things, this included preparing plans, specifications, and estimates for all capital elements of the program, contracting for and supervising all construction work, developing and managing the discount pass programs, and managing the operation of the park-ride and peak-period parking surcharge elements of the demonstration.

1.5.2 Urban Mass Transportation Administration (UMTA)

UMTA, the Service and Management Demonstration (SMD) sponsor for the Madison project, was responsible for overall supervision and management.

1.5.3 Transportation Systems Center (TSC)

Overall responsibility for the evaluation rests with the Transportation Systems Center, which is a division of the Research and Special Programs Administration of the U.S. Department of Transportation. It is TSC's task to select and monitor the activities of the evaluation contractor as well as to specify the technical direction of the evaluation. Both TSC and the evaluation contractor interact with the grant recipient to obtain the data necessary for the evaluation of the demonstration. TSC also coordinates and synthesizes the findings of the present evaluation with those from similar demonstration projects.

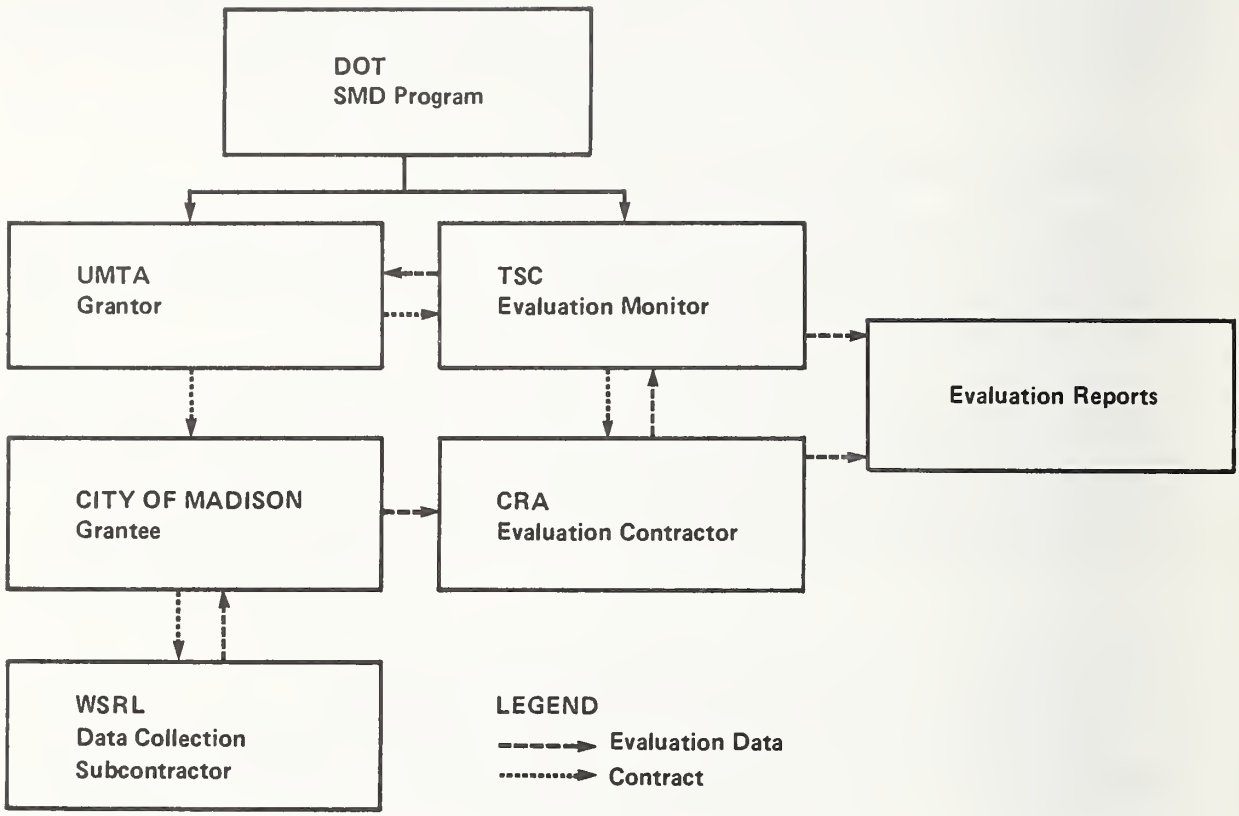

FIGURE 1–1. ORGANIZATIONS AND ROLES FOR THE MADISON DEMONSTRATION

1.5.4 Charles River Associates (CRA)

Charles River Associates serves as the evaluation contractor under contract to TSC. As such, CRA was responsible for monitoring and evaluating the demonstration project, including preparation of monthly Progress Reports, and this Final Evaluation Report. To this end, CRA, in consultation with TSC, was charged with developing appropriate data collection strategies, implementation procedures, and quality control checks for the reduction and transmittal of data.

1.5.5 Wisconsin Survey Research Laboratory (WSRL)

Under contract to the City of Madison, the WSRL was retained as a data collection subcontractor in order to carry out the required data collection functions as specified by CRA.*

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*See Charles River Associates, Final Evaluation Plan: Madison Parking Pricing Demonstration Project, prepared for the Transportation Systems Center (Boston, MA: CRA, May 1980).

2. CHARACTERISTICS OF THE MADISON TRANSPORTATION SYSTEM

2.1 HIGHWAY*

There are approximately 530 miles of streets open to traffic within the corporate limits of the City of Madison. The downtown area has a grid street pattern with east-west streets that parallel a relatively narrow isthmus and therefore carry the heaviest traffic flows. With few exceptions, the north-south streets carry little traffic, comprising mainly local circulation or access traffic. Except at several intersections, peak-period traffic in Madison generally operates under free-flow conditions, although traffic volumes approaching the CBD from all directions are nearing recommended maximum levels of service (measured at level "C", which denotes free-flow operations). Total vehicular traffic approaching the downtown core in the three-hour morning peak period has been estimated at 28,000 vehicles, of which approximately 21,700 have final destinations in the core. The remaining 23 percent of the vehicles pass through the core.

2.2 PARKING

2.2.1 Parking Supply Characteristics

A major concern in Madison, which was a factor in the development of this demonstration, was the availability of midday parking for nonwork trips. After examining parking ramp/lot occupancy characteristics and walk distances by trip purpose, a recent study on parking in Madison stated that:

> "...the shopping and personal business trip purposes are not being served as well as the work and school purposes. The best (most convenient, least expensive) spaces are being occupied by people who get to the central area first (workers, students); only those spaces remaining are available for the shoppers, visitors, business patrons, etc. This pattern prevails without regard for the time restrictions on the spaces being used."**

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*Information in this section is drawn from Franklin Spielberg, Transportation Improvements in Madison, Wisconsin: Preliminary Analysis of Pricing Programs for Roads and Parking in Conjunction with Transit Changes (Washington, DC: The Urban Institute, November 1978).

**Barton-Aschman Associates, Madison Central Area Parking and Transportation Plan, Draft (Evanston, IL, November 1978), p. 51.

In an effort to discourage long-term commuter parking, rates for short-term meters were set at $0.10 per hour, while they were $0.20 per hour for long-term parking. This led to a distortion in the use of parking spaces, with long-term parkers meter-feeding at short-term meters. Many of these distortions were reduced when a uniform hourly parking fee of $0.20 per hour (except for a relatively small number of spaces) was introduced in August 1978. However, parking supply prior to the beginning of the demonstration was still limited in the majority of parking facilities, especially during the midday.*

Approximately 40 percent of the 18,000 legal parking spaces in the core area are for public use. These are broken down into 4,396 hourly spaces and 298 monthly rental/reserved spaces in public off-street lots and ramps, and approximately 2,700 on-street spaces (consisting of 940 metered and 1,760 unmetered spaces). The remaining private parking spaces include 3,600 residential parking spaces, 550 university parking spaces, and approximately 7,100 nonresidential parking spaces for customer and employee parking. Table 2-1 lists the total number of parking spaces and the number of attended and meter spaces by parking time limit for the 13 parking lots and 4 parking ramps operated by the City of Madison at the time of the demonstration. Not shown in the table is the Dane County Ramp (1,004 spaces) operated by the county. All of the publicly-operated parking facilities located in the CBD and surrounding central area of Madison are shown in Figure 2-1. The 2 ramps (Dayton and Lake) and 2 lots (Brayton and Block 7) for which the $1.00 prime time parking charge was applied are highlighted.

Virtually all public spaces in the immediate CBD area are controlled by meters or are under attendant operation (except for about 200 monthly permit spaces). Farther away from the CBD, free on-street parking spaces are available. Parking charges (other than the surcharge) during the entire demonstration period were set at a flat rate of $0.20 per hour for the majority of the attended and metered off-street spaces and $0.25 per hour for the metered on-street spaces. The meters in one of the attendant/surcharge facilities (Brayton Lot) and three small high-demand, off-street parking lots (Frances Street, Block 88, and Lot 452) had flat meter rates of $0.25 per hour. Time limits on meters range from 12 minutes for some on-street spaces to 10 hours in city ramps and 20 hours in the Dane County Ramp.

In order to encourage additional shopping trips to the CBD, the City of Madison, in cooperation with a downtown business association, implemented a "Park on Us" program in April 1980. Under this program, participating business establishments provided shoppers a Park-on-Us stamp good for one hour of free parking with each minimum purchase made. Stamps are affixed to the parking entrance stubs obtained at any one of the five attendant facilities. Because this program began well before the start of data collection associated with the $1.00 surcharge, it did not particularly influence the present evaluation.

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*Duane F. Hinz, "1979 Off-Street Parking Surveys," Memorandum to Parking Utility Committee (City of Madison), April 26, 1979.

TABLE 2-1. PARKING INVENTORY FOR LOTS AND RAMPS IN MADISON

City of Madison Department of Transportation Parking Division

April, 1981

LOTS	Metered Spaces by Type 1 Hr	2 Hr	3 Hr	5 Hr	10 Hr	Total Metered Spaces[1]	Reserved Spaces	Hdcp. Spaces	Attended Spaces	Total Spaces	Cycle[1] Spaces	Meter Rates	Attended/ Reserved Rates	Prime Time Charge[4]
Brayton	--	14	--	--	--	14	--	--	178	192	--	25¢/hour	20¢/hour	$1.00
Buckeye	--	33	10	--	11	54	1	--	--	55	--	20¢/hour	--	NA
Amoth	--	--	--	--	16	16	12	--	--	28	--	20¢/hour	$10/month	NA
Evergreen	--	23	--	--	--	23	--	1	--	24	--	20¢/hour	--	NA
Wingra	--	11	--	--	10	21	--	1	--	22	--	20¢/hour	--	NA
Blair	--	--	--	--	--	--	72	--	--	72	--	--	$20/month	NA
Frances	32	22	26	--	--	80	--	--	--	80	--	25¢/hour	--	NA
Block 53	29	107	26	78	139	379	--	--	--	379	--	20¢/hour	--	NA
Block 54	--	65	26	--	142	233	1	--	--	234	--	20¢/hour	--	NA
Block 88[3]	5	22	--	--	--	27	24	1	--	52	--	25¢/hour	$50/month	NA
Lot 452[3]	6	17	--	--	--	23	--	1	--	24	--	25¢/hour	--	NA
Block 7[3]	--	--	--	--	--	--	--	--	190	190	--	--	7a-9:30a = $2.50 9:30a-Noon = $1.50 Noon-10p = $1.00	NA
Law Park[2]	--	--	--	--	--	--	128	3	--	131	--	--	$35/month	NA
LOTS TOTAL	72	314	88	78	318	870	238	7	368	1483	--			

RAMPS	Metered Spaces by Type 1 Hr	2 Hr	3 Hr	5 Hr	10Hr	Total Metered Spaces[1]	Reserved Spaces	Hdcp. Spaces	Attended Spaces	Total Spaces	Cycle[1] Spaces	Meter Rates	Attended/ Reserved Rates	Prime Time Charge[4]
Dayton	23	95	--	76	--	194	--	6	323	523	26	20¢/hour	20¢/hour	$1.00
Doty	--	--	48	44	--	92	60	3	376	531	6	20¢/hour	20¢/hour	NA
Lake	47	26	32	94	--	199	--	3	331	533	18	--	20¢/hour	$1.00
McCormick	--	82	--	--	--	82	--	--	538	620	11	20¢/hour	20¢/hour	NA
RAMPS TOTAL	70	203	80	214	--	567	60	12	1568	2207	61			
LOTS AND RAMPS TOTAL	142	517	168	292	318	1437	298	19	1936	3690	61			

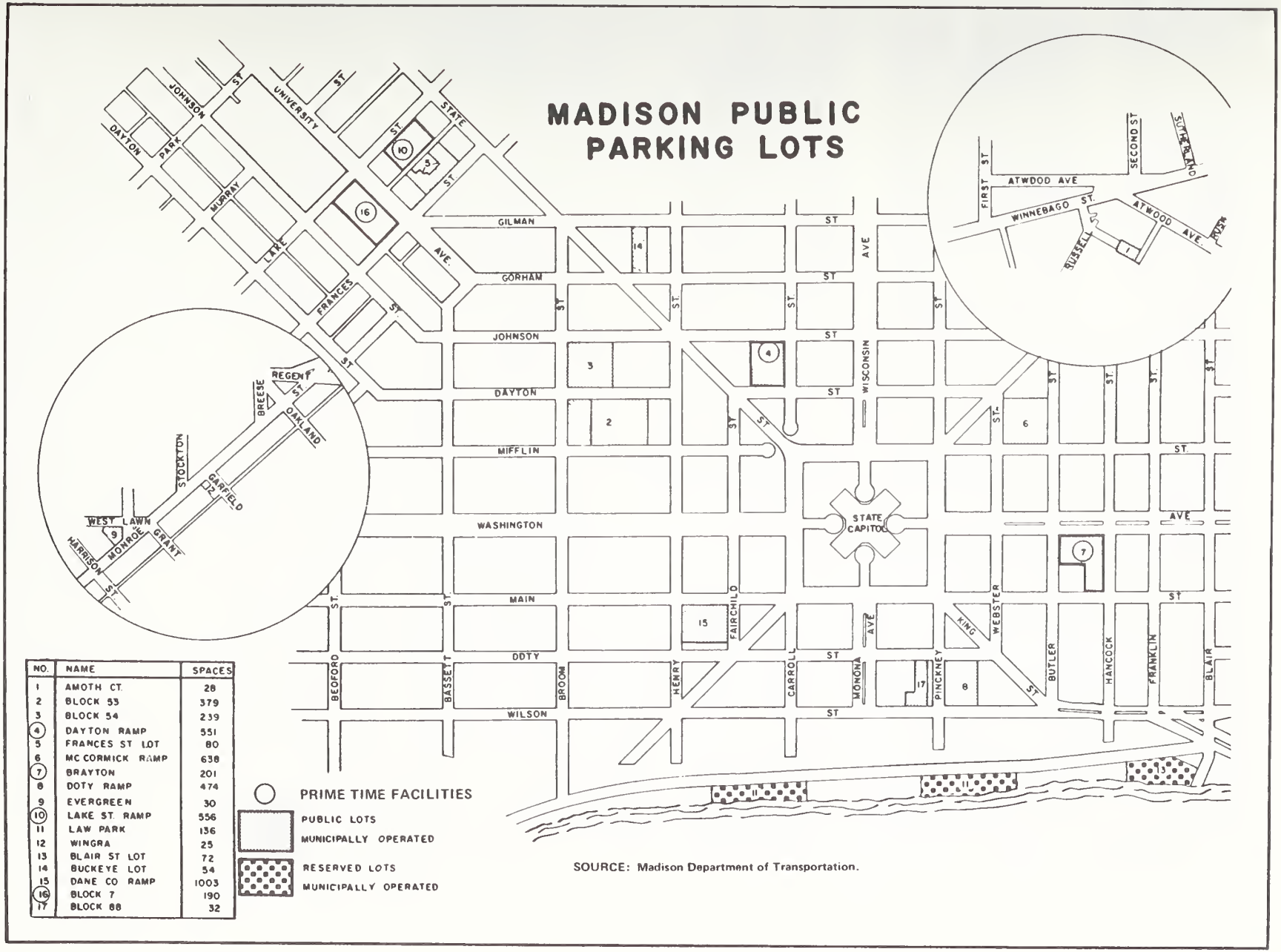
[1] Cycle Parking - 20¢/hour, not included in total spaces.

[2] Law Park to be phased out in September, 1982.

[3] TEMPORARY PARKING LOTS

[4] Arrival between 7 a.m. and 9:30 a.m., in addition to staying three hours or more.

SOURCE: Madison Department of Transportation



NO.	NAME	SPACES
1	AMOTH CT.	28
2	BLOCK 53	379
3	BLOCK 54	239
(4)	DAYTON RAMP	551
5	FRANCES ST LOT	80
6	MC CORMICK RAMP	638
(7)	BRAYTON	201
8	DOTY RAMP	474
9	EVERGREEN	30
(10)	LAKE ST. RAMP	556
11	LAW PARK	136
12	WINGRA	25
13	BLAIR ST LOT	72
14	BUCKEYE LOT	54
15	DANE CO RAMP	1003
(16)	BLOCK 7	190
17	BLOCK 88	32

FIGURE 2–1. LOCATION OF PRIME TIME AND OTHER PARKING FACILITIES IN MADISON

Table 2-2 shows the total number and type of parking spaces that were available in the 4 surcharge and 14 nonsurcharge parking facilities before and after the conversion process and the beginning of the prime time charge. As indicated in the table, the total number of off-street public parking spaces changed very little. (A few spaces were lost when the entrance/exit gates and the attendant booths were installed.)

The most significant change was the introduction of attendants at 5 parking facilities and the conversion of 1,746 metered spaces to attendant operation. However, only three of these facilities and Block 7, which was already under attendant operation, were included in the surcharge program. In these 4 surcharge facilities, 416 metered spaces continued to be available. Most of these meters were for short-term parking (1 to 3 hours) so as to discourage all-day parkers from using them, thereby avoiding the surcharge. Still, approximately 170 five-hour meters did remain in the 4 surcharge facilities.

According to a 1978 parking study, the peak-period occupancy rate was over 90 percent for the on-street spaces near Capitol Square, the State Street Mall, and within five blocks of the university. This same study showed that the average peak-period occupancy in the municipal off-street facilities was 92 percent. Six of the ten facilities had 95 percent or higher occupancies, with four of these being at 100 percent occupancy.

2.2.2 Institutional Setting

Madison is somewhat atypical in that virtually all of its publicly-available off-street parking spaces are under the direct control and operation of local (i.e., city and county) governments. Specifically, Dane County operates one ramp containing 1,004 parking spaces while the City of Madison, through its Parking Utility, manages the remaining 3,690 spaces in 4 parking ramps and 13 parking lots. This is an important point with respect to being able to plan and implement a coordinated set of changes to the parking fee structure on a city-wide basis.

Coordination of transportation matters in the City of Madison is achieved through the Transportation Commission, which has responsibility for transit, parking, bikeway, and pedestrian facilities; taxicabs; and traffic engineering activities. The Parking Utility Committee was created to serve as an advisory body to the Transportation Commission on matters related to the administration, regulation, and control of municipal parking finances.

TABLE 2-2. CHANGE IN NUMBER AND TYPE OF PARKING SPACES BEFORE AND AFTER CONVERSION TO ATTENDANT OPERATION

Surcharge Facilities	Before Conversion/Surcharge	After Conversion/Surcharge		
		Attended	Meter*	Total
Brayton Lot	201	178	14	192
Dayton Ramp	543	323	200	523
Lake St. Ramp	536	331	202	533
Block 7	190	190	0	190
Subtotal	1470	1022	416	1438
Nonsurcharge Facilities				
Ramps (2)	1156	914	237	1151
Lots (11)	1101	0	1101	1101
Dane County Ramp	1004	0	1004	1004
Subtotal	3261	914	2342	3256
Total Spaces	4731	1936	2758	4694

*Includes reserved and handicapped but not cycle spaces.

SOURCE: City of Madison Department of Transportation Parking Division, "Parking Inventory - Lots and Ramps," July 1, 1979 and April 1981.

The Parking Utility consists of the Director of Public Works, Director of Planning, one Council member, and three citizen members. Within the hierarchy of transportation policymaking, which is shown in Figure 2-2, the Transportation Commission reports to the Madison Common Council.

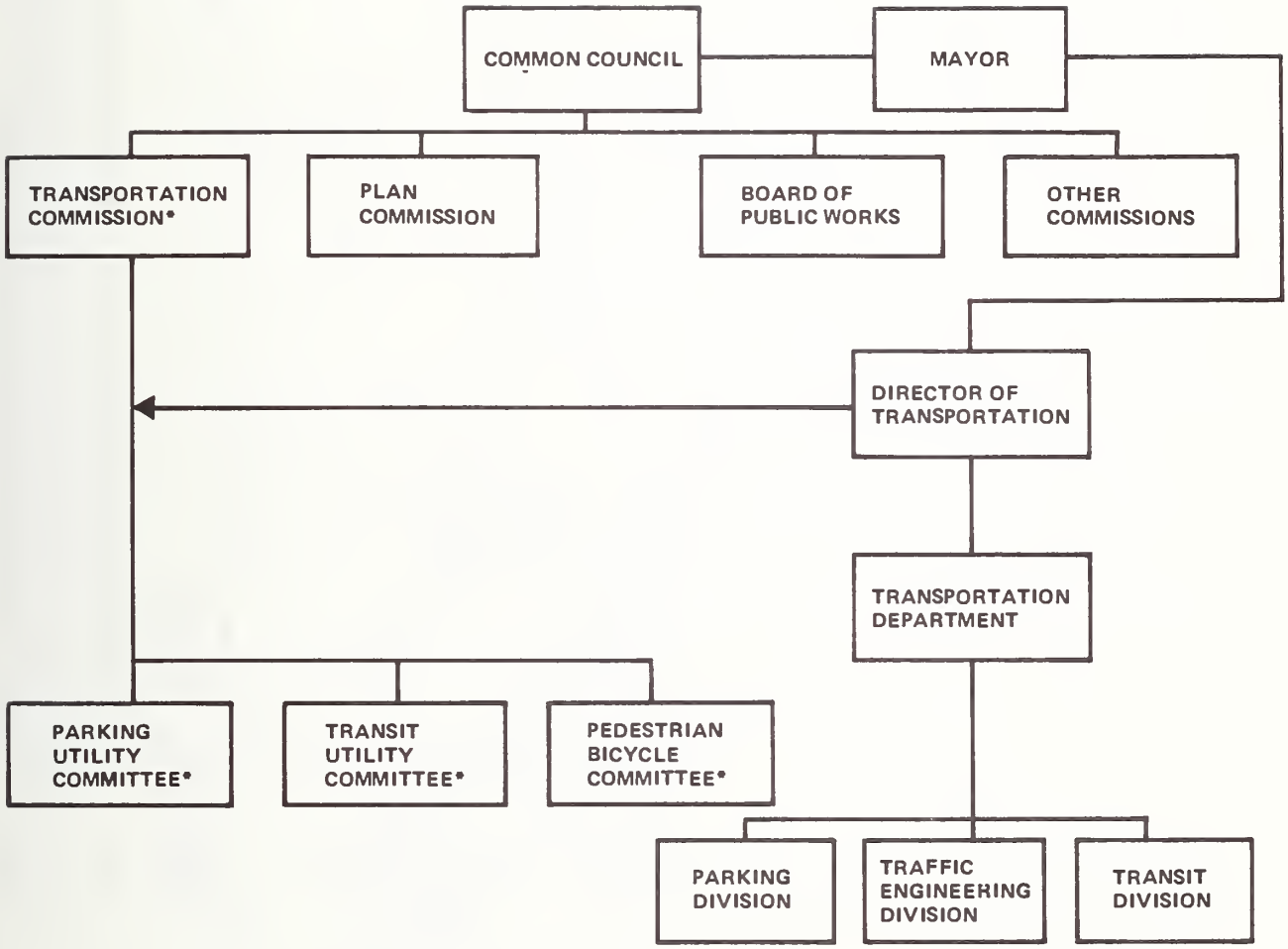
2.3 TRANSIT

Madison's transit system, which is also under the direct control of Madison's Department of Transportation, provides broad coverage to the city and surrounding communities. Of the 19 regularly-scheduled routes in existence in early 1981, 8 were primary or secondary routes, 8 were geared toward commuter needs (primarily providing peak-hour express service), and 3 provided downtown circulation and service to the University of Wisconsin. In addition, the system provided supplemental service to middle and high schools in the school district.

As part of the present demonstration, the city began shuttle service to three additional park-ride facilities: 1) MATC -- located at the Madison Area Technical Center, 3.1 miles northeast of the Capitol Concourse; 2) EXPO -- located at the Dane County Exposition Center, 2.1 miles south of the Capitol Concourse; and 3) HFSO -- located at the Hill Farms State Office Building, 4.7 miles west of the Capitol Concourse. The initial parking capacities at these three facilities were 200, 75, and 47 spaces, respectively. However, because of high demand levels at the HFSO facility, its capacity was subsequently increased to approximately 100 spaces.

The 19 scheduled bus routes, as shown in Figure 2-3, radiate from the downtown area for approximately 7 miles. (Also shown in Figure 2-3 is the location of the three new park-ride facilities.) Typical peak-hour headways are 15 minutes on the primary bus routes, increasing to 20 to 30 minutes during midday/base periods.

Annual ridership on the bus system was approximately 7.5 million in 1962. It declined in the late 1960s and again reached 7.5 million riders in 1970, the first year of city ownership. Ridership has increased at a fairly steady pace since that time, approaching nearly 14 million (total) passengers in 1979 (see Table 2-3). On an annualized basis, ridership remained fairly steady in 1980, although it declined in absolute numbers as a direct result of an eleven-week work stoppage. In 1981, ridership declined slightly to about 13.5 million (total) passengers; a contributing factor was a $0.10 increase in adult bus fares on Mainline and express routes that went into effect on January 1, 1981. Table 2-4 presents a more detailed description of the Madison Metro fare structure and the changes in fares that occurred on January 1, 1981.



*These are composed of aldermen, citizens, and staff members from the Planning and Public Works Department. The Director of Transportation acts as the Secretary of the Transportation Commission but is not a voting member.

FIGURE 2–2. CITY OF MADISON TRANSPORTATION POLICYMAKING STRUCTURE

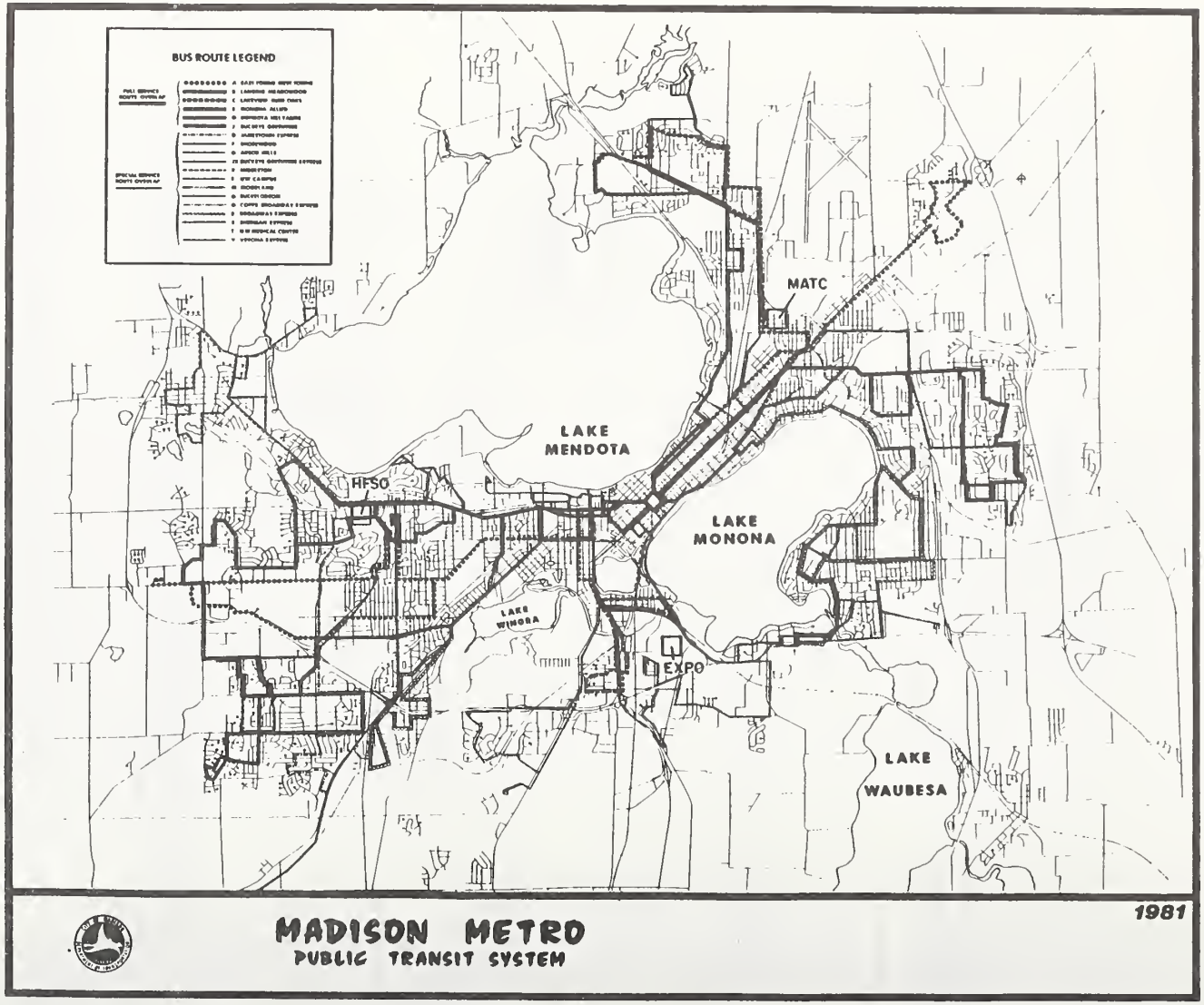


FIGURE 2–3. MAP OF MADISON PUBLIC TRANSIT SYSTEM

TABLE 2-3. TOTAL TRANSIT PASSENGERS AND BUS MILES OPERATED BY MADISON METRO

Year	Total Passengers*	Bus Miles
1974	10,120,231	3,234,000
1975	11,021,953	3,481,000
1976	11,417,630	3,517,000
1977	11,800,243	3,597,000
1978	12,299,311	3,917,000
1979	13,953,237	4,538,000
1980	11,933,703**	3,918,000**
1981	13,355,578	4,808,000
1982	13,282,362	4,633,804

*Does not include riders on the E&H buses or Independent Living.

**Work stoppage, May 1 - July 20, 1980.

SOURCE: Madison Department of Transportation.

TABLE 2-4. FARE STRUCTURE FOR THE MADISON METRO SYSTEM
(Partial Description of Tariff)

Fare Type	1/1/80 - 12/31/80	12/29/80	1/1/81 - 12/31/81
Mainline (Base)			
Adults	$0.35	P	$0.45
Students	$0.20	R	$0.25
Elderly & Handicapped	$0.15	I	$0.20
Children (Under 5)	Free	M	Free
Shopper's Pass	$0.70	E	$0.90
Monthly Pass	$13.00		$16.00
Transfer to Mainline	Free	T	Free
Transfer to Express (Adult)	$0.05	I M	$0.05
Transfer to Express (Student)	$0.10	E	$0.10
		C H	
Nickelodeon	$0.05	A R G	$0.10
Express		E	
Adults	$0.40		$0.50
Students	$0.30	B E G I N S	$0.35
Middleton			
Adults	$0.60		$0.60
Students	$0.35		$0.35
Elderly & Handicapped	$0.25		$0.25
Shopper's Pass	$1.20		$1.20
Verona Express	$0.75		$0.75

SOURCE: Madison Department of Transportation.

2.4 PUBLIC POLICY

A significant amount of retail activity has been attracted from the downtown area to several shopping malls that have opened during the last decade in suburban sections of Madison. The City of Madison, however, has taken positive steps to preserve the downtown retail sector. Public land use and development policy is aimed at, among other things, maintaining the central area of Madison "as the center of government, financial and professional office activity and as a specialized retailing complex."* Companion transportation objectives are directed at minimizing "the need to use private automobiles and maximize the availability and encourage the use of public transportation ... particularly for commuter travel."**

Several transportation-related policies and actions demonstrate Madison's commitment to this objective: automobile lanes have been converted to lanes reserved for bus or bicycle use; transit marketing is aggressive and innovative; the sidewalks around Capitol Square have been widened using space formerly allocated to traffic lanes; modest increases in transit fares have been imposed; and a city department of transportation has been formed. As described earlier, the director of this agency has responsibility for Madison streets and highways, the city parking utility, and the public transit operations, and, as a result, has been able to coordinate transit and automobile policies.

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*"Objectives and Policies for the City of Madison" (May 1978), p. 6.

**Ibid., p. 23.

3. . DEMONSTRATION IMPLEMENTATION AND OPERATION

3.1 PROJECT HISTORY AND STATUS

In early 1976, the SMD program initiated a set of pre-implementation planning and site selection procedures for a number of congestion pricing demonstrations. In response to an UMTA announcement, the City of Madison expressed an interest in a road pricing demonstration. Subsequently, in the summer of 1976, the Urban Institute, under contract to UMTA, prepared a report analyzing alternative road and parking pricing programs that could be implemented in Madison.*

After a series of public hearings and city council meetings were held, the city, in December 1976, declined to participate in the road pricing project.** However, a desire to examine other congestion pricing approaches was expressed. Eventually, the concept of implementing a peak-period parking surcharge that would be applied to single-occupant automobiles parking in the central business district was formulated as a potential demonstration project. (During the demonstration period, however, the surcharge was also levied on carpools.) As part of this demonstration, the city would also be able to convert some of its metered parking facilities to attendant control. Attendants are necessary in order to collect the peak-period or "prime time" parking surcharge as well as to handle shopper-validated parking stubs, which Madison and the CBD business community were anxious to implement.

In September 1978, the City of Madison submitted a grant application for the present demonstration. UMTA approved the final application in late 1978 and thus Madison became the first site under the SMD program to undertake this type of pricing disincentive demonstration. Demonstrations of other parking permit and pricing concepts have subsequently been implemented in Santa Cruz and Hermosa Beach, California.

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*Franklin Spielberg, Transportation Improvements in Madison, Wisconsin: Preliminary Analysis of Pricing Programs for Roads and Parking in Conjunction with Transit Changes (Washington, DC: The Urban Institute, November 1978).

**An overview and postmortem analysis of the attempt to implement a road pricing demonstration in Madison and other cities is contained in Thomas J. Higgins, "Road Pricing: A Clash of Analysis and Politics," Policy Analysis 7:1 (Winter 1981).

3.2 DESCRIPTION OF PROJECT ACTIVITIES AND SCHEDULE

The Madison parking pricing demonstration was initially scheduled to last approximately 22 months, including about 6 months for preparatory planning. However, because of the development of certain unforeseen events, the entire demonstration, from the signing of the demonstration grant until the end of data collection, lasted approximately 30 months. Most notable among these events were: 1) longer-than-anticipated lead times to hire a project coordinator; 2) the necessity to rebid the ramp conversion contract twice because only one bid was submitted in response to the first offering; 3) an eleven-week strike by bus drivers; and 4) problems associated with obtaining final approval from various governmental agencies within the City of Madison to implement the prime time charge as initially envisioned.

The activities that were undertaken during both the pre-implementation or planning phase of the demonstration and during the actual demonstration period are discussed in the following sections.

3.2.1 Planning Phase

After a manager was hired to direct the day-to-day activities of the project, the demonstration planning phase lasted about six months. It ended with the conversion of four parking ramps and one parking lot from all meters to a combination of meters and attendant control.

During this phase, the city prepared plans, specifications, and estimates for the improvements and revisions that had to be made at the affected parking facilities (e.g., installation of attendant booths, gates, lighting, and curbing). In conjunction with this activity, specifications were prepared and bids were solicited for the installation of the necessary parking equipment.

Provisions for acquiring (through ownership or lease) and preparing the space (i.e., lighting, resurfacing) at the proposed fringe-area parking lots were also made during this phase. Simultaneous with this activity, steps were taken to obtain the buses needed to provide the park-ride shuttle bus service. Shuttle bus service to the park-ride lots was initially provided from 6:00 a.m. to 6:00 p.m. with 15-minute headways, and with half-hour headways from 6:00 p.m. to 10:00 p.m.

3.2.2 Demonstration Phase

The demonstration phase of the Madison project comprised four principal elements that were designed as a coordinated package of activities to achieve overall demonstration objectives. These treatments, which are described in the following sections, were ordered in time so as to permit the impacts attributable to the primary element -- the peak-period parking surcharge -- to be evaluated without major confounding effects from other demonstration elements (see Figure 3-1). Also, the relatively short length of time between before and after data collection necessitated by the project phasing helped to minimize the effects of factors external to the demonstration. Appendix B describes the particular data collection activities that were undertaken during the demonstration. The various survey instruments that were used are reproduced in Appendix C.

3.2.2.1 Conversion to Attendant Operation - In the first phase of the demonstration, all four of the city-controlled parking ramps (Dayton, Doty, Lake, and McCormick) and one of the parking lots (Brayton) were converted from various combinations of short-, medium-, and long-term parking meters to attendant operation. Attendant operation was required at these five facilities since the original plan called for collection of the peak-period surcharge at these locations. However, because of physical (location) constraints, about 25 percent of the parking spaces in these five facilities remained under meter control after conversion. (As described below, the parking surcharge was eventually instituted in three of these facilities as well as at the 600 University Avenue parking lot.

Attendant service was phased into operation during a two-week period in 1980. McCormick Ramp started on March 24, Doty Ramp on March 27, Brayton Lot on March 31, Dayton Ramp on April 1, and Lake Street on April 7. (The 600 University Avenue parking facility was already operating with attendants.) One week prior to the beginning of attendant operation, a flyer, shown in Figure 3-2, was placed on the windshield of cars parked in the five facilities; it explained the change in operation that was to occur and what benefits would accrue to the users of the affected facilities.

3.2.2.2 Limited TFP Discount Sale - A new office building for about 1,200 government employees, commonly referred to as General Executive Facility (G.E.F.) II, opened during the month of September 1979. Employees from the Department of Natural Resources who were transferred from outside the CBD area and employees from the Department of Administration who were already located in the CBD were offered the opportunity to purchase a monthly, unlimited-use (but nontransferable) transit pass at a 75 percent discount for a period of 3 months. At the end of the three month discount period, the pass continued to be sold to these employees at their place of work, but at its regular price. This program provided these employees with an additional incentive to use the transit system for regular commuter trips.

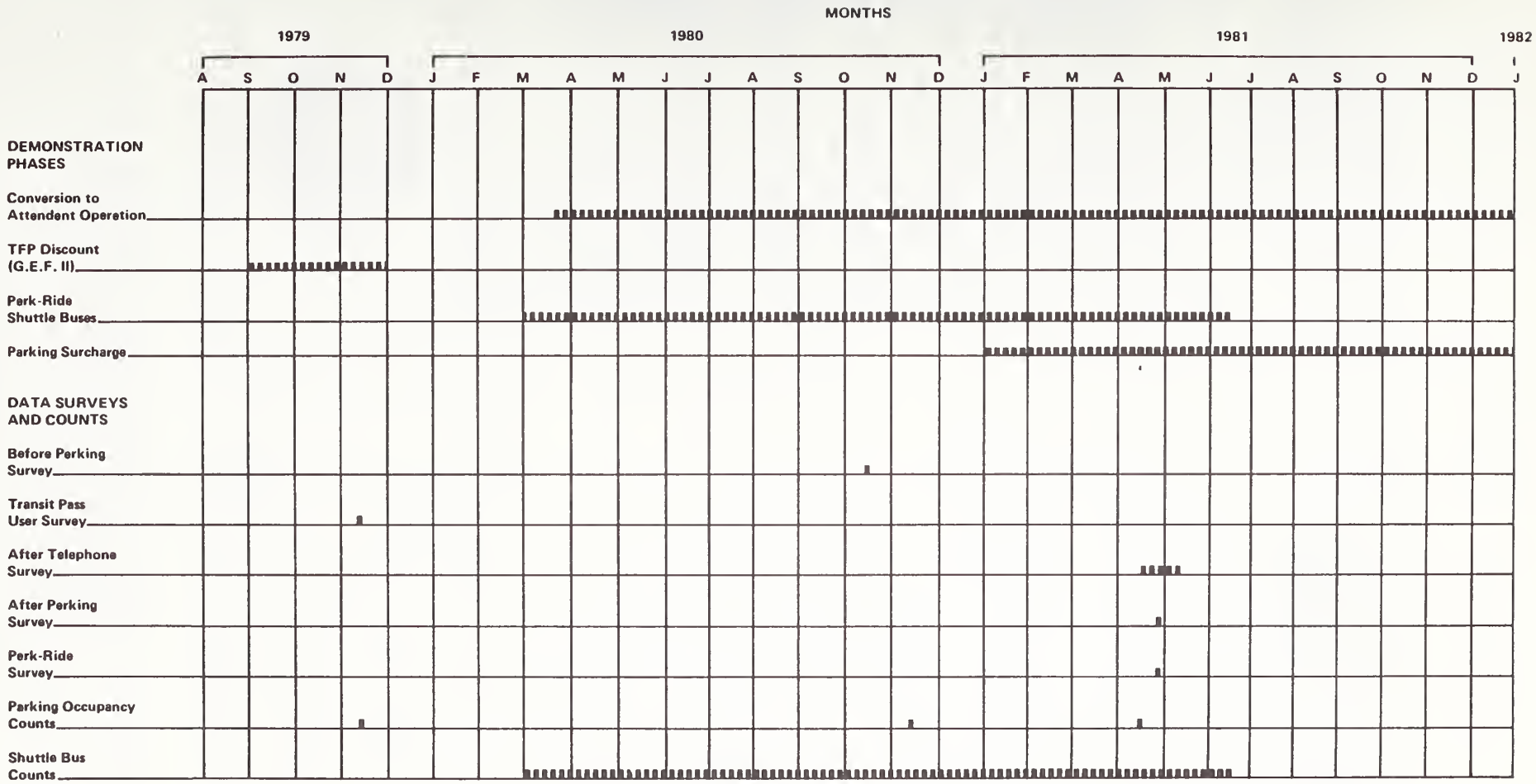


FIGURE 3–1. SCHEDULE OF DEMONSTRATION PHASES AND DATA COLLECTION ACTIVITIES

NOTICE TO USERS OF THIS PARKING FACILITY

Beginning one week from today all or a portion of the parking in this facility will be controlled by gates and an attendant, instead of by parking meters.

This is part of a demonstration program to improve parking and bus service in downtown Madison.

You will discover a number of benefits to attendant parking:

- No more running back once or more times during the day to "plug" a meter.
- No more worry about getting an overtime parking ticket.
- No more carrying a pocket of change to feed a meter.
- Downtown businesses plan to have a "Park on Us" program to give free or reduced rate parking to their customers.

Please bear with us during the first few weeks — until you and we get used to this new procedure, problems will likely occur. We will eliminate them as fast as we can.

If you have questions, call 266-4761.

FRONT SIDE

HOW TO PARK IN AN ATTENDED FACILITY

When you enter—take a ticket. Keep it with you.

When you leave—give the ticket to the attendant. **Please pay** in cash — no checks or credit cards will be accepted. **The attendants** will not be able to make change for bills larger than $20.00.

Your parking fee—will be calculated by the attendant — it's the same rate as with meters, **20¢/hour.** (5¢ per 15 minutes or portion thereof.)

If you lose your ticket—there is a "lost ticket fee" of $3.00.

If you have "Park on Us" stamps—they are good for up to a maximum of 20¢ per stamp. You may have more than one stamp on a ticket, but all stamps must be pasted on the back of the ticket.

REMEMBER: Attendant parking will begin one week from today.

CITY OF MADISON DEPARTMENT OF TRANSPORTATION

REVERSE SIDE

FIGURE 3–2. NOTICE ALERTING USERS THAT PARKING WILL BE CONVERTED TO ATTENDANT OPERATION

3.2.2.3 Park-Ride Shuttle Buses - As part of this third element of the demonstration, three parking lots located on the fringe of the CBD were opened and were served by a newly instituted, shuttle bus system. Service to these facilities began on March 3, 1980, about one month prior to the conversion of parking spaces to attendant control. Again, the objective was to provide commuters with alternatives to using the CBD parking facilities.

Initially, buses operated from 6 a.m. to 6 p.m. on 15-minute headways, with 30-minute headways from 6 p.m. to 10 p.m. However, on August 4, 1980, midday headways were increased to 30 minutes, and on October 20, 1980, service was discontinued during the midday and evening hours, during which time the service had been lightly patronized. In an effort to minimize expenditures, additional service reductions were made on April 6, 1981 (i.e., service hours changed from 6:00 a.m. - 10:00 a.m. and 2:30 p.m. - 6:00 p.m. to 6:45 a.m. - 9:30 a.m. and 3:15 p.m. - 6:00 p.m. Finally, the shuttle buses to the park-ride facilities, which were averaging about 500 boardings per day during April-May 1981 at the express bus fare of $0.50, were discontinued altogether on June 12, 1981.

3.2.2.4 Peak-Period Parking Surcharge - The fourth and major element of the demonstration was the institution of the peak-period or "prime time" parking charge. This was scheduled to begin about 6 to 8 weeks after conversion or sometime in May 1980 and was to last for a period of 16 months. However, a strike of bus operators during the months of May, June, and July 1980 resulted in the date being postponed. Subsequently, in separate actions, the Parking Utility Committee, the Transportation Commission, and finally the Board of Estimates voted to reject the scheduled plan to implement the prime time charge at the five facilities. A variety of alternatives to the then-existing flat rate parking fee structure were proposed but, in general, UMTA judged these nonresponsive to the main objectives and concerns of the original demonstration design.

After a series of negotiating sessions between the Mayor of Madison and UMTA officials, an agreement was reached whereby the prime time charge would be introduced at three of the original five facilities (Brayton, Dayton, and Lake Street) plus one other facility that already had attendants (called Block 7 or 600 University Avenue). In addition, so as not to penalize short-term parkers who happened to park at one of the surcharge facilities during the morning peak hours (7:00 a.m. - 9:30 a.m.), there was an agreement to assess the $1.00 prime time fee only on individuals who arrived in the morning peak period and who parked in that facility for three or more hours. The $1.00 fee was added to the regular parking flat rate of $0.20 per hour (except at Brayton Lot where it was $0.25). Consequently, workers and students who parked between 8 or 9 hours during the day would pay between $2.60 and $3.25.

The prime time charge began on December 29, 1980 at Brayton, Dayton, and Lake Street parking facilities and on January 5, 1981 at the 600 University Avenue parking lot. Unlike the other attendant facilities, which have flat hourly rates, parkers at this facility were charged a flat $2.50 if they entered before 9:30 a.m.; $1.50 between 9:30 a.m. and noon; and $1.00 after 12:00 noon. Consequently, there are no short-term rates at this facility. Figure 3-3 is a reproduction of a notice that was distributed to individuals using the CBD parking facilities about one week prior to the start of the prime time charge.

The agreement between UMTA and the city was to keep the prime time charge in effect for six months. However, with little public or political fanfare after its introduction and throughout its existence, the surcharge was in effect for one year until the end of 1981, at which time the flat rate for off-street parking was increased from $0.20 to $0.35 per hour and the prime time charge was discontinued.

3.3 DEMONSTRATION FUNDING

The major funding source for the Madison demonstration was an UMTA Section 6, Service and Methods Demonstration Grant, Federal Catalogue No. 20-506. Table 3-1 lists the budgeted amounts for each demonstration activity and the amount of funds expended for these activities (not including some in-kind costs) from the beginning of the demonstration. Based on the grant application, the City of Madison contributed approximately 40 percent of the total costs.

PARKING RATES ARE CHANGING

Parking rates in the attended part of this facility will change as of **December 29, 1980**. Beginning that day, anyone who comes in between 7:00 a.m. and 9:30 a.m. weekdays, and who stays 3 hours or more, will pay a $1.00 prime-time charge in addition to the 20¢ an hour base parking fee.

The prime-time charge will be collected as you leave, along with the base fee. If you come in before 7:00 a.m. or after 9:30 a.m., or stay less than 3 hours, your parking fee will be the same as it is now.

The prime-time charge will be in effect **only** in the following locations:

Lake St. Ramp—attended section
Dayton St. Ramp—attended section
Brayton Lot—attended section

Metered spaces in these facilities and the attended sections of the McCormick Ramp and the Doty St. Ramp will remain the same rates as they are now.

The rates at the **600 University Ave.** Lot will also be increased effective January 5, 1981. The new rates will be:

$2.50 before 9:30 a.m.
$1.50 between 9:30 a.m. and noon
$1.00 after 12 noon

Rates in other city lots and on-street meters will remain the same.

The prime-time charge is part of a demonstration program to improve short-term parking and bus use in downtown Madison. It will be in effect on a trial basis for six months.

If you have any questions, call 266-4761.

FIGURE 3–3. NOTICE ALERTING USERS THAT A PRIME TIME PARKING CHARGE WILL BE INSTITUTED

TABLE 3-1. DEMONSTRATION-RELATED EXPENDITURES, AS RECORDED THROUGH JUNE 1982

Activity	Budgeted Amount*	Funds Expended**
Administration	$ 50,000	$ 55,882
Data Collection	124,924	75,535
Ramp Conversion	270,456	247,357
Shuttle Bus Operation	479,183	464,645
Ramp Operation	137,519	267,779
Park-Ride Lot Operation	---	1,127
Transit Passes	295,680	---
Contingency	27,649	---
	$ 1,385,411	$ 1,112,325

*Includes local share and SMD contribution of $821,221.

**Not including some in-kind costs.

SOURCE: Madison Department of Transportation.

4. RESPONSES TO TRANSPORTATION SUPPLY CHANGES

This section of the report analyzes aggregate changes in parking utilization at the surcharge and nonsurcharge CBD parking facilities as well as changes in park-ride shuttle bus ridership that were due to the implementation of the prime time parking charge. Since data concerning before and after counts (of parking use or shuttle bus ridership) are being evaluated, the results, while illuminating, must be considered inferential in nature. However, the results are generally consistent with survey data from individuals on reported changes in travel behavior that are presented in Section 5.

4.1 CHANGES IN AGGREGATE PARKING UTILIZATION

The institution of the prime time parking charge resulted in a major impact in the peak-period occupancy characteristics at the four surcharge parking facilities (Brayton, Dayton, Lake Street, and 600 University Avenue.) Charging long-term parkers who entered during the morning peak period an additional $1.00 led to a significant decrease in the number of spaces occupied during the morning peak period (measured as of 9:00 a.m.) at the four surcharge facilities. Midday occupancies (measured as of 11:00 a.m.) were also reduced, but by a much smaller amount.

Data on the number of parking spaces occupied in five of the attendant facilities measured at three different time periods (7:00, 9:00, and 11:00 a.m.) are shown in Table 4-1. The information is based on records of occupancy counts recorded from automatic counters every one-half hour by the parking attendants. (Table 4-2 presents comparable data on the number of automobiles entering the 600 University Avenue parking facility by time of day.) As shown in Table 4-1, occupancies at 7:00 a.m. rose slightly after the prime time charge began at three of the surcharge facilities. However, the same is basically true for 7:00 a.m. occupancies at the two nonsurcharge, attended facilities. Since it is not likely that the prime time charge should affect 7:00 a.m. occupancies at the nonsurcharge facilities in any material way, it appears from this data that few individuals changed their time of arrival to before 7:00 a.m. in order to avoid the surcharge. (See Section 5 for an analysis of individual responses on this issue.)

At 9:00 a.m., however, occupancies at the 3 surcharge facilities were down by an average of about 40 percent (a reduction of an average of 330 cars) in each of the 5 months following the institution of the prime time charge. Conversely, 9:00 a.m. occupancies at the 2 nonsurcharge, attendant facilities increased by about 15 percent (or an increase of about 80 cars). This indicates that some individuals switched to these parking facilities

TABLE 4-1. AVERAGE NUMBER OF ATTENDED PARKING SPACES OCCUPIED, BY TIME OF DAY

Parking Facility	Total Attended Spaces	December 1980*			January 1981**			February 1981***			March 1981†			April 1981††			May, 1981†††		
		7 am	9 am	11 am	7 am	9 am	11 am	7 am	9 am	11 am	7 am	9 am	11 am	7 am	9 am	11 am	7 am	9 am	11 am
Surcharge:																			
Dayton	317	23	310	316	22	184	304	23	165	300	15	173	311	22	167	297	23	170	297
Lake	328	11	300	324	13	166	321	13	159	323	13	205	321	15	131	317	21	135	252
Brayton	177	43	170	173	52	122	116	49	105	143	54	113	150	57	121	156	56	127	167
Subtotal	822	77	780	813	87	472	741	85	429	766	82	491	782	94	419	770	100	432	716
Change From December																			
Relative (%)		--	--	--	+13	-39	-9	+10	-45	-6	+6	-37	-4	+22	-46	-5	+30	-45	-12
Absolute		--	--	--	+10	-308	-72	+8	-351	-47	+5	-289	-31	+17	-361	-43	+23	-348	-97
Nonsurcharge:																			
McCormick	545	12	220	375	13	294	396	8	280	361	9	280	372	10	288	364	18	289	365
Doty	372	32	353	366	36	369	371	38	369	372	43	371	371	53	370	371	53	369	371
Subtotal	917	44	573	741	49	663	767	46	649	733	52	651	743	63	658	735	71	658	736
Change From December																			
Relative (%)		--	--	--	+11	+16	+4	+5	+13	-1	+18	+14	0	+43	+15	-1	+61	+15	-1
Absolute		--	--	--	+5	+90	+26	+2	+76	-8	+8	+78	+2	+19	+85	-6	+27	+85	-5
TOTAL	1,739	121	1,353	1,553	136	1,134	1,508	131	1,078	1,499	134	1,142	1,525	157	1,077	1,505	171	1,090	1,452
Percent Change from December	--	--	--	--	+12	-16	-3	+8	-20	-3	+11	-16	-2	+30	-20	-3	+41	-19	-7

SURCHARGE INSTITUTED

Notes:

*Based on data for the December 1-13 time period.

**Based on data for the January 19-30 time period.

***Based on data for the February 2-27 time period.

†Based on data for the March 2-31 time period (except Dayton, Lake, and McCormick: March 2-13 and March 23-31).

††Based on data for the April 1-30 time period.

†††Based on data for the May 1-29 time period (except May 25: holiday).

SOURCE: Madison Department of Transportation.

TABLE 4-2. AUTOS ENTERING THE 600 UNIVERSITY AVENUE PARKING FACILITY, BY TIME OF DAY

Weekly Period	Number of Cars Entering During Week			Total Revenue
	7 am-9:30 am	9:31 am-Noon	Noon-10 pm	
December 8-12, 1980	[923 total]		1,424	$2,258.50
January 19-23, 1981	409	378	1,149	2,738.50
January 26-30, 1981	316	287	1,202	2,420.50
February 23-27, 1981	333	410	1,440	2,887.50
March 2-6, 1981	345	359	1,532	2,933.50
March 9-13, 1981	331	342	1,525	2,865.50
March 23-27, 1981*	297	363	1,316	2,603.00
March 30-April 3, 1981	302	298	1,491	2,693.00
April 6-10, 1981	382	354	1,432	2,918.00
April 13-17, 1981	285	349	1,678	2,914.00
April 20-24, 1981	295	418	1,819	3,183.50
April 27-May 1, 1981	343	421	1,413	2,902.00
May 4-8, 1981	336	473	1,343	2,892.50
May 11-15, 1981	349	360	1,524	2,936.50

*March 16-20, 1981: "Spring Break" for schools.

SOURCE: Madison Department of Transportation.

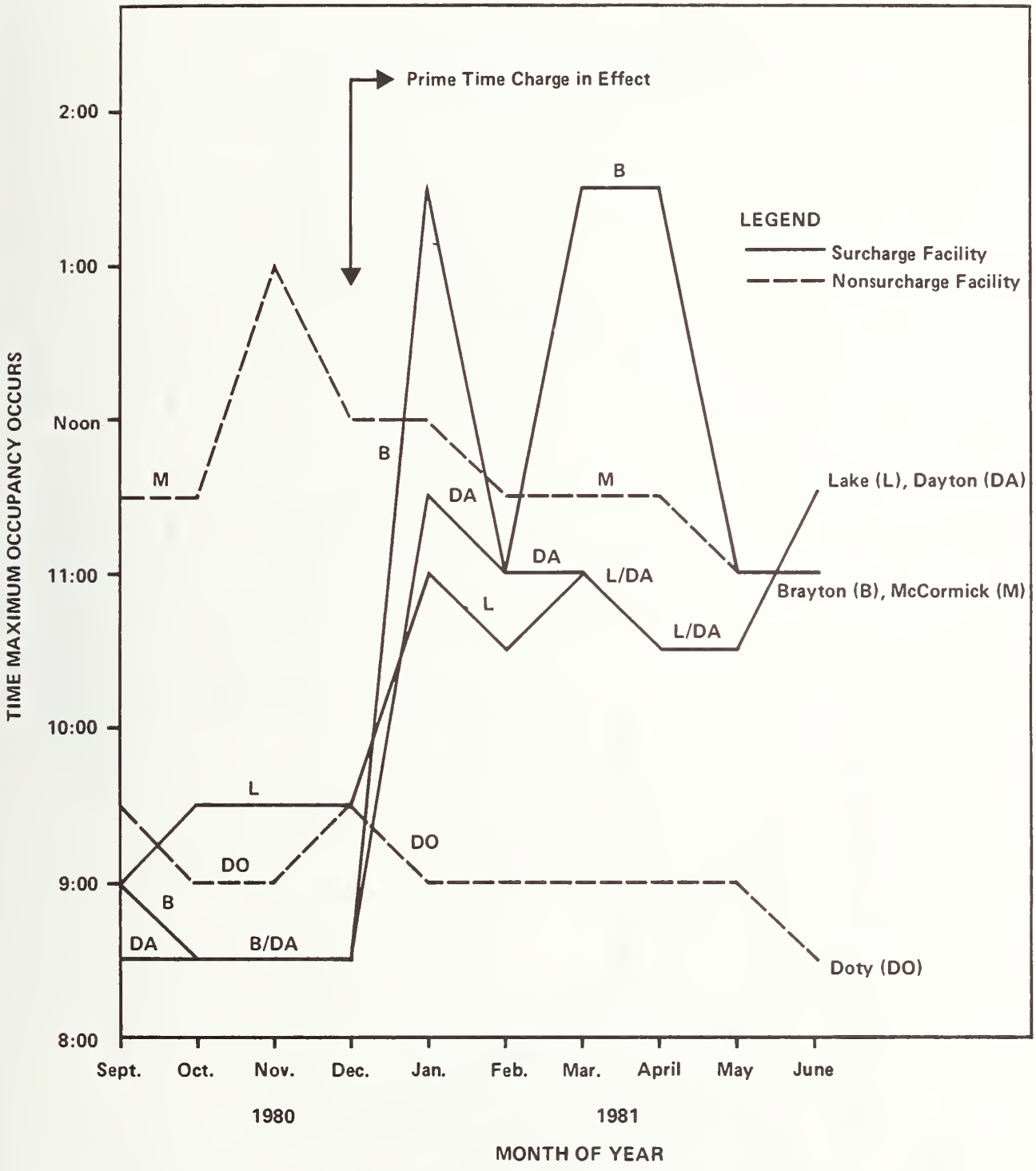
(mainly to the McCormick Ramp -- located one to two blocks away from both the Brayton Lot and Dayton Ramp -- and less so to Doty Ramp, which already was typically filled to capacity by 9:30 a.m.) in order to avoid the surcharge. However, the increase in occupancies at these 2 nonsurcharge facilities only accounts for about one-quarter of the 9:00 a.m. reduction in occupancies at the surcharge facilities.

By 11:00 a.m., occupancies at three of the surcharge facilities made a rapid recovery and were down by an average of only 7 percent after the institution of the prime time charge. Occupancies at 11:00 a.m. at the two nonsurcharge attended facilities remained essentially unchanged. From this data it would appear that some long-term parkers arrived after 9:30 a.m. in order to avoid the surcharge. It is also possible to infer that some individuals who normally arrived after 9:30 a.m. and parked in a nonsurcharge facility found them to be full (with individuals who previously parked at a surcharge facility), and therefore parked in one of the available prime time facilities.

As an example of how occupancies by time of day were affected in three surcharge and two nonsurcharge attended parking facilities, Figure 4-1 depicts the time of day that the maximum occupancy occurred most often during each weekday for four months before and six months after the beginning of the prime time charge. Quite striking changes are observed to have taken place at the three surcharge facilities. Prior to the surcharge, two of the facilities consistently reached capacity by 8:30 a.m., while the third reached capacity at 9:30 a.m. However, in the months immediately after the surcharge started, maximum occupancies were not attained until around 11:00 a.m. In some months, Brayton Lot did not reach its highest occupancy until 1:30 p.m., which was still under the maximum capacity of that lot. Average maximum occupancy at Brayton Lot was nearly 100 percent prior to the prime time charge, but it decreased to around 90 percent of capacity after the start of the prime time charge. At the Lake and Dayton ramps, maximum occupancies were virtually at 100 percent of capacity both before and after the surcharge began.

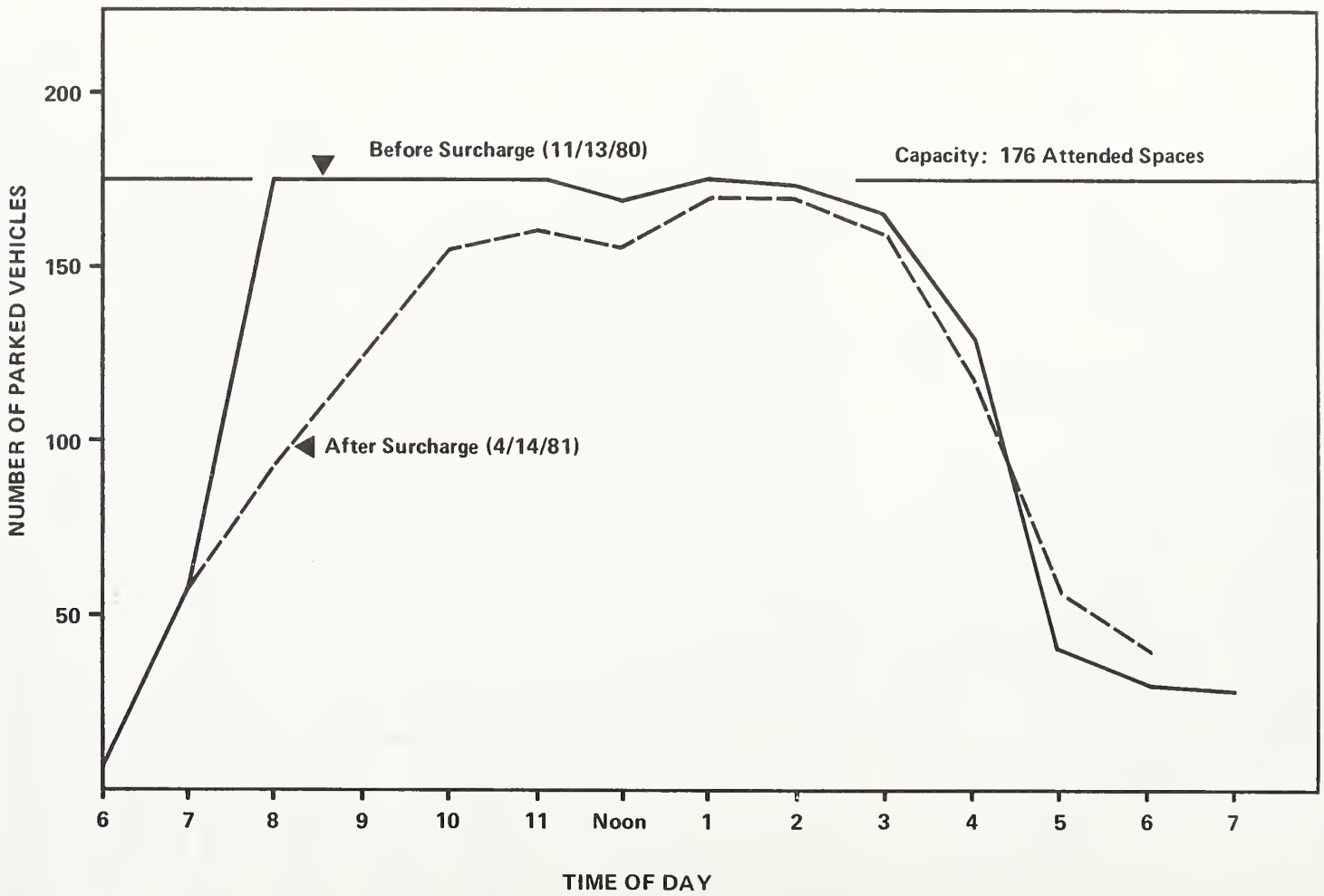
At Doty Ramp, a nonsurcharge facility, capacity continued to be reached fairly regularly each day (by 9 a.m.) after the surcharge was imposed. At McCormick Ramp, maximum occupancies were attained at slightly earlier time periods after the surcharge began, although the ramp rarely reached its full capacity. Thus, to the extent that commuters destined to the northern, central, and western sections of the CBD wished to park and avoid the prime time charge, space was available at this facility.

Based on data from parking occupancy and duration counts taken on a typical day both before and after the implementation of the prime time charge, it is possible to show how accumulation characteristics changed at various parking facilities. Figures 4-2 and 4-3 are representative of the



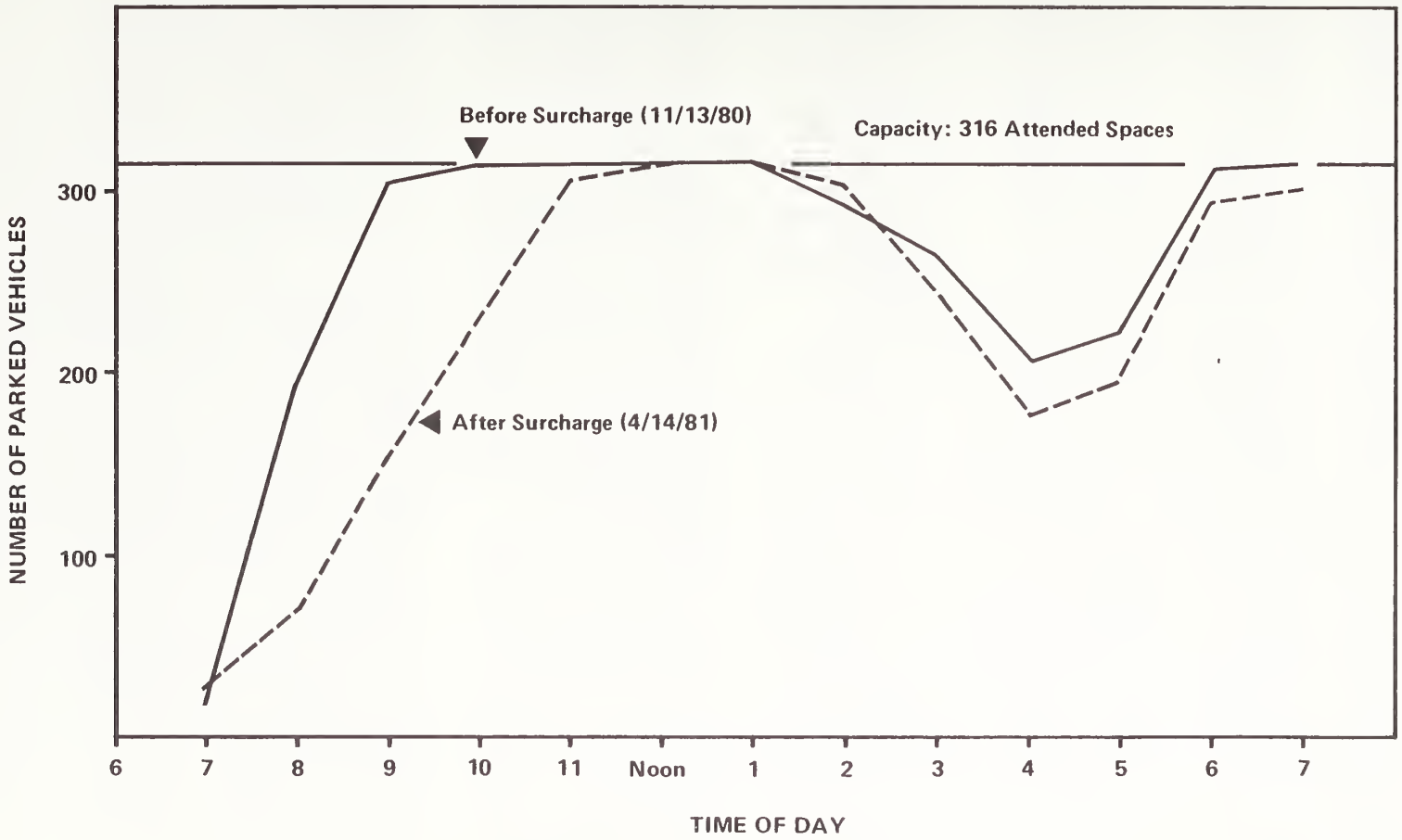
SOURCE: Madison Department of Transportation, Earliest Hour-Minimum Capacity Comparisons.

FIGURE 4–1. TIME OF MAXIMUM OCCUPANCY AT ATTENDED SPACES FOR SURCHARGE AND NONSURCHARGE PARKING FACILITIES



SOURCE: Madison Department of Transportation, All-day Occupancy Counts.

FIGURE 4–2. ACCUMULATION CURVE AT A PRIME TIME FACILITY (BRAYTON LOT) BEFORE AND AFTER SURCHARGE (ATTENDED SECTION ONLY)



SOURCE: Madison Department of Transportation, All-day Occupancy Counts.

FIGURE 4–3. ACCUMULATION CURVE AT A PRIME TIME FACILITY (DAYTON RAMP) BEFORE AND AFTER SURCHARGE (ATTENDED SECTION ONLY)

change in usage characteristics at surcharge facilities. Figure 4-2 shows, for Brayton Lot, that before the surcharge, capacity was reached very early in the morning (i.e., by 8:00 a.m.). While occupancy at 7:00 a.m. remained the same after the surcharge, the lot fell short of reaching capacity by the end of the peak period (9:30 a.m.). During the remainder of the day, the accumulation curves are very similar.

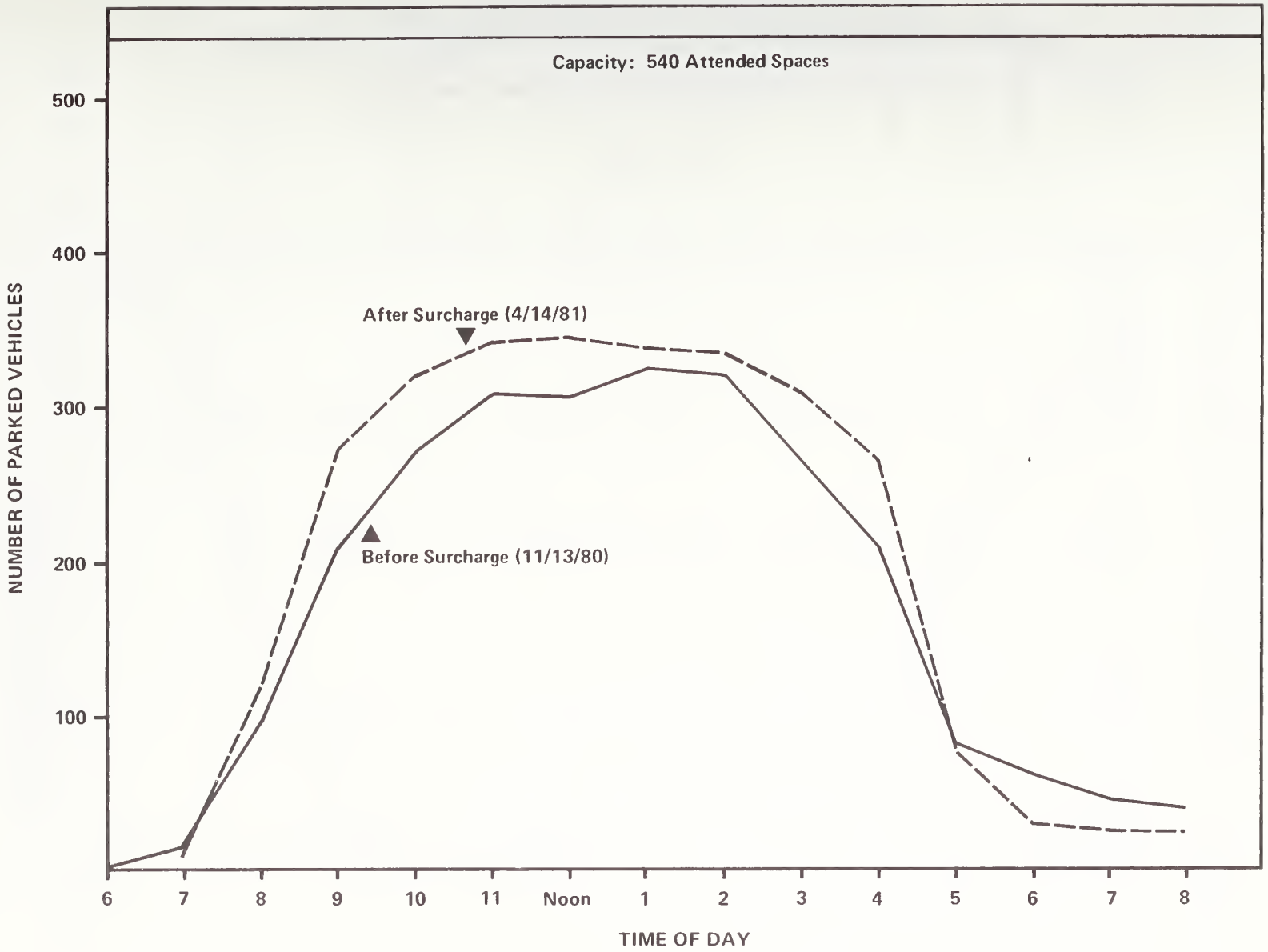
A nearly identical pattern is exhibited in Figure 4-3 for Dayton Ramp, another prime time facility. Before the surcharge, the ramp reached capacity around 9:00 a.m., while after the surcharge was implemented, the ramp reached 100 percent for only one hour between noon and 1:00 p.m.

At McCormick Ramp, a nonsurcharge facility, occupancies at 7:00 a.m. were again similar before and after the surcharge began, as is shown in Figure 4-4. However, by the end of the peak period, 60 more cars were using this ramp after the surcharge started. Throughout the remainder of the day, therefore, occupancies remained consistently higher. As indicated above, the facility typically did not reach capacity levels.

Before the surcharge, Doty Ramp regularly reached capacity in the attended section around 9:00 a.m., as shown in Figure 4-5. After the surcharge was implemented, this non-prime time facility became even more popular in the early morning hours as individuals switched from the prime time facilities to fill up the available spaces. Later in the day, the two accumulation curves behave quite similarly.

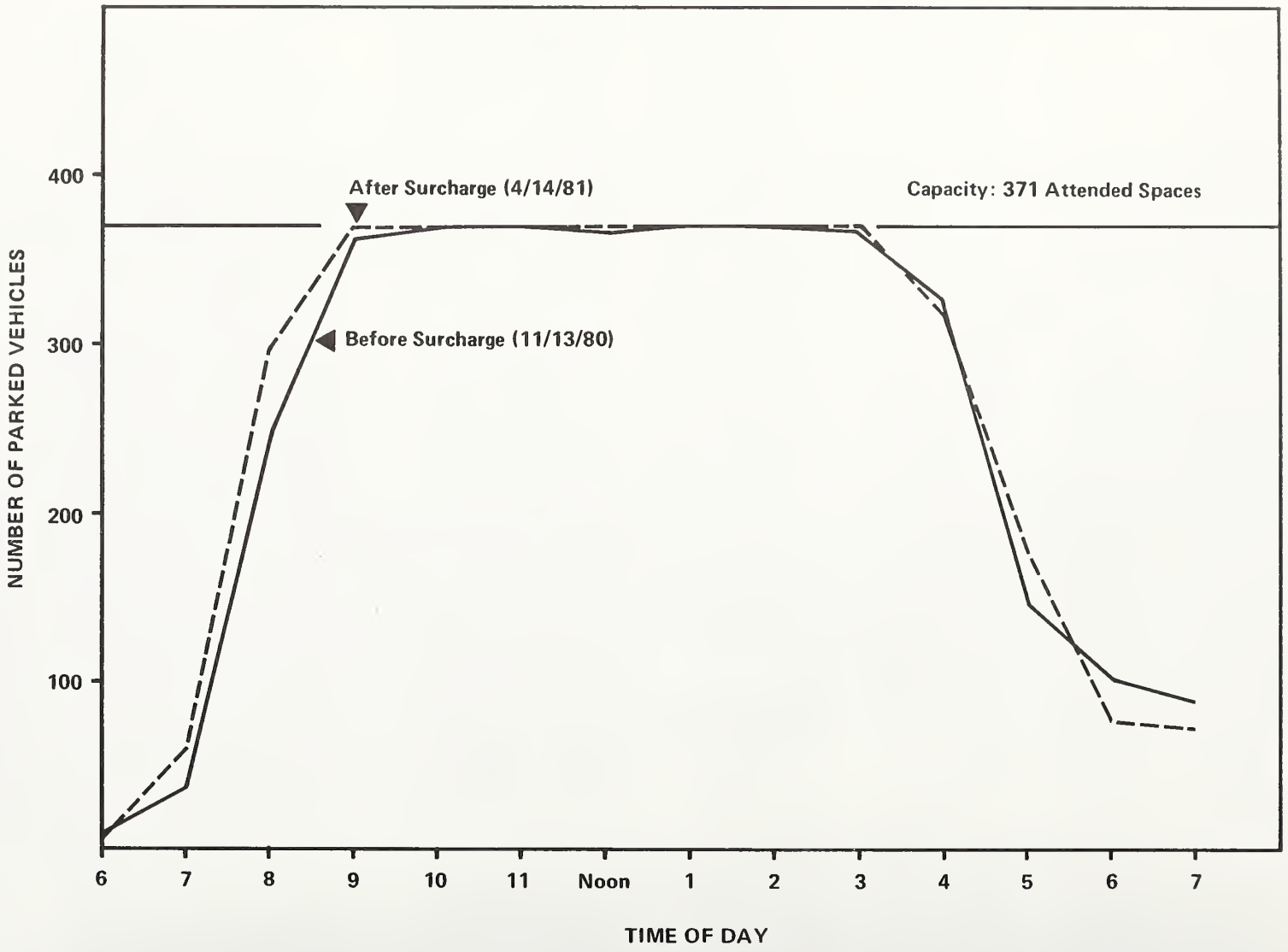
At 600 University Avenue, the fourth surcharge facility, approximately the same results are noted. Occupancies in the morning hours decreased by an average of about 25 percent after the prime time charge was instituted. Similarly, afternoon occupancies exceeded what they were before the surcharge began. Generally, it appears that some peak-period, all-day commuters (who at this facility are mainly associated with the university) parked at Lake Street or Block 53/54 during the morning and moved their cars into the parking facility later in the day. Some others adjusted their schedules to arrive after 9:30 a.m.

To evaluate other locations where commuters who once used the Brayton, Dayton, and Lake Street facilities may have parked, Table 4-3 presents data on the duration characteristics of individuals using the various parking meters that remain at the five attended facilities. When these facilities were (partially) converted to attendant operation in March 1980, all of the 10-hour parking meter spaces were eliminated, although some 5-hour spaces were kept. (Meter feeding in off-street parking facilities is legal in Madison, while it is illegal for on-street parking spaces.) The data in the table indicate that usage of the five-hour meters at two of the surcharge facilities (Dayton and Lake) for long-term parkers (i.e., those parking for six or more hours) tended to increase after the prime time charge was



SOURCE: Madison Department of Transportation, All-day Occupancy Counts.

FIGURE 4–4. ACCUMULATION CURVE AT A NON-PRIME TIME FACILITY (McCORMICK RAMP) BEFORE AND AFTER SURCHARGE (ATTENDED SECTION ONLY)



SOURCE: Madison Department of Transportation, All-day Occupancy Counts.

FIGURE 4–5. ACCUMULATION CURVE AT A NON-PRIME TIME FACILITY (DOTY RAMP) BEFORE AND AFTER SURCHARGE (ATTENDED SECTION ONLY)

TABLE 4-3. PARKING DURATION CHARACTERISTICS FOR METERED SPACES IN ATTENDED FACILITIES

Parking Facility	Parking Meters: Time Limit	Parking Meters: Number	Date of Count	Number Parking: ≤ 5 hours	Number Parking: > 6 hours	Percent > 6 hours
Surcharge:						
Brayton	2 hrs.	14	11/80	51	9	15.0
	2	14	4/81	62	6	8.8
Dayton	1	23	11/80	178	2	1.1
	1	23	4/81	158	9	5.4
	2	85	11/80	373	9	2.4
	2	85	4/81	443	12	2.6
	5	76	11/80	199	30	13.1
	5	76	4/81	128	39	23.4
Lake	1	47	11/80	298	5	1.7
	1	47	4/81	270	5	1.8
	2	29	11/80	106	6	5.4
	2	29	4/81	120	1	0.8
	3	32	11/80	59	10	14.5
	3	32	4/81	66	15	18.5
	5	94	11/80	247	54	17.9
	5	94	4/81	244	64	20.8
Nonsurcharge:						
Doty	3	48	11/80	33	3	8.3
	3	48	4/81	100	10	9.1
	5	48	11/80	59	32	35.2
	5	44	4/81	81	31	27.7
McCormick	2	82	11/80	26	0	0
	2	82	4/81	20	0	0

SOURCE: Madison Department of Transportation, "Parking Survey Summary," all-day counts performed November 13, 1980 and April 14, 1981.

instituted. Although the increase is fairly large in relative terms, the absolute change in the number of long-term parkers was small, and again only partially explains the change in behavior of some of the peak-period parkers who were facing the $1.00 surcharge. Section 5 of this report examines the changes that occurred in travel behavior due to the surcharge at a more disaggregate level.

4.2 UTILIZATION OF THE FRINGE-AREA SHUTTLE BUSES

A shuttle bus system serving three fringe-area parking lots was begun in April 1980 in order to provide alternatives to CBD parkers following implementation of the $1.00 prime time charge. During 6 months of operation prior to the implementation of the surcharge, service hours were gradually reduced such that by January 1981, shuttle buses were provided every 15 minutes during the morning and evening peak hours. If necessary, patrons could reach the fringe lots at other times during the day by using the regular bus service. Parking in the fringe lots was free. Fares on the shuttle buses were $0.40 in 1980, increasing to $0.50 in 1981 -- the same as express bus fares.

Table 4-4 shows average daily (weekday) ridership on the three shuttle bus routes, spanning the period from the beginning of service in April 1980 to its termination in June 1981. During the four months preceding the prime time charge (September through December 1980), the average number of daily users remained fairly steady at 330 (or 660 one-way trips). In January, bus fares increased from $0.40 to $0.50. Assuming an average peak-period fare elasticity of -0.25, this would imply a ridership reduction to about 310 riders per day. In the 3-month period January through March 1981, when shuttle bus service levels remained constant, daily riders averaged 323. It could be inferred that at best the "additional" 13 riders (323 - 310) were due to the prime time charge program. In actuality, data collected from a panel of CBD parkers (see Section 5) indicate that the likely number of individuals who shifted to the fringe-area lots as a result of the surcharge was less than this amount.

Given that approximately the same number of individuals used the fringe-area shuttle buses both before and after the surcharge introduction, it seems apparent that in this setting, the shuttle buses provided little complementarity to the peak-period surcharge. The overwhelming majority of shuttle bus users took advantage of the service for reasons other than the surcharge. Appendix B contains additional information on the socioeconomic and travel behavior characteristics of individuals who made use of these three park-ride facilities.

TABLE 4-4. AVERAGE DAILY RIDERSHIP
ON PARK-RIDE SHUTTLE BUSES
(Round Trips)

Month	Hill Farms	MATC	EXPO	Total	Comments
April 1980	240	62	92	394	Transit Strike 5/1
July 1980	156	26	38	220	Service resumes 7/21
August 1980	139	54	40	233	Off-peak headways increased to 30 minutes on 8/4
September 1980	185	93	58	336	
October 1980	176	90	63	329	Midday and evening service discontinued on 10/20
November 1980	184	85	56	325	
December 1980*	184	88	57	329	
January 1981**	186	75	54	315	Prime time charge in effect; Bus fares increased by $0.10
February 1981	182	69	72	323	
March 1981	189	85	58	332	
April 1981	124	80	44	248	First and last bus runs discontinued on 4/6
May 1981	97	89	31	217	
June 1981***	61	62	30	153	

*First two weeks only.

**Last two weeks only.

***Service ended 6/12/81.

SOURCE: Madison Department of Transportation.

5. USER IMPACTS AND CHANGES IN TRAVEL BEHAVIOR

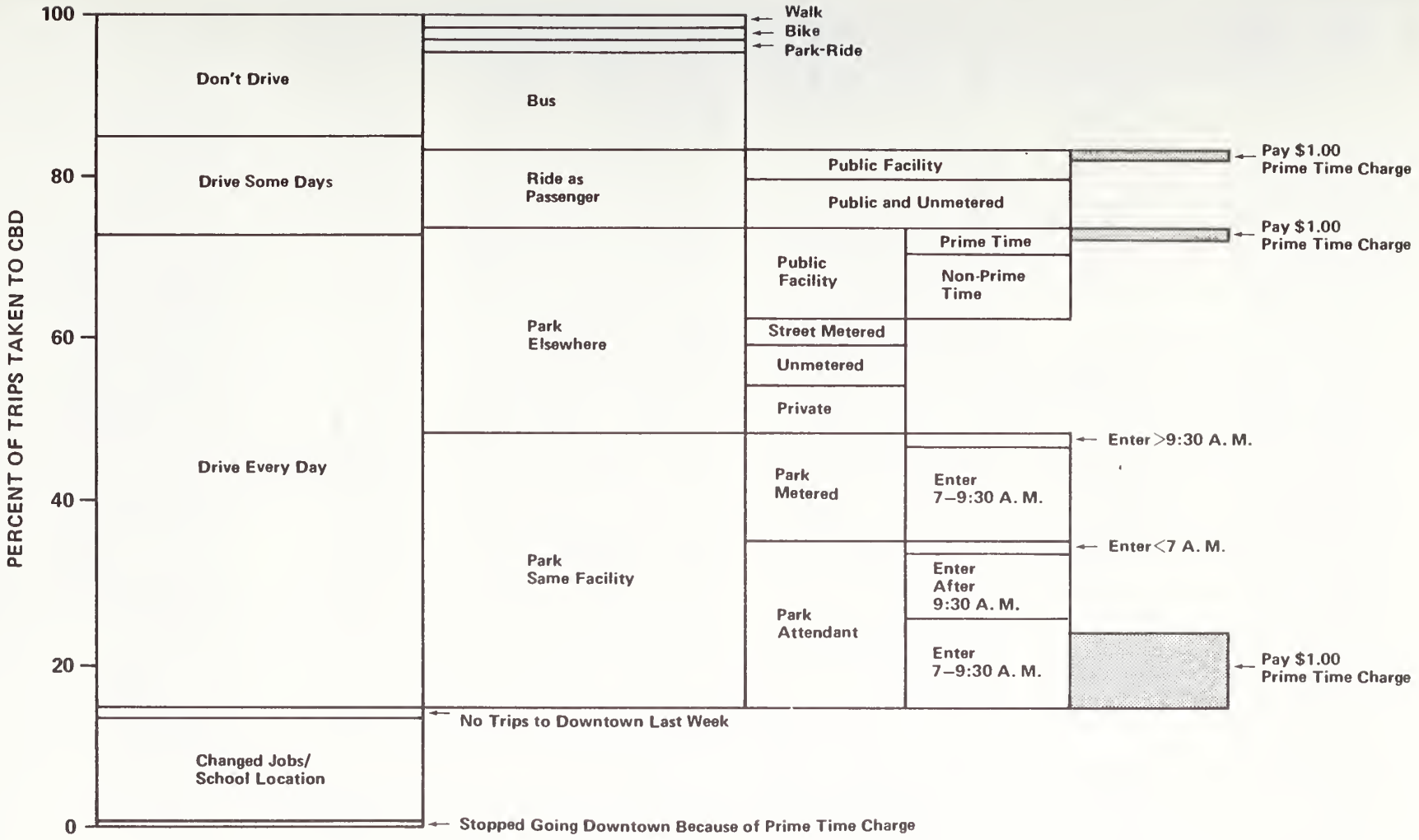
This section of the report analyzes the changes in individual travel behavior that occurred after the introduction of the prime time charge, and evaluates what particular changes were attributable directly to the prime time fee versus those changes that would have occurred absent the surcharge. The information presented in this section complements and extends the findings presented in Section 4 and represents the principal travel demand impacts that resulted from implementing the surcharge.

5.1 CHANGES IN PEAK-PERIOD TRAVEL BEHAVIOR

As described in earlier sections, the $1.00 peak-period surcharge applied only to individuals who entered four particular parking facilities in the Madison CBD between the hours of 7:00 a.m. and 9:30 a.m., and who parked for three or more hours. From the responses to the before all-day parking survey conducted in October 1980, parkers who met these two criteria were almost exclusively making either a work or a school trip. (Less than 3 percent were downtown for any other reason.) Thus, the immediate impact of the prime time charge was targeted very directly at the commuting market -- as it was intended.

In order to track the responses of individuals to the surcharge, a panel was established of all individuals who parked at the four surcharge facilities and who met the criteria of the prime time charge. So that they could be contacted at a later date for a follow-up interview, respondents were asked on the before all-day parking questionnaire to list a telephone number where they could be reached. (As described in more detail in Appendix B, a relatively high response rate of 60 percent was obtained to this question.) During April 1981, about four months after the prime time charge began, these individuals were contacted and a detailed record was obtained of how these individuals now make the work or school trip that they take to the CBD. If an apparent change in trip-making behavior was noted, the respondent was asked whether the prime time charge was a major reason or not. As a control measure, individuals parking in non-prime time facilities who would have met the criteria for the surcharge were also empaneled and contacted by telephone after the surcharge began.

Because some individuals commute by different modes during any given week and park in a varying number of locations, individuals were asked how many days during the week they travel to the CBD by different methods. Figure 5-1 traces through the various responses that were obtained for the panel of prime time parking facility users. Where possible, the responses have been weighted by the average number of days a given method of travel was used. (This procedure reduces the bias that occurs when multiple activities are reported by a small group of individuals.)



SOURCE: After Prime Time Telephone Survey, April 1981.

FIGURE 5–1. TRAVEL CHARACTERISTICS OF PANEL OF PRIME TIME PARKERS AFTER IMPLEMENTATION OF SURCHARGE

As shown in the first column, about 15 percent of the individuals responded that they did not travel to the CBD for the trip that they had made about six months ago, before the surcharge began. The major reason was a change in job location or school enrollment. Hardly anyone in the sample discontinued traveling to the CBD entirely because of the surcharge (1 person in 278 contacted). The majority of all respondents continued to drive every day to the CBD.

The responses from the control sample* of parkers at nonsurcharge facilities are shown in Figure 5-2. Here again, about 13 percent of the respondents did not travel to the CBD for the 7-day week being surveyed. "Drive every day" is again the dominant mode, but by a slightly higher proportion than was true for the prime time users.

Comparing Figures 5-1 and 5-2, it is apparent that prime time respondents were more likely to have switched parking locations and to have increased their use of the bus and walk modes. Another very striking difference between the two groups is the time of day that parkers entered the facility. While the proportion of respondents entering before 7:00 a.m. is nearly the same between the two groups, individuals using the surcharge facilities were much more likely to have entered after 9:30 a.m. in order to avoid the prime time charge. It is also evident from Figure 5-1 that many individuals who continued to use a prime time facility parked at a metered space to avoid the surcharge.

As depicted by the shaded boxes in the two figures, the percentage of individuals in the sample who paid the $1.00 prime time charge was relatively modest. Also emerging clearly from these figures are the travel behavior characteristics of commuters who on one given day of the week drive and park in a particular facility, but who then travel via a myriad of diverse ways on the other days of the same week. Some individuals switched from one surcharge facility to another and paid the prime time charge. Others rode as passengers in a vehicle that parked in a prime time facility and paid the surcharge. Finally, some individuals who before the surcharge had parked at least one day in a non-prime time facility parked in a prime time facility after the surcharge was instituted.

Relatively few individuals who parked in the surcharge facilities switched, in order to avoid the surcharge, to one of the three park-ride facilities that were opened as part of the demonstration. About 15.8 percent

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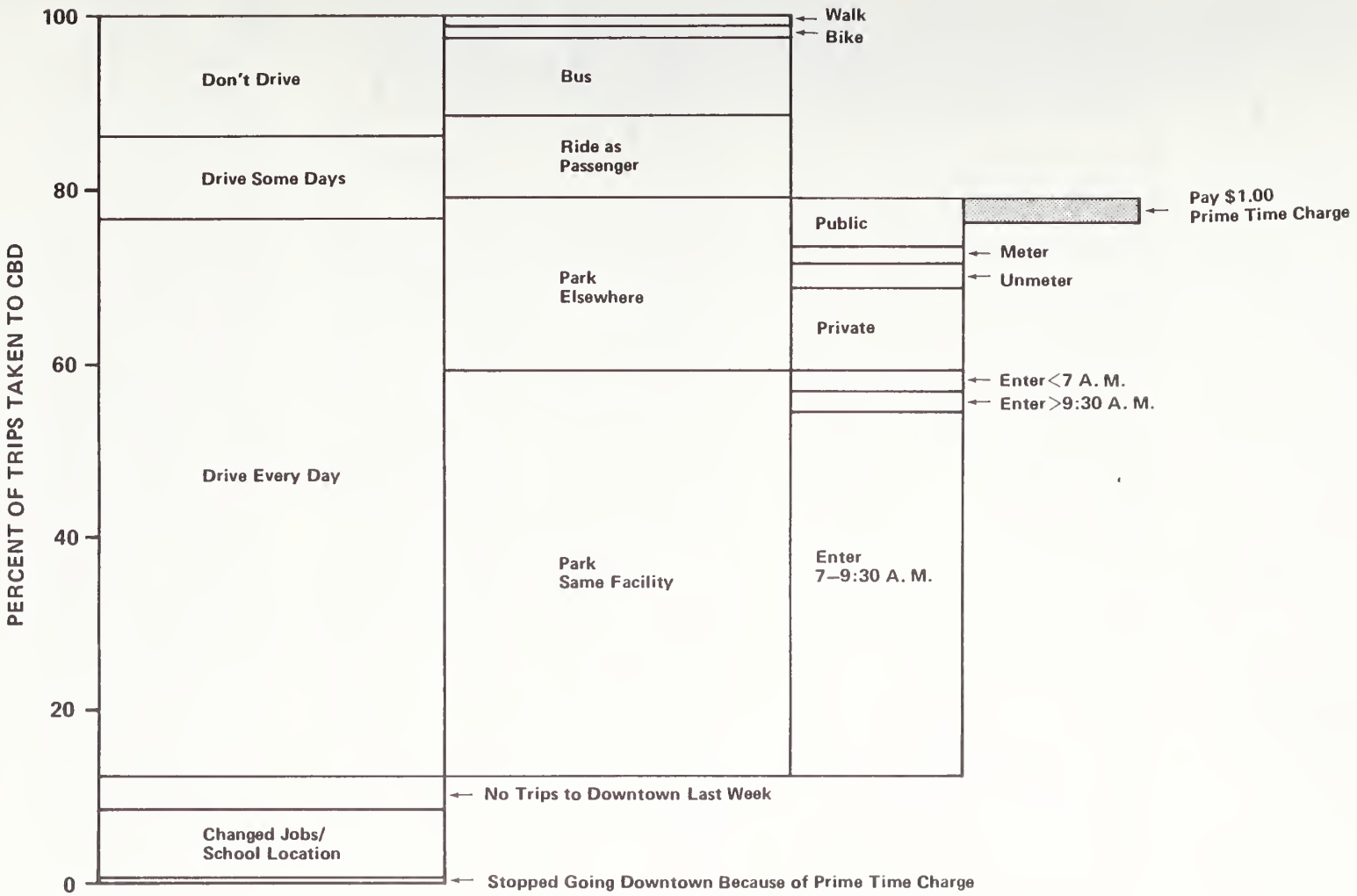
*While this is a fairly good control group, the composition of parkers differs somewhat from the main group due to differences in lot location and types of space available. The two groups are identical in the important respect that each individual entered the parking facility between 7:00 a.m. and 9:30 a.m. and parked for three or more hours on the day of the survey.



SOURCE: After Non-Prime Telephone Survey, April 1981.

FIGURE 5–2. TRAVEL CHARACTERISTICS OF PANEL OF NON-PRIME TIME PARKERS AFTER IMPLEMENTATION OF SURCHARGE

of the commuters in the panel of surcharge parkers reported using either the bus or park-ride shuttle bus modes, with a little over one-half saying that the major reason for doing so was the prime time charge. For the control panel, 10.8 percent reported using these modes. Therefore, between 5 to 8 percent of the commuting trips taken to the CBD by users of the prime time facilities before the surcharge shifted to the bus or park-ride modes. Within this group, 90 percent used the bus and only 10 percent the park-ride shuttle buses.

Shuttle bus ridership ranged between 500 and 650 boardings per day, meaning that these buses were being used by about 250 to 325 individuals per day, although over any given time period the number of different individuals would be larger since the same people do not use the lot every day. Not all of these persons, however, drove to the park-ride locations or drove to the CBD before the institution of this service. From the survey of parkers at the three park-ride lots, about 60 percent reported that they previously used an automobile to make the particular trip in question. Of these individuals, 65 percent previously parked in a public, off-street parking facility, with only 12 percent using a prime time facility. Thus, the vast majority of park-ride users selected this mode without any stimulus from the prime time parking charge. However, most of those individuals who previously did use a prime time facility said that they switched to the park-ride buses because of the surcharge.

To supplement the information presented in Figures 5-1 and 5-2, Table 5-1 hierarchically lists the reported "change" in travel demand that occurred along with the percentage of those individuals who said the $1.00 prime time charge was the major reason for the change. (Not included in the table are those individuals who reported that the surcharge had a minor influence on their reported change in travel demand.) The two most prevalent responses -- both in number and intensity -- were 1) a change in parking location to another parking facility, and 2) a change to a parking meter at the same facility. Using another mode (bus, park-ride, walk, or bicycle) for one or more days during the week was reported by 50 of the 278 respondents, with slightly over one-half of these indicating that the surcharge was the major reason. (In interpreting these responses, it should be recalled that the surcharge was introduced at only four parking facilities. The changes that occurred in travel behavior would likely have been different had additional facilities been included in the surcharge program.)

A moderate number of individuals, who before the surcharge program began parked for three or more hours, now left the facility within three hours and therefore did not have to pay the surcharge. However, only 18 percent of these users indicated that this action was taken to avoid the surcharge. (From the after telephone surveys, a few individuals reported that they left within three hours to avoid the surcharge and drove around the block and back into the same parking facility.) Sixty-five percent of the respondents who at certain times changed the time that they entered the parking facility

TABLE 5-1. CHANGES IN TRAVEL BEHAVIOR
RESULTING FROM PRIME TIME CHARGE

(Multiple Responses Possible)

Reported Change in Travel Behavior Due to Prime Time Charge	Number in Sample Reporting	Percent Attributing Change To Prime Time Charge
Changed Parking Facility	96	64
Parked at Meter in Same Facility	51	86
Used Another Mode	50	54
Left Within Three Hours	44	18
Rode as Passenger	39	41
Changed Time Entering Facility	37	65
Drove With Others	37	24
Stopped Coming Downtown	37	3

Total Sample = 278

SOURCE: After Prime Time Telephone Survey, April 1981.

(mostly entering after 9:30 a.m.) did so to avoid the surcharge. While an equal number of individuals increased the number of passengers in the vehicle, only one-quarter said that the surcharge was a major reason, indicating that carpooling arrangements are more heavily influenced by factors external to the pricing incentives of this demonstration. As mentioned above, the surcharge did little to discourage anyone from making trips to the downtown area.

Individuals who parked at a different location to avoid the surcharge increased their (one-way) walk time to their final destination by about two minutes (from 4.08 to 6.07 minutes, with a t-statistic of 2.6 that these mean times are significantly different). Since these persons presumably saved the $1.00 prime time fee, their implied price of time was $15.00 per hour. Those who changed parking locations for their own convenience and not because of the surcharge did not significantly alter walk access times to their final destination.

The survey questionnaires used to collect information from the panels of prime time and non-prime time parkers are provided in Appendix C. The responses that were obtained for each question have been added to these questionnaires. It is therefore possible to infer certain other characteristics of travel and parking behavior that may not have been explicitly discussed herein. For example, 60 percent (141 of 236) of the panel prime time parkers said that they drove every day on which they came downtown (during the week prior to the survey). However, of these individuals, nearly 30 percent said that, following implementation of the surcharge, they began to experiment with other ways of traveling downtown. The majority, 74 percent, tried using the regular bus system (see Question 25b). The reasons why they abandoned these other modes and went back to driving are given below:

Reason	Percent
• Bus is less convenient	44.7
• Bus takes too long	21.1
• Carpool is not flexible	10.5
• Need car for work	10.5
• Weather	5.3
• Bus is late/unreliable	5.3
• Too much to carry	2.6

In interpreting the information presented in Appendix C, one must be cautioned about the possibility of multiple responses and the skip-jump nature of the questionnaire. Also, it will not typically be possible to weight the responses by respondent trip frequencies.

5.2 SOCIOECONOMIC CHARACTERISTICS OF SELECTED GROUPS OF PRESENT AND FORMER PARKERS

An examination of the responses to the two all-day parking surveys (see Appendix B) reveals a fair amount of uniformity between the trip purpose of parkers and the usage characteristics of a particular facility, as well as the socioeconomic characteristics of the individuals who park there. For example, Brayton Lot, both before and after the introduction of the surcharge, is predominantly used by individuals who park on their way to work, while it is used infrequently by students going to school (76.9 percent vs. 1.6 percent, respectively). Average incomes of the parkers at this lot, therefore, are higher than those at most other facilities. Conversely, the majority of parkers at Dayton Ramp (54.1 percent) report that they are going to school, compared to only 18.2 percent of the parkers who report that they are going to work. Except for a slight increase in shopping and personal business trips, the trip purpose distribution of parkers at the Lake Street Ramp is very similar to that of Dayton Ramp -- that is, school trips account for about 50 percent of the parkers, while slightly less than 20 percent of the parking lot users are making a work trip.

Although the 600 University Avenue parking lot is located directly across the street from the Lake Street Ramp, its usage characteristics tend to favor longer-term parkers because of the parking fee structure that is in place. The majority of users are either on their way to work or to school. Given the facility's close proximity to the University of Wisconsin campus, most of the work trips may be assumed to be made by individuals associated with the university. Because of the large number of students using the facility, incomes are lower than average.

To evaluate whether certain socioeconomic groups were more or less likely to alter their travel behavior due to the introduction of the surcharge, it was necessary to establish a consistent basis for comparison; otherwise, as indicated above, characteristics of parkers can vary widely even between two parking facilities. Therefore, on the basis of their responses to the after telephone survey, individuals were divided into groups that either continued to drive, park, and pay the surcharge, or altered their behavior. Table 5-2 presents selected socioeconomic characteristics for individuals who elected to pay the surcharge, as well as for four groups who changed their travel behavior in some fashion.

Overall, it appears that males with lower incomes were more likely to have avoided the surcharge by using another mode or by changing the time that they entered the prime time facility. Higher-income individuals were more likely to change parking location (either to a meter or to a different facility), while females were more likely to continue parking at the same facility and pay the surcharge. Because of the small sample sizes (although they are not that small compared to the population size), statistically

TABLE 5-2. SOCIOECONOMIC CHARACTERISTICS OF PARKERS WHO PAID THE SURCHARGE VERSUS THOSE WHO CHANGED TRAVEL BEHAVIOR

Individuals Who:	Average Income	Average Age	Percent Male	Percent Who Use Vehicle During Day
Paid Surcharge [$\bar{X}$]*	$19,117	32.1	17	29
[σ]	(11,594)	(10.4)		
[n]	34	35		
Changed Parking Location	21,227	30.0	24	28
	(11,189)	(9.4)		
	55	60		
Used Another Mode	17,307	31.5	30	23
	(9,432)	(10.1)		
	26	27		
Formed Carpool	20,714	30.4	27	27
	(10,304)	(8.6)		
	14	15		
Changed Time Entering Facility	17,272	31.8	33	22
	(13,494)	(10.7)		
	22	24		

*$\bar{X}$ = estimated mean value;
σ = estimated standard deviation; and
n = number of observations in sample.

SOURCE: After Prime Time Telephone Survey and Before All-Day Parking Survey.

significant inferences cannot be made in all instances. The average incomes of those who changed modes as a result of the surcharge were found to be significantly less than the incomes of individuals who changed parking locations (at a 95 percent confidence limit). Individuals who changed the time at which they entered the parking facility also had significantly lower incomes (at a 90 percent confidence limit). However, there was no statistically significant difference between travelers who paid the surcharge and those who changed modes.

Age was not found to vary significantly among the five groups. (Part of the reason may be due to the heavy concentration of parkers in one age group -- over 40 percent of the respondents are between 25 and 34 years old.) At a 90 percent confidence limit, parkers who used another mode or who changed the time at which they entered the parking facility were more likely to be males. Individuals who paid the surcharge tended to include those who needed to use their car during the day. However, the difference between the groups was not significant.

5.3 EFFECT OF SURCHARGE ON AUTO OCCUPANCY LEVEL

As indicated previously, a substantial amount of turnover occurs in the normal carpooling patterns of individual commuters. However, because auto occupancy levels for various individuals both before and after the introduction of the surcharge are known, as is each respondent's assessment of whether this method of commuting to the CBD resulted from the prime time charge, it is possible to estimate the effect that the surcharge had on average auto occupancy levels.

Basically, about 6 percent of the individuals in the panel of surcharge parkers who were contacted during the after telephone survey reported that, as a result of the surcharge, they now carpool (either driving with others and/or riding with others). (Those who said they carpool but did not change the number of reported occupants are not included, nor are individuals who said that the surcharge had little or no influence on their decision to carpool.) The average auto occupancy levels of these carpoolers increased by 1.72 persons per car from an average of 1.06 to 2.78. However, when combined with the remaining population of all parkers at public, off-street facilities in the CBD (whose auto occupancy levels are presumed to have remained unchanged), auto occupancy levels for the total population of these off-street parkers increased by only 1 percent.

On the day of the before survey, 4,610 questionnaires were given out in surcharge facilities and 6,854 were distributed in nonsurcharge facilities. Given that about 30 percent of the individuals in the surcharge facilities entered between 7:00 a.m. and 9:30 a.m. and parked 3 or more hours, and that,

of these, 6 percent increased auto occupancies, the approximate number of parkers in this category is 83. If auto occupancies of the remaining 11,381 parkers on that day did not change over time, then the weighted change in average auto occupancies can be computed as (83 x 1.72) ÷ (83 + 11,381) or 0.012 persons per car. (Note that this is similar to but below the average 0.019 change in auto occupancies obtained from the before and after all-day surveys [1.336 and 1.355, respectively] as given in Appendix B.)

5.4 ATTITUDES AND PERCEPTIONS

Since individuals who travel by auto to downtown Madison typically park at only a subset of the parking facilities available, their knowledge of actual parking supply conditions is likely to be based on a limited amount of hard data (reflecting their own travel and parking choices) coupled with a far-ranging assortment of general impressions and perceptions. In order to evaluate whether individuals who park in the CBD area changed their perception of parking availability after the introduction of the prime time charge, individuals were asked during both all-day surveys and on the after telephone survey to rate their ability to find a place to park in downtown Madison during the commuting hours (7:00 a.m. to 9:00 a.m.) and during the midday (11:00 a.m. to 2:00 p.m.), using a scale on which 1 is "easy" and 7 is "hard."

Based on the responses of all individuals to the before and after all-day surveys, parkers reported that it was more difficult to find parking spaces at the surcharge rather than the nonsurcharge facilities. However, the same parkers reported that it was easier to find a parking space at both time periods after the introduction of the surcharge. For the 7:00 a.m. to 9:00 a.m. period, the average ranking declined by a statistically significant amount from 3.31 to 3.03 ($t = 5.0$), as did the ranking for the period 11:00 a.m. to 2:00 p.m. (from 5.28 to 4.83 with a $t = 9.0$). However, an examination of average ratings at the 13 major parking facilities in Madison (see Table 5-3) reveals a broad pattern of reductions in the rating measures (i.e., parking is easier to find) for facilities not directly affected by the surcharge, except for one facility (Doty Ramp) that operated at capacity just as often after the surcharge began (see Figure 4-5). Given the information presented in Section 4 that the non-prime time facilities were used more intensively after the surcharge began, one might have expected that the difficulty of finding a parking space in these facilities would have increased or at least remained the same.

One apparent reason why perception of parking availability for all parkers improved so ubiquitously may relate to the type and amount of publicity and advertising that was undertaken to explain the introduction and objectives of the prime time charge program as well as the availability of

TABLE 5-3. AVERAGE RATINGS OF PARKING AVAILABILITY BEFORE AND AFTER THE INTRODUCTION OF THE PRIME TIME CHARGE

	7:00 am - 9:00 am Period		11:00 am - 2:00 pm Period	
	Before	After	Before	After
Surcharge Facilities				
Brayton Lot	3.01	2.43	5.19	4.27
Dayton Ramp	3.78	3.37	5.18	4.83
Lake St. Ramp	3.38	3.51	5.63	5.18
600 University Ave.	3.21	2.73	6.01	4.53
Average (Weighted)	3.50	3.33	5.43	4.96
Nonsurcharge Ramps				
McCormick	2.61	2.18	4.29	3.75
Doty	2.67	2.63	5.35	5.10
Dane County	2.68	2.33	4.89	3.99
Average (Weighted)	2.66	2.40	4.85	4.33
Nonsurcharge Lots				
Frances Lot	3.72	3.26	5.38	5.10
Buckeye, Lot 452	3.89	2.85	5.22	4.67
Law, Blair, Post Office	3.84	3.05	5.27	4.46
Block 53/54	3.65	3.23	5.47	5.10
Average -- All Parkers	3.31	3.03	5.28	4.83

NOTE: 1 = "Easy" and 7 = "Hard".

SOURCE: All-Day Before and After Parking Surveys, October 1980 and April 1981.

the park-ride shuttle buses. In March 1981, after the prime time charge was implemented, an intensive series of 60-second radio and 30-second TV spots were aired as public service announcements by the local media. While the copy in the announcements (see Appendix D) focused on the attractiveness of downtown Madison (for shopping and doing business) and ways of avoiding the one-dollar surcharge, the ads stated that more short-term parking was available. On this score, it appears that the copy was effective in changing perceptions of how difficult it is to find a parking place in downtown Madison. (Some of these early perceptions could have represented memories of parking conditions prevailing in the late 1970s, when parking space availability was in particularly short supply.) The public announcements, in conjunction with the earlier leafleting campaign, were also effective in educating parkers about the prime time charge. During the various surveys, fewer than 5 percent of the respondents indicated that they had not heard about it.

For the panel of commuters who used a prime time facility and who entered between 7:00 a.m. and 9:30 a.m. and stayed three or more hours, perceptions of parking availability during the 7:00 a.m. to 9:00 a.m. period worsened after the surcharge was instituted. The average ranking increased from 2.88 to 3.20. Evidently, many of these individuals attempted to park at meters or at other facilities and found it a more difficult exercise compared to parking at their "normal" location. Also, the responses of these commuters are more likely to be influenced by their own experience rather than overall impressions -- at least with regard to the morning peak period. This same group of individuals said that it was somewhat easier to locate a space in the 11:00 a.m. to 2:00 p.m. time period (average scores decreased from 5.99 to 5.55).

Because at least some individuals did choose to carpool or take another mode as a result of the prime time charge, some parking spaces were freed up in the midday for use by noncommuters. The availability of parking spaces at various facilities was discussed in Section 4. Thus, capacity was available for individuals desiring to park in the central area. About 30 percent of the respondents to the after prime time telephone survey indicated that the $1.00 prime time charge did " ... in fact free up parking spaces for shoppers who arrive during the middle of the day."

An even higher 54 percent of the respondents felt that the $1.00 prime time charge resulted in commuters trying other ways of traveling downtown, such as taking the bus or carpooling. It is difficult to ascertain precisely how many new trips may have been attracted to the downtown area because of changes in the actual as well as perceived number of parking places. From the two all-day parking surveys, there appears to be no difference in the proportion of shopping trips made to downtown after the surcharge began. However, the percentage of social/recreational trips increased from 8.4 percent to 14.1 percent, while personal business trips increased from

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	7:00 am - 9:00 am Period		11:00 am - 2:00 pm Period	
	Before	After	Before	After
Surcharge Facilities				
Brayton Lot	3.01	2.43	5.19	4.27
Dayton Ramp	3.78	3.37	5.18	4.83
Lake St. Ramp	3.38	3.51	5.63	5.18
600 University Ave.	3.21	2.73	6.01	4.53
Average (Weighted)	3.50	3.33	5.43	4.96
Nonsurcharge Ramps				
McCormick	2.61	2.18	4.29	3.75
Doty	2.67	2.63	5.35	5.10
Dane County	2.68	2.33	4.89	3.99
Average (Weighted)	2.66	2.40	4.85	4.33
Nonsurcharge Lots				
Frances Lot	3.72	3.26	5.38	5.10
Buckeye, Lot 452	3.89	2.85	5.22	4.67
Law, Blair, Post Office	3.84	3.05	5.27	4.46
Block 53/54	3.65	3.23	5.47	5.10
Average -- All Parkers	3.31	3.03	5.28	4.83

NOTE: 1 = "Easy" and 7 = "Hard".

SOURCE: All-Day Before and After Parking Surveys, October 1980 and April 1981.

the park-ride shuttle buses. In March 1981, after the prime time charge was implemented, an intensive series of 60-second radio and 30-second TV spots were aired as public service announcements by the local media. While the copy in the announcements (see Appendix D) focused on the attractiveness of downtown Madison (for shopping and doing business) and ways of avoiding the one-dollar surcharge, the ads stated that more short-term parking was available. On this score, it appears that the copy was effective in changing perceptions of how difficult it is to find a parking place in downtown Madison. (Some of these early perceptions could have represented memories of parking conditions prevailing in the late 1970s, when parking space availability was in particularly short supply.) The public announcements, in conjunction with the earlier leafleting campaign, were also effective in educating parkers about the prime time charge. During the various surveys, fewer than 5 percent of the respondents indicated that they had not heard about it.

For the panel of commuters who used a prime time facility and who entered between 7:00 a.m. and 9:30 a.m. and stayed three or more hours, perceptions of parking availability during the 7:00 a.m. to 9:00 a.m. period worsened after the surcharge was instituted. The average ranking increased from 2.88 to 3.20. Evidently, many of these individuals attempted to park at meters or at other facilities and found it a more difficult exercise compared to parking at their "normal" location. Also, the responses of these commuters are more likely to be influenced by their own experience rather than overall impressions -- at least with regard to the morning peak period. This same group of individuals said that it was somewhat easier to locate a space in the 11:00 a.m. to 2:00 p.m. time period (average scores decreased from 5.99 to 5.55).

Because at least some individuals did choose to carpool or take another mode as a result of the prime time charge, some parking spaces were freed up in the midday for use by noncommuters. The availability of parking spaces at various facilities was discussed in Section 4. Thus, capacity was available for individuals desiring to park in the central area. About 30 percent of the respondents to the after prime time telephone survey indicated that the $1.00 prime time charge did " ... in fact free up parking spaces for shoppers who arrive during the middle of the day."

An even higher 54 percent of the respondents felt that the $1.00 prime time charge resulted in commuters trying other ways of traveling downtown, such as taking the bus or carpooling. It is difficult to ascertain precisely how many new trips may have been attracted to the downtown area because of changes in the actual as well as perceived number of parking places. From the two all-day parking surveys, there appears to be no difference in the proportion of shopping trips made to downtown after the surcharge began. However, the percentage of social/recreational trips increased from 8.4 percent to 14.1 percent, while personal business trips increased from

12.4 percent to 15.7 percent. Because this information is based on two separate one-day samples, the results could easily be influenced by exogenous factors such as sales or sporting events. In any case, the change in perceptions about parking availability was found to be significant.

During the after prime time telephone survey, individuals were asked whether the prime time program should be continued to free up parking spaces during the midday or, alternatively, to encourage travelers to try other modes. In general, the respondents were more favorable toward continuing the program on the grounds that individuals are apt to try other (more fuel-efficient) modes rather than free up parking spaces (26 percent and 17 percent, respectively). Of just those surveyed who paid the surcharge, only 11 percent felt that the program should continue because it frees up space for midday use, while an exceptionally large 60 percent felt that the program should continue because it encourages people to commute in other ways. Quite ironically, only 6 percent of the respondents who elected (or were forced) to ride with others felt that the surcharge should continue as a means of encouraging individuals to use other modes.

6. IMPLEMENTATION CONCERNS AND OPERATOR IMPACTS

As described in the preceding sections, the peak-period parking surcharge demonstration had a variety of effects on the travel and parking behavior characteristics of users of the publicly available parking facilities in the central area of Madison. This section of the report examines various implementation issues (i.e., public, political, and institutional concerns) and operator impacts, such as parking revenues and costs, and shuttle bus operating cost results. As the subsection immediately below describes, there was relatively little difficulty in reaching a consensus opinion to submit a grant application for the prime time charge program. However, as time passed and it appeared that certain pressures on downtown parking availability had lessened, the implementation of the prime time program was called into question. Section 6.1 describes the events leading to its eventual implementation.

6.1 IMPLEMENTING THE PRIME TIME PARKING CHARGE

The peak-period parking surcharge program evolved from an earlier proposal by the City of Madison to institute a roadway or congestion pricing demonstration project (see Section 3). In 1978 when the grant for the prime time parking demonstration was submitted to UMTA, the city had a shortage of parking spaces available for parkers arriving during the middle of the day (11:00 a.m. to 2:00 p.m.). The peak-period parking pricing demonstration, therefore, was conceived as a way of encouraging commuters to carpool or to use other modes, thereby freeing up spaces for shopping and personal business trips to the downtown.

Public hearings held on the demonstration application in Madison in 1978 received a favorable reaction from the League of Women Voters. In prepared remarks, the League expressed satisfaction at seeing "the integration of the three objectives of parking, car-pooling and mass transit to advance balanced transportation through the use of incentives and disincentives. The parking controls and pricing ... provide disincentives for the use of low-occupancy private vehicles during peak hours and incentives for vehicles as higher occupancy carpools."

However, a representative from the Madison Area Technical College expressed disapproval of any program that increased parking fees, since it was stated that 65 percent of the students have outside jobs and need to use their cars for work. A further argument made against the proposal was that the increase in parking fees was "not to pay the revenue bonds but to manipulate the modes of transportation that people use in getting downtown."

A local business group lent its approval to the project but at the same time expressed its desire that a new 1,000-car parking garage be built in the downtown area. Apparently, this group was more concerned with promoting the creation and expansion of parking spaces rather than the managing, through pricing policies, the existing parking supply.

After hearing all sides of the argument, the Madison Common Council, in 1978 and later in 1979, voted its support for undertaking the demonstration.

As the time to implement the peak-period surcharge drew near, the City Parking Manager submitted a report to the Parking Utility Committee expressing a series of reservations about implementing the program at all five of the originally-proposed, attended parking facilities. His main concerns were that 1) the program could have a detrimental effect on Parking Utility revenues, which could subsequently affect the ability of the city to repay outstanding revenue bonds without using subsidies from the general fund; and 2) parking occupancies had declined since the program was conceived two years earlier, lessening the need to free-up additional spaces. Four days later, on September 30, 1980, the Parking Utility Committee, by a vote of 5 to 1, recommended that the peak-period surcharge not be implemented. Subsequently, on October 14, 1980, the Transportation Commission, by a unanimous 8-0 vote, also rejected the surcharge program as proposed and requested that the city DOT staff report back with an evaluation of alternatives to the $1.00 prime time charge.

At this point, proposals for a series of alternative parking pricing strategies, ranging from flat to graduated pricing increases, and a prime time surcharge that would be in effect at a reduced number of parking facilities were made and evaluated. However, resistance to the concept of a prime time charge continued to be strong and the concept was rejected again by the Parking Utility and the Transportation Commission.

The four major objections against the prime time charge were 1) the effect on Parking Utility finances; 2) the effect on short-term parking; 3) the amount of the ($1.00) rate increase; and 4) the effect on the image of parking and the downtown. To address the last three concerns, it was proposed to restrict the surcharge to only those individuals who enter the parking facility between 7:00 a.m. and 9:30 a.m. and who park three or more hours. In addition, it was proposed that the surcharge be implemented at only four central-area parking facilities. Although calculations of the effect of the surcharge indicated that parking revenues would increase, UMTA provided further guarantees to the city and bondholders in the event of a revenue decrease. However, even this alternative was rejected by the Board of Estimates by a 4-2 vote on November 18, 1980.

Finally, with the possibility that UMTA would seek reimbursement for all demonstration expenses expended as of that date, Madison and UMTA officials agreed on a $1.00 prime time charge that would be instituted at four

facilities for a period of six months. With the backing of the Mayor of Madison, this proposal was presented to and approved by the Madison Common Council on December 16, 1980.

Two weeks later, on December 29, 1980, the prime time charge began to be collected at three of the attended facilities. (The 600 University Avenue facility started on January 5, 1981.) As it turned out, very little public reaction was voiced against the rise in parking fees. During the first month of operation, only seven complaints and one compliment were received by Madison's Department of Transportation. No "letters to the editor" or newspaper articles were printed by the local papers. A local TV station reportedly interviewed parkers about the surcharge and did broadcast some of the negative comments that were received, however.

As a further indication of the low level of public and political reaction that occurred after the prime time charge began, no calls for discontinuing the program were heard at the conclusion of the six-month "trial" period. Thus, the surcharge continued to be collected, and eventually was in effect for a period of one year. It was discontinued on January 4, 1982 at the same time that hourly parking rates were increased substantially from $0.20 to $0.35. This action was taken because it was felt that the $1.00 surcharge, in addition to these large rate increases, would result in a very high fee for all-day parkers. As it developed, however, the actual change to the parking rate structure resulted in a disproportionately larger increase for short-term parkers, thus counteracting one of the principal goals of the demonstration, which was to encourage more short-term parking. Long-term parkers who previously were paying the surcharge experienced essentially no change in daily parking costs. This action reflects a return to the concept of using traditional approaches to meeting parking revenue budgets rather than exploring options for achieving broader transportation system management objectives.

6.2 EFFECT ON PARKING REVENUES

A major concern that arose during the planning of the prime time parking demonstration, as discussed above, was the effect that the prime time charge would have on parking revenues, since the city uses certain of these revenues to repay the principal and interest on outstanding parking revenue bonds. As it developed, however, total parking revenues each month after the institution of the surcharge exceeded the revenues for the same month one year earlier (see Table 6-1). The period June 1980 to June 1981 was the only exception and occurred because June 1980 revenues were abnormally high due to a strike by bus transit employees.

TABLE 6-1. MONTHLY PARKING REVENUES COLLECTED IN MADISON
BY TYPE OF PARKING SPACE
(Thousands of Dollars)

Month	Surcharge Facilities			Other, Nonsurcharge Attended Facilities	Off-Street Meter Space	On-street Meter Space	Total Parking Revenue
	600 University Avenue	Attended††	Meter				
January 1980	9.7	-	34.3	-	46.5	29.0	119.5
February	9.2	-	37.2	-	41.8	27.1	115.3
March	7.7	-	36.8	-	41.8	35.0	121.3
April*	9.0	30.9	13.9	18.3	29.6	32.7	134.4
May**	8.9	35.8	14.2	25.5	27.4	29.5	141.3
June**	5.6	34.7	9.3	25.0	29.9	36.1	140.6
July**	10.4	37.0	9.9	25.6	30.7	34.2	147.8
August	11.0	31.6	12.0	21.7	25.2	30.9	132.4
September	8.5	40.7	14.2	26.5	27.1	38.4	155.4
October	10.5	45.0	18.5	27.4	33.7	31.6	166.7
November	8.7	36.3	13.5	22.9	27.7	30.9	140.0
December	8.9	35.2	12.6	23.8	24.2	33.8	138.5
January 1981***	10.9	32.7	13.6	25.3	29.0	30.0	141.5
February	9.0	38.5	15.1	25.3	24.1	29.2	141.2
March	8.7	39.6	14.4	27.2	34.5	39.9	164.3
April	11.3	42.3	15.4	27.9	29.6	32.4	158.9
May	9.4	36.2	18.0	25.3	32.4	32.9	154.2
June	8.8	28.3	11.2	25.2	26.6	35.5	135.6
July	13.6	34.3	15.6	27.7	33.2	36.1	160.5
August†	12.5	35.3	14.2	24.2	35.8	37.5	159.5
September†	11.9	49.1	17.3	29.0	35.3	34.4	176.9
October†	14.3	53.5	21.7	30.0	36.0	37.3	192.8
November†	11.4	42.9	15.2	25.5	34.9	31.0	160.9
December†	9.6	41.5	14.4	26.4	36.5	32.4	160.8

*Phased opening of five attended facilities.

**Bus strike.

***$1.00 prime time charge instituted.

†Block 53 and Block 54 closed for Capitol Ramp and Center construction.

††Brayton, Dayton, and Lake Street.

SOURCE: Parking Utility Division, Madison Department of Transportation.

The largest impact on parking revenues resulted simply from replacing parking meters with attendants at five facilities in April 1980. Although such revenues are difficult to determine precisely, city personnel have estimated (using information obtained from a study of expired parking meters) that parking revenues from the attendant-controlled spaces are about 30 percent greater than those obtained from using parking meters. Therefore, the city has determined that about $15,000 in additional parking revenue each month is attributable to attendants.

Using the above factor, parking revenues after the introduction of the prime time charge on December 29, 1980 increased on average by approximately $10,000 each month compared to the same month one year earlier. During the five-month period of January to May 1981, a fairly steady average of 256 people paid the $1.00 surcharge at the Dayton, Lake, and Brayton prime time parking facilities, while an average of about 67 individuals paid the surcharge at the 600 University Avenue lot. Assuming 21.67 work days per month, these 323 individuals paid approximately $7,000 per month in additional parking fees. However, parking revenues were lost due to the (approximate) 7 percent of certain peak-hour parkers (numbering about 95 individuals) who began using other modes and discontinued parking in the central area. Revenues were also reduced as a result of some commuters switching from an attended space to a parking meter. These reductions, however, were offset by additional parking revenues from 1) midday parkers who would have preferred parking at a meter but had to settle for an attendant space, and 2) new trips attracted to the CBD as a result of the actual and perceived increase in parking spaces (see Section 5). While it is difficult to determine precisely the individual effects of these offsets, it appears likely that the prime time program resulted in an increase in parking revenues of at least $6,000 to $10,000 per month.

Throughout the summer months, all parking revenues, including those derived from the surcharge, decreased due to vacations and the decline in the student population. Beginning in August 1981, monthly parking revenues increased by even larger amounts compared to the prior year. One apparent cause was the closing of two large parking lots (Block 53 and Block 54), which forced more parkers to use the attended parking facilities.

6.3 COST OF PARKING OPERATIONS

Computing the capital and operating costs required to collect the $1.00 prime time charge is heavily dependent upon the current method used to collect parking fees. For example, if the subject parking facilities are already attendant-controlled, then the additional cost of collecting the $1.00 fee is practically zero. The only costs that would be required are those necessary to advertise and educate the public concerning the parking

fee change. In some instances these costs can be minimized through the use of "public service" announcements and other "free" publicity.

Conversely, costs can become quite significant if it is necessary to convert existing parking facilities from meter control to attendant operation. In this instance, entrance and exit ways may have to be modified to incorporate ticket-dispensing machines and attendant booths. Depending on the physical layout, some parking spaces may be lost. Equipment for automatically computing parking charges must be ordered, installed, tested, and maintained. Finally, personnel must be hired and trained to operate the equipment over the total number of hours that the facility will be in service, unless other manning options, as described below, are used.

In Madison, about $250,000 was required to convert five parking facilities from meter control to attendant control. (Note that only three of these facilities were included in the surcharge program that was actually implemented.) Included in this amount were costs for the physical changes required at each facility (i.e., entrance ways, signs, and channelization) as well as purchasing and installing the necessary equipment and electrical work. The incremental cost involved in operating the four attendant facilities (i.e., booth attendants, tickets, and electricity for light and heating) has averaged about $17,800 per month. As mentioned, about $15,000 per month in new parking revenue was estimated to have resulted from switching to attendant operation. The attendant operation therefore resulted in a net deficit of approximately $2,800 per month. If the $6,000 to $10,000 in additional revenues from the $1.00 prime time charge are taken into consideration, the attended surcharge operation netted between $3,200 and $7,200 per month.

With regard to the issue of transferability, these costs are highly variable and depend on prevailing wage rates and fringe benefits, the size of the facilities, and the rates of entry and exit, as well as on the total number of hours that the parking facilities are operated. With garages operated by meters, a peak-period surcharge program could be implemented with a low- or reduced-capital budget in at least two ways. In the first alternative, attendants are stationed at the entrance way of each parking facility to collect the surcharge fee only from those parkers entering during prime time hours. This approach would reduce significantly the number of attendant hours that are required. This alternative, by itself, could not distinguish between short- and long-term parkers. The second approach would rely on some form of the honor or self-service system, by which peak-period (and if desired, long-term) parkers purchase through a vending machine a validated ticket that is displayed on the inside of the vehicle. Parking officers would check for the validated ticket at the same time that they perform their regular rounds.

6.4 COST OF SHUTTLE BUS OPERATIONS

This section examines Madison Metro's cost of operating the shuttle bus service and the associated fare revenues that were collected. The analysis indicates that the relatively low usage of the park-ride shuttle buses, compared to the level of service offered, resulted in a relatively high cost, and thus subsidy, per trip.

From September 1, 1980 to October 18, 1980, when the shuttles operated from 6:00 a.m. to 10:00 p.m., about 68.8 bus-hours of service were provided each weekday. After midday and late evening runs were terminated, about 48.8 bus-hours of service per day were provided for the period October 18 through December 31, 1980. This service was supplied at an average cost per bus-hour of $26.50, resulting in a total operating cost of $128,005 for this four-month period. During this same period, $14,226* in farebox revenues were collected, implying that 35,565 one-way trips were made at the $0.40 fare.

The average operating cost per trip is thus $3.60; deducting the $0.40 fare paid yields an average subsidy per trip of $3.20. Stated alternatively, the farebox recovery ratio during this period was a relatively low 11.1 percent.

In the three months following the introduction of the surcharge, a total of 48.8 bus-hours of service per day continued to be provided. As Madison Metro operates on a calendar-year basis, fares were increased on January 1, 1981 by $0.10 to $0.50, and operating costs increased to $32.40 per bus-hour. Total operating cost from January through March 1981 was thus computed to be $99,651. Farebox revenues during this same period totaled $11,590, yielding 23,180 one-way trips. Given this new cost structure, the average (gross) cost per trip increased to $4.30, implying a subsidy of $3.80. The farebox recovery ratio improved slightly to 11.6 percent since no off-peak service was being provided.

As a result of the cost structure for the shuttle bus system, the service was discontinued on June 12, 1981, although the park-ride lots remained open and service continued via existing bus routes.

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*Not included in this figure are any farebox revenues that may have been collected on the regular bus system from park-ride patrons.

7. CONCLUSIONS

The Madison Peak-Period Parking Pricing Demonstration tested an innovative approach to managing the use of parking spaces through pricing techniques in an urban area. From this test, as outlined in the preceding sections, numerous observations concerning the implementation and resultant travel behavior responses have been made. When assessing the potential merits of this type of pricing program for other urban areas, however, it is necessary to account for the effects that the characteristics of the local setting and the demonstration itself had on the observed results. Certain of these transferability issues have been noted in the Executive Summary and will not be repeated here. Rather, this section focuses on a more generalized assessment of the demonstration.

Perhaps one of the most noteworthy aspects of the Madison demonstration was that it was implemented at all. Although time-of-day pricing is common in other industries (e.g., telephone service) and to a limited extent in urban mass transportation, it has seen little or no application with respect to the automobile in the United States. Roadway or congestion pricing strategies have been proposed for decades, but as yet such concepts remain as far from implementation as ever. Peak-period parking pricing, however, is a close proxy for these roadway pricing strategies, and, as documented herein, the practice was in effect for one year in Madison.

Without the impetus provided by the demonstration, it is likely that the time-of-day pricing strategy as used in Madison would not have been implemented. Thus, on one level the current political, social, and institutional situations continue to favor existing pricing practices. Although such considerations are not evaluated here, businesses and shop owners likely receive regular feedback on parking shortages and typically have the means or forums to inform local policymakers of developments in this area. In Madison, downtown business establishments favored the attendant-operated surcharge program both as a way of freeing up spaces for shoppers and as a way of introducing a validated parking program. They also favor the construction of new parking facilities. Notwithstanding these comments, it is particularly relevant to note that the prime time charge did not elicit a vociferous response from the community against it. However, when asked, most commuters to the CBD had negative comments about the program.

The demonstration and this accompanying evaluation clearly show that individuals will adjust their travel behavior in response to changes in the parking pricing structure. While in Madison the large majority of individuals continued to rely on their automobiles for commuting to work or

school, some diversion to other modes was noted. It is likely that, had the surcharge been implemented more widely, modal diversions would have been larger, while diversions to alternative parking facilities would have been reduced. In both cases, parking revenues would have increased given the inelastic price elasticities that were observed at these parking fee levels.

No single demonstration can produce a universal "model" that can be used to predict or quantify the impacts of similar events implemented at all other localities. Insufficient information is available concerning the interrelationships among the levels of transportation services provided (and the prices charged) and the vitality of a local business and economic environment. However, as a method of allocating or rationing scarce resources (parking spaces), peak-period or time-of-day pricing strategies, such as the program implemented in Madison, can be included in the list of alternatives to be considered for possible implementation elsewhere.

APPENDIX A. DEMONSTRATION SETTING

APPENDIX A. DEMONSTRATION SETTING

A.1 GENERAL SITE DESCRIPTION

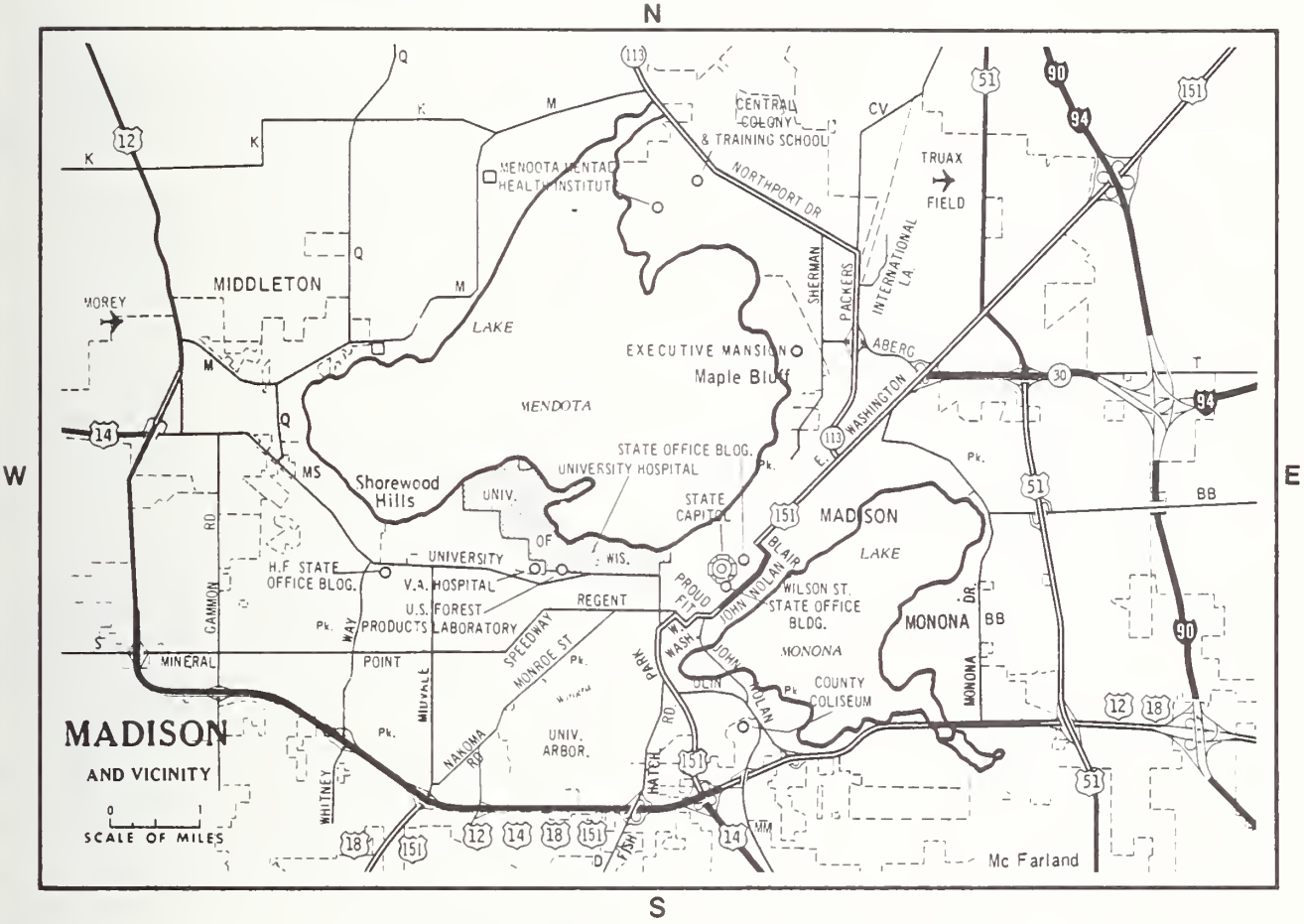
Madison, the state capital, is located in south-central Wisconsin, 80 miles west of Milwaukee and 150 miles northwest of Chicago. A map of Madison and vicinity is presented in Figure A-1. Madison's population grew rapidly in the 1960s, increasing by 35.6 percent from 1960 to 1970. According to the 1980 Census, however, Madison's population decreased by 1.5 percent over the next 10 years, from 173,258 in 1970 to a 1980 Census total of 170,616. The city's corporate limits encompass 54 square miles with a corresponding population density of approximately 3,160 people per square mile. This is only slightly smaller than the average population density of 3,551 persons per square mile for central cities located in urbanized areas in the United States.

Madison is also the county seat of Dane County, which is coterminous with the Madison Standard Metropolitan Statistical Area (SMSA). This county, comprising 1,205 square miles, had a 1980 population of about 323,545, with two-thirds of the people living in the Madison urbanized area (69 square miles). From 1970 to 1980, population in Dane County increased by 11.5 percent. All of this growth occurred outside the city of Madison. A more complete list of these and other demographic characteristics of Madison is supplied in Table A-1 and discussed in the next subsection.

A.2 DEMOGRAPHIC DESCRIPTION

The median family income in Madison for 1969 was $11,385, which was almost 20 percent higher than the national median family income of $9,586 for the same year. According to the 1980 Census, median family income doubled to $22,856 by 1979. Of the city's 66,451 households in 1980, 13.7 percent earned less than $10,000 while 21.1 percent earned above $35,000. Comparable data for urbanized areas in the United States are not yet available from the Census.

The median number of years of schooling in Madison for persons 25 years and older was 14.1 years in 1980, increasing from 12.8 in 1970. Approximately 14,879 people or 8.7 percent of Madison's 1980 population of 170,616 were 65 years of age or older. The median age of Madison's population increased from 23.6 to 26.9 years between 1970 and 1980. The percentage of the population under the age of 18 decreased significantly from 29.9 to 20.5 over this same time period. Madison's residents are predominantly white, comprising over 94 percent of the population; about 2.7 percent are black and the remaining 3.0 percent consist of other nationalities.



SOURCE: 1976 Official Highway Map of Wisconsin.

FIGURE A–1. MADISON AND VICINITY

TABLE A-1. DEMOGRAPHIC CHARACTERISTICS OF THE CITY OF MADISON AND THE URBANIZED AREAS OF THE UNITED STATES (For 1980 Unless Otherwise Stated)

Characteristic	Madison*	United States**
1. Population	170,616	139,170,683 (366 areas)
2. Growth Rate		
Percent Change in Population		
1960-1970	35.6	23.6
1970-1980	-1.5	17.5
3. Ethnic Breakdown		
Percent Black	2.7	14.4
Percent White	94.3	79.1
Percent Other	3.0	6.5
4. Land Area (Sq. Mi.)	54	52,017
5. Density (Pop./Sq. Mi.)	3,160	2,675 3,551 (inside central cities)
6. Median Age (Years)	26.9	30.0
7. Age Distribution		
Percent Below 18	20.5	27.0
Percent Above 64	8.7	10.9
8. Median Years of Schooling	14.1	
(Persons 25 Years Old and Over)	12.8 (1970)***	12.1 (1970)***
9. Total Number of Households	66,451	50,541,185
10. Average Number of Persons per Household	2.38	2.68
11. Median Family Income (1979)	$22,856	N/A
12. Income Distribution (1979)		
Percent Below $10,000	13.7	N/A
Percent Above $35,000	21.1	N/A

Table continued on following page.

TABLE A-1 (Continued).
DEMOGRAPHIC CHARACTERISTICS OF THE
CITY OF MADISON AND THE URBANIZED AREA OF THE UNITED STATES
(For 1980 Unless Otherwise Stated)

Characteristic	Madison*	United States**
13. Number of Persons in Labor Force	95,449	N/A
Number of Females	45,445	N/A
14. Unemployment Rate (4/1981)† (Percent)	4.9 (Dane Co.)	7.3
15. Modal Split Percent Workers Using Public Transportation for Work Trip	14.9 (1980) 9.8 (1970)***	13.8 (1970)***
16. Auto Ownership (1970)*** Percent Households with One or More Autos	81.2	79.9
17. Mean Travel Time to Work (Minutes)	17.4	
18. Persons per Private Vehicle	1.17	
19. Mean Temperature (°F) January	16.8††	
July	70.1††	
20. Mean Precipitation (Inches)	30.25††	
Percent Possible Sunshine	57.0††	
Wind Velocity (Mph)	9.9††	

Notes on following page.

TABLE A-1 (Continued).
DEMOGRAPHIC CHARACTERISTICS OF THE
CITY OF MADISON AND THE URBANIZED AREA OF THE UNITED STATES
(For 1980 Unless Otherwise Stated)

*Unless otherwise noted, Madison data are from U.S. Department of Commerce, 1980 Census of Population, Vol. 1, Characteristics of the Population, Ch. B - "General Population Characteristics: Wisconsin" (August 1982); and Ch. C - "General Social and Economic Characteristics: Wisconsin" (August 1983).

**Unless otherwise noted, U.S. data are from U.S. Department of Commerce, 1980 Census of Population, Vol. 1, Characteristics of the Population, Ch. B - "General Population Characteristics: United States Summary" (May 1983).

***U.S. Department of Commerce, Social and Economic Statistics Administration, Bureau of the Census, County and City Data Book, 1972: A Statistical Supplement (1972).

†U.S. Department of Labor, Bureau of Labor Statistics, Employment and Earnings, Vol. 28, No. 7 (July 1981).

††U.S. National Oceanic and Atmospheric Administration, Local Climatological Data: Annual Summary with Comparative Data - Madison, Wisconsin, 1977.

A.3 CLIMATE*

Madison is situated on a narrow isthmus of land between Lakes Mendota and Monona. Lake Mendota (15 square miles in size) lies northwest of Lake Monona (5 square miles) and the lakes are only two-thirds of a mile apart at their closest point, which is also the location of Madison's CBD.

Madison has the typical continental climate of interior North America with a large annual temperature range and frequent short-period temperature changes. Temperature extremes have ranged from 107°F to -37°F. Winter temperatures (December-February) average 20°F, with the summer average (June-August) a relatively cool and mild 68°F.

There are no dry and wet seasons as such but 59 percent of the annual precipitation (the mean is 30.25 inches) falls during the summer months from May through September. While the "cold season" precipitation is somewhat less, it lasts over a longer period of time. During an average winter, the ground is covered with an inch or more of snow about 60 percent of the time from December 10 to February 25.

Madison lies in the path of frequent cyclones and anticyclones, which move eastward over the region during fall, winter, and spring. March and November are the windiest months in Madison, with an average wind velocity of 9.9 miles per hour. Tornadoes occur infrequently, averaging one occurrence every three to five years in Dane County.

A.4 ECONOMIC BASE

The state government and the University of Wisconsin, both located in or very near to downtown Madison on the isthmus, are the major employers in the area. In 1970, 39.4 percent of the labor force of 78,773 were employed by the government and 22.3 percent were employed in educational services. Recent data for the month of April 1981 show that, of the 171,100 employees working in Dane County, 34.1 percent were employed by the government, (compared to 17.7 percent for the United States as a whole), and 26.2 percent were employed in educational, business, repair, and personal services. Table A-2 can be used to compare employment by industry division for that month for Dane County and the entire United States. In April 1981, the unemployment rate in Dane County was 4.9 percent, significantly lower than the national unemployment rate of 7.3 percent for the same month.

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*Information in this section is taken from U.S. National Oceanic and Atmospheric Administration, Local Climatological Data: Annual Summary with Comparative Data, Madison, Wisconsin, 1977.

TABLE A-2. EMPLOYEES ON NONAGRICULTURAL PAYROLLS IN DANE COUNTY AND THE UNITED STATES BY INDUSTRY DIVISION (APRIL 1981)

Types of Employment	Dane County		United States	
	Number	Percent	Number (000s)	Percent
Contract Construction	6,500	3.8	4,418	4.8
Manufacturing	19,800	11.6	20,332	22.2
Transportation and Public Utilities	6,300	3.7	5,161	5.7
Wholesale and Retail Trade	35,300	20.6	20,636	22.6
Finance, Insurance, and Real Estate	12,800	7.5	5,316	5.8
Services, Mining	32,100	18.7	19,425	21.2
Government	58,300	34.1	16,170	17.7
	171,100	100.0	91,458	100.0

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Employment and Earnings, Vol. 28, No. 7 (July 1981), pp. 118-119.

Figure A-2 shows the Madison central business district with the State Capitol at the center. High levels of retail activity extend from the capitol along State Street to the campus of the University of Wisconsin, approximately one mile to the west.

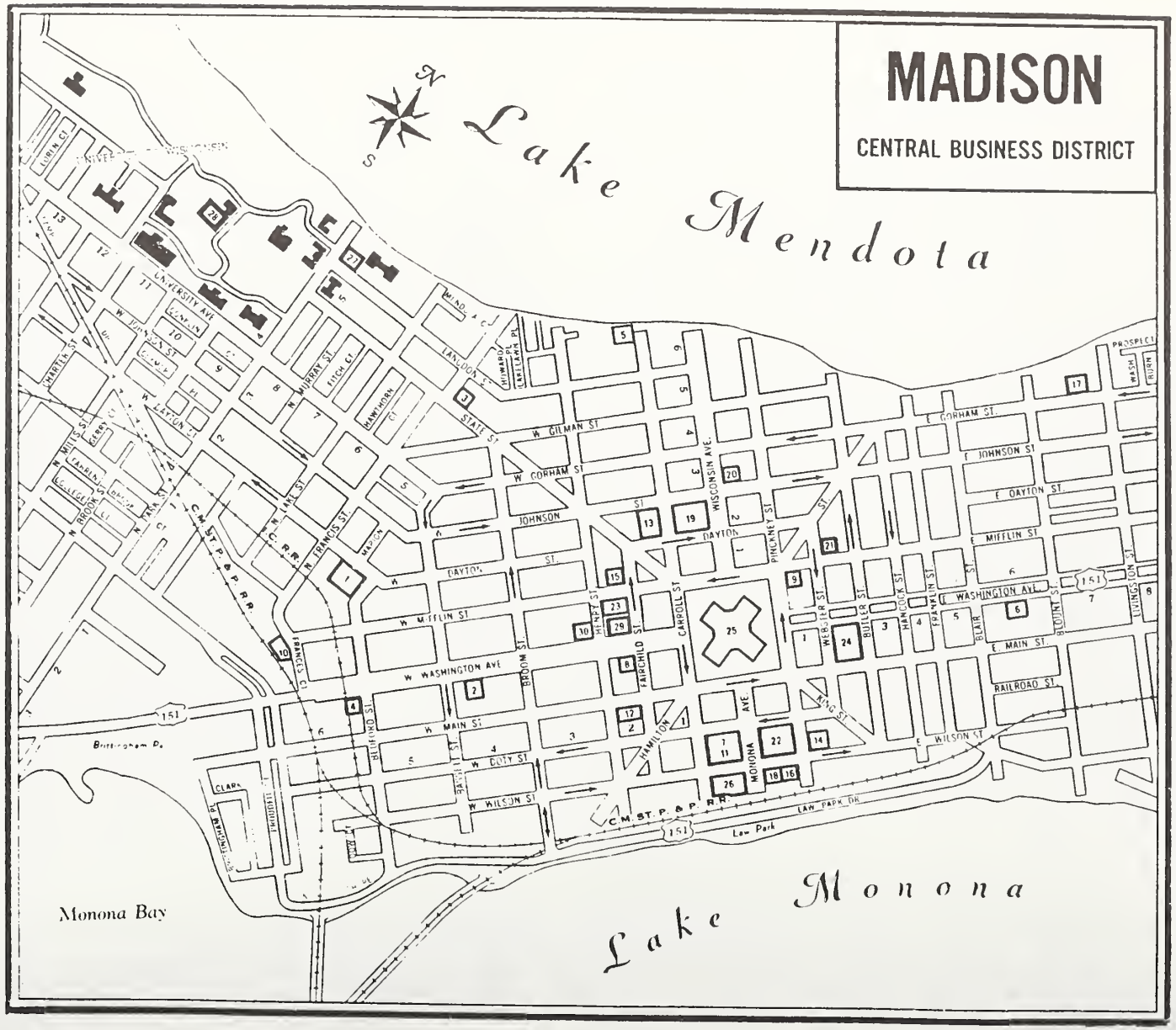

FIGURE A–2. MADISON CENTRAL BUSINESS DISTRICT

APPENDIX B. DATA COLLECTION ACTIVITIES

APPENDIX B. DATA COLLECTION ACTIVITIES

The information and analyses presented throughout this report are based on a series of data collection efforts designed to monitor all of the potential effects of the prime time demonstration. For the most part, the data collection was structured in a "before-and-after" framework to identify changes that occurred after the implementation of the surcharge. To isolate those changes that resulted directly from the surcharge from "changes" that would have occurred otherwise, two separate procedures were implemented. First, individuals in a survey panel who, in the second wave of surveys, reported making a change in the way they traveled were asked directly whether the surcharge was a major, minor, or unrelated reason for the change. Second, travel behavior changes of a control panel of individuals not directly affected by the surcharge were monitored. Both of these approaches were found to be extremely helpful in determining whether or not a given change in travel behavior was attributable to the $1.00 prime time charge.

Below is a list of the specific data collection activities that were undertaken during the course of this demonstration:

1. Before all-day parking survey;

2. After all-day parking survey;

3. After telephone surveys;

4. After park-ride survey;

5. Before and after parking accumulation and duration counts; and

6. Parking and transit revenue and operating statistics.

A brief description of each of these is presented below. Copies of the various survey instruments are given in Appendix C.

1. BEFORE PARKING SURVEY

The purpose of the before parking survey was to establish a baseline data set of travel behavior and user characteristics of parkers who use public, off-street parking facilities in downtown Madison, prior to the implementation of the prime time parking charge but subsequent to the

conversion of five major parking facilities in the CBD area from meter control to attendant operation.

The day-long before parking survey was conducted on Tuesday, October 14, 1980. Self-administered, postage-paid questionnaires were distributed to all drivers who entered parking facilities downtown between the hours of 6:00 a.m. and 10:00 p.m. (Surveys were discontinued at 7:00 p.m. at the Doty and McCormick ramps.) Where possible, questionnaires were handed out at the entranceways of each facility in order to insure a high coverage rate. When this was not possible, questionnaires were placed on the windshields of cars that were already parked. Also, questionnaires were placed on cars that were already in a parking facility prior to the 6:00 a.m. start time. Therefore, someone working a late-night shift from midnight to 8:00 a.m., for example, would have received a survey. However, an individual entering a parking facility after 10:00 p.m. and leaving before 6:00 a.m. the following morning would not. From an earlier survey, it was determined that little parking activity occurs at these late hours and, in any event, the individuals who park at these hours would not be affected either directly or indirectly by the surcharge program.

Questionnaires were distributed at the four surcharge facilities (Brayton, Dayton, Lake Street, and 600 University Avenue), at the county-operated Dane County Ramp, at Madison's two other parking ramps (McCormick and Doty) and at eight parking lots in the downtown and campus center areas (Frances Street, Buckeye, Lot 452, Law Park, Blair, Block 53, Block 54, and Post Office Block 88). As Table B-1 shows, 4,016 questionnaires were returned in response to the 11,464 questionnaires that were distributed, resulting in a favorable overall response rate of 35 percent. By parking facility, response rates ranged from a low of 21 percent at Buckeye/Lot 452 to a high of 50 percent at McCormick Ramp. The response rates at three of the four surcharge facilities are almost identical and are close to the mean response rate of all parking facilities. As a result, weighting the survey responses by the observed response rates will likely have little effect on the distribution of characteristics of individuals parking at the surcharge facilities.

The weather conditions on the day of the survey were basically favorable. Except for some rain between 6:00 and 7:00 a.m., the rest of the day was dry, although it remained cloudy and chilly.

The survey instrument, which is given in Appendix C, was serial-coded in order to record which parking facility it was distributed at and, as illustrated above, to determine response rates. Respondents listed their telephone numbers on slightly more than 60 percent of the surveys that were returned (see Table B-1). This was important since many of these same persons were contacted after the surcharge was enacted. Individuals had a choice of leaving the completed surveys in boxes located in each parking facility or returning them at no cost through the mail.

TABLE B-1. SURVEY SAMPLING STATISTICS FOR BEFORE PARKING SURVEY

Parking Facility	Number of Surveys Distributed	Number of Surveys Returned	Surveys with Tel. Numbers	Response Rate
Surcharge Locations				
Lake Street Ramp	1703	660	414	38.76
Dayton Ramp	2177	773	477	35.51
Brayton Lot	329	121	85	36.78
600 University Avenue	401	107	67	26.68
Subtotal	4610	1661	1043	36.0
NonSurcharge Ramps				
McCormick Ramp	628	314	205	50.00
Doty Ramp	751	315	201	41.94
Dane County Ramp	1923	469	241	24.39
Subtotal	3302	1098	647	33.3

Table continued on following page.

TABLE B-1 (Continued). SURVEY SAMPLING STATISTICS FOR BEFORE PARKING SURVEY

Parking Facility	Number of Surveys Distributed	Number of Surveys Returned	Surveys with Tel. Numbers	Response Rate
Nonsurcharge Lots				
Frances Lot	462	185	99	40.04
Buckeye/Lot 452	283	59	34	20.85
Law, Blair, Post Office	221	72	57	32.58
Block 53/54	2586	941	548	21.19
Subtotal	3552	1257	738	35.4
TOTAL	11464	4016	2428	35.0

SOURCES: Charles River Associates and Wisconsin Survey Research Laboratory, Before Parking Survey, October 1980.

Table B-2 presents a cross-tabulation of the responses to each question on the before parking survey by each of the four surcharge facilities, for five other nonsurcharge facilities, and aggregated across all parking facilities contained in the sample. For each question, cell frequencies, sample means (where appropriate), and sample sizes are listed in the table.

2. AFTER PARKING SURVEY

The day-long after parking survey was conducted on Tuesday, April 28, 1981. The basic mechanics of the survey were nearly identical to those of the before all-day survey (see above). Even the weather conditions were similar; there was a light rain early in the morning, with the remainder of the day being cool. The main objective of the survey was to obtain data on the overall composition and usage characteristics of both the prime time and non-prime time ramps and lots after the surcharge went into effect.

As Table B-3 shows, 3,602 questionnaires were returned in response to the 12,067 questionnaires that were distributed, resulting in an overall response rate of nearly 30 percent. This response rate is 5 percent less in absolute terms or about 15 percent less, relatively, than the before survey rate. Although no completely consistent response bias is evident, it appears that students and some of the longer-term parkers, who were more likely to have responded to the before survey, may have had lower response rates to the after survey. To the extent that this is true, information on the survey that is correlated with these individuals will be underrepresented in the sample. The response rates by parking facility are again fairly similar to each other, with the notable exceptions of 600 University Avenue and Buckeye/Lot 452.

Table B-4 presents a cross-tabulation of the responses to each question on the after parking survey by each of the four surcharge facilities, for five other nonsurcharge facilities, and aggregated across all parking facilities contained in the sample. For each question, cell frequencies, sample means (where appropriate), and sample sizes are listed in the table.

3. AFTER TELEPHONE SURVEY

For these surveys, two panels of individuals who responded to the before, all-day survey were established, and after the introduction of the surcharge these people were contacted by telephone for the purpose of ascertaining what changes in travel behavior, if any, were made in response to the $1.00 prime time charge. Only those individuals who entered a downtown or campus-area parking facility between 7:00 and 9:30 a.m. during

TABLE B-2. BEFORE PARKING SURVEY: TABULATION OF FREQUENCIES AND MEANS

Survey Question	Surcharge Facilities				Nonsurcharge Facilities					All Facilities
	Brayton	Dayton	Lake St.	600 University	Block 53/54	Dane Co.	Doty	Frances	McCormick	
1. Where Coming From?										
Home	81.8	70.4	70.5	87.0	67.1	81.4	78.6	54.4	82.1	72.5
Work	14.9	19.7	14.5	9.4	16.9	13.7	15.0	28.0	8.3	16.2
School	0	4.3	4.7	0.9	2.7	1.1	1.6	3.3	3.2	2.9
Shopping	0	0.5	1.2	0	1.5	0.0	0.0	2.2	0.3	0.8
Personal Business	1.6	2.6	4.7	0.9	6.8	2.8	2.2	5.5	3.2	4.1
Social/Recreation	0	1.2	1.2	0.9	1.9	0.2	0.0	5.0	1.0	1.3
Medical/Dental	0	0.5	1.1	0	1.6	0.4	1.0	1.1	0.3	0.9
Other	1.7	0.8	2.1	0.9	1.5	0.4	1.6	0.5	1.6	1.3
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	(121)	(770)	(657)	(107)	(935)	(467)	(313)	(182)	(313)	(3994)
2. Auto Drive Time (Minutes)	24.4 (120)	20.7 (757)	18.5 (656)	19.3 (107)	19.3 (934)	21.5 (467)	21.8 (321)	14.8 (180)	21.1 (312)	19.9 (3982)
3. Bus Travel Time (Minutes)	38.0 (65)	36.4 (425)	33.0 (410)	34.1 (77)	34.9 (510)	37.8 (271)	36.1 (183)	30.5 (105)	33.6 (191)	35.1 (2301)
4. Number of Persons in Auto	1.33 (121)	1.34 (755)	1.25 (652)	1.26 (107)	1.37 (927)	1.42 (466)	1.31 (322)	1.38 (182)	1.24 (312)	1.34 (3973)
5. Regular Carpool?										
Yes	5.0	15.5	4.9	6.6	7.8	14.4	8.7	3.3	11.2	10.1
No	95.0	84.5	95.1	93.4	92.2	85.6	91.3	96.7	88.8	89.9
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	(119)	(763)	(655)	(106)	(923)	(460)	(309)	(181)	(311)	(3956)

Table continued on following page.

TABLE B-2 (Continued). BEFORE PARKING SURVEY: TABULATION OF FREQUENCIES AND MEANS

Survey Question	Surcharge Facilities				Nonsurcharge Facilities					All Facilities
	Brayton	Dayton	Lake St.	600 University	Block 53/54	Dane Co.	Doty	Frances	McCormick	
6. Number of Days Parked Last Week										
None	30.6	22.2	34.4	29.9	41.8	32.1	38.3	51.1	23.0	33.2
1	22.3	17.0	18.1	12.2	17.3	9.0	10.9	16.5	14.1	15.4
2	10.7	16.1	17.7	21.5	9.6	5.8	11.2	12.1	13.7	12.5
3	2.5	10.4	9.3	8.4	5.8	5.8	8.0	6.0	9.6	7.7
4	7.5	7.7	7.9	9.3	4.5	6.2	5.7	3.3	7.7	6.6
5	25.6	24.0	10.6	18.7	18.6	39.0	24.0	7.7	30.3	22.4
6	0.8	2.6	2.0	0	2.4	2.1	1.9	3.3	1.6	2.2
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average	2.1	2.5	1.8	2.1	1.8	2.7	2.1	1.3	2.6	2.1
	(121)	(771)	(657)	(107)	(935)	(467)	(313)	(182)	(313)	(3996)
7. Where Going To?										
Home	5.0	6.9	3.2	6.5	4.7	5.6	3.2	2.7	3.2	4.7
Work	76.9	18.2	17.2	44.9	34.7	75.8	70.4	13.1	53.7	39.1
School	1.6	54.1	46.3	33.6	8.3	0.6	0.3	13.1	28.4	24.0
Shopping	0	4.3	9.4	3.8	8.2	0	0.6	23.5	1.0	6.0
Personal Business	7.4	7.8	12.3	1.9	23.6	5.4	11.8	19.7	5.4	12.4
Social/Recreation	2.5	6.6	7.6	6.5	11.8	7.7	4.1	22.4	3.8	8.4
Medical/Dental	0	0.4	0.6	0	3.4	0.6	2.6	0.6	1.3	1.4
Other	6.6	1.7	3.4	2.8	5.3	4.3	7.0	4.9	3.2	4.0
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	(121)	(769)	(657)	(107)	(936)	(467)	(314)	(183)	(313)	(3996)

Table continued on following page.

TABLE B-2 (Continued). BEFORE PARKING SURVEY: TABULATION OF FREQUENCIES AND MEANS

Survey Question	Surcharge Facilities				Nonsurcharge Facilities					All Facilities
	Brayton	Dayton	Lake St.	600 University	Block 53/54	Dane Co.	Doty	Frances	McCormick	
8. Number of Days Downtown for This Reason										
None	15.7	16.3	21.4	15.1	32.5	19.4	25.2	34.4	14.7	22.6
1	7.4	14.6	14.3	5.7	16.4	3.7	3.6	18.6	7.7	11.8
2	5.8	12.4	13.2	4.7	9.4	3.7	7.7	10.4	6.4	9.4
3	0.8	7.6	6.9	3.8	5.2	4.9	4.5	6.6	4.5	5.6
4	9.1	9.3	8.2	7.5	5.1	7.3	9.4	8.2	8.3	7.7
5	57.8	35.8	29.3	50.9	27.1	57.1	44.8	14.2	54.0	37.7
6	3.3	4.0	6.7	12.3	4.3	3.9	4.8	7.6	4.4	5.2
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average	3.7	3.0	2.8	3.8	2.3	3.6	3.2	2.1	3.6	3.0
	(121)	(767)	(658)	(106)	(936)	(464)	(310)	(183)	(313)	(3985)
8a. Other Means of Travel										
None (i.e., Auto)	56.7	76.6	54.6	49.4	70.2	75.2	61.0	58.4	63.5	67.0
Bus	28.9	11.9	23.2	27.1	14.1	15.9	19.7	13.3	20.9	16.9
Walk	4.1	4.2	10.1	5.9	5.5	1.7	4.2	14.2	4.0	5.6
Bicycle	2.1	2.4	8.2	7.0	6.2	1.7	5.2	9.7	3.6	5.0
Taxi	0	0	0	0	0	0	0.5	0	0	0
Other	8.2	4.9	3.9	10.6	4.0	5.5	9.4	4.4	8.0	5.5
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	(97)	(595)	(487)	(85)	(577)	(346)	(213)	(113)	(249)	(2864)

Table continued on following page.

TABLE B-2 (Continued). BEFORE PARKING SURVEY: TABULATION OF FREQUENCIES AND MEANS

Survey Question	Surcharge Facilities				Nonsurcharge Facilities					All Facilities
	Brayton	Dayton	Lake St.	600 University	Block 53/54	Dane Co.	Doty	Frances	McCormick	
8b. Number of Days Used This Other Mode										
1	11.6	22.2	21.7	19.5	35.3	20.0	18.2	34.8	15.6	23.2
2	16.3	21.5	15.0	9.8	15.5	20.0	11.7	19.6	16.7	16.8
3	13.9	19.3	21.7	31.7	16.2	12.9	19.5	19.6	22.2	19.2
4	23.3	11.9	13.5	17.1	11.4	16.5	18.2	4.3	18.9	13.9
5	34.9	20.7	18.9	19.5	15.0	29.4	29.9	8.7	22.2	21.1
6-7	0	4.4	9.2	2.4	6.6	1.2	2.5	13.0	4.4	5.8
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average	3.5	3.0	3.2	3.1	2.7	3.2	3.3	2.7	3.3	3.1
	(43)	(135)	(207)	(41)	(167)	(85)	(77)	(46)	(90)	(912)
9. Time to Destination (Minutes)	3.8	4.1	5.5	6.4	4.6	4.1	4.1	4.4	5.4	4.6
	(120)	(761)	(646)	(106)	(917)	(460)	(316)	(181)	(310)	(3936)
10. Mode of Travel										
Walk	100.0	99.1	98.7	99.0	99.4	99.8	99.7	99.4	99.0	99.3
Bus	0	0.3	1.1	0	0.5	0.2	0	0.6	1.0	0.5
Other	0	0.6	0.2	1.0	0.1	0	0.3	0	0	0.2
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	(112)	(681)	(625)	(99)	(838)	(441)	(294)	(165)	(295)	(3670)

Table continued on following page.

TABLE B-2 (Continued). BEFORE PARKING SURVEY: TABULATION OF FREQUENCIES AND MEANS

Survey Question	Surcharge Facilities				Nonsurcharge Facilities					All Facilities
	Brayton	Dayton	Lake St.	600 University	Block 53/54	Dane Co.	Doty	Frances	McCormick	
11. Time of Entering										
Before 7:00 a.m.	14.4	1.4	1.0	0.0	5.4	10.1	7.3	0	2.3	4.4
7:00 - 9:29 a.m.	55.9	33.2	31.0	69.2	29.1	59.8	59.8	8.4	53.9	39.7
9:30 - 11:59 a.m.	5.1	13.8	21.5	1.9	20.1	12.3	11.7	26.8	21.6	16.7
12:00 - 4:59 p.m.	21.2	27.4	29.6	8.7	31.3	12.7	16.5	36.3	19.3	25.1
5:00 - 12:00 M	3.4	24.2	16.9	20.2	14.1	5.1	4.7	28.5	2.9	14.1
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	(118)	(741)	(641)	(104)	(907)	(465)	(316)	(179)	(306)	(3905)
12. Time of Leaving										
Before 7:00 a.m.	0.9	0.8	0.5	1.0	0.7	0.2	0.3	0.6	0	0.5
7:00 - 9:29 a.m.	1.7	2.6	2.7	1.0	2.3	0.7	2.6	2.9	2.0	2.2
9:30 - 11:59 a.m.	2.5	10.7	14.9	0.0	14.8	3.3	10.7	12.7	7.2	10.5
12:00 - 4:59 p.m.	70.3	46.9	50.4	52.5	51.0	60.9	57.3	46.2	66.0	53.6
5:00 - 12:00 M	24.6	39.0	31.5	45.5	31.2	34.9	29.1	37.6	24.8	33.2
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	(118)	(738)	(635)	(101)	(871)	(458)	(309)	(173)	(306)	(3837)
Park Time (Minutes)										
0 - 180	22.2	54.3	57.4	18.0	62.7	15.8	28.2	84.6	25.0	46.6
181 - 300	12.0	18.6	16.5	10.0	7.7	15.8	10.2	9.5	27.0	14.1
301 - 420	7.7	10.9	11.4	10.0	4.1	3.0	4.9	3.5	12.0	7.4
421+	58.1	16.2	14.7	62.0	25.5	65.4	56.7	2.4	36.0	31.9
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average (Hours)	6.6	3.7	3.4	7.2	3.6	7.1	6.3	1.6	5.3	4.5
	(117)	(726)	(625)	(100)	(859)	(457)	(305)	(169)	(300)	(3785)

Table continued on following page.

TABLE B-2 (Continued). BEFORE PARKING SURVEY: TABULATION OF FREQUENCIES AND MEANS

Survey Question	Surcharge Facilities				Nonsurcharge Facilities					All Facilities
	Brayton	Dayton	Lake St.	600 University	Block 53/54	Dane Co.	Doty	Frances	McCormick	
13. Park Cost (Dollars)	1.31 (115)	0.76 (710)	0.73 (577)	1.26 (104)	0.77 (852)	1.26 (438)	1.30 (291)	0.37 (170)	1.16 (280)	0.91 (3663)
14. Employer Pays Parking Cost?										
Yes	9.6	14.2	15.8	5.6	12.6	17.5	11.2	13.3	8.8	12.8
No	90.4	85.8	84.2	94.4	87.4	82.5	88.8	86.7	91.2	87.2
	100.0 (104)	100.0 (155)	100.0 (133)	100.0 (54)	100.0 (358)	100.0 (378)	100.0 (240)	100.0 (30)	100.0 (170)	100.0 (1704)
14. Percent of Parking Cost Paid										
10 - 35	10.0	0	0	0	0	0	4.8	0	0	1.8
36 - 69	10.0	5.6	5.6	0	2.6	26.5	4.8	0	13.3	9.8
70 - 100	80.0	94.4	94.4	100.0	97.4	73.5	90.4	100.0	86.7	88.4
	100.0 (10)	100.0 (18)	100.0 (18)	100.0 (2)	100.0 (38)	100.0 (34)	100.0 (21)	100.0 (3)	100.0 (15)	100.0 (164)
14a. Flexitime										
None	47.1	52.3	33.6	51.9	60.4	57.6	50.0	27.6	47.4	52.0
Some	46.1	29.0	48.1	32.7	29.3	35.3	40.2	51.7	43.4	37.1
A Lot	6.8	18.7	18.3	15.4	10.3	7.1	9.8	20.7	9.2	10.9
	100.0 (102)	100.0 (155)	100.0 (131)	100.0 (52)	100.0 (341)	100.0 (377)	100.0 (234)	100.0 (29)	100.0 (175)	100.0 (1678)

Table continued on following page.

TABLE B-2 (Continued). BEFORE PARKING SURVEY: TABULATION OF FREQUENCIES AND MEANS

Survey Question	Surcharge Facilities				Nonsurcharge Facilities					All Facilities
	Brayton	Dayton	Lake St.	600 University	Block 53/54	Dane Co.	Doty	Frances	McCormick	
15. Parking Difficulty (7:00 a.m. - 9:00 a.m.)										
1	32.1	23.4	28.6	28.7	23.9	47.5	45.7	22.6	48.0	32.0
2	22.3	12.8	14.1	14.9	13.2	13.9	16.4	14.2	12.6	13.8
3	10.7	13.7	14.7	11.9	12.5	9.9	8.9	16.1	10.8	12.3
4	11.6	10.5	11.4	21.8	14.9	7.4	9.7	9.7	8.9	11.3
5	7.2	11.0	9.9	6.9	10.8	5.0	6.3	9.0	7.1	9.1
6	2.7	8.1	7.0	5.9	9.4	5.7	3.3	9.7	4.4	6.9
7	13.4	20.5	14.3	9.9	15.3	10.6	9.7	18.7	8.2	14.6
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average	3.0	3.8	3.4	3.2	3.6	2.7	2.7	3.7	2.6	3.3
	(112)	(555)	(545)	(101)	(720)	(404)	(273)	(155)	(269)	(3228)
Parking Difficulty (11:00 a.m. - 2:00 p.m.)										
1	6.0	6.7	3.0	1.2	4.6	11.2	6.5	5.0	18.8	6.8
2	6.0	5.6	3.2	1.2	3.5	3.3	2.6	3.8	6.7	4.1
3	2.3	8.4	5.6	2.3	7.0	8.5	5.2	4.4	10.0	6.8
4	22.6	9.7	8.1	8.1	12.0	15.8	13.4	15.0	12.9	11.7
5	11.9	15.8	15.9	14.0	13.9	12.5	17.8	15.0	17.9	14.9
6	14.3	19.0	24.4	24.4	16.6	20.7	16.4	21.2	10.8	18.9
7	36.9	34.8	39.8	48.8	42.4	28.0	38.1	35.6	22.9	36.8
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average	5.2	5.2	5.6	6.0	5.5	4.9	5.4	5.4	4.3	5.3
	(84)	(569)	(558)	(86)	(742)	(329)	(237)	(160)	(240)	(3096)

Table continued on following page.

TABLE B-2 (Continued). BEFORE PARKING SURVEY: TABULATION OF FREQUENCIES AND MEANS

Survey Question	Surcharge Facilities				Nonsurcharge Facilities					All Facilities
	Brayton	Dayton	Lake St.	600 University	Block 53/54	Dane Co.	Doty	Frances	McCormick	
16. Use Vehicle During Day?										
Yes	34.4	51.0	42.4	24.5	48.7	32.8	37.5	52.2	31.9	43.3
No	65.6	49.0	57.6	75.5	51.3	67.2	62.5	47.8	68.1	56.7
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	(119)	(751)	(644)	(106)	(916)	(463)	(309)	(178)	(307)	(3923)
17. Number of Autos Owned	1.8	2.0	1.7	1.8	1.8	2.0	1.7	1.7	1.9	1.8
	(120)	(762)	(654)	(107)	(926)	(754)	(319)	(184)	(313)	(3974)
18. Number of Licensed Drivers	1.95	2.23	2.06	2.06	1.99	2.05	1.81	2.09	2.15	2.06
	(121)	(762)	(652)	(107)	(929)	(466)	(321)	(185)	(314)	(3980)
19. Age										
16 - 19	0.8	11.9	4.6	2.8	3.5	0.7	0.6	1.6	11.5	5.1
20 - 24	12.6	23.6	30.9	24.3	15.8	8.6	13.5	26.2	21.2	19.6
25 - 34	39.5	34.8	41.0	44.9	48.7	37.3	39.5	45.4	35.9	41.0
35 - 44	20.2	16.4	13.0	16.8	13.9	25.0	23.5	13.7	13.1	16.6
45 - 54	13.4	7.9	5.6	9.4	9.6	17.0	10.3	7.1	8.0	9.6
55 - 64	11.8	3.0	2.9	1.8	6.1	8.4	8.4	3.8	5.8	5.5
65+	1.7	2.4	2.0	0	2.4	3.0	4.2	2.2	4.5	2.6
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average	37.4	31.4	30.7	31.5	34.0	38.4	36.9	32.1	33.0	33.7
	(119)	(758)	(654)	(107)	(930)	(464)	(311)	(183)	(312)	(3967)

Table continued on following page.

TABLE B-2 (Continued). BEFORE PARKING SURVEY: TABULATION OF FREQUENCIES AND MEANS

Survey Question	Surcharge Facilities				Nonsurcharge Facilities					All Facilities
	Brayton	Dayton	Lake St.	600 University	Block 53/54	Dane Co.	Doty	Frances	McCormick	
20. Sex										
Male	39.3	36.5	53.1	34.3	48.7	38.9	43.9	61.2	33.6	44.9
Female	60.7	63.5	46.9	65.7	51.3	61.1	56.1	38.8	66.4	55.1
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	(117)	(751)	(648)	(105)	(915)	(465)	(312)	(183)	(312)	(3938)
21. Household Income (Dollars)										
0 - 4,999	1.9	10.6	17.4	12.0	7.0	1.4	3.8	11.6	8.8	8.9
5,000 - 9,999	12.1	13.3	16.6	11.0	10.7	5.4	10.4	13.9	12.3	11.8
10,000 - 14,999	15.9	15.7	15.2	20.0	17.9	15.6	18.4	12.1	16.9	16.3
15,000 - 19,999	15.9	13.8	12.0	13.0	16.8	13.7	11.1	14.4	15.1	14.3
20,000 - 24,999	19.6	13.4	9.6	14.0	17.0	15.6	17.4	12.1	12.7	14.3
25,000 - 29,999	7.5	10.2	7.4	11.0	9.6	16.1	9.7	6.4	10.9	10.1
30,000 - 34,999	6.5	6.9	7.1	6.0	7.7	11.0	9.0	5.2	9.2	7.9
35,000 +	20.6	16.1	14.7	13.0	13.3	21.2	20.2	24.3	14.1	16.4
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average	$23,061	$20,514	$18,412	$19,550	$20,763	$25,309	$23,180	$21,864	$20,722	$21,204
	(107)	(696)	(625)	(100)	(858)	(429)	(288)	(173)	(284)	(3680)

Note: Sample size is shown in parentheses.

SOURCE: Charles River Associates, from Before Parking Survey, October 14, 1980.

TABLE B-3. SURVEY SAMPLING STATISTICS FOR AFTER ALL-DAY PARKING SURVEY

Parking Facility	Number of Surveys Distributed	Number of Surveys Returned	Response Rate
Surcharge Locations			
Lake Street Ramp	2231	722	32.36
Dayton Ramp	2347	594	25.31
Brayton Lot	345	115	33.33
600 University Avenue	363	68	18.73
Subtotal	5286	1499	28.4
Nonsurcharge Ramps			
McCormick Ramp	558	235	42.11
Doty Ramp	827	322	38.94
Dane County Ramp	1330	372	27.97
Subtotal	2715	929	34.2
Nonsurcharge Lots			
Frances Lot	433	129	29.79
Buckeye, Lot 452	369	69	18.70
Law, Blair, Post Office	292	91	31.16
Block 53/54	2972	885	29.78
Subtotal	4066	1174	28.9
TOTAL	12067	3602	29.9

SOURCES: Charles River Associates and Wisconsin Survey Research Laboratory, After All-Day Parking Survey, April 1981.

TABLE B-4. AFTER ALL-DAY PARKING SURVEY: TABULATION OF FREQUENCIES AND MEANS

Survey Question	Surcharge Facilities				Nonsurcharge Facilities					All Facilities
	Brayton	Dayton	Lake St.	600 University	Block 53/54	Dane Co.	Doty	Frances	McCormick	
1. Where Coming From?										
Home	67.8	69.2	69.0	75.8	68.2	74.9	76.6	57.0	85.9	70.5
Work	23.5	20.3	15.9	9.1	16.3	17.8	15.9	25.0	9.0	17.2
School	0.9	3.0	5.0	4.5	3.0	1.6	1.3	4.7	1.7	3.1
Shopping	0	0.7	1.4	1.5	1.2	0	0.6	2.3	0.4	1.0
Personal Business	5.2	3.7	5.0	6.1	6.8	2.7	4.1	6.3	1.3	4.8
Social/Recreation	1.7	1.7	2.1	0	3.0	1.6	0.3	4.7	0.4	2.0
Medical/Dental	0	1.4	1.4	1.5	1.1	1.4	0.3	0	1.3	1.1
Other	0.9	0	0.2	1.5	0.3	0	0.9	0	0	0.3
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	(115)	(591)	(716)	(66)	(882)	(370)	(320)	(128)	(233)	(3580)
2. Number of Persons in Auto	1.23	1.33	1.32	1.28	1.41	1.44	1.29	1.40	1.21	1.35
	(115)	(590)	(715)	(65)	(877)	(371)	(322)	(128)	(234)	(3587)
3. Regular Carpool?										
Yes	7.0	12.6	5.4	3.1	7.0	11.0	10.7	5.5	17.7	9.5
No	93.0	87.4	94.6	96.9	93.0	89.0	89.3	94.5	82.3	90.5
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	(114)	(585)	(710)	(65)	(876)	(371)	(318)	(128)	(232)	(3558)

Table continued on following page.

TABLE B-4 (Continued). AFTER ALL-DAY PARKING SURVEY: TABULATION OF FREQUENCIES AND MEANS

Survey Question	Surcharge Facilities				Nonsurcharge Facilities					All Facilities
	Brayton	Dayton	Lake St.	600 University	Block 53/54	Dane Co.	Doty	Frances	McCormick	
4. Number of Days Parked Last Week										
None	46.1	29.5	37.7	32.3	47.8	37.2	31.6	34.7	23.6	37.2
1	12.2	15.6	20.3	20.0	16.0	9.4	13.4	18.1	13.3	15.5
2	7.8	19.3	17.7	18.4	10.9	6.8	9.7	14.2	12.0	13.2
3	6.1	7.0	9.4	10.8	4.4	7.0	7.8	7.1	13.7	7.4
4	5.2	6.4	6.3	7.7	4.6	6.7	8.5	11.8	8.6	6.5
5	20.9	20.0	7.1	7.7	14.1	31.5	25.9	10.2	25.8	18.0
6	1.7	2.2	1.5	3.1	2.2	1.4	3.1	3.9	3.0	2.2
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average	1.8	2.1	1.5	1.8	1.53	2.37	2.38	1.90	2.60	1.9
	(115)	(590)	(716)	(65)	(881)	(371)	(320)	(127)	(233)	(3594)
5. Where Going To?										
Home	5.2	7.1	4.2	9.1	4.9	11.3	5.9	4.0	7.6	6.3
Work	77.4	17.0	17.3	39.4	31.3	55.9	77.8	22.2	67.7	37.6
School	0	51.2	36.7	25.8	5.3	1.3	1.0	19.8	13.6	19.5
Shopping	0.8	3.6	11.5	0	6.6	0.8	0.6	10.3	0	5.3
Personal Business	7.0	8.6	16.6	12.1	27.4	8.3	10.3	25.4	7.7	15.7
Social/Recreation	7.0	11.0	13.5	13.6	22.2	19.4	1.9	18.3	3.0	14.1
Medical/Dental	2.6	1.5	0.1	0	2.3	2.7	0.9	0	0.4	1.3
Other	0	0	0.1	0	0	0.3	1.6	0	0	0.2
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	(115)	(590)	(717)	(66)	(881)	(372)	(320)	(126)	(235)	(3580)

Table continued on following page.

TABLE B-4 (Continued). AFTER ALL-DAY PARKING SURVEY: TABULATION OF FREQUENCIES AND MEANS

Survey Question	Surcharge Facilities				Nonsurcharge Facilities					All Facilities
	Brayton	Dayton	Lake St.	600 University	Block 53/54	Dane Co.	Doty	Frances	McCormick	
6. Number of Days Downtown for This Reason										
None	32.7	20.3	29.0	19.7	40.2	28.6	20.1	20.3	10.8	27.5
1	3.6	15.7	13.4	10.6	15.6	7.8	5.6	14.9	5.2	12.0
2	4.4	15.2	13.0	6.1	9.0	5.9	3.1	11.7	5.6	9.6
3	4.4	6.0	7.9	4.5	5.5	5.9	6.6	14.9	7.8	6.7
4	6.2	8.2	8.2	15.1	3.5	7.3	7.2	7.8	7.4	6.8
5	44.3	32.6	21.2	27.3	22.5	41.3	53.0	19.5	57.6	32.5
6	4.4	2.0	7.3	16.7	3.7	3.2	4.4	10.9	5.6	4.9
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average	3.0	2.7	2.5	3.3	2.0	2.9	3.5	2.8	3.9	2.7
	(113)	(586)	(708)	(66)	(874)	(371)	(319)	(128)	(231)	(3552)
6a. Other Means of Travel										
None (i.e., Auto)	63.8	70.8	51.8	47.0	71.1	78.7	60.1	60.2	65.6	65.7
Bus	10.1	16.1	21.4	32.7	11.7	11.2	21.9	11.2	17.5	15.9
Walk	13.0	7.9	11.9	12.2	7.6	3.8	5.6	15.3	7.9	8.6
Bicycle	2.9	2.0	11.9	4.1	6.3	2.5	5.1	7.2	2.1	5.7
Taxi	0	0.2	0.9	2.0	0.4	0	1.7	1.0	0.5	0.6
Other	10.2	3.0	2.1	2.0	2.9	3.8	5.6	5.1	6.4	3.5
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	(69)	(441)	(471)	(49)	(477)	(240)	(233)	(98)	(189)	(2378)

Table continued on following page.

TABLE B-4 (Continued). AFTER ALL-DAY PARKING SURVEY: TABULATION OF FREQUENCIES AND MEANS

Survey Question	Surcharge Facilities				Nonsurcharge Facilities					All Facilities
	Brayton	Dayton	Lake St.	600 University	Block 53/54	Dane Co.	Doty	Frances	McCormick	
6b. Number of Days Used This Other Mode										
1	19.2	27.0	24.1	12.0	31.3	31.5	21.3	21.2	15.6	24.4
2	15.4	23.0	19.4	20.0	20.9	22.2	11.7	27.3	15.6	19.6
3	7.7	15.6	24.1	20.0	14.9	11.1	20.2	27.3	23.4	18.9
4	23.1	15.6	11.1	20.0	12.0	14.8	16.0	12.1	20.3	14.2
5	34.6	13.9	16.2	20.0	14.9	18.5	28.7	6.1	23.5	18.6
6-7	0	4.9	5.1	8.0	6.0	1.9	2.1	6.0	1.6	4.3
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average	3.4	2.8	2.9	3.4	2.8	2.7	3.3	2.7	3.2	3.0
	(26)	(122)	(216)	(25)	(134)	(54)	(94)	(33)	(64)	(787)
7. Time to Destination (Minutes)	2.9	5.7	6.3	6.5	5.5	4.9	4.8	6.5	6.9	5.6
	(115)	(576)	(701)	(65)	(862)	(368)	(319)	(128)	(232)	(3540)
8. Time of Entering										
Before 7:00 a.m.	21.7	3.9	2.9	2.9	5.4	6.5	9.3	6.2	3.4	5.6
7:00 - 9:29 a.m.	38.3	23.2	21.7	35.3	25.2	48.4	63.0	17.8	66.8	34.0
9:30 - 11:59 a.m.	19.1	17.8	24.5	25.0	20.2	21.5	8.4	22.5	16.2	19.5
12:00 - 4:59 p.m.	14.8	28.3	30.8	19.1	25.7	12.6	17.1	28.7	10.6	23.2
5:00 - 12:00 M	6.1	26.8	20.1	17.7	23.5	11.0	2.2	24.8	3.0	18.0
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	(115)	(594)	(722)	(68)	(885)	(372)	(322)	(129)	(235)	(3602)

Table continued on following page.

TABLE B-4 (Continued). AFTER ALL-DAY PARKING SURVEY: TABULATION OF FREQUENCIES AND MEANS

Survey Question	Surcharge Facilities				Nonsurcharge Facilities					All Facilities
	Brayton	Dayton	Lake St.	600 University	Block 53/54	Dane Co.	Doty	Frances	McCormick	
9. Time of Leaving										
Before 7:00 a.m.	4.4	4.2	4.7	10.3	5.6	1.1	2.8	9.3	2.6	4.4
7:00 - 9:29 a.m.	3.5	1.5	1.8	0.0	2.3	0	0.3	2.3	0.4	1.6
9:30 - 11:59 a.m.	13.0	10.9	11.4	0.0	11.8	6.2	7.7	17.8	5.5	10.1
12:00 - 4:59 p.m.	50.4	42.3	49.2	41.2	42.7	62.3	63.7	36.4	57.9	49.4
5:00 - 12:00 M	28.7	41.1	33.0	48.5	37.6	30.4	25.5	34.1	33.6	34.5
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	(115)	(594)	(722)	(68)	(885)	(372)	(322)	(129)	(235)	(3602)
Park Time (Minutes)										
0 - 180	35.7	59.1	64.0	18.8	63.7	30.7	22.9	77.0	19.2	50.8
181 - 300	7.2	22.8	19.1	15.6	10.9	15.8	12.4	9.0	11.3	14.9
301 - 420	11.6	7.9	6.9	15.6	2.7	5.4	7.6	3.3	15.3	6.5
421+	45.5	10.2	10.0	50.0	22.7	48.1	57.1	10.7	54.2	27.8
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average (Hours)	5.9	3.4	3.0	7.0	3.5	5.9	6.5	2.4	6.6	4.3
	(112)	(570)	(691)	(64)	(843)	(368)	(315)	(122)	(229)	(3472)
10. Park Cost (Dollars)	1.29	0.79	0.68	1.70	0.71	1.14	1.35	0.54	1.39	0.90
	(97)	(536)	(613)	(66)	(817)	(350)	(300)	(117)	(208)	(3266)

Table continued on following page.

TABLE B-4 (Continued). AFTER ALL-DAY PARKING SURVEY: TABULATION OF FREQUENCIES AND MEANS

Survey Question	Surcharge Facilities				Nonsurcharge Facilities					All Facilities
	Brayton	Dayton	Lake St.	600 University	Block 53/54	Dane Co.	Doty	Frances	McCormick	
11. Amount Include $1.00 Surcharge?										
Yes	17.0	8.1	6.5	41.9	N/A	N/A	N/A	N/A	N/A	4.7
No	83.0	91.9	93.5	58.1	[100.0]	[100.0]	[100.0]	[100.0]	[100.0]	95.3
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	(106)	(568)	(659)	(62)	(839)	(357)	(301)	(122)	(220)	(3380)
12. Where Park?										
Meter	5.4	42.1	46.3	1.5	[100.0]	[100.0]	24.0	[100.0]	3.9	60.4
Attendant	94.6	57.9	53.7	98.5	N/A	N/A	76.0	N/A	96.1	39.6
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	(111)	(570)	(691)	(65)	(853)	(357)	(317)	(122)	(231)	(3426)
13. Employer Pays Parking Cost?										
Yes	25.5	10.3	9.3	0	9.8	22.0	14.4	17.0	8.9	13.1
No	74.5	89.7	90.7	100.0	90.2	78.0	85.6	83.0	91.1	86.9
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	(98)	(146)	(183)	(35)	(338)	(232)	(285)	(47)	(179)	(1642)

Table continued on following page.

TABLE B-4 (Continued). AFTER ALL-DAY PARKING SURVEY: TABULATION OF FREQUENCIES AND MEANS

Survey Question	Surcharge Facilities				Nonsurcharge Facilities					All Facilities
	Brayton	Dayton	Lake St.	600 University	Block 53/54	Dane Co.	Doty	Frances	McCormick	
13. Percent of Parking Cost Paid										
10 - 35	0	0	0	--	0	2.4	2.9	0	7.7	1.7
36 - 69	0	0	6.3	--	3.7	29.3	5.7	0	7.7	9.5
70 - 100	100.0	100.0	93.7	--	96.3	68.3	91.4	100.0	84.6	88.8
	100.0	100.0	100.0	--	100.0	100.0	100.0	100.0	100.0	100.0
	(21)	(13)	(16)	(0)	(27)	(41)	(35)	(5)	(13)	(179)
13a. Flexitime										
None	29.5	51.8	34.8	61.8	53.0	58.8	41.8	37.5	50.3	47.5
Some	51.6	34.3	42.2	23.5	32.4	32.4	47.6	33.3	34.3	37.8
A Lot	18.9	13.9	23.0	14.7	14.6	8.8	10.6	29.2	15.4	14.7
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	(95)	(137)	(161)	(34)	(321)	(228)	(275)	(48)	(169)	(1563)
14. Surcharge Affect Parking Location?										
Yes	33.6	34.4	37.5	37.5	13.9	14.8	19.0	27.0	32.0	25.4
No	66.4	65.6	62.5	62.5	86.1	85.2	81.0	73.0	68.0	74.6
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	(113)	(569)	(677)	(64)	(819)	(351)	(306)	(122)	(228)	(3397)

Table continued on following page.

TABLE B-4 (Continued). AFTER ALL-DAY PARKING SURVEY: TABULATION OF FREQUENCIES AND MEANS

Survey Question	Surcharge Facilities				Nonsurcharge Facilities					All Facilities
	Brayton	Dayton	Lake St.	600 University	Block 53/54	Dane Co.	Doty	Frances	McCormick	
14a. Same Facility But Use Meter?										
Yes	83.3	39.8	47.9	81.8	57.8	68.0	69.6	46.9	87.3	56.5
No	16.7	60.2	52.1	18.2	42.2	32.0	30.4	53.1	12.7	43.5
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	(36)	(186)	(236)	(22)	(102)	(50)	(56)	(32)	(71)	(809)
14b. Use Different Facility?										
Yes	40.0	60.0	51.6	40.0	83.6	69.4	74.4	93.8	88.7	66.0
No	60.0	40.0	48.4	60.0	16.4	30.6	25.6	6.2	11.3	34.0
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	(30)	(75)	(122)	(20)	(61)	(36)	(39)	(16)	(62)	(476)

Table continued on following page.

TABLE B-4 (Continued). AFTER ALL-DAY PARKING SURVEY: TABULATION OF FREQUENCIES AND MEANS

Survey Question	Surcharge Facilities				Nonsurcharge Facilities					All Facilities
	Brayton	Dayton	Lake St.	600 University	Block 53/54	Dane Co.	Doty	Frances	McCormick	
14d. Other Effects of Surcharge?										
Park Elsewhere	44.0	33.0	28.7	15.8	29.2	21.9	20.5	40.0	37.1	29.8
Change Arrival/ Departure Time	8.0	28.0	25.4	36.8	15.4	3.1	7.7	0	7.4	19.9
Avoid Surcharge Facilities	16.0	6.8	8.3	5.3	16.9	37.5	17.9	10.0	11.1	12.0
Use Other Mode	0	10.2	11.6	5.3	13.8	3.1	7.7	10.0	11.1	9.9
Drive Less	8.0	1.7	6.1	15.8	3.1	3.1	2.6	0	3.7	4.5
Made Parking Easier	12.0	0.8	2.2	5.3	0	0	2.6	0	3.7	2.2
Come Downtown Less Often	0	1.7	2.8	0	7.7	6.2	10.3	0	3.7	3.8
Other	8.0	11.9	6.1	10.4	6.2	18.8	12.8	20.0	11.1	9.5
No Other	4.0	5.9	8.8	5.3	7.7	6.3	17.9	20.0	11.1	8.4
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	(25)	(118)	(181)	(19)	(65)	(32)	(39)	(10)	(27)	(533)

Table continued on following page.

TABLE B-4 (Continued). AFTER ALL-DAY PARKING SURVEY: TABULATION OF FREQUENCIES AND MEANS

Survey Question	Surcharge Facilities				Nonsurcharge Facilities					All Facilities
	Brayton	Dayton	Lake St.	600 University	Block 53/54	Dane Co.	Doty	Frances	McCormick	
15. Parking Difficulty (7:00 a.m. - 9:00 a.m.)										
1	46.1	28.4	27.6	50.0	32.5	58.0	42.2	30.9	56.5	37.6
2	20.9	15.3	11.9	13.5	14.1	10.7	17.2	14.4	13.4	13.9
3	9.9	14.3	15.1	5.8	11.9	7.5	14.1	16.5	9.3	12.2
4	7.7	10.7	11.9	9.6	13.6	8.2	9.2	11.4	8.8	10.8
5	4.4	10.0	8.8	1.9	8.8	3.2	4.9	6.2	3.7	7.2
6	4.4	7.0	10.0	3.8	5.5	4.2	3.9	4.1	5.1	6.3
7	6.6	14.3	14.7	15.4	13.6	8.2	8.5	16.5	3.2	12.0
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average	2.4	3.4	3.5	2.7	3.2	2.3	2.6	3.3	2.2	3.0
	(91)	(412)	(557)	(52)	(647)	(281)	(284)	(97)	(216)	(2758)
Parking Difficulty (11:00 a.m. - 2:00 p.m.)										
1	18.3	8.0	5.7	11.8	5.7	21.7	7.0	8.6	24.1	10.1
2	4.9	6.6	5.3	7.8	5.6	7.9	5.8	5.7	9.2	6.2
3	9.8	9.6	8.3	19.6	10.1	9.9	7.1	7.6	12.7	9.3
4	19.5	14.8	12.2	3.9	14.8	19.8	14.5	10.5	15.5	14.2
5	13.4	17.6	16.3	17.7	14.4	10.3	15.8	15.3	9.2	14.8
6	14.6	17.8	19.2	11.8	14.4	11.8	15.8	17.1	18.4	16.3
7	19.5	25.6	33.0	27.4	35.0	18.6	34.0	35.2	10.9	29.1
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average	4.3	4.8	5.2	4.5	5.1	4.0	5.1	5.1	3.8	4.8
	(82)	(438)	(600)	(51)	(685)	(253)	(241)	(105)	(174)	(2752)

Table continued on following page.

TABLE B-4 (Continued). AFTER ALL-DAY PARKING SURVEY: TABULATION OF FREQUENCIES AND MEANS

Survey Question	Surcharge Facilities				Nonsurcharge Facilities					All Facilities
	Brayton	Dayton	Lake St.	600 University	Block 53/54	Dane Co.	Doty	Frances	McCormick	
16. Use Vehicle During Day?										
Yes	36.0	48.9	46.2	31.3	49.8	40.1	37.0	62.8	35.4	45.6
No	64.0	51.1	53.8	68.7	50.2	59.9	63.0	37.2	64.6	54.4
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	(111)	(575)	(686)	(67)	(853)	(359)	(316)	(121)	(229)	(3471)
17. Number of Autos Owned	1.9	2.1	1.8	1.6	1.8	1.9	1.8	1.7	2.0	1.9
	(114)	(581)	(691)	(67)	(860)	(368)	(319)	(122)	(232)	(3531)
18. Number of Licensed Drivers	1.98	2.29	2.14	1.85	2.02	2.07	1.96	1.95	2.21	2.11
	(114)	(582)	(692)	(67)	(862)	(368)	(319)	(122)	(234)	(3536)
19. Age										
16 - 19	0	11.5	6.7	6.0	3.0	1.4	1.9	3.3	6.0	5.0
20 - 24	9.6	23.4	23.1	19.4	14.2	4.9	9.1	29.5	22.8	16.9
25 - 34	39.5	34.4	43.9	50.7	42.2	36.0	45.1	47.5	37.8	40.5
35 - 44	22.8	12.5	13.0	7.4	17.2	19.3	22.9	7.4	16.7	16.1
45 - 54	14.9	8.6	8.8	9.0	12.0	20.2	11.0	7.4	7.7	11.4
55 - 64	12.3	7.0	3.2	4.5	7.1	13.3	7.5	3.3	7.3	7.2
65+	0.9	2.6	1.3	3.0	4.3	4.9	2.5	1.6	1.7	2.9
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average	38.1	32.5	31.5	32.4	36.0	40.9	36.3	30.7	33.2	34.8
	(114)	(582)	(692)	(67)	(860)	(367)	(319)	(122)	(233)	(3531)

Table continued on following page.

TABLE B-4 (Continued). AFTER ALL-DAY PARKING SURVEY: TABULATION OF FREQUENCIES AND MEANS

Survey Question	Surcharge Facilities				Nonsurcharge Facilities					All Facilities
	Brayton	Dayton	Lake St.	600 University	Block 53/54	Dane Co.	Doty	Frances	McCormick	
20. Sex										
Male	45.6	43.3	45.6	29.8	43.6	42.9	44.6	67.8	34.5	44.7
Female	54.4	56.7	54.4	70.2	56.4	57.1	55.4	32.2	65.5	55.3
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	(114)	(580)	(686)	(67)	(853)	(364)	(318)	(121)	(232)	(3491)
21. Household Income (Dollars)										
0 - 4,999	0.9	11.0	13.5	12.3	7.4	2.0	3.3	24.8	2.3	8.2
5,000 - 9,999	2.7	10.4	14.6	13.8	9.3	6.3	5.9	11.5	11.7	9.8
10,000 - 14,999	11.6	13.6	13.6	23.1	15.4	8.3	11.9	7.1	11.7	12.8
15,000 - 19,999	14.3	9.7	11.6	10.8	13.3	13.5	14.5	10.6	12.2	12.4
20,000 - 24,999	15.2	11.9	13.6	12.3	12.7	13.5	13.9	11.5	14.0	13.0
25,000 - 29,999	13.4	12.3	7.7	4.6	10.4	13.7	12.5	10.6	12.1	11.0
30,000 - 34,999	12.5	8.9	9.3	4.6	10.5	15.5	11.9	4.4	10.3	10.6
35,000 +	29.4	22.2	16.1	18.5	21.0	27.2	26.1	19.5	25.7	22.2
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average	$27,857	$22,835	$20,211	$19,500	$23,208	$27,328	$26,064	$19,447	$25,280	$23,542
	(112)	(537)	(653)	(65)	(798)	(349)	(303)	(113)	(214)	(3301)

NOTE: Sample size is shown in parentheses.

SOURCE: Charles River Associates, from After All-Day Parking Survey, April 28, 1981.

the day of the before parking survey and who had parked for three hours or more were contacted. (These are the basic ground rules that determined who would be assessed the surcharge.) The two panels consisted of 1) individuals who parked in one of the four prime time facilities and, 2) a control group of individuals who parked in all other (nonsurcharge) facilities.

The survey was implemented over a three-week period from April 18 to May 8, 1981. Separate but very similar questionnaires were administered to each panel. The survey obtained information on individual travel behavior during the seven days (Sunday-Saturday) of the prior week with regard to trips taken to some place for the trip purpose indicated on the before survey. If any change in travel behavior had been made, individuals were asked whether the $1.00 prime time charge had been a major, minor, or not a contributing factor. Below is a summary of the sample statistics for the two groups surveyed.

	Panel of Surcharge Parkers	Panel of Nonsurcharge Parkers
Number of respondents in before survey who entered 7:00-9:30 a.m. and parked three or more hours	487	858
Respondents with telephone numbers	322	523
Interviews completed	278	470
Reasons not completed:		
Could not locate	27	26
Not at home	8	17
Refused	1	2
Other	8	8
Completion rate	86.3%	89.9%

Basically, both surveys achieved very high response rates (86 and 90 percent). The refusal rate after an individual was contacted was exceptionally small (less than 0.5 percent). The most typical reason for not being able to undertake the survey was the inability to locate the intended respondent (e.g., because of incorrect or outdated telephone numbers). In short, this survey approach worked remarkably well.

4. AFTER PARK-RIDE SURVEY

On April 28, 1981, all users of the three new park-ride lots that were opened as part of this demonstration were given a postage-paid, mail-back questionnaire as they entered the parking facility. The purpose of the survey was to establish a database on the socioeconomic and travel behavior characteristics of users of this mode. Of the 157 questionnaires given out, 107 usable responses were obtained, resulting in a favorable 68 percent response rate. Table B-5 presents a cross-tabulation of the responses to each question. Results are not disaggregated by park-ride facility due to sample size limitations.

5. BEFORE AND AFTER PARKING ACCUMULATION AND DURATION COUNTS

On November 13, 1980, about six weeks prior to the implementation of the prime time charge, and again on April 14, 1981, after the surcharge had been imposed, standard day-long parking occupancy and duration counts were made of parkers at all downtown off-street facilities. These two time periods were felt to represent fairly consistent weather and travel behavior conditions.

The purpose of these parking counts was to determine the change in usage characteristics at the surcharge and nonsurcharge parking facilities after the beginning of the prime time charge. The automatic equipment at the attended parking facilities also allowed data to be tabulated daily on parking occupancies at half-hour intervals.

6. PARKING AND TRANSIT REVENUE AND OPERATING STATISTICS

In order to monitor and analyze the aggregated impacts of the surcharge on the transportation operating agencies in Madison, data on revenues and operating statistics (e.g., cost and usage) were tabulated regularly for both the parking facilities and the transit system. Data on parking revenues were kept on a monthly basis for all parking facilities controlled by the City of Madison. Operating revenues and costs for the park-ride shuttle buses were maintained monthly, while statistics on ridership for each of the three routes were recorded on a daily basis.

TABLE B-5. AFTER PARK-RIDE SURVEY:
TABULATION OF FREQUENCIES AND MEANS

Survey Question		Frequency
1. Where Coming From?		
	Home	97.2
	Work	1.9
	Personal Business	0.9
	Other	0.0
		100.0
		(107)
2. Time of Entering		
	Before 7:00 a.m.	18.7
	7:00 - 7:59 a.m.	54.2
	8:00 - 8:59 a.m.	26.2
	9:00 - 10:30 a.m.	0.9
		100.0
		(107)
3. Time of Leaving		
	7:00 - 8:59 a.m.	3.7
	9:00 - 11:59 a.m.	0.0
	12:00 - 4:59 p.m.	47.7
	5:00 - 12:00 p.m.	45.8
	12:01 - 5:59 a.m.	2.8
		100.0
		(107)
Park Time (Hours)	0-5	2.9
	5-6	1.0
	6-7	2.9
	7-8	4.9
	8+	88.3
		100.0
		(103)
4. Take Bus to Destination?		
	Yes	100.0
		(107)

Table continued on following page.

TABLE B-5 (Continued). AFTER PARK-RIDE SURVEY:
TABULATION OF FREQUENCIES AND MEANS

Survey Question	Frequency
5. Where Going To?	
Work	85.0
School	15.0
Other	0
	100.0
	(107)
6. Number of Days Downtown for This Purpose	
None	1.9
1	0
2	2.8
3	2.8
4	7.5
5	85.0
	100.0
	(107)
6a. Use Park-Ride All Days?	
Yes	78.8
No	21.2
	100.0
	(104)
6b. Number of Days Used Other Means	
1	50.0
2	13.6
3	22.8
4	13.6
	100.0
	(22)

Table continued on following page.

TABLE B-5 (Continued). AFTER PARK-RIDE SURVEY:
TABULATION OF FREQUENCIES AND MEANS

Survey Question	Frequency
6c. Other Means of Travel	
Auto Driver	69.3
Auto Passenger	15.4
Taxi	0
Bicycle	3.8
Bus	7.7
Walk	0
Other	3.8
	100.0
	(26)
7. Mode Used Before Park-Ride	
Auto	60.8
Carpool	3.9
Bus	35.3
Walk	0
Bicycle	0
Taxi	0
	100.0
	(102)
9. Parking Facility Used Before Park-Ride	
Block 53/54	3.1
Dayton Ramp	10.8
McCormick Ramp	15.4
Doty Ramp	6.1
Lake Street Ramp	1.5
Blair Street	3.1
Dane County Ramp	20.0
Hill Farm	4.6
On-Street	7.7
Private Off-Street	9.2
Private Outlying	18.5
Brayton	0
600 University	0
	100.0
	(65)

Table continued on following page.

TABLE B-5 (Continued). AFTER PARK-RIDE SURVEY:
TABULATION OF FREQUENCIES AND MEANS

Survey Question		Frequency
11.	Parking Difficulty (7:00 - 9:00 a.m.)	
	1	33.3
	2	13.1
	3	12.1
	4	12.1
	5	6.1
	6	3.1
	7	20.2
		100.0
	Average	3.34 (99)
	(11:00 - 2:00 p.m.)	
	1	2.9
	2	1.4
	3	10.0
	4	17.1
	5	11.4
	6	12.9
	7	44.3
		100.0
	Average	5.49 (70)
12.	Number of Vehicles Owned	1.91 (107)
13.	Number of Licensed Drivers	2.08 (107)

Table continued on following page.

TABLE B-5 (Continued). AFTER PARK-RIDE SURVEY: TABULATION OF FREQUENCIES AND MEANS

Survey Question		Frequency
14. Age		
	16-19	1.9
	20-24	21.5
	25-34	40.2
	35-44	19.6
	45-54	10.3
	55-64	6.5
		100.0
		(107)
15. Sex		
	Male	25.5
	Female	74.5
		100.0
		(102)
16. Household Income (Dollars)		
	0 - 4,999	7.1
	5,000 - 9,999	10.2
	10,000 - 14,999	18.4
	15,000 - 19,999	15.3
	20,000 - 24,999	14.3
	25,000 - 29,999	10.2
	30,000 - 34,999	15.3
	35,000+	9.2
		100.0
		(98)

NOTE: Sample size is shown in parentheses.

SOURCE: Charles River Associates, from After Park-Ride Survey, April 28, 1981.

APPENDIX C. SURVEY QUESTIONNAIRES

Before All-day Parking Survey

After All-day Parking Survey

Park-Ride Survey

Telephone Survey -- Prime Time Respondents

Telephone Survey -- Non-Prime Time Respondents

Madison Parking Survey

This questionnaire is distributed to all drivers who parked in this facility today. Your cooperation will help the Madison Department of Transportation in planning for the downtown area. If possible, give the completed questionnaire to an attendant when you leave this facility, or just fold the form (with the address label showing) and drop in any mailbox—no postage required.

1. Where were you coming *from* when you parked here? (CHECK ONE)
   ☐Home ☐Work ☐School ☐Shopping ☐Personal business
   ☐Social/Recreational ☐Medical/Dental ☐Other (SPECIFY) _____
   _____

2. How many minutes did it take you to drive from that place to this parking facility? _____# Minutes

3. How many minutes would it take you to make this same trip by bus?
   _____# Minutes ☐No bus available ☐No idea

4. Including yourself, how many persons were in your vehicle? _____# Persons

5. Was the trip to this parking facility part of a regular carpool? ☐Yes ☐No

6. How many days last week did you park at this facility?
   ☐None ☐One ☐Two ☐Three ☐Four ☐Five ☐Six or more

7. Where did you go to *after you left your vehicle* at this parking facility? (CHECK MAIN ONE)
   ☐Home ☐Work ☐School ☐Shopping ☐Personal business
   ☐Social/Recreational ☐Medical/Dental ☐Other (SPECIFY) _____
   _____

№ 990

BUSINESS REPLY MAIL

FIRST CLASS PERMIT NO. 33 MADISON, WISCONSIN

POSTAGE WILL BE PAID BY ADDRESSEE

Wisconsin Survey Research Laboratory
University of Wisconsin–Extension
432 North Lake Street
Madison, Wisconsin 53791

NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES

8. How many days *last week* did you come downtown for this reason?
☐None ☐One ☐Two ☐Three ☐Four ☐Five ☐Six or more

8a. What one *other means of travel*—if any—did you use most often last week for this trip downtown?
☐None ☐Bus ☐Walk ☐Bicycle ☐Taxi ☐Other

8b. How many days last week did you make this trip downtown this way?
☐One ☐Two ☐Three ☐Four ☐Five ☐Six or more

9. How many minutes did it take you to get from this facility to the place you were going after leaving your vehicle? _____ # Minutes

10. How did you get to this place? ☐Walk ☐Bus
☐Other (SPECIFY)_____

11. At what time did you enter this parking facility?
_____Hour _____Minute ☐a.m. ☐p.m.

12. At what time will you drive out of this facility?
_____Hour _____Minute ☐a.m. ☐p.m.

13. What is the cost of this parking? $ _____

14. If the trip to this parking facility was to get to work or a work-related trip, does your employer pay for any of this parking cost?
☐Not to work or work-related trip
☐No, employer does not pay parking costs
☐Yes, employer pays: ☐All, or _____% of cost

14a. Can you vary or control the time you must report for work each working day?
☐No, I must be at work the same time every day
☐Yes, I have some flexibility
☐Yes, I have a great deal of flexibility

Please continue with questions on other side.

15. Check the box that best indicates your ability to find a place to park in downtown Madison:

	Easy 1	2	3	4	5	6	*Hard* 7
a. from 7 a.m. to 9 a.m.	☐	☐	☐	☐	☐	☐	☐
b. from 11 a.m. to 2 p.m.	☐	☐	☐	☐	☐	☐	☐

16. Do you usually use your vehicle *during the day* for work or work-related purposes? ☐Yes ☐No

17. How many registered vehicles are owned and operated by you and members of your household? _____ # Vehicles

18. Counting yourself, how many licensed drivers are in your household? _____# Drivers

19. What is your present age? ☐16-19 ☐20-24 ☐25-34 ☐35-44 ☐45-54 ☐55-64 ☐65 or older

20. Are you: ☐Male ☐Female

21. What was your 1979 total family income from all sources and before taxes?
☐Less than $5,000
☐$5,000 - $9,999
☐$10,000 - $14,999
☐$15,000 - $19,999
☐$20,000 - $24,999
☐$25,000 - $29,999
☐$30,000 - $34,999
☐$35,000 or more

22. What is your home postal ZIP code? _____ZIP

23. We would like to call you for your opinions about downtown parking. At what phone number can you be reached and for whom should we ask?

Phone: (_____) _____-_____ Ask for: _____

If possible, give the completed questionnaire to an attendant when you leave this parking facility, or just fold the form (with the address label showing) and drop in any mailbox—no postage required.

12000-7POT350-80

Madison Parking Survey

This questionnaire is distributed to all drivers who parked in this facility today. Your cooperation will help the Madison Department of Transportation in planning for the downtown area. If possible, drop off the completed questionnaire at the exit when you leave this facility, or just fold the form (with the address label showing) and drop in any mailbox — no postage required.

1. Where were you coming *from* whan you parked hara today? (CHECK ONE)
   ☐ Home ☐ Work ☐ School ☐ Shopping ☐ Personal business
   ☐ Social/Racraational ☐ Madical/Dantal ☐ Othar (SPECIFY) _____

2. Including yoursalf, how many persons wara in your vahicle? _____# Parsons.

3. Wes the trip to this parking facility part of a ragular carpool? ☐ Yes ☐ No

4. How many days last waak did you park at this fecility?
   ☐ None ☐ One ☐ Two ☐ Three ☐ Four ☐ Five ☐ Six or mora

5. Whare did you go to *altar you left your vahicle* at this parking facility? (CHECK MAIN ONE)
   ☐ Homa ☐ Work ☐ Schooi ☐ Shopping ☐ Parsonal businass
   ☐ Social/Racreationel ☐ Madical/Dental ☐ Othar (SPECIFY) _____

6. How many days *last waak* did you come downtown for thie raason?
   ☐ None ☐ One ☐ Two ☐ Thraa ☐ Four ☐ Five ☐ Six or more

   6a. What one *othar maans of treval* — if any — did you usa most oftan last waak for this trip downtown?
   ☐ Nona ☐ Bus ☐ Walk ☐ Bicycle ☐ Taxi ☐ Othar

   6b. How meny days last week did you meke this trip downtown this way?
   ☐ One ☐ Two ☐ Thraa ☐ Four ☐ Fiva ☐ Six or mora

7. How meny minutes did it taka you to gat from this facility to tha place you were going aftar laaving your vahicla? _____# Minutas

8. At whet time did you anter this parking facility?
   _____ Hour _____ Minuta ☐ a.m. ☐ p.m.

9. At what tima will you driva out of this facility?
   _____ Hour _____ Minuta ☐ a.m. ☐ p.m.

Plaasa continua with Quastion 10. № 180565

BUSINESS REPLY MAIL
FIRST CLASS PERMIT NO. 33 MADISON, WISCONSIN
POSTAGE WILL BE PAID BY ADDRESSEE

Wisconsin Survey Research Laboratory
University of Wisconsin — Extension
432 North Lake Street
Madison, Wisconsin 53791

NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES

10. What is the cost of this parking? $_____

11. Does this amount include the $1.00 prime time charge that is applied to early morning peak hour parkers at the Dayton, Lake Street, Brayton, or 600 University Avenue parking facilities? ☐ Yes ☐ No

12. Did you park at a parking *meter* space or — if there is one — in the attendant-controlled section of this facility?
☐ Meter space ☐ Attendant-controlled section

13. If the trip to this parking facility was to get to work or a work-related trip, does your employer pay for any of this parking cost?
☐ Not to work or work-related trip
☐ No, employer does not pay parking costs
☐ Yes, employer pays: ☐ All, or _____% of cost

13a. Can you vary or control the time you must report for work each working day?
☐ No, I must be at work the same time every day
☐ Yes, I have some flexibility
☐ Yes, I have a great deal of flexibility

14. Has the introduction of the $1.00 prime time parking charge about four or five months ago had *any* effect on where you park when you are downtown or the State Street campus area?
☐ Yes ☐ No: SKIP TO QUESTION 15

14e. Because of the $1.00 prime time parking charge, do you use the *same* lot or ramp, but park at a metered space?
☐ No ☐ Yes: GO TO QUESTION 14d, BELOW

14b. Because of the $1.00 prime time parking charge, do you use a *different* parking lot or ramp now?
☐ Yes ☐ No: GO TO QUESTION 14d, BELOW

14c. What is the name or location of the parking lot or ramp you used before the $1.00 prime time parking charge was introduced?
Name or Location: _____

14d. Describe any other effects the $1.00 prime time parking charge has had on where you park. _____
_____

Please continue with Question 15.

15. Check the box that best indicates your ability to find a place to park in downtown Madison:

	Easy 1	2	3	4	5	6	*Hard* 7
a. from 7 a.m. to 9 a.m.	☐	☐	☐	☐	☐	☐	☐
b. from 11 a.m. to 2 p.m.	☐	☐	☐	☐	☐	☐	☐

16. Do you usually use your vehicle *during the day* for work or work-related purposes?
☐ Yes ☐ No

17. How many registered vehicles are owned and operated by you and members of your household? # Vehicles: _____

18. Counting yourself, how many licensed drivers are in your household? # Drivers. _____

19. What is your present age? ☐ 16-19 ☐ 20-24 ☐ 25-34 ☐ 35-44 ☐ 45-54 ☐ 55-64 ☐ 65 or older

20. Are you: ☐ Male ☐ Female

21. What was your 1980 total family income from all sources and before taxes?
☐ Less than $5,000
☐ $5,000 - $9,999
☐ $10,000 - $14,999
☐ $15,000 - $19,999
☐ $20,000 - $24,999
☐ $25,000 - $29,999
☐ $30,000 - $34,999
☐ $35,000 or more

22. What is your home postal ZIP code? _____ ZIP

If possible, drop off the completed questionnaire at the exit when you leave this parking facility, or just fold the form (with the address label showing) and drop in any mailbox — no postage required.

17500—4A1T004

P—1353

Madison Parking Survey

This questionnaire is distributed to all drivers who parked in this facility today. Your cooperation will help the Madison Department of Transportation in planning for the downtown area. If possible, drop off the completed questionnaire at the exit when you leave this facility, or just fold the form (with the address label showing) and drop in any mailbox — no postage required.

1. Where were you coming *from* when you parked here today? (CHECK ONE)
   ☐ Home ☐ Work ☐ School ☐ Shopping ☐ Personal business
   ☐ Social/Recreational ☐ Medical/Dental ☐ Other (SPECIFY) _____

2. At what time did you enter this parking facility?
   _____ Hour _____ Minute ☐ a.m. ☐ p.m.

3. At what time will you drive out of this facility?
   _____ Hour _____ Minute ☐ a.m. ☐ p.m.

4. After parking your vehicle today, did you take a *bus* to get to where you were going?

   ☐ Yes ☐ No

   4a. How did you get there?
   ☐ Walk ☐ Car ☐ Other: _____
   Please skip to Question 5 to finish questionnaire.

   4b. What is the name or route number of the bus you usually take?
   Name: _____

Please continue with questions on other side.

№ 390062

BUSINESS REPLY MAIL
FIRST CLASS PERMIT NO. 33 MADISON, WISCONSIN
POSTAGE WILL BE PAID BY ADDRESSEE

Wisconsin Survey Research Laboratory
University of Wisconsin — Extension
432 North Lake Street
Madison, Wisconsin 53791

NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES

5. What was the purpose of this trip? (CHECK MAIN ONE)
☐ Home ☐ Work ☐ School ☐ Shopping ☐ Personal business
☐ Social/Recreational ☐ Medical/Dental ☐ Other (SPECIFY) _____

6. How many days *last week* — if any — did you go downtown or to the campus area for this *same* purpose?
☐ None or Number Days: _____

6a. Did you use the park and ride facility on all of these days?
☐ Yes ☐ No

6b. How many days *last week* did you make this trip without using park and ride?
Days: _____

6c. What means (other than park and ride) did you use *last week* to make this trip?
☐ Drove Auto ☐ Auto Passenger ☐ Taxi
☐ Bicycle ☐ Bus ☐ Walk ☐ Other

7. How did you usually make this trip *before* you started using this park and ride facility?
☐ I did not make this trip before park and ride.
☐ Drove Auto ☐ Carpool ☐ Bus ☐ Walk
☐ Bicycle ☐ Taxi ☐ Other: _____

8. As best as you remember, when did you *first* use this Madison Metro park and ride facility?
Month: _____, 19____

Please continue with questions on next page.

9. Where did you usually park *before* you started using this park and ride lot?
Name/location: _____
☐ Didn't use auto before.

10. Was your decision to park and ride a direct result of the $1.00 prime time parking charge that began a few months ago?
☐ Yes ☐ Haven't heard of $1.00 prime time charge.
☐ No

11. Check the box that best indicates your ability to find a place to park in downtown Madison:

	Easy 1	2	3	4	5	6	*Hard* 7
a. from 7 a.m. to 9 a.m.	☐	☐	☐	☐	☐	☐	☐
b. from 11 a.m. to 2 p.m.	☐	☐	☐	☐	☐	☐	☐

12. How many registered vehicles are owned and operated by you and members of your household? _____ # Vehicles.

13. Counting yourself, how many licensed drivers are in your household? _____ # Drivers.

14. What is your present age? ☐ 16-19 ☐ 20-24 ☐ 25-34 ☐ 35-44 ☐ 45-54 ☐ 55-64 ☐ 65 or older

15. Are you: ☐ Male ☐ Female

16. What was your 1980 total family income from all sources and before taxes?
☐ Less than $5,000 ☐ $20,000 - $24,999
☐ $5,000 - $9,999 ☐ $25,000 - $29,999
☐ $10,000 - $14,999 ☐ $30,000 - $34,999
☐ $15,000 - $19,999 ☐ $35,000 or more

17. What is your home postal ZIP code? _____ ZIP

Thank you very much.

If possible, drop off the completed questionnaire at the exit when you leave this parking facility, or just fold the form (with the address label showing) and drop in any mailbox — no postage required.

700—4A1T003 P—1357

_____ Office Number

Project 1353

April 3, 1981

University of Wisconsin-Extension
Wisconsin Survey Research Laboratory
PRIME TIME RAMP/LOT

"AFTER PARKING" TELEPHONE SURVEY

( ) = # RESPONDING

1. The questionnaire you filled out one day last October indicated that you went to (work/school: SEE COVER SHEET) then and parked in Madison's downtown or State Street area before 9:30 in the morning. How many days last week did you go downtown or to the State Street area to (work/school)?

(42) 0. None

Days: (236) (TO Q 10)

(0) 8. R denies eligibility (TO Q 34)

2. Why was it that you didn't make this trip at all last week? _____

24 - NOT IN SCHOOL; 1 - MOVED; 1 - HAD BABY
10 - CHANGED JOBS; 1 - LOST LICENSE; 2 - OTHER
2 - PERIODIC TRIP; 1 - ON VACATION

3. INTERVIEWER: HAS R COMPLETELY STOPPED MAKING THIS WORK/SCHOOL TRIP?

(37) 1. Yes

(5) 2. No (TO Q 4)

3a. Was the $1.00 prime time parking charge that began a few months ago a major reason you stopped making this trip, a minor reason, or not a reason at all?

(1) 1. Major (0) 2. Minor (33) 3. Not at all (SKIP TO Q 34) (3) 4. Never heard of it

4. When you do make this trip downtown or to the State Street area to (work/school), do you yourself usually drive, or do you get there some other way?

(3) 1. Drive

(2) 2. Some other way (TO Q 8)

(0) 8. Never makes this trip (GO BACK TO Q 3a)

5. Do you usually park in (RAMP/LOT I.D. FROM COVER SHEET) when you make this trip?

(1) 1. Yes (TO Q 7)

(1) 2. No

(1) 3. Don't remember

6. Do you usually park in another public ramp or lot, at a metered space on the street, at an unmetered street space, use private parking space, or what?

(1) 1. Ramp/lot

(1) 2. Meter

(0) 3. Unmetered (TO Q 9)

(0) 4. Private (TO Q 9)

(0) Other: _____ (TO Q 9)

6a. What is the name or location of the ramp or lot you park in?

Name or Location: 1 - McCORMICK RAMP

7. Don't know (TO Q 7)

6b. INTERVIEWER: IS THIS A PRIME TIME FACILITY?

(0) 1. Yes (TO Q 7)

(1) 2. No (TO Q 9)

(0) 3. Can't tell (TO Q 7)

Interviewer: _____ Sample #: _____

Date: _____ Time Started: _____

7. When you park there, do you usually pay the $1.00 prime time parking charge?

DNA

1. Yes (SKIP TO Q 34) | 2. No | 3. Depends | 4. Never heard of it (END) | 7. Don't know

7a. Do you usually avoid this charge by parking in a metered space, not entering between 7 and 9:30 in the morning, leaving before three hours, or what?

DNA

1. Metered (TO Q 9) | 2. Not entering | 3. Leaving | Other: _____ (SKIP TO Q 34)

8. How do you get downtown or to the State Street area when you go to (work/school)?

0 1. Bus only | 0 2. Park and ride bus | 1 3. Car passenger | 1 4. Walk | 0 5. Bicycle | 0 6. Taxi | Other: 0

9. Was the $1.00 prime time parking charge that began a few months ago a major reason you park or make these trips as you do now, a minor reason, or not a reason at all?

2 1. Major | 0 2. Minor | 2 3. Not at all (SKIP TO Q 34) | 0 4. Never heard of it

R'S WHO MADE THIS TRIP LAST WEEK

10. How many of these days last week did you yourself drive to (work/school) downtown or the State Street area?

32 0. None (TO Q 26) | 141 8. All of them | # Days: 63

11. Did you make these trips alone, or were any of them with others?

133 1. Alone (TO Q 12) | 45 2. With others | 26 3. Both alone and with others

11a. Including yourself, how many people were in the vehicle on these trips last week?

#: _____ 54 - 2, 11 - 3, 5 - 4, 1 - 6

11b. Was the $1.00 prime time parking charge that began a few months ago a major reason that you traveled with others, a minor reason, or not a reason at all?

12 1. Major | 5 2. Minor | 54 3. Not at all | 0 4. Never heard of it

12. How many days that you drove last week did you park in (RAMP/LOT I.D. FROM COVER SHEET) to go to (work/school) downtown or the State Street area?

76 0. None (TO Q 19)
99 8. All of them
Days: 29
0 7. R doesn't know (TO Q 25)

13. When you went to this ramp or lot last week, did you usually park at a meter, or did you park in the attendant-controlled section after looking for a meter, or did you go directly to the attendant-controlled section?

45 1. Meter
6 2. Looked/attendant
77 3. Attendant direct (TO Q 14)
0 4. Other (TO Q 14)

13a. Did you want to park at a meter to avoid paying the $1.00 prime time parking charge?

44 1. Yes
7 2. No
0 3. Depends

14. When you parked at this ramp or lot last week to go to (work/school), did you usually enter before 7 in the morning, between 7 and 9:30, or after 9:30 in the morning?

8 1. Before 7
81 2. 7-9:30 (TO Q 15)
39 3. After 9:30

14a. Was the $1.00 prime time parking charge that began a few months ago a major reason that you entered at this time, a minor reason, or not a reason at all?

25 1. Major
3 2. Minor
19 3. Not at all
0 4. Never heard of it

15. Did you pay all of the cost of parking at this ramp or lot yourself?

114 1. Yes (TO Q 16)
14 2. No

15a. Who did pay the cost of this parking?

9 1. Passengers
1 2. Employer
4 Other: SHARE WITH PASSENGER

16. How much was the usual total cost per day to park at this ramp or lot when you went to (work/school)?

41 ≤ $1.00
56 $1.00 - $2.00
29 ? $2.00
$_____
7. Don't know (TO Q 16d)

16a. INTERVIEWER: DID R PARK AT METER (Q 13)?

45 1. Yes
80 2. No (TO Q 16c)

16b. INTERVIEWER: IS "ALL OF THEM" CIRCLED IN Q 12?

38 1. Yes (TO Q 25)
8 2. No (TO Q 19)

16c. INTERVIEWER: IS THE AMOUNT IN Q 16 MORE THAN $1.60?

(47) 1. Yes

(33) 2. No (TO Q 17)

16d. Did the cost of this parking include the $1.00 prime time charge?

(35) 1. Yes (11) 2. No (2) 7. Don't know (TO Q 17)

16e. Why did you park where the $1.00 prime time charge had to be paid?

7 - DIDN'T WANT TO PLUG METER
12 - ONLY PLACE I COULD FIND - NOT WORTH LOOKING
16 - CLOSEST PARKING PLACE (TO Q 18)

17. Did you leave the ramp or lot within three hours to avoid paying the $1.00 prime time parking charge?

(8) 1. Yes (36) 2. No (2) 3. Never heard of it (TO Q 18)

17a. Did you leave and then return to the same ramp or lot, park at another ramp or lot, park at a meter on the street, or what?

(6) 1. Same (TO Q 18) (0) 2. Another (1) 3. Meter on street (TO Q 18) Other: (1) (TO Q 18)

17b. What is the name or location of the ramp or lot you parked in next?

Name or location: DNA

18. INTERVIEWER: IS "ALL OF THEM" CIRCLED IN Q 12?

(60) 1. Yes (21) 2. No (TO Q 19)

18a. INTERVIEWER: WAS PRIME TIME CHARGE PAID ("YES" TO Q 16d)?

(32) 1. Yes (27) 2. No (TO Q 25)

18b. Have you tried to park someplace else to avoid paying the $1.00 prime time parking charge when going to (work/school) downtown or in the State Street area?

(14) 1. Yes (18) 2. No (TO Q 25)

18c. To do this have you parked at meters in public ramps or lots, at street meters, at private parking spaces, or what? (CHECK ALL THAT APPLY)

(9) 1. Meters: ramps, lots (5) 2. Street meters (0) 3. Private (4) Other: (TO Q 25)

19. How many days last week did you park somewhere other than (RAMP/LOT I.D. FROM COVER SHEET) when you drove downtown or to the State Street area to (work/school)?

(4) 0. None (GO BACK TO Q 12. RECONCILE)

(48) All remaining

Days: (53)

(0) 7. R doesn't know (TO Q 25)

20. Did you park at another public ramp or lot, at a street meter, at an unmetered street space, in private parking, or where? (CHECK ALL THAT APPLY)

(47) 1. Other public

(13) 2. Street meter (TO Q 21)

(22) 3. Unmetered (TO Q 21)

(23) 4. Private (TO Q 21)

Other: (2) (TO Q 21)

20a. What is the name or location of the ramp or lot you parked in?

Name or Location: 13-McCORMICK; 1-BRAYTON; 2-600 UNIV. AVE.; 3-FRANCES; 1-BLOCK 54; 1-HILL FARM; 9-LAKE ST.; 1-BUCKEYE; 12-UNIVERSITY LOT; 3-FRANCES ST.

20b. INTERVIEWER: IS THIS A PRIME TIME FACILITY?

(14) 1. Yes

(32) 2. No (TO Q 21)

(0) 7. Cannot tell (TO Q 21)

20c. When you park there, do you usually pay the $1.00 prime time parking charge?

(3) 1. Yes

(8) 2. No

(3) 3. Depends (TO Q 20e)

(0) 7. Don't know

(0) 8. Never heard of it (TO Q 24)

20d. Why did you park where the $1.00 prime time parking charge had to be paid?

1-ONLY PLACE AVAILABLE
1-CLOSEST PARKING LOT
1-OTHER

(TO Q 20f)

20e. Do you usually avoid this charge by parking in a metered space, not entering between 7 and 9:30 in the morning, leaving before three hours, or what?

(6) 1. Metered

(5) 2. Not entering

(0) 3. Leaving (TO Q 21)

Other: (0) (TO Q 24)

20f. Did you pay all of the cost of parking there yourself?

(1) 1. Yes (TO Q 20h)

(2) 2. No

20g. Who did pay the cost of this parking?

(1) 1. Passengers

(0) 2. Employer

Other: (1) RESPONDENT + EMPLOYER

20h. How much was the usual cost per day to park there when you went to (work/school)?

$ 1 ∠ $2.00
2 $2.50 (TO Q 24)

7. Don't know (TO Q 24)

21. Did you pay all of the cost of parking there yourself?

(68) 1. Yes (TO Q 22)

(3) 2. No

21a. Who did pay the cost of this parking?

(2) 1. Passengers (1) 2. Employer Other: (0) _____

22. How much was the usual cost per day to park there when you went to (work/school)?

26 < $1.00
40 $1.00 - $2.00
$ 3 > $2.00 7. Don't know

23. Was the $1.00 prime time parking charge a major reason that you parked there last week, a minor reason, or not a reason at all?

(61) 1. Major (5) 2. Minor (30) 3. Not at all (0) 4. Never heard of it

24. How many minutes did it usually take you to get from this parking place to (work/school)?

Minutes: ____

71 - 0-5 MINUTES
18 - 6-10 MINUTES
12 - 11-20 MINUTES

25. INTERVIEWER: IS "ALL OF THEM" CIRCLED IN Q 10?

(141) 1. Yes

(58) 2. No (TO Q 26)

25a. After the $1.00 prime time parking charge that began a few months ago, did you try to experiment with any other ways of traveling downtown or to the State Street area to get to (work/school)?

(42) 1. Yes

(100) 2. No (TO Q 34)

(0) 3. Hasn't heard of it

(0) 7. Don't know (TO Q 34)

25b. What other kinds of transportation to (work/school) did you try before you went back to driving? (CIRCLE ALL THAT APPLY)

(31) 1. Bus only (4) 2. Park and ride bus (3) 3. Walk (4) 4. Bicycle (0) 5. Taxi Other: (1) _____

25c. Why did you go back to driving?

17 - BUS LESS CONENIENT
8 - BUS TAKES TOO LONG
4 - CARPOOL NOT FLEXIBLE
4 - NEED CAR FOR WORK
2 - WEATHER
2 - BUS LATE/UNRELIABLE
1 - TOO MUCH TO CARRY

(SKIP TO Q 34)

26. On how many of these days last week that you went downtown or to the State Street area to (work/school) did you ride as a passenger in a private vehicle?

(54) 0. None (TO Q 27)

(11) 8. All of them

Days: (28)

26a. Including yourself, how many people were in the vehicle last week? #: ____

22 - 2
10 - 3
5-4
2-7

26b. Was this vehicle usually parked in a public ramp or lot, at a meter on the street, at an unmetered street space, in a private space, or where?

14 1. Public — 1 2. Meter — 4 3. Unmetered (TO Q 26d) — 16 4. Private — Other: 2 (TO Q 26d) — 0 7. DK (TO Q 26d)

26c. Did the cost of this parking include the $1.00 prime time parking charge that began a few months ago?

2 1. Yes — 12 2. No — 0 3. Haven't heard of charge — 0 7. Don't know

26d. Did you pay any of the cost of this parking? 14 1. Yes — 25 2. No

26e. Was the $1.00 prime time parking charge that began a few months ago a major reason that you traveled this way, a minor reason, or not a reason at all?

16 1. Major — 4 2. Minor — 19 3. Not at all — 0 4. Never heard of it

INTERVIEWER: WHEN R HAS PROVIDED A MEANS OF TRANSPORTATION FOR ALL DAYS INDICATED IN Q 1, SKIP TO Q 32.

27. On how many of these days last week did you take either a regular bus or a park and ride bus for these (work/school) trips?

10 0. None — 26 8. All of them (TO Q 32a) — # Days: 21

28. On how many of these days did you walk?

6 0. None — 1 8. All of them (TO Q 33) — # Days: 7

29. On how many of these days did you make the trip by bicycle?

2 0. None — 2 8. All of them (TO Q 33) — # Days: 2

30. How many of these days did you take a taxi to (work/school)?

2 0. None — 0 8. All of them (TO Q 33) — # Days: 0

31. And, if all the days you made this trip last week aren't covered--what other means did you use last week to make this (work/school) trip?

0. All covered, or: 1 - DROVE 1 - MOTORCYCLE

32. INTERVIEWER: DID R MAKE ANY BUS TRIPS? (Q 27)

1. Yes — 2. No (TO Q 33)

32a. Did you use any of the park and ride buses last week for this trip?

5 1. Yes — 38 2. No (TO Q 32d)

32b. Which park and ride bus did you use?

1 1. Hill Farm 1 2. Exposition Center 0 3. MATC 1 4. Sherman Plaza
0 5. Nakoma Plaza 0 6. Kam'Ann Inn 2 7. Copp's lot Other: _____

32c. Did you park in the park and ride lot?

4 1. Yes (TO Q 33) 1 2. No

32d. When you took the bus to (work/school) on these trips last week, how did you get from home to the bus stop?

37 1. Walk 1 2. Was driven 1 3. R drove Other: 0

33. Was the $1.00 prime time parking charge a major reason you traveled this way, a minor reason, or not a reason at all?

27 1. Major 9 2. Minor 14 3. Not a reason 0 4. Never heard of it (END)

ALL RESPONDENTS

34. On a scale of one to seven with one being "easy" and seven being "hard", how would you rate your ability to find a place to park in downtown Madison from 7 to 9 in the morning?

Scale #: 3.20 (AVG.) 8. Don't know

35. ...from 11 in the morning to 2 in the afternoon? Scale #: 5.55 (AVG.) 8. Don't know

36. Do you think the $1.00 prime time parking charge does--in fact--free up parking space for shoppers who arrive during the middle of the day?

81 1. Yes — 140 2. No (TO Q 37) 51 7. Don't know 6 4. Never heard of it (TO Q 38)

36a. Do you think it should or should not be continued for this reason?

46 1. Should 54 2. Should not 31 7. Don't know

37. Does the $1.00 prime time parking charge, in your opinion, result in commuters trying other ways to get downtown such as the bus or carpooling?

(148) 1. Yes — (97) 2. No (TO Q 38) — (27) 7. Don't know

37a. Do you think it should or should not be continued for this reason?

(72) 1. Should — (78) 2. Should not — (25) 7. Don't know

38. What other comments--if any--would you like to make about the $1.00 prime time parking charge and parking downtown or in the State Street area?

0. None, or _____

SEE ATTACHED SHEET

* * * * * * * * * * * * * * * * * * * TERMINATE * * * * * * * * * * * * * * * * * * *

A. Sex of Respondent: (85) 1. Male (192) 2. Female

B. Time Interview Ended: 7.7 MINUTES (AVG.)

COMMENTS: BEFORE PARKING LOT:

113 - DAYTON RAMP
37 - BRAYTON LOT
89 - LAKE ST. RAMP
39 - 600 UNIVERSITY AVE.

BEFORE TRIP PURPOSE:

132 - WORK
141 - SCHOOL
2 - HOME
1 - SHOP
2 - SOCIAL/RECREATION

Q. 38. RESPONSES OF "PRIME TIME" PANEL. (MULTIPLE RESPONSES PERMITTED.)

NUMBER	POSITIVE SURCHARGE RESPONSES
9	OPENS UP PARKING FOR SHOPPERS
8	ENCOURAGES BUS RIDERSHIP
2	REDUCES THE AMOUNT OF DOWNTOWN TRAFFIC
19	PRO $1.00 PRIME TIME CHARGE-COMMENT NOT SPECIFIED GOOD EXPERIMENT
7	ENCOURAGES ALTERNATIVE TRANSPORTATION - (OTHER THAN BUS) - CARPOOLS, BIKES
	NEGATIVE SURCHARGE RESPONSES
36	ANTI $1.00 PRIME TIME CHARGE-COMMENT NOT SPECIFIED-PAIN, RIDICULOUS, SHOULD NOT BE CONTINUED, NO POSITIVE EFFECT
28	DISCRIMINATES AGAINST DOWNTOWN WORKERS - RAISES THEIR EXPENSES
13	NOT FAIR TO STUDENTS
39	DOESN'T REALLY OPEN UP PARKING FOR SHOPPERS - FORCES PEOPLE TO SHOP OTHER THAN DOWNTOWN — PEOPLE WOULD RATHER SHOP AT MALL — ONLY PEOPLE WHO SHOP DOWNTOWN WORK THERE OR ARE STUDENTS
10	NOT EFFECTIVE IN GETTING PEOPLE TO USE ALTERNATIVES TO DRIVING
15	PEOPLE JUST PARK IN OTHER LOTS — MOVE THEIR CARS AROUND DURING THE DAY
5	JUST ANOTHER WAY FOR THE CITY TO MAKE MONEY
20	DISCRIMINATES AGAINST OUT OF TOWN COMMUTER WHO CAN'T TAKE THE BUS
6	FORCES PEOPLE TO CHANGE THEIR TIME OF ARRIVAL OR DEPARTURE
15	BUS TAKES TOO LONG — IMPROVE BUS SERVICE
7	$1.00 SURCHARGE IS TOO EXPENSIVE
1	DISCRIMINATES AGAINST WORKING MOTHERS WHO HAVE TO TAKE CHILDREN TO DAY CARE
9	UNFAIR TO PEOPLE WHO NEED THEIR CARS FOR WORK
1	LINES TOO LONG TO GET OUT OF RAMP
	OTHER COMMENTS ON PARKING
7	SURCHARGE DOESN'T AFFECT ME
6	ALL PARKING IS TOO EXPENSIVE
30	NEED MORE PARKING PLACES
5	PARKING IS GOOD - NO COMPLAINTS
1	IMPROVE BIKE PATHS — IT'S DANGEROUS TO RIDE ON THE STREETS
3	NEED MORE LONG TERM PARKING, INCREASED METER TIMES
1	STATE SHOULD PROVIDE PARKING FOR THEIR EMPLOYEES

_____Office Number

Project 1353
April 3, 1981

University of Wisconsin-Extension
Wisconsin Survey Research Laboratory
NON-PRIME TIME RAMP/LOT

( ) = # RESPONDING "AFTER PARKING" TELEPHONE SURVEY

1. The questionnaire you filled out one day last October indicated that you went to (work/school: SEE COVER SHEET) then and parked in Madison's downtown or State Street area before 9:30 in the morning. How many days last week did you go downtown or to the State Street area to (work/school)?

   (59) 0. None

   # Days: (411) (TO Q 10)

   (0) 8. R denies eligibility (TO Q 32)

2. Why was it that you didn't make this trip at all last week? _____

   28 - CHANGED JOBS; 7 - PERIODIC TRIP; 1 - SICK
   10 - VACATION; 2 - MOVED; 1 - OTHER
   9 - NOT IN SCHOOL; 1 - HAD BABY

3. INTERVIEWER: HAS R COMPLETELY STOPPED MAKING THIS WORK/SCHOOL TRIP?

   (36) 1. Yes

   (23) 2. No (TO Q 4)

   3a. Was the $1.00 prime time parking charge that began a few months ago a major reason you stopped making this trip, a minor reason, or not a reason at all?

   (2) 1. Major (1) 2. Minor (33) 3. Not at all (0) 4. Never heard of it

   (SKIP TO Q 32)

4. When you do make this trip downtown or to the State Street area to (work/school), do you yourself usually drive, or do you get there some other way?

   (17) 1. Drive

   (6) 2. Some other way (TO Q 8)

   8. Never makes this trip (GO BACK TO Q 3a)

5. Do you usually park in (RAMP/LOT I.D. FROM COVER SHEET) when you make this trip?

   (14) 1. Yes (TO Q 7) 9

   (3) 2. No

   3. Don't remember

6. Do you usually park in another public ramp or lot, at a metered space on the street, at an unmetered street space, use private parking space, or what?

   (1) 1. Ramp/lot

   (0) 2. Meter (0) 3. Unmetered (1) 4. Private (TO Q 9)

   Other: (1) _____ (TO Q 9)

   6a. What is the name or location of the ramp or lot you park in?

   Name or Location: 1 - DOTY RAMP

   7. Don't know (TO Q 7)

   6b. INTERVIEWER: IS THIS A PRIME TIME FACILITY? (0) 1. Yes (TO Q 7) (1) 2. No (TO Q 9) (0) 3. Can't tell (TO Q 7)

Interviewer: _____ Sample #: _____

Date: _____ Time Started: _____

7. When you park there, do you usually pay the $1.00 prime time parking charge?

DNA

1. Yes (SKIP TO Q 9) | 2. No | 3. Depends | 4. Never heard of it (END) | 7. Don't know

7a. Do you usually avoid this charge by parking in a metered space, not entering between 7 and 9:30 in the morning, leaving before three hours, or what?

DNA

1. Metered (TO Q 9) | 2. Not entering | 3. Leaving | Other: _____ (SKIP TO Q 32)

8. How do you get downtown or to the State Street area when you go to (work/school)?

2 | 0 | 3 | 0 | 1 | 0

1. Bus only | 2. Park and ride bus | 3. Car passenger | 4. Walk | 5. Bicycle | 6. Taxi | Other: _____

9. Was the $1.00 prime time parking charge that began a few months ago a major reason you park or make these trips as you do now, a minor reason, or not a reason at all?

2 | 0 | 19 | 1

1. Major | 2. Minor | 3. Not at all (SKIP TO Q 32) | 4. Never heard of it

R'S WHO MADE THIS TRIP LAST WEEK

10. How many of these days last week did you yourself drive to (work/school) downtown or the State Street area?

59 | 272 | 80

0. None (TO Q 24) | 8. All of them | # Days: _____

11. Did you make these trips alone, or were any of them with others?

225 | 87 | 39

1. Alone (TO Q 12) | 2. With others | 3. Both alone and with others

11a. Including yourself, how many people were in the vehicle on these trips last week?

#: _____

92-2
19-3
9-4
5-2

1-6
3-7

11b. Was the $1.00 prime time parking charge that began a few months ago a major reason that you traveled with others, a minor reason, or not a reason at all?

4 | 3 | 119 | 0

1. Major | 2. Minor | 3. Not at all | 4. Never heard of it

12. How many days that you drove last week did you park in (RAMP/LOT I.D. FROM COVER SHEET) to go to (work/school) downtown or the State Street area?

(85) 0. None (TO Q 17) | (223) 8. All of them | # Days: (44) | 7. R doesn't know (TO Q 23)

13. When you parked at this ramp or lot last week to go to (work/school), did you usually enter before 7 in the morning, between 7 and 9:30, or after 9:30 in the morning?

(14) 1. Before 7 | (241) 2. 7-9:30 | (12) 3. After 9:30

14. Did you pay all of the cost of parking at this ramp or lot yourself?

(219) 1. Yes (TO Q 15) | (48) 2. No

14a. Who did pay the cost of this parking?

(21) 1. Passengers | (14) 2. Employer | (6) Other: PASSENGER & EMPLOYER | (3) DRIVER & PASSENGER | (4) SPECIAL COUNTY RATE

15. How much was the usual total cost per day to park at this ramp or lot when you went to (work/school)?

55 - ∠ $1.00
195 - $1.00-2.00
11 - 7 $2.00

$_____ | 7. Don't know

16. INTERVIEWER: IS "ALL OF THEM" CIRCLED IN Q 12?

(223) 1. Yes (TO Q 23) | (44) 2. No

17. How many days last week did you park somewhere other than (RAMP/LOT I.D. FROM COVER SHEET) when you drove downtown or to the State Street area to (work/school)?

(3) 0. None (GO BACK TO Q 12. RECONCILE) | (75) All remaining | (51) # Days: ____ | 7. R doesn't know (TO Q 23)

18. Did you park at another public ramp or lot, at a street meter, at an unmetered street space, in private parking, or where? (CHECK ALL THAT APPLY)

(34) 1. Other public | (13) 2. Street meter (TO Q 19) | (17) 3. Unmetered (TO Q 19) | (62) 4. Private (TO Q 19) | (2) Other: _____ (TO Q 19)

18a. What is the name or location of the ramp or lot you parked in?

Name or Location:
11 - DAYTON RAMP | 4 - BRAYTON | 2 - BLAIR
5 - DOTY RAMP | 3 - McCORMICK | 1 - BLOCK 54
5 - DANE CO. | 2 - LAKE ST. | 1 - OTHER

18b. INTERVIEWER: IS THIS A PRIME TIME FACILITY?

(17) 1. Yes (TO Q 18c) | (17) 2. No | (0) 7. Cannot tell (TO Q 19)

18c. When you park there, do you usually pay the $1.00 prime time parking charge?

(2) 1. Yes — (13) 2. No — (2) 3. Depends — (0) 7. Don't know — (0) 8. Never heard of it

(TO Q 18e) (TO Q 22)

18d. Why did you park where the $1.00 prime time parking charge had to be paid? 2 - CLOSEST LOT

(TO Q 18f)

18e. Do you usually avoid this charge by parking in a metered space, not entering between 7 and 9:30 in the morning, leaving before three hours, or what?

(5) 1. Metered — (6) 2. Not entering — (3) 3. Leaving — Other: (1)

(TO Q 19) (TO Q 22)

18f. Did you pay all of the cost of parking there yourself?

(0) 1. Yes (TO Q 18h) — (2) 2. No

18g. Who did pay the cost of this parking?

(0) 1. Passengers — (1) 2. Employer — Other: (1) DRIVER & EMPLOYER

18h. How much was the usual cost per day to park there when you went to (work/school)?

1 - $0.50
1 - $2.00

$_____ (TO Q 22) — 7. Don't know (TO Q 22)

19. Did you pay all of the cost of parking there yourself?

(77) 1. Yes (TO Q 20)

(29) 2. No

19a. Who did pay the cost of this parking?

(4) 1. Passengers (16) 2. Employer (5) Other: DRIVER & EMPLOYER

20. How much was the usual cost per day to park there when you went to (work/school)?

56 - ≤ $1.00
30 - $1.00-2.00
7 - > $2.00

$_____ 7. Don't know

21. Was the $1.00 prime time parking charge a major reason that you parked there last week, a minor reason, or not a reason at all?

(29) 1. Major (10) 2. Minor (75) 3. Not at all (5) 4. Never heard of it

22. How many minutes did it usually take you to get from this parking place to (work/school)?

Minutes: ____

97 - 0-5 MINUTES
14 - 6-10 MINUTES
11 - 11-20 MINUTES

23. INTERVIEWER: IS "ALL OF THEM" CIRCLED IN Q 10?

(272) 1. Yes

(76) 2. No (TO Q 24)

23a. After the $1.00 prime time parking charge that began a few months ago, did you try to experiment with any other ways of traveling downtown or to the State Street area to get to (work/school)?

(39) 1. Yes (231) 2. No (TO Q 32) (4) 3. Hasn't heard of it (TO Q 32) 7. Don't know

23b. What other kinds of transportation to (work/school) did you try before you went back to driving? (CIRCLE ALL THAT APPLY)

(25) 1. Bus only (4) 2. Park and ride bus (1) 3. Walk (4) 4. Bicycle (0) 5. Taxi Other: (7) CARPOOL (3) MOTORCYCLE

23c. Why did you go back to driving?

4 - NEED CAR FOR WORK
2 - PAY FOR PRIVATE SPOT
18 - BUS LESS CONVENIENT
3 - CARPOOL NOT FLEXIBLE
6 - BUS TOO SLOW
3 - BIKE PROBLEMS

(SKIP TO Q 32)

24. On how many of these days last week that you went downtown or to the State Street area to (work/school) did you ride as a passenger in a private vehicle?

(68) 0. None (TO Q 25)

(26) 8. All of them

Days: (43) ____

24a. Including yourself, how many people were in the vehicle last week? #: ____

54 - 2 2-4
8 - 3 5-7

24b. Was this vehicle usually parked in a public ramp or lot, at a meter on the street, at an unmetered street space, in a private space, or where?

(28) 1. Public (4) 2. Meter (2) 3. Unmetered (27) 4. Private Other: (6) (1) 7. DK
(TO Q 24d) (TO Q 24d) (TO Q 24d)

24c. Did the cost of this parking include the $1.00 prime time parking charge that began a few months ago?

(3) 1. Yes (23) 2. No (0) 3. Haven't heard of charge (2) 7. Don't know

24d. Did you pay any of the cost of this parking? (34) 1. Yes (34) 2. No

24e. Was the $1.00 prime time parking charge that began a few months ago a major reason that you traveled this way, a minor reason, or not a reason at all?

(11) 1. Major (7) 2. Minor (51) 3. Not at all (0) 4. Never heard of it

INTERVIEWER: WHEN R HAS PROVIDED A MEANS OF TRANSPORTATION FOR ALL DAYS INDICATED IN Q 1, SKIP TO Q 30.

25. On how many of these days last week did you take either a regular bus or a park and ride bus for these (work/school) trips?

(12) 0. None (25) 8. All of them (TO Q 30a) # Days: (36)

26. On how many of these days did you walk?

(10) 0. None (3) 8. All of them (TO Q 31) # Days: (5)

27. On how many of these days did you make the trip by bicycle?

(2) 0. None (4) 8. All of them (TO Q 31) # Days: (4)

28. How many of these days did you take a taxi to (work/school)?

(0) 0. None (0) 8. All of them (TO Q 31) # Days: (0)

29. And, if all the days you made this trip last week aren't covered--what other means did you use last week to make this (work/school) trip?

0. All covered, or: (1) CARPOOL (1) MOTORCYCLE

30. INTERVIEWER: DID R MAKE ANY BUS TRIPS? (Q 27) 5

(11) 1. Yes — (65) 2. No (TO Q 31)

30a. Did you use any of the park and ride buses last week for this trip?

(9) 1. Yes — (50) 2. No (TO Q 30d)

30b. Which park and ride bus did you use?

(2) 1. Hill Farm (1) 2. Exposition Center (3) 3. MATC (2) 4. Sherman Plaza
(0) 5. Nakoma Plaza (0) 6. Kam'Ann Inn (1) 7. Copp's lot Other: (0) _____

30c. Did you park in the park and ride lot? (7) 1. Yes (TO Q 31) (2) 2. No

30d. When you took the bus to (work/school) on these trips last week, how did you get from home to the bus stop?

(47) 1. Walk (2) 2. Was driven (3) 3. R drove Other: (0) _____

31. Was the $1.00 prime time parking charge a major reason you traveled this way, a minor reason, or not a reason at all?

(9) 1. Major (15) 2. Minor (35) 3. Not a reason (1) 4. Never heard of it (END)

ALL RESPONDENTS

32. On a scale of one to seven with one being "easy" and seven being "hard", how would you rate your ability to find a place to park in downtown Madison from 7 to 9 in the morning?

Scale #: 2.66 (AVG.) 8. Don't know

33. ...from 11 in the morning to 2 in the afternoon? Scale #: 4.87 (AVG.) 8. Don't know

34. Do you think the $1.00 prime time parking charge does--in fact--free up parking space for shoppers who arrive during the middle of the day?

(98) 1. Yes — (219) 2. No (TO Q 35) (135) 7. Don't know (17) 4. Never heard of it (TO Q 36)

34a. Do you think it should or should not be continued for this reason?

(70) 1. Should (93) 2. Should not (68) 7. Don't know

35. Does the $1.00 prime time parking charge, in your opinion, result in commuters trying other ways to get downtown such as the bus or carpooling?

(244) 1. Yes — (143) 2. No (TO Q 36) — (63) 7. Don't know

35a. Do you think it should or should not be continued for this reason?

(115) 1. Should — (137) 2. Should not — (54) 7. Don't know

36. What other comments--if any--would you like to make about the $1.00 prime time parking charge and parking downtown or in the State Street area?

0. None, or _____

SEE ATTACHED SHEET

* TERMINATE *

A. Sex of Respondent: (194) 1. Male (276) 2. Female

B. Time Interview Ended: 6.7 MINUTES (AVG.)

COMMENTS:

BEFORE PARKING LOT:

132 - DANE CO.
114 - BLOCK 53/54
98 - DOTY RAMP
84 - McCORMICK RAMP
37 - LAW, BLAIR, POST OFFICE
4 - FRANCES ST.
1 - BUCKEYE

BEFORE TRIP PURPOSE:

413 - WORK
37 - SCHOOL
8 - HOME
6 - PERSONAL BUSINESS
3 - SOCIAL RECREATION
2 - SHOPPING
1 - MEDICAL

Q. 36. RESPONSES OF "NON-PRIME TIME" PANEL. (MULTIPLE RESPONSES PERMITTED.)

NUMBER	POSITIVE SURCHARGE RESPONSES
2	OPENS UP PARKING FOR SHOPPERS
12	ENCOURAGES BUS RIDERSHIP
2	REDUCES THE AMOUNT OF DOWNTOWN TRAFFIC
25	PRO $1.00 PRIME TIME CHARGE-COMMENT NOT SPECIFIED GOOD EXPERIMENT
5	ENCOURAGES ALTERNATIVE TRANSPORTATION - (OTHER THAN BUS) - CARPOOLS, BIKES
	NEGATIVE SURCHARGE RESPONSES
70	ANTI $1.00 PRIME TIME CHARGE-COMMENT NOT SPECIFIED-PAIN, RIDICULOUS, SHOULD NOT BE CONTINUED, NO POSITIVE EFFECT
61	DISCRIMINATES AGAINST DOWNTOWN WORKERS - RAISES THEIR EXPENSES
19	NOT FAIR TO STUDENTS
31	DOESN'T REALLY OPEN UP PARKING FOR SHOPPERS - FORCES PEOPLE TO SHOP OTHER THAN DOWNTOWN - PEOPLE WOULD RATHER SHOP AT MALL - ONLY PEOPLE WHO SHOP DOWNTOWN WORK THERE OR ARE STUDENTS
10	NOT EFFECTIVE IN GETTING PEOPLE TO USE ALTERNATIVES TO DRIVING
6	PEOPLE JUST PARK IN OTHER LOTS - MOVE THEIR CARS AROUND DURING THE DAY
3	JUST ANOTHER WAY FOR THE CITY TO MAKE MONEY
19	DISCRIMINATES AGAINST OUT OF TOWN COMMUTER WHO CAN'T TAKE THE BUS
2	FORCES PEOPLE TO CHANGE THEIR TIME OF ARRIVAL OR DEPARTURE
10	BUS TAKES TOO LONG - IMPROVE BUS SERVICE
5	$1.00 SURCHARGE IS TOO EXPENSIVE
4	DISCRIMINATES AGAINST WORKING MOTHERS WHO HAVE TO TAKE CHILDREN TO DAY CARE
0	UNFAIR TO PEOPLE WHO NEED THEIR CARS FOR WORK
3	LINES TOO LONG TO GET OUT OF RAMP
	OTHER COMMENTS ON PARKING
33	SURCHARGE DOESN'T AFFECT ME
21	ALL PARKING IS TOO EXPENSIVE
50	NEED MORE PARKING PLACES
22	PARKING IS GOOD - NO COMPLAINTS
2	IMPROVE BIKE PATHS - IT'S DANGEROUS TO RIDE ON THE STREETS
3	NEED MORE LONG TERM PARKING, INCREASED METER TIMES
3	STATE SHOULD PROVIDE PARKING FOR THEIR EMPLOYEES

APPENDIX D. SELECTED COPY FOR RADIO AND TV ADVERTISING

Advertising, Boelter & Lincoln
Madison • Milwaukee
110 East Main Street • Madison, WI 53703
608-251-3381

COPY

Downtown Wisconsin
Transportation Project
Radio: 60 "Geography"
Job #51-389

AS PRODUCED
February 18, 1981

(MUSIC UNDER)

ANNCR: Geographically, Madison's an interesting city...with the beautiful, active Downtown Wisconsin nestled between two lakes.

But, those lakes mean there's not much room to park a lot of cars.

If you're a student...or if you work downtown...you're probably aware of the city's demonstration surcharge at four of the attendant parking areas... for people arriving early and parking more than three hours.

But, listen to these ways to avoid the dollar surcharge. You can take advantage of Metro's "Park & Ride" service. Park free at a handy "Park & Ride" lot and just pay for the "Park & Ride" express bus to Downtown Wisconsin.

Advertising, Boelter & Lincoln
Madison • Milwaukee
110 East Main Street • Madison, WI 53703
608-251-3381

COPY

There are frequent buses during rush hours.

Or, you can park at the McCormick or Doty ramps where there is no surcharge.

With more short-term parking available, you'll find it's more fun to do business, shop, or explore the excitement of Downtown Wisconsin...and most downtown businesses are happy to help pay for the parking with "Park On Us" stickers.

Downtown Wisconsin is the center of things...and now it's easier for more of us to be there.

Advertising, Boelter & Lincoln
Madison • Milwaukee
110 East Main Street • Madison, WI 53703
608-251-3381

COPY

Downtown Wisconsin
Transportation Project
TV :30 "Surcharge"
Job #51-387

AS PRODUCED
February 18, 1981

VIDEO	AUDIO
ZOOM IN ON DW LOGO	ANNCR: Heading downtown?
	(MUSIC UNDER)
DISSOLVE TO PHOTO OF ISTHMUS (CONTINUE ZOOM) SUPER: Park On Us GRAPHIC	Most merchants will pay for your city-lot parking with 'Park On Us" stickers.
	Plus...there's more short-term parking available since there's a surcharge at some attendant lots.
CARS MOVING ON STREET - CAMERA PICKS OUT BUS	If you're coming downtown early and parking more than three hours... avoid the dollar surcharge by using
CU PARK & RIDE BUS	Metro's 'Park & Ride" service.
	It's easy...to be in the center of things.
QUICK CUTS OF PEOPLE, PLACES, EVENTS DOWNTOWN	SINGERS: One place to find and it's the center of Madison Downtown Wisconsin
SUPER: DW LOGO	Is the center of Madison

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