

A Parking Study Designed for Downtown Planning

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At present many cities are undertaking comprehensive planning studies of their downtown areas. These studies are concerned with how the areas might be redeveloped to carry out their basic functions more adequately.

In such a study it is necessary to know the traffic and transportation requirements related to the area, as well as the transportation linkages between the various land uses. In Ithaca, N. Y., a special parking survey was conducted to answer these questions. This parking survey, in addition to obtaining the usual information on primary destination of the trip, also established what other stops were made in the downtown area.

Analysis of the data indicated that most of the persons who come downtown primarily for shopping reasons seldom take advantage of other activities. About 55 percent of the people who come mainly to shop visit more than two stores. However, 40 percent visit only one store. It appears that many of the persons coming downtown for such activities as banking, dental appointments, and other personal business do combine such trips with shopping. For example, about one-half the people who come for these purposes made other stops in the downtown area for shopping. These relationships would indicate that in developing a plan for the downtown area it is important to make these activities convenient to the shopping area so that the downtown area will be desirable from a visitor's point of view.

• IT HAS recently become stylish to develop plans for the downtown area. Undoubtedly, this is due to downtown areas feeling the competition of outlying centers or beginning to realize that they must improve their services and facilities if they are to compete with outlying areas and remain the dominant centers in cities. In planning for these areas, however, adequate techniques and procedures have not been developed to evaluate the transportation problems related to these areas and how the downtown

area should best be arranged to make it convenient from a transportation point of view.

Recently the author undertook an analysis of the transportation problems related to downtown Ithaca. The analysis aimed at developing a program for meeting future needs in the downtown area and recommending how the downtown area might be planned to make it more convenient from the transportation standpoint.

Ithaca is a city of about 25,000 population with an additional 15,000

in the trading area. It is a college town with two universities—Cornell and Ithaca College. Very few suburban centers have developed in the area primarily because Ithaca is a small city and its growth has been slow, tending to discourage speculative development of shopping centers.

In light of the characteristics of downtown Ithaca and the particular objectives that were sought, a special parking survey was devised that would give access to some of the fundamental problems. The survey interviewed people as they returned to their cars after visiting the downtown area. A procedure similar to that outlined in the Bureau of Public Roads standard parking survey for placing interviewers in and around the downtown area was used. However, in this case, the person was approached as he parked and was told about the parking study and that there would be a few questions asked him when he returned to his car. At that time a card was placed under his windshield wiper indicating the time of arrival. This card also acted as a reminder to the parker of the survey when he returned. This device also gave the interviewer a little more time to get to the car before the driver left his parking stall.

After noting the time of arrival and departure, the interviewer would then proceed with the interview. Women interviewers were employed in the survey. The interviews took as long as 10 min, but it was found that the women were able to hold attention for this length of time. It appears essential to have women interviewers in this type of study. Their approach is necessary in obtaining the proper response from those being interviewed.

The first question dealt with the main reason for coming downtown, as indicated on the sample interview form (Fig. 1). This follows very closely the purposes used in connection with the Bureau of Public Roads

standard procedure. With the second question, the street or building where the person was going for the described purpose was sought. Then in Question 3 all stops made in the downtown area were ascertained. In effect, a complete itinerary of all stops made in the downtown area was obtained. Question 4 was used as a reminder or a check to see if all downtown stops had been given.

Questions 5 and 6 dealt with where the person had come from and where he was going, to find if he was planning to make or had made any other stops in the downtown area, and what business was transacted at such stops. Unfortunately, it was felt that this would make the form too involved and a compromise was made with the questions indicated. However, this gave a great deal of insight as to where people came from in coming to the downtown area, and how many of them were going to other sections of the downtown area.

Question 7 was used to establish the trading area for Ithaca and Questions 8 and 9 were aimed at obtaining the person's attitude about the downtown area. Question 9 was open-ended, and it produced many interesting comments that were helpful in developing the plan for downtown Ithaca.

Although this questionnaire was not field tested in advance, it proved to work very well. No major changes in this form are suggested, although changing the order of some of the questions might improve reporting. In obtaining the information on this survey, the interviewers were not stationed at a given location for a whole day, but were moved every 4 hr. This seemed to work well. In fact, it appears that 2-hr observations would have been satisfactory in areas where the parking limit was 1 hr.

The parking survey was run during the hours that the downtown stores were open. This included Thursday and Friday evenings.

Date _____ Station _____

TRAFFIC AND PARKING STUDY FOR DOWNTOWN ITHACA, NEW YORK

Mode of Travel: Pass, car Truck Bus Walk
 Type of Parking: Meter curb Free curb Customer Lot Private Lot Other
 Time of Arrival: _____ Time Parked: _____
 Time of Departure: _____ Parking Cost: _____

1. What was your main reason for coming downtown today?

- A. Work C. Bank E. Pay Bills G. Social Activity I. Business related to work J. Other personal business
 B. Shop D. Meal F. Recreation H. Medical-Dental

2. What was the name of the store or building where you were going for this purpose?

_____ Code

3. After you parked here

where did you go first? _____

And from there to _____

And from there to _____

And from there to _____

And from there to _____

Purpose	Code
_____	_____
_____	_____
_____	_____
_____	_____

4. Have we covered all your purchases and all the stops that you made in connection with your trip downtown today? If not, please add to above list.

5. Where did you come from prior to parking here?

Other Where? _____

Home

(Name of place or address)

Downtown Where? _____

(Name of place or address)

6. Do you plan to visit any other stores or places of business in or around the downtown area today? Yes ___ No ___ If so, where? _____

Are you going there now? Yes ___ No ___

7. What is your home address? _____ Code

8. Was this parking space conveniently located for this particular trip? Yes ___ No ___

9. Comments: _____

Figure 1. Interview form.

TABLE 1
MAIN PURPOSE OF COMING DOWNTOWN

Purpose	Percentage
Shop	42.7
Bank	13.5
Meal	8.7
Pay bills	3.6
Social-recreation	1.8
Medical-dental	6.0
Business related to work	7.8
Other personal business	15.9
Total	100.0

TABLE 2
PURPOSE OF OTHER STOPS MADE
IN RELATION TO SHOPPING TRIP

Purpose	Percentage
Shop	85.0
Bank	4.6
Meal	2.8
Pay bills	1.5
Social-recreation	—
Medical-dental	1.3
Business related to work	0.5
Other personal business	4.3
Total	100.0

TABLE 3
PURPOSE OF OTHER STOPS MADE IN RELATION TO BANK, MEDICAL-DENTAL AND PERSONAL BUSINESS TRIPS

Purpose	Percentage
Shop	67.5
Bank	7.8
Meal	4.8
Pay bills	3.6
Social-recreation	—
Medical-dental	1.8
Business related to work	1.3
Other personal business	13.2
Total	100.0

TABLE 4
RELATIONSHIP OF PRIMARY PURPOSE OF TRIP AND NUMBER OF STORES VISITED

Primary Purpose of Trip	Percent Visiting						
	0 Stores	1 Store	2 Stores	3 Stores	4 Stores	5 Stores	Over 5 Stores
Shop	0	45	24	15	10	4	2
Other	64	22	11	1	—	—	—

Table 1 gives the main purpose of the non-work trips made to the downtown area. This analysis indicates that over 40 percent of all the trips made by persons parking in the downtown area were for shopping purposes. However, a considerable number of people came downtown for purposes of banking (13.5 percent) and for other personal business (15.9 percent). The study also revealed that nearly 9 percent of the parkers came down primarily to eat.

Table 2 shows that most who came downtown primarily for shopping reasons seldom took advantage of other downtown activities, such as banking or eating. However, 55 percent of those coming downtown primarily to shop visited two or more stores. This, of course, meant that a large number visited only one store. On the other hand, people who came downtown for banking or medical-dental appointments, or other personal business, seemed to combine such trips with shopping (Table 3). About one-half of those coming downtown for these purposes made other stops in the downtown area for some other purpose. Thus it would appear that people plan in advance their trips for banking or medical-dental purposes to the downtown area, and therefore often find it advantageous to do other things at the same time.

Table 4 shows that a large number of these people who came downtown for purposes other than shopping visited stores. In fact, over one-third of them visited at least one store and about 12 percent visited two or more stores. On the whole, one out of every two who came downtown for purposes other than shopping visited a store. This is certainly an important factor to be considered in any downtown plan, particularly because the number of trips for these other purposes outweighs the special shopping trips.

Generally, in Ithaca, these other trips were about twice as numerous as those for shopping. In many other parking studies completed throughout the country, the proportion of these other trips is even higher.

Of course, the people who came downtown primarily to shop, as shown by Table 4, tended to visit more stores than those who came downtown for other purposes. The average person coming downtown to shop in Ithaca stopped at slightly more than 2 stores. The number of stores that people will visit depends on the type of shopping trip involved. A shopping trip for furniture, for example, may include only one or two stores, whereas a woman looking for a new dress will often go to 3, 4, or even more stores.

The importance of shopping to the downtown activities can be seen more clearly in Table 5, which gives the purpose at the beginning and end of all walk trips made by people coming

to downtown Ithaca by car. It shows that over one-half of all trips were between one store and another, and over 80 percent of all the trips were involved in shopping at one end or the other. This far outweighed any other trip purpose. The next in line was banking, which was about 16 percent, followed by "other personal business," which was about 14 percent. This table, of course, does not take into consideration the pedestrian movements of people who work in the downtown area. This information could have been obtained by sampling a number of the downtown workers to determine their pedestrian movements on a given day. However, this was not done because of the limited budget and time. However, if possible, this additional information should be developed so that a complete picture of all pedestrian movements in the downtown area could be determined.

Table 6 shows that over one-third

TABLE 5
PURPOSE INVOLVED AT EITHER END OF TRIP
MADE WITHIN DOWNTOWN AREA

From	To (%)							
	Shop	Bank	Meal	Pay Bills	Medical-Dental	Business Related to Work	Other Personal Business	
Shop	51.0							
Bank	8.2	— ¹						
Meal	5.6	2.0	— ¹					
Pay bills	4.6	1.3	0.3	1.0				
Medical-dental	4.6	0.3	— ¹	0.3	— ¹			
Business related to work	1.0	0.7	0.3	— ¹	0.3	1.3		
Other personal business	6.1	3.9	0.3	— ¹	1.3	1.0	0.3	

¹ Less than 0.1 percent.

TABLE 6
ORIGIN OF TRIPS RELATED TO TRIP PURPOSE

Origin	Purpose of Trip (%)							
	All Purposes	Shop	Bank	Meal	Pay Bills	Medical-Dental	Business Related to Work	Other Personal Business
Home	63.4	28.2	6.0	4.4	2.2	6.4	3.2	12.0
Downtown	11.4	5.4	2.4	— ¹	— ¹	0.9	1.8	0.9
Other	25.2	11.4	2.6	3.6	0.9	0.6	2.7	3.4

¹ Less than 0.1 percent.

of the trips made to the downtown area were not related to the home. About one-fourth of them started from other places, such as place of employment or a friend's house, and over 10 percent started from some other place in the downtown area. The number of people who had started within the downtown area may appear to be high, but it was also found that over 10 percent of the people leaving their parking spaces in the downtown area were going to move to some other parking space within the downtown area to carry out the rest of their business or shopping. This would indicate that a considerable number of people were moving their cars instead of walking around the downtown area.

In light of these results, an analysis was made of the walking pattern within the downtown area (Table 7). It showed the percentage of people who walked various distances. About 80 percent walked less than 500 ft. The walking trip from the parking space was generally somewhat shorter than those made within the down-

town area. However, there really was a high degree of comparability in the walking patterns for the distances of these various trips.

It appears that the differences that occurred are largely related to the distribution of various activities in the downtown area and their relationship to other activities or parking facilities. This probably explains why there was a small number of people walking less than 200 ft to eat meals. In Ithaca, parking spaces suitable for people who are going to be gone long enough to eat a meal are some distance away from the restaurants, and at the same time the restaurants are some distance away from the major stores. The walking limitation of people in the downtown area is very short—less than 750 ft—and this distance is about the same for all walk trips in the downtown area. In large cities where the walking distance to the various activities is somewhat longer, the walking distance between downtown activities would probably be comparable.

This whole pattern indicates the

TABLE 7
LENGTH OF WALK TRIP IN DOWNTOWN AREA

Purpose	Percent Walking					Over 1,000 Ft
	0 to 250 Ft	250 to 500 Ft	500 to 750 Ft	750 to 1,000 Ft		
Shopping trips:						
All	27	52	18	3		—
From parking space	26	55	19	—		—
Banking trips:						
All	16	69	13	2		—
From parking space	35	60	5	—		—
Meals:						
All	13	43	40	4		—
From parking space	7	83	10	—		—
Business trips:						
All	30	48	22	—		—
From parking space	53	40	7	—		—
Personal business:						
All	30	52	11	3		4
From parking space	39	42	14	3		3
Average:						
All	26	52	18	3		1
From parking space	31	56	11	1		1

need to keep shopping and various other activities in the downtown area as compact as possible. A radius of 750 ft should include most of the activities linked together in the downtown area. Therefore, in planning the downtown area these linkages should be recognized and the walking distances between these linkages be kept less than 750 ft.

The results of this survey indicated that, for every employee in retailing in the downtown area, one auto driver shopping trip was made to downtown. Of course, because the average person who came downtown primarily to shop visited a little over two stores and because the people who came downtown for other reasons visited, on an average, a store on every other trip, it might be said that there are three visits to a store for every retail employee in the downtown area.

About three auto driver trips were made to the downtown area for every four employees in non-retailing activities. Because shoppers occasionally made non-shopping stops in the downtown area, it could be concluded that, on an average, every non-retailing employee generated about one

trip. Of course, trips made by downtown workers are not included. Because of the nature of the study, information on these trips was not obtained.

In considering the destination of trips in the downtown area, two analyses were made—one for shopping trips only, and the other for all other trips not related to work. The pattern of these two types of trips was quite different, as shown by Figure 2. This type of summary should be developed for any city for which a downtown plan is being prepared, because it shows where close-in spaces are needed—those most essential for the health of the downtown area. Similarly, it is important to explain the parking requirements for the all-day parkers. This was done, as shown in Figure 3. Because few parkers for work purposes were observed, this is based on employment because the bulk of the people working in the downtown area depend on the auto.

As already indicated, the attitudes of the parkers were very helpful. A summary of these attitudes is given in Tables 8 and 9. They indicated several things. First of all, they ob-

TABLE 8
SUMMARY OF COMMENTS ON PARKING FACILITIES IN DOWNTOWN ITHACA

Comment	No.	Comment	No.	Comment	No.
Parking facilities adequate:		Parking facilities inadequate:		Meter rates too high	17
No worse than other cities	39	Lucky to find space	93	Longer time limit allowed:	
Don't mind walking a few blocks	2	Must circle several times to find a space	37	1/2 hr should be available on meters	13
Adequate if you come downtown early	7	Especially bad on weekends	26	Enforcement too strict	2
Parking facilities better after universities close	6	Avoids downtown shopping due to poor parking condition	15	More uniformity in meter prices	6
Total	56	More municipal lots needed	12	Too many truck loading zones	4
		More space needed near P.O.	3	Parking spaces too small for large cars	4
		More space needed on State, Cayuga and Seneca Streets	2		
		More evening parking	3		
		Total	194		

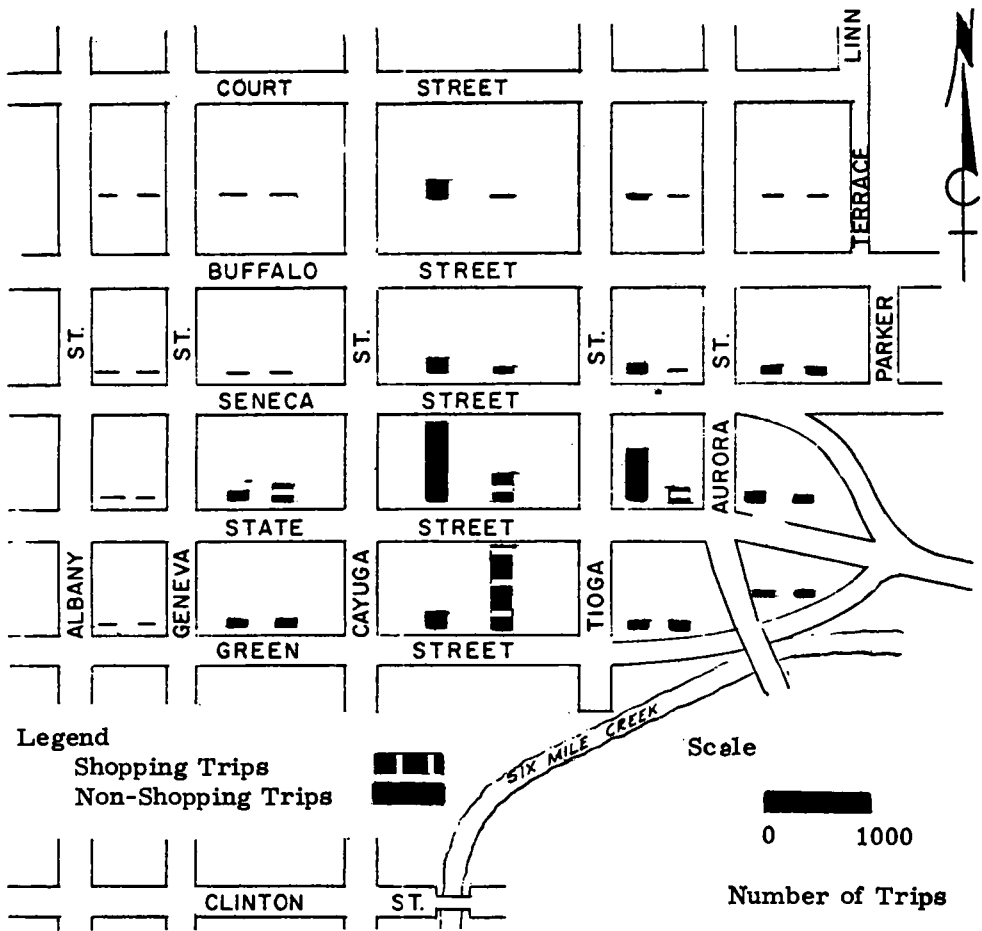


Figure 2. Destination of shopping and non-shopping trips in downtown Ithaca.

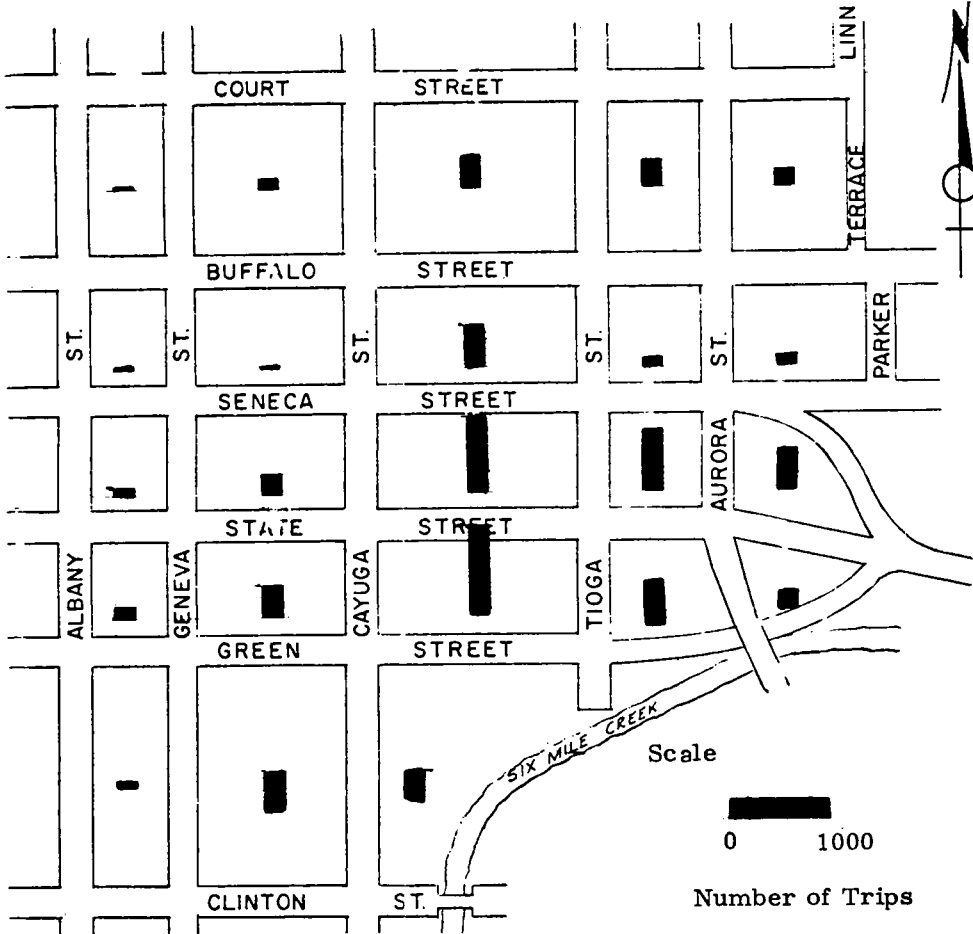


Figure 3. Destination of working trips in downtown Ithaca.

TABLE 9
MISCELLANEOUS COMMENTS ON PARKING
FACILITIES IN DOWNTOWN ITHACA

Telephone company needs employee parking lot.
Ten-minute parking limit around post office should be more strictly enforced.
Bank parking lot time limit should be extended to 1 hr.
Necessary to walk great distance for quick shopping.
Ithaca needs more good shops with better selection of merchandise.
State Street should be for pedestrians only.
More municipal parking lots needed; those now available are inconvenient.
Too much double parking in downtown area.
Meters are chasing shoppers away. Instead, shoppers should be encouraged.
More parking lots needed on Cayuga and Seneca Streets.
More overnight parking space needed near Cornell University.
Store owners park all day in front of their stores.
Too many empty truck spaces that shoppers could use.
Convenient night parking needed.
Need convenient bus station with parking lot.
Parking lot on Green Street is mass confusion.
Merchants should provide free parking for their customers.

jected to the meter rates and felt that the lots and garages should be paid for by merchant-validated programs rather than by meters. People seemed to detest the cost of parking, even though it is only a nickel or a dime. They greatly preferred cus-

tomers lots where available. It was apparent from these attitude studies that most people were very cognizant of the traffic and parking problems in the downtown area. In fact, several of them indicated that there were too many truck loading zones, because they knew that as a general practice many people would pull into a truck loading zone and wait in their car until a space became available down the street, and then would hurry to move into that space.

The insight gained from this study was very valuable to the team that was preparing the plan for downtown Ithaca. It gave a better understanding of the primary destination in the downtown area, the activities that were the backbone of the area in terms of attraction, and the linkages between various activities in the downtown area. It also established the pedestrian patterns and helped in providing for the over-all framework for the downtown plan. In addition to these advantages, it helped to establish parking needs and transportation requirements for the downtown Ithaca area.