

PUGET SOUND COUNCIL of GOVERNMENTS

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Seattle Parking Inventory: 1989

September 1989

ABSTRACT

REPORT TITLE: Seattle Parking Inventory: 1989
Seattle CBD, First Hill, Lower Queen Anne

PROJECT TITLE: Transportation Data

SUBJECT: Parking Availability and Cost by
Traffic Analysis Zone

DATE: September, 1989

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ABSTRACT: An inventory of parking stalls, occupancy,
and cost conducted for 19 Traffic Analysis
Zones in April-May of 1989, as an update to a
similar survey completed in 1987.

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were financed in part by appropriations from
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Department of Transportation.

FOREWORD

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This report was prepared by Kathleen Wanda with project management by Elaine Murakami, Senior Planner, and overall direction by Tim Watterson, Director of the Technical Services Division of the Puget Sound Council of Governments.

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SEATTLE PARKING INVENTORY, 1989

EXECUTIVE SUMMARY

An inventory of all off-street parking was conducted from April 4, 1989, through May 14, 1989. The study area included the Seattle Central Business District (CBD), which was also surveyed in 1987 by the Puget Sound Council of Governments, and two additional areas, First Hill and lower Queen Anne. The study area was divided into 19 Traffic Analysis Zones for the data collection and analysis.

The parking inventory included:

- off-street parking, both public and private
- free and pay parking
- carpool and vanpool lots
- motor pool parking, both private and government
- hotels and motels
- short-term customer parking
- residential parking (in CBD only).

A total of 45,389 parking stalls was counted in the CBD, 7,839 in First Hill, and 14,299 in lower Queen Anne. This count reflected an increase of about 4,000 spaces in the CBD since 1987. The increase was largely attributed to the completion of the following major building projects:

- Washington State Trade and Convention Center
- Washington Mutual Building
- Westlake Center
- Market Place Tower
- Arbor Place.

The average cost of daily and monthly parking varied widely among the three areas:

	<u>Daily</u>	<u>Monthly</u>
Seattle CBD	\$ 7.45	\$ 93.34
First Hill	5.54	46.86
Lower Queen Anne	3.54	35.79

Since 1987, the average daily parking cost in the CBD increased by 22.6 percent. Similarly, the average 2-hour parking cost in the CBD increased about 25 percent.

I. INTRODUCTION

This is the second inventory of off-street parking conducted by the Puget Sound Council of Governments (PSCOG). The inventory in 1987 covered only the Seattle Central Business District (CBD), whereas this study includes Seattle's CBD, First Hill, and lower Queen Anne areas. The Seattle Engineering Department's Transportation Division maintains an inventory of all metered, on-street parking within the City of Seattle.

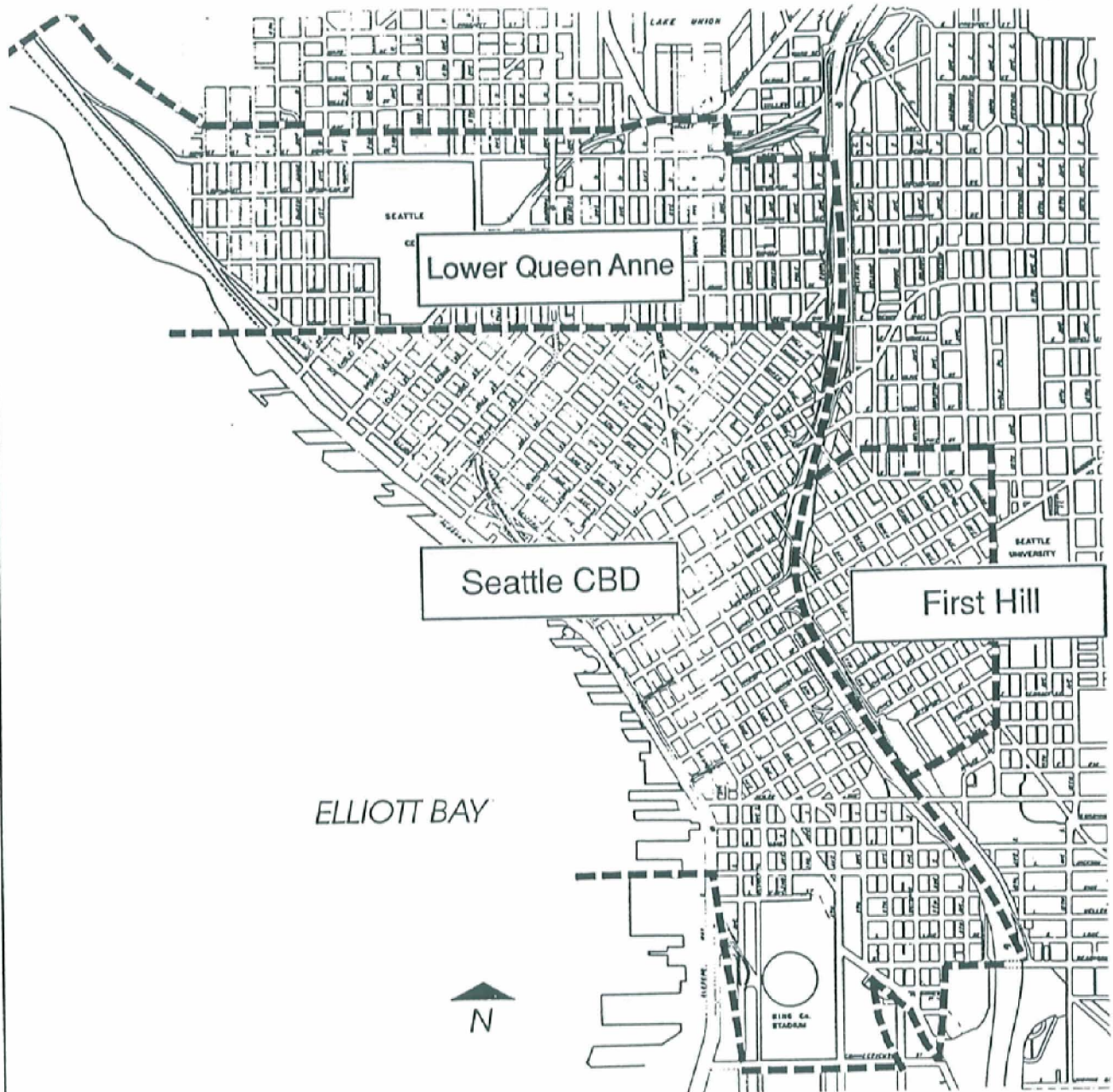
The study area as a whole is shown in Figure 1. Of the 19 Traffic Analysis Zones in the study area, zones 1 through 13 comprise the Seattle Central Business District (CBD), bounded by Elliott Bay to the west, Denny Way to the north, Interstate 5 to the east and roughly Royal Brougham Way to the south (Figure 2). Zones 14 through 16, located east of the CBD and known as First Hill, include the area between Interstate 5 to the west, Pine Street to the north, Broadway to the east and Alder Street to the south (Figure 3). Zones 17 through 19, known as lower Queen Anne, are bounded on the west by Elliott Bay, Denny Way to the south, Interstate 5 to the east, and Roy, Valley and Mercer streets to the north (Figure 4).

The report summarizes data by Traffic Analysis Zone and by area, and compares the CBD results with data from 1987. The PSCOG plans regular updating of this database on a two-year cycle. The data is used in the PSCOG's travel forecasting models, particularly in estimating choice of travel mode.

II. METHODOLOGY

Data collection was conducted from April 4, 1989, to May 14, 1989, using both permanent PSCOG staff and temporary staff. The parking lots were inventoried Monday through Friday between the hours of 10:00 a.m. and 12:00 noon, and again between the hours of 1:30 p.m. and 3:30 p.m.

Data collected for each parking lot included census tract and block number, owner/tenant, address, total number of stalls, morning and afternoon occupancy, type of parking, cost for two hours, daily cost, monthly cost, and comments. Type of parking, coded "R" (free residential), "C" (free, short-term customer), or "O" (all other), was used to analyze free parking. Residential parking was inventoried only in the Seattle CBD. All data were entered into a SAS dataset that included the 1987 parking inventory data for comparison. A more detailed methodology is included as an Appendix to this report.



PSCOG

Study Area Boundaries

Figure 1



PSCOG

First Hill Study Area

Figure 3

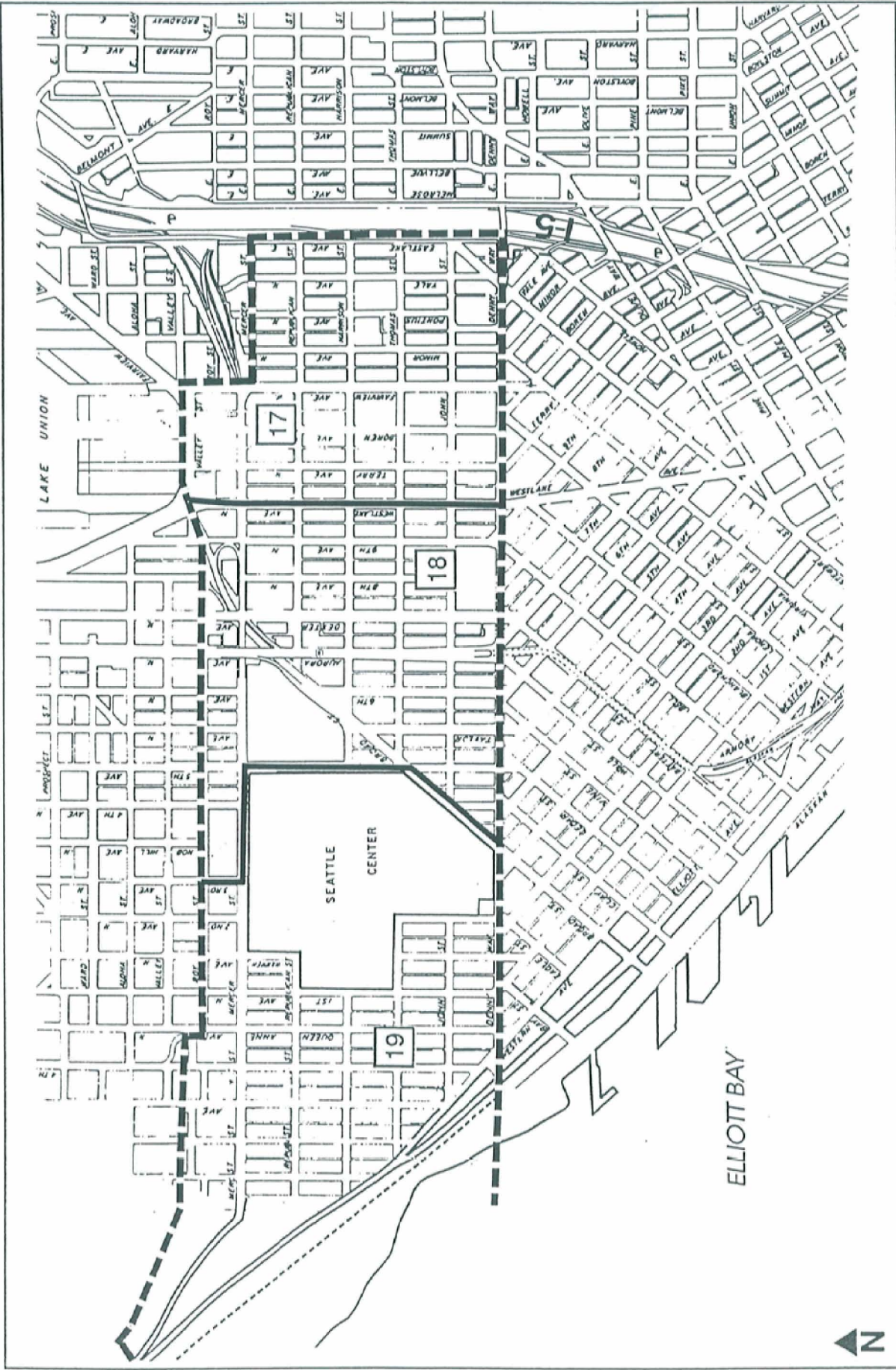


Figure 4

Lower Queen Anne Study Area

PSCOG

III. FINDINGS

SEATTLE CBD

Total Stalls

A total of 45,389 parking stalls was inventoried in the Seattle CBD. Table 1 sums the total number of parking stalls by zone and shows the percent change since 1987. While the CBD had an overall increase in parking stalls of 11.2 percent since 1987, zones 7, 8, and 11 show a greater increase of 43.2 percent, 39.9 percent, and 12.3 percent, respectively.

The greater increase in parking stalls in these zones can be attributed to major construction projects completed since 1987. In zone 7, three projects alone accounted for the addition of 1,256 stalls: Market Place Tower, Washington Mutual Building and Westlake Center. In zone 8, a 1,000-stall facility became available with the completion of the Washington State Trade and Convention Center. In zone 11, Arbor Place was completed.

TABLE 1

SEATTLE CBD

TOTAL STALLS AND PERCENT CHANGE 1989 AND 1987

Zone	1989	1987 (revised)	Percent Change
1	3,184	3,095	2.9%
2	992	999	-0.7
3	1,547	1,410	9.7
4	6,195	5,729	8.1
5	4,317	4,320	-0.1
6	1,067	1,018	4.8
7	5,964	4,166	43.2
8	4,613	3,298	39.9
9	3,958	4,182	-5.4
10	1,594	1,599	-0.3
11	2,994	2,665	12.3
12	4,267	4,126	3.4
1-12	40,692	36,607	11.2%
13	4,697	*	*
1-13	45,389	*	*

* = 1987 data incomplete

Projects under construction during the 1989 inventory include: Gateway Tower, Two Union Square, 1420 Fifth Avenue Building,

Seattle Art Museum, Metropolitan Park East, Market Garage, Pacific First Center, and 1800 Ninth Avenue Building. No parking data for these sites are included here.

Occupancy

Two occupancy counts were taken at each lot, once in the morning and once in the afternoon. More accurate occupancy measures would require more counts for each lot. Therefore, these figures should be evaluated with these limitations in mind. The occupancy rate uses the average of the morning and afternoon counts, divided by the total number of stalls.

Parking in the CBD had an overall occupancy rate of 75.3 percent, which was lower than in 1987 (Table 2). Counts in 1989 were more similar to the 1984 CBD average of 73 percent occupancy. In zones 8 and 11, the decrease in the occupancy may be attributed to the increase in the number of stalls. The Washington State Trade and Convention Center (zone 8) estimated that 600 of 1,000 stalls were occupied on an average event day. In zone 11, the occupancy rate at Arbor Place was significantly lower than the zone as a whole.

TABLE 2
SEATTLE CBD
OCCUPANCY RATES, 1989 and 1987

Zone	1989		1987 (revised)	
	Occupancy Rate (%)	Total Stalls	Occupancy Rate (%)	Total Stalls
1	41.9%	3,184	48.1%	3,095
2	60.3	992	58.4	999
3	79.7	1,547	87.7	1,410
4	82.1	6,195	90.9	5,729
5	82.3	4,317	94.9	4,320
6	80.3	1,067	87.3	1,018
7	84.8	5,964	81.8	4,166
8	72.9	4,613	93.8	3,298
9	79.1	3,958	63.8	4,182
10	71.2	1,594	80.0	1,599
11	64.1	2,994	76.2	2,665
12	73.1	4,267	84.6	4,126
1-12	74.7%	40,692	80.4%	36,607
13	81.1	4,697	*	*
1-13	75.3%	45,389	*	*

* = 1987 data incomplete

Parking Cost

Average parking cost in the CBD was \$3.76 for two-hour parking, \$7.45 for daily parking, and \$93.34 for monthly parking (Table 3). Two-hour average parking cost ranged from \$2.42 in zone 11 to \$4.99 in zone 5. The average cost of daily parking ranged from \$3.88 in zone 1 to \$10.30 in zone 4. Average monthly parking cost ranged from \$45.88 in zone 9 to \$119.88 in zone 5. Figure 5 summarizes the average daily cost of parking and total stalls in the CBD.

The zones with the highest average daily and monthly parking costs generally include large, higher-priced parking garages that have a marked influence on the average cost figures. For example, the average daily parking cost in zone 4 is influenced by two large parking garages -- the Columbia Center and Seafirst Fifth Avenue Plaza. The higher average monthly parking cost in zone 5 can be attributed to the Olympic Garage, Stouffer Madison Hotel and the Key Tower; in zone 8 the Seattle Sheraton, Hilton Garage and the Washington State Trade and Convention Center influence the higher cost.

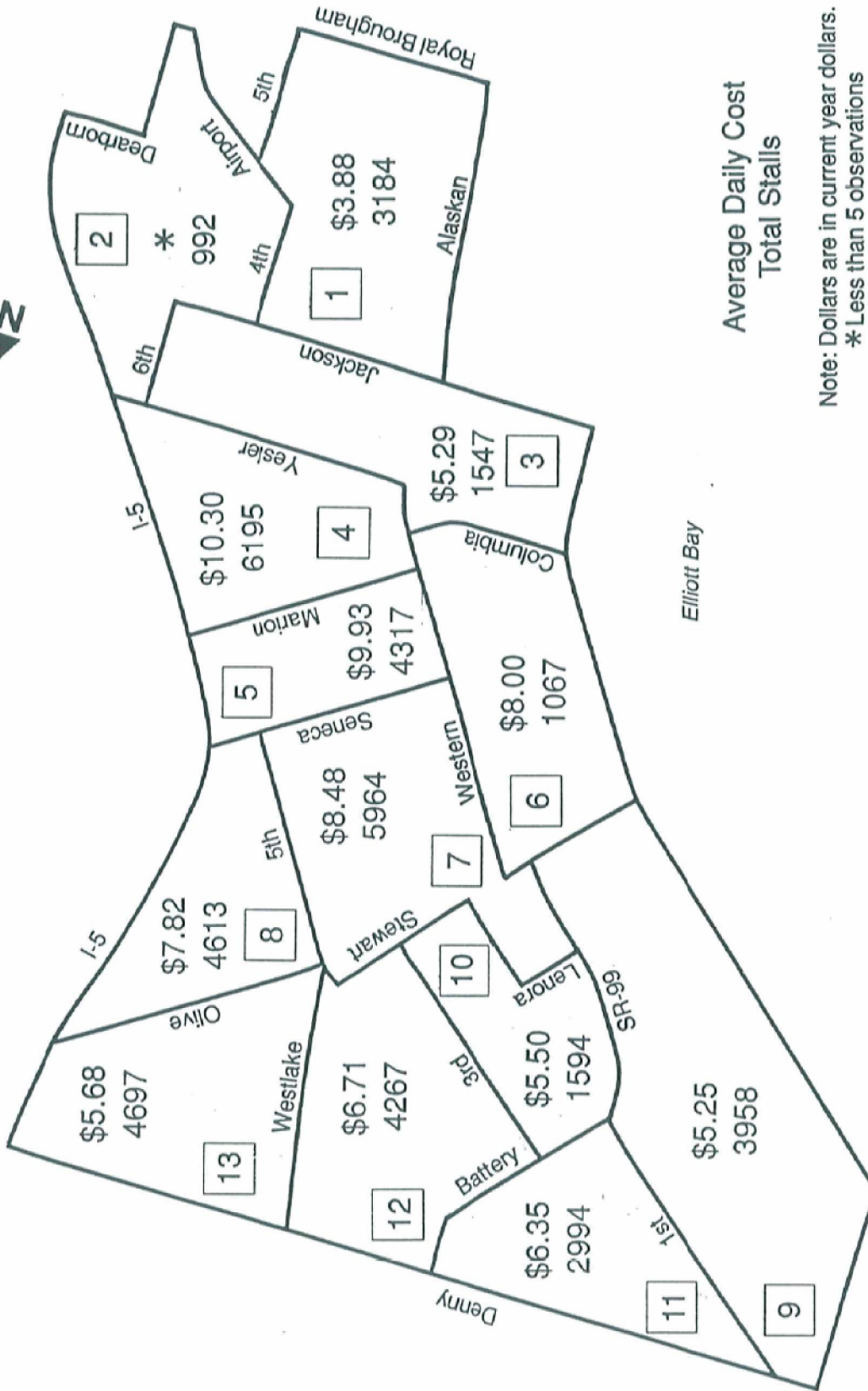
TABLE 3

SEATTLE CBD

AVERAGE COST, 1989
(weighted by total stalls)

Zone	2 Hours	Daily	Monthly
1	\$3.30	\$3.88	\$65.27
2	#	#	47.56
3	2.47	5.29	83.13
4	4.40	10.30	98.29
5	4.99	9.93	119.88
6	2.73	8.00	102.63
7	3.70	8.48	104.72
8	4.65	7.82	118.72
9	2.45	5.25	45.88
10	3.12	5.50	72.97
11	2.42	6.35	65.53
12	3.53	6.71	87.24
13	3.01	5.68	77.35
1-13	\$3.76	\$7.45	\$93.34

= less than 5 records with hourly or daily rates



Average Daily Cost
Total Stalls

Note: Dollars are in current year dollars.
* Less than 5 observations

Overall, parking costs have increased in the CBD since the 1987 study. Table 4 shows that, since 1987, the average cost for two-hour parking increased from \$3.06 to \$3.84, or 25.5 percent. The average daily cost increased from \$6.24 to \$7.65, or 22.6 percent. Data for zone 13 from 1987 were incomplete and were omitted from the tables.

TABLE 4
SEATTLE CBD
AVERAGE COST AND PERCENT CHANGE, 1989 and 1987
(weighted by total stalls)

Zone	2 Hours			Daily		
	1989	1987 (revised)	Percent Change	1989	1987 (revised)	Percent Change
1	\$3.30	\$2.14	54.2%	\$3.88	\$4.24	-8.5%
2	#	1.97	#	#	3.91	#
3	2.47	2.33	6.0	5.29	4.71	12.3
4	4.40	3.58	22.9	10.30	7.82	31.7
5	4.99	4.22	18.2	9.93	8.58	15.7
6	2.73	#	#	8.00	#	#
7	3.70	3.17	16.7	8.48	6.47	31.1
8	4.65	3.79	22.7	7.82	7.15	9.4
9	2.45	2.14	14.5	5.25	4.45	18.0
10	3.12	2.34	33.3	5.50	4.02	36.8
11	2.42	2.30	5.2	6.35	5.31	19.6
12	3.53	2.48	42.3	6.71	5.04	33.1
1-12	\$3.84	\$3.06	25.5%	\$7.65	\$6.24	22.6%
13	3.01	*	*	5.68	*	*
1-13	\$3.76	*	*	\$7.45	*	*

= less than 5 records in each category
* = 1987 data incomplete

Table 5 sums pay and free parking by zone and Table 6 categorizes the free parking into customer, residential, and other. Free parking in the "other" category is generally employee parking. Clearly, the proportion of free stalls to pay stalls is highest in the International District (zone 2) and in Denny Regrade (zones 9, 11, 12, and 13). In the entire CBD, 12.1 percent of the 45,389 total stalls were free. The last column in Table 5, "cost missing", contains the number of parking stalls in each zone for which no cost information was available.

TABLE 5
SEATTLE CBD
PAY AND FREE PARKING STALLS, 1989

Zone	Total Stalls	Pay Stalls	Free Stalls	Cost Missing
1	3,184	2,874	310	0
2	992	296	696	0
3	1,547	1,351	145	51
4	6,195	6,053	142	0
5	4,317	4,277	24	16
6	1,067	941	126	0
7	5,964	5,842	122	0
8	4,613	4,435	178	0
9	3,958	2,723	1,198	37
10	1,594	1,135	445	14
11	2,994	1,942	571	481
12	4,267	3,412	710	145
13	4,697	3,828	821	48
Total	45,389	39,109	5,488	792
% of Total	100.0%	86.2%	12.1%	1.7%

TABLE 6
SEATTLE CBD
FREE PARKING STALLS, BY TYPE, 1989

Zone	Customer Stalls	Residential Stalls	Other Stalls	Total Free Stalls
1	72	0	238	310
2	370	30	296	696
3	93	0	52	145
4	88	0	54	142
5	0	0	24	24
6	16	0	110	126
7	16	103	3	122
8	13	0	165	178
9	52	13	1,133	1,198
10	53	284	108	445
11	104	173	294	571
12	482	0	228	710
13	184	0	637	821
Total	1,543	603	3,342	5,488

FIRST HILL

First Hill is characterized by the concentration of major medical facilities including Swedish Hospital, Virginia Mason Hospital, and the Fred Hutchinson Cancer Research Center. It also has several older apartment buildings, and its eastern edge borders on Seattle University.

A total of 7,839 parking stalls was inventoried on First Hill. The average occupancy ranged from 76.4 percent in zone 16 to 87.9 percent in zone 14. Occupancy for the entire First Hill area was 80.8 percent (Table 7). The high occupancy rate on First Hill may be due to employment density within the area and its proximity to the downtown core.

TABLE 7

FIRST HILL

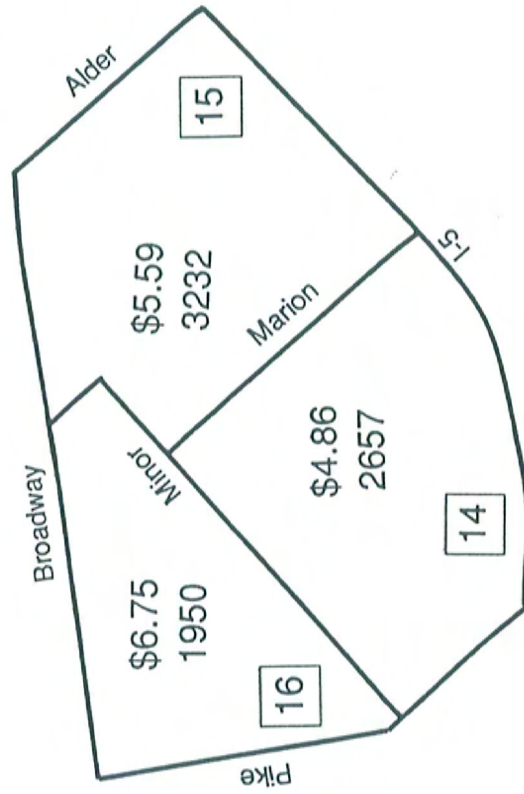
TOTAL STALLS, OCCUPANCY, AND AVERAGE COST, 1989

Zone	Total Stalls	Occupancy Rate(%)	Average Cost*		
			2 Hours	Daily	Monthly
14	2,657	87.9%	\$1.93	\$4.86	\$68.76
15	3,232	77.6	1.77	5.59	39.77
16	1,950	76.4	1.35	6.75	42.64
14-16	7,839	80.8%	\$1.73	\$5.54	\$46.86

* Average cost was weighted by total stalls.

Average parking costs on First Hill are also illustrated in Table 7. The average cost for two-hour parking was \$1.73, lower than the average for any of the 13 zones in the Seattle CBD. For daily parking, the average was \$5.54, and for monthly parking the average was \$46.86. Figure 6 summarizes the average daily cost of parking and total stalls on First Hill.

Table 8 sums pay and free parking by zone; of the 7,839 total stalls inventoried, 17.2 percent were free. Table 9 categorizes free parking into customer and other. "Other" free parking is generally employee parking.



Average Daily Cost
Total Stalls

Note: Dollars are in current year dollars.

TABLE 8

FIRST HILL

PAY AND FREE PARKING STALLS, 1989

Zone	Total Stalls	Pay Stalls	Free Stalls	Cost Missing
14	2,657	2,289	368	0
15	3,232	2,973	259	0
16	1,950	1,231	719	0
Total	7,839	6,493	1,346	0
% of Total	100.0%	82.8%	17.2%	0.0%

TABLE 9

FIRST HILL

FREE PARKING, BY TYPE, 1989

Zone	Customer Stalls	Residential Stalls*	Other Stalls	Total Free Stalls
14	163	-	205	368
15	62	-	197	259
16	300	-	419	719
Total	525	-	821	1,346

* Residential data were not collected in zones 14-16.

LOWER QUEEN ANNE

The lower Queen Anne area extends from I-5 on the east to Elliott Bay on the west. In zone 19, Seattle Center dominates the western portion, with several mid-rise office buildings in the southern end toward Denny. Zones 17 and 18 have a wide mix of residential, commercial, and some industrial uses. Aurora Avenue (State Highway 99) runs through zone 18.

In lower Queen Anne, the total number of parking stalls counted was 14,299 (Table 10). Occupancy for the entire lower Queen Anne area was 57.2 percent. The low occupancy rates may be attributed to the large parking facilities for events at the Seattle Center. Since most major events occur on evenings and weekends, occupancy was lower on weekdays when the study was conducted.

TABLE 10

LOWER QUEEN ANNE

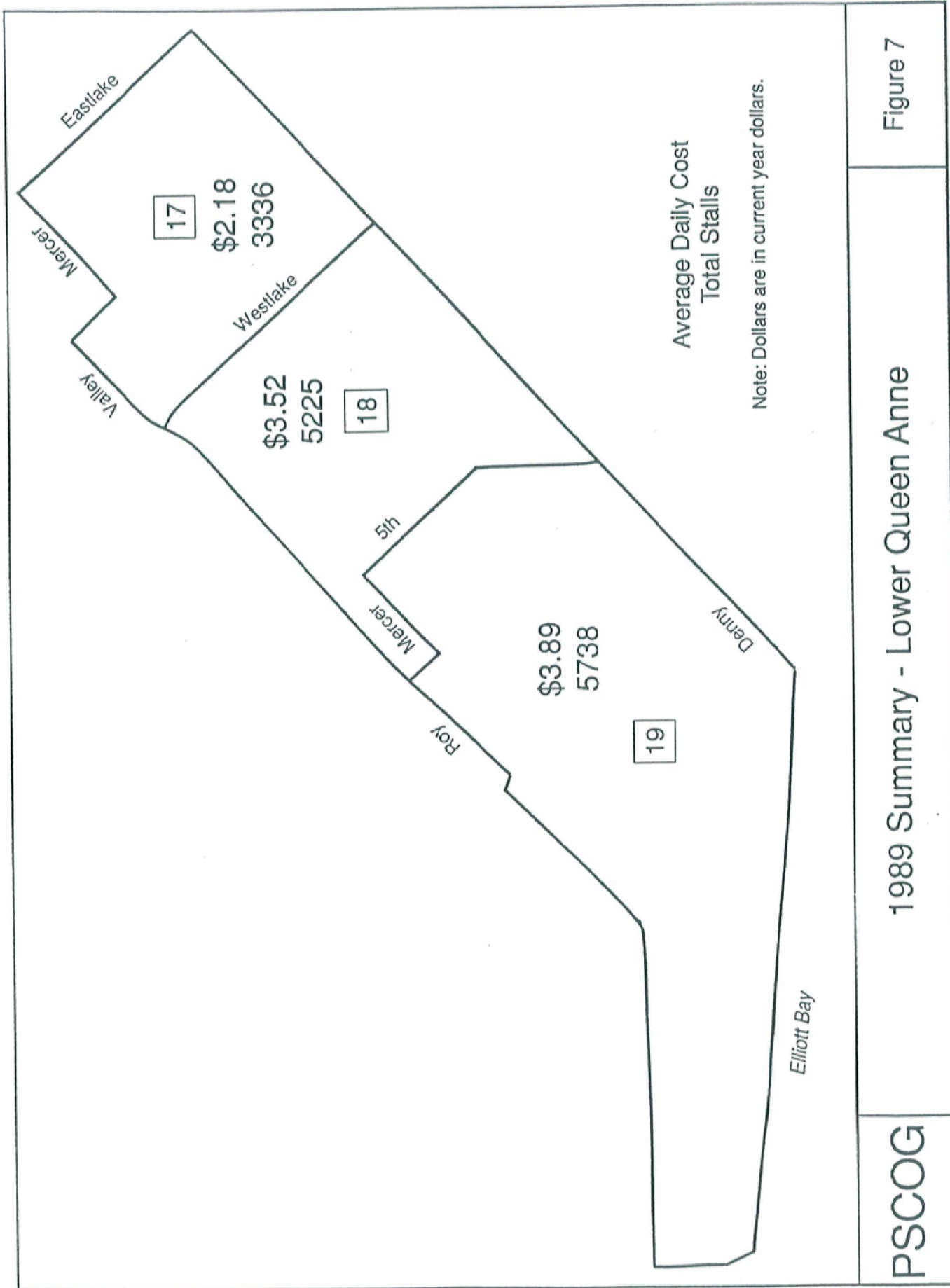
TOTAL STALLS, OCCUPANCY, AND AVERAGE COST, 1989

Zone	Total Stalls	Occupancy Rate	Average Cost*		
			2 Hours	Daily	Monthly
17	3,336	63.6%	\$1.43	\$2.18	\$26.87
18	5,225	45.2	2.68	3.52	34.67
19	5,738	64.4	1.95	3.89	41.68
17-19	14,299	57.2%	\$2.06	\$3.54	\$35.79

* Average cost was weighted by total stalls.

Average parking cost in lower Queen Anne, also shown in Table 10, was \$2.06 for two-hour, \$3.54 for daily, and \$35.79 for monthly parking. Of the three areas studied in 1989, lower Queen Anne had, on average, the lowest monthly parking rates. Zone 17, which includes Seattle Center, had the lowest monthly rate (\$26.87) for the entire study area. Figure 7 summarizes the average daily cost and total stalls in lower Queen Anne.

Table 11 sums pay and free parking by zone; of the 14,299 total stalls inventoried, 35.7 percent were free. Table 12 categorizes free parking into customer and other. "Other" free parking is generally employee parking.



PSCOG

1989 Summary - Lower Queen Anne

Figure 7

TABLE 11
 LOWER QUEEN ANNE
 PAY AND FREE PARKING STALLS, 1989

Zone	Total Stalls	Pay Stalls	Free Stalls	Cost Missing
17	3,336	2,055	1,228	53
18	5,225	3,165	2,014	46
19	5,738	3,634	1,860	244
Total	14,299	8,854	5,102	343
% of Total	100.0%	61.9%	35.7%	2.4%

TABLE 12
 LOWER QUEEN ANNE
 FREE PARKING, BY TYPE, 1989

Zone	Customer Stalls	Residential Stalls*	Other Stalls	Total Free Stalls
17	351	-	877	1,228
18	694	-	1,320	2,014
19	625	-	1,235	1,860
Total	1,670	-	3,432	5,102

* Residential data were not collected in zones 17-19.

Appendix

APPENDIX

METHODOLOGY FOR THE SEATTLE PARKING INVENTORY: 1989

SCOPE OF STUDY

Data collection for the study was conducted from April 4, 1989, to May 14, 1989. Traditionally, travel and transportation data related to commuting behavior is collected in the spring or fall. The 1987 survey was conducted in April and May and a comparable period was desired.

Parking that was included in the study:

- off-street parking, both public and private
- free and pay parking
- carpool and vanpool lots
- motor pool parking, both private and government
- hotels and motels
- short-term customer parking such as convenience stores and restaurants
- residential parking in the CBD only.

Parking that was excluded from the study:

- on-street parking
- new and used auto and truck sales lots
- parking occupied by police, fire, and emergency vehicles
- car rental lots
- METRO bus and van storage lots
- parking associated with auto and truck repair shops
- residential parking in the First Hill and lower Queen Anne areas.

DATA COLLECTION

The data collection team surveyed the zones on foot Monday through Friday between the hours of 10:00 a.m. and 12:00 noon, and 1:30 p.m. and 3:30 p.m. Each parking lot was coded with the 1980 census tract and block number in which it was located. The information collected was the lot's address, owner/tenant, total number of stalls, morning occupancy, afternoon occupancy, type of parking, cost, and comments (Figure 8, 1989 Data Collection Form). The Kingdome, the Seattle Center, and the Washington State Convention and Trade Center were surveyed when an "average event" for a weekday was scheduled.

PARKING COST

Three cost figures were sought at each lot: the two-hour cost, the daily cost, and the monthly cost. The PSCOG was only interested in costs during the normal work week, that is, Monday

SAS

1989 PARKING INVENTORY:
DATA COLLECTION FORM

TRACBLK	LOCATION	COST 0-2	COST DAY	COST Mnth	COST MAX 87	COST MAX 89	AM OCC	PM OCC	DATE		TYPE R/C/O	COMMENT
									MM	DD		
OWNER=												
OWNER=												
OWNER=												
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PSCOG

1989 Data Collection Form

Figure 8

through Friday, roughly 9:00 a.m. to 5:00 p.m. Many lots in outlying areas had only monthly rates, which were not posted, and a follow-up phone call was required. When more than one monthly rate was available, an average rate, weighted by number of stalls, was recorded.

Special discounted rates were not included in the 1987 or 1989 studies. These include employer subsidies, group discounts, special coupons, and "early bird" rates. Special rates for carpools and vanpools were not used unless the lots were used exclusively by carpools and/or vanpools.

The 1989 study differentiated between four types of parking in the Seattle CBD:

- pay parking
- free residential parking
- free short-term customer parking, such as convenience stores and restaurants
- other free parking, primarily employee parking.

In the First Hill and lower Queen Anne areas, all residential parking, both free and pay, was excluded from the study. In these areas, three types of parking were differentiated:

- pay parking
- free short-term customer parking
- other free parking, primarily employee parking.

"Free" parking was determined on the basis of cost to the user. The exception was free employee parking subsidized by an employer. In this case, an attempt was made to find out the price paid by the employer to the parking facility owner, and that price was used. Free parking included obvious free-of-charge parking facilities, as well as parking stalls included with the price of a condominium (zones 1-13 only), parking included at no extra cost with an apartment rental (zones 1-13 only), and parking included in a commercial lease and offered at no cost to employees or customers.

All cost figures were weighted by number of stalls. Average cost was computed only for pay parking, that is, all free parking was excluded from the calculation. In addition, for lots with only monthly parking rates, no daily or hourly cost was computed. All parking costs are reported in nominal dollars and have not been adjusted for inflation. These factors affect the average costs reported.

PARKING DATABASE

Each parking lot was entered as a separate record into a SAS¹ dataset. Some lots were divided into two separate records if the parking was segregated for two different price structures. Each record was assigned a unique identifier, called PARKID. Figure 9 shows the file structure of the SAS dataset.

The parking database contains:

- the 1989 parking inventory data;
- the 1987 parking inventory data; and
- the 1984 Seattle Engineering Department (SED) parking data.

The 1989 parking inventory data is consistent with the 1987 parking inventory data in file structure, variables, and data collection method. During the 1989 study, errors and omissions were found in the 1987 data and the database was revised.

Revisions made to the 1987 parking inventory data:

- Zone 1: deleted 250-stall METRO parking lot because it is not in survey area (incorrectly coded in 1987)
- Zone 2: deleted 127 stalls associated with truck repair and new truck inventory (incorrectly coded in 1987) added 100 stalls (unable to get information in 1987)
- Zone 3: no revisions
- Zone 4: added 131 stalls (unable to get information in 1987)
- Zone 5: added 815-stall garage that was coded to wrong zone in 1987
- Zone 6: added 334 stalls (unable to get information in 1987)
- Zone 7: deleted 815-stall garage that was coded to wrong zone in 1987
- Zone 8: no revisions
- Zone 9: no revisions
- Zone 10: no revisions

¹ SAS is a registered trademark of SAS Institute, Inc., Cary, NC.

SAS

CONTENTS PROCEDURE
CONTENTS OF SAS MEMBER WORK.TEMP

CREATED BY CMS USERID KATHLEEN ON CPUID FF-9375-001810 AT 13:43 WEDNESDAY, JULY 5, 1989 BY SAS RELEASE 5.16
FILE= WORK TEMP BLKSIZE=8116 LRECL=312 GENERATED BY DATA
NUMBER OF OBSERVATIONS: 1201 NUMBER OF VARIABLES: 30
MEMTYPE: DATA

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16	AOCC87	NUM	4	135	4.		AM*Occupancy*1987
12	CDLY87	NUM	8	107	DOLLAR7.2		Cost*Daily*1987
14	CMTH87	NUM	8	123	DOLLAR8.2		Cost*Month*1987
7	CODE	CHAR	1	81			Record*Status
25	COMMENT	CHAR	30	199			COMMENT*1989
26	COMMENT2	CHAR	30	229			COMMENT*1989
27	COMMNT87	CHAR	30	259			COMMENT*1987
11	COSTDLY	NUM	8	99	DOLLAR7.2		COST*DAILY*1989
13	COSTMTH	NUM	8	115	DOLLAR8.2		COST*MONTH*1989
9	COST02	NUM	8	83	DOLLAR7.2		COST*0-2 HRS*1989
10	COST87	NUM	8	91	DOLLAR7.2		COST*0-2 HRS*1987
+	19	ERLYCOST	NUM	8	147	DOLLAR7.2	COST*EARLY BIRD*SPECIAL
+	20	ERLYTIME	CHAR	20	155		EARLY BIRD*SPECIAL*TIME
3	LOCATION	CHAR	30	13	27.		LOCATION
5	MAXCAPCT	NUM	4	73	4.		TOTAL*STALLS*1989
6	MAX87	NUM	4	77	4.		Total*Stalls*1987
4	OWNER	CHAR	30	43	23.		OWNER/TENANT
1	PARKID	CHAR	4	4			SURVEY ID*1989
30	PHONE	CHAR	20	292			PHONE CONTACT*1989
17	POCCUPCY	NUM	4	139	4.		PM*OCCUPANCY*1989
18	POCC87	NUM	4	143	4.		PM*Occupancy*1987
21	SEDCAP	NUM	4	175	4.		SED*STALLS*1984
24	SEDDLY	NUM	8	191	DOLLAR8.2		SED*DAILY*COST*1984
22	SEDOCCUP	NUM	4	179			SED*OCCUPANCY*1984
23	SED02	NUM	8	183	DOLLAR8.2		SED*0-2 HRS*1984
2	TRACBLK	CHAR	5	8			TRACK*BLOCK
8	TYPE	CHAR	1	82			TYPE OF*PARKING*1989
28	UPDATE	CHAR	1	289			PARKING*STATUS*1989
29	ZONE	NUM	2	290	2.		ZONE

+ THESE VARIABLES WERE NOT USED IN THE DATA ANALYSIS.

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PSCOG

1989 Parking Database - File Structure

Figure 9

- Zone 11: no revisions
- Zone 12: no revisions
- Zone 13: 1987 data were incomplete and were omitted from analysis.

Throughout the report, some of the change in the data from 1987 to 1989 can be attributed to improvements in the quality of the data due to overall improvements in data collection procedures and increased cooperation of parking facility owners and managers.

