

Districtwide Trip Generation Study

Task V:

Final Report

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I. INTRODUCTION

District IV of the Florida Department of Transportation (Department) initiated a trip generation study of multi-use developments in 1993. The purpose of the study was to develop a data base such that internal trip capture could be identified. In March, 1994, the Department continued this study effort. Walter H. Keller, Inc., was retained by the Department to prepare the second phase of the research effort. In addition to continuing to investigate the internalization of mixed-use developments, the second phase also included establishing "pass-by" capture.

The 1994 Trip Generation Study encompassed five major tasks. Each major task concluded with a technical report which presented the findings and results of the task efforts. The following technical reports were prepared in this Study:

- Task 1.0 - Site Selection;
- Task 2.0 - Site Characteristics;
- Task 3.0 - Data Collection Summary; and,
- Task 4.0 - Data Analysis.

This Task 5.0 Final Report summarizes the entire Districtwide Trip Generation Study effort. The Final Report also includes additional information on a computer based software program that can be utilized to estimate the total trip ends of multi-use developments, internal trips, pass-by trips and external vehicle trips. The report concludes with recommendations for further study.

Section II of the Final Report reviews the Site Selection Process including the procedure for initial identification of 144 candidate sites, the first screening process down to 37 sites and the second level screening process down to 13 sites. A brief discussion is then provided to describe the general features of each of the final 13 sites. The final screening process that evaluates and ranks each of the final 13 sites relative to specific criteria is then presented. This section concludes with the identification of the final three (3) selected sites.

The site characteristics of each selected site are presented in Section III of the Report. This section includes narrative information on the history, site description, land use characteristics, generalized site plan and site vicinity information. This section attempts to also provide a "flavor" of each site in addition to the site characteristics.

The description and tabular summaries of the data collection phase of the study are provided in Section IV along with the data collection methodology, procedures and results. The locations of traffic counts, auto occupancy counts, pedestrian - land use counts and questionnaire interviews are also noted. Lastly, Section IV presents the results of the traffic count efforts, and the data collection summaries for auto occupancy and pedestrian - land use counts.

Section V presents the data analysis portion of the Districtwide Trip Generation Study. The analysis results for each study site are presented in a similar manner to facilitate site comparisons. The first portion of this section presents information on the trip generation characteristics of each site. Information on the external traffic count results is then presented and the hourly traffic loading by major land uses are illustrated. For comparisons sake, trip generation estimates are then developed using the *Institute of Transportation Engineer's* (ITE) techniques.

The questionnaire results are also reported in Section V. This portion of the Report describes the percentage response at each location, and provides detailed information on internalization and pass-by trips. This section concludes with information on the statistical relevance of the questionnaire sampling.

Site comparisons and an analysis summary are reviewed in Section VI of this Report. This Section provides information to compare land use and site characteristics, traffic characteristics, trip generation characteristics and comparisons with the prior study.

Section VII describes a computer software program developed to synthesize the estimation of external, internal and pass-by trip characteristics of Multi-Use Developments. The methodology was developed based on the results of the current and prior Department studies.

The final Section of the Report provides major findings, and recommendations for further study.

II. SITE SELECTION PROCESS

Initial Site Selection

A comprehensive process was developed to prepare a listing of candidate sites for the trip generation study. The study area includes the five District IV counties of Broward, Palm Beach, Martin, Indian River and Saint Lucie. The identification process included identifying all Developments of Regional Impact (DRI), vested or non-DRI projects, major non-DRI projects and unique areawide locations that appeared to meet multi-use criteria within the District.

The South Florida Regional Planning Council and the Treasure Coast Regional Planning Council provided DRI listings. A total of 121 DRI's were identified in the 5 county District IV area. The Florida Department of Community Affairs was also contacted and a listing was obtained that identified vested (pre-DRI) and non-DRI projects in the 5 county area. Seventeen vested and two non-DRI projects were identified by the DCA listing.

Maps were obtained for each county and reviewed to identify areawide multi-use possibilities. Generally, these areas were multi-use areas with potential for isolation. Seventeen multi-use areas were identified in the initial site listing.

A listing was prepared that identified 144 potential multi-use sites in the 5 county area. This listing can be found in the Task 1.0 Site Selection Technical Report. Based on the land use characteristics and or knowledge of a particular site, 37 sites were chosen for second level screening and review.

Second Level Grading Protocol

The second level evaluation process was very extensive. Criteria was developed to identify optimum multi-use sites. The criteria includes distance to a competing market, diversity and intensity of uses on site, proximity and intensity of residential/ hotel uses, spatial separation of uses, and availability and proximity of transit. A point system was assigned for each criterion with minimum and maximum values based on consistency with established criteria. The maximum number of points by criterion is provided in Table 1 on the following page. Detailed information on the second level screening process can be found in the Task 1.0 Site Selection Technical Report.

Table 1: Second Level Screening Criteria

Criterion	Points
Competing Markets	10
Diversity and Intensity of Uses on Site	30
Proximity and Intensity of Residential/ Hotel Uses	25
Spatial Separation of Uses	25
Availability and Proximity of transit	10
Total:	100

Source: Walter H. Keller, Inc.

Competing Markets

Proximity to competing markets is expected to influence the capture of "pass-by" trips. The greater the distance between competing uses, the greater is the likelihood of capturing passer-by trips. The grading system established for evaluating the impact of competing markets provides up to ten (10) points.

Diversity and Intensity of Uses

The diversity and intensity of uses is a factor which will effect the number of pass-by trips captured and internalization. In general, at least three primary types of uses must be present on site to qualify for a mixed use development. These uses may vary depending on the type of mixed use development and may include uses such as commercial, residential/ hotel, office, industrial, marina slips, institutional and parks. The procedure for evaluating the diversity and intensity of uses gave a maximum of thirty (30) points when three or more of the site's land uses were approximately equal (i.e., within 15% of the mean) in trips. This value decreases to zero if none of the uses were approximately equal.

Proximity and Intensity of Residential/ Hotel Uses

The proximity and intensity of residential units and/ or hotel rooms will influence internalization and pedestrian trips. Generally, the greater the intensity and proximity of residential units or hotel rooms to other uses on site, the greater amount of internalization and pedestrian trips. It is also expected that multi-family dwellings or hotels will generate higher internalization and pedestrian trips than

single family uses with increasing distances decreasing the likelihood of pedestrian activity. The maximum points would be assigned if on-site residential or hotel units exceed 400 units.

Spatial Separation of Uses

The spatial relationship of uses on site is expected to play a significant role on the internal capture of trips in a mixed use development. The closer the uses are, one to another on site, the greater is the likelihood that pedestrians will patronize more than one use. However, it is assumed that beyond a certain point, pedestrians will choose to ride as opposed to walk between and among uses.

Availability and Proximity of Transit

Transit use can reduce vehicle trips on the roadway network. However, transit use is related to, among other things, the number of routes serving a site, frequency of service, and the distance from the transit stop to the respective uses. The availability and proximity of transit provided a maximum of ten (10) points when more than one bus route was available within 400 feet of the site with a frequency of at least 1 hour headways.

Results of the Second Level Evaluation

The second level evaluation procedure identified 13 sites for final evaluation. A detailed tabulation of the evaluation procedure including criteria rankings can be found in the Task 1.0 Site Selection Technical Report (see Table 8).

General Site Description - Final Candidate Sites

Design Center of the Americas (#2)¹

This site is located in the City of Dania at the southeast corner of Griffin Road and Interstate 95. Design Center of the Americas (DCOTA) is a mixed use site that includes 500,000 square feet of designer showrooms, a 250 room Sheraton Hotel and a 60,000 square feet office building. The project was a DRI and the separation between uses are small with excellent pedestrian linkages. Approximately 35 acres are developed. The site is easy to isolate and does not have any "cut through" trips. Ultimate development will include an additional 500,000 square feet of designer showrooms and 120,000 square feet of offices. General site location can be found in Figure 1.

¹ #2 is a reference number carried over from Technical Report I and is not indicative of the site ranking.

Corporate Park at Cypress Creek (#4)

This DRP is approximately 78 acres in size and is located at the northeast corner of Powerline Road and Cypress Creek Road in the City of Fort Lauderdale. The site is a master planned business park that includes multi-story offices, industrial (service - office), a small commercial strip center with a day care, restaurants and commercial uses, three periphery restaurants (Bennigan's, Chili's and Burger King), banks and an Embassy Suite hotel. The site is almost totally developed. The site has a large number of driveways and no "cut-through" trips would be expected. Because of the large number of buildings and parking lots, survey efforts would be more complex. General site location can be found in Figure 1.

Mizner Park (#8)

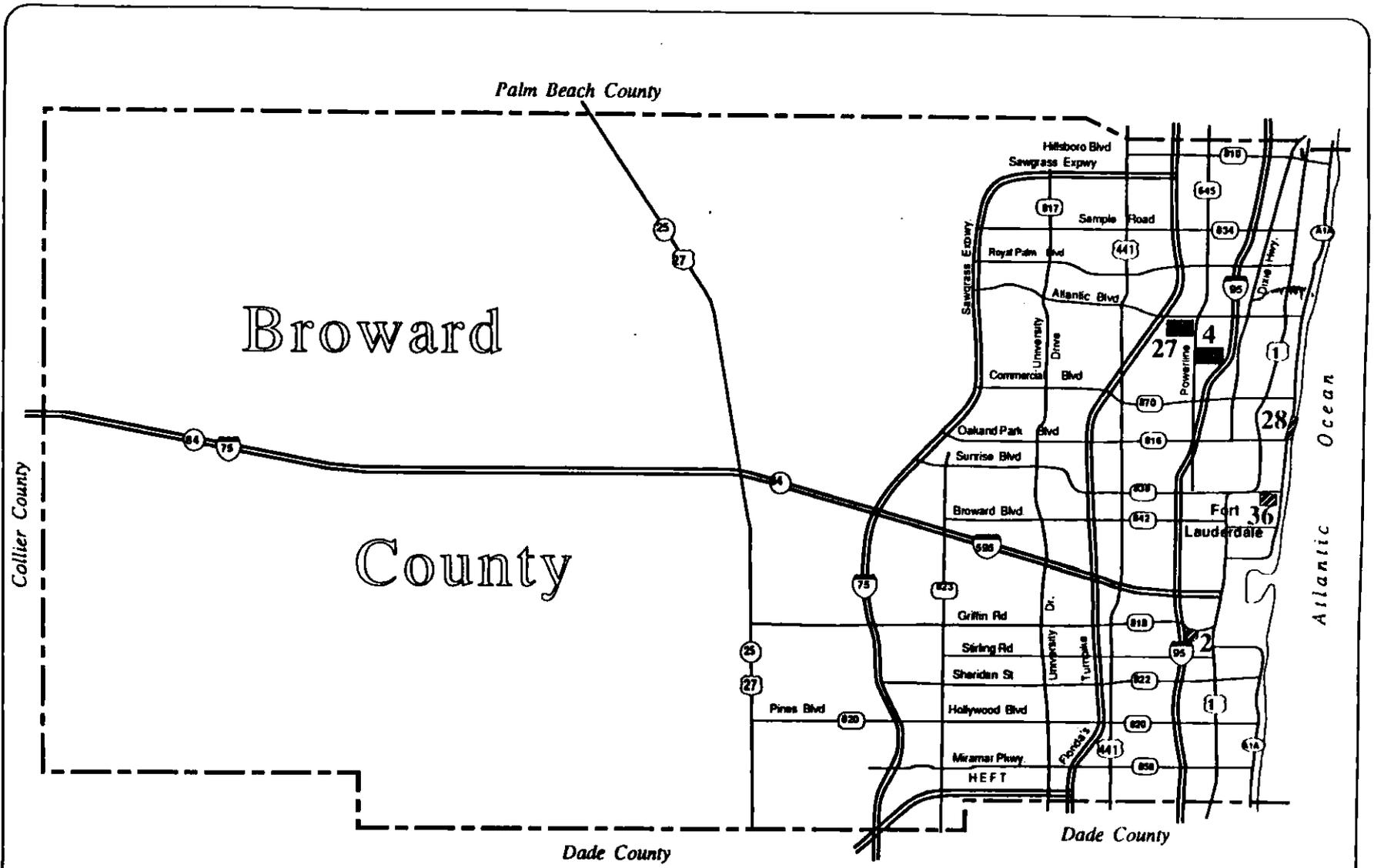
Mizner Park is 30 acre mixed use project located in the downtown redevelopment area of the City of Boca Raton north of Palmetto Park Road and east of Federal Highway (US 1). The project redeveloped a prior shopping mall into a commercial, office and residential complex with minimal separation between uses and excellent pedestrian linkages. An eight (8) screen theater and several trendy restaurants are located at this site. An additional 136 apartments and parking garages are being added to the site. General site location can be found in Figure 2.

Indian River Plantation (#13)

This resort oriented site is located on Hutchinson Island east of Stuart in Martin County. The project includes approximately 400 hotel rooms, 750 multi-family units, a marina, executive golf course, beach club, a bank, convenience store, gas station and several restaurants. An on-site tram is provided to link the various uses to each other for the approximately 190 acre development. Southeast McArthur Boulevard extends south of this development serving the southern portion of Hutchinson Island and Sailfish Point and "cut-through" trips would need to be identified. The site is however, easy to isolate and does not have any close competing land uses. General site location can be found in Figure 3.

Catalina Center - Savannah (#15)

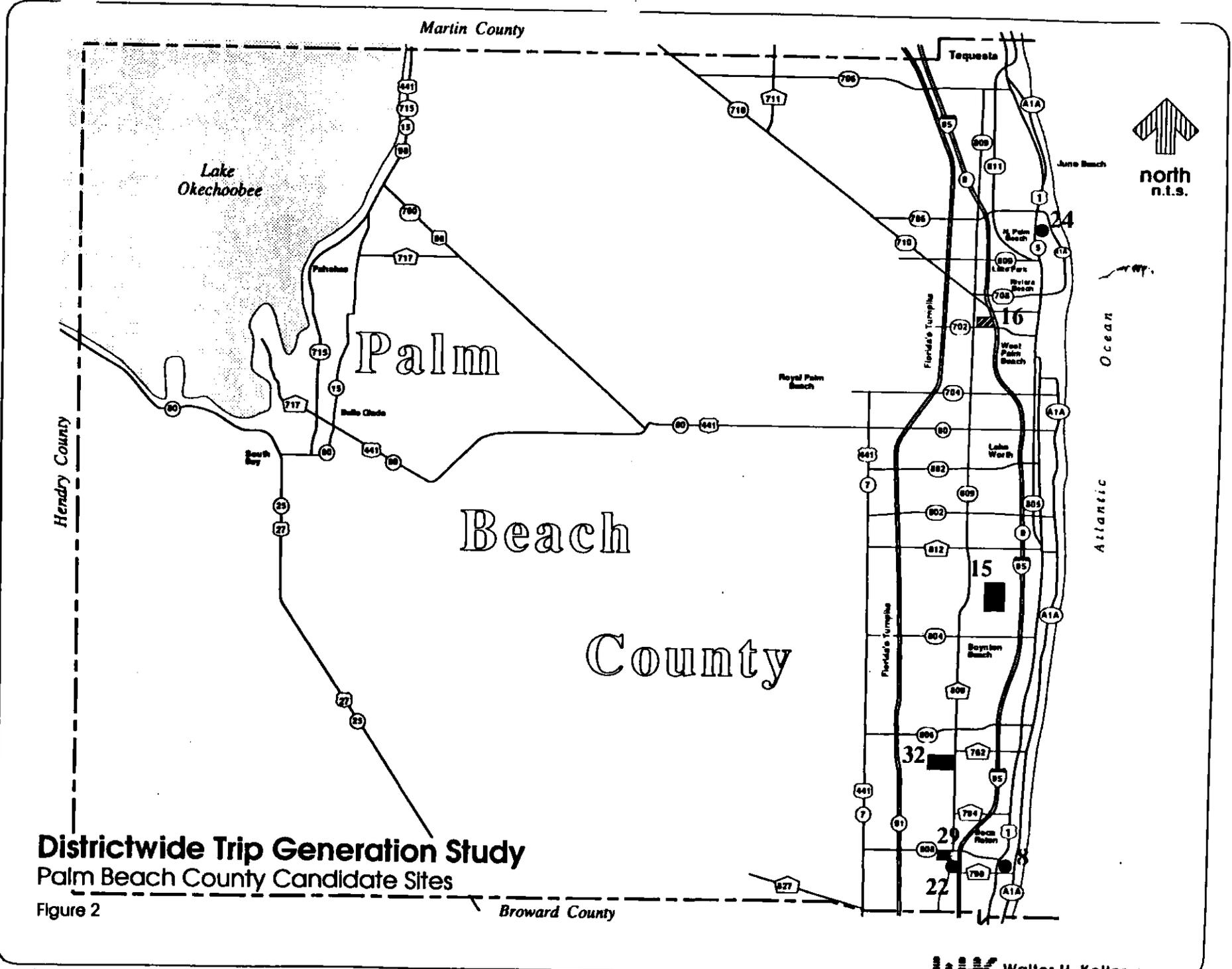
This master planned parcel is located at the southwest corner of Gateway Boulevard (NW 22nd Avenue) and Congress Avenue in the City of Boynton Beach (see Figure 2). The site includes 466 apartments, a 170 unit Holiday Inn Hotel, and a 166,000 square feet commercial center with approximately 28,000 square feet of offices. A Target discount store with 120,000 square feet is also located on this site. Out parcel uses include a McDonald's restaurant, a Barns and Noble bookstore, a bank and an unoccupied restaurant. Catalina - Savannah is approximately 80 acres in size.



Districtwide Trip Generation Study
 Broward County Candidate Sites

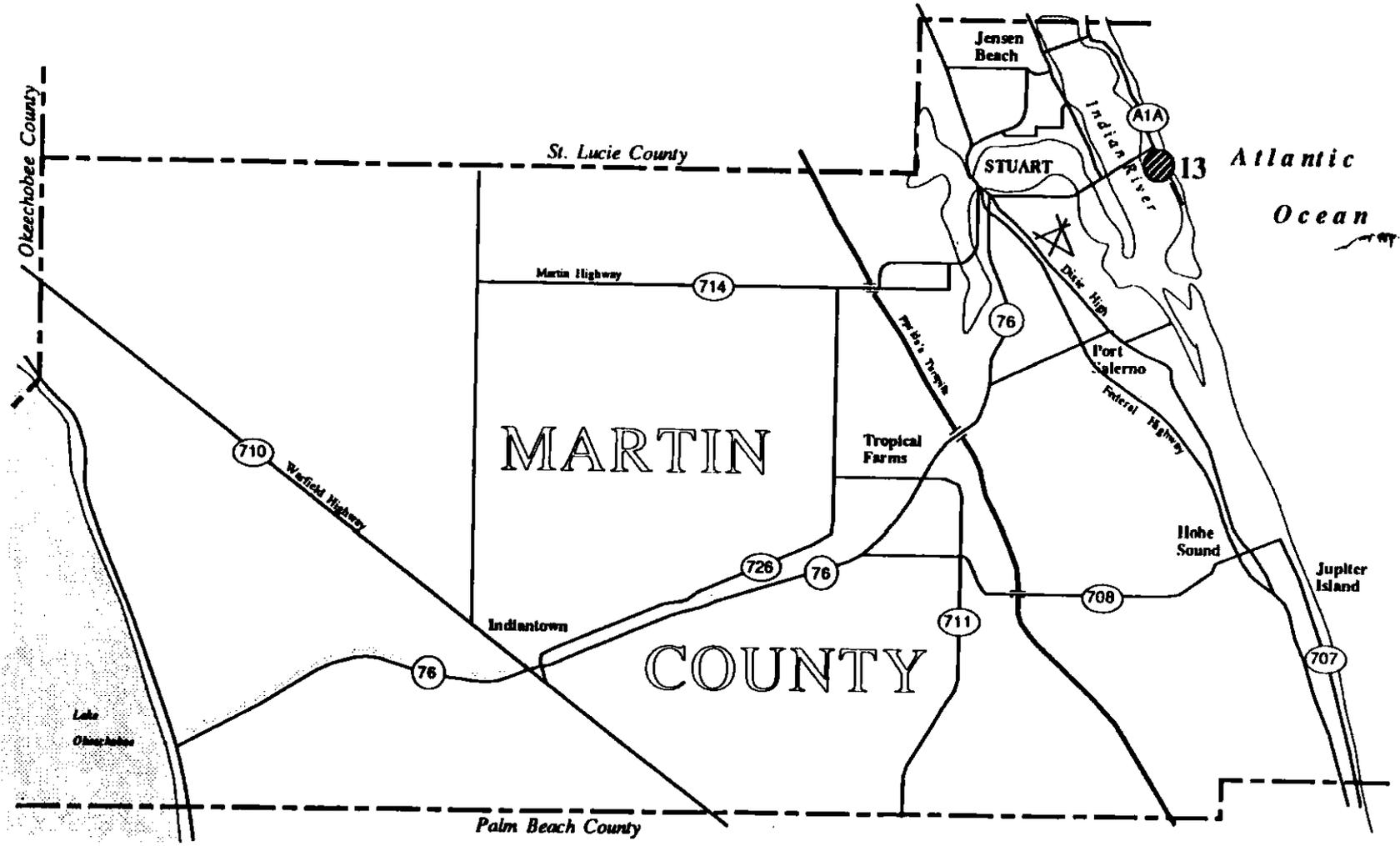
Figure 1





Districtwide Trip Generation Study
 Palm Beach County Candidate Sites

Figure 2



Districtwide Trip Generation Study
Martin County Candidate Sites

Figure 3



Northpointe Corporate Park - 45th Street Business Park (#16)

This site encompasses two master planned projects: a 45 acre business park and an 80 acre corporate park which was a DRI. The site is located at the northwest corner of the intersection of 45th Street and Interstate 95 in the City of West Palm Beach. In addition to office and service - office uses, the combined site includes a 120 room Marriott Courtyards suite hotel, a commercial strip center, a regional FPL center, a Wendy's restaurant and a day care center. The sites have internal connections and share similar driveways. This site is approximately sixty percent developed and separation between uses can be significant. Pedestrian linkages between uses is also limited. General site location can be found in Figure 2.

Crocker Center (#22)

This site is located on the east side of Military Trail south of Glades Road in the City of Boca Raton (see Figure 2). The site includes a 256 room Marriott hotel, 212,000 square feet of office uses in two towers and 86,400 square feet of commercial and restaurant uses. The separation between uses is minimal with excellent pedestrian linkages. The site totals approximately 26 acres.

Old Port Cove (#24)

This development is located on the east side of Federal Highway (US 1) north of the Intracoastal Waterway in the Village of North Palm Beach. The site includes a mixture of multi-family units, a large marina and yacht club and a 95,000 square foot business commercial center. The site is easily isolated and totals approximately 70 acres. Pedestrian linkages between uses is satisfactory. General site location can be found in Figure 2.

Palm Aire (#27)

Palm Aire is a master planned development located west of Powerline Road and south of Atlantic Boulevard in the City of Pompano Beach (see Figure 1). The entire development includes approximately 9,000 housing units, several golf courses, a spa, several commercial centers and offices. A portion of the development located in the northeast area of approximately 105 acres was identified for this study. This area includes Loehmann's Plaza, the Marketplace at Palm Aire (a small strip center with offices), the Palm Aire Spa, offices and several multi-family uses. Because of the spread out nature of this site, spatial separation is higher and pedestrian linkages could be better. "Cut-through" trips would have to be accounted for on North Course Drive and SW 27th Avenue.

Galt Ocean Mile (#28)

This site (see Figure 1) is located east of SR A1A and north of Oakland Park Boulevard in the City of Fort Lauderdale. This site is about 75 acres and includes a variety of uses including eighteen (18) high-rise apartment

buildings, a 150 room hotel, a new 145,000 square feet shopping center with a Winn Dixie Marketplace Store and offices, commercial and office uses and restaurants. The spatial separation between the residential uses and the commercial - office uses is generally small with good pedestrian linkages. Galt Ocean Drive separates the residential from the commercial. No "cut-through" trips would be expected on this roadway.

Glades Plaza (#29)

Glades Plaza totals approximately 100 acres and includes a variety of commercial, office and hotel uses. The site is located south of Glades Road, east of Town Center and west of Military Trail in the City of Boca Raton. Two hotels are located in this area a Holiday Inn and a Sheraton. In addition to Glades Plaza and its commercial and restaurant uses, the area includes several multi-story office buildings including Grace Corporate Tower, Crocker Plaza, Twin Plaza, Town Center Plaza, One Lincoln Place and Mediplex medical offices. Other uses include banks and a Don Carter's Bowling Center. The spatial separation between uses can be high with limited pedestrian linkages due to intersecting streets. SW 19th Street and Sheraton Way cross the study area and "cut-through" trips would have to be accounted for. General site location can be found in Figure 2.

Delray Medical Center (#32)

This site is 175 acres and is located at the southwest corner of Linton Boulevard and Military Trail in the unincorporated area of Palm Beach County west of the City of Delray Beach. Included in this tract are two residential developments: Country Lakes (a townhouse community) and Belaire (a gated single family attached community). The site includes several hospitals and medical uses including Delray Community Hospital (211 beds), Fair Oaks Hospital, Pine Crest Rehabilitation Hospital, Hillhaven Convalescent Center, a Cancer Center and the Delray Eye Center. The site also includes the Palm Court Plaza (commercial uses and doctor's offices), a Wal-Mart and First Baptist Church of Delray Beach. Pedestrian linkage and connections between uses is restricted. General site location can be found in Figure 2.

Galleria (#36)

Galleria includes the area south of Sunrise Boulevard between the Intracoastal Waterway and the Middle River in the City of Fort Lauderdale and totals approximately 135 acres. A wide variety of uses exist including the Galleria Regional Shopping Center, the Galleria Professional offices, a 200 room Guest Quarters suite hotel, a four screen cinema, other commercial uses, professional and corporate offices, apartments and single family homes. While no "cut-through" trips are expected, the size and intensity of the area complicate the survey data collection efforts. General site location can be found in Figure 1.

Final Level Grading and Evaluation

Candidate sites selected in the final listing were evaluated in order to arrive at a priority list of the final thirteen (13) candidate sites. The criteria selected for evaluation were separated into three distinct categories: site layout; site development characteristics; and other. Table 2 provides the criteria for final site evaluation.

Site layout criteria included the ability to isolate the study site, the internal connection between land uses, the spatial separation of land uses and the probability of "cut through" trips. Each criteria was valued from 0 to a maximum of 10 points. If a particular site was best in each criteria, a maximum score of forty (40) points was awarded for site layout.

Site development characteristics included the intensity and diversity of land uses, the proximity and intensity of residential development, the pedestrian friendliness and whether the study site was "master planned". Each criteria was valued from 0 to a maximum of 10 points. If a particular site was best in each criteria, a maximum score of forty (40) points was awarded for site development characteristics.

Other criteria included the proximity of other competing land uses and the survey feasibility for collecting site data. Each criteria was valued from 0 to a maximum of 10 points. If a particular site was best in each criteria, a maximum score of twenty (20) points was awarded for site other criteria.

Table 2: Final Scoring Protocol

Criterion	Minimum (0 Points)	Maximum (10 Points)
Site Layout (0 - 40 Points)		
Easy to Isolate	Hard to Isolate	Easy to Isolate
Internal Connection Between Uses	Poor Connections	Good Connections
Spatial Separation Between Uses	Not Close Together	Close Together
Amount of "Cut Through" Trips	High Cut Through Trips	Low Cut Through Trips
Site Development Characteristics (0 - 40 Points)		
Intensity & Diversity of Uses	Skewed to One Use	Equal Intensity of Uses
Proximity & Intensity of Residential	Minor Residential	Significant Residential
Pedestrian Friendliness	Poor Pedestrian Linkage	Good Pedestrian Linkage
Master Planned Development	Not Master Planned	Master Planned
Other Characteristics (0 - 20 Points)		
Proximity to Competing Land Uses	Multiple Competing Uses	Lack of Competing Uses
Survey Feasibility	Complex Survey Effort	Less Complex Survey

Source: Walter H. Keller, Inc.

Evaluation and Scoring Procedure

Project team members held a review meeting to evaluate and score each of the final thirteen (13) sites. During the review meeting each site was reviewed using aerial photographs and the results of site inspections and prior site familiarity. The evaluation was also based in part of the results of the second level scoring of similar criteria of prior diversity and intensity of land uses, proximity and intensity of residential and spatial separation of uses. While a detailed and itemized scoring system was not utilized in the final level screening, an open discussion took place among project team members on the relative scoring for each criteria for each site. Table 3 details the results of the final evaluation.

Table 3 - Final Evaluation & Ranking

No.	Project Name	Size	Unit	Site Layout				Site Development Characteristics				Other		Total Pts	Rank
				Easy to Isolate	Connection Between Uses	Spatial Separation	Cut - Through Trips	Intensity & Diversity of Uses	Proximity & Intensity of Residential	Pedestrian Friendly	Master Planned	Proximity to Other Uses	Survey Feasibility		
Development Of Regional Impact															
2	Design Center Of The Americas (Dania)	44	Acres	10	10	10	10	10	8	10	10	7	10	95	1
	Hotel Room	250	Rooms												
	Commercial- Showroom	500,000	SF												
	Office	60,000	SF												
4	Corp Park @ Cypress Creek (Fl. Lauderdale)	24	Acres	5	8	6	10	8	8	6	10	3	3	67	8
	Hotel Room	300	Rooms												
	Industrial	35,255	SF												
	Commercial	30,000	SF												
	Office	442,142	SF												
8	Mizner Park (Boca Raton)(Portion of DRI)	38	Acres	10	10	10	9	9	9	10	10	7	8	92	2
	Dwelling Units	136	DU												
	Commercial	125,000	SF												
	Office	100,000	SF												
	Movie Theatre	8	Screens												
13	Indian River Plantation (Martin Co.)	198	Acres	9	6	4	6	5	10	10	10	10	6	76	5
	Dwelling Units	947	DU												
	Hotel Room	200	Rooms												
	Commercial	5,380	SF												
	Office	7,658	SF												
15	Catalina Center- Savannah (Boynton Beach)	80	Acres	7	7	6	10	8	9	6	8	3	8	72	6
	Apartments	466	DU												
	Hotel (includes 18 rental apartments)	170	Rooms												
	Retail Shopping Center	290,000	SF												
	Office	28,550	SF												
16	Northpoint Corporate Park	134	Acres	10	6	4	10	10	1	3	8	5	5	62	10
	Hotel Room	120	Rooms												
	Industrial	125,000	SF												
	Commercial	35,000	SF												
	Office	472,000	SF												
Vented Non DRI's															
22	Crocker Center	26	Acres	10	10	10	10	10	8	10	10	4	10	92	2
	Hotel Room	256	Rooms												
	Commercial	86,400	SF												
	Office	217,247	SF												

Table 3 - Final Evaluation & Ranking (continued)

No.	Project Name	Size	Unit	Site Layout				Site Development Characteristics				Other		Total Pts	Rank
				Easy to Isolate	Connection Between Uses	Spatial Separation	Cut-Through Trips	Intensity & Diversity of Uses	Proximity & Intensity of Residential	Pedestrian Friendly	Master Planned	Proximity to Other Uses	Survey Feasibility		
24	Old Port Cove Marina (Palm Beach Co.)	70	Acres	10	10	7	10	7	10	9	10	3	8	84	4
	Dwelling Units	1,066	DU												
	Office-Commercial	100,000	SF												
	Marina	200	Berths												
27	Palm Aire (Pompano Beach)	185	Acres	3	4	6	6	10	8	5	10	3	4	59	11
	Dwelling Units	3,529	DU												
	Industrial	42,596	SF												
	Commercial	189,000	SF												
	Office	282,720	SF												
28	Galt Ocean Mile (Fl. Lauderdale)	74	Acres	3	8	8	9	10	10	7	6	6	1	68	7
	Dwelling Units	3,930	DU												
	Hotel Room	723	Rooms												
	Industrial	52,319	SF												
	Commercial	259,000	SF												
	Office	461,776	SF												
29	Glades Plaza (Boca Raton)	100	Acres	1	5	5	1	10	10	4	3	3	3	45	12
	Hotel Room	1,139	Rooms												
	Industrial	2,315	SF												
	Commercial	213,500	SF												
	Office	670,016	SF												
32	Delray Medical Center (Delray Beach)	175	Acres	4	2	2	10	10	4	3	2	4	4	45	12
	Dwelling Units	705	DU												
	Industrial	926	SF												
	Commercial	4,000	SF												
	Hospital	211	Beds												
	Office	455,088	SF												
36	Galleria	135	Acres	4	8	8	10	10	10	8	2	3	3	66	9
	Dwelling Units	709	DU												
	Hotel Room	201	Rooms												
	Industrial	49,078	SF												
	Commercial	514,500	SF												
	Office	202,464	SF												

Source: Walter H. Keller, Inc.
ITE Trip Generation Manual - 5th Edn.

Recommended Multi-Use Study Sites

Three multi-use sites received final scores of 92 - 95 points out of a maximum of 100 points. These sites were all somewhat similar in that spatial separation between uses was minimal with excellent pedestrian linkages. Additionally, these sites were more equal in intensity of the individual uses and were generally easier to isolate. The three highest rated sites were:

#2	Design Center of the Americas	Dania	95 Points
#8	Mizner Park	Boca Raton	92 Points
#22	Crocker Center	Boca Raton	92 Points

The next highest rated sites varied from 72 to 84 points. These sites generally had greater separation of uses, were less pedestrian friendly and were somewhat more skewed to one primary use. The next three highest rated sites were:

#24	Old Port Cove	North Palm Beach	84 Points
#13	Indian River Plantation	Martin County	76 Points
#15	Catalina Center - Savannah	Boynton Beach	72 Points

The Department of Transportation selected Mizner Park and Crocker Center for study. The Design Center of the America's was not selected due to the uniqueness of the site. The Galleria Area (site #8) located in the City of Fort Lauderdale was chosen as the final study site.

III. SITE CHARACTERISTICS

Crocker Center

History and Description

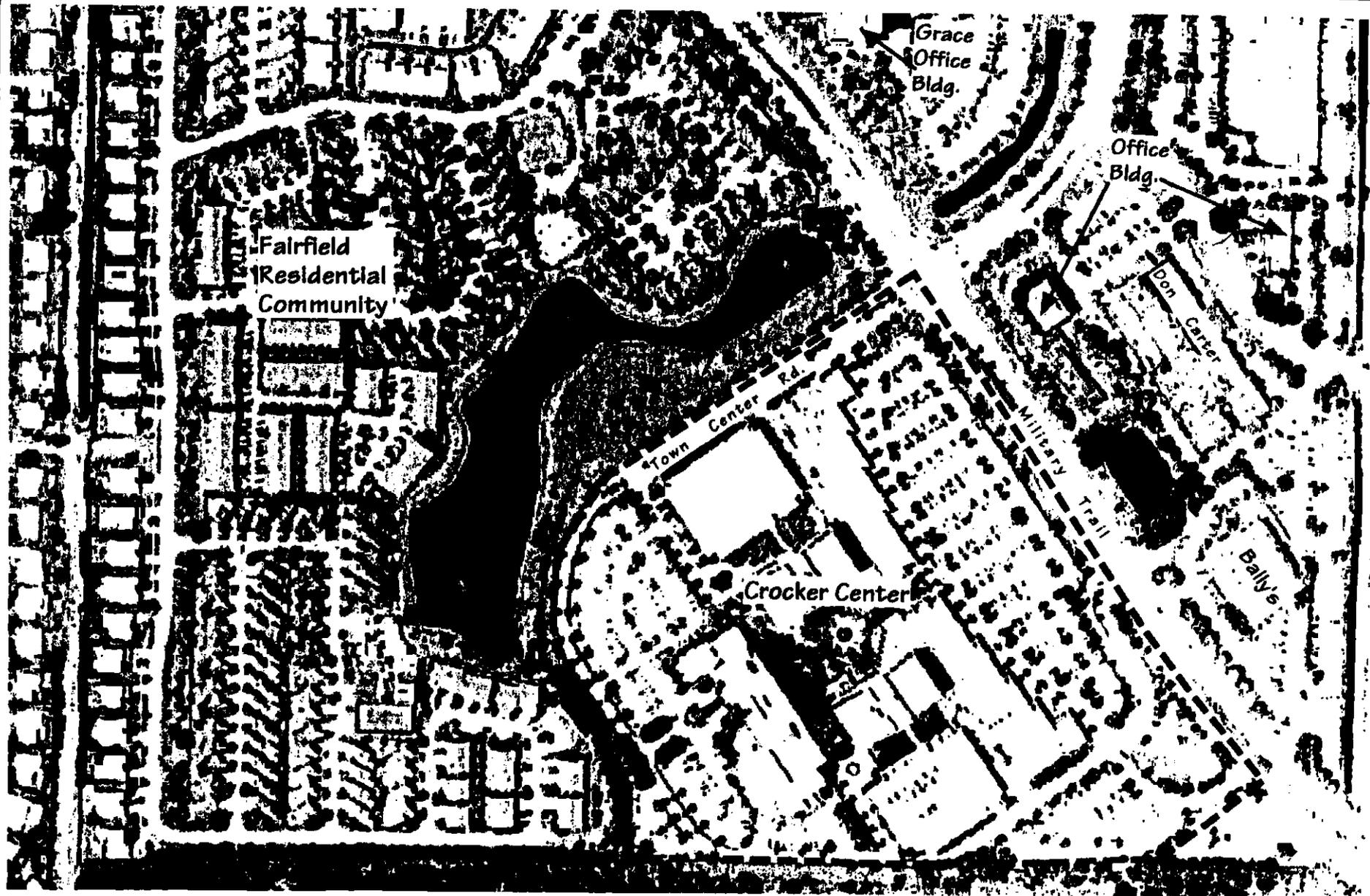
Crocker Center¹ a 28.6 acre site, is located just outside the municipal boundaries of Boca Raton, Florida southwest of the I-95/Glades Road interchange, as shown on Figure 4. It is accessible only from Military Trail, directly opposite from the eastern access to Town Center, a thriving regional mall, and from Glades Plaza, a complex of retail businesses, recreational centers, hotels, and office buildings, which is well established and fully occupied.

Crocker Center was built as a unified, multi-use development, creating an upscale environment conducive to leisurely shopping and dining, attracting professional tenants to its office towers, and providing the most luxurious hotel in the four square mile I-95/Glades Road area with attendant catering facilities. The retail shops opened in 1986, the Marriott Hotel and south office tower in 1987, and the north office tower opened in 1988. All uses are connected by deeply shaded walkways. The site layout is shown in Figure 5.

An elaborately landscaped fountain and courtyard area is flanked by seven restaurants, half of which would be considered very expensive, as noted in the *Boca Raton Magazine*. Most of the restaurants provide al fresco dining, which integrates them into the pedestrian flow of the center. The shops face into the main parking area in two wings; they are predominantly upscale boutiques. At the north end of the retail row is a McDonald's fast food restaurant which does a brisk business; the south end is anchored by a moderately priced restaurant which attracts a sizable lunch crowd.

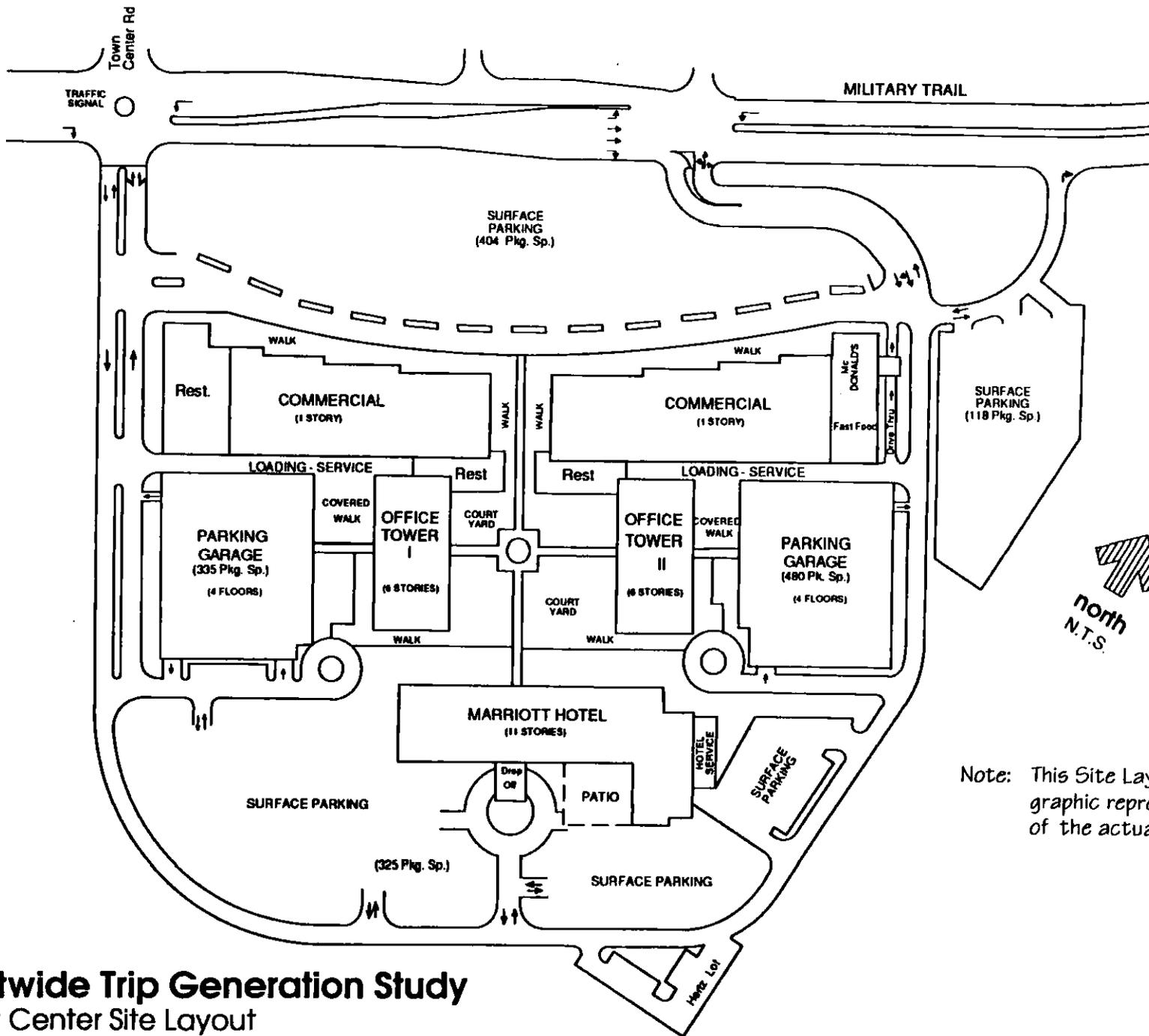
The Marriott Hotel has 256 rooms and, according to hotel management, attracts much of its trade from business trips related to nearby corporate headquarters. Its main entrance is from Town Center Drive which swings behind the complex. It also has a well defined entrance to the courtyard area, making that travel path very attractive. On the dates when the site was surveyed, the occupancy rate was 66 % although its annualized occupancy is 80%. The hotel has an upscale dining room and lounge occupying 3,000 square feet and various sized meeting rooms totaling 10,000 square feet. The Marriott provides all services and facilities usually associated with a first class facility.

1 - Crocker Center was re-named in November 1994 to Boca Center.



Districtwide Trip Generation Study
Crocker Center and Surrounding Development
Figure 4





Note: This Site Layout is a graphic representation of the actual Site Plan

Districtwide Trip Generation Study
Crocker Center Site Layout

Figure 5

Two, six story office towers are depicted in Figure 5. The south office building, Tower I, is developed at 120,000 square feet while the north office building, Tower II, is developed at 97,000 square feet. Both Towers are set back from the retail and restaurant facades, but have excellent pedestrian links. The office buildings have luxurious lobbies staffed by a front desk attendant. Due to the layout of the center, only those persons going to the offices would be likely to use the parking garages. The outdoor parking areas serve the retail and restaurant trade, and the hotel has valet service as well as its own parking areas. An inventory of land uses at Crocker Center is provided in Table 4.

Table 4 - Crocker Center Land Use Inventory

Land Use	Square Feet	% Occupied	ITE Code
Office Uses	208,883	94	
Law	19,019		710
Securities	89,150		710
Medical	2,434		710
Other	85,696		710
Vacant	12,584		
Commercial	87,157	90	
Retail (Specialty)	33,495		814
Restaurant (Quality)	30,201		831
Restaurant (Sit Down)	9,250		833
Fast Food (McDonald's)	5,611		834
Vacant	8,600		
Hotel		66	
Rooms	256		310
Mtg. Rooms	10,000		
Restaurant/ Lounge	3,000		

Source: Walter H. Keller, Inc.
Marda L. Zimring, Inc.
ITE Trip Generation, 5th Edition

Parking spaces are not assigned by use within Crocker Center. All parking is free and available for all Center users. One exception is that on a case by case basis, many office tenants have been assigned parking spaces within the garages. Overall parking conforms to Code requirements of one space per 200 square feet of gross leaseable floor area for shopping centers and office buildings. The management office did not have a reliable count on the number of employees at Crocker Center.

Site Vicinity Information

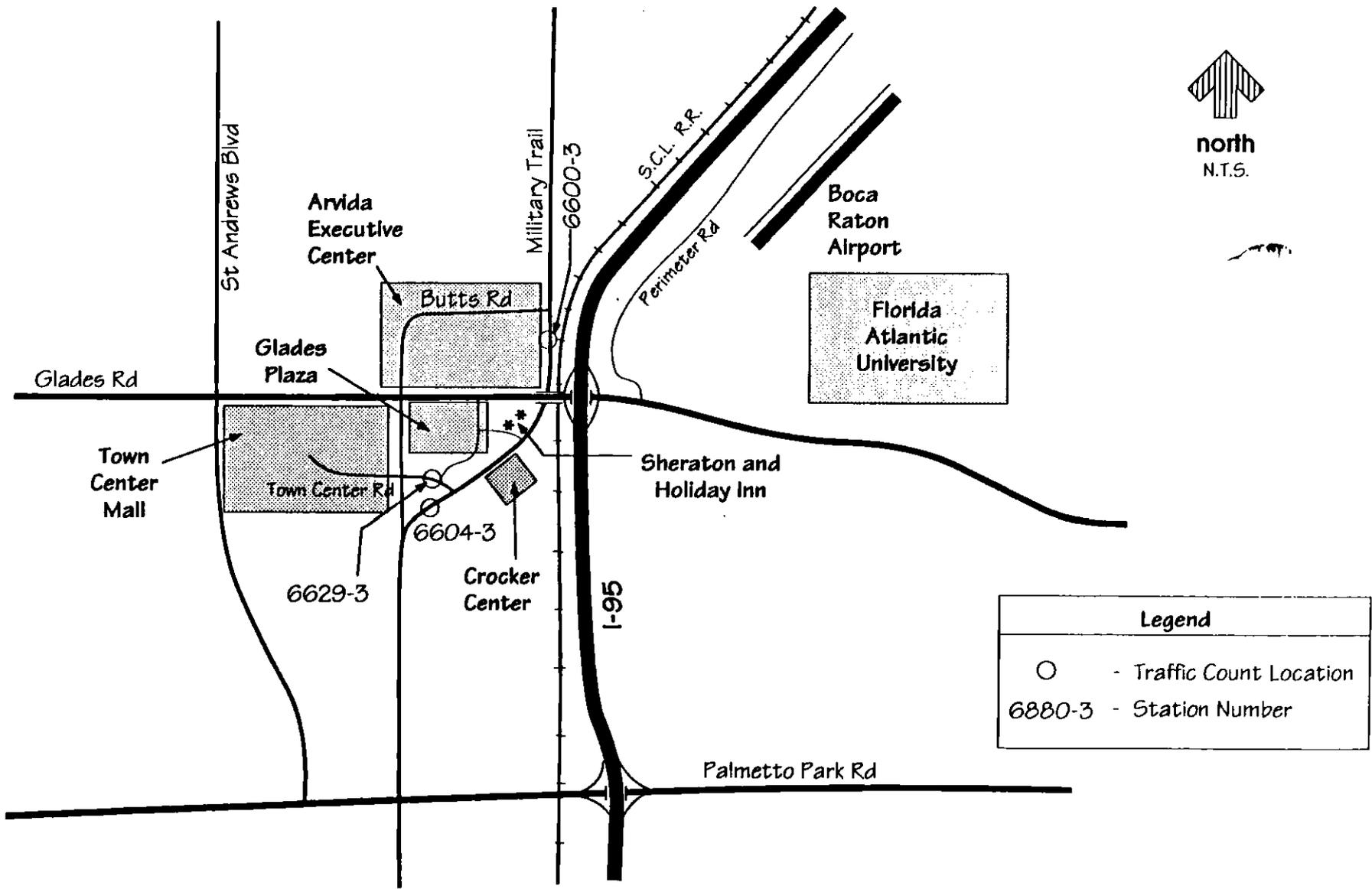
As discussed, Crocker Center is located in the midst of a large area of competing retail, office, restaurant and hotel uses. The Center is several miles from downtown Boca Raton, but is at the core of the intensely developed area surrounding Town Center. It has carved its own niche at the high end of the market, and is well positioned to capture trips from the adjacent development. Crocker Center is isolated to the extent that only those from office buildings directly across Military Trail would be likely to walk into the center. Due to the spread of the development in the area, trips from any other locations would necessarily be vehicular.

Annual Average Daily Traffic (AADT) and level of service for the surrounding roadways were analyzed to identify external traffic conditions adjacent to Crocker Center. The AADT counts were obtained from the Palm Beach County Metropolitan Planning Organization (MPO) and represent an average of first and third quarter counts. Three MPO stations are depicted in Figure 6. Peak Hour volumes were also computed by calculating the K-100 factor from the Study data collection effort pursuant to Florida Department of Transportation procedures and multiplying it by the AADT. AADT, peak hour and level of service are reported in Table 5. As noted in Table 5, the area around Crocker has levels of service D and F on Military Trail and C+ on Town Center Road.

Table 5 - Adjacent Traffic Volumes and Characteristics

Station #	Roadway	Location	93-94	LOS		PM Pk	LOS	
			AADT	D	LOS	Vol	D	LOS
6629-3	Town Center Rd	W of Military Tr	11,863	29,400	C+	1,341	2,670	C+
6604-3	Military Tr	S of Town Ctr Rd	33,220	29,400	F	3,754	2,670	F
6600-3		S of Butts Road	26,008	29,400	D	2,939	2,670	E

Source: Walter H. Keller, Inc.
Florida Department of Transportation, District IV



Districtwide Trip Generation Study
Crocker Center Count Station Locations

Figure 6

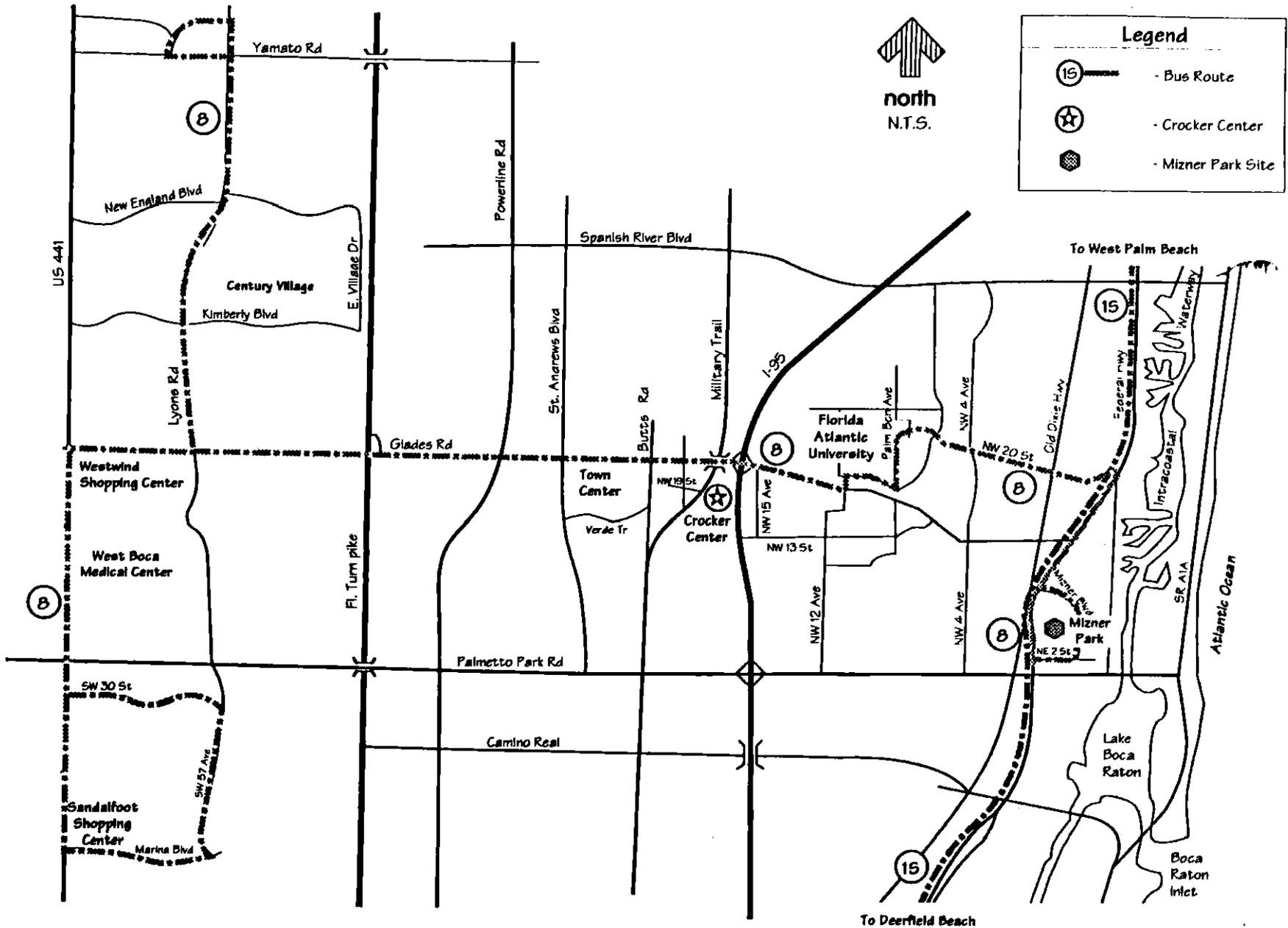
Crocker Center is not directly served by the local CoTran bus system, however, the "Cross Town Boca Raton" route (#8) stops at Glades Plaza and Town Center, west of Crocker Center. Route 8 runs west along Glades Road from Mizner Park on the east to the residential communities and commercial areas along State Road 7 to the west with intervening stops at Florida Atlantic University, Town Center, and Century Village, a large retirement community. Buses depart to the west and arrive from the west on an hourly schedule each day of the week during business hours except for Sundays. Route 8 is schematically depicted on Figure 7.

Crocker Center is geographically isolated from surrounding uses. All access is provided off of Military Trail. Its main entrance point is a signalized, heavily landscaped, median-divided roadway, Town Center Circle. This entry forms the east leg of a four-legged intersection. Proceeding directly east from the intersection, traffic is directed to the Marriott Hotel and both parking garages. Traffic intended for the commercial uses takes a left hand turn a hundred feet from the entrance at a north - south drive that accesses the large open parking area depicted in Figure 5. This roadway also provides a convenient means of access to the shopping promenade and allows site users access to the signalized intersection on Military Trail.

A secondary entrance to the site, which is not signalized, is approximately 680 feet further north on Military Trail where turning movements in all directions are permitted. This entrance would be most convenient for parking in the north parking garage as it would eliminate the drive around the Marriott parking areas or across the promenade roadway.

A third, minor entrance is located approximately 440 feet further north on Military Trail. This access provides right turns into and out of Crocker Center and is a convenient entrance to the McDonald's restaurant and drive-through window. The geometry at each access is depicted in Figure 5.

A total of 1,662 spaces are provided on site (see Figure 5). There is a parking lot for 404 cars across from the shops, with valet parking provided at the entrance to the courtyard for dinner-hour patrons. The northern surface lot has 118 spaces and the hotel has a surface parking lot with 325 spaces with valet parking service. The two parking garages have a total of 815 spaces (480 and 335) and are connected directly by covered walkways to the office towers, although anyone may use them. Except for valet parking, all parking is free.



Districtwide Trip Generation Study
Crocker Center Regional Bus Routes

Figure 7

Mizner Park

History and Description

Mizner Park was developed as a partnership venture by the City of Boca Raton Community Redevelopment Agency and a private developer to redevelop 30 acres of blighted property in the central business district. The project is privately owned. The site is located one block north of Palmetto Park Road, the downtown east-west arterial connecting I-95, Federal Highway, and terminating at Ocean Boulevard (S.R.-A1A) at the City's public beach. It is bordered on the west by Federal Highway which was recently reconstructed to a four-lane divided roadway with infrastructure and streetscaping improvements. An aerial of Mizner Park is depicted in Figure 8.

Retail and office building uses typical of downtown development are found immediately to the north, south and west of Mizner Park. To the south is Royal Palm Plaza, a Mizner style outdoor retail shopping center with covered walkways connecting shops with fountain and courtyard areas and a regionally renowned theater. To the west is the Boca Raton municipal complex which includes City Hall, the police station, community center, library, and tennis center. Adjacent to Mizner Park on the east is an old neighborhood of single family homes, most upwards of \$250,000, and beyond those, expensive high rise condominiums lining Ocean Boulevard. All are within walking distance of Mizner Park.

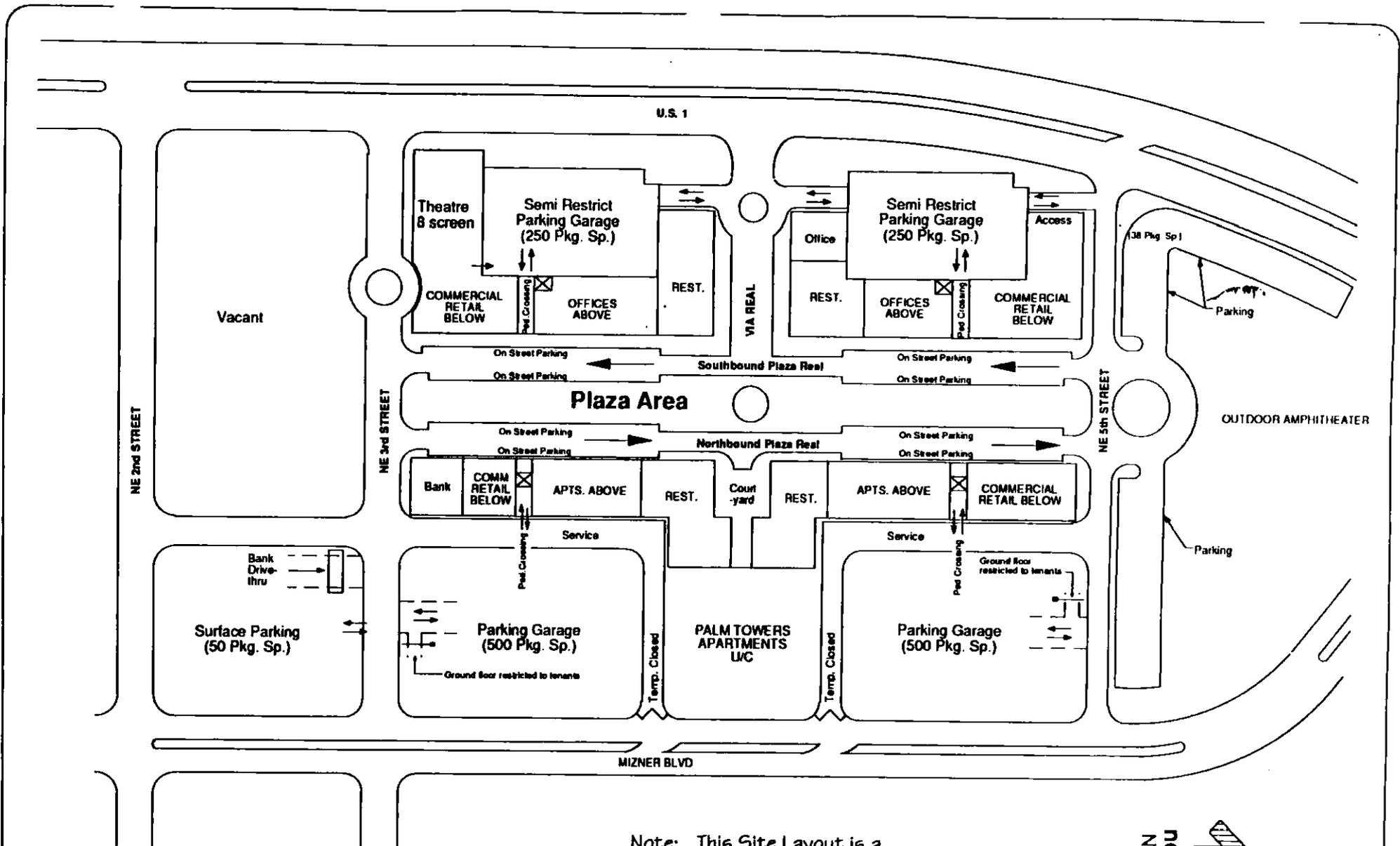
Mizner Park opened in 1990 with 136 rental apartments, 85,000 square feet of retail space, two 250 car garages, a 1,900 seat movie theater with eight screens, 95,000 square feet of office space, and 30,000 square feet of restaurant space. Two 500 space garages on the east side of the property were completed in the Spring of 1994. An apartment tower, under construction on the east side of the project between the garages, will provide an additional 136 units when completed; however, it will not be occupied until the Fall of 1994, after the completion of the data collection. A generalized site layout is provided in Figure 9.

Mizner Park is a unique development which acts as a magnet to the surrounding community and to the region for social/recreational purposes. It is important to note that the site is more heavily utilized in the evening than during the day. This is due to several factors: there are seven restaurants, eight movie screens in an elaborate movie house, and stores which stay open until at least 9:00 P.M., with most open until 11:00 P.M., and some open past midnight.

Districtwide Trip Generation Study Mizner Park and Surrounding Development

Figure 8





Note: This Site Layout is a graphic representation of the actual Site Plan



Districtwide Trip Generation Study

Mizner Park Site Layout

Figure 9

The site is often a destination in itself, providing a pleasant, pedestrian oriented environment with fountains, gazebos, manicured lawns, and covered walkways conducive to browsing.

The amphitheater on the north end and the plaza are regularly used for free events open to the public. By all accounts, this is a highly successful project based on rentals and occupancy factors, the quality of tenants, and its ability to draw a clientele which keeps them in business. An inventory of land uses at Mizner Park is depicted in Table 6.

Table 6 - Mizner Park Land Use Inventory

Land Use	Square Feet	% Occupied	# Employees	ITE Code
Office Uses	88,279	100	405	
Law	11,403		34	710
Securities	28,193		216	710
Medical	10,724		40	710
Other	37,959		115	710
Vacant	0			
Commercial	162,743	93	509	
Retail	86,632		253	814
Banking	3,653		8	911/912
Restaurant	29,697		188	831
Movie Theater (8 screens)	31,000		60	
Vacant	11,761			
Residential	Size	136 apts.	100	
1 bdrm	995 sq.ft.	48		223
2 bdrm/1 bath	1,145 sq.ft.	16		223
2 bdrm/2 bath	1,200 sq.ft.	56		223
3 bdrm/2 bath	1,695 sq.ft.	16		223

Source: Walter H. Keller, Inc.
Marda L. Zimring, Inc.

ITE Trip Generation, 5th Edition

Mizner Park is centered on a broad, beautifully landscaped plaza/boulevard, named Plaza Real, running north-south through the site. The north end is a large open space providing grounds for the amphitheater. The south end has not yet been developed and remains an open grassy area. At the street level, both sides of Plaza Real are lined with retail shops; the restaurants, with one exception, are clustered around the central fountain area. The movie theater is located in the southwest corner. Offices are located above the retail uses on the west; rental apartments are located above the retail uses on the east.

Parking garages with 1,500 spaces which connect to the offices, apartments, shops and the plaza by covered walkways are located in each quadrant of the site. A 50 space parking lot which is integrated with the drive-through bank operation is located in the southwest corner of the site and a 38 space lot is located at the north end of the site. All self-parking is free. Valet parking convenient to the restaurants near the central fountain is available throughout the day.

Parking spaces are generally not assigned by use within Mizner Park. Two exceptions are those areas controlled by card-activated gates for the exclusive use of the apartment tenants and a number of spaces in the west garage which are restricted for office employees during office hours, before 5:00 P.M.. The retail shops conduct their heaviest business in the evening hours and that is also the peak period for the theaters.

Site Vicinity Information

As noted, Mizner Park is at the heart of Boca Raton's Downtown Redevelopment District, fronting on Federal Highway, the area's major north-south arterial, and two blocks north of Palmetto Park Road. Mizner Park is located in close proximity to the most densely developed residential areas of the City and to the municipal complex. Its downtown location, mixed uses and parking supply make the site well suited to capture pass-by trips. Mizner Park and its relationship to the surrounding developed areas are depicted in Figure 8 (see page 26).

Access to Mizner Park is provided from Federal Highway via three east/ west roadways: N.E. 3rd Street, Via Real, and N.E. 5th Street; from N.E. 2nd Street by a driveway which connects to N.E. 3rd Street and from Mizner Boulevard. Each of the three east/ west roadways have restricted right-in and right-out turning movements provided at the intersection with Federal Highway and, in addition, a southbound left turn lane is provided at N.E. 5th Street. None of the intersections is signalized.

The southernmost access point is located at N.E. 3rd Street. N.E. 3rd Street is conveniently located for access to the theaters. Traffic is slowed by a rotary 100 feet onto the site. Vehicles can proceed east to Plaza Real or further east to the southeast parking garage. N.E. 3rd Street cuts across the entire site and terminates at Mizner Boulevard. Through traffic on N.E. 3rd Street is discouraged owing to the right-in and right-out turning movement restrictions at Federal Highway and Mizner Boulevard.

The middle entry point of access from northbound Federal Highway is Via Real, a two lane roadway. Traffic entering at this point is slowed and distributed by a rotary located fewer than 50 feet onto the site. The rotary provides access to the garages. Traffic can also continue east along Via Real and then south on Plaza Real.

The northernmost point of access from northbound Federal Highway is at N.E. 5th Street. N.E. 5th Street cuts across the entire site and could be used by through traffic, however, as is the case with N.E. 3rd Street, the geometrics are not conducive to this movement.

The driveway which serves Mizner Park from N.E. 2nd Street is the only one which permits all turning movements. It provides access to the drive-in bank facility and it aligns with the service drive to the north. This driveway also provides access to the parking garage located in the southeast quadrant of the project and to the rear of the businesses located along the east side of Mizner Park.

Access from Mizner Boulevard, a median divided roadway bordering the east side of the site, is possible at N.E. 5th Street and N.E. 3rd Street, but only in right-in, right-out turning movements. There are no traffic signals. These access points provide convenient entry to the northeast and southeast parking garages.

Internal circulation at Mizner Park is provided by Plaza Real. Plaza Real is a broad boulevard with two, two-lane, one-way streets and a heavily landscaped center plaza which features pedestrian attractions such as sitting areas and landscaped views. On-street parallel parking is provided on Plaza Real adjacent to the covered walkways which front the retail outlets. Owing to its design and pedestrian amenities, Plaza Real is an attraction to Mizner Park visitors.

Due to the fact that access is distributed among six entry-ways, the location of the parking garages at four corners of the site, two rotaries and one main internal roadway, Plaza Real, internal circulation on the site flows slowly, but evenly. There were no observed bottlenecks. Valet parking and taxi loading are provided at the semicircle on the east side of Plaza Real in front of the restaurants. The parking garage located in the northeast quadrant of the site is used for valet parking. These activities do not adversely impact on-site traffic circulation; however, valet drivers exit the northeast parking garage and use Mizner Boulevard to re-enter the site at the southeast entrance.

Annual Average Daily Traffic (AADT), peak hour counts and level of service for the surrounding roadways were analyzed to identify external traffic conditions adjacent to Mizner Park. The AADT counts were obtained from the Palm Beach County Metropolitan Planning Organization and represent an average of first and third quarter counts. Four MPO stations are depicted in Figure 10, *Count Station Locations*. Peak Hour volumes were established by multiplying the K-100 factor (from the data collection effort) by the AADT. AADT, peak hour and level of service are reported in Table 7. Traffic volumes exceed LOS D on U.S.-1 as noted in Table 7.

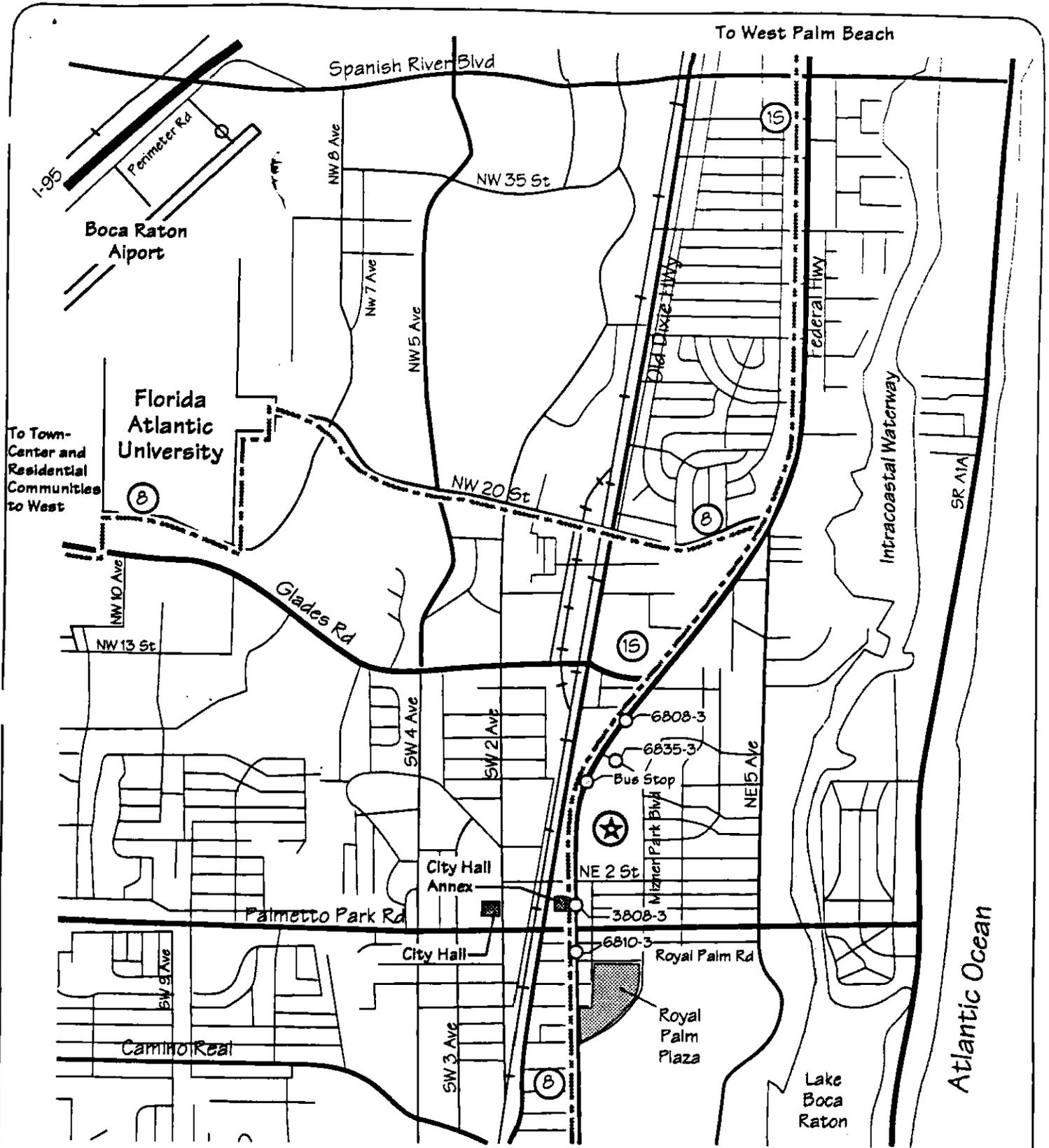
Table 7 - Adjacent Traffic Volumes and Characteristics

Station #	Roadway	Location	93-94	LOS		PM Pk	LOS	
			AADT	D	LOS	Vol	D	LOS
6808-3	US 1	S of Glades Rd	30,370	29,400	E	3,067	2,670	F
3808-3		N of Palmetto Park	21,847	29,400	D	2,207	2,670	D
6810-3		S of Palmetto Park	21,250	29,400	D	2,146	2,670	D
6835-3	Mizner Blvd.	E of Federal Hwy (NE 6 St)	5,080	29,400	A	513	2,670	A

Source: Walter H. Keller, Inc.
Florida Department of Transportation, District IV

Mizner Park is served directly by the CoTran bus system. Routes 8 and 1S connect Mizner Park with the areas to the west and north. Route 8, the "Cross Town Boca Raton" route (see description on page 23). Buses run on an hourly schedule each day of the week during business hours except for Sundays. Route 1S runs along Federal Highway from downtown West Palm Beach to the intersection of Hillsboro Boulevard and Federal Highway in Deerfield Beach. Buses run every two hours, each day of the week during business hours except for Sundays. Routes 8 and 1S are shown on Figure 7 (see page 24).

Employment incomes vary from a low of under \$20,000 per year for restaurant and retail employees to a high in excess of \$100,000 per year for office professionals. Rental rates for the apartments at Mizner Park range from \$840 to \$3,000 per month. A conservative rule of thumb is that housing should equal 30% of gross annual income. Based on this rule, the Mizner Park apartments are affordable to persons earning an income greater than \$34,000 per year.



north
N.T.S.

Districtwide Trip Generation Study

Mizner Park Count Station Locations

Figure 10

Legend	
	- Bus Route
	- Mizner Park Site
	- Traffic Count Station
6810-3	- Traffic Count Station Number



Walter H. Keller, Inc.
Consulting Engineers & Planners

Galleria Area

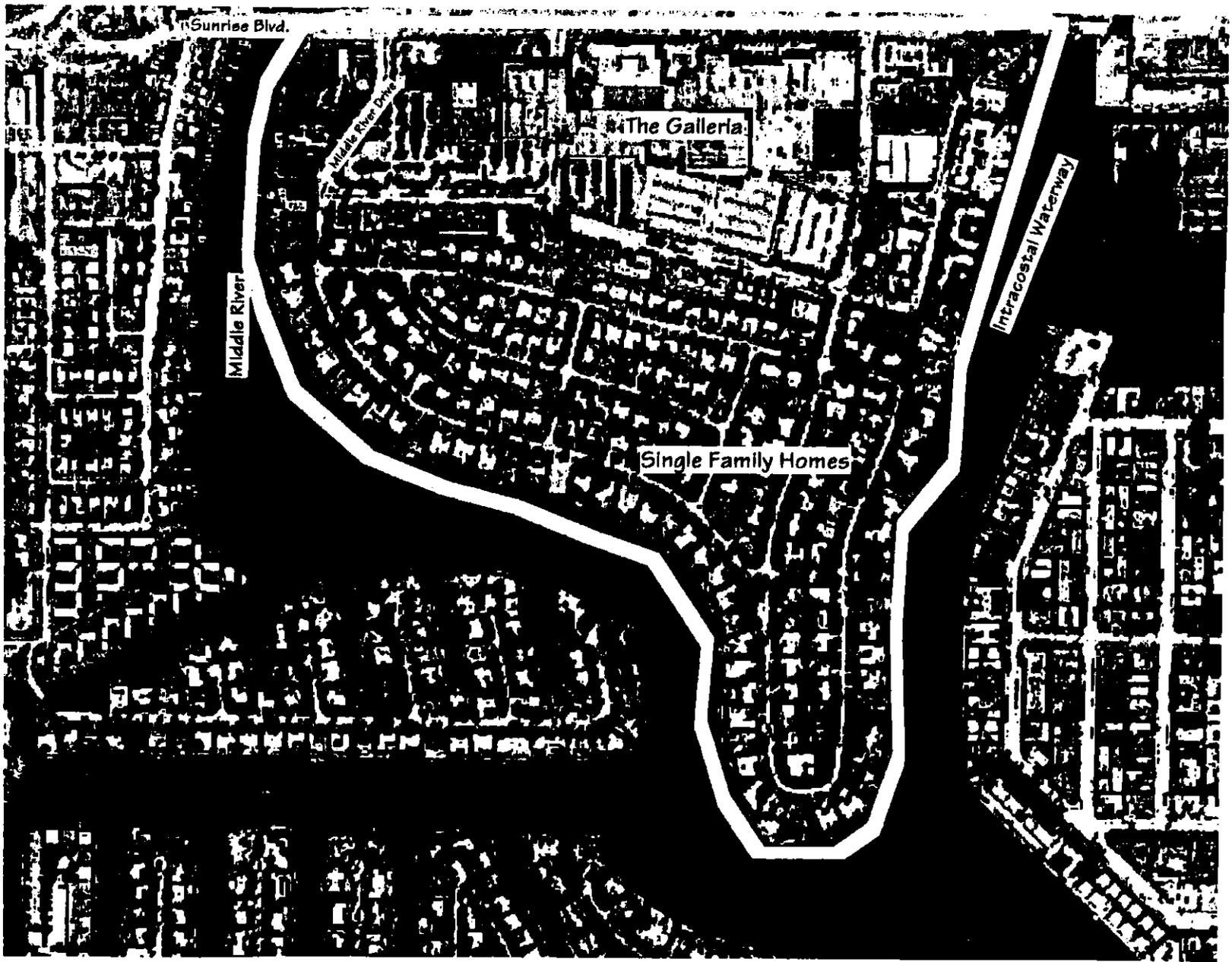
History and Description

The Galleria site is comprised of 165 acres surrounding and including the Galleria Mall, south of Sunrise Boulevard in east Fort Lauderdale. The site is surrounded on the other sides by the Intracoastal Waterway and the Middle River, isolating it geographically. Although the site was not developed as a single project, for the purposes of this study, its many complementary uses make it a viable subject. Figure 11 depicts the Galleria Area and surrounding development. Owing to the complexity of the site, a second more detailed aerial of the commercial portion of the site is provided in Figure 12. Figure 13 depicts the generalized site layout of the commercial area.

Commercial uses line the north side of Sunrise Boulevard, a six lane, divided east-west arterial connecting to Federal Highway and I-95 west of the site. To the east, the Sunrise Boulevard bridge spans the Intracoastal Waterway leading to beach front condominiums, hotels, and tourist destinations. The Intracoastal Waterway and Middle River separate the site from nearby residential development to the south and west.

The Galleria Cinemas, located on the west side of 26th Avenue, is a four screen theater in a 29,000 square foot space. A McDonald's fast food restaurant, which does a very slow daytime business, and vacant office space occupy the same building. The Guest Quarters, located on the Intracoastal and Sunrise Boulevard, is a 229 room suite hotel which had occupancy rates of 72% and 73% on the days the site was surveyed. The parking garage south of the theater belongs to the hotel, however, it is also used by the cinema. The hotel offers valet parking at all times and charges for parking.

There are eleven small buildings along the east side of 26th Avenue and N.E. 9th Street containing approximately 21,000 square feet of medical offices, 13,100 square feet of other office space, and 6,400 square feet of vacant office space. The five story Galleria Professional building on Middle River Drive was built in 1954. It contains 70,000 square feet of office space, approximately 15% of which are medical offices; a cafe is located on the ground floor of the building. A vacant two story office building sits at the southwest corner of Middle River Drive and Sunrise Boulevard. All buildings provide free on-site parking.



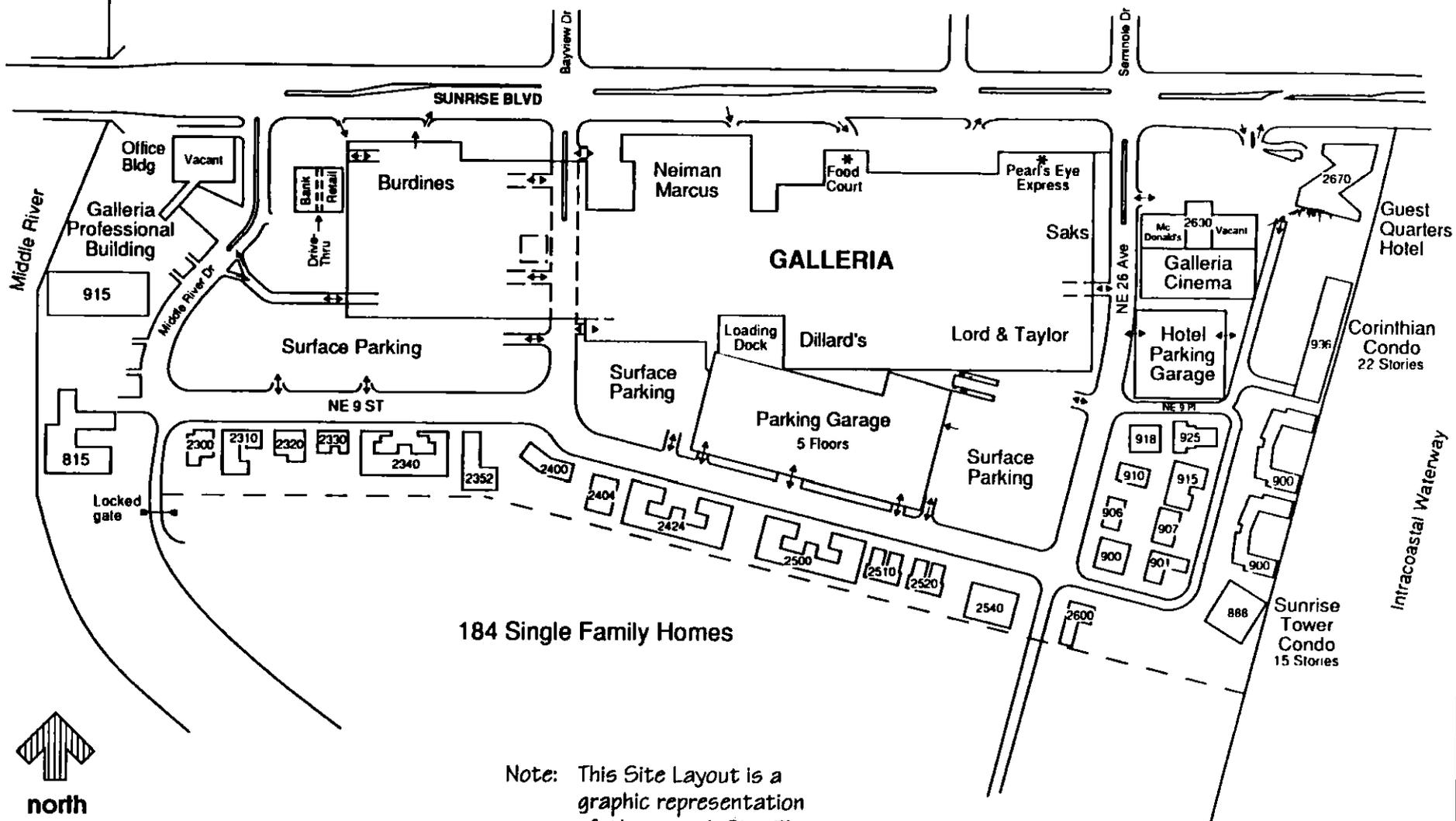
Districtwide Trip Generation Study

Galleria and Surrounding Development

Figure 11



Districtwide Trip Generation Study
Galleria Area Detail
Figure 12



184 Single Family Homes

Note: This Site Layout is a graphic representation of the actual Site Plan



north
N.T.S.

Legend	
	- Street Address

Districtwide Trip Generation Study

Galleria Site Layout

Figure 13

The gated enclave of 184 single family homes is located in the southern portion of the site. These homes were developed in the 1960's. The only open entrance is from N.E. 26th Avenue just south of N.E. 9th Street. Two condominium towers face the Intracoastal on the east side of the site. The Corinthian, on the north, is a 152 unit 22 story building; the Sunrise Tower, to the south, is a 100 unit 15 story building. There are six two-story apartment buildings east of N. E. 26th Avenue with a total of 76 units. On the south side of N.E. 9th Avenue there are nine multi-family buildings containing a total of 210 units. Galleria Area land uses are summarized in Table 8. Office and Residential Land Use Inventory, Table 9, further defines the large number of office and residential land uses in the Galleria area, outside of the Galleria Mall proper.

Table 8 - Galleria Area Land Use Inventory

Land Use	Square Feet	% Occupied	ITE Code
Office Uses	120,940	72	
Law	3,850		710
Medical	21,490		720
General	52,500		
Other	9,250		710
Vacant	33,850		710
Commercial	50,400	86	
Movie Theater (4 screens)	29,000		444
Fast Food (McDonald's)	5,600		834
Bank w/Drive Thru	3,400		912
Retail	5,400		814
Vacant	7,000		814
Residential (du's)	722		
Single Family	184		210
Condominium	252		232
Apartment	286		223
Hotel			
Rooms	229	72	310
The Galleria	1,115,575	90	820
Medical Offices	7,330		
Securities Offices	5,719		
Other Offices	3,707		
Retail	974,378		
Vacant Retail	108,000		
Banking	6,756		
Fast Food	9,685		

Source: Walter H. Keller, Inc. ITE Trip Generation, 5th Edition
Marda L. Zimring, Inc.

Parking is not assigned by use within the Galleria Area; it is available for all users. The only exception is the parking within the Guest Quarters garage which is secured for 60 vehicles. Additionally, employment figures were not available other than for the Galleria Mall, which employs 2,000.

Table 9 - Office and Residential Land Use Inventory

Offices Uses				Residential Uses		
Address	Use	Square Feet	Stories	Address	Dwelling Units	Stories
Medical Offices		21,490		Apartments/ Condominiums		530
918	medical office	3,250	1			
906	medical office	2,600	1	925	16	2
2540	medical office	7,000	1	915	12	2
2600	medical office	2,040	2	907	10	2
2330	medical office	2,400	1	901	6	2
2300	medical office	4,200	1	900	16	2
				900	16	2
Law Offices		3,850		815	54	3
				2310	10	2
2404	law office	3,850	1	2340	30	3
				2352	12	2
Other Offices		61,750		2400	24	6
				2424	36	3
915	general office	52,500	5	2500	36	3
900	media production	8,450	2	936	152	22
2310	personal service	800	1	888	100	15
Vacant Offices		33,850		Townhouses		8
910		2,450	1	2510	4	2
2320		3,900	2	2520	4	2
2300		10,000	1&2			
915		17,500	5	Single-Family		184
						1&2
				Total:		722
	Total:	120,940		Hotel		
					2670	
				Total:		229
						14

Source: Walter H. Keller, Inc.
Marda L. Zimring, Inc.

Site Vicinity Information

The uses within the site are not conducive to pedestrian trips due to a lack of sheltered, interconnected pedestrian ways and integration of the entire site as a planned entity. The distances, however, are certainly walkable, and the non-residential uses are attractive to the residents in that they provide everyday necessities for services and goods.

Annual Average Daily Traffic (AADT) and level of service for the surrounding roadways were analyzed to identify adjacent traffic characteristics. The AADT counts were obtained from the Broward County Metropolitan Planning Organization in 1993. A total of three stations were identified. Traffic counts for Sunrise Boulevard were conducted for three quarters of 1993 while one count was made for US 1. Both Sunrise Boulevard and U.S.-1 in the vicinity of the Galleria are six-lane divided urban arterials. Count stations are depicted in Figure 14. Peak Hour volumes were developed by using the calculated K-100 factor (from Consultant ADT counts) and multiplying it by the AADT. AADT, peak hour and level of service are reported in Table 10. As noted in Table 10, roadways in the vicinity of the Galleria are severely congested with LOS F on both Sunrise Boulevard and US 1.

Table 10 - Galleria Area Adjacent Traffic Volumes and Characteristics

Station #	Roadway	Location	1993 AADT	LOS D	LOS	Pk Hr Vol	LOS D	LOS
9054 359	Sunrise Blvd	E of US 1	41,507	38,700	E	3,943	3,410	E
		E of Bayview Dr	24,889	38,700	C	2,364	3,410	C
446	US 1	N of NE 13 St	52,210	51,200	F	4,960	4,660	F

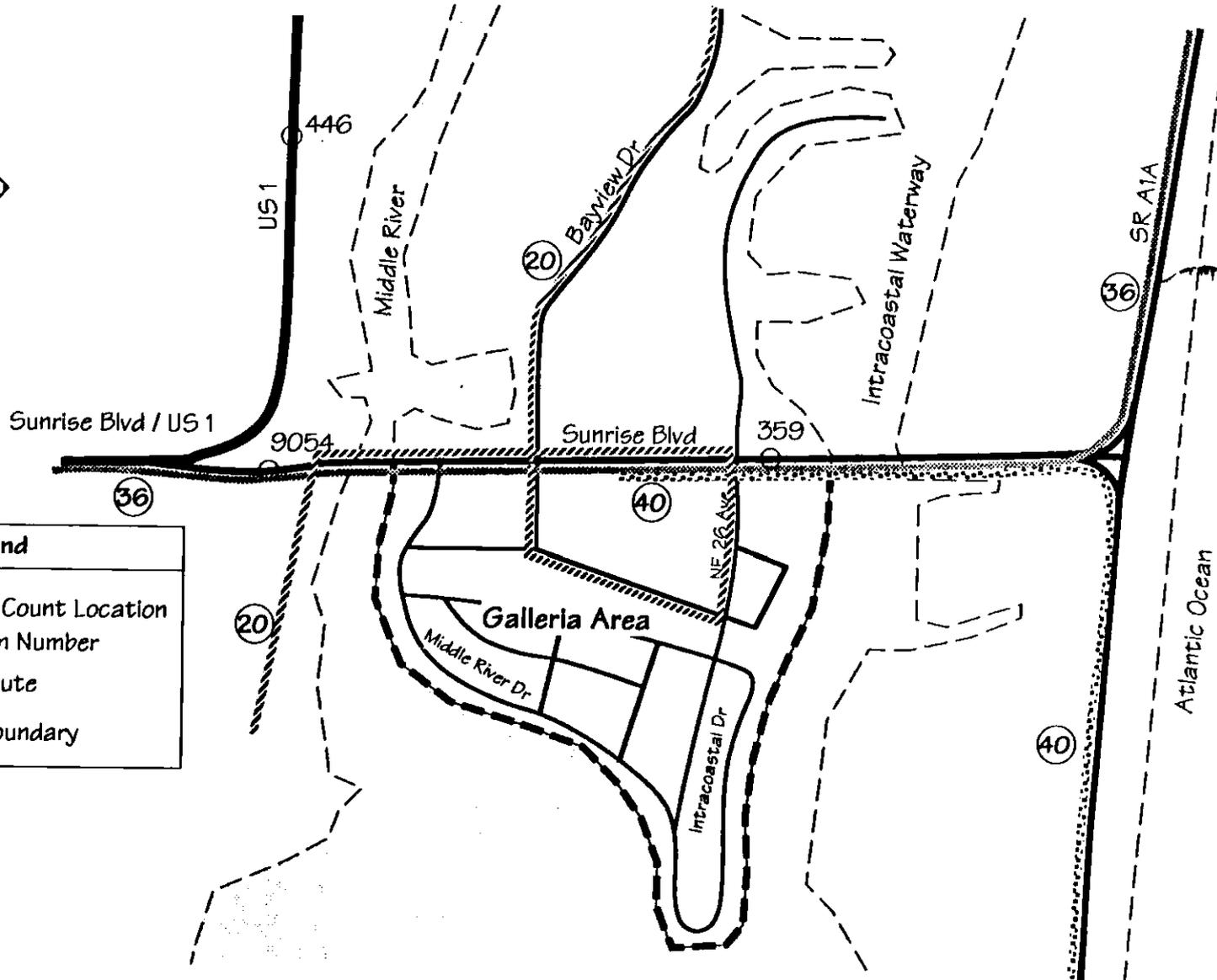
Source: Walter H. Keller, Inc.
Florida Department of Transportation, District IV

The Galleria Area is served directly by the BCT bus system. Routes 20, 36 and 40 connect the Galleria Area with the areas to the west and north and to the downtown Fort Lauderdale central terminal. Indirect transfer service is available to all areas of Broward County. Route 20 runs from the Broward County Terminal northward with stops at several commercial areas including the Galleria Mall, the Coral Ridge Mall, and the Pompano Square. Additionally, Route 20 serves two major hospitals, Holy Cross Hospital at U.S.-1 and Commercial Boulevard and the North Broward Medical Center located at Sample Road and I-95.



north
N.T.S.

Legend	
○	- Traffic Count Location
9054	- Station Number
36	- Bus Route
---	- Site Boundary



Districtwide Trip Generation Study

Galleria Count Station Locations

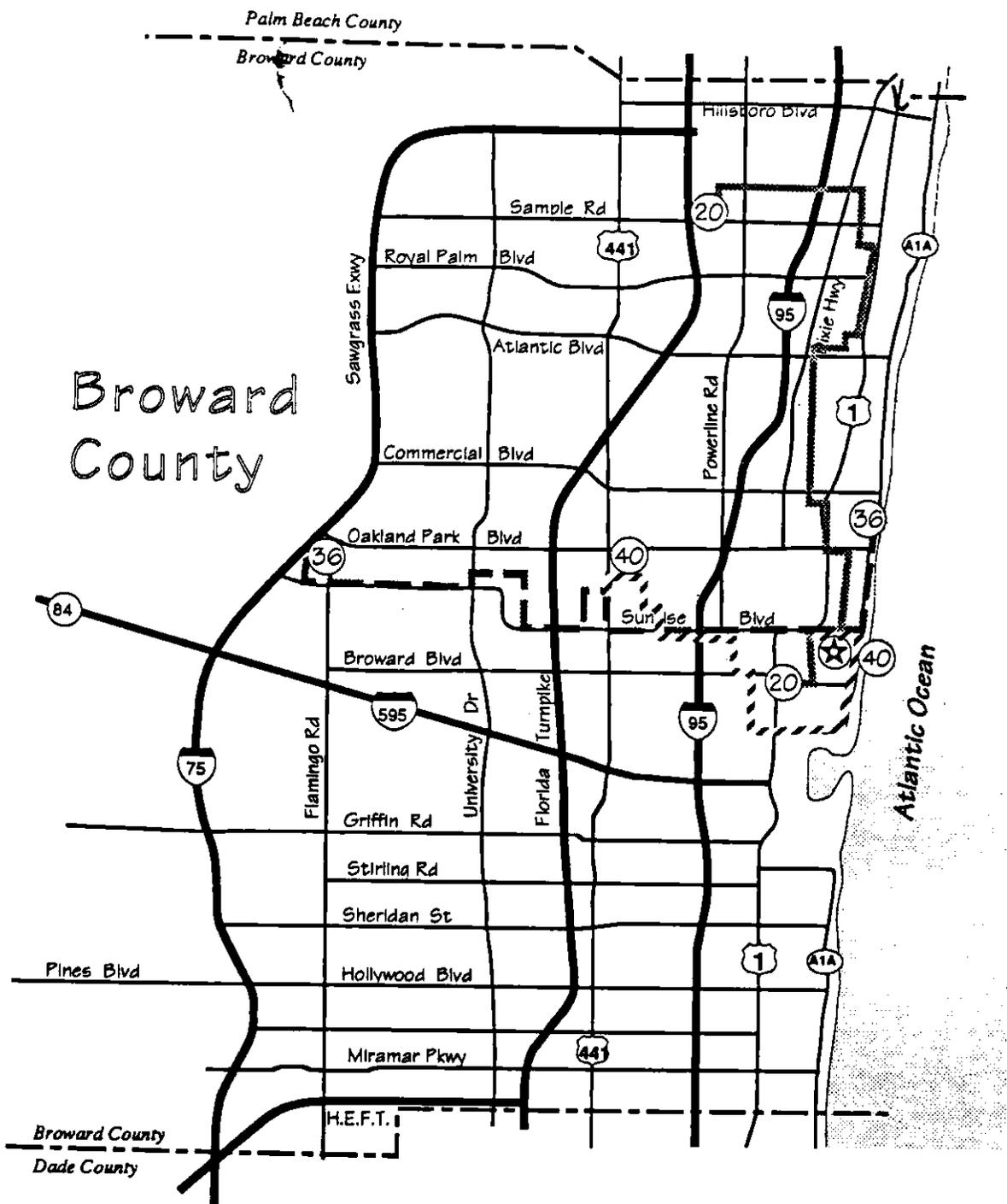
Figure 14

These major destinations range in distance from the Galleria mall from approximately 3 miles to the Coral Ridge Mall to approximately 12 miles to the North Broward Medical Center. Route 20 serves the Galleria on approximately a one hour headway in each direction six days a week during business hours, not including Sunday.

Route 36 runs along Sunrise Boulevard west to Sawgrass Mills, a regional discount mall, with intervening stops at the Lauderhill Mall, Lauderhill City Hall and Motorola, a major manufacturing center. It also stops east of the Galleria at Birch State Park and then runs north along S.R.-A1A to Galt Ocean Mile, a high density, residential area. Route 36 serves the Galleria on an approximately one-half hour headway in each direction six days a week during business hours. Service is provided on Sundays on an hourly basis. Route 36 has among the highest ridership rates for all bus routes in the County. Route 36 traverses a route of approximately 13 miles from east to west.

Route 40 serves the Galleria Mall from the south and central parts of the County. Service on Route 40 begins at the Galleria Mall, on the east, and at the Lauderhill Mall, on the west. The route runs approximately parallel to Sunrise Boulevard between U.S.-441 and Andrews Avenue where it turns south and runs to the Broward Central Terminal and thence to Broward General Hospital. Following the stop at the Broward General Hospital, the bus route runs along the 17th Street Causeway to S.R.-A1A and then north on S.R. A1A to Sunrise Boulevard where it turns west to the Galleria Mall where it terminates. Primary stops along Route 40 include the Downtown Bus Terminal, Broward General Hospital, the Southport Shopping Center, Ocean World, Pier 66 Hotel and Birch State Park, in addition to the Galleria and Lauderhill Malls. Route 40 buses serve the Galleria Area on an approximately one-half hour headway in each direction six days a week during business hours. Route 40 traverses a semi-circular route from the Lauderhill Mall Shopping Center to the Galleria. If measured along Sunrise Boulevard the distance would be approximately 6 miles; however, when measured along the actual route the distance would equal approximately 12 miles. Service is provided on Sundays on an hourly basis. Bus Routes which serve the Galleria are depicted on Figure 15.

Access to the Galleria Area is provided from a series of public streets and private driveways. The public streets are Middle River Drive, Bayview Drive, and Seminole Drive/ N.E. 26th Avenue and in each instance the intersection of these streets with Sunrise Boulevard is signalized without restriction. These streets provide direct access to the Mall and the adjacent commercial, office and residential land uses.



north
N.T.S.

Legend	
	- Galleria Site
	- Bus Route #40
	- Bus Route #36
	- Bus Route #20

Districtwide Trip Generation Study
Galleria Regional Bus Routes

Figure 15

Middle River Drive is located between the Galleria Mall and the office and residential land uses which border the Middle River to the west. Middle River Drive forms a T-intersection with Sunrise Boulevard and provides direct access to the parking lots which serve the non-residential and residential land uses adjacent to the west and to the Mall surface lots and parking garage to the east. Middle River Drive intersects with N.E. 9th Street south of the Mall. N.E. 9th Street is an internal circulation roadway which connects with Bayview Drive, NE 26th Avenue and Intracoastal Drive.

Bayview Drive is the primary access to the Galleria Mall. Bayview Drive continues north of Sunrise Boulevard and it is an important collector roadway serving the residential area to the north of the Galleria Area. Bayview Drive provides direct access to the Mall parking garages and surface lots before it terminates at N.E. 9th Street.

N.E. 26th Avenue (Seminole Drive) is located between the Galleria Mall and the commercial and residential land uses which border the Intracoastal Waterway to the east. N.E. 26th Avenue provides direct access to the McDonald's fast food restaurant, cinema and the Guest Quarters Hotel to the east and to the Mall parking garages and surface lots to the west. As it continues to the south, N.E. 26th Avenue provides access to the land uses adjacent to the Intracoastal Waterway and the single-family residential area to the south of the Mall.

In addition to the access points discussed above, there are six driveways which access the Galleria Area land uses directly from Sunrise Boulevard. Five of these driveways provide direct access to the Galleria Mall surface lots and parking garages and the sixth driveway serves the Guest Quarters Hotel area. The driveway which serves the Guest Quarters Hotel continues to the south to access the Hotel's parking garage and the residential areas located along the Intracoastal Waterway. A restricted westbound left turn lane is provided at the intersection of the hotel driveway and Sunrise Boulevard.

The primary internal circulation route is a U-shaped road formed by Middle River Drive, N.E. 9th Street and N.E. 26th Avenue. Access to all uses other than the Galleria Mall and the area adjacent to Sunrise Boulevard is made from this roadway. Although the single family subdivision has access only from N.E. 26th Avenue, the circulation within the subdivision works well with no dead ends. Intrusion of commercial traffic in the residential area is restricted owing to the geographic isolation of the community created by the Middle River and the Intracoastal Waterway.

There is adequate access to all land uses in the Galleria Area, with no obvious problem areas. It is the unplanned evolution of the site combined with the 21 points of access to the Galleria Mall which create a less than "user-friendly" internal circulation system. Internal circulation is particularly hostile to pedestrian traffic. There are no sidewalks except along Sunrise Boulevard and a limited amount of tree canopy to afford shade for pedestrians.

The on-site employment opportunities provide jobs with salaries that range from minimum wage within the Galleria Mall, to the highest paid professionals at the medical offices which predominate and the other professional offices. The single family homes cost range from \$200,000 on an interior lot to more than \$500,000 on the water. The condominiums along the Intracoastal are sold in the range of \$60,000 to \$150,000 in the Sunrise Tower and \$100,000 to \$200,000 in the Corinthian. The apartments rent from as little as \$400 per month up to \$600 per month and are affordable to a household with an income of less than \$15,000, using 30% of income for housing as a generally accepted standard of affordability.

The Galleria garages and surface lots provide 5,000 spaces of indoor and outdoor parking. There is indoor parking connected to each anchor store which makes it possible to minimize walking distances. The garage areas are well marked by color coding, however, once in the garage system it is difficult to circulate from one area to another. The Galleria Professional Building provides parking spaces consistent with the City of Fort Lauderdale's Code which requires one space per 250 square feet of floor area for office building. The Guest Quarters has a parking garage with 260 spaces, 60 of which are secured for use by the hotel with the remaining 200 spaces free for use by cinema patrons. The surface lot north of the cinemas provides another forty spaces. The condominiums have indoor garages with adequate parking for owners and visitors. The apartment buildings have outdoor assigned parking spaces which appear to be adequate, as do the small office buildings. There was parking available at all locations during the data collection days. Parking is not permitted on the public streets. All parking is free except for the daily charge for the Hotel parking and valet parking.

Major Site Characteristic Findings

Both Crocker Center and Mizner Park are recently completed and developed under unified control, subject to a master plan. The Galleria Area was developed in stages with no overall plan or single developer. This development took place over three decades.

All three multi-use sites cater to an upper end market with the Galleria having a broader appeal and a broader based residential component. All sites have high occupancy rates, are considered to be thriving and are located in highly developed areas. Mizner Park and the Galleria Area are located in the eastern portion of the urban area which experience notable tourist activity. Crocker Center is located on the western portion of the urban area and does not experience the same tourist impacts as Mizner Park and Galleria. All three sites will reflect an off-peak season data collection effect. They are all affected to some degree by South Florida tourist and snowbird populations.

These three sites are deemed to be representative of functionally well-integrated, multi-use projects with complementary, well distributed land uses.

IV. DATA COLLECTION

Data Collection Methodology

The data collection effort for the Trip Generation Study involved collecting information in order to establish the vehicle trip generation of each site, internal trips, pass-by trips, peaking characteristics and person trips. In order to obtain this information, the following data was collected at each site:

- Machine Traffic Counts to Identify the Passing Traffic Stream
- Machine Traffic Counts to ascertain entering and exiting vehicles
- Manual Auto Occupancy Counts
- Manual Pedestrian Counts by Land Uses
- Personal Interviews of Travel Characteristics & User Demographics

Several visits were made to each site to identify: general operating conditions, ingress/egress points, appropriate locations for traffic counts, appropriate locations for pedestrian and auto occupancy counts and potential interview sites. Site layout maps were prepared based on information obtained from aerial photographs, site visits and discussions with site management personnel.

Discussions were held with the Department to review the proposed data collection process and collection locations. The data collection period generally included two (2) days of manual counts and questionnaire interviews with three (3) days of machine traffic counts. Primary data collection periods for auto occupancy and pedestrian counts were oriented to the 11:30 AM - 1:30 PM mid-day and 4:30 - 6:30 PM peak hours. Questionnaire interviews were scheduled between 10:00 AM - 2:00 PM and 3:00 PM - 7:00 PM time frames. Discussions with management personnel suggested Wednesday and Thursday preferences for manual data collection efforts.

Sampling and Questionnaire Design

The sampling design was structured to obtain both internal and external generated traffic characteristics at each site. The sample frame consists of all persons visiting each site on each of the sample days. The sample days coincided with machine and manual traffic counts as well as with the pedestrian - land use counts. Based on the desired level of accuracy and confidence (15% and 90%, respectively), the general make up of the sites,

and the number of key binary questions, it was decided that two to three sample days were needed.

Questionnaires were designed to capture the required information on internal and external trip characteristics and also to provide demographic profiles of the trip makers. The questionnaire was developed consistent with the suggested interview questions for multi-use developments as provided in the Institute of Transportation Engineers Trip Generation Report - 5th Edition. The questionnaire included questions on: origin and purpose of trips, mode of transportation to the site, last stop, length of trip, expected time of departure, destination, distance and mode of transportation to the next destination, additional stops within the site, age, occupation, household size and income, number of vehicles in household, type of residential housing and home zip code.

Personnel Training and Data Collection Management

Training sessions were held with survey personnel prior to the first interview survey and data collection period and again prior to the initiating efforts at the last survey site (Galleria Area), due to the complexities of the site layout. Several supervisors were available to coordinate and monitor operations with counting and interview personnel during the data collection efforts at each site. Individual forms were prepared to facilitate counting efforts and improve quality control. Data collection survey forms such as the auto occupancy and pedestrian - land use counts were prepared for each site, specific land uses and time frames. All data collection forms were issued in similar colors. Crocker Center data collection forms were pale yellow, Mizner Park forms were green and Galleria Area forms were pink.

The following sections provide an overview and summary of the data collection effort for this study. For additional information, the Task III Report should be consulted.

Crocker Center

Data Collection Overview

Crocker Center data collection efforts were scheduled for the first week of August, 1994. Figure 16 depicts a generalized site layout indicating land uses, access and circulation routes, parking areas and surrounding roadways. Figure 16 also identifies the locations for machine traffic counts, auto occupancy counts, pedestrian - land use counts and general survey (interviewer) locations.

Traffic count machines were set on Monday August 1, 1994 and manual data collection efforts were programmed for Wednesday August 3rd and Thursday August 4th.

Data Collection Efforts and Influences - 1st Day - August 3, 1994

Weather Conditions:

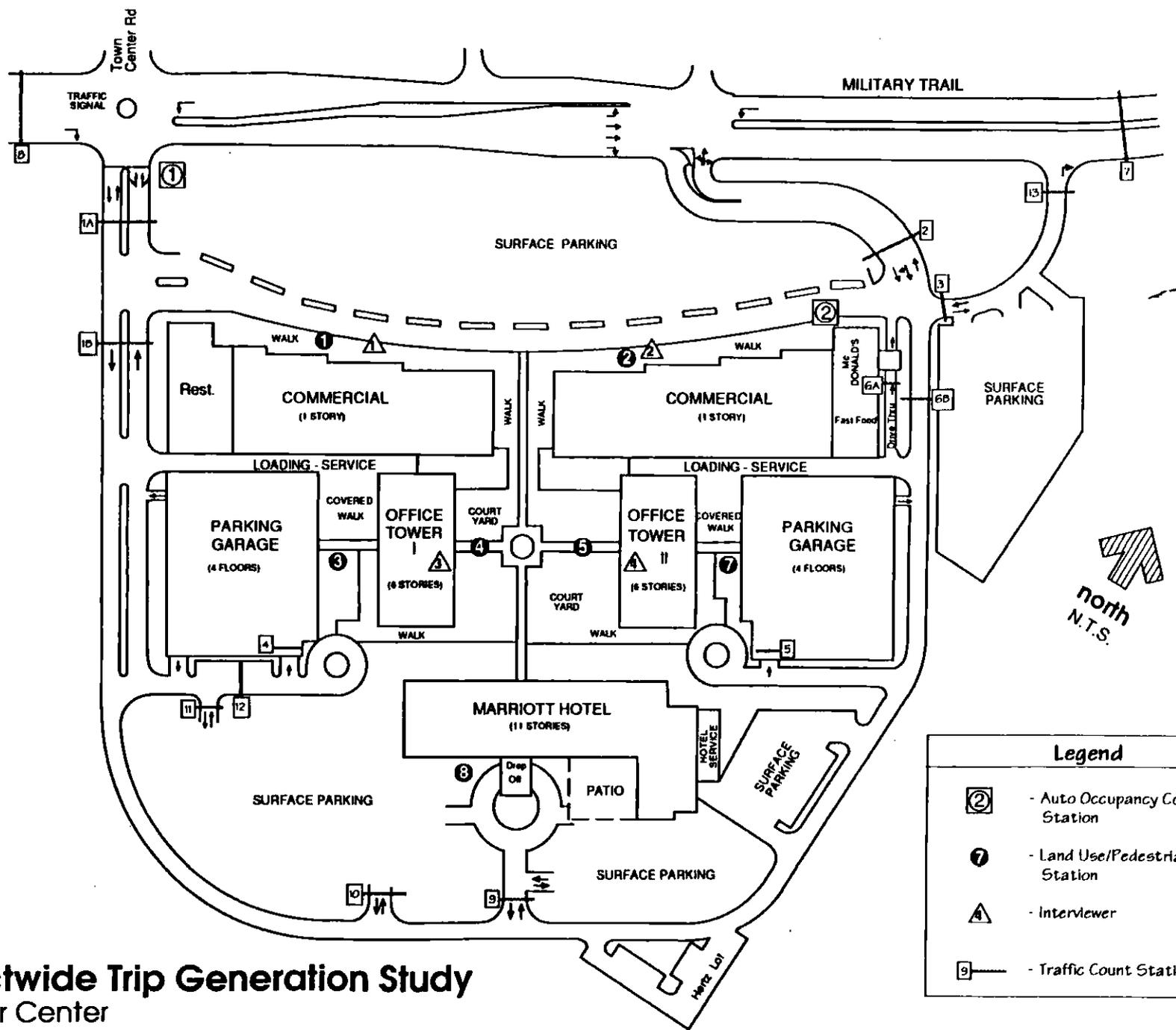
Rain chance was projected to be 50%. Light rain was occurring in the morning prior to the start of the Interview period at 10:00 AM. By 10:00 AM, the rain was essentially stopped. Very light rain, almost drizzle occurred during the 10:00 AM - 1:15 PM time frame. At about 1:15 PM the rain became very heavy. During the afternoon hours, rain continued at a light to medium pace. This continued until the survey ended at 7:00 PM.

Machine Traffic Counts:

Traffic count machines were set in place on Monday afternoon at the locations noted in Figure 16. Site observations indicated some counting problems which necessitated minor adjustments in the hose locations to improve count results. Fifteen (15) minute manual counts were conducted at each traffic count machine location to establish an axle adjustment factor.

Auto Occupancy Counts

Two people conducted auto occupancy counts at locations 1 and 2. These people also noted any walkers, bikers or transit trips. Except for occasional difficulties due to window tints, no difficulties were encountered in this data collection effort.



-50-

Districtwide Trip Generation Study Crocker Center

Figure 16

Legend	
	- Auto Occupancy Count Station
	- Land Use/Pedestrian Count Station
	- Interviewer
	- Traffic Count Station

Pedestrian - Land Use Count Conditions

Personnel were placed at several locations with responsibilities of counting pedestrian movements from parking lots to land uses and internally. One person was placed at both the north (#2) and south (#1) commercial areas, two in the courtyard area (#4 & #5) and one each at each office parking garage (#3 & #7) and the hotel entrance (#9). No difficulties were noted in the first day data collection effort.

Questionnaire Interviews

Seven people were assigned to perform interviews through-out the data collection period. Additionally, pedestrian counters were utilized to do surveys between 10:00 - 11:15 AM and 3:00 - 4:15 PM. During the first day, some interviewers encountered problems getting interviewees to answer the income question and/or the specific location. Most surveyors allowed the interviewees to provide zip codes only. General participation and performance during the survey appeared satisfactory.

Data Collection Efforts and Influences - 2nd Day - August 4, 1994

Weather Conditions:

Rain chance during the day was again estimated at 50% however, only sparse and very light rain occurred during the day.

Machine Traffic Counts:

Traffic count machines remained in place on Thursday. Additional manual counts were made during the day to verify machine operation.

Auto Occupancy Counts

No difficulties were encountered in this data collection effort during the Thursday effort.

Pedestrian Count Conditions

Observations at the Hotel noted employees parking in the southern lot and entering the Hotel unobserved. Additionally, a north exit was noted at McDonald's adjacent to

the drive-through that was not being counted. The majority of the people missed in the pedestrian count used the north parking lot, which was being monitored during the second day.

Questionnaire Interviews

Interviewers were instructed to get proper zone locations and not to be passive with regards to the income question. While some improvement was noted, most surveyors again allowed the interviewees to provide zip codes only. General participation and performance during the Thursday survey appeared satisfactory however, less participation was received since some of the parties were surveyed the previous day.

Additional Data Collection Efforts and Influences

Machine Traffic Counts:

In order to improve traffic count results, traffic count machines were relocated in the vicinity of the Hotel and north entrance on Thursday evening. Two additional count locations were established at the Hotel at the east (#10) and west entrances/exits (#11) to the south parking lot. This necessitated relocating the machine at the south parking garage (#4) to count the west entrance (#11) and the drive to the parking garage (#12). An additional machine was also located on the northern most roadway to count vehicles between the ring road at location 3 and the exit at Military Trail (#13). These machines were picked up on Sunday, August 7, 1994.

Data Collection Results

The results of the data collection effort are provided in the pages that follow. In instances where data has been edited or adjusted from the raw results, notations are provided. Questionnaire survey results are provided in Section V (see page 95) of this report.

Traffic Count Summary - Table 11

A summary of traffic-count results depicting daily, AM and PM peak hour totals by location, direction and day is provided in Table 11. This information has been adjusted to reflect the manual axle counts. Information relative to the axle count adjustment factors can be found in the Task 3.0 Data Collection Technical Report. The individual daily traffic count sheets for each location can be found in the Appendix to this report.

Table 11 - Crocker Center - Traffic Count Summary

Location	Date	AM Pk		PM Pk		Daily	
		In	Out	In	Out	In	Out
1A	Tues 8/2/94	282	91	270	262	2,436	2,665
	Wed 8/3/94	219	189	343	303	2,533	2,891
	Thurs 8/4/94	276	111	314	320	2,576	2,788
	Fri 8/5/94	283	111	319	334	2,813	3,143
		In	Out	In	Out	In	Out
1B	Tues 8/2/94	273	59	57	243	1,386	1,365
	Wed 8/3/94	271	66	67	155	1,343	1,043
	Thurs 8/4/94	254	85	62	233	1,315	1,402
	Fri 8/5/94	267	84	90	177	1,362	1,536
		In	Out	In	Out	In	Out
2	Tues 8/2/94	195	72	250	143	2,043	1,049
	Wed 8/3/94	217	61	256	231	1,978	1,203
	Thurs 8/4/94	194	57	213	160	1,959	1,147
	Fri 8/5/94	203	64	265	158	2,035	1,168
		In	Out	In	Out	In	Out
3	Tues 8/2/94	7	87	17	174	95	1,258
	Wed 8/3/94	7	98	12	170	86	1,309
	Thurs 8/4/94	9	94	12	168	96	1,262
	Fri 8/5/94	7	82	12	153	90	1,263
		In	Out	In	Out	In	Out
4	Tues 8/2/94	180		239		812	
	Wed 8/3/94	179		85		637	
5	In		In		In		
	Fri 8/5/94	158		40		540	
6A	Thru		Thru		Thru		
	Tues 8/2/94	77		99		704	
	Wed 8/3/94	64		107		727	
	Thurs 8/4/94	75		80		677	
	Fri 8/5/94	90		94		707	
6B		In	Out	In	Out	In	Out
	Tues 8/2/94	202	35	142	102	1,404	648
	Wed 8/3/94	193	35	155	75	1,412	581
	Thurs 8/4/94	218	32	95	89	1,365	580
	Fri 8/5/94	206	24	134	62	1,449	596
7		NB	SB	NB	SB	NB	SB
	Tues 8/2/94	1,620	708	886	1,460	12,976	12,889
	Wed 8/3/94	1,619	707	877	1,442	13,270	12,908
	Thurs 8/4/94	1,687	815	923	1,482	13,153	13,050
	Fri 8/5/94	1,479	765	828	1,444	12,845	12,940

Table 11 - Crocker Center - Traffic Count Summary

Location	Date	AM Pk		PM Pk		Daily	
		NB	SB	NB	SB	NB	SB
8	Tues 8/2/94	2,097	601	989	1,863	15,642	15,501
	Wed 8/3/94	2,124	582	1,022	1,871	16,151	17,561
		In	Out	In	Out	In	Out
9	Tues 8/2/94	44	20	21	26	431	267
	Fri 8/5/94	50	49	79	41	857	536
		In & Out		In & Out		In & Out	
10	Fri 8/5/94	82		92		939	
		In	Out	In	Out	In	Out
13	Fri 8/5/94	8	67	4	186	145	1,256

Source : Walter H. Keller, Inc.

Vehicle Occupancy Survey - Table 12

Auto occupancy count sheets are provided for each location (see Figure 16 for location) by 15 minute period, direction and day. As noted, walk-ins, taxi and transit person-trips are also noted. Table 12 provides the auto occupancy results.

Pedestrian - Land Use Counts - Tables 13 and 14

The results of the pedestrian - land use counts are provided in Tables 13 and 14 (see pages 57 through 58). These tables are summarized in 15-minute periods by land use, location, direction for the mid-day and PM peak periods. The tables also include percentage summaries of half-hour loading by land use type.

**Table 12 - Crocker Center
Vehicle Occupancy Survey**

Date 8/3/94				
Location	Time	Inbound	Outbound	Total
1A	Mid Day	1.32	1.27	1.30
	PM	1.48	1.19	1.30
McDonald's	Mid Day	1.34	1.36	1.35
	PM	1.34	1.26	1.29
Date 8/4/94				
Location	Time	Inbound	Outbound	Total
1A	Mid Day	1.41	1.30	1.36
	PM	1.38	1.26	1.30
McDonald's	Mid Day	1.41	1.37	1.41
	PM	1.47	1.36	1.31

Source: Walter H. Keller, Inc.

Table 13 - Crocker Center - Pedestrian Trips
Pedestrian Trips

8/3/94 11:30AM - 1:30PM

Time	In									Out								
	Rest.	Fast Food	Retail South	Retail North	Office South	Office North	Hotel	Other*	Total	Rest.	Fast Food	Retail South	Retail North	Office South	Office North	Hotel	Other*	Total
11:30-11:45	14	18	12	9	9	5	7	30	104	2	11	13	11	17	4	4	3	65
11:45-12:00	19	21	9	9	5	6	6	40	115	0	9	11	11	39	5	8	9	92
12:00-12:15	37	15	13	19	14	14	12	43	167	1	13	6	8	35	12	15	11	101
12:15-12:30	32	25	19	8	16	5	10	44	159	5	16	5	8	18	39	6	10	107
12:30-12:45	15	15	16	5	14	9	10	41	125	12	13	6	5	14	15	2	25	92
12:45-1:00	16	16	20	13	44	7	1	40	157	14	20	5	22	9	6	11	28	115
1:00-1:15	6	15	9	10	23	9	2	14	88	26	11	17	8	22	11	3	27	125
1:15-1:30	12	6	9	5	21	19	4	8	84	17	8	6	9	14	5	6	22	87
Total	151	131	107	78	146	74	52	260	999	77	101	69	82	168	97	55	135	784
% of Total	15.1%	13.1%	10.7%	7.8%	14.6%	7.4%	5.2%	26.0%	100.0%	9.8%	12.9%	8.8%	10.5%	21.4%	12.4%	7.0%	17.2%	100.0%
	Eating Establishments		Retail		Offices					Eating Establishments		Retail		Offices				
	28.2%		18.5%		22.0%					22.7%		19.3%		33.8%				

% of Total Pedestrians Per Half Hour in Each Location

Time	Rest.	Fast Food	Retail South	Retail North	Office South	Office North	Hotel	Other*	Total	Rest.	Fast Food	Retail South	Retail North	Office South	Office North	Hotel	Other*	Total
	11:30-12:00	21.9%	29.8%	19.6%	23.1%	9.6%	14.9%	25.0%	26.9%	21.9%	2.6%	19.8%	34.8%	26.8%	33.3%	9.3%	21.8%	8.9%
12:00-12:30	45.7%	30.5%	29.9%	34.8%	20.5%	25.7%	42.3%	33.5%	32.6%	7.8%	28.7%	15.9%	19.5%	31.5%	52.6%	38.2%	15.6%	26.5%
12:30-1:00	20.5%	23.7%	33.6%	23.1%	39.7%	21.6%	21.2%	31.2%	28.2%	33.8%	32.7%	15.9%	32.9%	13.7%	21.6%	23.6%	39.3%	26.4%
1:00-1:30	11.9%	16.0%	16.8%	19.2%	30.1%	37.8%	11.5%	8.5%	17.2%	55.8%	18.8%	33.3%	20.7%	21.4%	16.5%	16.4%	36.3%	27.0%

8/3/94 4:30PM - 6:30PM

Time	In									Out								
	Rest.	Fast Food	Retail South	Retail North	Office South	Office North	Hotel	Other*	Total	Rest.	Fast Food	Retail South	Retail North	Office South	Office North	Hotel	Other*	Total
4:30-4:45	11	7	4	6	3	9	7	5	52	0	1	11	9	35	14	4	2	76
4:45-5:00	11	2	0	10	4	6	13	12	58	2	12	2	10	62	10	5	1	104
5:00-5:15	10	4	2	1	4	4	15	9	49	3	3	13	5	45	57	15	5	146
5:15-5:30	17	3	2	6	3	2	16	5	54	0	3	8	10	32	16	5	6	80
5:30-5:45	12	8	6	4	3	0	19	7	59	4	4	5	5	24	40	6	10	98
5:45-6:00	17	7	2	4	3	4	10	25	72	5	12	6	7	8	34	11	10	93
6:00-6:15	28	7	1	3	0	5	2	25	71	17	5	7	7	8	20	3	12	79
6:15-6:30	15	9	0	0	1	2	17	20	64	15	5	3	3	15	4	12	8	65
Total	121	47	17	34	21	32	99	108	479	48	45	55	56	229	195	61	54	741
% of Total	25.3%	9.8%	3.5%	7.1%	4.4%	6.7%	20.7%	22.5%	100.0%	6.2%	6.1%	7.4%	7.6%	30.9%	26.3%	8.2%	7.3%	100.0%
	Eating Establishments		Retail		Offices					Eating Establishments		Retail		Offices				
	35.1%		10.6%		11.1%					12.3%		15.0%		57.2%				

% of Total Pedestrians Per Half Hour in Each Location

Time	Rest.	Fast Food	Retail South	Retail North	Office South	Office North	Hotel	Other*	Total	Rest.	Fast Food	Retail South	Retail North	Office South	Office North	Hotel	Other*	Total
	4:30-5:00	18.2%	19.1%	23.5%	47.1%	33.3%	46.9%	20.2%	15.7%	23.0%	4.3%	28.9%	23.6%	33.9%	42.4%	12.3%	14.8%	5.6%
5:00-5:30	22.3%	14.9%	23.5%	20.6%	33.3%	18.8%	31.3%	13.0%	21.5%	6.5%	13.3%	38.2%	26.8%	33.6%	37.4%	32.8%	20.4%	30.5%
5:30-6:00	24.0%	31.9%	47.1%	23.5%	28.6%	12.5%	29.3%	29.6%	27.3%	19.6%	35.8%	20.0%	21.4%	14.0%	37.9%	27.9%	37.0%	25.8%
6:00-6:30	35.5%	34.0%	5.9%	8.8%	4.8%	21.9%	19.2%	41.7%	28.2%	69.6%	22.2%	18.2%	17.9%	10.0%	12.3%	24.6%	37.0%	19.4%

* Other: Person trips entering or exiting central restaurant-office area where only the western parking lot destination/origin could be observed.

Source: Walter H. Keller, Inc.

Table 14
Crocker Center - Pedestrian Trips

8/4/94 11:30AM - 1:30PM

Time	In									Out								
	Rest.	Fast Food	Retail South	Retail North	Office South	Office North	Hotel	Other*	Total	Rest.	Fast Food	Retail South	Retail North	Office South	Office North	Hotel	Other*	Total
11:30-11:45	5	17	1	3	6	6	7	2	47	0	7	2	11	11	13	3	0	47
11:45-12:00	5	46	2	7	6	2	15	1	84	0	12	1	13	15	15	8	2	66
12:00-12:15	13	21	0	8	9	11	8	0	70	2	27	1	7	16	14	10	2	79
12:15-12:30	7	23	2	10	7	6	19	17	91	4	29	0	5	20	21	14	9	102
12:30-12:45	12	15	1	3	7	13	13	14	78	4	43	4	3	12	7	14	12	99
12:45-1:00	1	7	5	10	18	6	5	16	68	3	35	2	9	20	5	7	5	86
1:00-1:15	10	10	0	2	13	8	8	2	53	2	7	2	4	16	8	1	19	59
1:15-1:30	6	5	0	6	10	10	8	13	58	19	24	11	7	9	3	12	11	96
Total	59	144	11	49	76	62	83	65	549	34	184	23	59	119	86	69	60	634
% of Total	10.7%	26.2%	2.0%	8.9%	13.8%	11.3%	15.1%	11.8%	100.0%	5.4%	29.0%	3.6%	9.3%	18.6%	13.6%	10.9%	9.5%	100.0%
	Eating Establishments		Retail		Offices					Eating Establishments		Retail		Offices				
	37.0%		19.9%		25.1%					34.4%		12.9%		32.3%				

% of Total Pedestrians Per Half Hour in Each Location

Time	Rest.	Fast Food	Retail South	Retail North	Office South	Office North	Hotel	Other*	Total	Rest.	Fast Food	Retail South	Retail North	Office South	Office North	Hotel	Other*	Total
11:30-12:00	16.9%	43.8%	27.3%	20.4%	15.8%	12.9%	26.5%	4.6%	23.9%	0.0%	10.3%	13.0%	40.7%	21.8%	32.6%	15.9%	3.3%	17.8%
12:00-12:30	33.9%	30.6%	18.2%	36.7%	21.1%	27.4%	32.5%	26.2%	29.3%	17.6%	30.4%	4.3%	20.3%	30.3%	40.7%	34.8%	18.3%	28.5%
12:30-1:00	22.0%	15.3%	54.5%	26.5%	32.9%	30.6%	21.7%	46.2%	26.6%	20.6%	42.4%	26.1%	20.3%	26.9%	14.0%	30.4%	28.3%	29.2%
1:00-1:30	27.1%	10.4%	0.0%	16.3%	30.3%	29.0%	19.3%	23.1%	20.2%	61.8%	16.8%	56.5%	18.6%	21.0%	12.8%	18.8%	50.0%	24.4%

8/4/94 4:30PM - 6:30PM

Time	In									Out								
	Rest.	Fast Food	Retail South	Retail North	Office South	Office North	Hotel	Other*	Total	Rest.	Fast Food	Retail South	Retail North	Office South	Office North	Hotel	Other*	Total
4:30-4:45	10	4	4	13	9	3	6	6	55	3	1	5	19	33	8	11	9	89
4:45-5:00	10	7	9	2	4	2	5	18	57	6	4	7	11	21	14	4	7	74
5:00-5:15	10	4	12	4	9	2	22	10	73	10	1	17	5	80	29	12	10	164
5:15-5:30	20	7	12	6	8	1	14	1	69	0	10	12	2	38	12	6	8	88
5:30-5:45	25	11	11	7	8	3	13	4	82	10	5	9	7	19	36	6	4	96
5:45-6:00	13	8	9	8	5	3	28	20	94	8	23	10	14	21	18	8	10	112
6:00-6:15	21	6	7	5	8	1	13	25	86	15	17	10	4	23	12	22	19	122
6:15-6:30	35	3	1	0	1	0	20	35	95	10	1	0	2	7	10	4	5	39
Total	144	50	65	45	52	15	121	119	611	62	62	70	64	242	139	73	72	784
% of Total	23.6%	8.2%	10.6%	7.4%	8.5%	2.5%	19.8%	19.5%	100.0%	7.9%	7.9%	8.9%	8.2%	30.9%	17.7%	9.3%	9.2%	100.0%
	Eating Establishments		Retail		Offices					Eating Establishments		Retail		Offices				
	31.8%		18.0%		11.0%					15.8%		17.1%		48.6%				

% of Total Pedestrians Per Half Hour in Each Location

Time	Rest.	Fast Food	Retail South	Retail North	Office South	Office North	Hotel	Other*	Total	Rest.	Fast Food	Retail South	Retail North	Office South	Office North	Hotel	Other*	Total
4:30-5:00	13.9%	22.0%	20.0%	33.3%	25.0%	33.3%	9.1%	20.2%	18.3%	14.5%	8.1%	17.1%	46.9%	22.3%	15.8%	20.5%	22.2%	20.8%
5:00-5:30	20.8%	22.0%	36.9%	22.2%	32.7%	20.0%	29.8%	9.2%	23.2%	16.1%	17.7%	41.4%	10.9%	48.8%	29.5%	24.7%	25.0%	32.1%
5:30-6:00	26.4%	38.0%	30.8%	33.3%	25.0%	40.0%	33.9%	20.2%	28.8%	29.0%	45.2%	27.1%	32.8%	16.5%	38.8%	19.2%	19.4%	26.5%
6:00-6:30	38.9%	18.0%	12.3%	11.1%	17.3%	6.7%	27.3%	58.4%	29.6%	40.3%	29.0%	14.3%	9.4%	12.4%	15.8%	35.6%	33.3%	20.5%

* Other: Person trips entering or exiting central restaurant-office area where only the western parking lot destination/origin could be observed.

Mizner Park

Data Collection Overview

Mizner Park data collection efforts were scheduled for the second week of August, 1994. Figure 17 depicts a generalized site layout indicating land uses, access and circulation routes, parking areas and surrounding roadways. Figure 17 also identifies the locations for machine traffic counts, auto occupancy counts, pedestrian - land use counts and general survey (interviewer) locations.

Traffic count machines were set on Monday August 8, 1994 and manual data collection efforts were conducted on Wednesday August 10th and Thursday August 11th.

Data Collection Efforts and Influences - 1st Day - August 10, 1994

Weather Conditions:

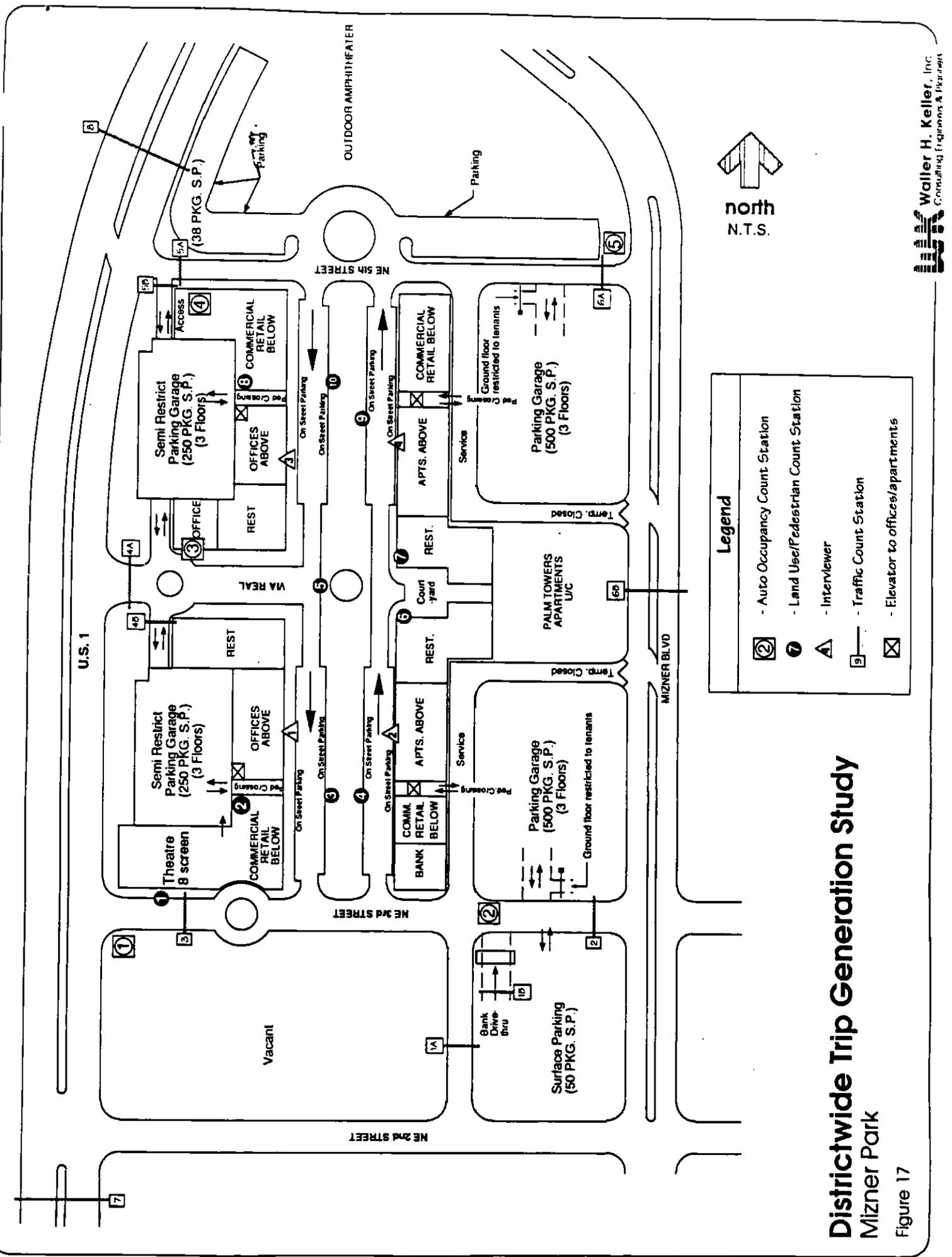
Rain chance was projected to be 40%. Light rain was occurring in the morning prior to the start of the Interview period at 10:00 AM. By 10:00 AM, the rain stopped. At about 3:00 PM the rain became very heavy. During the afternoon hours, rain continued at a medium pace. This continued until the survey ended at 7:00 PM.

Machine Traffic Counts:

Traffic count machines were set in place on Monday afternoon at the locations noted in Figure 17. Site observations indicated some counting problems which necessitated minor adjustments in the hose locations to improve count results. Fifteen (15) minute manual counts were conducted at each traffic count machine location to establish an axle adjustment factors. The adjustment factors for each count location can be found in the Task 3.0 Data Collection Technical Report.

Auto Occupancy Counts

Five people were stationed around the site to perform auto occupancy counts. These counts were taken at locations 1 - 5 (see Figure 17).



Legend

- ② - Auto Occupancy Count Station
- ⑦ - Land Use/Pedestrian Count Station
- △ - Interviewer
- ② - Traffic Count Station
- ⊠ - Elevator to offices/apartments

Districtwide Trip Generation Study
Mizner Park
 Figure 17

Pedestrian - Land Use Count Conditions

Personnel were placed at locations based upon site visits and review of site drawings with the responsibility of counting pedestrian movements from parking lots to land uses. Some difficulties were encountered in the first day morning data collection effort and adjustments were made in the afternoon session to improve results. With the changes in locations and personnel, the afternoon data collection effort was significantly improved with no observed difficulties.

Questionnaire Interviews

Four people were assigned to perform interviews through-out the data collection period (locations #'s 1 - 4). Pedestrian counters also conducted interviews from 10:00 - 11:15 AM and 3:00 - 4:15 PM. During the first day, some interviewers encountered problems getting interviewees to answer the income question and/or the specific location by individual zone number for the trip origin. Most surveyors allowed the interviewees to provide zip codes only. General participation and performance during the survey appeared satisfactory.

Data Collection Efforts and Influences - 2nd Day - August 11, 1994

Weather Conditions:

Rain chance during the day was estimated at 50% and rain occurred during the morning data collection effort. While the sky was threatening in the afternoon, no rain occurred.

Traffic Count Conditions:

Traffic count machines remained in place on Thursday. Additional manual counts were made to establish adjustment factors at each location.

Auto Occupancy Counts

No difficulties were encountered in this data collection effort during the Thursday effort. The counter located at #5 noted valet personnel exiting the northeast parking garage and making a eastbound right at Mizner Boulevard. These vehicles would re-enter Mizner Park at the southeast entrance (#2). Manual counts were made by the counter at location #5 to quantify this condition.

Pedestrian Count Conditions

No problems were encountered during the Thursday pedestrian count data collection effort.

Questionnaire Interviews

Interviewers were again instructed to get specific locations of trip origins and not to be passive related to the income question. General participation and performance during the Thursday survey appeared satisfactory, however, less participation was received since some of the parties were surveyed the prior day.

Data Collection Results

The results of the data collection effort are provided in the pages that follow. In some instances, data has been adjusted and edited. In instances where data has been edited or adjusted from the raw results, notations have been provided.

Traffic Count Summary - Table 15

A summary of traffic count results depicting daily, AM peak hour and PM peak hour totals by location, direction and day is provided in Table 15.

Vehicle Occupancy Survey - Table 16

Pedestrian - Land Use Counts - Tables 17 and 18

Table 15 - Mizner Park All Entrances Counts

Location	Date	Daily		8 - 9		11 - 12		1 - 2		5 - 6		Adj Factor		Daily		8 - 9		11 - 12		1 - 2		5 - 6	
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
1A	Tues 8/9/94	1,319	1,088	33	28	101	50	95	68	86	82	100.00%	92.85%	1,319	1,010	33	26	101	46	95	63	86	76
	Wed 8/10/94	1,313	1,078	39	21	94	63	119	79	96	93	100.00%	92.85%	1,313	1,001	39	19	94	58	119	73	96	86
	Thrus 8/11/94	1,331	1,144	33	26	107	62	110	77	83	92	100.00%	92.85%	1,331	1,062	33	24	107	58	110	71	83	85
2A	Tues 8/9/94	800	572	20	9	33	27	51	47	55	27	92.85%	103.15%	743	590	19	9	31	28	47	48	51	28
	Wed 8/10/94	748	465	16	13	37	24	57	54	42	14	92.85%	103.15%	695	480	15	13	34	25	53	56	39	14
	Thrus 8/11/94	796	561	22	6	34	25	61	62	41	29	92.85%	103.15%	739	579	20	6	32	26	57	64	38	30
3	Tues 8/9/94	1,978	1,120	31	18	78	56	160	70	107	88	89.15%	83.35%	1,763	934	28	15	70	47	143	58	95	73
	Wed 8/10/94	1,948	2,991	35	27	31	48	111	22	123	76	89.15%	83.35%	1,737	2,493	31	23	28	40	99	18	110	63
	Thrus 8/11/94	2,209	1,094	15	15	107	60	109	76	164	80	89.15%	83.35%	1,969	912	13	13	95	50	97	63	146	67
4A	Tues 8/9/94	1,008	1,108	129	66	58	44	63	75	85	108	61.90%	18.80%	624	208	80	12	36	8	39	14	53	20
	Wed 8/10/94	972	1,220	120	83	51	54	56	80	67	79	61.90%	18.80%	602	229	74	16	32	10	35	15	41	15
	Thrus 8/11/94	1,016	1,272	116	83	73	65	70	91	59	94	61.90%	18.80%	629	239	72	16	45	12	43	17	37	18
5A	Tues 8/9/94	2,101	1,457	37	44	119	69	143	84	125	106	112.50%	57.95%	2,364	844	42	25	134	40	161	49	141	61
	Wed 8/10/94	1,897	1,359	38	46	104	87	166	99	111	89	112.50%	57.95%	2,134	788	43	27	117	50	187	57	125	52
	Thrus 8/11/94	1,905	1,544	38	41	81	72	25	126	221	138	112.50%	57.95%	2,143	895	43	24	91	42	28	73	249	80
5B	Tues 8/9/94	782	690	17	76	31	35	54	50	87	33	58.60%	50.00%	458	345	10	38	18	18	32	25	51	17
	Wed 8/10/94	541	608	17	83	38	36	31	44	61	34	58.60%	50.00%	317	304	10	42	22	18	18	22	36	17
	Thrus 8/11/94	684	665	11	70	47	1	77	11	60	75	58.60%	50.00%	401	333	6	35	28	1	45	6	35	38
6A	Tues 8/9/94	587	1,177	10	20	52	64	41	80	46	84	109.10%	68.20%	640	803	11	14	57	44	45	55	50	57
	Wed 8/10/94	519	932	13	29	27	41	50	97	43	58	109.10%	68.20%	566	636	14	20	29	28	55	66	47	40
	Thrus 8/11/94	598	1,160	23	29	47	36	66	107	31	68	109.10%	68.20%	652	791	25	20	51	25	72	73	34	46
Total	Tues 8/9/94	8,575	7,212	277	261	472	345	607	474	591	528			7,911	4,734	222	140	446	230	561	312	527	333
	Wed 8/10/94	7,938	8,653	278	302	382	353	590	475	543	443			7,363	5,930	226	159	356	230	565	308	494	287
	Thrus 8/11/94	8,539	7,440	258	270	496	321	518	550	659	576			7,865	4,810	213	137	449	212	452	367	621	364
Average	3 Days	8,351	7,768	271	278	450	340	572	500	598	516			7,713	5,158	220	145	417	224	526	329	547	328

Source : Walter H. Keller, Inc.

**Table 16 - Mizner Park
Vehicle Occupancy Survey**

Date 8/10/94				
Location	Time	Inbound	Outbound	Total
NW	Mid Day	1.60	1.51	1.55
	PM	1.51	1.44	1.47
NE	Mid Day	1.57	1.44	1.50
	PM	1.40	1.29	1.33
Date 8/11/94				
Location	Time	Inbound	Outbound	Total
NW	Mid Day	1.57	1.41	1.50
	PM	1.49	1.38	1.44
NE	Mid Day	1.53	1.34	1.44
	PM	1.56	1.33	1.46

Source: Walter H. Keller, Inc.

Table 17 - Mizner Park
Pedestrian Trips

8/10/94 11:30AM - 1:30PM

Time	In										Out									
	Apt NE	Apt SE	Retail North	Retail South	Office NW	Office SW	Rest	Bank	Theater	Total	Apt NE	Apt SE	Retail North	Retail South	Office NW	Office SW	Rest	Bank	Theater	Total
11:30-11:45	3	2	7	3	8	5	11	1	0	38	3	5	15	2	5	4	6	1	0	41
11:45-12:00	0	1	9	16	12	8	32	1	0	79	1	6	15	8	13	10	4	1	10	68
12:00-12:15	0	2	8	18	9	9	68	2	0	114	1	1	7	11	14	13	14	0	15	76
12:15-12:30	2	3	13	5	12	2	70	1	0	108	0	4	5	9	22	18	28	0	0	86
12:30-12:45	2	3	10	10	16	8	67	3	0	119	1	5	5	6	23	16	49	4	8	117
12:45-1:00	1	2	18	16	28	5	54	2	9	135	0	4	8	10	8	7	34	3	0	74
1:00-1:15	1	3	12	16	10	21	57	2	6	128	1	5	12	7	9	11	48	4	4	101
1:15-1:30	1	1	10	15	15	8	32	1	7	90	2	1	12	14	10	4	46	4	2	95
Total	10	17	87	97	108	68	391	13	22	811	9	31	79	67	104	83	220	17	39	658
% of Total	1.2%	2.1%	10.7%	12.0%	13.3%	8.1%	48.2%	1.6%	2.7%	100.0%	1.4%	4.7%	12.0%	10.2%	15.8%	12.6%	34.8%	2.6%	5.9%	100.0%
	Apt 3.3%		Retail 22.7%		Offices 21.5%						Apt 6.1%		Retail 22.2%		Offices 28.4%					

% of Total Pedestrians Per Half Hour in Each Location

Time	Apt NE	Apt SE	Retail North	Retail South	Office NW	Office SW	Rest	Bank	Theater	Total	Apt NE	Apt SE	Retail North	Retail South	Office NW	Office SW	Rest	Bank	Theater	Total
	11:30-12:00	30.0%	17.6%	18.4%	19.6%	18.7%	19.7%	11.0%	15.4%	0.0%	14.4%	44.4%	35.5%	38.0%	14.9%	17.3%	16.9%	4.4%	11.8%	25.6%
12:00-12:30	20.0%	29.4%	24.1%	21.6%	19.4%	16.7%	35.3%	23.1%	0.0%	27.4%	11.1%	16.1%	15.2%	29.9%	34.6%	37.3%	18.3%	0.0%	38.5%	24.6%
12:30-1:00	30.0%	29.4%	32.2%	26.8%	40.7%	19.7%	30.9%	38.5%	40.0%	31.3%	11.1%	29.0%	18.5%	23.9%	29.8%	27.7%	36.2%	41.2%	20.5%	29.0%
1:00-1:30	20.0%	23.5%	25.3%	32.0%	23.1%	43.0%	22.8%	23.1%	59.1%	26.9%	33.3%	19.4%	30.4%	31.3%	18.3%	18.1%	41.0%	47.1%	15.4%	29.8%

8/10/94 4:30PM - 6:30PM

Time	In										Out									
	Apt NE	Apt SE	Retail North	Retail South	Office NW	Office SW	Rest	Bank	Theater	Total	Apt NE	Apt SE	Retail North	Retail South	Office NW	Office SW	Rest	Bank	Theater	Total
4:30-4:45	2	1	26	38	5	3	15	0	9	101	0	6	35	41	17	8	13	0	66	186
4:45-5:00	0	2	29	62	4	2	21	0	24	144	1	4	24	35	22	6	7	0	23	122
5:00-5:15	1	0	29	63	2	2	13	0	19	129	0	3	28	18	38	10	12	0	47	156
5:15-5:30	0	5	30	60	6	2	20	2	64	189	0	0	35	39	31	25	4	2	6	142
5:30-5:45	1	1	37	43	11	0	46	0	53	192	2	0	20	37	6	6	8	0	2	83
5:45-6:00	1	3	39	37	10	0	31	0	6	129	1	4	42	17	21	1	19	0	1	106
6:00-6:15	1	1	20	19	6	2	33	0	0	82	2	3	26	24	15	4	16	0	0	80
6:15-6:30	3	5	17	21	5	0	14	0	0	85	3	0	22	14	11	3	13	0	3	69
Total	9	18	229	343	49	11	193	2	177	1031	9	20	232	225	163	63	92	2	148	954
% of Total	0.9%	1.7%	22.2%	33.3%	4.8%	1.1%	18.7%	0.2%	17.2%	100.0%	0.9%	2.1%	24.3%	23.8%	17.1%	6.6%	9.6%	0.2%	15.5%	100.0%
	Apt 2.6%		Retail 55.5%		Offices 5.8%						Apt 3.0%		Retail 47.9%		Offices 23.7%					

% of Total Pedestrians Per Half Hour in Each Location

Time	Apt NE	Apt SE	Retail North	Retail South	Office NW	Office SW	Rest	Bank	Theater	Total	Apt NE	Apt SE	Retail North	Retail South	Office NW	Office SW	Rest	Bank	Theater	Total
	4:30-5:00	22.2%	16.7%	24.9%	29.2%	18.4%	45.5%	18.7%	0.0%	18.6%	23.8%	11.1%	58.0%	25.4%	23.8%	23.9%	22.2%	21.7%	0.0%	60.1%
5:00-5:30	11.1%	27.8%	25.8%	35.9%	16.3%	36.4%	17.1%	100.0%	46.9%	30.8%	0.0%	15.0%	27.2%	25.3%	42.3%	55.8%	17.4%	100.0%	35.8%	31.2%
5:30-6:00	22.2%	22.2%	33.2%	23.3%	42.9%	0.0%	39.9%	0.0%	34.5%	31.1%	33.3%	20.0%	26.7%	24.0%	17.8%	11.1%	29.3%	0.0%	2.0%	19.8%
6:00-6:30	44.4%	33.3%	18.2%	11.7%	22.4%	18.2%	24.4%	0.0%	0.0%	14.3%	55.8%	15.0%	20.7%	16.9%	18.0%	11.1%	31.5%	0.0%	2.0%	16.7%

Source: Walter H. Keller, Inc.

Table 18 - Mizner Park
Pedestrian Trips

8/11/84 11:30AM - 1:30PM

Time	In										Out											
	Apt NE	Apt SE	Retail North	Retail South	Office NW	Office SW	Rest	Bank	Theater	Total	Apt NE	Apt SE	Retail North	Retail South	Office NW	Office SW	Rest	Bank	Theater	Total		
11:30-11:45	3	3	50	47	17	6	24	3	5	158	2	4	48	61	18	5	4	5	1	146		
11:45-12:00	1	2	37	37	12	6	23	2	17	137	4	0	42	34	28	13	2	3	4	130		
12:00-12:15	2	2	38	73	12	12	51	8	36	234	1	3	47	55	28	18	12	6	0	170		
12:15-12:30	0	1	33	45	23	7	72	7	32	220	3	1	39	53	24	14	27	8	0	169		
12:30-12:45	0	2	40	44	23	8	63	8	17	205	1	0	43	68	20	14	17	4	1	168		
12:45-1:00	3	3	35	42	20	9	37	5	33	187	1	0	37	44	19	18	32	5	0	156		
1:00-1:15	3	0	49	31	35	7	30	4	7	166	7	3	47	24	22	10	34	5	1	153		
1:15-1:30	1	1	39	49	24	7	37	7	0	165	1	1	37	37	19	11	45	5	0	156		
Total	13	14	321	368	168	62	337	44	147	1472	28	12	340	376	176	103	173	41	7	1248		
% of Total	0.9%	1.0%	21.8%	25.0%	11.3%	4.2%	22.9%	3.0%	10.0%	100.0%	1.6%	1.0%	27.2%	30.1%	14.1%	8.3%	13.9%	3.3%	0.6%	100.0%		
	Apt 1.6%		Retail 46.8%		Offices 15.5%												Apt 2.6%		Retail 57.4%		Offices 22.4%	

% of Total Pedestrians Per Half Hour in Each Location

Time	Apt NE	Apt SE	Retail North	Retail South	Office NW	Office SW	Rest	Bank	Theater	Total	Apt NE	Apt SE	Retail North	Retail South	Office NW	Office SW	Rest	Bank	Theater	Total
11:30-12:00	30.8%	35.7%	27.1%	22.8%	17.5%	19.4%	13.9%	11.4%	15.0%	20.0%	30.0%	33.3%	26.5%	25.3%	25.0%	17.5%	3.5%	19.5%	71.4%	22.1%
12:00-12:30	15.4%	21.4%	22.1%	32.1%	21.1%	30.8%	36.5%	34.1%	48.3%	30.8%	20.0%	33.3%	25.3%	28.7%	28.5%	31.1%	22.5%	34.1%	0.0%	27.2%
12:30-1:00	23.1%	35.7%	23.4%	23.4%	25.9%	27.4%	29.7%	29.5%	34.0%	26.6%	10.0%	0.0%	23.5%	29.8%	22.2%	31.1%	28.3%	22.0%	14.3%	26.0%
1:00-1:30	30.8%	7.1%	27.4%	21.7%	35.5%	22.6%	19.9%	25.0%	4.6%	22.5%	48.0%	33.3%	24.7%	16.2%	23.3%	20.4%	45.7%	24.4%	14.3%	24.8%

8/11/84 4:30PM - 6:30PM

Time	In										Out											
	Apt NE	Apt SE	Retail North	Retail South	Office NW	Office SW	Rest	Bank	Theater	Total	Apt NE	Apt SE	Retail North	Retail South	Office NW	Office SW	Rest	Bank	Theater	Total		
4:30-4:45	0	2	30	39	14	4	12	3	17	121	2	0	19	26	14	13	11	4	23	112		
4:45-5:00	1	0	23	64	8	4	10	2	20	132	2	0	21	41	18	5	0	3	0	90		
5:00-5:15	1	0	19	53	8	1	29	3	27	141	3	5	23	59	28	31	5	3	19	174		
5:15-5:30	1	0	23	75	9	3	23	1	13	148	1	0	32	67	16	15	18	1	6	158		
5:30-5:45	1	7	15	39	9	1	34	2	31	139	1	3	16	39	13	10	20	2	11	115		
5:45-6:00	5	1	26	54	5	0	38	3	29	161	0	0	29	63	9	6	20	3	5	135		
6:00-6:15	0	6	21	52	5	0	57	0	20	161	0	1	12	38	10	6	19	0	3	89		
6:15-6:30	1	1	15	41	4	5	47	0	22	136	0	3	17	47	5	0	11	0	2	85		
Total	10	17	172	417	62	18	250	14	179	1139	9	12	169	380	111	86	104	16	68	956		
% of Total	0.8%	1.5%	15.1%	36.6%	5.4%	1.6%	21.9%	1.2%	15.7%	100.0%	0.9%	1.3%	17.7%	39.7%	11.6%	9.0%	10.9%	1.7%	7.2%	100.0%		
	Apt 2.4%		Retail 51.7%		Offices 7.0%												Apt 2.2%		Retail 57.4%		Offices 20.6%	

% of Total Pedestrians Per Half Hour in Each Location

Time	Apt NE	Apt SE	Retail North	Retail South	Office NW	Office SW	Rest	Bank	Theater	Total	Apt NE	Apt SE	Retail North	Retail South	Office NW	Office SW	Rest	Bank	Theater	Total
4:30-5:00	10.0%	11.8%	30.8%	24.7%	35.5%	44.4%	8.8%	35.7%	20.7%	22.2%	44.4%	0.0%	23.7%	17.6%	28.8%	20.9%	10.6%	43.8%	33.3%	21.1%
5:00-5:30	20.0%	0.0%	24.4%	30.7%	27.4%	22.2%	20.8%	28.6%	22.3%	25.4%	44.4%	41.7%	32.5%	33.2%	37.8%	53.5%	22.1%	25.0%	36.2%	34.5%
5:30-6:00	66.0%	47.1%	23.8%	22.3%	22.8%	5.8%	28.8%	35.7%	33.9%	26.3%	11.1%	25.0%	26.6%	26.8%	19.8%	18.6%	38.5%	31.3%	23.2%	26.2%
6:00-6:30	10.0%	41.2%	20.9%	22.3%	14.5%	27.8%	41.8%	0.0%	23.5%	26.1%	0.0%	33.3%	17.2%	22.4%	13.5%	7.0%	28.8%	0.0%	7.2%	18.2%

Source: Walter H. Keller, Inc.

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Galleria Area

Data Collection Overview

The Galleria Area data collection efforts were scheduled for the fourth week of August, 1994. Figure 18 depicts the generalized site layout indicating land uses, access and circulation routes, parking areas and the locations for machine traffic counts, auto occupancy counts, pedestrian - land use counts and general survey (interviewer) locations.

Traffic count machines were set on Monday August 22, 1994 and manual data collection efforts were conducted on Tuesday August 23rd and Wednesday August 24th. The data collection was started on Tuesday to allow for an additional day of data collection (Thursday) if necessary. Sufficient surveys were completed on Wednesday, thereby, negating the need for an additional survey day.

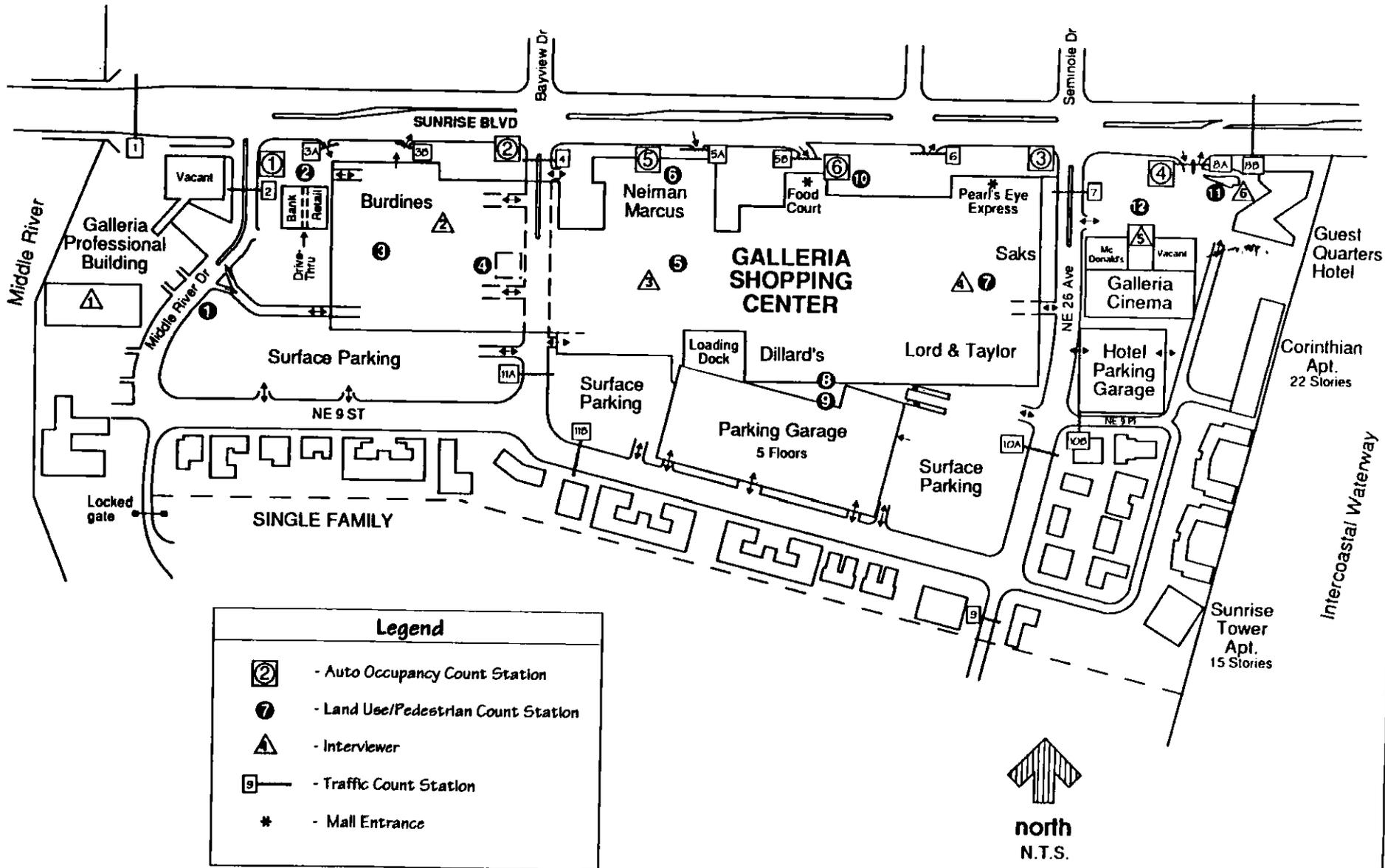
Data Collection Efforts and Influences - 1st Day - August 23, 1994

Weather Conditions:

Tuesday's rain chance was projected to be 40% with possible thunderstorms. While surrounding weather conditions appeared very threatening and severe weather was occurring in the western portions of the County in the afternoon, only light rain occurred during the first portion of the afternoon data collection period.

Machine Traffic Counts:

Traffic count machines were set in place on Monday afternoon. Directional entrances into the Galleria Mall along Sunrise Boulevard were spaced too far apart for one machine and therefore only entrances and joint entrance/exits were counted off Sunrise. Locations set on Monday included #'s 1, 2, 3A, 4, 5A, 5B, 7, 8A, 8B and 9 (see Figure 18). No major difficulties were encountered in placing traffic count machines. Manual counts were also conducted at each location to establish an adjustment factor for each location.



Districtwide Trip Generation Study Galleria

Figure 18

Auto Occupancy Counts

The data collection effort began on Tuesday. Personnel were placed at Middle River Drive (#1), Bayview Drive (#2), at 29th Avenue (#3) and at the Sunrise Boulevard entrance to the Hotel (#4). Additionally, pedestrian counters were also used to obtain auto occupancy counts at the Nieman Marcus entrance (#5) and at the Food Court entrance (#6). No problems were encountered during this day's data collection effort.

Pedestrian Count Conditions

Considerable difficulties were encountered in identifying and counting entrances/exits at the Galleria Area due to the very high number of locations. After extensive review, only non-residential land uses adjacent to Sunrise Boulevard and the major Mall entrances were selected for counting since these locations were expected to be the highest generators. Discussions with the Galleria Shopping Center Management Company suggested the highest locations for entering the Mall. Based on these discussions and several site observations, initial pedestrian - land use count locations were determined.

The Galleria Professional Building had entrances from a northern and southern parking lot. An additional side entrance was located adjacent to Middle River Drive. One person (#1) was located across from the Middle River Drive entrance with responsibilities for counting vehicles in and out of the parking lots and walkers in and out of the side entrance. The Nations Bank, drive-through and Fedco Drugs is located at the northeast corner of Middle River Drive and was counted by one person (#2).

The Galleria Shopping Center has approximately 18 entrances/exits into the Department Stores and Mall shopping areas. With access at ground level parking, second level parking, third level parking and rooftop parking, pedestrians can enter and exit at a total of 26 locations. The following count locations were initially established: Burdines Escalator - 2nd level (#3), Orange Parking Mall entrance - inside (#4), Red Parking Escalator - ground level (#5), Nieman Marcus Elevator (#6), Plum garage - ground level (#7), Dillard's -ground level (#8), Blue and Plum garages - 2nd level (#9) and Food Court main entrance (#10). At some mall locations, counters had responsibilities for counting multiple entrances.

Pedestrian counters were also placed at the McDonald's Restaurant (#12) and at the Guest Suites Hotel (#11). Pedestrian counts were also taken by the auto occupancy

counter at Bayview Drive for the Hollywood Federal and the Police Department Substation.

Questionnaire Interviews

Six (6) questionnaire interviewers were located in the Galleria Shopping Center (#'s 1-3), at the Galleria Professional Office Building (#4), McDonald's (#5) and the Guest Suites Hotel (#6). Pedestrian counters also collected questionnaire interviews between 10:00 - 11:15 AM and 3:00 - 4:15 PM. Origin zone survey response results were improved during the first day of survey when compared to earlier survey results.

Data Collection Efforts and Influences - 2nd Day - August 24, 1994

Weather Conditions:

Rain chance was projected to be 30%. Only very light rain occurred during a very small portion of the day.

Machine Traffic Counts:

Manual counts were again conducted to establish adjustment factors for each location. No traffic count machine problems were encountered during the day.

Auto Occupancy Counts

No problems were encountered during this day's data collection effort.

Pedestrian Count Conditions

During the second day's data collection effort, most locations were again counted similar to the first day's effort, except as noted. Two Galleria Shopping Center entrances were dropped due to low pedestrian counts during the first day's effort. During the second day minimum problems occurred in the pedestrian counts.

Questionnaire Interviews

Second day questionnaire interviews were performed in a similar manner to day one interviews. Two additional interviewers were located within the Mall area to insure adequate survey sample size. No problems were encountered during the second day's survey effort.

Additional Data Collection Efforts and Influences

Traffic count machines were left in place until Sunday August 28, 1994 when some machines were relocated to additional locations. Locations counted between Monday August 22nd through Saturday August 27th included locations #'s 1, 2, 4, 5A and 9. Locations counted between Monday August 29th through Tuesday August 30th included locations #'s 10A and 10B. Locations counted between Monday August 29th through Wednesday August 31st included locations #'s 3B, 6, 11A and 11B. Locations counted between Tuesday August 23rd through Wednesday August 31st included locations #'s 3A, 5B, 7, 8A and 8B. Manual traffic counts were again performed to establish adjustment factors for each location.

Data Collection Results

The results of the data collection effort are provided in the pages that follow. In some instances, data has been adjusted and edited. In instances where data has been edited or adjusted from the raw results, notations are provided.

Traffic Count Summary - Table 19

A summary of traffic count results depicting daily, AM peak hour and PM peak hour totals by location, direction and day is provided in Table 19.

Vehicle Occupancy Survey - Table 20

Pedestrian - Land Use Counts - Tables 21 and 22

Table 19 - Galleria Area - Traffic Count Summary

Location	Date	AM Pk		PM Pk		Daily	
		EB	WB	EB	WB	EB	WB
1	Tues 8/23/94	1,319	969	1,365	1,308	19,180	16,504
	Wed 8/24/94	1,355	1,202	1,509	1,551	20,285	19,602
	Thurs 8/25/94	1,210	1,272	1,520	1,614	20,132	21,073
	Fri 8/26/94	1,374	1,249	1,578	1,562	22,283	21,129
	Sat 8/27/94	1,432	1,179	1,690	1,484	21,461	21,225
			In	Out	In	Out	In
2	Tues 8/23/94	226	198	254	295	2,755	2,842
	Wed 8/24/94	229	213	221	326	2,835	2,945
	Thurs 8/25/94	239	186	228	374	2,807	2,747
	Fri 8/26/94	259	244	333	354	2,872	3,031
	Sat 8/27/94	285	267	238	318	2,529	2,782
			In	Out	In	Out	In
3A	Tues 8/23/94	64		86		658	
	Wed 8/24/94	75		105		742	
	Thurs 8/25/94	65		104		738	
	Fri 8/26/94	81		87		794	
	Sat 8/27/94	124		172		1,281	
	Sun 8/28/94	65		158		733	
	Mon 8/29/94	66		78		671	
	Tue 8/30/94	71		89		721	
	Wed 8/31/94	63		98		655	
				Out		Out	
3B	Mon 8/29/94		31		57		410
	Tue 8/30/94		38		43		357
	Wed 8/31/94		28		43		349
		In	Out	In	Out	In	Out
4	Tues 8/23/94	258	233	281	317	3,018	3,391
	Wed 8/24/94	236	182	270	325	2,986	3,382
	Thurs 8/25/94	293	178	354	300	3,064	3,663
	Fri 8/26/94	244	180	310	340	3,348	3,572
	Sat 8/27/94	342	213	346	499	3,757	4,272
			In	Out	In	Out	In
5	Tues 8/23/94	73	3	80	12	481	57
	Wed 8/24/94	51	5	67	4	505	39
	Thurs 8/25/94	48	2	134	5	658	52
	Fri 8/26/94	53	0	79	11	521	47
		In	Out	In	Out	In	Out
5B	Tues 8/23/94	91		121		1,032	
	Wed 8/24/94	96		95		963	
	Thurs 8/25/94	82		116		953	
	Fri 8/26/94	76		88		933	
	Sat 8/27/94	80		116		1,034	
	Sun 8/28/94	46		74		451	
	Mon 8/29/94	43		69		541	
	Tue 8/30/94	56		48		504	
	Wed 8/31/94	39		59		496	
			Out		Out		Out
6	Mon 8/29/94		67		115		1,117
	Tue 8/30/94		73		126		1,032
	Wed 8/31/94		86		95		926

Table 19 - Galleria Area - Traffic Count Summary

Location	Date	AM Pk		PM Pk		Dally	
		In	Out	In	Out	In	Out
7	Tues 8/23/94	233	191	343	213	3,896	3,188
	Wed 8/24/94	244	176	320	156	3,940	2,096
	Thurs 8/25/94	239	182	344	172	3,727	2,350
	Fri 8/26/94	236	269	322	363	3,857	4,609
	Sat 8/27/94	322	358	637	638	5,699	6,559
	Sun 8/28/94	9	288	708	197	3,806	2,607
	Mon 8/29/94	247	101	378	178	4,464	2,106
	Tue 8/30/94	290	230	298	268	4,360	2,555
8A		In	Out	In	Out	In	Out
	Tues 8/23/94	65	21	73	16	829	283
	Wed 8/24/94	56	14	75	22	864	278
	Thurs 8/25/94	42	31	70	41	900	343
	Fri 8/26/94	72	25	126	37	1,042	324
	Sat 8/27/94	56	32	152	30	1,158	390
	Sun 8/28/94	41	22	111	33	902	399
	Mon 8/29/94	49	17	68	24	793	279
	Tue 8/30/94	43	15	70	14	745	255
	Wed 8/31/94	51	30	69	29	826	306
	8B		EB	WB	EB	WB	EB
Tues 8/23/94		717	693	937	895	12,110	10,530
Wed 8/24/94		734	633	892	773	12,488	10,860
Thurs 8/25/94		607	702	876	753	11,954	11,072
Fri 8/26/94		688	664	999	741	13,827	11,807
Sat 8/27/94		683	697	913	801	13,151	12,608
Sun 8/28/94		483	776	1,026	643	10,799	10,749
Mon 8/29/94		637	613	868	723	11,117	10,762
Tue 8/30/94		560	650	874	748	11,380	10,994
Wed 8/31/94		580	680	747	774	11,468	10,913
9			In	Out	In	Out	In
	Tues 8/23/94	69	72	77	84	896	957
	Wed 8/24/94	65	81	95	86	940	991
	Thurs 8/25/94	67	82	80	55	851	906
	Fri 8/26/94	64	85	90	69	884	951
	Sat 8/27/94	47	71	72	60	782	798
10A		In	Out	In	Out	In	Out
	Mon 8/29/94	50	71	58	94	354	981
Tue 8/30/94	82	75	82	100	397	1,043	
10B		In	Out	In	Out	In	Out
	Mon 8/29/94	14	74	16	69	190	782
Tue 8/30/94	6	79	27	61	207	822	
11A		In	Out	In	Out	In	Out
	Mon 8/29/94	186	75	199	134	1,870	1,402
	Tue 8/30/94	233	57	181	157	2,047	1,454
Wed 8/24/94	251	77	164	160	1,820	1,517	
11B		In	Out	In	Out	In	Out
	Mon 8/29/94	348	117	328	253	3,340	2,907
	Tue 8/30/94	354	155	209	178	2,544	2,148

Source : Walter H. Keller, Inc.

**Table 20 - Galleria
Vehicle Occupancy Survey**

Date 8/23/94				
Location	Time	Inbound	Outbound	Total
A1	Mid Day	1.39	1.34	1.37
	PM	1.30	1.32	1.31
A2	Mid Day	1.45	1.38	1.42
	PM	1.65	1.40	1.51
A3	Mid Day	1.49	1.39	1.43
	PM	1.46	1.33	1.38
Hotel	Mid Day	1.42	1.98	1.59
	PM	1.73	1.34	1.62
Neiman Marcus	Mid Day	1.43	1.26	1.40
	PM	1.69	1.83	1.71
Food Court	Mid Day	1.44	-	1.44
	PM	1.51	-	1.51
Date 8/24/94				
Location	Time	Inbound	Outbound	Total
A1	Mid Day	1.35	1.26	1.31
	PM	1.32	1.39	1.36
A2	Mid Day	1.44	1.38	1.41
	PM	1.43	1.39	1.41
A3	Mid Day	1.42	1.43	1.42
	PM	1.51	1.36	1.42
Hotel	Mid Day	1.63	1.78	1.67
	PM	1.60	1.78	1.65
Food Court	Mid Day	1.59	-	1.59
	PM	1.51	-	1.51

Source: Walter H. Keller, Inc.

Table 21
Galleria - Pedestrian Trips

8/23/84 11:30AM - 1:30PM

Time	In											Out												
	Galleria Sh. Cent.	Office By Walk	Office By Car	Other Retail	Bank	Bank Drive-In	Fast Food	Theater	Hotel *	Police Hwywd Fed	Total	Galleria Sh. Cent.	Office By Walk	Office By Car	Other Retail	Bank	Bank Drive-In	Fast Food	Theater	Hotel *	Police Hwywd Fed	Total		
11:30-11:45	292	1	10	27	6	2	19	2	-	3	382	150	0	17	28	8	2	8	0	-	2	213		
11:45-12:00	327	0	4	20	14	3	22	0	-	2	382	166	3	5	18	11	3	18	0	-	10	234		
12:00-12:15	351	1	7	14	7	3	28	0	-	2	413	198	2	15	24	7	3	18	0	-	0	287		
12:15-12:30	323	2	16	21	8	5	15	2	9	4	488	195	3	9	25	17	5	12	0	12	3	281		
12:30-12:45	353	2	11	16	18	5	16	12	16	0	447	208	4	5	15	14	5	25	0	10	3	289		
12:45-1:00	302	2	11	16	8	7	27	14	22	0	409	262	8	5	16	8	7	15	0	11	2	334		
1:00-1:15	309	7	18	26	5	0	23	9	9	0	488	271	6	13	20	7	0	15	0	11	0	343		
1:15-1:30	332	3	11	18	4	4	15	34	5	4	438	283	3	13	21	7	4	17	0	4	1	353		
Total	2568	18	88	158	68	29	165	73	81	13	3263	1733	29	92	187	78	28	128	0	48	21	2318		
% of Total	78.3%	0.6%	2.7%	4.8%	2.1%	0.9%	5.1%	2.2%	1.9%	0.4%	100.0%	74.8%	1.3%	3.5%	7.2%	3.4%	1.3%	5.5%	0.0%	2.1%	0.9%	100.0%		
		Office 3.2%												Office 4.8%										

% of Total Pedestrians Per Half Hour in Each Location

Time	In											Out										
	Galleria Sh. Cent.	Office By Walk	Office By Car	Other Retail	Bank	Bank Drive-In	Fast Food	Theater	Hotel *	Police Hwywd Fed	Total	Galleria Sh. Cent.	Office By Walk	Office By Car	Other Retail	Bank	Bank Drive-In	Fast Food	Theater	Hotel *	Police Hwywd Fed	Total
11:30-12:00	23.9%	5.6%	15.9%	28.7%	29.4%	17.2%	24.8%	2.7%	0.0%	38.8%	23.1%	18.2%	10.3%	26.8%	27.5%	24.1%	17.2%	20.3%	-	0.0%	37.1%	19.4%
12:00-12:30	28.0%	18.7%	28.1%	22.2%	22.1%	27.6%	26.1%	2.7%	14.8%	38.8%	25.1%	22.7%	17.2%	29.3%	28.3%	38.4%	27.8%	23.4%	-	25.0%	14.3%	23.7%
12:30-1:00	25.3%	22.2%	25.0%	20.3%	38.3%	41.4%	26.1%	35.6%	82.3%	15.4%	26.2%	27.1%	41.4%	12.2%	18.6%	27.8%	41.4%	31.3%	-	43.8%	23.8%	26.9%
1:00-1:30	24.7%	55.6%	33.0%	27.8%	13.2%	13.8%	23.0%	58.9%	23.0%	23.1%	25.8%	32.0%	31.0%	31.7%	24.6%	17.7%	13.8%	25.0%	-	31.3%	4.6%	30.1%

*Note: Data collection for the hotel began at 12:15 PM and data was collected only at the front entrance to the hotel.
Source: Walter H. Keller, Inc.

8/23/84 4:30PM - 8:30PM

Time	In											Out												
	Galleria Sh. Cent.	Office By Walk	Office By Car	Other Retail	Bank	Bank Drive-In	Fast Food	Theater	Hotel *	Police Hwywd Fed	Total	Galleria Sh. Cent.	Office By Walk	Office By Car	Other Retail	Bank	Bank Drive-In	Fast Food	Theater	Hotel *	Police Hwywd Fed	Total		
4:30-4:45	254	2	17	11	0	2	9	12	64	0	371	224	4	12	7	0	2	12	7	19	0	287		
4:45-5:00	211	0	3	14	0	3	7	18	26	1	281	211	2	20	21	0	3	10	0	12	0	279		
5:00-5:15	232	0	4	4	0	3	11	8	21	3	288	245	2	22	8	0	3	8	8	10	3	307		
5:15-5:30	218	0	3	15	0	0	3	2	19	0	238	189	2	10	15	0	0	12	9	8	0	245		
5:30-5:45	235	0	0	20	0	0	7	0	12	2	278	196	1	6	24	0	0	11	0	18	0	258		
5:45-6:00	254	1	2	11	0	0	6	2	37	0	313	200	3	8	22	0	0	8	1	9	1	252		
6:00-6:15	278	1	2	0	0	0	14	5	15	0	318	222	2	14	0	0	0	7	2	29	1	277		
6:15-6:30	285	1	3	0	0	0	8	2	18	0	298	208	1	4	0	0	0	7	1	83	1	285		
Total	1948	8	34	78	0	8	63	47	212	8	2385	1893	17	96	97	8	8	73	28	188	8	2188		
% of Total	81.2%	0.2%	1.4%	3.1%	0.0%	0.3%	2.6%	2.0%	8.8%	0.3%	100.0%	77.5%	0.8%	4.4%	4.4%	0.0%	0.4%	3.3%	1.3%	7.7%	0.3%	100.0%		
		Office 1.6%												Office 5.2%										

% of Total Pedestrians Per Half Hour in Each Location

Time	In											Out										
	Galleria Sh. Cent.	Office By Walk	Office By Car	Other Retail	Bank	Bank Drive-In	Fast Food	Theater	Hotel *	Police Hwywd Fed	Total	Galleria Sh. Cent.	Office By Walk	Office By Car	Other Retail	Bank	Bank Drive-In	Fast Food	Theater	Hotel *	Police Hwywd Fed	Total
4:30-5:00	23.9%	40.0%	88.8%	33.3%	-	82.5%	25.4%	58.8%	42.8%	18.7%	27.2%	28.7%	35.3%	33.3%	28.9%	-	82.5%	30.1%	25.0%	18.5%	0.0%	25.9%
5:00-5:30	23.0%	0.0%	20.6%	25.3%	-	37.5%	22.2%	21.3%	18.9%	88.6%	22.7%	25.6%	23.5%	33.3%	23.7%	-	37.5%	24.7%	80.7%	10.7%	88.6%	25.2%
5:30-6:00	25.1%	20.0%	5.8%	41.3%	-	0.0%	20.8%	4.3%	23.1%	33.3%	24.6%	23.4%	23.5%	14.6%	47.4%	-	0.0%	26.0%	3.6%	16.1%	16.7%	23.2%
6:00-6:30	27.9%	48.8%	14.7%	0.0%	-	0.0%	31.7%	14.8%	15.6%	0.0%	25.5%	25.4%	17.8%	18.8%	0.0%	-	0.0%	19.2%	10.7%	54.8%	33.3%	25.7%

*Note: Data was collected only at the front entrance to the hotel.
Data was not collected at the West Food Court entrance after 4:45 PM.
Source: Walter H. Keller, Inc.

Table 22
Gallerie - Pedestrian Trips

8/24/94 11:30AM - 1:30PM

Time	In											Out												
	Galleria Sh. Cent.	Office By Walk	Office By Car	Other Retail	Bank	Bank Drive-In	Fast Food	Theater	Hotel *	Police Hwywd	Police Fec	Total	Galleria Sh. Cent.	Office By Walk	Office By Car	Other Retail	Bank	Bank Drive-In	Fast Food	Theater	Hotel *	Police Hwywd	Police Fec	Total
11:30-11:45	188	3	8	20	10	4	11	0	13	3	260	108	3	17	18	8	4	6	0	11	0	11	0	173
11:45-12:00	216	0	14	20	7	8	23	0	22	1	309	135	0	12	19	3	8	12	0	42	0	42	0	229
12:00-12:15	272	0	3	27	10	7	36	1	17	4	377	156	0	6	28	11	7	22	0	27	0	27	0	259
12:15-12:30	250	0	12	44	13	2	16	0	13	0	350	161	0	10	38	15	2	16	0	16	3	16	3	261
12:30-12:45	202	1	9	14	9	1	13	12	21	1	283	150	3	12	26	8	1	23	0	21	2	21	2	246
12:45-1:00	194	4	17	37	8	1	10	23	24	1	319	228	3	10	33	9	1	14	0	22	0	22	0	320
1:00-1:15	233	3	21	31	6	5	21	9	18	1	348	180	4	10	36	9	5	19	0	15	1	15	1	279
1:15-1:30	254	0	9	18	5	4	28	18	19	2	355	194	5	8	23	5	4	17	0	18	5	18	5	279
Total	1800	11	93	211	68	30	158	61	147	13	2601	1314	18	83	219	68	30	129	0	172	11	172	11	2046
% of Total	69.6%	0.4%	3.6%	8.1%	2.6%	1.2%	6.1%	2.3%	5.7%	0.5%	100.0%	64.2%	0.9%	4.2%	10.7%	3.3%	1.5%	6.3%	0.0%	8.4%	0.5%	8.4%	0.5%	100.0%
		Office 4.0%												Office 5.0%										

% of Total Pedestrians Per Half Hour in Each Location

% of Total Pedestrians Per Half Hour in Each Location

Time	In											Out											
	Galleria Sh. Cent.	Office By Walk	Office By Car	Other Retail	Bank	Bank Drive-In	Fast Food	Theater	Hotel *	Police Hwywd	Police Fec	Total	Galleria Sh. Cent.	Office By Walk	Office By Car	Other Retail	Bank	Bank Drive-In	Fast Food	Theater	Hotel *	Police Hwywd	Police Fec
11:30-12:00	22.3%	27.3%	23.7%	19.0%	25.0%	33.3%	21.5%	0.0%	23.8%	30.8%	21.9%	18.5%	16.7%	34.1%	16.0%	16.2%	33.3%	14.0%	-	30.8%	0.0%	19.6%	
12:00-12:30	28.9%	0.0%	16.1%	33.8%	33.8%	30.0%	32.8%	1.6%	20.4%	30.8%	28.0%	24.3%	0.0%	18.8%	30.1%	38.2%	30.0%	28.5%	-	25.0%	27.3%	25.4%	
12:30-1:00	21.9%	45.5%	28.0%	24.2%	25.0%	6.7%	14.0%	57.4%	36.8%	15.4%	23.1%	28.8%	33.3%	25.9%	26.9%	25.0%	8.7%	28.7%	-	25.0%	18.2%	27.7%	
1:00-1:30	26.9%	27.3%	32.3%	23.2%	16.2%	30.0%	31.0%	41.0%	25.2%	23.1%	27.0%	28.5%	50.0%	21.2%	26.9%	20.6%	30.0%	27.9%	-	19.2%	54.5%	27.3%	

* Note: Data was not collected at the Neiman Marcus, West Food Court, and Orange Parking entrances for 8/24/94.
Source: Walter H. Keller, Inc.

8/24/94 4:30PM - 6:30PM

Time	In											Out												
	Galleria Sh. Cent.	Office By Walk	Office By Car	Other Retail	Bank	Bank Drive-In	Fast Food	Theater	Hotel *	Police Hwywd	Police Fec	Total	Galleria Sh. Cent.	Office By Walk	Office By Car	Other Retail	Bank	Bank Drive-In	Fast Food	Theater	Hotel *	Police Hwywd	Police Fec	Total
4:30-4:45	182	0	22	-	-	-	12	13	7	0	236	254	2	20	-	-	-	11	12	23	1	323		
4:45-5:00	161	1	38	-	-	-	11	20	27	0	258	222	2	35	-	-	-	13	3	27	0	302		
5:00-5:15	190	0	39	-	-	-	15	4	22	0	270	208	3	38	-	-	-	16	14	12	0	289		
5:15-5:30	151	1	6	-	-	-	9	9	17	0	193	214	1	6	-	-	-	10	2	16	1	250		
5:30-5:45	181	0	4	-	-	-	9	0	9	0	203	210	1	14	-	-	-	12	0	22	2	261		
5:45-6:00	192	0	6	-	-	-	7	0	11	2	218	223	0	18	-	-	-	12	0	6	0	259		
6:00-6:15	198	0	2	-	-	-	5	0	14	0	219	252	0	8	-	-	-	7	0	28	0	293		
6:15-6:30	145	0	3	-	-	-	7	0	4	0	159	169	0	9	-	-	-	7	6	7	1	199		
Total	1408	2	118	0	0	0	75	48	111	2	1754	1752	8	148	0	0	0	88	37	141	5	2178		
% of Total	79.8%	0.1%	6.7%	0.0%	0.0%	0.0%	4.3%	2.6%	6.3%	0.1%	100.0%	80.4%	0.4%	8.7%	0.0%	0.0%	0.0%	4.0%	1.7%	6.5%	0.2%	100.0%		
		Office 6.8%												Office 7.1%										

% of Total Pedestrians Per Half Hour in Each Location

% of Total Pedestrians Per Half Hour in Each Location

Time	In											Out											
	Galleria Sh. Cent.	Office By Walk	Office By Car	Other Retail	Bank	Bank Drive-In	Fast Food	Theater	Hotel *	Police Hwywd	Police Fec	Total	Galleria Sh. Cent.	Office By Walk	Office By Car	Other Retail	Bank	Bank Drive-In	Fast Food	Theater	Hotel *	Police Hwywd	Police Fec
4:30-5:00	24.5%	50.0%	48.2%	-	-	-	30.7%	71.7%	30.6%	0.0%	28.1%	27.2%	44.4%	37.7%	-	-	-	27.3%	40.5%	35.5%	20.0%	28.7%	
5:00-5:30	24.4%	50.0%	38.1%	-	-	-	32.8%	28.3%	35.1%	0.0%	26.4%	24.1%	44.4%	28.8%	-	-	-	29.5%	43.2%	19.9%	20.0%	24.7%	
5:30-6:00	26.8%	0.0%	6.5%	-	-	-	21.3%	0.0%	18.0%	100.0%	24.0%	24.7%	11.1%	21.9%	-	-	-	27.3%	0.0%	19.9%	46.0%	23.9%	
6:00-6:30	24.5%	0.0%	4.2%	-	-	-	16.0%	0.0%	16.2%	0.0%	21.6%	24.0%	0.0%	11.8%	-	-	-	15.9%	16.2%	24.8%	20.0%	22.7%	

* Note: Data was not collected at the Neiman Marcus, West Food Court, and Orange Parking entrances as well as Other Retail, the Bank, or Drive-In for 8/24/94 PM.
Source: Walter H. Keller, Inc.

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V. DATA ANALYSIS

Trip Generation Results

Overview of Trip Generation Analysis

Each study site was totally isolated by machine traffic counts and did not have any roadways crossing the site with external to external trips. Each traffic count location was also manually counted to develop adjustment factors for accounting for slight differences due to vehicles not hitting the machine hose perpendicular at each location. Standard ITE trip generation procedures were then employed at different levels of stratification to project external trip ends. The ITE results were then compared with the adjusted machine count results.

Crocker Center Trip Generation - Machine Counts

The results of the driveway machine counts are provided in Table 23. These results have been modified to reflect the manual adjustment factors for each access location and are averaged. For consistency, set time periods were chosen to compare the traffic count results. These times included 8:00 AM - 9:00 AM for the AM peak hour, 12:00 PM - 1:00 PM for the Midday peak hour and 5:00 PM - 6:00 PM for the PM peak hour. In reality, the peak hour for each location may actually occur at a time slightly different and on different days.

Based on the results of Table 23, the AM peak hour was 7.2% of the 24 hour, the Midday peak hour was 12.0% of the 24 hour and the PM peak hour was 8.2% of the 24 hour traffic loading. The average daily external traffic associated with Crocker Center was 9,972 vehicle trips per day.

Table 23 - Crocker Center External Traffic From Machine Counts

Location †	Date	AM PK 8 - 9		Mid Day 12 - 1		PM PK 5 - 6		Daily	
		In	Out	In	Out	In	Out	In	Out
1A	Tues 8/2/94	282	91	273	251	151	352	2,436	2,665
	Wed 8/3/94	290	82	343	303	144	373	2,533	2,891
	Thurs 8/4/94	276	111	314	320	168	298	2,576	2,788
	Fri 8/5/94	289	102	333	296	210	319	2,813	3,143
2	Tues 8/2/94	190	74	250	143	120	62	2,043	1,049
	Wed 8/3/94	217	47	256	231	112	66	1,978	1,203
	Thurs 8/4/94	189	60	213	160	117	80	1,959	1,147
	Fri 8/5/94	196	69	270	152	95	77	2,035	1,168
3	Tues 8/2/94	9	80	17	151	4	128	95	1,258
	Wed 8/3/94	1	67	12	170	3	125	86	1,309
	Thurs 8/4/94	8	78	13	162	6	128	96	1,262
	Fri 8/5/94	4	53	7	151	4	113	90	1,263
13	Fri 8/5/94	7	64	3	159	10	122	145	1,256
Averages*	1A	283	95	310	291	154	341	2,515	2,781
	2	199	60	240	178	116	69	1,993	1,133
	3	6	75	14	161	4	127	92	1,276
	Total of Averages	487	230	564	630	275	537	4,601	5,191
	Percent Total	7.33%		12.19%		8.30%		9,791	
	Percent Day	68%	32%	47%	53%	34%	66%		

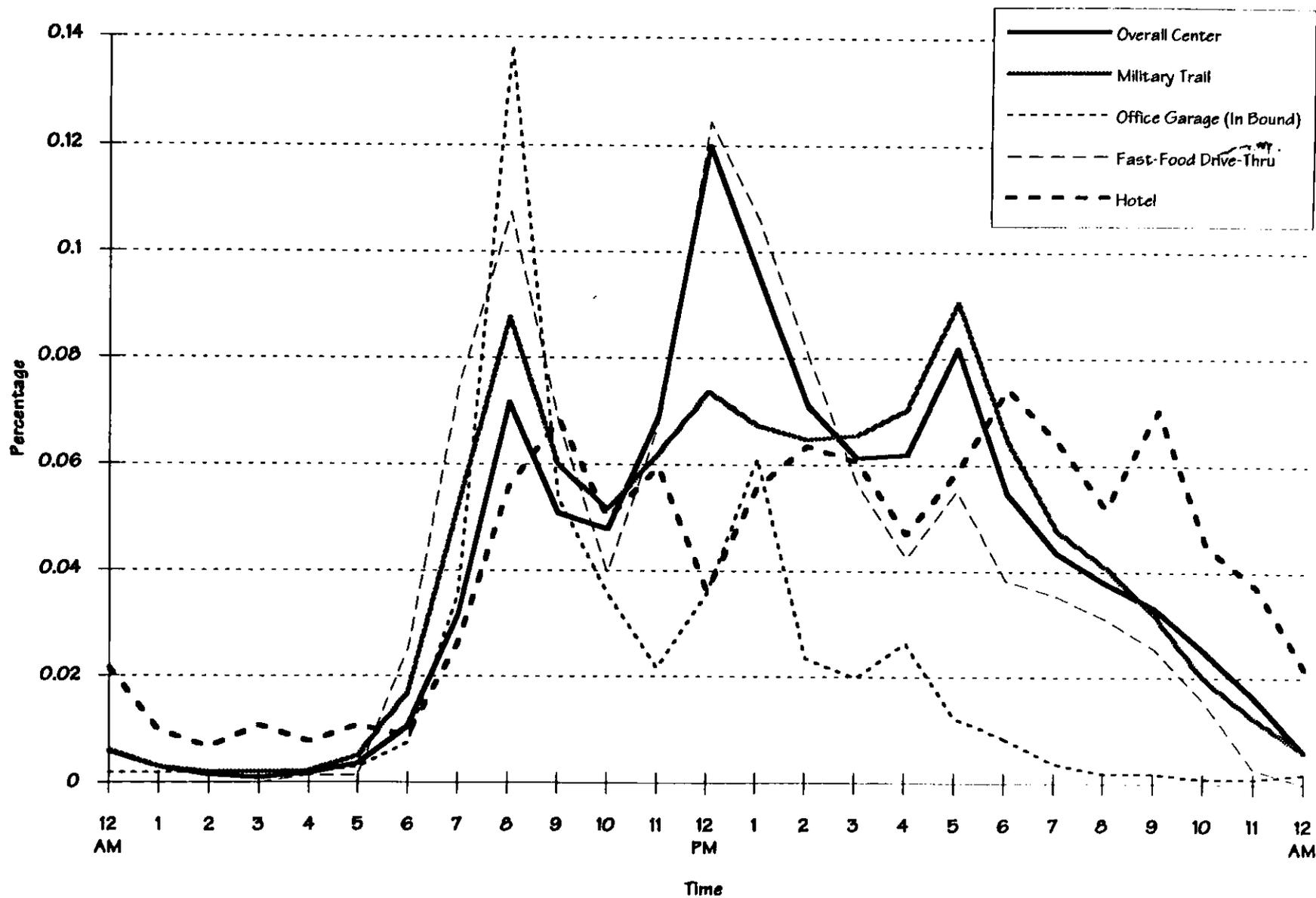
Source : Walter H. Keller, Inc.

*Averages based on Tues, Wed, Thurs

† - See Figure 16 for locations

For comparison purposes, the hourly external distribution of trips at the access points of Crocker Center have been graphed (see Figure 19) along with the distribution of trips of individual uses such as office, fast food drive-thru, the hotel, and the traffic distribution along the adjacent street, Military Trail. The distribution of office trips, however, is only reflective of the in-bound garage trips.

Figure 19: Crocker Center - % Loading by Use



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Crocker Center Trip Generation - Using ITE Procedures

Table 24 summarizes the number of external site trips which would be estimated using the ITE Trip Generation Procedures, and segregating the site land uses. For example, the two office buildings (i.e., Tower 1 and Tower II) contain 208,883 square feet of total floor area. Table 24 stratified the office space into the following uses: law, securities, medical, vacant and other. The total square footage of commercial oriented uses was segregated into the following uses: retail, restaurant, fast-food restaurant and vacant. The hotel use was grouped into hotel rooms, meeting rooms and restaurant/lounge. ITE rates for each sub category were then used to estimate the trip generation characteristics.

An aggregated projection of trips was also developed using ITE rates for aggregated uses (see Table 23). The aggregated uses are as follows: office, commercial and hotel. The aggregated analysis is based on occupied floor area only.

Mizner Park Trip Generation - Machine Counts

Mizner Park is located on the east side of Federal Highway (US1) and west of Mizner Park Boulevard. Mizner Park has six (6) access points (see Figure 9). Three (3) access points are located along Federal Highway and two (2) access points are along Mizner Park Boulevard. The last access point is along NE 2nd Street. Except for the northern access on Federal Highway and the access along NE 2nd Street, all access locations allow right in and right out movements only. The northern most Federal Highway access is served by a directional median opening which allows for southbound left, right in, and right out movements. The NE 2nd Street access point allows all movements. None of the access locations are signalized.

The results of the driveway counts are provided in Table 26. Note, adjustments have been made in Table 26 as necessary, based on manual turning movement counts. As noted in Table 26, the traditional AM peak hour was 2.8% of the daily generation, the mid day peak hour was 5.0% of the daily generation and the PM peak hour was 6.8% of the daily generation. The average daily external traffic associated with Mizner Park was 12,471 vehicle trips per day.

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Table 24 - Crocker Center Disaggregate Trip Generation Estimate

ITE Code	Land Use	Size	Unit	Daily Trip	AM PK Hr In	Out	PM Pk Hr In	Out
	Office Uses	208,883	SF					
710	Law	19,019	SF	400	47	6	9	45
710	Securities	89,150	SF	1,287	155	19	29	142
720	Medical	2,434	SF	46	20	6	3	6
710	Other	85,696	SF	1,249	151	19	28	138
	Vacant	12,584	SF					
	Total			2,981	373	50	69	331
	Commercial	87,157	SF					
814	Retail	33,495	SF	1,362	103	112	94	71
831	Restaurant	30,201	SF	2,420	26	2	162	69
831	Restaurant(Sit Down)	9,250	SF	1,900	73	73	81	69
834	Fast Food(McDonald's)	5,611	SF	3,547	159	153	107	98
	Vacant	8,600	SF					
	Total			9,229	361	339	444	308
	Hotel							
310	Rooms @ 66% occup	256	Rooms	1,448	61	41	68	58
	Mtg. Rooms	10,000	SF					
831	Restaurant/ Lounge	3,000	SF	318	3	0	16	7
	Total			1,766	64	41	84	65
	Total			13,976	798	429	597	704

Source: Walter H. Keller, Inc.
Marda L. Zimring, Inc.
ITE Trip Generation, 5th Edition

Table 25 - Crocker Center Aggregated Trip Generation Estimate

ITE Code	Land Use	Size	Unit	Daily Trip	AM PK Hr In	Out	PM Pk Hr In	Out
710	Office Uses	196,299	SF	2,336	287	35	52	254
820	Commercial	78,557	SF	6,078	89	52	281	281
310	Hotel @ 66% Occupancy	256	Rooms	1,448	61	41	68	58
	Total			9,862	437	128	402	593

Source: Walter H. Keller, Inc.
Marda L. Zimring, Inc.
ITE Trip Generation, 5th Edition

Table 26 - Mizner Park Driveway Counts

Location	Date	AM PK 8 - 9		Mid Day 12 - 1		PM PK 5 - 6		Daily	
		In	Out	In	Out	In	Out	In	Out
1A	Tues 8/9/94	33	26	121	53	86	76	1,319	1,019
	Wed 8/10/94	39	19	142	73	96	86	1,313	1,010
	Thurs 8/11/94	33	24	149	73	83	85	1,331	1,067
2A	Tues 8/9/94	19	9	40	44	51	28	743	578
	Wed 8/10/94	15	13	40	28	39	14	698	468
	Thurs 8/11/94	20	6	37	43	38	30	740	565
3	Tues 8/9/94	28	15	150	62	95	73	1,765	927
	Wed 8/10/94	31	23	122	72	110	63	1,739	939
	Thurs 8/11/94	13	13	132	66	146	67	1,967	908
4A	Tues 8/9/94	80	12	42	14	53	20	583	339
	Wed 8/10/94	74	16	42	29	41	15	562	380
	Thurs 8/11/94	72	16	51	25	37	18	588	394
5A	Tues 8/9/94	42	25	148	68	141	61	2,364	851
	Wed 8/10/94	43	27	140	70	125	52	2,143	794
	Thurs 8/11/94	43	24	0	96	249	80	2,149	896
5B	Tues 8/9/94	10	38	38	24	51	17	467	362
	Wed 8/10/94	10	42	27	29	36	17	321	324
	Thurs 8/11/94	6	35	48	0	35	38	406	349
6A	Tues 8/9/94	11	14	47	42	50	57	641	804
	Wed 8/10/94	14	20	58	43	47	40	563	641
	Thurs 8/11/94	25	20	82	59	34	46	652	790
Averages	1A	35	23	137	66	88	83	1,321	1,032
	2A	18	10	39	38	43	24	727	537
	3	24	17	135	67	117	68	1,824	925
	4A	75	15	45	23	44	18	578	371
	5A	42	25	96	78	171	64	2,219	847
	5B	9	38	38	18	41	24	398	345
	6A	17	18	62	48	44	48	619	745
	Total of Averages	220	145	552	338	547	328	7,685	4,802
	Percent Total	2.93%		7.13%		7.01%		12,486	
	Percent Day	60%	40%	62%	38%	63%	37%		

Source : Walter H. Keller, Inc.

The hourly external distribution of trips at the access points of Mizner Park have been graphed (see Figure 17) along with distribution of trips at individual uses such as garages, bank drive-thru, and the traffic distribution along the adjacent streets of Federal Highway and Mizner Boulevard. The center loadings are heavily influenced by the site's retail - commercial oriented land uses resulting in traffic growth increasing during the day.

Mizner Trip Generation - Using ITE Procedures

Table 27 summarizes the number of external site trips which would be estimated using the ITE Trip Generation Procedures, and segregating the site land uses. Table 27 stratified the office space into the following uses: law, securities, medical, vacant and other. The total square footage of commercial oriented uses was segregated into the following uses: retail, restaurant, fast-food restaurant and vacant. The residential apartment use was separated by the number of unit types. ITE rates for each sub category were then used to estimate the trip generation characteristics.

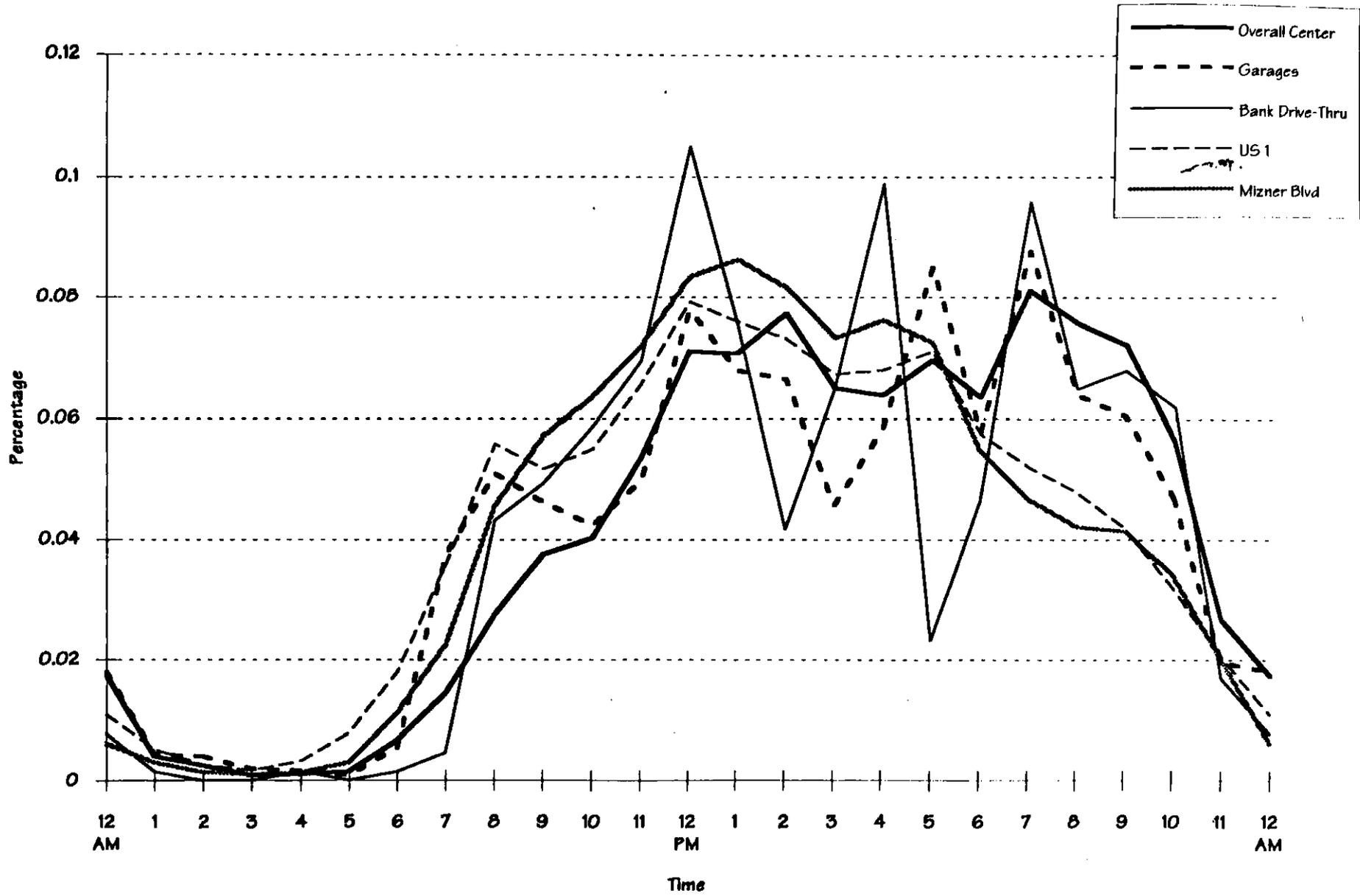
An aggregated projection of trips was also developed using ITE rates for aggregated uses (see Table 28). The aggregated uses are as follows: office, commercial, movie theater and residential (apartment) uses. The aggregated analysis is based on occupied floor area and dwelling units only.

Galleria Area Trip Generation - Machine Counts

The Galleria Area includes the land area south of Sunrise Boulevard between the Intracoastal Waterway and the Middle River. The Galleria Area has nine (9) access points (see Figure 18). Three (3) access points are intersecting streets including: Middle River Drive, Bayview Drive and NE 26th Avenue. All of these access points have full median openings and are signalized. Five (5) additional driveways provide right turn in and right turn out access in and out of the Galleria Shopping Center. The final access has a directional median opening on Sunrise Boulevard just west of the Intracoastal Waterway bridge allowing westbound left-turn, right in, and right out movements. This access point provides access to the Guest Suites Hotel, the Galleria Cinema and McDonald's Restaurant.

The results of the driveway machine counts, including manual adjustments, are provided in Table 29. As noted in Table 29, the traditional AM peak hour was 4.2% of the daily

Figure 20: Mizner Park - % Loading by Use



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Table 27 - Mizner Park Disaggregate Trip Generation Estimate

ITE Code	Land Use	Size	% Occup	Unit	Daily Trip	AM PK Hr In	AM PK Hr Out	PM Pk Hr In	PM Pk Hr Out
	<u>Office Uses</u>	88,279		SF					
710	Law	11,403	100%	SF	272	31	4	6	31
710	Securities	28,193	100%	SF	539	64	8	12	61
720	Medical	10,724	100%	SF	263	34	10	12	29
710	Other	37,959	100%	SF	675	80	10	15	76
	Total				1,748	209	32	47	196
	<u>Commercial</u>	162,743		SF					
814	Retail	86,632	100%	SF	3,523	267	289	243	184
911/912	Bank w/Drive Thru	3,653	100%	SF	1,001	19	15	77	83
831	Restaurant	29,697	100%	SF	2,384	26	2	159	68
444	Movie Theater*	31,000	100%	SF	1,227	38	38	105	47
	Vacant	11,761		SF					
	Total				8,136	349	343	584	382
	<u>Residential</u>	136		Apts					
223	1 bdrm	995/ 48	100%	Du's					
223	2 bdrm/1 bath	1,145/ 16	100%	Du's					
223	2 bdrm/2 bath	1,200/ 56	100%	Du's					
223	3 bdrm/2 bath	1,695/ 16	100%	Du's					
	Total				846	12	58	58	27
	Total				10,730	570	433	689	605

Source: Walter H. Keller, Inc.

* - with 8 screens

Marda L. Zimring, Inc.

ITE Trip Generation, 5th Edition

Table 28 - Mizner Park Aggregate Trip Generation Estimate

ITE Code	Land Use	Size	% Occup	Unit	Daily Trip	AM PK Hr In	AM PK Hr Out	PM Pk Hr In	PM Pk Hr Out
710	Office Uses	88,279	100%	SF	1,277	154	19	29	141
820	Commercial	131,743	91.07%	SF	8,396	120	71	391	391
444	Movie Theater	8	100%	Screens	1,227	38	38	105	47
223	Residential	136	100%	Apts	846	12	58	58	27
	Total				11,746	325	186	583	606

Source: Walter H. Keller, Inc.

Marda L. Zimring, Inc.

ITE Trip Generation, 5th Edition

generation, the Midday peak hour was 8.5% of the daily generation and the PM peak hour was 8.1% of the daily generation. The average daily external traffic associated with the Galleria Area was 22,971 vehicle trips per day.

The hourly external distribution of trips at the access points to the Galleria Area have been graphed (see Figure 20) along with the distribution of trips at individual uses such as the Galleria Shopping Center entrances, the Guest Suites Hotel/ McDonald's, the single family area, the main entry roadways, and the traffic distribution along Sunrise Boulevard. The center loadings are only reflective of a retail - commercial oriented site with the traffic growth increasing during the day. The Galleria area loadings are heavily influenced by the Galleria Mall's land uses resulting in traffic growth increasing during the day.

Galleria Area Trip Generation - Using ITE Procedures

Table 30 summarizes the number of external site trips which would be estimated using the ITE Trip Generation Procedures, and segregating the site land uses. Table 30 stratifies the office space into the following uses: law, securities, medical, vacant and other. The total square footage of commercial oriented uses was segregated into the following uses: retail, banking, restaurant, movie theater and vacant. The residential uses were grouped into single family, apartment, high-rise apartment and hotel rooms. ITE rates for each sub category were then used to estimate the trip generation characteristics. Table 31 provides a trip generation estimate with partial disaggregation of land uses.

An aggregated projection of trips was also developed using ITE rates for aggregated uses (see Table 32). The aggregated uses are as follows: office, commercial and residential. The aggregated analysis is based on occupied floor area and occupied residential units only.

Significant differences existed between the machine traffic counts and the estimated ITE trip generation (22,819 vpd versus approximately 41,600 vpd with lowest estimate). Review of the machine counts and the floor area estimates did not reveal any obvious problem which would cause such a major difference. The largest generator in this area is the Galleria Shopping Mall which should account for approximately 78% of all trips according to the trip generation estimates. Using the pedestrian counts taken in the Midday and PM peak hour periods, however, the traffic counts were found to be reflective of true conditions and accurate.

Table 29 - Galleria Driveway Counts

Location	Date	AM PK 8 - 9		Mid Day 12 - 1		PM PK 5 - 6		Daily	
		In	Out	In	Out	In	Out	In	Out
2	Tues 8/23/94	245	79	272	228	154	268	2,755	2,842
	Wed 8/24/94	270	94	254	269	191	343	2,835	2,945
	Thurs 8/25/94	198	75	282	240	187	343	2,807	2,747
	Fri 8/26/94	244	87	333	354	194	350	2,872	3,031
	Sat 8/27/94	98	34	232	246	151	272	2,529	2,782
3A	Tues 8/23/94	9		82		73		658	
	Wed 8/24/94	0		105		69		742	
	Thurs 8/25/94	0		101		78		738	
	Fri 8/26/94	0		87		84		794	
	Sat 8/27/94	7		139		90		1,281	
	Sun 8/28/94	0		123		32		733	
	Mon 8/29/94	0		78		65		671	
	Tue 8/30/94	0		80		76		721	
	Wed 8/31/94	0		92		54		655	
3B	Mon 8/29/94		0		44		45		410
	Tue 8/30/94		0		28		43		357
	Wed 8/31/94		0		40		33		349
4	Tues 8/23/94	154	50	309	235	202	289	3,018	3,391
	Wed 8/24/94	148	45	292	242	232	326	2,986	3,382
	Thurs 8/25/94	149	52	354	300	216	327	3,064	3,663
	Fri 8/26/94	126	177	346	278	274	294	3,348	3,572
	Sat 8/27/94	135	32	447	288	243	499	3,757	4,272
5	Tues 8/23/94	0	0	72	9	34	6	481	57
	Wed 8/24/94	0	0	60	4	38	2	505	39
	Thurs 8/25/94	6	0	75	0	125	4	658	52
	Fri 8/26/94	0	0	50	5	47	3	521	47
	Sat 8/27/94	0	0	58	5	45	7	617	53
5B	Tues 8/23/94	75		121		64		1,032	
	Wed 8/24/94	49		79		76		963	
	Thurs 8/25/94	45		93		60		953	
	Fri 8/26/94	44		77		76		933	
	Sat 8/27/94	45		83		59		1,034	
	Sun 8/28/94	0		64		28		451	
	Mon 8/29/94	17		66		50		541	
	Tue 8/30/94	28		41		42		504	
	Wed 8/31/94	27		52		43		496	
6	Mon 8/29/94		33		108		82		1,117
	Tue 8/30/94		22		62		101		1,032
	Wed 8/31/94		28		53		81		926

Table 29 - Galleria Driveway Counts (continued)

Location	Date	AM PK 8 - 9		Mid Day 12 - 1		PM PK 5 - 6		Daily	
		In	Out	In	Out	In	Out	In	Out
7	Tues 8/23/94	170	132	275	168	262	138	3,896	2,188
	Wed 8/24/94	184	123	272	168	307	142	3,940	2,096
	Thurs 8/25/94	168	126	258	188	289	146	3,727	2,350
	Fri 8/26/94	175	162	269	327	286	322	3,857	4,609
	Sat 8/27/94	176	166	369	448	396	448	5,699	6,559
	Sun 8/28/94	2	117	91	217	527	33	3,806	2,607
	Mon 8/29/94	235	100	338	128	320	167	4,464	2,106
	Tue 8/30/94	201	123	270	211	320	169	4,360	2,555
8A	Tues 8/23/94	39	20	54	26	45	16	829	283
	Wed 8/24/94	44	15	55	19	50	19	864	278
	Thurs 8/25/94	43	23	65	21	80	17	900	343
	Fri 8/26/94	63	22	52	13	57	33	1,042	324
	Sat 8/27/94	35	15	65	20	57	16	1,158	390
	Sun 8/28/94	27	16	44	24	42	26	902	399
	Mon 8/29/94	40	9	42	18	40	8	793	279
	Tue 8/30/94	36	13	44	13	48	16	745	255
Wed 8/31/94	47	20	48	13	56	15	826	306	
Averages*	2	238	83	269	246	177	318	2,799	2,845
	3A	2		92		70		703	
	3B		0		34		38		353
	4	150	49	318	259	217	314	3,023	3,479
	5	2	0	69	4	66	4	548	49
	5B	45		77		57		790	
	6		25		58		91		979
	7	181	126	269	184	295	149	3,981	2,297
8A	42	18	53	18	56	17	833	293	
	Total of Averages	659	301	1,148	803	937	930	12,676	10,295
	Percent Total	4.18%		8.49%		8.13%		22,971	
	Percent Day	69%	31%	59%	41%	50%	50%		

Source : Walter H. Keller, Inc.

*Averages based on Tues, Wed, Thurs

Figure 21: Galleria - % Loading by Use

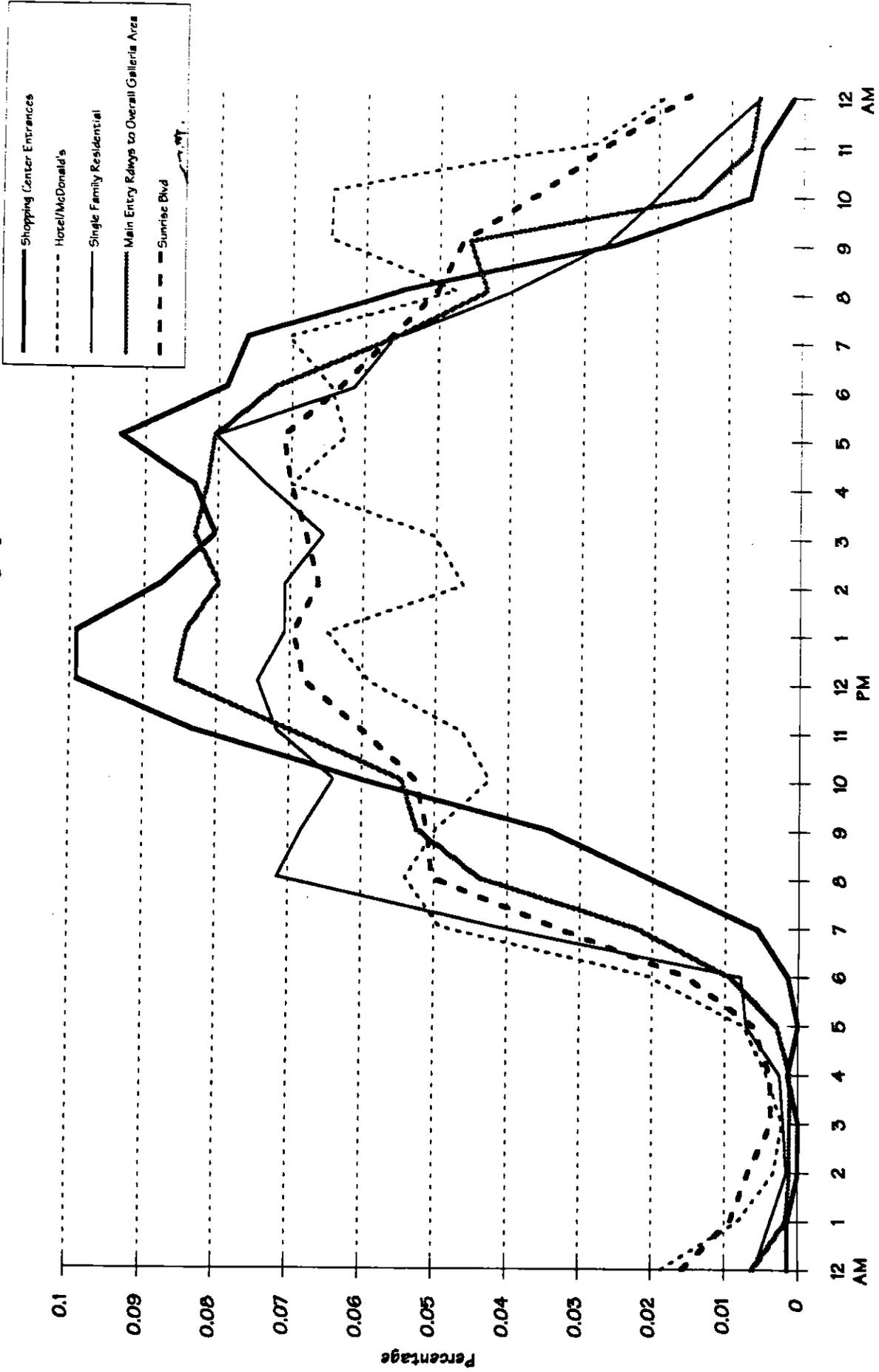


Table 30 - Galleria Area Disaggregate Trip Generation Estimate

ITE Code	Address	Land Use	Size	% Occup	Unit	Daily Trip	AM PK Hr		PM PK Hr	
							In	Out	In	Out
Office Uses										
720	918	Medical office	3,250	100%	SF	64	22	6	4	9
720	908	Medical office	2,600	100%	SF	50	21	6	3	7
720	2540	Medical office	7,000	100%	SF	159	28	8	8	19
720	2600	Medical office	2,040	100%	SF	37	20	6	2	5
720	2330	Medical office	2,400	100%	SF	45	20	6	3	6
720	2300	Medical office	4,200	100%	SF	87	23	7	5	11
710	2404	Law Office	3,850	100%	SF	120	14	2	3	14
710	915	general office	52,500	100%	SF	862	103	13	20	96
710	900	media production	8,450	100%	SF	217	25	3	5	25
710	2310	personal service	800	100%	SF	36	4	0	1	4
	915	Vacant Offices(4 loc)	33,850		SF					
		Total				1,677	279	58	53	196
Residential										
220	925	Apartment	16	50%	Du's	46	1	6	4	2
220	915	Apartment	12	50%	Du's	35	1	5	3	1
220	907	Apartment	10	50%	Du's	29	1	5	3	1
220	901	Apartment	6	50%	Du's	17	1	4	2	1
220	900	Apartment	16	35%	Du's	32	1	5	3	1
220	900	Apartment	16	35%	Du's	32	1	5	3	1
220	815	Apartment	54	65%	Du's	211	4	17	16	8
220	2310	Apartment	10	65%	Du's	38	1	5	3	2
220	2340	Apartment	30	65%	Du's	116	2	11	10	4
220	2352	Apartment	12	65%	Du's	45	1	6	4	2
220	2400	Apartment	24	65%	Du's	92	2	9	8	4
220	2424	Apartment	36	65%	Du's	140	3	12	11	5
220	2500	Apartment	36	65%	Du's	140	3	12	11	5
220	936	Apartment	152	35%	Du's	324	5	24	24	11
220	888	Apartment	100	35%	Du's	211	3	17	16	8
230	2510	Townhouses	4	75%	Du's	33	1	4	2	1
230	2520	Townhouses	4	75%	Du's	33	1	4	2	1
		Single Family	184	97.5%	Du's	1,768	35	99	119	64
		Total				3,341	66	252	246	124
Commercial										
			50,400		SF					
444		Movie Theater (4 screens)	29,000	100%	SF	613	19	19	53	24
834		Fast Food (McDonald's)	5,600	100%	SF	3,540	159	152	106	98
912		Bank w/Drive Thru	3,400	100%	SF	962	18	14	71	77
820		Retail	5,400	100%	SF	620	18	11	34	34
		Vacant	7,000		SF					
		Total				5,734	214	196	264	233
Hotel										
310		Rooms	229	72.5%	Rooms	1,402	60	40	67	57
		The Galleria	1,115,575		SF					
820		Retail	974,378	100%	SF	31,465	391	230	1,456	1,456
710		Medical Offices	7,330	100%	SF	168	28	8	8	19
710		Securities Offices	5,719	100%	SF	161	18	2	4	19
710		Other Offices	3,707	100%	SF	116	13	2	3	14
912		Banking	6,756	100%	SF	1,415	31	24	141	153
834		Fast Food	9,685	100%	SF	6,122	274	264	184	170
820		Vacant Retail	108,000		SF					
		Total				39,448	757	530	1,796	1,830
		Total				51,603	1,375	1,077	2,425	2,440

Source: Walter H. Keller, Inc. & Marda L. Zimring, Inc.
ITE Trip Generation, 5th Edition

Table 31 - Galleria Area Partial Disaggregate Trip Generation Estimate

ITE Code	Land Use	Size	% Occup	Unit	Daily Trip	AM PK Hr In	Out	PM Pk Hr In	Out
710	Office Uses	120,940							
	General Offices	99,450	66.0%	SF	1,020	122	15	23	113
	Medical Offices	21,490	100%	SF	596	51	15	25	58
	Total				1,616	174	30	48	171
820	Commercial	1,161,975		SF					
	Movie Theater (4 screens)	29,000	100%	SF	613	19	19	53	24
	Fast Food	5,600	100%	SF	3,540	159	152	106	98
	Retail	12,400	43.5%	SF	620	18	11	34	34
	Bank w/Drive Thru	3,400	100%	SF	962	18	14	71	77
	Galleria Shopping Center	1,111,575	90.3%	SF	32,185	398	234	1,487	1,487
820	Total			SF	37,919	612	430	1,751	1,720
210	Residential	722		Du's					
	Single Family	184	97.5%	Du's	1,768	35	99	119	64
232	Apartment	286	59.6%	Du's	802	13	56	48	29
222	High-Rise Apartment	252	35.0%	Du's	401	7	20	20	13
	Total				2,972	55	175	187	106
310	Hotel								
	Rooms	229	73%	Rooms	1,402	60	40	67	57
	Total				43,910	900	675	2,054	2,055

Source: Walter H. Keller, Inc. & Marda L. Zimring, Inc.
ITE Trip Generation, 5th Edition

Table 32 - Galleria Area Aggregate Trip Generation Estimate

ITE Code	Land Use	Size	% Occup	Unit	Daily Trip	AM PK Hr In	Out	PM Pk Hr In	Out
710	Office Uses	120,940	72.01%	SF	1,264	153	19	29	139
820	Commercial Uses	1,136,975	89.89%	SF	32,622	402	236	1,507	1,507
444	Movie Theater (4 screens)	29,000	100%	SF	613	19	19	53	24
210	Residential - Single Family	184	97.5%	Du's	1,768	35	99	119	64
232	Residential - Apartment	286	59.6%	Du's	802	13	56	48	29
222	Residential - High Rise Apartment	252	35.0%	Du's	401	7	20	20	13
310	Hotel - Occupied Rooms	229	72.5%	Rooms	1,402	60	40	67	57
	Total				38,873	688	489	1,842	1,833

Source: Walter H. Keller, Inc.
Marda L. Zimring, Inc.
ITE Trip Generation, 5th Edition

Table 33 summarizes the pedestrian counts at the Galleria Mall during the data collection period. These numbers were developed from the manual counts of Galleria Mall entrances. A trip generation estimate was then developed utilizing the auto occupancy information collected on site. The auto occupancy rate was divided into the pedestrian count to arrive at an estimate of external vehicles during the survey period. For the Galleria Mall, an estimated 5,378 vehicles were estimated for the time frame during which the pedestrian count data was collected.

Table 34 identifies the estimated hourly trip generation loading for a regional mall from the ITE Trip Generation Handbook - 5th Edition. This analysis (see Table 34) indicates that regional shopping centers in general have 33.7% of their 24 hour loading during the hours which the pedestrian count data was collected. Table 34 further identifies the estimated 24 hour trip generation and the adjustment results considering the day of the week and month (based on ITE). Based on ITE estimates, Galleria Mall should have 10,573 vehicle trips during the pedestrian count period per the square footage of the center. However, because the center pedestrian count estimate is 5,378, it was concluded that the center is producing approximately 51% of the trips that would normally be expected for a center of this size. As a result, it was further concluded that the traffic count data was accurate.

Discussions were held with the Galleria Mall Management Company to review the trip generation findings and to ascertain possible reasons for the lower trip generation rate. The Management Company indicated the Mall does produce less traffic than average due to the higher expenditure rate of the Mall's customers. Management personnel indicate the Mall generates a per customer expenditure almost three (3) times higher than the national average.

Table 33 - Galleria Shopping Mall - Pedestrian Counts

Time Period	Auto Occupancy		
	In Bound	Out Bound	
Average 2 days AM	1.42	1.36	
Average 2 days PM	1.45	1.37	
Time Period	Ped Counts (Person Trips)		
	In Bound	Out Bound	
Avg of 2 Days 11:30-1:45	257	135	
Avg of 2 Days 11:45-12:00	292	164	
Avg of 2 Days 12:00-12:15	333	194	
Avg of 2 Days 12:15-12:30	313	191	
Avg of 2 Days 12:30-12:45	291	189	
Avg of 2 Days 12:45-1:00	261	267	
Avg of 2 Days 1:00-1:15	289	239	
Avg of 2 Days 1:15-1:30	306	251	
Avg of 2 Days 4:30-4:45	227	253	
Avg of 2 Days 4:45-5:00	194	233	
Avg of 2 Days 5:00-5:15	224	236	
Avg of 2 Days 5:15-5:30	193	216	
Avg of 2 Days 5:30-5:45	222	215	
Avg of 2 Days 5:45-6:00	239	223	
Avg of 2 Days 6:00-6:15	254	242	
Avg of 2 Days 6:15-6:30	216	194	
Time Period	Vehicle Trips		
	In Bound	Out Bound	Total
Avg of 2 Days 11:30-1:45	181	99	280
Avg of 2 Days 11:45-12:00	205	120	325
Avg of 2 Days 12:00-12:15	234	142	377
Avg of 2 Days 12:15-12:30	220	140	360
Avg of 2 Days 12:30-12:45	204	138	343
Avg of 2 Days 12:45-1:00	184	196	379
Avg of 2 Days 1:00-1:15	203	175	379
Avg of 2 Days 1:15-1:30	215	184	399
Avg of 2 Days 4:30-4:45	156	184	341
Avg of 2 Days 4:45-5:00	134	170	303
Avg of 2 Days 5:00-5:15	154	172	326
Avg of 2 Days 5:15-5:30	133	157	290
Avg of 2 Days 5:30-5:45	153	156	309
Avg of 2 Days 5:45-6:00	164	162	327
Avg of 2 Days 6:00-6:15	175	176	351
Avg of 2 Days 6:15-6:30	149	141	290
Est Veh Trips/Ped Cnts =			5,378

Source: Walter H. Keller, Inc.

Table 34 - Galleria Shopping Mall - Pedestrian Traffic Estimate

ITE Reg Shopping Center Hrly Traffic Loadings			
Time	In	Out	Total
11 - 12 AM	8.6%	5.9%	
12 - 1PM	9.5%	7.9%	
1 - 2 PM	8.7%	8.2%	
4 - 5 PM	8.2%	9.1%	
5 - 6 PM	8.3%	9.5%	
6 - 7 PM	7.8%	7.7%	
11:30 AM-1:30 PM & 4:30 PM-7:30 PM Total	34.5%	32.9%	33.7%
ITE Reg Shopping Center Daily Traffic Estimate			
	24 Hour Ext Traffic Estimate =		32,275
	Adj for Day & Month =		31,420
	Estimated Traffic for Ped Count Time Frame =		10,573
Ped Count Est % of ITE Estimate			
	Ped Count Veh Traffic Estimate (Tab 10) =		5,378
	ITE Vehicle Est for Ped Count Time Frame =		10,573
	Ped Count % of ITE Estimate =		50.87%

Source: Walter H. Keller, Inc.

Questionnaire Results

Overview of Questionnaire Analysis

A major component of the data collection effort for the Districtwide Trip Generation Study was collecting face to face questionnaire interviews with users and workers at the study sites. At each site, face to face interviews were collected over a two (2) day period during the Midday (10:00 AM - 2:00 PM) and PM peak hour (3:00 PM- 6:30 PM) time frames. The questionnaires were based on questions relative to major trip purpose, major destination, additional destinations, the origin and destination of the trip, mode and demographic profile. The questionnaire was based on the recommended procedures as outlined in the ITE Trip Generation Report - 5th Edition for mixed use sites. A total of 2,189 interviews were collected. The actual tabulation of the interviews can be found in Technical Report 3.0 along with the preliminary tabulations of the findings. This report provides final tabulation of the survey results for each study site based upon final review and editing.

In addition to providing information on trip purposes and destinations, the questionnaire results were also utilized to estimate the amount of internalization, pass-by characteristics, and diverted trips.

Crocker Center Questionnaire Results

A total of 650 interviews were completed during the two (2) day survey periods at Crocker Center. Table 35 provides a tabulation of the questionnaire results. In general, the majority of trip purposes were for work (42%), followed by eating (25%). The majority of trip destinations were office (39%), followed by restaurant (33%). The majority of origins came from the home (62%), with an off-site work location accounting for 18% of the trip origins. Three (3%) percent of all trips originated from the on-site Marriott Hotel.

The auto accounted for 97% of all trips, walking/biking accounted for 2% and no trips were by transit. Year round residents accounted for 91% of all respondents, tourists totaled 8%, and seasonal residents were 2% of the people surveyed.

Internalization

A screening procedure was utilized to identify the amount of internalization. In this procedure, the survey results were first grouped into users and workers at the center,

Table 35 - Crocker Center Questionnaire Results

Question 1: What is your major purpose for coming to Crocker Center?

Work	Shop	Eat	Personal Service	Conduct Business	Lodging	Live Here	Browse	Cinema	Other
41.7%	9.1%	24.8%	6.3%	10.3%	2.0%	0.2%	3.7%	0.0%	2.0%

Question 2: What is your major destination here?

Office	Retail	Restaurant	Bank/ S&L ATM	Medical/ Dental	Hotel/ Motel	SFH	MFH	Cinema	Other
39.4%	19.6%	32.8%	1.4%	2.3%	4.2%	0.0%	0.0%	0.0%	30.8%

Question 3: Which other types of buildings or establishments have you visited or intend to visit here today?

Office	Retail	Restaurant	Bank/ S&L ATM	Medical/ Dental	Hotel/ Motel	SFH	MFH	Cinema	Other	None
6.5%	17.2%	34.0%	0.9%	0.0%	0.6%	0.0%	0.0%	0.0%	0.5%	40.3%

no additional destinations	one additional destination	two additional destinations	three additional destinations	four or more additional destinations
40.3%	59.7%	14.8%	2.6%	0.9%

Question 4: Where did you come from before arriving at Crocker Center today?

Live/ Stay Crocker Center	Off-site Home	Off-site Work	Off-site Hotel/ Motel	Off-site Store/ Office	Other
2.7%	62.4%	17.8%	1.4%	3.8%	11.9%

Question 6: Was this stop along your normal route or did you deviate from your normal route to come here?

Normal Route	Deviation from Route
71.4%	28.6%

Table 35 - Crocker Center Questionnaire Results

(Continued)

Question 7: Where will you go immediately after leaving Crocker Center?

Home	Work	Hotel/ Motel	Retail Stores	Office	Other
57.8%	13.1%	2.3%	7.7%	4.2%	14.9%

Question 10: What mode of travel did you use to get here?

Automobile/ Van	Transit Bus	Motor Cycle Scooter	Taxi	Local Tram	Bicycle	Walk	Other
96.6%	0.3%	0.0%	1.1%	0.0%	0.5%	1.1%	0.3%

Question 11: What mode of travel will you use to leave here?

Automobile/ Van	Transit Bus	Motor Cycle Scooter	Taxi	Local Tram	Bicycle	Walk	Other
96.4%	0.6%	0.0%	1.1%	0.0%	0.5%	1.1%	0.3%

Question 12: If you arrived by automobile, which of these applies?

Driver	Passenger
91.4%	8.6%

Question 13: Which of these statements best describes you?

Live in SF 6 months +	Live in SF 3-5 months	Tourist
90.7%	1.5%	7.7%

Question 14: Age?

Under 24	25-44	45-54	55-64	65+
9.6%	50.0%	17.5%	13.8%	9.1%

Table 35 - Crocker Center Questionnaire Results

(Continued)

Question 15: Occupation?

Employed	Retired	Homemaker	Student	Unemployed
73.7%	12.4%	6.4%	5.3%	2.0%

Question 16: Household Income?

Under 25 K	25-50 K	50-75 K	75-100 K	100 K +
10.6%	28.3%	24.9%	12.5%	23.6%

Question 17: Size of Household?

One	Two	Three	Four	Five +
20.2%	38.1%	16.6%	18.9%	39.0%

Question 18: Number of vehicles in household?

None	One	Two	Three	Four	Five +
0.3%	27.8%	52.8%	10.8%	5.7%	2.5%

Question 19: Type of housing here?

Single Family	Duplex	Townhouse	Mobile Home	Hotel/ Motel	Apt/ Condo 1-3 Stories	Apt/ Condo > 3 Stories
58.0%	3.6%	11.4%	0.8%	14.8%	9.2%	2.2%

and then sorted by primary trip purpose. The surveys were then sorted into subgroups based on the number of internal visits which the individual made.

Three levels of stratification were used to describe the site's major uses. The first level is broken into the least number of uses: office, commercial, hotel, other and browse. The next level of stratification separates the commercial use into retail and restaurant. The final level of stratification separates the restaurant uses into sit-down and fast food.

Tables 36 - 38 identify the internalization results for Crocker Center. In general, users visiting the site make one internal trip for every secondary visit. Workers, on the other hand, generally return to their place of employment after visiting a secondary use; thereby making two internal trips. This is not always the case for a worker, however, since some secondary visits may be made after leaving one's place of employment for the day (or prior to arriving to work for the day). As such, it was assumed that the first secondary visit made by a worker will generate 1.5 internal trips, and every secondary visit made thereafter by a user, will generate 1.0 internal trip. All external primary visits (by their nature) generate 2.0 external trips (inbound and out bound). Figure 7 has been prepared to illustrate the trip end characteristics of external and internal trips.

Tables 36 - 38 reveal that of the 1,300 external person trips generated by the Crocker Center, 907 additional internal trips were produced. For users, 447 internal trips were produced and 758 primary trips. For workers, 460 internal trips were produced and 542 primary trips.

Pass-by Trips

An additional screening process was utilized to identify the amount of pass-by trips attracted to Crocker Center. The following criteria were used to determine pass-by trips:

- the major trip purpose was to shop, eat a meal, personal service to conduct business or to browse ;
- the major trip destination was to an office, retail, restaurant or financial type use ;
- the trip origin was off-site;
- the trip was made by an automobile/van ; and,
- the trip could not have the same origin and destination.

Table 36 - Crocker Center Internalization (1)
1st Stratification

Destination	Major Destination (5)	External Trips (2)	Destination +1	Internal Trips	Destination +2	Internal Trips	Destination +3	Internal Trips	Destination +4	Internal Trips	Total Internal Trips	% of Internal Trips	Live/ Stay Crocker
Users (3)													
Office	84	168	20	20	2	2	2	2			24	5.4%	14
Commercial	274	548	172	172	50	50	6	6			228	51.7%	
Hotel	19	38	2	2	2	2	1	1	5	5	10	2.2%	
Other	2	4	1	1							1	0.2%	
Browse			184	184							184	41.2%	
Sub-Total	379	758	379	379	54	54	9	9	5	5	447	100.0%	14
Workers (4)													
Office	196	392	28	42	4	4	2	2			48	10.4%	2
Commercial	67	134	161	242	32	32	5	5			279	60.6%	1
Hotel	8	16	2	3	7	7	2	2	1	1	13	2.8%	
Other			2	3							3	0.7%	
Browse			78	117							117	25.5%	
Sub-Total	271	542	271	407	43	43	9	9	1	1	460	100.0%	3
Total	650	1300	650	786	97	97	18	18	6	6	907		17

Source: Walter H. Keller, Inc.

- (1) Based on questionnaire population.
- (2) Primary purpose visits to the site generate two (2) external trips.
- (3) Secondary visits made by users of the site are assumed to generate one (1) internal trip.
- (4) Secondary visits made by workers at the site are assumed to generate 1.5 trips per visit for the first additional destination and then one (1) trip per destination for additional on-site destinations.
- (5) The major destination is the primary trip purpose.

**Table 37 - Crocker Center Internalization (1)
2nd Stratification**

Destination	Major Destination (5)	External Trips (2)	Destination +1	Internal Trips	Destination +2	Internal Trips	Destination +3	Internal Trips	Destination +4	Internal Trips	Total Internal Trips	% of Internal trips	Live/ Stay Crocker
Users (3)													14
Office	84	168	20	20	2	2	2	2			24	5.4%	
Retail	88	176	88	88	8	8	6	6			102	22.8%	
Restaurant	186	372	84	84	42	42					126	28.2%	
Hotel	19	38	2	2	2	2	1	1	5	5	10	2.2%	
Other	2	4	1	1							1	0.2%	
Browse			184	184							184	41.2%	
Sub-Total	379	758	379	379	54	54	9	9	5	5	447	100.0%	14
Workers (4)													
Office	196	392	28	42	4	4	2	2			48	10.4%	2
Retail	40	80	24	36	9	9					45	9.8%	
Restaurant	27	54	137	206	23	23	5	5			234	50.8%	1
Hotel	8	16	2	3	7	7	2	2	1	1	13	2.8%	
Other			2	3							3	0.7%	
Browse			78	117							117	25.5%	
Sub-Total	271	542	271	407	43	43	9	9	1	1	460	100.0%	3
Total	650	1300	650	786	97	97	18	18	6	6	907		17

Source: Walter H. Keller, Inc.

- (1) Based on questionnaire population.
- (2) Primary purpose visits to the site generate two (2) external trips.
- (3) Secondary visits made by users of the site are assumed to generate one (1) internal trip.
- (4) Secondary visits made by workers at the site are assumed to generate 1.5 trips per visit for the first additional destination and then one (1) trip per destination for additional on-site destinations.
- (5) The major destination is the primary trip purpose.

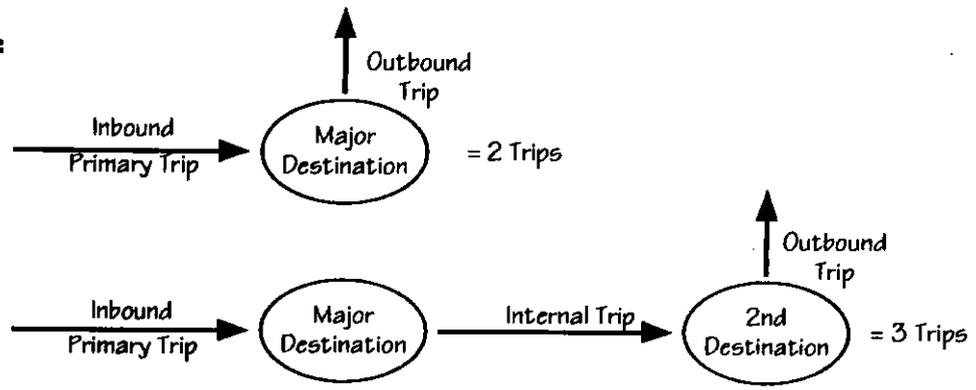
Table 38 - Crocker Center Internalization (1)
3rd Stratification

Destination	Major Destination (5)	External Trips (2)	Destination +1	Internal Trips	Destination +2	Internal Trips	Destination +3	Internal Trips	Destination +4	Internal Trips	Total Internal Trips	% of Internal Trips	Live/ Stay Crocker
<i>Users</i> (3)													14
Office	84	168	20	20	2	2	2	2			24	5.4%	
Retail	88	176	88	88	8	8	6	6			102	22.8%	
Restaurant-Sit Down	101	202	58	58	27	27					85	19.0%	
Restaurant- Fast Food	85	170	26	26	15	15					41	9.2%	
Hotel	19	38	2	2	2	2	1	1	5	5	10	2.2%	
Other	2	4	1	1							1	0.2%	
Browse			184	184							184	41.2%	
Sub-Total	379	758	379	379	54	54	9	9	5	5	447	100.0%	14
<i>Workers</i> (4)													
Office	196	392	28	42	4	4	2	2			48	10.4%	2
Retail	40	80	24	36	9	9					45	9.8%	
Restaurant-Sit Down	27	54	125	188	23	23	5	5			216	46.9%	1
Restaurant- Fast Food			12	18							18	3.9%	
Hotel	8	16	2	3	7	7	2	2	1	1	13	2.8%	
Other			2	3							3	0.7%	
Browse			78	117							117	25.5%	
Sub-Total	271	542	271	407	43	43	9	9	1	1	460	100.0%	3
Total	650	1300	650	786	97	97	18	18	6	6	907		17

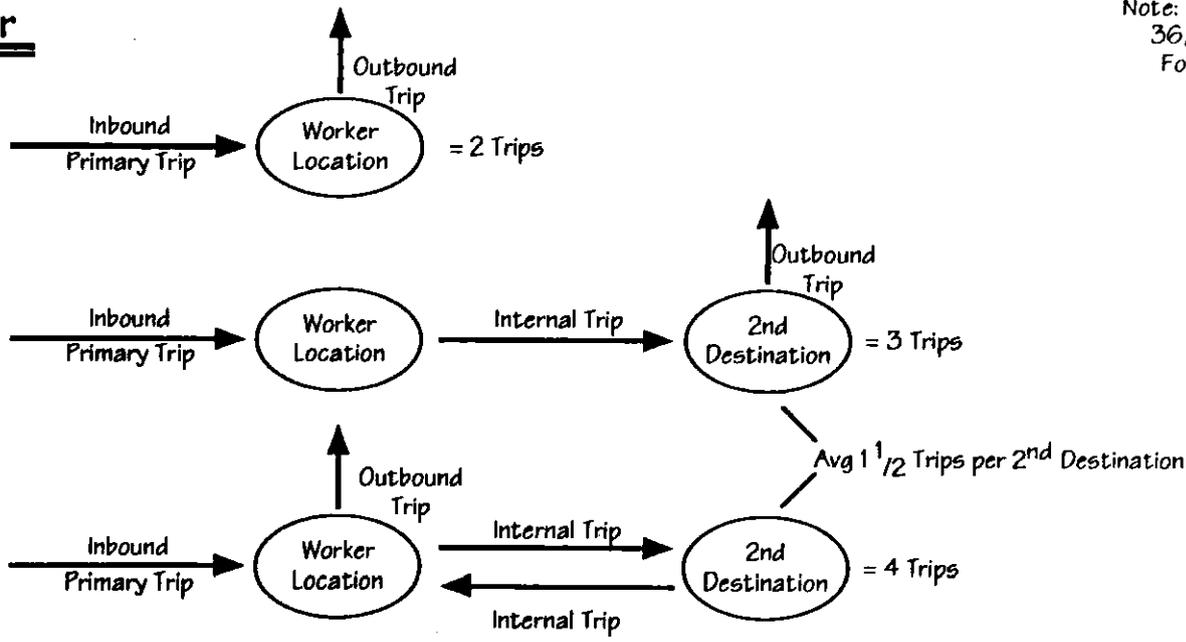
Source: Walter H. Keller, Inc.

- (1) Based on questionnaire population.
- (2) Primary purpose visits to the site generate two (2) external trips.
- (3) Secondary visits made by users of the site are assumed to generate one (1) internal trip.
- (4) Secondary visits made by workers at the site are assumed to generate 1.5 trips per visit for the first additional destination and then one (1) trip per destination for additional on-site destinations.
- (5) The major destination is the primary trip purpose.

User



Worker



Note: See Tables
36, 41 & 45
For Detail

Districtwide Trip Generation Study

Figure 22 - Internalization Methodology

Table 39, below, presents the result of the pass-by analysis. For Crocker Center, twenty-six (26%) percent of the respondents were estimated to be pass-by trips.

Table 39 - Crocker Pass-By (vehicle trips)

Crocker Center Pass-by Trips		
Land Use	Number	%
Retail	34	20.1%
Restaurant	81	47.9%
Personal Service	17	10.1%
Business	26	15.4%
Browse	11	6.5%
Total (Site Pass-by)	169	100.0%
Total (Site Respondent)	650	26.0%

Source: Walter H. Keller, Inc.

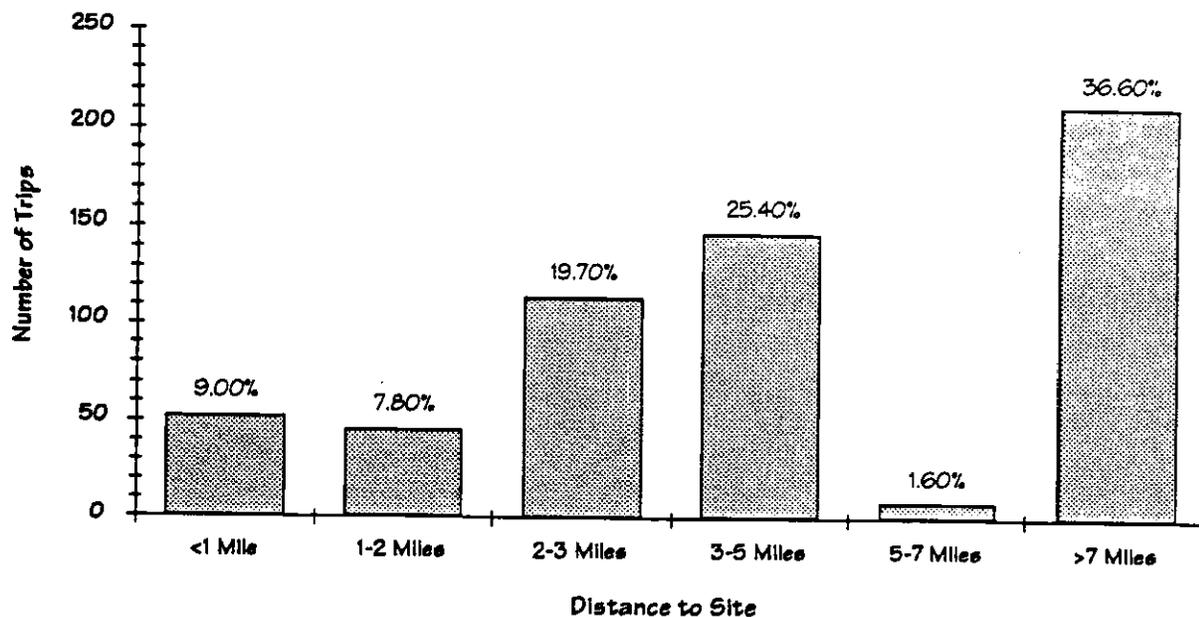
Trip Length

Each questionnaire respondent was asked to identify the trip origin and destination location. This information was processed to identify the distribution of trips from the site and the cumulative distribution of trips. Figures 23 - 24 provide a graphic representation of the trip distribution. Figure 23 provides a bar chart of the distribution of total trip lengths and the cumulative distribution. Figure 24 illustrates the trip distribution in radial miles around the site.

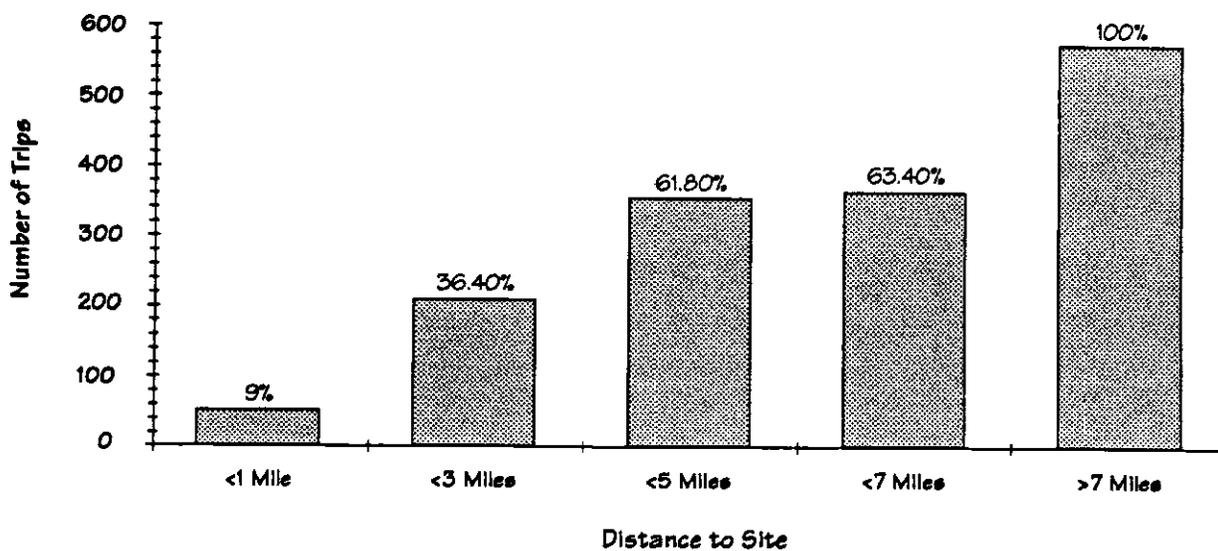
Mizner Park Questionnaire Results

A total of 720 interviews were completed during the two (2) day survey period at Mizner Park. Table 40 provides a tabulation of the questionnaire results. In general, the majority of trip purposes were for shopping (29%), followed by work (17%). The majority of trip destinations were retail (49%), followed by restaurant (22%). The majority of trip origins came from the home (61%), with off-site work location accounting for 12% of the trip origins. Three (3%) percent of all trips originated from the on-site apartments.

Distribution of Total Trip Lengths

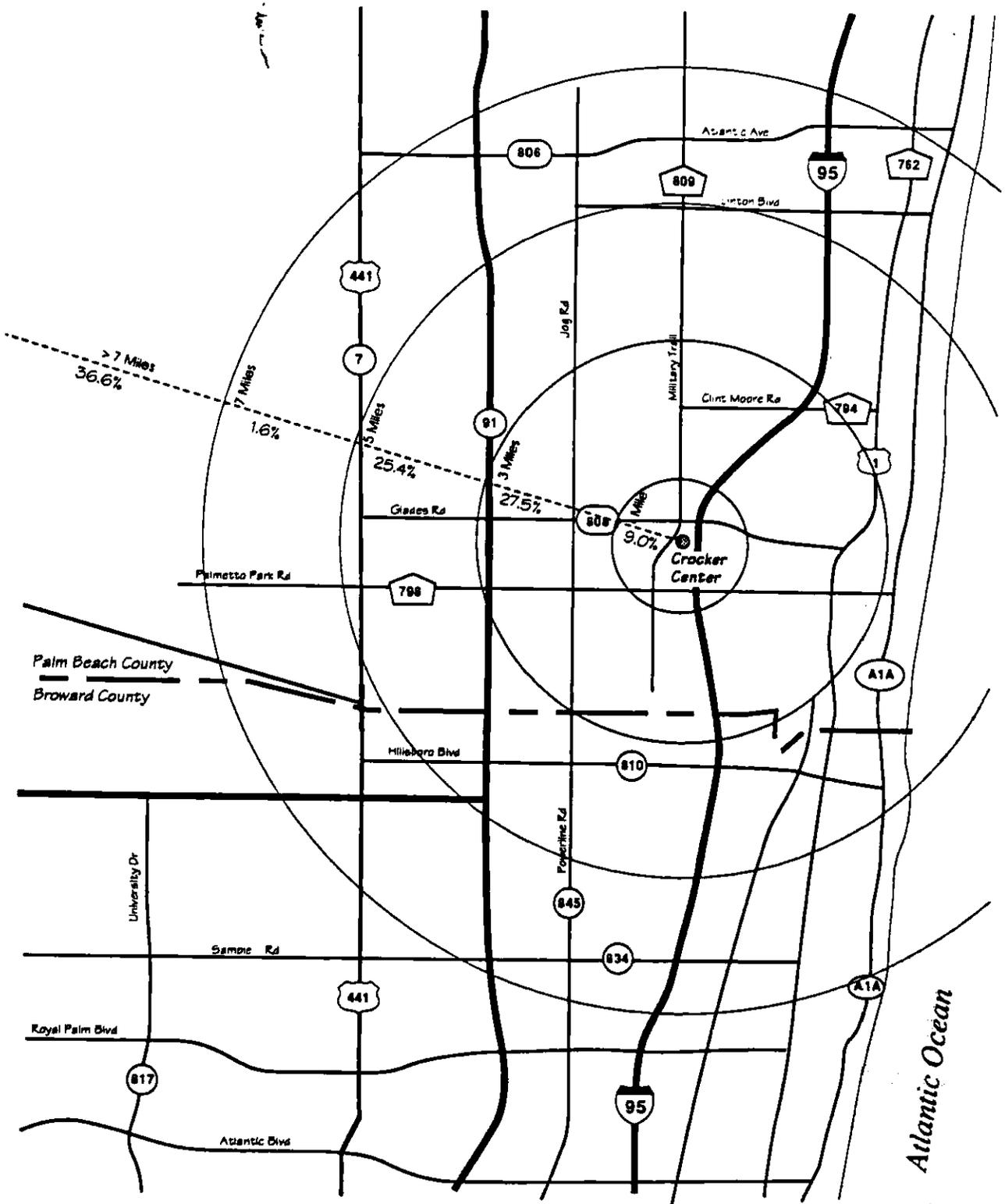


Cumulative Distribution of Total Trip Lengths



Districtwide Trip Generation Study

Figure 23 - Crocker Center Site



Districtwide Trip Generation Study

Figure 24 - Crocker Center Site, Trip Length Distribution



Table 40 - Mizner Park Questionnaire Results

Question 1: What is your major purpose for coming to Mizner Park?

Work	Shop	Eat	Personal Service	Conduct Business	Lodging	Live Here	Browse	Cinema	Other
17.2%	28.5%	15.6%	6.5%	4.9%	0.0%	2.6%	14.4%	9.4%	0.6%

Question 2: What is your major destination here?

Office	Retail	Restaurant	Bank/ S&L ATM	Medical/ Dental	Hotel/ Motel	SFH	MFH	Cinema	Other	Browse
8.8%	49.2%	21.5%	2.8%	1.5%	0.0%	0.0%	1.7%	9.9%	2.2%	2.5%

Question 3: Which other types of buildings or establishments have you visited or intend to visit here today?

Office	Retail	Restaurant	Bank/ S&L ATM	Medical/ Dental	Hotel/ Motel	SFH	MFH	Cinema	Other	None
1.5%	38.9%	26.3%	2.5%	0.4%	0.0%	0.0%	0.3%	1.0%	1.7%	27.5%

no additional destinations	one additional destination	two additional destinations	three additional destinations	four or more additional destinations
27.5%	72.5%	20.6%	3.6%	0.7%

Question 4: Where did you come from before arriving at Mizner Park today?

Live/ Stay Mizner Park	Off-site Home	Off-site Work	Off-site Hotel/ Motel	Off-site Store/ Office	Other
3.2%	61.4%	12.2%	5.6%	7.9%	9.7%

Question 6: Was this stop along your normal route or did you deviate from your normal route to come here?

Normal Route	Deviation from Route
51.6%	48.4%

Table 40 - Mizner Park Questionnaire Results

(Continued)

Question 7: Where will you go immediately after leaving Mizner Park?

Home	Work	Hotel/ Motel	Retail Stores	Office	Other
57.4%	7.8%	5.3%	11.0%	2.5%	16.1%

Question 10: What mode of travel did you use to get here?

Automobile/ Van	Transit Bus	Motor Cycle Scooter	Taxi	Local Tram	Bicycle	Walk	Other
91.6%	2.1%	0.0%	0.3%	0.1%	2.0%	3.9%	0.0%

Question 11: What mode of travel will you use to leave here?

Automobile/ Van	Transit Bus	Motor Cycle Scooter	Taxi	Local Tram	Bicycle	Walk	Other
96.4%	0.6%	0.0%	1.1%	0.0%	0.5%	1.1%	0.3%

Question 12: If you arrived by automobile, which of these applies?

Driver	Passenger
85.0%	15.0%

Question 13: Which of these statements best describes you?

Live in SF 6 months +	Live in SF 3-5 months	Tourist
83.6%	3.9%	12.5%

Question 14: Age?

Under 24	25-44	45-54	55-64	65+
16.5%	40.8%	18.2%	11.7%	12.8%

Table 40 - Mizner Park Questionnaire Results

(Continued)

Question 15: Occupation?

Employed	Retired	Homemaker	Student	Unemployed
66.2%	17.0%	7.0%	8.1%	1.7%

Question 16: Household Income?

Under 25 K	25-50 K	50-75 K	75-100 K	100 K +
19.5%	25.7%	20.4%	12.3%	22.1%

Question 17: Size of Household?

One	Two	Three	Four	Five +
21.1%	38.5%	17.7%	16.0%	6.6%

Question 18: Number of vehicles in household?

None	One	Two	Three	Four	Five +
0.9%	27.7%	49.4%	16.2%	5.2%	0.6%

Question 19: Type of housing here?

Single Family	Duplex	Townhouse	Mobile Home	Hotel/ Motel	Apt/ Condo 1-3 Stories	Apt/ Condo > 3 Stories
52.8%	3.8%	11.0%	0.6%	12.9%	11.0%	8.0%

The auto accounted for 96% of all trips, walking/biking accounted for 2%, and 1% of all trips were by transit. Year round residents accounted for 84% of all respondents, tourists totaled 13%, and seasonal residents were 4% of the people surveyed.

Internalization

The same procedure which was used to determine the internalization for Crocker Center was followed for Mizner Park. However, only two stratifications were developed. These stratifications included the major land uses of office, commercial, multi-family residential, other and browse. The second stratification provides refined land uses within office and commercial uses. Tables 41 - 42 identify the Mizner Park internalization. This table also estimates the number of trips produced both internal and external.

Tables 41 - 42 reveal that of the 720 primary trips generated by the site, 1,440 external and 966 additional internal trips were produced. For users, 730 internal trips were produced and 596 primary trips. For workers, 236 internal trips were produced and 124 primary trips.

Pass-by Trips

Table 43 presents the result of the Mizner Park pass-by analysis. For Mizner Park, 29.2 percent of the respondents were estimated to be pass-by trips.

Table 41 - Mizner Park Internalization (1)
1st Stratification

Destination	Major Destination (5)	External Trips (2)	Destination +1	Internal Trips	Destination +2	Internal Trips	Destination +3	Internal Trips	Destination +4	Internal Trips	Total Internal Trips	% of Internal Trips	Live/ Stay Mizner
Users (3)													
Office	23	46	7	7	1	1					8	1.1%	
Commercial	531	1062	412	412	113	113	16	16	3	3	544	74.5%	
MFH	10	20	2	2	1	1					3	0.4%	
Other	14	28	11	11							11	1.5%	
Browse	18	36	164	164							164	22.5%	
Sub-Total	596	1192	596	596	115	115	16	16	3	3	730	100.0%	21
Workers (4)													
Office	51	102	7	11					1	1	12	4.9%	1
Commercial	69	138	82	123	27	27	18	18	4	4	172	72.9%	1
MFH	2	4									0	0.0%	
Other	2	4	1	2							2	0.6%	
Browse			34	51							51	21.6%	
Sub-Total	124	248	124	186	27	27	18	18	5	5	236	100.0%	2
Total	720	1440	720	782	142	142	34	34	8	8	966		23

Source: Walter H. Keller, Inc.

- (1) Based on questionnaire population.
- (2) Primary purpose visits to the site generate two (2) external trips.
- (3) Secondary visits made by users of the site are assumed to generate one (1) internal trip.
- (4) Secondary visits made by workers at the site are assumed to generate 1.5 trips per visit for the first additional destination and then one (1) trip per destination for additional on-site destinations.
- (5) The major destination is the primary trip purpose.

Table 42 - Mizner Park Internalization (1)
2nd Stratification

Destination	Major Destination (5)	External Trips (2)	Destination +1	Internal Trips	Destination +2	Internal Trips	Destination +3	Internal Trips	Destination +4	Internal Trips	Total Internal Trips	% of Internal Trips	Live/ Stay Mizner
Users (3)													21
Office-General	13	26	4	4							4	0.5%	
Office-Med/Dent	10	20	3	3	1	1					4	0.5%	
Retail	306	612	247	247	3	3					250	34.2%	
Restaurant-Sit Down	139	278	145	145	91	91	2	2			238	32.6%	
Bank w/ Drive Thru	17	34	13	13	3	3	4	4	2	2	22	3.0%	
Cinema-8 Screens	69	138	7	7	16	16	10	10	1	1	34	4.7%	
MFH	10	20	2	2	1	1					3	0.4%	
Other	14	28	11	11							11	1.5%	
Browse	18	36	164	164							164	22.5%	
Sub-Total	596	1192	596	596	115	115	16	16	3	3	730	100.0%	21
Workers (4)													
Office-General	50	100	7	11					1	1	12	4.9%	1
Office-Med/ Dent	1	2									0	0.0%	
Retail	48	96	33	50	2	2					52	21.8%	
Restaurant-Sit Down	16	32	44	66	21	21	10	10			97	41.1%	1
Bank w/ Drive Thru	3	6	5	8	1	1	4	4	2	2	15	6.1%	
Cinema-8 Screens	2	4			3	3	4	4	2	2	9	3.8%	
MFH	2	4									0	0.0%	
Other	2	4	1	2							2	0.6%	
Browse			34	51							51	21.6%	
Sub-Total	124	248	124	186	27	27	18	18	5	5	236	100.0%	2
Total	720	1440	720	782	142	142	34	34	8	8	966		23

Source: Walter H. Keller, Inc.

- (1) Based on questionnaire population.
- (2) Primary purpose visits to the site generate two (2) external trips.
- (3) Secondary visits made by users of the site are assumed to generate one (1) internal trip.
- (4) Secondary visits made by workers at the site are assumed to generate 1.5 trips per visit for the first additional destination and then one (1) trip per destination for additional on-site destinations.
- (5) The major destination is the primary trip purpose.

Table 43 - Mizner Pass-By (vehicle trips)

Mizner Park Pass-by Trips		
Land Use	Number	%
Retail	98	46.7%
Restaurant	41	19.5%
Personal Service	20	9.5%
Business	14	6.7%
Browse	37	17.6%
Total (Site Pass-by)	210	100.0%
Total (Site Respondents)	720	29.2%

Source: Walter H. Keller, Inc.

Trip Length

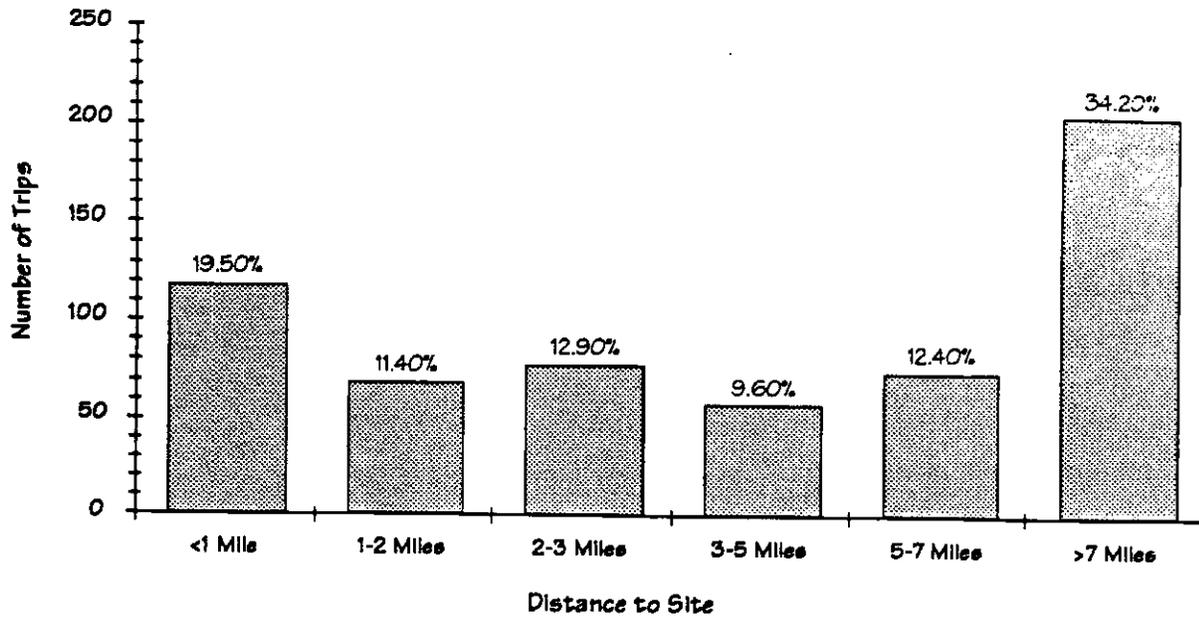
Figures 25 - 26 provide a graphic representation of the Mizner Park trip distribution. Figure 25 illustrates a bar chart of the distribution of total trip lengths and the cumulative distribution while Figure 26 depicts the trip distribution in radial miles around the site.

Galleria Area Questionnaire Results

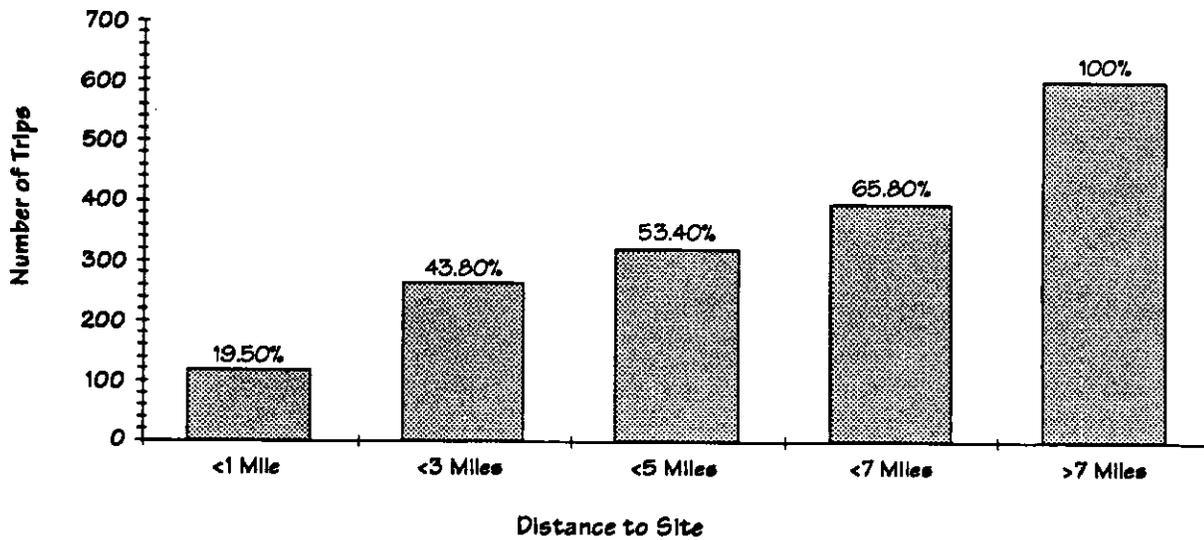
A total of 819 interviews were completed for the Galleria Area during the two (2) day survey period. Table 44 provides a tabulation of the questionnaire results. In general, the majority of trip purposes were for shopping (47%), followed by work (22%). The majority of trip destinations were the Galleria Shopping Mall (67%), followed by offices (11%). The majority of trip origins came from the home (57%), with an off-site work location accounting for 11% of the trip origins. Seven (7%) percent of all trips originated from the on-site residential uses or the Guest Suites Hotel.

The auto accounted for 87% of all trips, walking/biking accounted for 6%, and 5% of all trips were by transit. Year round residents accounted for 77% of all respondents, tourists totaled 17%, and seasonal residents were 6% of the people surveyed.

Distribution of Total Trip Lengths

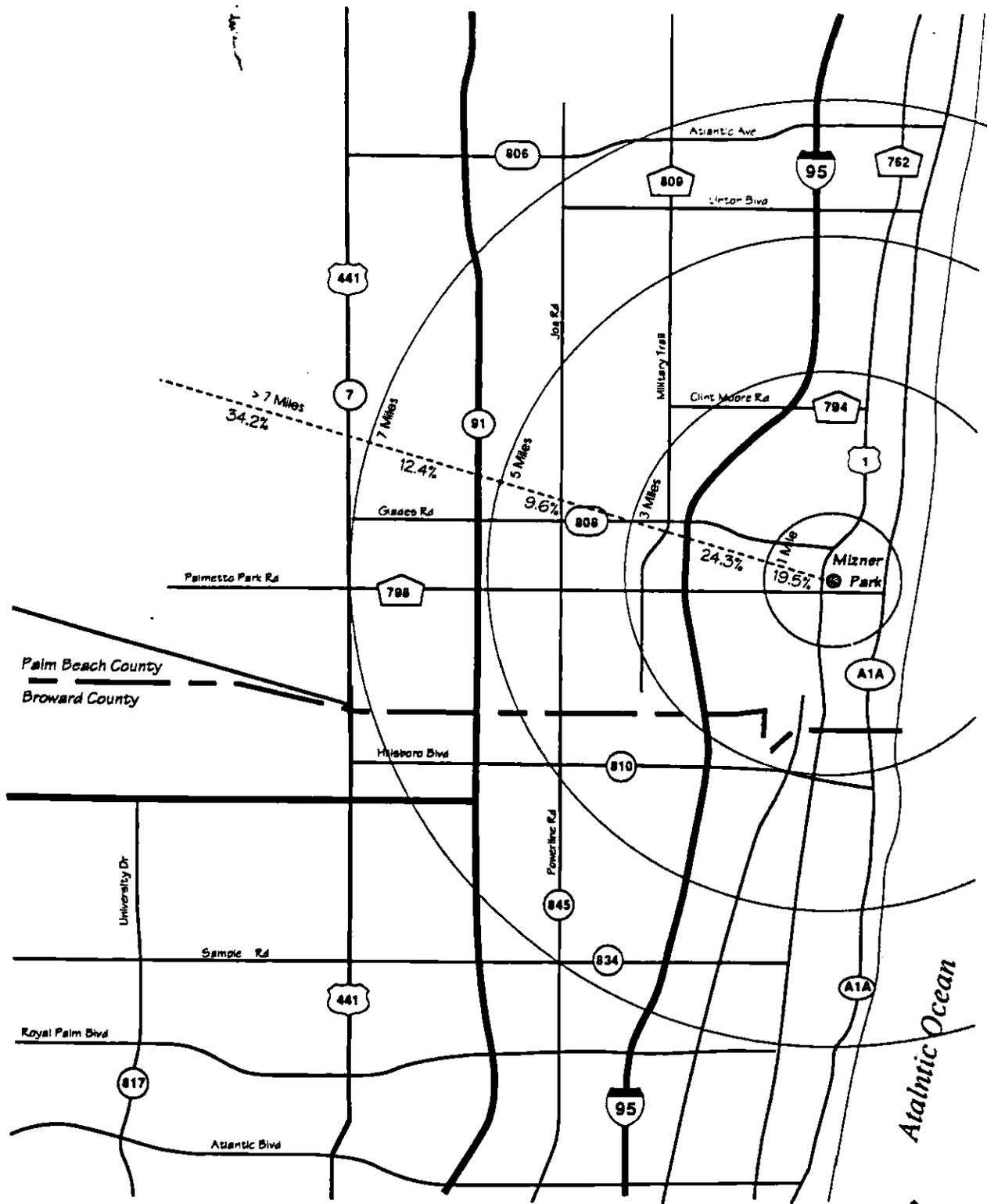


Cumulative Distribution of Total Trip Lengths



Districtwide Trip Generation Study

Figure 25 - Mizner Park Site



Districtwide Trip Generation Study

Figure 26 - Mizner Park Site, Trip Length Distribution



Table 44 - Galleria Questionnaire Results

Question 1: What is your major purpose for coming to Galleria Area?

Work	Shop	Eat	Personal Service	Conduct Business	Lodging	Live Here	Browse	Cinema	Other
21.5%	47.0%	7.3%	3.8%	4.9%	1.6%	1.3%	9.6%	0.7%	2.2%

Question 2: What is your major destination in the Galleria Area?

Galleria Shopping Center	Office	Retail	Restaurant	Bank/ S&L ATM	Medical/ Dental	Hotel/ Motel	SFH	MFH	Cinema	Other
67.0%	10.7%	8.9%	5.3%	0.6%	2.8%	3.2%	0.2%	0.2%	0.7%	0.2%

Question 3: If visiting the Galleria Shopping Center, what is your major destination in the Center?

Office	Retail	Restaurant	Bank/ S&L ATM	Medical/ Dental	Hotel/ Motel	SFH	MFH	Cinema	Other	Not Visiting Mall
5.4%	67.3%	9.5%	0.4%	1.3%	1.8%	0.1%	0.0%	0.9%	0.9%	12.5%

Question 4: Which other types of buildings or establishments have you visited or intend to visit here today?

Office	Retail	Restaurant	Bank/ S&L ATM	Medical/ Dental	Hotel/ Motel	SFH	MFH	Cinema	Other Destination in Mall	None
4.8%	46.3%	18.6%	1.6%	0.9%	2.7%	0.1%	0.2%	1.6%	1.1%	22.2%

no additional destinations	one additional destination	two additional destinations	three additional destinations	four or more additional destinations
22.2%	69.4%	25.2%	9.5%	2.3%

Question 5: Where did you come from before arriving at Galleria Area today?

Live/ Stay Galleria Area	Off-site Home	Off-site Work	Off-site Hotel/ Motel	Off-site Store/ Office	Other
6.8%	57.4%	11.2%	8.9%	6.5%	9.2%

Table 44 - Galleria Questionnaire Results

(Continued)

Question 7: Was this stop along your normal route or did you deviate from your normal route to come here?

Normal Route	Deviation from Route
51.4%	48.6%

Question 8: Where will you go immediately after leaving Galleria Area?

Home	Work	Hotel/ Motel	Retail Stores	Office	Other
60.0%	8.5%	9.6%	5.0%	2.8%	14.0%

Question 11: What mode of travel did you use to get here?

Automobile/ Van	Transit Bus	Motor Cycle Scooter	Taxi	Local Tram	Bicycle	Walk	Other
86.7%	5.0%	0.1%	1.6%	0.1%	0.6%	5.8%	0.0%

Question 12: What mode of travel will you use to leave here?

Automobile/ Van	Transit Bus	Motor Cycle Scooter	Taxi	Local Tram	Bicycle	Walk	Other
87.3%	4.9%	0.1%	1.2%	0.1%	0.6%	5.5%	0.1%

Question 13: If you arrived by automobile, which of these applies?

Driver	Passenger
83.8%	16.2%

Question 14: Which of these statements best describes you?

Live in SF 6 months +	Live in SF 3-5 months	Tourist
77.2%	5.5%	17.3%

Table 44 - Galleria Questionnaire Results

(Continued)

Question 15: Age?

Under 24	25-44	45-54	55-64	65+
17.9%	41.6%	13.4%	10.9%	16.3%

Question 16: Occupation?

Employed	Retired	Homemaker	Student	Unemployed
66.3%	17.9%	5.5%	7.1%	3.3%

Question 17: Household Income?

Under 25 K	25-50 K	50-75 K	75-100 K	100 K +
23.1%	34.6%	19.4%	11.7%	11.1%

Question 18: Size of Household?

One	Two	Three	Four	Five +
21.6%	39.8%	16.5%	13.6%	8.4%

Question 19: Number of vehicles in household?

None	One	Two	Three	Four	Five +
3.1%	21.8%	40.3%	16.7%	13.8%	8.5%

Question 20: Type of housing here?

Single Family	Duplex	Townhouse	Mobile Home	Hotel/ Motel	Apt/ Condo 1-3 Stories	Apt/ Condo > 3 Stories	Other
41.8%	5.8%	9.5%	0.3%	13.6%	15.3%	13.1%	0.8%

Internalization

As was done with the previously discussed sites, the number of internal trips was estimated for users and workers. Only two trip stratifications were developed for this site. The stratifications included the major land uses of office, commercial, residential, other and browse. The second stratification provides additional refinement of offices, commercial and residential uses. Tables 45 - 46 identify the internalization results for the Galleria Area. Table 45 indicates that of the 819 primary trips generated by the Galleria Area, 1,638 external and 1,015 additional internal trips were produced. For users, 720 internal trips were produced from 643 primary trips. For workers, 295 internal trips were produced from 176 primary trips.

Pass-by Trips

Tables 47 and 48 present the result of the pass-by analysis. For the Galleria Shopping Mall, forty (40%) percent of the respondents were estimated to be pass-by trips. For the Galleria Area, excluding the Galleria Shopping Mall, 15.6% of the respondents were pass-by trips.

Trip Length

Figure 27 provides a bar chart of the distribution of total trip lengths and the cumulative distribution. Figure 28 provides a map of the trip distribution in radial miles around the site.

(1)
**Table 45 - Galleria
 1st Stratification**

Destination	Major Destination (5)	External Trips (2)	Destination +1	Internal Trips	Destination +2	Internal Trips	Destination +3	Internal Trips	Destination +4	Internal Trips	Total Internal Trips	% of Internal Trips	Live/ Stay Galleria
<i>Users</i> (3)													48
Office	53	106	20	20	1	1			2	2	23	3.2%	
Commercial	549	1098	450	450	134	134	48	48	9	9	641	89.0%	
Residential	19	38	19	19	13	13	7	7	1	1	40	5.6%	
Other	8	16	6	6	8	8	2	2			16	2.2%	
Browse	14	28											
Sub-Total	643	1286	495	495	156	156	57	57	12	12	720	100.0%	48
<i>Workers</i> (4)													
Office	75	150	15	23	3	3					26	8.7%	2
Commercial	84	168	115	173	52	52	20	20	4	4	249	84.4%	4
Residential	13	26	6	9	1	1	1	1			11	3.7%	2
Other	4	8	3	5	2	2	1	1	2	2	10	3.2%	
Browse													
Sub-Total	176	352	139	209	58	58	22	22	6	6	295	100.0%	8
Total	819	1638	634	704	214	214	79	79	18	18	1015		56

Source: Walter H. Keller, Inc.

- (1) Based on questionnaire population.
- (2) Primary purpose visits to the site generate two (2) external trips.
- (3) Secondary visits made by users of the site are assumed to generate one (1) internal trip.
- (4) Secondary visits made by workers at the site are assumed to generate 1.5 trips per visit for the first additional destination and then one (1) trip per destination for additional on-site destinations.
- (5) The major destination is the primary trip purpose.

(1)
Table 46 - Galleria Area
2nd Stratification

Destination	Major Destination (5)	External Trips (2)	Destination +1	Internal Trips	Destination +2	Internal Trips	Destination +3	Internal Trips	Destination +4	Internal Trips	Total Internal Trips	% of Internal Trips	Live/ Stay Galleria	
(3)														
<i>Users</i>														
Office-General	30	60	6	6							6	0.8%	48	
Office-Med/ Dent	19	38	2	2							2	0.3%		
Galleria Center	465	930	370	370	121	121	48	48	8	8	547	76.0%		
Retail	59	118	61	61	1	1					62	8.6%		
Bank w/ Drive Thru	3	6	2	2	1	1	3	3			6	0.8%		
Restaurant-Fast Food	38	76	37	37	25	25					62	8.6%		
Cinema-4 Screens	5	10	5	5	1	1	4	4	4	4	14	1.9%		
SFH	1	2			1	1	1	1			2	0.3%		
MFH	2	4	1	1	1	1					2	0.3%		
Hotel	16	32	10	10	3	3	1	1			14	1.9%		
Other	1	2	1	1	2	2					3	0.4%		
Browse	4	8												
Sub-Total	643	1286	495	495	156	156	57	57	12	12	720	100.0%		48
(4)														
<i>Workers</i>														
Office-General	58	116	3	5	2	2					7	2.2%	8	
Office-Med/ Dent	4	8	2	3	1	1					4	1.4%		
Galleria Center	78	156	71	107	32	32	14	14	5	5	158	53.5%		
Retail	14	28	27	41	5	5					46	15.4%		
Bank w/ Drive Thru	2	4	5	8	1	1	1	1			10	3.2%		
Restaurant-Fast Food	5	10	22	33	15	15	1	1			49	16.6%		
Cinema-4 Screens	1	2	1	2			4	4	1	1	7	2.2%		
SFH	1	2	1	2							2	0.5%		
MFH			1	2							2	0.5%		
Hotel	10	20	4	6			1	1			7	2.4%		
Other	3	6	2	3	2	2	1	1			6	2.0%		
Browse														
Sub-Total	176	352	139	209	58	58	22	22	6	6	295	100.0%		8
Total	819	1638	634	704	214	214	79	79	18	18	1015			56

Source: Walter H. Keller, Inc.

- (1) Based on questionnaire population.
- (2) Primary purpose visits to the site generate two (2) external trips.
- (3) Secondary visits made by users of the site are assumed to generate one (1) internal trip.
- (4) Secondary visits made by workers at the site are assumed to generate 1.5 trips per visit for the first additional destination and then one (1) trip per destination for additional on-site destinations.
- (5) The major destination is the primary trip purpose.

Table 47 - Galleria Pass-By (vehicle trips)

Galleria Shopping Center Pass-by Trips		
Land Use	Number	%
Retail	3	1.4%
Restaurant	193	88.9%
Personal Service	19	8.8%
Business	0	0.0%
Browse	2	0.9%
Total (Site Pass-by)	217	100.0%
Total (Site Respondents)	543	40.0%

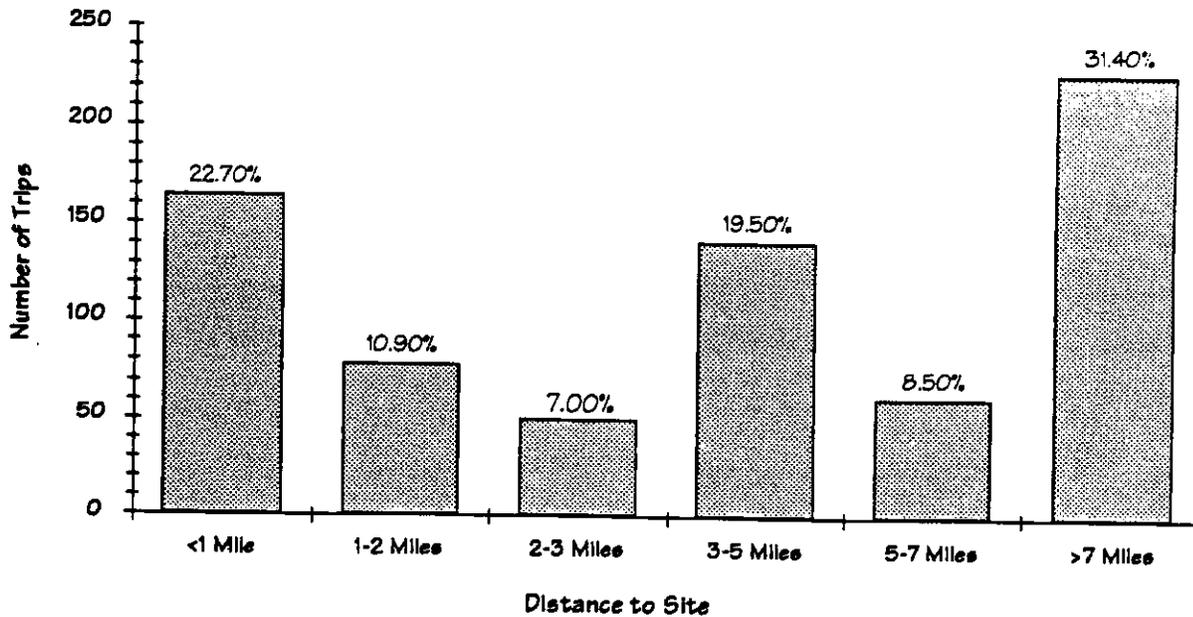
Source: Walter H. Keller, Inc.

Table 48 - Galleria Pass-By (vehicle trips)

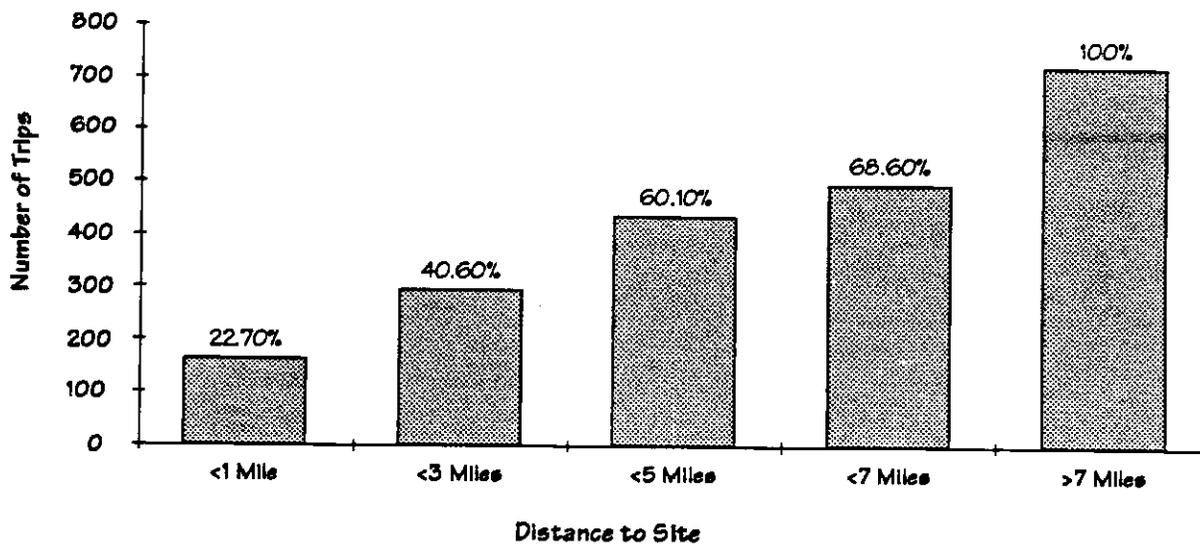
Galleria Area Pass-by Trips		
Land Use	Number	%
Retail	17	39.5%
Restaurant	12	27.9%
Personal Service	1	2.3%
Business	12	27.9%
Browse	1	0.5%
Total (Pass-by)	43	100.0%
Total (Respondents)	276	15.6%

Source: Walter H. Keller, Inc.

Distribution of Total Trip Lengths



Cumulative Distribution of Total Trip Lengths



Districtwide Trip Generation Study

Figure 27 - Galleria Site

Statistical Relevance of Questionnaire Sampling

The statistical relevance of the questionnaire sampling is predicated on the analysis of mixed use trip characteristics. Vehicle trips have been categorized by primary destination (i.e., type of function visited) and by whether the trip maker works on the site or does not (i.e., is a user). External trips originate or end off-site, internal trips originate on-site and end on-site.

The internal trips of the study sites were used for the first statistical assessment. Questionnaire results were stratified into users and workers based on the primary trip destination. Total person trips were calculated and separated into external and internal trips. The proportion of person trips external and internal were also computed. Classified by initial primary land use visited, the tables present the proportion of all trips made by workers and users that are external and that are internal, the sum of both proportions must be 1.0 (that is, all trips captured in the trip maker surveys must be categorized as either external or internal).

For the purpose of examination of trip internalization ratios, the minimum number of trips needed in the sample to achieve a fifteen (15%) percent accuracy at a ninety (90%) percent confidence level is derived from the equation below. This equation is from "Sampling in Education and the Social Sciences" by Richard M. Jaeger published in New York by Longman, Inc. in 1984. The equation uses the standard assumption of a normal approximation to the distribution of the sample (internal trip) proportion:

$$n = \frac{(t / \epsilon)^2 P(1 - P)}{1 + (1 / N)[(t / \epsilon)^2 P(1 - P) - 1]}$$

For example, if the internal trip proportion is 0.5, the minimum sample size needed for a fifteen (15%) percent accuracy at a ninety (90%) percent confidence level of statistical significance is thirty-one (31). Because the unit of concern is trips, thirty-one (31) trips are needed to meet sample size requirements. If the internal trip proportion is 0.2, the minimum sample size needed is twenty (20) trips or ten (10) surveys.

The standard errors and the lower and the upper bounds for the ninety (90%) percent confidence interval for each land use category are derived from the equation below also by Jaeger:

$$S_p = \sqrt{\frac{p(1 - p)}{n}}$$

The confidence interval lower limit (CI_l) and the upper limits (CI_u) are:

$$CI_l = p - 1.645(S_p)$$

$$CI_u = p + 1.645(S_p)$$

Three tables have been prepared to identify the statistical analysis results for each study site. The tables have been stratified to the most detailed land use category by site users, workers and total site.

Table 49 provides the statistical results for the third level of land use stratification for Crocker Center. At the ninety (90%) percent confidence level, the majority of the land use categories internal person trip proportions meet the required statistical accuracy. For example, for the Office land use the combined Users and Workers (Both) category has an accuracy of 2.1 percent. That is, the calculated internal person trip proportion of 0.114 (11.4 percent of all trips made to Offices at Crocker Center were internal trips) has an accuracy of 0.021 (2.1 percent). This means there is a ninety (90%) percent confidence level that the true internal person trip proportion for this land use is between 0.093 (9.3 percent) and 0.135 (13.5 percent) for multi-use developments similar to Crocker Center. Similarly structured statements can also be made for the other land uses at Crocker and for the other study sites. The specific level of accuracy is given in the last column of these tables (Tables 49, 50 & 51). For few specific land uses, the fifteen (15%) percent accuracy level was not obtained due to the small number of persons in the survey who indicated visiting these functions.

For Crocker Center as a whole, the internal trip proportion was 0.411 (41.1 percent). It can be concluded that in 9 out of 10 repeated samplings, the internal trip ratios would be similar, within the band of 0.394 to 0.428 inclusive.

Table 50 provides the statistical results for the second level of land use stratification for Mizner Park. Again using the ninety (90%) percent level of confidence and all trip makers (Both Users and Workers), all of the land uses have estimated internal trip proportions better than the fifteen (15%) percent accuracy goal. Only when examining the data for the trip making behavior of site workers is this standard not met and then only for specialized land uses. For example, Cinema's would not be expected to draw many site workers during midweek daylight hours when the majority of these workers are likely to be working. The internal trip proportion for Mizner Park as a whole is 0.402

(40.2 percent), has an accuracy level of 0.016 (1.6 percent) which is well within the required level of accuracy.

Table 49 - Statistical Analysis Crocker Center Questionnaire

Destination	Trips			External Proportion	Internal Proportion	Minimum Trips (n) 90% Confid 15% Accur	Calculated Standard Error of Proportion	Confidence Band for Internal Proportion		Accuracy Level at 90% Confidence
	External	Internal	Total					Min	Max	
<i>Users</i>										
Office	168	24	192	0.875	0.125	13.2	0.024	0.086	0.164	3.9%
Retail	176	102	278	0.633	0.367	27.9	0.029	0.319	0.414	4.8%
Restaurant-Sit Down	202	85	287	0.704	0.296	25.1	0.027	0.252	0.341	4.4%
Restaurant- Fast Food	170	41	211	0.806	0.194	18.8	0.027	0.150	0.239	4.5%
Hotel	38	10	48	0.792	0.208	19.8	0.059	0.112	0.305	9.6%
Other	4	1	5	0.800	0.200	19.2	0.179	0.000	0.494	29.4%
Browse		184	184	0.000	1.000	0.0	0.000	1.000	1.000	0.0%
Sub-Total	758	447	1,205	0.629	0.371	28.1	0.014	0.348	0.394	2.3%
<i>Workers</i>										
Office	392	48	440	0.891	0.109	11.7	0.015	0.085	0.134	2.4%
Retail	80	45	125	0.640	0.360	27.7	0.043	0.289	0.431	7.1%
Restaurant-Sit Down	54	216	270	0.200	0.800	19.2	0.024	0.760	0.840	4.0%
Restaurant- Fast Food		18	18	0.000	1.000	0.0	0.000	1.000	1.000	0.0%
Hotel	16	13	29	0.552	0.448	29.7	0.092	0.296	0.600	15.2%
Other		3	3	0.000	1.000	0.0	0.000	1.000	1.000	0.0%
Browse		117	117	0.000	1.000	0.0	0.000	1.000	1.000	0.0%
Sub-Total	542	460	1,002	0.541	0.459	29.9	0.016	0.433	0.485	2.6%
<i>Both</i>										
Office	560	72	632	0.886	0.114	12.1	0.013	0.093	0.135	2.1%
Retail	256	147	403	0.635	0.365	27.9	0.024	0.325	0.404	3.9%
Restaurant-Sit Down	256	301	557	0.460	0.540	29.9	0.021	0.506	0.575	3.5%
Restaurant- Fast Food	170	59	229	0.742	0.258	23.0	0.029	0.210	0.305	4.8%
Hotel	54	23	77	0.701	0.299	25.2	0.052	0.213	0.385	8.6%
Other	4	4	8	0.500	0.500	30.1	0.177	0.209	0.791	29.1%
Browse	0	301	301	0.000	1.000	0.0	0.000	1.000	1.000	0.0%
Total	1,300	907	2,207	0.589	0.411	29.1	0.010	0.394	0.428	1.7%

Source: Regional Research Associates, Inc.

Table 50 - Statistical Analysis Mizner Park Questionnaire

Destination	Trips			External Proportion	Internal Proportion	Minimum Sample n 90% Confid 15% Accur	Calculated Standard Error of Proportion	Confidence Band for Internal Proportion		Accuracy Level at 90% Confidence
	External	Internal	Total					Min	Max	
<i>Users</i>										
Office-General	26	4	30	0.867	0.133	13.9	0.062	0.031	0.235	10.2%
Office-Med/Dent	20	4	24	0.833	0.167	16.7	0.076	0.042	0.292	12.5%
Retail	612	250	862	0.710	0.290	24.8	0.015	0.265	0.315	2.5%
Restaurant-Sit Down	278	238	516	0.539	0.461	29.9	0.022	0.425	0.497	3.6%
Bank w/ Drive Thru	34	22	56	0.607	0.393	28.7	0.065	0.285	0.500	10.7%
Cinema-8 Screens	138	34	172	0.802	0.198	19.1	0.030	0.148	0.248	5.0%
MFH	20	3	23	0.870	0.130	13.6	0.070	0.015	0.246	11.6%
Other	28	11	39	0.718	0.282	24.4	0.072	0.164	0.401	11.9%
Browse	36	164	200	0.180	0.820	17.8	0.027	0.775	0.865	4.5%
Sub-Total	1,192	730	1,922	0.620	0.380	28.3	0.011	0.362	0.398	1.8%
<i>Workers</i>										
Office-General	100	12	112	0.893	0.107	11.5	0.029	0.059	0.155	4.8%
Office-Med/ Dent	2	0	2	1.000	0.000	0.0	0.000	0.000	0.000	0.0%
Retail	96	52	148	0.649	0.351	27.4	0.039	0.287	0.416	6.5%
Restaurant-Sit Down	32	97	129	0.248	0.752	22.4	0.038	0.689	0.814	6.3%
Bank w/ Drive Thru	6	15	21	0.286	0.714	24.5	0.099	0.552	0.876	16.2%
Cinema-8 Screens	4	9	13	0.308	0.692	25.6	0.128	0.482	0.903	21.1%
MFH	4	0	4	1.000	0.000	0.0	0.000	0.000	0.000	0.0%
Other	4	2	6	0.667	0.333	26.7	0.192	0.017	0.650	31.7%
Browse		51	51	0.000	1.000	0.0	0.000	1.000	1.000	0.0%
Sub-Total	248	238	486	0.510	0.490	30.1	0.023	0.452	0.527	3.7%
<i>Both</i>										
Office-General	126	16	142	0.887	0.113	12.0	0.027	0.069	0.156	4.4%
Office-Med/ Dent	22	4	26	0.846	0.154	15.7	0.071	0.037	0.270	11.6%
Retail	708	302	1,010	0.701	0.299	25.2	0.014	0.275	0.323	2.4%
Restaurant-Sit Down	310	335	645	0.481	0.519	30.0	0.020	0.487	0.552	3.2%
Bank w/ Drive Thru	40	37	77	0.519	0.481	30.0	0.057	0.387	0.574	9.4%
Cinema-8 Screens	142	43	185	0.768	0.232	21.5	0.031	0.181	0.284	5.1%
MFH	24	3	27	0.889	0.111	11.9	0.060	0.012	0.211	9.9%
Other	32	13	45	0.711	0.289	24.7	0.068	0.018	0.400	11.1%
Browse	36	215	251	0.143	0.857	14.8	0.022	0.820	0.893	3.6%
Total	1,440	968	2,408	0.598	0.402	28.9	0.010	0.386	0.418	1.6%

Source: Regional Research Associates, Inc.

Table 51 gives the second level stratification results for the Galleria Area. The overall results are very similar to the previous two sites. The internal trip ratio is 0.383 (38.3 percent), slightly lower than Crocker Center and Mizner Park. The accuracy level is 0.016 (1.6 percent) at the ninety (90%) percent confidence level. Several of the land use categories have large standard errors due to the low number of respondents in the sample and thus the accuracy of their estimated internal trip proportion is higher than fifteen (15%) percent.

The overall trip generation statistical parameters for the three (3) study sites are presented in Table 52. At the ninety (90%) percent confidence limit, the confidence intervals (bands) overlap. Thus, the null hypothesis that the overall site internal trip ratios are equal can not be rejected. Combining (pooling) the surveys for the three sites yields an internal trip proportion of 0.398 (39.8 percent), with an accuracy level of 0.009 (0.9 percent). Therefore there is a ninety (90%) percent confident level the proportion parameter for mixed-use sites similar to Crocker Center, Mizner Park, and Galleria lie within the band of 0.388 to 0.407 inclusive.

In summary, the minimum sample size needed to achieve fifteen (15%) percent accuracy at a ninety (90%) percent confidence level for each development site has been met. This accuracy condition also extends to the major land uses at each development site and for most cross-tabulations of Users and Workers.

Table 51 - Statistical Analysis Galleria Area Questionnaire

Destination	Trips		Total	External Proportion	Internal Proportion	Minimum Sample n 90% Confid 15% Accur	Calculated Standard Error of Proportion	Confidence Band for Internal Proportion		Accuracy Level at 90% Confidence
	External	Internal						Min	Max	
<i>Users</i>										
Office-General	60	6	66	0.909	0.091	9.9	0.035	0.033	0.149	5.8%
Office-Med/ Dent	38	2	40	0.950	0.050	5.7	0.034	0.007	0.107	5.7%
Galleria Center	930	547	1,477	0.630	0.370	28.0	0.013	0.350	0.391	2.1%
Retail	118	62	180	0.656	0.344	27.2	0.035	0.286	0.403	5.8%
Bank w/ Drive Thru	6	6	12	0.500	0.500	30.1	0.144	0.263	0.737	23.7%
Restaurant-Fast Food	76	62	138	0.551	0.449	29.8	0.042	0.380	0.519	7.0%
Cinema-4 Screens	10	14	24	0.417	0.583	29.2	0.101	0.418	0.749	16.6%
SFH	2	2	4	0.500	0.500	30.1	0.250	0.089	0.911	41.1%
MFH	4	2	6	0.667	0.333	26.7	0.192	0.017	0.650	31.7%
Hotel	32	14	46	0.696	0.304	25.5	0.068	0.193	0.416	11.2%
Other	2	3	5	0.400	0.600	28.9	0.219	0.240	0.960	36.0%
Browse	8	0	8	1.000	0.000	0.0	0.000	0.000	0.000	0.0%
Sub-Total	1,286	720	2,006	0.641	0.359	27.7	0.011	0.341	0.377	1.8%
<i>Workers</i>										
Office-General	116	7	123	0.943	0.057	6.5	0.021	0.023	0.091	3.4%
Office-Med/ Dent	8	4	12	0.667	0.333	26.7	0.136	0.109	0.557	22.4%
Galleria Center	156	158	314	0.497	0.503	30.1	0.028	0.457	0.550	4.6%
Retail	28	46	74	0.378	0.622	28.3	0.056	0.529	0.714	9.3%
Bank w/ Drive Thru	4	10	14	0.286	0.714	24.5	0.121	0.516	0.913	19.9%
Restaurant-Fast Food	10	49	59	0.169	0.831	16.9	0.049	0.750	0.911	8.0%
Cinema-4 Screens	2	7	9	0.222	0.778	20.8	0.139	0.550	1.006	22.8%
SFH	2	2	4	0.500	0.500	30.1	0.250	0.089	0.911	41.1%
MFH		2	2	0.000	1.000	0.0	0.000	1.000	1.000	0.0%
Hotel	20	7	27	0.741	0.259	23.1	0.084	0.121	0.398	13.9%
Other	6	6	12	0.500	0.500	30.1	0.144	0.263	0.737	23.7%
Browse										0.0%
Sub-Total	352	298	650	0.542	0.458	29.9	0.020	0.426	0.491	3.2%
<i>Both</i>										
Office-General	176	13	189	0.931	0.069	7.7	0.018	0.038	0.099	3.0%
Office-Med/ Dent	46	6	52	0.885	0.115	12.3	0.044	0.043	0.188	7.3%
Galleria Center	1,086	705	1,791	0.606	0.394	28.7	0.012	0.375	0.413	1.9%
Retail	146	108	254	0.575	0.425	29.4	0.031	0.374	0.476	5.1%
Bank w/ Drive Thru	10	16	26	0.385	0.615	28.5	0.095	0.458	0.772	15.7%
Restaurant-Fast Food	86	111	197	0.437	0.563	29.6	0.035	0.505	0.622	5.8%
Cinema-4 Screens	12	21	33	0.364	0.636	27.8	0.084	0.499	0.774	13.8%
SFH	4	4	8	0.500	0.500	30.1	0.177	0.209	0.791	29.1%
MFH	4	4	8	0.500	0.500	30.1	0.177	0.209	0.791	29.1%
Hotel	52	21	73	0.712	0.288	24.6	0.053	0.201	0.375	8.7%
Other	8	9	17	0.471	0.529	30.0	0.121	0.330	0.729	19.9%
Browse	8	0	8	1.000	0.000	0.000	0.000	0.000	0.000	0.0%
Sub-Total	1,638	1,018	2,656	0.617	0.383	28.4	0.009	0.368	0.399	1.6%

Source: Regional Research Associates, Inc.

Table 52 - Overall Statistical Analysis All Sites

Destination	Trips		Total	External Proportion	Internal Proportion	Minimum Sample n 90% Confd 15% Accur	Calculated Standard Error of Proportion	Confidence Band for Internal Proportion		Accuracy Level at 90% Confidence
	External	Internal						Min	Max	
<i>Users</i>										
Crocker Center	758	447	1,205	0.629	0.371	28.1	0.014	0.035	0.394	2.3%
Mizner Park	1,192	730	1,922	0.620	0.380	28.3	0.011	0.362	0.398	1.8%
Galleria Area	1,286	720	2,006	0.641	0.359	27.7	0.011	0.410	0.377	1.8%
Sub-Total	3,236	1,897	5,133	0.630	0.370	27.7	0.011	0.341	0.377	1.1%
<i>Workers</i>										
Crocker Center	542	460	1,002	0.541	0.459	29.9	0.016	0.433	0.485	2.6%
Mizner Park	248	238	486	0.510	0.490	30.1	0.023	0.452	0.527	3.7%
Galleria Area	352	298	650	0.542	0.458	29.9	0.020	0.426	0.491	3.2%
Sub-Total	1,142	996	2,138	0.534	0.466	29.9	0.011	0.448	0.484	1.8%
<i>Both</i>										
Crocker Center	1,300	907	2,207	0.589	0.411	29.1	0.010	0.394	0.428	1.7%
Mizner Park	1,440	968	2,408	0.598	0.402	28.9	0.010	0.386	0.418	1.6%
Galleria Area	1,638	1,018	2,656	0.617	0.383	28.4	0.009	0.368	0.399	1.6%
Sub-Total	4,378	2,893	7,271	0.602	0.398	28.8	0.006	0.388	0.407	0.9%

Source: Regional Research Associates, Inc.

VI. SITE COMPARISONS AND ANALYSIS SUMMARY

Land Use Characteristics

Two of the three study sites were located in the City of Boca Raton. Both of these sites, Crocker Center and Mizner Park, are master planned developments with excellent pedestrian amenities, and with spatial separations that encourage trip interchanges (internalization). The Boca Raton sites are also approximately equal in size encompassing about thirty (30) acres with comparable non residential floor areas of 250 - 300,000 square feet.

The Galleria Area is quite different in scale and layout. The Galleria Area is located in Fort Lauderdale, and was developed without master planning. The Galleria Area has less pedestrian amenities than the other two sites. The Galleria Shopping Mall is the predominant feature and totals approximately 1,150,000 gross square feet of floor area. The Area also includes a wide variety of residential uses including single family, multi-family, high rise apartments and a suite hotel. Other non-residential uses include offices, medical offices, retail, banking, and a fast food restaurant. The Galleria Area totals 165 acres.

A tabular comparison of the three study sites is provided in Table 53.

Traffic Characteristics

Tabular comparisons have been prepared to review the traffic characteristics of the three study sites. Table 54 compares trip purpose, destination, origin, internalization and pass-by trips between sites. This table also reviews selected demographic characteristics such as resident make-up, age and household income.

Table 55 provides additional traffic characteristics of the three sites. Included in this table are total trips (from machine counts), auto occupancy, trip distribution and average trip length.

Table 53 - Site Characteristics

Characteristic	Crocker Center	Mizner Park	Galleria Area
General:			
Location	Boca Raton	Boca Raton	Ft. Lauderdale
	Fringe	CBD	Fringe
Area (Acres)	29	30	165
Non-Residential Flr Area	296,040	251,022	1,286,915
Residential & Hotel Units	256	136	951
Estimated Parking Spaces	1,662	1,588	NA
Number of Access Points	3	6	9
Master Planned ?	Yes	Yes	No
Pedestrian Features	High	High	Limited
Transit Available ?	No	Yes	Yes
Land Use Detail:			
<u>Office Uses:</u>	208,883	88,279	120,940
Law	19,019	11,403	3,850
Securities	89,150	28,193	0
Medical	2,434	10,724	21,490
Other	85,696	37,959	61,750
Vacant	12,584	0	33,850
<u>Commercial:</u>	87,157	162,743	50,400
Retail	33,495	86,632	5400
Restaurant	30,201	29,697	0
Fast Food	14,861	0	5,600
Movie Theater	0	31,000	29,000
Bank w/Drive Thru	0	3,653	3,400
Vacant	8,600	11,761	7000
<u>Reg. Shopping Center:</u>	0	0	1,115,575
Medical Offices			7,330
Securities Offices			5,719
Other Offices			3,707
Retail			974,378
Banking			6,756
Fast Food			9,685
Vacant			108,000
<u>Hotel:</u>	256	0	229
<u>Residential (du's):</u>	0	136	722
Single Family			184
Apartment		136	252
High-Rise Apartment			286

Source: Walter H. Keller, Inc.

Table 54 - Traffic Characteristics

	Crocker Center		Mizner Park		Galleria Area	
No. of Surveys	650		720		819	
Trip Purpose (%)	Work	42%	Shopping	29%	Shopping	47%
	Eating	25%	Work	17%	Work	22%
	Per Business	10%	Eating	16%	Browse	10%
Destination (%)	Office	39%	Retail	49%	Galleria Mall	67%
	Restaurant	33%	Restaurant	22%	Office	11%
	Retail	20%	Theater	10%	Other Retail	9%
Trip Origin(%)	Off-Site Home	62%	Off-Site Home	61%	Off-Site Home	57%
	Off-Site Work	18%	Off-Site Work	12%	Off-Site Work	11%
	On-Site Hotel	3%	On-Site Apts.	3%	On-Site Resid	7%
% Pass-by Trips	26%		29%		32%	
% Internalization	41%		40%		38%	
Travel Mode (%)	Auto/Van	97%	Auto/Van	96%	Auto/Van	87%
	Walk/Bike	2%	Walk/Bike	2%	Walk/Bike	6%
	Transit	0%	Transit	1%	Transit	5%
% Residents	91%		84%		77%	
% Seasonal Residents	2%		4%		6%	
% Tourists	8%		13%		17%	
Age (%)	< 24	10%	< 24	17%	< 24	18%
	25 - 64	81%	25 - 64	71%	25 - 64	66%
	65+	9%	65+	13%	65+	16%
Household Income (%)	< \$25K	11%	< \$25K	20%	< \$25K	23%
	\$25-\$50K	28%	\$25-\$50K	26%	\$25-\$50K	35%
	\$51-\$75K	25%	\$51-\$75K	20%	\$51-\$75K	19%
	\$75-\$100K	13%	\$75-\$100K	12%	\$75-\$100K	12%
	\$100K+	24%	\$100K+	22%	\$100K+	11%

Source: Walter H. Keller, Inc.

Table 55 - Additional Traffic Characteristics

Characteristic	Crocker Center	Mizner Park	Galleria Area
Total Trips	9,963	12,155	23,819
Auto Occupancy			
Mid-Day	1.34	1.51	1.45
PM Peak	1.35	1.57	1.47
Trip Distribution			
Less Than 1 Mile	9%	20%	23%
1-2 Miles	8%	11%	11%
2-3 Miles	20%	13%	7%
3-5 Miles	25%	10%	20%
5-7 Miles	2%	12%	9%
More Than 7 Miles	37%	34%	31%
Avg. Trip Length	5.4 mi.	5.4 mi.	6.6 mi.

Source: Walter H. Keller, Inc.

Trip Generation Comparison

Several trip generation estimates were prepared to project the external vehicle trips associated with the multi-use study sites. These estimates were based on disaggregated land uses and aggregated land uses. For example, under the disaggregated land use procedure, individual buildings were separately used to project trip generation. Under the aggregated scheme, various commercial land uses such as retail, restaurants and banks were combined into one commercial total. The various trip generation estimates were compared with the results of the traffic count machines.

This analysis was previously provided in Tables 23 - 25 (Crocker Center), Tables 26 -28 (Mizner Park) and Tables 29 - 32 (Galleria Area). Review of these tables indicates the aggregated land use procedure produced the closest fit to the external ADT traffic count results. Peak hour synthesis of external traffic was not projected with similar results. While the ADT analysis indicates replication of the traffic count results varying between 93.3% to 100.6% of machine counts, the peak hour replication varied between 78.9% to 137.1% of machine counts.

Factors which influence the accuracy of the peak hour replication include the time frame of the count comparison and the reliability of the trip rates. The peak hour condition for the machine counts are based on a set time frames of 8:00 AM to 9:00 AM and 5:00 PM to 6:00 PM, while the ITE analysis is based on the highest one (1) hour between 7:00 AM to 9:00 AM and 5:00 PM to 6:00 PM. The trip generation procedure normally utilizes a formula to estimate generation. The reliability of the formula can be approximated by the R^2 value. The R^2 value provides the percentage of the variance in the number of trips associated with the independent variable. The closer the R^2 value is to 1, the better correlation in the equation. The ITE R^2 values are generally lower for peak hour estimates and in some instances formulas can not be used due to the low R^2 value. This factor will tend to produce greater variability in the trip generation estimate.

Table 56 shows the results of this analysis for the ADT and peak hour conditions associated with the aggregate trip generation procedure.

Table S6 - Best Trip Generation Estimates

ITE Code	Land Use	Size	Unit	% Occup	External Daily Trips	% of ADT Trips	Peak Hour Trips			
							AM		PM	
							In	Out	In	Out
Crocker Center:										
710	Office Uses	208,883	SF	93.98%	2,336	23.7%	287	35	52	254
820	Commercial	87,157	SF	90.13%	6,078	61.6%	89	52	281	281
310	Hotel	256	Occ. Rms	66.00%	1,448	14.7%	61	41	68	58
Total Trips Per ITE TG =					9,862			566		995
Total Trips per Machine Counts =					9,791	100.7%		78.9%		122.5%
								717		812
Mizner Park:										
710	Office Uses	88,279	SF	100.00%	1,277	11.3%	154	19	29	141
820	Commercial	131,743	SF	91.07%	7,920	70.3%	114	67	368	368
444	Movie Theater (8 Screens)	8	Screens	100.00%	1,227	10.9%	38	38	105	47
223	Residential - Apartment	136	Occ. Du's	100.00%	846	7.5%	12	58	58	27
Total Trips Per ITE TG =					11,269			500		1,144
Total Trips per Machine Counts =					12,086	93.2%		137.1%		130.7%
								365		875
Galleria Area:										
710	Office Uses	120,940	SF	72.01%	1,264	5.5%	153	19	29	139
820	Commercial	1,136,975 †	SF	89.89%	16,594	71.8%	205	120	767	767
444	Movie Theater (4 Screens)	4	Screens	100.0%	613	2.7%	19	19	53	24
210	Residential - Single Family	184	Occ. Du's	97.50%	1,765	7.6%	35	99	119	64
220	Residential - Apartment	286	Occ. Du's	59.70%	1,081	4.7%	15	72	71	34
222	Residential - High Rise Apartment	252	Occ. Du's	35.00%	395	1.7%	7	20	20	13
310	Hotel	229	Occ. Rms	72.50%	1,402	6.1%	60	40	67	57
Total Trips Per ITE TG † =					23,115			882		2,222
Total Trips per Machine Counts =					22,971	100.6%		91.9%		119.0%
								960		1,867

Source: Walter H. Keller, Inc.

ITE Trip Generation, 5th Edition

NOTE: No Reductions have been credited to the ITE Estimates for Internalization or Pass-By

† - Shopping Center further reduced to 50.87% per Ped Counts

but driveway counts include pass-by

-137-
These are considered
Aggregates
↓
↓

22?

average
23% PM
high in PM
Project
with ITE

Comparison with Prior Trip Generation Study

The Department had a prior Trip Generation Study performed by the consulting firm of Tindale Oliver and Associates (TOA). In this study completed in January 1994, three (3) sites were also selected for detailed trip generation review. The sites were located in the western unincorporated area of Broward County (known as the Country Isles site), in the City of West Palm Beach (Village Commons site) and in the City of Boca Raton (Boca Del Mar site).

In the TOA study, the observed site traffic volumes were based on driveway counts and ITE procedures were used to estimate trip generation. TOA generally found the disaggregate land use breakdown best represented the observed traffic volumes. Through use of on-site interviews, TOA also developed estimates on the percentage of internalization, pass-by, and trip length.

Differences exist between the results of the two studies. In this current study, the aggregate trip generation estimate is very close to the external trip generation. In the prior study, the disaggregate trip generation estimate was closer to the trip generation. All three of the study sites were crossed by collector or arterial roadways. While driveway and crossing roadways were counted, trip classifications were not identified at the study boundaries. Because of this, internal trips, internal to external trips and external to external trips are co-mingled. Furthermore, internal trips are also included in the driveway counts.

In order to make a meaningful comparison of the results from both studies, the TOA study results were adjusted to reflect site external trips. After a review of the TOA study sites, it was estimated a twenty (20) percent reduction should be made in the driveway counts for Country Isles and Boca Del Mar observed trip generation numbers to account for internal vehicle trips. For Village Commons, a seventeen and one-half (17.5) percent reduction should be made to account for internal vehicle trips. The estimates were developed after considering the trip generation and questionnaire results of the TOA study.

A comparison of the results of the Phase 2 (current study) and Phase 1 (prior study) results is provided in Table 57. Table 57 first provides the results from the current study, then the results from the prior study (with total trips reduced as indicated above) and an average of the two studies. The total (external) trips associated with each site is

Table 57 - Traffic Characteristics • Phase 1 & 2 Results

Characteristic	Phase 2 Study			Phase 2 Avg.	Country Isles	Village Commons	Boca Del Mar	Phase 1 Avg.	Ph 1 & 2 Avg.
	Crocker Center	Mizner Park	Galleria Area						
Total External ADT Trips	9,791	12,086	22,971	14,949	22,419 ⁴	18,075 ⁵	22,846 ⁴	21,114	18,031
Ext. AM Peak Hr Trips	717	365	960	681	1,335 ⁴	881 ⁵	1,164 ⁴	1,127	904
Ext. PM Peak Hr Trips	812	875	1,867	1,185	1,740 ⁴	1,431 ⁵	1,715 ⁴	1,629	1,407
Disagg ADT Trip Gen	11,944	10,730	32,273 ¹	18,316	31,068	26,196	32,642	29,969	24,142
Aggregate ADT Trip Gen	9,862	11,269	23,115 ¹	14,749	21,558	16,997	23,263	20,606	17,677
ATG AM Pk Hr Trips	566	500	882	649	1,213	959	1,098	1,090	870
ATG PM Pk Hr Trips	995	1,144	2,222	1,454	2,057	1,799	2,355	2,070	1,762
DTG% Total Trips	122.0%	88.8%	140.5%	117.1%	138.6%	144.9%	142.9%	142.1%	129.6%
ATG% Total Trips	100.7%	93.2%	100.6%	98.2%	96.2%	94.0%	101.8%	97.3%	97.8%
ATG% AM Pk Hr Trips	78.9%	137.0%	91.9%	102.6%	90.8%	108.8%	94.3%	98.0%	100.3%
ATG% PM Pk Hr Trips	122.5%	130.7%	119.0%	124.1%	118.2%	125.7%	137.3%	127.1%	125.6%
% Non-Residential	86.5%	92.5%	79.9%	86%	92.2%	90.4%	73.6%	85.4%	85.9%
% Residential	13.5%	7.5%	20.1%	14%	7.8%	9.6%	26.4%	14.6%	14.2%
% Internal Trips	41%	40%	38%	40%	33%	28%	33%	31.1%	35.4%
% Pass-By Trips	26%	29%	32%	29%	28%	14%	29%	23.2%	26.1%
Avg Trip Length	5.40	5.40	6.60	5.80	6.08	3.06 ²	4.04	4.39	5.10
Auto Occupancy	1.34	1.53	1.45	1.44	1.44	1.21	1.24	1.30	1.37

Source: Walter H. Keller, Inc.

- 1 - Based on reduced Regional Shopping Center trip generation estimate
- 2 - Non-Residential uses only
- 3 - Phase 1 Study by Tindale Oliver and Associates, Inc.

- 4 - Total trips reduced by 20% to account for internalization.
- 5 - Total trips reduced by 17.5% to account for internalization.
- 6 - Based on 8:00 - 9:00 AM
- 7 - Based on 5:00 - 6:00 PM

compared to disaggregate (DTG) and aggregate (ATG) trip generation estimates. Percentages are provided to compare each procedure's trip generation estimate with total external vehicle trips. Comparisons are also provided for percentage of total trips by use (non-residential and residential), internalization, and pass-by. The average trip length and auto occupancy is also provided.

With the reductions previously noted in the TOA driveway counts, the ITE aggregate ADT trip generation estimate procedure is very close in both studies to replicating the external daily vehicle trips as determined by the traffic count effort.

VII. MULTI-USE TRIP GENERATION SOFTWARE

This chapter reviews the design and operation of the Multi-Use Development Trip Generation (MUTG) software developed to project the trip generation of multi-use developments. This software was developed to estimate trip generation characteristics based on the land use mix of a multi-use development.

The MUTG software has been developed to operate on computers running Windows 3.1 or a later version. MUTG is spreadsheet based but macro driven providing "user-friendly" operation. Trip generation reports can be printed and the file can be saved, modified and retrieved.

Methodology

The results of the Districtwide Trip Generation Study of Multi-Use Developments indicates there is a high correlation between the external trips of a multi-use project when the trip generation procedure aggregates land uses. Comparisons with the earlier Department study by Tindale Oliver Associates, Inc., also revealed consistency with the current study when reductions were made in the observed trip generation to account for internal trips which were not accounted for, due to the fact that each site has roadways which cut through the site. As such, internal trips which used the roadway to access different parts of the site were included in the driveway counts.

The methodology for the MUTG software aggregates land uses to major categories of commercial, office, movie theater and residential. ITE trip generation rates from the 5th Edition are then used to calculate vehicle trips. The resulting calculation of trips is the external vehicle trips. Factors developed in the current study are then used to project the internalization and pass-by trips associated with each multi-use project.

System Overview

MUTG has been developed as a template for use with the Quattro-Pro Spreadsheet by Borland. The template is macro driven such that initiation of the software template will produce a base screen and system menu. The spreadsheet shown on the screen will activate the various modules without the need for complex computer programming skills. The base software has four (4) modules including: **Main Menu; Land Use Characteristics; View Results** and **Macros**. Through the **Main Menu**, the user can start a new file, retrieve an existing file or save the individual analysis.

The primary function of the software is to estimate the daily external trip generation of multi-use developments given site development land use characteristics. A flow chart of the system is provided in Figure 29.

Data Input Requirements

MUTG is menu driven and requires a series of inputs to be provided by the user. From the input menu, the user provides information on Project Name, Reviewer, Date and Location. The user is supplied (on screen) with a list of possible land uses. The user provides the gross square footage (for non-residential) and number and type of dwelling units (for residential) for a particular multi-use development analysis. For example, if a particular development includes retail, office and residential uses, the user would fill in the appropriate size/scale of a particular use until all uses of the development have been accounted for.

Example Problem

An example of the MUTG software is provided to illustrate the simplicity of the software's use. The mixed-use development is based on Crocker Center. Table 58 describes the land uses for the example.

Table 58 - Land Uses for Trip Generation Example

Land Use	Sq. Ft.	Occupied Uses
Office Uses	217,000	204,416
Office Tower I	113,500	
Office Tower II	90,916	
Vacant	12,584	
Commercial Uses	87,157	78,557
Retail Shops	33,495	
Restaurant (Quality)	30,201	
Restaurant (Sit Down)	9,250	
Fast Food (McDonald's)	5,611	
Vacant	8,600	
Residential - Hotel Uses		169
Rooms	256	
Room Occupancy	66%	
Mtg. Rooms	10,000	
Restaurant/ Lounge	3,000	

Source: Walter H. Keller, Inc.

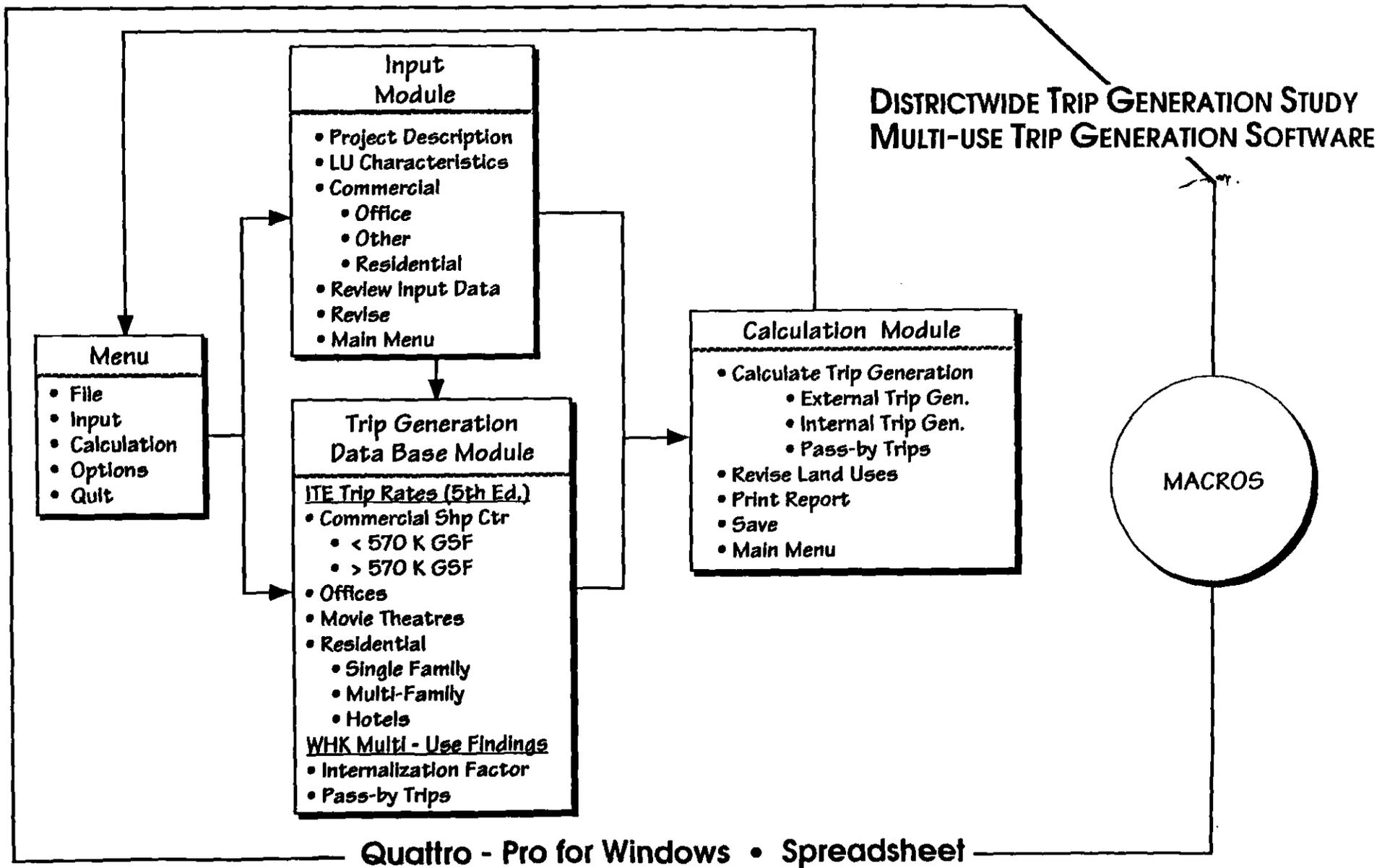


Figure 29 - MUTG System Overview

The MUTG Software is activated by importing the MUTG Template file through Quattro Pro. A Main Menu is displayed with the loading of the template. Triggering the Project Description category from the Main Menu allows the input of Project Name, Reviewer, Date and Location. The user can only access these input boxes. A Carriage Return (CR) takes the user back to the Main Menu. Accessing Land Use Characteristics provides the land use input screen. The size of each applicable land use is input by gross square feet of building floor area through the available land use boxes on the screen. Exceptions to this include movie theaters which are based on the number of screens and residential uses which are either occupied dwelling units or occupied hotel rooms. Figure 30 provides the input results for the Crocker Center example. A CR returns the user to the Main Menu. The trip generation calculations are automatically initiated when leaving the Land Use Characteristics Module.

View Results is accessed from the Main Menu. In this Module, the results of the trip generation calculations are displayed on the screen. The user can choose to print the results for a hard copy, save the results or go back to the input module and revise the land use inputs.

The trip generation results for the Crocker Center example are illustrated in Figure 31. Note that the Total Daily External Vehicle Trips (i.e., 9,915 in example) are total external vehicle trips and include pass-by trips.

Figure 30 - Land Use Input Screen

Florida Department of Transportation District IV Trip Generation of Multi-Use Developments Copyright (c) 1994 Walter H. Keller, Inc.		
PROPOSED LAND USE		
<u>Residential Uses</u>	<u>Size</u>	<u>Unit</u>
Single Family		DU's
Multi-Family Apts		DU's
High Rise Apts		DU's
Hotel-Motel	169	Rooms
<u>Commercial Uses</u>		
Shopping Center		GSF
Sit-Down Restaurant	9,250	GSF
Fast-Food Restaurant	5,611	GSF
Restaurant	30,201	GSF
Gas Station		GSF
Convenience Store		GSF
Discount Store		GSF
Bank		GSF
Savings and Loan		GSF
Retail	33,495	GSF
Other Commercial		GSF
<u>Offices</u>		
General Office	113,500	GSF
Medical Office		GSF
Day-Care Center		GSF
Other	90,916	GSF
<u>Movie Theater</u>		Screen

Figure 31 - Trip Generation Results

Florida Department of Transportation District IV Trip Generation of Multi-Use Developments Copyright (c) 1994 Walter H. Keller, Inc.				
GENERAL INFORMATION				
Project Name:	Crocker Center			
Reviewer:	Walter H. Keller, Inc.	Date:	26-Jan-95	
Location:	Boca Raton			
LAND USE AND TRIP GENERATION ESTIMATES				
	<u>Land Use</u>	<u>Size</u>	<u>Unit</u>	<u>Daily Trips</u>
	Residential Uses			
	Single Family			
	Multi-Family Apts			
	High-Rise Apts			
	Hotel-Motel	169	Rooms	1,428
	Commercial Uses	78,557	GSF	6,078
	Offices	204,416	GSF	2,409
	Movie Theater			
	Total Daily External Vehicle Trips =		9,915	
	Daily Internal Person Trips =		6,571	
	Pass By Vehicle Trips =		2,895	

VIII. SUMMARY AND RECOMMENDATIONS

This Final Report documents a comprehensive trip generation study of three (3) multi-use developments in Broward and Palm Beach Counties. The multi-use study sites were selected through a screening process and included Crocker Center and Mizner Park in the City of Boca Raton and the Galleria Area in the City of Fort Lauderdale. The study site's land use and operation characteristics were reviewed, mapped and documented. While the Boca Raton sites were recently developed mixed-use PUD type projects occupying approximately thirty (30) acres, the Galleria Area, is an older, non-master planned multi-use area totaling 165 acres that is dominated by the Galleria Mall.

An involved data collection effort was initiated to: quantify site traffic characteristics such as traffic volumes, auto occupancy and traffic flow; identify pedestrian movements in the mid-day and afternoon peak hours; and, to collect on-site face to face questionnaire interviews with site users and workers over a two day period. External daily traffic volumes varied from 9,791 at Crocker Center to 22,971 at the Galleria Area. Traffic volumes at all sites was highest during the mid-day (12:00 PM - 1:00 PM) period as compared to the traditional morning (8:00 AM- 9:00 AM) and afternoon (5:00 PM - 6:00 PM) peak times.

A total of 2,189 face to face questionnaire interviews were performed to ascertain the trip purpose, trip end origin and destination, internalization characteristics, travel mode and demographic information. The results of the interviews reveal that approximately twenty-nine (29%) percent of trips are pass-by and forty (40%) percent of all trips are internal. Average trip length was approximately 5.8 miles with auto occupancy ranging from 1.34 persons per vehicle at Crocker Center to 1.53 persons per vehicle at Mizner Park.

Trip generation estimates were developed using ITE procedures considering disaggregated and aggregated land uses. The best procedure for estimating external ADT vehicle trips of mixed use developments occurs when ITE trip generation rates are applied to aggregated land uses. Pedestrian counts were utilized at Galleria Shopping Mall to confirm a significantly lower external trip generation for the shopping center consistent with the traffic count results. Incorporating this adjustment with the trip generation results enabled external ADT trip generation estimates to approximate 98% of the traffic count results. Future trip generation research should incorporate parking occupancy counts to help assist in quantifying multi-use activity characteristics.

A comparison of the current study results with the Department's prior study indicate some potentially significant differences until adjustments are made to the prior study's observed traffic counts. Because the prior study reported driveway counts and since the driveway counts include internal vehicle counts, adjustments are warranted for comparing similar conditions. The prior study indicated internalization of 33.0% (Country Isles), 27.5% (Village Commons) and 32.7% (Boca Del Mar). Since not all of these trips are included in the driveway counts, reductions of 17.5% (Village Commons) and 20.0% (Country Isles and Boca Del Mar) are reasonable. With these reductions in the observed driveway counts, the external ADT trip generation results approximate 97% of traffic counts.

The approximation of peak hour trip generation using ITE procedures for aggregated land uses was not found to produce satisfactory results when compared to the ADT results. Peak hour trip generation estimates varied from 78.9% to 137.3% of traffic count volumes. The basis for the peak hour differences may be influenced by more variable trip generation characteristics (as evidenced with lower ITE R^2 values) and time differences in selecting the peak hour traffic volume (two hour ITE peak period versus a set one hour period). Further research is necessary to quantify the peak hour characteristics of multi-use developments.

A computer software program was developed to estimate the trip generation characteristics of multi-use developments. The software (MUTG) utilizes a macro controlled spreadsheet template to activate a series of project screens. Information on project description is input by gross square feet of occupied floor area for all non-residential land uses except theaters which uses number of screens. Residential land uses are also input by occupied dwelling units for single family, multi-family apartment and high-rise apartment categories. MUTG automatically aggregates land uses and calculates the external ADT vehicle trips associated with the development. The software also estimates the amount of internal person trips generated and the number of vehicle trips associated with pass-by capture based on the results of this study. The software does not estimate peak hour traffic volumes due to the variability previously discussed.