

SHARED PARKING

In Mixed-Use Developments
and Districts

PARKING DATA COLLECTION

Compass Blueprint Parking Forum
SCAG

SHARED PARKING

Shared Parking occurs when

the project's parking supply can accommodate the parking demand

generated by different land uses

with a supply less than that typically required by Zoning Code.

SHARED PARKING EXAMPLES

- Cinema and Office
 - Cinema generates nighttime and weekend
 - Office generates daytime and weekday
- Office and Restaurant
 - Office = daytime
 - Restaurant = nighttime
- Restaurant and Residential
 - Both nighttime demand
 - Poor choice for Shared Parking

HISTORY

- 1983 Shared Parking
 - Sponsored by ULI
 - Massive data collection of single use projects
 - Development of spreadsheet model
- 2005 Update
 - 20+ years of model experience
 - Expert Panel
 - Experience

1983 INPUT DATA

PIKE GARAGE PARKING DEMAND -- SUMMER PEAK SHARED PARKING ESTIMATION-INPUT ASSUMPTIONS

PROJECT #: 949.01

PROJECT : PIKE GARAGE

Month : JUL

<u>LAND USE</u>	<u>SIZE</u>	<u>DEMAND RATIO</u>		<u>%AUTO</u>	<u>PERS/ AUTO</u>	<u>%CAPTIVE</u>	<u>MONTH ADJMT</u>	
		<u>Weekday</u>	<u>Saturday</u>				<u>Weekday</u>	<u>Saturday</u>
OFFICE	0	3.33	0.50	100%	1.2	N/A	1.00	1.00
RETAIL	72.3	3.80	4.25	100%	1.8	0%	0.75	0.75
RESTAURANT	150.75	20.00	20.00	80%	2.0	40%	1.00	1.00
ENTERTAINMEN	34.8	10.00	10.00	100%	2.0	20%	1.00	1.00
CINEMA	3572	0.13	0.23	100%	2.0	0%	1.00	1.00
CBD-RESID.	0	1.00	1.00	N/A	N/A	N/A	1.00	1.00
HOTEL-ROOM	0	0.35	0.35	80%	1.4	0%	1.00	1.00
MEDICAL OFFICE	0	5.00	5.00	100%	1.5	0%	1.00	1.00
NIGHT CLUB	48.52	10.00	10.00	100%	2.0	20%	1.00	1.00
HOTEL-BANQ/ MTG	0	10.00	10.00	100%	2.0	0%	0.50	0.50

PARKING ACCUMULATION SUMMARY

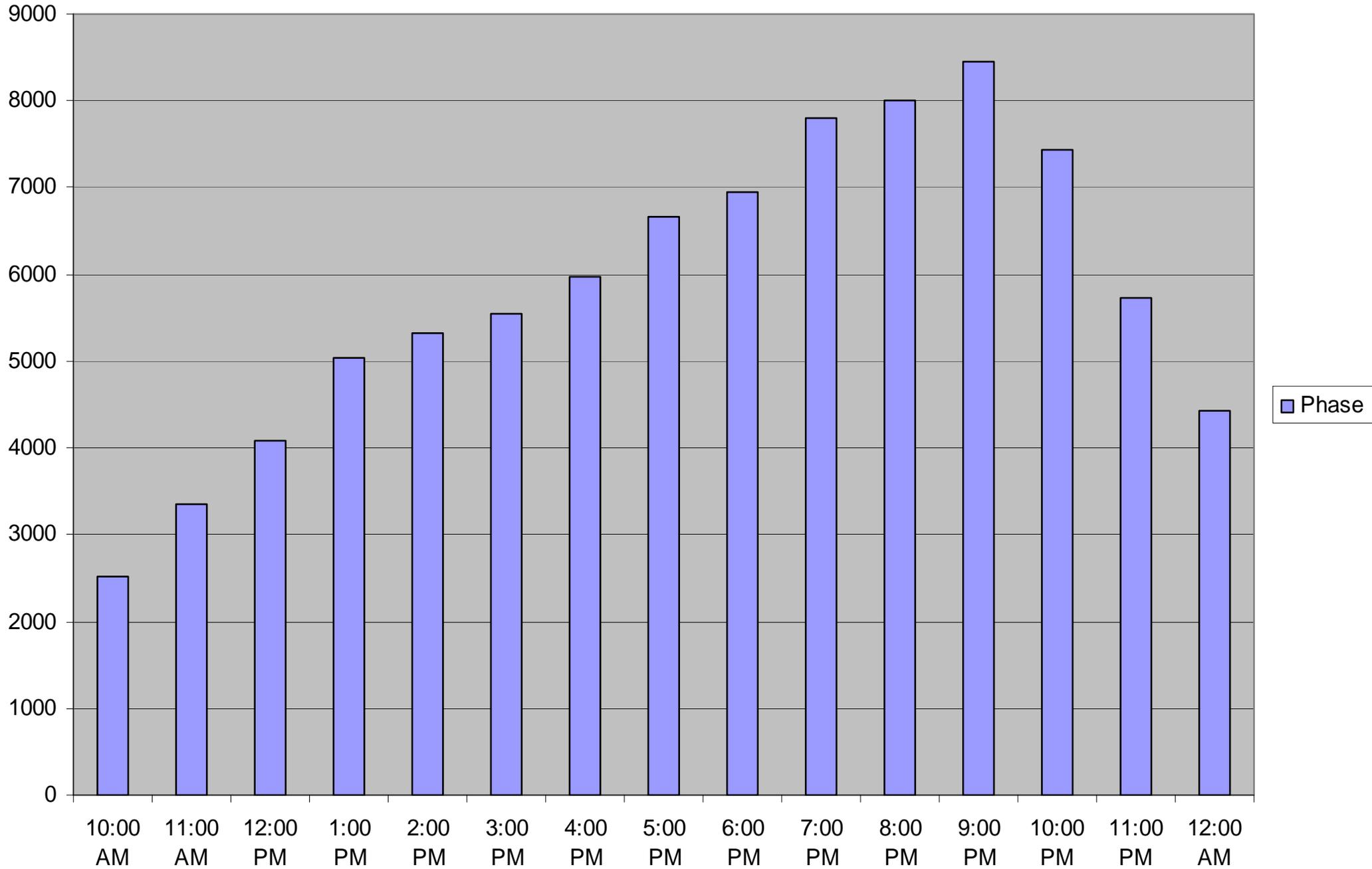
PROJECT #:		949.01									
PROJECT :		PIKE GARAGE		Month : JUL							
WEEKDAY											
<u>TIME</u>	<u>Office</u>	<u>Retail</u>	<u>Rest.</u>	<u>Entertainm</u>	<u>Cinema</u>	<u>CBD Res</u>	<u>Hotel Room</u>	<u>Medical Office</u>	<u>Night Club</u>	<u>Hotel Banquet</u>	<u>Totals</u>
6 a.m.	0	0	0	0	0	0	0	0	0	0	0
7 a.m.	0	16	29	6	0	0	0	0	0	0	51
8 a.m.	0	37	72	8	0	0	0	0	0	0	117
9 a.m.	0	87	145	17	0	0	0	0	0	0	249
10 a.m.	0	140	289	22	0	0	0	0	0	0	451
11 a.m.	0	179	434	28	98	0	0	0	0	0	739
12 noon	0	200	724	84	163	0	0	0	0	0	1171
1 p.m.	0	206	1013	125	163	0	0	0	0	0	1507
2 p.m.	0	200	868	125	195	0	0	0	0	0	1388
3 p.m.	0	196	868	125	195	0	0	0	0	0	1384
4 p.m.	0	179	724	125	116	0	0	0	0	0	1144
5 p.m.	0	163	1013	167	153	0	0	0	128	0	1624
6 p.m.	0	169	1302	251	163	0	0	0	136	0	2021
7 p.m.	0	183	1447	278	464	0	0	0	388	0	2760 *
8 p.m.	0	179	1447	278	464	0	0	0	388	0	2756
9 p.m.	0	126	1447	278	464	0	0	0	388	0	2703
10 p.m.	0	66	1302	264	362	0	0	0	303	0	2297
11 p.m.	0	27	1013	237	163	0	0	0	136	0	1576
12 mid.	0	0	724	195	0	0	0	0	0	0	919

Max = 2760

SATURDAY											
<u>TIME</u>	<u>Office</u>	<u>Retail</u>	<u>Rest.</u>	<u>Entertainm</u>	<u>Cinema</u>	<u>CBD Res</u>	<u>Hotel Room</u>	<u>Medical Office</u>	<u>Night Club</u>	<u>Hotel Banquet</u>	<u>Totals</u>
6 a.m.	0	0	0	0	0	0	0	0	0	0	0
7 a.m.	0	12	29	6	0	0	0	0	0	0	47
8 a.m.	0	23	43	8	0	0	0	0	0	0	74
9 a.m.	0	69	87	17	0	0	0	0	0	0	173
10 a.m.	0	104	116	22	0	0	0	0	0	0	242
11 a.m.	0	173	434	28	337	0	0	0	0	0	683
12 noon	0	196	868	84	567	0	0	0	0	0	1281
1 p.m.	0	219	868	125	567	0	0	0	0	0	1562
2 p.m.	0	230	868	125	698	0	0	0	0	0	1704
3 p.m.	0	230	868	125	665	0	0	0	0	0	1671
4 p.m.	0	207	868	125	411	0	0	0	0	0	1394
5 p.m.	0	173	868	167	271	0	0	0	128	0	1607
6 p.m.	0	150	1302	251	288	0	0	0	136	0	2127
7 p.m.	0	138	1447	278	822	0	0	0	388	0	3073 *
8 p.m.	0	127	1447	278	822	0	0	0	388	0	3062
9 p.m.	0	92	1447	278	822	0	0	0	388	0	3027
10 p.m.	0	92	1375	264	739	0	0	0	303	0	2773
11 p.m.	0	23	1230	237	583	0	0	0	136	0	2209
12 mid.	0	0	1013	195	0	0	0	0	0	0	1208

Max = 3073

Figure 8
Irvine Spectrum Parking
Phase 1-5 Friday July vs Dec



2005 UPDATE FOCUS

- New Land Uses
- Updated Hourly/Monthly Patterns
- Transit/Walk and Internal Capture Flexibility
- Employees and Visitors/Customers
- Calculates Peak Month Automatically

ADDITIONAL LAND USES

- Restaurants
 - Fast Food, Fine/Casual Dining, Family Restaurant
- Arena, Stadium
- Multiplex Cinema
- Live Theater
- Night Club
- Health Club

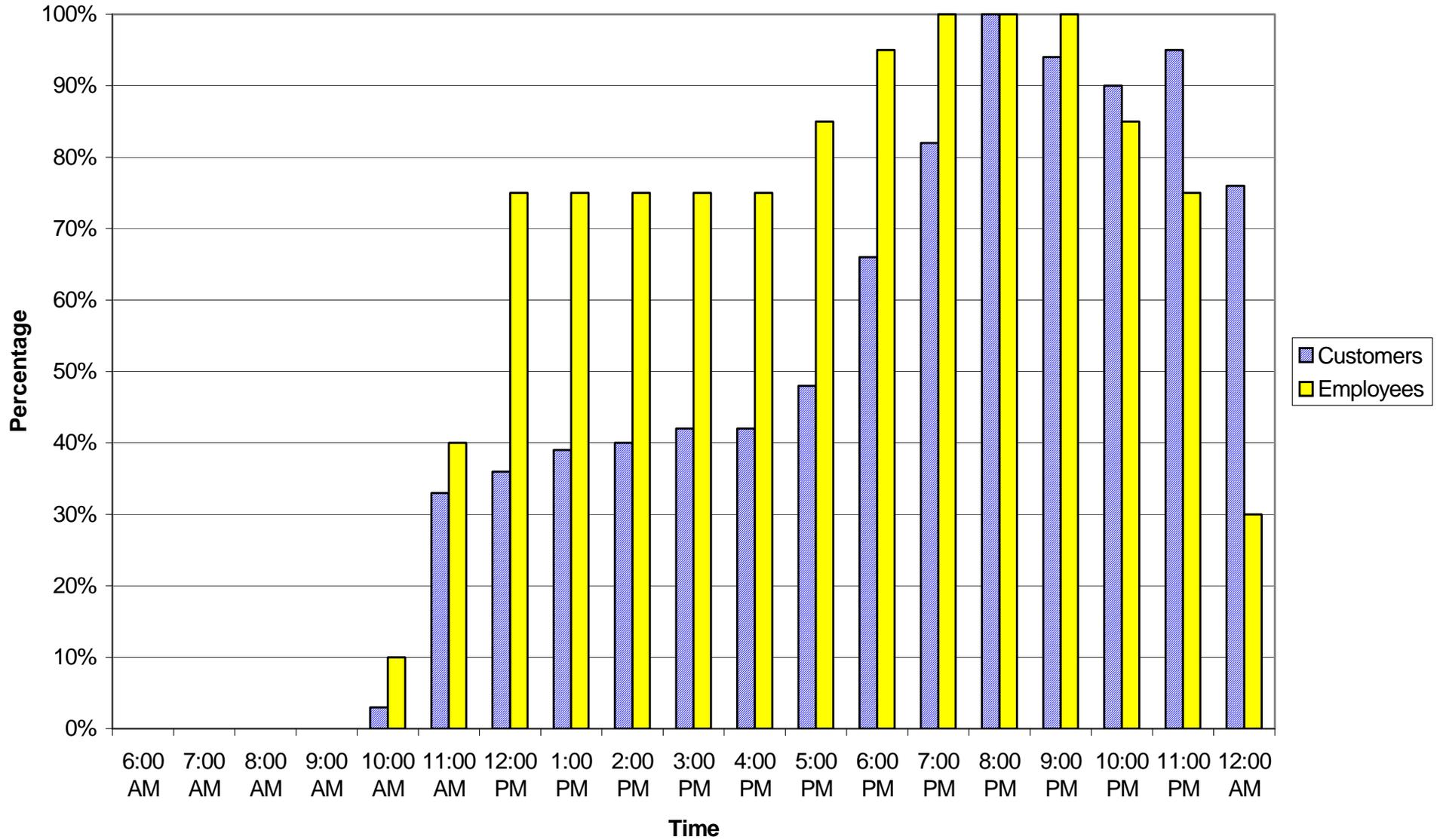
DEFAULT VALUES

Land Use	Weekday		Weekend		Unit	Source
	Visitor	Employee	Visitor	Employee		
Community Shopping Center (<400 ksf)	2.90	0.70	3.20	0.80	/ksf GLA	1
Regional Shopping Center (400k to 600ksf)	3.02	0.74	3.36	0.84	/ksf GLA	1
Super Regional Shopping Center (>600k)	3.20	0.80	3.60	0.90	/ksf GLA	1
Convenience Retail	4.70	0.80	5.50	1.00	/ksf GLA	
Fine Dining Restaurant	15.00	2.50	18.50	3.00	/ksf GLA	2
Casual Restaurant	13.00	2.00	20.00	2.50	/ksf GLA	3
Family Restaurant	11.00	2.00	14.00	2.00	/ksf GLA	3
Fast Food	13.25	1.75	13.25	1.75	/ksf GLA	2
Nightclubs	13.00	1.00	20.00	1.25	/ksf GLA	3
Active Entertainment	4.20	0.40	6.50	0.50	/ksf GLA	3
Cineplex	0.19	0.01	0.26	0.01	/seat	2,3
Performing Arts Theater	0.30	0.07	0.33	0.07	/seat	3
Arena	0.27	0.03	0.30	0.03	/seat	3
Pro Football Stadium	0.30	0.01	0.30	0.01	/seat	3
Pro Baseball Stadium	0.31	0.01	0.34	0.01	/seat	3
Health Club	5.75	0.25	4.80	0.20	/ksf GLA	5,3
Convention Center	5.50	0.50	5.50	0.50	/ksf GLA	3
Hotel-Business	1.00	0.25	0.90	0.18	/room	2,4
Hotel-Leisure	0.90	0.25	1.00	0.18	/room	2
Restaurant/Lounge	10.00		10.00		/ksf GLA	4
Meeting/Banquet (20 to 50 sq ft/ guest room)	30.00		15.00		/ksf GLA	4
Convention (>50 sq ft / guest room)	20.00		10.00		/ksf GLA	4
Residential, Rental, Suburban	0.15	1.35	0.15	1.35	/unit	2,3
Residential, Rental, Transit Oriented	0.15	1.3	0.15	1.3	/unit	2,3
Residential Owned, Suburban	0.15	1.7	0.15	1.7	/unit	2,3
Residential Owned, Transit Oriented	0.15	1.5	0.15	1.5	/unit	2,3
Office <250,000 sq ft	0.20	3.40	0.01	0.14	/ksf GLA	2
Office >250,000 sq ft	0.19	3.16	0.01	0.14	/ksf GLA	2
Office High Density Activity Center*	0.15	2.85	0.01	0.14	/ksf GLA	2
Data Processing Centers	0.15	5.85	0.01	0.14	/ksf GLA	2,3
Medical/Dental Office	2.65	1.75	2.65	1.75	/ksf GLA	2
Bank (Branch)	3.75	1.75	3.75	1.75	/ksf GLA	2
Bank (Headquarters)	2.40	2.00			/ksf GLA	2

Monthly Adjustments for Customer/Visitor Parking

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Community Shopping Center (<400 k	56%	57%	64%	63%	66%	67%	64%	69%	64%	66%
Retail	56%	57%	64%	63%	66%	67%	64%	69%	64%	66%
Super Regional Shopping Center (>60	56%	57%	64%	63%	66%	67%	64%	69%	64%	66%
Convenience Retail	83%	79%	88%	85%	91%	89%	91%	90%	87%	88%
Fine Dining Restaurant	85%	86%	95%	92%	96%	95%	98%	99%	91%	96%
Casual Restaurant	85%	86%	95%	92%	96%	95%	98%	99%	91%	96%
Family Restaurant	85%	86%	95%	92%	96%	95%	98%	99%	91%	96%
Fast Food	84%	84%	94%	93%	98%	97%	100%	99%	92%	98%
Nightclubs	84%	86%	98%	90%	90%	91%	94%	96%	92%	98%
Active Entertainment	71%	59%	67%	58%	71%	82%	92%	75%	51%	62%
Cineplex Weekdays	27%	21%	20%	19%	27%	41%	55%	40%	15%	15%
Cineplex Weekends	71%	59%	67%	58%	71%	82%	92%	75%	51%	62%
Performing Arts Theater	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%
Arena	90%	100%	100%	100%	100%	75%			60%	65%
Pro Football Stadium								67%		
Pro Baseball Stadium					100%	100%	100%	100%	100%	100%
Health Club	100%	95%	85%	70%	65%	65%	65%	70%	80%	85%
Convention Center	75%	100%	90%	55%	60%	50%	45%	75%	80%	85%
Hotel-Business	71%	85%	91%	90%	92%	100%	98%	92%	93%	93%
Hotel-Leisure	90%	100%	100%	100%	90%	90%	90%	90%	75%	75%
Restaurant/Lounge	85%	86%	95%	92%	96%	95%	98%	99%	91%	96%
Meeting/Banquet (20 to 50 sq ft/ gue	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Convention (>50 sq ft / guest room)	75%	100%	90%	55%	60%	50%	45%	75%	80%	85%
Residential, Rental, Suburban	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Residential, Rental, Transit Oriented	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Office <250,000 sq ft	100%	100%	100%	100%	100%	100%	95%	95%	100%	100%
Office >250,000 sq ft	100%	100%	100%	100%	100%	100%	95%	95%	100%	100%
Office High Density Activity Center*	100%	100%	100%	100%	100%	100%	95%	95%	100%	100%
Data Processing Centers	100%	100%	100%	100%	100%	100%	95%	95%	100%	100%
Medical/Dental Office	100%	100%	100%	100%	100%	100%	95%	95%	100%	100%
Bank (Branch)	100%	100%	100%	100%	100%	100%	95%	95%	100%	100%

Weekday Parking Patterns Cinema



SAMPLE PROJECT

- 1,475,000 sf Retail
- 114,000 sf Restaurant
- 4,500 seat Cinema
- Code Required Parking = 8,903 spaces

Project: Westfield Santa Anita

Description: Existing plus Phase 2 Peak Month Parking Demand

Projected Parking Supply:		6850	Driving Ratio				Non-Captive Ratio				
Land Use	Quantity	Max Parking Spaces	Weekday		Weekend		Weekday		Weekend		
			Weekday	Weekend	Daytime	Evening	Daytime	Evening	Daytime	Evening	
Community Shopping Center (<400 ksf)	sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Regional Shopping Center (400k to 600ksf)	sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Super Regional Shopping Center (>600k)	1,473,741 sf GLA	4480	5040	100%	100%	100%	100%	100%	100%	100%	100%
Employee		1120	1267	100%	100%	100%	100%	100%	100%	100%	100%
Fine/Casual Dining Restaurant	114,855 sf GLA	1665	1855	100%	100%	100%	100%	75%	75%	75%	75%
Employee		300	327	100%	100%	100%	100%	100%	100%	100%	100%
Family Restaurant	sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Fast Food Restaurant	sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Nightclubs	sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Cineplex	4,500 seats	855	1170	100%	100%	100%	100%	75%	75%	75%	75%
Employee		45	45	100%	100%	100%	100%	100%	100%	100%	100%
Performing Arts Theater	seats	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Arena	seats	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Pro Football Stadium	seats	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Pro Baseball Stadium	seats	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Health Club	sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Convention Center	sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Hotel-Business	rooms	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Hotel-Leisure	rooms	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Restaurant/Lounge	sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Conference Ctr/Banquet (20 to 50 sq ft/ guest room)	sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Convention Space (>50 sq ft / guest room)	sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Residential, Rental	units	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Reserved	1 Sp/Unit	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Guest	units	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Residential, Owned	units	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Reserved	1 Sp/Unit	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Guest	units	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Office <25 ksf	sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Office 25 ksf to 100 ksf	sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Office 100 ksf to 500 ksf	sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Office >500 ksf	sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Data Processing Office	sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Medical/Dental Office	sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Bank (Branch) with Drive-In	sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Subtotal Customer/Guest Spaces		7000	8065								
Subtotal Employee/Resident Spaces		1465	1639								
Subtotal Reserved Spaces		0	0								
Total Parking Spaces		8465	9704								

OUTPUT -- SUMMARY

Table 18A															
Project: Westfield Santa Anita															
Description: Existing plus Phase 2 Peak Month Parking Demand															
SHARED PARKING DEMAND SUMMARY															
PEAK MONTH: DECEMBER -- PEAK PERIOD: 2 PM, WEEKEND															
Land Use	Project Data		Weekday					Weekend					Weekday		
	Quantity	Unit	Base Rate	Driving Ratio	Non-Captive Ratio	Project Rate	Unit	Base Rate	Driving Ratio	Non-Captive Ratio	Project Rate	Unit	Peak Hr Adj 1 PM	Peak Mo Adj December	Estimated Parking Demand
Super Regional Shopping Center (>600k)	1,473,741	sf GLA	3.04	1.00	1.00	3.04	/ksf GLA	3.42	1.00	1.00	3.42	/ksf GLA	1.00	1.00	4,480
Employee			0.76	1.00	1.00	0.76	/ksf GLA	0.86	1.00	1.00	0.86	/ksf GLA	1.00	1.00	1,120
Fine/Casual Dining Restaurant	114,855	sf GLA	14.50	1.00	0.75	10.88	/ksf GLA	16.15	1.00	0.75	12.11	/ksf GLA	1.00	1.00	937
Employee			2.61	1.00	1.00	2.61	/ksf GLA	2.85	1.00	1.00	2.85	/ksf GLA	1.00	1.00	270
Cineplex	4,500	seats	0.19	1.00	0.75	0.14	/seat	0.26	1.00	0.75	0.20	/seat	1.00	0.23	66
Employee			0.01	1.00	1.00	0.01	/seat	0.01	1.00	1.00	0.01	/seat	1.00	0.50	14
ULI base data has been modified from default values.												Customer		5483	
												Employee		1404	
												Reserved		0	
												Total		6887	

OUTPUT PEAK MONTH BY HOUR

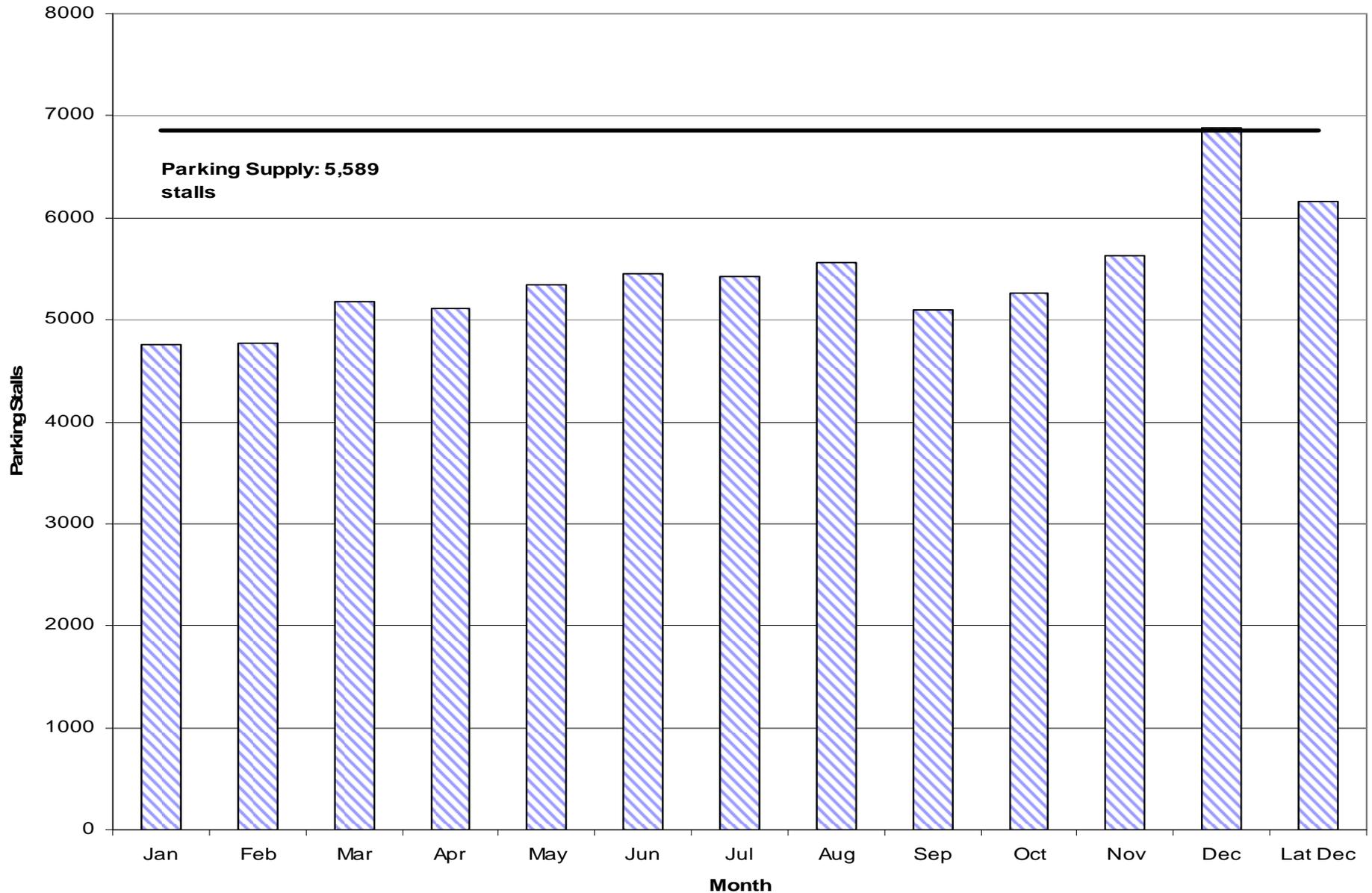
Table 18B
Project: Westfield Santa Anita
Description: Existing plus Phase 2 Peak Month Parking Demand

		December																	
		Weekday Estimated Peak Hour Parking Demand																	
		6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	
Super Regional Shopping Center (>600k)	100%	45	224	672	1,344	2,464	3,360	4,032	4,480	4,480	4,480	4,256	3,808	3,584	3,360	2,912	2,240	1,344	
Employee	100%	112	168	448	840	952	1,064	1,120	1,120	1,120	1,120	1,120	1,064	1,064	1,064	1,008	840	448	
Fine/Casual Dining Restaurant	100%	-	-	-	-	187	500	937	937	812	500	624	937	1,186	1,249	1,249	1,249	1,186	
Employee	100%	-	60	150	225	270	270	270	270	270	225	225	300	300	300	300	300	300	
Cineplex Weekdays	23%	-	-	-	-	-	-	29	66	81	81	81	88	88	118	147	147	118	
Employee	50%	-	-	-	-	-	-	11	14	14	17	17	23	23	23	23	23	23	
	Customer	45	224	672	1,344	2,651	3,860	4,998	5,483	5,373	5,061	4,961	4,833	4,858	4,727	4,308	3,636	2,640	
TOTAL DEMAND	Employee	112	228	598	1,065	1,222	1,334	1,401	1,404	1,404	1,362	1,362	1,387	1,387	1,387	1,331	1,163	777	
	Reserved	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		157	452	1,270	2,409	3,873	5,194	6,399	6,887	6,777	6,423	6,323	6,220	6,245	6,114	5,639	4,799	3,417	
ULI base data has been modified from default values.																			

		December																	
		Weekend Estimated Peak Hour Parking Demand																	
		6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	
Super Regional Shopping Center (>600k)	100%	50	252	504	1,764	3,024	3,528	4,284	4,788	5,040	5,040	4,788	4,536	4,032	3,780	3,276	2,520	1,764	
Employee	100%	127	190	507	950	1,014	1,140	1,267	1,267	1,267	1,267	1,267	1,204	1,077	1,014	950	824	507	
Fine/Casual Dining Restaurant	100%	-	-	-	-	209	557	1,043	1,043	904	557	696	1,043	1,322	1,391	1,391	1,391	1,322	
Employee	100%	-	65	164	245	294	294	294	294	294	245	245	327	327	327	327	327	327	
Cineplex Weekend	67%	-	-	-	-	-	-	118	265	323	323	323	353	353	470	588	588	588	
Employee	80%	-	-	-	-	-	-	18	22	22	27	27	36	36	36	36	36	36	
	Customer	50	252	504	1,764	3,233	4,085	5,445	6,096	6,267	5,920	5,807	5,932	5,707	5,641	5,255	4,499	3,672	
TOTAL DEMAND	Employee	127	255	671	1,195	1,308	1,434	1,579	1,583	1,583	1,539	1,539	1,567	1,440	1,377	1,313	1,187	933	
	Reserved	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		177	507	1,175	2,959	4,541	5,519	7,024	7,679	7,850	7,459	7,346	7,499	7,147	7,018	6,568	5,686	4,605	
ULI base data has been modified from default values.																			

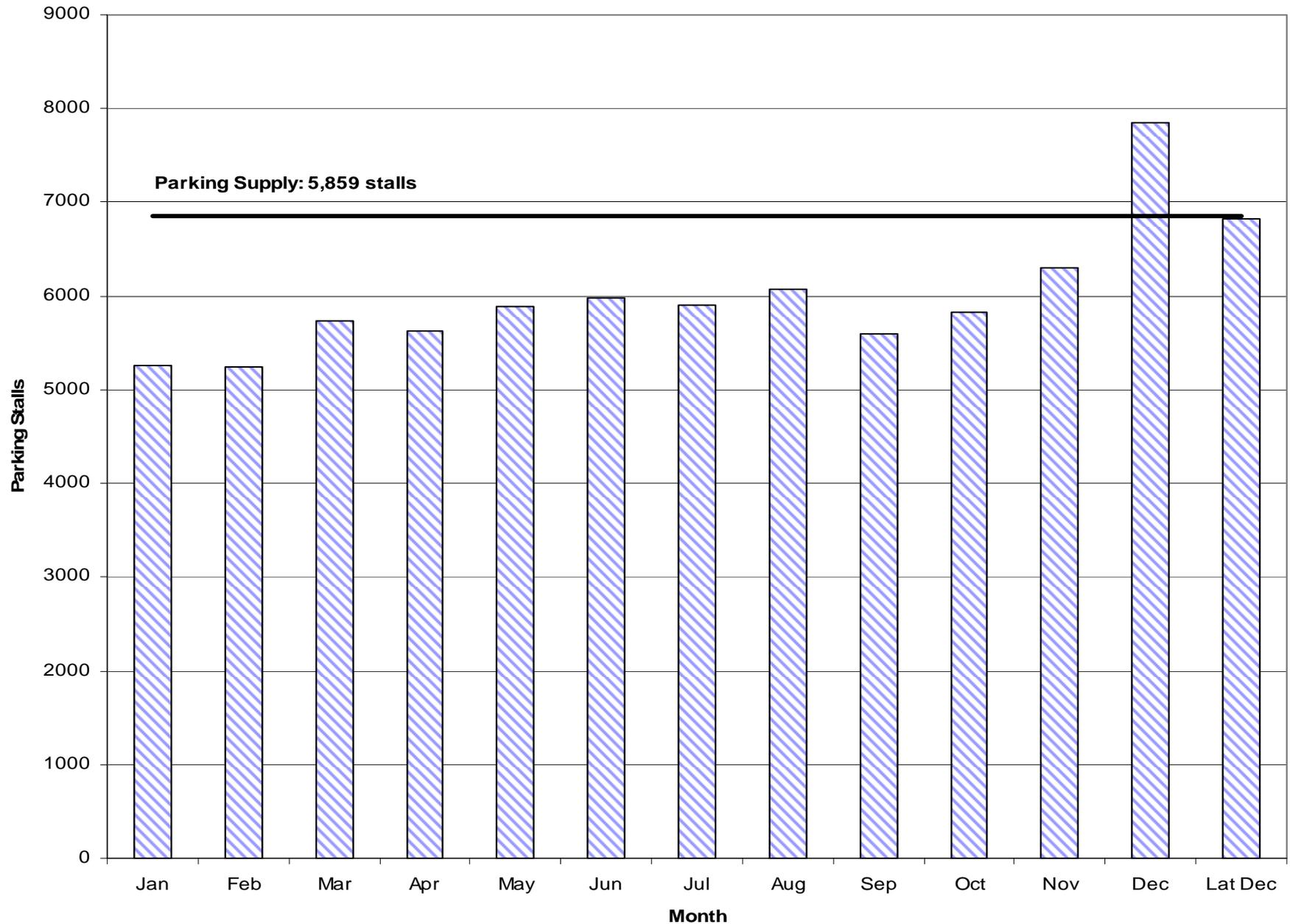
OUTPUT – WEEKDAY BUSIEST HOUR

Weekday Month-By-Month Estimated Parking Demand



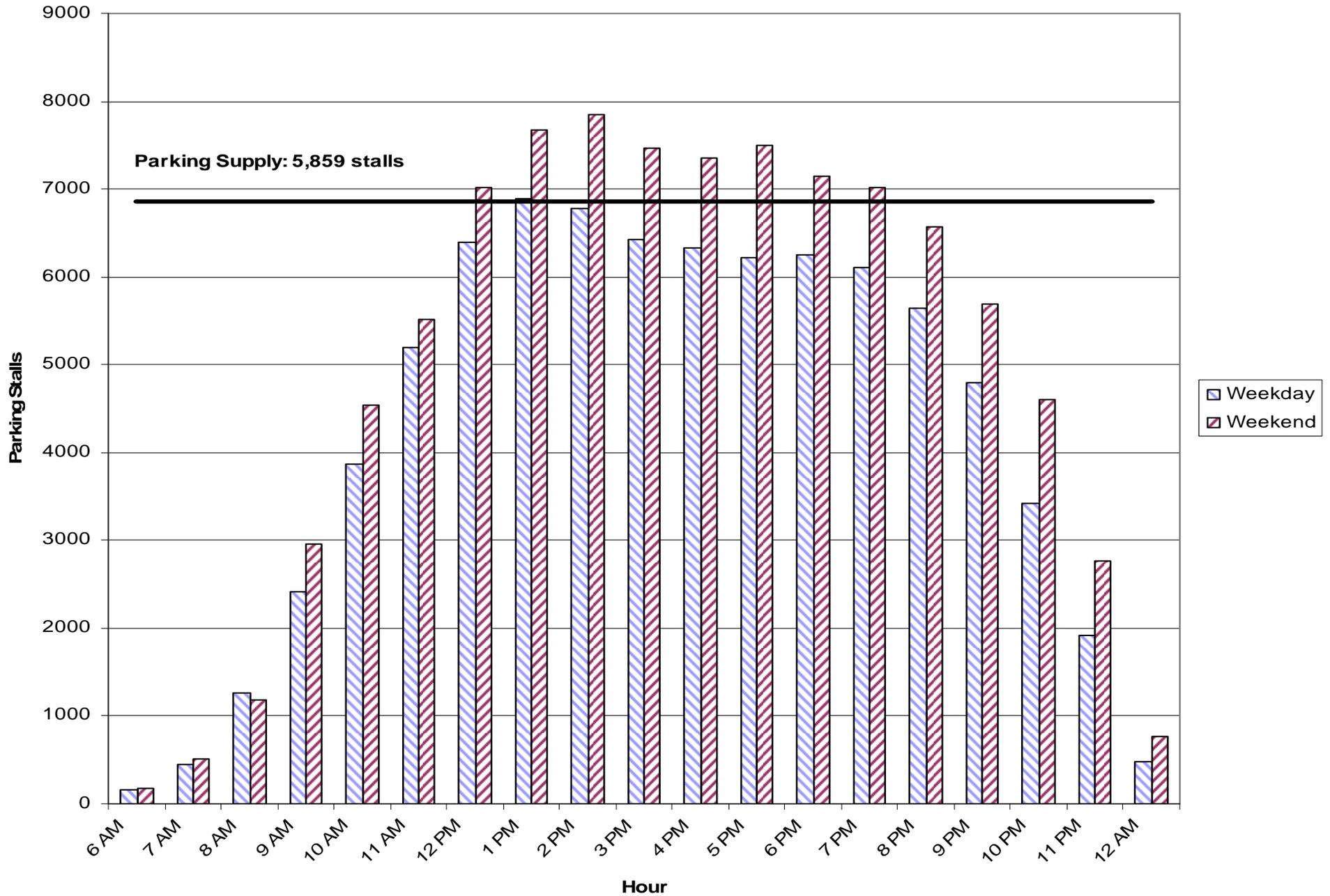
OUTPUT – WEEKEND BUSIEST HOUR

Weekend Month-By-Month Estimated Parking Demand



OUTPUT – BUSIEST MONTH BY HOUR

Peak Month Daily Parking Demand by Hour



TRENDS

- **Lots More Entertainment**
 - Nighttime Usage
 - Residential Conflicts
- **Residential Sharing**
 - Reserve 1 space/br, share the rest
- **Internal Capture Overestimation**
 - Cinema/Restaurant Share

CONCLUSIONS

- 2005 Model is More Detailed
- Goal: Accurate, Useful
- Cities Changing Codes to Recognize Shared Parking
- Build Parking as Necessary to Meet Demand
- Best Tool for TOD Parking Demand
- Model in Use NOW

PARKING DATA COLLECTION

GOAL: Identify Real Data Needs

Be Aware that Data Collection can be
Endless

Inventory, Occupancy, Duration, Turnover

Study Area Zones – Walking Distances

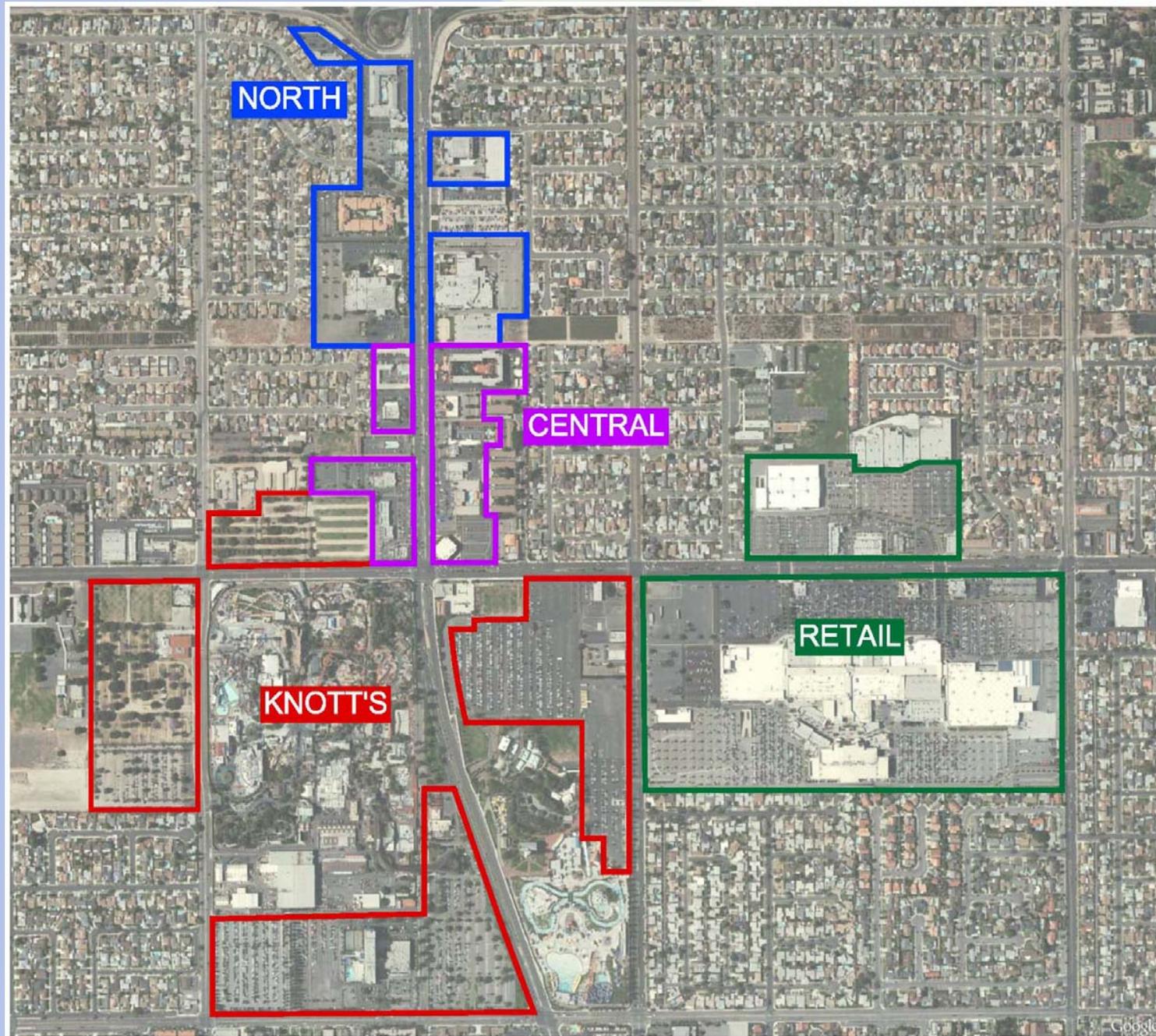
Merchants Know the Answers

BUENA PARK E-ZONE

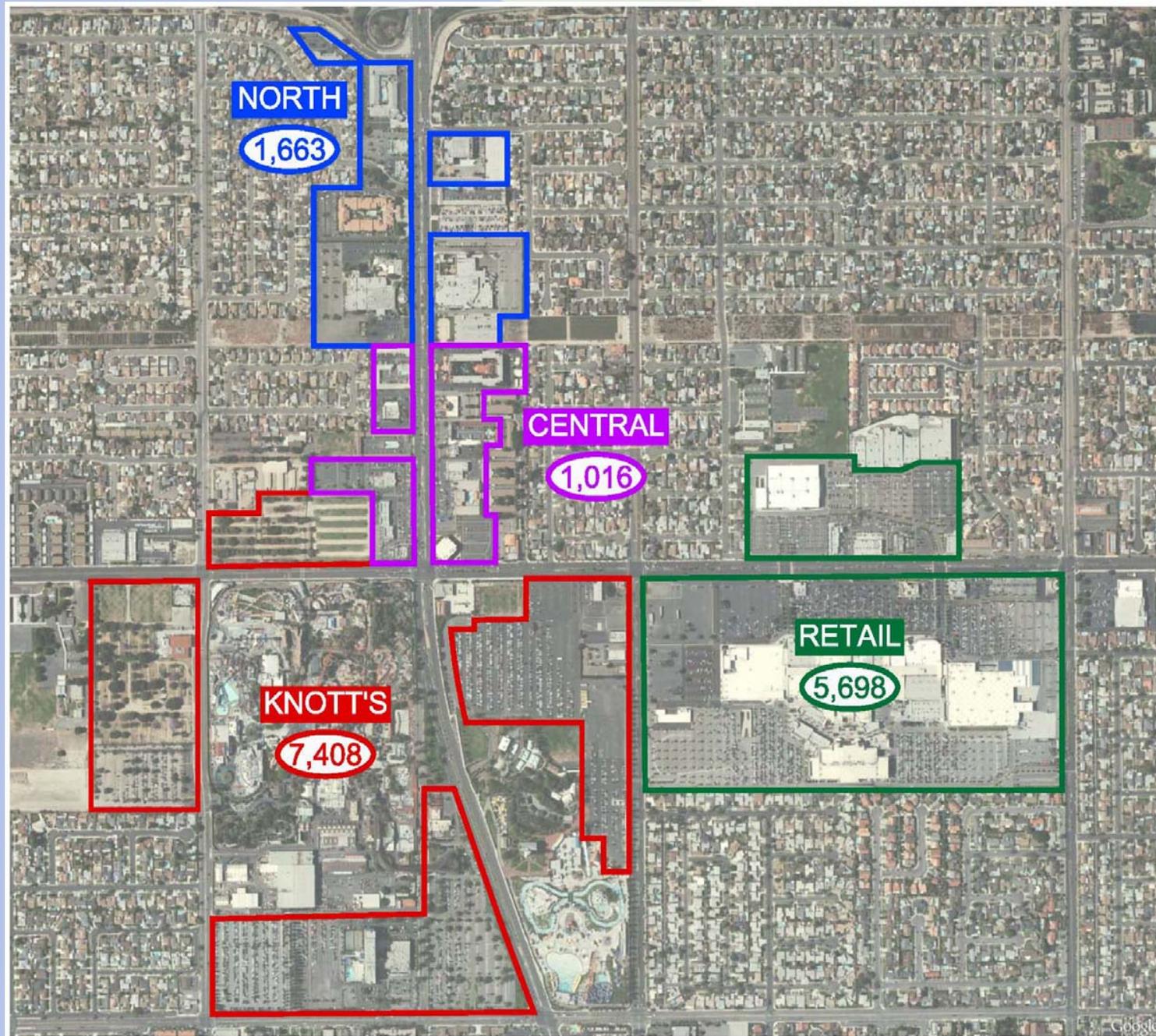
EXISTING CONDITIONS PARKING SUMMARY

August 12, 2009

ZONES



CAPACITY



OCCUPANCY STUDIES

DAY OF THE WEEK

TUESDAY - JUNE 30, 2009

SATURDAY - JUNE 27, 2009

TIME OF DAY

10:00 AM

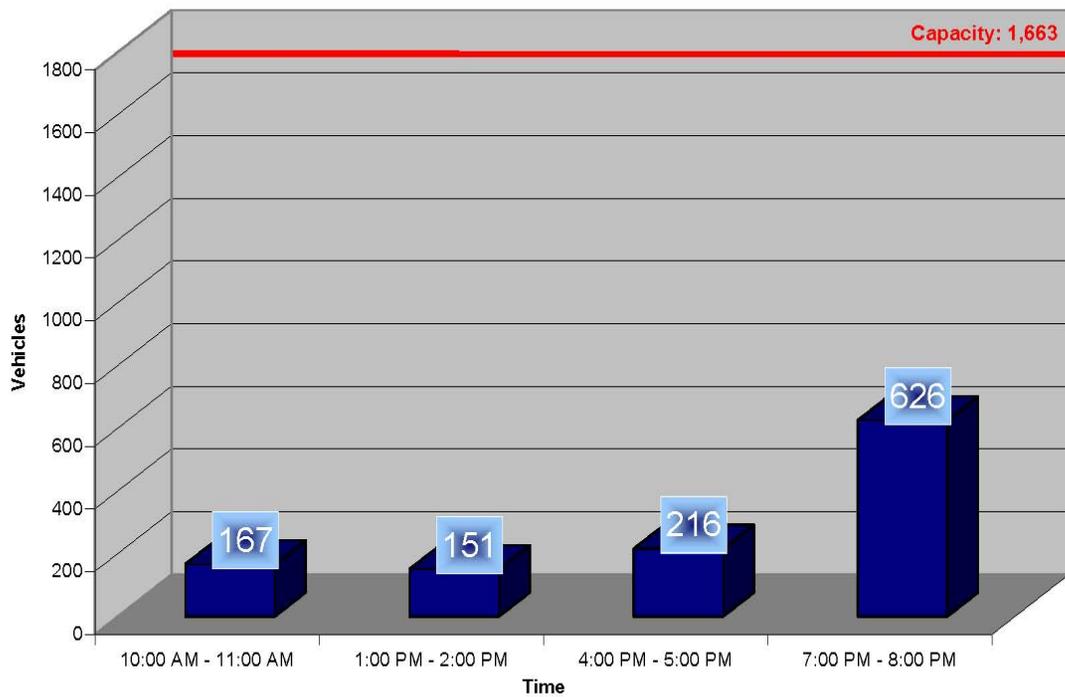
1:00 PM

4:00 PM

5:00 PM

NORTH ZONE

WEEKDAY OCCUPANCY

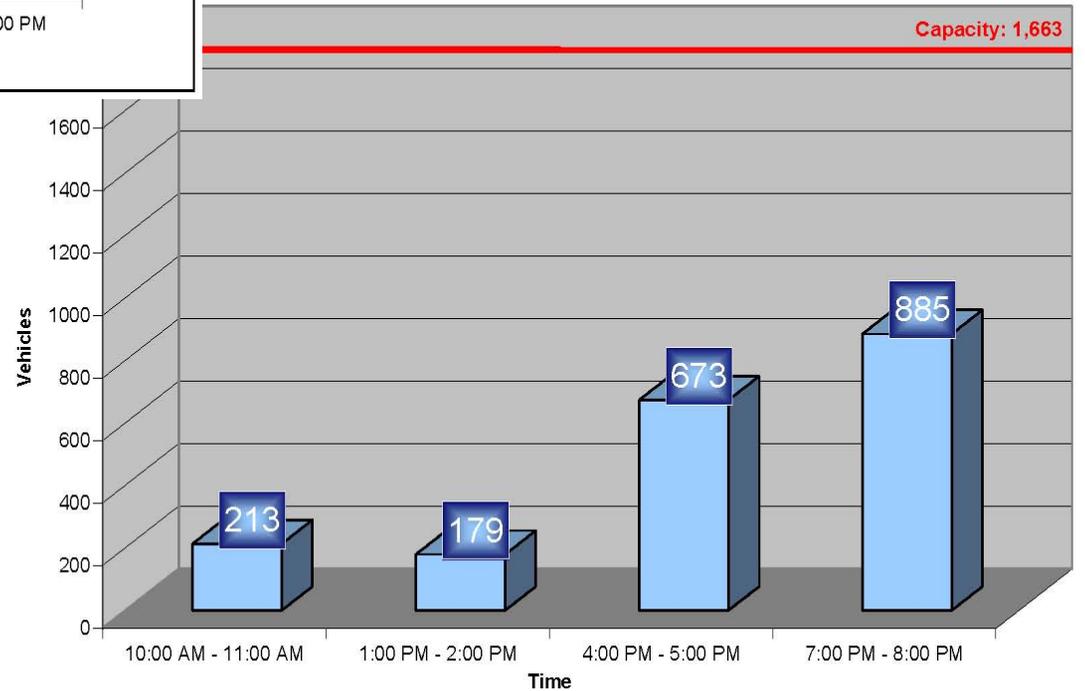


PEAK OCCUPANCY

38%

7:00 PM – 8:00 PM

SATURDAY OCCUPANCY



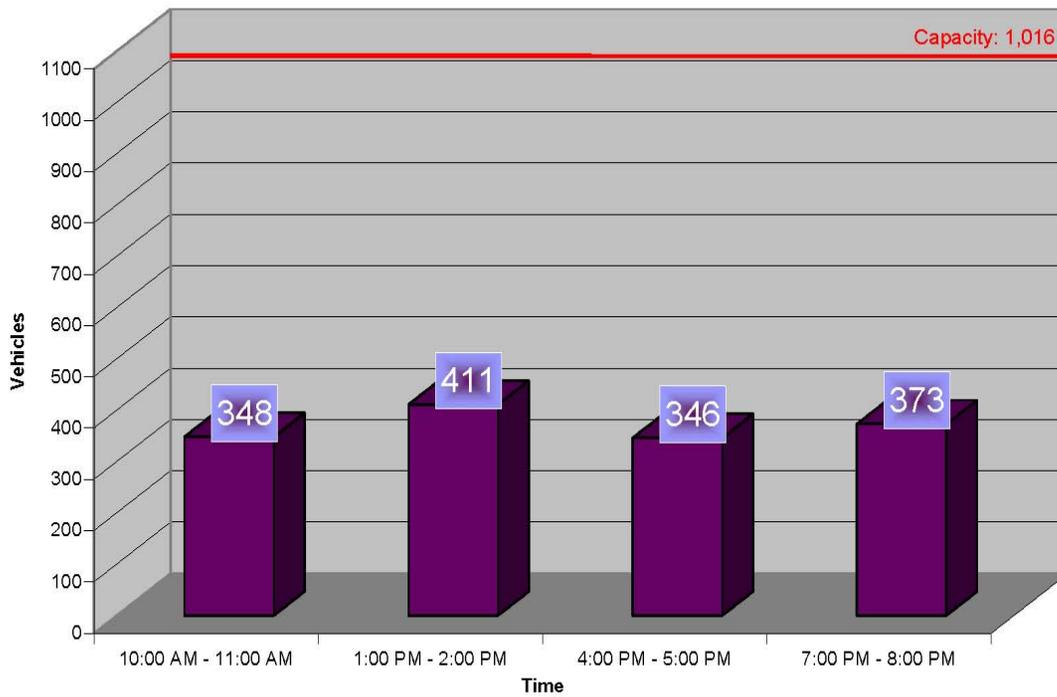
PEAK OCCUPANCY

53%

7:00 PM – 8:00 PM

CENTRAL ZONE

WEEKDAY OCCUPANCY

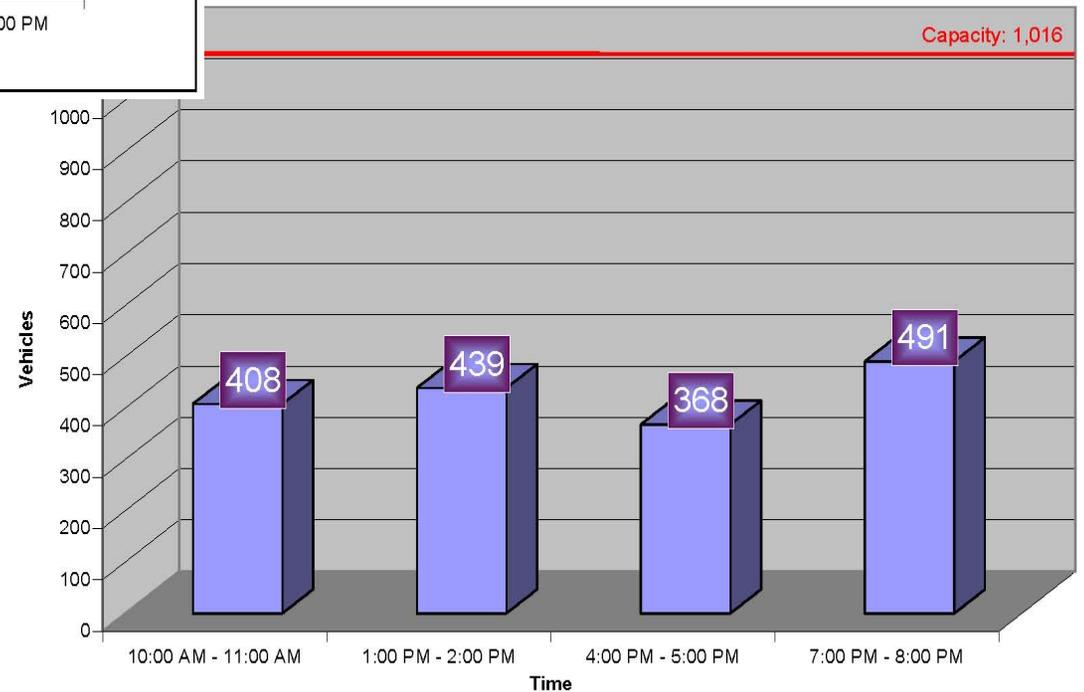


PEAK OCCUPANCY

40%

1:00 PM – 2:00 PM

SATURDAY OCCUPANCY



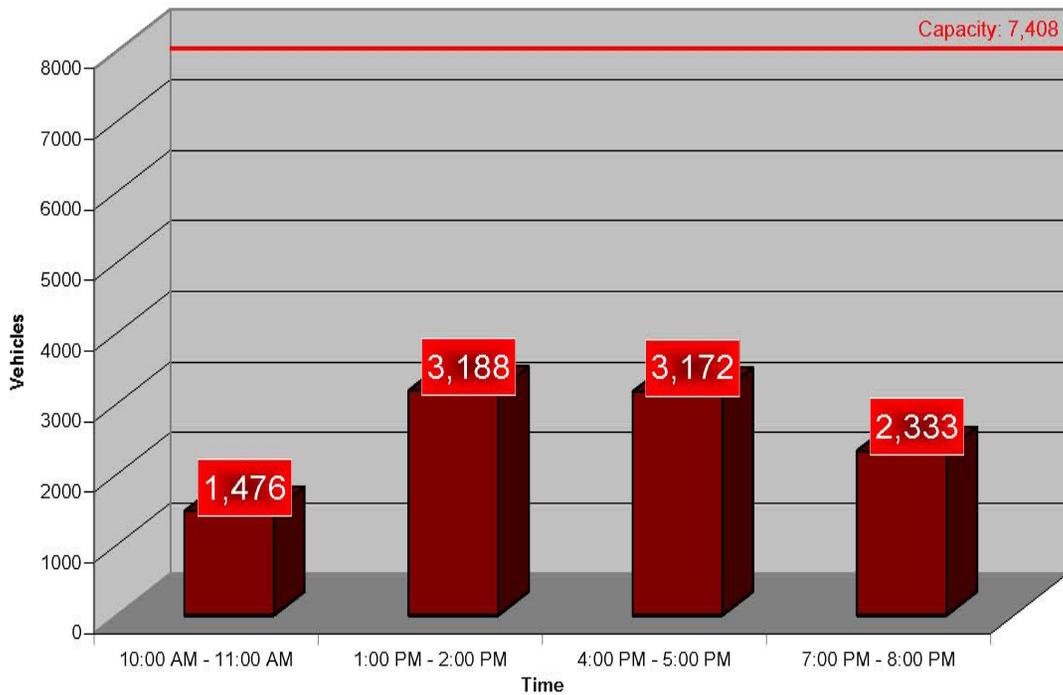
PEAK OCCUPANCY

48%

7:00 PM – 8:00 PM

KNOTT'S ZONE

WEEKDAY OCCUPANCY

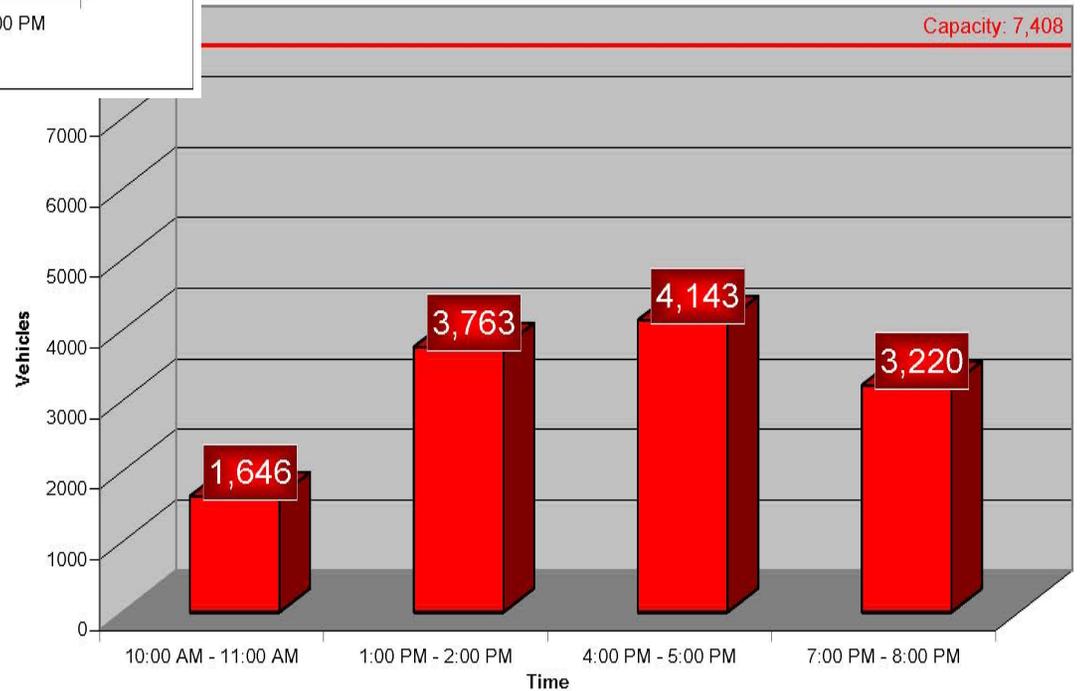


PEAK OCCUPANCY

43%

1:00 PM – 2:00 PM

SATURDAY OCCUPANCY



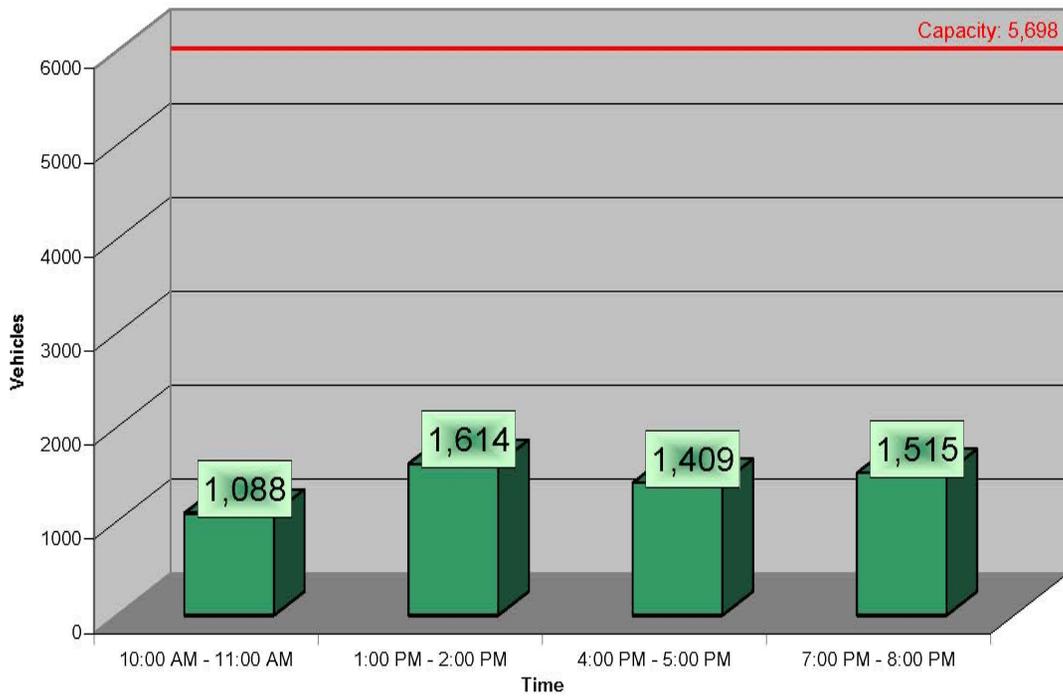
PEAK OCCUPANCY

56%

4:00 PM – 5:00 PM

RETAIL ZONE

WEEKDAY OCCUPANCY

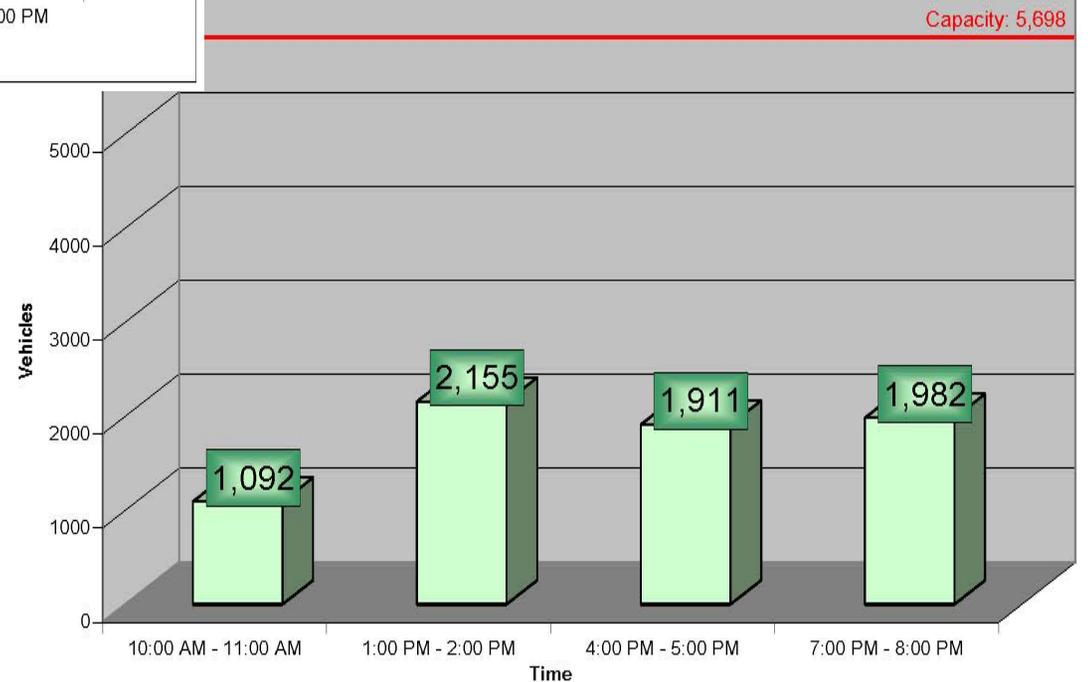


PEAK OCCUPANCY

28%

1:00 PM – 2:00 PM

SATURDAY OCCUPANCY



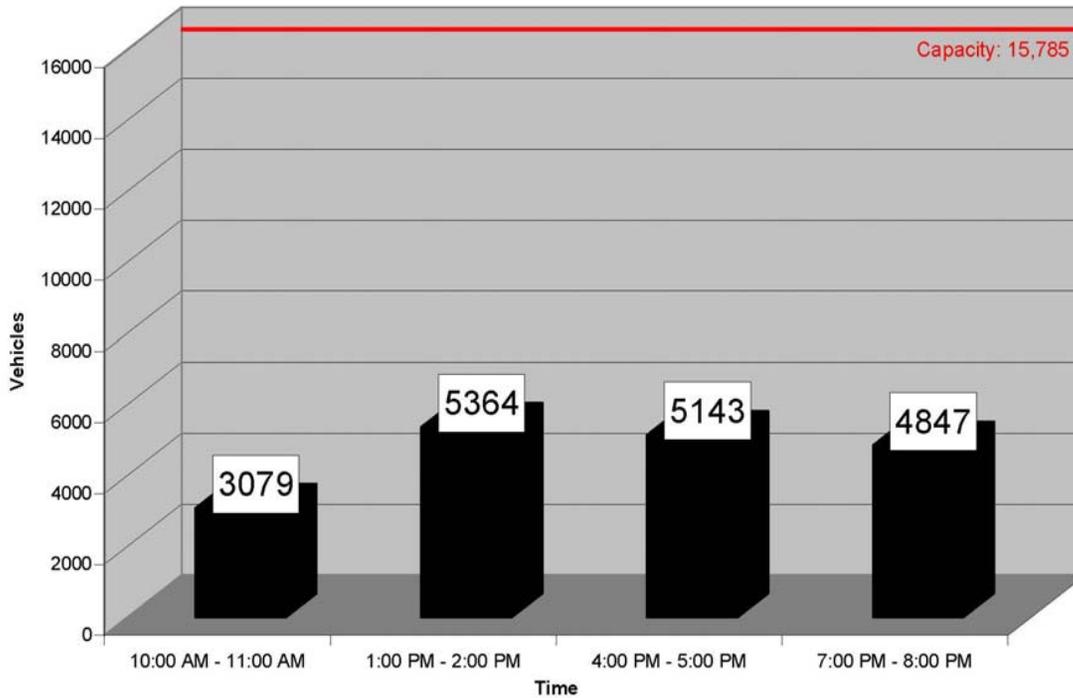
PEAK OCCUPANCY

38%

1:00 PM – 2:00 PM

TOTAL OCCUPANCY

TOTAL WEEKDAY OCCUPANCY

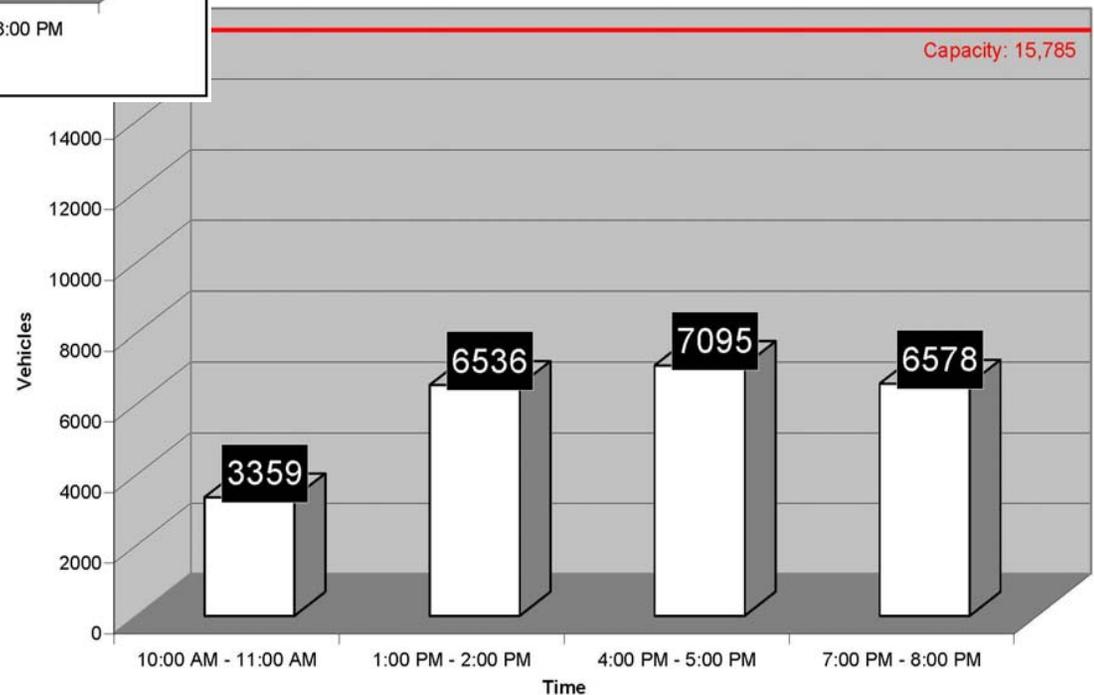


PEAK OCCUPANCY

34%

1:00 PM – 2:00 PM

TOTAL SATURDAY OCCUPANCY



PEAK OCCUPANCY

45%

4:00 PM – 5:00 PM

SUMMARY

- E-Zone Summer Peak Parking Occupancy is 45% - (Saturday Afternoon)
- Existing Parking Capacity is Significantly Underutilized
- Shared Parking Model Used to Project Future Conditions



Downtown Pomona Parking Plan

DPOA Stakeholder Presentation

December 6, 2007

Purpose & Need

Need for a Parking Plan:

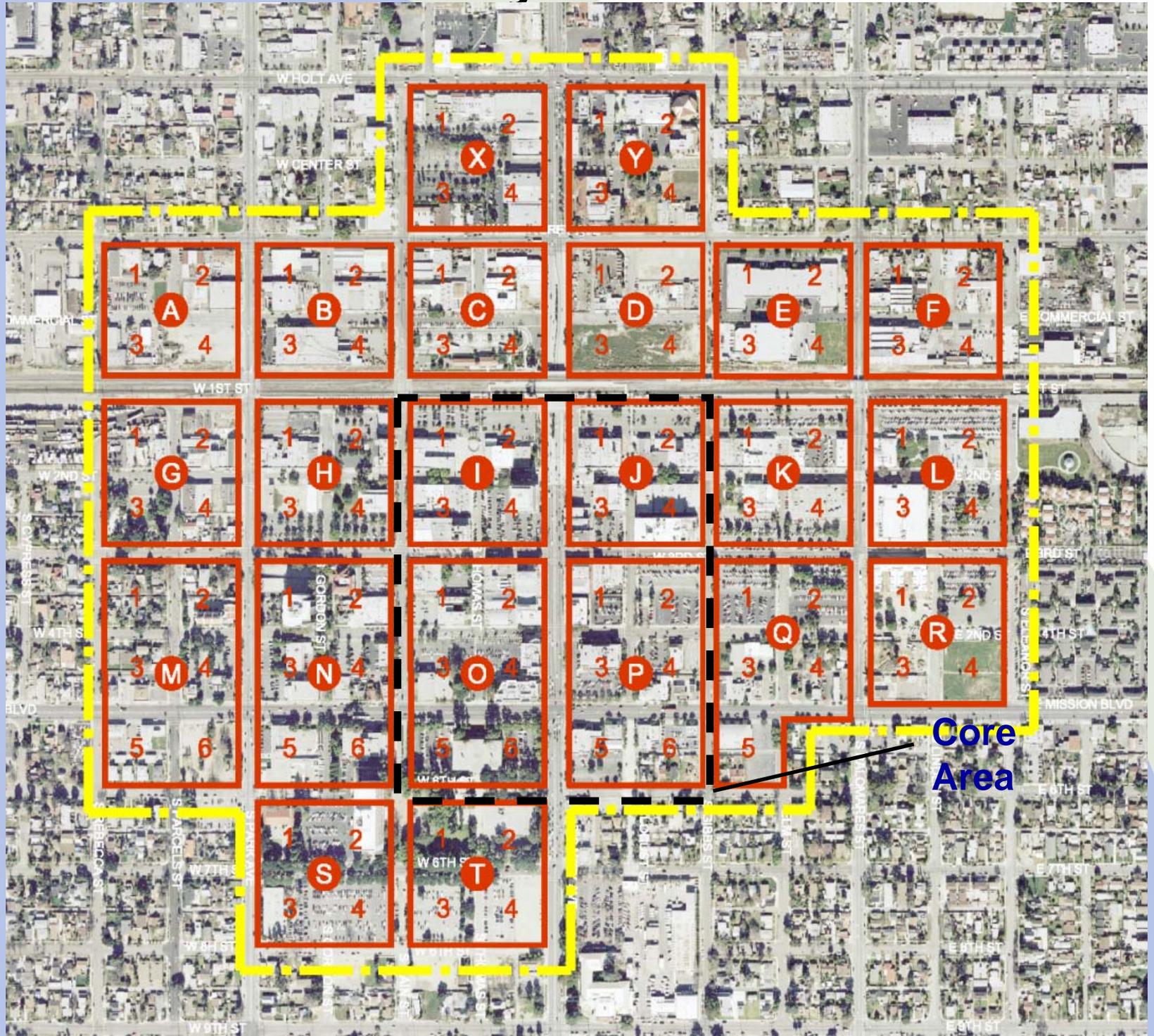
- **Parking demand will grow as development increases Downtown**
- **Parking supply will decrease as projects are built on existing lots**

Purpose & Need

Purpose of the Downtown Parking Plan:

- **Document existing occupancy patterns**
- **Estimate future needs**
- **Develop strategies to match future supply & demand**

Study Area



Core Area

Occupancy Data: VPD Lots

Weekday Peak

- **Multiple counts at all VPD Lots, excluding:**
 - Metrolink parking in lots 2-1, 2-2 (include in Private Lots Count)
 - Lot 2-14 (closed)

VPD	Spaces	Percentage
Spots Available:	2534	-
Spots Occupied:	1311	52%
Vacant Spots	1223	48%

Occupancy Data: VPD Lots

Weekday Peak



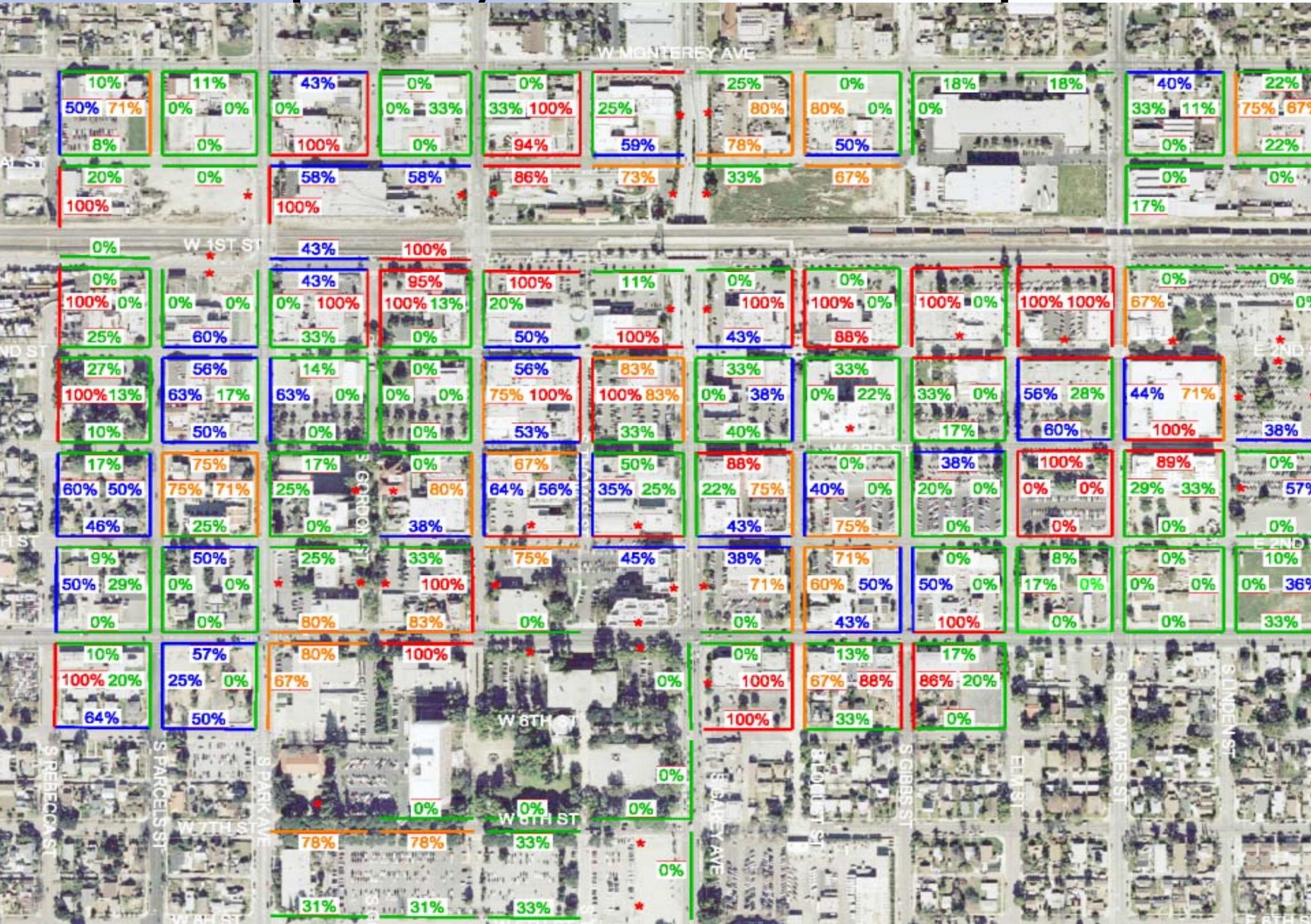
Occupancy Data: Curb Spaces

Weekday Peak

- **Curb parking spaces, excluding red curb & spaces**
- **with restrictions**

Curb Spaces	Spaces	Percentage
Spots Available:	2220	-
Spots Occupied:	812	37%
Vacant Spots	1408	63%

Occupancy Data: Curb Spaces



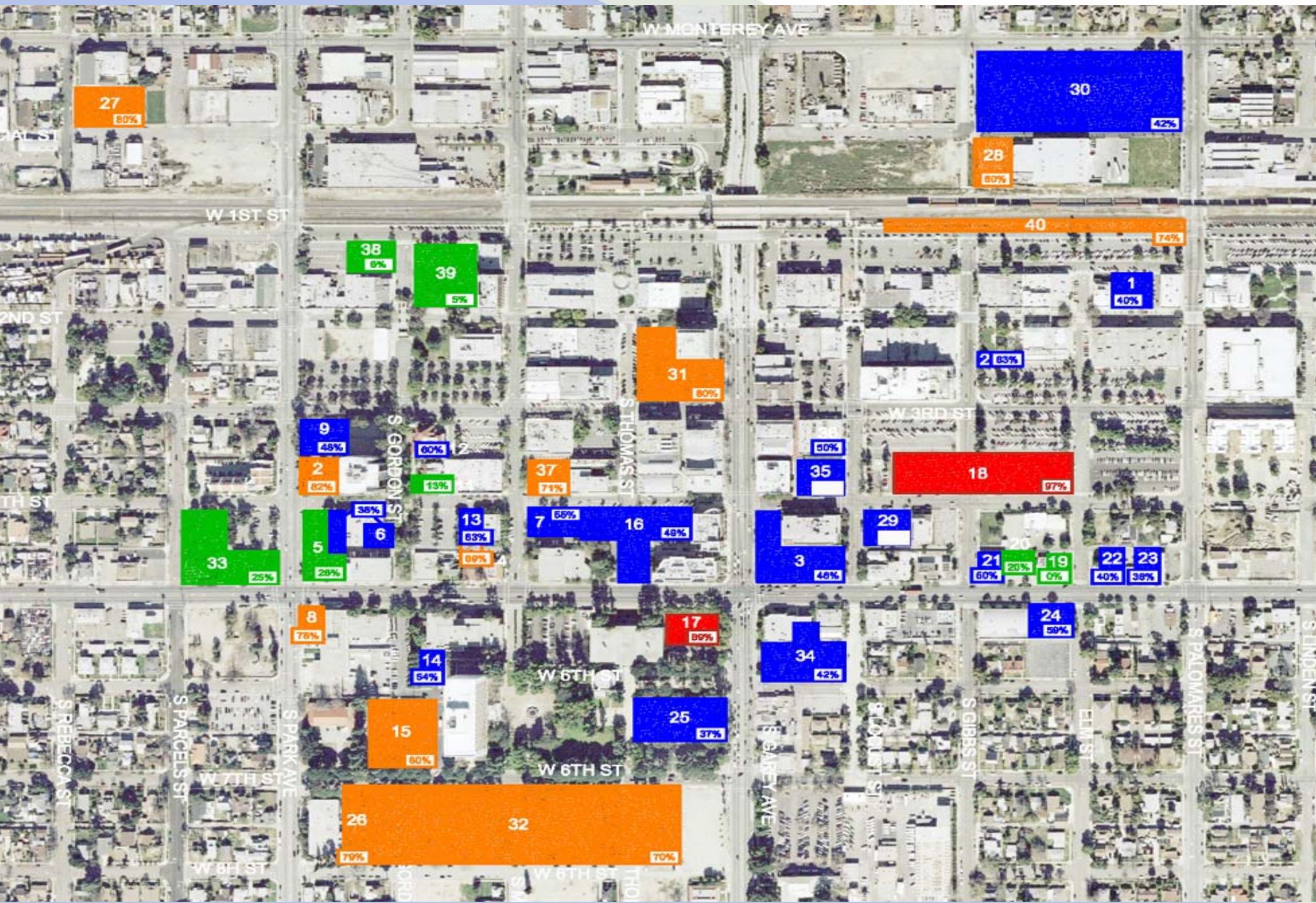
Occupancy Data: Private Lots

Weekday Peak

- **Off-street lots available for restricted public parking:**
 - **Employee Parking**
 - **Customer/Visitor Parking**

Private Lots	Spaces	Percentage
Spots Available:	2689	-
Spots Occupied:	1510	56%
Vacant Spots	1179	44%

Occupancy Data: Private Lots



Future Development Projects

- 25 Pending or Approved Projects in Downtown Pomona:
 - 12 Projects with new footprints **(will increase parking demand and remove existing supply)**
 - 13 Projects expanding or converting existing buildings **(will increase parking demand)**



Zone Surplus/Deficit

- After future demand increases, supply changes, and use of vacant public parking



Zone Surplus/Deficit

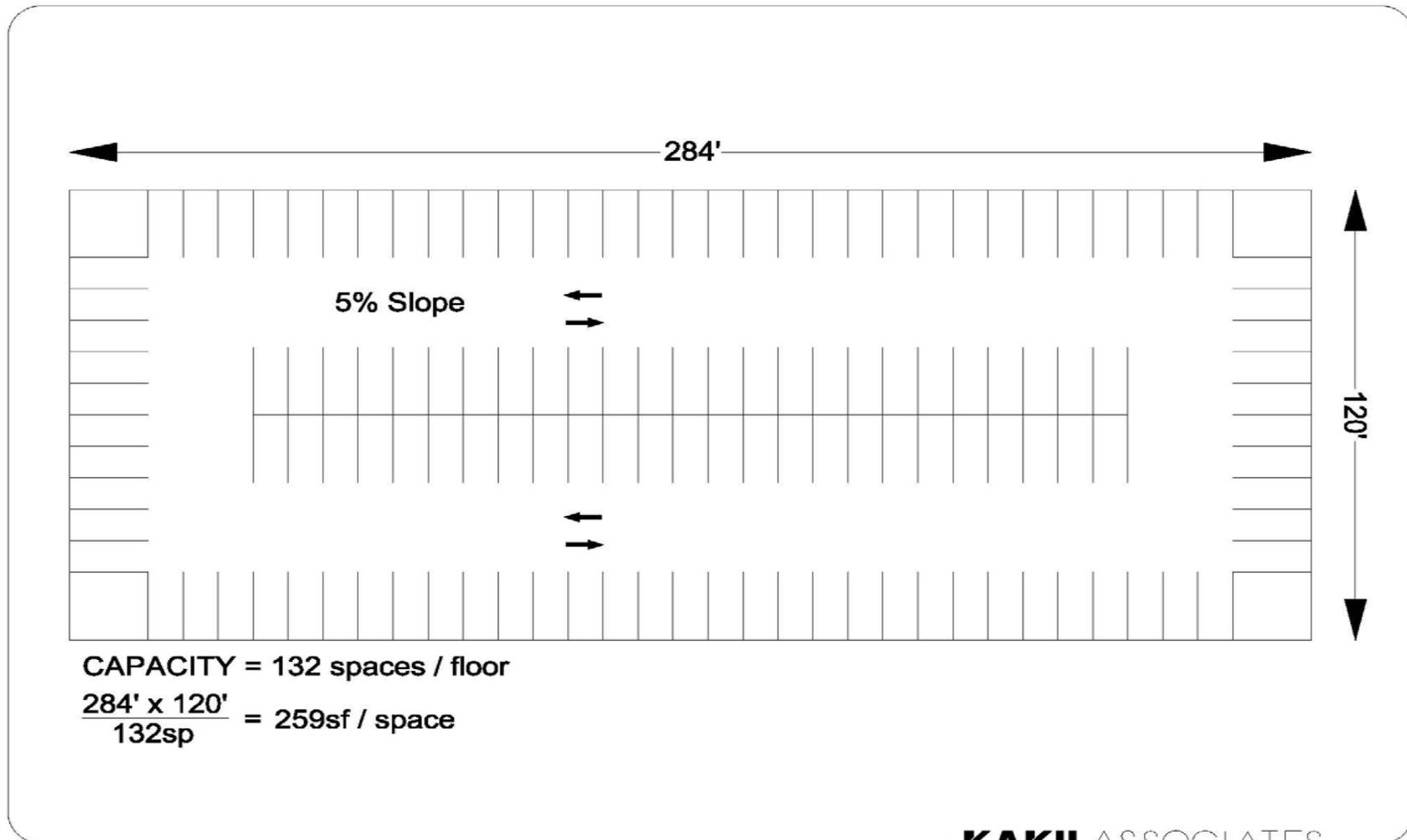
- Deficit of ~ 1,300 spaces west of Garey Ave
 - **360 spaces planned in Mission Promenade II**
 - **Need ~ 1,000 additional spaces if all projects are constructed**
- Deficit of ~ 700 spaces east of Garey Ave
 - **Less if planned projects provide replacement public parking**

Facts About Parking Structures:

Size

- **Typical Range = 350-800 Spaces**
- **Ideal Size = 500 Spaces**
- **Ideal Dimensions**
- **Efficiency**
- **Ground Floor Retail in Garages**

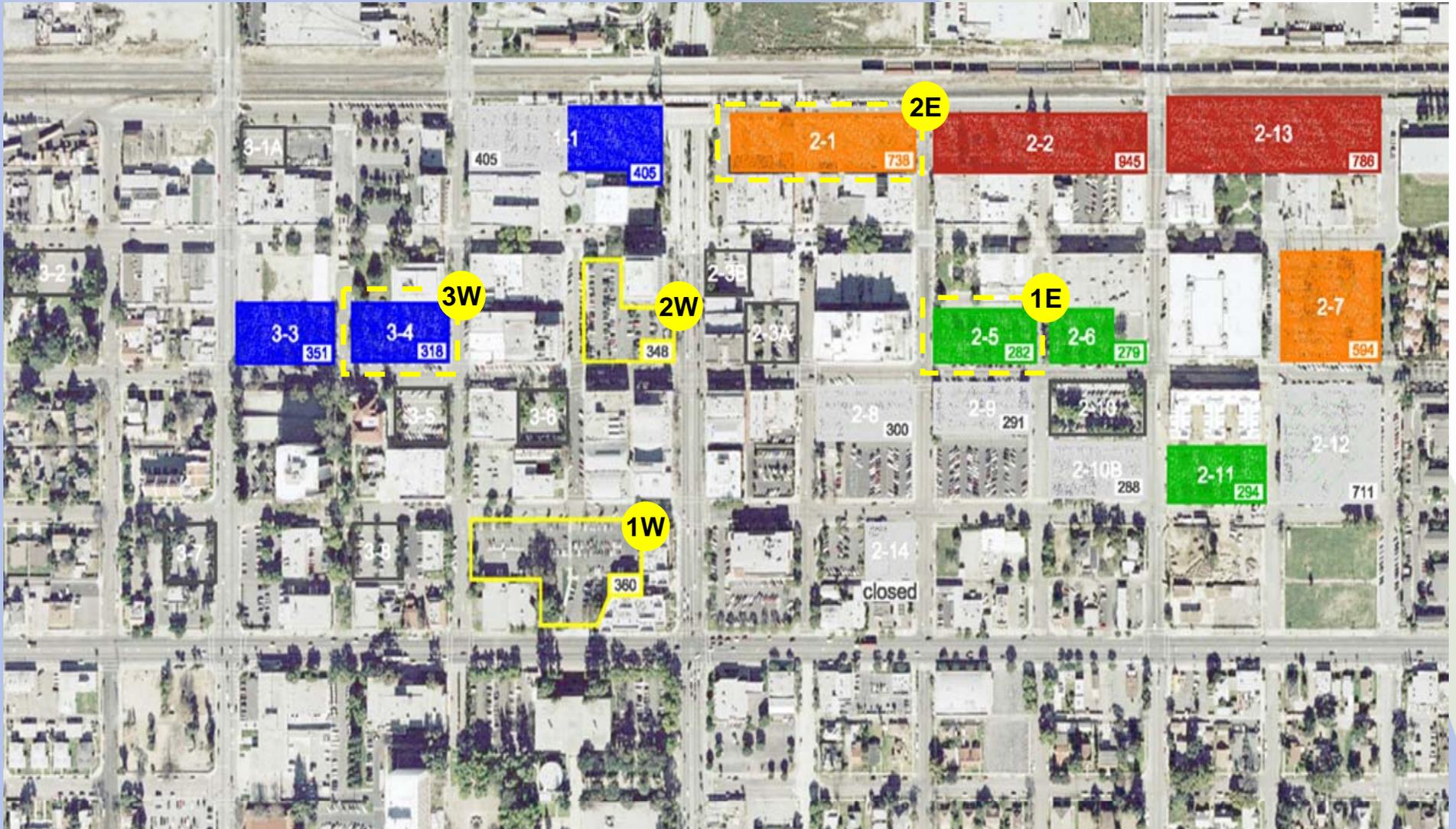
Ideal Dimensions



KAKU ASSOCIATES

IDEAL DIMENSIONS

Potential Parking Structure Locations



Next Steps

- Continue stakeholder outreach
- Refine preliminary location recommendations
- Analyze financial feasibility
- Develop parking management strategies



SUMMARY

- ULI Shared Parking Model is a Useful Tool for Projects, Districts, Downtowns**
- Calibrate Shared Parking Model to Existing Conditions and Use to Estimate Future Demands**
- Excessive Data Collection can Sink Any Parking Study**
- Employ Parking Management Strategies**

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