

09/09/2019



PARKING ANALYSIS

SPRINGHILL SUITES

68TH STREET/CAMELBACK ROAD



PREPARED FOR

IMEG CORPORATION 1600 NORTH DESERT DRIVE, SUITE 230 TEMPE, ARIZONA 85281

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Trip Generation Calculations Peak Parking Demand Calculations

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Project Description

Kultna, LLC is proposing to construct a new hotel on the northeast corner of 68th Street/Camelback Road in Scottsdale, Arizona. The vicinity of the project is shown in **Figure 1**. The new hotel will provide 127 rooms and 126 parking spaces. The proposed building and parking are shown in **Figure 2**.

The purpose of this study is to evaluate the parking requirements for the site and, if necessary, provide recommendations to mitigate any parking deficiencies.

The author of this report is a registered Professional Engineer (Civil) in the State of Arizona having specific expertise and experience in the preparation of traffic and parking analyses.

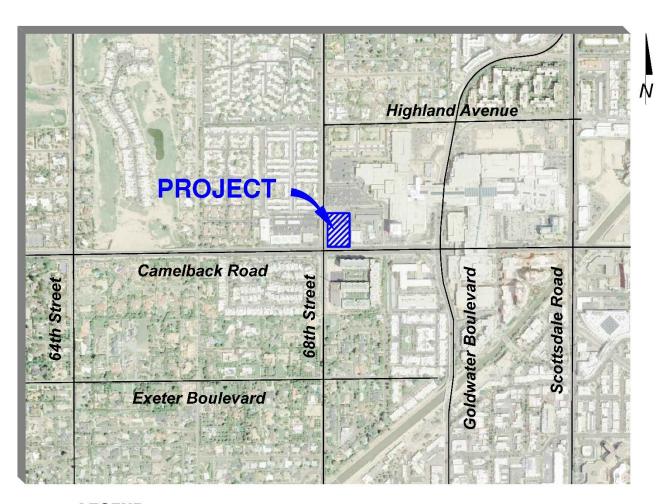
Study Methodology

The following tasks were undertaken in order to analyze and evaluate the development parking requirements:

- A review of the site plan was performed to determine the types of proposed land uses.
- Site traffic volumes generated by the proposed site were calculated using the *Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition, 2017.*
- City of Scottsdale zoning and development codes were reviewed to determine the parking ratios and total parking spaces for the proposed land uses.
- Guidelines established by the *American Planning Association (APA) Parking Standards*, 2002 were evaluated to determine comparable parking ratios and total parking spaces for the proposed site.
- The parking ratios and required number of parking spaces to meet the highest peak period parking demand were determined for the proposed land use based on *Institute of Transportation Engineers (ITE) Parking Generation*, 4th Edition, 2010 guidelines.

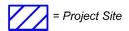


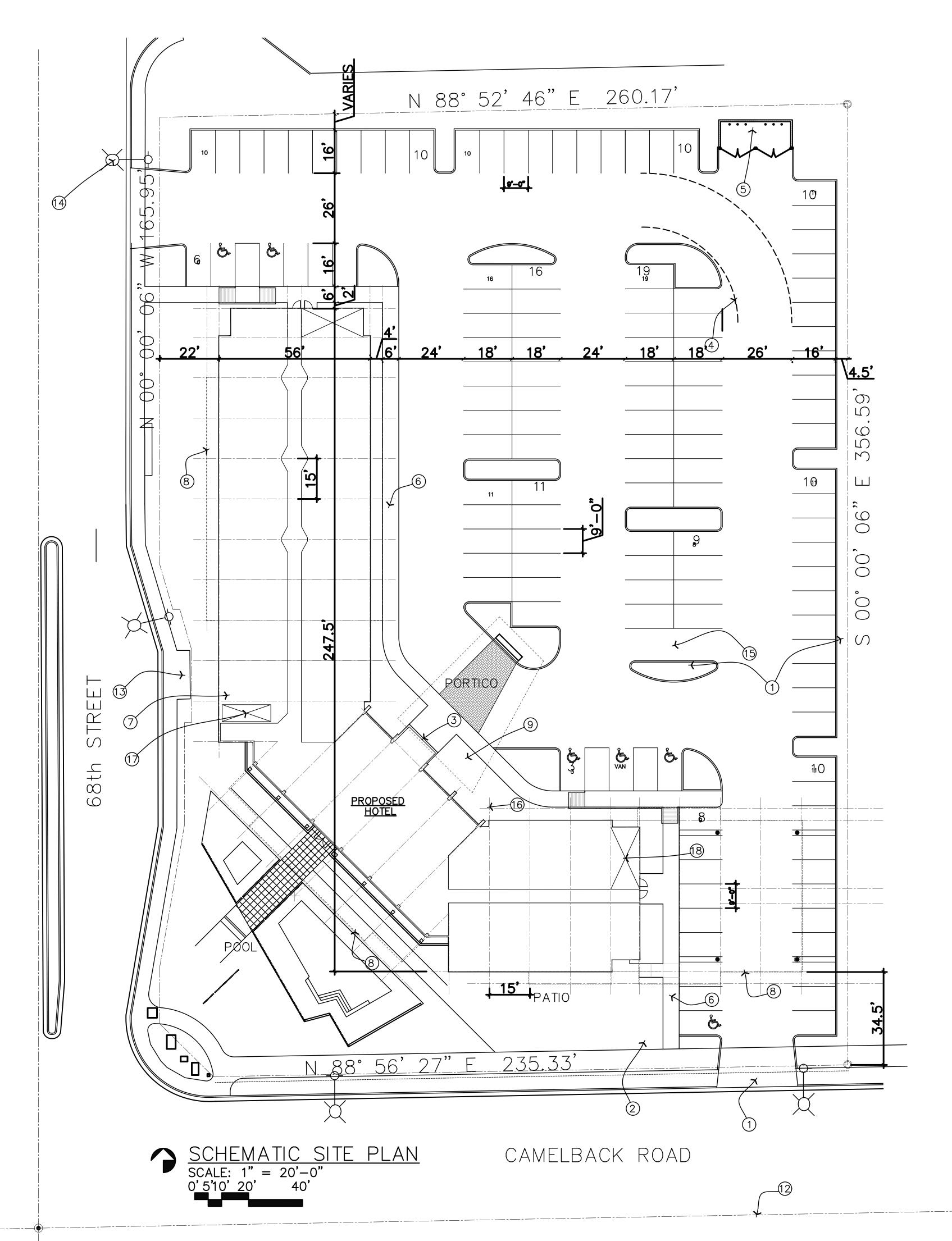
Figure 1 – Vicinity Map



LEGEND:

----- = Existing Road





PROJECT DATA OWNER: KULTNA LLC 1550 N 52nd STREET TEMPE, AZ 85 PHONE: 480-966-0955 EMAIL: shanekuber@gmail.com NE CORNER 68TH ST. & CAMELBACK ROAD PROJECT ADDRESS: SCOTTSDALE, ARIZONA 85251 PROJECT DESCRIPTION: A NEW 127 ROOM, 4 STORY WOOD FRAMED LIMITED SERVICE HOTEL. PARCEL # 173-36-008B ZONING: COMMERCIAL NET SITE AREA: 86,664 S.F. OR 2.06 ACRES OCCUPANCY CLASSIFICATION: MIXED - SEPARATED OCCUPANCY GROUPS: R-1 (HOTEL-TRANSIENT), A-2, A-3, B, S-2VA (SPRINKLERED), NFPA 13, NFPA 72 (FIRE ALARM) CONSTRUCTION TYPE: GROUND FLOOR = 16,111 S.F. BUILDING AREA: = 20,744 S.F. 2nd FLOOR = 22,215 S.F. 3rd FLOOR = 20,832 S.F. 4th FLOOR TOTAL: = 79,902 S.F. 4 STORIES (50' MAX.) 80' ALLOWED BUILDING HEIGHT: PARKING <u>REQUIRED</u>: (1.25 PER GUEST ROOM) $= (1.25 \times 128) = 160 \text{ SPACES}$ 116 PARKING PROVIDED: REGULAR SPACES SPACES ACCESSIBLE SPACE VAN ACCESSIBLE DELIVERY PARKING SPACE SPACES TOTAL = 123

1 PER 10 = 12 SPACES

= 0.8 OR (120,557 S.F.) GROSS = 96,445 S.F.

= 0..62 --> OK

12 SPACES --> OK

= 75,033 / 120,557

BIKE PARKING REQUIRED:

BIKE PARKING PROVIDED:

FAR ALLOWED (MAX)

FAR PROVIDED

KEYED NOTES	GUEST ROOM COUNT
 NEW ENTRY DRIVE. MONUMENT SIGN. MAIN LOBBY ENTRANCE. FIRE TRUCK TURNING RADIUS 35' DIA. (MIN.) 55' DIA. (MAX.). REFUSE ENCLOSURE W/ OPAQUE GATE. 	KING SUITES = 96 QUEEN QUEEN SUITES = 26 TOTAL ROOMS = 122
6. CONC. SIDEWALK (TYP).	VICINITY MAP
 FIRE RISER ROOM. LINE OF SECOND FLOOR ABOVE. BIKE PARKING FOR (12) BIKES. (EX SIDEWALK ALONG STREET LANDSCAPE AREA (TYP). CENTERLINE OF STREET. (EX) BUS STOP (EX) STREET LIGHTS - TWO AT DRIVEWAYS TO BE RELOCATED. DELIVERY TRUCK PARKING BUILDING GRID LINES ELEVATORS STAIR TOWER 	COLDWATER BLVD. SCOTTSDALE ROAD SCOTTSDALE ROAD



Trip Generation

The proposed Springhill Suites project will consist of a 127-room hotel. Trip generation for the proposed site was developed utilizing nationally agreed upon data contained in the Institute of Transportation Engineers (ITE) publication *Trip Generation*, *10th Edition*, 2017. The Springhill Suites project trip generation was estimated based on ITE Land Use Code 310, Hotel (LUC 310). The resulting weekday daily, weekday AM peak hour, and weekday PM peak hour trip generation for the Springhill Suites project is shown in **Table 1**. Complete trip generation calculations can be found attached to this report.

Table 1 – Weekday Site Generated Trips

Time Period	Hotel (LUC 310)
Average Daily, Inbound (vtpd)	531
Average Daily, Outbound (vtpd)	531
Total Daily	1,062
AM Peak Hour, Inbound (vtph)	35
AM Peak Hour, Outbound (vtph)	25
Total AM Peak	60
PM Peak Hour, Inbound (vtph)	39
PM Peak Hour, Outbound (vtph)	38
Total PM Peak	77

vtpd - vehicle trips per day, vtph - vehicle trips per hour

Parking Requirements per City of Scottsdale Codes

The City of Scottsdale provides parking requirements for various land uses in their Zoning and Development Code. Per Section 9.103 "Parking Requirements", the parking requirements shown in **Table 2** are applicable to the proposed project. It should be noted that, per the City of Scottsdale Old Town Scottsdale Character Area Plan, the Springhill Suites site is located within the boundaries of Old Town Scottsdale.

Table 2 – City of Scottsdale Parking Requirements

Jurisdiction	Land Use	Required Parking	Total Size	Minimum Parking Spaces
City of Scottsdale	Travel Accommodations	1.25 parking spaces per guest room	127	159

Table 2 shows that the Springhill Suites will require a minimum 159 parking spaces, which is 33 more than the 126 parking spaces proposed.



Peak Parking Evaluation

Parking generation for the project was developed utilizing nationally agreed upon data contained in the Institute of Transportation Engineers (ITE) Parking Generation Manual, 4th Edition, 2010. ITE provides rates of expected parking demands during peak periods of demand based on land use. When the peak parking demand rate occurs over several hours of the day, the average parking demand rate of these peak periods is calculated and used to predict the number of required parking spaces to meet the highest parking demand. The ITE peak period parking requirements for the Springhill Suites project was based on ITE LUC 310, Hotel. Peak period parking demand for the Springhill Suites hotel is shown in **Table 3** for a typical weekday.

Table 3 – ITE Peak Parking Requirements

Land Use	Required Parking	Total Size	Minimum Parking Spaces
Hotel (LUC 310)	0.89 parking spaces per occupied room	127	114

As shown in **Table 3**, the required number of parking spaces based on the ITE peak period calculations is 114 parking spaces (12 less than Springhill Suites will provide).

Parking Comparison

Some of the parking requirements for hotels throughout North America are reported by the American Planning Association (APA) in their latest edition of *Parking Standards*, 2002. In addition, parking requirements for City of Phoenix and City of Tempe from their respective Zoning and Development Code were reviewed. **Table 4** shows a comparison of parking requirements for Springhill Suites based on parking requirements in various jurisdictions throughout the United States.

Table 4 – Parking Requirements by Jurisdiction

Land Use	Required Parking	Jurisdiction	Total Size	Minimum Parking Spaces
Hotel	1 parking space per room	Eugene, Oregon	127 rooms	127
Hotel	1 parking space per room plus 1 space per 20 rooms	Colombia, Missouri	127 rooms	134
Hotel	0.8 parking spaces per room plus 1 parking space per 800 sqft of restaurant/meeting area	San Antonio, Texas	127 rooms, 3,275 sqft	106
Hotel	1 parking space per room	Phoenix, Arizona	127 rooms	127
Hotel	1 parking space per unit	Tempe, Arizona	127 rooms	127



Table 4 shows that similar land uses in other jurisdictions within the United States would require a minimum 106 to 134 parking spaces for the proposed Springhill Suites site (53 to 25 parking spaces fewer than the City of Scottsdale requires). The Springhill Suites hotel is expected to need significantly less parking than the City of Scottsdale minimum requirements.

Conclusion

The new Springhill Suites hotel is expected to generate 60 AM weekday peak hour trips and 77 PM weekday peak hour trips to the roadway network adjacent to the project site. This limited number of trips is not expected to have a significant impact on the surrounding roadway network.

Parking requirements for similar land uses in other jurisdictions show that significantly fewer spaces are needed than the City of Scottsdale requires. The City of Scottsdale requires a minimum of 159 parking spaces to be provided on the project site. ITE peak parking generation recommends a minimum of 114 parking spaces. A study of similar land uses in other jurisdictions within the United States shows that the project could be served by as few as 106 parking spaces. The Springhill Suites site will provide 126 parking spaces, which is less than City of Scottsdale parking space requirements, but more than the parking requirements for ITE and similar jurisdictions in the United States.

No explicit on demand taxi service reduction was utilized to help ensure that the overall results of this report are conservative. However, it is expected that some portion of traffic to the site will utilize rideshare services to travel to/from Springhill Suites due to its proximate location to Sky Harbor Airport and adjacent entrainment venues. A porte-cochère will be located on the project site near the hotel's main entrance to serve as temporary vehicle parking for guest check-in/check-out and as a drop-off/pick-up area for ridesharing and on demand taxi services.

The proposed 126 parking spaces at the Springhill Suites site are predicted to exceed guest needs, employee needs, and ITE standards.



APPENDIX

Trip Generation Calculations

Peak Parking Demand Calculations



APPENDIX

Trip Generation Calculations

Hotel

LAND USE: 127 Rooms Hotel

TRIP GENERATION CALCULATIONS ARE BASED ON THE INSTITUTE OF TRANSPORTATION ENGINEERS' TRIP GENERATION, 10TH EDITION. THE ITE LAND USE CODE IS Hotel (310), General Urban/Suburban

Weekday

Average Rate = 8.36 Trips per Room (Room)

T = 8.36 Trips x 127 Room

T = 1,062 VTPD

ENTER: (0.5)*(1062) = 531 VTPD EXIT: (0.5)*(1062) = 531 VTPD

AM PEAK HOUR (ONE HOUR BETWEEN 7 AND 9 AM)

Average Rate = 0.47 Trips per Room (Room)

T = 0.47 Trips x 127 Room

T = 60 VPH

ENTER: (0.59)*(60) = **35 VPH** EXIT: (0.41)*(60) = **25 VPH**

PM PEAK HOUR (ONE HOUR BETWEEN 4 AND 6 PM)

Average Rate = 0.6 Trips per Room (Room)

T = 0.6 Trips x 127 Room

T = 77 VPH

ENTER: (0.51)*(77) = **39 VPH** EXIT: (0.49)*(77) = **38 VPH**

TRIP GENERATION SUMMARY

SATURDAY
AM PEAK HOUR (ONE HOUR BETWEEN 7 AND 9 AM)
60 VPH
PM PEAK HOUR (ONE HOUR BETWEEN 4 AND 6 PM)
77 VPH

^{*}where, T = trip ends



APPENDIX

Peak Parking Demand Calculations

Hotel

LAND USE: 127 Rooms Hotel

PARKING GENERATION CALCULATIONS ARE BASED ON THE INSTITUTE OF TRANSPORTATION ENGINEERS' PARKING GENERATION, 4TH EDITION (2010). THE ITE LAND USE CODE IS Hotel (310)

WEEKDAY

Average Rate = 0.89 Vehicles per Room (Rooms) T = 0.89 Trips x 127 RoomsT = 114 VPD

PEAK PARKING SUMMARY WEEKDAY

114 VPD