



Memorandum

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Date: September 5, 2023

Subject: Traffic and Parking Analysis
Kingdom Martial Arts Naperville
Northwest Corner of Shopping Center
Northeast side Washington Ave
Naperville, Illinois

Part I. Introduction and Project Context

I, Jinah Park, am the head manager of the Kingdom Martial Arts and have conducted our own Traffic and Parking Analysis for the proposed Kingdom Martial Arts in Naperville, Illinois. It will be located in an approximately 3,081 square-foot vacant tenant space contained within the existing approximately 36,222 square-foot of rentable Square Footage of the Building located at the northeast side of Washington Avenue. The tenant space was formerly utilized as a dance studio until 2019 that moved within the building, locating in second floor.

The shopping center is served by a total of 140 parking spaces, including 5 accessible spaces. Access to the proposed use will be maintained via the existing building driveways.

The following provides a summary of existing conditions, site traffic characteristics and the analysis conducted, which includes a qualitative evaluation of the development's impact on the surrounding roadway network and a parking analysis. *Exhibits and Appendices* referenced are located at the end of this document.

Part II. Background Information

Site Location Map

Exhibit 1 provides a site location map.

Part III. Parking Evaluation

Parking Requirements

Based on the parking requirements outlined in the City of Naperville Code of Ordinance, 12 parking spaces are required for the 3,081 square feet to be utilized for the Kingdom Martial Arts as the business is categorized as Fitness Facility. The city may require that additional parking be provided if the facility includes competitions or special events, yet due to the size of the business, we do not host any competitions or events on-site rather the business is invited to other school's competitions or tournaments.

A total of 140 parking spaces are required for the building (existing/proposed) uses. The City's parking requirements are summarized in *Table 1*.

Table 1: City of Naperville Parking Requirements

Property	Unit(s)	Tenant	Area (sq ft)	Use Type	Parking spots required	Parking Provided
cedar4	B-10	VACANT	563	Office	2	140
	100A	Center For Autism and Related Disorders LLC	5,002	Medical	25	
	100B	PROPOSED KINGDOM MARTIAL ARTS	3,081	Fitness	12	
	108	Edward P. Marcin DDS Ltd.	520	Medical	3	
	110	VACANT	1,075	Office	4	
	112A/B/C	Farmers Insurance	607	Office	2	
	114A	Magnate Worldwide LLC	1,262	Office	4	
	114B	Lincoln Engineering Group	1,200	Office	4	
	117	Huntingon Learning	1,376	Learning Center	7	
	119	RKB Global Tax	1,300	Office	4	
	120, 121	Huntingon Learning	2,238	Learning Center	11	
	200	Elevate Dance Experience LLC	5,572	Fitness	22	
	202	Prizm Behavioral Services, P.C.	1,839	Medical	9	
	211	AG Dental	1,504	Medical	8	
	214	Dr. Michael Russell	2,550	Medical	13	
	215	Edward Jones	870	Office	3	
216	Dr. Michael Russell	1,665	Medical	8		
217	Dr. Linda Ricks	1,875	Medical	9		
210, 213	Prestige Orthodontics LLC	2,123	Medical	11		
Total			36,222	-	161	

cedar4	B-11 (Storage)	Dr. Linda Ricks	180	
	B-12 (Storage)	VACANT	543	
	B-13 (Storage)	Patel X-Ray Room & Storage	380	
	B-14 (Storage)	VACANT	1767	
	B-15 (Storage)	VACANT	420	
	B-17 (Storage)	VACANT	240	
	B-18 (Storage)	VACANT	259	
				560
			3,229	Storage Vacant

31,503 Total Occupied

4,719 Total Vacant

36,222 Total

Parking Demand Projections

With the addition of the proposed Kingdom Martial Arts, the required parking per the City's requirements exceeds the provided parking spaces by approximately 21 parking spaces. In order to project the peak parking demand for the proposed Kingdom Martial Arts, I have referenced the following sources providing peak parking demand data:

- Anticipated peak staff and customer demand.
- Parking counts conducted in September 2023 (see *Appendix A*) at the existing Building.

Parking Supply and Occupancy Survey

A parking supply and occupancy survey of the parking service the building was conducted on Wednesday, September 6th, 2023, during the Wednesday (1:00 to 3:00 PM and 5:00 to 6:00 PM) peak timeframe, Friday, September 8th, 2023, during the Friday (1:00 to 3:00 PM and 5:00 to 6:00 PM) peak timeframe, and on Saturday, September 9th, 2023, the weekend (9:30 to 11:00 AM) peak timeframe. The results of the parking survey are summarized in the exhibit contained in *Appendix A*, along with an aerial photo of the parking areas surveyed.

The findings of the survey are summarized below:

- A total of 140 parking spaces were surveyed: 65 parking spaces within the main parking field (area E, F, I, and J on the map) and 31 spaces to the rear of the building (area G and H on the map).
- Approximately 46 percent (65 of 140) of the total parking spaces surveyed were occupied at its peak, which occurred at 5:00 PM on Wednesday.
- Based on the maximum occupied parking spaces (65) and the occupied tenant space (31,503 SF. see *Table 1*), the observed peak parking for the existing building is 65 spaces / 31,503 SF, which is less than required by City Code (152.23 spaces / 31,503 SF per approved Ordinance #87-163).
- The calculations can be found on *Exhibit 2* and show that the percentage of occupied spaces in the parking lot would rise from 31% to 49% at the peak hour and would stay below 60% occupied at off-peak hours.
- As a guideline, parking demand should not exceed 90% of the supply. Based on our observations and calculations, the parking supply at the building is sufficient to accommodate the new martial arts space.

Accordingly, the anticipated peak parking demand is expected to be accommodates within the available parking supply.

Part IV. Recommendations and Conclusions

A traffic and parking analysis was performed for the proposed Kingdom Martial Arts located in the 1112 S. Washington Street Building in Naperville, Illinois. Overall, the development is anticipated to have little or no impact on the operations of the area roadway network. And, based on the parking analysis, it can be concluded the development provides sufficient parking spaces to accommodate the anticipated parking demand for the proposed development, although the city requirements would not be satisfied per *Table 1*.

In addition, the following is recommended:

- The business, Kingdom Martial Arts, will be encouraged to continue to keep the drop-off system to provide convenient parking for customers.
- An additional ordinance may be required from the city to add future tenants.

Part V. Technical Addendum

The following Exhibits and Appendices were previously references. They provide technical support for my observations, findings, and recommendations discussed in the text.

Exhibits

1. Location Map
2. Parking Calculations

Appendices

- A. Parking Occupancy Survey Summary

EXHIBITS



*Proposed Kingdom Marital Arts
1112 S. Washington St
Naperville, IL*

EXHIBIT D

Exhibit 1: Location Map



Exhibit 1 – Location Map
Proposed Kingdom Martial Arts
1112 S. Washington St, Naperville, IL



Exhibit 2: Parking Calculation

According to the Property Management, the peak time for office use is probably 2pm mid-week (Tues – Thursday) and 5pm in the evening. The peak time for the weekend will be morning. Thus, the data for the study includes plus and/or minus 1 hour from the peak time. Our business peak time for the weekdays are from 5:30 - 6:30 pm (Mon - Thursday) and 5 pm (Friday). The peak time for the weekend is from 10:30 - 11:00 am (Saturday). Our typical operation hour is from 4 to 7 pm (Mon); 4 to 7:30 pm (Tues - Friday); 10 - 11:30 am (Sat). The required parking space is additional 12 for the Building. However, the parking space that we use for the noted time is based on the parking space that we use at the current location. It is embedded in calculation below 2. and 3. to calculate the required parking space for our business and its impact on the future demands.

1. Current Demand

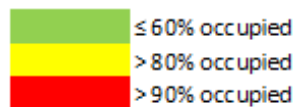
A. Weekday Parking	Weekday					Friday				
	1:00 PM	2:00 PM	3:00 PM	5:00 PM	6:00 PM	1:00 PM	2:00 PM	3:00 PM	5:00 PM	6:00 PM
Total = 140 (Max)	44	53	52	65	40	35	32	23	20	13
% Occupied	31%	38%	37%	46%	29%	25%	23%	16%	14%	9%
Saturday										
B. Weekend Parking	9:30 AM	11:00 AM								
Total = 140 (Max)	40	42								
% Occupied	29%	30%								

2. Kingdom Martial Arts Parking

A. Weekday Parking	Weekday					Friday				
	1:00 PM	2:00 PM	3:00 PM	5:00 PM	6:00 PM	1:00 PM	2:00 PM	3:00 PM	5:00 PM	6:00 PM
Kingdom Martial Arts (3,081 sf)	0	0	0	4	5	0	0	0	5	3
12.32 Spaces Required	0	0	0	4	5	0	0	0	5	3
% use out of 12.32 space - Weekday	0%	0%	0%	32%	41%	0%	0%	0%	41%	24%
Saturday										
B. Weekend Parking	9:30 AM	11:00 AM								
Kingdom Martial Arts (3,081 sf)	0	5								
12.32 Spaces Required	0	5								
% use out of 12.32 space - Saturday	0%	41%								

3. Future Demands

A. Weekday Parking	Weekday					Friday				
	1:00 PM	2:00 PM	3:00 PM	5:00 PM	6:00 PM	1:00 PM	2:00 PM	3:00 PM	5:00 PM	6:00 PM
Total = 140 (Max)	44	53	52	69	45	35	32	23	25	16
% Occupied	31%	38%	37%	49%	32%	25%	23%	16%	18%	11%
Saturday										
B. Weekend Parking	9:30 AM	11:00 AM								
Total = 140 (Max)	40	47								
% Occupied	29%	34%								



APPENDIX A
Parking Occupancy Survey Summary



*Proposed Kingdom Marital Arts
1112 S. Washington St
Naperville, IL*

EXHIBIT D

Appendix C Parking Occupancy Survey

Location	Supply Parking Bay Total	Weekday						Friday			Saturday		
		1:00PM	2:00PM	3:00PM	5:00PM	6:00PM	Peak Time/Operation Time	1:00PM	2:00PM	3:00PM	5:00PM	6:00PM	9:30AM
A	19	10	10	9	7	3	3	3	4	0	0	2	2
B	16	7	9	7	6	2	3	3	3	1	1	3	5
C	3	1	2	2	1	0	1	1	0	0	0	0	0
D	6	4	5	2	2	0	2	1	1	0	0	1	1
E	11	5	9	8	4	4	4	5	2	4	3	6	9
F	6	1	1	1	4	1	1	0	0	0	0	0	0
G	15	3	2	5	9	10	4	4	1	2	2	7	7
H	16	2	1	3	10	7	1	2	1	2	2	6	6
I	25	4	7	7	13	7	8	9	8	5	2	7	5
J	23	7	7	8	9	6	5	4	3	6	3	8	7
Occupied Total	140	44	53	52	65	40	35	32	23	20	13	40	42
Occupancy Percentage (%)	100%	31%	38%	37%	46%	29%	25%	23%	16%	14%	9%	29%	30%

EXHIBIT D



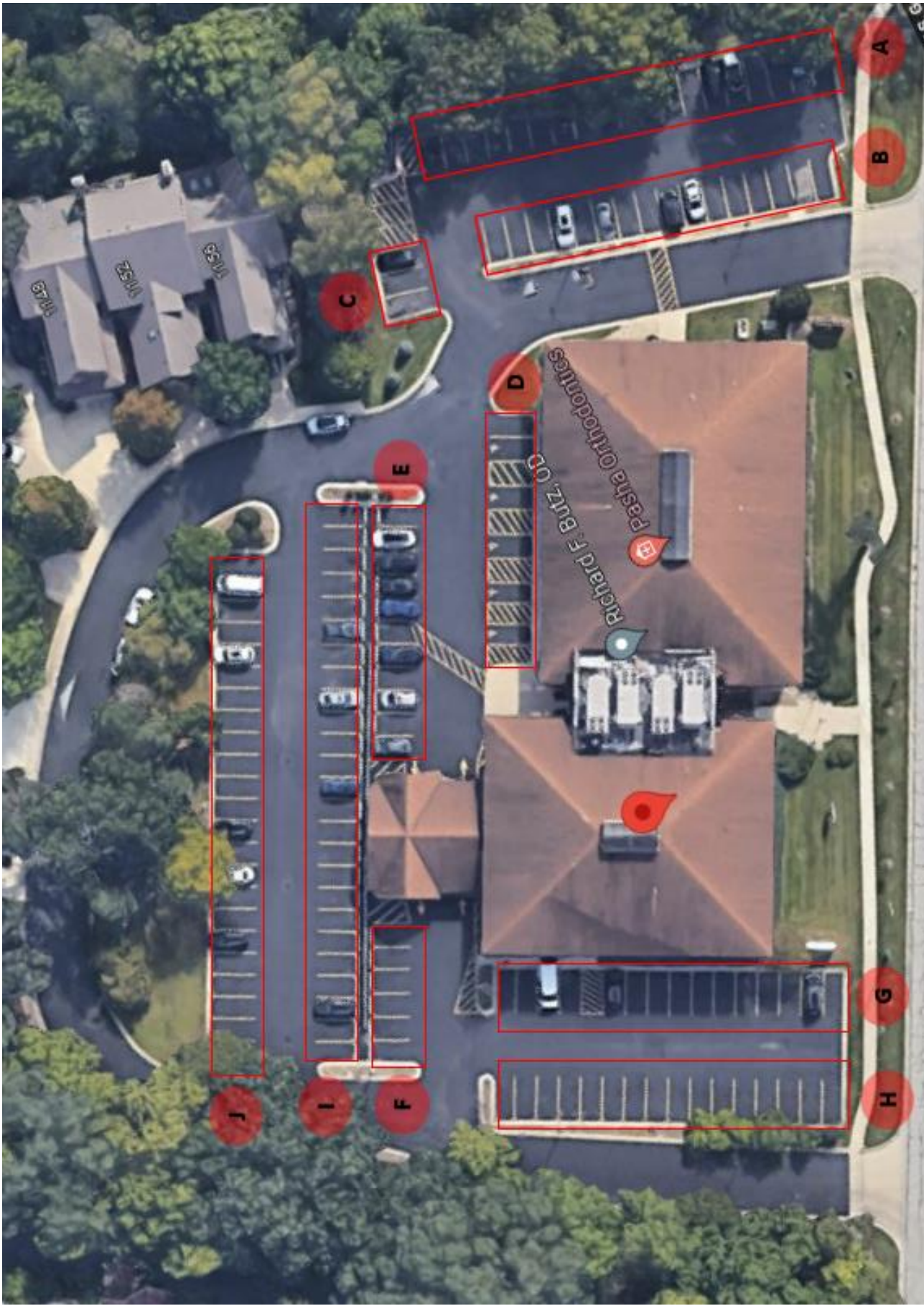


EXHIBIT D

**Existing
Parking Location Map**