



Specializing in Traffic Engineering and Transportation Planning

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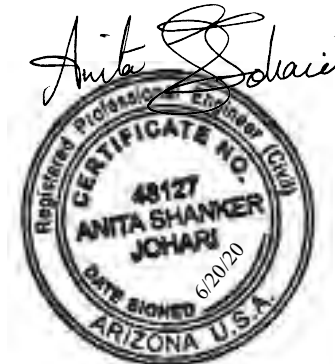
## **Technical Memorandum – Parking Study**

### **Proposed EOS Fitness Northwest Corner of Gilbert Road at McKellips Road Mesa, AZ**

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ASJ Engineering has performed this shared parking analysis for the mixed-use development located at the northwest corner of Gilbert Road and McKellips Road, in Mesa, Arizona. The developer is planning to use an existing building (previously a Basha's) and build a new EOS Fitness gymnasium. In addition, a McDonald's Fast food restaurant will be built between the existing Banner Urgent Care and Dutch Bros coffee shop. There is another vacant space within the shopping area and it is assumed it will be used for general retail as part of the shopping center. This parking analysis is prepared to identify the number of parking spaces required and verify if the existing number of parking spaces is sufficient after the construction of the assumed retail shop and the new EOS Fitness. Figure 1 shows the site location map and location of the existing and proposed land uses within this site.



**Figure 1 – Site Location Map (Source: Google maps)**

At the site, there is Happy Pets Store, Got Roots Hair Salon, UPS Store, Nails, Cleaners, Orchard Eats, Serrano's Restaurant, two empty buildings and an empty lot. The empty lot will become a McDonald's fast food restaurant and one of the vacant spaces will become EOS Fitness center. The use for the other vacant space is not currently known and for the purpose of the parking analysis it is assumed as a retail land use. Currently there are 399 parking spaces of which 397 parking spaces will be shared between all these uses, two parking spaces are lost to accommodate the ADA parking spaces in front of the proposed fitness place

The 54,427 square feet EOS Fitness center will consist of an open EOS Fitness area, group training areas, a pool with hot tub, one basketball court, a spin room, and cardio room, locker rooms, reception and kids area. The other vacant space that is assumed retail will be 5,062 square feet, and the McDonald's will be 4,520 square feet of fast food with drive-thru restaurant.

To calculate the parking needs for each land use within the site, parking ratios were provided in the City of Mesa Zoning Ordinance – *Chapter 32 On-Site Parking, Loading and Circulation* are used.

From the site plan provided, the total square footage of the fitness center is 54,427 square feet. The square footage used to calculate the required parking consists of the open EOS Fitness, group area, cardio cinema, swimming pool and spin room. This reduces the square footage to 36,569 square feet. Parking required for the courts is different (2 spaces per racquet ball court) per the City of Mesa Zoning Ordinance. Since this swimming pool provides only three lanes, the swimming pool is included as if it were a court.

In discussions with the representatives of the EOS Fitness, the fitness facility seldom operates at 100 percent occupancy and the parking usage at similar EOS facilities in the Phoenix metro area are different and lower than the ratio provided in the City of Mesa's ordinance. Attached is the letter from the representatives of the EOS Fitness discussing the parking usage at their facilities across the country. Per the information provided by the EOS Fitness representatives, based on the parking usage at other EOS Fitness centers, a ratio of 1 parking space per 180 square feet is sufficient. Upon discussion with the City of Mesa's planning staff, changes to the parking ratios should be supplemented with sufficient evidence from similar sites. The letter provided by the EOS representatives, provides parking usage at different sites across the country and should be used as the supporting document for changing the parking ratio requirement for the EOS Fitness at this location.

Table 1 summarizes the hours of operations and size for each of the existing and proposed land uses. Per the COM, for restaurant land uses located within a multi-tenant retail building, multi-use retail parking ratio shall be used instead of the restaurant parking ratio, so multi-use retail parking ratio of 1 space per 275 square feet has been used for Orchard Eats restaurant.

Table 1 also shows the parking spaces requirement for each of the land use calculated based on their effective service area (calculated as mentioned above), and using the parking ratios provided in the City of Mesa Zoning Ordinance – *Chapter 32 On-Site Parking, Loading and Circulation* and EOS Fitness provided parking ratio (for the EOS Fitness facility).

**Table 1: Existing and Proposed Land uses, Size, Operating hours, and Parking Ratios and Parking Spaces Requirements**

Land Use (Type)		Hours of operation	Total Area (Sq. Ft.)	Effective Area (Sq. Ft.)	City of Mesa Parking Req.	Parking spaces
Existing	Happy Pets (Retail)	6am-6:30pm	5,000	5,000	1 space per 275 sq ft	18
	Got Roots (Retail)	9am-8pm	1,726	1,726	1 space per 275 sq ft	6
	UPS Store (Retail)	8am-6pm	1,906	1,906	1 space per 275 sq ft	7
	Nails (Service/Retail)	9am-7pm	894	894	1 space per 275 sq ft	3
	Cleaners Service/Retail	10am-5pm	908	908	1 space per 275 sq ft	11
	Orchard Eats (Restaurant)	9am-9pm	3,025	3,025	1 space per 275 sq ft	18
	Serrano's Pad (Restaurant)**	11am-9pm	4,902	4,902	1 space/75 sq ft indoor	65
Proposed	Retail	9am-9pm	5,065	5,065	1 space per 275 sq ft	18
	EOS Fitness (Health Space)*	24 hrs	36,569	36,569	1 space / 180 sq. ft*.	203
	EOS Fitness Court (basketball court & Swimming Pool)	24 hrs	2	2	2 per Court	4
	McDonald's Pad **	5 am-1:am	4,520	4,520	1 space per 100 indoor, 200 outdoor	45

If City of Mesa's parking ratios are used for the EOS fitness center, a total of 546 parking spaces are required. With the use of the parking ratio provided by the EOS Fitness, the parking requirement reduces to 383. The number of parking spaces that will be available at the site is 397, resulting in a surplus of 14 parking spaces at the site.

A cursory field review was conducted by ASJ Engineering Staff on May 10th, 2018, at 11:30 am. During the field observation, approximately 15% of the parking spaces were used, leaving several vacant and unused parking spaces. This lack of parking space utilization is because the parking demand for each land use varies throughout the day. The mix of land uses within this mixed use site provides an opportunity to share the parking spaces between the land uses. Thus, a shared parking analysis is conducted to identify the ability to share the parking spaces between the various land uses within the site and meet the overall parking demand of the site.

Shared parking analysis has been performed for the site based on the data provided by the Institute of Transportation Engineers Parking Generation Manual (4<sup>th</sup> Edition). Table 2 and Figure 3 provide the hourly variation of the parking demand for each land use within this development, calculated using the provided EOS Fitness Parking ratio for the EOS Fitness and City of Mesa's parking ratios for the other land uses. From Table 2, the highest parking demand for this mixed-use development is 330 spaces and occurs between 7:00 and 8:00 pm. With this daily variation in the parking demand, the 397 provided spaces is sufficient to satisfy the parking demands of this mixed use site.



**Figure 2 - Time of Day Variation in Parking Demand – Based on ITE Parking Generation Manual**

The 397 parking spaces that will be provided at this mixed-use facility exceeds the required number of parking spaces by 67 spaces. Based on the ADA requirements for a site with approximately 400 parking spaces a minimum of eight (8) accessible parking spaces two of which must be van accessible, should be provided to meet the City's accessible parking space requirements criteria. The site provides more than eight (8) parking spaces and meets the City's ADA requirements.

Upon your review, please feel free to contact Anita S. Johari ([anita@asjengineering.com](mailto:anita@asjengineering.com)) with your questions or comments.

**Table 2: Time of Day Variation in Parking Demand – Based on ITE Parking Generation Manual**

Land uses		5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00
Existing	Happy Pets	0%	5%	10%	18%	38%	68%	91%	100%	97%	95%	88%	78%	62%	64%	0%	0%	0%	0%	0%	0%
	Got Roots	0%	0%	0%	0%	38%	68%	91%	100%	97%	95%	88%	78%	62%	64%	77%	70%	0%	0%	0%	0%
	UPS Store	0%	0%	0%	18%	38%	68%	91%	100%	97%	95%	88%	78%	62%	64%	0%	0%	0%	0%	0%	0%
	Nails	0%	0%	0%	0%	38%	68%	91%	100%	97%	95%	88%	78%	62%	64%	50%	0%	0%	0%	0%	0%
	Cleaners	0%	0%	0%	0%	0%	68%	91%	100%	97%	95%	88%	78%	62%	0%	0%	0%	0%	0%	0%	0%
	Orchard Eats	0%	0%	0%	0%	5%	10%	20%	51%	56%	40%	27%	27%	39%	71%	100%	97%	10%	0%	0%	0%
	Serrano's Pad	0%	0%	0%	0%	0%	0%	20%	51%	56%	40%	27%	27%	39%	71%	100%	97%	10%	0%	0%	0%
Proposed	Vacant 1 (Retail/Restaurant)	0%	0%	0%	0%	5%	10%	20%	51%	56%	40%	27%	27%	39%	71%	100%	97%	10%	0%	0%	0%
	Vacant 2 (Fitness)	20%	20%	20%	20%	26%	51%	48%	42%	47%	38%	41%	61%	84%	91%	100%	50%	30%	20%	20%	0%
	Basket ball Court	20%	20%	20%	20%	26%	51%	48%	42%	47%	38%	41%	61%	84%	91%	100%	50%	30%	20%	20%	0%
	McDonald's Pad (Assumed for later)	0%	20%	30%	40%	40%	41%	63%	100%	92%	61%	45%	55%	89%	95%	48%	40%	40%	30%	20%	10%
Parking Requirement																					
Existing	Happy Pets	0	1	2	3	7	12	16	18	17	17	16	14	11	12	0	0	0	0	0	0
	Got Roots	0	0	0	0	2	4	5	6	6	6	5	5	4	4	5	4	0	0	0	0
	UPS Store	0	0	0	1	3	5	6	7	7	7	6	5	4	4	0	0	0	0	0	0
	Nails	0	0	0	0	1	2	3	3	3	3	3	2	2	2	2	0	0	0	0	0
	Cleaners	0	0	0	0	0	2	3	3	3	3	3	2	2	0	0	0	0	0	0	0
	Orchard Eats	0	0	0	0	1	1	2	6	6	4	3	3	4	8	11	11	1	0	0	0
	Serrano's Pad	0	0	0	0	0	0	13	33	36	26	18	18	25	46	65	63	7	0	0	0
Proposed	Vacant 1 (Retail/Restaurant)	0	0	0	0	1	2	4	9	10	7	5	5	7	13	18	17	2	0	0	0
	Vacant 2 (Fitness)	41	41	41	41	53	104	97	85	95	77	83	124	171	185	203	102	61	41	41	0
	Vacant 2 Courts/Pool	1	1	1	1	1	2	2	2	2	2	2	2	3	4	4	2	1	1	1	0
	McDonald's Pad (Assumed for later)	0	9	14	18	18	18	28	45	41	27	20	25	40	43	22	18	18	14	9	5
Total Parking Requirement		42	52	58	64	87	152	179	217	226	179	164	205	273	321	330	217	90	56	51	5