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MONTEREY PARK ORANGE ONTARIO SAN DIEGO

TECHNICAL MEMORANDUM

Date: March 22, 2019

To: David Vanderzell

From: Frank Barrera, Senior Planner – KOA Corporation

Subject: Traffic Study Technical Memorandum for Mixed-Use Project Located at Park Sierra Drive and Magnolia Avenue

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KOA Corporation (KOA) is pleased to submit this technical memorandum to document the analysis of potential impact resulting from the change of use of an El Torito restaurant to a mixed-use dance studio class space and event hall.

1.1 PROJECT DESCRIPTION

The Project proposed by David Vanderzell (Client) will be repurposing a 10,666 Square foot commercial building, currently part of the larger 2.7 Million Square foot Park Sierra Development, a commercial center located along Park Sierra Drive near the intersection with Magnolia Avenue in the City of Riverside (City).

The previous use of the building to be repurposed was an El Torito, a high-turnover (sit-down) restaurant. The proposed land use consists of The Dance Center, a combination of dance instruction school and event hall, with the potential of expanding to light food sales for patrons of The Dance Center (Project).

The current site layout has 1 driveway directly leading to the project site along Park Sierra Drive, as well as four additional driveways leading to the commercial center along Park Sierra Drive and a total of 10 driveways providing access to the commercial center along the surrounding streets. The proposed Project will not make any modifications to the surrounding site or affect any of the access points.

The proposed Project Vicinity map is illustrated on Figure 1.1.

KOA Corporation has been retained to conduct a traffic impact assessment and prepare a technical memorandum addressing the City's comments regarding:

- Access to public Streets
- Vehicular Traffic in a resident zone
- Traffic Hazards to pedestrians

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Figure 1.1 – Project Vicinity Map

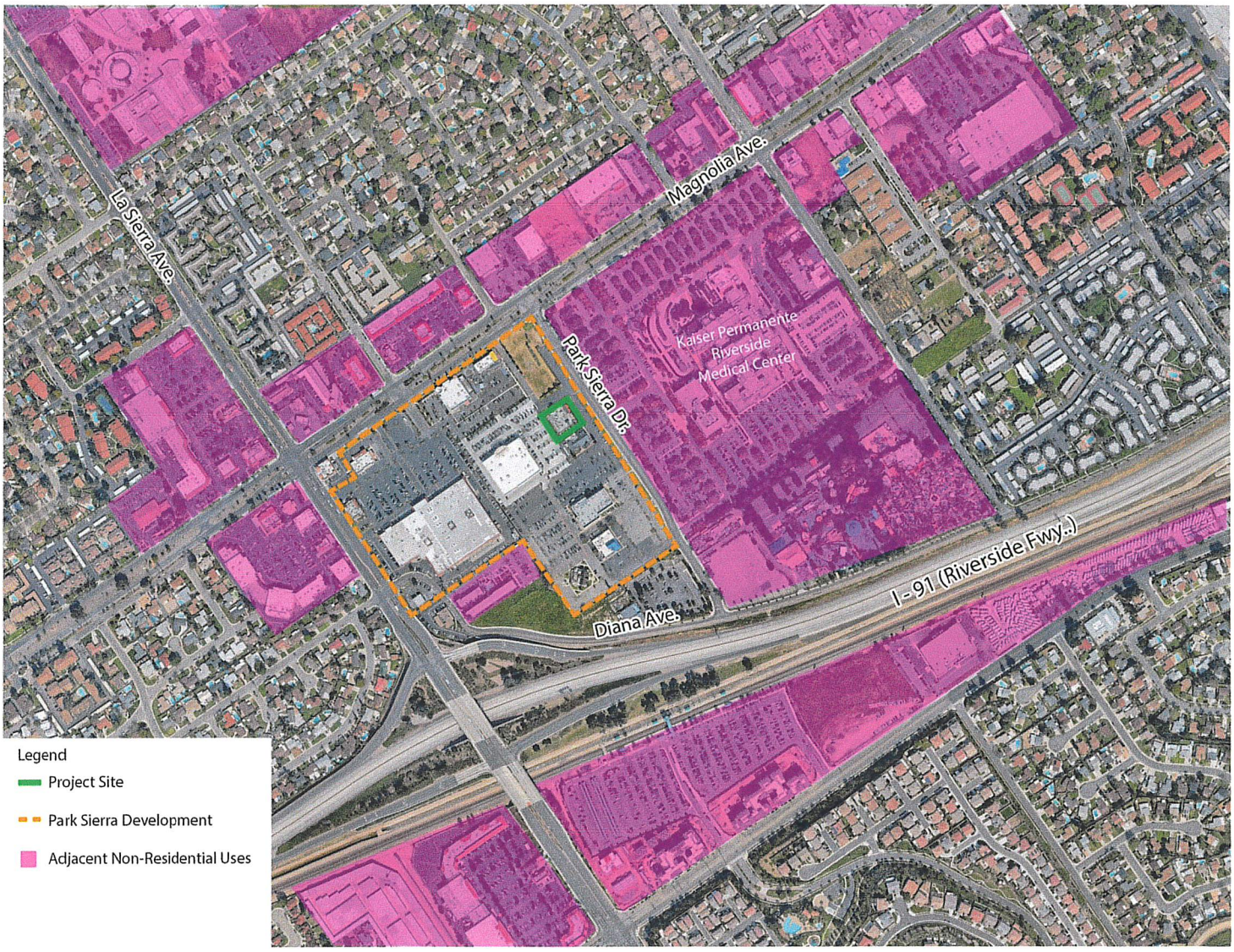

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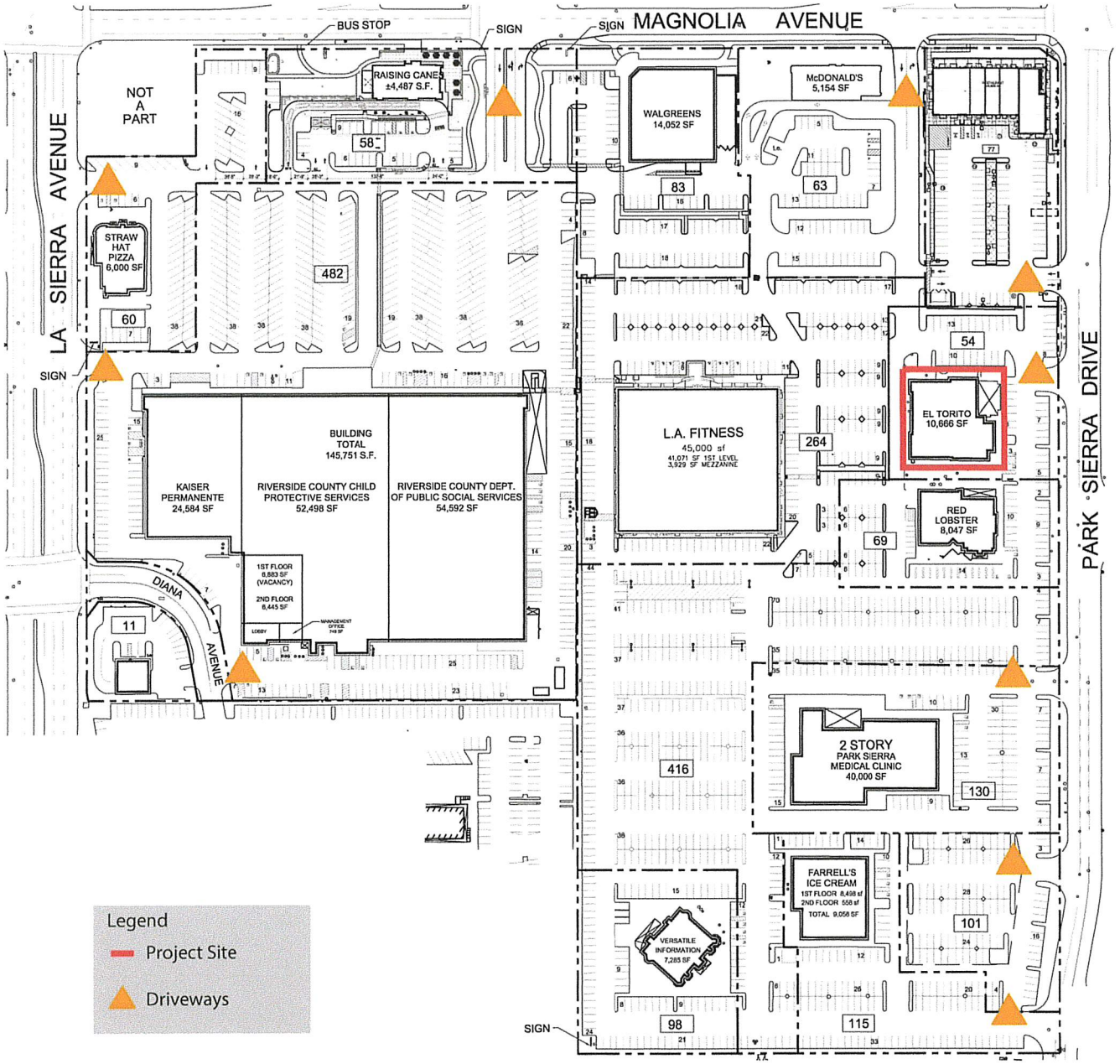
Figure 1.2 – Project Site Plan and Access Points



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1.2 ANALYSIS METHODOLOGY

The following text describes the study methodology contained in this report.

Site Accessibility
Accessibility was reviewed by considering access points to enter and exit the site, characteristics and connectivity of roadways surrounding the site, transit connections, and pedestrian infrastructure including sidewalks and crosswalks. Further details on the analysis can be found in Section 2.1.

Project Trip Generation
Project trip generation is typically based on land use trip rates defined by the Institute of Transportation Engineers (ITE) Trip Generation, 10th Edition. However, not all land uses being considered in the analysis are identified in the Trip Generation manual. In these cases, the most similar uses were selected to establish a general estimate. In addition to this analysis, rates during the weekend were not available to estimate trip generation. Instead, estimated trips were based on possible occupancy during the proposed Project's busiest period. Further details on the analysis can be found in Section 2.2.

Traffic Hazards to Pedestrians
Potential pedestrian hazards were reviewed by considering pedestrian infrastructure surrounding the site and pedestrian connections to surrounding streets. Further details on the analysis can be found in Section 2.3.

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2.1 SITE ACCESS TO PUBLIC STREETS ANALYSIS

The key roadways within the study area are described below. The discussion presented here is limited to specific roadways that traverse the Project site. Figure 2.1 provides a site plan showing nearby streets and driveway access points.

Park Sierra Drive is a north/south oriented street that is approximately 45 feet wide with three travel lanes and no on-street parking. The street has posted speed limit of 25 miles per hour and has a crosswalk with in-ground flashers for pedestrians crossing to and from the Kaiser Permanente parking lot across the street. Continuous sidewalks are provided throughout the street. A signalized intersection with a protected left turn provides access to Park Sierra Drive from Magnolia Avenue.

This street provides the most direct driveway access to the project site. In addition to the main Project driveway, there are four additional driveways on Park Sierra Drive alone that provide access to the Project's commercial center parking lot.

Magnolia Avenue is an east/west oriented street that is approximately 125 feet wide with four travel lanes, bike lanes in each direction, and a large 50 foot wide raised center median. Along this street there are several bus stops located along each side of the street.

This street provides two driveways that provide access to the Project's commercial center parking lot, including a signalized entrance to the site. Continuous sidewalks are provided throughout the street.

La Sierra Avenue is a north/south oriented street that is approximately 93 feet wide with six travel lanes, bike lanes in each direction, and a 6 foot wide raised center median.

This street is the furthest from the project site, but still has two driveways that provide access to the Project's commercial center parking lot. Continuous sidewalks are provided throughout the street.

Diana Avenue is an east/west oriented street that is approximately 32 feet wide with two travel lanes. The street is adjacent to and travels parallel with the Riverside Freeway, SR-91.

This street has one driveway that provides access to the Project's commercial center parking lot. Continuous sidewalks are provided throughout the street.

The abundance of driveways, high vehicle capacity roadways, bike infrastructure, pedestrian infrastructure, and transit connections provide adequate access between public streets and the Project site.

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2.2 PROJECT TRIP GENERATION ANALYSIS

Trip generation estimates were calculated using the Institute of Transportation Engineers' (ITE) Trip Generation, 10th Edition. Based on the general schedule of events provided by the client, included as Appendix A, during the AM peak period and PM peak period, the intended use of the space will be private lessons. Due to limited data available for this use, the rates from the most similar land use were utilized, Recreational Community Center (ITE Code 435). Since concurrent usage of the space is not expected during this time, other rates were utilized for weekday trip generation estimates. For the existing use rates, El Torito was classified as ITE land use, High-turnover (Sit-down) restaurant (ITE Code 932). Trip generation estimates can be seen in table 2.1.

Based on the estimates shown in table 2.1, the proposed project would not have a significant impact on traffic during the AM peak period or the PM peak period. The previous restaurant land use generated an estimated 1,197 daily trips with 106 AM peak period trips and 104 PM peak period trips, while the proposed land use would generate an estimated 307 daily weekday trips with 19 AM peak period trips and 25 PM peak period trips. This results in an estimated net trip reduction of 889 daily trips with a reduction of 87 AM peak period trips and 79 PM peak period trips.

In addition to this, the lessons offered from the studio begin at 10 AM. However, AM peak travel periods are typically between 7 AM and 9 AM. Thus, most traffic generated by the proposed Project will likely occur during off-peak periods in areas surrounding the project site.

Table 1 – Weekday Peak hour Trip Generation

Land Use	ITE Code	Intensity		Weekday						
				Average Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Trip Generation Rates[1]										
Recreational Community Center (Studio Classes)	495		k.s.f	28.82	66%	34%	1.76	47%	53%	2.31
High-turnover (Sit-down) restaurant	932		k.s.f	112.18	55%	45%	9.94	62%	38%	9.77
Proposed Improvements										
Recreational Community Center (Studio Classes)	495	10.666	k.s.f	307	13	6	19	12	13	25
			Sub-total	**307**	**13**	**6**	**19**	**12**	**13**	**25**
Existing Use										
High-turnover (Sit-down) restaurant	932	10.666	k.s.f	(1,197)	(58)	(48)	(106)	(64)	(40)	(104)
			Sub-total	**(1,197)**	**(58)**	**(48)**	**(106)**	**(64)**	**(40)**	**(104)**
			Net Estimated Trips	**(889)**	**(45)**	**(42)**	**(87)**	**(52)**	**(27)**	**(79)**

Rate Source: ITE Trip Generation, 10th Edition

1 = Note 1: k..s.f. - 1,000 Sq. Feet Gross Floor Area

2 = No AM Peak hour studies rates were available for ITE land use code 435

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Since the proposed project is planned to function as an Event Hall during the weekends, a separate analysis was conducted for the weekend peak period. For the previous restaurant land use the same ITE land use was utilized as the weekday estimates. The lowest trip generation rate for weekend peak periods was utilized in order to conduct a conservative evaluation. The rate utilized was for the Saturday peak generator period. This resulted in an estimated 1,305 daily trips with 119 peak period trips.

Due to data availability for specific land uses, an occupancy based trip generation was utilized with certain assumptions made for the calculation of the Event Hall on the weekends. Based on information provided by the client, up to 250 patrons may attend an event. For each event, it was assumed that there will be an average of 2 people per vehicle and an arrival rate of 60% during the first hour. Due to the nature of the events that will be held, the inbound trip rate will be 90% and the outbound trip rate will be 10%. With these assumptions in place, each weekend event would generate estimated 125 trips daily with 75 trips occurring during the peak period. The overall results can be seen in Table 2.2.

Although there is a slight increase of seven inbound trips during the weekend peak period compared to the restaurant use, outbound and total trips are reduced significantly during the peak period, with 7 and 75 trips estimated. This is due to the nature of the event hall use having a specific start time as opposed to a restaurant that generates trips throughout a wider range of time.

Table 2 – Weekend Peak period Trip Generation

Land Use	ITE Code	Intensity		Weekend			
					Peak Period		
				Average Daily	In	Out	Total
Proposed Use							
Event Hall	N/A	250	Occupants	125	68	7	75
			Sub-total		**68**	**7**	**75**
Existing Use							
High-turnover (Sit-down) restaurant	932	10.666	k.s.f	(1,305)	(61)	(58)	(119)
			Sub-total		**(61)**	**(58)**	**(119)**
			Net Estimated Trips		**7**	**(51)**	**(44)**

Rate Source: ITE Trip Generation, 10th Edition

1 = Note 1: k..s.f. - 1,000 Sq. Feet Gross Floor Area

2 = Lowest Weekend Peak Hour rate was utilized for this calculation

Additionally, the site is not directly adjacent to residential properties, minimizing the impact to residential zones. The site is bordered by a Kaiser Permanente Riverside Medical Center parking lot to the east, the remainder of the commercial center to the west, the SR-91 freeway to the south, and although there are residential uses to the north, they are buffered by existing commercial centers along Magnolia Avenue. This is shown in Figure 1.1.

Overall, no significant traffic impacts are expected as result of the Project when considering the most recent use of the building and the surrounding land uses in the area. The project may lead to a reduction of overall trips in the area based on the trip generation estimates.

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2.3 PEDESTRIAN TRAFFIC HAZARDS

In addition to the pedestrian infrastructure noted throughout section 2.1, the site and surrounding area have adequate, well-marked pedestrian crosswalks, pedestrian signage, and advanced yield pavement markers along Park Sierra Drive and throughout where necessary. Internally, traffic calming measures are put in place including speed bumps and crosswalks as well.

Adequate pedestrian infrastructure and the reduction of expected vehicle trips resulting from the proposed land use noted in section 2.2 should not result in a substantial increase in traffic hazards to pedestrians.

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3.1 ANALYSIS SUMMARY AND CONCLUSIONS

The following summarizes the traffic study results, conclusions and recommendations:

- The abundance of driveways, high vehicle capacity roadways, bike infrastructure, pedestrian infrastructure, and transit connections provide adequate access between public streets and the Project site.
- The previous restaurant (El Torito) land use generated an estimated 1,197 daily trips with 106 AM peak period trips and 104 PM peak period trips, while the proposed land use would generate an estimated 307 daily weekday trips with 19 AM peak period trips and 25 PM peak period trips. This results in an estimated net trip reduction of 889 daily trips with a reduction of 87 AM peak period trips and 79 PM peak period trips.
- Studio lessons offered begin at 10 AM. However, AM peak travel periods are typically between 7 AM and 9 AM. Thus, most AM traffic generated by the proposed Project will likely occur during off-peak periods in areas surrounding the project site.
- The lowest trip generation rate for weekend peak periods was utilized in order to conduct a conservative evaluation. The weekend peak period rate used was for the Saturday peak generator period. This resulted in an estimated 1,305 daily trips with 119 peak period trips. Each weekend event would generate estimated 125 trips daily with 75 trips occurring during the peak period.
- No significant traffic impacts are expected as result of the Project when considering the most recent use of the building and the surrounding land uses in the area. The project may lead to a reduction of overall trips in the area based on the trip generation estimates.
- Adequate pedestrian infrastructure and the reduction of expected vehicle trips resulting from the proposed land use noted in section 2.2 should not substantially increase traffic hazards to pedestrians.

KOA concludes that the Project's should not significantly impact any of the concerns noted from City staff.

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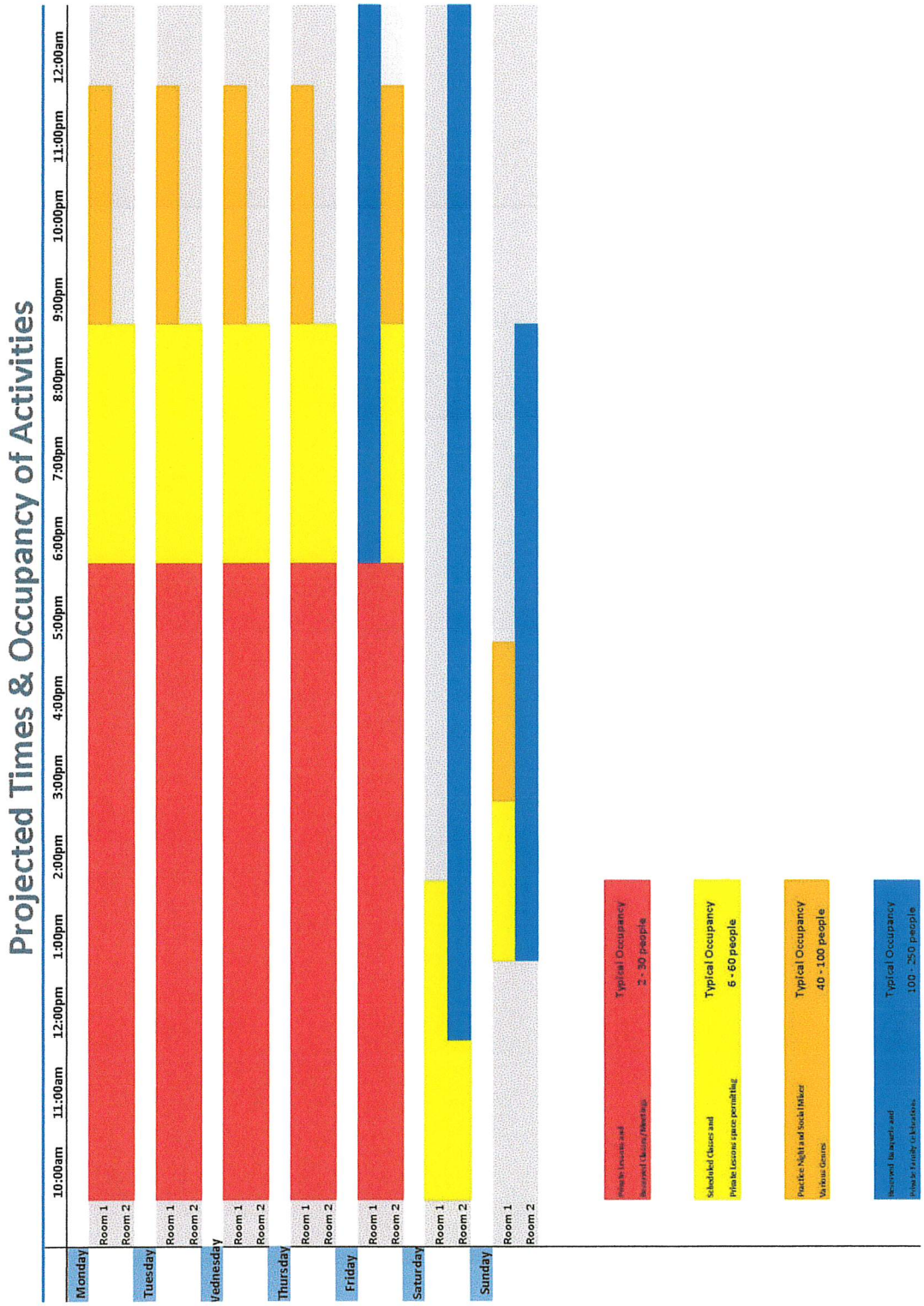
APPENDIX A – OCCUPANCY AND UTILIZATION TIMES



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