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TO: City of Mesa

FROM: Paul E. Basha, PE, PTOE, Summit Land Management
Kayla Amado

RE: Traffic Statement for Park North

Introduction

Excolo Management is planning the development of 120 multi-family homes, identified as Park North, on approximately 5 acres in Mesa, Arizona. The property is adjacent to and north of Guadalupe Road and east of Power Road.

The Park North residential community location is indicated in the large vicinity aerial photograph of **Figure 1**. **Figure 2** provides an aerial photograph of the intermediate vicinity of the proposed Park North residential community.

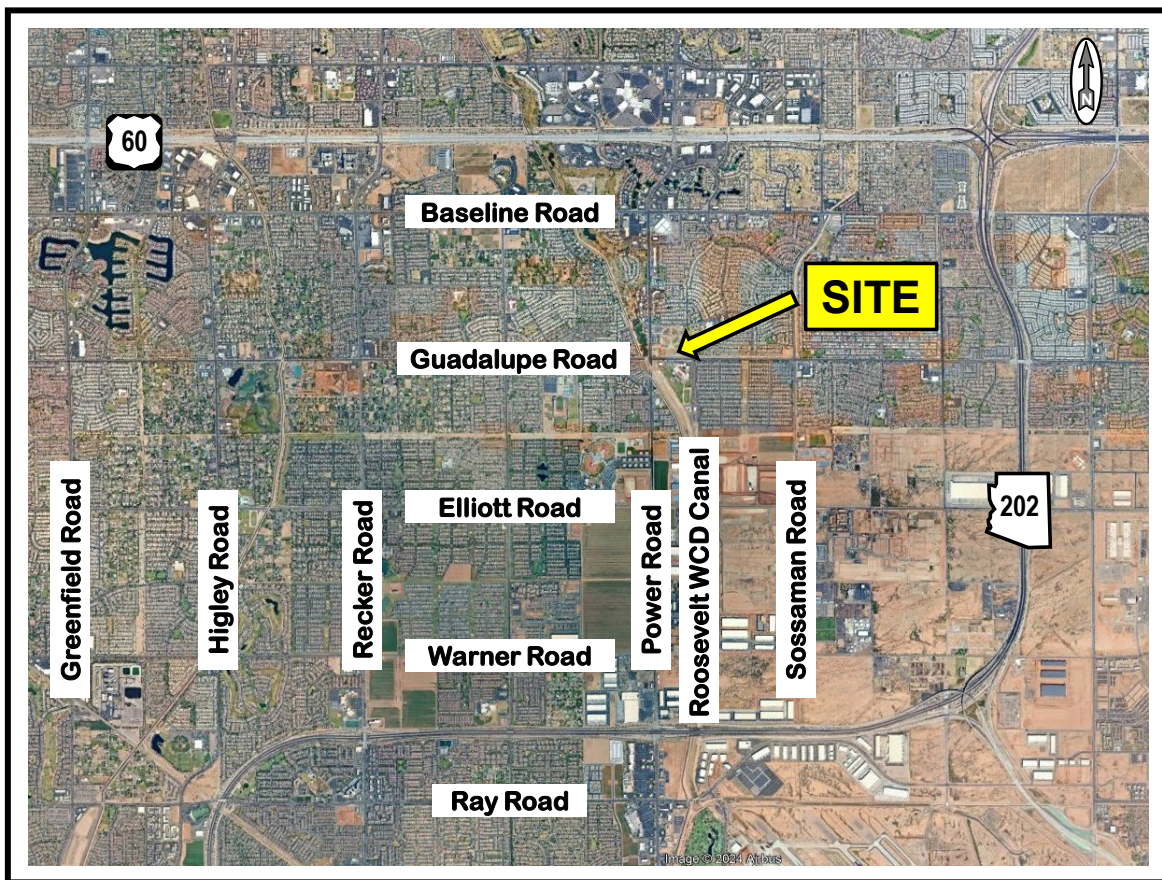


Figure 1: Aerial Photograph Greater Vicinity Park North Residential Community



Figure 2: Aerial Photograph Intermediate Vicinity Park North Residential Community

Figure 3 provides an aerial photograph of the immediate vicinity of the proposed Park North residential community.

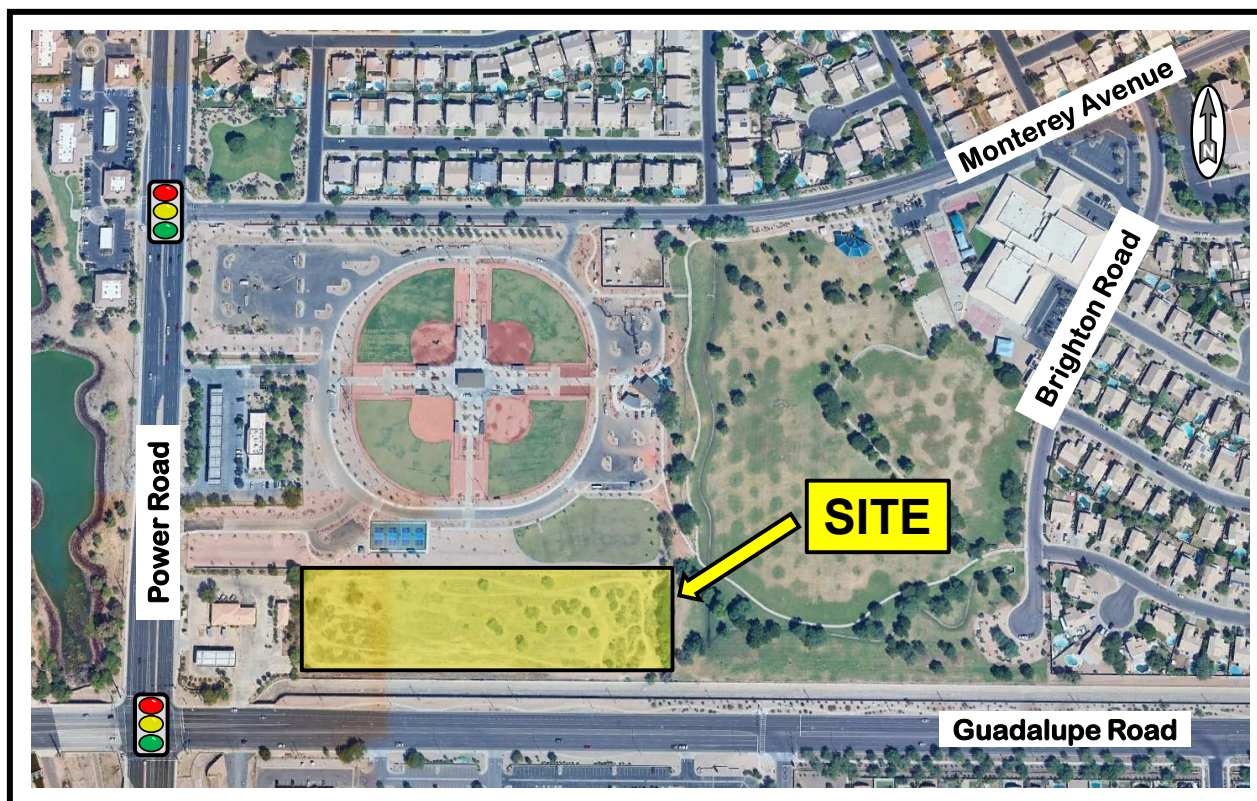


Figure 3: Aerial Photograph Immediate Vicinity Park North Residential Community

Proposed Multi-Family Trip Generation

Trip generation for proposed developments is estimated with the procedures and data contained within the Institute of Transportation Engineers *Trip Generation Manual, 11th Edition*, published in 2021. This document provides traffic volume data from existing developments throughout the United States and Canada, from 1980 through 2021, that can be utilized to estimate trips from proposed developments. The traffic data are provided for 179 land use categories separated into 10 major land use categories. The estimated traffic volume is dependent upon independent variables defined by the characteristics and size of each land use category. Data are typically provided for five (5) weekday time periods and four (4) weekend time periods.

For this multi-family property use, the land use category of multi-family low-rise code 220, was utilized. Low-rise is defined as three (3) stories or less. Both the average rate and the fitted curve equation were utilized, and the maximum of the two (2) values was utilized. The **Attachment** provides the complete trip generation calculations results, and **Table 1** provides a summary.

Table 1: Park North Estimated Trip Generation

	AVERAGE RATE			EQUATION			LARGEST		
	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
WEEKDAY DAILY	405	404	809	423	422	845	423	422	845
AM PEAK HOUR STREET	12	36	48	14	46	60	14	46	60
AM PEAK HOUR GENERATOR	13	43	56	17	53	70	17	53	70
PM PEAK HOUR STREET	38	23	61	38	27	65	38	27	65
PM PEAK HOUR GENERATOR	42	26	68	53	32	85	53	32	85
SATURDAY DAILY	273	273	546	NA	NA	NA	273	273	546
PEAK HOUR GENERATOR	25	24	49	NA	NA	NA	25	24	49
SUNDAY DAILY	232	231	463	NA	NA	NA	232	231	463
PEAK HOUR GENERATOR	22	21	43	NA	NA	NA	22	21	43

The maximum exiting traffic generated by Park North is estimated as 53 vehicles-per-hour during the weekday morning peak hour of generator. The maximum entering traffic generated by Park North is also estimated as 53 vehicles-per-hour during the weekday evening peak hour of generator.

Existing Zoning Multi-Family Trip Generation

The existing property is zoned for a combination of retail and office, consisting of three (3) two (2) story buildings. The office use consists of 50,800 square feet, and the retail use consists of 18,000 square feet. The trip generation for the existing zoning was estimated utilizing the same *Trip Generation Manual, 11th Edition* data and procedures. The Attachment includes the results of this calculation. **Table 2** compares the estimated trip generation of the proposed multi-family homes to that of the existing zoning.

Table 2: Trip Generation Comparison of Proposed Multi-family to Existing Zoning

	PROPOSED MULTI-FAMILY			EXISTING ZONING			CHANGE
	ENTERING	EXITING	TOTAL	ENTERING	EXITING	TOTAL	
WEEKDAY DAILY	423	422	845	817	816	1,633	-48%
AM PEAK HOUR STREET	14	46	60	108	28	136	-56%
AM PEAK HOUR GENERATOR	17	53	70	152	79	231	-70%
PM PEAK HOUR STREET	45	27	72	93	79	172	-58%
PM PEAK HOUR GENERATOR	53	32	85	162	129	291	-71%
SATURDAY DAILY	273	273	546	NA	NA	NA	NA
PEAK HOUR GENERATOR	25	24	49	75	70	145	-66%
SUNDAY DAILY	232	231	463	NA	NA	NA	NA
PEAK HOUR GENERATOR	22	21	43	NA	NA	NA	NA

The proposed residential community is estimated to generate substantially less traffic than the existing zoning; ranging from 48% to 71% less traffic depending on the time period.

Conclusions and Recommendations

The Park North residential community is estimated to generate a maximum of 53 hourly exiting vehicles in the morning peak hour and 53 hourly entering vehicles in the evening peak hour.

No other street improvements will be necessary.

Please contact me at (480) 505-3931 or pbasha@summitlandmgmt.com, if you have any questions or would like to discuss this traffic statement.

Attachment: Trip Generation