

Parking Demand Study
SAFStor Development
6842 Grand Ave, Glendale, AZ



Figure 1: Study Location

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Study Area

For this parking demand study, the study area will be defined as only the proposed development's lot. Trip counts in and out of the facility are counted as vehicles which access the facility through its one driveway on US 60/Grand Ave.

Inventory of Existing Parking Facilities

Currently the existing site is an undeveloped lot with no parking spaces. The existing roadway does not have available on-street parking, and there are no shared parking spaces between the proposed site and any of the surrounding properties.

Proposed Development and Parking Facilities

As seen in Figure 2, plans for the site call for a three-story "Mini-Warehouse" storage facility with a total square footage of 103,500 sf. There are no other buildings planned for the site. There is a total of twenty-one (21) planned parking spaces, two (2) of which are handicapped, and four (4) loading bays with a turnaround at the rear of the property.

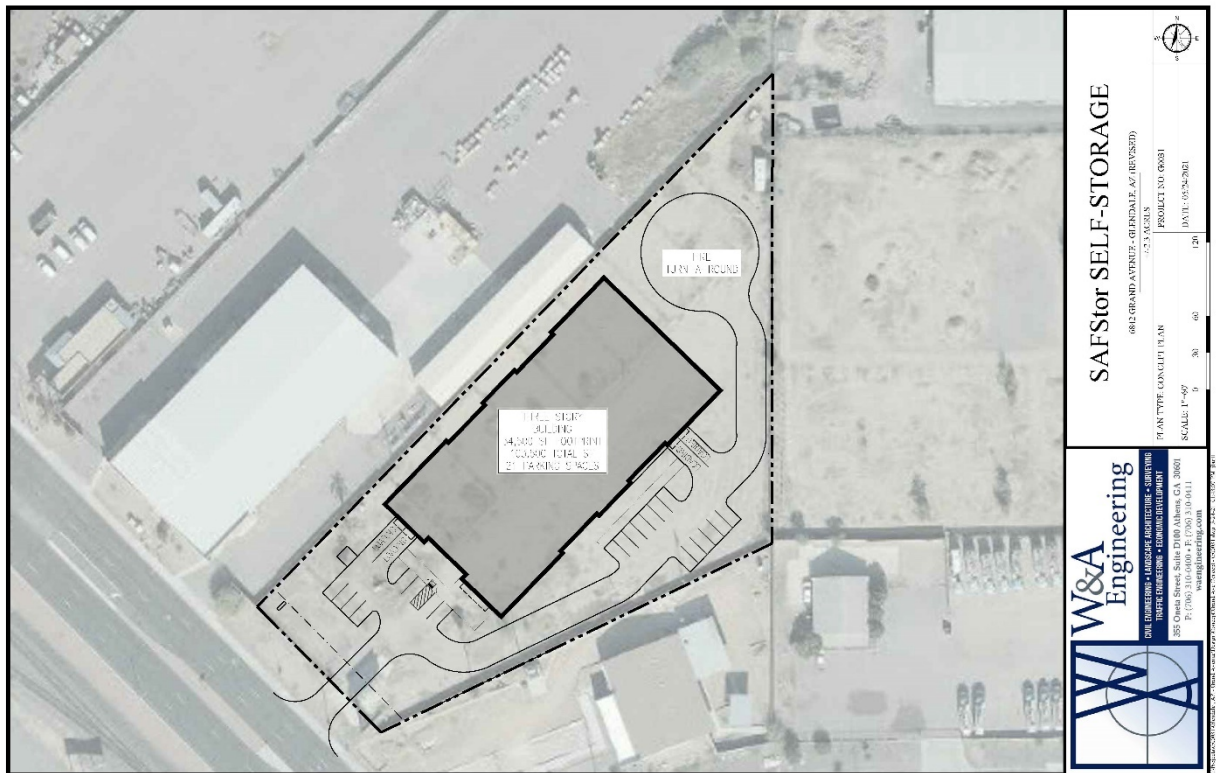


Figure 2: Proposed Site Development

City of Glendale, AZ Parking Requirements

From Section 7.403 of the Glendale Code of Ordinances (See Table 1 in Appendix), the proposed storage facility falls under the “Manufacturing/Assembly Wholesale/Warehouse” category which has a minimum parking requirement of one (1) space per 600 square feet and a maximum parking requirement of one (1) space per every 300 square feet. These requirements give the following totals for a Warehouse with 103,500 square feet:

- Minimum: 173 Parking Spaces
- Maximum: 345 Parking Spaces

ITE Parking Demand Calculations

As can be seen, the required minimum for a warehouse in Glendale, AZ far exceeds the proposed development’s parking. However, this site justifies a parking demand study by means of the ITE Parking Manual. The Institute of Transportation Engineers (ITE) provides a *Parking Generation Manual* which breaks down Parking Demand based on prescribed Land Use. In the case of a mini-warehouse, it is *Land Use 151*. For *Land Use 151*, there are three ways to calculate the parking demand: total storage units, gross floor area, or employees. In this instance, the parking demand will be calculated using the gross floor area of 103,500 sf. The given formula from the Manual (See Table 2 in Appendix) is shown below:

- Weekday: $P=0.07(x)+2.32$
 - P=Parked Vehicles
 - x=1,000 Gross Floor Area

Calculations for the development using the previous formula are shown below:

- $P=0.07(103.5)+2.32$
- $P=7.245+2.32$
- $P=9.565\approx 10$

Conclusions

From the calculations, it is shown the proposed development only generates a Peak Period Parking Demand of 10 Parked Vehicles. The proposed twenty-one (21) spaces shown in Figure 2 are more than adequate to handle the calculated demand. Per the Maricopa County Zoning Ordinance (March 2021) Section 1102 “Parking Regulations” Article 1102.9.1. “No Zoning Clearance shall be issued unless the required parking as indicated in this section is provided”. From this study, the case was made in favor of a Zoning Clearance since there will be twice as many proposed parking spaces as what the peak Parking Demand will be.

Appendix

Table 1: Glendale, AZ Parking Requirements by Use

| USE | MINIMUM # OF SPACES | MAXIMUM # OF SPACES |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| Auditorium, Stadium, Public Assembly, Private Clubs, Health Clubs, Theaters | 1:100 sq. ft. or 1:5 seats | no maximum |
| Auto Repair | 2 spaces per service bay; plus 1 space per every 250 sq. ft. of retail or office area. | no maximum |
| Banks, Financial Institutions | 1:250 sq. ft. | 1:200 sq. ft. |
| Barber Shop or Beauty Shop | 1:100 sq. ft. | no maximum |
| Churches | 1:5 seats or 90 lineal inches of pew space | no maximum |
| Cocktail Lounge | 1:100 sq. ft. | no maximum |
| Home Furnishings, Major Appliances | 1:500 sq. ft. | 1:400 sq. ft. |
| Hospitals | 1:bed | no maximum |
| Manufacturing/Assembly Wholesale/ Warehouse | 1:600 sq. ft. | 1:300 sq. ft. |
| Mixed Uses | To be determined by Planning Director. | |
| Motels/Hotels | 1:room | no maximum |
| Restaurant/Bar | 1:200 sq. ft. | no maximum |
| Banquet/Meeting Rooms | 1:200 sq. ft. | no maximum |
| Office, General, Professional | 1:300 sq. ft. | no maximum |
| Medical/Dental | 1:150 sq. ft. | no maximum |
| Indoor Recreation Facility Amusement Center, Arcades Batting Cages Bowling Alley | 1:100 sq. ft. 1:cage 4:lane plus accessory uses if separate outside entrances are provided. | no maximum no maximum no maximum |
| Outdoor Recreation Golf | 1:tee space (10 lineal feet) | no maximum |
| Driving Ranges | 1:hole | no maximum |
| Miniature Golf Courses | 1:200 sq. ft. | no maximum |
| Skating Rinks | 1:200 sq. ft. | no maximum |
| Regional Malls | 1:225 sq. ft. | 1:180 sq. ft. |
| Residential Single-family Multi-family Studio or 1 Bedroom 2 or more Bedrooms 1 Designated guest space for every 3 units. | 2:unit-1 covered 1 space 2 spaces | no maximum no maximum no maximum no maximum |
| Restaurant-freestanding | 1:100 sq. ft. | no maximum |

| | | |
|---------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|---------------|
| Retail/Shopping Center (including up to 10% restaurant, health club, beauty shops...additional percentages calculated at rate for each use) | 1:250 sq. ft. | 1:200 sq. ft. |
| Retirement/Senior Housing/ Convalescent/Nursing/Congregate Care Home | .4:unit | no maximum |
| Schools Elementary | 2:classroom or largest single public assembly area, whichever is greater. | no maximum |
| Jr. High | 3:classroom or largest single public assembly area, whichever is greater. | no maximum |
| High School | 7:classroom or largest single public assembly area, whichever is greater. | no maximum |
| College | 10:classroom or largest single public assembly area, whichever is greater. | no maximum |
| Vocational/Technical | 1:2 students | no maximum |

Table 2: ITE Parking Demand Model for Land Use 151

Mini-Warehouse (151)

Peak Period Parking Demand vs: 1000 Sq. Ft. GFA

On a: Weekday (Monday - Friday)

Setting/Location: General Urban/Suburban

Peak Period of Parking Demand: 4:00 - 6:00 p.m.

Number of Studies: 14

Avg. 1000 Sq. Ft. GFA: 60

Peak Period Parking Demand per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | 33rd / 85th Percentile | 95% Confidence Interval | Standard Deviation (Coeff. of Variation) |
|--------------|----------------|------------------------|-------------------------|------------------------------------------|
| 0.10 | 0.03 - 0.53 | 0.08 / 0.25 | *** | 0.07 (70%) |

Data Plot and Equation

