

July 18, 2022

Mr. Christopher D. Brozina  
Guardian Development Partners LLC  
7377 East Doubletree Ranch Road, Suite 100  
Scottsdale, Arizona 85258



***RE: PARKING ANALYSIS FOR MILLENNIUM SUPERSTITION SPRINGS,  
NORTHWEST CORNER OF SUNVIEW AND BASELINE ROAD, MESA, ARIZONA***

Dear Mr. Brozina:

Thank you for engaging CivTech to prepare for Guardian this parking analysis for the Millennium Superstition Springs multifamily residential development proposed on northwest corner of S Sunview<sup>1</sup> and E Baseline Road in Mesa, Arizona. The project is proposed on a vacant parcel within the Arizona Health and Technology Park (AzH&TP), the traffic impacts of which were originally studied in a February 2001 Kirkham-Michael & Associates Traffic Impact Analysis (TIA).

The development is proposed to provide 394 dwelling units with a total of 661 bedrooms on 9.82-acre, Maricopa County Assessor Parcel Number (APN) 141-53-896B. Per the proposed site plan (dated December 1, 2021), 654 parking spaces will be provided, yielding a parking ratio of approximately 1.66 parking spaces per unit. The unit mix per the site plan (see **Attachment A**) is summarized in **Table 1**.

**TABLE 1 – PROPOSED RESIDENTIAL UNITS**

UNIT TYPE	NUMBER OF UNITS	NUMBER OF BEDROOMS
Studio	17	17
One-Bedroom	152	152
Two-Bedroom	183	366
Three-Bedroom	42	126
<b>TOTAL</b>	<b>394</b>	<b>661</b>

#### **PARKING REQUIREMENTS BY CODE**

Parking requirements established by the City's Zoning Ordinance (the "Code") were used to calculate the required number of parking spaces. The Code states that "apartments, multiple residence condominiums, mixed-use residential, townhomes, patio homes, and similar multiple residence buildings: development site not located within ¼-mile radius (1,320- feet) of bus rapid transit or light rail station, regardless of bedroom count" are required to provide approximately 2.1 spaces per unit. **Table 2** summarizes the Code's parking requirements.

<sup>1</sup> S Sunview is the complete name of the street; there is no designation of street, road, avenue, lane, circle, or other.

**TABLE 2: SPACES REQUIRED BY CODE**

UNIT TYPE	NUMBER OF UNITS	SPACES PER UNIT	PARKING SPACES
Studio	17	2.1	35.7
One-Bedroom	152	2.1	319.2
Two-Bedroom	183	2.1	384.3
Three-Bedroom	42	2.1	88.2
<b>Total Required</b>	<b>394</b>	<b>2.1</b>	<b>828</b>
<b>Spaces Provided</b>		<b>1.66</b>	<b>654</b>
<b>Number Below ZDC Requirement</b>			<b>174</b>

The City's Code requires 184 more parking spaces than are being provided at Millennium Superstition Springs.

#### **SITE'S PROXIMITY TO ALTERNATE MODES OF TRANSPORTATION**

The City is actively engaged with transit and has both Light Rail Transit, Bus Rapid Transit, High Capacity Transit and several local transit routes available through both Valley Metro and City provided circulators such as the Downtown Buzz.

The Mesa Transit Plan 2040 states "The Transit Master Plan is needed to respond to a change in travel patterns in the City, as land use and transit opportunities become more urban in character. This includes an increased emphasis on making connections to major activity centers and regional transportation nodes." It further states that, "The recent demographic changes in Mesa are well documented (see **Attachment B**). Mesa is continuing to transform from a suburban bedroom community that was primarily auto-oriented to a more urbanized city that includes multi-modal transportation connections and defined character areas." Reducing parking, and thus reducing the reliance on owned vehicles, enhances the future transit system thoughtfully planned for the City.

#### ***BUS/PREMIUM BUS/LIGHT RAIL TRANSIT/RAIL***

##### Existing

The nearest north-south local Valley Metro bus routes are 184 (Power Road) and 136 (Gilbert Road), adjacent to the site. East-west Route 108 (Elliot Road) operates along Guadalupe Road (one mile south of Baseline Road) between Power Road and Val Vista Drive. These routes are considered local providing bus operation between 8:00 am and 12:00 pm at 30-minute headways. Route 61 along Southern Avenue (one mile north of Baseline Road) operates between 8:00 am and 12:00 pm at 15-minute headways; the nearest stops at Higley Road and Southern Avenue are located approximately 2 miles north the site. Express route 533, which runs in the mornings and afternoons only, links the Superstition Springs Transit Center/Park-and-Ride (approximately 1.8 miles from the site) directly to employment centers in downtown Phoenix and the State Capitol area.

The Valley Metro Light Rail runs east-west along Main Street, from Gilbert Road west, approximate 7¼ miles from the site. A resident could walk a mile south to Guadalupe Road, take local bus routes 108 along Elliot Road and 136 north to Main Street and transfer to the Light Rail there. Currently

there is no other commuter rail closer to the project. Nor is there any Bus Rapid Transit (BRT) in the area.

Finally, there are Union Pacific Railroad (UPRR) heavy rail tracks that cross Baseline Road approximately seven-and-one-quarter miles to the west. This is the main link between Phoenix and UPRR cross-country mainline tracks in Tucson. Currently there is no passenger rail on these UPRR tracks.

#### Proposed

Mesa's 2040 transit plan shows that no additional local or express bus routes are expected in the area. Improvements to these fixed routes will include more frequent service. The Metro LINK bus service could transition to an undetermined type of high-capacity transit in the mid-term (i.e., by 2030) with passenger rail envisioned in the long term (beyond 2030) between Rural Road in Tempe and Gateway Airport either along US 60 or along the existing UPRR tracks. No BRT routes are expected.

#### ***PEDESTRIAN/BICYCLE***

Mesa has a long-standing commitment to encourage bicycling since the preparation of the first Mesa Bicycle Study in the late 1970s. This commitment was renewed in the City's 2012 Bicycle Master Plan and reinforced in the City's 2040 General Plan, adopted in 2014. The site could have a high volume of pedestrian and bicycle activity due to its proximity to transit service and other amenities (shopping, restaurants, etc.). The sidewalks along Baseline Road, Sunview, and Inverness Avenue are part of an existing pedestrian network and are pedestrian friendly. Adjacent Inverness Avenue has bicycle lanes west of S Slater that continue to Higley Road, which has bicycle lanes to the north (in Mesa) and to the south (in Gilbert). The development is being designed with pedestrians and bicyclists in mind and will provide sidewalks that will preserve existing connectivity.

#### ***PROPOSED PARKING REDUCTION***

##### Parking Trends – Short Term and Mid Term

The ownership of vehicles with the adoption of ride hail and ride share in Arizona has steadily decreased. A report prepared by the American Apartment Association called the *Transformation of Parking* (<https://www.naahq.org/news-publications/transformation-parking>) details this trend between the years 2006 and 2016. The report suggests that the trend of lower parking rates for mid-rise and garden apartments is expected to continue. The report states that the average parking ratios for apartment properties with 50 or more units peaked at 1.62 in the 2000s before declining to 1.46 in the current decade, its lowest rate since the 1960s. Decreases in parking rates are being aggressively pursued by the American Planning Association in the People over Cars campaign. The City appears to be actively engaged in providing alternate forms of transportation and supporting the use of bus, high-capacity transit, rail, as well as other options to reduce the use of vehicles based on the future services shown in the Transit Plan 2040.

### ITE Parking Generation

*Parking Generation*, now in its 5<sup>th</sup> edition, published in 2019, is a document prepared and published by the Institute of Transportation Engineers (ITE) that summarizes a collection of parking demand data observations made all over the world by land use type. *Parking Generation* provides statistics on the average peak parking demand. For urban low- and mid-rise multifamily developments, the average peak parking demand is 1.31 vehicles per dwelling unit (DU) for mid-rise multifamily residences in an urban/suburban setting more than ½-mile from rail transit. This site, with 394 DUs, would generate an average peak parking demand of 516 spaces, well below the 654 spaces being proposed. Peak parking demand is overnight, when most residents are home sleeping. *Parking Generation* also indicates that the 85<sup>th</sup> percentile of all peak parking rates observed at low/mid-rise multifamily developments is 1.47 vehicles per dwelling unit. This value serves as a conservative estimate for the parking likely to be experienced at Millennium Superstition Springs. Therefore, an overall parking rate, including guests, of at least 1.47 is recommended. The developer is proposing a supply equal to the recommendation resulting in 1.61 spaces per unit, which exceeds the 85<sup>th</sup> percentile average rate. (Please note that the developer's proposed 1.61 spaces per unit rate is only slightly less than the 2000's peak as reported by the apartment association and that ITE's 85<sup>th</sup> percentile 1.47 spaces per unit is similar to the currently-reported average reported by the association.) In response to a City review comment, **Attachment C** provides the excerpts from *Parking Generation* from which the above information is taken.

### *Proposed Parking After Applied Reduction*

Six hundred and fifty-four parking spaces will be provided, resulting in a parking ratio of 1.66 parking spaces per unit. The proposed parking rate for Millennium Superstition Springs can be identified in **Table 3**.

**TABLE 3: PROPOSED PARKING**

UNIT TYPE	NUMBER OF UNITS	SPACES PER UNIT	PARKING SPACES
Studio	17	1.66	28.2
One-Bedroom	152	1.66	252.3
Two-Bedroom	183	1.66	303.8
Three-Bedroom	42	1.66	69.7
<b>Total Proposed</b>	<b>394</b>	<b>1.66</b>	<b>654</b>

A comparison of parking ratios for other multifamily developments has been developed. The results of the research are documented in **Table 4** below. Parking ratios for several similar projects in Mesa and Tempe are documented. A comparison to the parking ratio provided for Millennium Superstition Springs and ITE Parking Generation manual are included.

**TABLE 4: COMPARISON OF PARKING PROVIDED AT OTHER DEVELOPMENTS**

PROJECT	# OF UNITS	PARKING REQUIRED	PARKING PROVIDED	PER UNIT PARKING
Broadstone Lakeside	168	314	269	1.60
Residences @ University Center	296	378	432	1.46
The Motley	399	523	607	1.52
Broadstone Dobson Ranch	288	605	464	1.61
<b>Millenium Superstition Springs</b>	<b>394</b>	<b>828</b>	<b>654</b>	<b>1.66</b>
ITE <i>Parking Generation</i> 85 <sup>th</sup> Percentile of all Peaks	70	-	-	1.61

The results between similar researched developments and ITE provided a range of rates that varied around the 1.61 proposed rate. The proposed rate of 1.61 spaces per unit would be applied regardless of the number of bedrooms for this analysis.

## CONCLUSIONS

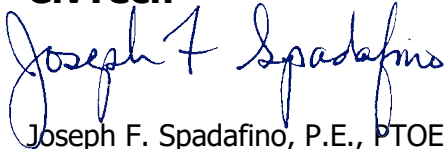
Based on the above, CivTech concludes the following:

- At full build-out, the site will consist of 394 mid-rise multifamily dwelling units with a total of 661 bedrooms.
- The proposed site will provide a total of 654 parking spaces. ITE *Parking Generation* predicts an average peak parking demand of 513 spaces, significantly below the 654 being provided, which are provided at a parking ratio of 1.66 parking spaces per unit. (The developer's proposed 1.61 spaces per unit rate is more than the 2000's peak of 1.62 spaces per unit as reported by the American Apartment Association and ITE's 85<sup>th</sup> percentile 1.47 spaces per unit is similar to the currently-reported average reported by the same association.)
- The *Parking Generation* 85<sup>th</sup>-percentile of all peaks resulted in a rate of 1.47 spaces per unit inclusive of guest parking. The parking required when using the proposed 1.66 spaces per unit rate is 654 parking spaces.
- The proposed number of vehicle parking spaces are sufficient to meet the needs of the development.

Thank you for allowing CivTech to assist you on this project. Should you wish to discuss this information further, please contact me at (480) 659-4250.

Sincerely,

**CivTech**



Joseph F. Spadafino, P.E., PTOE, PTP  
Project Manager/Senior Traffic Engineer

Attachments (3)

- A. Site Plan
- B. Mesa Demographic Data
- C. Excerpts from *Parking Generation*

## **ATTACHMENT A**

### **SITE PLAN**



## REFUSE NARRATIVE

REQUIRED:  
0.5 CUBIC YARDS OF WASTE PER UNIT  
CUBIC YARDS PER WEEK = 0.5 x 397 = 199

PROVIDED:  
MINI MAC COMPACTOR COMPACTION RATIO 4:1 = 50 C.Y. PER WEEK  
50 CUBIC YARDS / 2 COLLECTIONS PER WEEK = 25 C.Y.  
25 CUBIC YARDS / 4 C.Y. CONTAINERS = 6 CONTAINERS

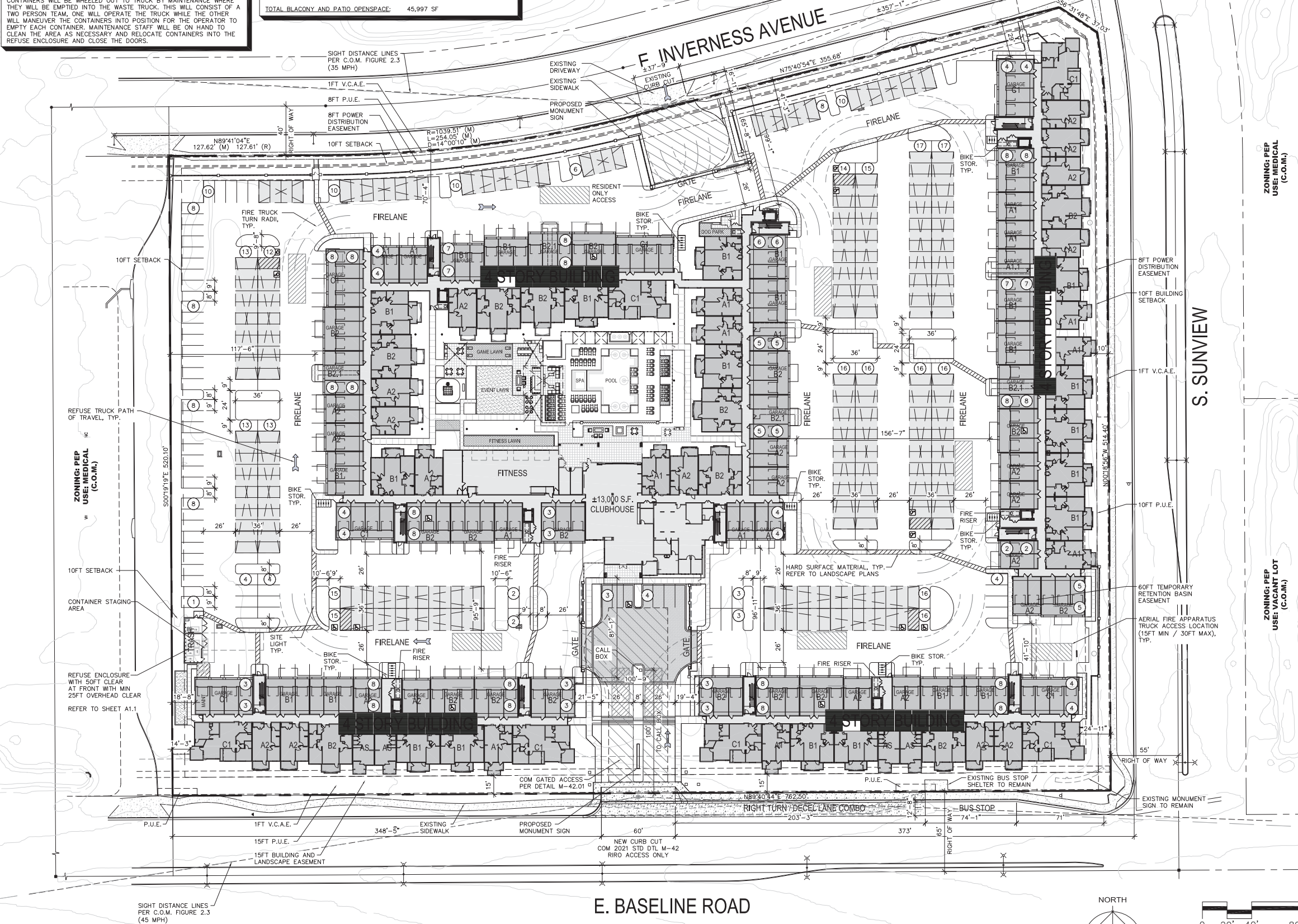
REFUSE NOTE:  
TRASH VALET SERVICE PROVIDED BY APARTMENT MANAGEMENT. TENANTS  
WILL NOT HAVE ACCESS TO OR OPERATE TRASH COMPACTOR.

ON COLLECTION DAY THE TRUCK WILL PULL UP TO THE ENCLOSURE.  
CONTAINERS WILL BE WHEELED OUT TO TRUCK BY MAINTENANCE WHERE  
THEY WILL BE EMPTIED INTO THE WASTE TRUCK. THIS WILL CONSIST OF A  
TWO PERSON TEAM, ONE WILL OPERATE THE TRUCK WHILE THE OTHER  
WILL MANUEVER THE CONTAINERS INTO POSITION FOR THE OPERATOR TO  
EMPTY EACH CONTAINER. MAINTENANCE STAFF WILL BE ON HAND TO  
CLEAN THE AREA AS NECESSARY AND RELOCATE CONTAINERS INTO THE  
REFUSE ENCLOSURE AND CLOSE THE DOORS.

## UNIT BALCONY/PATIO OPEN SPACE

GROUND FLOOR:				UPPER FLOORS:			
UNIT	AREA	QTY	UNIT	UNIT	AREA	QTY	UNIT
AS	103 SF	4	412 SF	AS	64 SF	13	832 SF
A1	123 SF	8	984 SF	A1	80 SF	54	4,320 SF
A2	139 SF	12	1,668 SF	A2	91 SF	75	6,825 SF
A3	N/A	N/A	0 SF	A3	63 SF	2	126 SF
B1	155 SF	15	2,325 SF	B1	100 SF	86	8,600 SF
B2	139 SF	7	945 SF	B2	101 SF	75	7,575 SF
C1	122 SF	7	854 SF	C1	122 SF	39	4,758 SF
TOTAL GROUND FLR AREA				TOTAL UPPER FLR AREA			
7,188 SF				33,036 SF			
TOTAL BALCONY AND PATIO OPENSACE:				45,997 SF			

ZONING: PEP  
USE: VACANT LOT  
(C.O.M.)



ZONING: GC  
USE: VACANT LOT  
(C.O.G.)

SITE PLAN "B"

## PROJECT DATA

### OVERALL SITE DATA:

SITE AREA:	±9.83 ACRES / 428,398 S.F.
ZONING:	EXISTING: PEP-PAD-CUP PROPOSED: PAD (RM-5)
APN NO'S:	141-53-896B
PROPOSED USE:	MULTI-FAMILY
MAXIMUM DENSITY ALLOWED:	40.7 DU/AC
PROPOSED DENSITY:	TBD
LOT COVERAGE (BUILDINGS):	33.5%
LOT COVERAGE (IMPERVIOUS):	PROVIDED: 68.5% / MAX ALLOWED: 70%
PROPOSED BUILDING HEIGHT:	50 FT (PARAPETS)/52 FT (TOWER) 54 FEET TO MECH (STAIRS/ELEVATOR)
TOTAL BUILDING AREA:	±579,551 S.F.
OPEN SPACE REQUIRED (120 S.F. x 397 UNITS):	47,640 S.F.
PUBLIC OPEN SPACE PROVIDED (SHEET CLS-3):	30,130 S.F.
PRIVATE OPEN SPACE PROVIDED (UNIT PATIO/BALCONY):	±5,997 S.F.
	76,127 S.F.

### TOTAL UNIT MIX:

STUDIO UNITS:	17	(4%)
ONE BEDROOM UNITS:	152	(39%)
TWO BEDROOM UNITS:	183	(46%)
THREE BEDROOM UNITS:	42	(11%)
TOTAL:	394	D.U.

UNIT TYPE	GROSS AREA		UNITS	GROSS AREA
STUDIO	1 BED/1 BA	562 S.F.	17	9,554 S.F.
UNIT A1	1 BED/1 BA	686 S.F.	63	43,218 S.F.
UNIT A2	1 BED/1 BA	749 S.F.	87	65,163 S.F.
UNIT A3	1 BED/1 BA	1,014 S.F.	2	2,028 S.F.
UNIT B1	2 BED/2 BA	1,072 S.F.	101	108,272 S.F.
UNIT B2	2 BED/2 BA	1,174 S.F.	82	96,268 S.F.
UNIT C1	3 BED/2 BA	1,408 S.F.	42	59,136 S.F.
TOTAL:			394 D.U.	383,639 S.F.
AVG. S.F.				974 S.F.

### TOTAL PARKING:

PROVIDED:	
GARAGE PARKING	150 P.S.
TANDEM PARKING	150 P.S.
COVERED PARKING	244 P.S.
OPEN PARKING	110 P.S.
TOTAL PROVIDED:	654 P.S.
REQUIRED (2.1 PER UNIT):	828 P.S.
ACCESSIBLE PARKING REQUIRED (2% TYPE OF PARKING AREAS):	14 P.S.
ACCESSIBLE PARKING PROVIDED:	GARAGES = 5 P.S. COVERED = 5 P.S. OPEN = 5 P.S. TOTAL = 15 P.S.

BIKE REQUIRED (M20 SECTION 11-32-B):	
1 SPACE PER 10 PARKING STALLS (UP TO 50)	58 BIKE STALLS
1 SPACE PER 20 PARKING STALLS (OVER 50)	
BIKE PROVIDED:	60 BIKE STALLS

## PROJECT NARRATIVE

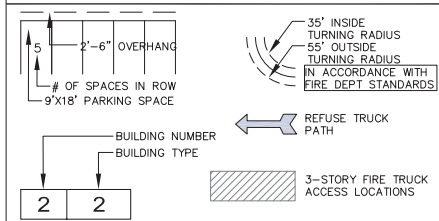
THE INTENT OF THIS PROJECT IS TO DEVELOP A MULTI-FAMILY CLASS "A" (LUXURY) APARTMENT COMMUNITY, WITH A TOTAL OF 397 APARTMENT HOMES. SPECIFICALLY, THE DEVELOPMENT'S CURRENT CONCEPT INCLUDES:

- 17 STUDIO UNITS - 562 SQUARE FEET;
- 148 ONE-BEDROOM UNITS - RANGING FROM APPROXIMATELY 686 SQUARE FEET TO 749 SQUARE FEET;
- 183 TWO-BEDROOM UNITS - RANGING FROM APPROXIMATELY 1,072 SQUARE FEET TO 1,174 SQUARE FEET; AND
- 46 THREE-BEDROOM UNITS - 1,408 SQUARE FEET; AND

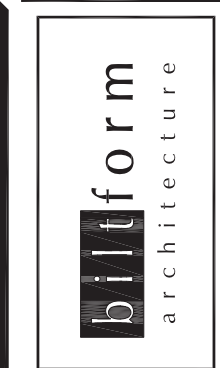
THERE WILL BE QUALITY AMENITIES PROVIDED ON-SITE AT THE PROJECT, INCLUDING COVERED AND GARAGE PARKING OPTIONS, A RESORT STYLE POOL AND AN AMENITIZED CLUBHOUSE.

AS CURRENTLY PLANNED THERE WILL BE ONE (1) PRIMARY ACCESS POINT FOR THE PROJECT LOCATED ALONG E. BASELINE ROAD AND ONE (1) SECONDARY ACCESS ALONG E. INVERNESS AVENUE. THE PROJECT WILL PROVIDE 654 PARKING STALLS, GARAGE PARKING (150), TANDEM PARKING (150), COVERED PARKING (244), AND UNCOVERED (110) PARKING SPACES THAT WILL BE EVENLY DISTRIBUTED ACROSS THE PROJECT.

## SYMBOL SCHEDULE



## VICINITY MAP:



biltform architecture  
group, inc.

11460 north cave creek road suite 11  
phoenix, arizona 85020  
Phone 602.285.9200 Fax 602.285.9229

PRELIMINARY  
NOT FOR  
CONSTRUCTION

**BASELINE & SUNVIEW**  
MULTI-FAMILY LIVING  
MESA, ARIZONA  
**Guardian Development Partners**  
SCOTTSDALE, AZ.

REVISIONS:	
△	
△	
△	
△	
△	
JOB NO:	21-081
DATE:	DECEMBER 01, 2021
SCALE:	1" = 40'
SHEET NO:	A1.0



## **ATTACHMENT B**

### **MESA DEMOGRAPHIC DATA**

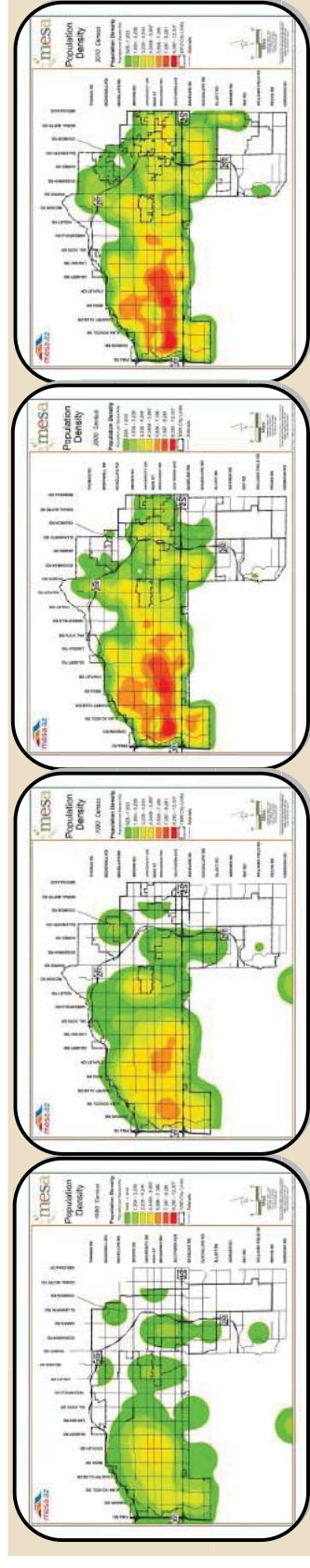
## 2.0 TRANSIT PROFILE

The transit profile in Mesa has changed dramatically in recent years. The implementation of new transit services (such as METRO light rail), the Great Recession and “new normal” economy, and the continued development and evolution of activity centers and districts (such as Downtown Mesa, Fiesta District, and Gateway) have changed the transit landscape in Mesa. This includes both those who ride transit in Mesa today as well as who are likely to do so in the future.

### 2.1 Demographics

The recent demographic changes in Mesa are well documented (see Figure 2). Mesa is continuing to transform from a suburban bedroom community that was primarily auto-oriented to a more urbanized city that includes multi-modal transportation connections and defined character areas.

**Figure 2: Population Growth in Mesa**



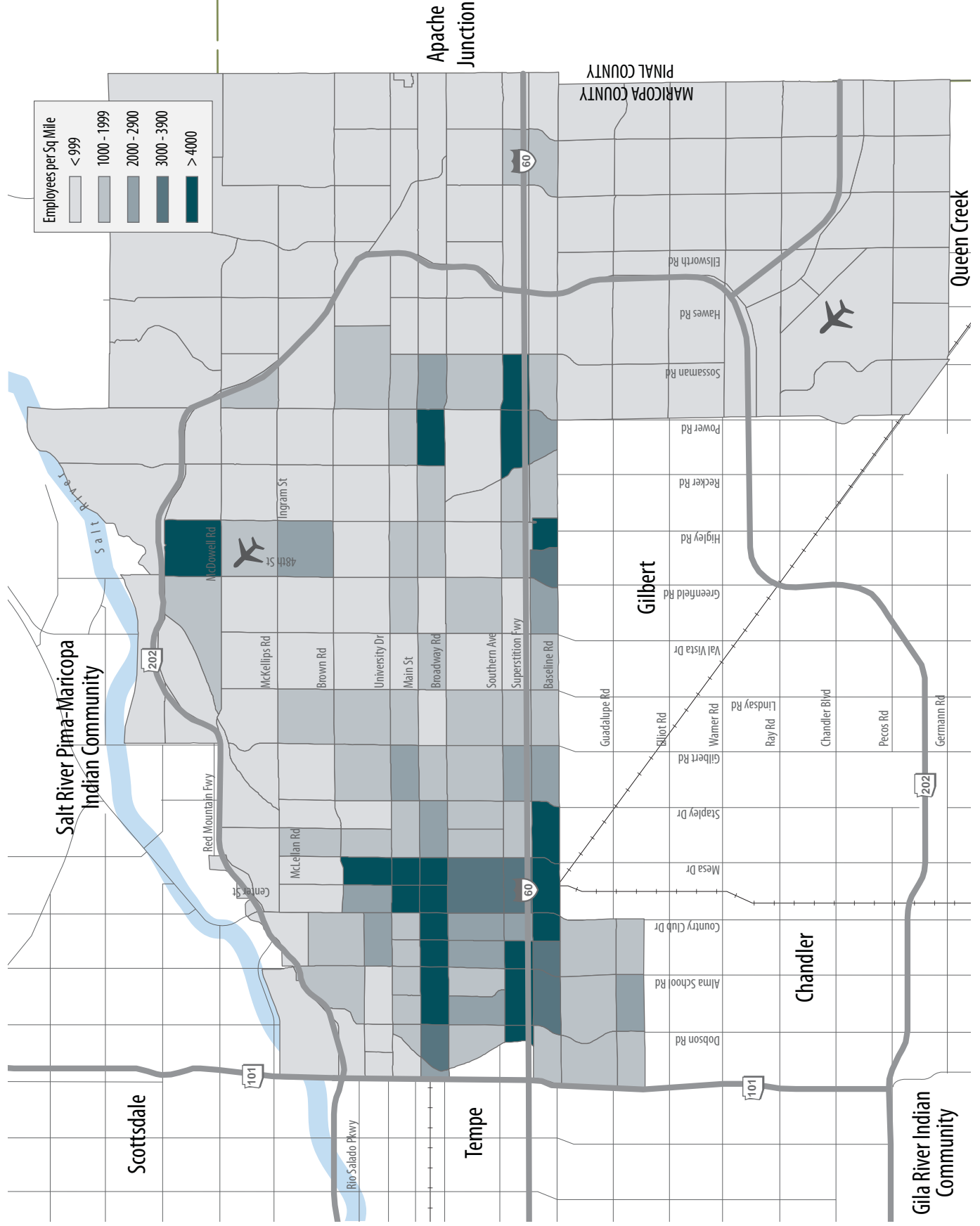
Source: Mesa 2040 General Plan, 2013

Figures 1 through 11 show a sample of current demographic information in Mesa, including:

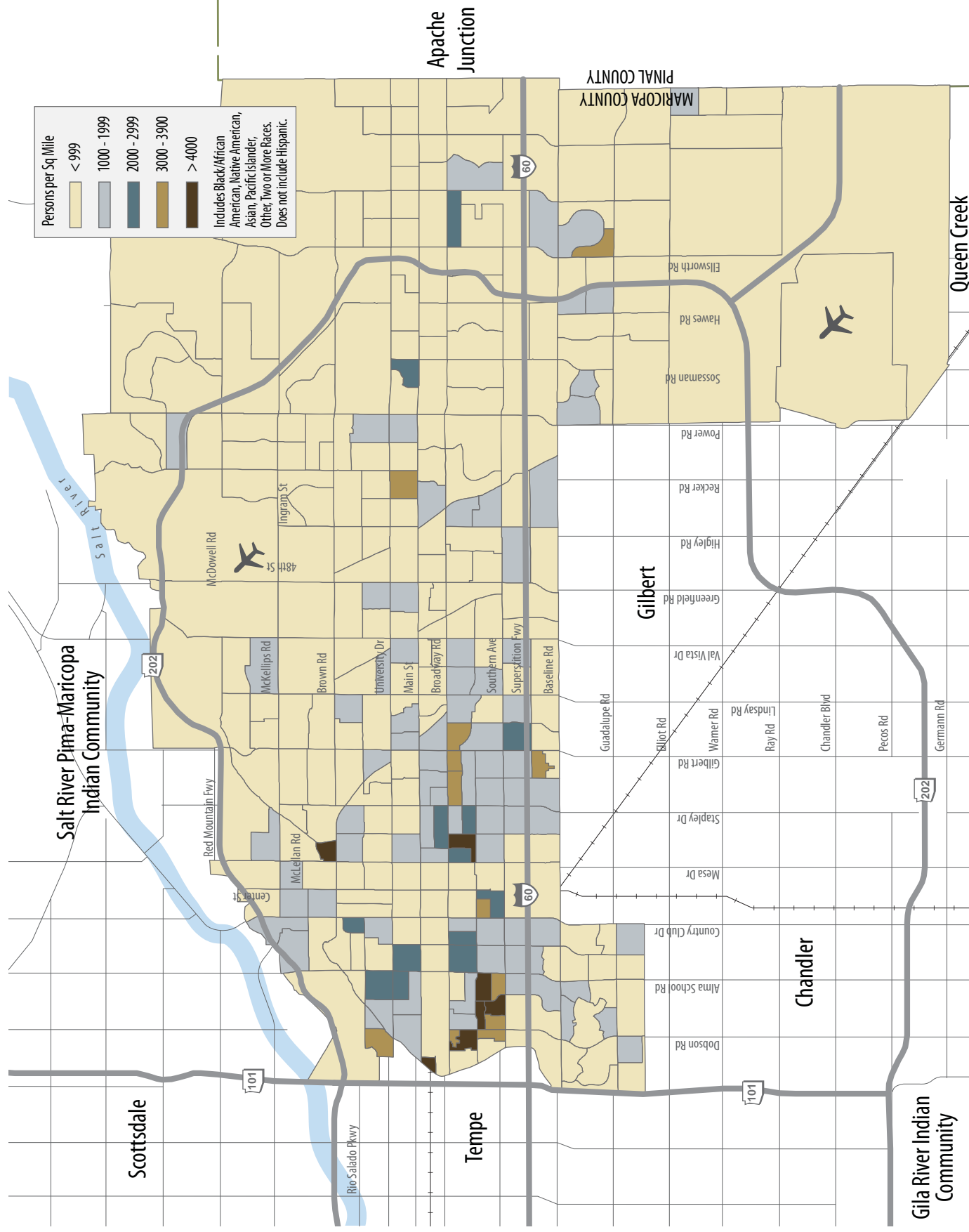
- » Population density
- » Employment density
- » Minority population density
- » Hispanic population density
- » Population under 18 density
- » Population over 65 density
- » Household density
- » Housing units density
- » Vehicle availability



Figure 4: Employment Density



**Figure 5: Minority Population Density**





**Figure 6: Hispanic Population Density**

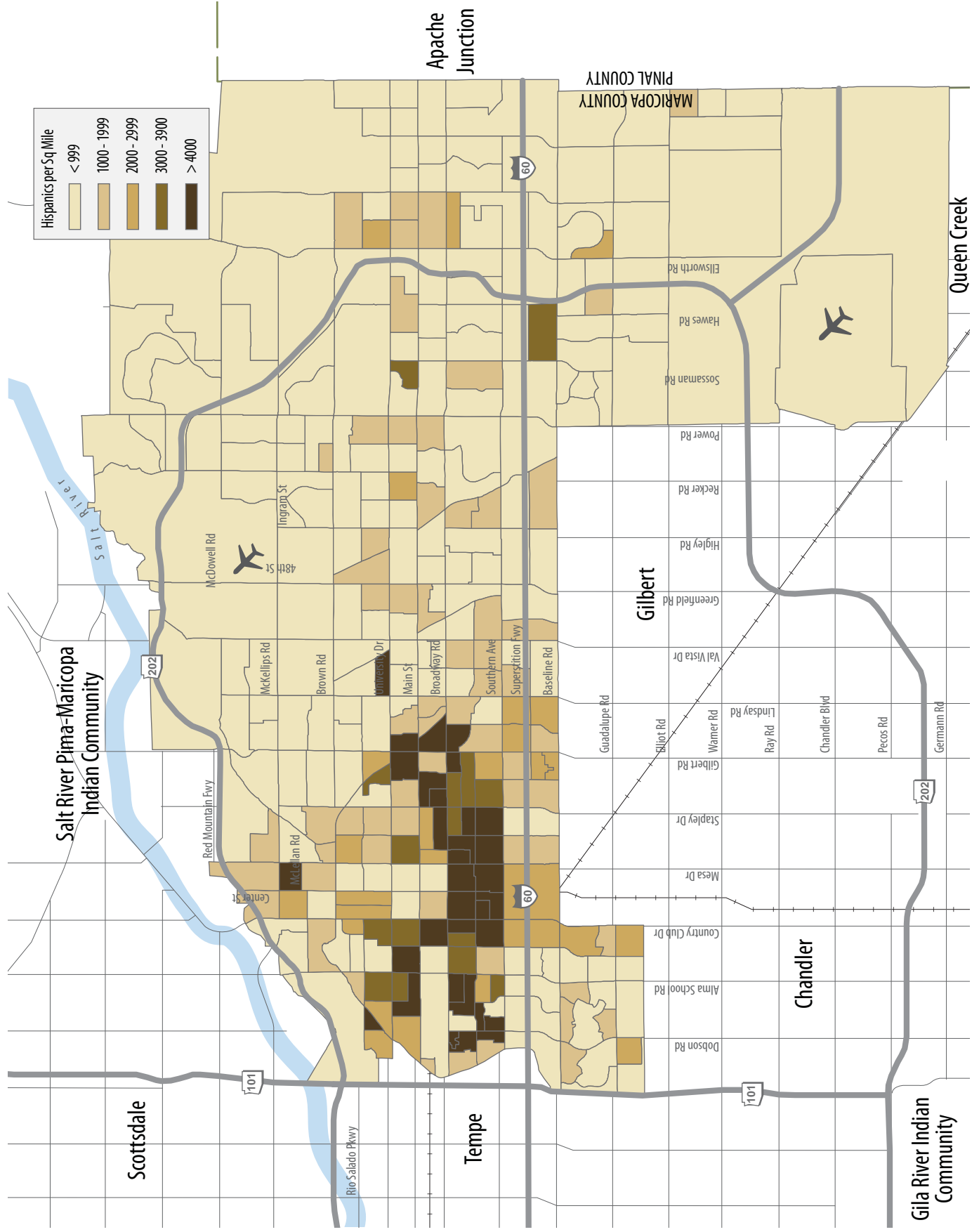
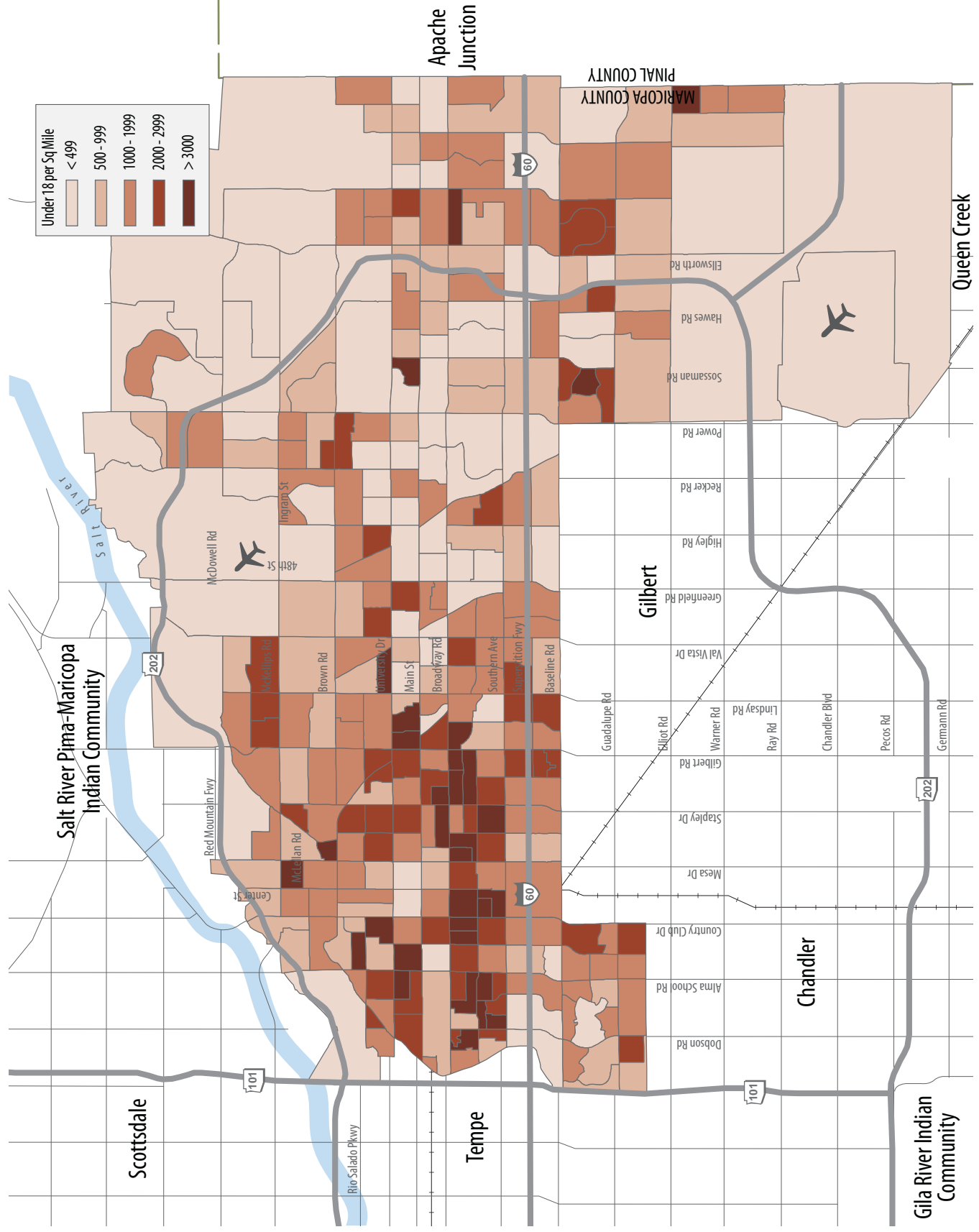


Figure 7: Population Under 18 Density



**Figure 8: Population Over 65 Density**

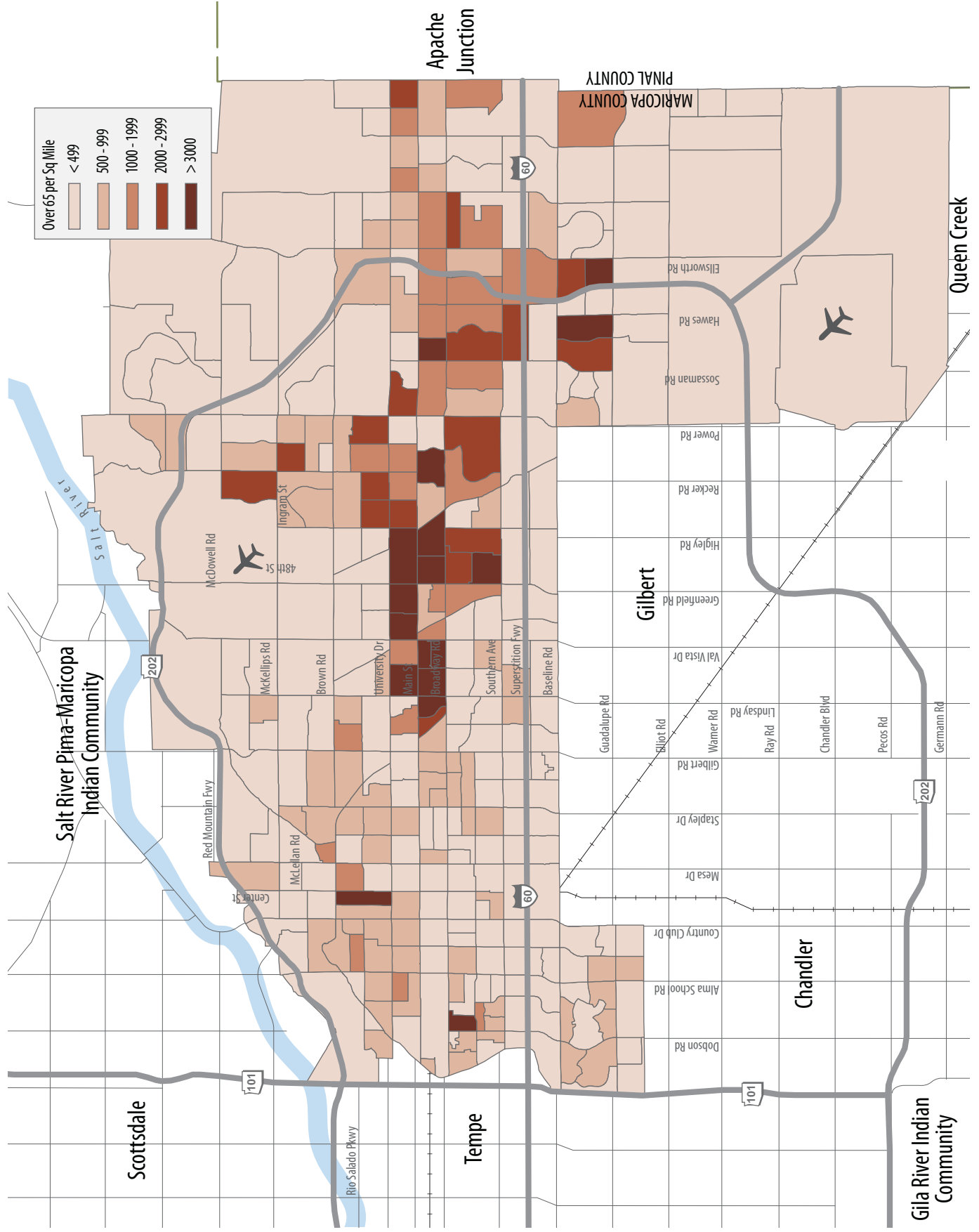


Figure 9: Household Density

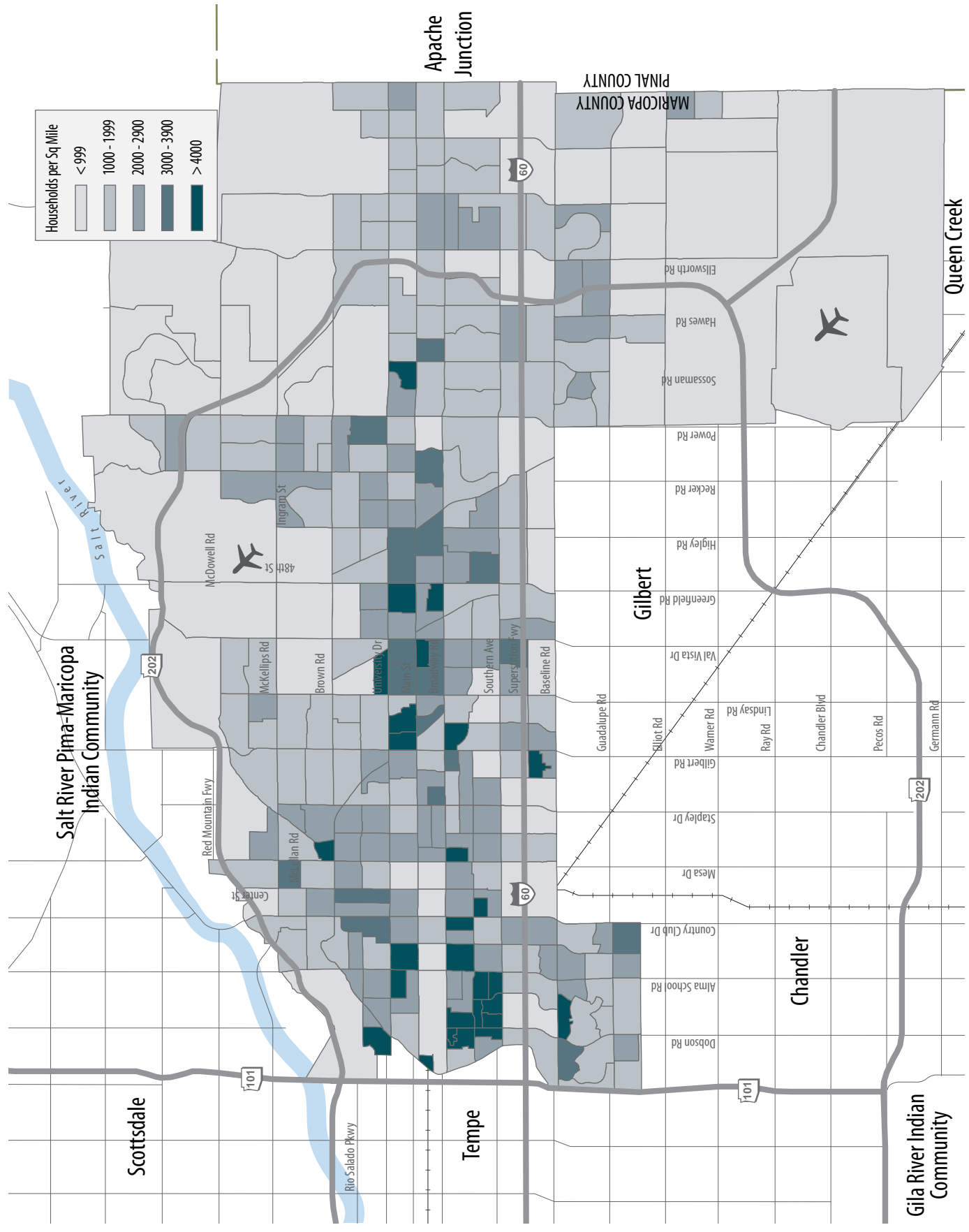


Figure 10: Housing Units Density

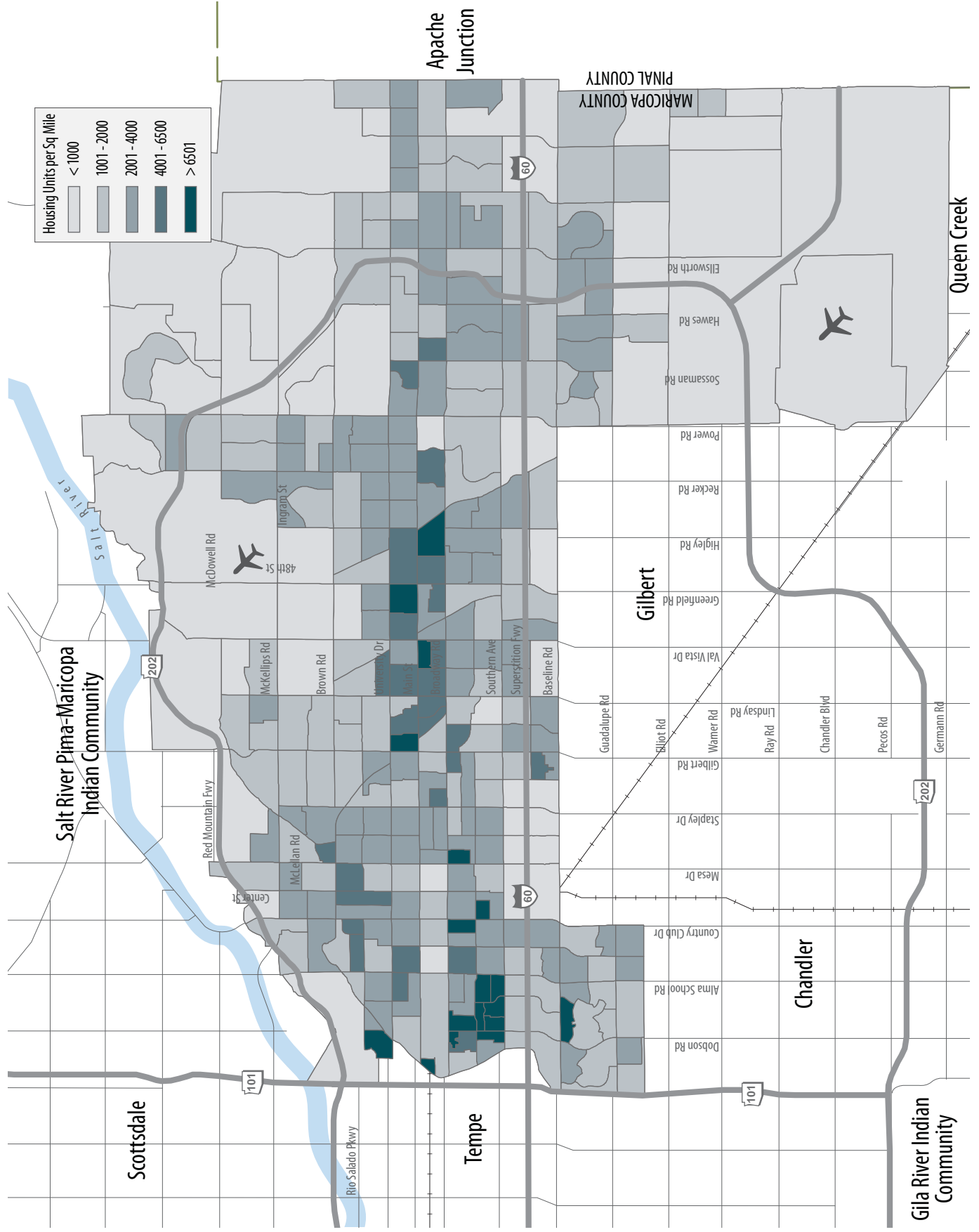
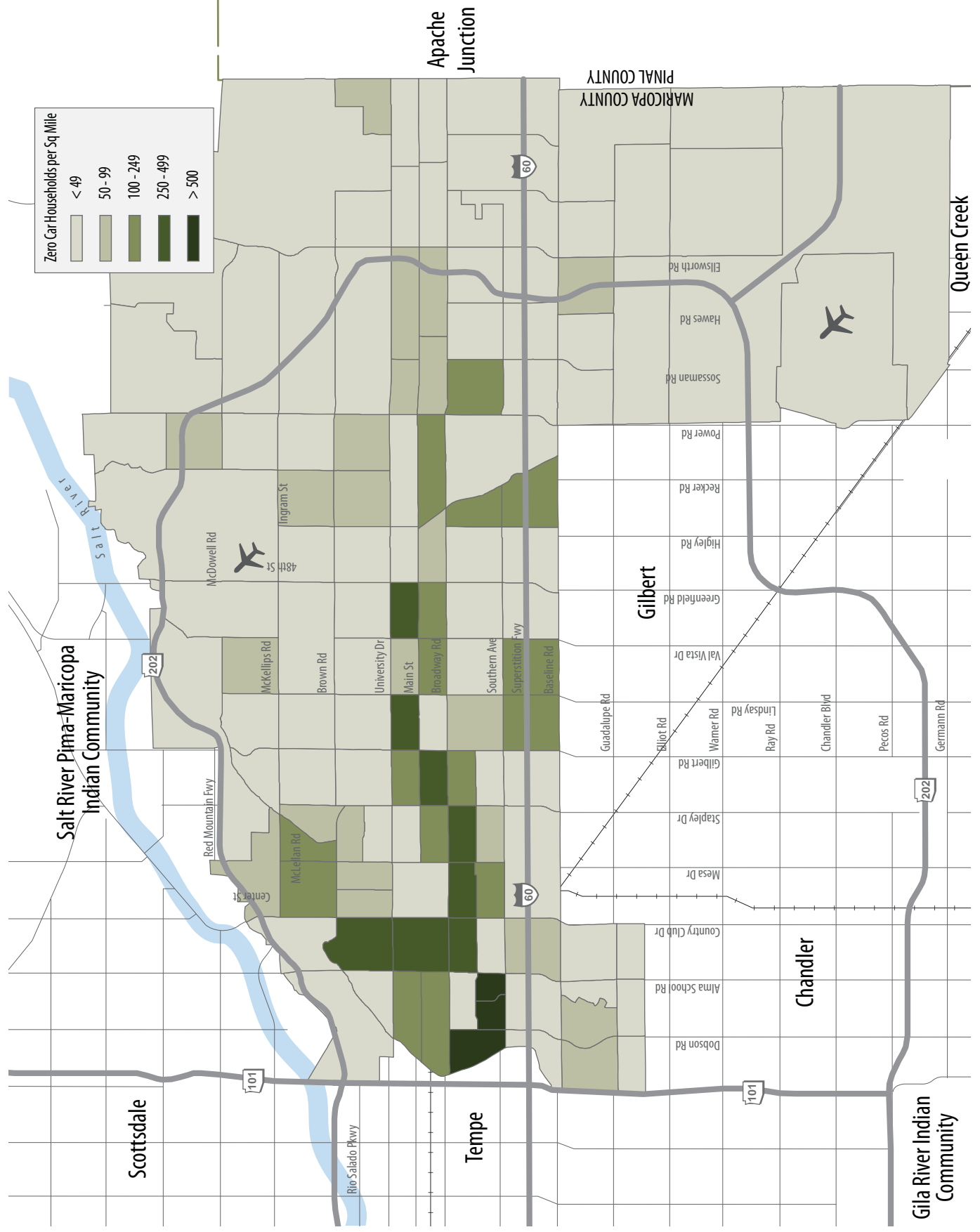


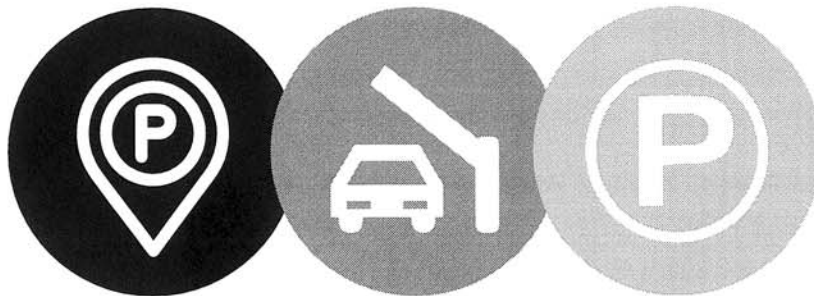


Figure 11: Vehicle Availability



## **ATTACHMENT C**

### **EXCERPTS FROM ITE *PARKING GNERATION***



# Parking Generation Manual

5<sup>th</sup> Edition



INSTITUTE OF TRANSPORTATION ENGINEERS

Land Use: 221 Multifamily Housing (Mid-Rise)

Description

Mid-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and with between three and 10 levels (floors) of residence. Multifamily housing (low-rise) (Land Use 220), multifamily housing (high-rise) (Land Use 222), and affordable housing (Land Use 223) are related land uses.

Time of Day Distribution for Parking Demand

The following table presents a time-of-day distribution of parking demand on a weekday (one general urban/suburban study site), a Saturday (two general urban/suburban study sites), and a Sunday (one dense multi-use urban study site).

Hour Beginning	Percent of Peak Parking Demand		
	Weekday	Saturday	Sunday
12:00–4:00 a.m.	100	100	100
5:00 a.m.	94	99	–
6:00 a.m.	83	97	–
7:00 a.m.	71	95	–
8:00 a.m.	61	88	–
9:00 a.m.	55	83	–
10:00 a.m.	54	75	–
11:00 a.m.	53	71	–
12:00 p.m.	50	68	–
1:00 p.m.	49	66	33
2:00 p.m.	49	70	40
3:00 p.m.	50	69	27
4:00 p.m.	58	72	13
5:00 p.m.	64	74	33
6:00 p.m.	67	74	60
7:00 p.m.	70	73	67
8:00 p.m.	76	75	47
9:00 p.m.	83	78	53
10:00 p.m.	90	82	73
11:00 p.m.	93	88	93

Multifamily Housing (Mid-Rise)  
(221)

Peak Period Parking Demand vs: Dwelling Units

On a: Weekday (Monday - Friday)

Setting/Location: General Urban/Suburban (no nearby rail transit)

Peak Period of Parking Demand: 10:00 p.m. - 5:00 a.m.

Number of Studies: 73

Avg. Num. of Dwelling Units: 261

Peak Period Parking Demand per Dwelling Unit

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
1.31	0.75 - 2.03	1.13 / 1.47	1.26 - 1.36	0.22 ( 17% )

Data Plot and Equation

