



To: Max Friedman
Banyan Residential

From: Shelly Sorensen, PE, PTOE

Job Number: 25.5917

RE: Banyan Apartments
Parking Demand Study

Date: June 10, 2026



INTRODUCTION

Lōkahi, LLC (Lōkahi) has prepared a Parking Demand Study for the proposed Banyan Apartments development, located on the southeast corner of Virginia Street and Rennick Drive in Apache Junction, Arizona. See **Figure 1** for the vicinity map.

The proposed development consists of a two and three-story apartment complex with 146 dwelling units. The proposed development is a low-income housing tax credit (LIHTC) development. See **Attachment A** and **Figure 2** for the site plan.



Figure 1 - Vicinity Map

The objective of this Parking Demand Study is to analyze the parking demand needs specific to the proposed development to avoid providing an overabundance of parking. Providing too much parking can inefficiently allocate resources (both public and private) and contradict the principles of fostering walkable communities. The study will also examine the impact of alternative transportation options and vehicle ownership trends in the area on parking demand.





PROJECT DESCRIPTION

The proposed Banyan Apartments development consists of a two and three-story apartment complex with 146 dwelling units.

The 146 dwelling units will be composed of the following unit breakdown:

- 38 one-bedroom units
- 48 two-bedroom units
- 49 three-bedroom units
- 11 four-bedroom units



Figure 2 – Site Plan

The proposed development will be a LIHTC development, renting only to households earning no more than 60% of the Pinal County Area Median Income.

PROVIDED PARKING

The proposed development will provide 290 vehicle parking spaces, 278 of which will be first-come, first-serve spaces and 12 of which will be reserved for handicapped users.

REQUIRED PARKING BY CODE

The required number of parking spaces by land use type is identified within *Table 7-1: Number of Parking Stalls Required* of Article 1-7-3 of the City of Apache Junction’s City Code.

The required parking for the proposed breakdown of 146 dwelling units is shown in **Table 1**.

Table 1 – Required Vehicle Parking by Code

Land Use	Rate	Quantity	Units	Parking Spaces
Residential - One-bedroom apartment	1.5 per 1 Dwelling Unit	38	Dwelling Units	57
Residential - Two or more bedroom apartment	2.0 per 1 Dwelling Unit	108	Dwelling Units	216
Guest	0.3 per 1 Dwelling Unit	146	Dwelling Units	44
				317



The proposed Banyan Apartments development will provide 290 parking spaces, which represents a deficit of 27 (8.5%) parking spaces compared to the 317 parking spaces required by the Code.

ITE PARKING DEMAND

The Institute of Transportation Engineers (ITE) publication entitled *Parking Generation, 6th Edition* is utilized to estimate parking demand based on research and experiences of transportation engineering and planning professionals.

The parking demand was evaluated using two ITE land use codes (LUC): ITE LUC 217 – Multifamily Housing – 1 BR (Low-Rise) and ITE LUC 220 – Multifamily Housing – 2+ BR (Low-Rise).

AVERAGE PARKING DEMAND

The average weekday and Saturday ITE peak period of parking demand calculations for General Urban/Suburban locations are shown in **Table 2** and **Table 3**, respectively. ITE does not provide Saturday data for LUC 217, so weekday rates were used for the Saturday parking demand calculations.

Table 2 – ITE Parking Demand (Average Rate – Weekday)

Use	Weekday Rate	Quantity	Units	Parking Stalls
ITE Code 217 - Multifamily Housing - 1 BR (Low-Rise)	0.93 Per 1 Dwelling Unit	38	Dwelling Units	36
ITE Code 220 - Multifamily Housing - 2+ BR (Low-Rise)	1.27 Per 1 Dwelling Unit	108	Dwelling Units	138
				174

Table 3 – ITE Parking Demand (Average Rate – Saturday)

Use	Saturday Rate	Quantity	Units	Parking Stalls
ITE Code 217 - Multifamily Housing - 1 BR (Low-Rise)	0.93 Per 1 Dwelling Unit	38	Dwelling Units	36
ITE Code 220 - Multifamily Housing - 2+ BR (Low-Rise)	1.18 Per 1 Dwelling Unit	108	Dwelling Units	128
				164



Based on *ITE Parking Generation, 6th Edition*, the average weekday and Saturday peak parking demand for the proposed Banyan Apartments development is 174 and 164 parking spaces, respectively. The proposed development provides 290 parking spaces, representing a surplus of 116 (66.7%), 126 (76.8%), and parking spaces for the average weekday and Saturday parking demand, respectively.

COMPARABLE PARKING REQUIREMENTS

The parking requirements of other municipalities were evaluated for the proposed development as a form of comparison.

Using the parking requirements found in *Section 702. Off-Street Parking and Loading* of the City of Phoenix’s Zoning Ordinance, the required parking is shown in **Table 4**.

Table 4 – Parking Requirements (City of Phoenix)

Use	Rate			Quantity	Units	Parking Stalls
Dwelling Unit, Multi-Family	1.5	Per	each dwelling unit	146	Dwelling Units	219
Total						219

The proposed Banyan Apartments development will provide 290 parking spaces, which represents a surplus of 71 (32.4%) parking spaces compared to the 219 parking spaces required by the City of Phoenix.

ALTERNATIVE MODES OF TRANSPORTATION

Infrastructure to support alternative modes of transportation (walking, biking) may contribute to reducing vehicle dependency and parking demand. Continuous sidewalks are provided within the greater study area. While admittedly this is not a transit rich environment, the site is close to both existing retail and employment opportunities, as well as future planned development. The study area is considered bikeable with some bicycle infrastructure provided along Apache Trail. Modern electric bikes and scooters further extend the range of residents to services and employment opportunities, reducing some automobile travel needs and parking.

STUDY AREA DEMOGRAPHICS

Apache Junction Study Area

The Maricopa Association of Governments (MAG) provides the Arizona Demographics map viewer, which graphically displays selected population and housing data for any block group subset of the state of Arizona based on Census 2020 and the American Community Survey (ACS) 5-year 2018-2022.





The standard report from the Apache Junction study area was selected. See **Figure 3** for the Apache Junction study area boundaries and **Attachment C** for the Apache Junction Demographics Report.



Figure 3 – Apache Junction Study Area

Based on the demographics of the Apache Junction study area, 85.5% of the population drives to work alone and **14.5% of the population walks to work**. Additionally, **5.9% of the population does not have a vehicle**.

If a relationship is considered between the Apache Junction study area demographics and the resident demographics, it is assumed that some portion of the total residents of the proposed Banyan Apartments do not own a vehicle and will utilize alternative modes of transportation for travel, thus reducing the parking demand for household units.

LOWER-INCOME HOUSING CONSIDERATION

As previously mentioned, the proposed Banyan Apartments is a LIHTC development, renting only to households earning no more than 60% of the Pinal County Area Median Income. The high cost of automobile ownership and operation further stress such households, which often offset such costs by sharing one vehicle for the household, seeking nearby employment opportunities to allow for alternative means for one or more household unit members as well as use of transit or bicycle options.



Beyond the anecdotal, there is real world research into the needs of lower income households as to the parking requirements. According to a study entitled *Residential Parking in Station Areas: A Study of Metro Denver* by the Regional Transportation District (RTD) of Denver, Colorado, income-restricted properties have a lower parking utilization rate than market-rate properties. The study states the following:

“In market-rate properties, 1.23 parking spaces per unit are provided, but only 0.74 parking spaces per unit are used.

Income-restricted properties provide 0.72 parking spaces per unit, but residents use only 0.36 parking spaces per unit ...

Market-rate properties provide ... a 60 percent utilization rate...

Income-restricted properties provide ... a 50 percent utilization rate”

While metro Denver does have more transit overall, this regional study provides confirmation that lower income yields less car ownership.

The proposed Banyan Apartments development is proposing 290 parking spaces for 146 dwelling units, which is a rate of 1.98 spaces per dwelling unit – higher than the rates of 1.23 for market-rate properties and 0.72 for income-restricted properties. As mentioned above, the utilization rates for market-rate and income-restricted properties are 60% and 50%, respectively. Conservatively using a 60% utilization rate, the proposed Banyan Apartments development will experience a parking demand of just 174 parking spaces.

See **Attachment D** for the RTD parking study.

Additionally, according to the National Equity Atlas, households living below 200% – or twice – the poverty level are much more likely to lack access to a vehicle, with 19% of these individuals owning zero vehicles. See **Attachment E** for the National Equity Atlas’ report on *Car access*.

In consideration of the RTD parking study and the National Equity Atlas’ report, *Car access*, the income-restricted nature of the proposed Banyan Apartments is anticipated to foster a tenant mix with less dependency on and access to personal vehicles. This is anticipated to lower the parking demand for the development.



CONCLUSION

The proposed development consists of a two and three-story apartment complex with 146 dwelling units. The analysis presented in this Parking Demand Study demonstrates that the proposed parking supply is sufficient to meet the anticipated demand.

Provided Parking

- 290 unreserved parking spaces,
 - Twelve (12) of which are reserved for handicapped users.

Parking Requirement – Apache Junction

- Per Article 1-7-3 of the City of Apache Junction City Code, 317 parking spaces are required.

ITE Parking Generation, Average Parking Demand Analysis

- Weekday peak parking demand: 174 parking spaces (surplus of 66.7% or 116 spaces)
- Saturday peak parking demand: 164 parking spaces (surplus of 76.8% or 126 spaces)

The ITE Parking Generation results indicate that the parking supply of 290 parking spaces is adequate for the proposed Banyan Apartments development, exceeding the weekday and Saturday peak parking demands.

Demographic Trends

National studies indicate that income levels directly relate to car ownership, which affects parking demand. Additionally, it is understood that parking utilization rates for market-rate and low-income properties are 60% and 50%, respectively, indicating that the parking supply for the proposed Banyan Apartments is adequate.

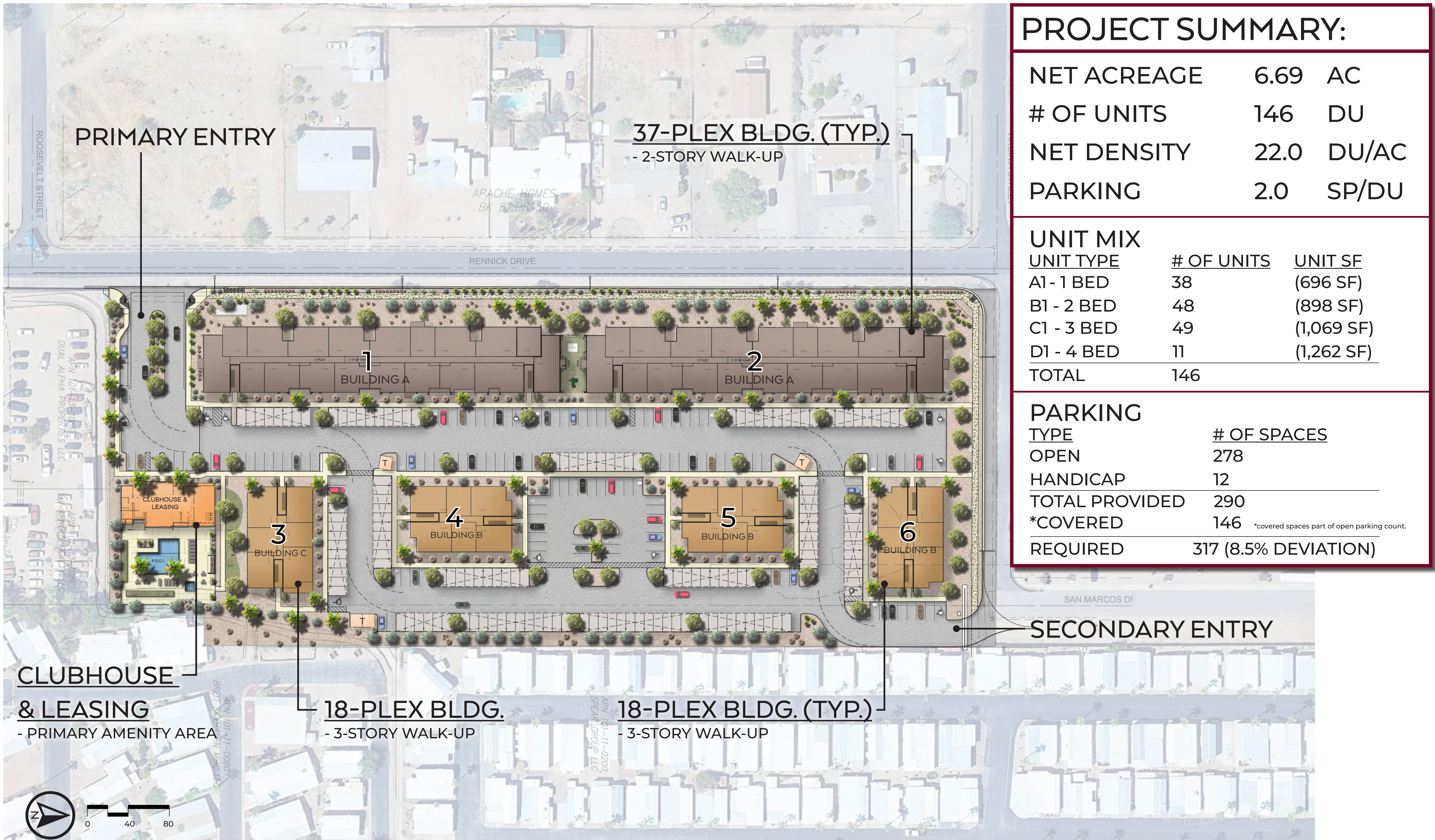
Demographic trends including lower vehicle ownership rates among low-income individuals further support the adequacy of the parking supply. National and local data, including Apache Junction demographics, indicate that 14.5% of residents in the area utilize alternative modes of transportation and 5.9% do not own a vehicle. Additionally, the availability of nearby pedestrian bicycle infrastructure, along with the proximity to commercial centers, is expected to reduce vehicle dependency among residents.

Conclusion

By aligning parking supply with actual demand, the proposed development avoids over-parking, which can lead to inefficient resource allocation and conflicts with the goal of creating sustainable, walkable communities. This study confirms that the 290 proposed parking stalls is appropriate and effective for the proposed development, ensuring that the development meets residents' needs while supporting the broader objectives of sustainable urban design and resource efficiency.



ATTACHMENT A - SITE PLAN



PROJECT SUMMARY:

NET ACREAGE	6.69	AC
# OF UNITS	146	DU
NET DENSITY	22.0	DU/AC
PARKING	2.0	SP/DU

UNIT MIX		
UNIT TYPE	# OF UNITS	UNIT SF
A1 - 1 BED	38	(696 SF)
B1 - 2 BED	48	(898 SF)
C1 - 3 BED	49	(1,069 SF)
D1 - 4 BED	11	(1,262 SF)
TOTAL	146	

PARKING	
TYPE	# OF SPACES
OPEN	278
HANDICAP	12
TOTAL PROVIDED	290
*COVERED	146 <small>*covered spaces part of open parking count.</small>
REQUIRED	317 (8.5% DEVIATION)

BANYAN - APACHE JUNCTION APARTMENTS

APACHE JUNCTION, ARIZONA
 CONCEPTUAL SITE PLAN | KA#225084 | DATE 06/11/2026





ATTACHMENT B – APACHE JUNCTION CITY CODE

§ 1-7-3 PARKING STANDARDS.

(A) *Number of stalls required.* Apache Junction City Code, Vol. II, § 1-7-3, Table 7-1 sets forth the minimum number of required parking spaces for different land use types.

(B) *Uses not identified in Table 7-1.* The Zoning Administrator shall determine the parking requirement for uses that do not closely correspond to the categories listed in Apache Junction City Code, Vol. II, § 1-7-3, Table 7-1. In such instances, the applicant shall provide the following information for staff review and determination:

- (1) Explanation of proposed uses;
- (2) Number of employees;
- (3) Building design capacity;
- (4) Gross floor area (square feet);
- (5) Proposed on-site parking spaces;
- (6) Proposed off-site parking spaces;
- (7) Hours of operation; and
- (8) Analysis of proposed parking demand.

TABLE 7-1: NUMBER OF PARKING STALLS REQUIRED

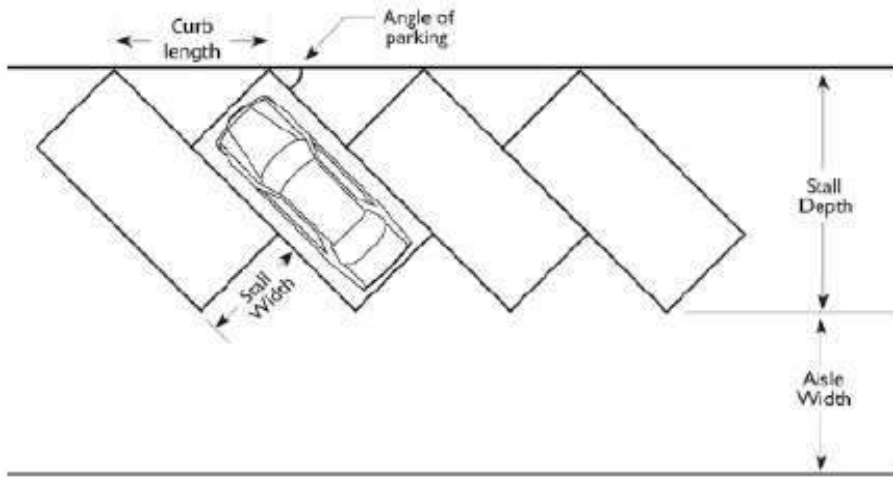
CLASSIFICATION	NUMBER OF SPACES REQUIRED ¹
Residential	
Single-family dwelling residential	2 spaces per dwelling unit.
Studio or efficiency residential	1 space per dwelling unit.
One-bedroom apartment	1.5 spaces per dwelling unit.
Two or more bedroom apartment	2 spaces per dwelling unit.
Guest parking of multi-family style communities, townhomes and condominium subdivisions	0.3 spaces per dwelling unit.
Independent senior housing	Based on specific project need as determined by the Zoning Administrator.
Assisted living senior housing	Based on specific project need as determined by the Zoning Administrator.
Nursing home	1 space per 3 beds.
Group home	Based on specific project need as determined by the Zoning Administrator.
Manufactured home or RV in park	1 space per unit space; plus 1 visitor parking space per 10 unit spaces; and parking spaces to meet the needs to any commercial; office or public assembly.
Manufactured home in subdivision	2 spaces per dwelling unit.
Rooming house or boarding house	1 space per guest room; plus 1 space for resident manager.
Commercial	
Retail and/or office sales and service	1 space for each 300 sq. ft. of gross floor area
Restaurant/bar/nightclub (indoor area)	1 space for each 100 sq. ft. of customer accessible area and 8 spaces of stacking in the drive-through area. Stacking shall be from the pick-up/final window back.
Restaurant/bar/nightclub (outdoor area)	1 space per 200 sq. ft. of seating/service area outdoors, in addition to required parking for indoor uses.
Medical and dental offices/clinics	1 space for each 200 sq. ft. of gross floor area.
Lodging (hotel/motel/bed and breakfast)	1 space per room, plus 1 space per 200 square feet of meeting, banquet and restaurant space not solely

	intended for hotel guests and/or staff.
Indoor amusement center (including bowling alleys)	1 space per 200 square feet of gross floor area.
Funeral home	1 space per 4 seats.
Commercial	
Hospital	1.5 spaces per bed.
Vehicle service and/or sales	1 space for each 300 sq. ft. of gross floor area for office/display/seating, plus 2 spaces per service bay.
Swap meets/farmer's markets	Based on specific project needs as determined by the Zoning Administrator.
Amusement park, fairground or transient show	Based on specific project need as determined by the Zoning Administrator.
Arena, stadium, auditorium or theater	1 space for every 5 seats (20 inches of bench or pew shall be considered 1 seat). 1 space per 200 square feet of gross floor area if not permanent seats.
Institutional	
Private lodges and clubs (no overnight lodging)	1 space per 200 square feet of gross floor area.
Religious assembly	1 space for every 8 seats in the principal auditorium (20 inches of bench or pew shall be considered 1 seat). If no fixed seating is provided, 1 space is required for every 50 sq. ft. of sanctuary/primary assembly area.
Outdoor recreational facilities	Based on specific project need as determined by the Zoning Administrator.
Schools	1 space per 200 square feet of gross floor area.
Day care/nursery	1 space per 300 square feet of gross floor area.
Library and museum	Based on specific project need as determined by the Zoning Administrator.
Industrial	
Industrial and warehousing	1 space per 1,000 square feet gross floor area of industrial, manufacturing and warehouse space, plus 1 space per 300 square feet of office space.

(C) *Parking stall size.* Parking stall and aisle dimensions shall comply with Apache Junction City Code, Vol. II, § 1-7-3, Table 7-2.

TABLE 7-2: PARKING STALL AND AISLE DIMENSIONS

Angle of Parking	Stall Width	Curb Length Per Stall	Stall Depth	One-Way Aisle Width	Two-Way Aisle Width
Parallel	9'0"	22'0"	9'0"	12'	20'
30°	9'0"	18'0"	17'4"	11'	20'
40°	9'0"	14'0"	19'2"	12'	22'
45°	9'0"	12'9"	19'10"	13'	24'
50°	9'0"	11'9"	20'5"	15'	24'
60°	9'0"	10'5"	21'0"	18'	24'
70°	9'0"	9'8"	21'0"	19'	24'
90°	9'0"	9'0"	18'0"	24'	24'



Note: Up to 20% of the total required parking spaces may be compact spaces with minimum 9' by 16' stall dimensions for 90 degree parking.

(D) *Multiple uses.* Where there are multiple uses within a structure or property, the minimum standards shall apply to each use, except as provided in Apache Junction City Code, Vol. II, §§ 1-7-3(F) and 1-7-3(G) regarding shared parking facilities.

(E) *Parking location.*

(1) *Business and multi-family zoned properties.* Parking shall only be allowed in approved parking spaces and shall be located on-site, except as provided below in Apache Junction City Code, Vol. II, § 1-7-3(F). Parking spaces shall be located and designed to prohibit backward movement of a vehicle onto a public right-of-way, except for single-family and duplex dwellings. Bumper guards or wheel barriers shall be used in multi-family and non-residential parking areas to prevent a parked vehicle from projecting into a public right-of-way, adjoining property or sidewalk.

(2) *Single-family residential properties.*

(a) *Passenger vehicle parking.* Parking for passenger vehicles, trailers, boats, all-terrain vehicles and other types of vehicles and equipment (excluding heavy commercial equipment) shall be limited to the driveway and to the side or the rear of the residence and shall not be parked or stored in the front yard.

(b) *Large trucks and recreational vehicle parking.* Recreational vehicles shall be considered the following: conventional travel trailers, fifth-wheel travel trailers, travel trailers with expandable ends, folding camping trailers, tear-drop trailers, motorhomes (Class A, Class B, Class C), camper vans, horse trailers with living quarters, motorized and non-motorized toy haulers. Recreational vehicles and large truck vehicles shall be licensed, operable and parked in the side or rear yard behind the front facade of the residence, or in a completely enclosed garage. Truck campers shall be excluded from regulations and not counted towards the maximum allowance.

1. Single-family residential lots with a minimum of 1 gross acre shall be able to store 1 of the following options:

a. Option 1: 2 unoccupied recreational vehicles; or

b. Option 2: 1 unoccupied recreational vehicle and 1 large truck vehicle (e.g., semi-truck or dump truck) less than 24,000 pounds of empty weight.

2. All other residential lots smaller than 1 gross acre shall be limited to the storage of 1 unoccupied recreational vehicle or 1 large truck vehicle.

(F) *Off-site shared parking.* Off-site/off-street shared parking may be allowed if all of the following conditions are met:

(1) The off-site parking facilities are within 100 feet of the property;

(2) The Zoning Administrator determines that the total parking demand of all the uses contributing to the parking at any 1 time is less than the total parking stalls required in accordance with the shared parking calculation described in Apache Junction City Code, Vol. II, § 1-7-3(G); and

(3) A city-approved, perpetual parking easement/agreement for off-site/off-street parking shall be executed by the parties and recorded in the County Recorder's office.

(G) *On-site shared parking.* Developments containing a mix of uses on the same parcel may reduce the amount of required parking in accordance with the following methodology:

(1) *Step 1.* Calculate the minimum parking requirements for each use in accordance with Apache Junction City Code Vol. II, § 1-7-3, Table 7-1 ;

(2) *Step 2.* Multiply the minimum parking amount for each use by the corresponding percentages for each of the 5 time periods set forth in Columns (B) through (F) of Apache Junction City Code Vol. II, § 1-7-3, Table 7-3;

(3) *Step 3.* Calculate the total for each time period; and

(4) *Step 4.* Select the total with the highest value as the required minimum number of parking spaces.

TABLE 7-3 SHARED PARKING CALCULATOR.					
(A) Land Use	Weekday		Weekend		(F) Nighttime 12:00 a.m. - 6:00 a.m.
	(B) Daytime 9:00 a.m. - 4:00 p.m.	(C) Evening 6:00 p.m. - 12:00 a.m.	(C) Daytime 9:00 a.m. - 4:00 p.m.	(E) Evening 6:00 p.m. - 12:00 a.m.	
Office/Industrial	100%	10%	10%	5%	5%
Retail	60%	90%	100%	70%	5%
Hotel	75%	100%	75%	100%	75%
Restaurant	50%	100%	100%	100%	10%
Entertainment/ Commercial	40%	100%	80%	100%	10%

(H) *Maintenance of parking areas.* The maintenance of required parking and loading facilities are continuing obligations of the property owner or tenant. Parking surfaces shall be kept in a clean, safe and well-maintained condition. More specifically, the property owner shall restore the parking surface to its original approved condition if parking surface areas become deteriorated and/or emit dust particles into the air, as determined by the Development Services Engineer.

(I) *Use of parking stalls.* Required parking spaces shall be available for parking of vehicles of residents, customers, patrons and employees, and shall not be used for inventory storage, extra signage, outside retail sales, servicing or repair unless otherwise authorized by the city.

(J) *Site plan.* A scaled site plan illustrating existing and proposed off-street parking shall be included in an application for development site plan approval and/or building permit where parking is required. The site plan shall include the following:

- (1) Delineation and size of individual parking spaces and aisles.
- (2) Circulation area necessary to serve spaces.
- (3) Driveway openings to streets.
- (4) Curb and median cuts.
- (5) Grading, drainage and surfacing details.
- (6) Delineation of obstacles to parking and circulation within parking area.
- (7) Specifications as to signs and bumper guards.
- (8) Landscaping.

(K) *Access to public streets.* Driveways and areas for loading, parking and maneuvering of vehicles for multiple-family residential, business and institutional land use shall comply with Apache Junction City Code, Vol. II, Chapter 10, Engineering Design Guidelines and Policies.

(L) *Stormwater management.* A parking area shall be subject to the runoff, drainage and retention requirements of the Development Services Engineer.

(M) *Parking lot obstructions.* No obstructions of any kind shall be permitted within any designated parking space except for approved landscaping, retention basins, lighting, curbing, walkways or shopping cart corrals.

(N) *Blocked stalls.* No parking space shall be located or used in a manner as to block access to another parking space, except in a parking lot with a parking attendant having access to each vehicle's keys or as part of an approved planned development (PD) rezoning site plan.

(O) *Lighting.* Parking area lighting shall not create unsafe glare to motorists and shall be designed and installed in accordance with Apache Junction City Code, Vol. II, Article 1-10.

(P) *Signage.* Directional signs and pavement markings shall be used to control vehicular movement in a parking area. Signs shall be limited to 2 square feet each, and an aggregate total not to exceed 20 square feet. No sign of any kind other than those indicating entrances, exits, name of establishment to which the parking area is accessory, or conditions of use shall be erected.

(Q) *Surface grade.* No driveway over 300 feet long shall exceed a 10% grade, and no driveway shall exceed a 17% grade.

(R) *Shared access.* Common driveways between adjacent properties are encouraged and may be required as a condition of site plan approval. A perpetual, cross-access and maintenance agreement between the adjoining properties shall be required in a form approved by the City Attorney.

(S) *Parking lot surface.* The following requirements shall apply to loading spaces, maneuvering areas, and driveways for new development or redevelopment and/or additions, where 50% expansion of the existing building floor area occurs:

(1) *B-1, B-3, B-4, B-4, RM-1, RM-2 and RM-3 Zoning Districts.* Asphalt, concrete or masonry pavers installed at a depth approved by the Development Services Engineer shall be required for new development or redevelopment and/or additions where 50% expansion of the existing building floor area occurs.

(2) *B-2 (Old West District).* A minimum depth of 3 inches of ½ minus compacted decomposed granite or other dust-controlling material approved by the Development Services Engineer, and which complies with the American Disabilities Act (ADA), shall be allowed. The design and layout of the unpaved parking and circulation area shall be subject to the Zoning Administrator’s determination that the unpaved parking area layout provides safe and manageable parking and circulation.

(3) *Air quality control.* Existing and future parking surfaces shall comply with air quality control requirements (i.e., PM-10) as set forth in Ordinance No. 1316, and as amended in the future.

(T) *Landscaping.* Parking lot landscaping shall be designed and installed in accordance with Apache Junction City Code, Vol. II, § 1-8-6(E).

(U) *Accessibility standards.* Accessible (persons with disabilities) parking and pedestrian access shall be designed and installed in accordance with the American with Disabilities Act (ADA), as amended. The minimum number of accessible parking spaces shall be provided per the ADA standard, based on the total number of parking spaces provided, as depicted in Apache Junction City Code, Vol. II, § 1-7-3, Table 7-4. At least 1 of every 6 spaces must be van-accessible.

TABLE 7-4: ACCESSIBLE PARKING SPACES

Total Number of Parking Spaces Provided in a Parking Lot or Facility	Minimum Number of Accessible Parking Spaces Permitted
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8
401 to 500	9
501 to 1,000	2% of total
1,001 and over	20, plus 1 for each 100, or fraction thereof, over 1,000

(V) *Structured parking.* The exterior elevations of any multi-level parking structure must be designed so as to screen or conceal parked cars on the first and second floor from exterior public view.

(W) *Bicycle parking.* Bicycle parking spaces shall be provided to comply with Apache Junction City Code, Vol. II, § 1-7-3, Table 7-5 . Bicycle parking spaces may be bicycle lockers or bicycle racks. A **BICYCLE RACK** is defined as a stationary object designed so that a bicyclist can secure both the bicycle frame and wheels using a U-shaped lock or cable and lock. Notable rack examples include:

ART RACK



INVERTED U



POST AND RING



WHEEL-WELL SECURED



Alternative rack designs may be approved by administrative review. One bicycle rack may qualify as more than 1 bicycle parking space, provided it is designed to allow for multiple bicycles to be properly and easily secured at once.

TABLE 7-5: BICYCLE PARKING REQUIRED

CLASSIFICATION	NUMBER OF BICYCLE RACKS REQUIRED
Multi-Family Residential	A minimum of 6 bicycle spaces shall be provided. 2 additional bicycle spaces shall be provided for every 40 motor vehicle parking spaces required.
Commercial, Single-Tenant Location	4 bicycle spaces shall be provided.
Commercial, Multi-Tenant Location	12 bicycle spaces shall be provided.
Industrial and Warehousing	4 bicycle spaces shall be provided.

(X) *Motorcycle and scooter parking.* In non-residential parking lots, 2 motorcycle/scooter parking stalls shall be provided out of every 75 motor vehicle parking spaces required.

(Y) *Electric vehicle parking and charging stations.* In non-residential and multi-family residential parking lots, 1 motor vehicle parking space out of every 250 motor vehicle parking spaces shall be required to be equipped with an electric vehicle (“EV”) charging station that is at least of the Level 2 capacity. It is recommended that an additional number of parking spaces are constructed with convenient access to electrical connections to preemptively prepare for potential conversions of normal parking stalls to EV charging stations, in case future demand were to require more charging stations.

(1) Level 2 EV charging stations are defined by their capacity to provide 30-80 amperes using a 208 to 240 volt outlet. An EV charging station capable of simultaneously charging at 30 amperes or greater for each of 2 vehicles (also known as dual-port charging station) shall be counted as two Level 2 EV charging stations.

(2) Advertising signage placed on EV charging stations shall not be visible from the right-of-way and shall comply with all lighting requirements established in Apache Junction City Code, Vol. II, Article 1-10 of this Chapter, and the signage requirements in Apache Junction City Code, Vol. II, Article 1-11 of this Chapter.

(3) Each EV charging station shall be clearly marked with a sign reading “Electric Vehicle Charging Station”.

TABLE 7-6: ELECTRIC VEHICLE PARKING SPACES

Total Number of Parking Spaces Provided in a Parking Lot or Facility	Minimum Number of Electric Vehicle Parking Spaces Required
1 to 249	0
250 to 499	1
500 to 749	2
750 to 999	3
1,000 or more	4

(Ord. 1402, passed 5-6-2014; Am. Ord. 1537, passed 9-5-2023)

Notes

- 1 Fractional parking stall calculations should be rounded to the nearest whole number. For example, a parking stall requirement for 10.3 stalls should be rounded to 10 stalls, whereas a requirement for 10.7 stalls should be rounded to 11 stalls.

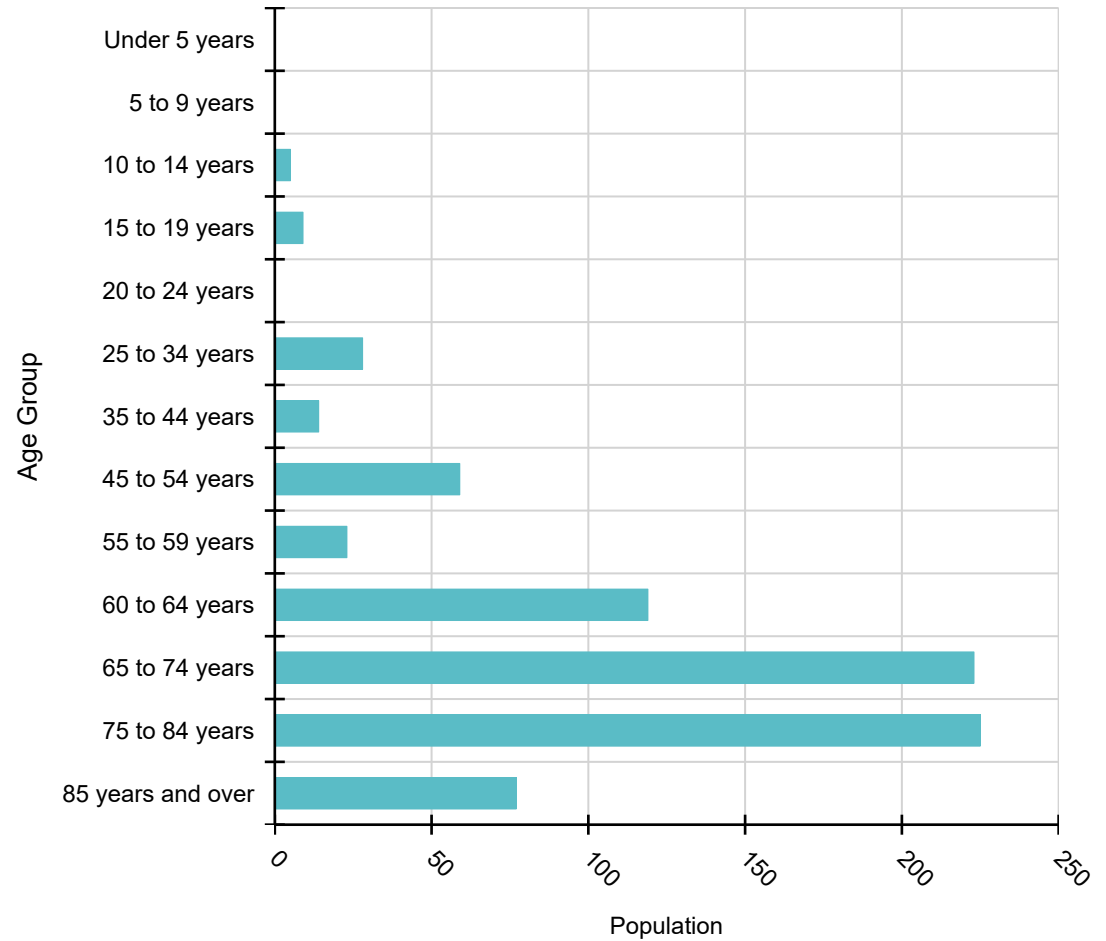


ATTACHMENT C – APACHE JUNCTION DEMOGRAPHIC REPORT

American Community Survey 2019-2023 5yr Estimates

Age		
Name	Total	Percent
Total	782	N/A
Under 5 years	0	0.0%
5 to 9 years	0	0.0%
10 to 14 years	5	0.6%
15 to 19 years	9	1.2%
20 to 24 years	0	0.0%
25 to 34 years	28	3.6%
35 to 44 years	14	1.8%
45 to 54 years	59	7.5%
55 to 59 years	23	2.9%
60 to 64 years	119	15.2%
65 to 74 years	223	28.5%
75 to 84 years	225	28.8%
85 years and over	77	9.8%

Universe: Total Population

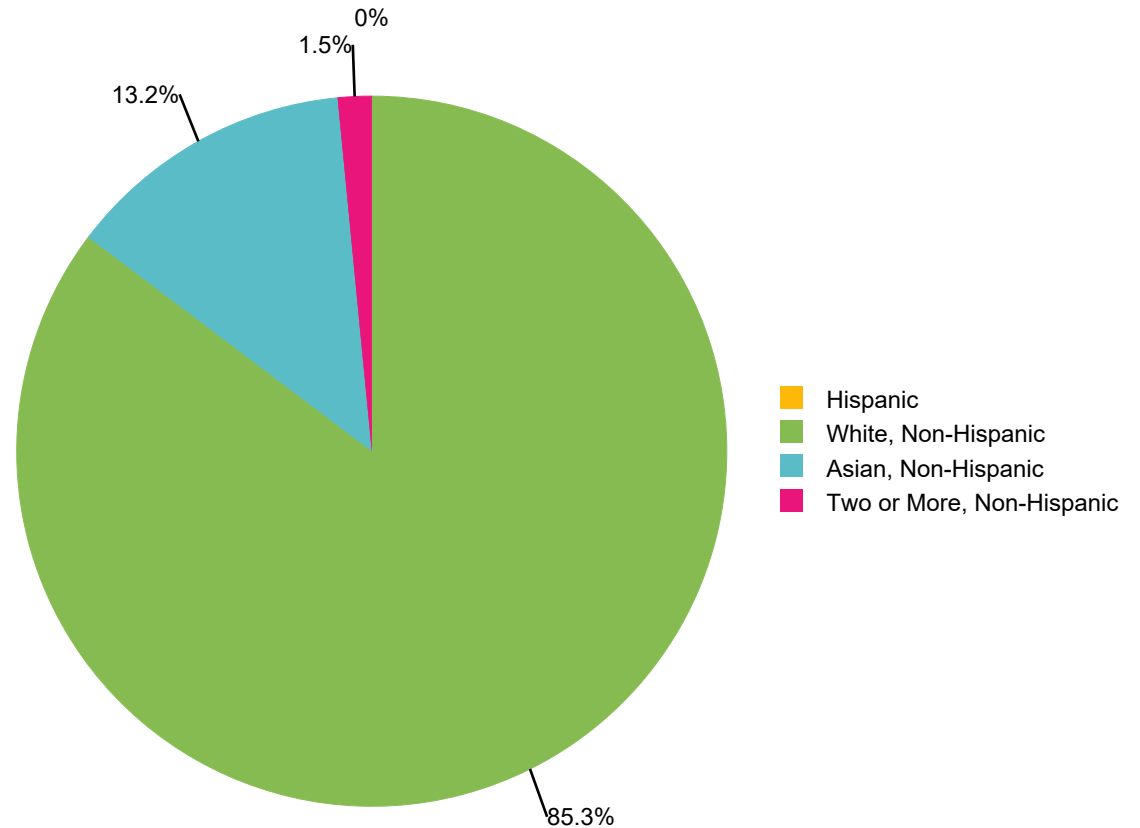


Race and Ethnicity

American Community Survey 2019-2023 5yr Estimates

Race and Ethnicity		
Name	Total	Percent
Total	782	N/A
Hispanic	0	0.0%
White, Non-Hispanic	667	85.3%
Black, Non-Hispanic	0	0.0%
Native American, Non-Hispanic	0	0.0%
Asian, Non-Hispanic	103	13.2%
Pacific Islander, Non-Hispanic	0	0.0%
Two or More, Non-Hispanic	12	1.5%
Other Race, Non-Hispanic	0	0.0%

Universe: Total Population

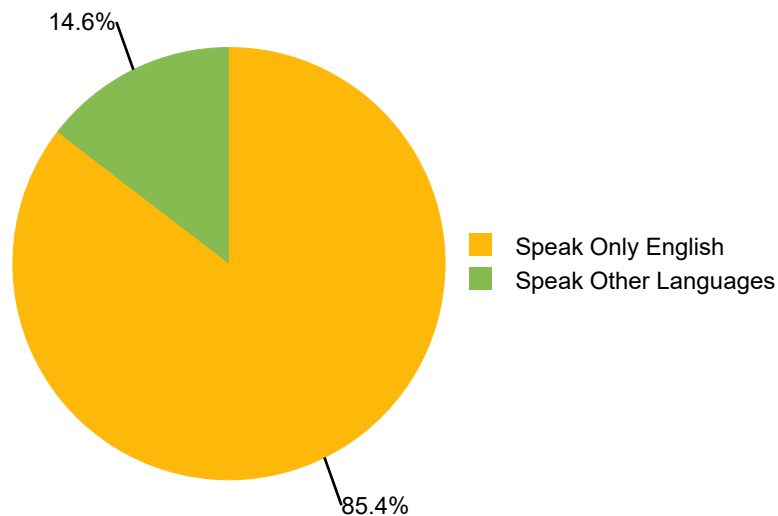


Ability to Speak English / Veterans Status by Age

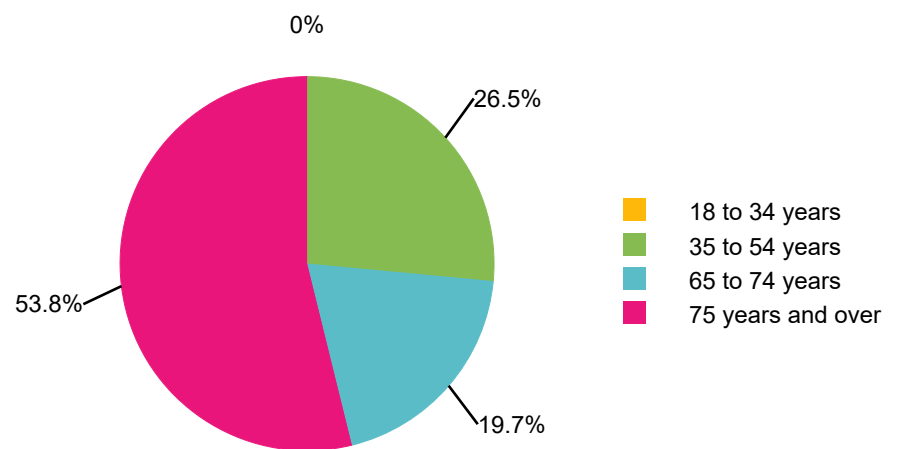
American Community Survey 2019-2023 5yr Estimates

Ability to Speak English		
Name	Total	Percent
Speak Only English	668	85.4%
Speak Other Languages	114	14.6%
Speak English "very well"	98	N/A
Persons with Limited English Proficiency (LEP)	16	N/A
Speak English "well"	16	N/A
Speak English "not well"	0	N/A
Speak English "not at all"	0	N/A

Veterans Status		
Name	Total	Percent
Civilian Population 18 years and over	768	N/A
Civilian veterans	117	15.2%
Male	96	N/A
Female	21	N/A
18 to 34 years	0	0.0%
35 to 54 years	31	26.5%
55 to 64 years	0	0.0%
65 to 74 years	23	19.7%
75 years and over	63	53.8%



Universe: Population 5 years and over



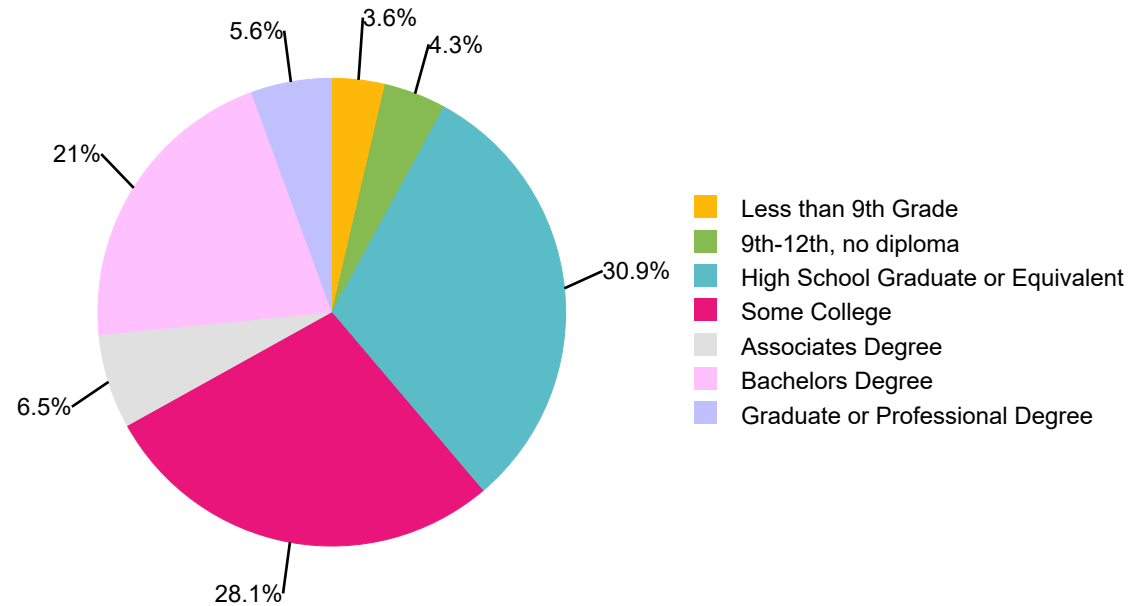
Universe: Civilian Population 18 years and over

Educational Attainment

American Community Survey 2019-2023 5yr Estimates

Educational Attainment		
Name	Total	Percent
Population 25 and over	768	100.0%
Less than 9th Grade	28	3.6%
9th-12th, no diploma	33	4.3%
High School Graduate or Equivalent	237	30.9%
Some College	216	28.1%
Associates Degree	50	6.5%
Bachelors Degree	161	21.0%
Graduate or Professional Degree	43	5.6%

Universe: Population Age 25 Years and Over



Household Income and Households

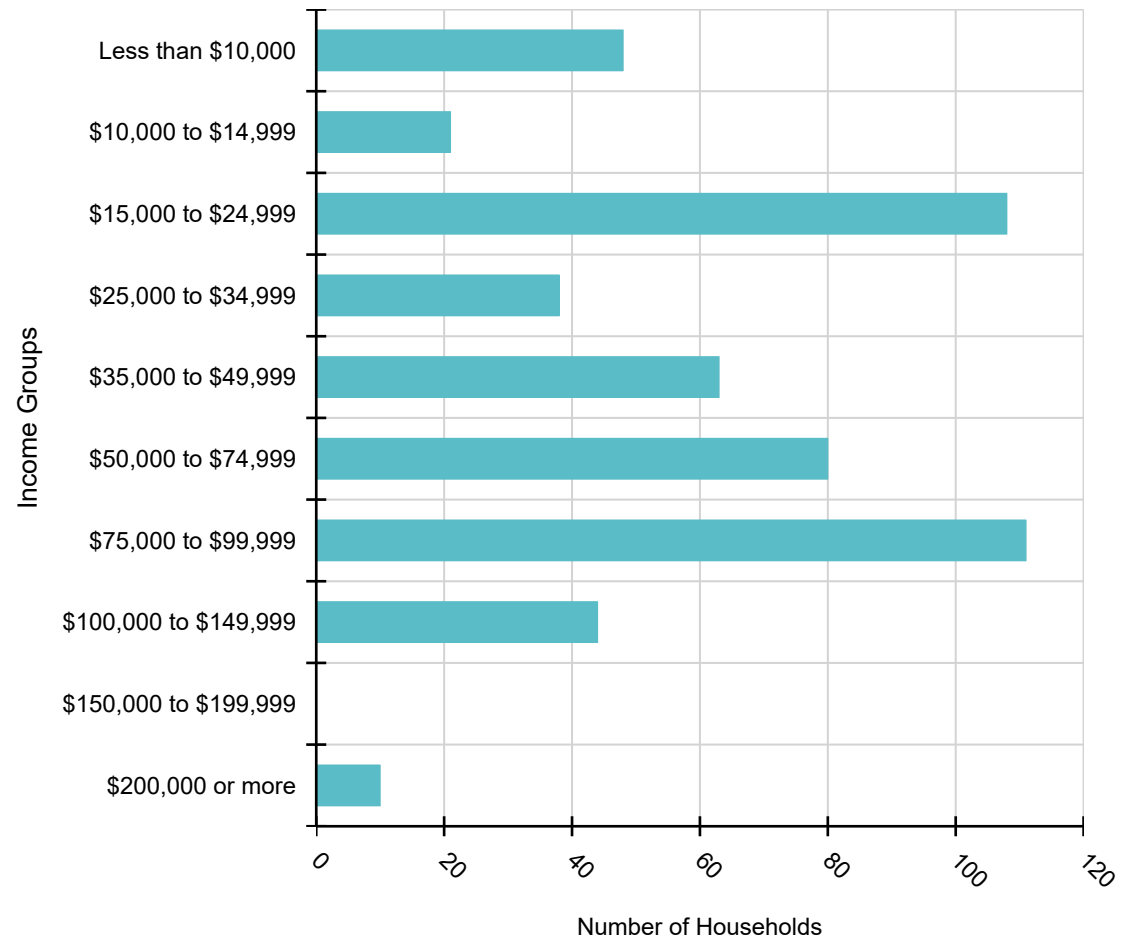
American Community Survey 2019-2023 5yr Estimates

Household Income (In 2023 inflation-adjusted dollars)		
Name	Total	Percent
Total Households	523	N/A
Median Household Income	\$ 47,938	N/A
Less than \$10,000	48	9.2%
\$10,000 to \$14,999	21	4.0%
\$15,000 to \$24,999	108	20.7%
\$25,000 to \$34,999	38	7.3%
\$35,000 to \$49,999	63	12.0%
\$50,000 to \$74,999	80	15.3%
\$75,000 to \$99,999	111	21.2%
\$100,000 to \$149,999	44	8.4%
\$150,000 to \$199,999	0	0.0%
\$200,000 or more	10	1.9%

Universe: Households

Households		
Name	Total	Percent
Total Households	523	N/A
Average Household Size	2	N/A
Family Households (Families)	203	38.8%
Married-couple family	197	N/A
Female Householder, no spouse present	6	N/A
with own children under 18 years	0	N/A
Nonfamily Households	320	61.2%
Householder living alone	297	N/A

Universe: Households



Poverty Status

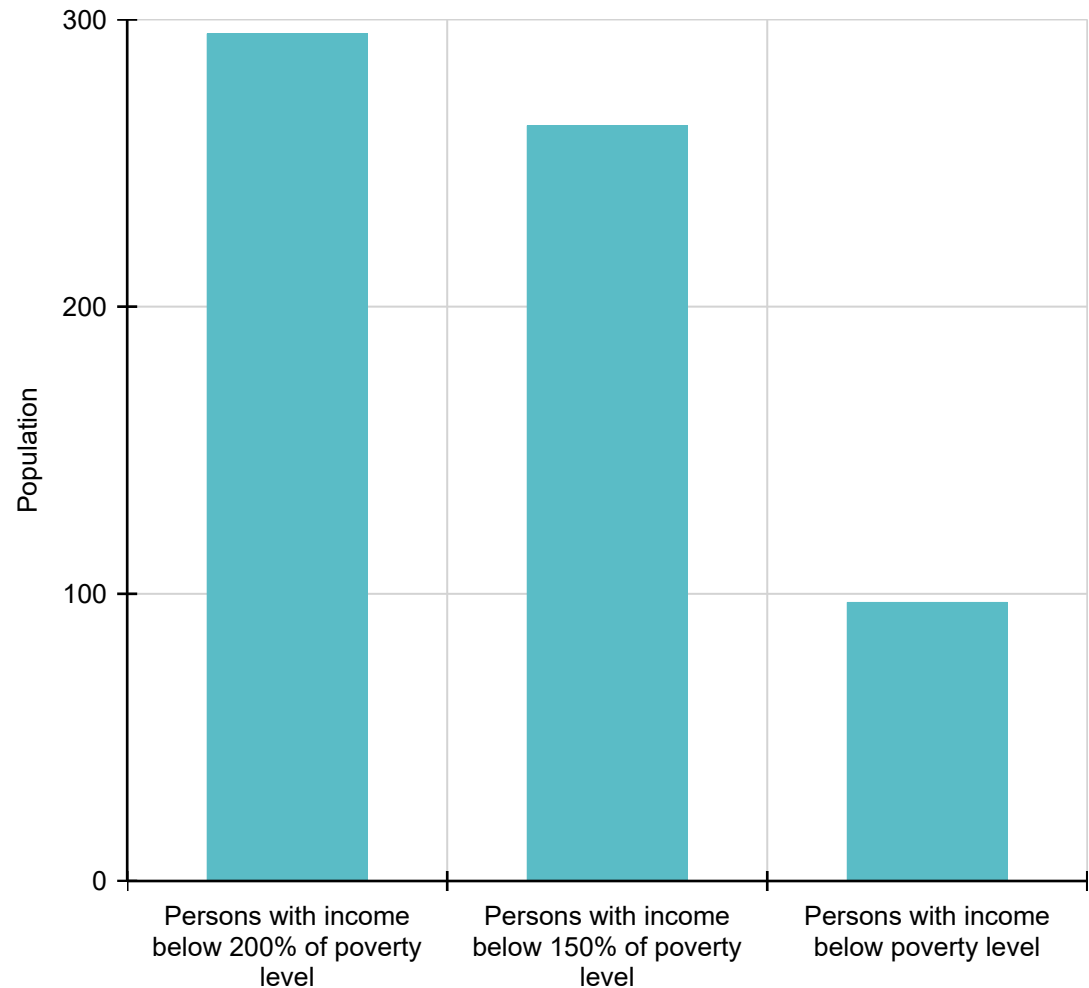
American Community Survey 2019-2023 5yr Estimates

Poverty Status in the Past 12 Months		
Name	Total	Percent
Persons for whom poverty status is determined	782	N/A
Persons with income below poverty level	97	12.4%
Persons with income below 150% of poverty level	263	33.6%
Persons with income below 200% of poverty level	295	37.7%

Universe: Persons for whom poverty status is determined

Poverty Status for Families in the Past 12 Months		
Name	Total	Percent
Total Families	203	N/A
Families with income below poverty level	15	7.4%
Married-couple family with related children under 18 years	15	N/A
Female householder, no spouse present with related children under 18 years	0	N/A
Male householder, no spouse present with related children under 18 years	0	N/A

Universe: Families

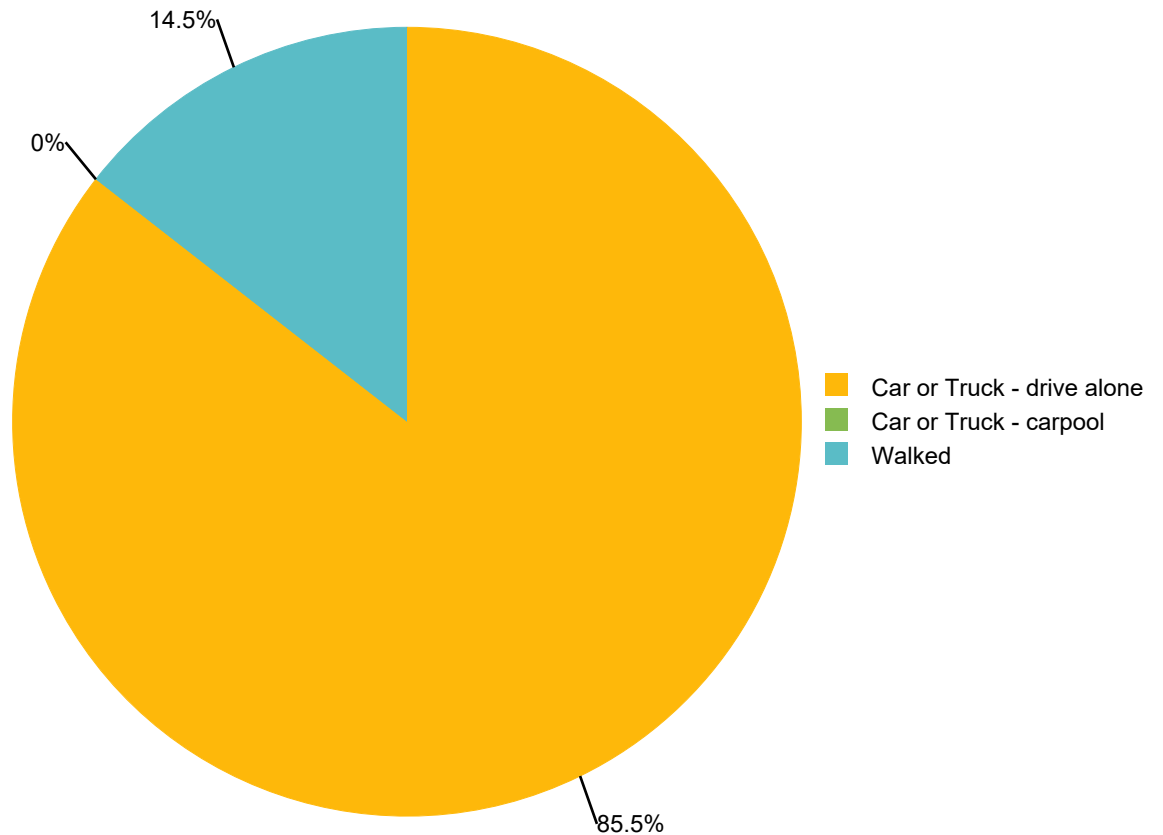


Modes of Transportation

American Community Survey 2019-2023 5yr Estimates

Commuting to Work		
Name	Total	Percent
Workers 16 years and over	159	N/A
Car or Truck - drive alone	136	85.5%
Car or Truck - carpool	0	0.0%
Public Transportation	0	0.0%
Bicycle	0	0.0%
Walked	23	14.5%
Other means (taxicab, motorcycle, etc.)	0	0.0%
Worked at home	0	0.0%

Universe: Workers age 16 years and over

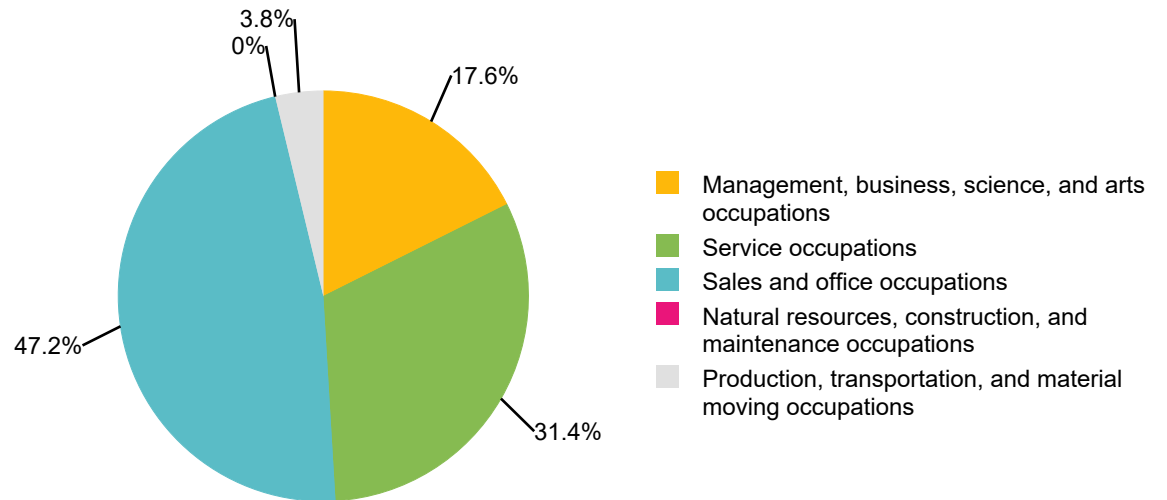


Occupation

American Community Survey 2019-2023 5yr Estimates

Occupation		
Name	Total	Percent
Civilian employed population 16 years and over	159	N/A
Management, business, science, and arts occupations	28	17.6%
Service occupations	50	31.4%
Sales and office occupations	75	47.2%
Natural resources, construction, and maintenance occupations	0	0.0%
Production, transportation, and material moving occupations	6	3.8%

Universe: Civilian employed population 16 years and over



Occupancy, Tenure, Value, and Rent

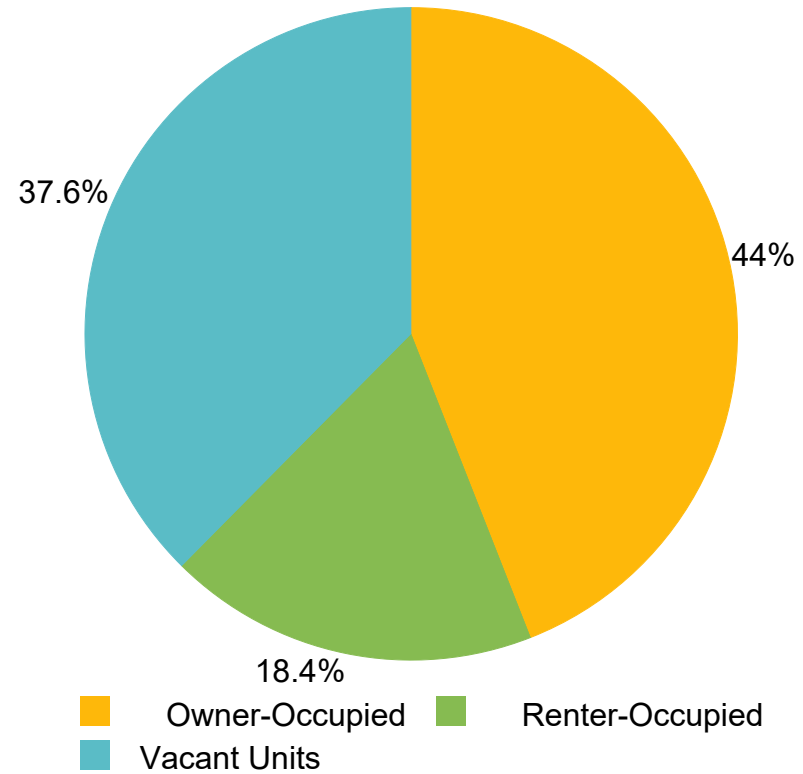
American Community Survey 2019-2023 5yr Estimates

Housing			
Name	Total	Percent	Per Sq Mile
Housing Units	838	N/A	2.4
Occupied Housing Units	523	62.4%	1.5
Owner-Occupied	369	44.0%	1.0
Renter-Occupied	154	18.4%	0.4
Vacant Units	315	37.6%	0.9
Median Housing Value	\$ 31,000	N/A	N/A
Median Rent	\$	N/A	N/A

Universe: Housing Units

Housing		
Name	Total	Percent
Total Housing Units	838	N/A
1, detached	133	15.9%
1, attached	31	3.7%
2 to 9	36	4.3%
10 or more	0	0.0%
Mobile Home	583	69.6%
Boat, RV, van, etc.	55	6.6%

Universe: Housing Units

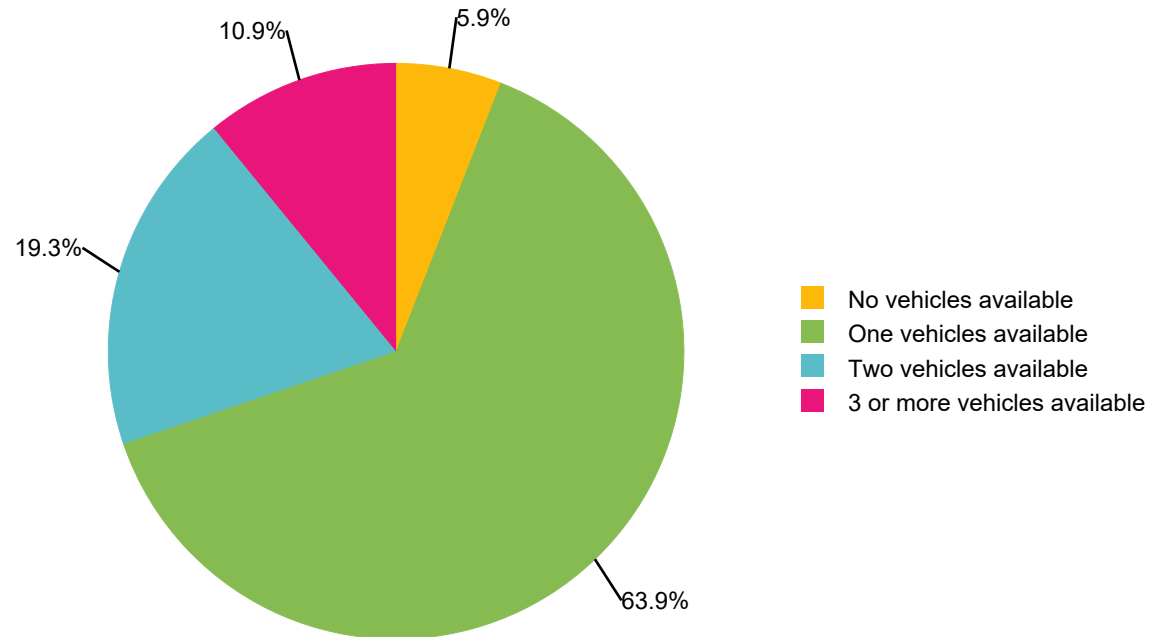


Vehicles Available

American Community Survey 2019-2023 5yr Estimates

Vehicles Available		
Name	Total	Percent
Total Occupied Housing Units	523	N/A
No vehicles available	31	5.9%
One vehicles available	334	63.9%
Two vehicles available	101	19.3%
3 or more vehicles available	57	10.9%

Universe: Occupied Housing Units



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ATTACHMENT D – RTD PARKING STUDY

Residential Parking in Station Areas: A Study of Metro Denver



December 2020



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Executive Summary

In late 2019 and early 2020, the Regional Transportation District (RTD) of Metro Denver, Colorado, surveyed property managers, counted parking supply and demand, and analyzed findings from 86 station-area developments. Per RTD's analysis of peak parking demand, market-rate properties provide 40 percent more parking than residents use, and income-restricted properties provide 50 percent more parking than residents use.



At market-rate properties, 40% of parking spaces go unused at peak, while income-restricted properties provide 50% more parking than used.

Providing an excessive amount of parking at station-area properties across Metro Denver affects residents' welfare and the economic vitality of the region, which the State of Colorado enabled RTD to promote.¹ As parking increases development costs, developers may pass on costs to residents in the forms of higher rent, fewer units, and reduced services.² In aggregate, increased costs for unnecessary parking contribute to a higher cost of living across Metro Denver, which recently experienced the second greatest rate of gentrification in the country.³ From the perspective of the transit agency, which particularly benefits from the patronage of low-income passengers, fewer income-restricted units near existing service threatens the agency's fiscal solvency and satisfaction of its mandate.

RTD intends this research to prompt discussion about more appropriate parking provision for properties in transit-rich neighborhoods. RTD, municipalities, and development partners who have a role in promoting the region's economic welfare should prefer station-area affordable housing in disposition guidelines, zoning regulations, and funding requirements. In addition, developers should rely on findings like those presented here to make the case to municipalities and financial partners to tailor expectations for parking demand to a multimodal environment. RTD hopes that this research effort will help to foster a more affordable, connected, and competitive Metro Denver region.

¹ State of Colorado, "[Colorado Revised Statutes §32-9-102\(1\)a](#)"

² A parking space in a structured parking facility costs approximately \$25,000 in Metro Denver in 2020.

³ National Community Reinvestment Coalition, "[Gentrification and Displacement 2020](#)"



Background

RTD provides fixed-route transit service for the eight-county Metro Denver region – one of the nation’s largest service areas, covering 2,342 square miles and including more than three million residents. In 2019, before COVID-19-related service adjustments, RTD operated nearly 44 million miles of regular fixed-route service with a fleet of 66 commuter-rail and 201 light-rail trains, more than one thousand local- and regional-service buses, and nearly 400 special-service vehicles. RTD provided more than 100 million trips in 2019.⁴

In 2004, residents within RTD’s service area approved a sales-tax increase to fund FasTracks, the nation’s largest transit expansion at that time. Between 2015 and 2020, RTD opened seven new rapid transit services, including the University of Colorado A Line between Denver Union Station and Denver International Airport and the Flatiron Flyer bus rapid transit service between Denver Union Station and Boulder. Since 2005, an outsized amount of development has occurred near rapid-transit stations: 43 percent of all multifamily development and 55 percent of all office development in Metro Denver has occurred within a half-mile of RTD rapid-transit stations, which together account for only 0.6 percent of land area in the Denver-Aurora-Lakewood and Boulder metropolitan statistical areas.



0.6% of land area in Denver/Boulder Metropolitan Statistical Area (MSA) is within a half-mile of an RTD station area.

Since 2005, those station areas have captured:



43% of multifamily development



55% of office development

⁴ Regional Transportation District, “[Facts and Figures](#)”



Despite impressive growth in Metro Denver’s station-area development, transit ridership has not followed. Between 2015 and 2018, ridership decreased from 103 million to 98 million, and recent RTD research suggests that the *type* of development more than simply *total* development may play a role. In 2017 and 2018, RTD surveyed 1,340 residents of 35 station-area apartments and found a compelling relationship between low-income households and transit service.^{5 6}

RTD research shows:

- **61 percent** of low-income households have no car, while **93 percent** of market-rate households have at least one car.
- **63 percent** of low-income households ride the bus once a week or more, while **88 percent** of market-rate households ride the bus once a week or less.
- **57 percent** of low-income households ride the train once a week or more, while **73 percent** of market-rate households ride the train once a week or less.



Co-locating income-restricted housing and high-frequency transit service benefits both low-income households and transit agencies.

In other words, co-locating income-restricted housing and high-frequency transit service benefits both low-income households and the transit agency. Reducing parking supply at station-area developments reduces development cost, helping residents to reduce housing and transportation costs and RTD to increase ridership on its expansive transit network.⁷

RTD strives to support development opportunities that increase ridership or enhance transit investments across the District through station design and close coordination with local jurisdictions and developers. RTD plays a proactive role in facilitating transit-supportive development around transit stations, managing and conducting research to support transit-oriented development, sharing information with both public and private sector partners, and providing planning assistance to help local jurisdictions connect constituents to transit service.

⁵ Travel Behaviour and Society, “[Comparing the travel behavior of affordable and market-rate housing residents in the transit-rich neighborhoods of Denver, CO](#)”

⁶ TransitCenter, “[Transit-Oriented Development is More Transit-Oriented When It’s Affordable Housing](#)”

⁷ Center for Neighborhood Technology, “[Housing and Transportation Affordability Index](#)”



Methodology

RTD's research into station-area developments' parking provision and utilization relied on results of an electronic survey of property managers and counts of properties' parking facilities during peak demand.

Guidance

In summer 2019, RTD consulted several planning, parking, and development practitioners to better understand similar research efforts, nuances, and pressing issues facing each discipline. In particular, the [Metropolitan Area Planning Council](#) (MAPC) in Greater Boston and the [North Central Texas Council of Governments](#) (NCTCOG) in the Dallas-Fort Worth Metroplex offered lessons learned from their similar work to understand and inform station-area parking supply.

Survey

After speaking with these agencies, RTD drafted an electronic survey in Google Forms for managers of residential properties to understand each property's general characteristics, parking programs, and transportation amenities.

RTD tracks station-area development in Metro Denver, logging development type, size, and location among other features. RTD used that database to develop a universe of properties for this study, prioritizing rental apartment buildings within a 10-minute walk of a bus rapid transit or train station with at least 50 units that opened or were substantially renovated within five years of transit service opening.⁸ That filter identified 120 properties, and RTD relied on contact information provided by transportation management associations or property websites to contact managers of those properties between fall 2019 and spring 2020 to explain the research and distribute the online survey. Of 111 property managers who received the survey, RTD received 99 responses.

Count & Confirmation

Learning from MAPC and NCTCOG and taking advantage of a State-mandated stay-at-home order in April 2020, RTD counted parking utilization at 104 properties in April 2020 on a Tuesday through Thursday between 10 a.m. and 3 p.m., avoiding Friday through

⁸ RTD did not survey or count condominiums. A State construction defects law has limited condominium development, thus mitigating the benefit of studying this product type, and surveying individual condo-unit owners proved prohibitively challenging.



Monday because utilization is typically lower on those days. RTD again followed up with property managers after these counts to clarify questions raised in the field and further detail survey responses.

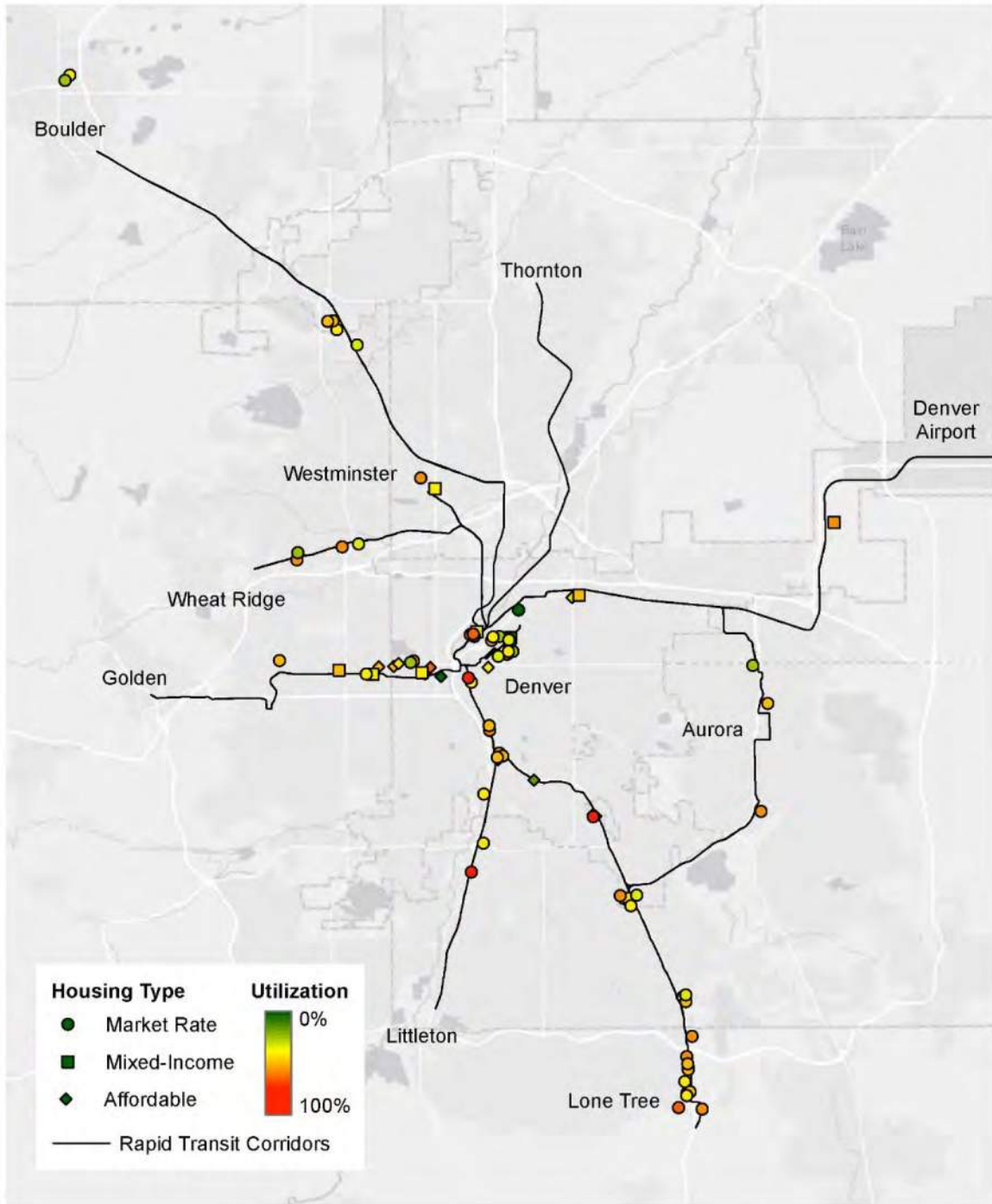
In the two weeks following Labor Day 2020, RTD verified April daytime counts with nighttime counts of 19 properties (approximately 22 percent of the 86 analyzed properties) on a Tuesday through Thursday between 9 p.m. and midnight to verify consistency between the counting time periods. Utilization from the smaller nighttime counts nearly matched that of the daytime counts: 63 percent utilization by day in April; 62 percent utilization by night in September.

Analysis

RTD both received a survey from and counted parking utilization at 94 properties, of which 86 properties in 11 municipalities were more than 80 percent leased at the time of the count (Figure 1). RTD analyzed these 86 properties' parking provision and utilization patterns related to resident income, property age, property transportation policies, and location features.



Figure 1: Map of Properties Analyzed



Findings

Most significant, the analysis found that all 86 properties provide 42 percent more parking on average than residents use at peak demand, and income-restricted properties provide 50 percent more parking than used – well above the 5 to 15 percent considered optimal parking management.⁹ This over-supply comes at a substantial cost: approximately \$25,000 per parking space in a Metro Denver parking structure, which are typical of station-area developments that make efficient use of high-value land.

While excessive parking at any station-area property would fail to complement the neighborhood’s intrinsic multimodal alternatives and increase residents’ cost of living, the cost of excessive parking often jeopardizes affordable housing. Thus, the unnecessary cost of housing cars instead of families often limits or effectively prohibits affordable housing in station areas and limits transit access for reliable transit users.

Excessive parking particularly affects the viability of low-income housing, whose developers have few financial sources to afford inefficient costs. The [City and County of Denver](#) estimates that the region lacks 100,000 homes, and the [Colorado Housing and Finance Authority](#) reports that annual demand for competitive low-income housing tax credit capital was over-subscribed by 219 percent in 2020. Not surprising, the [National Community Reinvestment Coalition](#) (NCRC) ranked Metro Denver as the second fastest gentrifying region in the country between 2013 and 2017.

Table 1: Selection from NCRC’s “Gentrification and Displacement 2020”

City	Total Tracts	Eligible Tracts	Gentrifying Tracts	Rate of Gentrification
San Francisco-Oakland	975	131	41	31.3%
Denver	619	80	22	27.5%
Boston	1003	75	16	21.3%
Miami-Ft. Lauderdale	1215	81	17	21.0%
New Orleans	392	64	13	20.3%
Austin	350	56	11	19.6%
New York City	4515	362	70	19.3%

Reproduced from “Gentrification and Displacement 2020”

Excess parking is particularly inappropriate in transit-rich neighborhoods. Not only does it effectively prohibit affordable housing, but it unnecessarily increases development cost,

⁹ Urban Land Institute, “[Shared Parking](#)”



reduces project savings, and obstructs access to transit and, by extension, to economic opportunity for a growing number of low-income households.

Resident Income

Table 2 details the number of parking spaces available and utilized on a per-unit basis at all 86 properties analyzed, separated by their inclusion of market-rate, mixed-income, and income-restricted units. Residents of income-restricted properties use less parking than residents of market-rate residents, suggesting that municipalities and developers should have different standards for parking demand at market-rate and income-restricted properties in station areas.



In market-rate properties, 1.23 parking spaces per unit are provided, but only 0.74 parking spaces per unit are used.

Income-restricted properties provide 0.72 parking spaces per unit, but residents use only 0.36 parking spaces per unit.



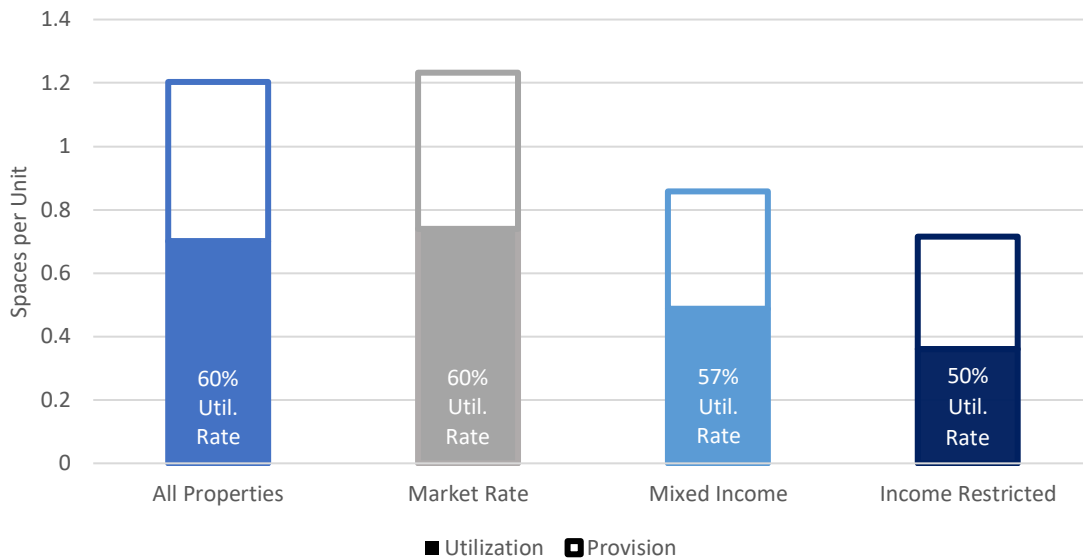
Summarized in Figure 2, the 65 analyzed market-rate properties provide an average of 1.23 parking spaces per unit, but residents use at peak demand only 0.74 parking spaces per unit— a 60 percent utilization rate. Sixteen income-restricted properties provide an average of 0.72 spaces per unit, but residents use only 0.36 parking spaces per unit – a 50 percent utilization rate.

Table 2: Parking Provided and Utilized per Unit at Property by Resident Income

Resident Income	Properties	Units	Parking Spaces	Spaces Provided Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	86	25,333	30,478	1.20	0.70	58%
Market Rate	65	19,850	24,462	1.23	0.74	60%
Mixed Income	5	985	845	0.86	0.49	57%
Income Restricted	16	1,587	1,135	0.72	0.36	50%



Figure 2: Parking Provided and Utilized per Unit at Property by Resident Income



Bundled Parking

Nearly an even split of properties include (45) or do not include (41) a parking space in a tenant’s lease, otherwise known as bundling or unbundling parking, respectively. Although one may expect an additional parking fee at unbundled properties to result in lower parking demand, prompting developers to reduce supply, properties with unbundled parking provide more parking per unit and have higher utilization rates than their bundled-parking counterparts. This unexpected finding for higher supply and utilization at unbundled properties may be explained by resident income at these properties; 38 of 41 unbundled properties are market-rate properties, thus accommodating a higher-income tenant, who is more likely than a lower-income tenant to own a vehicle. Developers of market-rate apartments with unbundled parking likely anticipate a high demand for parking from higher-income tenants.

Table 3: Parking Provided and Utilized per Unit at Properties with Bundled Parking

Bundled	Properties	Units	Parking Spaces	Spaces Provided Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	45	9,851	11,580	1.18	0.66	56%
Market Rate	27	7,892	10,147	1.29	0.73	57%
Mixed Income	4	901	751	0.83	0.48	58%
Income Restricted	14	1,058	682	0.64	0.33	50%



Table 4: Parking Provided and Utilized per Unit at Properties with Unbundled Parking

Unbundled	Properties	Units	Parking Spaces	Spaces Provided Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	41	11,241	13,330	1.19	0.74	63%
Market Rate	38	10,947	13,042	1.19	0.75	63%
Mixed Income	1	84	94	1.12	0.56	50%
Income Restricted	2	210	194	0.92	0.45	49%

Neighborhood Transit Quality

The Center for Neighborhood Technology’s (CNT) [All Transit](#) (AT) compiles transit stop, route, and frequency information in more than 300 regions, including Metro Denver. RTD used properties’ AT scores to approximate their neighborhoods’ levels of transit service and separated scores into quartiles of transit quality. (Tables 5 through 8)

One may expect quartiles to relate inversely to parking utilization – the better the transit quality, the lower the need to own and park a vehicle – and that expectation holds true. After accounting for single-property outliers, resident income continues to correlate with parking utilization. Rates of parking supply and demand are higher at market-rate properties and lower at income-restricted properties than average in each quartile, and income-restricted properties exhibit the lowest per-unit utilization (0.31) across all quartiles.

However, parking utilization across all properties in all quartiles is neither as distinct among the quartiles nor as related to neighborhood transit quality as one may expect. For example, the lowest per-unit utilization occurs in the second lowest quartile, not the highest quartile. It is surprising that neighborhood transit quality does not play a more significant role in parking provision or utilization. Municipalities and developers may better consider neighborhood transit quality when determining parking provision, as the transit agency may consider transit-supportive land uses in station areas when determining provision of transit services to neighborhoods.

Table 5: Parking Provided and Utilized per Unit at Properties in Lowest Quartile

Lowest Quartile	Properties	Units	Parking Spaces	Spaces Provided Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	21	6,429	7,067	1.10	0.66	60%
Market Rate	19	6,018	6,911	1.15	0.69	60%
Mixed Income	1	266	126	0.47	0.24	52%
Income Restricted	1	145	30	0.21	0.19	90%



Table 6: Parking Provided and Utilized per Unit at Properties in Low Quartile

Low Quartile	Properties	Units	Parking Spaces	Spaces Provided Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	23	5,277	6,028	1.14	0.72	63%
Market Rate	15	4,283	5,351	1.25	0.80	64%
Mixed Income	2	194	199	1.03	0.53	52%
Income Restricted	6	800	478	0.60	0.31	52%

Table 7: Parking Provided and Utilized per Unit at Properties in High Quartile

High Quartile	Properties	Units	Parking Spaces	Spaces Provided Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	22	6,129	8,015	1.31	0.73	56%
Market Rate	17	5,761	7,617	1.32	0.75	56%
Mixed Income	1	129	158	1.22	0.51	42%
Income Restricted	4	239	240	1.00	0.50	50%

Table 8: Parking Provided and Utilized per Unit at Properties in Highest Quartile

Highest Quartile	Properties	Units	Parking Spaces	Spaces Provided Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	20	4,587	5,332	1.16	0.70	60%
Market Rate	14	3,788	4,583	1.21	0.73	60%
Mixed Income	1	396	362	0.91	0.62	68%
Income Restricted	5	403	387	0.96	0.44	46%

Transit Pass Provision

RTD's [Neighborhood EcoPass](#) (NEco) Program allows managers with at least 40 units to purchase monthly transit passes at significant discount and provide those passes to tenants to encourage their transit use. Of the 86 properties analyzed, managers at only eight properties provide Neighborhood EcoPasses, translating to slightly lower parking provision and utilization (1.15 and 0.64 parking spaces per unit, respectively) compared to the majority of properties (1.18 and 0.71 parking spaces per unit, respectively). Although few station-area properties participate in the NEco Program, this finding suggests nonetheless that RTD should encourage municipalities and developers to consider reductions in parking provision on condition of participation in NEco and other transportation-demand management programs.



Table 9: Parking Provided and Utilized per Unit at Properties with Neighborhood EcoPasses

With NEco	Properties	Units	Parking Spaces	Spaces Provided Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	8	1,330	1,532	1.15	0.64	56%
Market Rate	4	1,011	1,273	1.26	0.72	57%
Mixed Income	0	-	-	-	-	N/A
Income Restricted	4	319	259	0.81	0.42	51%

Table 10: Parking Provided and Utilized per Unit at Properties without Neighborhood EcoPasses

Without NEco	Properties	Units	Parking Spaces	Spaces Provided Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	78	21,092	24,910	1.18	0.71	60%
Market Rate	61	18,839	23,189	1.23	0.74	60%
Mixed Income	5	985	845	0.86	0.49	57%
Income Restricted	12	1,268	876	0.69	0.35	50%

Proximity to Transit

The distance between property and station may play a small role in parking supply and demand. Twenty-nine (29) properties lying less than 0.3 miles from a station provide 0.17 fewer parking spaces per unit and residents of those properties utilize 0.10 fewer parking spaces per unit compared to 57 properties between 0.3 and 0.5 miles from a station. In other words, for every 30 units, a property within a five-minute walk of a station provides five fewer parking spaces and its residents use three fewer parking spaces than a comparable station-area property farther away.

Table 11: Parking Provided and Utilized at Properties less than 0.3 Miles from Station

<0.3 mi.	Properties	Units	Parking Spaces	Spaces Provided Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	29	6,670	7,086	1.06	0.63	60%
Market Rate	19	5,380	6,334	1.18	0.71	61%
Mixed Income	4	589	483	0.82	0.40	48%
Income Restricted	6	701	269	0.38	0.23	59%



Table 12: Parking Provided and Utilized at Properties between 0.3 and 0.5 Miles from Station

0.3 mi. - 0.5 mi.	Properties	Units	Parking Spaces	Spaces Provided Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	57	15,752	19,356	1.23	0.73	59%
Market Rate	46	14,470	18,128	1.25	0.75	60%
Mixed Income	1	396	362	0.91	0.62	68%
Income Restricted	10	886	866	0.98	0.47	48%

Core vs Suburbs

Of the 86 properties analyzed, 45 are in Denver, where relatively sophisticated parking requirements may influence properties' provision of 0.04 fewer parking spaces per unit, compared to their suburban counterparts.¹⁰

Table 13: Parking Provided and Utilized at Properties Located in Denver

Denver	Properties	Units	Parking Spaces	Spaces Provided Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	45	10,217	11,801	1.16	0.68	59%
Market Rate	27	8,081	10,109	1.25	0.75	60%
Mixed Income	3	609	614	1.01	0.59	58%
Income Restricted	15	1,527	1,078	0.71	0.35	49%

Table 14: Parking Provided and Utilized at Properties not Located in Denver

Non-Denver	Properties	Units	Parking Spaces	Spaces Provided Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	41	12,205	14,641	1.20	0.72	60%
Market Rate	38	11,769	14,353	1.22	0.73	60%
Mixed Income	2	376	231	0.61	0.32	52%
Income Restricted	1	60	57	0.95	0.65	68%

Transit-Oriented Development Typology

In 2015, the City and County of Denver's [Transit-Oriented Development Strategic Plan](#) classified all 29 stations in the city into five typologies: Downtown, Urban Center, General Urban, Urban, and Suburban. Of 45 analyzed properties in all five Denver typologies, the five properties in the Downtown typology near Union Station – arguably the region's most transit-oriented and walkable environment – exhibit the lowest parking provision (0.96

¹⁰ Denver [Zoning Code](#) allows for alternative parking ratios (Art. 10.4.5.2) and parking reductions (Art. 10.4.5.3).



parking spaces per unit) among the five typologies but the highest parking utilization (0.76 parking spaces per unit), despite all five requiring an additional for parking fee (i.e., unbundling). Four market-rate properties where residents use 0.77 parking spaces per unit on average significantly influence the high utilization rate. Income-restricted properties in the Urban and General Urban typologies exhibit the lowest rates of parking supply (0.58 and 0.54 parking spaces per unit, respectively) and parking demand (0.28 and 0.29 parking spaces per unit, respectively).

Table 15: Parking Provided and Utilized at Properties per Denver Downtown Typology

Downtown	Properties	Units	Parking Spaces	Spaces Provided Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	5	1,592	1,522	0.96	0.76	79%
Market Rate	4	1,485	1,396	0.94	0.77	82%
Mixed Income	0	-	-	-	-	N/A
Income Restricted	1	107	126	1.18	0.59	50%

Table 16: Parking Provided and Utilized at Properties per Denver Urban Center Typology

Urban Center	Properties	Units	Parking Spaces	Spaces Provided Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	15	3,862	4,844	1.25	0.74	59%
Market Rate	12	3,616	4,586	1.27	0.76	60%
Mixed Income	0	-	-	-	-	N/A
Income Restricted	3	246	258	1.05	0.50	48%

Table 17: Parking Provided and Utilized at Properties per Denver Urban Typology

Urban	Properties	Units	Parking Spaces	Spaces Provided Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	6	1,176	1,243	1.06	0.47	44%
Market Rate	2	537	874	1.63	0.70	43%
Mixed Income	0	-	-	-	-	N/A
Income Restricted	4	639	369	0.58	0.28	48%

Table 18: Parking Provided and Utilized at Properties per Denver General Urban Typology

General Urban	Properties	Units	Parking Spaces	Spaces Provided Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	15	3,083	3,601	1.17	0.65	55%
Market Rate	7	2,055	2,761	1.34	0.74	55%
Mixed Income	3	609	614	1.01	0.59	58%
Income Restricted	5	419	226	0.54	0.29	53%



Table 19: Parking Provided and Utilized at Properties per Denver Suburban Typology

Suburban	Properties	Units	Parking Spaces	Spaces Provided Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	4	504	591	1.17	0.73	62%
Market Rate	2	388	492	1.27	0.81	64%
Mixed Income	0	-	-	-	-	N/A
Income Restricted	2	116	99	0.85	0.43	51%

Property Age

Property age does not clearly affect parking supply or demand. In terms of parking provision, whereas the 22 properties built before 2010 and the 38 properties built after 2015 have higher per-unit supply (1.21 and 1.28 parking spaces per unit, respectively), the 26 properties built between 2010 and 2015 offer only 1.01 parking spaces per unit, which may reflect financing constraints during the Great Recession.

Table 20: Parking Provided and Utilized at Properties Built before 2010

Pre-2010	Properties	Units	Parking Spaces	Spaces Provided Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	22	6,420	7,771	1.21	0.74	61%
Market Rate	16	5,398	7,175	1.33	0.81	61%
Mixed Income	2	662	488	0.74	0.47	64%
Income Restricted	4	423	189	0.45	0.22	49%

Table 21: Parking Provided and Utilized at Properties Built between 2010 and 2014

2010-2014	Properties	Units	Parking Spaces	Spaces Provided Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	26	5,959	6,014	1.01	0.67	66%
Market Rate	19	5,367	5,593	1.04	0.70	67%
Mixed Income	1	110	105	0.95	0.51	53%
Income Restricted	6	482	316	0.66	0.37	56%

Table 22: Parking Provided and Utilized at Properties Built after 2015

2015-2019	Properties	Units	Parking Spaces	Spaces Provided Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	38	8,713	11,125	1.28	0.70	55%
Market Rate	30	8,074	10,421	1.29	0.72	56%
Mixed Income	2	213	252	1.18	0.53	45%
Income Restricted	6	426	452	1.06	0.49	46%



Recommendations

Together, RTD's ridership and parking research encourage changes to parking policy in Metro Denver, and several planning and development partners have the opportunity to drive that change for mutual benefit.

RTD

Understanding that low-income households utilize transit more and demand parking less than higher income neighbors, RTD should amend its policy for joint development (i.e., redevelopment of agency property) to prefer income-restricted housing in order to increase ridership, which market-rate housing is less likely to accomplish. Considering income-restricted properties' relatively low parking demand, RTD should negotiate with developers to share parking between transit patrons and residents and encourage municipalities to recognize lower parking demand at income-restricted housing, either by right or through variances from unduly high minimum parking requirements.

While promoting affordable housing through redevelopment of RTD parking facilities may be a laudable goal, RTD's limited property holdings in station areas as well as competition for maintaining or expanding parking for transit patrons minimize the potential impact of that effort and so invites collaboration from municipalities.

Municipalities

Municipalities could expand the impact of co-locating income-restricted housing in station areas by amending local zoning or issuing variances from parking requirements to encourage affordable housing in station areas through context-sensitive parking requirements. The City and County of Denver exemplifies several leading practices: the zoning code allows reducing minimum parking requirements by 25 percent for all properties within 0.25 miles of a station; the [Dedicated Affordable Housing Fund](#) and other funding sources prioritize financial support to transit-rich neighborhoods; recently published recommendations for transportation demand management complement significant station-area investments; and the proposed [Affordable Housing Zoning Incentive](#) would reduce parking requirements citywide (coincidentally consistent with RTD's expansive bus network in the region's core).



Developers and Financial Partners

Developers and their financial partners should consider and expand on this research to make data-driven, evidence-based decisions about development that will attract residents who prefer a transit-oriented lifestyle and other amenities that reduced or deferred project costs can support. Relevant for income-restricted housing that relies on low-income housing tax credits, the Colorado Housing and Finance Authority has shown interest in considering revisions to its qualified allocation plan in order to increase funding for non-parking transportation resources. The Colorado Chapter of the Urban Land Institute also has expressed support to advance these findings among members.

Financial partners play a significant role in Denver's transit-oriented affordable housing landscape, with many of them, as well as the City and County of Denver, the Colorado Housing and Finance Authority, and state agencies, investing in the [Denver Region Transit-Oriented Development Fund](#) to provide low-interest loans to affordable-housing developers in transit-rich neighborhoods. In addition, [Mile High Connects](#) provides a forum for government, funders, and advocates to identify and secure broad community benefits through station-area development.



Conclusion

An analysis of peak-hour parking demand at 86 leased-up apartment buildings across Metro Denver found utilization ranging from 60 percent at market-rate properties to 50 percent at income-restricted properties.



Planning and development partners should tailor parking requirements for station-area development's unique mobility landscape.

Those low utilization rates represent substantial and unnecessary additional development cost, which developers may pass on to residents through higher rents, fewer units, and reduced services. In the second fastest-gentrifying region in the country, that cost particularly burdens low-income households, who are more likely to use transit than parking. Backed by these findings, planning and development partners should tailor parking requirements to station-area developments' unique mobility landscape in order to achieve shared goals for enhanced public welfare and economic vitality.



RTD Residential Property Parking Survey

(Created and distributed with Google Forms)

The RTD Residential Property Parking Survey is designed to understand current parking demand at residential properties near train and bus rapid transit stations to inform future parking supply provided in transit-served areas. RTD will aggregate and anonymize your response and others and publish findings on our website. Your participation is voluntary and the survey should take less than 10 minutes to complete. Please contact [Name] at [Name]@RTD-Denver.com for further information. Thank you!

Property Information

1. How many units are there in the property? (E.g., 100 units)
2. How many of those total units are leased? (E.g., 85 units)
3. How many of those total units are income-restricted? (E.g., 40 units)
4. How many studio apartments are in the property?
5. How many one-bedroom apartments are in the property?
6. How many two-bedroom apartments are in the property?
7. How many three-bedroom apartments are in the property?
8. What is the average monthly rent for a market-rate studio apartment?
9. What is the average monthly rent for a market-rate one-bedroom apartment?
10. What is the average monthly rent for a market-rate two-bedroom apartment?
11. What is the average monthly rent for a market-rate three-bedroom apartment?

Parking Information

12. How many parking spaces are available at the property for passenger vehicles?
13. Is parking for passenger vehicles included (i.e., bundled) in a tenant's lease? *Mark only one oval.*
 - a. Yes *Skip to question 14*
 - b. No *Skip to question 17*
 - c. Other:
14. How many parking spaces are provided in the lease? (Please express in terms of per unit, per bedroom, etc. E.g., 1 space per unit)
15. Can a tenant receive additional parking beyond what is guaranteed in its lease? *Mark only one oval.*
 - a. Yes
 - b. No
 - c. Other:
16. Can the tenant decline to use parking in order to reduce the lease payment? *Mark*



only one oval.

- a. Yes *Skip to question 18*
- b. No *Skip to question 18*
- c. Other:

17. What is the monthly cost of reserving a parking space? (If applicable, please specify different costs for covered or uncovered parking, for first, second, or third spaces, etc. E.g., "\$75 for first covered, \$50 for first uncovered; \$100 for each additional covered or uncovered")

18. Is there a waitlist for parking spaces? *Mark only one oval.*

- a. Yes
- b. No
- c. Other:

19. In addition to parking for tenants, does the property provide parking for any of the following users? *Check all that apply.*

- a. N/A - the property does not provide parking for any other user
- b. Property management
- c. Visitors
- d. Car sharing
- e. Nearby business employees
- f. Nearby retail customers
- g. Nearby residents
- h. General public - hourly
- i. General public - daily
- j. Other:

20. Do you think tenants are parking off-site? *Mark only one oval.*

- a. Yes
- b. No
- c. Other:

21. If you do think tenants park off-site, where and why?

22. Does the property provide any of the following to tenants? *Check all that apply.*

- a. RTD pass subsidy
- b. RTD service info (e.g., schedules and maps)
- c. Shuttle service
- d. Carshare membership subsidy
- e. Bikeshare membership subsidy
- f. Bike parking - uncovered
- g. Bike parking - covered
- h. Bike parking - secured (e.g., in a locker or locked room)
- i. Bike maintenance equipment
- j. Other:

23. Do you hear from tenants any recurring comments or complaints about parking or transportation in/around the property?



Contact Information

- 24. Property Name
- 25. Property Address - Street & City
- 26. Property Management Company
- 27. Property Manager Name
- 28. Property Manager Phone Number
- 29. Property Manager Email Address

Thank you!

30. Thanks for your help! RTD may follow up with questions. Please feel free to provide additional comment below.





ATTACHMENT E – CAR ACCESS REPORT (NATIONAL EQUITY ATLAS)



[Home](#) > [Indicators](#) > Car Access

Car access: Everyone needs reliable transportation access and in most American communities that means a car

Indicator group

Connectedness ▼

Choose your indicator

Car access ▼

Geography

Choose your geography type

Choose your geography

SELECT

COMPARE

Nation ▼

United States ▼

Car access ⓘ United States

Percent of households without a vehicle by race/ethnicity: United States; **Poverty:** All income levels; **Year:** 2022

SELECT BREAKDOWN ▼

FILTERS:

POVERTY ▼

YEAR ▼

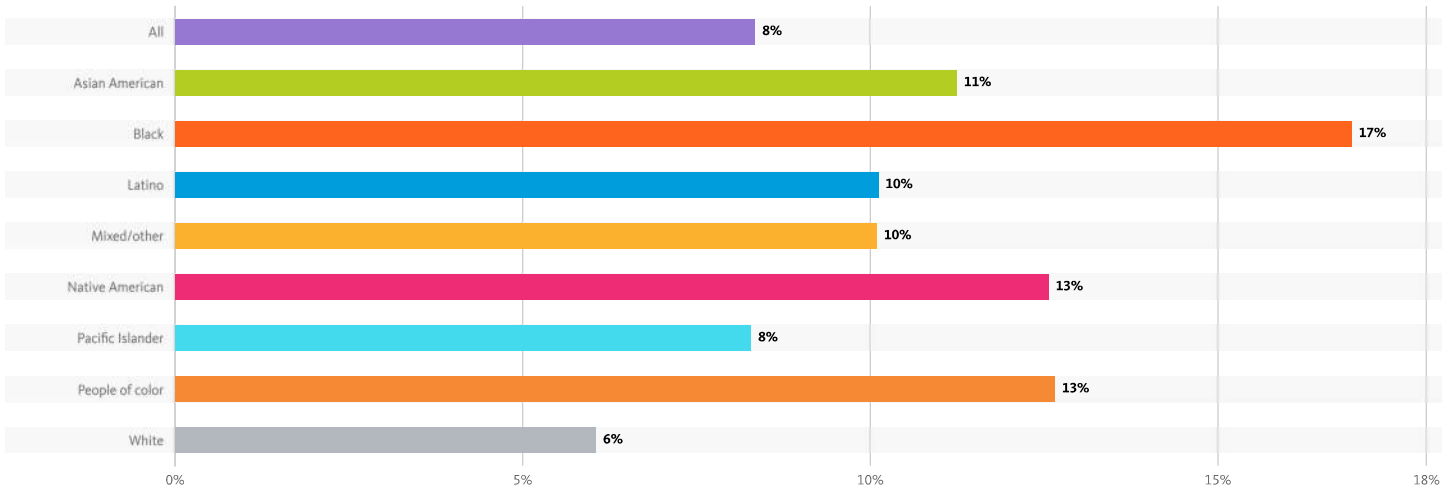


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Accept



WHAT IT SHOWS WHY IT MATTERS TOUR

Data source: IPUMS USA | National Equity Atlas

Powered by the [National Equity Atlas](#)

Insights & Analyses

National Equity Atlas

- Households living below 200 percent of the federal poverty are much more likely to lack car access (19 percent), compared with those living at or above 200 percent of the poverty level (5 percent).
- Female-headed households are less likely than male-headed households to have access to a vehicle for all racial and ethnic groups identified by the census, except for Native American households, for which the rates of being carless are similar (13 percent).
- Asian American, Latinx, Pacific Islander, and white immigrant households are less likely to have access to a vehicle compared to their US-born counterparts.

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Income and wealth disparities have caused people of color in the US to have less access to vehicles than white people. Racial segregation forged through the expropriation of land from Indigenous people and racially discriminatory practices such as redlining dispossessed communities of color and excluded them from economic prosperity. As a result, people of color are more likely to experience poverty and lack generational wealth than their white counterparts. This trend, along with [racially discriminatory pricing for auto loans](#) and [car insurance](#), makes car ownership more costly and drives inequities in car access between white people and people of color.

Strategies

Grow an equitable economy: Policies to ensure everyone can connect to opportunity

- Build robust [public transit systems](#) including buses, [bus rapid transit](#), and [shared mobility options](#) that connect low-income communities to jobs, education and training opportunities, and services.
- Create [transit-oriented developments \(TODs\)](#) in ways that expand affordability and access for low-income residents and prevent displacement of both people and small businesses.
- Expand [transit options](#) in rural communities, including van pools, shuttles, low-income car ownership programs, and bus routes.
- Make [driver's licenses](#) available for all drivers regardless of immigration status.
- At the federal level, [invest in public transportation infrastructure](#) in high-need communities and [cap interest rates on predatory car title loans](#).

Strategy in Action

Transit initiative increases mobility in North Central Montana. In the Great Plains area in

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neighboring regional transit systems. They also provide free transportation to polling places on election days and pick-up and drop-off service for Boys and Girls Club members during the summer. [Read more.](#)



Resources

- **Reports:** [Measures Matter: Ensuring Equitable Implementation of Los Angeles County Measures M & A](#); [Those Who Need it Most: Maximizing Transit Accessibility and Removing Barriers to Employment in Areas of Concentrated Poverty](#); [Too Far from Jobs: Spatial Mismatch and Hourly Workers](#); [TransitCenter](#); [Transportation Equity Caucus](#)
- **Data:** [The H+T® Affordability Index](#); [All Transit](#)

Related Indicators

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INDICATOR



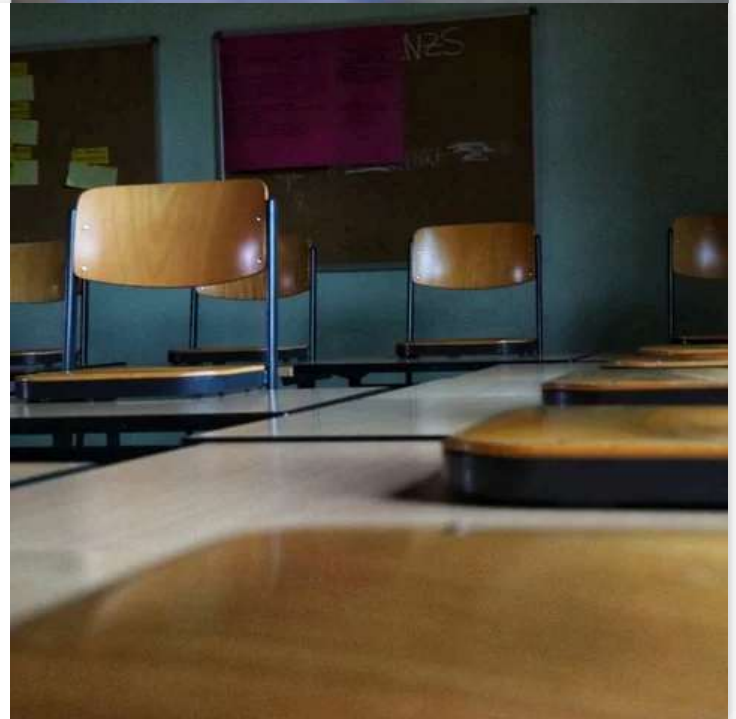
Poverty



INDICATOR



Neighborhood poverty



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Air Pollution



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