

Moffett Park Market Analysis

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Introduction

This report provides an overview of real estate market conditions and trends in the Moffett Park Specific Plan area. The analysis includes a summary of the current supply and estimated demand for housing, office, industrial, retail, and hotel uses in the Moffett Park Specific Plan area. The long-range demand estimates included in this report take into consideration both short-term financial feasibility of these uses and potential long-term future market cycles. Those cycles will include phases of high demand for space and construction activity and phases of stagnant or low development activity. While it is not possible to predict the timing of market cycles, the market analyses incorporate historical trend data and present demand estimates in high and low scenarios to account for potential market volatility.

The first section of this report summarizes the key findings for each of the analyzed land uses. This is followed by an overview of relevant demographic and employment trends. The next sections describe the housing, office, industrial, retail, and hotel analyses. The housing analysis includes an assessment of issues and opportunities related to affordable housing.

Impact of the COVID-19 Pandemic

Uncertainty exists about the full scope of the current global COVID-19 pandemic's economic impacts, and the pandemic's economic and market impacts are also rapidly changing. As a result, the data in this report does not capture the most recent impacts of the pandemic, but instead reflects longer-term trends and conditions shortly before the onset of the pandemic.

Ultimately, the COVID-19 pandemic will result in a significant decline in economic activity for a period of time, which will impact the residential and commercial market conditions in the Moffett Park plan area and surrounding region. However, it is important to recognize that the demand estimates presented in this report span a 20 year period through 2040; this period will include recovery from the pandemic and multiple future economic cycles of growth and recession. As a result, this report's demand estimates already incorporate consideration of fundamental, long-term competitive assets and opportunities that attract business investment and growth to the Moffett Park plan area. Examples include the area's strong regional transportation access, proximity to a highly-skilled workforce, location within the innovation- and technology-focused Silicon Valley economy, and concentration of major technology employers.

Despite this need to maintain a long-term perspective, the timing of an economic recovery is not currently known and could therefore influence the timing of growth in demand for housing and commercial uses in the Moffett Park plan area over the next several years. The COVID-19 pandemic may also result in changes in the density of workers at businesses, a potential increase in remote work for some jobs, and shifts in travel patterns—all of which could also influence the ultimate timing of residential and commercial demand and development activity.

Reference Geographies

The Specific Plan Area, referred to as “the Moffett Park plan area” or “the plan area” in this report, is located within the City of Sunnyvale at the northern edge of the city north of Highway 237 and south of the San Francisco Bay shoreline. Throughout this report the Moffett Park plan area is compared with a set of larger reference geographies. These include the City of Sunnyvale, Santa Clara County, and “market areas” within which the plan

area primarily competes for capturing demand and attracting development activity. The market areas are as follows:

- **Demographic and Employment Analyses:** Cities of Sunnyvale, Mountain View, Santa Clara, and San Jose.
- **Housing market area:** Cities of Sunnyvale, Mountain View, Santa Clara, and San Jose.
- **Office market area:** Cities of Sunnyvale, Mountain View, Santa Clara, and San Jose.
- **Industrial/Flex market area:** Cities of Sunnyvale, Mountain View, Santa Clara, and San Jose.
- **Retail trade area:** Varies by category of retail and shopping center; see the Retail Market Analysis section of this report.
- **Hotel market area:** Cities of Sunnyvale, Mountain View, and Santa Clara.

Key Findings

Housing

Over the next 20 years Sunnyvale could potentially capture demand for at least 21,000 additional housing units.

The Association of Bay Area Governments (ABAG) has allocated 163,000 additional households to Sunnyvale and the neighboring “market area” cities of Mountain View, Santa Clara, and San Jose from now until 2040. Assuming that Sunnyvale would retain its share of recent housing development at 13 percent, the city could capture at least 21,000 new housing units. If Sunnyvale were to double its share of housing development, the city could attract about 43,000 housing units by 2040.

Strong demand exists for multi-family housing units in Sunnyvale. Strong demand for multi-family housing units in the market area and Sunnyvale is reflected by high apartment rental rates and condominium sales prices. Areas zoned for multi-family housing development are often located in areas that are desirable for their proximity to jobs, amenities, and major automobile and transit connections.

Significant unmet demand for affordable housing exists in Sunnyvale. Rapidly increasing rents and housing prices have exacerbated the need for affordable housing across the region, including in Sunnyvale. Sunnyvale is falling far short of meeting its 2023 targets for adding housing affordable to lower income households, even as the city is on track to exceed its 2023 housing production target for housing affordable to “above moderate income” households.

Office

The rapidly growing technology industry is driving strong demand for office space in the market area cities of Sunnyvale, Mountain View, Santa Clara, and San Jose. The “Information” and “Professional, Scientific, and Technical Services” industries constitute 24 percent of all jobs in the market area overall and 38 percent of all jobs in Sunnyvale. Vacancy rates for office space in the market area and Sunnyvale declined in recent years—to seven percent overall in Sunnyvale—while rents rapidly climbed to an overall average of \$4.94 per square foot per month in Sunnyvale on a full-service gross basis. Significant development activity is occurring, with approximately five million square feet of office space currently under construction or approved for construction in Sunnyvale, and a total of over 24 million square feet in Sunnyvale, Mountain View, Santa Clara, and San Jose.

Demand for office space in Sunnyvale and neighboring cities of Mountain View, Santa Clara, and San Jose is estimated at between 11 million and 31 million square feet from now until 2040, depending on the pace of job growth and tech firm expansions in Silicon Valley. The high end of this range assumes that the average annual absorption of 1.5 million square feet of office space between 1998 and 2019 continues in these cities. This optimistic scenario of demand would rely on continued expansions of large corporate users, such as Google and Apple, in the market area. Based on a more conservative employment forecast released by ABAG in 2018, however, the demand for office space in the market area would be much lower at approximately 11 million square feet per year.

The Moffett Park plan area is a competitive location for future office development, as long as there are significant infrastructure, transportation, and other place-making investments in the area. The Moffett Park plan area is well-positioned to compete for a substantial share of the market area’s future demand, given the plan area’s location in Sunnyvale, strong transportation connections, and development interest from several major property owners. However, development will require continued concerted investment efforts by major property owners since the plan area also requires major investments in transportation and other infrastructure to support higher employment densities.

Industrial, Flex, and R&D

Demand exists for light industrial and flex space in the market area and Sunnyvale, but inventory is declining as many R&D and industrial parks are redeveloped into other uses. Low vacancy rates (six percent in Sunnyvale) and increasing rents (averaging \$3.10 per square foot per month in Sunnyvale in 2019 on a triple net basis for flex/R&D space) indicate that there is continued demand for these spaces from companies that need flex space for research, advanced manufacturing, and distribution uses. These businesses are typically interlinked tightly with the broader Silicon Valley economy. However, the inventory of lower cost spaces that are suitable for these types of firms is declining as these buildings are redeveloped into other higher intensity uses, including office, residential, and mixed-use developments. Preventing redevelopment and promoting new investment in these spaces may require strict zoning and land use limitations, policies for retaining some existing buildings, or adoption of policies requiring developers to replace or include these uses in new projects.

Retail

Future households and existing and new workers in the Moffett Park plan area will generate demand for new neighborhood-serving retail such as grocery stores, personal services, and restaurants. However, the plan area is unlikely to attract retailers and restaurants serving the larger region. These retailers view the plan area as an undesirable location since it is already served by existing concentrations of regional retail, with the closest located two miles south along El Camino Real and at areas such as Downtown Sunnyvale.

Demand for retail space in the Moffett Park plan area will largely depend on the number of future housing units added to the area. Each new household in the plan area is projected to generate demand for 50 square feet of neighborhood-serving retail space. As an illustrative example, if 10,000 housing units were to be added in the Moffett Park plan area and half this space was captured in the area, those households would generate demand for nearly 250,000 square feet of local retail space. This is based on average spending for households in Sunnyvale, which in 2019 had a median household income of around \$132,000. Workers will also generate some limited demand for retail, especially dining and food/beverage stores, but their spending potential and associated retail demand are significantly lower than households,¹ with this demand further reduced if employers continue to provide on-site cafeterias and other amenities for office workers that will reduce off-site worker spending.

The addition of new retail is largely contingent on the timing of residential development:

1. The plan area will not support significant retail development until there is a critical mass of residential development. Retailers and restaurants will be difficult to attract until there is a large concentration of households in the area, because daytime employees alone cannot support most retail businesses.
2. Sites on Mathilda or Java near Highway 237 will be the most desirable sites in the short term for major national retailers because they are more accessible to North Sunnyvale and other neighborhoods and are in locations with high vehicular traffic counts. As housing development is completed in other parts of the plan area, it can incrementally attract more “convenience” retail tenants (e.g. convenience or small grocery stores, restaurants, and experiential retailers) in the ground-floor spaces of the new mixed-use buildings. These types of retail tenants are more likely to be drawn to the improved pedestrian and bicycle infrastructure and other amenities in the planned activity centers.

¹ As described in the following Retail chapter on page 39, estimated average annual spending on neighborhood-serving retail for a Sunnyvale household is approximately \$22,500, while the estimated average annual spending for a worker on neighborhood-serving retail is approximately \$2,750, which does not account for on-site amenities.

The Moffett Park plan area could potentially support multiple neighborhood-serving shopping centers or retail nodes, depending on how many housing units are built and occupied, and on the priorities of individual property owners. Moffett Park could likely support a modest concentration of convenience retail with a minimum of 1,200 additional households, or a grocery-anchored neighborhood center with between 1,200 and 5,000 or more new households. Additional increments of growth beyond 5,000 housing units could potentially allow Moffett Park to support a primary grocery-anchored retail node, plus smaller nodes of convenience retail. The exact number, types, and locations of these shopping centers or nodes would vary depending on the locations, concentration, configuration, and quantity of housing and office/flex space in Moffett Park, plus the potential to capture demand from existing households in North Sunnyvale. The decisions and interests of major property owners—such as Google—will also influence the locations and sizes of retail concentrations in the plan area, depending on those owners’ visions for their properties.

Hotel

Driven by rapid employment growth and business activity in Santa Clara County, demand for hotels in Santa Clara County and Sunnyvale grew significantly over the past decade. Average occupancy rates and revenue per available room at hotels in Sunnyvale and neighboring Mountain View grew significantly since the Great Recession of 2008 to 2009, mirroring countywide trends. This strong performance is driving development activity resulting in a nearly six percent increase in hotel rooms in Santa Clara County between 2010 and 2019.

The hotel market area, which includes the cities of Sunnyvale, Mountain View, and Santa Clara, successfully attracts hotel development activity based on proximity and access to the cities’ large concentration of technology businesses. While hotel rooms in the market area account for 35 percent of the county’s existing inventory, they represent 46 percent of rooms in the pipeline, suggesting these cities are on track to capture a large share of the region’s expected growth in hotel room supply. Within the Moffett Park plan area itself there are 350 rooms under construction at two new hotel projects, and an additional 185 rooms may be added through renovation and reconstruction at the Hotel Matilda.

In the short term, there are multiple hotel projects in the pipeline to absorb demand, although hotel development activity is likely to largely cease until travel activity recovers from the impacts of the COVID-19 pandemic. Approved, planned, and proposed hotel development projects in Santa Clara County include over 8,000 rooms. Combined with hotels currently under construction, this development pipeline was already positioned to absorb substantial demand growth in the next five to ten years prior to the impacts of the COVID-19 pandemic. Over the long term, the Moffett Park plan area can attract new hotel development as travel activity resumes and demand grows, especially for business travelers.

Demographic and Employment Trends

This section reviews population and employment characteristics and trends in the City of Sunnyvale compared to the market area and Santa Clara County. The market area includes the cities of Sunnyvale, Mountain View, Santa Clara, and San Jose. The data in this section provides a larger context for the market analysis.

Approximately 93,000 workers were employed in Sunnyvale in 2017. According to the most recent estimate of employment from the U.S. Census Longitudinal Employer-Household Dynamics (LEHD) data set, Sunnyvale accounted for 13 percent of the total employment in the market area, as shown in Figure 1.

Sunnyvale's employment is highly specialized in the technology and information sectors. Located in northern Santa Clara County, which is the epicenter of the Silicon Valley economy, Sunnyvale has a high concentration of jobs in the Professional, Scientific, & Technical Services and Information sectors. A quarter of the city's employment was in Professional, Scientific, & Technical Services compared to 14 percent in the market area and Santa Clara County, as shown in Figure 1. Similarly, the Information sector accounted for 13 percent of total jobs in Sunnyvale, compared 10 percent in the market area.

Population and household growth in Sunnyvale were similar to the growth experienced in the larger market area and Santa Clara County from 2011 to 2018. During the 2011 to 2018 period, the total population in Sunnyvale, the market area, and the county grew at a rate of approximately eight percent. The number of households in each of the jurisdictions increased by approximately 5.5 percent, except for San Jose, which grew at a slightly greater rate of seven percent, as shown in Figure 2.

Two-thirds of households in Sunnyvale are non-family households and families without children. As Figure 3 shows, approximately two-thirds of Sunnyvale households were either non-family households or families without children in the 2014 to 2018 period. This is comparable to other market area cities and Santa Clara County, in which the share of non-family households and families without children ranged from 62 percent in San Jose to 73 percent in Mountain View.

Sunnyvale's population shares similar racial and ethnic composition compared to the City of Santa Clara, with a relatively high share of Asian residents and a lower share of Non-Hispanic White residents. As shown in Figure 4, in the 2014 to 2018 period, Sunnyvale had a higher share of Asian residents than Santa Clara County, at 46 percent versus 36 percent of the population, respectively. Of the other cities in the market area, Sunnyvale's racial composition most closely matches the City of Santa Clara in which 41 percent of residents were Asian. In contrast, Mountain View has a much higher share of Non-Hispanic White residents (45 percent) and lower share of Asian residents (31 percent).

Sunnyvale had the highest median household income in the market area in the 2014 to 2018 period. Sunnyvale's median household income was nearly \$132,000, the highest of all the cities in the larger market area (Sunnyvale, Mountain View, Santa Clara, and San Jose), as shown in Figure 2. By comparison, the median household income in Santa Clara County was approximately \$116,000.

Sunnyvale benefits from a high concentration of skilled labor in the region. Overall, northern Santa Clara County has a high concentration of residents with an advanced degree, as shown in Figure 5 and Figure 6. In the 2014 to 2018 period, one-third of Sunnyvale's population over the age of 25 had an advanced degree such as a master's, doctorate, or other professional school degree, compared to less than one-quarter in Santa Clara County. Mountain View had an even higher share with nearly 40 percent of its population age 25 years or older having obtained an advanced degree. The access to a talented workforce is one of the main reasons why Sunnyvale and the market area continue to be attractive locations for many types of businesses that need highly skilled labor, particularly in the technology sector.

FIGURE 1: EMPLOYMENT BY WORKPLACE GEOGRAPHY AND INDUSTRY, SUNNYVALE, MARKET AREA, AND SANTA CLARA COUNTY, 2017

	Sunnyvale		*Market Area		Santa Clara County	
	Jobs	Share	Jobs	Share	Jobs	Share
Agriculture, Forestry, Fishing & Hunting	4	0%	418	0%	2,969	0%
Mining, Quarrying, & Oil & Gas Extraction	1	0%	143	0%	256	0%
Utilities	1,021	1%	3,518	0%	4,182	0%
Construction	2,110	2%	36,937	5%	49,462	5%
Manufacturing	16,443	18%	98,082	13%	153,615	14%
Wholesale Trade	5,206	6%	30,353	4%	39,985	4%
Retail Trade	4,912	5%	58,051	8%	83,730	8%
Transportation & Warehousing	1,140	1%	16,355	2%	18,931	2%
Information	12,332	13%	70,505	10%	85,196	8%
Finance & Insurance	888	1%	14,257	2%	21,407	2%
Real Estate & Rental & Leasing	883	1%	9,922	1%	14,260	1%
Professional, Scientific, & Technical Services	23,738	25%	104,177	14%	151,536	14%
Management of Companies & Enterprises	437	0%	7,878	1%	13,715	1%
Administration & Support, Waste Management & Remediation	5,820	6%	54,238	7%	66,160	6%
Educational Services	3,127	3%	43,945	6%	82,051	8%
Health Care & Social Assistance	6,541	7%	78,581	11%	123,463	12%
Arts, Entertainment, & Recreation	769	1%	12,819	2%	17,583	2%
Accommodation & Food Services	5,796	6%	55,439	8%	83,302	8%
Other Services (excluding Public Administration)	1,485	2%	18,185	2%	28,514	3%
Public Administration	466	1%	16,303	2%	19,943	2%
Total	93,119	100%	730,106	100%	1,060,260	100%

*The market area includes the cities of Sunnyvale, Mountain View, Santa Clara, and San Jose.

Source: U.S. Census Longitudinal Employer-Household Dynamics (LEHD), 2017; Strategic Economics, 2020.

FIGURE 2: POPULATION AND HOUSEHOLD CHARACTERISTICS AND CHANGE, SUNNYVALE, MARKET AREA CITIES, AND SANTA CLARA COUNTY, 2011 TO 2014-2018 PERIOD

	2011	2018	Change 2011-2018	
			Number	Percent
Sunnyvale				
Total Population	140,482	152,323	11,841	8%
Total Households	53,122	55,938	2,816	5%
Average Household size	2.6	2.7	0.1	4%
Median Household Income	\$93,509	\$131,791	\$38,282	41%
Mountain View				
Total Population	74,327	80,993	6,666	9%
Total Households	31,890	33,707	1,817	6%
Average Household size	2.3	2.4	0.1	4%
Median Household Income	\$90,976	\$128,252	\$37,276	41%
Santa Clara				
Total Population	116,609	126,209	9,600	8%
Total Households	42,146	44,079	1,933	5%
Average Household size	2.7	2.8	0.1	4%
Median Household Income	\$86,004	\$116,257	\$30,253	35%
San Jose				
Total Population	953,497	1,026,658	73,161	8%
Total Households	300,675	321,835	21,160	7%
Average Household size	3.1	3.1	0.0	0%
Median Household Income	\$78,557	\$104,234	\$25,677	33%
Santa Clara County				
Total Population	1,786,927	1,922,200	135,273	8%
Total Households	601,185	635,525	34,340	6%
Average Household size	2.9	3.0	0.1	3%
Median Household Income	\$87,148	\$116,178	\$29,030	33%

Source: U.S. Census American Community Survey, 3-year estimate, 2011; 5-year estimate, 2014-2018; Strategic Economics, 2020.

FIGURE 3: HOUSEHOLDS BY TYPE, SUNNYVALE, MARKET AREA CITIES, AND SANTA CLARA COUNTY, 2014-2018 PERIOD

	Sunnyvale		Mountain View		Santa Clara		San Jose		Santa Clara County	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Families with Children	19,238	34%	9,198	27%	14,571	33%	121,902	38%	232,862	37%
Families without Children	18,873	34%	9,800	29%	14,894	34%	113,561	35%	223,578	35%
Householder Living Alone	12,273	22%	10,610	31%	10,257	23%	62,846	20%	130,866	21%
Other Non-Family Household	5,554	10%	4,099	12%	4,357	10%	23,526	7%	48,219	8%
Total	55,938		33,707		44,079		321,835		635,525	

Source: U.S. Census American Community Survey, 5-year estimate, 2014-2018; Strategic Economics, 2020.

FIGURE 4: RACE AND ETHNICITY OF POPULATION, SUNNYVALE, MARKET AREA CITIES, AND SANTA CLARA COUNTY, 2014-2018 PERIOD

	Sunnyvale		Mountain View		Santa Clara		San Jose		Santa Clara County	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Non-Hispanic White	47,548	31%	36,084	45%	42,663	34%	267,218	26%	615,912	32%
Hispanic/Latino	26,355	17%	14,439	18%	21,919	17%	328,157	32%	495,455	26%
Non-Hispanic Black or African American	2,462	2%	1,284	2%	3,609	3%	29,208	3%	45,379	2%
Non-Hispanic Asian	69,546	46%	25,332	31%	51,992	41%	360,641	35%	685,265	36%
Other	6,412	4%	3,854	5%	6,026	5%	41,434	4%	80,189	4%
Total	152,323		80,993		126,209		1,026,658		1,922,200	

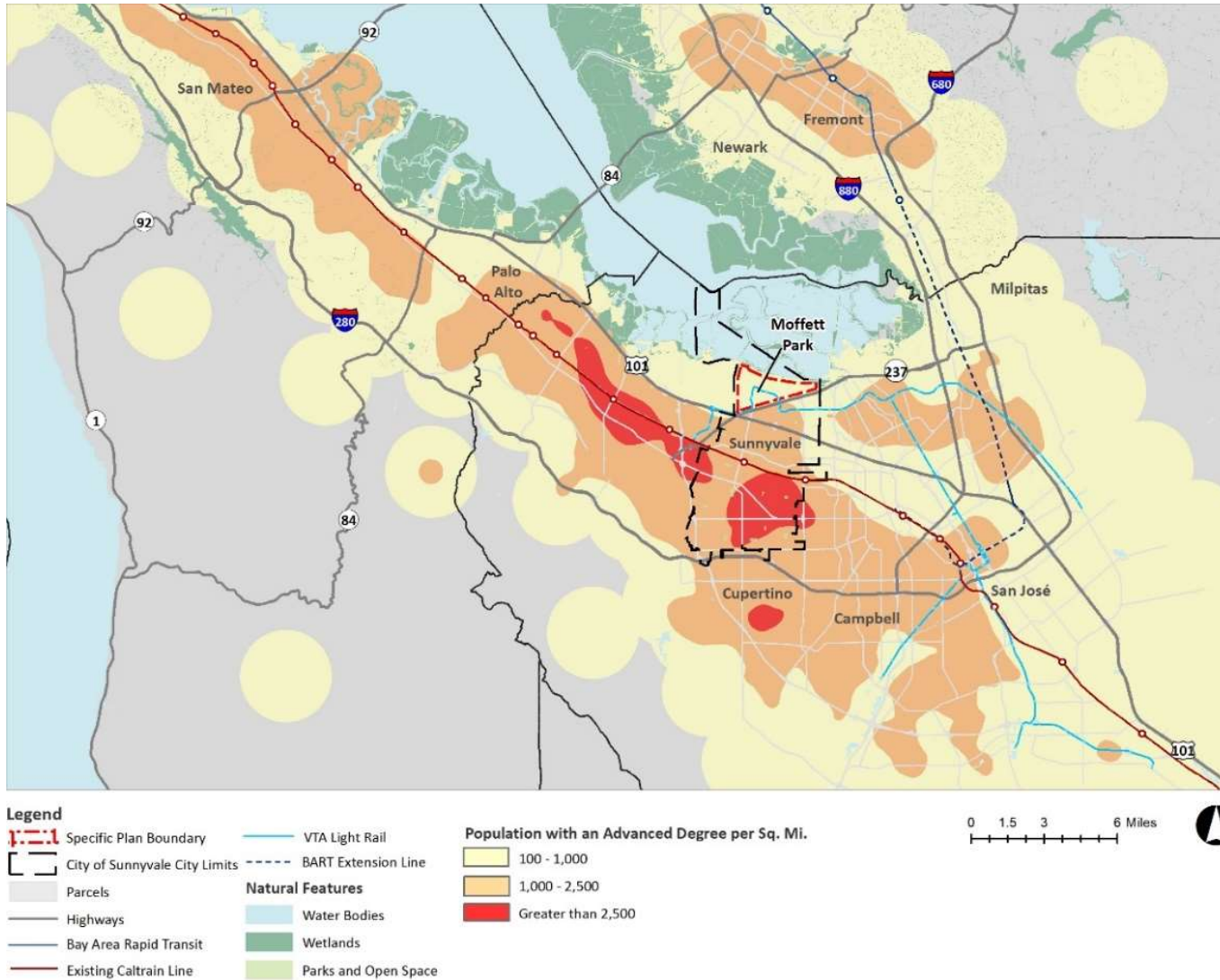
Source: U.S. Census American Community Survey, 5-year estimate, 2014-2018; Strategic Economics, 2020.

FIGURE 5: EDUCATIONAL ATTAINMENT OF THE POPULATION AGE 25 YEARS AND OLDER, SUNNYVALE, MARKET AREA CITIES, AND SANTA CLARA COUNTY, 2014-2018 PERIOD

	Sunnyvale		Mountain View		Santa Clara		San Jose		Santa Clara County	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
High School Degree or Less	20,494	19%	9,440	16%	17,995	21%	230,169	33%	349,382	26%
Some College	19,656	18%	9,169	16%	17,705	21%	171,182	24%	294,921	22%
Bachelor's Degree	33,573	30%	17,122	29%	26,222	31%	177,902	25%	361,683	27%
Advanced Degree	36,995	33%	23,289	39%	24,037	28%	121,477	17%	317,815	24%
Total	110,718		59,020		85,959		700,730		1,323,801	

Source: U.S. Census American Community Survey, 5-year estimate, 2014-2018; Strategic Economics, 2020.

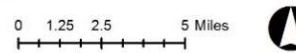
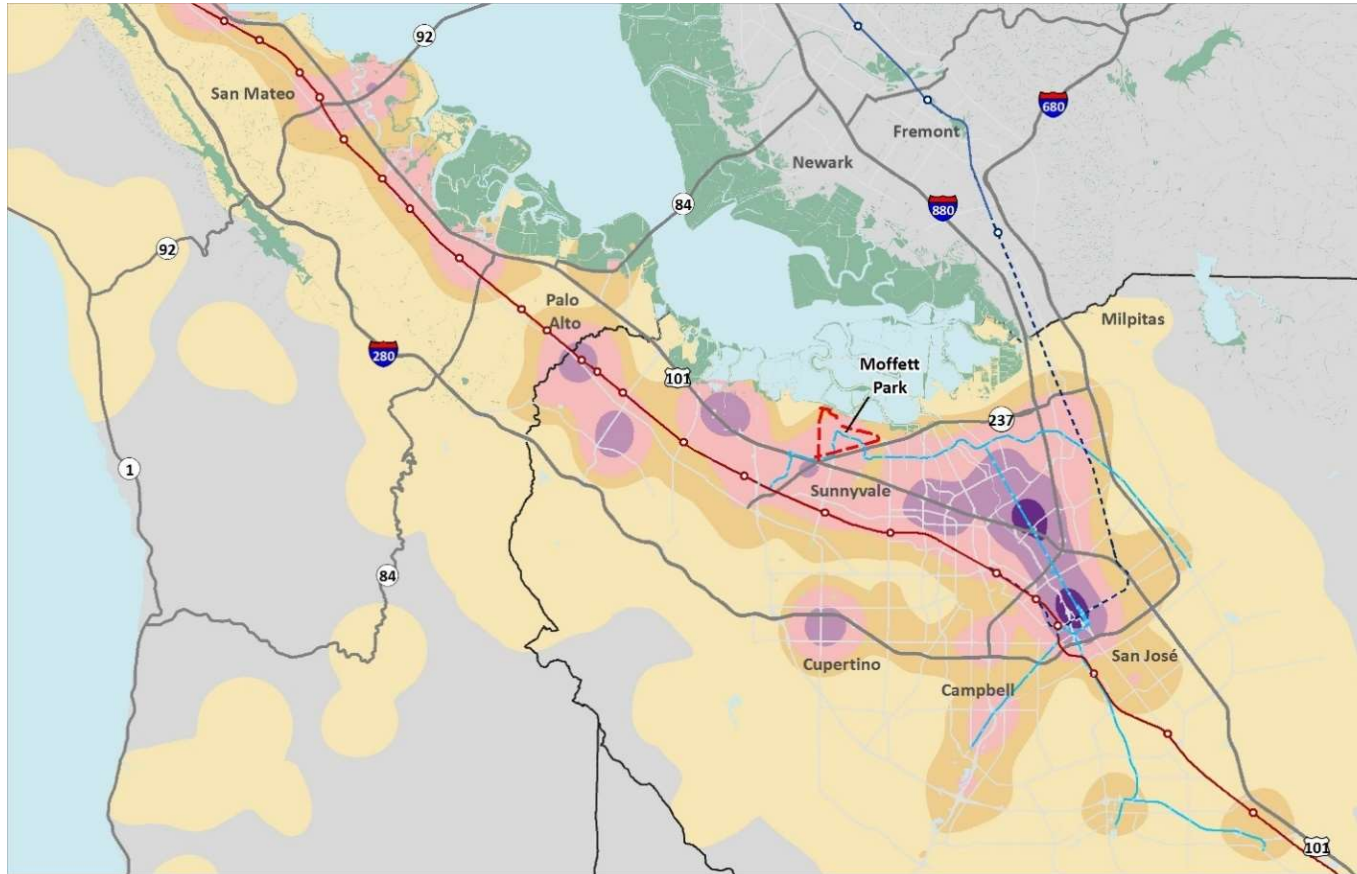
FIGURE 6: DENSITY OF POPULATION AGE 25 YEARS AND OLDER WITH ADVANCED DEGREE, 2013-2017 PERIOD



“Advanced” degrees include Master’s, Professional, and Doctorate degrees.

Source: U.S. Census American Community Survey, 5-year estimate, 2013-2017; Strategic Economics, 2020.

FIGURE 7: DENSITY OF EMPLOYMENT, 2013-2017 PERIOD



Source: U.S. Census LEHD, 2017; Strategic Economics, 2020.

Housing Market

This section provides an overview of Sunnyvale’s housing market in the context of the market area and Santa Clara County. The market area includes the cities of Sunnyvale, Mountain View, Santa Clara, and San Jose. The section begins by examining current housing stock and trends in housing production and home prices and rents. The section then reviews projections for future housing demand, followed by a discussion of the implications for the Moffett Park plan area.

Sunnyvale Housing Market Trends

Housing Stock Characteristics

Sunnyvale’s housing stock has a larger share of multi-family units and renter households than the market area and Santa Clara County. Figure 8 shows that while the majority of Sunnyvale’s housing stock consisted of single-family units as of the 2014 to 2018 period, 44 percent was multi-family units. In contrast, multi-family units constitute 37 percent of housing units in the market area and 34 percent in Santa Clara County. Unlike Santa Clara County and the market area, the majority of units in Sunnyvale (54 percent) were renter occupied, indicating that some residents in single-family units are likely renters.

FIGURE 8: HOUSING STOCK CHARACTERISTICS, SUNNYVALE, MARKET AREA, SANTA CLARA COUNTY, 2014-2018 PERIOD

	Sunnyvale		Market Area		Santa Clara County	
	Units	Percent	Units	Percent	Units	Percent
Housing Units						
Single-Family	29,167	50%	281,008	59%	420,557	63%
Multi-Family	25,946	44%	178,338	37%	225,180	34%
Other	3,802	6%	16,307	3%	19,628	3%
Total	58,915		475,653		665,365	
Occupied Units						
Owner Occupied	25,936	46%	243,061	53%	360,658	57%
Renter Occupied	30,002	54%	212,498	47%	274,867	43%
Total	55,938		455,559		635,525	

Note: The market area includes the cities of Sunnyvale, Mountain View, Santa Clara, and San Jose.

Source: U.S. Census American Community Survey, 2014-2018; Strategic Economics, 2020.

Home Prices and Rents

The Bay Area is experiencing a regional housing crisis. Rapid job growth has outpaced housing construction efforts in the Bay Area, leading to a housing crisis that is among the most severe in the nation.² From 2010 to 2018, the Bay Area added approximately 6.8 jobs for everyone one housing unit built.³

Ownership housing prices increased dramatically across the market area. From 2012 to 2019, the price of single-family homes doubled in Sunnyvale, Mountain View, Santa Clara, San Jose, and Santa Clara County, as shown in Figure 9. Condominium sales prices increased at an even faster rate, with the fastest growth in Sunnyvale.

² <http://2040.planbayarea.org/the-bay-area-today>

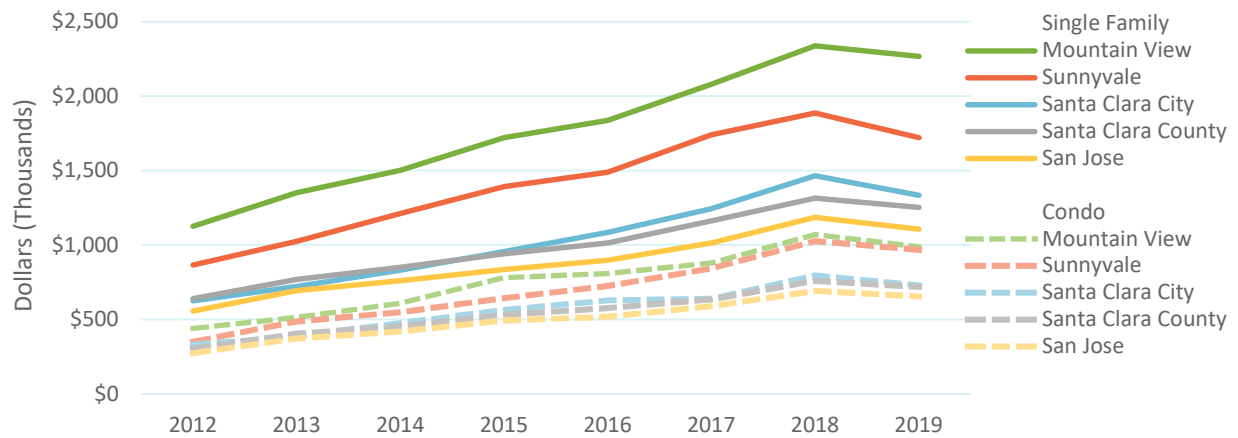
³ https://mtc.ca.gov/sites/default/files/CASA_Compact.pdf

Condominium prices increased by 2.75 times in Sunnyvale and by around 2.3 times in Mountain View, Santa Clara, San Jose, and Santa Clara County.

Rents have also increased steeply in recent years. Since the recovery from the Great Recession, rents have increased in Sunnyvale, Mountain View, Santa Clara, San Jose, and Santa Clara County. From 2012 to 2019, rents per square foot increased the most in Sunnyvale at a rate of 36 percent, followed by Mountain View at 31 percent, as shown in Figure 10. These rates exceeded rent appreciation of 27 percent and 29 percent in San Jose and Santa Clara County, respectively.

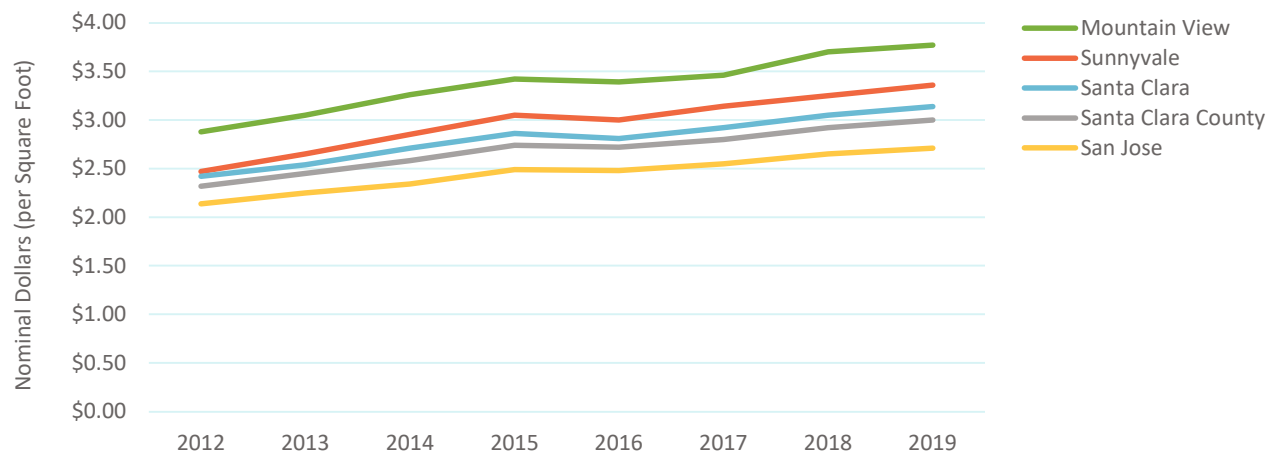
Sunnyvale’s home prices and rents are higher than most market area cities and Santa Clara County, but slightly lower than Mountain View. As shown in Figure 9 and Figure 10, median single-family residence and condominium prices and average apartment rents per square foot in Sunnyvale remained higher than the Cities of Santa Clara, and San Jose, and higher than Santa Clara County during all time periods.

FIGURE 9: MEDIAN SINGLE-FAMILY RESIDENCE AND CONDOMINIUM SALE PRICES, SUNNYVALE, MARKET AREA CITIES, AND SANTA CLARA COUNTY, 2012 TO 2019



Source: Redfin, 2020; Strategic Economics, 2020.

FIGURE 10: AVERAGE EFFECTIVE APARTMENT RENT PER SQUARE FOOT, 2012 TO 2019



Source: Costar, 2020; Strategic Economics, 2020.

Recent Housing Development and Planned Growth

Sunnyvale’s share of overall housing unit permitting activity matches the city’s share of existing total housing units in the market area and Santa Clara County. As shown in Figure 11: Total Building Permits for New Housing Construction, 2008 to 2019, data from the U.S. Department of Housing and Urban Development indicates that Sunnyvale permitted over 6,400 housing units for construction between 2008 and 2019. This represented 13 percent and 10 percent of permits issued in the market area and Santa Clara County, respectively. This closely matches Sunnyvale’s 12.3 percent share of existing housing units in the market area and 8.9 percent share of Santa Clara County units.

About 60 percent of new housing permits issued in Sunnyvale between 2008 and 2019 were for multi-family units. In contrast, multi-family units made up almost all the permitting activity in the market area and Santa Clara County during the same period (85 percent and 74 respectively), as shown in Figure 11: Total Building Permits for New Housing Construction, 2008 to 2019.

Sunnyvale’s current progress toward its Regional Housing Needs Allocation (RHNA) goals demonstrates the outstanding need for housing. The state mandate, Regional Housing Needs Allocation, or RHNA, estimates the total number of housing units that each California jurisdiction needs to build and at what affordability levels during a specific time period. Figure 12 shows that as of 2019, Sunnyvale had reached 42 percent of its total goal during the current RHNA period (2015-2023). To meet its RHNA goals by 2023 the city will need to permit at least 3,136 more housing units, all of which would need to be for households at a moderate-income level or below.⁴

The City of Sunnyvale and its neighboring communities are planning to allow significant amounts of additional housing unit growth in targeted areas. As shown in Figure 13 and Figure 14, there are several locations slated for future housing development near the Moffett Park plan area. Planned areas for growth in the City of Sunnyvale include Peery Park, Downtown Sunnyvale, and Lawrence Station, which together could accommodate approximately 3,900 housing units in the city.

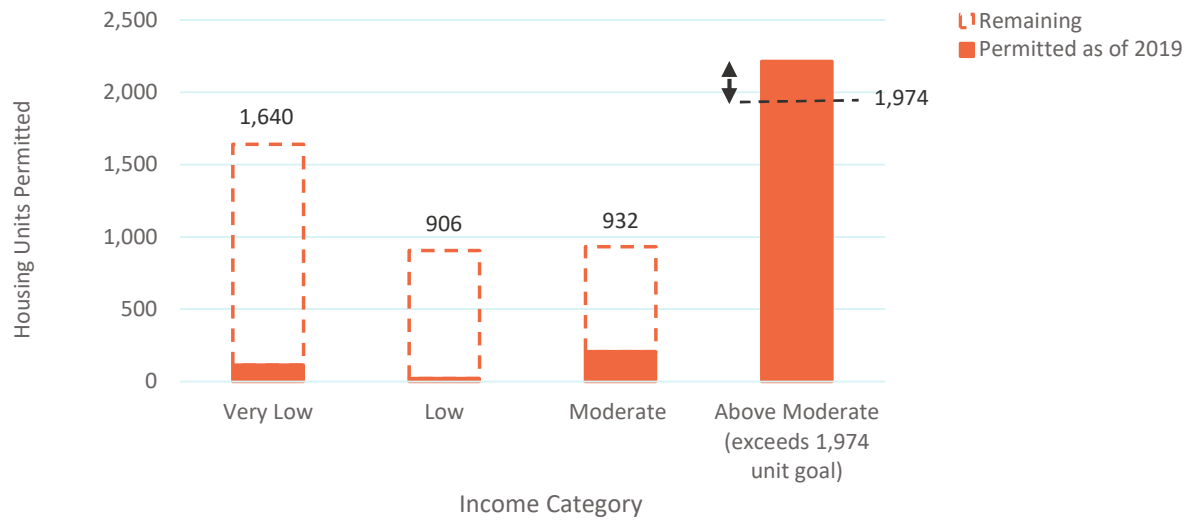
FIGURE 11: TOTAL BUILDING PERMITS FOR NEW HOUSING CONSTRUCTION, 2008 TO 2019

	Sunnyvale			Market Area	Santa Clara County
	Units	% of Market Area	% of County		Units
Single-Family	2,446	35%	14%	7,089	17,415
Multi-Family	4,037	10%	8%	41,747	50,285
Total	6,483	13%	10%	48,836	67,700
% Single Family	38%			15%	26%
% Multi-Family	62%			85%	74%

Source: HUD SOCDs, 2020; Strategic Economics, 2020.

⁴ Moderate income includes those making 80 to 120 percent the area median income (AMI).

FIGURE 12: SUNNYVALE REGIONAL HOUSING NEEDS ALLOCATION PROGRESS REPORT, 2019



Note: RHNA goals are based on 2015-2023 targets. Extremely low income includes those making under 30 percent AMI, very low income includes those making 30 to 50 percent AMI, low income includes those making 50 to 80 percent AMI, and moderate income includes those making 80 to 120 percent AMI.

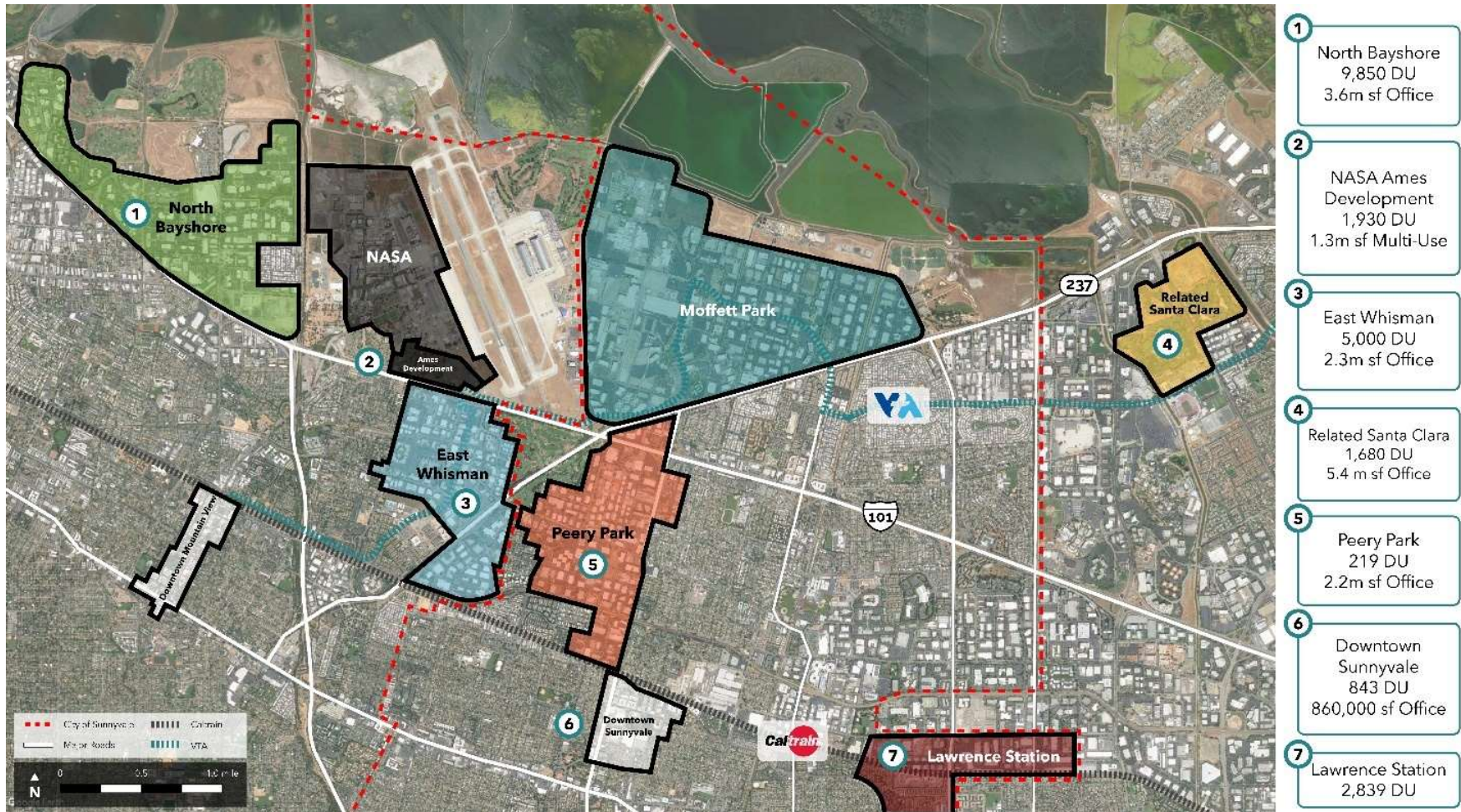
Source: City of Sunnyvale, 2020; Strategic Economics, 2020.

FIGURE 13: PLANNED MIXED-USE OFFICE DEVELOPMENT PROJECTS IN AND NEAR SUNNYVALE, 2020

Site	Jurisdiction	Housing Units	Office Sq. Ft. (Millions)
North Bayshore	City of Mountain View	9,850	3.6
NASA Ames Development	Unincorporated Santa Clara County	1,930	1.3
East Whitman	City of Mountain View	5,000	2.3
Related Santa Clara	City of Santa Clara	1,680	5.4
Peery Park	City of Sunnyvale	219	2.2
Downtown Sunnyvale	City of Sunnyvale	843	0.9
Lawrence Station	City of Sunnyvale	2,839	N/A

Source: Raimi + Associates, 2019.

FIGURE 14: AREAS PLANNED FOR FUTURE SIGNIFICANT HOUSING DEVELOPMENT



Source: North Bayshore Precise Plan (2014), NASA Ames Development Plan (2002), East Whisman Precise Plan (2019), Related Santa Clara, Peery Park Specific Plan (2016), Downtown Specific Plan (2013), Lawrence Station Area Plan (2016); Raimi + Associates, 2019.

Housing Demand Estimate

A potential range of future demand for new housing units in Sunnyvale and the Moffett Park plan area in the short term (2020-2030) and long term (2030-2040) was calculated according to the methodology described below and shown in Figure 15.

- ABAG projections.** The housing demand estimates were based on the Association of Bay Area Governments' (ABAG) household projections for the cities of Sunnyvale, Mountain View, Santa Clara, and San Jose, released in November 2018. The projections for each of these cities were aggregated to determine a total household-driven future housing demand estimate for the entire market area. Although ABAG also produces a household growth projection for Sunnyvale itself, the use of a projection for the entire market area recognizes that Sunnyvale could capture a varying share of this larger pool of demand.
- Scenario 1.** This scenario provides a low estimate of future housing demand in Sunnyvale by assuming Sunnyvale's capture rate of housing unit demand growth in the market area matches Sunnyvale's 13 percent share of market area housing unit permitting activity from 2008 to 2019.
- Scenario 2.** This scenario provides a high estimate of future housing demand in Sunnyvale by assuming Sunnyvale's capture rate of market area demand growth doubles to 26 percent.
- Illustrative Moffett Park Plan Area Capture Rate.** Availability of land and concentrated growth of jobs in the Moffett Park plan area suggests that the plan area could capture the majority share of Sunnyvale's housing development over the next 20 years. Figure 15 illustrates potential housing unit growth in the plan area if it captures 75 percent of future demand in Scenarios 1 and 2.

FIGURE 15: PROJECTED HOUSING DEMAND, MOFFETT PARK, SUNNYVALE, MARKET AREA, 2020 TO 2040

	Scenario 1		Scenario 2	
	2020-2030	2030-2040	2020-2030	2030-2040
Market Area				
Projected Net New Households	67,230	96,240	67,230	96,240
Sunnyvale				
% of Market Area Growth	13%	13%	26%	26%
New Unit Demand	8,768	12,552	17,537	25,104
Moffett Park				
% of Sunnyvale Demand (illustrative capture rate)	75%	75%	75%	75%
Illustrative New Unit Demand	6,576	9,414	13,152	18,828

Source: Association of Bay Area Governments (ABAG), 2019; Strategic Economics, 2020.

Based on these assumptions, from 2020 to 2040 the estimated housing demand in Sunnyvale would range from 21,000 to 43,000 new units. By 2040, the market area could require more than 163,000 new housing units. If Sunnyvale continues to represent its current share of housing permitting activity in the market area (13 percent), the city will capture demand for up to 21,000 units in the next 20 years. If Sunnyvale captures twice as much as its current share of housing permitting activity in the market area, it will capture demand for 43,000 new units.

While there is a notable amount of areas planned to accommodate housing growth in Sunnyvale and surrounding cities, future development activity may have little impact on future housing demand due to years of severe housing shortages in the region. Figure 13 and Figure 14 show the presence of multiple areas planned to accommodate significant housing development in and near Sunnyvale. However, development within these areas

may not substantially reduce housing demand that could be captured in Sunnyvale. The regional housing crisis has created a severe housing deficit, which combined with potentially large office growth (as shown in the “Office Market” section of this report) suggests that future housing demand will remain strong despite new additions to the immediate area’s housing supply.

Implications for the Moffett Park Plan Area

By 2040 demand for housing in the Moffett Park plan area could total between 16,000 and 32,000 housing units if Sunnyvale captures 75 percent of citywide housing demand. Assuming most new housing in Sunnyvale is built in the Moffett Park plan area, the plan area could capture demand for nearly 16,000 new units. Should Sunnyvale double its share of the market area’s housing development activity and should most of Sunnyvale’s residential development occur in the plan area, then the plan area could capture demand for nearly 32,000 new units.

The market is strong for dense multi-family development. Condominium prices and rents have rapidly increased in the market area and the county. Additionally, Sunnyvale and the other market area cities have a high share of families without children, single-person, and other non-family households (Figure 3). Taken together, these trends suggest demand for relatively dense multi-family housing, particularly one-and two-bedroom units.

Affordable Housing

There is significant unmet demand for affordable housing in Sunnyvale. High rents and housing prices have exacerbated the need for affordable housing across the region. However, as Figure 12 showed, the City of Sunnyvale is well below its RHNA targets for construction of new housing units in the lower income categories. The City has only reached about 22.2 percent of its moderate housing goal, 2.3 percent of its low-income housing goal, and 7.0 percent of its very low-income goal.

High development costs are a significant challenge for building more affordable housing. According to the City’s current Housing Element, high land and construction costs pose the most significant barriers to building affordable housing. Additionally, the cost to construct new housing—including factors such as materials, labor, fees, and land—rose dramatically in recent years. Income-restricted housing units are also challenging to deliver since additional funding (from a variety of public and private sources) is required to cover the gap between development costs and the rents or sales prices paid by residents. These gaps in financing can be significant. A recent affordable housing study estimated that in Santa Clara County the average cost for building a unit affordable to households at or below “low-income” (households earning 80 percent of Area Median Income and lower) is \$462,000 (see Figure 16).⁵

Planned updates to the City of Sunnyvale’s inclusionary housing policy provide an opportunity to expand affordable housing production in Sunnyvale. The City currently has an inclusionary housing policy that requires residential ownership (for-sale) development projects to provide 12.5 percent of units on-site for moderate-income households (between 80 and 120 percent of area median income). The requirement may soon increase to 15 percent. The City is also planning to implement a 15 percent inclusionary requirement on new multifamily rental properties, with 10 percent being affordable to low-income households (80 percent AMI and below) and five percent being affordable to very low-income households (50 percent AMI and below).⁶

⁵“Affordable Housing Nexus Studies, County of Santa Clara.” Keyser Marston Associates, Inc., April 2018.

<https://www.sccgov.org/sites/osh/HousingandCommunityDevelopment/Documents/County%20of%20Santa%20Clara%20Affordable%20Housing%20Nexus%20Studies%20Public%20Review%20Draft.%2004-04-2018.pdf>

⁶ Previously the City of Sunnyvale did not have an inclusionary requirement for rental housing. The Palmer/Sixth Street Properties L.P. v. City of Los Angeles case decided in 2009 had previously precluded California cities from requiring long term rent restrictions or inclusionary requirements on rental units. In 2017, Governor Brown signed AB 1505 to restore cities’ and counties’ ability to require on-site affordable units within rental projects.

The Moffett Park plan area has a limited number of amenities attractive for affordable housing development.

Housing projects applying for tax credits can receive “locational amenity” points for being within a quarter-mile of certain amenities such as public transportation.⁷ The Moffett Park plan area has a high degree of public transportation. The area contains four VTA light rail stations along VTA’s Orange line with 15-minute headways during the weekday peak and midday hours and 20-minute headways on weekends.⁸ However, the plan area currently lacks proximity to other important amenities such as a grocery store, pharmacy, public school, or medical facilities.

FIGURE 16: SANTA CLARA COUNTY AFFORDABILITY GAP FOR PRODUCING HOUSING UNITS AFFORDABLE TO HOUSEHOLDS AT DIFFERENT INCOME CATEGORIES, 2018 (2018 DOLLARS)



Source: Keyser Marston Associates, 2018; Strategic Economics, 2020.

⁷ To receive full points for transit, the system must have at least 30-minute headways.

⁸ <https://newservice.vta.org/routes/orange-line>

Office Market

This section provides an overview of Sunnyvale’s office market in the context of the market area, which includes the cities of Sunnyvale, Mountain View, Santa Clara, and San Jose. The analysis is based on office market data, publicly available development information, and interviews with brokers with a long history of experience in Sunnyvale and the immediate region. The section begins with an overview of current office supply and conditions, followed by a description of office trends and planned development. The section also includes projections for future office demand and concludes with a discussion of the implications for the Moffett Park plan area.

Office Supply and Performance

Sunnyvale’s office inventory accounts for a significant share of the market area and is among its strongest performing. As shown in Figure 17: Office and R&D Inventory, Vacancy Rate, Absorption, and Rents, Moffett Park, Sunnyvale and Market Area Cities, 201, about 20 percent of the market area’s total office inventory by square feet is in Sunnyvale. Of the market area cities, Sunnyvale has the second lowest vacancy rate and second highest office rents behind Mountain View.

The Moffett Park plan area constitutes approximately 60 percent of Sunnyvale’s office space. Based on data from CoStar, a real estate data service, the Moffett Park plan area included approximately 11 million square feet of office space in 2019, as shown in Figure 17.

The Silicon Valley office market has been performing well in recent years due to rapid growth in the information and technology industry. Figure 18 shows that in recent years vacancy rates have declined to very low rates, and Figure 19 demonstrates the rapid climb in rents. Low vacancy, high annual net absorption of office space (Figure 20), and high rents across the market area all indicate strong demand for office space.

Although absorption of office space in the market area varies based on market cycles, long-term average annual net absorption has remained consistent over the past two decades. Figure 20 shows the annual net absorption for the market area from 1998 to 2019.⁹ During this time, the net absorption was negative during the years following the dot-com bubble and the Great Recession. However, overall average annual absorption of office space remained positive throughout this period at slightly more than 1.5 million square feet per year. Average annual absorption was also similar in the 2008 to 2019 period alone.

Most jobs in the Moffett Park plan area are in the technology and information industry. Figure 21 shows that nearly half of all jobs in the plan area are in the Information sector, and another 40 percent are in Professional, Scientific, & Technical Services. Within the Moffett Park plan area and Silicon Valley generally these sectors largely consist of jobs and businesses in or related to the tech industry. Google is the largest employer in the Moffett Park plan area, followed by other large technology firms including Juniper Networks, Lockheed Martin, Amazon, and NetApp.

⁹ Annual net absorption is calculated by subtracting the total amount of leased square footage by the total amount of vacated square footage in a year.

FIGURE 17: OFFICE AND R&D INVENTORY, VACANCY RATE, ABSORPTION, AND RENTS, MOFFETT PARK, SUNNYVALE AND MARKET AREA CITIES, 2019

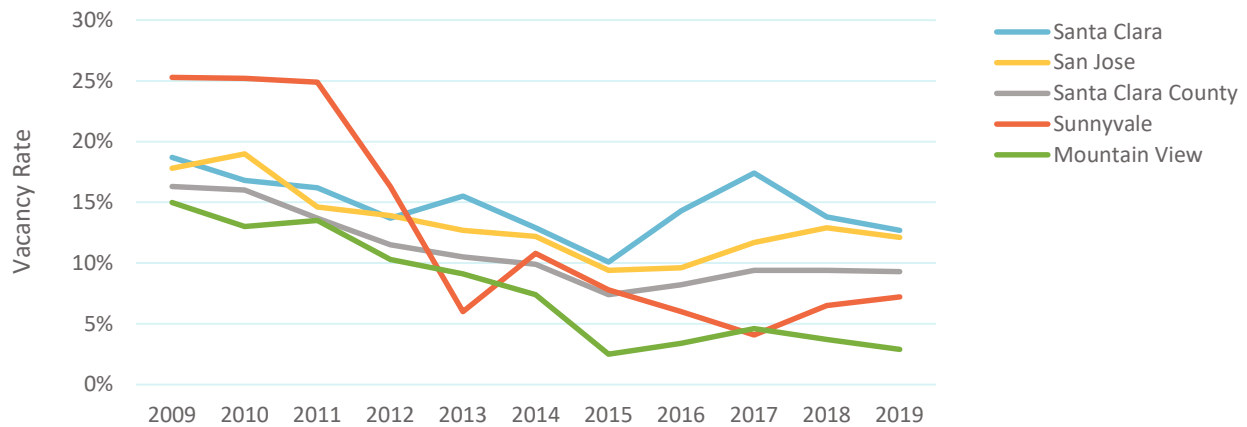
	Rentable Building Area (Sq Ft)	Vacancy Rate	Average Monthly Rent
Sunnyvale	19,239,139	7%	\$4.94
Moffett Park	11,012,533	5%	N/A
Mountain View	12,862,214	3%	\$5.99
Santa Clara	20,694,775	13%	\$3.19
San Jose	42,082,661	12%	\$3.51
Market Area Total*	94,878,789		

*The market area includes the cities of Sunnyvale, Mountain View, Santa Clara, and San Jose.

Rents are shown on a full-service gross basis.

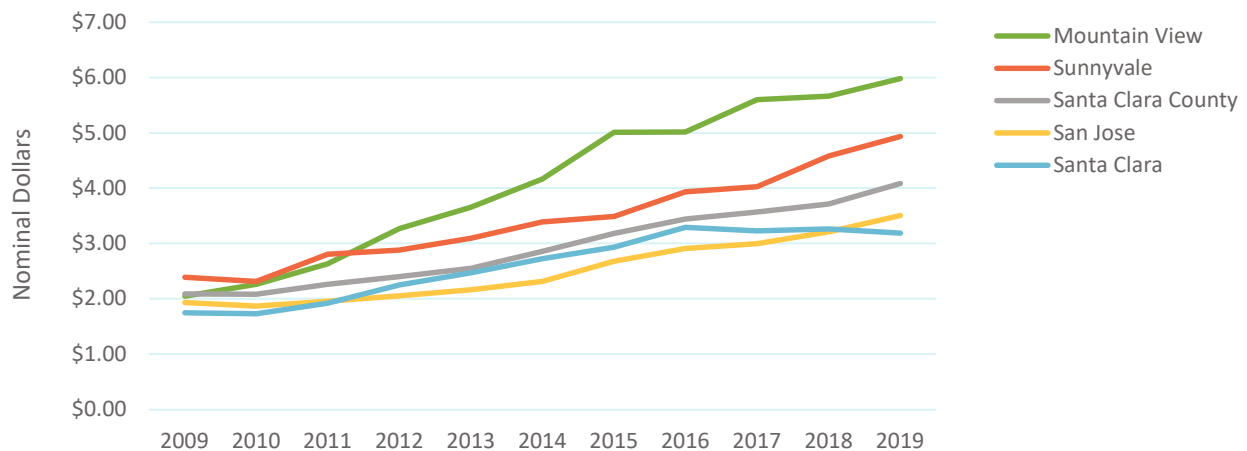
Source: Costar, 2020; Strategic Economics, 2020.

FIGURE 18: OFFICE VACANCY RATES, SUNNYVALE AND MARKET AREA CITIES, 2009 TO 2019



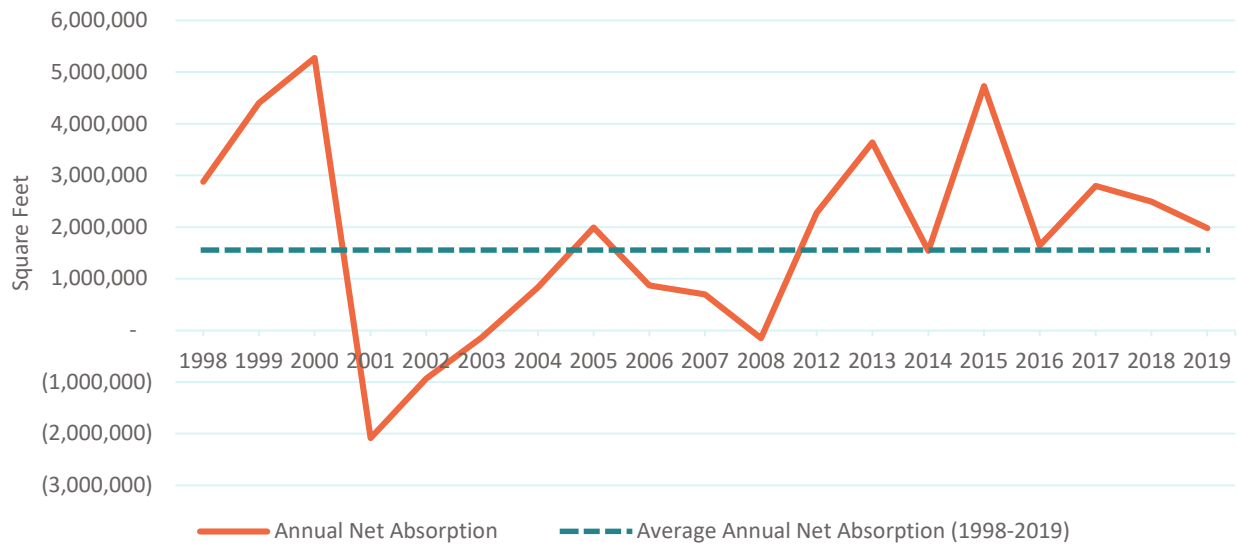
Source: Costar, 2020; Strategic Economics, 2020.

FIGURE 19: GROSS OFFICE RENTS PER SQUARE FOOT, SUNNYVALE AND MARKET AREA CITIES, 2009 TO 2019



Source: Costar, 2020; Strategic Economics, 2020.

FIGURE 20: ANNUAL NET ABSORPTION, MARKET AREA, 1998 TO 2019



Note: Overall average annual net absorption from 1998 to 2019 was 1,559,450 square feet.
 Source: Costar, 2020; Strategic Economics, 2020.

FIGURE 21: TOP INDUSTRY SECTORS IN MOFFETT PARK, 2019



Note: There are approximately 35,212 total jobs in Moffett Park, based on City business license data and supplemental data [reported](#) directly by employers.
 Source: City of Sunnyvale, 2019; Strategic Economics, 2020.

Recent Construction and Planned Development

The following analysis of planned and proposed, approved, and under construction office development projects in the market area cities was based on information published by the Cities of Sunnyvale, Mountain View, Santa Clara, and San Jose.

The “pipeline” of planned/proposed, approved, and under construction office development projects in the market area include a total of approximately 35 million square feet of office space, with 18 percent of this space located in projects in Sunnyvale. Figure 22 shows that a substantial amount of office development is planned, approved, or under construction development in each of the market cities. As shown in Figure 23, 37 percent of

this space is currently under construction, while 30 percent is planned/proposed and therefore less certain to be built. These counts are estimates since the configuration and status of projects change over time.

Some new and planned development is responding to a trend of large companies seeking office spaces that are larger than their current needs in order to secure a future path of growth. According to local brokers interviewed for this report, developers are currently building or planning projects for large single tenant office buildings to accommodate companies requiring space for future expansions. For example, a large company using 150,000 square feet for current operations may be looking to leasing twice as much space and up to 1 million square feet.

ABAG forecasts continued rapid growth of jobs in office-based industry sectors in the market area over the next 20 years. Figure 24 shows ABAG’s employment forecasts through 2040, which indicate market area job growth outpacing the total Bay Area region. ABAG projects that jobs in largely office-based industry sectors¹⁰ in the market area will grow by seven percent from 2030 to 2040 and by eight percent from 2030 to 2040, compared to two percent and six percent respectively for the Bay Area region.

FIGURE 22: OFFICE PIPELINE DEVELOPMENT BY STATUS, SUNNYVALE AND MARKET CITIES, 2019

	Planned/Proposed		Approved		Under Construction	
	Sq. Ft.	Projects	Sq. Ft.	Projects	Sq. Ft.	Projects
Mountain View	1,095,552	4	635,350	4	2,181,477	5
Santa Clara	4,802,403	3	3,688,000	2	3,035,219	4
San Jose	3,350,000	4	4,694,652	6	5,047,758	9
Sunnyvale	1,341,627	8	2,478,743	11	2,599,919	8
Total	10,589,582	19	11,496,745	23	12,864,373	26

Source: City of Mountain View, December 2019; City of Santa Clara, December 2019; City of San Jose, December 2019; City of Sunnyvale, December 2019; Strategic Economics, 2020.

FIGURE 23: PROJECTED OFFICE PIPELINE DEVELOPMENT (SQ. FT.) IN THE MARKET AREA, 2019

	Total Pipeline
Under Construction	12,864,373
Approved	11,496,745
Planned/Proposed	10,589,582
Total	34,950,700

Source: Cities of Mountain View, Santa Clara San Jose, and Sunnyvale, December 2019; Strategic Economics, 2020.

¹⁰ “Office-based” industry sectors include jobs in the Finance and Professional Services and Information industry sectors.

FIGURE 24: ABAG EMPLOYMENT PROJECTIONS FOR JOBS IN OFFICE-BASED INDUSTRIES, 9-COUNTY BAY AREA AND MARKET AREA, 2020 TO 2040

	2020	2030	2040	Change 2020-2030		Change 2030-2040		
				Number	Percent	Number	Percent	
Bay Area								
Office Jobs	1,306,525	1,338,730	1,414,070	32,205	2%	75,340	6%	
Total Jobs	4,010,135	4,136,190	4,405,125	126,055	3%	268,935	7%	
Market Area								
Office Jobs	288,079	307,066	331,758	18,987	7%	24,692	8%	
Total Jobs	769,445	824,350	907,365	54,905	7%	83,015	10%	

Note: Office-based jobs include jobs in the Finance and Professional Services and Information sectors.

Source: Association of Bay Area Governments (ABAG), 2019; Strategic Economics, 2020.

Projected Office Demand

Market Area Office Demand

Figure 25 shows two scenarios of projected demand for new office space in the market area for the periods 2020 to 2030 and 2030 to 2040. The demand projection in Scenario 1 was based on ABAG employment projections for jobs in office-based industry sectors, while Scenarios 2 projected forward long-term trends in average annual net absorption of office space from 1998 to 2019. Additional details are described below:

- Scenario 1.** This scenario is based on 2019 ABAG projections of future employment growth in office-based industries. ABAG anticipates that the market area will add 18,987 new office-based jobs between 2020 and 2030, and 24,692 jobs between 2030 and 2040, for a total of 43,679 net new office-based jobs by 2040. These job forecasts were translated into demand for additional office space by multiplying the number of new jobs by 250 square feet per employee.¹¹
- Scenario 2.** This scenario assumes that demand for office space will increase at the rate of the market area’s average annual net absorption for the period 1998 to 2019, which was 1,559,450 square feet. Although Scenario 2 results in a much higher estimate of future growth in office demand compared to Scenario 1, Scenario 2 is still a conservative projection since the average annual absorption of office space over the past 20 years reflects multiple market cycles of growth and contraction in office demand.

FIGURE 25: PROJECTED NET NEW OFFICE DEMAND (SQUARE FEET) IN THE MARKET AREA, 2020 TO 2040

	2020-2030	2030-2040	Total by 2040
Scenario 1	4,746,769	6,172,902	10,919,670
Scenario 2	15,594,500	15,594,500	31,189,000

Source: Strategic Economics, 2020.

¹¹ Office space per employee in the past typically averaged around 275 square feet. However, in recent national trends, office space per employee has decreased. According to one broker report, from 2009 to 2017 square footage per employee decreased by 8.3 percent across the county. During this period Silicon Valley experienced a more limited decline, with only a 3.0 percent decrease, and office space in San Mateo County has remained in the mid to high 200’s. The slower rate of office densification in some places might be explained by expansions in communal or flexible office space, which offset reductions to private employee space.

<https://www.cushmanwakefield.com/en/united-states/insights/space-matters>

By 2040, demand for additional office space in the market area is estimated to range from 10.9 million to 31.2 million square feet, with this wide range partly explained by the ongoing trend of large companies constructing new space to meet specific needs. Brokers reported that new and planned development may be driven by companies seeking space not only for their current operations but future expansion as well. This trend of large companies, particularly large tech companies such as Google, seeking space according to their planned requirements suggests that the demand for office space may be less directly connected to employment growth than is typical. As a result, the “Scenario 1” demand estimate, which is linked solely to employment growth in a few clearly tech-oriented industry sectors, is much lower than the estimate that accounts for long term absorption trends. Scenario 1 may also undercount the number of jobs located in office space in the Silicon Valley area since even companies classified as “Manufacturing” are often actually largely based in office space.

Projects approved and planned/proposed for development in the market area could potentially absorb a large share of future demand growth—although it is uncertain how many of these projects will ultimately be completed. As described earlier and in Figure 23, approximately 22 million square feet of office space is included in approved or planned/proposed office development projects in the market area. Although many of these projects may not be completed, the existing development pipeline will absorb a share of future growth in office demand.

Implications for the Moffett Park Plan Area

As an illustrative example, should 10 million square feet of office be built in the Moffett Park plan area, this would account for a substantial share of the total market area demand in both scenarios.

- **Scenario 1:** In this scenario, building 10 million square feet of office in the Moffett Park plan area would account for nearly all (92 percent) of the market area demand estimate for 2040.
- **Scenario 2:** The building of 10 million of square feet of office in Scenario 2 would account for one-third of the 2040 estimated market area demand.

Unique factors in the Moffett Park plan area position it to capture a high share of office demand. A large amount of office space in the plan area will likely be tenanted by large employers in the area such as Google, and these firms’ construction plans are likely more driven by specific internal needs than market forces.

Improved transit and the addition of residential and retail uses within the Moffett Park plan area would improve its attractiveness to tenants. The Moffett Park plan area is a desirable site for office development due to its location in Silicon Valley and its natural amenities such as shoreline access, trails, and views of the Bay. However, the plan area currently lacks retail amenities and housing, which would make the area a more attractive option for workers. The Moffett Park plan area also lacks quality public transportation, which local brokers highlight as a significant attractor for area office tenants. While the plan area contains several VTA light rail stations, high fare prices and limited regional connectivity are current challenges for the VTA light rail system.

Other constraints to maximizing the attraction of office tenants include the physical isolation of the Moffett Park plan area, traffic congestion, and potentially limited growth of multi-tenant office spaces in favor of growth by large employers. Highway 237 runs along the southern border of the plan area, minimizing access to the rest of Sunnyvale and making the plan area more isolated than other existing and planned large competing office developments in the market area. This separation of the plan area and the potential intensification of land uses may worsen existing traffic congestion. Additionally, local brokers interviewed for this study reported that Google’s large and growing footprint in the area could limit space for other plan area companies to expand in the future.

Including a mix of office types may increase the Moffett Park plan area’s resiliency in responding to future market changes. According to local brokers, developers are building many large single tenant office spaces. However, creating a high concentration of a limited number of single tenant and uniform office product types could threaten the plan area’s future ability to tenant spaces as market trends or preferences evolve.

Industrial, Flex, and R&D Market

This section provides an overview of market conditions for industrial (including manufacturing, warehouse, and distribution uses), flex, and R&D space in Sunnyvale relative to the context of the competitive market area, which includes the cities of Sunnyvale, Mountain View, Santa Clara, and San Jose. The analysis is based on market data, ABAG employment projection data, and employment data provided by the City of Sunnyvale. The section opens with an overview of current industrial, flex and R&D supply, conditions, and trends. The section concludes with a discussion of future demand and implications for the Moffett Park plan area.

Industrial Supply and Performance

The market for industrial, flex, and R&D space is performing well in the market area, with the highest rents and lowest vacancy rates found in Mountain View and Sunnyvale. Vacancy rates are low and rents are increasing across the market area for industrial, flex and R&D space, as shown in Figure 26 and Figure 27. Of the market area cities, Sunnyvale has the second highest rents behind Mountain View.

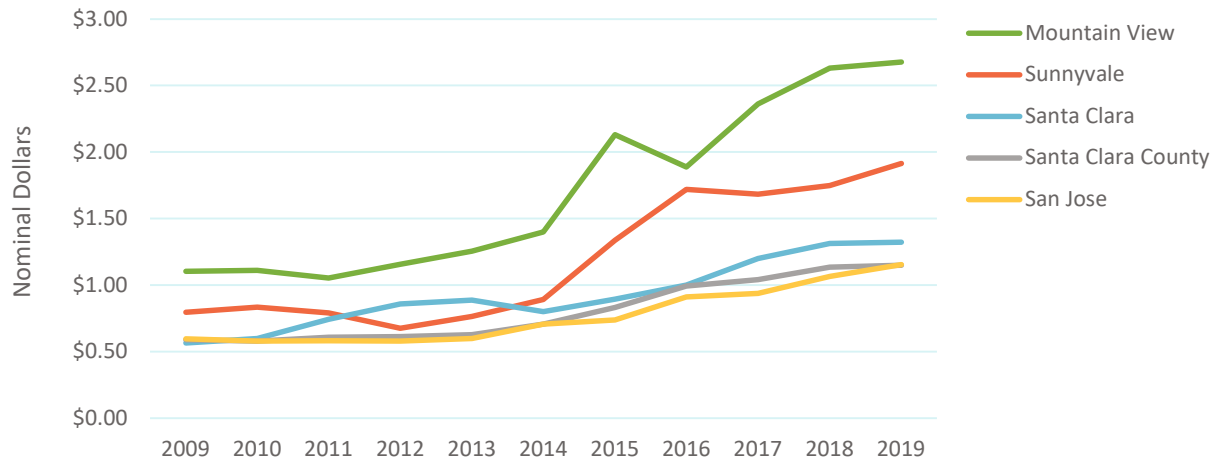
The Moffett Park plan area currently contains a significant amount of Sunnyvale’s industrial, flex and R&D space. Based on CoStar data, there is a combined total of about 6 million square feet of industrial, flex, and R&D space currently in the plan area. This accounts for 28 percent of Sunnyvale’s total industrial, flex, and R&D inventory, as shown in Figure 28.

Sunnyvale’s industrial, flex and R&D space has steadily decreased. Figure 29 shows that industrial, flex and R&D square footage has steadily declined from 2009 to 2019—the amount of industrial square footage in Sunnyvale decreased by 25 percent, and Sunnyvale’s flex and R&D square footage decreased by 16 percent. During this period some tenants occupying light-industrial and flex spaces in Sunnyvale have relocated elsewhere in the region such as Santa Clara and San Jose.

Industrial, flex, and R&D space have declined due to pressure to redevelop and convert these spaces to other uses. According to local brokers interviewed for this study, industrial spaces have been decreasing regionwide due to redevelopment and conversions to office, housing, and other competing uses that can attract significantly higher rents. This trend began to intensify after the Great Recession and with the accelerated growth of technology firms in the area. Figure 30 shows that while industrial, flex and R&D rents have increased, they are still significantly lower than office rents.

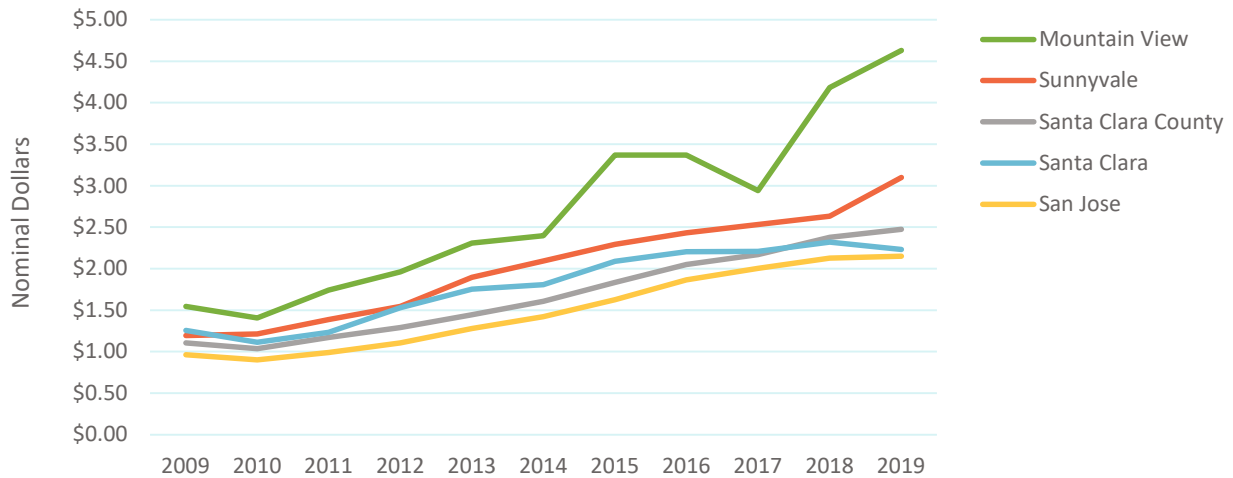
Manufacturing is the third largest industry sector in the Moffett Park plan area, consisting primarily of advanced manufacturing and biotech businesses. Information and Professional, Scientific, & Technical Services account for 84 percent of jobs in the Moffett Park plan area, as was shown in Figure 1. Manufacturing is the next largest industry sector, representing eight percent of total employment, and an estimated 2,224 jobs. In the plan area, manufacturing generally consists of high-tech advanced manufacturing and biotech, with the sector’s largest employers including lab and medical device companies such as Cepheid, Accuray Inc., and Molecular Devices, LLC.

FIGURE 26: INDUSTRIAL RENTS PER SQUARE FOOT, MARKET AREA AND SANTA CLARA COUNTY, 2009 TO 2019



Note: Rents shown as triple net (NNN).
 Source: Costar, 2020; Strategic Economics, 2020.

FIGURE 27: FLEX AND R&D AVERAGE RENTS PER SQUARE FOOT, MARKET AREA AND SANTA CLARA COUNTY, 2009 TO 2019



Note: Rents shown as triple net (NNN).
 Source: Costar, 2020; Strategic Economics, 2020.

FIGURE 28: CURRENT INDUSTRIAL AND FLEX/R&D INVENTORY, VACANCY RATES, AND RENTS FOR SUNNYVALE, MARKET AREA, AND SANTA CLARA COUNTY, 2019

	Rentable Building Area (Sq Ft)	Vacancy Rate	Average Monthly Rent
Industrial			
Sunnyvale	5,699,573	4%	\$1.92
*Moffett Park	1,842,518	10%	N/A
Mountain View	2,023,780	2%	\$2.68
Santa Clara	15,580,408	2%	\$1.32
San Jose	42,451,598	3%	\$1.16
**Market Area Total	65,755,359		
Flex and R&D			
Sunnyvale	15,865,227	6%	\$3.10
*Moffett Park	4,287,074	10%	N/A
Mountain View	8,191,239	6%	\$4.63
Santa Clara	18,687,827	8%	\$2.23
San Jose	39,775,635	9%	\$2.15
**Market Area Total	82,519,928		

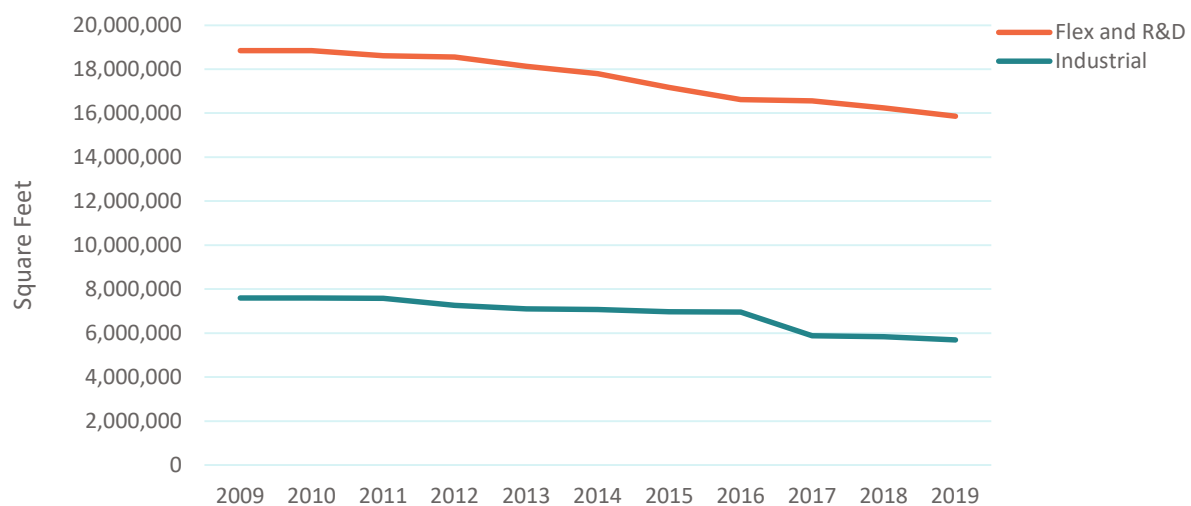
*Rent data for Moffett Park is too limited to be reliable. However, brokers interviewed for this study cited a range of \$2.50 per square foot in older flex/R&D buildings up to \$3.50 to \$4.00 for new buildings.

**Market Area includes the cities of Sunnyvale, Mountain View, Santa Clara, and San Jose.

Note: Rents presented as triple net (NNN).

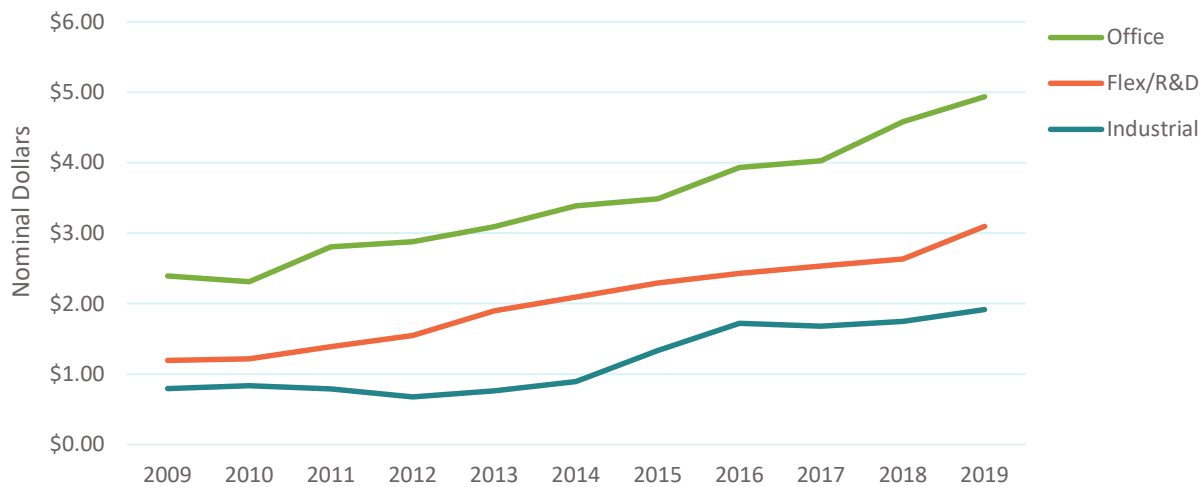
Source: Costar, 2020; Strategic Economics, 2020.

FIGURE 29: INDUSTRIAL, FLEX AND R&D INVENTORY, SUNNYVALE, 2009 TO 2019



Source: Costar, 2020; Strategic Economics, 2020.

FIGURE 30: COMPARISON OF OFFICE, INDUSTRIAL, AND FLEX/R&D RENTS PER SQUARE FOOT, SUNNYVALE, 2009 TO 2019



Source: Costar, 2020; Strategic Economics, 2020.

Market Area Industrial Demand

ABAG projections forecast an ongoing decline in the number of regional jobs in industry sectors associated with industrial space. ABAG estimates that Sunnyvale and Santa Clara County will experience declines in manufacturing and warehousing jobs, with Sunnyvale projected to experience some of the most significant declines in industrial jobs. The ABAG projections suggest the sector will decline by 11 percent in Sunnyvale compared to a decline of two percent in Santa Clara County.

Employment declines in manufacturing do not necessarily reflect declines in business activity and output. Gains in efficiency due to automation allow manufacturers to maintain and grow their output even as they require fewer workers. As a result, demand for industrial space is not directly tied to employment trends and projections.

Due to competition with other uses, industrial, flex, and R&D space are likely to continue declining in the market area and Sunnyvale despite strong demand for these spaces. Increasing rents and falling vacancy rates indicate that industrial, flex, and R&D spaces are still in high demand in the market area and Sunnyvale. Manufacturing companies, such as those engaged in high-tech advanced manufacturing and research and development, benefit from being located with the Silicon Valley ecosystem. Industrial and flex space also provide relatively inexpensive space for space small to medium sized businesses that wish to locate within the region. However, competition from office and residential uses, which command higher rents, will continue to result in redevelopment and loss of industrial, flex, and R&D spaces throughout the market area and Sunnyvale in the foreseeable future.

FIGURE 31: ABAG PROJECTIONS FOR MANUFACTURING AND WHOLESALE JOBS, 2020 TO 2040

	2020	2030	2040	Change 2020 to 2040	
				Number	%
Sunnyvale	21,135	19,815	18,815	(2,320)	-11%
Mountain View	8,815	9,140	8,880	65	1%
Santa Clara	34,355	32,960	29,820	(4,535)	-13%
San Jose	86,335	84,830	88,465	2,130	2%
Market Area Total	150,640	146,745	145,980	(4,660)	-3%
Santa Clara County	199,085	196,580	195,675	(3,410)	-2%

Source: ABAG, 2019; Strategic Economics, 2020.

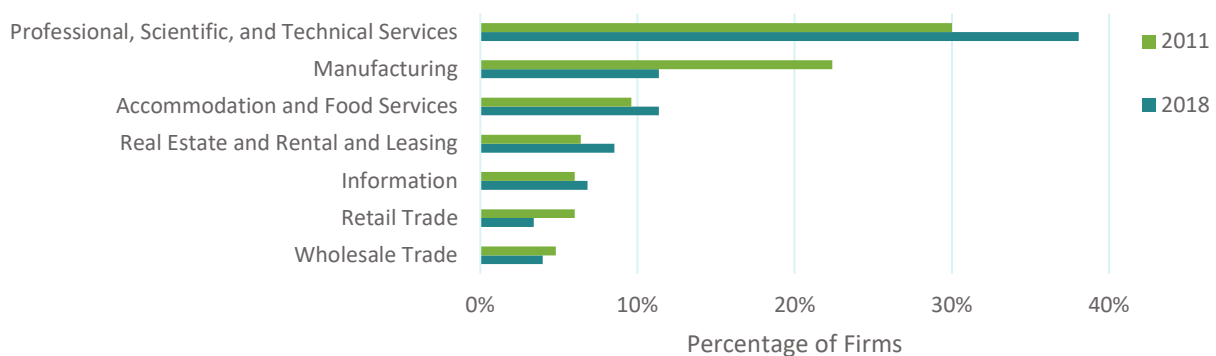
Implications for the Moffett Park Plan Area

Matching trends throughout the market area and Sunnyvale, manufacturing and R&D businesses have been declining in the Moffett Park plan area. Regionwide industrial conversion pressures are also present in the plan area. Figure 32: Moffett Park Share of Firms by Industry Sector, 2011 and 2018 shows that while 22 percent of firms located in the Moffett Park plan area in 2011 were manufacturing businesses, this share declined by half to 11 percent in 2018. Brokers interviewed for this report stated that even before 2011 the Moffett Park plan area included a larger inventory of light industrial, flex, and R&D spaces such as warehouses and wet labs.

Demand will continue to exist for industrial, flex, and R&D space in the Moffett Park plan area—despite the likelihood that the inventory of these spaces will decline without policy interventions. The Moffett Park plan area accounts for a large share of Sunnyvale’s current industrial flex and R&D inventory. The plan area will continue to be competitive for capturing demand in the market area, given the plan area’s desirable location within Silicon Valley. However, preventing redevelopment and promoting new investment in these spaces may require strict zoning and land use limitations, policies focused on retaining existing buildings, or adoption of policies requiring developers to replace or include these uses in new projects.

The Moffett Park plan area achieves unique benefits from the business diversity enabled by the presence of industrial, flex, and R&D buildings. Local brokers interviewed for this study stressed the importance of industrial spaces since Silicon Valley still depends on industries such as advanced manufacturing and related research and development. A diversity of land uses may improve the Moffett Park plan area’s resiliency in confronting future market changes.

FIGURE 32: MOFFETT PARK SHARE OF FIRMS BY INDUSTRY SECTOR, 2011 AND 2018



Source: City of Sunnyvale, 2019; Strategic Economics, 2020.

Retail Market Analysis

This section analyzes the potential for new retail in the Moffett Park plan area through characterization and analysis of the existing competitive retail environment. The section includes the following subsections:

1. National Retail Trends
2. Regional Context
3. Potential for Retail Development
4. Neighborhood-serving Retail Demand Estimate

National Retail Trends

Demand for retail in the Moffett Park plan area is affected by broader shifts in the global retail industry. Americans continue to shop, but where and how they shop have impacts on the performance and location of existing and future brick-and-mortar businesses. Major trends that affect the demand for new retail space include the following:

The retail industry is growing and reorganizing. In 2019, consumer expenditures in the U.S. hit an all-time high. However, much of the growth is happening online rather than in brick-and-mortar stores. Nationwide, online sales account for an increasingly larger portion of total sales¹² and e-commerce continues to expand. Products sold online are no longer limited to books and music, but now also encompass a wide array of soft and hard goods, including: electronics, sporting goods, office supplies, toys, and apparel.

Offering a unique consumer experience—including mixed-use districts—has become essential, given the growing influence of online shopping. New retail centers are being designed with an “experiential” component that often includes well-designed common gathering areas, more eating and drinking establishments, and more interactive retail concepts. Existing shopping centers and malls, which are seeing an erosion in sales in department stores and conventional soft goods, are re-tenanting their spaces and redeveloping their parking lots to add entertainment uses (bowling alleys, spas, salons) as well as adding restaurants, grocery stores, and brew pubs. Many shopping centers are also integrating housing and office spaces into their redevelopment plans.

In addition to their typical location requirements, experiential retailers are also sensitive to the quality of the pedestrian environment for shoppers. The fundamental factors that retailers consider continue to be the demographic profile of the surrounding area, traffic patterns, and site characteristics (ease of access, visibility, etc.). However, to remain competitive, retailers are also interested in creating a high-quality pedestrian experience, including streetscape/urban design and other “placemaking” components.

¹² According to a study conducted by Strategic Economics in 2018 for the City of San Francisco's Office of Economic and Workforce Development, while non-store retailers accounted for 12 percent of total national retail sales in 2016, they accounted for 40 percent of the growth in total sales between 2014 and 2016.
<https://oewd.org/sites/default/files/Invest%20In%20Neighborhoods/State%20of%20the%20Retail%20Sector%20-%20Final%20Report.pdf>

Regional Context

This subsection includes an analysis of the regional context for retail in the plan area, which incorporates an assessment of existing competing retail centers in Sunnyvale and surrounding areas whose “trade areas” overlap with the Moffett Park plan area. A trade area is the area from which a given retail business or shopping center attracts customers. Within the region, there is a wide range of retail centers, each serving a unique trade area. The retail center categories are described in more detail below and summarized in Figure 33.

Large shopping centers, such as regional lifestyle centers, power centers, and community centers, serve a large trade area by drawing customers from within three miles or beyond. Figure 34 shows the locations of lifestyle centers, power centers, and community centers that serve the plan area. Note there are no traditional regional malls near the Moffett Park plan area. Definitions of these region-serving shopping center types follow:

- **Lifestyle centers** are upscale shopping centers that incorporate “Main Street” design concepts. They are typically around 300,000 square feet and have a greater focus on experiential retail and walkability than a traditional regional mall. Most lifestyle centers have been developed in the last two decades. CityLine in Downtown Sunnyvale is a lifestyle center near the Moffett Park plan area. The retail components at City Place and Mission Point in Santa Clara, which are both proposed for development, would likely be considered “lifestyle centers” once built.
- **Power centers** (often known as “big box” centers) are characterized by several large anchor stores, such as discount department stores, and are usually between 250,000 to 600,000 square feet. San Antonio Center in Mountain View, McCarthy Ranch Marketplace in Milpitas, and San Jose Market Center in San Jose are three power centers located within a few miles of the Moffett Park plan area. The trade area for a power center is between 5 to 10 miles.
- **Community centers** have trade areas of between 3 and 6 miles and are often anchored by grocery stores or “big box” stores. These centers are usually between 125,000 to 400,000 square feet in size. El Mercado Plaza in Santa Clara and Hacienda Center in Sunnyvale are two community centers located near the plan area.

FIGURE 33. TYPICAL U.S. SHOPPING CENTER TYPES AND CHARACTERISTICS

Type of Shopping Center	Typical Size (sf)	Acres	Typical Anchors	Trade Area Size/ Drive-time	Examples
Regional and Super Regional Malls	400,000 to 800,000	40 to 100	General merchandise or fashion-oriented anchors, may include department stores, mass merchants, and/or fashion apparel	5-15 miles/ 15-20 minutes	Westfield Valley Fair, Stanford Shopping Center
Lifestyle Centers	150,000 to 500,000	10 to 40	Large format upscale specialty stores	8-12 miles/ 15-20 minutes	Downtown Sunnyvale including CityLine
Power Centers	250,000 to 600,000	25 to 80	Category-dominant anchors, often in more than one freestanding structures, with only a few small tenants	5-10 miles/ 15-20 minutes	San Antonio Center, San Jose Market Center
Community Center	125,000 to 400,000	10 to 40	General merchandise or convenience-oriented anchors, may include discount stores, grocery stores, drug stores, and/or large specialty stores (home improvement/furnishings, sporting goods, etc.)	3-6 miles/ 10-15 minutes	El Mercado Plaza, Hacienda Center
Neighborhood Center	30,000 to 125,000	3 to 5	Convenience-oriented, typically anchored by a grocery and/or drug store	3 miles/ 5-10 minutes	Lakewood Shopping Center, Sunnyvale Square Shopping Center
Strip or Convenience Center	Less than 30,000	Less than 3	Un-anchored, or anchored by a small convenience store (e.g. 7-Eleven)	<1 mile/ < 5 minutes	Moffett Plaza, various centers along El Camino Real

Source: International Council of Shopping Centers, January 2017; CoStar, January 2017; Strategic Economics 2020.

Sunnyvale Retail Snapshot

Figure 34 shows regional retail centers near the Moffett Park plan area. Figure 35 and Figure 36 provide base metrics for evaluating Sunnyvale’s retail market health compared to other geographies. Figure 35 compares Sunnyvale’s retail inventory, vacancy, and rents to neighboring jurisdictions, while Figure 36 compares taxable sales per household in Sunnyvale compared to Santa Clara County, which indicates leakage and absorption trends among Sunnyvale’s retail categories.

Sunnyvale and neighboring cities form a competitive retail market area, with high rents and low vacancy rates overall. Sunnyvale’s monthly average asking rents lag those in Mountain View and Cupertino, as shown in Figure 35. Vacancy rates across jurisdictions are also currently very low, signifying a strong regional retail market.

FIGURE 34: REGIONAL RETAIL CENTERS NEAR THE MOFFETT PARK PLAN AREA, 2020

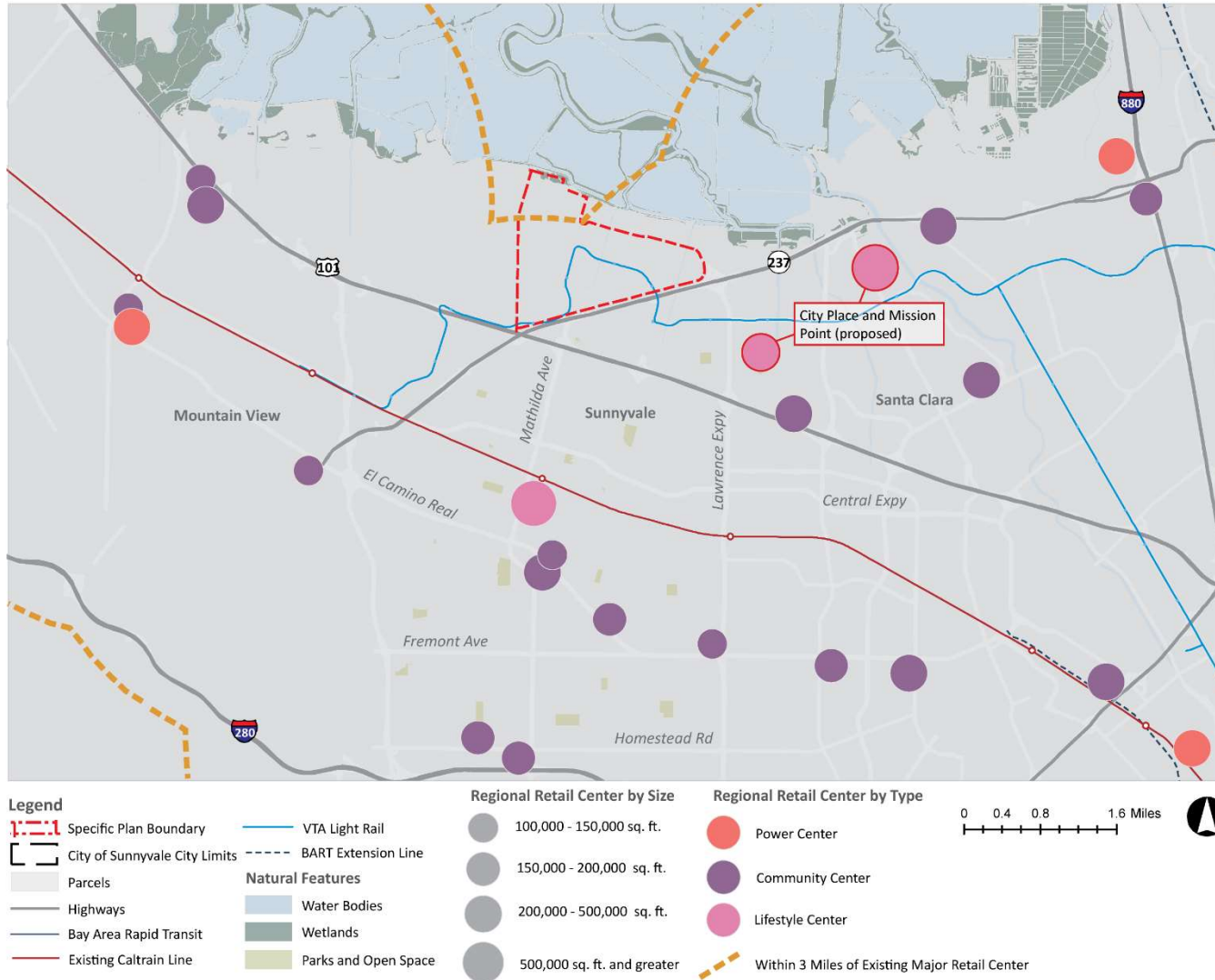


FIGURE 35. RETAIL INVENTORY, VACANCY, AND RENT, SUNNYVALE AND SURROUNDING COMMUNITIES, 2019

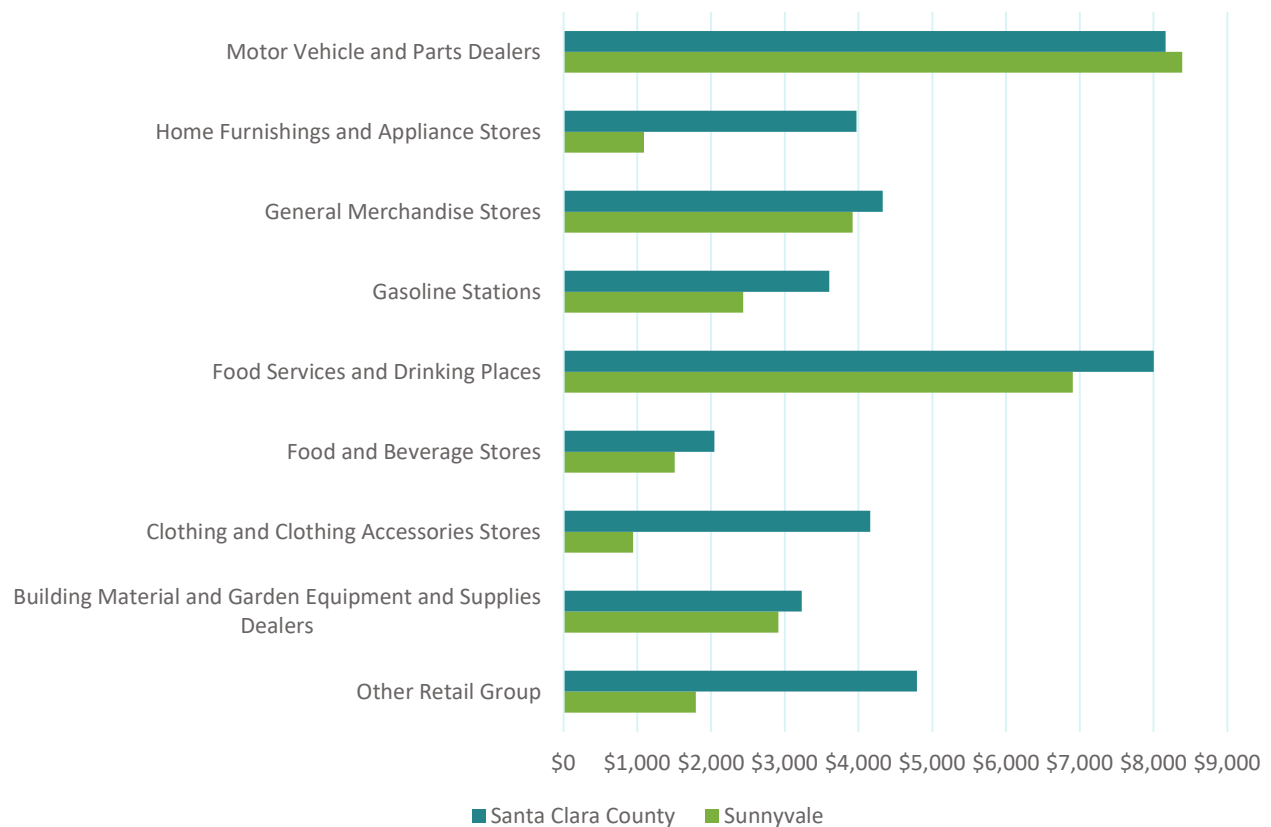
	Inventory (Buildings)	Inventory (Sq. Ft.)	Total Vacancy Percent	Monthly Asking Rent (\$/Sq. Ft.)
Sunnyvale	408	5,225,116	1.3%	\$2.96
Mountain View	361	3,788,678	1.7%	\$3.45
Cupertino	188	2,629,115	2.3%	\$4.19
Santa Clara	466	6,354,058	2.4%	\$2.59

Rents are shown on a triple-net basis.

Source: Costar, 2019; Strategic Economics, 2020.

Across most retail spending categories, Sunnyvale achieved lower taxable sales per household compared to the county overall in 2018, suggesting potential opportunities to capture a greater share of local and regional spending. Retail categories in which Sunnyvale achieves lower sales per household compared to Santa Clara County indicate likely retail sales “leakage” to other communities. As shown in Figure 36, spending per household in Sunnyvale lags Santa Clara County in all categories except Motor Vehicles and Parts Dealers.

FIGURE 36. SUNNYVALE AND SANTA CLARA COUNTY TAXABLE SALES PER HOUSEHOLD, 2018



Source: California Department of Tax and Fee Administration, 2018; U.S. Census ACS, 2014-2018; Strategic Economics, 2020.

Existing and Planned Retail Areas

Most existing retail concentrations in Sunnyvale are located approximately two miles south of the Moffett Park plan area closer to Sunnyvale’s downtown and along El Camino Real (as shown in Figure 37). Retail spaces in these areas benefit both from high traffic counts and from being in established shopping areas, in close proximity to other stores. These two areas are described below:

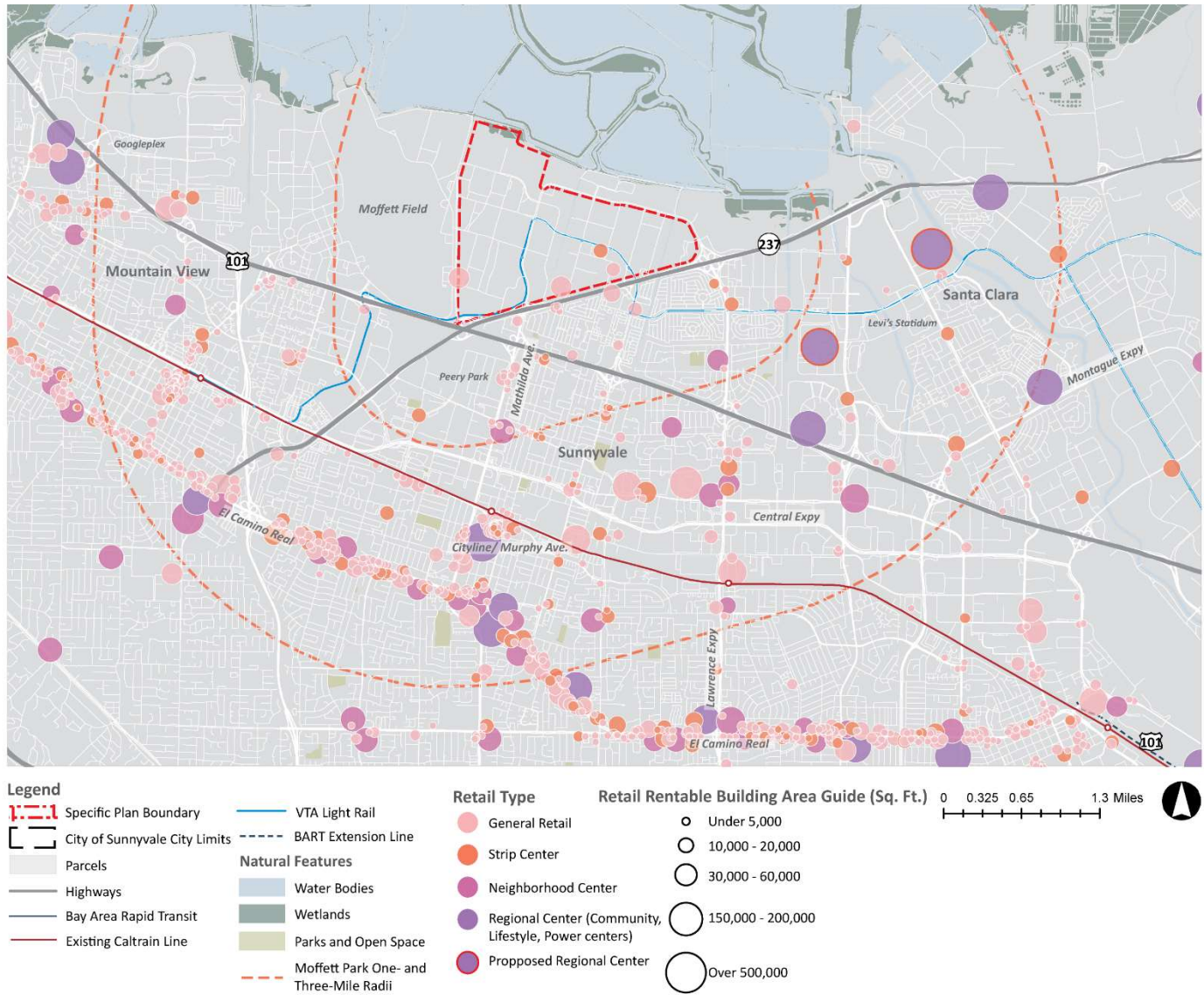
- **El Camino Real:** El Camino Real is a historic retail corridor that spans the entirety of Silicon Valley. In Sunnyvale, a plurality of retail space is located on or very close to El Camino Real, which is considered one of the most desirable locations for retailers of all sizes—particularly those serving regional shoppers. In Sunnyvale, many centers are concentrated at the intersection of Mathilda Ave and El Camino Real.
- **The CityLine development within Downtown Sunnyvale:** Adjacent to Sunnyvale’s historic Murphy Ave and to the Caltrain Sunnyvale Station, CityLine is a six-block, walkable, mixed-use district within Downtown Sunnyvale, anchored by Target. The redevelopment of a traditional car-oriented mall, much of the CityLine project is nearly built-out today, with multiple mixed-use apartments completed in 2019.

There are no significant retail concentrations currently in the Moffett Park plan area. The plan area is currently home to a handful of small strip centers and stand-alone shops mostly occupied by restaurants and other service-oriented uses that serve the daytime office population, as shown in the map in Figure 37. Few major retail concentrations or shopping centers currently exist in North Sunnyvale near Moffett Park.

While there is little existing competitive supply located near the Moffett Park plan area, there are two major development projects with sizeable retail components that are planned just east of the plan area in Santa Clara near Highways 101 and 237. These two projects, if they move forward as planned, are likely to absorb any unmet regional retail demand among households in northern Sunnyvale. Both projects involve the redevelopment of large-scale, vacant, contiguous sites. These types of sites are more conducive for establishing new regional retail destinations than areas like the Moffett Park plan area, which has multiple owners associated with subdivided parcels that are small and already improved. These two projects are described below, and also noted as “proposed retail centers” in Figure 37:

- **City Place:** Developed by Related, City Place will span 240 acres on the site of a municipal golf course in Northern Santa Clara. It is planned to accommodate 5.4 million square feet of office, 1,680 housing units, and 1 million square feet of space dedicated to consumer goods retail, restaurant, and entertainment uses.
- **Mission Point:** Mission Point, being developed by Kylii, Mission Point, is planned to contain 3.5 million square feet of office, 6,000 housing units, and potentially 400,000 square feet of retail space. The site is currently a surface parking lot serving Levi’s Stadium.

FIGURE 37: ALL RETAIL PROPERTIES NEAR MOFFETT PARK



Potential for Retail Development

Strategic Economics conducted interviews with retail brokers familiar with both the Sunnyvale retail market and with dynamics around adding retail to office and residential redevelopment projects more generally. Taking into account those discussions and the Moffett Park plan area's positioning relative to competing retail supply at existing and future retail centers, Strategic Economics arrived at the following findings:

The Moffett Park plan area is already well served by existing regional retail and therefore not well-positioned to attract a new *regional* retail center. As noted earlier, the plan area is already well-served by regional retail destinations at Downtown Sunnyvale, centers along El Camino Real, and planned development at City Place and Mission Point. Furthermore, a new regional retail destination in a place like the plan area would require a large contiguous site that could yield a critical mass of new development. The opportunities for site assembly and development at this scale are limited.

Highways 101 and 237 restrict accessibility into the Moffett Park plan area, which further impedes retail viability beyond centers and stores that primarily serve the plan area. These highways act as a barrier, isolating the plan area from Sunnyvale neighborhoods to the south that are better connected to one another by local streets. Shoppers are less likely to travel across one or two major freeways to access shopping when there are existing regional retail concentrations that are more easily accessible two miles south. Under *existing* conditions, any proposed retail would be most viable on Mathilda or Java avenues on sites located adjacent to freeway entrances/exits, for maximum accessibility and visibility to passing drivers.

Any new retail space in the Moffett Park plan area would likely consist of neighborhood-serving establishments, such as grocery, restaurants and bars, drug stores, personal services such as dry cleaning and salons, and other convenience-focused businesses. New retail spaces would primarily depend on spending from new residents and workers in the Moffett Park plan area. There is some potential for new retail spaces to attract residents who live just south of the plan area, between Highways 237, 101 and Lawrence Expressway, though it is unlikely new plan area retail would be able to draw people from further away.

As larger numbers of housing units are built and occupied, the area could gradually support ground-floor, neighborhood-serving retail spaces as components of mixed-use projects:

- These types of spaces are more dependent on business from residents in the immediate vicinity because parking access, which is either provided on-street or in a nearby garage, is more challenging compared to a more “suburban,” surface-parked traditional neighborhood shopping center format.
- Restaurants, bars, or personal service businesses are typically best suited for ground-floor spaces in mixed-use buildings, and more likely to locate in Moffett Park in the early stages of the area's buildout. Grocery tenants are primarily interested in leasing spaces with plentiful nearby surface parking, such as in a traditional neighborhood center previously described—although a grocery store in a mixed-use format could become possible in later stages of growth after substantial numbers of residential units are built and occupied.
- Because new households generate significantly more retail demand than new workers, ground-floor retail spaces will be most successful if they are either developed as a part of, or immediately near new multifamily housing.

Neighborhood-Serving Retail Demand Estimate

While the Moffett Park plan area is not well-positioned to attract a major new retail center, it could attract neighborhood-serving retail uses that would support new residents and employees in the area.

Strategic Economics developed an estimate for the additional demand for neighborhood-serving retail that would be supported with the addition of new workers and housing in the Moffett Park plan area. For the purposes of this report, neighborhood-serving retail is defined as businesses that provide goods and services that people would frequent at least weekly to take care of their personal and household needs. Examples include grocery stores, drug stores, eating and drinking establishments, dry cleaners, and hair salons.

The demand estimates described in the following sub-sections were developed using the following approach:

1. Strategic Economics collected estimates of per household annual spending on neighborhood-serving categories of retail for the City of Sunnyvale. These estimates were assembled by Esri, a mapping software and data services provider. To represent neighborhood-serving uses, the following categories of spending were chosen: groceries, dining, alcoholic beverages, non-prescription and prescription drugs, housekeeping supplies, personal care, pet supplies, and apparel products and services.
2. Strategic Economics also collected estimates of annual spending by office workers in neighborhood-serving retail categories based on national studies. The categories are less broad than those incorporated in the household retail demand model due to narrower worker spending habits. The categories included were: groceries, dining, and alcoholic beverages.
3. Strategic Economics then divided the annual spending by a set of assumptions for average sales per square foot of retail space. Strategic Economics reviewed data published by Baker Tilly, the Food Marketing Institute, and other reports on retail performance to arrive at these estimates. Based on this review of the research, the expected sales per square foot of retail was estimated by retail category.
4. Annual spending was divided by annual sales per square foot for each use to estimate the retail space demand per worker and per household for each retail category.
5. Next, the demand estimate per household and per worker were multiplied by the number of new households and workers for three illustrative growth scenarios to calculate the worker and household demand estimate for each scenario.
6. Illustrative capture rates were applied to these demand estimates to demonstrate the potential range of new retail square feet that could be supportable in the Moffett Park plan area.

Household Retail Demand Estimate

Figure 38 shows the total square feet of neighborhood-serving retail demand associated with each new household in the Moffett Park plan area, while Figure 39 estimates the total retail square feet demand from households based on the three illustrative household growth scenarios. Figure 40 shows the amount of new retail that could potentially be absorbed in the Moffett Park plan area depending on how effectively the area captures growth in retail demand.

Each increment of 10,000 new households in the Moffett Park plan area will create demand for approximately half a million square feet of neighborhood-serving retail establishments. Figure 39 illustrates three scenarios of neighborhood-serving retail demand associated with growth of 10,000, 20,000, and 30,000 additional households in the plan area.

The Moffett Park plan area is likely to capture a substantial but not comprehensive share of this new demand for retail space. Households will do some of their spending outside their neighborhood, such as near their work or school. Since neighborhood-serving retail uses tend to draw patrons primarily from their immediate vicinity, it is likely the Moffett Park plan area's capture rate of neighborhood-serving retail demand from the area's new households would exceed 50 percent. While a 50 percent capture rate would still translate to a large amount of new retail demand, limited site availability may impact the likelihood that this scale of retail could be delivered. Figure 40 shows a range of potential retail growth in the Moffett Park plan area based on a range of illustrative household growth scenarios and capture rates.

FIGURE 38. DEMAND ESTIMATE FOR NEIGHBORHOOD-SERVING RETAIL PER HOUSEHOLD IN THE MOFFETT PARK PLAN AREA

Resident-Serving Categories of Retail	Spending per Sunnyvale Household	Estimated Sales per Sq. Ft.	Demand Estimate (Sq. Ft. of Retail per Household)	Share of Total Demand
Groceries (food at home)	\$9,602	\$600	16	32%
Restaurants (food away from home)	\$7,156	\$350	20	41%
Alcoholic Beverages	\$1,239	\$500	2	5%
Drugstores (non-prescription drugs, prescription drugs, housekeeping supplies, and personal care)	\$3,046	\$650	5	9%
Pets	\$1,166	\$250	5	9%
Toys, Games, Crafts and Hobbies	\$215	\$200	1	2%
Apparel Products and Services (shoe repair, laundry/ dry cleaning, etc)	\$141	\$400	0.4	1%
Total	\$22,566		50	100%

Sources: Retail Goods and Services Expenditures, ESRI, 2018; Baker Tilly, 2014; Food Marketing Institute, 2014; Business Insider, 2014; Strategic Economics, 2020.

FIGURE 39. HOUSEHOLD RETAIL DEMAND ESTIMATE BY ILLUSTRATIVE HOUSEHOLD GROWTH SCENARIOS FOR THE MOFFETT PARK PLAN AREA

	Demand Estimate (low)	Demand Estimate (medium)	Demand Estimate (high)
Housing Units	10,000	20,000	30,000
Groceries (food at home)	160,039	320,078	480,117
Restaurants (food away from home)	204,470	408,941	613,411
Alcoholic Beverages	24,771	49,543	74,314
Drugstores (nonprescription drugs, prescription drugs, housekeeping supplies, and personal care)	46,868	93,736	140,604
Pets	46,645	93,290	139,934
Toys, Games, Crafts and Hobbies	10,737	21,473	32,210
Apparel Products and Services (shoe repair, laundry/ dry cleaning, etc)	3,526	7,052	10,578
Total	497,056	994,111	1,491,167

Source: Strategic Economics, 2020.

FIGURE 40. HOUSEHOLD RETAIL DEMAND ESTIMATE, BY ILLUSTRATIVE HOUSEHOLD GROWTH SCENARIOS AND CAPTURE RATES

	Low Growth Scenario	Medium Growth Scenario	High Growth Scenario
<i>New Housing Units</i>	10,000	20,000	30,000
<i>New Supportable Retail Sq. Ft. From Households</i>	497,056	994,111	1,491,167
<i>Moffett Park Capture Rate</i>			
25% of Total Sales	124,264	248,528	372,792
50% of Total Sales	248,528	497,056	745,583
75% of Total Sales	372,792	745,583	1,118,375

Source: Strategic Economics, 2020.

Worker Demand Estimate

Figure 41 shows retail demand generated per worker, while Figure 42 estimates the total retail square feet demand generated by workers based on three illustrative growth scenarios. Figure 43 shows the amount of new retail that would be absorbed in the Moffett Park plan area based on different illustrative capture rates.

Each increment of 20,000 new workers in the Moffett Park plan area will create demand for approximately 107,000 square feet of restaurants, bars, and food stores, as shown in Figure 42. Each worker in the plan area is projected to generate demand for approximately 5.7 square feet of space for these uses (Figure 41. Demand Estimate for Neighborhood-Serving Retail Per Worker in the Moffett Park Plan Area).

The Moffett Park plan area is likely to capture a modest share of this new worker-generated demand for retail space. A share of workers will also reside in the plan area, meaning a portion of future worker retail demand is already accounted for in household demand estimates. Additionally, the extent to which offices provide on-site cafeterias with complimentary meals will greatly impact the potential for new retail spaces to absorb this demand. The precise extent to which on-site cafeterias impact worker demand is unknown and not incorporated in the demand calculation, though the negative impact is likely to be substantial. The Moffett Park Specific Plan could potentially incorporate policies regulating on-site cafeterias and amenities. Figure 43 illustrates potential demand associated with workers in the plan area based on varying capture rates.

FIGURE 41. DEMAND ESTIMATE FOR NEIGHBORHOOD-SERVING RETAIL PER WORKER IN THE MOFFETT PARK PLAN AREA

Worker-Serving Categories of Retail (a)	Spending Per Worker (b)	Estimated Sales per Sq. Ft.	Demand Estimate (Sq. Ft. of Retail per Worker)	Share of Total Demand
Food Services and Drinking Places (b)	\$1,572	\$425	3.7	65%
Food and Beverage Stores	\$1,176	\$600	2.0	35%
Total	\$2,748	\$1,025	5.7	100%

Notes:

(a) Retail categories used for worker and household demand estimates slightly varies because research on worker and household spending patterns derives from separate sources.

(b) Estimated sales per sq. ft. is the average of Strategic Economics' established space assumptions for Restaurants and Alcoholic Beverages categories.

Source: ICSC Research, 2012; Strategic Economics, 2020.

FIGURE 42: WORKER RETAIL DEMAND ESTIMATE BY ILLUSTRATIVE GROWTH SCENARIO IN MOFFETT PARK

	Low Growth Scenario	Medium Growth Scenario	High Growth Scenario
New Office Sq. Ft.	5,000,000	10,000,000	15,000,000
New Office Workers (a)	20,000	40,000	60,000
Food Services and Drinking Places Sq. Ft.	73,976	147,953	221,929
Food and Beverage Stores Sq. Ft.	37,240	74,480	111,720
Total	107,518	215,035	322,553

Notes: (a) This assumes a 250 square foot per office worker ratio.

Source: ICS Research, 2012; Strategic Economics, 2020.

FIGURE 43. WORKER RETAIL DEMAND ESTIMATE BY ILLUSTRATIVE GROWTH SCENARIO AND CAPTURE RATE

	Low Growth Scenario (sq. ft.)	Medium Growth Scenario (sq. ft.)	High Growth Scenario (sq. ft.)
Growth in Office Sq. Ft.	5,000,000	10,000,000	15,000,000
New Supportable Retail Sq. Ft. from Workers	107,518	215,035	322,553
Moffett Park Capture Rate			
25% of total sales	26,879	53,759	80,638
50% of total sales	53,759	107,518	161,276
75% of total sales	80,638	161,276	241,915

Source: Strategic Economics, 2020.

Other Moffett Park Plan Area Retail Demand Considerations

Demand for retail space in the Moffett Park plan area will largely depend on the number of future housing units added to the area. Each new household in the plan area is projected to generate demand for 50 square feet of neighborhood-serving retail space, a portion of which could be captured within the plan area. In contrast, each worker only generates demand for 5.7 square feet of dining and food/beverage stores space, and the plan area is especially unlikely to capture a substantial share of this demand given competing on-site amenities provided by employers.

Two significant phasing challenges will impact retail development in the Moffett Park plan area:

1. The area will not support retail development until there is a critical mass of residential development in the plan area. Retailers and restaurants will be difficult to attract until there is a large concentration of households in the area.
2. The creation of a successful retail node may require a combination of traditional shopping centers and mixed-use retail formats, with prime sites near the freeways reserved for and initially built out as traditional shopping centers focused on neighborhood-serving retail. There are few examples of successful full-service grocery stores in mixed-use buildings, which tend to occur in denser urban contexts; most grocery tenants prefer to have more traditional shopping center formats with convenient parking. New retail built in the early phases of growth in the Moffett Park plan area will still require significant parking and automobile access. In the initial phases of housing development in Moffett Park, sites on Mathilda or Java avenues adjacent to Highway 237 will remain the most desirable sites for national retailers, because they are most accessible to the rest of Sunnyvale and are in locations with high

vehicular traffic counts. As housing growth advances, however, ground-floor retail in mixed-use projects is more likely to become attractive to tenants as the Moffett Park plan area evolves to become a proven location for urban living and pedestrian traffic and visibility increase in importance.

The Moffett Park plan area could potentially support multiple neighborhood-serving shopping centers or retail nodes, depending on how many housing units are built and occupied, and on the priorities of individual property owners. The household retail demand estimate found that Moffett Park could support approximately 25 square feet of retail space per new household, assuming the plan area captures half of each household’s demand for products and services within neighborhood-serving retail categories. Based on the shopping center characteristics shown in Figure 33—which also translate to equivalent retail increments in a mixed-use environment—Moffett Park could likely support a modest concentration of convenience retail with 1,200 additional households, or a grocery-anchored neighborhood center with between 1,200 and 5,000 or more new households. Additional increments of growth beyond 5,000 housing units could potentially allow Moffett Park to support a primary grocery-anchored retail node, plus smaller nodes of convenience of convenience retail. The exact number, types, and locations of these shopping centers or nodes would vary depending on the locations, concentration, configuration, and quantity of housing and office/flex space in Moffett Park, plus the potential to capture demand from existing households in North Sunnyvale. The decisions and interests of major property owners—such as Google—will also influence the locations and sizes of retail concentrations in the plan area, depending on those owners’ visions for their properties.

Hotel Market Analysis

This section examines hotel market conditions in the Moffett Park plan area, the combined Sunnyvale, Mountain View, and Santa Clara competitive hotel market area, and Santa Clara County overall. This analysis is primarily based on inventory and performance data from Smith Travel Research (STR). The analysis provides a snapshot of regional hotel room inventory and visitor trends over time, as well as occupancy and revenue trends for hotels in Sunnyvale and Mountain View. These findings are followed by an assessment of the potential for new hotel development in the Moffett Park plan area.

Existing Hotel Inventory and Development Trends

Inventory

This section describes Santa Clara County's existing supply of hotels (excluding economy class properties), including those located in the market area. Figure 44 shows historic hotel room inventory growth for the market area and Santa Clara County, while Figure 45 shows those rooms by the year in which they were built. Note that this data does not incorporate economy-class hotels or hotels that have been demolished or taken out of service. Economy hotels were excluded since this product type is rarely constructed in the market area today and serves different traveler segments compared to largely business-driven demand in the market area.

There were 23,333 hotel rooms across 164 hotel properties in Santa Clara County as of January 2020 (excluding rooms in economy-scale hotels). Approximately 42 percent of these rooms were built since 2010. The hotel market in Santa Clara County caters largely to business and convention travelers typically associated with the tech industry, and hotels are concentrated near employment centers, the Mineta San Jose International Airport, and the Santa Clara Convention Center.

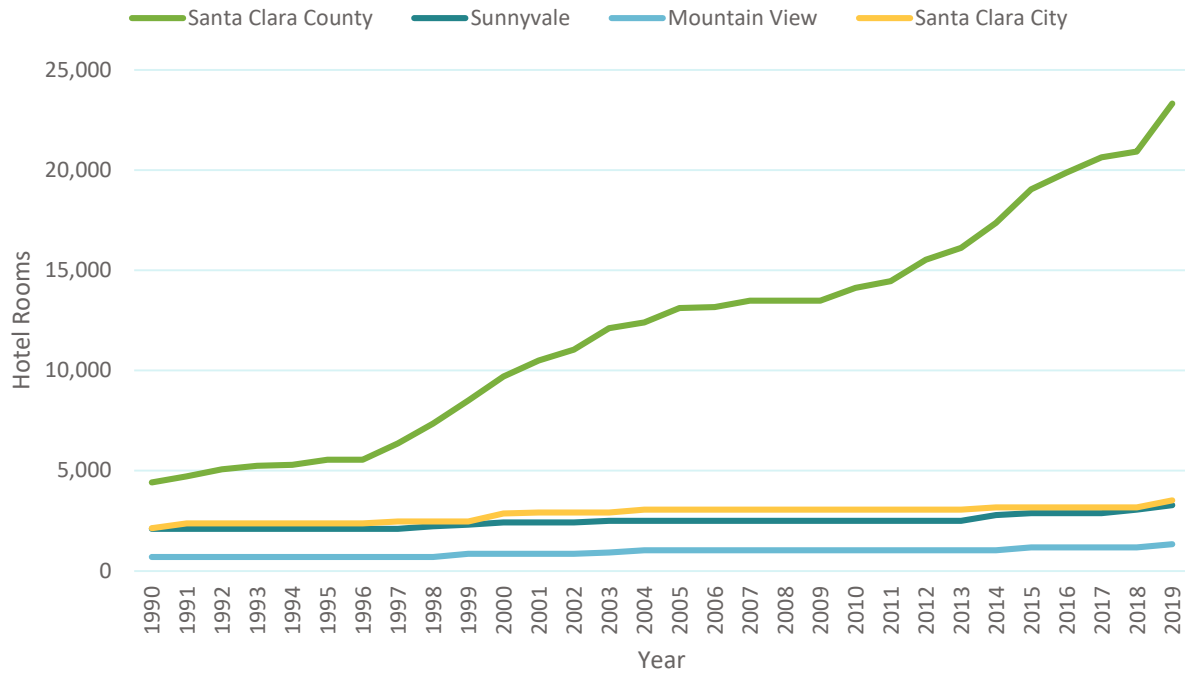
The regional hotel market is driven by sustained job growth associated with recent periods of economic expansion. In regions like Santa Clara County with high office employment, hotel supply growth is typically correlated to changes in employment. The region's hotel market has benefitted from steady job growth during the dot-com boom and recent expansion in the tech sector. From 2010 to 2019 the supply of hotel rooms in Santa Clara County grew by 73 percent, with 9,851 new hotel rooms coming online (Figure 44). The San Jose Airport also experienced a 76 percent increase in airport arrivals from 2013 (the earliest year for which data was available) and 2019, suggesting the region is attracting more visitors which in turn sustain demand for hotel rooms.¹³

There are 8,170 rooms in 56 hotels within the market area, which represents approximately 35 percent of the total hotel room supply in Santa Clara County. Twenty-seven of these 56 hotels, which contain 39 percent of the rooms in the market area were built since 2010.

The market area has attracted a greater share of higher-end hotel rooms compared to Santa Clara County overall since the Great Recession. Twenty-eight percent of hotel rooms built in the most recent market cycle in the market area were in Luxury and Upper Upscale hotels, compared to just 17 percent in the County overall. In contrast, 28 percent of new hotel rooms in Santa Clara County overall are considered Midscale or Upper Midscale, compared to just 23 percent in the market area.

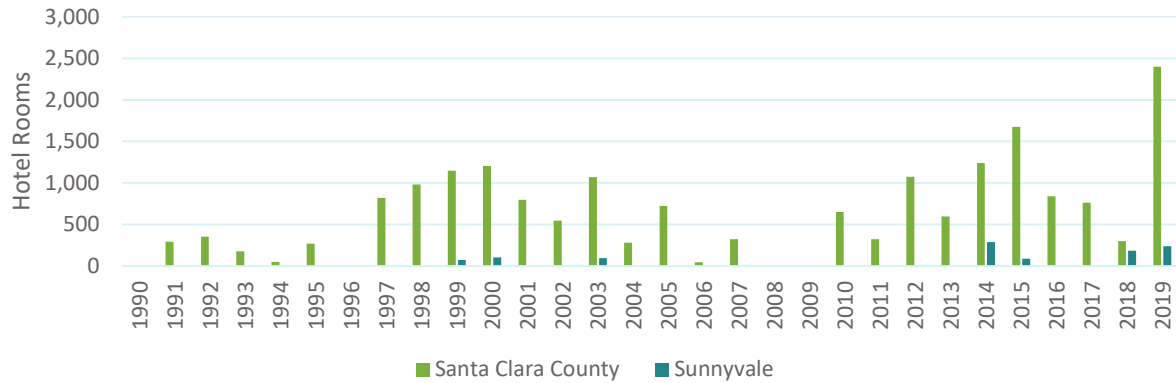
¹³ San Jose Airport Comprehensive Annual Financial Report, FYs 2015, 2016, 2019.

FIGURE 44. HOTEL ROOM INVENTORY GROWTH IN SANTA CLARA COUNTY AND MARKET AREA CITIES, 1990 TO 2019



Source: Smith Travel Research, 2020; Strategic Economics, 2020.

FIGURE 45. NEW HOTEL ROOMS COMPLETED ANNUALLY IN SANTA CLARA COUNTY AND SUNNYVALE, 1990 TO 2019



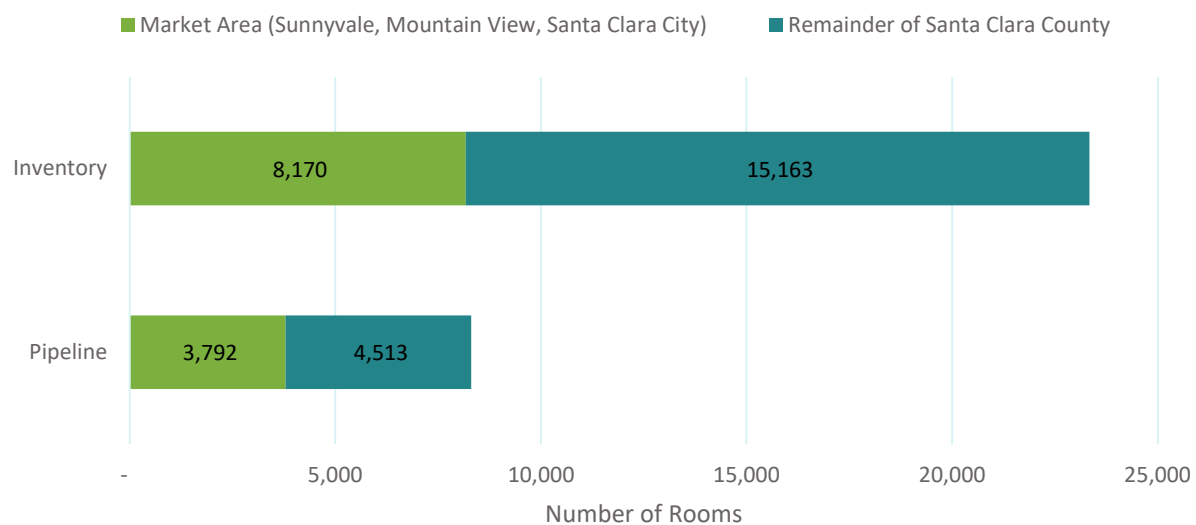
Source: Smith Travel Research, 2020; Strategic Economics, 2020.

Development Trends

Within Santa Clara County, there are approximately 8,300 hotel rooms in the development pipeline, which would represent an increase in inventory of 36 percent if all are built. Of these, it is estimated that approximately 1,775 are currently under construction, 2,890 are entitled, and 3,990 are proposed for development.¹⁴ This amount is slightly less than the total amount of hotel rooms in the county built from 2010 to 2019.

The market area is attracting an over-representative share of hotel rooms in the Santa Clara County pipeline. While hotel rooms in Sunnyvale, Mountain View, and Santa Clara account for 35 percent of the county's existing inventory, they represent 46 percent of rooms in the pipeline, suggesting the market area is on track to capture a large share of the region's expected growth in hotel room supply (Figure 46).

FIGURE 46: HOTEL ROOM INVENTORY AND PROJECTED GROWTH IN SANTA CLARA COUNTY, 2020



Source: STR, 2020; Hotel-Online.com, 2019; Strategic Economics, 2020.

The current amount of hotel rooms in the development pipeline within the market area would represent a substantial expansion of its existing supply:

- There are currently over 1,000 hotel rooms currently under construction in Sunnyvale alone (Figure 47), which represents a 30 percent increase in Sunnyvale's inventory.
- There are 4,381 rooms under construction and planned within the market area (excluding rooms associated with inactive projects), which would represent a 54 percent increase in the market area's inventory.
- Nearly half (46 percent) of hotel rooms in the pipeline within the market area are in Sunnyvale. Within Sunnyvale, hotel projects are concentrated in three areas: the Moffett Park plan area, along El Camino Real, and in locations with proximity to Highway 101 access along Lawrence Expressway.

¹⁴ These are rough estimates based on the analysis in Lana Yoshi's article, "Silicon Valley Supply Growth Rates Increasing in Step with Demand Growth" from Hotel-Online.com in March, 2019. While the "entitled" and "unentitled" numbers are based on March, 2019, the "under construction" amount has been reduced from the figure reported in the article, based on hotels that were completed between March and December 2019, according to hotel data service STR.

FIGURE 47: BREAKDOWN OF PIPELINE HOTEL ROOMS BY STATUS WITHIN THE MARKET AREA, 2020

	Moffett Park	Sunnyvale	Mountain View	Santa Clara City	Market Area	Moffett Park as Share of Study Area
Under Construction	350	1,004	455	365	1,824	19.2%
Planned	185	804	502	1,251	2,557	7.0%
Inactive*	180	368	-	-	368	48.9%
Total	715	2,176	957	1,616	4,749	15.0%

*Neither Mountain View nor Santa Clara track inactive projects the way Sunnyvale does. Therefore it is possible that planned projects in those two cities may be "inactive" as well.

Source: City of Sunnyvale, 2019; City of Mountain View, 2019; City of Santa Clara, 2020; Strategic Economics, 2020.

The four pipeline hotel projects in the Moffett Park plan area represent 38 percent of total pipeline Sunnyvale hotel rooms, and another project is proposed just across the street from the boundary. Note, however, that one project—250 E Java. Dr.- is currently on hold. Projects in and adjacent to the plan area are:

- **410 W. Java Dr.** (formerly 1235 Bordeaux Dr.) which is currently under construction, involves new construction of two hotels—an AC Marriott and a Courtyard by Marriott—on the same site. The completion of these two hotels will result in a net increase of 350 new hotel rooms.
- **1100 N. Mathilda Ave.**, which is currently in the middle of the permitting process, involves the renovation and expansion of the Hotel Matilda, which will ultimately result in the addition of 185 net new rooms.
- 180 rooms at **250 E. Java Dr.** are currently on hold.
- There are plans for a six-story hotel at **1296 Lawrence Station Road**, located on the southwest corner of the Highway 237 and Lawrence Expressway intersection, just outside of the Moffett Park plan area. It is estimated to include 128 rooms.

Hotel Performance

This section describes the market area’s performance. Note hotel performance data only captures trends for Sunnyvale and Mountain View, and does not include hotels in Santa Clara, which tend to charge lower rates. Figure 48 shows hotel occupancy, average daily rates, and revenue per available room for mid-price, upscale, and luxury hotels over the last five years for which full data was available.

Prior to the COVID-19 pandemic, hotels in Sunnyvale and Mountain View generally performed very well, with high occupancy rates and room revenues. Average occupancy rates in Sunnyvale and Mountain View hotels hovered at over 75 percent since 2013.¹⁵ Average daily rates (ADR) exceeded \$200 and revenue per room (RevPAR)¹⁶ exceeded \$160. In comparison, the national average RevPAR was \$86 in 2018.¹⁷

As a surge of new hotel projects have opened in recent years and absorbed additional hotel demand, ADRs and RevPAR had leveled off and occupancy rates had softened. While ADRs and RevPAR grew 37 and 36 percent respectively from 2013 to 2016, they had been steady since (prior to the COVID-19 pandemic)—growing just three

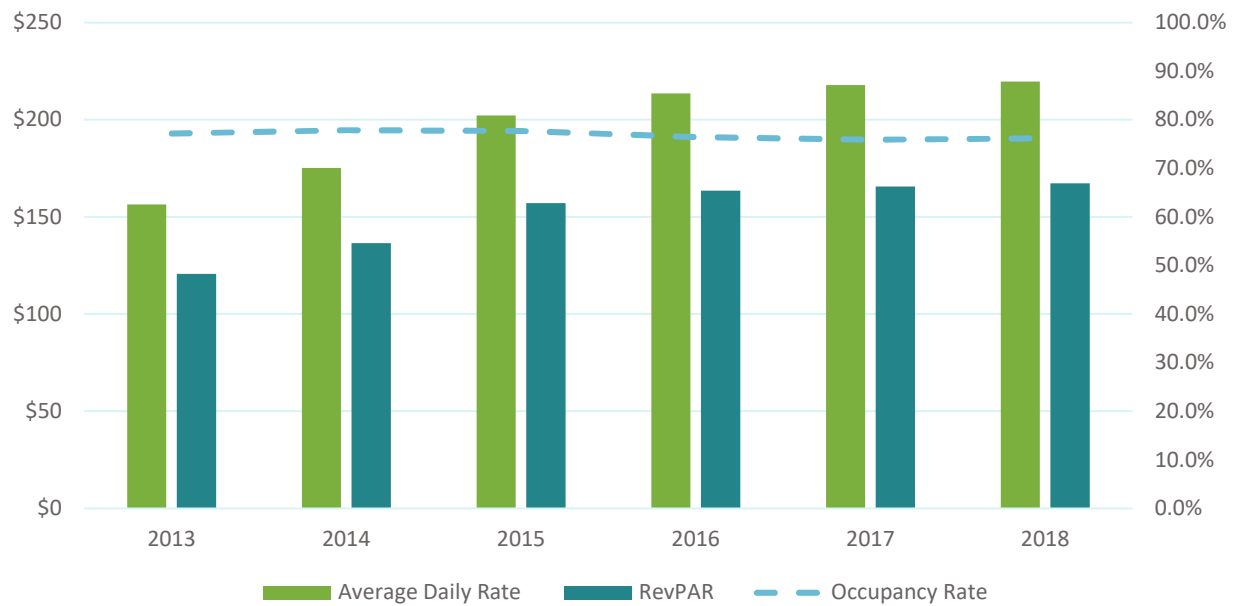
¹⁵ 2013 is the earliest year for which performance data is available.

¹⁶ Revenue per available room (RevPAR) is calculated by dividing total room revenue by the number of rooms available.

¹⁷ Lock, S. "Average revenue per available room of the U.S. hotel industry from 2001 to 2019," Statista.com, Jan 22, 2020. <https://www.statista.com/statistics/200168/us-lodgings-average-revenue-per-available-room-outlook/>

percent (ADR) and two percent (RevPAR) from 2016 to 2018, as shown in Figure 48. Meanwhile, occupancy also decreased slightly—from 77.2 percent in 2013 to 76.2 percent in 2018.

FIGURE 48. HOTEL MARKET PERFORMANCE IN SUNNYVALE AND MOUNTAIN VIEW, 2013-2018 (IN 2018 DOLLARS)



Source: Smith Travel Research, 2020; Strategic Economics, 2020.

Future Demand for Hotels in the Moffett Park Plan Area

Substantial continued employment growth in Santa Clara County will drive additional long-term demand for hotel rooms beyond those currently planned. Hotel demand in Santa Clara County is primarily associated with growth of office-based businesses. As was noted in the office demand analysis, jobs associated with the tech industry will continue growing in Santa Clara County, and 35 million square feet of office space is under construction, approved, or proposed within Mountain View, Sunnyvale, Santa Clara, and San Jose.

The market area and the Moffett Park plan area are likely to continue attracting hotel demand and development due to the presence of expanding large technology businesses. The many large technology employers in Sunnyvale, Mountain View, and the plan area are among the primary drivers of hotel demand in the region. Expansion by these and other businesses will create long-term growth in demand for hotels in these areas.

Prior to the COVID-19 pandemic, softening market indicators and the large quantity of hotel projects currently under construction or approved in the market area already suggested that development would slow until additional employment growth occurred. As discussed, the hotel inventory in the market area rapidly expanded in recent years, which absorbed unmet demand and contributed to slowing growth in room rates and declining occupancy rates. As a result, hotel development activity was already likely to slow over the next five to ten years until additional employment growth increased demand for hotel stays.

Employment growth within the Moffett Park plan area will position it to generate and potentially capture significant long-term hotel demand. Over the last two decades, there was one hotel room added for every 2,860 square feet of office space in Santa Clara County, as shown in Figure 49. As an illustrative example, Figure 50 shows the potential demand for hotel rooms that would be generated by office growth within the plan area if the relationship between hotel rooms and office space remains steady. As shown, a 10 million square feet in office space would correspond to an increase in demand for nearly 3,500 hotel rooms. Although development of these

hotels would not necessarily occur in the Moffett Park plan area itself, the plan area would be a competitive location to attract future hotel projects since visitors to businesses in the area would favor proximity to their destinations.

In the short-term, the decline in travel resulting from the COVID-19 pandemic will dramatically slow growth in demand for additional hotel rooms. Travel restrictions, event cancellations, and general safety concerns have all resulted in minimal demand for hotel stays during the COVID-19 pandemic. As a result, growth in demand for additional hotel rooms will be slow to occur, and may still be absorbed by hotel projects currently in the development pipeline. Ultimately, however, long-term growth in demand for hotel stays in Moffett Park will still remain linked to growth in employment and office space in Santa Clara County.

FIGURE 49. RELATIONSHIP BETWEEN SANTA CLARA COUNTY OFFICE AND HOTEL GROWTH BETWEEN 2000 AND 2019

	Growth, 2000-2019
Hotel Rooms	14,835
Office Sq. Ft.	42,433,842
Office Sq. Ft. Per Hotel Room	2,860
Average Hotel Rooms Added Per Year	781

Source: Smith Travel Research, 2020; Hotel-Online.com, 2019; City of Mountain View, December 2019; City of Santa Clara, December 2019; City of San Jose, December 2019; City of Sunnyvale, December 2019; Strategic Economics, 2020.

FIGURE 50. ILLUSTRATIVE SCENARIOS OF HOTEL DEMAND DIRECTLY ASSOCIATED WITH POTENTIAL OFFICE GROWTH IN THE MOFFETT PARK PLAN AREA

	Low Growth Scenario	Medium Growth Scenario	High Growth Scenario
New Office Sq. Ft.	5,000,000	10,000,000	15,000,000
New Regional Hotel Room Demand	1,748	3,496	5,244

Source: Strategic Economics, 2020.