



San Mateo – An Analysis of Local Land Use Planning and Regional Growth

Like many Bay Area communities, the City of San Mateo has experienced significant change in recent years as the region grows alongside a wildly successful economy. The effects of this growth include increased traffic congestion as the number of new jobs surpassed the amount of housing built in San Mateo County during the same timeframe.

This issues paper examines some key information to help the community better understand San Mateo's current situation as well as the correlation between land use and traffic. It also evaluates planning efforts within the City's control that strive to focus growth in areas with better access to alternative modes of transportation.

This analysis includes data on how regional commute patterns have changed over time, as well as information gleaned from the adoption of the San Mateo Rail Corridor Transit Oriented Development Plan. That long-range 2005 planning effort provided guidance for the creation of denser, mixed-use communities with housing, employment opportunities, amenities and open space within close proximity to the Hillsdale and Caltrain stations.

The plan focuses development near transit as a method of encouraging alternate modes of transportation, and strives to protect existing neighborhoods while addressing requirements to accommodate future growth. According to ongoing monitoring efforts of new developments in the Rail Corridor Plan area, these residents and workers are more likely to use mass transit and have significantly reduced the number of vehicle trips beyond what was initially expected.

Yet while the intent of the Rail Corridor Plan becomes a reality, the Bay Area's thriving economy and resulting traffic congestion are affecting a City situated at the crossroads of two major freeway interchanges. This paper provides a regional context while evaluating how transit oriented development is performing in San Mateo.

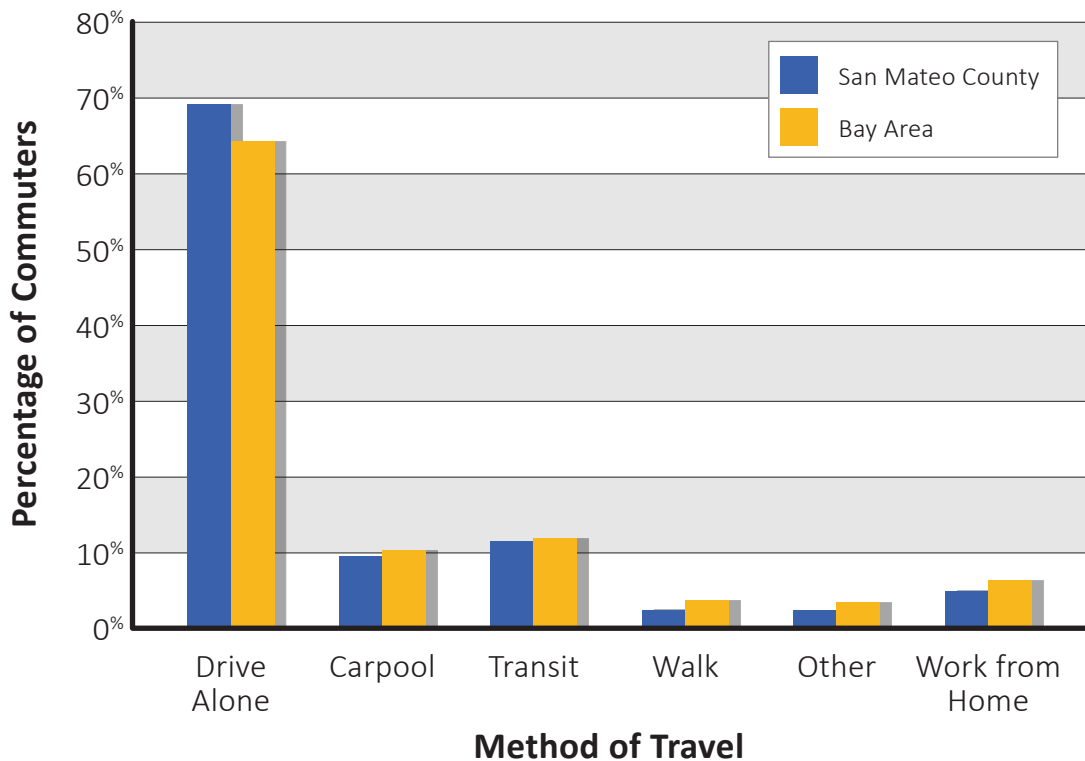
The effects of regional growth and traffic in **San Mateo**

The Peninsula remains a desirable place to live and people don't appear to be abandoning it anytime soon. San Mateo County's population is expected to grow by more than 21 percent to almost 900,000 residents between 2010 and 2040, according to the California Department of Finance. The regional economic boom is projected to follow suit with the Bay Area estimated to add 1.1 million new jobs between 2010 and 2040, according to the Metropolitan Transportation Commission, MTC.

With further growth on the horizon, traffic is unlikely to improve without significant changes in the way people commute. In understanding San Mateo's current congestion, it is helpful to evaluate both how local and regional commuters are getting to work, as well as how traffic patterns have changed.

San Mateo County residents are a little less likely than the Bay Area average to get to work via mass transit. Private automobiles, including carpools, accounted for nearly 80 percent of the trips in 2016. Figure 1 shows a breakdown of how San Mateo County residents are commuting, according to data from the MTC.

Figure 1: Commute Mode Choice (2016)



Source: Metropolitan Transportation Commission's Vital Signs (www.vitalsigns.mtc.ca.gov), 2019.

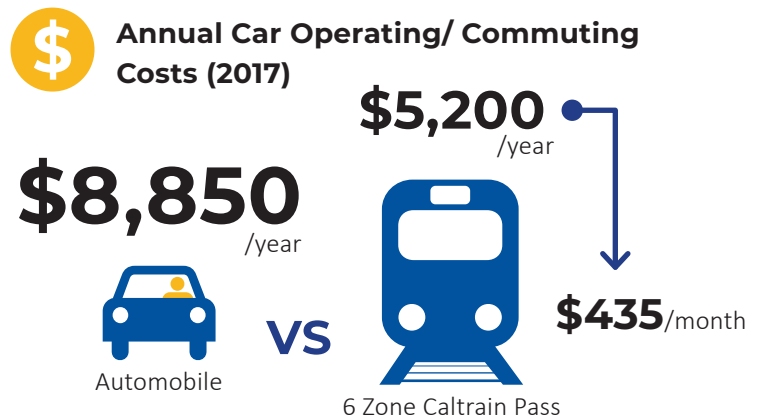
Mass transit use has steadily increased in the county from 7.8 percent in 2006 to 11.4 percent in 2016, according to the MTC. Proximity to mass transit and accessibility of alternative modes of transportation are often factors in how people decide to commute.

In the City of San Mateo, those who use transit tend to live closer to the Caltrain line, especially near the Hillsdale and Downtown stations where up to 30 percent of employed residents take transit. Figure 2, on the following page, shows where transit commuters tend to reside in San Mateo with darker areas representing higher rates of mass transit use.

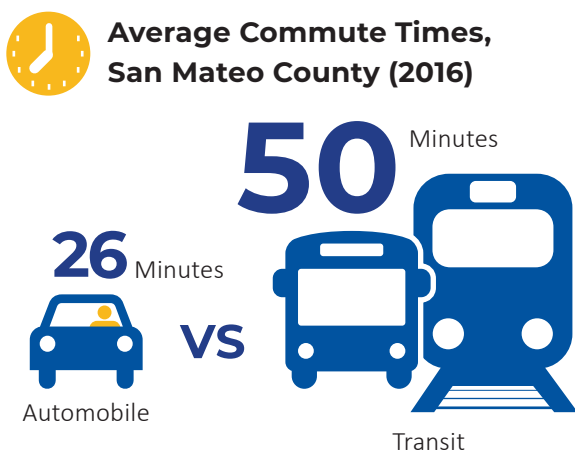
Locating housing and amenities near transit can also increase ridership, which in turn means more revenue for transit agencies to provide better and more frequent service. Understanding the reasons people opt for or against mass transit are considerations for communities in land use decisions. Currently, both the time and money it takes to commute by transit are barriers for many people.

A 6 Zone Caltrain pass costs roughly \$5,200 annually, and even the discounted Go Pass now costs \$3,420. Roundtrip commute-day BART fares from San Bruno to downtown San Francisco cost about \$2,300 annually. In comparison, AAA reports the annual cost of owning and operating a new car in 2018 was about \$8,850. Even though it is more expensive, for many the time advantages and direct delivery to one's destination may make the automobile more attractive than transit.

Commute times often drive decisions about whether to take alternate modes of transit to work. Overall, average commute times for San Mateo County residents, across all modes, have increased from 23 minutes in 1980 to 29 minutes in 2016. Driving remains the fastest way for the average San Mateo County commuter to get to work, although it increased from 24 minutes in 2006 to an average of 26 minutes in 2016, according to MTC. Meanwhile, mass transit averages about 50 minutes a trip, according to MTC.



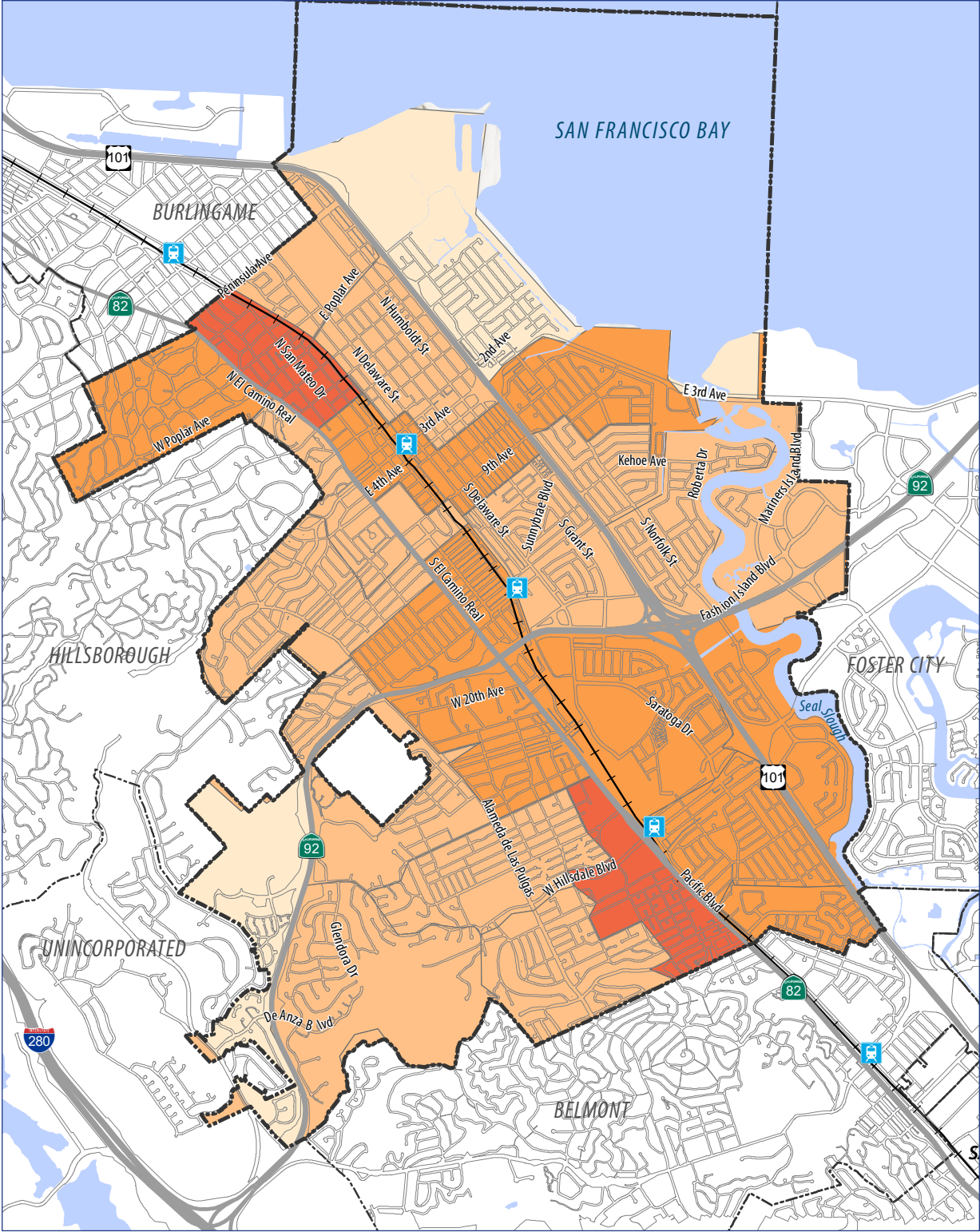
Source: AAA Newsroom (<https://newsroom.aaa.com/auto/your-driving-costs/>), 2019.



Of course, time spent commuting mostly depends on how far you have to travel to work. As of the 2015 Census, approximately 13 percent of San Mateo residents were employed in the City. About 46 percent work elsewhere on the Peninsula or in San Francisco, and 41 percent commute to even farther away. There is also more than 40,000 people who commute into the City of San Mateo from other communities, according to the Census.

Source: Metropolitan Transportation Commission's Vital Signs (www.vitalsigns.mtc.ca.gov), 2019.

Figure 2: Transit Commuters in San Mateo



Source: City of San Mateo, 2018; San Mateo County, 2018; Esri, 2018; PlaceWorks, 2019.



Residents Commuting by Transit:

- 0% to 5%
- 6% to 10%
- 11% - 15%
- 16% - 30%
- Caltrain Stations
- San Mateo City Limit

Intersected by Highway 101 and State Route 92, San Mateo is located at a key juncture for commuters traveling from Silicon Valley to San Francisco or from East Bay communities where housing tends to be more affordable than the jobs-rich Peninsula. The uptick in employment opportunities and changing commute patterns resulting from a strong economy are apparent on local freeways.

Between 2008 and 2017 daily average traffic volumes have increased 7 percent on State Route 92 in San Mateo City limits from 143,000 to 160,700 vehicles. On Highway 101, trips have risen 9 percent from 243,000 to 249,900 vehicles, according to the California Department of Transportation (Caltrans) 2017 Traffic Volumes Report.

Changing Times and Changing Commutes

With more people on the road for longer amounts of time, the result is “peak spreading,” where what was once called rush hour has now taken over much of the weekday. Ironically, one of the solutions for traffic congestion – commuting at “off-peak” hours – probably contributes to this effect.

As congestion on the main highways tightens and the rise in mobile mapping technology encourages drivers to leave congested roads, traffic often spills over onto local San Mateo streets. This coincides with an increasing number of cut-through drivers – or those who begin their trip outside of San Mateo, travel onto local streets and end in destinations outside of the City.

To better understand how local roads are being used, traffic engineers evaluated data from vehicles with GPS-enabled devices or cellphones during peak commute hours between 2014 and 2018. Areas with the highest percentage of cut-through traffic include major east-west connectors to the San Mateo Bridge, and roads leading to neighboring cities. Both the total number of vehicles on certain roads and the percentage of those cutting through San Mateo have increased significantly between 2014 and 2018, according to an analysis by Hexagon Transportation Consultants.

Figure 3 shows the percentage of cut-through traffic as compared to total volumes on certain streets in San Mateo during the evening peak commute hours between 4 p.m. and 6 p.m. Studied road segments are highlighted in blue, and areas with the largest percentage of cut-through drivers – typically near freeway intersections and to the east of Highway 101 – are shown with both (2014) and 2018 rates for comparison.

Figure 3: Cut-Through Traffic Change, 2014 to 2018



Source: Hexagon Transportation Consultants, Inc., 2018.



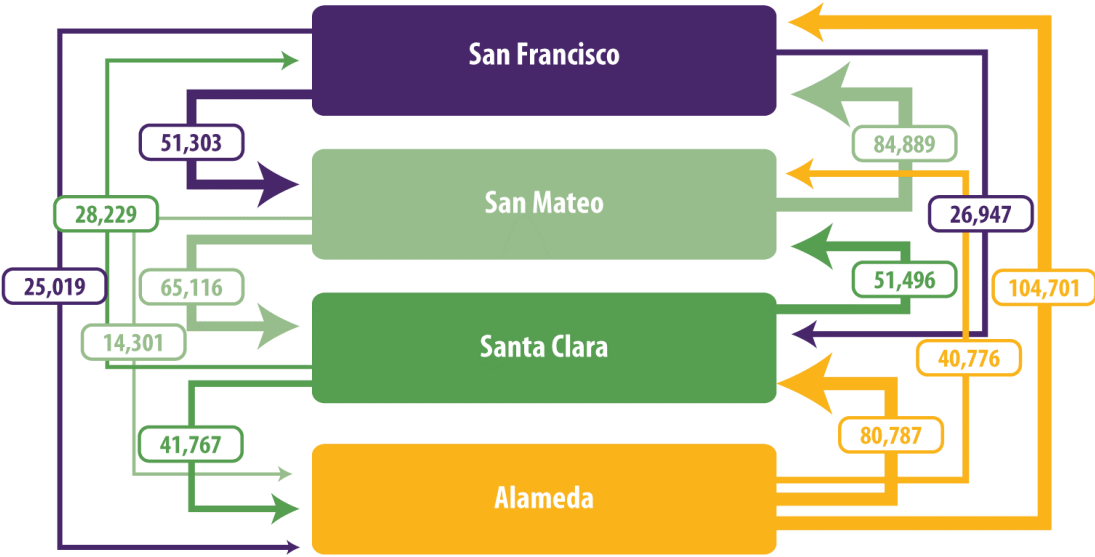
Of the total number of vehicles on Hillsdale Boulevard east of the highway, cut-through traffic rose from 45 percent to 51 percent while the total volume of drivers increased 121 percent, according to Hexagon. The total number of vehicles on between South Norfolk Street and Mariners Island Boulevard has increased 69 percent, while cut-through traffic went from 52 percent to 54 percent, according to Hexagon.

Studies also show large increases in the number of vehicles exiting Highway 101 just before the San Mateo Bridge, suggesting drivers are using surface streets to avoid the congested interchange. Of all the vehicles heading to the East Bay from Highway 101, between 25 percent and 35 percent are cutting through local San Mateo streets. Similarly, of the drivers on Highway 101 who are heading into Foster City, between 70 percent and 90 percent are using San Mateo streets – Third Avenue, Hillsdale Boulevard and Fashion Island Boulevard – to avoid the congested interchange at State Route 92, according to Hexagon.

Commute patterns have changed significantly alongside the rebounding economy and San Mateo County’s location makes it prime for cross-county commuters – defined as those who don’t work and reside in the same county. The Bay Area Commute Patterns illustration (Figure 4) below shows the number of residents who are crossing county borders to get to work.

Figure 4: Bay Area Commute Patterns (2017)

Number of Residents who Commute to Another County Within the Region.



Source: Silicon Valley Institute for Regional Studies, Silicon Valley Indicators (<https://siliconvalleyindicators.org/data/place/transportation/commuting/>), 2017.

County, according to the Silicon Valley Indicators Report. San Mateo County residents are also more likely than any other Bay Area residents to commute to another county. Over 42 percent of San Mateo County residents cross county lines when commuting, as compared to the Bay Area average of 29 percent. Table 1 below shows how commute patterns have changed since 2007, according to the Indicators Report.

Table 1: Change in the number of Cross-County Commuters

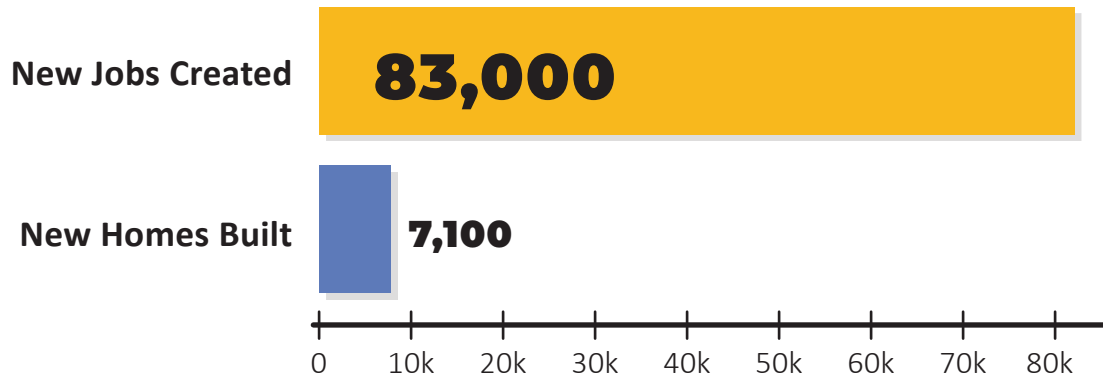
Origin	Destination	2007 – 2017		2016 – 2017	
		Number	Percent	Number	Percent
Alameda	San Francisco	+36,627	+53.8%	-10,311	-9.0%
	San Mateo	+9,253	+29.4%	-752	-1.8%
	Santa Clara	+15,428	+23.6%	+4,767	+6.3%
San Francisco	Alameda	+4,303	+20.8%	-767	-3.0%
	San Mateo	+8,018	+18.5%	+1,098	+2.2%
	Santa Clara	+4,477	+19.9%	-1,749	-6.1%
San Mateo	Alameda	+558	+4.1%	-1,227	-7.9%
	San Francisco	+3,398	+4.2%	-7,182	-7.8%
	Santa Clara	+16,606	+34.2%	+4,117	+6.7%
Santa Clara	Alameda	+4,061	+10.8%	-3,030	-6.8%
	San Francisco	+18,067	+177.8%	+10,092	+55.6%
	San Mateo	+12,768	+33.0%	+5,572	+12.1%

Source: Silicon Valley Institute for Regional Studies, Silicon Valley Indicators (<https://siliconvalleyindicators.org/data/place/transportation/commuting/>), 2017.

The Interrelation of Housing and Traffic in **San Mateo**

A major reason commute patterns have changed and people are spending more time on the road is because job growth in San Mateo County has outpaced new housing construction at a ratio of about 12 to 1, as shown in Figure 5.

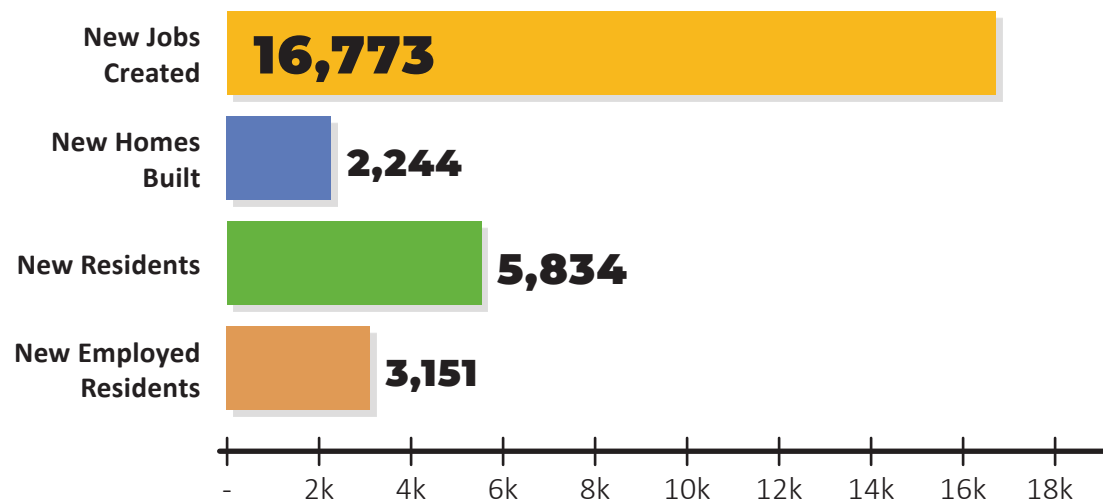
Figure 5: Jobs Created vs. Homes Built in San Mateo County (2010-2017)



Source: Home For All (<https://homeforallsmc.org/challenge/>), 2019.

In the City of San Mateo, over 16,773 jobs and 2,244 new homes were added between 2010 and 2017, according to data from the state's Employment Development Department (Figure 6), a ratio of 7.5 to 1.

Figure 6: Jobs Created vs. Homes Built in the City of San Mateo (2010 - 2017)



Source: California Employment Development Department, 2019; City of San Mateo, 2019.

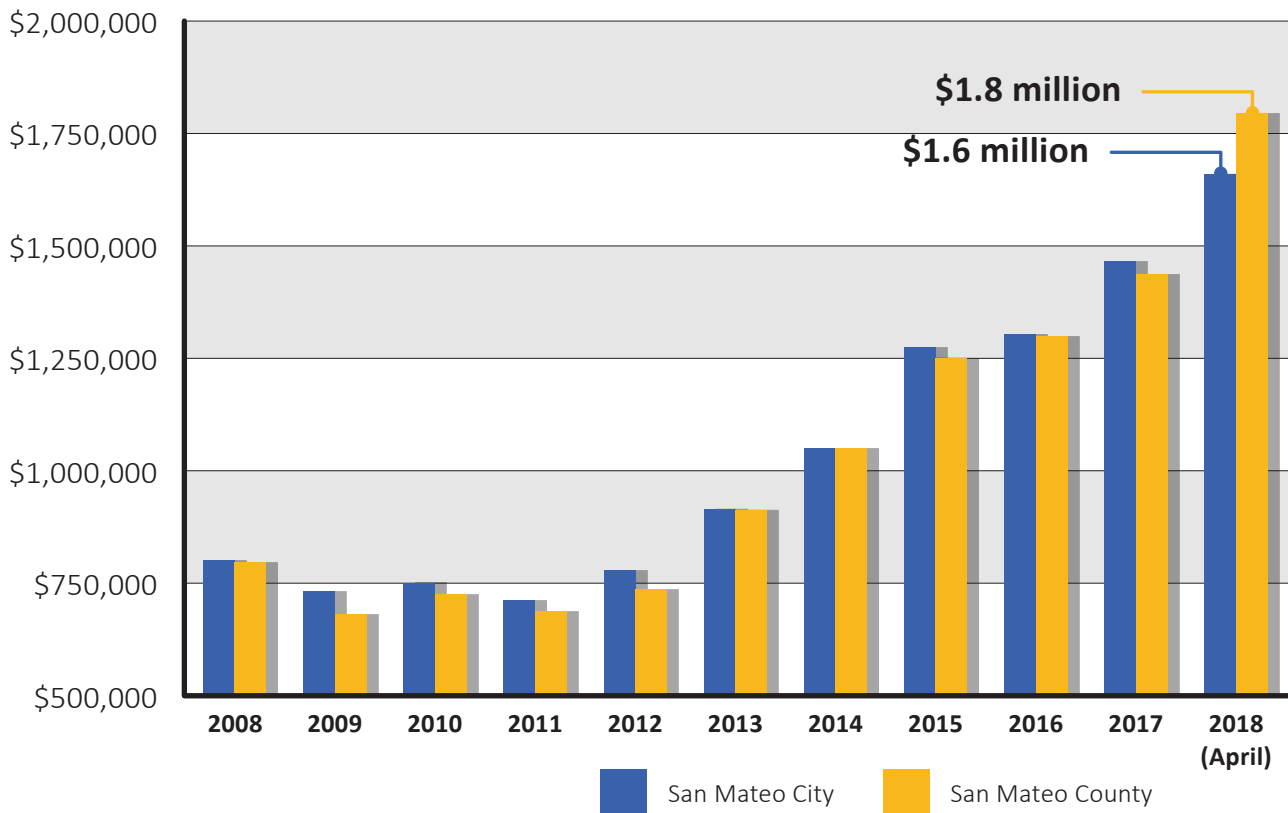
However, comparing homes to jobs does not compare people to people. Based on San Mateo's current population per household of 2.6, the new homes built from 2010 to 2017 represent about 5,834 new residents added. Assuming that about 54% of these new residents are employed, consistent with San Mateo's current proportion of residents in the labor force,

these new homes would house about 3,151 workers. This means that the ratio of new jobs created in San Mateo to new workers moving to San Mateo from 2010 to 2017 in San Mateo is about 5.3 to 1.

Since demand is greater than supply, housing costs are rising. Figure 7, based on data from the San Mateo County Association of Realtors, shows home prices in the city and county have increased considerably following the recession. With a current median annual income of \$118,000, a four-person household in San Mateo can comfortably afford to purchase a home priced at \$700,000 or less – about half of the realistic cost.

In 2016, only 29 percent of San Mateo County first-time homebuyers could afford a home in the county, according to a report by Sustainable San Mateo County.

Figure 7: Single-Family Median Home Price (2008-2018)



Note: Annual data are year-end figures, except 2018 data which was taken in April 2018.

Source: San Mateo County Association of Realtors, 2018; California Association of Realtors, 2018; Economic & Planning Systems, Inc., 2018.

Multi-family rents in San Mateo are also out of reach for many people currently working in the city. About half of San Mateo County workers earn less than \$50,000 a year, according to an analysis of Census data by the University of Minnesota’s Integrated Public Use Microdata Series. Even two such workers living together can only afford about \$1,750 per month in rent.

Although the City of San Mateo is largely “built out,” California law requires municipalities to continue to zone land for more housing – including 3,100 new dwellings between 2015 and 2022. Cities are required to file annual Housing Element reports to show how they’re complying with these Regional Housing Needs Allocations (RHNA) that include new homes for a variety of income levels. According to San Mateo’s 2018 report, the City issued construction permits for 1,320 new housing units between 2015 and 2018, and additional units are in the pipeline. Multi-family dwelling units – which include apartments, townhomes and condominiums – have accounted for the majority of this new construction.

Table 2: 2018 City of San Mateo RHNA Progress

Income Level	2015 to 2023 RHNA Allocation by Income Level	Total Units Constructed to Date (2015 to 2018)	Total Remaining RHNA by Income Level	Percent Remaining by RHNA Income Level
Very Low	859	44	815	95%
Low	469	23	446	95%
Moderate	530	94	436	82%
Above Moderate	1,242	1,159	83	7%
Total Units	3,100	1,320	1,780	57%

Note: Units serving extremely low income households are included in the very low-income permitted units totals.

Source: City of San Mateo Annual Housing Element Progress Report, 2018.

City of **San Mateo** Housing Objectives

- 1** Maintain the character and physical quality of existing residential neighborhoods.
- 2** Maintain a diversity of housing opportunities.
- 3** Increase its housing supply to meet the housing demand caused by future job growth.

Since the early 2000's, the City Council has prioritized maintaining San Mateo's character and existing neighborhoods while striving to address the housing shortage. While also seeking to preserve parks and open space, these housing policies often result in growth being targeted to the redevelopment of underutilized parcels.

To provide housing opportunities while managing the effects on traffic, the City's policies also encourage construction near areas with transit. Sometimes referred to as transit-oriented developments, TOD, these neighborhoods often feature a diversity of housing types – including single-family homes, townhomes, and other multi-family housing units – near transit stops and amenities such as grocery stores, restaurants or shops.

San Mateo has several examples of TOD, including the mixed-use Bay Meadows project – the redevelopment of the former horse race track into housing, office and commercial space near the Hillsdale Caltrain station.

It is important to note these new developments were never expected to result in no new vehicle trips. Instead, residents or workers were expected to take fewer vehicle trips than those who may work or reside farther away from mass transit. To achieve these goals, the City has enacted measures to ensure these types of projects actually succeed in reducing the number of vehicle trips stemming from new developments.

How Land Use Decisions Can Affect Traffic

Like many other Bay Area communities, San Mateo has sought to address the state’s mandate to plan for more housing by establishing transit-oriented development policies. By co-locating a mix of housing, employment, shopping and entertainment within walking or biking distance of transit, TOD can reduce the number of vehicles that would otherwise be on the road.

To encourage this type of redevelopment, the City in 2005 adopted the San Mateo Rail Corridor Plan, which calls for TOD within a half-mile radius of the Hillsdale and Hayward Park Caltrain stations. TOD typically allows for higher densities while encouraging a mix of uses that complement each other – such as housing near shopping and dining.

Over the last 13 years, the Plan has facilitated new developments such as Station Park Green near the Hayward Park Caltrain Station and Bay Meadows near the Hillsdale station. These projects are designed as vibrant mixed-use neighborhoods with open space and improved pedestrian paths near transit.

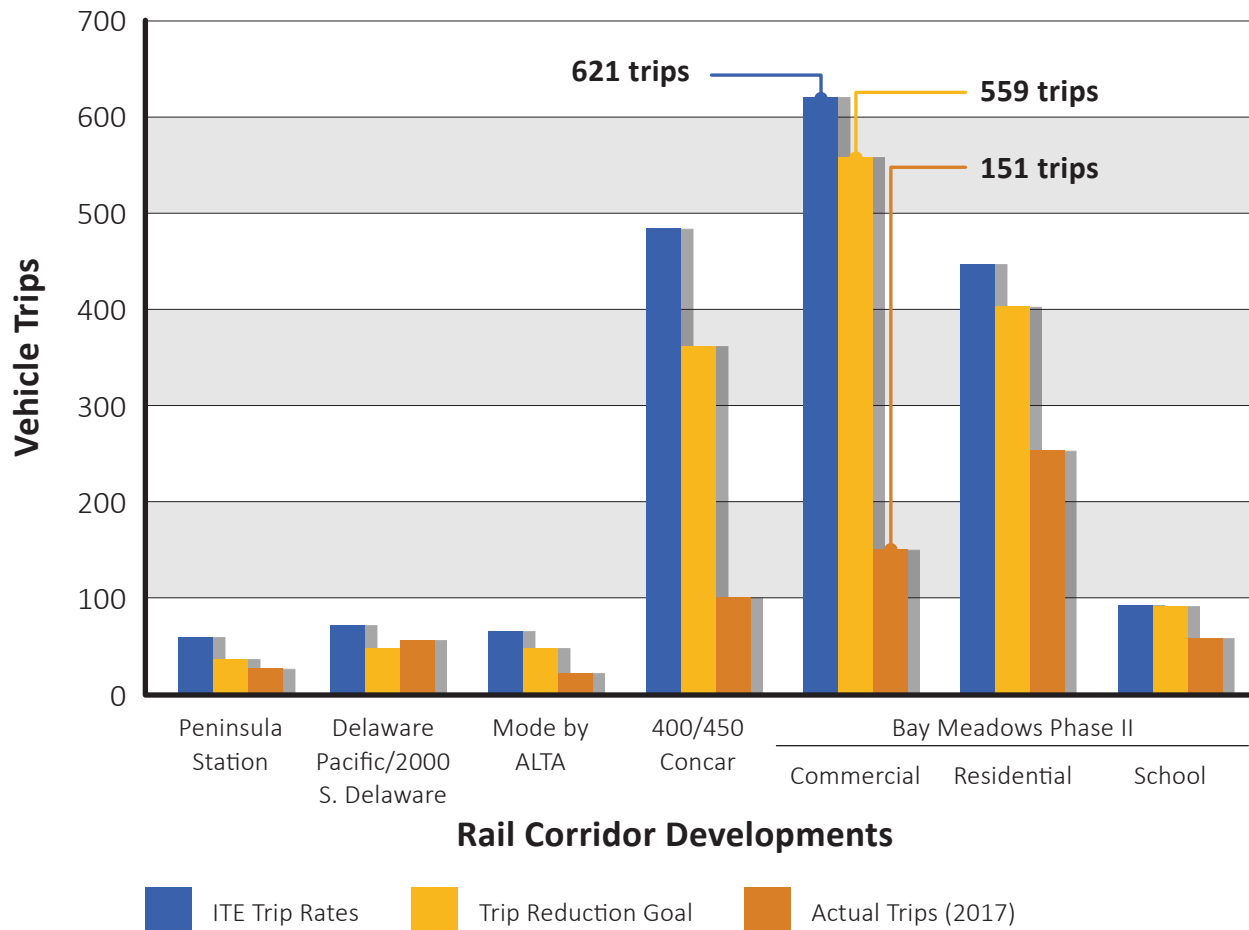
The City also established a Transportation Demand Management program, or TDM, that employs strategies to reduce vehicle trips by shifting travel to biking, walking and transit. New rail corridor developments are required to reduce the amount of vehicle trips generated by at least 25 percent as compared to non-TOD projects. To achieve these congestion-relief goals, developers in the corridor are required to adopt TDM measures such as subsidizing transit passes, installing bike lockers, partnering with agencies to offer shuttles, and providing bike or car shares on site.

Projects that adopt TDM measures often produce results. For example, between 2012 and 2017, pedestrian and bicycle volumes in the corridor increased by about 93 percent and 96 percent, respectively.

As part of the Rail Corridor Plan, the City created a Transportation Management Agency, or TMA, to assist developers in meeting mandates to reduce vehicle trips. One function of the TMA is to annually monitor new developments within the rail corridor to ensure projects are reducing trips by between 10 percent and 54 percent below typical traffic counts generated by a non-TOD project. The range is broad as the requirements include both short- and long-term reductions and vary by development type as well as location.

A review of 2017 evening trip counts for projects within the Rail Corridor found most of these housing and commercial developments had lower traffic volumes than expected. Figure 8: Rail Corridor Developments Vehicle Trips Analysis, shows projects built within the corridor since the plan was passed. The chart compares ITE Trip Rates, or the number of trips generated from a non-TOD project of a similar size; against the project’s required trip reductions; and the actual number of vehicle trips counted at each project.

Figure 8: Rail Corridor Developments - Vehicle Trips Analysis



Source: City of San Mateo, Annual Transportation Management Association Report, 2017.

This data factors in the current build-out of a project and highlights how well-planned developments near mass transit and amenities results in less traffic than similar non-TOD projects. Again, it should be noted that TOD was never expected to generate no new vehicle trips. Instead, the goal is to co-locate housing, services and jobs near transit to help reduce one’s reliance on a car in their daily lives.

A major reason these developments are successful in reducing vehicle trips is that TOD is often branded as a lifestyle. Bay Meadows, for example, has actively marketed their mixed-use housing and office space to residents and employers who are seeking proximity to transit and the ability to walk or bike to dining and shopping.

TOD serves a growing demand for attached and multi-family housing from groups like millennials entering the housing market and aging baby boomers who want smaller homes close to services. San Mateo’s Bay Meadows community highlights the desirability of TOD housing as all of the townhomes and apartments built so far were occupied soon after opening.



An Example of open space and pedestrian improvements at the Bay Meadows development.

In the summer of 2017, Bay Meadows staff conducted a survey of 223 residents. The results show the majority of those who chose to live in Bay Meadows are 25 to 44 years old, with 42.6 percent married and 41 percent the parent of a child 18 or younger.

Bay Meadows residents are much more likely to ride Caltrain with 56 percent reporting they ride on a frequent basis, including 44 percent who ride daily. Furthermore, over 60 percent of residents walk or bike on a weekly or more frequent basis to grocery shop and dine out. Almost 54 percent indicated they chose to live at Bay Meadows because of its walkable lifestyle and proximity to conveniences, retail and parks.

SurveyMonkey, a tech company occupying one of the Bay Meadows office developments adjacent to the Hillsdale Caltrain station, has also sought to reduce the number of people driving to work and reported 250 of their 455 employees – or about 55 percent – have Caltrain Go Passes they use as their primary method of commuting to work.

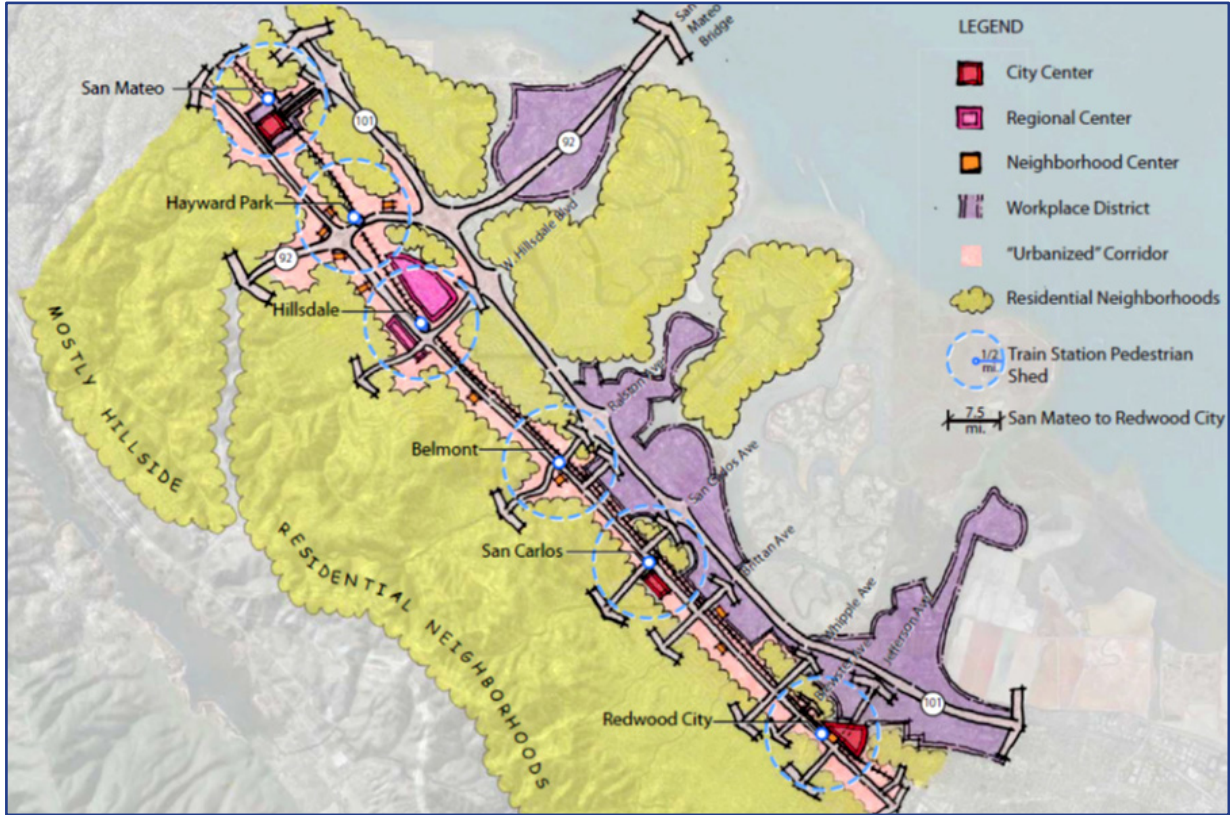
Of the Bay Meadows residents surveyed, 51 percent said the primary reason for not taking Caltrain is it isn't convenient for their commute. This highlights the importance of focusing future growth – both residential and employment – in areas well-served by transit.

As many workers cross county boundaries during their commutes, the City of San Mateo is also part of a larger regional strategy to promote TOD on the Peninsula called the Grand Boulevard Initiative. The Initiative is a partnership of 19 cities, San Mateo and Santa Clara counties, as well as local regional transportation agencies. The vision of the Initiative is to improve the condition and performance of El Camino Real while creating mixed-use housing communities that promote walking and mass transit use.

The Initiative also helps the City satisfy direction from the nine-county Plan Bay Area 2040 to located housing and jobs along major transportation corridors.

Figure 9 shows transit nodes identified in the Grand Boulevard Initiative between San Mateo and Redwood City.

Figure 9: Grand Boulevard Initiative Transit Nodes



Source: Grand Boulevard Initiative, 2010, Economic & Housing Opportunities Assessment, page 34.

As we learned from studying traffic conditions and the rise in cut-through drivers, San Mateo is undoubtedly affected by regional demands. As housing costs increase, people who can't afford to live locally will continue to live further away from major job centers causing more people to commute longer distances.

The Bay Area's employment opportunities and desirability of the area means traffic is unlikely to decrease overnight. Furthermore, based on San Mateo's location and the force of the surrounding economy, congestion could continue regardless of whether the City itself were to cease growing.

While there are external pressures fueling the wild job growth and increased traffic that San Mateo is experiencing, it is important to note TOD in the City is performing as was planned. Strategic planning and transportation demand management strategies within the City's control have been effective in reducing the number of drivers who might otherwise be on the road.

What is Being Done to Balance Growth

The City is in the midst of several long-term planning efforts and leveraging municipally-owned assets to increase TOD housing opportunities. The City also has inclusionary housing policies that require for-profit developers to set aside a portion of their units at below market rates and the City Council recently discussed possibly increasing the requirement from the current minimum 10 percent.

Forward-thinking planning efforts include updates of the General Plan and Bicycle Master Plan – two guiding documents that encourage the public to weigh-in on zoning and bicycle improvements. The Bicycle Master Plan seeks to create an overall cohesive network for bicyclists to travel throughout the City. A key goal is to improve safety for bicyclists while providing better connections between jobs, housing and transit stops.

The City's General Plan outlines an overall community-based vision for San Mateo's future that will be used to guide new developments and infrastructure improvements. The plan provides policies on land use, urban design, housing, transportation and circulation, safety, open space and more. The General Plan update is an opportunity for the community to learn about existing challenges and discuss its priorities for the future.

San Mateo is also leveraging City-owned parcels near downtown by partnering with a non-profit developer to create 163 apartments specifically for workforce housing. Still in the planning stages, this project is adjacent to the Caltrain line and near a wide variety of amenities in Downtown San Mateo.

The City will continue to ensure projects within the Rail Corridor Plan meet vehicle trip caps and require TDM plans for new projects in the area. The City is also in the process of forming another TMA to focus on reducing single occupancy vehicle trips for employees working downtown.

While San Mateo does have control within its own boundaries, the City is unlikely to be able to alleviate regional traffic on its own. Transportation infrastructure improvements are often extremely costly and require a larger, regional approach by municipalities, transit agencies and the public.

The Caltrain Electrification project broke ground in 2017 and will allow faster, more frequent service with longer trains that will increase ridership capacity. SamTrans is working on improving Dumbarton Express bus service while analyzing options for faster and more frequent express service on Highway 101 through San Mateo County – including with new electric buses.

SamTrans and Caltrain are also evaluating the possibility of rehabilitating the currently defunct Dumbarton rail bridge and creating a new east-west route for train service. These enhancements to San Mateo County's southern Bay crossing could help take commute pressure off the San Mateo Bridge.

The City plays an important role and more municipalities are recognizing the importance of collectively addressing these challenges as a region. Continuing to evaluate how TOD is performing in San Mateo while acknowledging the effects of regional demands can help inform future community planning decisions.