

**MEMORANDUM**

Public Works Department

**DATE:** December 1, 2021

**TO:** Council Sustainability Committee

**FROM:** Ria Hutabarat Lo, Transportation Manager  
Damian Skinner, Assistant Public Works Director  
Dawn S. Cameron, Public Works Director

**SUBJECT:** Pandemic Travel Patterns and Postpandemic Opportunities

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**RECOMMENDATION**

Review and provide input on information on pandemic travel patterns and postpandemic opportunities.

**BACKGROUND**

Since March 2020, the COVID-19 pandemic has produced massive changes in the ways that people work, their patterns of travel, and methods for accessing services and opportunities. The unprecedented nature of these changes provides fertile ground for a range of ideas about how life will be different in the postpandemic era. One question of interest is the degree to which remote work will continue, the difference that this might make on future commute patterns, and what strategies could be explored to realize ongoing improvements in traffic congestion and greenhouse gas (GHG) emissions.

The purpose of this report is to present information regarding observed travel patterns and changed work configuration in the last 20 months and identify potential opportunities to leverage any benefits associated with pandemic conditions to achieve the City's goals for the future.

To that end, staff has analyzed the journey to work, due to the oversized influence of commute travel on traffic congestion, GHG emissions and transportation infrastructure considerations.

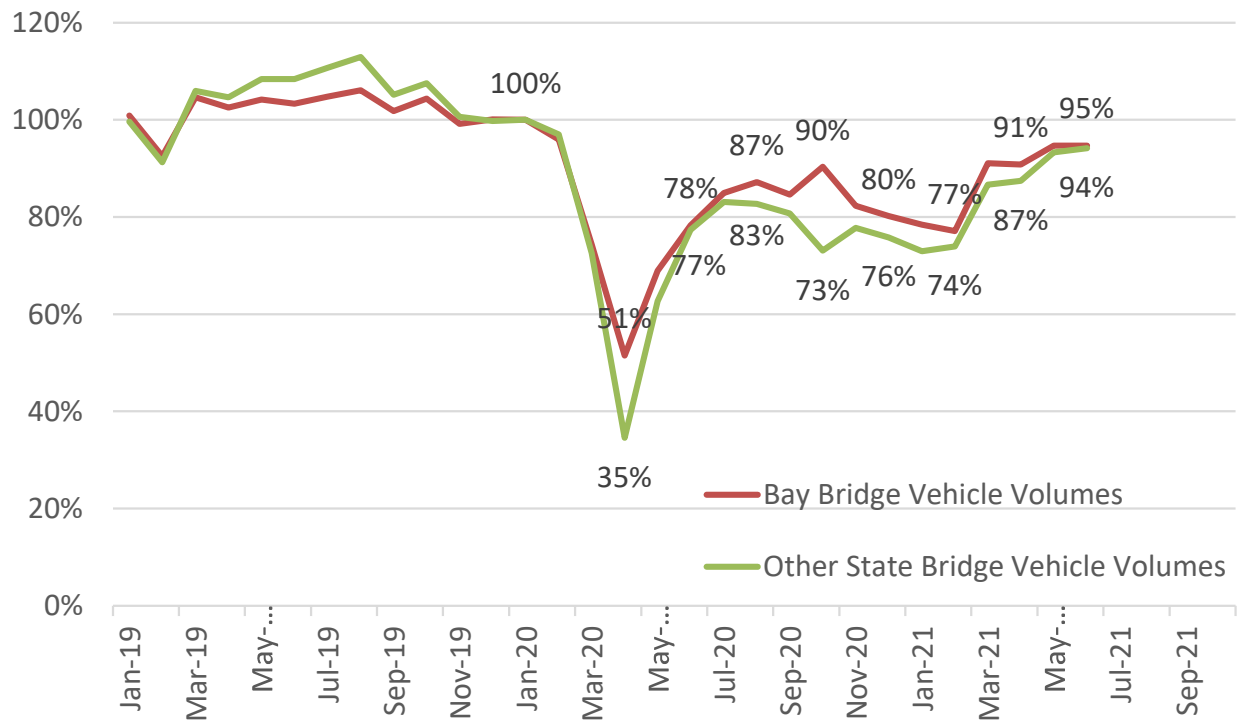
However, it should be noted that there are also considerable changes in other trip types associated with the pandemic. These changes include a reduction in local shopping trips; an increase in delivery trips; increased use of automated vehicles or personal delivery devices; reduced carpool, vanpool, taxi and ride-hail (e.g., Uber, Lyft) trips; and changes in school-based trips.

## **ANALYSIS**

### ***Vehicular Traffic Lightened During the Pandemic and Has Now Rebounded to 90%***

In early 2020, concerns about the spread of COVID-19 were accompanied by a shift to remote work arrangements for many Silicon Valley technology companies as well as changes in consumer behavior (such as reduced eating out, reduced transit ridership, and increased grocery shopping trips). These shifts were reflected in a slight downward trend in vehicular traffic and public transit ridership in early 2020.

This trend became a more dramatic drop in March 2020, when the County of Santa Clara issued a Shelter-in-Place order to prevent severe public health outcomes. At that time, office-based employers shifted to work-from-home arrangements, schools shifted to asynchronous or online learning, and many service businesses paused operations. The resulting decrease in travel demand is reflected in bridge crossing vehicle volume data, which the Metropolitan Transportation Commission (MTC) uses as a proxy for Bay Area travel demand.

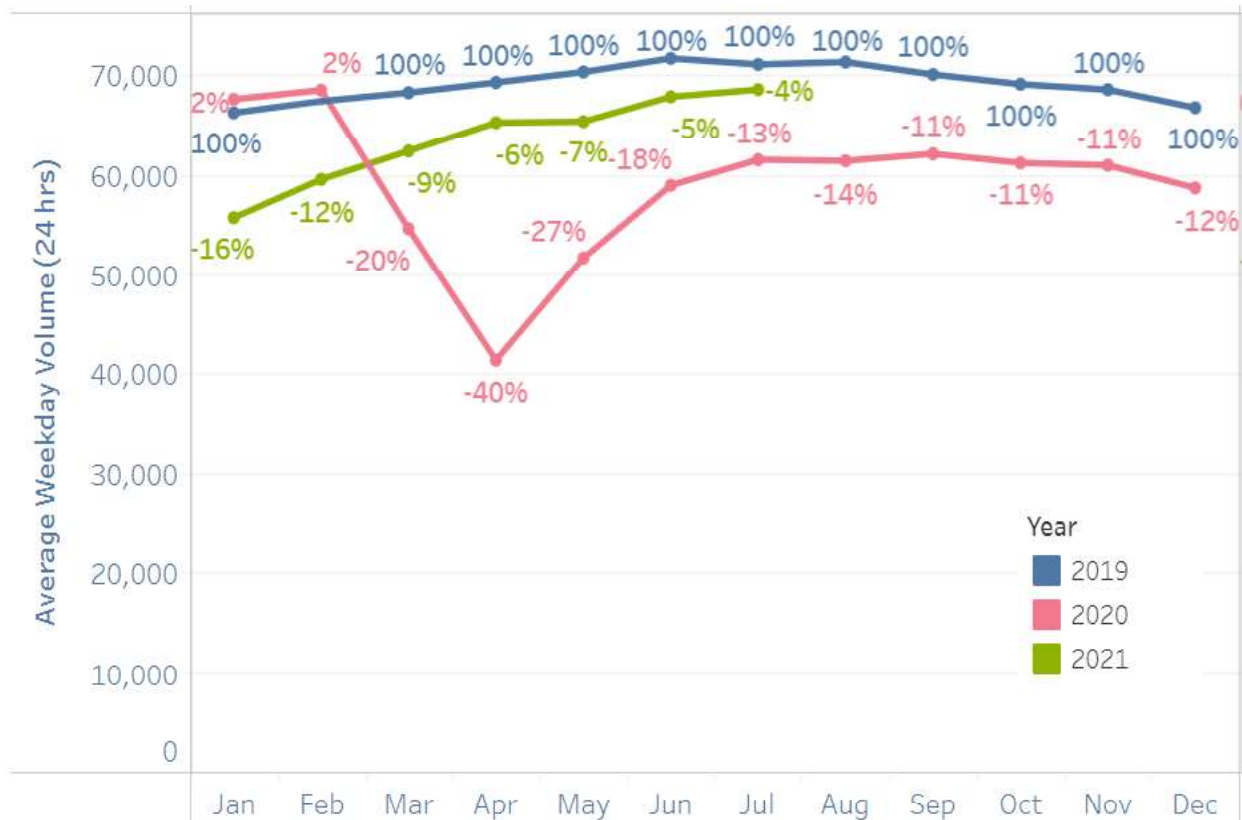


**Figure 1: Vehicle Traffic Volumes Relative to January 2020, Bay Area**

*Source: MTC Monthly Transportation Statistics, November 2021*

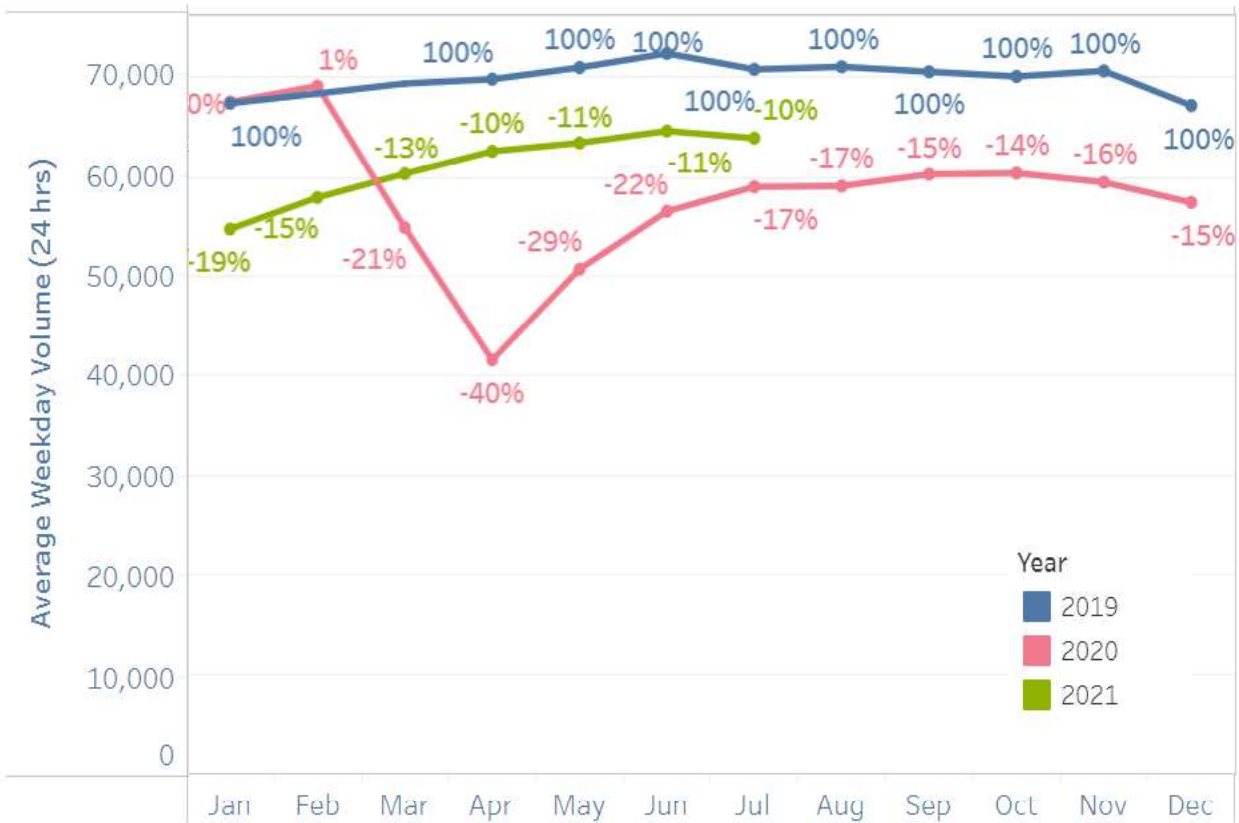
After a drop of approximately 50% in March 2020, economic activity somewhat returned in summer 2020 accompanied by an increase in vehicular traffic on Bay Area bridges to approximately 75% of January 2020 levels. By August 2021, bridge traffic reached 95% of January 2020 levels as displayed in Figure 1.

Local traffic data provided by the Caltrans Performance Measurement System (PeMS) for the U.S. 101 freeway in Santa Clara County suggests that traffic volumes in the vicinity of Mountain View dropped to approximately 60% of typical levels (accounting for month-to-month seasonality). Since the initial drop, **traffic volumes rebounded to about 80% by summer 2020 and are now at 96% (northbound) to 90% (southbound) of typical levels** (see Figures 2 and 3).



**Figure 2: Vehicle Traffic Volumes Relative to 2019, U.S. 101 Northbound in Santa Clara County**

Source: Caltrans Performance Measurement System (PeMS), November 2021



**Figure 3: Vehicle Traffic Volumes Relative to 2019, U.S. 101 Southbound in Santa Clara County**

Source: Caltrans Performance Measurement System (PeMS), November 2021

***Transit Ridership Dropped Dramatically and Has Slowly Rebounded to 20% to 50%***

**Pandemic-related travel demand reductions were substantially more dramatic for public transit than for vehicular transportation.** For example, while vehicular traffic on U.S. 101 in Santa Clara dropped by 40% and is now back at 90% of pre-COVID levels, transit ridership (using BART ridership as a proxy) dropped by about 95% and is still at only about 20% of pre-COVID levels (see Figure 4).

Similar patterns of a deeper drop and much more gradual recovery have been observed for services operating in Santa Clara County, including VTA, Caltrain, and Mountain View Community Shuttle. Caltrain ridership dropped by 98% between February and April 2020 and has gradually rebounded to approximately 20% of pre-COVID rates (i.e., 80% below prepandemic levels). VTA ridership dropped by 75% between February and April 2020, and rebounded to approximately 50% of pre-COVID rates by October 2021. Mountain View Community Shuttle ridership dropped by 85% and has now rebounded to approximately 50% of pre-COVID rates.

Given this substantial lag in recovery of transit ridership compared with vehicle traffic, staff anticipates that **it could take years for transit ridership levels to return to prepandemic levels, while vehicle traffic levels are already at 90% to 95% of prepandemic levels.** Caltrain and other agencies have implemented promotions to nudge former riders back to transit.

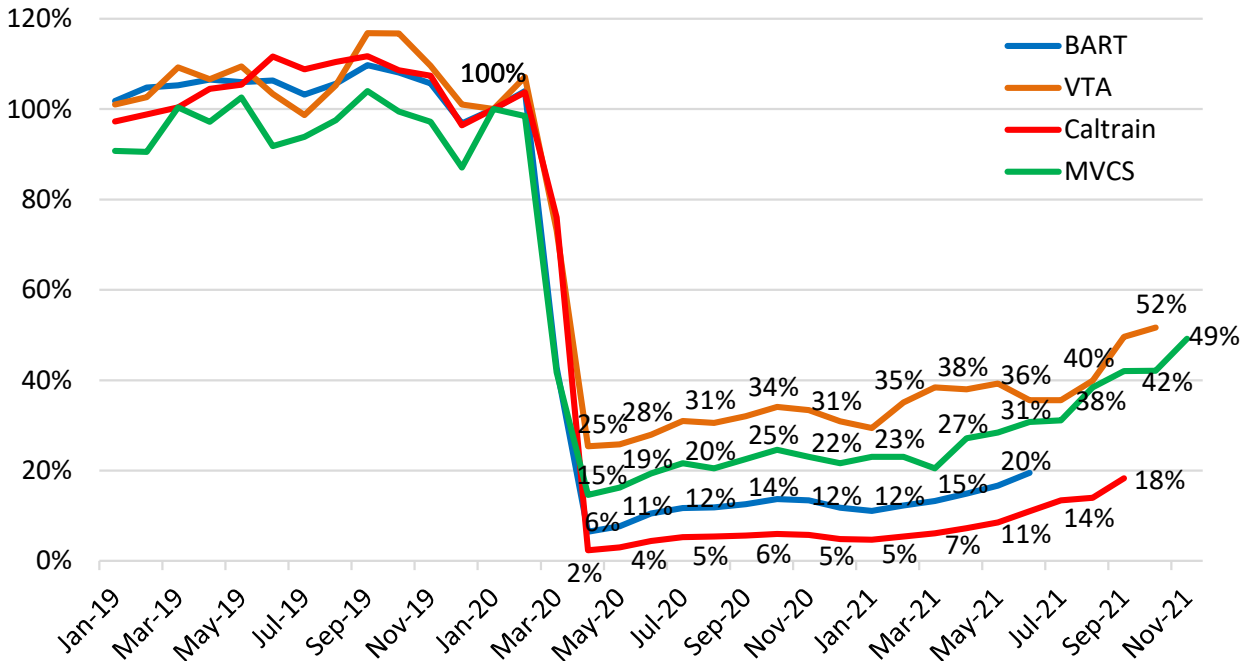


Figure 4: Public Transit Ridership Relative to January 2020<sup>1</sup>

*Transit Hesitancy Is Reducing Vehicle Occupancy and Elevating Roadway Traffic*

Hesitancy to get back on transit is related to concerns regarding the spread of COVID-19, including variants and breakthrough cases after vaccination. This hesitancy affects transit ridership as well as other high-occupancy modes involving people outside a single household. These modes include corporate shuttles, vanpools, carpools, and shared ride-hail services. Regular carpooling and vanpooling is also more difficult when employees have different schedules throughout the week, with some days of remote work and some in-office work.

<sup>1</sup> Sources: MTC Monthly Transportation Statistics 11/2021; VTA Ridership Data 11/2021; Caltrain Ridership Data 11/2021; Mountain View Community Shuttle Ridership Data 11/2021. 100% represents 388,922 average daily BART riders, 107,456 daily VTA riders, 64,806 daily Caltrain riders, and 781 daily Mountain View Community Shuttle riders in January 2020.

**Ongoing transit hesitancy has worrisome implications for traffic congestion in the Bay Area because typical transit occupancy levels are so much higher than that of motor vehicles.** For example, while a typical vehicle carries 1.2 passengers (including the driver), a bus carries 60 passengers, and a train carries around 500 passengers. Ridership on Caltrain services prior to the pandemic represented an equivalent of four freeway lanes of capacity during peak hours, which means that if former riders are hesitant to get back to transit, some of those currently driving are new vehicle trips diverted away from transit and not the return of former freeway travelers.<sup>2</sup>

*Active Transportation Increased, and These New Habits Are Likely to Persist Somewhat*

While transit ridership dramatically decreased during the pandemic, **participation in active transportation modes such as walking and cycling increased** as community members sought local outdoor places to exercise, recreate, and social distance during shelter-in-place orders. In general, rates of walking and biking increased in residential and lower-density areas such as much of Mountain View, and decreased in higher density and more employment-oriented areas such as urban Central Business Districts and office parks.

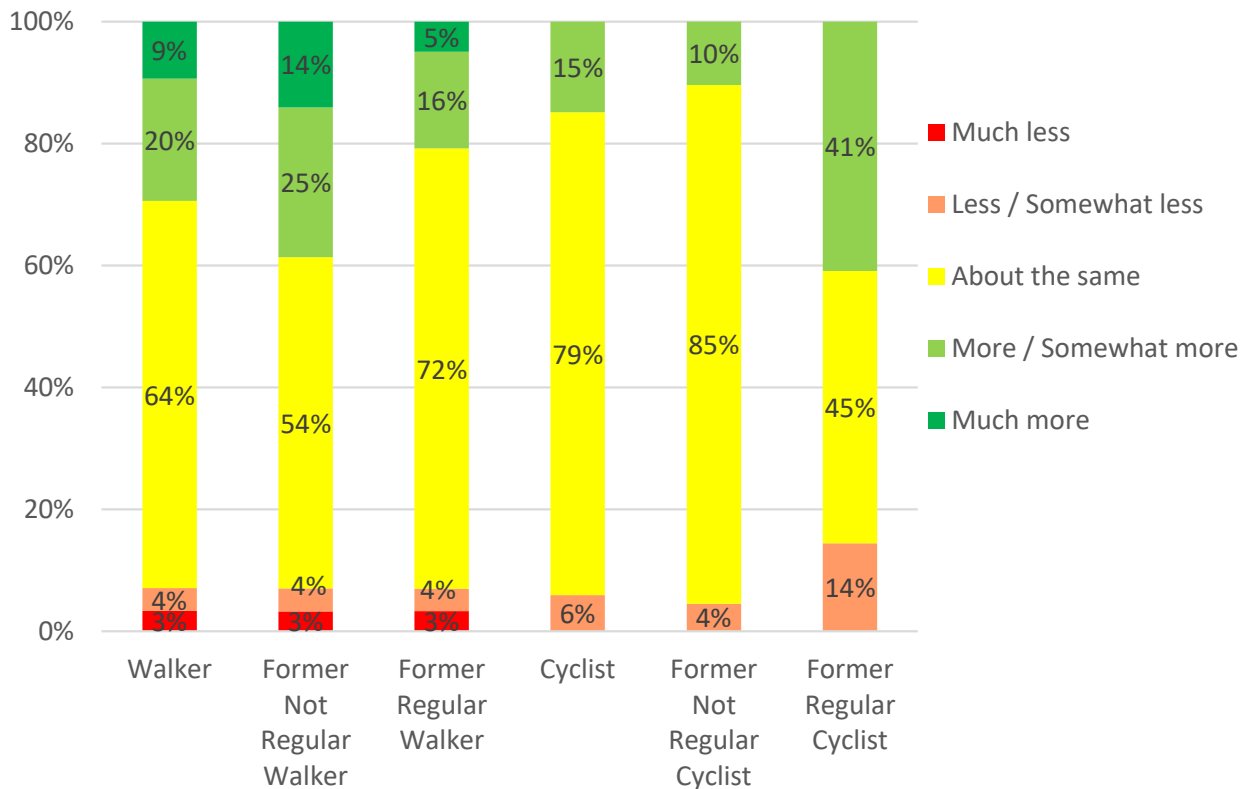
Recent research on the expected persistence of these changes suggest that 29% of U.S. residents expect to walk more frequently than they did in the prepandemic era, and 15% of residents expect to bike more frequently than in the prepandemic era.<sup>3</sup> The results, from a sample of more than 7,000 walkers and bikers, are shown in Figure 5.

Among those interviewed, almost 45% of those who were not regular walkers before the pandemic indicated an intention to continue walking at a greater frequency during the postpandemic era. Additionally, 10% of those who were not regular cyclists expect to ride at a greater frequency postpandemic. **Many of those who expect to ride at a greater rate than before the pandemic identified a “realization” that resulted from their experience and exposure to bike riding during the pandemic.**

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<sup>2</sup> Caltrain Giphy on Modernization [High Speed Traffic GIF by Caltrain – Find & Share on GIPHY](#)

<sup>3</sup> Salon, Deborah, Matthew Wigginton Conway, Denis Capasso da Silva, Rishabh Singh Chauhan, “The Potential Stickiness of Pandemic-Induced Behavior Changes in the United States,” PNAS July 6, 2021 118 (27) e2106499118; <https://doi.org/10.1073/pnas.2106499118>



**Figure 5: Expected Level of Participation in Active Transportation Postpandemic<sup>4</sup>**

**This shift toward active transportation represents an opportunity for cities like Mountain View to capitalize on new habits** developed during the pandemic in order to encourage more active transportation in the postpandemic era. Efforts to encourage walking and biking are most suitable for first- and last-mile trips to or from transit as well as short trips within a walkable or bikeable range of up to about three miles.

For example, the Castro StrEATS program, which was initiated to support the recovery of downtown businesses, has also helped community members to envision and experience a more walkable downtown environment and has encouraged short walking trips in Mountain View’s downtown business district and Transit Center area. Likewise, planned execution of the City’s Safe Routes to School program as students return to school campuses is expected to boost walking and biking access to school through encouragement events and education efforts focused on building confidence, skills, and traffic safety knowledge among students.

<sup>4</sup> Source: Salon, et al., “The Potential Stickiness of Pandemic-Induced Behavior Changes in the United States,” PNAS July 6, 2021 118 (27) e2106499118; <https://doi.org/10.1073/pnas.2106499118>



### *Some Employment Sectors Have Returned to Work*

In the 20 months since March 2020, the pandemic has eased, and vaccines have been developed and distributed. Santa Clara County's infection rates, which reached a peak of 2,249 per day on January 5, 2021, are now around 160 per day, and 1.47 million (74% of all residents) have been fully vaccinated. In this context, most service jobs have returned to in-person work, and many office-based employers have started the process of returning employees to the office.

For peak hour trips, which are the focus of congestion analyses, trip types that have rebounded include commute trips by essential workers and people working in health care, construction, education, and various service sectors. Additionally, school-related traffic has rebounded, along with commute trips for a small portion of professional workers doing office-based work.

According to analysis by the Bay Area Council's Economic Institute, almost 50% of jobs in Santa Clara County are not eligible to be conducted remotely. **In-person jobs (and the need to commute) are skewed toward lower-income households as well as Black and Latinx communities.** For example, only 6% of employees in jobs with an annual income of less than \$40,000 are eligible to work remotely compared to 76% of those in jobs with an annual income of more than \$150,000. Likewise, only 33% of Black workers and 30% of Latinx workers are employed in jobs where they are eligible for remote work, compared with 51% of White workers.<sup>5</sup>

Regardless of employment sector and remote work eligibility, differences in household size and access to technology can exacerbate these differences in participation in remote or in-person work by lower-income households as well as Black and Latinx communities.

### *Most Tech Workers Have Not Yet Returned to the Office*

In Silicon Valley, the City's largest employers have started the process of bringing some employees back to the office through a phased approach that is slated to conclude in early 2022 (see Table 1). For example, Google currently has a voluntary return to the office and has postponed the mandatory return to the office until January 10, 2022. For Google employees who return to the office, recent media reports and company blogs indicate that a hybrid work plan will allow for up to two days of remote work per week. Additionally, up to 20% of employees may be permitted to work fully remotely with a salary reduction to reflect cost-of-living differences and the company's valuing of in-person collaboration. For Intuit, hybrid work arrangements are likely to include up to

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<sup>5</sup> Bay Area Council's Economic Institute <http://www.bayareaeconomy.org/report/remote-work-in-the-bay-area/>

two or three days of remote work, with the possibility of some employees opting for fully remote work.

**Table 1: Return to Office Plans for Mountain View’s Largest Employers<sup>6</sup>**

<b>Employer (Employees)</b>	<b>Current Arrangement</b>	<b>Planned Return Date</b>	<b>Hybrid Work Plan</b>
<b>Google/ Alphabet (25,000)</b>	Voluntary return	January 10, 2022 (or 30-day notice)	Most employees work in office 3 days per week; Up to 20% of employees work fully remote with reduced salary
<b>Intuit (2,600)</b>	Voluntary opt-in (<40% capacity)	January 18, 2022	Employees work in office 2 to 3 days per week; 14% of employees prefer fully remote work
<b>El Camino Hospital (2,200)</b>	Mostly essential workers	N/A	N/A
<b>LinkedIn (2,000) + Microsoft (1,700)</b>	Voluntary return	No date	Hybrid work plan may allow fully remote work

While there is a hypothesis that the pandemic might shift most office-based employees to remote work configurations and reduce the number of people working on-site, academic research, Silicon Valley leadership and unabated development demand in Mountain View suggest that there is likely to continue to be a strong role for in-person work and collaboration.

The importance of in-person collaboration and chance encounters in the workplace was recently highlighted by Sundar Pichai, CEO of Google/Alphabet, as critical to the company’s ability to innovate. Academic research supports this notion and identifies agglomeration economies, social networks, and the culture of decentralized knowledge-sharing both within and between organizations as the key ingredient explaining the sustained success of Silicon Valley as the world’s engine of technology and innovation.<sup>7</sup> For this reason, **industry leaders and academic observers expect that in-person collaboration and encounters will continue to be critical to Silicon Valley’s**

<sup>6</sup> Sources: [Extending our voluntary return to office \(blog.google\)](https://blog.google/working/2020/return-to-office/); <https://www.intuit.com/blog/intuitlife/our-workplace-of-the-future-strategy/>; [LinkedIn's hybrid approach: we trust each other](#)

<sup>7</sup> Saxenian, A. (1994). *Regional Advantage: Culture and Competition in Silicon Valley and Route 128*, Harvard University Press, Cambridge, MA.

**technological innovation in the postpandemic era, thereby maintaining the importance of in-person workplaces alongside a shift to increased levels of remote work.**

Researchers at Stanford University also note the limitations of remote work tools such as videoconferencing for virtual collaboration. These limitations include negative psychological effects that have been observed in relation to Zoom fatigue, social isolation, and the pressures of work-life blending in a remote work setting. Along with collaborative opportunities, these **issues of mental health and work-life boundaries are likely to prompt a return to the workplace for many who could otherwise conduct their work fully remotely.**

### *Return to Office Plans Will Likely Result in Worse than Prepandemic Traffic*

Preliminary information from several Silicon Valley technology companies suggest that 10% to 30% of employees have currently returned to the office. Based on the preliminary hybrid work plans listed in Table 1, initial postpandemic office-based work may reach 40% to 64% of prepandemic occupancy if most employees continue with remote work two days per week and some employees are permitted and choose to work fully remotely. An initial return to the office in early 2022 at 40% to 64% of office capacity would represent a 100% to 400% increase in travel demand relative to current pandemic rates for the companies involved.

With current Bay Area vehicle traffic levels of approximately 90% of prepandemic levels (see Figure 1), a 100% to 400% increase in travel demand for corporate return to office plans represents substantially higher rates of vehicle traffic than prepandemic levels if current patterns of transit hesitancy (see Figure 4) persist.

### *Planned Hot Desk Office Configurations Will Allow Workforce Expansion*

A likely scenario is that lower office occupancies associated with increased remote work will be counteracted by new office configurations that allow for more efficient use of space. Specifically, in response to increased requirements and demands for social distancing and remote work, **technology companies have accelerated prepandemic trends toward hot desk office configurations.**

Hot desk office configurations have historically been implemented in workplaces with robust transportation demand management (TDM) programs such as Genentech in South San Francisco. Such configurations allow companies to make efficient use of office space when a sizeable portion of the workforce works remotely for some portion of the time. For example, for the past decade, Genentech has encouraged employees to work from home one day per week as an employee benefit associated with TDM strategies to meet

freeway on-ramp trip caps. Rather than leaving 20% of desks unutilized when employees work from home, Genentech offices have been designed with team pods, hot desks, and conference facilities.

Given the shift toward more robust remote work policies, Google is planning next-generation COVID-friendly hot desk arrangements for their Mountain View offices. These arrangements allow for better social distancing through lower-density spacing of hot desks in team pods to more efficiently utilize facilities.

With these new office configurations and remote work options, it is unlikely that postpandemic conditions will see underutilization of office spaces. Instead, companies are finding a way to utilize spaces more efficiently and allow for remote work with team members using facilities on a rotating basis. Should social distancing become less of a concern, such reconfigurations of offices into hot desks and team pods will support a return to prepandemic daily occupancy rates at an existing building spread out over a higher number of employees. In this sense, hybrid work models are a form of TDM in that they allow a higher number of employees to work at a building without increasing the number of daily trips to that building.

**From the perspective of the City, remote work conditions at Silicon Valley companies are, therefore, not expected to result in reduced travel demand relative to prepandemic levels.** Instead, staff anticipates that the conditions will result in workforce expansion with a similar level of daily trips to prepandemic conditions. If transit hesitancy persists, higher vehicle trip rates and congestion are expected. This expectation is supported by the heavy development demand that continues unabated throughout the pandemic.

### *Higher Rates of Remote Work will Likely Lead to Longer Commutes*

Induced travel demand is a phenomenon that has been studied and proven by various researchers, while controlling for population increase and demographic change. **Induced travel demand is any increase in travel arising from improved travel conditions such as shorter travel times.**<sup>8</sup> This phenomenon results in roadways filling up faster than would otherwise be expected after certain improvements are made. The extent to which the roadways fill up faster is determined by the elasticity of demand.

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<sup>8</sup> EPA Guidebook on Induced Travel Demand.

Current and potential postpandemic travel improvements that would trigger (or have already triggered) induced demand effects include:

- Opportunities for remote work several days per week, which reduces the total weekly commute times for all modes;
- Reduced traffic congestion and therefore shorter commute times for motorists during the pandemic;
- Projects such as new auxiliary lanes on freeways and new turn lanes on local streets, which reduce travel delay for motorists; and
- Increased availability of free motor vehicle parking near work and other destinations.

In response to these types of changes, research indicates that travelers change their behaviors in the immediate, near term, and long term.

- In the immediate term, travelers tend to:
  - Travel closer to peak hour rather than staggering their work hours (or “peak spreading”) to avoid the traffic;
  - Drive alone instead of carpooling or taking the bus (“mode switching”); and
  - Select the most direct route rather than using back routes.
- In the near term, travelers tend to:
  - Select more distant destinations for daily trips instead of living locally;
  - Run errands with many separate trips instead of grouping trips together (“trip chaining”); and
  - Add new trips that would otherwise not be taken.
- In the long term, travelers tend to:
  - Make locational investments such as moving to a house in a far-flung area instead of living in more dense, mixed-use, and transit-oriented areas;

- Purchase a second or third car rather than living a car-light lifestyle; and
- Develop land or relocate their businesses to more remote areas.

Given the duration of the pandemic, all of these effects have been observed in Silicon Valley, including long-term real estate investments in more suburban or rural areas such as South San José, Sacramento, and Tahoe, and increased vacancy rates for Silicon Valley offices located near transit.<sup>9</sup> As traffic volumes rebound in postpandemic era, a certain amount of reversal of these patterns can be expected. For example, increased commute travel and greater flexibility in work conditions is likely to be accompanied by peak spreading – with commute patterns spread out throughout the day, and not just in the peak period.

With the prospect of greater opportunity for more remote work in the postpandemic era, induced travel demand effects suggest that Mountain View employees will be more likely to live further away and commute further than in prepandemic times. Given the geography of California, these locations are likely to be less accessible to transit, thereby increasing the likelihood that employees drive alone to work (rather than walk, bike, or use transit) on the days that they do commute. Despite the potential reductions in travel associated with remote work, **the long-term induced travel demand effects could potentially result in increased rates of single-occupancy vehicle (SOV) travel and vehicle-miles traveled (VMT) due to the spreading of trip origins and increased rates of mega-commuting of 50 miles or more.**

In Silicon Valley, the phenomenon of mega-commuting includes the following behaviors, which have been anecdotally reported to City staff by tech sector and other professional workers:

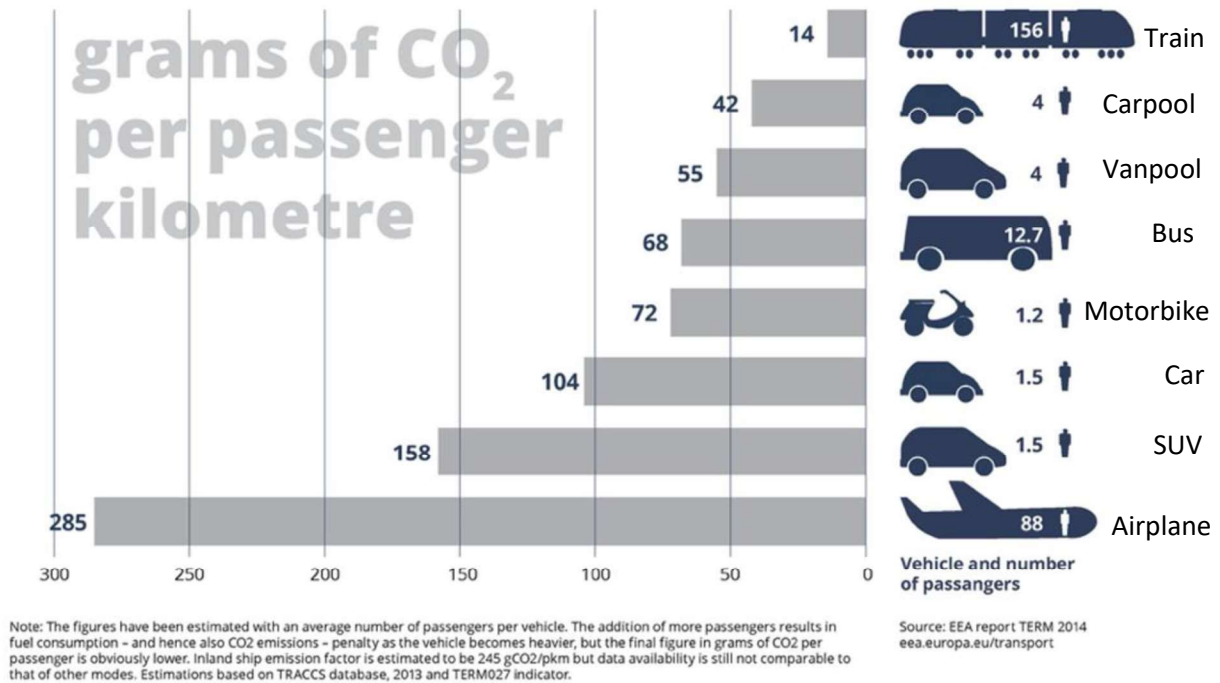
- Vanpool partners who commute from far-flung locations and share the driving. This type of mega-commuting is more likely to occur when commuters have consistent daily travel patterns.
- SOV mega-commuters who drive alone several times a week from far-flung residential locations such as Brentwood or Sacramento;
- Airplane mega-commuters who commute by airplane between different regions such as Sacramento, Tahoe, San Diego, Greater Los Angeles, Oregon, Washington, or Colorado on a daily or weekly basis.

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<sup>9</sup> Source:

<https://www.pwc.com/us/en/industries/financial-services/research-institute/blog/move-to-the-suburbs-real-estate-market.html>; <https://www.mercurynews.com/2021/07/19/tahoe-real-estate-soars-even-as-pandemic-eases/>; [Silicon Valley commercial real estate sales high despite vacancies \(sanjoespotlight.com\)](#)

- Telecommuters who work almost entirely remotely, may be relocated in a different time zone such as Atlanta, New York, or Hawaii, and travel to Silicon Valley by car or plane every few weeks for face-to-face meetings.



**Figure 8: Carbon Footprint of Different Modes of Transportation<sup>10</sup>**

As illustrated in Figure 8, mega-commuting on a regular basis by car or airplane is associated with very high VMT and GHG emissions that have the potential to outweigh the environmental benefits of less frequent commutes. The more sprawling residential patterns associated with mega-commuting mean that both commuting and daily travel patterns are less likely to be accessible by transit and other sustainable modes of transportation.

In addition to GHG emissions, mega-commuting patterns are also associated with urban sprawl and higher rates of land consumption, which is, in turn, associated with other environmental impacts, including increased stormwater runoff, water pollution, soil erosion, resource consumption, solid waste generation, habitat loss, loss of agricultural land, and vulnerability to extreme weather events such as wildfires and storms.

<sup>10</sup> Source: <https://ensia.com/voices/flight-shaming-flying-travel-carbon-co2-emissions-flyless-aviation-cars-trains/>

***Summary: Local Traffic Relief Masks Higher SOV Rates and Potential Postpandemic Congestion***

According to Caltrans data, traffic volumes on freeways in Mountain View are currently about 5% to 10% lower than in prepandemic times. This moderate traffic relief, however, masks a number of more concerning patterns, including the following:

- There is a significant lag in the recovery of transit ridership relative to vehicle traffic volumes, which corresponds to lower average vehicle occupancy and high consumption of motor vehicle lanes.
- Most Silicon Valley companies plan to have a majority of employees return to the office and continue to demonstrate their expectation of face-to-face workplaces with unabated development activity and plans.
- The return to the office for employees from these companies will dramatically increase the number of people traveling into and through Mountain View.
- Companies have accelerated the shift toward hot desk-style office configurations, which means that more people can use the same amount of office space on a rotating basis.
- The current congestion relief and increased opportunity for remote work is associated with induced travel demand and induced real estate investment in lower-density and less transit-accessible areas, which may exacerbate GHG emissions and traffic congestion concerns when more employees return to the office.

While there is still significant uncertainty about postpandemic travel patterns, the factors listed above indicate that remote work conditions are not expected to be a sustainable long-term solution for significantly reducing traffic congestion and VMT in Mountain View.

## **DISCUSSION**

The City of Mountain View has a multi-pronged array of strategies for reducing SOV trips, reducing VMT, and encouraging people to shift to more sustainable modes of transportation.



### ***The City's Land Use Plans Provide a Foundation for Transportation Transformation***

The City of Mountain View's General Plan outlines policies that limit street widening as a means of improving traffic flow (MOB 3.4 and 10.3) and that encourage a shift toward more sustainable modes of transportation. The General Plan and Precise Plans for North Bayshore, San Antonio, East Whisman, El Camino Real, Downtown, and Moffett areas also outline the City's strategy to encourage a shift from suburban car-oriented travel patterns to more sustainable transportation patterns, while also protecting key assets such as habitat areas in the Shoreline Regional Park Community and historic character in downtown.

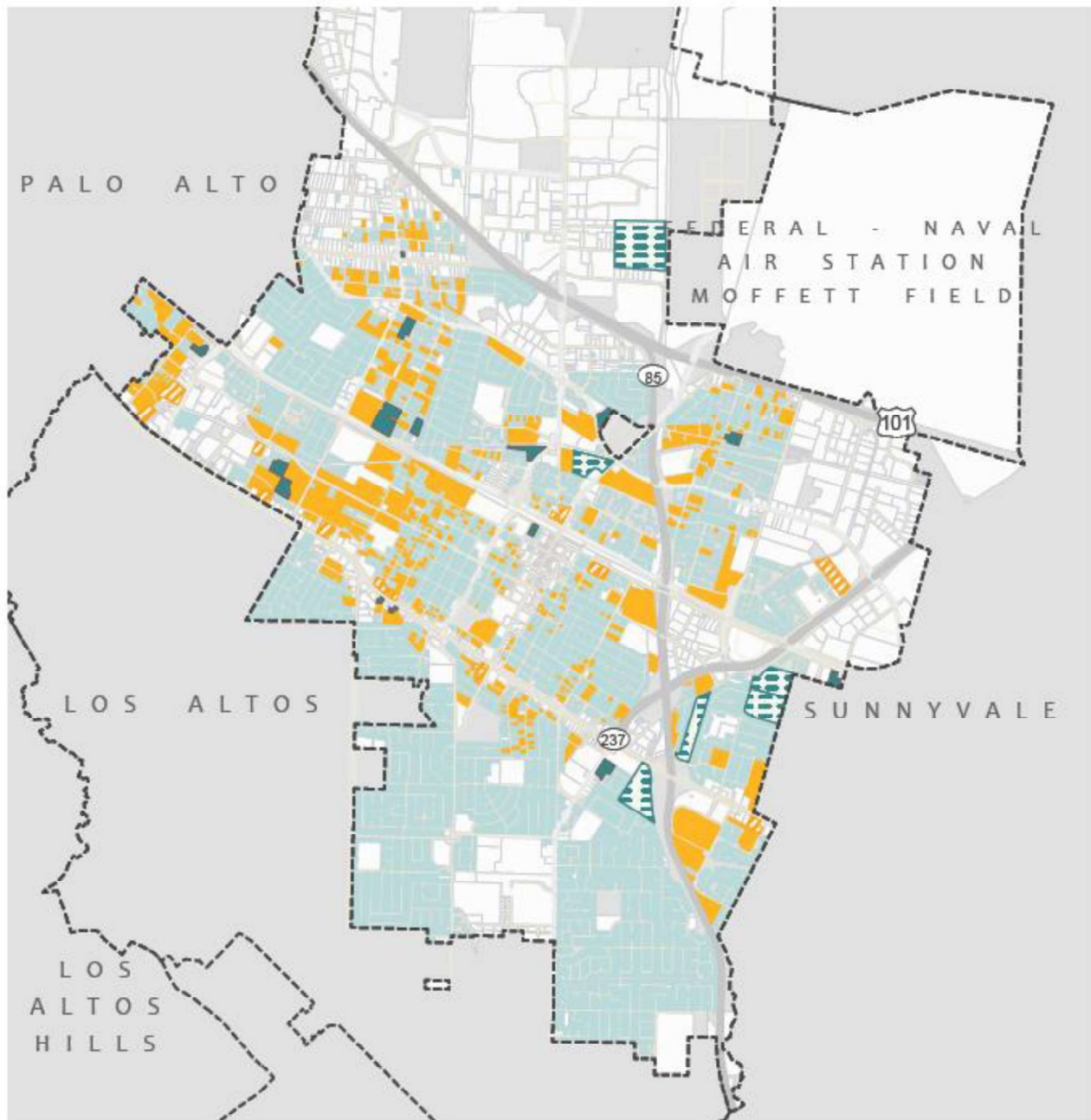
These land use plans provide an important foundation for the private market to add thousands of new market-rate and affordable housing units in Mountain View. Increased housing supply helps reduce SOV trips and VMT by placing residences within a more walkable, bikeable, and transit-accessible proximity to jobs and services. For example, the North Bayshore Precise Plan lays out a plan for adding nearly 10,000 new housing units in proximity to North Bayshore jobs, with 20% being affordable housing units.

The General Plan and Precise Plans integrate land use planning with multi-modal transportation investments to address development effects and encourage a shift away from SOV travel. For example, the Shoreline Boulevard bus lane project is being implemented to support development within the North Bayshore Precise Plan. Furthermore, the North Bayshore Precise Plan includes a gateway trip cap with requirements for measuring the number of cars going in and out of the district every six months to ensure that the district moves toward its ambitious goal of SOV trip reduction.

### ***Affordable Housing Programs Also Reduce SOV Trips and Average VMT***

In addition to long-range plans which facilitate development of new dwelling units, the City of Mountain View is implementing strategies to preserve the inventory of existing affordable housing and facilitate new affordable housing development, including housing for families, seniors, low-wage workers, and developmentally disabled adults. Low-income housing is particularly helpful for reducing SOV trips and VMT because lower-income populations have a higher elasticity demand, which means that they are more likely to respond to efforts to encourage use of modes other than driving alone.

As shown in Figure 9, Mountain View's affordable housing programs are extensive and distributed across a wide area of the City. These programs include Rent Stabilization (rent control for units built before 1995); Subsidized Rental Housing (financial assistance to provide affordable housing), and Below-Market-Rate Housing (developers required to



CITY OF MOUNTAIN VIEW  
AFFORDABLE HOUSING DISTRIBUTION

- Subsidized Rentals <sup>1</sup>
- Subject to Below Market Rate <sup>2</sup>
- Stabilized Rentals <sup>3</sup>
- Mobile Home Parks <sup>4</sup>
- Other Residential Housing
- City Boundary

Figure 9: Mountain View Affordable Housing

set aside 15% of all housing units for low- and moderate-income households). There are currently more than 16,101 affordable dwelling units in Mountain View, including 1,421 subsidized rental apartments and programs for previously unhoused populations, such as the project Homekey Program.

### ***Multi-Modal Transportation Infrastructure Investments Aim to Create Mode Shift***

The City of Mountain View also has key transportation policies and plans that are summarized in AccessMV, Mountain View's Comprehensive Modal Plan. These policies emphasize sustainable transportation modes and provide a framework for shifting away from SOV trips toward walking, biking, and transit.

Based on priorities outlined in AccessMV, the City is progressively investing in transportation projects that help to reduce SOV trips and create a path to more sustainable travel patterns. Projects currently undergoing feasibility analysis, design, or construction include:

- Bus lanes and protected bikeways along Shoreline Boulevard and Charleston Road;
- Grade separations at Rengstorff Avenue and Castro Street; and
- A pedestrian mall for the 100, 200, and 300 blocks of Castro Street. (This project draws upon lessons from the Castro StrEATS program, which was implemented to help facilitate business recovery during COVID while allowing community members to envision a more walkable downtown.)

In addition to the above projects, the City has been awarded more than \$30 million in grant funding within the last two years for key multi-modal transportation projects, including:

- Pedestrian and bicycle improvements along El Camino Real and Stierlin Road;
- A pedestrian/bicycle undercrossing at Bernardo Avenue;
- Extension of Stevens Creek Trail; and
- Expansion of the Mountain View Community Shuttle service.

All of these investments will help to curb SOV trips by providing attractive alternatives to driving alone.

### *City TDM Requirements Encourage Corporations to Do Their Part to Reduce SOV Trips*

As employees return to offices, TDM requirements, incentives, and encouragement programs can play a critical role in helping to shift people out of cars and back to transit and other sustainable modes.

The City of Mountain View is a regional leader in TDM as exemplified by its cutting-edge TDM guidelines for the North Bayshore Area. These guidelines support precise plan goals and provide guidance for developers and corporations to help their employees walk, bike, and use transit instead of driving alone. Other precise plans, such as the East Whisman Precise Plan, also include TDM guidelines and requirements for new development.

**The City's authority to impose trip reduction requirements and TDM programs is limited to new development at the time of project approval or entitlement.** The City has been consistently incorporating such requirements in the conditions of approval for both new commercial and residential developments above a minimum size threshold. After a project is approved, the City may enforce the trip reduction requirements included in the conditions of approval; however, the City cannot impose new trip reduction or TDM requirements. Therefore, efforts and incentives that encourage voluntary participation in TDM programs by existing commercial and residential development are essential for shifting people out of SOV travel.

In order to further these TDM efforts, Council has authorized funding for a TDM Analyst, to be hired in early 2022. The TDM Analyst will help the City to establish a program for monitoring and achieving compliance with TDM requirements imposed on developments as a condition of approval. The TDM Analyst will also help to develop a Citywide TDM ordinance for Mountain View that will establish a more consistent approach for all new development in the City. The TDM Analyst will also help support the Transportation Section in Public Works with programs and initiatives for establishing voluntary TDM programs.

### *Additional Opportunities to Reduce SOV Trips Postpandemic*

There are a number of short- and long-term strategies that the City is pursuing that can help encourage lower rates of SOV commuting in the postpandemic period as outlined in Table 2 below.

**Table 2: City Activities for Suppressing Postpandemic Traffic**

STRATEGY	STATUS
<b>Housing</b>	
<ul style="list-style-type: none"> <li>• Continue housing affordability programs</li> <li>• Update the City’s Housing Element to facilitate compliance with RHNA goals</li> </ul>	<ul style="list-style-type: none"> <li>• In progress/ongoing</li> <li>• In progress</li> </ul>
<b>Transportation</b>	
<ul style="list-style-type: none"> <li>• Continue to advance active transportation projects</li> <li>• Deliver multimodal improvements with repaving</li> <li>• Execute Safe Routes to School programming to increase active transportation participation</li> <li>• Consider opportunities for traffic calming as part of development-related improvements</li> <li>• Pursue legislative strategies to understand and address impediments to innovative transit strategies, such as reversible bus lanes on Shoreline Boulevard and public transit partnerships for corporate shuttle services</li> <li>• Address quality-of-life issues such as green streets to encourage living locally and sustainable transportation</li> </ul>	<ul style="list-style-type: none"> <li>• In progress/ongoing</li> <li>• In progress/ongoing</li> <li>• Reduced scope due to less grant funding</li> <li>• Ongoing as part of development review process</li> <li>• Can be considered as part of Council legislative priorities</li> <li>• Included in scope of work for Active Transportation Plan</li> </ul>
<b>TDM Strategies</b>	
<ul style="list-style-type: none"> <li>• Implement TDM monitoring and enforcement for developments where TDM requirements have been imposed as part of conditions of approval</li> <li>• Explore districtwide TDM strategies for downtown, including transit incentives</li> <li>• Explore strategies to encourage voluntary participation in TDM programs for existing developments</li> </ul>	<ul style="list-style-type: none"> <li>• TDM Analyst starting in 2022</li> <li>• Downtown Parking Strategy implementation; potential MTMA partnership</li> <li>• TDM Analyst starting in 2022; potential MTMA partnership</li> </ul>

STRATEGY	STATUS
<ul style="list-style-type: none"> <li>• Explore congestion pricing in North Bayshore Area</li> <li>• Address parking pricing</li> </ul>	<ul style="list-style-type: none"> <li>• Feasibility being studied as part of North Bayshore Circulation Study</li> <li>• Downtown Parking Study implementation</li> </ul>

There are additional strategies to address postpandemic traffic that could be considered; however, these strategies would require additional staffing and/or budgetary resources. These strategies include the following:

- Augment outreach efforts by transit agencies to encourage increased transit ridership and carpool and vanpool ridership;
- Advocate for expanded transit services serving Mountain View from VTA;
- Develop strategies and funding options to expand the fare-free Community Shuttle services, including the possibility of merging with the fare-free MVgo Shuttle operated by the Mountain View Transportation Management Association (MTMA);
- Increase partnership with the MTMA to explore additional funding sources and broader delivery of TDM programs; and
- Develop or facilitate micro-mobility programs (e.g., e-scooter share).

**NEXT STEPS**

Staff will continue to monitor the effects of the pandemic on commute travel and other trips. Staff will also continue to implement the strategies in Table 2. Implementation of additional strategies or expanded efforts for existing strategies will require Council consideration as part of the Fiscal Year 2021-22 and Fiscal Year 2022-23 Strategic Roadmap Action Plan priority projects for commitment of staffing resources and funding.