

MEMORANDUM

Public Works Department

DATE: October 25, 2023

TO: Bicycle/Pedestrian Advisory Committee

FROM: Brandon Whyte, Active Transportation Planner
Ria Hutabarat Lo, Transportation Manager

VIA: Dawn S. Cameron, Public Works Director

SUBJECT: **Active Transportation Plan Update**

RECOMMENDATION

Review and provide feedback on the Active Transportation Plan existing conditions report.

BACKGROUND

On [January 28, 2014](#) and [November 17, 2015](#), the City Council adopted Mountain View's Pedestrian Master Plan (PMP) and Bicycle Transportation Plan (BTP), respectively.

On [November 10, 2020](#), the City Council directed staff to update the PMP and BTP in an integrated manner to align competing uses within public rights-of-way for key corridors within the City. Taking a more holistic approach to the development of an integrated Active Transportation Plan (ATP) allows for cohesive and efficient planning, ensuring quality transportation options for both modes of travel. Council also directed staff to incorporate considerations related to green streets and habitat corridors arising from the Biodiversity Strategy.

On January 3, 2022, staff released a Request for Proposals (RFP) for professional services to aid in production of the ATP. After a competitive selection process, NN Engineering, Inc., was selected as the preferred consultant. The City Council authorized the City Manager to execute a professional services agreement with NN Engineering on [May 24, 2022](#), and they began work on the ATP in September 2022.

Vision Statement

Staff assembled an interdepartmental Technical Advisory Committee (TAC), which met in December 2022 to review the proposed existing conditions analysis and discuss the plan vision,

goals, and objectives. On February 22, 2023, staff also convened the Active Transportation Plan Advisory Committee (ATPAC) to review the draft vision, goals, and objectives.

The ATPAC is comprised of representatives from the following member organizations or bodies:

- Mountain View Bicycle/Pedestrian Advisory Committee (BPAC);
- Mountain View Youth Advisory Committee (YAC);
- Santa Clara County Public Health Department;
- Santa Clara Valley Transportation Authority (VTA);
- The Day Worker Center of Mountain View;
- Green Streets for Sustainable Communities;
- Silicon Valley Bicycle Coalition;
- Mountain View Streets for All;
- Mountain View Mobile Home Alliance;
- Mountain View Community Services Agency;
- Mountain View Chamber of Commerce; and
- Canopy.

On [February 22, 2023](#), the BPAC received an update on the ATP process and provided input on the following draft vision statement:

“The City of Mountain View will lead regionally by creating an active transportation system that strengthens the community’s access to housing, employment, schools, and other destinations.

The Active Transportation Plan will enable the City to intentionally plan with policies that support walkable and bikeable places, programs that create a culture of walking and biking, and projects that produce a connected, low-stress, and inviting active transportation network that doubles as corridors of shade, habitat, and/or public open space. This network of streets and trails will encourage biking and walking, enhance biodiversity, and reduce climate change impacts.”

BPAC members supported the concepts in the vision statement. Two members requested a shorter version of the vision statement focused on Council Strategic Priorities, safety, and reducing vehicle trips.

ANALYSIS

The Existing Conditions and Needs Analysis (Attachment 1) is one of the first steps in developing the ATP. This analysis draws upon Citywide datasets and input and observations collected from community members through a series of public engagement activities during the spring and summer of 2023.

Data Collection

Data sources used in the Existing Conditions and Needs Analysis include:

- [Mountain View's Open Data Portal](#), including geographic information systems (GIS) data on sidewalks, bicycle facilities, land use, and tree canopy.
- **Existing Policies and Practice**, including [Access MV](#), [Community Tree Master Plan](#), [General Plan 2030](#), [Precise Plans](#), [Standard Provisions and Standard Details](#), and [Mountain View City Code](#).
- [U.S. Census Data](#) from the 2020 Decennial Census and the 2021 American Community Survey.
- [Transportation Injury Mapping System \(TIMS\) data](#) on bicycle, pedestrian, and motor vehicle crashes compiled from Police reports and presented via the University of California, Berkeley.
- **Community Engagement** input on people's lived experience of active transportation in Mountain View via an online mapping survey, walk audits, bike rides, meetings, community conversation meetings, and a multi-year compilation of input from [AskMV](#) tickets, emails, and notes from face-to-face interactions at City events.

Community Engagement Methods

Community engagement specifically focused on the Active Transportation Plan is outlined below:

Map-Based survey

A web-based survey was conducted from May 15 to July 31 using the [Maptionnaire](#) platform. This survey aimed to gather broad, location-based community input about places and routes in Mountain View where people encounter challenges or see opportunities for improving walking, biking, or green street conditions. The survey was open to all people living, working, visiting, and attending school in Mountain View, and was provided in four languages: English, Spanish, Chinese, and Russian. In total, 655 unique survey responses were provided. Survey analysis indicated that a demographically proportional sample was obtained for all major demographic groups in Mountain View; however, there was lower representation of Spanish-speaking households initially and, therefore, additional outreach was performed, including posters in laundry facilities and neighborhoods with larger Spanish speaking populations.

Community Conversations

Staff held four in-person conversations with groups of community members and representatives at community gatherings at the Mountain View Day Worker Center (with Spanish translation), El Cafecito, Mountain View Senior Center, Mountain View Teen Center, and Mountain View Community Services Agency. These conversations aimed to increase project awareness and gather detailed, open-ended input about needs and opportunities through open-ended, in-person community conversations. The conversations also aimed to ensure that staff obtained direct input from members of groups that have been historically underrepresented in active transportation conversations in Mountain View, including people who do not speak English and seniors. In total, approximately 85 people participated in these conversations.

Community Walking and Biking Tours

Three in-person walk workshops and two bike tours were held at key locations in Mountain View as listed below:

- August 11, 2023: Walking Tour No. 1 starting at Mountain View Community Center with a focus on Rengstorff Avenue, El Camino Real, and Latham Street;
- August 12, 2023: Walking Tour No. 2 starting at Mistral Elementary with a focus on Latino residents and Escuela Avenue, Latham Street, Rengstorff Avenue, and California Street;
- August 25, 2023: Walking Tour No. 3 starting at Sunset Estates mobile home park with a focus on senior residents and the Sylvan Avenue neighborhood;
- May 13, 2023: Biking Tour No. 1 focusing on areas south of the Central Expressway; and
- September 23, 2023: Biking Tour No. 2 focusing on areas north of the Central Expressway.

These engagement events aimed to collaboratively observe, discuss, experience, and document walking and biking conditions with Mountain View community members, and gather focused, in-depth input about needs and opportunities through community conversations. All tours were open to all members of the public, with Spanish interpretation provided at all three walks, and Chinese interpretation available for Walking Tour No. 3. In total, 61 people participated in the three walking audits and 40 people participated in the two bike rides.

Findings on Existing Conditions and Needs

Key findings of the Existing Conditions and Needs Analysis are presented below in relation to five topics:

- Demographics and Mode Share
- Mobility and Connectivity
- Safety and Comfort
- Access and Equity
- Sustainability and Biodiversity

Demographics and Mode Share

Based on the 2020 U.S. Decennial Census, the City's population is approximately 82,000, which is an increase of over 10% since 2010. In addition to these residents, the daily influx of professionals to public and private employers increases the City daytime population to over 100,000 during most weekdays.

In terms of the residential population, Mountain View has a low to medium population density. Approximately 48% of residents identify as White, 33% Asian, and 18% Hispanic or Latino. The City has a high median household income of \$165,448, while the mean is \$241,232. The wide difference between the mean and median income highlights the income disparity in the City, with approximately 6.5% of people in Mountain View currently living in poverty.

The mode share of work or school trips in Mountain View includes approximately 5.4% of workers 16 years and over who bicycle to work, with males riding at a higher rate than females (2021 ACS 5-year estimates). About 3.7% of workers reported walking to work, with females walking at a slightly higher rate than males. It should be noted that the Journey to Work data set of the U.S. Census only provides a snapshot of travel mode share for one type of trip, work, or school; no data source captures mode share for all types of trips, of which bicycle and walking trips are often recreational.

Almost 5% of households in Mountain View have do not have access to a motor vehicle (2020 ACS 5-year estimates). In looking at this data spatially, some block groups in Mountain View report up to 24% of households without access to a vehicle. Many of these block groups mirror the areas with higher percentages of low income populations, youth density, and bicycling to work.

These findings are displayed in Figures 1 through 5 of Attachment 1.

Mobility and Connectivity

Pedestrian and bicycle networks in Mountain View are essential components of the City's transportation network.

The Sidewalk Network Facilities

The Existing Conditions Analysis noted that Mountain View has a well-connected sidewalk network (96%) that supports walking and rolling throughout most of the City. However, some gaps in the sidewalk network remain, and issues such as long distances between crosswalks, difficult or stressful crossings, obstructions, uplifting, deterioration, and driveway slopes affect the safety and accessibility of the existing network. While there are scattered gaps in the network throughout the City, several neighborhoods have a larger concentration of missing and narrow sidewalks.

In all six of the City's mobile home parks, streets are privately owned and sidewalks are missing. The analysis noted the need for improved pedestrian connectivity between mobile home parks and surrounding areas and the wider transportation network.

Survey respondents and engagement event participants affirmed many of the above issues of network gaps, crossings, and uplift. Additionally, respondents expressed a desire for more pathways or paseos through apartment and office complexes near schools and on routes to transit nodes such as the Caltrain stations, to increase active transportation accessibility.

The code review related to pedestrians noted that policies on, and implementation of, directional curb ramps, commercial driveways, and curb radii in the City are not consistent with best practices.

The Bicycle Network Facilities

In relation to the bicycle network, the Existing Conditions and Needs Analysis noted that the City is made up of a network of bicycle facilities and different groups of people have different levels of comfort, ability, and risk tolerance along these facilities. Facilities for bicyclists of All Ages and Abilities (AAA) include existing and planned trails, protected bikeways, bicycle boulevards, and bike lanes on low-volume, low-speed streets (shown in Figures 10 and 12 of Attachment 1). In some areas, such as the North Bayshore Area, the existing and planned AAA network is robust, while other areas, such as residential neighborhoods in the City's southern parts, bicycle facilities are sparse, disconnected, or create a bicycle level of traffic stress (BLTS) that is too high to meet AAA standards. Along the eastern side of Mountain View, Stevens Creek Trail provides a

continuous AAA-quality north-south connection in the City. However, there is no equivalent east-west connection for bicyclists.

The analysis also considered auxiliary facilities such as bicycle parking and end-of-trip facilities, like restrooms, drinking fountains, and fix-it stations (bicycle tools and pumps) in Mountain View (data collection still in progress - map to be provided in the final existing conditions report). These facilities are important components to encourage and support cycling and are provided to varying degrees throughout the City.

Survey respondents and engagement participants noted the lack of suitable crossings and trail access facilities in several locations, such as Moffett Boulevard and West Middlefield Road, as well as difficult trail access conditions at Evelyn Avenue. Survey respondents also requested better bicycle detection at signalized intersections. In addition, many survey respondents highlighted poor bicycle and pedestrian conditions along El Camino Real, which are expected to be addressed through a City and Caltrans project slated to begin construction in winter 2023. Other key routes that were identified as challenging for both walking and biking are listed in Table 1 below (and displayed in Figure 13 of Attachment 1).

The code review related to bicycles revealed the need to update bicycle parking requirements.

Table 1: Top 10 Challenging Routes as Indicated by Community Input

Rank	Challenging Route
1	El Camino Real (between Dale Avenue and Rengstorff Avenue/Ortega Avenue)
2	Shoreline Boulevard (between Sonia Way and Wright Avenue)
3	Central Expressway (between Thompson Avenue and SR-85)
4	Grant Road (between Bentley Square and SR-85)
5	Rengstorff Avenue (between El Camino Real and Montecito Avenue)
6	Latham Street (between Ortega Avenue and Leksich Avenue)
8	Escuela Avenue (between El Camino Real and Villa Street)
9	California Street (between Chiquita Avenue and Ortega Avenue)
10	Leland Avenue/Crisanto Avenue (between College Avenue and Escuela Avenue)

Pedestrian and Bicycle Connectivity

The Existing Conditions Analysis noted that the City’s sidewalk network provides consistent connectivity and coverage within most neighborhoods. However, pedestrian and bicycle access between some areas is hampered by infrequent or unsafe crossings. Some of Mountain View’s busiest arterial roads, such as El Camino Real, East Middlefield Road, segments of Shoreline Boulevard, and Rengstorff Avenue have long distances between marked crosswalks (see Figure 16 of Attachment 1). Longer distances between crosswalks may challenge a traveler’s desire to walk or tempt them to make a crossing between intersections that may be unsafe due to vehicles’ sight lines, speeds, and volumes. The issue of long blocks is not isolated to major arterials. Long block lengths also exist on segments of other streets such as Showers Drive, Latham Street, California Street, East Middlefield Road, and Grant Road (Figure 17 of Attachment 1).

Survey respondents identified challenges at intersections on many major east-west roadways like El Camino Real, Central Expressway, and U.S. 101 interchanges, particularly where they intersect with significant north-south roadways such as Rengstorff Avenue, Shoreline Boulevard, and Castro Street/Moffett Boulevard (see Figure 15 of Attachment 1). Survey respondents noted that a lack of crossings creates a significant barrier to access for pedestrians and bicyclists traveling north and south, especially when accessing downtown Mountain View from the south.

Based on survey data, the 10 most challenging locations for walking, biking, and rolling in Mountain View are those listed in Table 2 below (and displayed in Figure 15 of Attachment 1).

Table 2: Top 10 Challenging Spots for Walking, Biking, and Rolling as Indicated by Community Input

Rank	Challenging Spot
1	Rengstorff Avenue and Central Expressway (and, by extension: Rengstorff Avenue and Leland Avenue/Crisanto Avenue)
2	Castro Street/Moffett Boulevard and Central Expressway (and, by extension: Castro Street and Evelyn Avenue)
3	El Camino Real and Castro Street
4	Central Expressway and Shoreline Boulevard
5	Grant Road and El Camino Real
6	Miramonte Avenue/Shoreline Boulevard and El Camino Real
7	SR-85 and El Camino Real

Rank	Challenging Spot
8	U.S. 101 and Shoreline Boulevard
9	SR-85 and Central Expressway
10	El Camino Real and Escuela Avenue

Safety and Comfort

Analysis of safety and comfort noted that many places in Mountain View provide safe and enjoyable spaces for people who walk, bike, and roll—including places where people are separated from motor vehicles and have access to nature and open space.

Survey respondents and community members identified parks and trails in Mountain View as their favorite places for walking, biking, or rolling. In particular, the survey respondents highlighted the wide variety of uses along Stevens Creek Trail, including recreational bike rides with family and kids, commuting to work, and accessing key destinations. Survey respondents also expressed appreciation for safe pedestrian and bicycle environments at Sylvan Park and Rengstorff Park, both in terms of getting to and from the parks by walking or rolling and for the parks themselves. On the other hand, respondents indicated that they drove to Shoreline at Mountain View due to a lack of safe access routes for bicyclists and pedestrians. Finally, the pedestrian-only portion of Castro Street was celebrated as a great place for walking by survey respondents and community conversation participants.

Collisions Involving Bicycles and Pedestrians

From 2015 to 2022, there were 563 reported collisions involving people walking and biking in Mountain View, including 63 fatal or severe injury collisions. In Mountain View, 73% of fatal and severe injury collisions involving pedestrians or bicyclists occurred on streets with posted speeds of 35 mph or above. However, these streets represent only 20% of the total street network. Approximately 60% of crashes occur in commercial areas, including downtown Mountain View and El Camino Real, which are often adjacent or intersected by streets with posted speeds of 35 mph or above. Fatal and severe injury collision data from 2015 to 2022 (Figures 22 and 23 of Attachment 1) highlight the concentration of severe collisions on higher-speed corridors, particularly for pedestrian collisions.

These collision numbers likely underestimate total collisions in Mountain View. Collisions, particularly pedestrian and bicycle collisions, are historically underreported in many communities for a variety of reasons. Near-misses are also not consistently reported. Survey respondents and community members participating in walk tours and small group meetings noted several locations where near-misses often occur, including, but not limited to, Showers Drive between

Latham and California Streets, the intersection of Escuela Avenue and El Camino Real, and Miramonte Avenue and Cuesta Drive.

Based on community input, many Mountain View residents also expressed safety concerns about walking and biking along or across El Camino Real and Central Expressway, specifically noting that drivers focus to the left when making a right on a red light rather than stopping and looking both right and left for people crossing.

It should be noted that survey concerns may not reflect travel patterns. Survey respondents indicate where they have concerns from a walking and biking perspective. These respondents, however, are not indicating where they actually travel. Many of the areas of indicated concern do not have high crash reports, which may be because people are too concerned to walk or bike through those locations (see Figures 24 and 25 of Attachment 1).

Sidewalk and Roadway Conditions

Sidewalk and roadway conditions can affect collision risk or comfort for those who walk, bike, and roll. Survey respondents, walking tour participants, and biking tour participants highlighted various issues related to sidewalk and roadway conditions. These include locations with the following features:

- Uneven or bumpy pavement, which creates tripping concerns for pedestrians or safety challenges for bicyclists;
- Unexpected or difficult-to-see curb edges and driveway lips;
- Curbs which allow motorists to easily park on the sidewalk and block the sidewalk for pedestrians of all ability levels;
- Neighborhoods with frequent driveways along main roads, which creates numerous potential conflict points between pedestrians and vehicles; and
- Poor drainage and debris such as gravel, leaves, which can create risks for turning bicyclists.

In addition, the review of codes and standard details indicated that current standards do not reflect best practice for streets that support active transportation at the AAA level. For example, standards include elements such as narrow sidewalks, narrow bike lanes, and driveway slopes beginning in the sidewalk that do not meet current ADA standards.

Roadway Crossings, Signals, and Visibility

Community members indicated that crossing roadways, especially those with fast-moving traffic and multiple lanes, was a recurring comfort and safety challenge. Survey and community conversations highlighted concerns in relation to long blocks with limited crosswalks in some areas of the City. In this context, community members supported the City's efforts to provide Rectangular Rapid Flashing Beacons (RRFBs), Pedestrian Hybrid Beacons (PHBs) and midblock crossings in various locations. However, community members expressed a concern that driver behavior would continue to create challenges for safe crossings—especially across larger arterial roads.

Survey respondents also noted that long wait times and a lack of shade were issues at large intersections in Mountain View. On the other hand, some survey respondents commented on poor visibility between bicyclists and vehicles while entering or existing trails in Mountain View. Dense foliage, trailhead configurations, and vehicle speeds were noted as potential contributing factors to these visibility challenges.

Land Use and Urban Design Considerations

Survey respondents and community conversation participants frequently identified vibrant, walkable shopping areas such as downtown and the San Antonio Shopping Center as favorite places for safe and comfortable walking. They also indicated their support for urban design elements such as paseos and midblock crossings as features that can reduce pedestrian and bicycle travel times and stress.

Access and Equity

The Existing Conditions Analysis considered how the active transportation network connects people with critical services and destinations and reflects the different needs, abilities, and levels of experience of different people who walk, bike, or roll.

The analysis indicated that existing and funded AAA network connect to many of the City's major employers and areas of high job density. Areas of lower-density employment, such as along the commercial corridors, where lower-paying jobs are typically located, are not as well served by the AAA network (see Figures 31 and 32 in Attachment 1). The analysis also indicated that the sidewalk network supports walking access to work; however, gaps exist particularly in neighborhoods in the City's southern section.

Pedestrian and bicycle access to transit in Mountain View is mixed. Fixed-route transit services available in the City include VTA Light Rail, Caltrain service, VTA bus service, and Mountain View Community Shuttle and MVgo shuttle services. While some community members have reliable pedestrian and bicycle access to these services, others report challenges or barriers to access.

Station area planning has helped create green, walkable streets that improve transit access for people who walk, bike, and roll. Some survey respondents identified access to a transit stop or station as a favorite destination for walking, biking, and rolling, especially the Downtown Transit Center and other rail stations.

Sustainability and Biodiversity

Green streets are an important component in promoting biodiversity within the active transportation system. Green streets provide access to recreation, nature, and open spaces through green treatments that are integrated into the street. In the context of this plan, Green Streets combine active transportation, biodiversity, and sustainable stormwater.

Mountain View's Urban Forest

According to the 2015 Community Tree Master Plan (CTMP), Mountain View's urban forest currently provides 17.7% canopy cover, which surpasses the California urban area average of 15% but is lower than some neighboring communities. The city aims to increase canopy tree coverage by planting on public and private locations, which would be equivalent to planting an additional 11,000 trees citywide.

Mountain View has 237 unique species of street trees, however, the top ten species represents 55% of the overall population – most of which are not native to California. As such, the city is working towards promoting greater biodiversity in the street palette by introducing more diverse and native tree species and reducing reliance on heavily used species.

Active Transportation Plan Integration

Street tree planting sites represent a considerable opportunity for tree canopy expansion, accounting for 92% of vacant planting sites per the CTMP. The city has successfully planted trees along streets, including plantings in tree wells, planting strips, medians, parking spaces, and cul-de-sacs, each offering unique challenges and opportunities (see Figures 44 through 52 in Attachment 1). The challenge exists between the citywide goal to increase tree canopy and the aim to increase driveway visibility through codes and standards (see Figure 42 of Attachment 1).

Impervious Surfaces

Impervious surfaces, such as concrete, asphalt, roofs, and other hard materials, do not allow water to soak into the ground, which detracts from biodiversity goals and regional stormwater requirements. On the other hand, trees, shrubs, and unpaved surfaces help reduce, slow, and filter stormwater runoff and reduce urban heat island effects. In Mountain View, different neighborhoods have different percentages of impervious surfaces (as seen in Figure 53 of Attachment 1).

NEXT STEPS

The data and findings presented in the Existing Conditions and Needs Summary (Attachment 1) will be used to identify potential active transportation projects, policies, and programs for consideration in the ATP in addition to projects already included in the City’s Five-Year Capital Improvement Program. Staff will seek input on potential actions from the community, elected officials, and community partners to short-list actions for inclusion in the plan. As displayed in Figure 1, key milestones in the planning process include development of scenario plans in spring 2024, preparation of the draft plan in summer 2024, and plan adoption in fall 2024. Future community engagement efforts related to these steps will include meetings with the TAC and ATPAC; in-person and virtual community engagement meetings; presentations to BPAC and Parks and Recreation Commission (PRC); and presentation to the Council Transportation Committee (CTC) and/or City Council.



Figure 1: ATP Project Schedule

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Attachment: 1. Existing Conditions and Needs Summary