CITY OF PALO ALTO

City Council Staff Report

From: City Manager
Report Type: STUDY SESSION
Lead Department: Planning and Development Services

Meeting Date: October 6, 2025
Report #:2509-5194

TITLE
San Antonio Road Area Plan: Provide Feedback on Existing Conditions Analysis and Land Use and Mobility Priorities. CEQA Status: Exempt under CEQA Guidelines Section 15262.

RECOMMENDATION
Staff recommends the City Council review the San Antonio Road Area Plan Existing Conditions Assessment Summary and provide preliminary feedback to staff on considerations discussed in this report in advance of developing land use and mobility alternatives.

EXECUTIVE SUMMARY
The draft Existing Conditions Analysis Summary Report (Attachment A) outlines key findings on current conditions in the Plan Area and their interaction with existing regulations, highlighting development opportunities and challenges. The Executive Summary of Attachment A presents these findings. This study session provides an opportunity to brief the City Council on the report and advisory body feedback, and solicit initial input on project considerations to guide the next phase – developing land use and transportation alternatives.

PROJECT DESCRIPTION
The San Antonio Road Area Plan will guide development in the 275.3-acre corridor with an integrated land use and transportation strategy. Its objectives include expanding housing, improving mobility, providing open space, strengthening commercial nodes, upgrading infrastructure, and advancing sustainability. The plan will set policies, standards, and guidelines to implement the City's Comprehensive Plan and Housing Element, while building on related efforts such as the Sustainability and Climate Action Plan, Safe Streets for All Action Plan, and Bicycle and Pedestrian Plan update.

BACKGROUND

The City Council designated the Bayshore Alma San Antonio (BASA) Area as a Priority Development Area (PDA) on September 18, 2023.[1] PDAs are locally created to support regional goals set forth by the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC), as described in Plan Bay Area. Plan Bay Area outlines the Bay Area's Regional Growth Framework, Regional Transportation Plan, and Sustainable Community Strategies through 2050 and beyond. Key goals of PDAs include encouraging and guiding growth around transit and connecting housing to jobs and areas of interest.

The Area Plan boundary covers most of the larger BASA PDA and includes 53 Housing Element Opportunity Sites with capacity for 1,559 units, of which 614 are designated for lower-income households. The Plan Area is also shaped by existing and proposed development nearby, including across the border in Mountain View. Currently, it prioritizes vehicle traffic while lacking adequate pedestrian, bicycle, and transit facilities; combined with speeding beyond posted limits, this creates safety concerns. To achieve housing, mobility, and sustainability goals, the Plan requires an integrated land use and circulation strategy, with a central aim of providing safe, convenient multimodal connections.

The Area Plan budget was approved by the Council in March 2025, and work began in April 2025. Phase one of the Area Plan includes analysis of the area through literature and regulatory review, site visits, collection of new data, stakeholder interviews, workshops, surveys, and other technical studies to determine the area's existing conditions, strengths, and challenges. Staff convened both a Community Advisory Group (CAG) made up of area residents (from both Palo Alto and Mountain View) and stakeholders and a Technical Advisory Group (TAG) made up of City staff and subject matter experts on August 19 and August 21, 2025, respectively. The Existing Conditions Analysis Summary Report is before the Council at this time, having previously been presented to other advisory committees, boards and commissions.[2] A Community Survey is being conducted in the month of October, and the first Community Workshop will be held on October 23, 2025.

Preliminary input received from these meetings included topics which the next phase of the project should explore:

- Determining how much additional housing capacity the Plan Area should include
- Improving connectivity to transit, community amenities, and retail
- Improving safety for those traveling along and across San Antonio Avenue and Alma Street

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[1] https://cityofpaloalto.primegov.com/Portal/Meeting?meetingTemplateId=13026

[2] The Existing Conditions Assessment was presented to the Pedestrian and Bicycle Advisory Committee on September 9, 2025; Planning and Transportation Commission on September 10, 2025; Architectural Review Board on September 18, 2025; and the City/School Transportation Safety Committee on September 25, 2025.

- Improving vehicle traffic flow for existing and future users, including understanding origin and destination of drivers
- Exploring methods of preserving existing retail and employment after redevelopment
- Developing options for adding green space and retail space, especially those which would reduce vehicle trips
- Planning for how much parking is needed within the Plan Area
- Preparing for impacts to RVs parked within the Plan Area
- Mitigating for flood zones and future sea level rise
- Cooperating with Mountain View and major property owners adjacent to the Plan Area
- Engaging with school districts on individual school capacity and safe routes for schools
- Representing impacts of the Area Plan on the City as a whole

ANALYSIS

The Existing Conditions Assessment is a key deliverable in the first phase of the project. Preliminary findings, included in Attachment A, are based on technical analysis, regulatory review, and literature review, including existing City and regional planning documents.

The report considers the following topic areas:

- Land Use: Existing built environment, applicable State laws, zoning regulations found in the Palo Alto Municipal Code, land use designations found in the 2030 Comprehensive Plan, and amenities such as schools, parks, community centers, and retail in and around the plan area.
- Housing, Growth, and Displacement: Existing housing stock, pipeline development projects, City planning documents, and housing affordability.
- Transportation: Automobile, bicycle, pedestrian, and mass transit networks in the proximate Plan Area, as well as safety concerns related to those networks.
- Market Analysis: Housing market, retail market, and employment market.
- Hazards, Public Safety, and Historic Resources: Flooding, geologic, and fire hazards, emergency response, and historic context of the built environment.
- Parks, Outdoor Spaces, and Public Facilities: Existing amenities within and adjacent to the Plan Area.
- Air Quality, Noise, and Vibration: Existing conditions and local and regional thresholds for impacts.
- Infrastructure: City owned utility facilities in the Plan Area.
- Climate and Resilience: Local and regional policies and data.

Council Feedback Requested

Based on the findings identified in the draft Existing Conditions Analysis Summary Report (Attachment A), there are several notable assets and opportunities for consideration in developing the Area Plan. Staff believes that updating land use designations, development standards, and improving active transportation routes and connections to the San Antonio

Caltrain Station are key to the Plan's success. In order to develop complete neighborhoods, the Area Plan will also address open space/parks, retail, transit, and utilities.

The upcoming community meetings and alternatives development will be informed by the work to date and the following assumptions. Council feedback – particularly on areas of potential disagreement or concern – is requested:

1. Housing. The 53 Housing Element Opportunity Sites with a capacity for 1,559 units represents a baseline level of housing production and a low growth alternative. Other scenarios will consider increased housing production to represent mid- and high-housing growth projections. Across all scenarios, the opportunity sites and regional housing needs allocation capacity may be re-evaluated within the plan area.
2. Office. Allowance for commercial office development can entice redevelopment and support local interests to create affordable housing opportunities, infrastructure and mobility improvements, retail, and access to open space. One or more scenarios will examine plan-area specific office caps to create net new office floor area that would otherwise be exempt from existing limitations and caps. In addition to net new office, it is anticipated commercial office, R&D or similar uses removed or demolished to support housing or mixed use development could be re-established in the within the plan area as an incentive to advance plan objectives.
3. Building Height, Floor Area and Density. Each scenario will evaluate modification to development standards, however, for higher density housing, 85 feet, which represents five stories over a two or three story concrete podium is anticipated, and similar to what has recently been proposed along portions of San Antonio Road. Staff will be prepared to discuss taller housing typologies if asked by Council. It is anticipated that at least one scenario may include tall commercial office buildings adjacent to the freeway or within the San Antonio and Charleston Roads and Transport triangle, similar with planned development activity in adjacent Mountain View.
4. Transportation. Mobility improvements for all travelers, such as redesigning all or portions of San Antonio Road, utilizing special setbacks or easements, creating bike/ped facilities through neighborhoods, exploring private and regional connectivity solutions to improve access to/from transit services and destinations will be considered for all scenarios and tiered to anticipated funding sources from redevelopment and other strategies to support desired outcomes.
5. Open Space. Other than the public right of way, the City controls little land in the plan area making it challenging to locate new open space. Through land acquisition or public-private partnerships, the plan will seek to create opportunities within a reasonable walking distance to new housing and may be incorporated into 'third spaces' shared with retail or neighborhood serving uses or services.
6. Retail. Consistent with other city strategies, retail will be prioritized where it can be aggregated in locations with good access and visibility near future housing and employment. Isolated retail along San Antonio Road without the support of other assembled uses and services is less likely to succeed and not anticipated to be pursued in the scenario planning efforts.

Next Steps
A Community Survey is being conducted in the month of October, and the first community workshop is scheduled for October 23, 2025. The discussion with the community will include exercises that will identify community needs in the Plan Area and the types of improvements most desired by the public. The community survey running during the month of October will allow additional feedback on specific questions from community members who are unable to attend the workshop.

The direction received from the City Council, and feedback from advisory bodies and the community will inform the scope of the land use and mobility alternatives. These alternatives will be shared with the community and the advisory bodies in the first half of 2026 and are planned for review by City Council in June 2026, before work on the final plan elements and the environmental review begin.

POLICY IMPLICATIONS

Several **2030 Comprehensive Plan policies** directly support the Area Plan:

- **Growth & Community**: Policies L-1.10, L-2.2–2.4, L-2.6, L-2.11–2.12, and L-3.4 address growth management, sustainable communities, and neighborhood character.
- **Commerce & Employment**: Policies L-4.5, L-4.16, and L-5.4 guide commercial centers and employment districts.
- **Design & Public Realm**: Policies L-6.6–6.7 focus on building and public space design.
- **Parks & Streets**: Policies L-8.6, L-9.3, L-9.6, and L-9.7 support parks, streets, and public spaces.

The **2023–2031 Housing Element** reinforces these goals, with Program 6.6(C) directing preparation of the San Antonio Road Corridor plan and identifying 53 Housing Opportunity Sites, emphasizing housing near the Caltrain station. The **Housing Incentive Program (HIP)**, adopted in 2019 and updated in 2025, further promotes multi-family and mixed-use development across much of the Plan Area.

FISCAL/RESOURCE IMPACT

The Area Plan budget was approved by the Council on March 10, 2025, with an amount not to exceed $1,979,902.[5] There are no additional costs associated with this action item.

STAKEHOLDER ENGAGEMENT

Community Engagement is the key to the success of the planning effort. The project team has created a robust community engagement strategy, which includes a dedicated webpage, social media and email announcements, formation of the Community Advisory Group (CAG) and Technical Advisory Group (TAG), stakeholder interviews, community workshops, surveys,

[5] CMR 2501-4703 was approved on March 10, 2025 and can be viewed here: https://cityofpaloalto.primegov.com/meetings/ItemWithTemplateType?id=7153&meetingTemplateType=2&compiledMeetingDocumentId=13423

meetings with the City Council and advisory commissions, committees, and boards, and pop-ups including tabling at City events and Farmers Markets. Given the proximity of the Plan Area to Mountain View, the City hosted Mountain View's Community Development Director and key planning, transportation, and public works staff for an initial discussion of the plan, and the two cities' long range planning teams meet once a month to share information about the plan and adjacent areas.

The first CAG meeting was held on August 19, 2025, and the first TAG meeting on August 21, 2025. The first survey is currently live on the project's webpage, and the first community workshop will be held on October 23, 2025, at the Cubberley Community Center. Feedback will be incorporated into the Land Use and Mobility Alternatives, which will have their own series of public outreach in late 2025 through early 2026.

ENVIRONMENTAL REVIEW

The actions recommended in this report are exempt from review under the California Environmental Quality Act (CEQA) pursuant to CEQA Guidelines Section 15262: A project involving only feasibility or planning studies for possible future actions that has not been approved, adopted, or funded would not have significant impact on the environment. The City will prepare an environmental analysis for the San Antonio Road Area Plan when more project specifics have been identified.

ATTACHMENTS

Attachment A: San Antonio Road Area Plan: Existing Conditions Analysis Summary Report, September 4, 2025 Draft
Attachment B: San Antonio Road Area Plan Map

APPROVED BY:

Jonathan Lait, Planning and Development Services Director

San Antonio Road Area Plan

Existing Conditions Analysis

Summary Report

SEPTEMBER 4, 2025 DRAFT

CITY OF PALO ALTO

SAN ANTONIO ROAD AREA PLAN

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INTRODUCTION

This is a draft report summarizing the existing conditions within and around the boundaries of the San Antonio Road Area Plan. Please note that some sections of this analysis are in progress as of the publication of this draft, and analysis will continue as part of the Area Plan's compliance with the California Environmental Quality Act.

About the Project

The San Antonio Road Area Plan (Area Plan) is a multi-year initiative by the City of Palo Alto to reimagine land use, transportation, and community development for an area of 275 acres encompassing the roadway and private properties on both sides of San Antonio Road, one of the City's and region's key transportation corridors. This area, referred to in this document as the Plan Area, is located along the south-eastern edge of Palo Alto, adjacent to its boundary with Mountain View, and covers most of the Bayshore Alma San Antonio (BASA) Priority Development Area (PDA) boundary.

Initiated in March 2025, the Area Plan will have five phases and is anticipated to be completed by 2028. It will build on recent City efforts including the 2023-2031 Housing Element, which established "Focus Areas" for the Plan Area, the Housing Incentive Program (HIP), the 2025 Safe Streets for All (SS4A) Safety Action Plan, and the Bicycle and Pedestrian Transportation Plan Update (in progress). The Area Plan will include a land use program; development standards; policies for transportation, housing, and environmental sustainability among other topics; implementation recommendations; and financing strategies. Community input will be critical to shaping the Area Plan outcomes. The project includes robust engagement including community workshops, pop-up events, surveys, advisory groups, and public meetings. Key goals of the Area Plan include:

- **Create a more livable community**. Promote compact, mixed-use development with housing options at all income levels, local businesses, and well-designed public spaces.
- **Improve mobility and safety**. Enhance streets, sidewalks, bike lanes, and transit connections for easier and safer travel and crossings, and improved access to the San Antonio Caltrain Station.
- **Support sustainability**. Integrate green infrastructure, reduce emissions, and ensure resilience to climate change.
- **Enhance economic vitality**. Attract new businesses and strengthen Palo Alto's economy while preserving cherished local establishments and community character.

San Antonio Road is an important regional arterial connecting US-101 (Bayshore Freeway) in the east to Alma Street/Central Expressway in the west, and beyond to El Camino Real and Foothill Expressway. It serves as an important truck route and facilitates access to key employment centers. Within the Plan Area, major crossings along San Antonio Road include US-101, East Charleston Road, Middlefield Road, and Alma Street/Central Expressway. The San Antonio Station of the Caltrain commuter rail line is located near the south-western corner of the Plan Area. Adjacent to the Plan Area are residential neighborhoods in Palo Alto and Mountain View.

At present, the Plan Area has a mix of industrial, office, service commercial, and residential uses, with some properties transforming from commercial or industrial uses to residential and mixed use. There are only a few retail stores and no parks or other community spaces. While there are several community amenities in the vicinity, including parks, schools, grocery stores, and institutions (refer Figure 1); access to these destinations is difficult at present because of inadequate pedestrian and bicycle safety and connectivity. Substantial placemaking

efforts, including urban design, public realm, and safety improvements such as Complete [illegible] to provide safer, more convenient transportation options. These improvements can enhanc[illegible] of the Plan Area for current and future residents, and help meet the City's housing, sustainability, and mobility goals.

Figure 1. Plan Area and Surrounding Context

Source: Raimi + Associates, Google Earth

How This Document Is Organized

This Summary Report presents key findings from analysis carried out by the project team to assess existing conditions within the Plan Area. Serving as an introduction to the project, it offers a concise overview of current conditions and key findings, organized by topic. For the purposes of this document, true cardinal directions are not used, but rather descriptors consistent with northbound/southbound as used for Highway 101: San Francisco is north, San Jose is south, and the San Francisco Bay is east.

EXECUTIVE SUMMARY

Location and Context

San Antonio Road is an important transportation corridor for Palo Alto and the surrounding region. The Area Plan includes approximately 275 acres on either side of a 1.8-mile segment of San Antonio Road. Located along the boundary of Palo Alto and Mountain View, the Plan Area is influenced by development trends and movement patterns in both cities. Connections to US-101 (Bayshore Freeway), Alma Street/Central Expressway, and proximity to the San Antonio Caltrain station influence the area as well.

Existing Uses and Character

The Plan Area has a diverse mix of industrial, office, service commercial, and residential uses; and some properties are starting to transform from commercial or industrial uses to mixed-use. At present, the built character varies across the Plan Area, and the land use pattern is fragmented. The Plan Area itself lacks community spaces such as parks, and has only a few retail establishments, but in its vicinity, there are a number of community destinations such as parks, schools, grocery stores, institutions, and other uses. Connectivity to these amenities is, however, limited at present because of inadequate pedestrian and bicycle facilities. Substantial placemaking efforts, including urban design, public realm, and safety improvements such as Complete Streets, are required to provide safer, more convenient transportation options. These improvements can help meet the City's housing, mobility, and sustainability goals, and enhance the accessibility and usability of the Plan Area for current and future residents.

Mobility

The current condition of San Antonio Road prioritizes vehicles and is less accommodating for pedestrians and cyclists. Limited bicycle infrastructure, known gaps in the pedestrian network, such as the absence of continuous sidewalks and unprotected crossings, as well as the lack of shade, restrict bicycle and pedestrian travel to major neighborhood destinations. Transit is

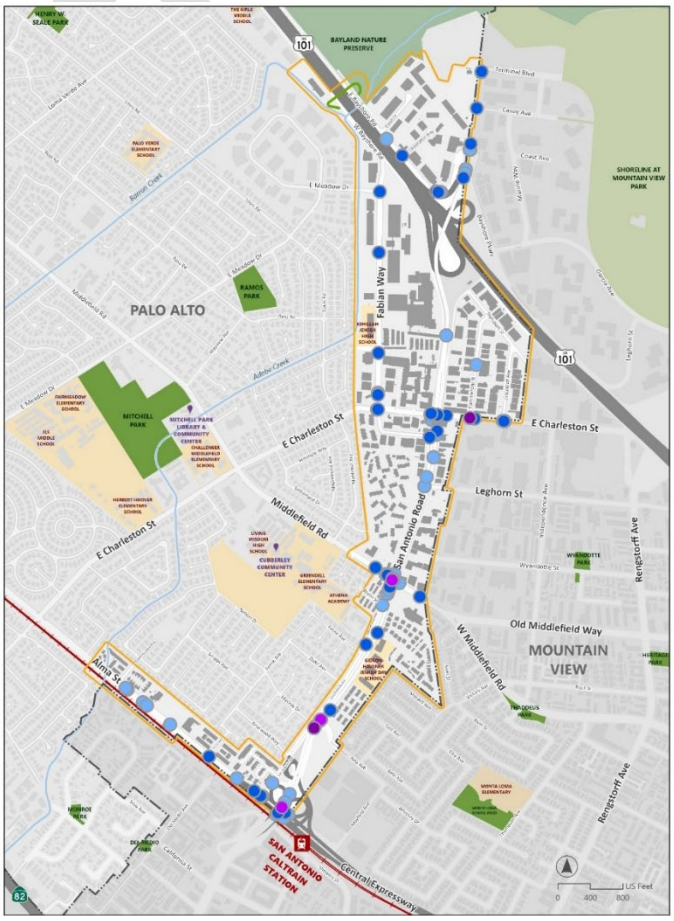


Figure 2. Crash Severity in the Plan Area, 2015-2024
Source: Raimi + Associates, City of Palo

available within the Plan Area; however, bus service is limited and there is poor connectiv[illegible]o Caltrain Station, despite its proximity. Comprehensive improvements to ensure multimod[illegible] safety may be necessary to provide sustainable travel options for Plan Area residents, workers, and visitors as its population increases. These improvements will be designed to reduce traffic congestion as mixed-use development increases.

Safety is one of the key issues that need to be addressed in the Plan Area. Vehicle speeds along San Antonio Road often exceed posted limits, associated with a significant share of collisions. Figure 2 shows key locations and severity of collisions within the Plan Area. Investments in street, bicycle, and sidewalk infrastructure will improve safety and strengthen connections both within the Plan Area, to San Antonio Caltrain Station, and to other destinations in Palo Alto and Mountain View.

Housing Market Conditions

Although few housing projects have been built in the Plan Area since the 1990s, it has attracted development interest in recent years, and several pipeline projects could yield up to 750 housing units if completed as proposed. This would be a significant increase over the 802 residential units that currently exist in the Plan Area. There is strong demand for housing in Palo Alto, and the Plan Area may attract mid-rise multifamily projects, which align with the City's regulatory and policy priorities for higher-density development. As the area evolves, development standards will be needed to guide compatibility between adjacent uses, and transitions in built form and scale. Because all pipeline projects are located on privately owned land, they remain subject to market volatility and other development uncertainties. Successful implementation may depend on targeted incentives that encourage the provision of community amenities as part of private development.

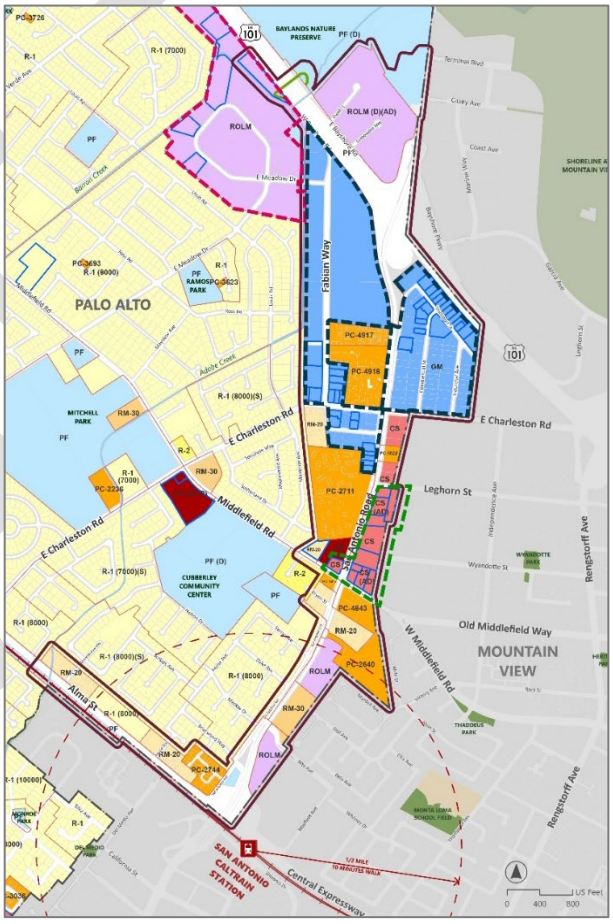


Figure 3. Plan Area Zoning, HIP and Focus Area
Source: Raimi + Associates, City of Palo

Housing Initiatives

The City of Palo Alto's 2023–2031 Housing Element identifies 53 opportunity sites in the Plan Area, representing 1,559 new housing units, and designated the GM- and ROLM-zoned districts as Focus Areas to stimulate housing production. In addition, the City's Housing Incentive Program (HIP) applies to a portion of the Plan Area, as shown in Figure 3. Together, these initiatives have already expanded development capacity along San Antonio Road. Given strong demand for housing in Palo Alto, and the available housing development opportunities within the Plan Area, the area is well-positioned to capture demand for additional housing units associated with projected household and employment growth.

Housing Affordability

The Plan Area currently contains about 250 deed-restricted affordable housing units across four properties, as well as a small number of "naturally affordable" rental housing units (that have lower rents than City averages but are not deed-restricted). While homeowners and residents of deed-restricted units face lower displacement risk, renters in market-rate units may be more vulnerable to displacement as the Plan Area redevelops. With many sites identified for future housing, the Plan Area is well positioned to support lower-income households through inclusionary requirements, affordable housing fees, and, when funding is available, new or preserved deed-restricted affordable housing projects. The addition of housing in the Plan Area that is affordable at a range of income levels can help meet the needs of current and future residents and workers in Palo Alto.

Existing Employment and Businesses

According to U.S. Census data, as of 2022, the Plan Area accounted for about four percent of the City's total jobs, but nearly 40 percent of its jobs in the Manufacturing sector. Small office and light industrial spaces, particularly near Commercial Street and Industrial Avenue, provide flexible, relatively affordable options for local businesses. As these spaces redevelop for housing or higher-intensity employment uses, existing small-scale businesses may be at risk of displacement, especially given the limited supply of comparable spaces elsewhere in Palo Alto.

Community Amenities

The Plan Area includes some religious institutions and community spaces, including the Oshman Family Jewish Community Center, and is adjacent to the Cubberley Community Center and Baylands Nature Preserve. However, the Plan Area itself has no parks or open spaces and is limited in retail nodes or other "third places" for community gathering. As the Plan Area adds more residents, such spaces will need to be included. A portion of the Plan Area is also "park deficient" by being more than a 10-minute walk away from an open space nearby, as shown in Figure 4.

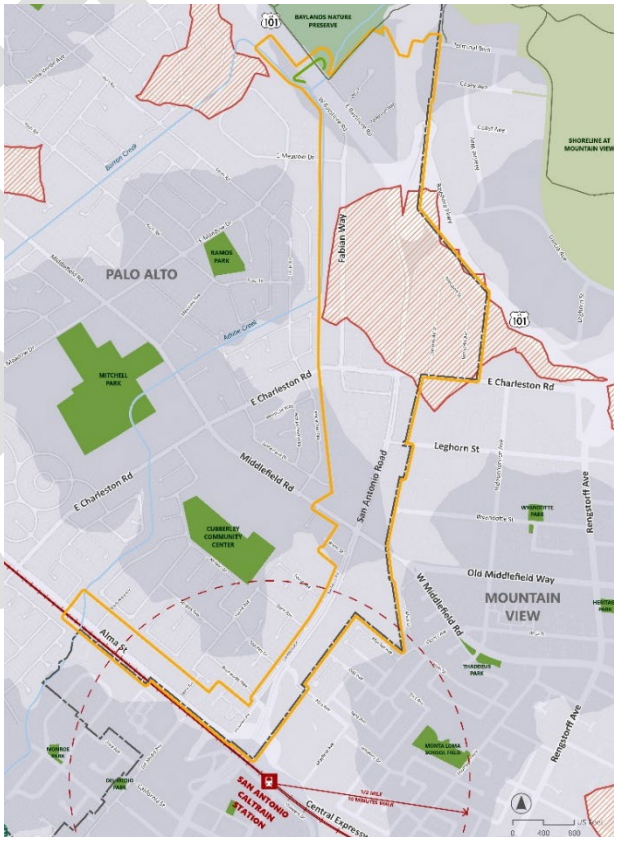


Figure 4. Open Space Access in the Plan Area
Source: Raimi + Associates, City of Palo Alto GIS

While there are limited retail uses within the Plan Area at present, there are a few valued local businesses. Retail offerings in the vicinity, including on El Camino Real and Mountain View's San Antonio Center, can meet many day-to-day shopping needs. As the Plan Area redevelops, it is more likely to serve as a secondary retail location

that is better suited to neighborhood-serving restaurants, coffee shops, drugstores, and p ail demand is projected to grow gradually and may require a larger resident base before sup w retail amenities, such as a new grocery store. The Area Plan will need to incorporate a vision and policies to encourage concentration of future retail at key locations with high visibility and access, such as the intersections of San Antonio Road with Middlefield Road and East Charleston Road.

Climate Resilience and Environmental Hazards

The Plan Area has some susceptibility to environmental challenges, including flooding, sea-level rise, urban heat events, and ground liquefication from seismic events. The portion of the Plan Area east of East Charleston Road is subject to a one percent annual chance flood and sea-level rise, while the rest of it faces a 0.2 percent annual chance of flooding. New development will need to meet base flood elevation standards and incorporate resilience measures. Air quality is another concern, particularly near US-101 and during regional wildfire events.

Potential Impacts on Services from Population Growth

Growth will place additional demands on public services and infrastructure. Emergency Medical Services (EMS) may require more staff, new equipment, and fire station upgrades. Overall school enrollment is down across all three school districts that service the Plan Area (Palo Alto Unified School District, Mountain View-Whisman School District, and Mountain View-Los Altos Union High School District), indicating their capacity to absorb new students. The City owns and provides stormwater, wastewater, domestic water, recycled water, natural gas, and electrical utilities. Additional development could require upgrades to all these utilities, including installation of larger water mains to produce necessary fire flow and service levels.

I. LAND USE AND ZONING

Existing Uses and Built Character

The City of Palo Alto's Comprehensive Plan assigns a mix of residential and non-residential land use designations to the Plan Area. The San Antonio Road/Bayshore Corridor is an important employment center and has a variety of light industrial, research, and office uses. Within the Plan Area, these uses are concentrated mainly east of East Charleston Road, transitioning to a mix of commercial and residential uses west of East Charleston, with some research and office uses west of Middlefield Road. Residential units within the Plan Area are primarily low-rise multifamily buildings.

Existing building heights in the Plan Area are predominantly one to two stories, with a few buildings exceeding four stories, such as those in the Taube Koret Campus, and two hotels along San Antonio Road. Floor Area Ratios (FARs) range from 0.5 to 1.0, with a few buildings such as the AC Hotel reaching a higher FAR of 2.8. A built form analysis of the Plan Area identified distinct character areas, each with a unique mix of uses and built form characteristics, as shown in Figure 1.1. Across the Plan Area, parcel sizes, building types, and development patterns vary considerably, with little consistency in setbacks, building orientation, or scale transitions. By contrast, the character areas are more cohesive, with similar parcel sizes, building scale and land uses.

Several developments along San Antonio Road, such as the Greenhouse Community, were designed to be inward facing, with limited interaction between building edges and adjacent streets or sidewalks. Such inactive frontages discourage pedestrian activity and placemaking and may need to be addressed as part of future development.

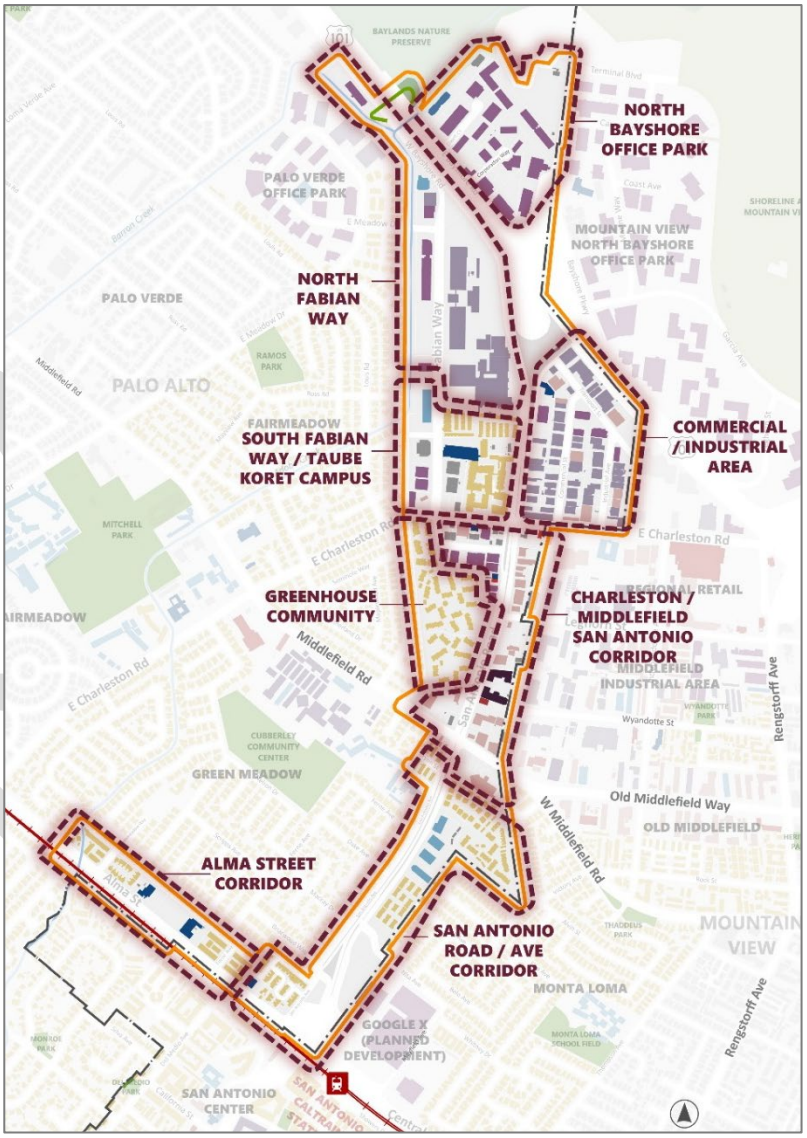


Figure 1.1. Existing Uses, Built Form and Character Areas

Source: City of Palo Alto GIS, Raimi and Associates, 2025.

Regulatory Context and City Initiatives

Zoning districts within the Plan Area, as shown in Figure 1.2, allow a mix of residential, commercial, office, and light industrial uses. Development standards regulate the scale and form of buildings in each district. Most zoning districts in the Plan Area allow multifamily housing at various densities. The Plan Area also has a few Planned Communities with site-specific development standards.

Recent regulatory changes have focused on encouraging more housing City-wide, and the Plan Area in particular. The City's 2023-2031 Housing Element identified 53 housing opportunity sites within the Plan Area, with a combined capacity for 1,559 new housing units at various income levels. It also designated the GM and ROLM zoning districts —areas that allow manufacturing, office, and research uses—within and adjoining the Plan Area as "Focus Areas", allowing housing. The City's Housing Incentive Program (HIP) that applies to a section of the Plan Area east of Middlefield Road, was also expanded to include the GM and ROLM Focus Areas, as well as multifamily residential zoning districts (RM-20, RM-30, and RM-40). In addition, Program 6.6C of the 2023-2031 Housing Element directs the City to prepare a plan for the San Antonio Road corridor, including the GM and ROLM Focus Areas.

These initiatives aim to promote multifamily housing through development incentives such as increased density, higher Floor Area Ratios (FARs), and reduced parking requirements.

In addition, a 24-foot Special Setback applies to portions of Charleston Road, Middlefield Road, and San Antonio Road. Originally designated for future road widening, this setback presents an opportunity for public realm improvements as part of future development.

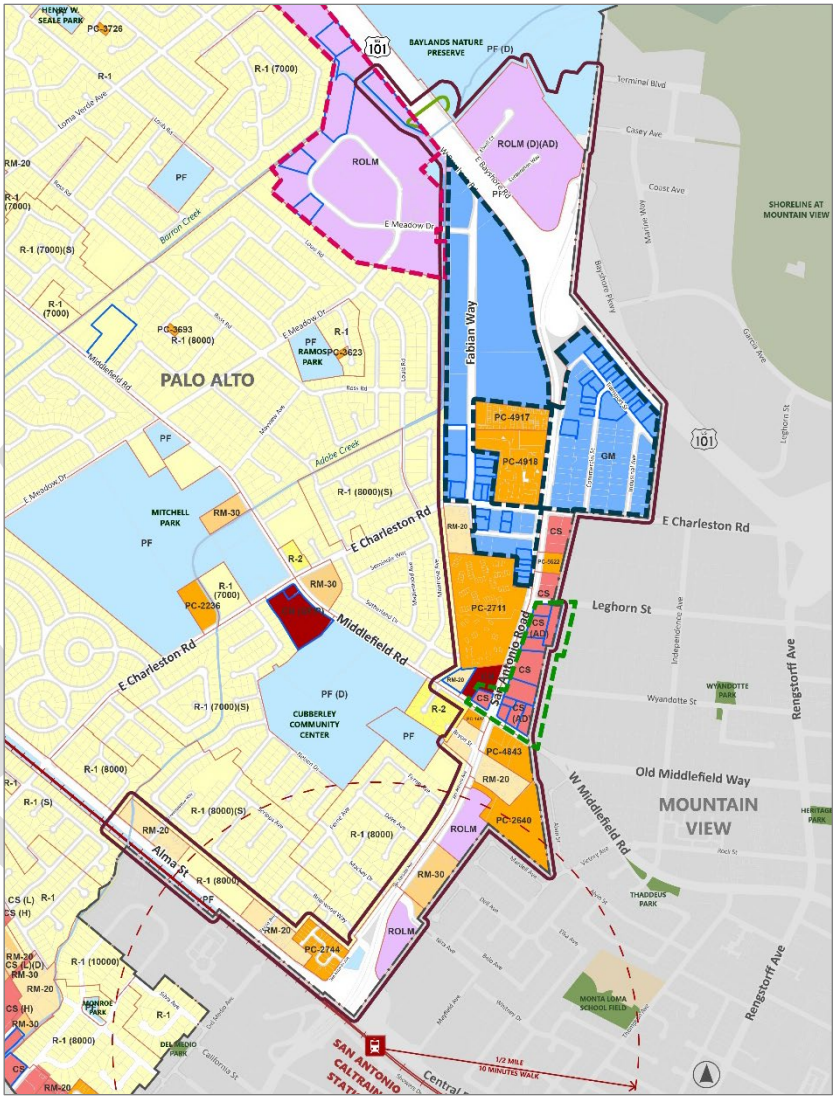


Figure 1.2. Zoning, Focus Areas and HIP Boundaries

Source: Raimi + Associates, City of Palo Alto GIS

Pipeline Projects

The Plan Area has attracted recent development activity and there are several projects at various stages of proposal review and entitlement. These include mid-rise residential and mixed-use projects located along San Antonio Road between East Charleston Road and Middlefield Road (in the HIP district), and along Fabian Way.

Figure 1.3 shows the large number of 2023-2031 Housing Element sites in the Plan Area, along with key projects currently in the development pipeline (also listed in Table 1.1). In total, these could yield more than 750 housing units should all the development occur as proposed. To be feasible in Palo Alto's housing market, future development is anticipated to be larger and taller than what exists currently; as indicated by recent development proposals that typically feature five- to seven-story residential and mixed-use buildings with FARs of 3.0 or more, and parking ratios of fewer than two parking spaces per unit.

Figure 1.3. Plan Area Pipeline Projects
Source: City of Palo Alto GIS, Raimi and Associates

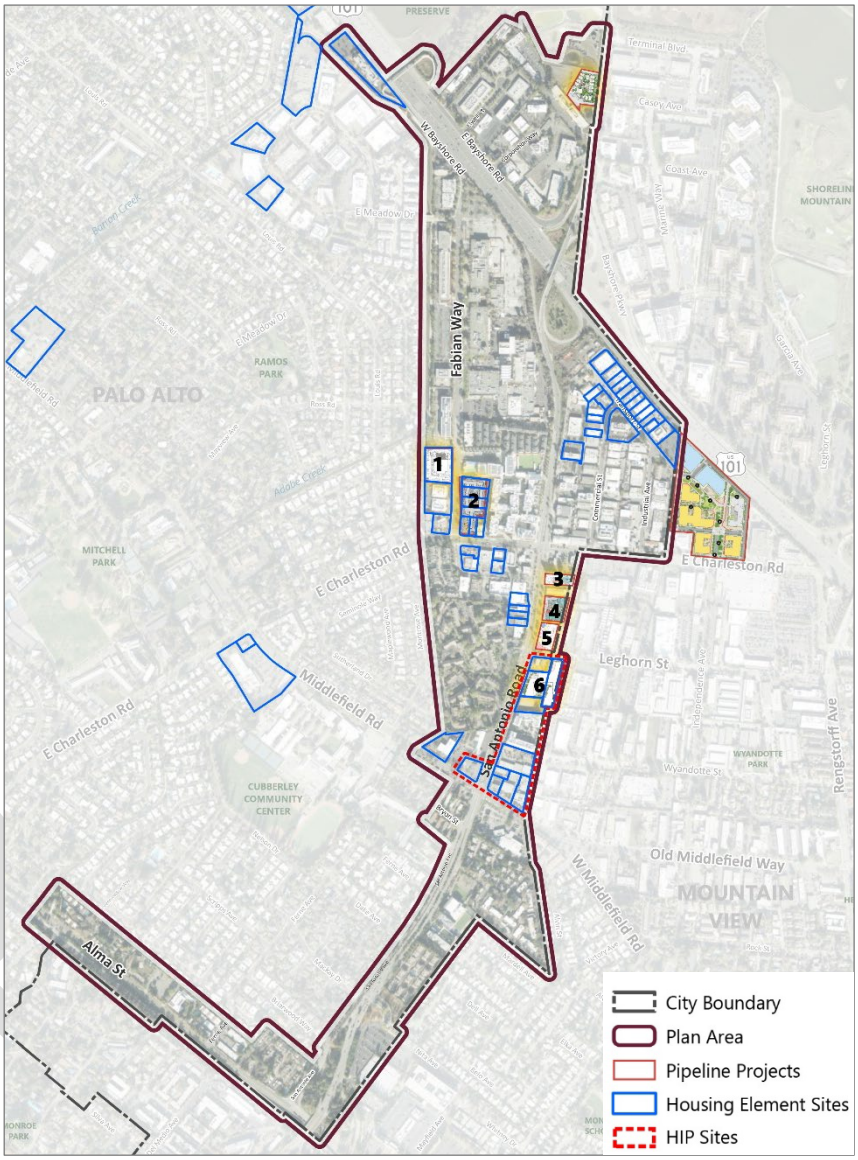


Table 1.1. Plan Area Pipeline Projects
Source: City of Palo Alto

Pipeline Project	Lot Area	Density, No. of Units	FAR, Height	Pkg Ratio	Commercial	Status
1. 3950 Fabian Way	1.51 ac	None (school project)	0.5, 2 stories	0.12	None (school)	Entitled
2. 3997 Fabian way	2.16 ac	135 du/ac, 295 units	3.19, 7 stories	1 to 1.5	None	Pending approval
3. 824 San Antonio Rd.	0.45 ac	56 du/ac, 28 units	1.99, 4 stories	0.57	2,948 sf	Entitled
4. 800,808 San Antonio Rd.	0.88 ac	85 du/ac, 75 units	3.0, 5 stories	1.97	None	Entitled
5. 788 San Antonio Rd.	0.99 ac	169 du/ac, 168 units	3.31, 8 stories	0.43	None	Building Permits Issued
6. 762 San Antonio Rd.	1.78 ac	112 du/ac, 197 units	3.33, 7 stories	1.24	None	Pending approval

Outdoor Space and Placemaking Opportu

Palo Alto has approximately 4,000 acres of open space (outdoor space), including the Baylands Nature Preserve, larger regional parks such as Mitchell Park (21 acres), smaller neighborhood parks such as Ramos Park (4 acres), community gardens, and other types of parks and recreation amenities. However, the Plan Area itself has no parks or other spaces for recreation or community gathering within it. Figure 1.4 shows parks and open spaces in the vicinity of the Plan Area, and pedestrian "walksheds" around each for 5-minute (approximately ¼ mile) and 10-minute (approximately ½ mile) walk distances. While most parts are within a 10-minute walkshed to neighboring parks, a significant portion is "park deficient" with inadequate access, meaning no parks are located within a 10-minute walking distance. Creating new open spaces, such as parks, as part of future development will be a key focus of the Area Plan. Placemaking and public realm improvements will also be important not only to improve safety and connectivity, but also to create distinct character districts along San Antonio Road that relate to the existing uses and functions of each segment. Figure 1.5 highlights potential focus areas for urban design improvements, as well as key streets and intersections where multimodal safety and connectivity improvements will be most critical.

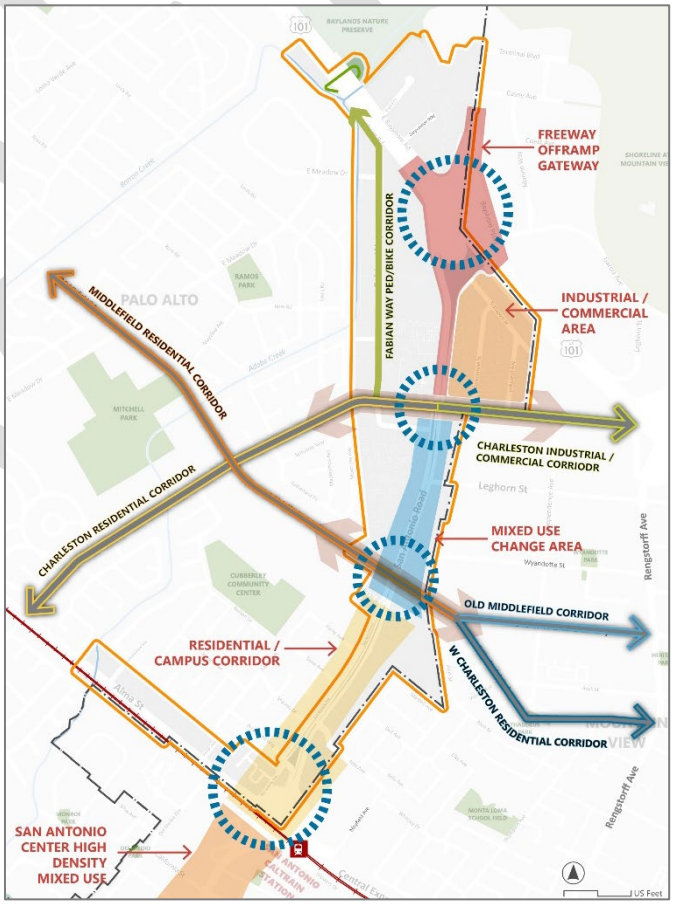
Figure 1.4. Outdoor Space Access

Source: City of Palo Alto GIS, Raimi and Associates

City Boundary
Plan Area
5 Min. Walk (1/4 Mile)
10 Min. Walk (1/2 Mile)
Open Space Deficient Areas (Greater than 10 Mins. Walk)
Trails
Bike/Ped Bridge
Shoreline at Mountain View
Baylands Nature Preserve
Parks

Figure 1.5. Critical Areas of Safety and Mobility Focus

Source: City of Palo Alto GIS, Raimi and Associates



City Boundary
Plan Area
Railway
Caltrain Station
Creeks
Parks
Areas of safety and mobility improvements

Key Findings and Conclusions

Key findings from the existing conditions analysis are summarized below.

DESIGN OPPORTUNITIES

- **Location and Access**. San Antonio Road is an important transportation corridor for Palo Alto and the surrounding region. The Plan Area has good auto access from US-101, and being located adjacent to the San Antonio Caltrain station offers the potential for enhanced transit connectivity if pedestrian and bicycle access to the station is improved. Located along the boundary between Palo Alto and Mountain View, the Plan Area is influenced by development trends and movement patterns in both cities and benefits from employment opportunities, as well as access to community and open space amenities, in both cities.
- **Existing Uses and Built Character**. The Plan Area has a diverse mix of industrial, office, service commercial, and residential uses. While land use and built form patterns are currently fragmented, and San Antonio Road functions primarily as a circulation corridor; the Plan Area has distinct "character areas" with the potential to evolve into mixed-use neighborhoods. Several properties in the Plan Area are already transitioning from commercial and industrial uses to residential and mixed-use development.
- **Development Trends**. The Plan Area has attracted development interest in recent years and has several proposed projects in the pipeline that could produce more than 750 housing units, should all these projects be built as proposed.
- **Housing Initiatives**. The City of Palo Alto's 2023-2031 Housing Element identified 53 opportunity sites in the Plan Area, designated the GM- and ROLM-zoned districts within the Plan Area as Focus Areas, and directed the City through Program 6.6C to develop a plan for this area to stimulate housing production. Additionally, the City's Housing Incentive Program (HIP) applies to a portion of the Plan Area. These housing-focused initiatives substantially increase the development capacity along San Antonio Road.

SITE CHALLENGES

- **Inconsistent Character.** Inconsistent land uses and built character in the Plan Area that exist currently are not supportive of the Plan Area's envisioned transition to a mixed-use area with additional housing. Substantial placemaking efforts, along with urban design and public realm improvements, may be needed to support future development and population growth.
- **Inadequate Pedestrian, Bicycle and Transit Facilities**. The current condition of streets and sidewalks is not friendly or accommodating for pedestrians and bicyclists, and transit connectivity is inadequate. Comprehensive improvements are needed to ensure multimodal connectivity and safety to serve future residents, workers and visitors, and to meet the City's mobility, sustainability, and housing goals.
- **Limited Community Amenities**. The Plan Area itself has no parks, open spaces, or other "third places" for community gathering. A portion of the Plan Area is also "park deficient" by being more than a 10-minute walk (half a mile) from nearby open spaces. Additionally, the Plan Area has no defined retail nodes or similar community destinations. Creating such "third places" may be considered as part of the Area Plan.
- **Compatibility in Built Form and Uses.** As the area transforms over time, incompatibility between adjacent land uses, as well as building height and massing transitions, must be addressed through updated development standards.
- **Market Conditions**. All pipeline projects are located on privately-owned properties and subject to housing market volatility and other development uncertainties. Successful implementation will require development incentives to encourage the provision of community amenities in private development projects.

DEVELOPMENT OPPORTUNITIES

The Plan Area's characteristics and anticipated projects indicate a valuable opportunity to guide large-scale development in targeted locations within the Plan Area. Future development can be leveraged to create mixed-use neighborhoods with safe and convenient access to transportation, employment, community services, and recreation. To achieve this, placemaking will be an important design tool, and will likely include a combination of streetscape improvements to promote safety and walkability, as well as design enhancements to create a distinct identity for this neighborhood with a strong sense of place. Figure 1.6 maps key development opportunities within the Plan Area by identifying areas with the highest probability of transformation — the potential "opportunity areas" with projects that are in the development pipeline, Housing Element opportunity sites, and areas eligible for the Housing Incentive Program (HIP).

An example of a potential opportunity area is the E Charleston Commercial/ Industrial character area (area around Commercial Street and Industrial Avenue), which has good visibility and auto access from East Charleston and San Antonio Roads, and includes several small-scale office and light industrial uses. It also has a large concentration of Housing Element sites within it, signaling an increase in population in the coming years. However, this area is also "park deficient." These characteristics suggest potential priorities to consider as part of future development: the need for connectivity improvements, measures to prevent displacement of neighborhood-serving uses, and an opportunity to create a new open space, potentially coupled with neighborhood-serving retail and amenities.

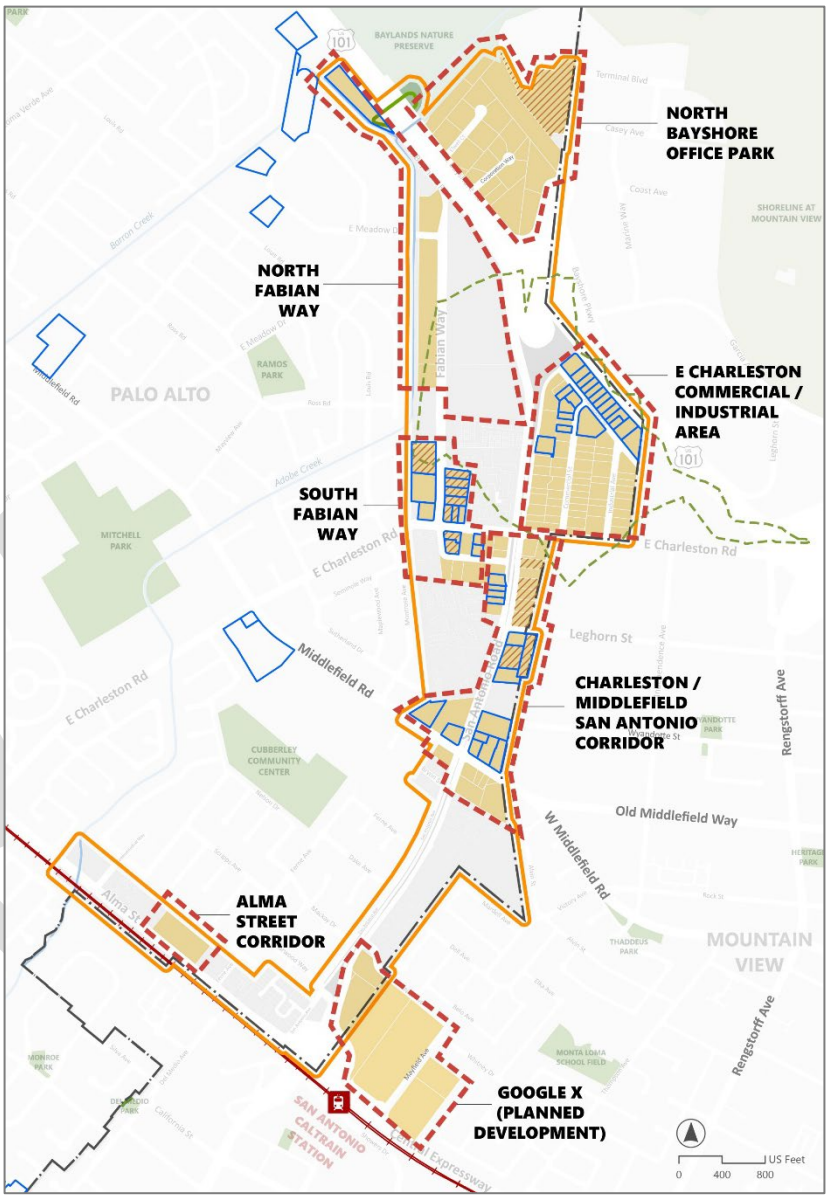


Figure 1.6. Development Opportunities

Source: City of Palo Alto GIS, Raimi and Associates

- City Boundary
- Plan Area
- Railway
- Caltrain Station
- Creeks
- Parks
- Potential Opportunity Areas
- Potential Sites for Future Development
- Pipeline Projects
- Housing Element Sites
- Open Space Deficient Areas (Greater than 10 Min. Walk Shed)

2. HOUSING, GROWTH, AND DISPLACEMENT RISK

Introduction

This section looks at current housing characteristics, potential residential displacement risks, and relevant City housing policies impacting the Area Plan. The findings of these analyses will help inform the City of Palo Alto's efforts to increase affordable and market-rate housing production in the Plan Area, preserve existing affordable housing (including both deed-restricted affordable housing as well as market-rate housing that is not deed-restricted yet relatively affordable), and protect households vulnerable to displacement.

Data and findings in this section describe conditions within the "Plan Area Census Block Groups," a set of Census block groups with existing housing that encompass the Plan Area, as shown in Figure 2.1. Since detailed U.S. Census data is only available for specific predetermined geographies, the selected block groups best cover the Plan Area while providing sufficient information for analysis. The analyses only cover the most recent available Census data since the block group boundaries differ from previous years.

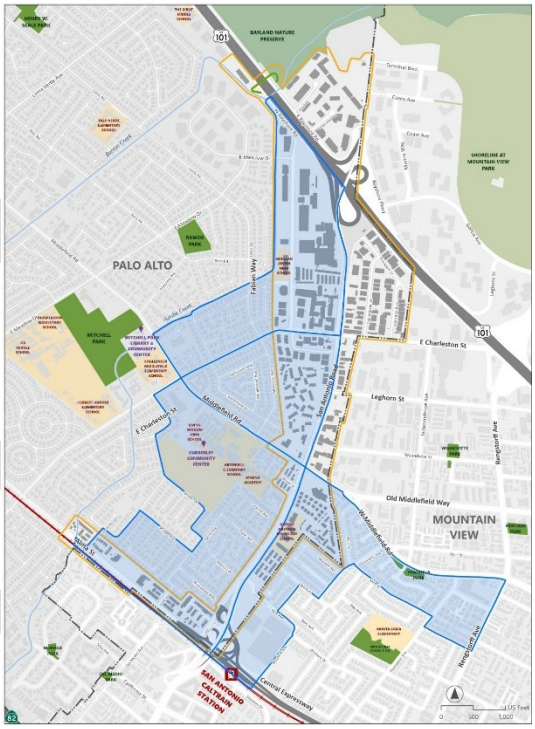


Figure 1.1. Plan Area Census Block Groups
Source: City of Palo Alto GIS, Strategic Economics, 2025.

Existing Housing Characteristics

The Plan Area has approximately 750 existing housing units, most of which are located on San Antonio Road west of East Charleston Road. This number represents approximately three percent of the City's total housing stock. These include two large concentrations of housing—Greenhouse Community (228 units) and Palo Alto Gardens (156 units)—that together make up just under half of the Plan Area's existing housing. Three condominium communities, each with between 30 and 50 housing units, and a cluster of small apartment buildings (totaling approximately 40 units) on Byron Street are also located on or just off San Antonio Road. Housing along Alma Street contributes approximately 100 units to the Plan Area's total, mostly as attached single-family housing units (as defined by the U.S. Census, whose classifications of housing types may differ from other sources such as the California Building Code and Palo Alto Municipal Code).

HOUSING TYPES

The Plan Area's housing mix includes a significantly higher share of multifamily and attached single-family housing than in Palo Alto overall. These attached housing products provide housing comparably more affordable than detached single-family homes. As shown in Table 2.1, 39 percent of the Plan Area's housing units are attached single-family homes (such as townhomes), compared to six percent Citywide. Small multifamily buildings with fewer than 20 housing units account for 54 percent of all housing in the Plan Area, compared to 16 percent

Citywide. The majority of housing in the Plan Area consists of two- to three-story building[illegible], as most of the Plan Area was built-out from the 1950s through the 1980s. With two exceptio[illegible]t of new housing projects largely ceased in the Plan Area after 1990. Based on recent zoning changes and recent patterns of redevelopment of industrial and commercial uses, the Plan Area is now positioned to accommodate significant new mid-rise housing development.

Table 2.1. Housing Units by Building Type

	Plan Area		Palo Alto		Mountain View	
Units by Building Type	**Count**	**Percent**	**Count**	**Percent**	**Count**	**Percent**
Single-Family (Detached)	4	0%	16,298	56%	10,516	27%
Single-Family (Attached)	312	39%	1,671	6%	5,378	14%
Multiple Units (2 Units)	0	0%	330	1%	694	2%
Multiple Units (2-19 Units)	430	54%	4,794	16%	8,607	22%
Multiple Units (20+ Units)	56	7%	5,911	20%	12,340	32%
Mobile Home	0	0%	100	0%	1,235	3%
Total (% may not sum due to rounding)	**802**	**100%**	**29,104**	**100%**	**38,770**	**100%**

Source: U.S. Census, Strategic Economics, 2025.

AFFORDABLE HOUSING

The Plan Area has 252 deed-restricted affordable housing units that constitute over 30 percent of the Plan Area's existing housing and equate to 15 percent of Palo Alto's total deed-restricted affordable housing inventory. Of the Plan Area's 252 affordable units, 80 consist of senior housing for residents 65 and older.

Residential Displacement Risk

Maintaining household income diversity and affordability in the Plan Area requires not only strategies to produce and preserve affordable housing, but also to protect lower-income residents from potential displacement risks. Variables such as household tenure, income, and education help determine households' displacement risk. The U.S. Census data representing the "Plan Area Census Block Groups" (Figure 2.1) was used for this analysis, and the conclusions drawn from the data were compared to findings from the Urban Displacement Project, a research project affiliated with the University of California at Berkeley, which models displacement risk at the Census tract level.

HOUSING TENURE

The Plan Area Census Block Groups include 766 renter-occupied housing units, 364 of which were built before 1960 and may be relatively affordable due to their age. Renter households do not constitute a relatively high share of occupied housing units in the Plan Area Census Block Groups, at 42.6 percent of occupied housing units, compared to 45.8 percent Citywide. However, the Plan Area's more than 350 households occupy older rental housing units that may be relatively more affordable. Unlike ownership housing with fixed-rate mortgages and limited allowable property tax increases, renter households in Palo Alto are vulnerable to significant rent increases. Palo Alto lacks a rent control program, although some limits under the State's California Tenant Protection Act apply to all cities which lack local rent control regulations. The Act limits annual rent increases for

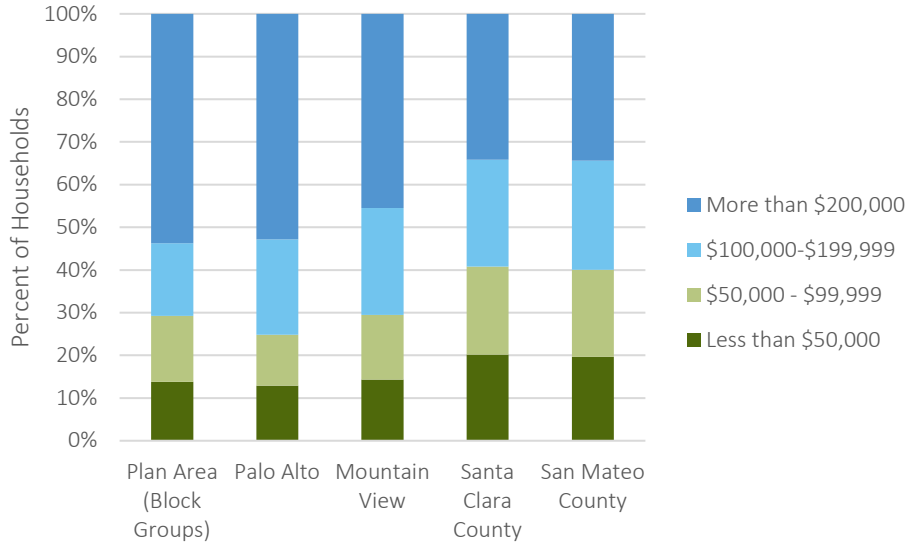
most rental housing units to five percent plus the change in the regional Consumer Price total (whichever is lower).

HOUSING COST BURDEN

Cost-burdened households (those paying more than 30 percent of total household income toward housing expenses) are especially concentrated among lower-income renter households in Palo Alto. Although corresponding data is not available for the Plan Area, the 2023-2031 Housing Element indicated that 17 percent of the City's renters and 15 percent of its homeowners were defined as cost-burdened as of 2018, and renters were more likely to experience cost burdens compared to homeowners. Nearly 65 percent of Palo Alto's extremely low-income renter households were cost-burdened, with 42 percent paying more than half their income toward housing expenses. As shown in Figure 2.2, nearly 30 percent of households living in the Plan Area Census Block Groups earn household incomes of less than $100,000 per year and 13 percent of households earn less than $50,000 per year. Although some of these households may be served by existing deed-restricted affordable housing in the Plan Area, there are only 250 deed-restricted units in the Plan Area and approximately 525 households earning less than $100,000 in the Block Groups. For reference, a single-person household earning $111,700 qualifies as low-income based on Santa Clara County's area median income limits used for affordable housing development.

Figure 2.2. Household Income, 2019-2023

Source: U.S. Census, Strategic Economics, 2025.



HOUSEHOLD INCOME TRENDS

Median household income in the Plan Area Census Block Groups is $200,001, which is lower than that for Palo Alto as a whole ($220,408) but higher than that for Mountain View ($179,917). Between 2011 and 2021, median household incomes rose at a faster rate in Palo Alto (81 percent) and Mountain View (85 percent) than the regional increase of 74 percent for Santa Clara County and 77 percent for San Mateo County. Increasing household incomes in Palo Alto are driven by growth of very high-income households and declines in lower- and middle-income households—leading to increased displacement risk as lower-income households compete for housing with higher-income households. The number of these high-income households grew by 33 percent from 2000 to 2022 during a period when total households only grew by three percent. At the same time, households earning $60,000 to $100,000 declined by 66 percent, the largest loss among income groups.

URBAN DISPLACEMENT PROJECT ANALYSIS

The Urban Displacement Project is a research lab and collaborative of four universities—including the University of California at Berkeley—that estimates displacement risk at the Census tract level. The Urban Displacement Project did not identify displacement risk for very low-income and low-income residents for any of the Census tracts in the Plan Area. However, this analysis does not address past exclusion, which is a form of displacement that impacts low-income renters' ability to afford to live in a community. High housing costs, high household incomes, and high levels of educational attainment in Palo Alto make it especially difficult for lower-income households to afford market-rate rents and sales prices. The U.S. Census data that informs the Urban Displacement Project is also focused on housed residents and therefore does not account for unhoused residents in the Plan Area subject to displacement if, for example, regulatory changes force people living in vehicles to relocate. Furthermore, regardless of aggregated data findings, the risk of displacement can remain a concern at the level of the individual resident or household.

NATURALLY OCCURRING AFFORDABLE HOUSING

Naturally Occurring Affordable Housing (NOAH) refers to unsubsidized market-rate (and often rental) housing that is especially affordable to lower-income residents based on 30 percent of their annual household incomes. The relatively lower rents found in NOAH units are usually related to building age, condition, or location. NOAH properties are a means for lower-income residents to be able to live in otherwise unaffordable communities. Although the Plan Area's overall diversity of housing types provides relative affordability compared to single-family homes, few unsubsidized properties affordable to lower-income residents exist in the Plan Area overall. However, approximately 40 units of multifamily rental housing on Byron Street potentially represent NOAH properties. The Plan Area also includes two examples of preservation of long-term affordability: Ferne Apartments, built in 1963, was converted into deed-restricted affordable housing in 1981 and is currently managed by the nonprofit Alta Housing. MidPen Housing acquired Palo Alto Gardens in 1999 after residents organized to protect the property from significant rent increases as market-rate property.

Housing Need and Policy

RHNA PROGRESS

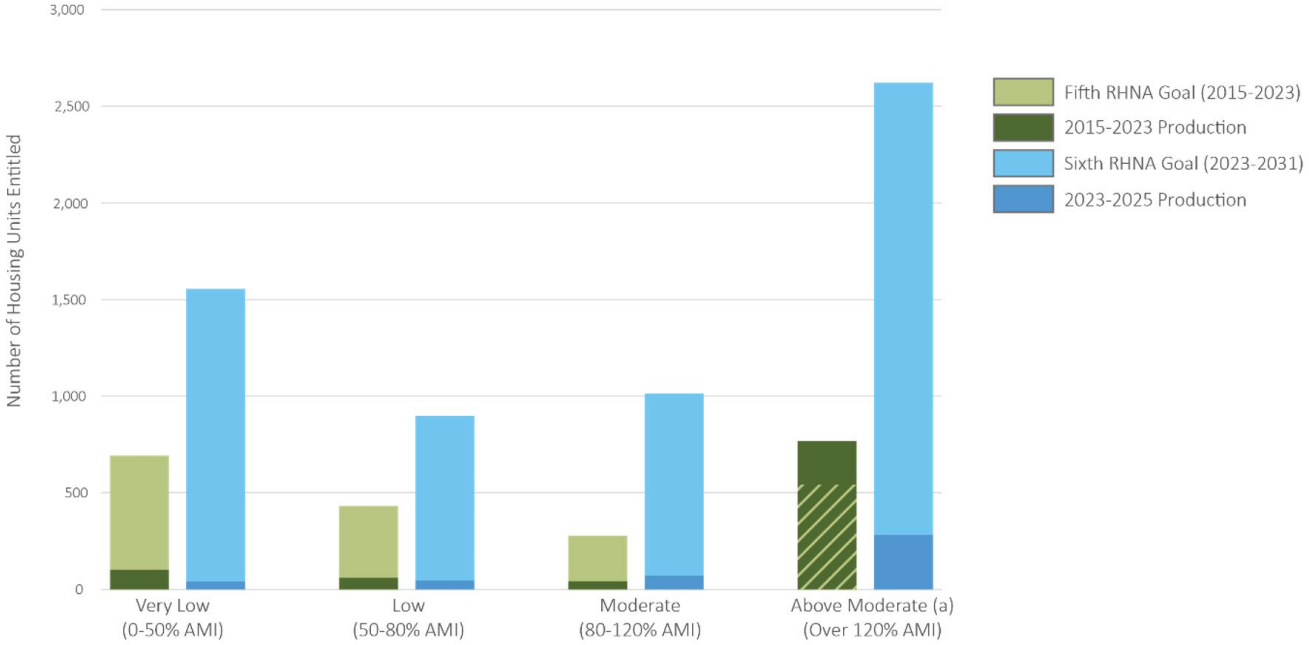
The City of Palo Alto's housing production goals are identified through the Regional Housing Needs Allocation (RHNA), a State-wide process which breaks down housing production goals into income categories for eight-year cycles. The City's 2023-2031 Housing Element plans for the production of 6,086 housing units between 2023 and 2031. The distribution of units across income groups reflects adopted City policy regarding Palo Alto's overall housing needs during the current RHNA cycle. Palo Alto succeeded in meeting its previous RHNA cycle's production goal in the above moderate-income category but fell short of production goals for all other lower-income groups. During the fifth RHNA cycle covering 2015 to 2023, the estimated need was highest for housing affordable to very low-income households. However, only 100 units meeting these affordability needs were proposed and approved, permitted, or built. Similarly, low- and moderate-income housing production fell short of the fifth cycle RHNA goals. Palo Alto's current RHNA goals consist primarily of housing affordable to above moderate-income households and very low-income households.

The likely housing need by affordability level based on the mix of jobs and occupations found in Palo Alto closely aligns with current RHNA goals—reinforcing the need to produce housing that is affordable at a variety of income levels. The Plan Area also includes a significant share of jobs paying wages that would likely require deed-

restricted affordable housing for the worker household to reside in Palo Alto. For exampl a itself, U.S. Census data from the Longitudinal Employer-Household Dynamics data set indicates that approximately 16 percent of "primary" jobs (i.e., the highest-paying job held by a worker) in 2022 paid less than $40,000 annually.

Figure 2.3. 5th and 6th Cycle RHNA Goals and Progress, 2025

Source: U.S. Census, Strategic Economics, 2025.



ROLE OF PLAN AREA IN MEETING HOUSING GOALS

The Plan Area was allocated 25 percent of the Citywide Opportunity Sites inventory capacity in the current RHNA cycle, while the area currently includes just 2.8 percent of Citywide housing units. Table 2.2 shows the 2023-2031 Housing Element sites inventory by income category. The Opportunity Sites inventory anticipates further housing production through redevelopment of existing older commercial and light industrial buildings, and most designated sites are concentrated east of Middlefield Road and west of US-101. No sites are located west of Middlefield Road, where many of the Plan Area's existing housing units are located.

Table 2.2. Housing Element Units from Opportunity Sites

	Lower-Income (0-80% AMI)		Moderate-Income (80-120% AMI)		Above Moderate-Income (120%+ AMI)		All Units	
	Total	Percent	Total	Percent	Total	Percent	Total	Percent
Plan Area	614	25%	332	33%	613	23%	1,559	26%
Other	1,838	75%	681	67%	2,008	77%	4,527	74%
Total	**2,452**	**100%**	**1,013**	**100%**	**2,621**	**100%**	**6,086**	**100%**

Source: U.S. Census, Strategic Economics, 2025.

AFFORDABLE HOUSING CONSIDERATIONS FOR THE PLAN AREA

The City of Palo Alto has existing tools and policies for affordable housing production, the preservation of affordable housing, and protection of tenants. Tools focused on affordable housing production are most relevant to the Plan Area, given the number of sites identified as future Housing Opportunity Sites. The following are most relevant to the Plan Area:

- The City of Palo Alto's Housing Incentive Program (HIP) provides incentives for housing development in the Plan Area that are coupled with contributions to affordable housing production.
- The City also ensures that the overall supply of housing in the Plan Area will be sustained through its "no net loss" policy in which future redevelopment of existing housing stock must include at least as many units as are proposed for demolition.
- Other requirements linking affordable housing production or revenue contributions to new development will be especially relevant for ensuring the Plan Area remains a mixed-income community.
- The City must consider the tradeoffs between immediately delivering affordable housing units in the Plan Area via an emphasis on inclusionary requirements (currently in place for ownership housing developments and via the HIP) versus providing fee resources (including via current impact fees applied to rental housing developments) for City contributions to more deeply affordable 100 percent affordable projects.
- The Plan Area presents opportunities to leverage the City's existing affordable housing resources to support the development of 100 percent affordable housing projects if the City can acquire sites or partner with developers seeking master plan development agreements for large properties.
- The Plan Area's ability to compete for outside affordable housing funding varies by location. The California Tax Credit Allocation Committee (TCAC) and Department of Housing and Community Development (HCD) define the Plan Area as representing "highest resource" and "high resource" areas. This designation improves the Plan Area's ability to score and compete for critical funding sources such as Low-Income Housing Tax Credits (LIHTC) and other State resources. However, most large, underutilized sites best positioned for cost-efficient housing development in the Plan Area are located outside the half-mile radius of robust transit access at the Caltrain station, which reduces the area's ability to compete for funding sources tied to transit and reductions of greenhouse gas emissions.
- The City's support for the Homekey Palo Alto project (at 1237 North San Antonio Road), currently under construction, helps achieve the City's homelessness services and alternative housing program goals. The project is an example of leveraging City funds to provide diverse housing options in the Plan Area.

Key Findings and Conclusions

The findings of these analyses will help inform the City of Palo Alto's efforts to increase affordable and market-rate housing production in the Plan Area, preserve existing affordable housing, and protect households vulnerable to displacement. Key conclusions are summarized below.

- Few new housing projects have been built in the Plan Area since the 1980s. Housing in the Plan Area largely consists of two- to three-story condominium and rental multifamily buildings built from the 1950s through the 1980s, except for assisted living housing built at the Taube Koret Campus in 2010 and affordable housing units at the Alta Torre senior affordable housing project. The Plan Area's 802 housing units constitute approximately 2.8 percent of Palo Alto's 29,104 units.
- The Plan Area's existing housing helps in meeting Palo Alto's affordable housing needs, with approximately 250 deed-restricted affordable housing units at four properties.
- A limited quantity of relatively affordable market-rate rental housing—known as "naturally-occurring affordable housing," or "NOAH"—exists within the Plan Area at properties along Byron Street. NOAH units can potentially represent future opportunities for conversion to deed-restricted affordable housing as part of a strategy to preserve existing relatively affordable housing. An example of this occurred in the Plan Area at Palo Alto Gardens in 1999.
- Although modeling by the UC Berkeley Urban Displacement Project does not indicate a significant risk of displacement for low-income renter households in and near the Plan Area, City tenant protection policies can play a role in supporting the nearly 40 percent of households that are renters in and near the Plan Area.
- The addition of housing in the Plan Area that is affordable to households with diverse income levels can help meet the needs of workers at jobs in Palo Alto and the Plan Area itself. Wages associated with the industry sector mix of jobs in Palo Alto suggest that 35 percent of worker households may qualify as low- or very low-income and would benefit from deed-restricted affordable housing in the City. This share is similar to the assigned RHNA targets the City is seeking to achieve as part of its current Housing Element of the Palo Alto Comprehensive Plan.
- Within the Plan Area, U.S. Census data indicates that approximately 16 percent of "primary" jobs (i.e., the highest-paying job held by a worker) in 2022 paid less than $40,000 annually.
- Given the number and magnitude of sites identified as future Housing Opportunity Sites within it, the Plan Area is especially well-positioned to expand its role in meeting the housing needs of lower-income households. This can be achieved through application of inclusionary housing policies and affordable housing fee payments in conjunction with future housing development, and through production of deed-restricted 100 percent affordable housing developments.

3. TRANSPORTATION AND MOBILITY

Introduction

The transportation network studied for the Plan Area consists of roadways, pedestrian facilities, bicycle facilities, and transit facilities, as well as the suggested walk and roll routes from the City's Safe Routes to School Program.

Road Network

Roads within the Plan Area and its vicinity can be categorized into three classifications: arterial, collector, and local, shown in Figure 3.1. Posted speed limits within the Plan Area range from 25 to 45 miles per hour (mph). The Plan Area includes a network of designated truck routes including US-101 (Bayshore Freeway), San Antonio Road, Alma Street, Fabian Way, and East and West Bayshore Roads. San Antonio Road is classified as a critical east-west arterial and truck route providing access to key employment centers, and has a speed limit of 35 mph. There are six signalized intersections within the Plan Area, and major crossings include Alma Street, Middlefield Road, East Charleston Road, and US-101. From Alma Street to East Charleston Road, the roadway features a divided four-lane cross-section, that transitions to a three-lane undivided cross-section east of East Charleston Road, and narrows to a two-lane cross-section as it approaches and crosses US-101.

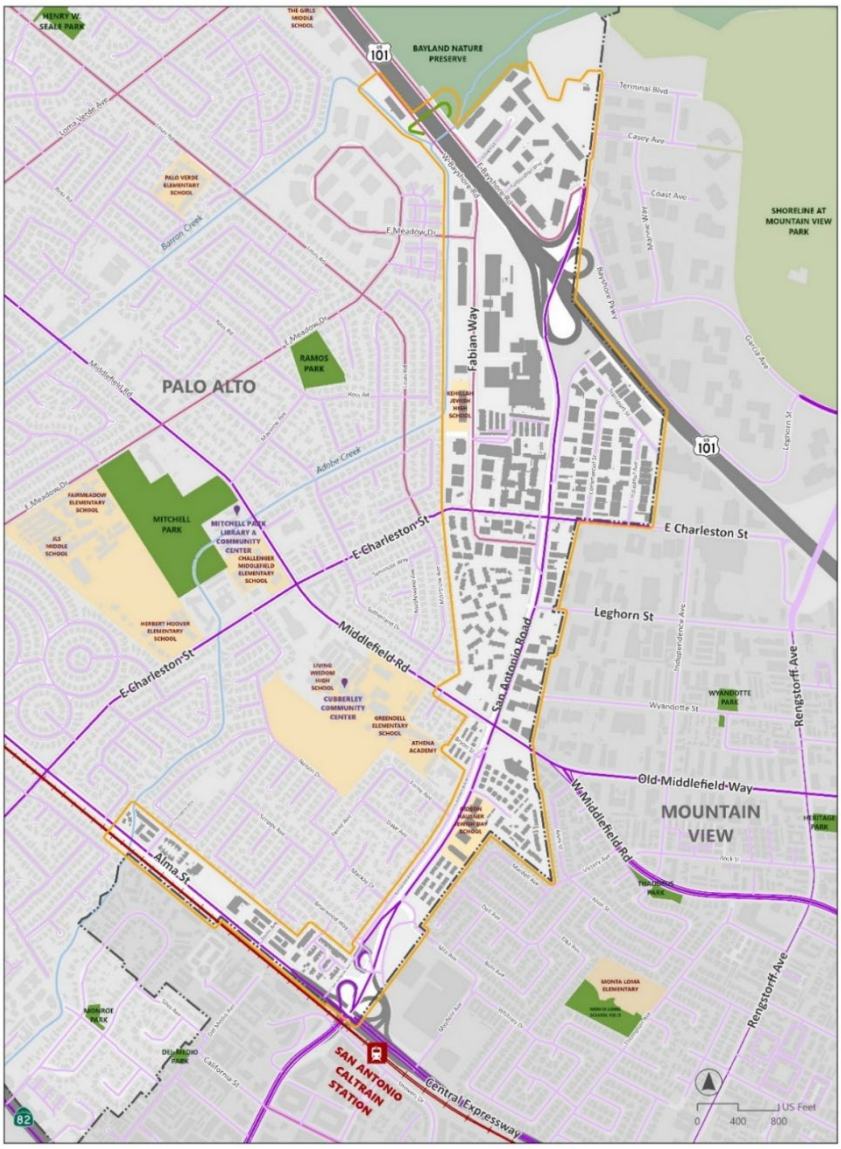


Figure 3.1. Roadway Classification

Source: City of Palo Alto GIS, Kittelson and Associates, 2025.

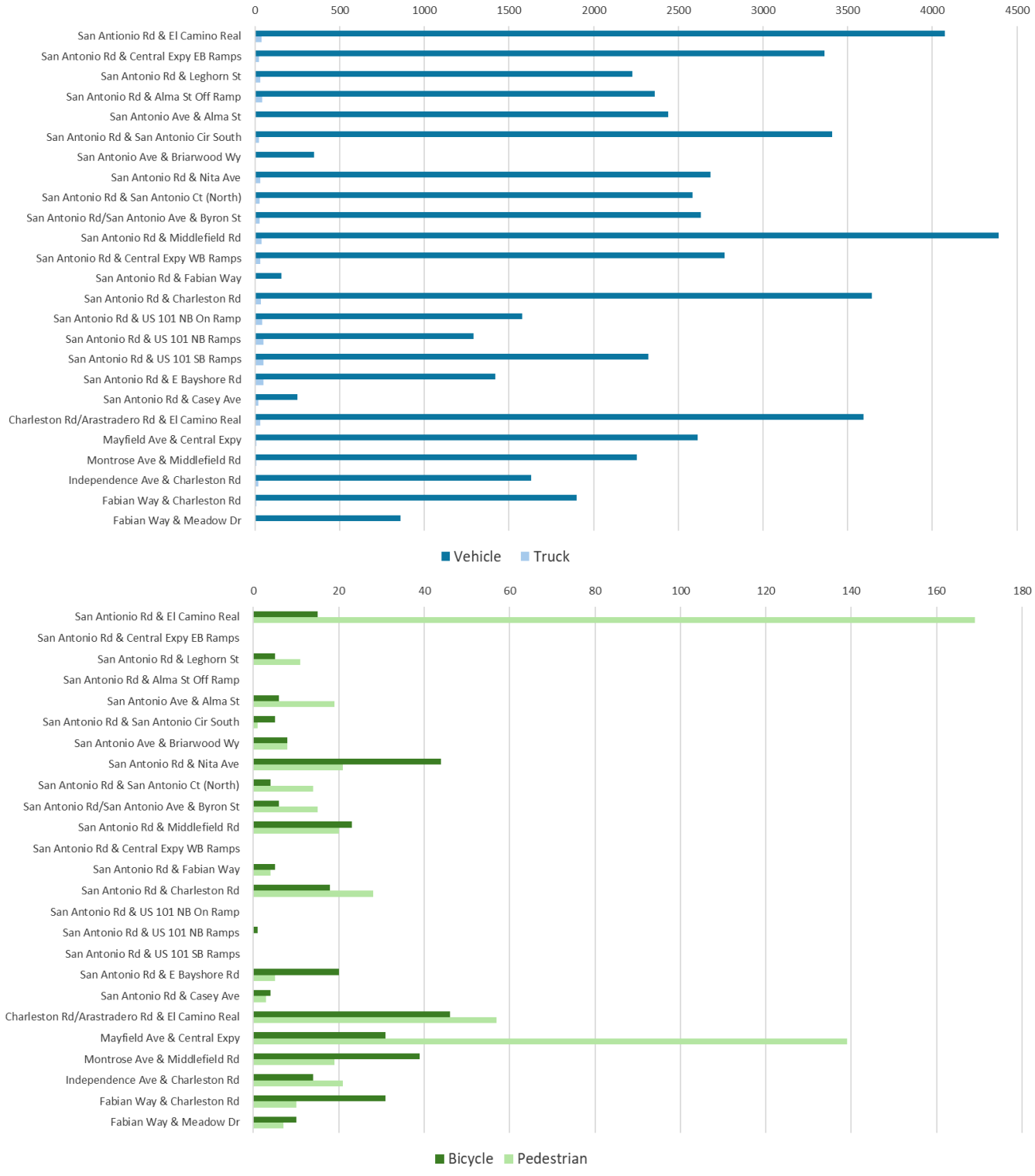
TRAFFIC COUNTS

Vehicle, truck, bicyclist, and pedestrian counts were collected at 25 intersections for the weekday AM (7:00–10:00 AM) and PM (4:00–7:00 PM) peak periods. The data was collected on three separate weekdays: Thursday May 15, Wednesday May 21,

and Tuesday May 27, 2025. It is worth noting that one of the count days (May 15, 2026) c[illegible]o-Work Day, which may have influenced bicyclist volumes. For each intersection, the peak h[illegible] based on the highest observed total vehicle volume within the respective time window. PM peak hour volumes were higher at each intersection. Figure 3.2 summarizes PM peak hour volumes at each intersection.

Figure 3.2. PM Peak Hour Traffic Volumes by Intersection

Source: Kittelson and Associates, 2025.



TRAFFIC SPEEDS

Table 3.1 shows Average Daily Traffic (ADT) data collected over a 72-hour period along San Antonio Road between Alma Street and Casey Avenue, including vehicle speeds and volumes. The highest observed 85th percentile speed was on the segment between East Charleston Road and US-101, indicating an increase as vehicles approach the highway. The lowest speeds are recorded on the segment between Bayshore Road and Casey Avenue, aligned with the change in cross-section to two undivided lanes in this segment. A notable percentage of high-speed vehicles was observed along San Antonio Road. On the segment between East Charleston Road and US-101, around one-third of vehicles exceed 40 mph where the posted speed limit is 35 mph. Average Daily Traffic (ADT) volumes remain within a similar range along Alma Street to US-101, with eastbound volumes ranging from 10,410 to 11,916 and generally higher westbound volumes between 11,559 and 17,593.

Table 3.1. Average Daily Traffic Volumes and Speed Surveys

Source: Kittelson and Associates, 2025.

Roadway Segment	85th Percentile Speed (mph)		Vehicles > 40mph (%)		ADT	
	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound
San Antonio Road between East Charleston Road and US-101	44	43	35	33	11,779	17,593
San Antonio Road between Middlefield Road and East Charleston Road	35	38	5	10	10,410	11,559
San Antonio Road between Alma Street and Middlefield Road	40	40	17	15	11,916	17,368
San Antonio Road between Bayshore Road and Casey Avenue	29	28	0	0	1,390	1,511

Bicycle Network

The City of Palo Alto has developed a robust bike network with a mix of bicycle boulevards, bike lanes, separated bikeways, and trails; but the Plan Area lacks a fully connected bicycle network.

There are currently no continuous bicycle facilities on San Antonio Road. A bike route is present between Middlefield Road and Charleston Road. Fabian Way has a bike lane from East Bayshore Road, which discontinues near the intersection with East Charleston Road. The only continuous north-south bikeways are found on East Charleston Road, which includes both standard and buffered bike lanes on both sides of the roadway. Middlefield Road provides a short segment of bike lane south of San Antonio Road on the west side of the roadway.

The pedestrian and bicycle bridge that crosses US-101 provides a grade-separated facility that enables uninterrupted crossing for people walking, biking, and rolling across the highway barrier. Overall, the limited presence of bike facilities, combined with high vehicle speeds and volumes, contributes to conditions that are not conducive to bicycle travel. Figure 3.3 illustrates the existing bicycle facilities.

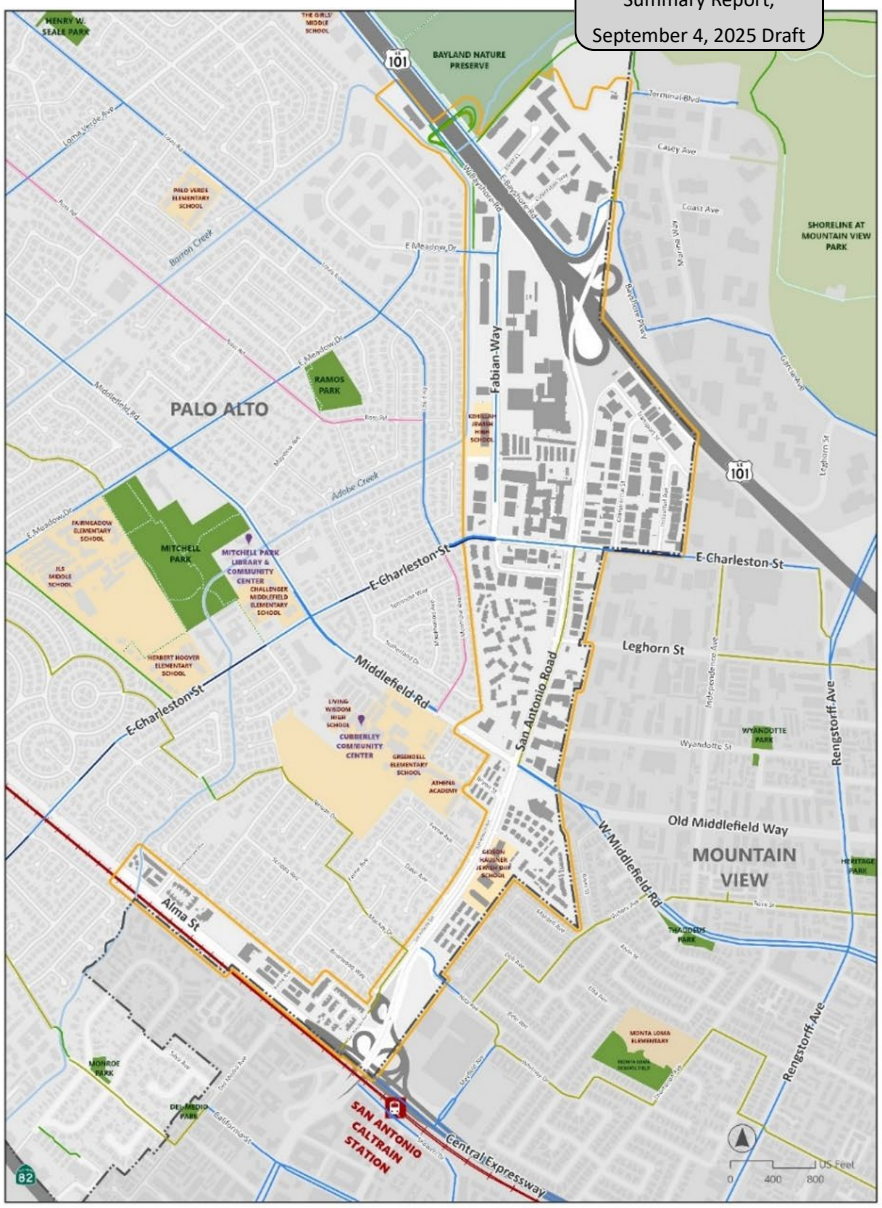


Figure 3.3. Existing Bicycle Facilities

Source: City of Palo Alto GIS, Kittelson and Associates, 2025.

BICYCLE LEVEL OF COMFORT

Bicycle Level of Traffic Stress (LTS) is an evaluation that quantifies the amount of discomfort that people feel when bicycling based on attributes such as vehicle speed, vehicle volume, number of lanes, bicycle lane blockage, presence of on-street parking, and ease of intersection crossing. There are four LTS ratings (LTS 1 through LTS 4). The higher the LTS, the higher the expected discomfort for the rider traveling along the facility. Figure 3.4 illustrates the Segment Bicycle LTS analysis from the City of Palo Alto's Bicycle and Pedestrian Transportation Plan (BPTP) Update (in progress). Based on the BPTP Update, the Plan Area exhibits generally high levels of bicycle traffic stress. While most minor streets are classified as LTS 1 (low traffic stress), most major corridors are rated LTS 3 or LTS 4. The most stressful segments in the Plan Area are located along Alma Street and San Antonio Road (both LTS 4), Middlefield Road, East Charleston Road, Fabian Way, and Bayshore Road (all LTS 3).

Among the intersections in the Plan Area, six are signalized and are assigned LTS 1, as traffic signals provide dedicated crossing time for cyclists. The other low-stress intersections are typically along residential streets with lower speeds and minimal vehicular activity. Many high-stress intersections are found along Alma Street, San Antonio Road, Middlefield Road, East Charleston Road, and Fabian Way, consistent with the high-stress classifications of these corridors. San Antonio Road features 12 intersections in the Plan Area, of which five are rated LTS 4 and one is rated LTS 3.

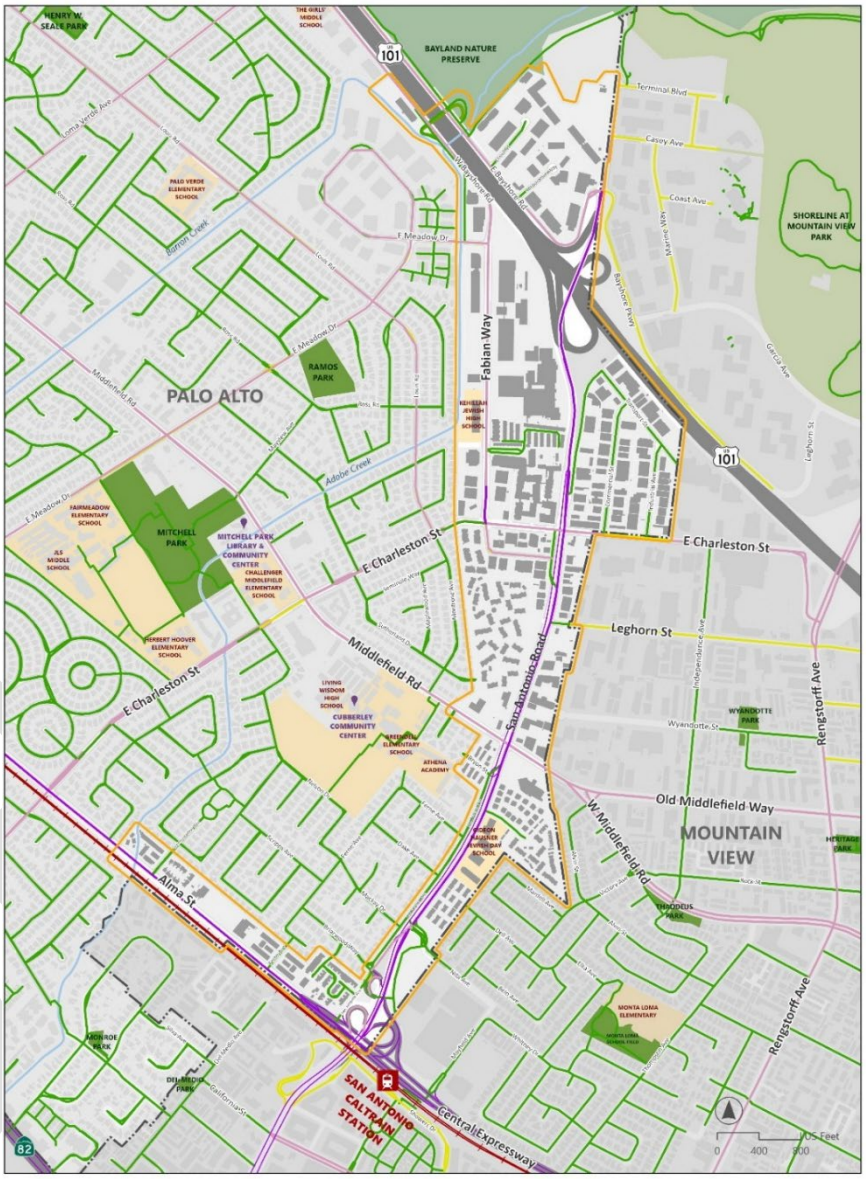


Figure 3.4. Bicycle Level of Traffic Stress

Source: City of Palo Alto GIS, Kittelson and Associates, 2025.

MAJOR BARRIERS

The BPTP Update identified three primary linear barriers within and connecting to the Plan Area: US-101, the Caltrain rail corridor, and the waterway near Fabian Way and Bayshore Road. The most critical connectivity gap lies between Adobe Creek and Embarcadero Road pedestrian and bicycle bridges, which limits access to the Adobe Creek Loop Trail and adjacent destinations. Within the Plan Area, the San Antonio Caltrain Station provides a pedestrian and bicycle crossing over the rail corridor, improving connectivity across this barrier. Barriers near transit also occur at San Antonio Road, where the absence of continuous sidewalks along certain segments limits direct pedestrian and bicyclist access to transit.

Pedestrian Network

Figure 3.5 shows pedestrian facilities in the Plan Area. Sidewalks are largely continuous, with most streets in the Plan Area providing sidewalks approximately four to five feet wide on both sides of the roadway. While this width meets minimum standards in many residential contexts, it may be inadequate for higher pedestrian volumes, accessibility needs, or areas with high levels of adjacent traffic. In some areas, sidewalks are separated from the roadway by landscaped strips and tree coverage, which help buffer pedestrians from vehicle traffic. However, notable gaps exist in certain locations. The Plan Area's six signalized intersections are equipped with standard marked crosswalks, ADA ramps, and pedestrian-activated countdown signal heads, with each intersection providing at least one crosswalk and corresponding pedestrian signal. The Plan Area features pedestrian safety treatments such as mid-block crossings, a Rectangular Rapid Flashing Beacon (RRFB) and refuge islands. Within the Plan Area, San Antonio Road does not provide continuous pedestrian or bicycle crossings over US-101.

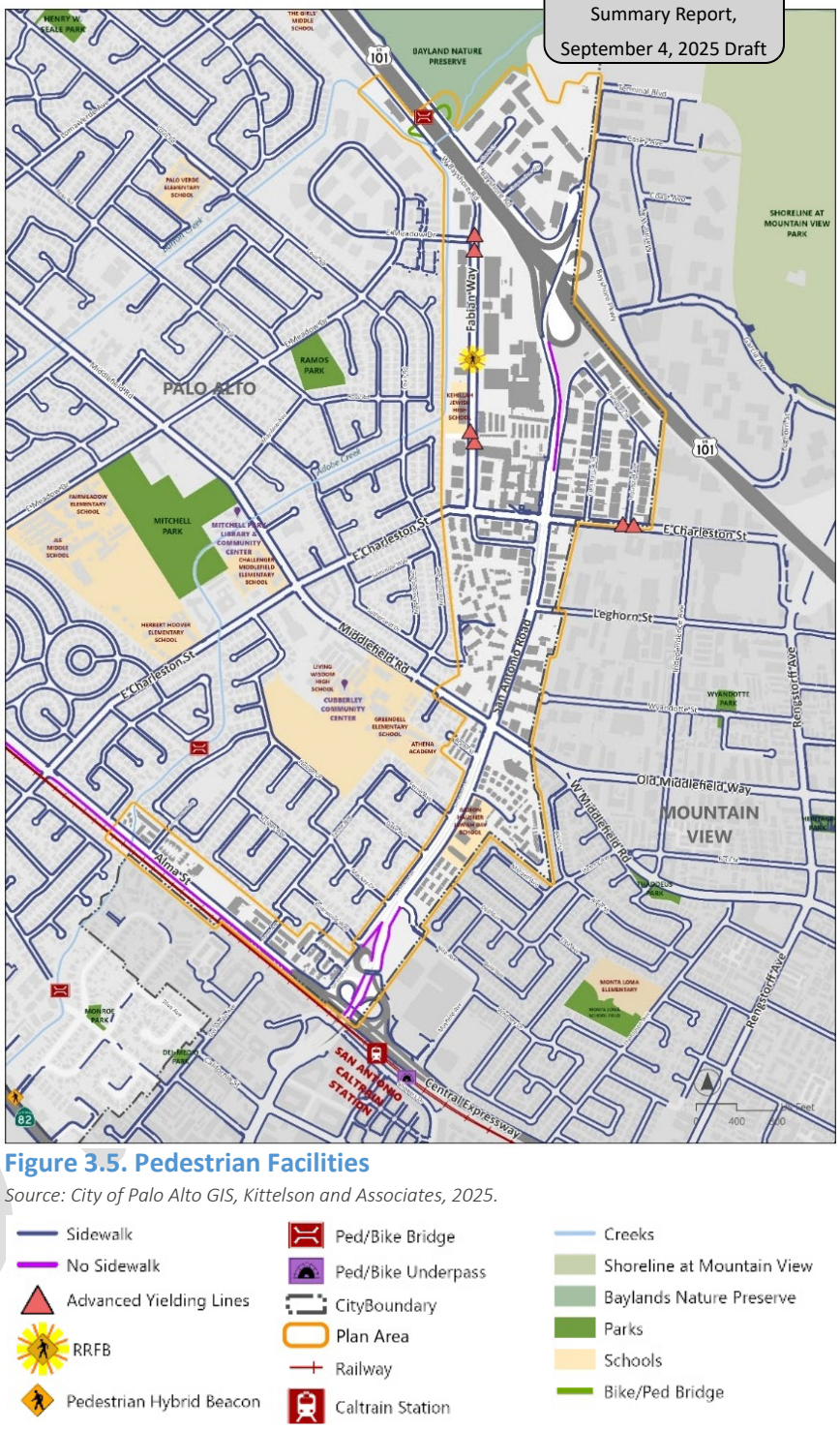


Figure 3.5. Pedestrian Facilities

Source: City of Palo Alto GIS, Kittelson and Associates, 2025.

Transit Services

The Santa Clara Valley Transportation Authority (VTA) operates bus services within Palo Alto. Key features of existing transit services in the Plan Area include:

- There are currently five bus stops located along San Antonio Road, four bus stops along Fabian Way, and two bus stops along East Charleston Road. None of the associated services are classified as high frequency.
- VTA Route 21 travels twice an hour from the Stanford Shopping Center to the Santa Clara Transit Center via the Mountain View Transit Center. The route runs along San Antonio Road between Alma Street and Middlefield Road, with stops at Middlefield Road and at Nita Road and San Antonio Court.
- VTA Route 288 is a school-day-only tripper route with one daily service to and from Gunn High School. It operates along East Charleston Road and Fabian Way, before continuing west on Meadow Drive and Arastradero Road toward Gunn High School.
- ACE Orange Route provides four daily commuter shuttle service between Meadow Drive and Meadow Circle, east of the Plan Area, and the Great America ACE/Amtrak Station, including stops at Fabian Way and East Meadow Drive, Fabian Way and East Charleston Road, and San Antonio Road and Casey Avenue within the Plan Area.
- MVgo Routes D and C operate along San Antonio Road, connecting Mountain View employment centers with Caltrain and light rail stations. However, these routes do not stop within Palo Alto.
- Palo Alto Link, an on-demand rideshare service, also provides point-to-point service to popular destinations throughout the City.
- Located just outside the Plan Area boundary, the San Antonio Caltrain Station, a regional commuter rail system operated by the Peninsula Joint Powers Board, provides service at 15- or 30-minute headways (depending on peak or off-peak times) between San Francisco and San Jose, with additional service as far as Gilroy. Caltrain recently completed electrification of its right-of-way between San Francisco and San Jose, improving service frequency and speeds. A large portion of the plan area is located within a half mile walk, and the entire plan area is within a 2-mile bicycle ride, of San Antonio Caltrain station.
- Future plans for California's High-Speed Rail include a proposed four-track segment through Palo Alto for high-speed train service alongside Caltrain.

Safety

An assessment of reported crashes was conducted using the latest 10 years of the University of California, Berkeley's Transportation Injury Mapping System (TIMS) data (2015 to 2024). A total of 143 crashes occurred in the Plan Area over the past 10 years, including two fatal and three severe injury crashes. One fatal crash occurred at the intersection of Commercial Street and Charleston Road, and another near the intersection of San Antonio Road and Nita Avenue. Throughout the 10-year review period, a total of five pedestrian and 15 bicycle crashes were reported in the Plan Area. Among the pedestrian crashes, one crash was fatal, and one resulted in a severe injury. For bicycle-involved crashes, one crash resulted in a severe injury, and 11 crashes involved visible injuries. No bicycle crashes were fatal.

Most collisions occurred along key access points and intersections along San Antonio Road including Charleston Street, Middlefield Road, and Alma Street. Approximately 30 percent of the reported crashes occurred along Fabian Way. Primary collision factors among fatal crashes were unsafe speeds and pedestrian right-of-way

violations. For severe injury crashes, the leading factors were unsafe speed, driving or cyc nce (DUI), and traffic signal and sign violations.

HIGH-INJURY LOCATIONS

The Safe Streets for All (SS4A) Safety Action Plan identified a High-Injury Network (HIN) composed of corridors with a disproportionate share of fatalities and severe injuries between 2018 and 2022. These corridors were prioritized for safety interventions as part of the City's commitment to Vision Zero and the Safe System Approach. The SS4A Safety Action Plan includes San Antonio Road from Alma Street to East Charleston Road, Middlefield Road from San Antonio Road to Lytton Avenue, and East Charleston Road from San Antonio Road to Los Palos Avenue.

SAFE ROUTES TO SCHOOLS

The local Safe Routes to School (SRTS) Partnership between the City, the Palo Alto Unified School District (PAUSD), and the Palo Alto Council of PTAs (PTAC) works to reduce risk to students in routes to and from school and encourages more families to choose alternatives to driving solo more often.

Within the Plan Area, the Palo Alto SRTS program has identified suggested walking routes on San Antonio Road and Middlefield Road, while Fabian Way and East Charleston Road include segments designated for both walking and biking. Greendell School, a public PAUSD site, is located near these suggested routes and is included in the City's SRTS Walk and Roll Map program. Other private schools in the Plan Area are located near suggested corridors; however, these schools are not formally evaluated by the SRTS program. Private institutions may choose to reference existing Walk and Roll Maps and develop their own recommended routes.

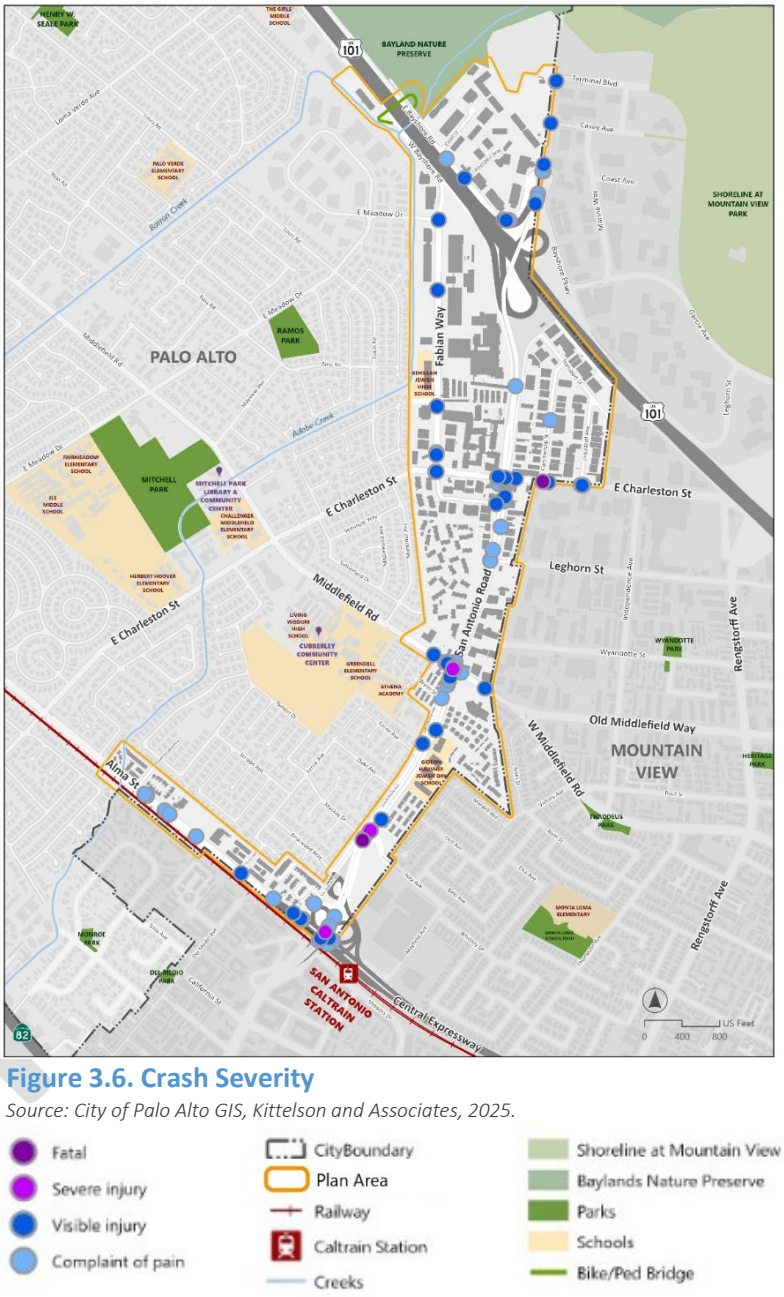


Figure 3.6. Crash Severity

Source: City of Palo Alto GIS, Kittelson and Associates, 2025.

PARKING

Both on-street and off-street parking is permitted throughout the Plan Area. San Antonio Road has a total of 145 on-street parking spaces, Fabian Way has 135 total spaces, and most residential streets also allow on-street parking. In the Plan Area, bicycle parking appears to be insufficient overall, with limited availability near public

spaces, intersections, and key pedestrian corridors. The distribution of bicycle racks is co tern portion of the corridor near dense commercial areas, while significant gaps exist along th f San Antonio Road.

Key Findings and Conclusions

Key findings, challenges and opportunities for transportation and mobility are identified in the following list.

BICYCLE AND PEDESTRIAN NETWORKS

- The Plan Area includes key destinations within a walking, biking or rolling distance, such as Ramos Park, Cubberley Community Center, San Antonio Caltrain Station, and nine public and private schools.
- Existing bicycle facilities are limited along San Antonio Road, with only a short bike route present between Middlefield Road and East Charleston Road.
- Bicycle Level of Traffic Stress (LTS) analysis identifies segments on San Antonio Road, Alma Street, and Middlefield Road that are particularly uncomfortable and have the highest LTS rating of 4.
- There are gaps in the existing pedestrian network where the absence of continuous sidewalks limits direct access to key destinations. Existing pedestrian facilities are present along most segments of San Antonio Road, but key gaps exist near the Bayshore Freeway interchange and between Nita Avenue and Alma Street.

TRANSIT SERVICES

- VTA Route 21 provides public transit access at 30-minute headways along a short segment of San Antonio Road between Alma Street and Middlefield Road, with the highest weekday ridership activity observed at the Middlefield Road stop. No other active bus routes currently operate within the Plan Area.
- A large portion of the plan area is also within a half-mile walk, and the entire plan area is within a 2-mile bicycle ride, of San Antonio Caltrain station, which provides regional transit access between San Francisco and San Jose.

SAFETY

- The City's Safe Routes to School (SRTS) program identifies suggested walking routes on San Antonio and Middlefield Roads, and shared walking/biking routes on Fabian Way and Charleston Road. Public schools like Greendell are formally included, while private schools may reference the City's Walk and Roll Maps to develop their own routes.
- Vehicle volumes are highest at the intersection of San Antonio Road and Middlefield Road with 3,741 cars observed between 8:00 AM and 9:00 AM and 4,391 observed between 4:55 PM and 5:55 PM. A total of 88 trucks were counted at this location during the weekday AM peak hour and 40 trucks were counted during the weekday PM peak hour, or 2.3 percent and 0.9 percent respectively.
- Truck volumes are generally higher during the morning and are consistently higher near US-101 ramps, where trucks made up 95 of the 2,411 vehicles, or 3.9 percent of the vehicle traffic at that location during the weekday AM peak hour (which occurred between 8:05 AM and 9:05 AM).
- Speed surveys show that 85th percentile speeds exceed the posted 35 mph limit on multiple segments of San Antonio Road, particularly between East Charleston Road and US-101, where nearly one-third of vehicles travel above 40 mph.

- San Antonio Road has a total of 145 on-street parking spaces. Bicycle parking is limit
  distributed, particularly along the western portion of San Antonio Road.
- Over the last 10 years, 143 crashes were reported in the Plan Area, including two fatal and three severe injury crashes. 14 percent of reported crashes involved pedestrians or bicyclists. The most common primary collision factor was unsafe speed, accounting for 34 percent of the reported crashes and many of the fatal and severe injury crashes.
- The City of Palo Alto's Safe Streets for All Safety Action Plan (2025) identifies San Antonio Road, from Alma Street to East Charleston Road, as part of the City's High Injury Network based on its crash history and collision severity.
- The City of Palo Alto's Bicycle and Pedestrian Transportation Plan Update (in progress) and City of Palo Alto Bicycle and Pedestrian Transportation Plan (2012) propose redesigning San Antonio Road as part of the San Antonio Road Area Plan to accommodate anticipated housing growth along and near the corridor as well as continued development and improvement of the San Antonio Caltrain Station as an important transportation node for the City.
- City of Palo Alto Bicycle and Pedestrian Transportation Plan (BPTP) Update (in progress) recommends the following improvements:
  - Class I shared use path along San Antonio Road from East Charleston Road to Terminal Boulevard,
  - Class IV separated bikeways on San Antonio Road between Alma Street and East Charleston Road, on Charleston Road within City limits, and on Alma Street from Meadow Drive to San Antonio Avenue,
  - Class IIb buffered bikeway on Fabian Way from Meadow Drive to East Charleston Road, and
  - Class IIIb bicycle boulevard on Mackay Drive, continuing along Shasta Drive and Nelson Drive.

The existing conditions assessment for the San Antonio Road corridor identifies several critical challenges that limit safe and equitable multimodal access to key destinations. The issues include the lack of continuous and protected bicycle infrastructure along San Antonio Road, which is classified as high stress (LTS 4) and creates a major barrier to travel. Sidewalk gaps, minimal landscaping buffers, and long crossings and block lengths further hinder pedestrian comfort and accessibility. Driver speeding is prevalent, with 85th percentile speeds exceeding posted limits on multiple segments, and crash data reveal a history of severe and fatal collisions involving pedestrians, cyclists, and motorcyclists. Transit service is minimal, with only two active VTA routes (route 21 and ACE Orange Mountain View Shuttle) and no operating school or shuttle services. Finally, the shortage and poor distribution of public bike parking undermines the potential for short local bike trips and first/last mile connectivity.

4. MARKET AND ECONOMIC ANALYSIS

Introduction

The primary relevant local market for the Plan Area includes the cities of Palo Alto and Mountain View, with the regional area consisting of Santa Clara County and San Mateo County. Figure 4.1 shows the census block groups used for the Plan Area analysis of demographic and household trends. Since detailed U.S. Census data is only available for specific predetermined geographies, the selected block groups best cover the Plan Area while providing information for analysis.

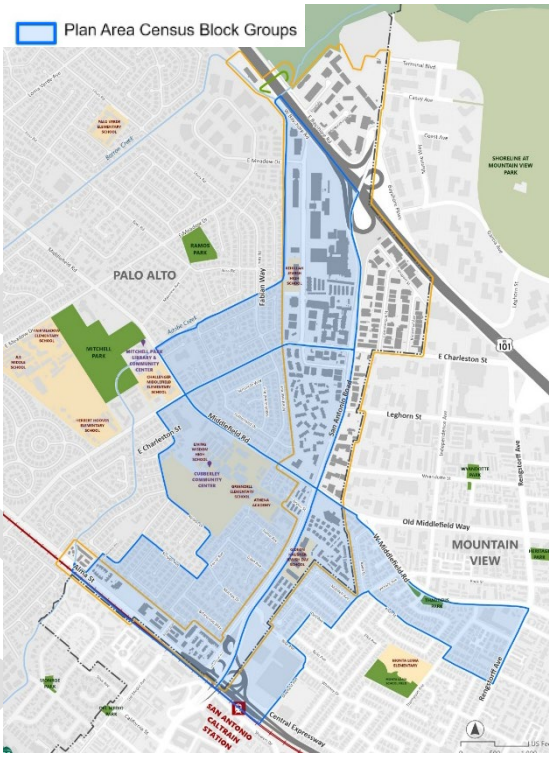


Figure 4.1. Plan Area Census Block Groups
Source: U.S. Census, Strategic Economics, 2025.

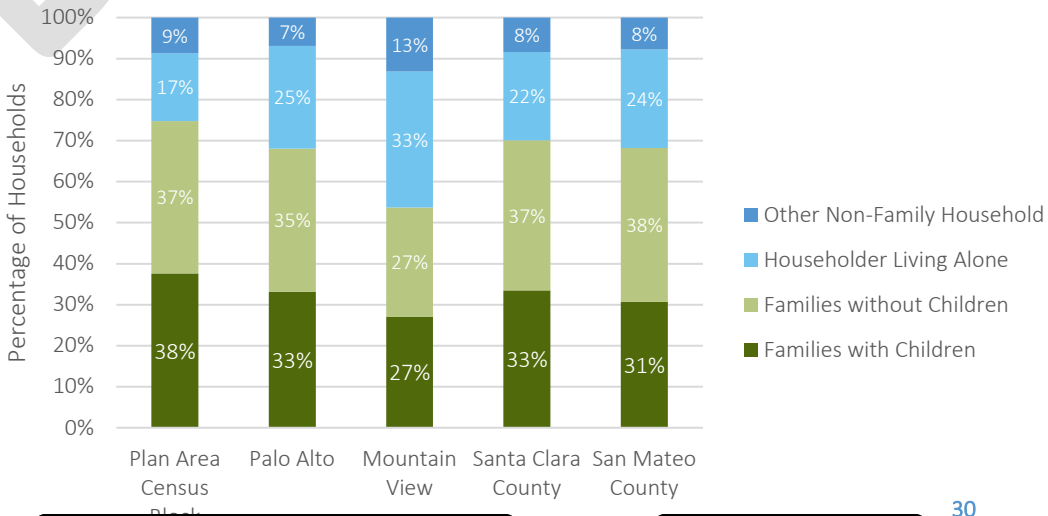
DEMOGRAPHIC AND HOUSEHOLD TRENDS

The Plan Area Census Block Groups have a higher presence of families with children, slightly lower median household income, and a more diverse population than Palo Alto.

- **Population.** As of 2021, the Plan Area Census Block Groups had 4,975 people (7 percent of Palo Alto's population), in 1,798 households (7 percent of Palo Alto's households).
- **Median Household Income.** The Plan Area Census Block Groups' median income of $200,001 is lower than that of Palo Alto ($220,408) and higher than Mountain View ($179,917). Median household income in Palo Alto increased by 81 percent from 2011 to 2021, driven by increases in high-income households, and losses of middle- and lower-income households.
- **Household Characteristics.** Average household sizes in Mountain View and Palo Alto are much smaller than in Santa Clara County and San Mateo County overall. Figure 4.2 shows details of household types.
- **Race and Ethnicity.** Palo Alto and Mountain View are less racially and ethnically diverse than Santa Clara County and San Mateo County overall. Compared to Palo Alto, the ratio of Non-Hispanic Black residents to the total population is higher for the Plan Area at 11 percent, compared to 2 percent for the City.

Figure 4.2. Household Types, 2019-2023

Source: U.S. Census, American Community Survey, 5-year Estimate, 2019-2023; Strategic Economics, 2025.



Housing Market Conditions

EXISTING HOUSING SUPPLY

Analysis of the Plan Area's existing housing supply including Key Findings is described in Section 2, "Housing, Growth, and Displacement Risk" of this report.

HOUSING MARKET POTENTIAL AND TRENDS

Palo Alto home sales prices are significantly higher than those for neighboring cities and the County. In 2025, the median single-family home value in Palo Alto was $3.69 million, 76 percent higher than Mountain View ($2.09 million), 94 percent higher than Santa Clara County ($1.73 million), and 99 percent higher than San Mateo County ($1.61 million). Between 2015 and 2025, single-family home values increased by 43 percent in Palo Alto and 62 percent in Mountain View. Condominiums are relatively more affordable but still significantly more expensive than surrounding areas. Palo Alto's average effective rents per square foot increased by nearly 18 percent from 2015 to 2025, similar to Mountain View. High absorption and low vacancy rates for multifamily rental housing in Palo Alto and Mountain View indicate strong demand for this product type. Recent developments have been trending towards multifamily housing as well, as shown in Table 4.1.

Table 4.1. Permitted Housing Units by Building Type, 2018-2024

	Number				Percent		
	Single-Family	ADU	Multi-family	Total	Single-Family	ADU	Multi-family
Local Market Area	813	825	5,177	6,815	12%	12%	76%
Palo Alto	15	574	363	952	2%	60%	38%
Mountain View	798	251	4,814	5,863	14%	4%	82%
Regional Market Area	**8,533**	**10,393**	**46,233**	**65,159**	**13%**	**16%**	**71%**
Santa Clara County	7,209	7,294	36,611	51,114	14%	14%	72%
San Mateo County	1,324	3,099	9,622	14,045	9%	22%	69%

Notes: "ADU"s are accessory dwelling units, which are accessory to a single-family home or other residential structure.
14 manufactured units were also permitted in Santa Clara County during this period.

Source. California Department of Housing and Community Development Annual Progress Reports, Table A2, 2018-2024; Strategic Economics, 2025.

The Plan Area benefits from a variety of indicators that suggest strong ongoing demand for new housing: high-performing housing markets in Palo Alto and Mountain View, demographic trends suggesting demand from senior and working-age adult households; and recent developer interest, with pipeline projects potentially adding 750 new housing units to the Plan Area. Regional forecasts anticipate housing growth translating to an average of 974 housing units per year for Palo Alto and Mountain View combined. Given this strong demand, available development opportunities, and its access to jobs, the Plan Area is well-positioned to capture projected demand for additional housing units.

The Plan Area is most likely to attract development of mid-rise multifamily rental housing products, which are most compatible with the Plan Area's existing built environment of light industrial sites positioned for

redevelopment, patterns of development in nearby areas of Mountain View at similar site[illegible]o Alto's regulatory and policy priorities focused on promoting higher-density development [illegible]. Developers interviewed shared that ideal sites for cost-efficient mid-rise housing development are rectangular or square, allow multiple access points, are at least one to two acres in size, are relatively underutilized (typically vacant or with light industrial uses), and located near existing or future transportation access and retail amenities.

Retail Market Conditions and Trends

EXISTING RETAIL

The Plan Area currently has a small retail inventory consisting of approximately 69,000 square feet of retail space concentrated around the intersections of San Antonio Road at East Charleston Road and Middlefield Road. This includes 38,000 square feet of automobile-oriented retail and one car dealership (28,000 square feet) that is currently for sale. Other uses include small stores and quick-serve restaurants. The Plan Area is within the service radius of regional retail centers such as Stanford Shopping Center and Town & Country Village in Palo Alto, San Antonio Center in Mountain View, and retail centers near El Camino Real. Other retail centers in the vicinity include the Rengstorff Center and two grocery-anchored neighborhood shopping centers along Middlefield Road in Palo Alto and Mountain View. The Plan Area is reasonably well covered by the trade areas of existing food stores, including two supermarkets (Joya Supermarket and Piazza's Fine Foods), a specialty food store (Crossroads), Costco in Mountain View, and multiple grocery stores west of the Plan Area at and near San Antonio Center. These existing retail uses can serve the Plan Area's near-term needs. The eastern portion of the Plan Area has lower access to grocery stores than other parts.

The City of Palo Alto has a policy priority to preserve existing retail, which is enacted through the Retail Preservation Ordinance (RPO). The RPO generally requires replacement of existing ground floor retail. However, specific requirements vary by location in the City and project type. Under State Law, the RPO does not apply at sites included in Palo Alto's 2023-2031 Housing Element sites inventory, and the replacement requirement is limited to 1,500 square feet for housing projects with densities of 30 or more dwelling units per acre.

RETAIL MARKET POTENTIAL AND TRENDS

The analysis for potential retail development in the Plan Area is based on current market conditions and competitive retail supply in the surrounding trade area, interviews with local retail brokers, and examining pipeline projects. As the Plan Area adds more households, it is best positioned to attract neighborhood-serving retail that typically has a service radius of one to three miles. These can include dining, personal services, and potentially future grocery stores and drug stores, with each new household generating a demand for approximately 34 square feet of new retail space. Local retail brokers interviewed noted that the most desirable retail locations in the Plan Area are at the intersections of Middlefield Road and San Antonio Road, and East Charleston Road and San Antonio Road, due to visibility from large quantities of through traffic and accessibility from existing residents and new residents at proposed housing projects.

Future retail development in the Plan Area is anticipated to follow recent trends in the area, that consist of small quantities of ground floor retail in mixed-use development projects or expansions and modernizations of existing major shopping centers.

Employment Profile and Trends

EMPLOYMENT IN THE PLAN AREA

Most jobs in the Plan Area today are in the manufacturing sector, accounting for 43 percent of total Plan Area employment, with Maxar as a major employer. As of 2022, the Plan Area had 40 percent of Palo Alto's Manufacturing sector jobs, and 36 percent of the City's construction jobs. Between 2012 to 2022, the Plan Area lost a large number of manufacturing jobs and gained jobs in other sectors, with health care as the largest sector. Employment trends are shown in Table 4.2.

Table 4.2. Percent Change in Employment in Plan Area, 2012-2022.

Industry	2012	2022	Change (Number)	Change (%)
Manufacturing	3,788	2,043	-1745	-46%
Other	764	722	-42	-5%
Professional, Scientific, and Technical Services	481	640	159	33%
Health Care and Social Assistance	184	564	380	207%
Retail Trade	184	360	176	96%
Construction	209	315	106	51%
Information	130	52	-78	-60%
Total	**5,740**	**4,696**	**-1044**	**-18%**

Source. U.S. Census, LEHD OnTheMap, 2022; Strategic Economics, 2025.

EMPLOYMENT TRENDS

Jobs in the Plan Area today include a larger share of opportunities for workers with lower levels of educational attainment compared to jobs in Palo Alto overall. The Information and Professional, Scientific and Technical Services industry sectors are associated with very high average wages, but also high education, training, and skill requirements. In contrast, the Manufacturing and Construction industry sectors typically include a larger share of middle-skill, middle-wage jobs. Development of new housing in the Plan Area is likely to primarily occur at properties with these types of existing employment, such as the small office and light industrial spaces near Commercial Street and Industrial Avenue.

Key Findings and Conclusions

HOUSING MARKET ANALYSIS FINDINGS

- Robust demand for a variety of housing products exists in the Plan Area and surrounding market area, as indicated by relatively high sales prices for ownership housing, relatively high achievable rents, and low residential vacancy rates.
- Given strong demand for housing in Palo Alto and the available housing development opportunities within the Plan Area, the area is well-positioned to capture demand for additional housing units associated with projected household and employment growth, as forecasted by the Association of Bay Area Governments for Santa Clara and San Mateo Counties.
- Despite demand for a range of housing products in Palo Alto—including lower-density ownership housing such as luxury townhomes—the Plan Area is most likely to attract development of mid-rise multifamily housing products. These products are most compatible with the City of Palo Alto's regulatory and policy priorities focused on promoting higher density development in the Plan Area.
- Recent housing development proposals in the Plan Area demonstrate developer interest in mid-rise, relatively higher-density housing products. Housing development proposals in and near the Plan Area primarily consist of buildings that are most often seven to eight stories tall and with densities ranging from 110 to 170 dwelling units per acre.
- The likelihood and timing of housing development on specific sites in the Plan Area will depend on site characteristics, existing uses, and location. Ideal sites for cost-efficient mid-rise housing development are rectangular or square, allow multiple access points, are at least one to two acres in size, are relatively underutilized (typically vacant or with light industrial uses), and located near existing or future transportation access and retail amenities. Developers can assemble smaller sites to create a site with these characteristics, but parcel assembly takes time and adds development risk.
- Improvements to local amenities, the pedestrian environment, and multimodal transportation options can support the attractiveness of the Plan Area for future residents and potentially accelerate housing development activity.

RETAIL MARKET ANALYSIS FINDINGS

- Existing retail offerings (with "retail" inclusive of shopping, dining, services, and entertainment) are limited within the Plan Area. However, much of the area is located within a half mile of existing neighborhood and community shopping centers that can meet many day-to-day shopping needs for existing residents and residents of any early future housing developments.
- The best performing retail locations near the Plan Area are primarily closer to El Camino Real, with retail brokers noting that the Plan Area itself is more likely to serve as a secondary retail location that is better suited to supporting neighborhood-serving retail—such as dining, personal services, and potentially future grocery stores and drug stores—rather than major regional shopping destinations. The San Antonio Center adjacent to the Plan Area functions as a larger regional retail center that can serve current and future households in the Plan Area.
- Over time, additions of new residents in the Plan Area will generate demand for additional local retail space to accommodate dining, services, and day-to-day shopping needs. The total magnitude of supportable retail space will vary depending on the projected buildout of housing units in the Plan Area.

- Given the likely incremental process of housing development in the Plan Area, retail [illegible] row gradually and take time to achieve a critical mass of residents to support significant [illegible] such as a new grocery store. Existing nearby retail amenities will largely meet demand from early residential growth, and early retail opportunities within the Plan Area will primarily consist of dining and personal services.
- New retail space is likely to best perform in Plan Area locations that are near areas of future housing growth, visible and readily accessible from higher-traffic streets, and allow for a concentration of retail tenants. Real estate brokers interviewed for this study noted that the intersection of Middlefield Road and San Antonio Road is likely to be a desirable retail location within the Plan Area due to visibility from large quantities of pass-through traffic and accessibility from existing residents and new residents at proposed housing projects to the east. Locations along East Charleston Road and San Antonio Road near the intersection of these streets also benefit from visibility and access.
- Given the gradual pace of housing buildout to achieve a critical mass of residents to support larger quantities of new retail space, the San Antonio Road Area Plan will need to incorporate a vision and policies to ensure development of retail space at preferred future retail concentrations.

ECONOMIC ANALYSIS FINDINGS

- Although the Plan Area constitutes a relatively small share of jobs in Palo Alto overall, the area includes a notable concentration of manufacturing jobs. The U.S. Census estimates that the Plan Area included approximately 4.3 percent of jobs in Palo Alto as of 2022, but nearly 40 percent of jobs classified in the Manufacturing industry sector. The Plan Area includes major employers such as Maxar along Fabian Way and a limited quantity of Google offices east of US-101.
- The diverse small office and light industrial spaces in the Plan Area—especially near Commercial Street and Industrial Avenue—accommodate a wide variety of small businesses seeking flexible and relatively affordable space within Palo Alto. Tenant lease data indicates that at least two thirds of businesses in the Plan Area have 50 or fewer employees.
- Redevelopment of existing smaller light industrial and flex buildings in the Plan Area for housing and other uses creates a displacement risk for businesses in these spaces. Relocation within Palo Alto and even neighboring communities is challenging due to the limited and declining inventory of similar spaces due to their redevelopment for higher-intensity employment and housing uses.
- The addition of housing in the Plan Area that is affordable to households with diverse income levels can help meet the needs of workers at jobs in Palo Alto and the Plan Area itself. Analysis of wages associated with the industry sector mix of jobs in Palo Alto found that 35 percent of worker households may qualify as low- or very low-income and likely require deed-restricted affordable housing to be able to live in Palo Alto. Within the Plan Area itself, U.S. Census data indicates that approximately 16 percent of “primary” jobs (i.e., the highest-paying job held by a worker) in 2022 paid less than $40,000 annually.

5. HAZARDS, PUBLIC SAFETY, AND HI[illegible] RESOURCES

Note: Some of the topics discussed in this section (such as sea level rise) overlap with topics discussed in Sections 8 and 9. Since these topics are relevant for each of these subject areas, they have been included in each section.

Hazards

Environmental hazards studied as part of the analysis to date include sea level rise and wildfire. The study of seismic hazards and soil and groundwater contamination is currently in process, and additional content will be provided when the studies are completed.

SEA LEVEL RISE

A portion of the Plan Area is located in the Federal Emergency Management Agency (FEMA) Flood Zone AE, a Special Flood Hazard Area (SFHA) designation with a one percent (100-year flood) or greater annual chance of flooding in any given year. Within the Plan Area, the AE Zone covers a large area generally from East Charleston Road to the San Francisco Bay, shown in Figure 5.1. The remainder of the Plan Area is located in SFHA Zone X, with a 0.2% (500-year event) annual chance of flood. The City of Palo Alto completed a Sea Level Rise Vulnerability Assessment in 2022 which documents potential sea level rise (SLR) hazards to City and community assets from increments between 12 to 84 inches of SLR. Portions of the Plan Area north and east of East Charleston Road are predicted to be inundated under a 36-inch SLR scenario during an average tide. Areas north of the Plan Area could experience overtopping by Bay waters.

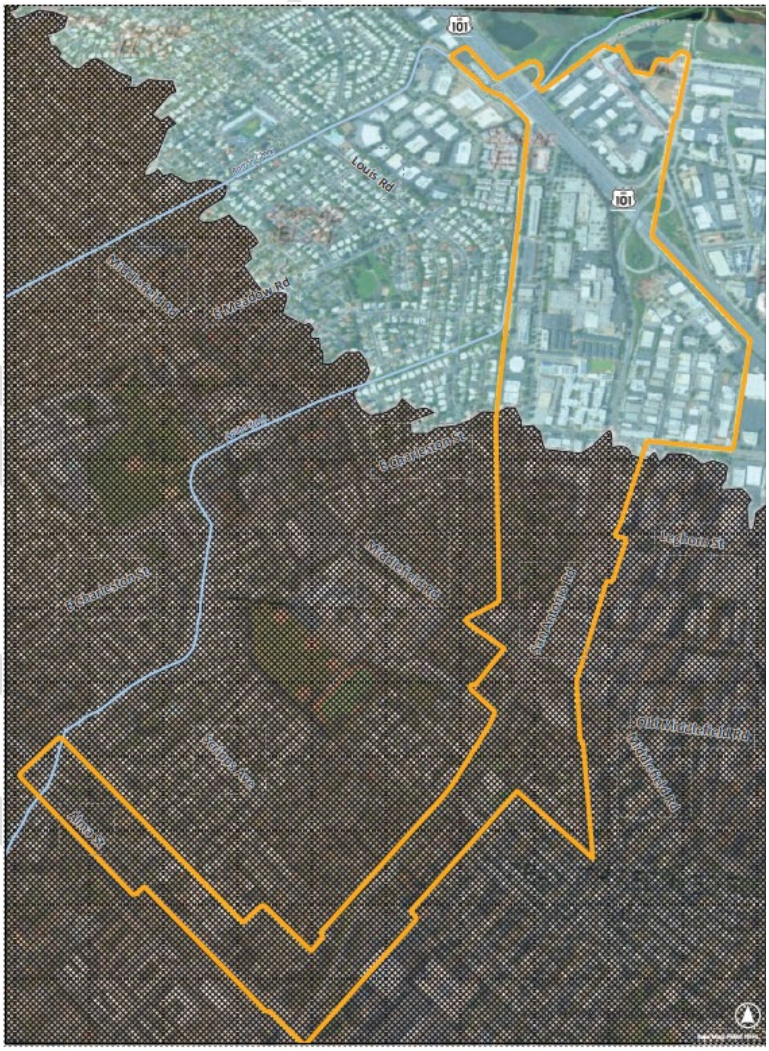


Figure 5.1. FEMA Special Flood Hazard Area in the Plan Area

Source: City of Palo Alto GIS, David J Powers & Associates, 2025.

WILDFIRE

The Plan Area is not located in a Fire Hazard Severity Zone (FHSZ) as defined by the California Department of Forestry and Fire Protection (CAL FIRE).

SEISMIC HAZARDS

As detailed in the 2024 Santa Clara County Multi-Jurisdictional Hazard Mitigation Plan, the Bay Area is located in a geologically active area. The impact of an earthquake on buildings and infrastructure largely depends on ground shaking, the distance from the earthquake's source, and the potential for liquefaction. Liquefaction generally occurs in soft, unconsolidated sedimentary soils with a shallow water table. The City of Palo Alto's Safety Element identifies areas near the Bay and along creeks as having very high liquefaction susceptibility levels, and the entire Plan Area has at least a moderate liquefaction susceptibility level. Additional analysis of the seismic hazard within the Plan Area is underway.

SOIL AND GROUNDWATER CONTAMINATION

The portion of the Plan Area between East Charleston Road and US-101 has long been a light industrial and manufacturing area, which increases the possibility of soil and/or groundwater contamination. Sites with known or suspected contamination could require remediation prior to any new development. The California Department of Toxic Substances Control (DTSC) has identified seven properties within the Plan Area with known or suspected contamination issues. The following addresses within the Plan Area are listed on the DTSC EnviroStor tool: 821 San Antonio Road, 844 East Charleston Road, 899 East Charleston Road, 3825 Fabian Way, 3839 Fabian Way, 890 Commercial Street, and 936 Industrial Avenue. 1275 North San Antonio Road (a City-owned parcel) is the site of the former Los Altos Treatment Plant, and required some remediation efforts prior to developing the HomeKey project. Additional analysis of these sites and the Plan Area is underway.

Public Safety

Police and fire services are essential components of a well-functioning and resilient community. Growth within the Plan Area may increase calls for service and place additional demands on personnel, equipment, and emergency access.

POLICE

Law enforcement protection services in Palo Alto are provided by the Palo Alto Police Department (PAPD) that employs a total of 141 positions (2025). The 2030 Comprehensive Plan EIR found that the existing police station is inadequate to accommodate growth under the General Plan. The PAPD is currently constructing a new Public Safety Building (PSB) at 250 Sherman Avenue which will serve as the new headquarters of the Police Department, 911 Emergency Dispatch Center, the Emergency Operations Center, the Office of Emergency Services, and the administration needs of the Fire Department. The new PSB building is scheduled to open in Fall 2025. With the new police station, police services are anticipated to be adequate to accommodate current and future needs of the City.

FIRE

The Palo Alto Fire Department's (PAFD's) service area covers the jurisdictional boundaries of Palo Alto in addition to some of the unincorporated land surrounding the City limit, much of which is occupied by Stanford University. The PAFD staffs six full-time fire stations (Stations 1 through 6) and one seasonal fire station (Station 8), located strategically throughout the City. In addition to the PAFD's primary service area, the City has entered into mutual aid and automatic aid agreements with the City of Mountain View, the City of Menlo Park, CAL FIRE, the Santa Clara County Fire Department (SCCFD), and the Woodside Fire Protection District. The City has set a service goal at responding to all fire emergencies in 8 minutes or less 90% of the time. For medical emergencies, the goal is 8

minutes or less 90% of the time and ambulance response, 12 minutes or less 90% of the t dical services (EMS) in the PAFD service area are expected to increase incrementally with both population and the aging of the population. To meet increased demand, the PAFD is launching a new EMS ambulance program to enhance staffing and resource availability for the increase in EMS ambulance transports during peak hours. The City is also in the process of replacing Fire Station 4, the closest station to the Plan Area, which is estimated to be completed in 2027.

Historic Resources

The City's Historic Preservation Program began in 1979, with subsequent Local Inventory updates in 2001 and 2023. Any individual or group may propose designating a historic structure, site, or district to the Inventory according to the procedure found in the Historic Preservation Ordinance (Municipal Code Section 16.49.040). Properties nominated for designation are recommended by the Historic Resources Board and decided upon by the City Council. In addition to the City's Historic Inventory, there are number of Palo Alto properties and four historic districts that are listed in the National Register of Historic Places (NRHP), including the Greenmeadow Historic District immediately adjacent to the Plan Area. The California Office of Historic Preservation recognizes the Greenmeadow Historic district, as well as Native American shell mounds in the vicinity and two sites in the Plan Area: 844 East Charleston Road as the site where Dr. Robert Noyce of Fairchild Semiconductor Corporation invented the first integrated circuit that could be produced commercially in 1959 and the Secundino Robles Adobe Site north-east of the San Antonio Road and Alma Street intersection. As of this report, there are no properties located within the Plan Area listed on the NRHP or on the Palo Alto Historic Inventory. Most existing structures within the Plan Area were constructed between approximately 1940 and 1980. Evaluation of the properties in the Plan Area for significant historical, archeological, and/or architectural value is in process.

Key Findings and Conclusions

The following environmental issues would need to be addressed as part of future development in the Plan Area. Please note that some sections of this analysis are in progress as of the publication of this draft report, and analysis will continue as part of the Area Plan's compliance with the California Environmental Quality Act.

- A large area within the Plan Area is designated as a Special Flood Hazard Area (SFHA).
- Adapting to sea level rise would need to be addressed in the areas east of East Charleston Road.
- Increased demand for EMS services may require increased EMS staffing and/or new apparatus and fire station improvements to support new development.

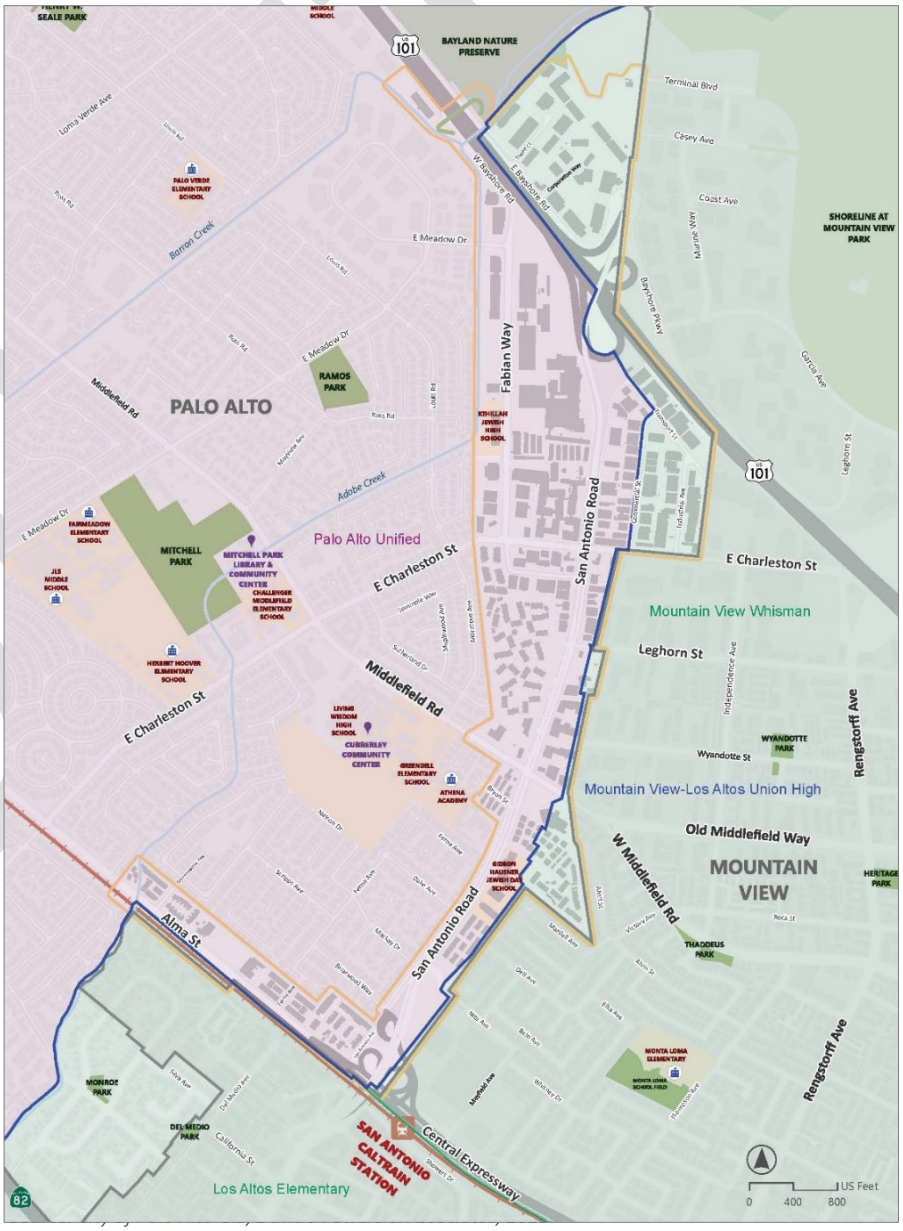
6. PARKS, OPEN SPACE, AND PUBLIC FACILITIES

Schools

The Plan Area is served by the Palo Alto Unified School District (PAUSD), Mountain View-Whisman School District (MVWSD), and Mountain View-Los Altos Union High School District, as shown in Figure 6.1. The PAUSD operates 13 elementary schools, three middle schools, and three high schools (including Middle College at Foothill College) within their service area. There is available capacity for more students at all PAUSD schools. Projections forecast a decline in enrollment district-wide across a 10-year period based upon historical enrollment trends and projected new development.

The MVWSD operates one preschool, nine K-5 elementary schools, and two 6-8 middle schools. There is capacity for additional enrollment in all the MVWSD schools.

The Mountain View-Los Altos Union High School District operates two high schools within its boundaries. The portions of the Plan Area within the district's boundaries are served by Los Altos High School, which is also currently enrolled at below its capacity.



Parks and Recreational Facilities

The City of Palo Alto owns and operates 32 parks and four open space preserves. There are also a variety of other facilities in Palo Alto and the vicinity which are not City-owned and which serve some of the same demand for City-owned and operated facilities. These include PAUSD-owned land used for recreation, Stanford University open space and recreation lands, privately owned recreational facilities, land managed by conservation groups, and State and regional parks in the vicinity of Palo Alto. There are also open space preserves that serve larger service areas and contain a broad range of facilities, including picnic grounds, hiking and biking trails, wildlife watching and camping.

In addition, the City of Palo Alto Recreation Services Division offers youth and adult sports, teen and middle school activities, after-school programs, a variety of classes for all ages, and a wide range of special events. Recreation facilities include the Cubberley, Lucie Stern, and Mitchell Park Community Centers; the Children's Theater and Community Theater; Rinconada Pool; Junior Museum and Zoo; Baylands Golf Course; Art Center; Baylands Nature Interpretive Center; and the Skateboard Park at Greer Park.

The nearest parks and open spaces to the Plan Area include Henry W. Seale Park, Ramos Park, Mitchell Park, Monroe Park, Del Medio Park (Mountain View), Wyandotte Park (Mountain View), Thaddeus Park (Mountain View), Monta Loma School Field (Mountain View), Heritage Park (Mountain View), Baylands Nature Preserve, Shoreline at Mountain View Park (Mountain View). Under Comprehensive Plan Policy C-28, the City's desired ratios are two acres of neighborhood parks plus two acres of district parks per 1,000 residents (four acres total) and a parkland dedication requirement of five acres of neighborhood park, district park, recreational facilities, and open space for every 1,000 residents.

The City of Palo Alto operates five community libraries, all of which were renovated between 2006 and 2015 and are considered to be in good condition. The Mitchell Park library is nearest to the Plan Area.

Key Findings and Conclusions

In terms of parks and public facilities, the Plan Area would need to consider the following as part of future development:

- Overall school enrollment is down across all three school districts that service the Plan Area (Palo Alto Unified School District, Mountain View-Whisman School District and Mountain View-Los Altos Union High School District).
- The City has a policy to reach two acres of neighborhood parks plus two acres of district parks per 1,000 residents (four acres total per 1,000 residents) and a parkland dedication requirement of five acres of neighborhood park, district park, recreational facilities, and open space for every 1,000 residents.

7. NOISE AND AIR QUALITY

Noise and Vibration

The analysis for noise and vibration for the Plan Area includes a description of the fundamentals of environmental noise and ground-borne vibration, summarizes applicable regulatory criteria, and discusses the existing noise environment. It also identifies constraints for potential noise-sensitive uses and provides guidance to attain noise and land use compatibility. A noise measurement survey was completed to establish existing noise levels from substantial sources in the Plan Area, including both long- and short-term measurements at several locations.

SOURCES OF ENVIRONMENTAL NOISE

Primary sources of noise in the Plan Area include:

- Major ground transportation corridors such as US-101, Central Expressway/Alma Street, San Antonio Road, and Middlefield Road.
- Minor ground transportation corridors, such as small arterial roadways and collector streets, produce noise levels that contribute to ambient conditions on a localized basis.
- The Union Pacific Railroad, located west of Central Expressway/Alma Street, provides a thoroughfare for freight and passenger (Caltrain) trains that produce noise and vibration during pass-by events.
- Palo Alto Airport lies approximately 1.7 miles north-east of the Plan Area, and Moffett Federal Airfield lies approximately 2.2 miles south-east of the Plan Area, producing intermittent noise due to aircraft overflights.
- Noise sources located on private property such as mechanical equipment, including fans, blowers, chillers, compressors, boilers, pumps, and air conditioning systems that may run continuously, and other intermittent sources of noise, including emergency generators, horns, and loading activities.

Sensitive land uses within and around the Plan Area include residences, hotels, religious institutions, schools, medical facilities, and libraries. Residential development is sensitive to community noise, both outdoors and indoors. Single-family residential development, schools, libraries, hospitals, convalescent homes, and places of worship are considered the most noise-sensitive land uses. High-density/mixed-use residential, commercial, and industrial development is considered less noise-sensitive because uses are primarily indoors and can be mitigated with building design and construction.

DESIGN CONSIDERATIONS

- Locate sensitive land uses in noise and vibration environments that are compatible with the proposed uses. The possibility of sensitive development encroaching on existing noise sources could result in some land use conflicts, requiring careful consideration during the planning process.
- Ensure that new noise-generating land uses do not substantially increase ambient noise levels at adjacent sensitive land uses.
- Ensure that increase in traffic does not substantially increase ambient noise levels at sensitive land uses.
- Mitigate construction noise and construction vibration to the extent possible to not adversely affect adjacent sensitive land uses.

Air Quality

The Bay Area Air Quality Management District (Air District) publishes California Environmental Quality Act (CEQA) Air Quality Guidelines and provides tools and recommendations to develop plans that are consistent with Clean Air Plan goals. Air quality and greenhouse gas (GHG) emissions analysis for the Plan Area found the following issues:

- **Meeting Ambient Air Quality Standards**. The region is considered to be in non-attainment for the criteria air pollutants ozone (O3) and particulate matter (respirable particulate matter [PM10] and fine particulate matter [PM2.5]). Criteria air pollutant levels have generally decreased over the last 25 years, as regional emissions of pollutants and precursor pollutants have decreased. An increase in episodes of wildfire smoke in recent years, however, has caused spikes in the number of days that air quality standards have been exceeded. While overall trends for air pollutants remain downward over the last 25 years, the trend in annual PM2.5 concentrations has only slightly decreased; however, the levels are at or below standards. A large number of exceedances occurred in the years 2017 through 2020 due to episodes of wildfire smoke.
- **Toxic Air Contaminants (TACs)**. The Plan Area is less burdened with TACs than 50 percent of the State (a CalEnviroScreen range of 5 to 50 percentile). The Air District considers 70 percentile or higher as overburdened. While efforts to control TAC emissions have been quite effective, some areas are still exposed to levels that exceed the Air District's recommended thresholds. Common sources of TAC exposure include large volumes of truck traffic, construction activity, diesel generators, and gasoline stations. Air monitoring data published by the Air District for benzene shows dramatic decreases in ambient concentrations at all Bay Area stations.

Conclusions

For the Plan Area to grow while maintaining air quality, the following challenges will need to be resolved:

- **Reducing Vehicle Miles Traveled (VMT)**. The Air District's CEQA Air Quality Guidelines recommend that land use plans demonstrate the growth in vehicle travel (measured as trips or VMT) at a lower rate than the population growth rate. This could be accomplished through land uses and policies that encourage non-motorized travel and shorter commute distances.
- **Compliance with Clean Air Plan Measures and Air District Recommendations.** Planned land uses will need to be in conformity with Clean Air Plan measures, including periodic updates by the Air District to ensure progress in attaining and maintaining ambient air quality standards.
- **Reducing Unhealthy Exposure to TAC and Air Pollutants.** The effects of TACs on the public is typically evaluated through health risk assessments (HRAs) that predict excess cancer risk, non-cancer health hazards, and exposure to PM2.5. The Plan Area is affected by a large number of TAC sources. The primary sources that drive overall exposures are busy roadways, diesel locomotives using Caltrain, and stationary sources permitted by the Air District. The Air District provides screening tools to assess the risks that these sources pose to the Area. Refined modeling can be conducted at a project level to further assess these impacts and predict future exposures as controls to reduce TACs become more effective.

8. INFRASTRUCTURE

Note: Some of the topics discussed in this section (such as sea level rise) overlap with topics discussed in Sections 5 and 9. Since these topics are relevant for each of these subject areas, they have been included in each section.

Storm Drain Infrastructure

Storm drainage facilities in and around the Plan Area are owned and maintained by the City of Palo Alto. Per the 2015 City of Palo Alto Storm Drain Master Plan, the Plan Area is located within the Adobe Creek Watershed and surface water drains north towards Adobe Creek and towards the San Francisco Bay. Local stormwater infrastructure is located in the rights-of-way of San Antonio Road, East Charleston Road, Fabian Way, and along Adobe Creek, which runs on the north side of the Plan Area. The Master Plan found that portions of the storm drain system are currently under capacity, and identified high priority system upgrades for East and West Bayshore Road, East Meadow Drive, East Meadow Circle, East Charleston Road and Adobe Creek, and Fabian Way, as shown in Figure 8.1.

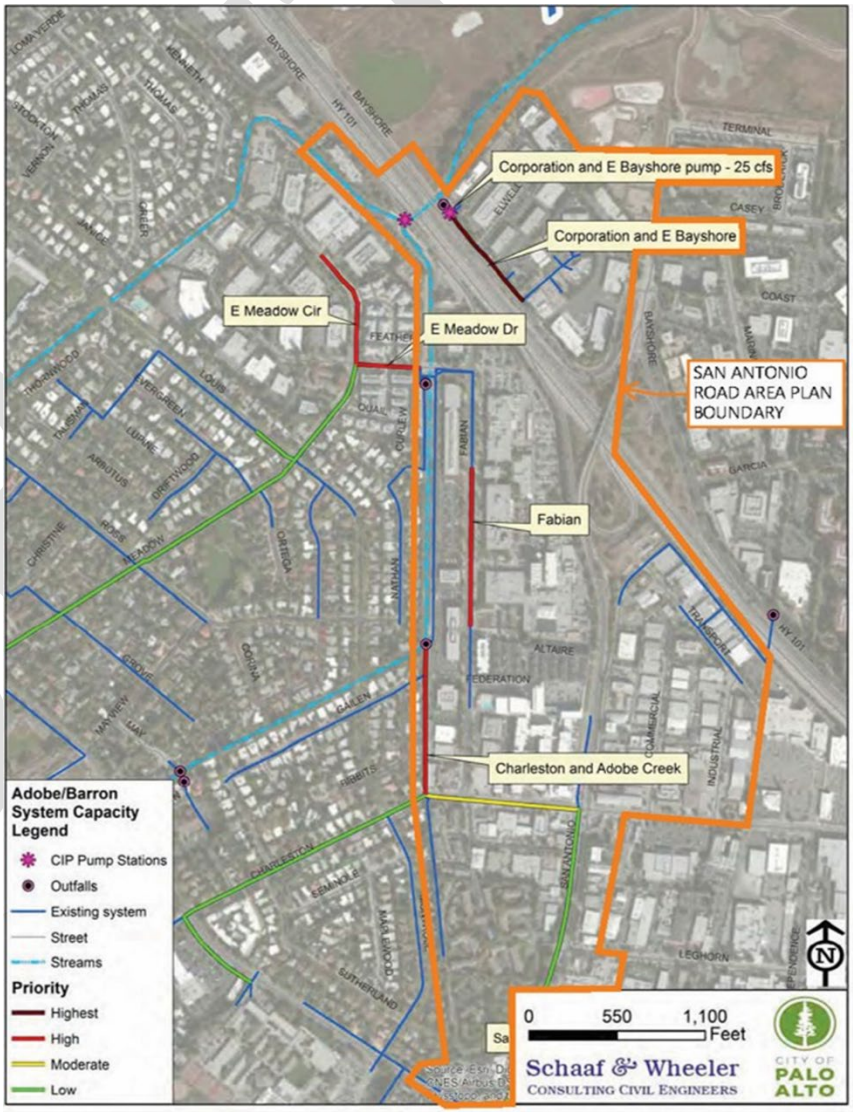


Figure 8.1. 2015 Storm Drain Master Plan Priority Projects

Source: City of Palo Alto's 2015 Storm Drain Master Plan, Schaaf & Wheeler, 2015.

FLOODING

FEMA Flood Insurance Rate Maps (FIRM) indicate a range of flood hazard risk levels for parcels within the Plan Area. As discussed in Section 5, the Plan Area between East Charleston Road and the San Francisco Bay falls within Zone AE, a Special Flood Hazard Area (SFHA) subject to inundation by a one percent annual chance flood, known as the base flood with an elevation of 10.5. The rest of the Plan Area falls within Flood Zone X with a lower probability of flooding. The Plan Area periodically experiences flooding during large storm events at the area bound by East Bayshore Road and Adobe Creek, West Bayshore Road and Adobe Creek, East Meadow Circle and Fabian Drive upstream of the Adobe Pump Station. The flooding experienced is generally due to flap gates unable to open when the water level in the creek exceeds the height of the gate at the outfall. In 2024 Public Works Engineering completed

the necessary improvements along East Meadow Circle and East Meadow Drive and elim potential that would otherwise occur when the gravity fed line was unable to discharge in Works Engineering is working on a separate construction contract to install two small pump stations and storm drainpipe upgrades on both East and West Bayshore Road to eliminate the street flooding that occurs near Adobe Creek. These projects will be completed by December 2026.

Future development projects should anticipate implementation measures to protect from flooding and sea level rise, and to reduce impact on existing drainage infrastructure.

Sanitary Sewer Infrastructure

The City of Palo Alto owns and maintains the wastewater system. Local wastewater is collected and conveyed to sewer mains on all public roads and public utility easements on private property, with the trunk main located at the north-east side of the Plan Area. All wastewater is then conveyed to the Palo Alto Regional Water Quality Control Plant for treatment and discharge or reuse as recycled water. The 2004 Wastewater Collection System Master Plan – Capacity Assessment by MWH Americas evaluated the capacity of the existing wastewater system and identified areas with limited capacities and need for system improvements and rehabilitation. According to the 2023 Sanitary Sewer Management Plan, all the identified projects have been completed. The City is planning to complete a new Sanitary Sewer Master Plan Study which will include an updated capacity assessment and recommendations for Capital Improvement Projects (CIP). Future development projects should anticipate implementing system upgrades that align with identified deficiencies in the future Master Plan Study. Additionally, there are several sewer mains within the Plan Area smaller than eight inches that should be replaced with larger pipe sizes as part of future development.

Domestic and Recycled Water Infrastructure

The City of Palo Alto owns and maintains the water distribution system. The Plan Area is adequately served, with water mains in the rights-of-way of Fabian Drive, San Antonio Road, East Charleston Road, Middlefield Road, Alma Street, and East and West Bayshore Road. Future development with a change in land use should anticipate implementing system upgrades, with review on a project-by-project basis. Some of the smaller existing water mains may need to be upsized to meet localized fire flow requirements, depending on actual building heights, locations, densities, and construction types.

Currently, only the areas east of US-101 and Greer Park are serviced with recycled water. The City has also identified future expansions of the recycled water distribution system within City extents but outside of the Plan Area. Given the proximity of the Plan Area to the existing recycled water system, the City may consider expanding the recycled water distribution system within the Plan Area to offset future water demand and usage. New recycled water pipelines would need to be extended across US-101 to serve the majority of the Plan Area. Distribution pipelines would also need to be built within the street rights-of-way to serve individual properties, and new buildings in the Plan Area would need to be dual plumbed for both domestic and recycled water use. Further study is required to evaluate the feasibility of expanding the existing recycled water distribution system into the Plan Area.

Natural Gas and Electricity Infrastructure

The City of Palo Alto provides natural gas and electricity. Multiple gas mains serve the Plan Area that are located within the rights-of-way of every public street as well as on several private roads and properties. With current policies encouraging new development to be designed as "all electric," the demand for natural gas is expected to decrease. Existing electrical and fiber optic lines adequately serve the Plan Area. Existing electrical utilities consist of both underground and overhead lines. It should be anticipated that existing overhead electrical lines will be converted to underground lines in conjunction with future development. It should also be anticipated that future development will increase electrical demand. Undergrounding existing overhead electrical lines could represent an opportunity to upgrade the network in anticipation of potential increases in electrical demand.

Key Findings and Conclusions

- The City of Palo Alto owns and provides stormwater, wastewater, domestic water, recycled water, natural gas, and electrical utilities.
- **Stormwater**. Stormwater drains north towards Adobe Creek and the San Francisco Bay via catch basins and pipes in public rights-of-way. The Adobe Pump Station is located within the Plan Area, and outfalls into Adobe Creek. The 2015 Storm Drain Master Plan identified seven high priority improvement projects in the vicinity of the Plan Area to alleviate flooding caused by large storm events. Two of these projects are complete, three are under construction and two others will be completed by 2032.
- **Flooding**. The portion of Plan Area that falls within FEMA Flood Zone AE is subject to inundation by a one percent annual chance flood, also known as the base flood with an elevation of 10.5. The remaining portion of the Plan Area that falls within FEMA Flood Zone X, has a 0.2 percent annual chance of flooding. Future developments in the Plan Area will have to account for the base flood elevation and implement measures to protect new buildings from flooding and sea level rise in accordance with Building Codes. For example, under FEMA regulations, basement levels are not permitted beneath residential buildings within FEMA Flood Zones.
- **Wastewater**. Local wastewater is collected and conveyed via sewer mains in public rights-of-way and public utility easements on private property, then conveyed to the Palo Alto Regional Water Quality Control Plant for treatment and discharged into the San Francisco Bay, or reused as reclaimed water. According to the 2023 Sanitary Sewer Management Plan, all improvement projects identified in the 2004 Wastewater Master Plan have been completed. Future development projects should anticipate implementing system upgrades that align with identified deficiencies in any future Master Plan studies.
- **Domestic Water.** The area is served by water mains in all public rights-of-way and public utility easements on private property. Some smaller water mains may need to be upsized with future development in order to meet localized fire flow requirements.
- **Recycled Water**. The only recycled water line in the vicinity of the Plan Area runs along East Bayshore Road. Given its proximity to existing lines, the City may consider expanding the recycled water distribution system within the Plan Area to offset future water demand and usage.
- **Natural Gas**. With current policies encouraging the transition of new developments to be designed as "all electric," a decrease in demand for natural gas is expected.
- **Electricity**. Existing electrical utilities consist of both underground and overhead lines. In conjunction with future development and anticipated increase in demand for electricity, there can be opportunities to underground existing overhead electrical lines when upgrading the electrical network.

9. CLIMATE AND RESILIENCE

Note: Some of the topics discussed in this section (such as sea level rise) overlap with topics discussed in Sections 5 and 8. Since these topics relevant for each of these subject areas, they have been included in each section.

Policies Regarding Climate Hazard Planning

Hazards related to climate change studied for the Plan Area include sea level rise (SLR), shallow groundwater rise, flooding, changes to precipitation and drought, extreme heat, and wildfire. Plan Area-specific information regarding impacts from climate change is referenced from the Santa Clara County Multi-Hazard Mitigation Plan and Palo Alto Annex (2024), the Palo Alto Sea Level Rise Vulnerability Assessment, and data from Cal-Adapt.

The Safety Element of the City of Palo Alto's Comprehensive Plan addresses natural and human-caused hazards. It contains a Natural Hazards policy framework that includes general safety measures and measures to address flood and fire risk. In 2023-24, Santa Clara County led the update of the Santa Clara County Multi-Jurisdictional Hazard Mitigation Plan (SCC MJHMP) with 15 participating jurisdictions and three special districts. As a participating jurisdiction, Palo Alto adopted its own Annex to the SCC MJHMP with more City-specific information. The ratings in the Annex are from an emergency management lens so they do not consider how climate change will increase the probability and impacts of each hazard in the future. Rather, it considers climate change as a hazard on its own. The City of Palo Alto's 2022 Sustainability and Climate Action Plan (S/CAP) aims to reduce carbon emissions to 80 percent below 1990 levels by 2030 and achieve carbon neutrality by 2030. Though the S/CAP's main purpose is climate action (greenhouse gas mitigation) one of its "Key Issues" is "Climate Adaptation and Sea Level Rise". The S/CAP has two goals and eight actions related to climate adaptation, and also has goals and associated actions to "minimize the impacts of wildland fire hazards," but they are not as directly relevant to the Plan Area because it is not located in a Fire Hazard Severity Zone.

Future development in the Plan Area will also be affected by new SLR planning processes. SB 272 (2023) requires that all local governments in the jurisdiction of the San Francisco Bay Conservation and Development Commission (BCDC) adopt a subregional Shoreline Adaptation Plan that complies with the requirements of the BCDC Regional Shoreline Adaptation Plan (RSAP) by January 2034. Palo Alto is in BCDC's jurisdiction and can adopt a plan on its own or be part of a plan with other entities.

Baseline Conditions and Projections

Climate projections from the Cal-Adapt database and other reports completed by the City are summarized in Table 9.1.

Table 9.1. Summary of Hazard Projections

Source: Cal-Adapt, Raimi + Associates

Climate Hazard	Trend
Sea level rise	More areas potentially exposed to inundation and flooding
Shallow groundwater rise	Higher groundwater levels and more areas where groundwater comes above the surface of the ground (emergent groundwater)
Flooding	Flooding may exceed mapped FEMA floodplains

Precipitation and drought	Longer dry spells and more extreme storms
Extreme heat	Higher average and maximum temperatures, more heatwaves with longer duration, more warm nights
Wildfire	More wildfire smoke

SEA LEVEL RISE

The Bayward portion of the Plan Area up to East Charleston Road may only experience temporary flooding during a 100-year storm tide under current conditions and for up to 24 inches of SLR. However, the SLR Vulnerability Assessment found that the average high tide with 36 inches of SLR is a tipping point when many areas of the City become vulnerable to permanent inundation (Figure 9.1). With SLR at 36 inches and above, and without further shoreline protections, the Bayward portion of the Plan Area up to East Charleston Road may experience permanent inundation with the average high tide, and the extent of temporary flooding will extend further inland.

SHALLOW GROUNDWATER RISE

Currently, the existing depth of groundwater surface within the Plan Area ranges from more than 10 feet farthest away from the Bay (inland from Mackay Drive), to less than zero feet in the area that is part of the Baylands Nature Preserve (Figure 9.2). However, groundwater within the Plan Area is projected to rise as SLR occurs. In general, areas close to the Bay shoreline (and former wetland areas) are more likely to experience emergent groundwater flooding. The area of emergent groundwater expands inland with higher SLR scenarios.

LIQUEFACTION

Elevation of the groundwater table can affect liquefaction hazards during large earthquakes. Nearly all the Plan Area has only "Moderate" liquefaction susceptibility. However, a portion of the Plan Area across US-101 close to tidal marshes has "Very High" susceptibility.

Figure 9.1. SLR Exposure Projections

Source: City of Palo Alto SLR Vulnerability Assessment, 2024; Raimi + Associates, 2025.

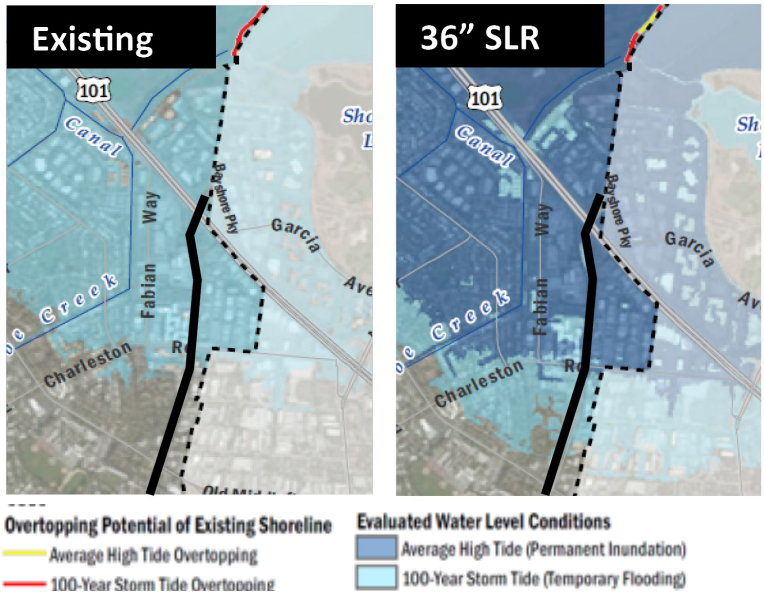
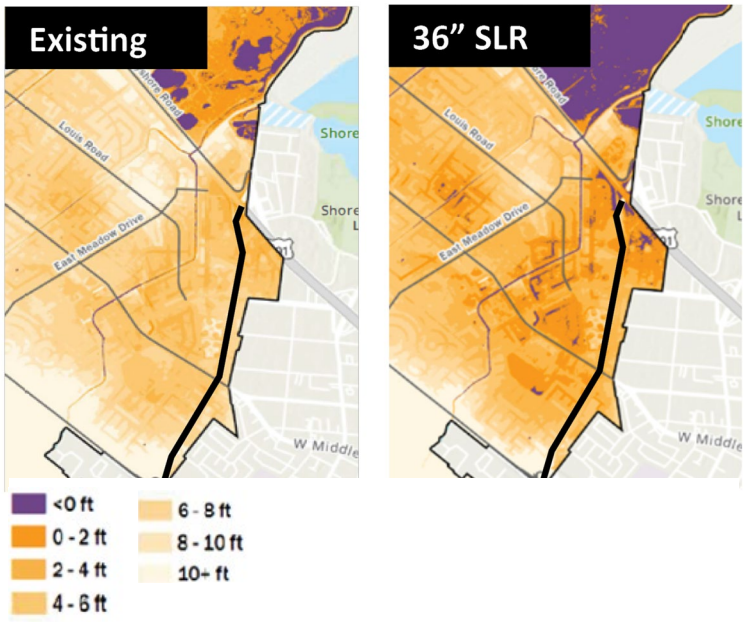


Figure 9.2. Existing and Projected Groundwater Depth

Source: City of Palo Alto SLR Vulnerability Assessment, 2024; Raimi + Associates, 2025.

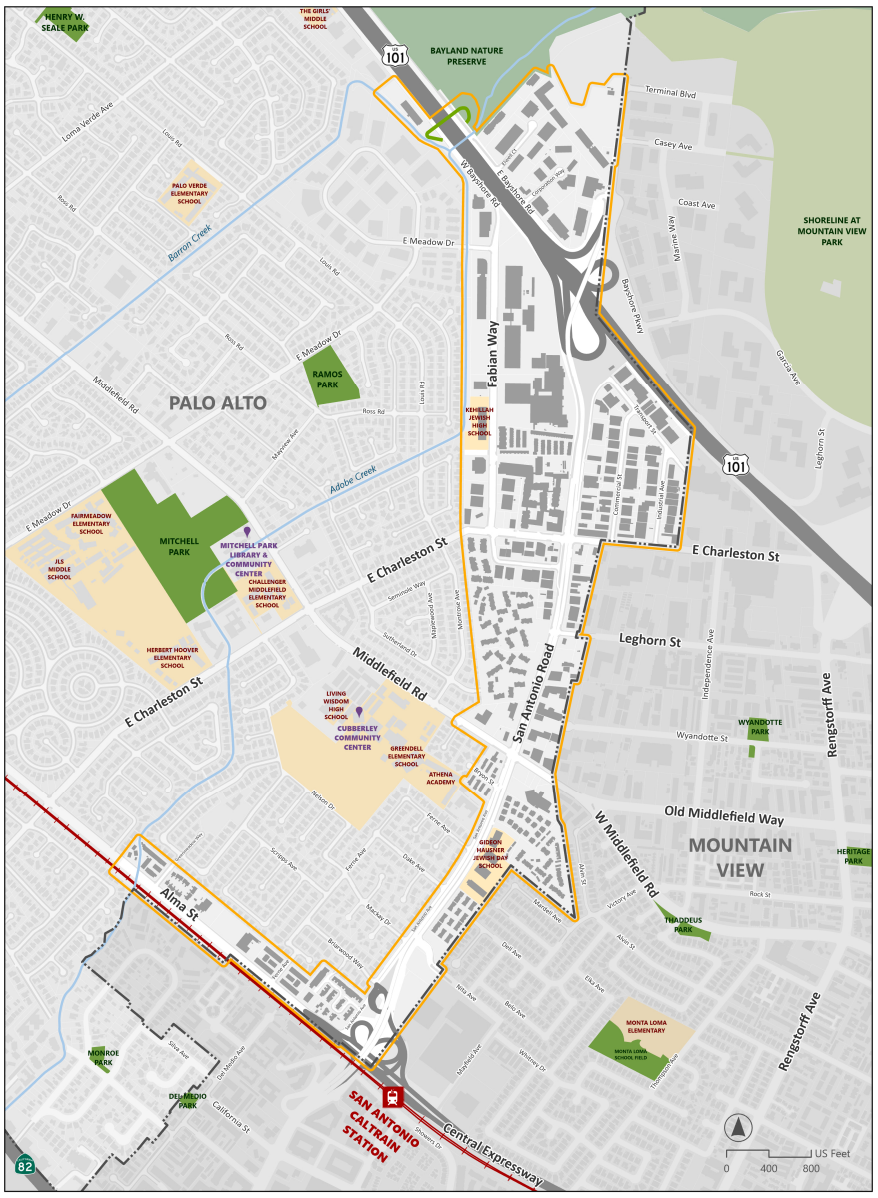


FLOODING

As mentioned previously in Sections 5 and 8 of this report, portions of the Plan Area are in the Federal Emergency Management Agency (FEMA) Flood Zone AE, which designates a Special Flood Hazard Area (SFHA) with a one percent or greater annual chance of flooding. Within the Plan Area, the AE Flood Zone covers a large area generally from Middlefield Road to the Bay. The remainder of the Plan Area is designated as Flood Zone X, which falls inside the 500-year flood zone.

Key Findings and Conclusions

- The Plan Area is projected to experience varying degrees of flooding from Sea Level Rise (SLR). Temporary flooding may occur under existing conditions and up to 24 inches of SLR. However, 36 inches of SLR is a tipping point at which permanent flooding could occur in the Bayward portion of the Plan Area up to East Charleston Road.
- The Bayward portion of the Plan Area up to East Charleston Road is within FEMA Flood Zone AE, which means it could be flooded by a one percent chance annual flood event. The rest of the Plan Area is within FEMA Flood Zone X, which means it is at moderate-to-low flood risk.
- Groundwater is projected to rise as sea levels rise. An increase of 36 inches of SLR is the point at which groundwater may begin emerging above the ground surface in the Plan Area.
- All available indicators of extreme heat (e.g., average daily temperatures, duration of heat waves) are projected to increase in the Plan Area.
- The Plan Area is not directly in a Fire Hazard Severity Zone, but it may experience more wildfire smoke in the future, due to an increased likelihood and severity of wildfires in other parts of the City and region.



Base Map

- CityBoundary
- Project Boundary
- Railway
- Caltrain Station
- Creeks
- Shoreline at Mountain View
- Baylands Nature Preserve
- Parks
- Schools
- Bike/Ped Bridge

CITY OF PALO ALTO

SAN ANTONIO ROAD AREA PLAN