

GOAL

South Pasadena's transportation networks should be designed and managed to support not just mobility and access but broader community goals of safety, health, economic development and environmental sustainability.

A. INTRODUCTION

As required under the City's adopted Complete Streets Policy, streets should safely accommodate all users. To the extent practically feasible, streets should be designed to encourage active transportation uses including walking and biking while discouraging unsafe vehicle speeds. Existing and potential transit and truck routes should be designed to safely accommodate large vehicles.

Mobility should be optimized by making intersections and interchanges more efficient and by providing alternatives to driving such as enhanced public transportation. The City should also ensure that its methodologies for measuring mobility are consistent with other City policies.

The City should pursue opportunities to improve multimodal access to the Metro A Line station, focusing on improvements to access pathways within the station's walkshed, bikeshed and transit shed.

To support mobility and economic development, the City should seek to ensure availability of public parking for residents and visitors within the context of safety and other needs. Before providing additional parking supply, the City should first seek to more efficiently manage demand for its existing supply, then to partner with private entities to provide additional supply that is accessible to members of the general public.

Considering the future of parking demand is less certain now than in previous years due to the potential emergence of connected and autonomous vehicles and related mobility innovations, the importance of using existing supply, rather than building new garages, is of heightened importance.

B. COMPLETE STREETS

Opportunities exist to apply South Pasadena's recently enacted Complete Streets Policy to major local streets, reconfiguring them to more safely accommodate all users without significantly impacting traffic.

While on some major streets, traffic volumes are at or approaching the capacity of the roadway (Fremont Avenue, for example), on others including Mission Street and Huntington Drive there is excess capacity. On streets including Fair Oaks Avenue, meanwhile, traffic lanes are wider than they need to be, or should

be for safety reasons.

These streets also have among the City's highest rates of traffic collisions involving the most exposed users of the street, pedestrians and cyclists. On these streets, space that is not needed for traffic purposes may be put to other uses such as bike lanes, transit-only lanes, wider sidewalks, additional parking or landscaped medians.

Traffic calming measures should also be implemented on residential streets that serve as "cut-through" routes for speeding traffic.

Pedestrians, bicyclists, motorists and transit riders of all ages and abilities can safely move along and across a Complete Street.

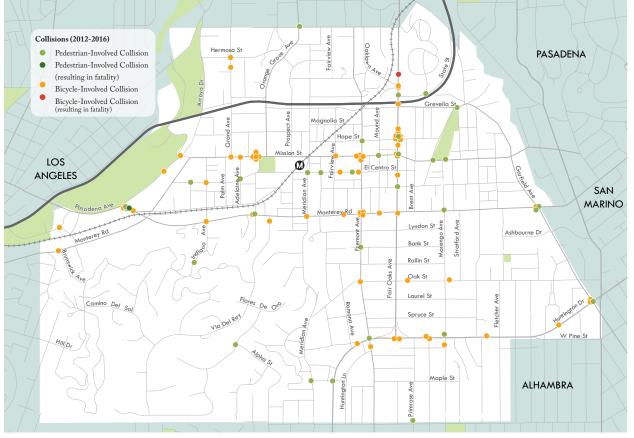


Figure B4.1 Pedestrian- and Bicycle-Involved Collisions, 2012-2016.

Policies and Actions

- P4.1 Provide safe, comfortable, and convenient access to local destinations for people walking and bicycling in South Pasadena and integrate the local walking and bicycling network into the regional network to connect to adjacent jurisdictions and points beyond.
- A4.1a Upgrade and enhance existing walking and bicycling facilities to support safety, comfort, and convenience, especially in Pedestrian Priority Areas and along Bicycle Priority Corridors.
- A4.1b Enhance active transportation connections to and from the Metro A Line station.
- A4.1c Ensure that walking facilities including sidewalks, curb ramps, crossings, and trails are accessible for people with physical impairments.
- A4.1d Develop a signage master plan consistent with state regulations that specifies guidelines and requirements for the design of high-quality, user-friendly and attractive human-scaled signage directing people driving, walking, and bicycling to destinations and guiding them through the bicycle/pedestrian network.
- A4.1e Encourage and/or require the provision of secure bicycle parking facilities at employment centers, commercial centers, recreational amenities, and civic amenities.
- P4.2 Engage and educate the community to encourage people to walk and bike in South Pasadena for recreation, transportation, and health/fitness. Promote walking and biking as safe, enjoyable, convenient, and environmentally sustainable alternatives to automobile travel.
- A4.2b Support programs that encourage South Pasadena residents, workers, and visitors to choose walking, bicycling, and other active modes of travel.
- P4.3 Promote safety for all road users through compliance with and enforcement of traffic codes for drivers, bicyclists and pedestrians.
- A4.3 Work with the South Pasadena Police Department to increase enforcement of traffic laws related to walking and bicycling.







- P4.4 Ensure successful implementation of the active transportation policies and actions by developing programs and strategies for successfully implementing and funding pedestrian and bicycle projects and programs, and for maintaining pedestrian and bicycle facilities.
- A4.4a Provide routine inspection and maintenance of pedestrian and bicycle facilities, including pavement repairs, restriping, maintenance of traffic control devices, landscape maintenance, and sweeping bike lanes and paths.
- A4.4b Minimize disruption to pedestrians when repairing and constructing transportation facilities, and provide alternate routes when necessary.
- A4.4c Evaluate the progress and effectiveness of the Active Transportation policies and actions to achieve project and program goals.
- A4.4d Regularly seek funding for the design and development of active transportation projects, and ensure awareness of current regional, state, and federal funding programs.
- A4.4e Coordinate with federal, state, regional, county and local agencies to fund and implement bicycle and pedestrian projects in cooperation with other nearby jurisdictions.







P4.5 Support street designs that emphasize safety and accommodate all users, including pedestrians and cyclists.

Ensure that streets are pedestrian-oriented, with complete sidewalks, regular crosswalks, and other measures to improve pedestrian safety and comfort. Limit the widths of vehicular lanes in order to discourage speeding (on truck routes or streets on which public transit operates, ensure that lanes are wide enough to safely accommodate large vehicles passing one another in opposite directions, and that intersections can accommodate turns by large vehicles).

- A4.5a Conduct a study of potential speed management improvements to Fremont Avenue, with the objectives of a) establishing the need for safety improvements, and b) identifying improvements that would enhance safety while maintaining throughput levels compatible with neighborhood character.
- A4.5b Evaluate the adequacy and appropriateness of existing designated truck routes and modify where appropriate based on findings (such as Fremont Avenue south of Huntington Drive).
- A4.5c Implement measures to protect pedestrians and bicyclists in the Fair Oaks Corridor, including bulb-outs, enhanced crosswalks, and leading pedestrian intervals at traffic signal.
- A4.5d Identify and improve the safety and efficiency of crosswalks throughout the City, consistent with the requirements of State legislation including the Americans with Disabilities Act (such as Monterey Road and Pasadena Avenue).
- A4.5e Prioritize adoption, funding, and implementation of a Neighborhood Traffic Management Program that identifies physical and operational changes to reduce traffic impacts throughout the City.







- P4.6 Provide high quality pedestrian and bicycle facilities to enhance the safety, comfort and convenience of people walking and bicycling in South Pasadena.
- A4.6a Implement South Pasadena's Complete Streets Policy. ® 🗞
- A4.6b Design roadways to safely accommodate all users, balancing the needs of people walking, bicycling, riding transit, and driving personal and commercial vehicles.
- A4.6c Utilize roadway design/engineering best practices to ensure safe and effective pedestrian and bicycle infrastructure.
- A4.6d Utilize best practices for the design of bicycle parking facilities in the public realm and at locations such as employment centers and schools.
- P4.7 On streets identified as priorities for one specific mode of travel, such as bicycle routes, prioritize improvements for that mode. Ensure that bicycle lanes provide a high level of separation from traffic, using buffers, vertical elements or parked cars wherever possible.
- A4.7a Proceed with implementation of Bicycle Master Plan projects. ® 🚳 🖦
- A4.7b Update the Bicycle Master Plan to identify the appropriate locations and improvements for a citywide network of bicycle paths and facilities.
- A4.7c Study the viability of adding bicycle lanes to Fair Oaks Avenue, Mission Street, and Huntington Drive.
- P4.8 Maintain a roadway system that provides for the efficient movement of goods and people in South Pasadena, while maintaining the community's character and quality of life.
- A4.8a Maintain the roadway network according to the street classifications depicted on Figure B4.9 Proposed Classifications.
- A4.8b Require that development projects achieve no net increase in Vehicle Miles Traveled (VMT) per capita above current levels for comparable uses in the City of South Pasadena as determined in accordance with the City's Transportation Impact Analysis (TIA) Methodology (updated May 5, 2020).

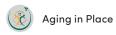








Figure B4.2. Potential Circulator Shuttle Alignment.



State law requires local agencies to adopt strategies that encourage other modes of travel beyond the automobile. The General Plan envisions more pedestrian and bicycle facilities in South Pasadena.

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C. MOBILITY

Many of the projects described earlier under "Complete Streets," would provide mobility benefits for different users of the street. A number of additional projects, however, might improve mobility for vehicles without unduly impacting other users, or might improve mobility citywide, not just in specific corridors or at specific locations.

VMT vs LOS

California's Senate Bill (SB) 743, passed in 2013, changed how the transportation impacts of development projects must be evaluated and mitigated. SB 743 eliminated the requirement to count traffic delay (measured using "Level of Service" or LOS standards) as an environmental impact under the California Environmental Quality Act (CEQA). SB 743 requires that a new metric be adopted when evaluating those impacts, to better align with state climate policy and sustainability goals.

The new metric recommended in state-level guidance is vehicle miles traveled (VMT). The overall level of auto use, as measured using VMT, is much more closely related to carbon emissions and air pollution than local traffic levels are.

South Pasadena has approved a Transportation Impact Analysis Methodology that addresses the requirements of SB 743 by utilizing measures of VMT per capita, per employee, and per service population (residents plus employees) for the purposes of CEQA Transportation Impact Analysis. However, the City will continue to use LOS traffic analysis guidelines to assess project impacts and mitigation measures related to the provision of safe and efficient public roadway infrastructure and facilities within the City. This may require a separate traffic study for proposed projects, beyond the appropriate CEQA document.

Policies and Actions

- P4.9 Reduce traffic congestion by modification of traffic signals, turning movements, and other operational changes that do not require increasing the width of rights-of-way or adding lanes to streets.
- A4.9a Study the feasibility for reconfiguring the SR-110-Fair Oaks Avenue interchange to improve freeway access and egress and traffic flows.
- A4.9b Identify traffic signal improvements where appropriate to optimize traffic flow at safe speeds by implementing adaptive traffic control system technology and synchronization.
- A4.9c Encourage Metro and the California Public Utilities Commission to reduce signal delay at the Metro A Line crossing of Mission and Meridian while maintaining safety.
- P4.10 Explore options to improve transit service within South Pasadena, including City programs and/or partnerships with Metro.
- A4.10 Improve transit service within South Pasadena using one of four options:
 - 1. Expand the City's existing dial-a-ride program to serve all residents (and not just older residents); ③ 🏵 😭
 - 2. Implement a circulator shuttle, funded through a public-private partnership, providing connections every 30 minutes or more often during the day to the Metro A Line station and other major destinations (one possible routing is shown in Figure B4.2; alternately, buses might operate on Fremont to directly serve schools);

 - 4. Initiate a partnership with Metro to pilot "microtransit" on-demand service using smartphone apps. 3







D.TRANSIT

The Metro Rail A Line South Pasadena Station at Mission and Meridian Avenue is an existing mobility asset that could be better leveraged. There are a number of locations within a half-mile of the station – within its "walkshed," which includes much of Downtown South Pasadena – where "first/last mile" access to the station and transportation conditions more generally could be improved. This would serve to improve the accessibility of the station and increase transit ridership; it would also improve safety and mobility for non-users of the station who are traveling through the area.

Some possible improvements, such as grade-separation of the A Line at locations where it acts as a barrier, would be relatively expensive (A Line grade separations would also almost certainly require property takings). Other relatively low-cost improvements potentially could be implemented, however, using regional funding that Metro has made available for projects to improve mobility in the proposed 710 freeway extension corridor.

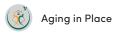


Figure B4.3. Metro A Line Walkshed Access. The figure shows half-mile walkshed around the Metro A Line station, along with primary walking routes, and the pedestrian barriers that impede walkability in the Downtown area.



Policies and Actions

- P4.11 Facilitate safe and improved pedestrian and bicycle traffic between the Metro A Line station and major destinations.
- A4.11a Study and develop a plan for sidewalk, signalization, crosswalk, bike ways, and other improvements on streets connecting the Metro A Line station with the downtown and surrounding neighborhoods (for example Mission Street at Prospect Avenue, El Centro Street between Mound Avenue and Edison Alley, and Orange Grove Avenue at El Centro Street).
- A4.11b Explore appropriate ways to improve the safety of pedestrians and cyclists at rail crossings. 3
- P4.12 Encourage and facilitate shared-ride options include e-hailing services, carshare, and bikeshare. Increase awareness of multi-modal alternatives to driving to the Metro A Line station.
- A4.12 In the near term, work with Metro and private partners (carshare companies) to identify "mobility hub" improvements that could be implemented at or near the Metro A Line station, such as additional, secure parking (lockers) for bicycles, a future bikeshare station and carshare vehicles stationed in the Mission Meridian Village Parking Garage.







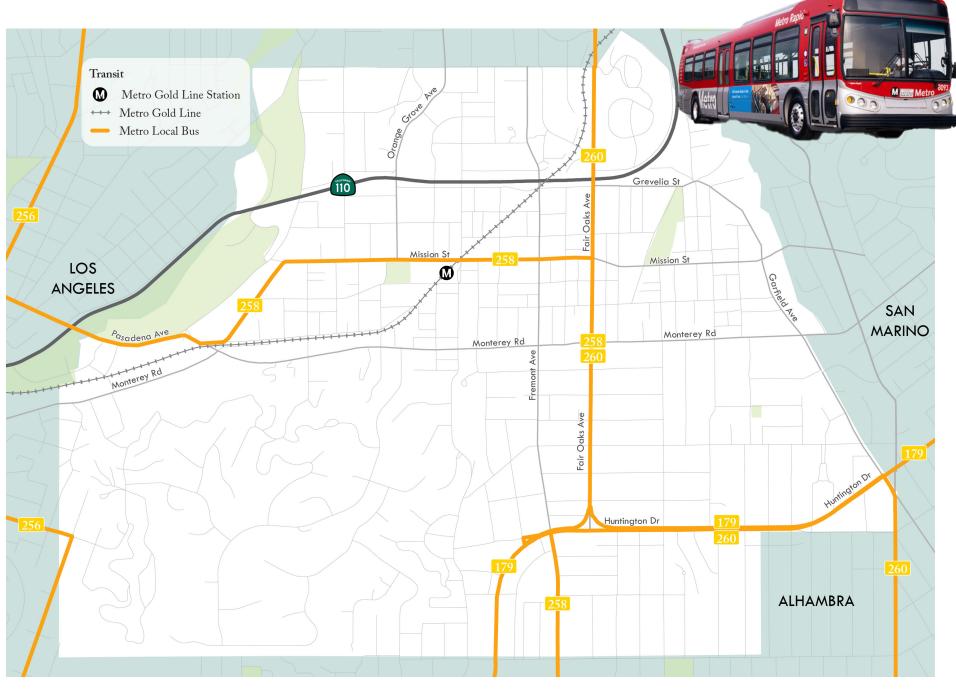


Figure B4.4. Existing fixed-route transit services. Large vehicles (including both buses and trucks) currently operate or are allowed to operate on only a few streets in South Pasadena, including Fair Oaks, Huntington, Mission, Pasadena Avenue, Fremont south of Huntington, Garfield Avenue south of Mission, and brief segments of Atlantic Boulevard, Collis Avenue and Avenue 60.



It is important to manage parking so residents not only have a place to park at home, but also have sufficient parking available in commercial areas.





E. PARKING

To ensure vehicular access to businesses, homes and other destinations, when developing parking policy the City should focus on availability of parking rather than supply. The supply of public and private parking in an area should also, to the extent feasible, be proactively managed as a shared resource, rather than individual allotments that may remain underutilized while parking on adjacent properties is oversubscribed.

Policies and Actions

- P4.13 Proactively manage public and private parking supply within a common area as a shared resource, and focus on measures to ensure availability and access rather than simply increasing supply.
 - Provide alternatives to mandated parking minimums and explore opportunities to increase availability of public parking through private development.
 - Seek to balance the need for vehicular access to properties with other imperatives, such as the need to reduce traffic for purposes of safety and environmental impact.
- A4.13a Establish a Preferential Parking Permit Program that can be managed efficiently, incorporates minimum requirements for implementation and identifies appropriate revenue sources to pay for administrative costs. Cap the number of permits that may be issued to a household as appropriate. 🕲 🧐 😝
- Periodically review Preferential Parking Permit program to make sure it A4.13b is meeting the needs of designated locations. 3 4 4



Aging in Place





F. STREET CLASSIFICATION

The City of South Pasadena classifies its streets into three major categories based on the functional classification system:

- 1. Arterial Streets: Arterial streets are generally the commercial arteries. They carry the majority of traffic within the city. A major arterial would contain either four or six lanes of through traffic, plus left-turn lanes at key intersections. Minor arterials serve the same function as major arterials, but have four lanes of through traffic and may or may not have separate left-turn lanes. Recommended design volumes on arterials are generally greater than 25,000 for major arterials and between 4,000 and 30,000 for minor arterials, depending on number of lanes and left-turn movements. Arterials serve two primary functions: to move vehicles within the city and to serve adjacent commercial land uses. Driveways and other curb cuts along arterials are generally limited to minimize disruption to traffic flow.
- 2. Collector Street: Collector streets are intended to carry traffic between residential neighborhoods and the arterial street network. They are generally two and four-lane roadways that have a mixture of residential and commercial land uses along them. Average daily traffic volumes on collector streets are generally between 2,000 and 6,000. Higher density residential land uses or side yards of single-family homes may be located adjacent to collector streets. Higher traffic volumes may be acceptable on certain collector streets such as those fronting commercial uses.
- 3. Local Residential Streets: Local residential streets are designed to serve adjacent residential land uses only. They allow access to residential driveways and often provide parking for the neighborhood. They are not intended to serve through traffic. Traffic volumes on a residential street should not exceed about 2,500 vehicles per day and 200-300 vehicles per hour. The maximum residential traffic volume which is acceptable to persons living along a street may vary from one street to another, depending upon roadway width, type of dwelling units (i.e., high density apartments versus single-family homes), presence of schools and other factors. The maximum volume of 2,500 is, therefore, to be used as a guide only.

Roadway designations are shown in Figure B4.5. Note that several minor arterials currently feature just one general-purpose lane in each direction rather than the standard of two. Also note that Orange Grove Avenue north of State Route 110 has recently been reduced to one general-purpose lane southbound (it remains two lanes north-bound).

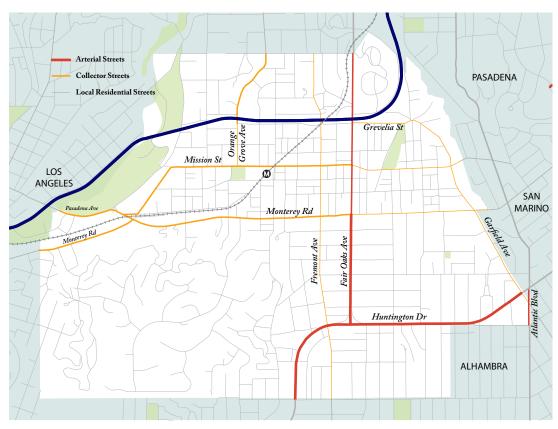
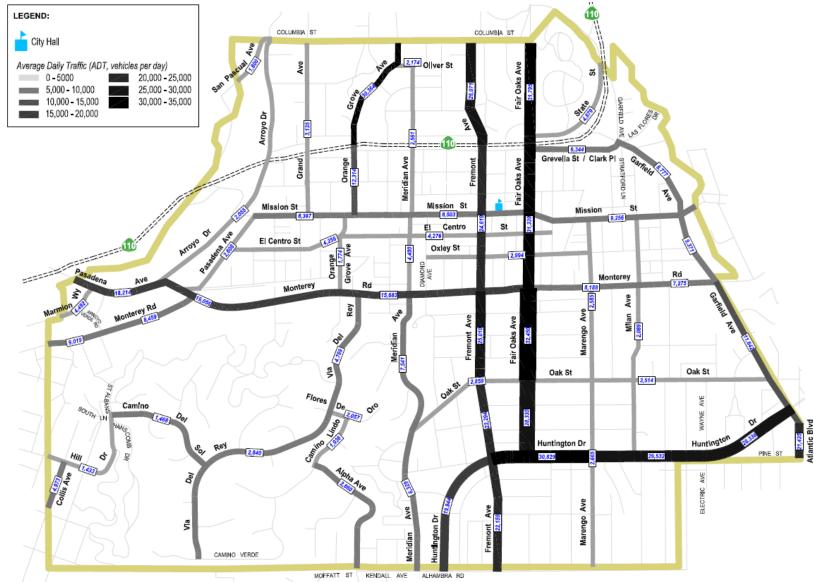


Figure B4.5. Existing roadway designations.



Transportation Networks

Current traffic volumes on select streets are shown in Figure B4.6. Only a few streets have volumes consistent with a four- or six-lane roadway (two to three general-purpose lanes in each direction): Fair Oaks Avenue, Huntington Drive, Fremont Avenue, and arguably segments of Pasadena Avenue and Monterey Road (note that the volume shown on Orange Grove Avenue north of State Route 110 is assumed to be incorrect). Mission Street currently has two general-purpose lanes in each direction west of Fair Oaks Avenue, while Fremont Avenue has just one lane each way.

Figure B4.6. Existing traffic volumes. Source: Average Daily Traffic Flow, September 2014, Minagar & Associates, Inc.



Figure B4.7. Current truck route designations. This General Plan Update recommends removal of Fremont Avenue south of Huntington Drive from the truck network.

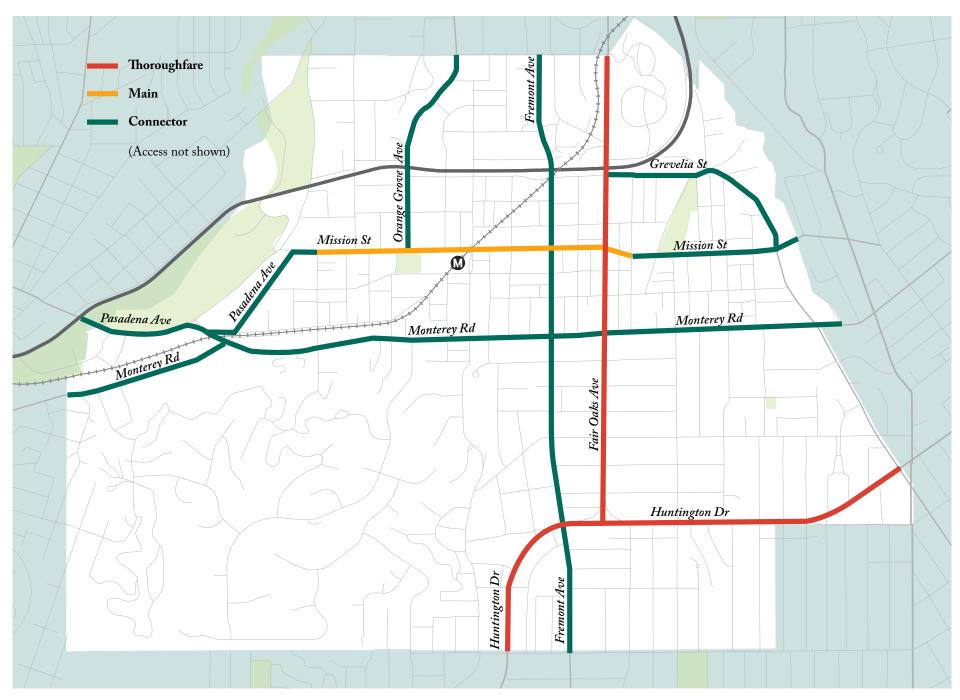


Figure B4.8. Proposed Classifications.

Proposed Classifications

Proposed new street classifications are shown in Figure B4.8. Four primary classifications are proposed: Throughway, Main, Connector and Access. These classifications are similar to those adopted by Pasadena in its 2015 General Plan Update. As in Pasadena, secondary classifications (such as "Access (Shared)") could be developed. While the classifications are not associated directly with land uses, they are related to land use, as well as to roles in the transportation network: retail is located primarily on Throughway and Main streets, on which a higher level of pedestrian amenity would be required. Transit, Bicycle and Freight "Modal Priority Network Overlays" would be adopted along with the new classifications, with additional requirements related to each mode such as accommodations for large vehicles and dedicated bicycle facilities.

Table B4.1 Descriptions of Proposed Classifications

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Classification	Definition	Major Elements	Funtional Equivalent
Thoroughfare	 Major regional street High volumes of traffic Primarily retail and high-density residential uses 	 2-3 through lanes of traffic each way (plus turn lanes) 35 mph design speed Minimum 5' sidewalks and 1/4-mile or less between marked crosswalks Pedestrians buffered from traffic by parking, bicycle lanes and/or other streetscape elements (e.g. planted strips or trees in furniture zone of sidewalk) 	Arterial
Main	 Pedestrian-oriented retail street Moderate volumes of traffic Primarily pedestrian oriented retail uses 	 1 through lane of traffic each way (plus turn lanes) 30 mph design speed Minimum 10' sidewalks and 1/8-mile or less between marked crosswalks 	Collector
Connector	 Crosstown street Moderate volumes of traffic Primarily low- to medium-density residential uses 	 1-2 through lanes of traffic each way (plus turn lanes) 30 mph design speed Minimum 5' sidewalks and 1/4-mile or less between marked crosswalks 	Collector
Access	 Local/neighborhood serving street Low volumes of traffic Primarily low- to medium-density residential uses 	 1 through lane of traffic each way (plus turn lanes) 25 mph design speed Minimum 5' sidewalks 	Local Residential

All streets would be covered under the City's adopted Complete Streets Policy, regardless of classification or modal priority.

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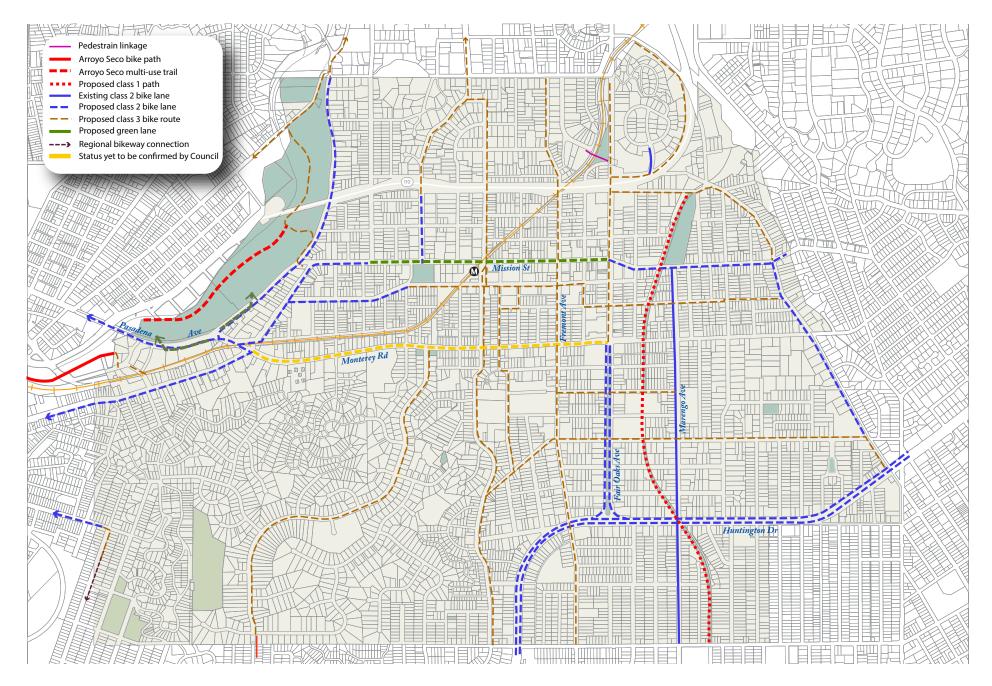


Figure B4.9. Existing and Planned Bicycle Facilities.

H. ADAPTABILITY



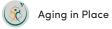
In the coming decades, rapidly evolving transportation-related technologies may affect urban mobility patterns. South Pasadena can look ahead to prepare for such changes by planning for flexibility in the design of the public realm. The following disruptive trends have changed mobility choices over the past five years and will change our mobility options into the future:

- Transportation Network Companies (TNCs): also called a ride-hailing services, are companies like Uber and Lyft that provide on-demand rides for passengers with mobile apps or websites. TNCs tend to increase demand for curb space but can decrease the demand for parking.
- Autonomous vehicles (AVs): are vehicles that are capable of driving with limited or no human involvement. There are six levels of autonomy (0-5) that range from issuing warnings and momentary interventions with the human driver to a fully automated machine which requires no human involvement to operate.
- Connected vehicles (CVs): are vehicles that can interact with one another and/or with infrastructure. Some CVs can also be autonomous vehicles, however CVs can be human operated.
- Car Sharing Services: are services that allow consumers access to a vehicle without owning a personal car. Car share services typically charge a monthly or yearly membership fee and an hourly rate for access to its shared vehicle fleet.
- 5. Micromobility: is a combination of emerging trends including bike share, e-scooters, and e-bikes.
- 6. Bike sharing services: bike sharing services operate like car sharing services in that consumers can rent from a shared bicycle fleet. Bike sharing services typically do not charge a monthly membership fee and can be either docked (at set stations where one picks up and drops off a bike) or dockless (bikes are picked up wherever the last user dropped them off).
- 7. Electric scooters and bikes: E-scooters and e-bikes are powered by an electric motor to propel riders along streets and up hills. E-bikes can travel up to 20 mph and e-scooters have a top speed of 15 mph. In the United States, e-bike and e-scooter sharing services are typically dockless and have expanded

- rapidly since the first launch of e-bike service in 2017 and e-scooter service in 2018.
- Microtransit: is defined as a privately-operated transit system, which in many cases mirrors the operations of public transit agencies along select routes. Microtransit operators can be highly flexible, tailoring their operations to match short-term or long-term changes in travel behavior.
- Intelligent Transport Systems (ITS): ITS are the control and information systems that use integrated communications and data processing technologies for the purposes of improving the mobility of people and goods. increasing safety, reducing traffic congestion and managing incidents effectively. Examples of ITS include: adaptive traffic signal control, adaptive street lighting; dynamic speed limits; conditional transit signal priority; automated detection of pedestrians in crosswalks; connected mobile applications for bicyclists; and connected vehicle communications.

To prepare for the wave of emerging changes in transportation technology, this General Plan identifies policies and actions that would enable the City to meet its common goals. The City's approach should be to harness technological innovations to achieve the overarching goals of creating an accessible, prosperous, resilient, healthy, safe and active community. In this changing mobility landscape, there are great opportunities to be national leaders by connecting the dots between disruptive trends, existing transportation governance, and funding structures. Investments today will be the foundation for future and experiment with today's traffic problems may be able to set the stage for larger policies. It is also important to be cognizant about what the future mobility options should and should not do. For example, while shared mobility options can provide various options for trips, it should not replace high-capacity transit in the long term.

Policies and Actions		
P4.14	Establish resilient transportation investments by prioritizing flexibility and adaptability.	
A4.14a	Identify and implement additional passenger loading zones as needed by monitoring demand for pick-up/drop-off access to curbs. ® 🍽	
A4.14b	Where demonstrated parking shortages exist, provide information on parking availability nearby rather than increasing supply. Strategies for doing so may include Transportation Demand Management (TDM) and Parking Demand Management (PDM) measures.	
A4.14c	If public parking supply must be increased, prioritize those options with the potential for future conversion to other uses.	
A4.14d	Evaluate and plan for the use of shared vehicles (such as carshare, bikeshare, etc.), ride-hail, autonomous vehicles, and other emerging technologies that will affect the street network, traffic operations and management, parking, curbside drop-off, and adjoining land uses. ®	
A4.14e	Monitor for impacts associated with delivery and loading.	
P4.15	Ensure new mobility services and options are accessible and safe for all.	
A4.15a	Expand the availability of shared bike, micromobility and microtransit options to offer a range of accessible mobility options. ® 🌣	
A4.15b	Develop clear policies around right-of-way and use of micromobilities	



A4.15c



Work with technological providers to ensure diversity in the new transportation system. 3

in the public right-of-way. ® 🗞

