Transportation 5

Access

Access refers to a person's ability to reach desired goods, services, and destinations typically needed on a daily basis.

This chapter describes a framework for a balanced transportation system in the Plan area that meets the needs of residents, workers, and visitors, and supports the Vision detailed in Chapter 2. Throughout the planning process, the community supported a transportation system vision that would enhance quality of life, promote environmental sustainability goals, and complement the unique community character in the Plan area.

This chapter is organized in several sections. First, the existing transportation network is described in terms of travel patterns, areas of strength, and opportunities for improvements. Second, the Plan area street network is organized into suggested street types based on prioritized and non-prioritized modes. Next, possible performance measures for evaluating future programs and projects are introduced, and a list of suggested improvement projects to move toward the goals and vision including possible General Plan policy updates, are presented in Chapter 8 and Appendix B.

GUIDING PRINCIPLES FOR TRANSPORTATION

The vision for transportation in the Plan area is to improve the environment and quality of life for residents through a safe, reliable, and efficient transportation network comprised of a range of transportation choices. Residents would have access to an interconnected network of both vehicular and non-automobile options in the Plan area, so they could leave their cars at home for some trips. Throughout the Plan area, there are locations such as villages, coastal trails, and community centers that are destinations with a strong sense of community. A connected, convenient transportation network would complement this sense of community.

Promoting active modes and transit use for work and leisure trips would help reduce dependence on the automobile, reduce local road congestion, and improve public health. Feedback from residents emphasized that it should be easy and safe to walk or bike from one neighborhood or commercial center to another, with new connections supplementing the existing network of sidewalks and bike facilities. Also, given that seniors and other citizens are often less able to walk or ride a bicycle, it is important to improve street connectivity and bus frequencies as well.

In this vision, an optimized transportation network comprised of diverse transportation options would connect residents to activity centers via reliable transit and convenient facilities for cyclists and pedestrians. Within unincorporated Santa Cruz County, some amount of improving and retrofitting the existing vehicular roadway network is necessary to reduce vehicle miles traveled (VMT) and congestion on Highway 1 and constrained arterial roadways. With fewer trips in single occupancy cars, Highway 1 would function better with reduced travel times for automobiles and trucks. Pressure on local streets would be relieved, increasing the reliability of travel for both short and regional trips, locally and on the freeway. In addition, connections between rural and urban portions of the Plan area would be strengthened in terms of access and reliability. The railroad and Monterey Bay Sanctuary Scenic Trail (MBSST) would contribute to transportation and recreation choices, as well as enhance public health, the sense of community, and economic vitality.

VALUES FOR SUSTAINABLE TRANSPORTATION

Four core values included in the guiding principle of "Transportation Choices" illustrate the public's strong desire for increasing mobility, and serve as the touchstones for the suggested performance metrics to evaluate the transportation system. These values are:

- Access for All
- Unique Community Character
- Multimodal Safety
- Clean Environment and Healthy Community

Access for All

Providing access to all destinations for all residents and visitors translates directly to the identification of improvements that would strengthen connectivity and proximity to employment and activity centers in the Plan area. Destinations include employment centers, community centers, schools, community buildings, and gathering places. Access is a person's ability to reach desired goods, services, and destinations typically needed on a daily or frequent basis, regardless of which travel mode one chooses. In contrast, mobility refers to physical movement, including travel by non-motorized and motorized modes. Although the two concepts are related, they are distinct and separate.

Overall, the future transportation network seeks to provide access to activity centers, including areas of dense employment, within a 10- or 20-minute walk, bike, or transit trip in the Plan area. Strengthening access would improve the ability of residents and workers to meet most short-distance daily needs without having to drive. For longer trips, automobile or express bus would remain the primary mode of transportation for most residents and workers. The challenge of ensuring that a public transit user can connect to and from different transit services to their destination is commonly referred to as the first- or last-mile problem (Mineta Transportation Institute, 2009). First- and last-mile connections to transit would need to be enhanced to achieve this goal. Transit users need to access a transit station via some other mode—for example by driving/carpooling, taking a shuttle or taxi, biking, or walking. Maintaining pedestrian and bike network connectivity would help improve first- and last-mile connections as well as enhance connectivity for trips made entirely on foot or by bike.

Unique Community Character

The Plan area is rich with neighborhoods each with unique character. Many of the key activity centers in the Plan area are located in these neighborhoods, including Soquel Village, Aptos Village, and Pleasure Point. These activity centers are the anchors of the Plan area—and can celebrate the diverse and inclusive community of residents and workers. Developing a transportation network that provides access to these activity centers within a 10- or 20-minute walk, or a short bike ride, would encourage people to experience and strengthen the unique community character of their neighborhoods.

Streets in the Plan area should be designed with the intention of encouraging walking, biking, and transit, especially near activity centers that people naturally gravitate to for work and play. Amenities such as street furniture, trees lining sidewalks, sidewalk café spaces, and inviting building facades would help accentuate the community character of neighborhoods and activity centers and make travel routes to them more appealing.

Vehicle Miles Traveled (VMT)

Vehicle Miles Traveled (VMT) is a commonly used measure of how much people in a specific area travel by car. VMT is calculated based on the number of vehicles multiplied by the distance traveled by each vehicle. In Santa Cruz County, 60 percent of all greenhouse gas emissions are attributable to VMT (Santa Cruz County Climate Action Strategy, 2013)

Active Transportation

Active transportation refers to the transport of person(s) and or goods via non-motorized modes of transportation, including walking and biking. On September 26, 2013, Governor Brown signed legislation creating the Active Transportation Program (ATP) in the Department of Transportation (Senate Bill 99, Chapter 359 and Assembly Bill 101, Chapter 354). The ATP consolidates existing federal and state transportation programs, including the Transportation Alternatives Program (TAP), Bicycle Transportation Account (BTA), and State Safe Routes to School (SR2S), into a single program.

Multimodal Safety

The community has repeatedly expressed concern about bicycle and pedestrian safety. The California Complete Streets Act (2008) requires cities in California to plan for a balanced, multimodal transportation system that meets the needs of bicyclists and pedestrians as well as vehicles. Initiatives such as Vision Zero similarly promote concrete options for increasing safety for all people using multi-modal roadways.

The Plan proposes that roadways be designed to reduce transportation-related fatalities and injuries, focusing on areas where improvements can be made through reduced roadway speeds, appropriate lane widths, compact intersections, methods to buffer pedestrian and bicycle exposure to vehicular traffic, and improved street markings, signals, and signage. Specific gaps in infrastructure—such as incomplete sidewalks, long pedestrian crossing distances, bike lane gaps, and sudden lane merges should be addressed to create safer continuous travel paths for pedestrians and cyclists. Potential bicycle and pedestrian safety improvements are shown in the Aptos/State Park Circulation Focus Area in Figure 7-14, and listed in Appendix B.

Clean Environment and a Healthy Community

Promoting a clean environment goes hand-in-hand with promoting a healthy, active community. Encouraging active transportation and transit as a realistic and convenient travel option would positively contribute to human health and a clean local environment. Physical activity is good for health, while leading a sedentary lifestyle increases the risk of cardiovascular disease, stroke, and obesity. Research has identified a number of land use and design-related determinants of physical activity, including the presence of sidewalks, enjoyable scenery, neighborhood design features, density, land use mix, the presence of other people who are physically active, and safe infrastructure.

Promoting active modes and transit also helps promote clean air and water. Promoting walking, biking, and transit rather than travel by automobile would reduce the amount of harmful air pollutants released into the atmosphere, which affects both local and regional air quality. In general, mobile sources are major contributors to air toxins. The higher the VMT, the greater the contribution to air pollution.

A bioswale collects and infiltrates stormwater rather than directing it to a drainpipe, reducing run-off and improving water quality.

Air pollutants decrease air quality also contribute to water pollution in the form of runoff from roadways and parking lots which contain oil, hydrocarbons, heavy metals and other pollutants. Reducing reliance on automobiles while encouraging active transportation and transit modes would improve air quality and reduce greenhouse gas emissions in the Plan area. In addition, how streets are designed can improve the environment. Using design features such as pavement and landscaping that retains, treats, or eliminates runoff at its source would improve water quality.

EXISTING CIRCULATION NETWORK AND TRAVEL PATTERNS

The current circulation network in the Plan area is geographically oriented in an east-west direction, following Highway 1 and Soquel Drive. However, there is limited east-west street connectivity along the length of the Plan area due to topography such as creeks, gulches, and mountainous terrain. Highway 1 and Soquel Drive are the only continuous east-west oriented streets in the north part of the Plan area. East Cliff Drive, Portola Drive, Capitola Road, Park Avenue, and Brommer Street provide east-west connectivity south of Highway 1. North-South Roadway connectivity is constrained by Highway 1, which creates a major barrier for vehicles, bicycles, and pedestrians between the north and south portions of the Plan area. There are only six north-south connections across Highway 1 along its 8-mile route between Live Oak and Aptos, which are often spaced more than a mile apart. This creates connectivity difficulties for pedestrians and bicyclists trying to access goods, services, and employment. The railroad right-of-way also limits north-south connectivity with only seven crossings at select arterial or collector designated streets in the Live Oak and Seacliff neighborhoods.

Vehicle Level of Service (LOS) is a qualitative description of traffic flow based on factors such as speed, travel time, delay, and freedom to maneuver, that ranks roadway segments and intersections on a scale of A through F. In 2012, with the exception of Highway 1, all Plan area roadways operated at LOS D or better during daily and peak periods for a typical weekday (without an incident on Highway 1).

Average daily traffic (ADT) varies in the Plan area. Some roadway segments, such as Brommer Street between Darlene Drive and 20th Avenue, carry fewer than 20,000 vehicles per day. Others, such as several segments along Soquel Drive, 41st Avenue, and State Park Drive, carry between 20,000 and 40,000 vehicles per day. Highway 1 between Monterey Avenue and Porter Street carries approximately 46,000 to 48,000 vehicles per direction daily (almost 100,000 vehicles per day total) (Figure 5-1).

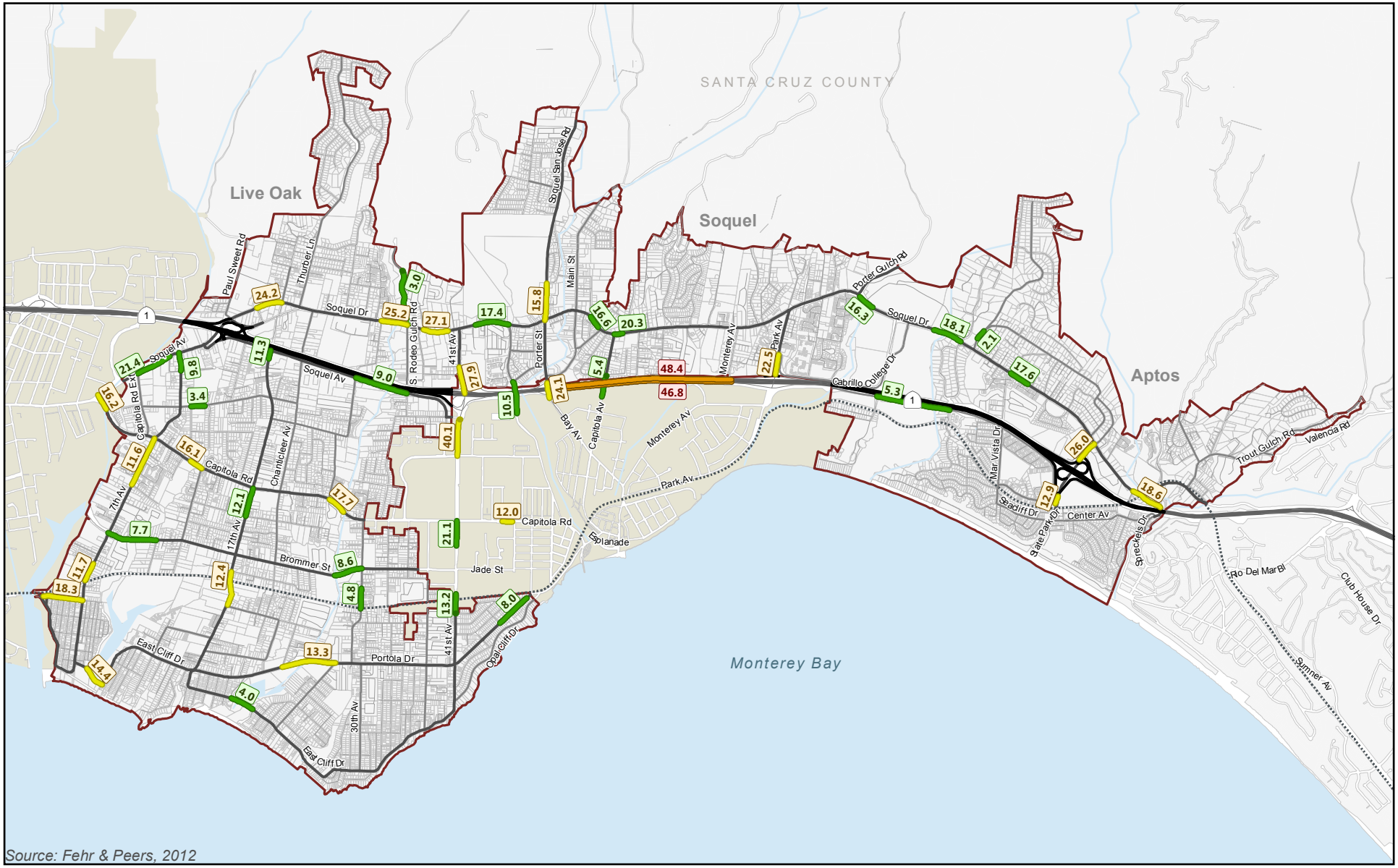
On a typical weekday, commute trips represent approximately 20 to 25 percent of all trips.[1] These trips have the longest average trip length compared to the 75 to 80 percent of daily non-commute trips. Non-commute trips are comprised of school, shopping, civic, and recreational trips. Santa Cruz County is a popular tourist destination that attracts tourists mainly during the spring and summer months, especially on weekends and holidays. These visitor recreational trips add considerable stress to already-constrained roadways.

Level of Service

Vehicle Level of Service (LOS) is a qualitative description of traffic flow based on factors such as speed, travel time, delay, and freedom to maneuver. Six levels are defined from LOS A, which reflects free-flow conditions where there is very little interaction between vehicles, to LOS F, where the vehicle demand exceeds the capacity and high levels of vehicle delay result. LOS E represents "at-capacity" operations. The 1994 County General Plan Policy 3.12.1 establishes LOS D as the minimum LOS standard.

[1] AMBAG Regional Travel Demand Model: Model Development Report 2005 Base Year Model (AMBAG, March 2011).

FIGURE 5-1 DAILY ROADWAY VOLUMES AND LEVEL OF SERVICE



Source: Fehr & Peers, 2012

Roadway Level of Service (LOS) and Average Daily Traffic (ADT)

- LOS A, B, & C with ADT (x1,000)
- LOS D with ADT (x1,000)
- LOS E with ADT (x1,000)
- LOS F with ADT (x1,000)
- Railroad
- Plan Area

NORTH

Monterey Bay Sanctuary Scenic Trail Master Plan

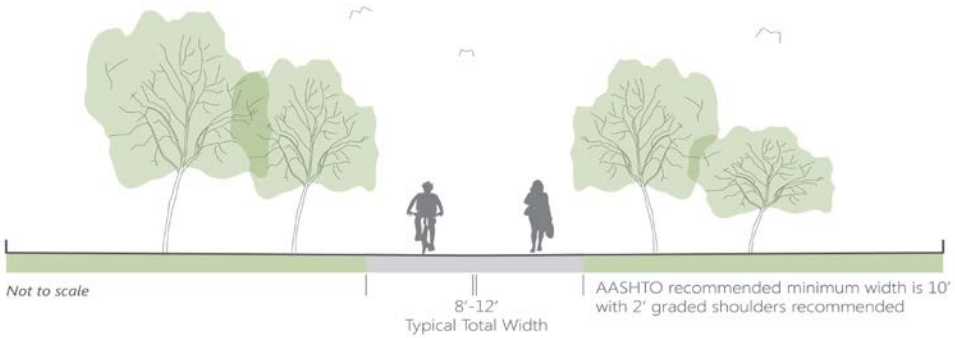
The Santa Cruz County Regional Transportation Commission (SCCRTC) has recently adopted a plan for the Monterey Bay Sanctuary Scenic Trail. The spine of this trail network will be built within the 32-mile Santa Cruz branch rail line right-of-way from Davenport, in northern Santa Cruz County, to Pajaro in Monterey County. The Plan calls for a new multi-use bicycle/pedestrian trail through Live Oak, Capitola, and Aptos parallel to the rail tracks. A narrow rail right-of-way in Live Oak east of 17th Avenue may require an alternative route along Brommer Street and/or Portola Drive in the short term. In the long term, rail track relocation will allow for the trail to coexist with the rail tracks. The Master Plan and Final Environmental Impact Report were adopted in 2013 (SCCRTC, 2013). Approximately $7 million of local and federal funds have already been secured for construction of initial segments.

About 80 percent of Plan area residents commute to work within Santa Cruz County, while approximately 20 percent commute to work in other locations, including Santa Clara, Monterey, and San Benito counties. Approximately 75 percent of Plan area residents commute by driving alone in a vehicle or motorcycle, which is higher than in Santa Cruz County (71 percent) and the State (73 percent). Nine percent of workers in the Plan area commute by public transportation, walking, or biking, which is a lower rate than in Santa Cruz County overall and the State.[2]

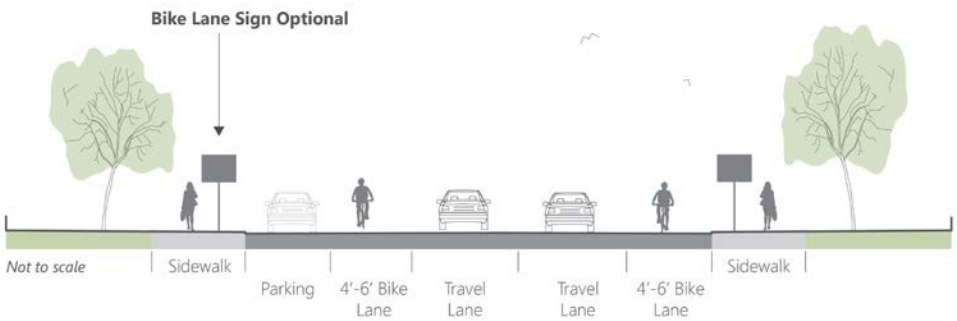
The Plan area is served by the Santa Cruz Metropolitan Transit District (Metro) bus system, which provides bus service in Santa Cruz County. Metro operates approximately 30 year-round bus routes. Some additional routes operate seasonally according to UCSC school terms or the tourist high season. Metro operates regular bus service along Soquel Drive between Aptos and downtown Santa Cruz, which is the highest ridership route in the Plan area (Routes 69 and 71). Other Metro routes in the Plan area provide service between Capitola, Santa Cruz, Scotts Valley, and Watsonville. The Watsonville Transit Center located at Rodriquez Avenue and West Lake Avenue in Watsonville provides connections to Greyhound and Monterey Salinas Transit (MST). MST routes connect to numerous cities and points of interest including: Pajaro, Moss Landing, Castroville and Salinas, as well as other rural communities in Monterey County.

Monterey Bay Sanctuary Scenic Trail Study Area

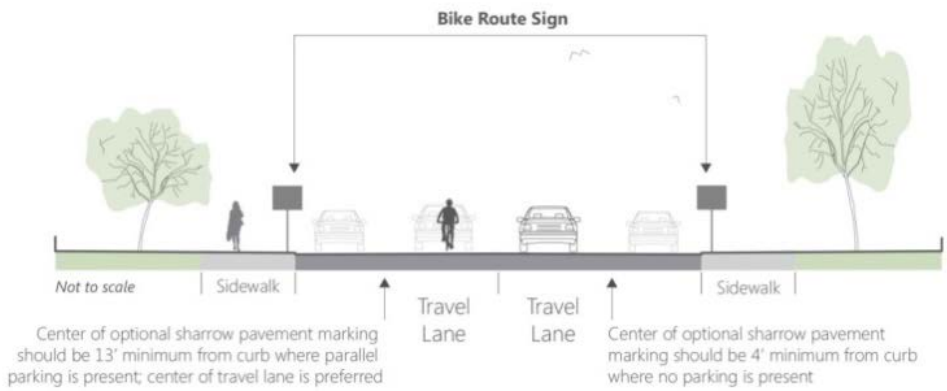
[2] ACS, 2006-2010; BAE, 2012



Class I Bicycle Path



Class II Bicycle Path



Class III Bicycle Path

Monterey-Salinas Transit offers twice-daily service with route 78 between Downtown Santa Cruz and Downtown Monterey, with several stops through the Plan area. In addition, Amtrak operates an express bus service, the Amtrak Thruway Motorcoach Highway 17 express bus, between the City of Santa Cruz and the San Jose Diridon Station in Santa Clara County. This express route mainly serves commuters who work outside of Santa Cruz County and need to make longer-haul trips to reach their workplaces. San Jose Diridon is a major transit hub in Santa Clara County with regional transit connections via a variety of rail transit and shuttle providers, including Caltrain, Amtrak, Santa Clara County Valley Transportation Authority, and Altamont Commuter Express.

Currently, less than 3 percent of residents in the Plan area commute to work by bus. Encouraging an increase in this ridership would go hand-in-hand with making it a more attractive choice for residents as more frequent service could be supported.

Bicycle facilities in the Plan area provide some east-west connectivity, as dedicated bicycle lanes are present on most major east-west streets. The bicycle facility network includes a variety of accommodations, including paths for exclusive use of bicycles and pedestrians (Class I), on-street bike lanes (Class II), and signed on-street bike routes (Class III). However, bicyclists face network constraints and challenges, including limited north-south connectivity due to Highway 1 and vehicular congestion on key roadways.

The Plan area walking environment is characterized by limited east-west connectivity, constrained north-south connectivity across Highway 1, and the inconsistent provision of sidewalks throughout. Natural geographic features also impose constraints. The Live Oak street

network in particular includes many cul-de-sac streets that interfere with connectivity for all vehicles, as well as pedestrians and bicyclists.

Parking is limited in high-employment and tourist destinations in the Plan area, such as near Dominican Hospital, Cabrillo College, and in Seacliff Village. In these areas, parking management strategies would help balance the utilization of existing parking and minimize spillover effects on adjacent neighborhoods.

STREET TYPES

The transportation framework discussed in this chapter is focused on the development of a "layered" transportation network, a concept that envisions streets as systems, each street type designed to create a high quality experience for its intended users. A balanced transportation system is rooted in the understanding that it is difficult for a single roadway to meet the demands and expectations of all modes simultaneously. However, the various demands and expectations can be met overall if streets function as part of a multimodal network. In order to accomplish this, an interconnected, layered network of street "types" is proposed for the Plan area, in which key streets are designated to prioritize one or another form of travel. Overall, all modes would be served by the suggested transportation network.

In order to create a balanced transportation system, roadways that play key roles in how people travel are categorized into six street "types", based on the forms of travel that are emphasized on the street. The characteristics of the street and surrounding area are taken into consideration when designating the type. Street types define the user priorities on each street and frame the planning context for infrastructure needs. Taken together, these designated streets create a livable, balanced transportation system.

Layered Network and Street Types

A balanced transportation system is based in the understanding that it is difficult for a single roadway to meet the demands and expectations of all modes simultaneously. The "layered" transportation network concept envisions streets as systems, each street type designed to create a high quality experience for its intended users. In order to create a balanced transportation system, streets that play key roles in how people travel in the Plan area are categorized into six street "types" explored in more detail in this Chapter.

The future layered network draws upon existing conditions and community vision. The existing conditions review of roadways in the Plan area included the design, use, infrastructure, operating characteristics, and surrounding land uses.

The key variables used in developing the street types are the following:

Geographical Context: What geographic context does the street exist in now? Is this context expected to shift in the future, and if so, how? What land uses and activity centers does it connect to now and where would it connect to in the future? Can bolstering access to activity

centers along a specific street improve connectivity in an east-west or north-south direction?

Use and Access: What form of travel do residents and visitors most use today? What safety concerns or challenges do travelers face on the street?

Community Vision: How does this street relate to the community's vision and goals for access, environmental stewardship, multimodal safety, and fostering a unique community character, especially near activity centers? Can a street connect a traveler from their home or workplace to activity centers within a 10- to 20-minute walk, bike, or transit trip?

Consistency with Other Plans: Are these street types congruent with street classifications in the General Plan, Village and area plans, the Capital Improvement Plan (CIP), County Bike Plan, Design Criteria and other County guidance and specifications? How do they differ, and would changes lead to better sustainability outcomes?

The locations and extent of these street types are displayed in Figure 5-2. The street types are described in Table 5-1. Each street type identifies prioritized and non-prioritized modes. For example, on "Transit Connector" streets, buses and pedestrians would be given priority status. Modes that are not emphasized would be provided for and given adequate space and necessary facilities, but non-priority users would not be the focus of the street's design. Consequently, automobiles, trucks, and bicyclists would be provided for, but not prioritized, on Transit Connector streets. Table 5-2 displays the relationship between the Street Types in this Plan and the Urban Street Classifications from the *Circulation Element of the 1994 County of Santa Cruz General Plan and Local Coastal Program*.

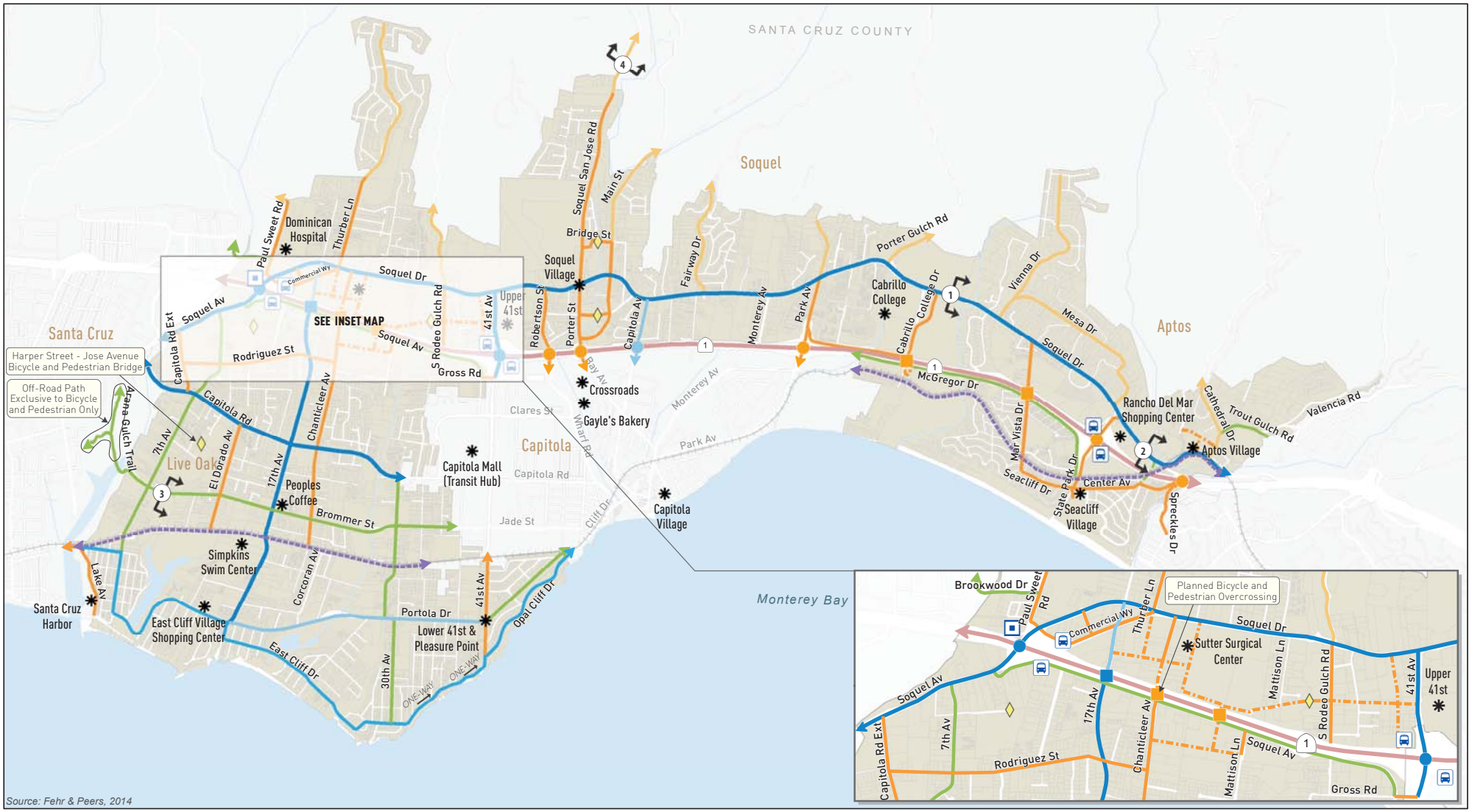
Activity Centers

Activity centers are places to which people naturally gravitate for work, shopping and leisure purposes, and trips begin and end there. Activity centers range from major places of employment, retail centers, and educational institutions, to village-like neighborhoods with elementary schools, parks, restaurants, and commercial corners with gathering spots. Comfortable, direct walking connections to activity centers are essential for pedestrians. In order to encourage walking to activity centers, wide and complete sidewalks should be provided on the streets leading them with amenities and landscapes helping to create a pleasant walk. Additionally, in order to allow people to bike to activity centers, safe routes and secure bike parking should be provided. Bike parking facilities should be located in prominent, well-lit areas of an activity center to enhance security and ease of use.

Walkshed Analysis

Five major activity centers were chosen to illustrate the concept of "walksheds" in the Plan area: Dominican Hospital, Soquel Village, Pleasure Point, Cabrillo College and Aptos Village. Figure 5-3 depicts a 10-minute walkshed and 20-minute walkshed around each of these five activity centers. A walkshed is a geographic area representing how far a person can walk in a certain time period—usually about 10 or 20 minutes, or about ½- to 1-mile in distance.

FIGURE 5-2 FUTURE STREET TYPES NETWORK



Features

- Express Bus Stop
- Partial List of Activity Centers
- Potential Enhanced Park-n-Ride
- Existing Highway 1 Crossing
- Site of Possible Future Highway 1 Crossing
- Railroad
- Plan Area
- Neighborhood Path
- Freeway
- Monterey Bay Sanctuary Scenic Trail
- Cross Section Location

Street Types

- Multimodal Corridor
- Transit Connector
- Bicycle Connector
- Active Connector
- Coastal Street
- Rural Connector
- Future Bicycle Connector
- Future Active Connector

NORTH

TABLE 5-1 STREET TYPES AND MODE PREFERENCE

Prioritized Modes	Non-Prioritized Modes	Description and Preferred Attributes
Multimodal Corridor		
Buses, Bicyclists, Pedestrians, Automobiles 	Trucks 	• The purpose of this street type is to provide a safe, continuous route for vehicles, transit users, pedestrians, and cyclists. • Buses, bicycles, pedestrians, and automobiles are prioritized on Multimodal Corridors. Trucks are provided for, but not prioritized. • Includes features like buffered dedicated bicycle facilities (cycle tracks), bus shelters and amenities, wide sidewalks to and from bus stops, and frequent and reliable bus service. • Access to multimodal corridors for pedestrians and bicyclists is key. This street type is complemented by Active Connector, Transit Connector, and Bicycle Connector street types, also explained in this section. • All Multimodal Corridors have existing bus service. Capitola Road currently has bus service running every 30 minutes. Soquel has buses running about every 15 minutes. • Sample Cross Section Locations: (1) Soquel Drive near Cabrillo College Drive: may include cycle tracks, bus shelter bulb-outs, landscaped and bioswale median, and widened sidewalks (suggest 6 to 8 feet wide). (2) Soquel Drive between Aptos Ranch Road and Aptos Wharf Road: may include colored bike lanes, transit shelters, and widened sidewalks (suggest 6 to 8 feet wide).
Transit Connector		
Buses and Pedestrians 	Automobiles, Trucks, and Bicycles 	• The purpose of this street type is to connect transit users and pedestrians to Multimodal Corridors. • Buses and pedestrians are prioritized on these streets. Automobiles, trucks, and bicyclists are provided for, but not prioritized. • Transit Connector streets are streets with existing Metro bus service. • All transit users are pedestrians at some point during a journey, as they walk to and from bus stops and wait at bus stops. Transit users, therefore, need safe routes to and from transit in both east-west and north-south oriented directions. 2+

TABLE 5-1 STREET TYPES AND MODE PREFERENCE

Prioritized Modes	Non-Prioritized Modes	Description and Preferred Attributes
Bicycle Connector		
Bicyclists 	Automobiles, Trucks, Buses, Pedestrians 	• The purpose of this street type is to connect bicyclists to Transit Connector streets. • Bicycles are prioritized on these streets thorough dedicated bicycle facilities, such as bicycle lanes or cycle tracks. • Buses (where routes are currently in operation or will be in the future), automobiles, trucks, and pedestrians are provided for, but not prioritized. • Bicycle Connector streets provide safe bicycle routes to and from Multimodal streets. In addition, they provide safe routes to Highway 1 overcrossings, including the planned pedestrian/bicycle overcrossing at Chanticleer Avenue and Mar Vista. • Like Transit Connectors, Bicycle Connectors form a network of north-south and east-west oriented routes in order to strengthen access from all directions, typically on lower-volume and lower-speed streets • Sample Cross Section location at (3) Brommer Street between 7th Avenue and El Dorado Avenue: may include may include buffered bike lanes (bike lanes separated from automobile traffic by either a physical barrier or a wide, painted section of roadway) and street landscaping.
Active Connector		
Pedestrians and Bicyclists 	Automobiles, Trucks, Buses 	• The purpose of Active Connector Streets is to connect pedestrians and bicyclists to different activity centers and land uses in the Plan area. • Pedestrians and bicyclists are prioritized on Active Connectors, through wide sidewalks and high-visibility crosswalks, pedestrian-friendly intersection treatments, as well as dedicated bicycle facilities where possible. Buses (where routes are in operation), automobiles and trucks are provided for, but not prioritized. • Active Connectors streets tend to be north-south oriented in order to connect pedestrians and bicyclists to the east-west oriented transit street types. • This street type is a direct complement to Bicycle Connector Streets, as pedestrians and cyclists need safe routes to access transit in the Plan area.

TABLE 5-1 STREET TYPES AND MODE PREFERENCE

Prioritized Modes	Non-Prioritized Modes	Description and Preferred Attributes
Coastal Street		
Pedestrians and Bicyclists  	Automobiles, Trucks, Buses   	• The purpose of Coastal Streets is to provide high-quality, dedicated bicycle and pedestrian recreational paths with scenic views of the Monterey Bay and coastal areas. • Pedestrians and bicyclists are prioritized on Coastal Streets. Buses and automobiles are provided for, but not prioritized. • Some portions of Coastal Streets are one-way, thus the ability of trucks and larger buses to navigate Coastal Streets may be limited.
Rural Connector		
Automobiles and Bicyclists  	Trucks, Buses, and Pedestrians   	• The purpose of this street type is to provide automobile and bike connectivity and access in lower density, rural neighborhoods marked by dispersed land use and less developed streets. • A few rural connectors have regional transportation importance. In those cases, consider traffic mix and commuter use in road design. • Both bikes and automobiles are prioritized on Rural Connectors. Pedestrians and trucks are provided for, but not prioritized. • Due to the narrow right-of-way on some Rural Connectors, it may be difficult for buses and trucks to traverse, and slow speeds with deference to autos and bikes is advised. • Providing sidewalks along Rural Connectors is key. In some cases, providing a wider, well-marked paved shoulder can provide the safe buffer from automobile traffic that pedestrians need. • Sample Cross Section Location at (4) Soquel San Jose Road between Little Creek Road and Rancho Soquel Drive: may include sharrow markings in the downhill direction, buffered bike lanes in the uphill direction, maintained paved shoulder (for pedestrians).

Note: Locations of street types are shown on Figure 5-2: Future Street Types Network.
Sources: Fehr & Peers, 2014.

TABLE 5-2 RELATIONSHIP BETWEEN PLAN AREA STREET TYPES AND URBAN STREET CLASSIFICATIONS FROM SANTA CRUZ COUNTY GENERAL PLAN (1994)

	Street Types (Sustainable Santa Cruz Plan)					
Urban Street Classifications (General Plan)	**Multimodal Corridor**	**Transit Connector**	**Bicycle Connector**	**Active Connector**	**Coastal Street**	**Rural Connector**
Major Arterials (3-6 lanes)	■	■				
Minor Arterials (2-4 lanes)	■	■	■	■		
Collectors (2 lanes)			■	■	■	■
Select Locals (2 lanes)					■	■
Locals (2 lanes)					■	■

Sources: Fehr & Peers, 2014; County of Santa Cruz, 1994.

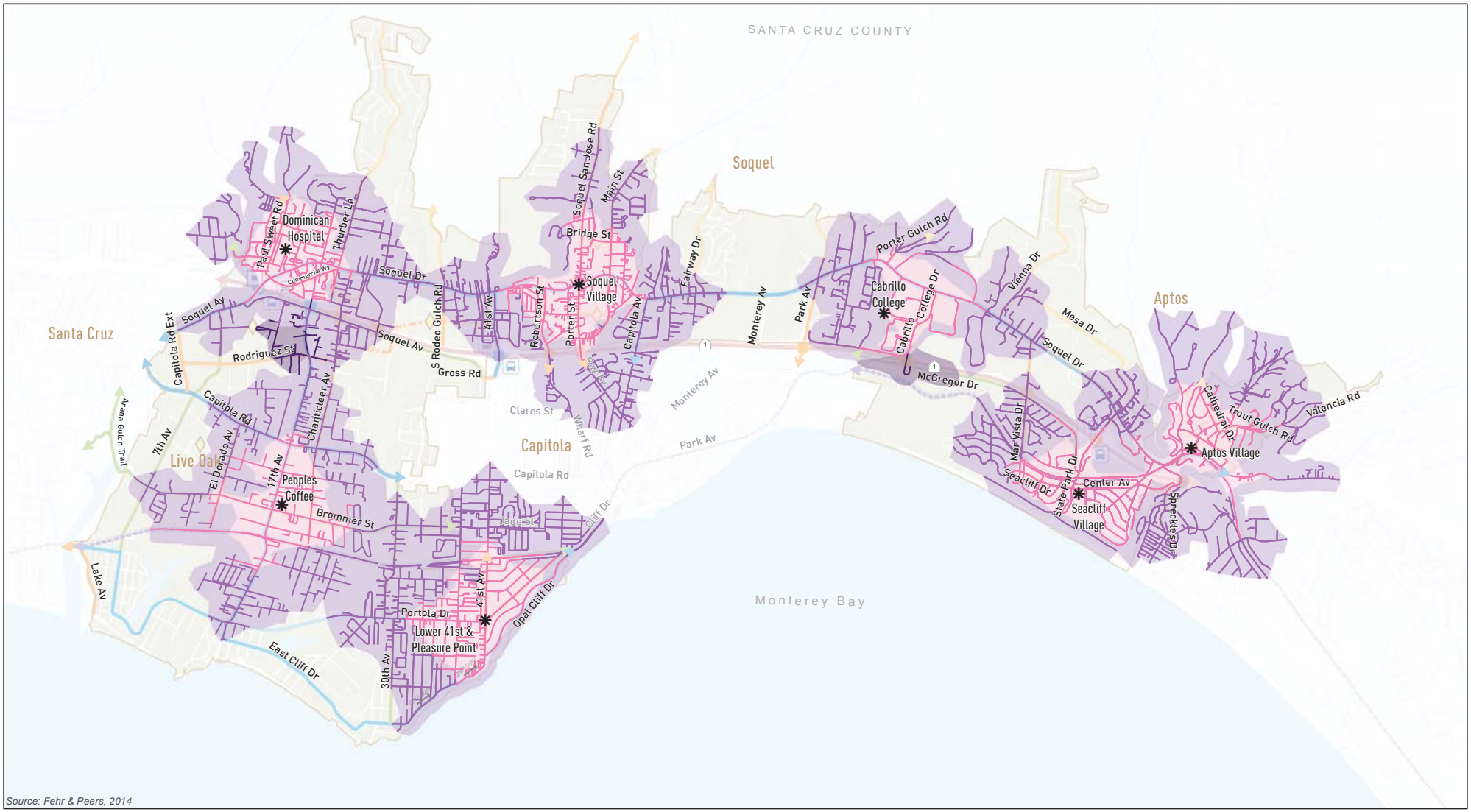
Walksheds can be used to "measure" or illustrate the connectivity of an area; that is, they describe the access residents, as pedestrians, would have to points of interest and goods and services. Walksheds can also be useful for evaluating how much connectivity is gained from a particular improvement to a pedestrian network.

In addition to employment, commercial and educational activity centers, a number of other points of interest exist in the Plan area including medical uses and parks. The majority of these points of interest are clustered along 17th Avenue and Soquel Drive. Both of these streets are suggested to be classified as Multimodal Corridor, with frequent bus service.

An analysis was conducted surrounding 17th Avenue and Soquel Drive corridors to determine what points of interest will be within a 10- and 20-minute walk from these corridors in the future. The walkshed analysis resulted in the suggested connectivity improvements depicted in Figure 5-2. The analysis indicates that connectivity, in terms of distance to destinations, is relatively good. The majority of points of interest would be within a 10-minute walk of 17th Avenue or Soquel Drive if new connections and over crossings were in place and the remainder would be within a 20-minute walk.

However, north of Highway 1, Soquel Drive is the primary, if not the only, option for people moving east-west through the Plan area on foot. The high speed of traffic, narrow, obstructed, or missing sidewalks, inconsistent landscaping for shade and other design elements make walking here an unattractive choice. Key destinations are surrounded by residential uses, meaning there is great potential for future pedestrian demand if the walking routes can be improved.

FIGURE 5-3 WALKSHED ANALYSIS



Source: Fehr & Peers, 2014

Features

- Partial List of Activity Centers
- Existing Highway 1 Crossing
- Site of Possible Future Highway 1 Crossing
- Railroad
- Plan Area
- Freeway

Walkshed Analysis

- 0 - 10 minute walk (includes possible Chanticleer Ave and Mar Vista Dr crossings only)
- 10 - 20 minute walk (includes possible Chanticleer Ave and Mar Vista Dr crossings only)
- Added walking distance (20 minutes) with all potential Highway 1 crossings included

NORTH

The importance of future street connections and connections across Highway 1 is highlighted by the analysis. Near Dominican Hospital, south of Soquel Village, and between Seacliff and Aptos, Highway over- or possibly under-crossings, as feasible provide north-south access for pedestrians that would otherwise be cut off from the opposite side of the freeway. Crossings at Chanticleer, Mar Vista, and via the rail trail between Aptos and Seacliff are already planned by the Regional Transportation Commission and in various stages of planning and funding acquisition. This Plan suggests consideration of additional crossings at 17th Avenue, the former Skyview Drive-In/Flea Market parcel, and at Cabrillo College Drive. New crossings would be high cost investments and therefore are unlikely to be realized in the short-term. However, these improvements have a place in the Plan due to the strong potential to positively impact ocal access and reduce traffic congestion in the Plan area, and the long term nature of the goal of greater sustainability.

Network Connectivity

An important principle supporting the selection and geographic spacing of the suggested Street Types and transportation improvements is network connectivity and access to transit. This section provides an overview of network connectivity from the perspective of all users—bicyclists, pedestrians, transit riders, and motorists.

East-West Roadway Connectivity

There is limited east-west street connectivity along the length of the study area due to local topographic constraints such as creeks and gulches. Highway 1 and Soquel Drive are the only continuous east-west streets in the north part of the study area, and East Cliff Drive and Portola Avenue provide an east-west connection south of Highway 1. No local neighborhood streets cross creeks. This often requires pedestrians and bicyclists to take indirect routes between neighborhoods and to cross these barriers by using higher volume streets. Further detail on existing conditions in the Plan area can be found in the Existing Conditions Report, Appendix E (County of Santa Cruz, 2012).

Lack of connectivity introduces both safety and travel time reliability concerns into trip planning. Having multiple east-west and north-south routes is important for distributing traffic, providing path options and reducing travel time and distance for everyone. Providing continuous routes for bicyclists and pedestrians with fewer detours (e.g., detours resulting from cul-de-sacs and sidewalk gaps) along low-volume streets would create comfortable and connected east-west and north-south oriented routes.

North-South Connectivity

Highway 1 serves an important role in local and regional vehicle travel. However, it is also a major barrier for vehicles, and other transportation modes between the north and south portions of the Plan area. There are six north-south connections across the 8-mile length of Highway 1 within the unincorporated area, at Soquel Drive, 41st Avenue, Porter Street-Bay Avenue, Capitola Avenue, Park Avenue, and State Park Drive (Figure 5-2). These crossings are often spaced more than a mile apart, which focuses local traffic at these crossings and increases travel times for vehicles and active transportation modes. Further, the bicycle and pedestrian facilities at the Highway 1 crossings vary in availability and condition.

Vehicular Circulation

This section describes strengths and opportunities in the County roadway network and explains how vehicular traffic would fit into the suggested Street Types. High levels of motor vehicle travel result in increased congestion at locations where major streets intersect with freeways, cross geographic barriers, or run parallel to the congested highway. Establishing viable and safe transit and active transportation infrastructure throughout the network would help decrease automobile dependence and encourage people to take transit, walk, or bike for some trips. However, many trips would still be made by automobiles, both local and longer distance trips.

Improvements for automobiles on Multimodal Corridors would include Transportation System Management (TSM)/Intelligent Transportation Systems (ITS) measures, prioritized on some urban and on rural streets. On a Multimodal Corridor, TSM measures such as adaptive signal timing and ITS would be used to improve vehicle travel time reliability and help to optimize the steady, safe, and orderly flow of vehicle traffic on congested streets. These TSM measures are not typically considered capacity enhancements; rather, they are operational improvements designed to complement vehicle trip reduction strategies. Prioritizing automobiles on Rural Streets would help improve access between rural and urban parts of the Plan area. The roadways connecting rural areas tend to have steep grades and many curves.

The layered network concept described by the Street Types in this plan views streets as systems where each street type is designed to create a high quality experience for its intended users. There is a finite amount of space on roadways in the Plan area, due in part to the constraints of available road right-of-way. In addition, decreasing budgets for the maintenance of roads, as well as recognition of the environmental impacts of adding lanes and new pavement, mean that adding capacity is not always a feasible or desirable option. Adding capacity to a congested roadway does not always lead to the traffic benefit people hope for, especially if traffic demand exceeds what a newly widened roadway can accommodate. However, in many cases existing space in a right of way can be reconfigured to provide infrastructure for active modes—such as wider sidewalks and wider, buffered bike lanes.

It is also important to "claim" public right-of-way areas and not allow adjacent private uses or landscaping to encroach upon and diminish the utility of rights of way for pedestrians and cyclists as well as for vehicles.

Goods Movement

The main roadway in the Plan area is Highway 1. This regional roadway is used for longer-haul trips and conveys commercial goods throughout the region, in addition to accommodating resident and visitor trips to workplaces, community places, and visitor attractions. Trucks move most commercial freight in Santa Cruz County. Highway 1 serves as the main link that truckers can travel to bring regional, national, and international goods to consumers. The AMBAG Sustainable Communities Strategy identifies Highway 1 as a goods movement corridor of regional significance, especially for conveying agricultural goods from the Plan area to surrounding counties.[3]

[3] 20135 MTP/SCS and RTSs for Monterey, San Benito, and Santa Cruz EIR, AMBAG, 2014; Central Coast California Commercial Flows Study, Cambridge Systematics, 2012.

Transit Network

Multimodal Corridors and Transit Connectors would form a strong north-south and east-west oriented network of transit routes throughout the Plan area.

Soquel Drive has high-frequency bus service, with buses arriving at least every 15 minutes during AM and PM commute times (Metro routes 71, 69W, 91X, 55, 54). Capitola Avenue between Soquel Drive and 41st Avenue has service at least every 30 minutes, with potential for higher-frequency service in the future (Metro routes 69A and 69W). Portola Drive between 17th and 41st Avenue also has service at least every 30 minutes, with potential for higher-frequency service in the future (Metro routes 66 and 68). Other operational efficiency measures could be implemented on Soquel Drive bus routes in the future, including signal preference, queue jumping, off-bus ticketing, and real time bus information at bus stops and via web-enabled devices.

All transit users are pedestrians at some point during a journey as they walk to and from bus stops and wait at bus stops. Therefore, streets that lead to transit corridors would feature wider sidewalks on both sides of the street, bus and pedestrian-scaled lighting, and helpful maps and information about transit. Bus shelters would be safely buffered from automobile traffic with side medians or other design features.

PEDESTRIAN CONNECTIVITY

Active Connectors and Coastal Streets would form the backbone of the pedestrian network in the Plan area. Active Connector streets tend to be north-south oriented in order to connect pedestrians and bicyclists to the east-west oriented street types. Coastal Streets are east-west oriented, following the coastline.

Bus shelter with passenger amenities. Photo credit: Fehr & Peers, 2014

Enhanced pedestrian safety features should be provided on streets surrounding activity centers, to improve access to key locations within a 10- to 20- minute walking trip in the Plan area. These safety features include wider sidewalks that are

Paved shoulders (6 feet preferred) provide safe walking areas for pedestrians along Rural Connectors and can also improve space for cyclists.
Photo credit: Fehr & Peers, 2014

A bicycle "leap frogs" with a bus blocking bicycle lane.

Photo Credit: Fehr & Peers, 2013

ADA compliant with at least 4 feet of clearance. Where possible, sidewalks should be at least 6 feet wide on Active Connectors and Coastal Streets and buffered from traffic by landscape, preferably with trees. Sidewalks should also be smooth and level, compliant with ADA standards.

Some Active Connectors are narrow and have limited space for sidewalks. However, providing a paved shoulder (6 feet preferred) can provide a space for pedestrians to walk comfortable and more safely. This can create connections between close-in rural areas and the urban area, and also improve safety for cyclists. North-south pedestrian connectivity would be improved by new multimodal and/or pedestrian/bike crossings of Highway 1. Possible new crossings are explored in more detail in the Walkshed discussion.

BICYCLE NETWORK

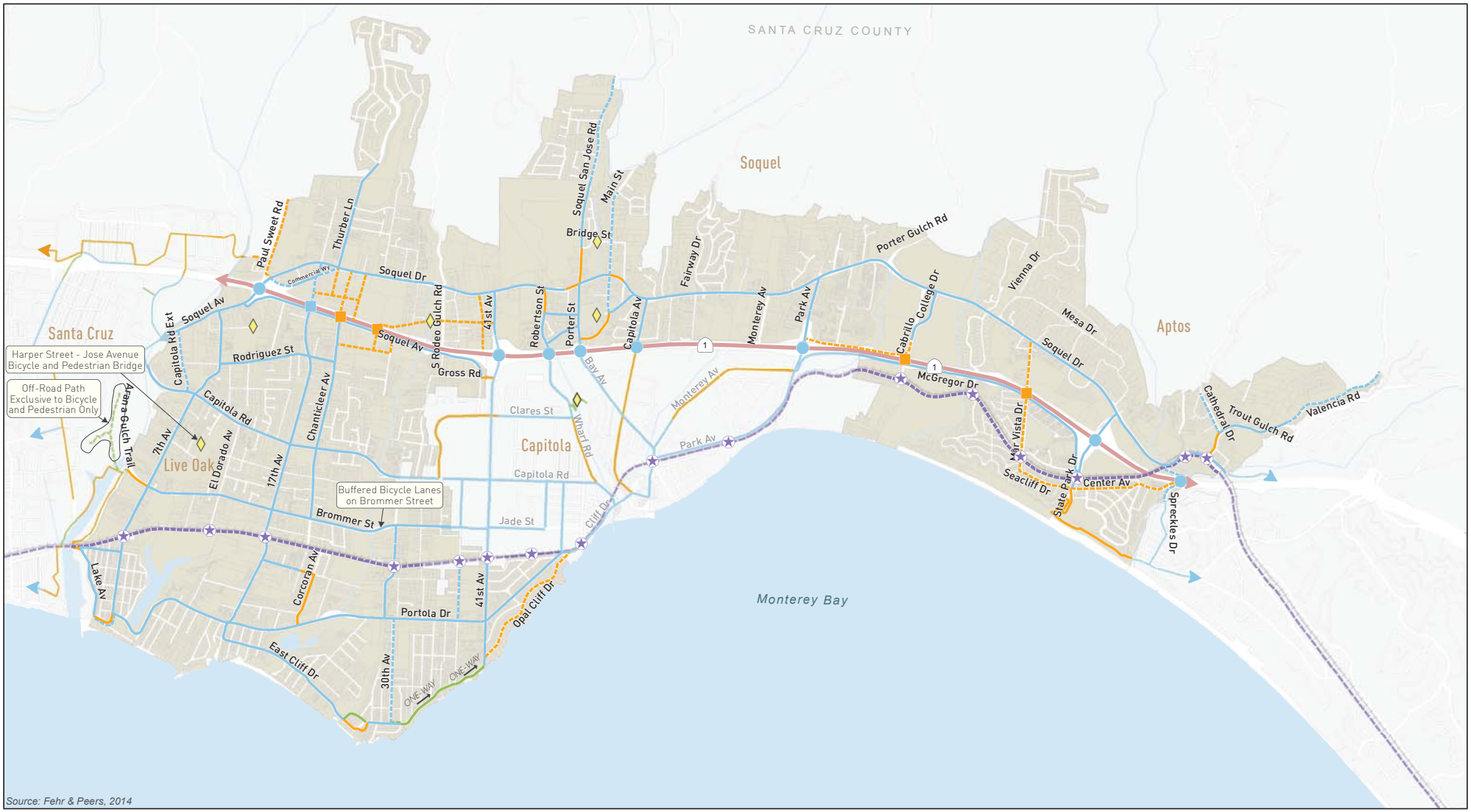
Multimodal Corridors, Bike Connectors, Active Connectors, and Coastal Streets, in combination with other streets that have bicycle facilities, would form the bicycle network in the Plan area.

Bicycle facilities in the Plan area should provide strong east-west connectivity, with dedicated bicycle lanes present on most of the arterial streets. The proposed MBSST would enhance east-west connectivity for bicyclists for trips within the Plan area and also for trips to nearby cities along the trail. Figure 5-4 shows points of connection to the trail from existing and planned bicycle facilities in the Plan area.

Buffered bike lane.

Photo credit: Fehr & Peers, 2014

FIGURE 5-4 MONTEREY BAY SANCTUARY SCENIC TRAIL CONNECTIONS TO OTHER BICYCLE AND PEDESTRIAN FACILITIES



Source: Fehr & Peers, 2014

Features

- Bicycle and Pedestrian Connection
- Railroad
- Plan Area
- Neighborhood Path
- Existing Highway 1 Crossing
- Site of Possible Future Highway 1 Crossing
- Freeway

Existing Bicycle Facilities

- Bicycle Path (Class I)
- Bicycle Lane (Class II)
- Bicycle Route (Class III)

Planned Bicycle Facilities

- Bicycle Path (Class I)
- Bicycle Lane (Class II)
- Bicycle Route (Class III)
- Monterey Bay Sanctuary Scenic Trail

NORTH

Cross Section

A **cross section** is a diagram that shows the layout and width of the different elements that make up a street, such as the roadway, sidewalks, bus stops, and bicycle facilities.

Sharrow road markings. Photo credit: locallygrownnorthfield.org

Chanticleer Avenue, 17th Avenue, 30th Avenue, and 41st Avenue are all connectors that would strengthen north-south bike connectivity. Brommer Street was identified as being particularly valuable for bicycles during the visioning process. Brommer Street provides a lower stress biking environment than alternatives with higher traffic volumes and it connects the Arana Gulch bike path in the City of Santa Cruz to the City of Capitola.

Pedestrian refuge islands provide a protected resting place for pedestrians when crossing wider streets – approximately more than two lanes of traffic.

Photo Credit: Model Design Manuel, 2010

Brookwood Drive is also an important bike connection that is suggested for improvement. It is a one-way street in the northwest edge of the Plan area, which connects the "Banana Belt" section of the City of Santa Cruz to the rest of mid-County.

Multimodal Corridor Soquel Drive has higher traffic volume, but is nevertheless well used by bicyclists. The safety and comfort of bicyclists would be improved with facilities such as a continuous cycle track and medians and bus bulb out islands that buffer bicyclists from buses and help prevent "leap-frogging" between riders and buses. Leap-frogging is the back and forth conflict of a bicyclist and a bus between successive bus stops.

Additional bike improvements that would increase network connectivity and close bike lane gaps are listed in Appendix B. These improvements are designed to complement the different street types with supportive infrastructure for the priority users.

SAMPLE CROSS SECTIONS

The designation of priority modes for key streets guides the design of the street. Streets have limited space. In a layered network, it is important to dedicate space and amenities for modes according to the needs of the users of that mode. For example, on a Bike Connector street where bikes would be prioritized, adequate space should be provided for bike lanes or cycle tracks in which bicyclists are buffered from vehicular traffic and pedestrians. This helps avoid conflicts between modes and bolsters multimodal safety. Four cross sections were developed to illustrate the suggested design features

for the different street types. Together they represent a sampling of locations and street types in the Plan area. Sample cross sections can be found in Appendix A.

PARKING MANAGEMENT

Most parking in the Plan area is located off-street and in parking lots associated with retail shops, residences, workplaces, and shopping centers. On-street parking is less common in the Plan area but does exist in some locations. On-street parking is available on both the north and south sides of Soquel Drive near Cabrillo College, although this could be refined to reduce potential for bicycle/auto conflicts. Very limited on-street parking is available along the south side of Soquel Drive between Daubenbiss Avenue and Main Street in Soquel Village. In the Village, where right of way is constrained, the on street parking spaces cause the bike lane to end abruptly, forcing bicyclists to merge into the traffic lane. The value of the parking spaces should be evaluated relative to the possible benefits of increased vehicular and bicycle mobility, safety, and pedestrian streetscape amenities when deciding whether the on-street parking should be retained. Limited on-street parking is also available on short stretches of Capitola Road, Brommer Street, Portola Drive, 41st Avenue, and 7th Avenue.

Parking districts can be helpful in areas where parking is challenging due to a mismatch between demand and supply. This can cause spillover daytime parking impacts on adjacent neighborhoods. Parking Districts can take many forms, but are typically defined as areas where special rules and fees apply for people who use parking or the businesses that rely upon it. There are two existing parking districts in the Plan area: The Live Oak Parking District and the Soquel Village Parking and Business Improvement District. The Live Oak Parking District is located south of East Cliff Drive and Portola Drive. In the Live Oak Parking District, parked vehicles must display a valid parking permit issued to residents and available for purchase by visitors.

The Soquel Village Parking and Business Improvement District is located near Porter and Main Streets. Within the Soquel Village Parking and Business Improvement District there are four free, time-restricted public parking lots and time-restricted on-street parking spaces available on Soquel Drive, Walnut Street, and Main Street. When funds are collected from participants they are used to fund maintenance in the district, such as maintaining landscaping, lighting, parking enforcement and periodic sealing and striping. The funding mechanism may be modified in the future to respond to changes in State law regarding taxes and fees.

There are several areas in the Plan area where spillover parking is occurring in adjacent neighborhoods. Two of the most noticeable areas are the Dominican Hospital area (Focus Area 1) and Cabrillo College. Both of these activity centers attract many automobile trips. Dominican Hospital is a major employment center and health care provider in the County, and the Sutter Surgery Center and future Sutter/PAMF campus is located nearby. Cabrillo is a major educational institution with over 14,000 students enrolled. The spillover issues in these areas could be improved through focused parking management strategies. These may include new parking districts that would manage parking through permits, time limits, fees, valet services, or increased supply. Opportunities for shared parking should be explored where feasible, as discussed in Chapter 7.

Project Scale

Program-level investments include a series of actions that are consistent with a larger policy or planning effort, such as a Long Range Development Plan or a Bicycle or Pedestrian Master Plan. A project-level investment focuses on a single project, such as a new retail building or housing development.

LIST OF RECOMMENDED IMPROVEMENTS

In order to bring the vision and goals for a Sustainable Santa Cruz County to life, transportation improvements are necessary. Several planning efforts have occurred recently that reinforce the need and desire for transportation improvements identified by community members involved in Sustainable Santa Cruz County workshops. Many of the improvements identified in this Plan respond to transportation needs that are also expressed in important guiding documents such as the 2014 Santa Cruz County Regional Transportation Plan, the Santa Cruz County Bicycle Plan (2011), and Monterey Bay Area Complete Streets Guidebook (2013). These commonalities indicate a shared understanding of the desired transportation network in the community.

A list of suggested transportation infrastructure improvement projects is presented in Appendix B. The list of improvements was compiled from ideas and suggestions gathered through the process of preparing this plan. The purpose of the list is to highlight improvements that will strengthen connectivity and multimodal transportation. The projects range from small to large investments, acknowledging that in the right locations relatively inexpensive improvements can contribute substantially to the comfort of pedestrians and bicyclists, and therefore to achieving the sustainability goals and objectives of the Plan (see Chapter 2, "Vision and Guiding Principles"). The largest capital cost improvements, such as new connections across Highway 1, that are discussed in this plan are not included in the list. This is because Appendix B focuses on the projects that are more likely to be able to be financed in the timeframe of the Plan, which is 2014 - 2035. However, designs for Highway 1 and other major transportation improvements should consider these possible future multi-modal road connections, so that opportunities to increase local transportation options are not precluded.

The purpose of the list is also to document the most promising ideas that were gathered, and to position the projects for consideration when important transportation plans such as the Regional Transportation Plan (RTP), prepared by the Santa Cruz County Transportation Commission, and the Santa Cruz County Capital Improvement Program (CIP), Santa Cruz County Bicycle Plan, and Circulation Element of the General Plan are updated. The principles and goals in the 2014 RTP are well aligned with the goals of Sustainable Santa Cruz County Plan and projects on this list that are not in current planning documents should be considered for inclusion in the future. (Some of these improvements are already addressed in the RTP and County plans, often as part of larger, more general projects. Those projects are included here in more specific form to highlight their importance in achieving the sustainability goals for the Plan area.)

PERFORMANCE MEASURES

Performance measures are used to evaluate how well the transportation network is functioning, to evaluate individual improvement projects, and to characterize the potential impacts of new development on the existing system. Currently the County relies heavily on vehicle Level of Service, or LOS, as a performance measure. Vehicle LOS focuses solely on automobile delay and is insensitive to walking, bicycling, and transit conditions. Traditional vehicle LOS analysis actually considers bicycles and pedestrians to be an impediment. Given that the purpose of measuring the transportation system is to understand how well it is achieving the goals that are most valued by the users,

expanding the measurement tools to include options that consider the needs of all users is important.

Performance measures are also the basis for determining which transportation projects provide the most positive change for the cost. Vehicle LOS has a place in this toolbox as well, but must be supplemented with other metrics in order to gain a complete picture of the effects of any particular transportation project on the multimodal transportation network and on the environment.

TABLE 5-3 PERFORMANCE METRICS

Performance Metrics
Improves Overall Street Connectivity
Improves Pedestrian Safety and Access to Activity Centers (including schools, workplaces, commercial areas and public facilities)
Improves Bike Safety and Access
Creates Safe Routes to Transit and Increases Opportunities to Ride Transit
Improves Management of Parking Supply and Access to Park-and-Ride Lots
Creates Livable Public Spaces around Activity Centers
Reduces Vehicle Miles Traveled
Reduces Traffic Congestion
Consistency with Other Plans and Projects

Sources: Fehr & Peers, 2014.

An explanation of each of the performance measures is discussed below.

Improves Overall Street Connectivity

Street connectivity in the Plan area is limited in the east-west direction by topography, long blocks, and cul-de-sacs and there are limited north-south crossing locations across Highway 1. Improvements that add to overall street connectivity strengthen access to transportation choices in the Plan area. New connections, especially in the north-south direction, would meet or exceed this connectivity performance measure. Improvements that would add new streets, Highway 1 crossings, or bridges that offer people new, safer, and more direct ways of getting around the Plan area would meet or exceed this performance measure.

Improves Pedestrian Safety and Access to Activity Centers

Through the visioning process, community members identified the need to improve pedestrian access to activity centers in the area. In terms of access, improvements that would increase the size of a 10- to 20-minute walkshed around an activity center would meet or exceed this performance measure. In addition, improvements that remove physical barriers for pedestrians make locations more accessible. Establishing and continuing Safe Routes to School Programs surrounding the numerous schools in the Plan area would improve safety for children. In terms of safety, improvements that provide sidewalks and trails of adequate width on both sides of the street (6 feet is most desirable), pedestrian-scaled lighting, and medians or landscaping that buffer pedestrians from traffic would meet or exceed this performance measure.

Street furniture buffers pedestrians from vehicular traffic and makes streets more pleasant and inviting. Photo Credit: Fehr & Peers, 2014

Improves Bike Safety and Access

As discussed earlier, the Plan area has strong bike connectivity on a variety of street types. Some streets have higher traffic volumes and are likely to attract more experienced bicyclists. However, all cyclists, regardless of their level of experience, need safe facilities. This can take the form of new facilities or improvements that provide adequate space, street markings and design features that buffer cyclists from vehicles in the roadway. When planning or reviewing future development a good rule of thumb is to locate driveways on side streets rather on than busier streets such as Soquel Drive or 41st Avenue. This minimizes conflict points between cars and can be especially helpful when many cars are waiting in the roadway to turn left or right into a driveway, which causes congestion for the through traffic behind them. Improvements that close gaps in the existing bicycle network would meet or exceed this performance measure.

Creates Safe Routes to Transit and Increases Opportunities to Ride Transit

What encourages people to ride transit? Factors such as comfort (at bus stops and on-board), convenience, access, cost, safety, and travel time are all considerations. Improving upon these factors can encourage more people to ride transit. Improvements can be incremental or large-scale. Something as small as adding more lighting at a bus stop can make a person feel more comfortable using transit at night. Adding bus shelters on heavily used routes can encourage ridership, as people are likely to be more comfortable while waiting to board a bus, especially in rainy weather. In addition, adding service in the form of new routes along corridors with strong ridership potential that connect to activity centers, or adding more frequent service along heavily used routes (15- to 30-minute increments) during the busiest times of day will encourage use of transit. Increasing the coverage of the transit network and the frequency at which buses arrive would also encourage people to leave their cars at home for some trips. In combination with the land use and diversity changes suggested by this Plan, congestion can be lessened and quality of life improved.

Improves Management of Parking Supply and Access to Park-and-Ride Lots

As discussed in the previous section, parking can be challenging in some parts of the Plan area, particularly where a busy activity center borders residential neighborhoods. In these cases, parking spillover is a main concern for the community. A Parking Master Plan would help to understand parking needs in more detail. Such a study would develop specific measures to improve how parking is provided and managed. In the near-term, establishing parking districts in areas where spillover is already known to be a challenge would meet this performance measure. The development of the specific characteristics and guidelines of each parking district should be a process that involves community members from the adjacent neighborhoods as well as property owners and business owners.

Creates Livable Public Spaces around Activity Centers

Livable public spaces are attractive and accessible by foot. One of the goals of this plan is to encourage the creation of livable public spaces around activity centers as a way to encourage more people to walk, bike and take transit. Developments that fund amenities such as street furniture, vegetation strips lining sidewalks, sidewalk café spaces, and bike parking, would meet or exceed this measure. In many communities, there is a requirement for commercial development to include public art or to pay a fee that funds public art.

Reduces Vehicle Miles Traveled (VMT)

VMT is a commonly used measure of how much people in a specific area travel by car. Improvements aimed at getting people out of their cars to travel by active modes can help reduce VMT, which would reduce production of greenhouse gases, which relates to addressing climate change. Improvements aimed at reducing the number of miles people drive and the number of trips made by private automobiles would meet or exceed this performance measure.

Reduces Traffic Congestion

Traffic congestion is a challenge for residents, workers, and visitors in the Plan area. People would like to be able to travel to destinations efficiently, without dealing with backups at high-volume locations, and with increased predictability.

This photo shows pedestrian-scaled lighting in South Bend, Indiana. Overhead lighting on pedestrian-oriented streets should be low enough to the ground to illuminate walkways and the faces of pedestrians.

Photo credit: SFMTA, 2013.

Improvements that help shift people from their cars to other modes for at least some trips would help reduce local congestion, and roadway improvements that make traffic flow better would also meet or exceed this measure. Examples include adding capacity to a roadway, restriping a roadway to add left-hand or right-hand turn-lanes that reduce backups for through traffic, signal coordination, new streets, and adding more locations for crossing Highway 1.

Consistency with Other Plans and Projects

The Plan area intersects a number of neighborhoods and jurisdictions in Santa Cruz County. Many projects and planning efforts in Santa Cruz County are currently in process or have been recently completed. Improvements that are consistent with adopted policy guidelines and approved plans and projects from neighboring jurisdictions and regional governing bodies, including the Santa Cruz County Regional Transportation Commission and Association of Monterey Bay Area Governments (AMBAG), would meet this performance measure.

BALANCED TRANSPORTATION FRAMEWORK

Taken together, the transportation strategies suggested in this chapter form a framework for a balanced transportation system that can meet the needs of residents, workers, and visitors in the Plan area. The community's transportation values establish a lens through which to view transportation opportunities that respond to the vision for reduced congestion, increased connectivity and improved mobility. The suggested street types would foster a network that would make walking, biking, and taking transit more viable options for getting around the Plan area. The sample cross sections help to define and illustrate the types of design elements recommended for the different street types—including wider and safer sidewalks, buffered bicycle lanes, broader paved shoulders on rural roads, and more comfortable bus stops. The Performance Measures are included to help the community and decision makers understand how a new land use development or other project would affect the desired transportation network, and to guide the prioritization and implementation of programs and projects that work toward the well-connected, balanced transportation network that is described in "A Vision for Sustainable Communities in Santa Cruz County."