3 TRANSPORTATION

The General Plan recognizes that an efficient multi-modal transportation plan, coupled with wise land use planning, is essential to improving quality of life, supporting economic vitality, and reducing greenhouse gas emissions. The Transportation Element seeks to create a well-connected transportation network that accommodates cars, public transit, walking, and biking.

3.1 BACKGROUND

Emeryville is traversed by a number of key regional transportation routes, notably the I-80 and I-580 freeways, San Pablo Avenue corridor, AC Transit bus lines, Amtrak and freight rail lines and the San Francisco Bay Trail. The San Francisco Bay Area Rapid Transit (BART) system has several stations a short distance from Emeryville, including the West Oakland Station, with frequent service to San Francisco and the MacArthur Station, a hub for the East Bay, easily accessed by free bus service provided by the Emery Go-Round shuttle. Oakland International Airport is located 10 miles to the southeast, and San Francisco International Airport is 15 miles to the southwest. However, the infrastructure that allows for such flexibility also creates some constraints, as freeway and rail lines produce congestion and internal barriers to east-west circulation.

Removing barriers to pedestrian and bicycle connectivity will help to create a street and transportation network that is accessible for all modes and for all users.

Recent Trends

A confluence of demographic, economic, and environmental trends are converging toward the necessity of creating a multi-modal transportation network in Emeryville. An aging population, increasing fuel costs, and concerns about climate change, highlight the benefits and necessity of alternative modes of transportation. Moreover, during the General Plan update process, community members expressed a desire for Emeryville to be more pedestrian and bicycle friendly.

The surge in commercial development in the past 10 years is testament to Emeryville's central location in the Bay Area and proximity to regional transportation facilities. The city has seen increased ridership regionally on the Amtrak Capitol Corridor—serving over 160,000 passengers in July 2008, a 30 percent increase in ridership over the previous year—and locally on the Emery Go-Round which has served over one million passengers annually. However, like many places, the City has accommodated motor vehicles at the expense of pedestrian and bicycle movement. While transit use among residents of Emeryville increased during the 1990s, Emeryville's circulation network is still not conducive to pedestrian and bicycle travel. In response, the General Plan creates a more balanced approach to circulation and transportation mode choice.

Commute Patterns

Emeryville residents tend to commute less by driving alone and more by telecommuting, walking, biking, carpooling, riding transit, or bicycling compared with the Bay Area as a whole. However, the city's population swells during the day by the substantial number of non-residents who work in Emeryville and tend to come by car. In 2000, there were about 1,000 residents who both lived and worked in Emeryville, about 3,000 residents who commuted to jobs outside the city ("Out-commuters"), and about 17,000 workers who lived elsewhere and commuted to jobs in Emeryville ("In-commuters").

As shown in Table 3-1, about 60 percent of workers commuting out of Emeryville drove alone, while 77 percent of commuters employed in Emeryville drove alone to work. Only 37 percent of those who both lived and worked in Emeryville drove alone. The Bay Area average is 68 percent, so Emeryville's residents tend to drive to work less than the regional average, while those who commute to Emeryville from elsewhere drive somewhat more than the regional average.

The rate of walking and biking to work was substantially higher for those who both live and work in Emeryville than the Bay Area average (31% in Emeryville, versus 4% in the Bay Area). This is influenced by Emeryville's small size and flat terrain, which make walking and bicycling relatively easy for those who live close to their workplace. In addition, the city has a high rate of workers who work at home or telecommute: 25 percent in Emeryville, compared with just four percent in the region as a whole. The rate of transit use for out-commuters (40%) is double that of in-commuters (20%). This is influenced by the substantial proportion of residents that are employed in San Francisco, Berkeley or Oakland (the top destinations), which can be easily accessed by public transportation from Emeryville.

The journey to work is only one aspect of travel patterns. People also travel for shopping, school, personal business, recreation, and other reasons. Shopping trips are especially important in Emeryville because of the large number of retail stores. However, similar detailed data is not available for these other trip purposes. While they do not constitute the whole picture, journey to work patterns are important to understand because they make up the bulk of the traffic during the busiest time of day, the "p.m. peak hour" (rush hour), which largely determines the types of transportation improvements that are typically proposed.

TABLE 3-1: Journey to Work by Mode of Travel

	Emeryville Residents		In-Commuters	Bay Area Average
COMMUTE MODE	WORK IN EMERYVILLE	OUT-COMMUTERS		
Work at Home	25%	n/a	n/a	4%
Drive Alone	37%	60%	77%	68%
Transit/Carpool/Other	6%	40%	20%	24%
Walk	28%	0.1%	2%	3%
Bicycle	4%	0.7%	1%	1%

Source: 2000 U.S. Census provides "Journey to Work"

The General Plan seeks to enhance the city's multi-modal transportation system.

3.2 CIRCULATION SYSTEM

Typology

To ensure a balanced, multi-modal transportation network, the General Plan organizes streets and other transportation facilities according to "typologies" which consider the context and prioritize travel modes for each street. This ensures that the standards consider a facility's relation to surrounding land uses, appropriate travel speeds, and the need to accommodate multiple travel modes.

The following typology definitions apply to the streets and other facilities that make up the city's circulation plan, as shown in Figures 3-1 through 3-6:

- **Transit Street** – These are primary routes for AC Transit, Emery Go-Round, and other public transit providers. Signal preemption for transit vehicles, bus stops, and, where appropriate, bus lanes, are provided. Other travel modes, including automobiles, bicycles, and trucks, are accommodated in the roadway, but if there are conflicts, transit has priority. These streets accommodate moderate to high volumes of through-traffic within and beyond the city. Pedestrians are accommodated with ample sidewalks on both sides of the street, and amenities around bus stops (e.g. shelters, benches, lighting, etc).
- **Bicycle Boulevard** – These are through-routes for bicycles providing continuous access and connections to the local and regional bicycle route network. Through-motor vehicle traffic is discouraged. High volumes of motor vehicle traffic are also discouraged, but may be allowed in localized areas where necessary to accommodate adjacent land uses. Local automobile, truck, and transit traffic are accommodated in the roadway, but if there are conflicts, bicycles have priority. Traffic calming techniques to slow and discourage through-automobile and truck traffic may be appropriate. Pedestrians are accommodated with ample sidewalks on both sides of the road.
- **Connector Street** – Automobiles, bicycles, and trucks are accommodated equally in the roadway. Transit use, if any, is incidental. These streets accommodate moderate to high volumes of through-traffic within and beyond the city. Pedestrians are accommodated with ample sidewalks on both sides of the street.
- **Local Street** – Automobiles, bicycles, and trucks are accommodated equally in the roadway. Transit use, if any, is incidental. These streets accommodate low volumes of local traffic and primarily provide access to property. Through-traffic is discouraged. Traffic calming techniques to slow and discourage through-automobile and truck traffic may be appropriate. Pedestrians are accommodated with ample sidewalks on both sides of the street.
- **Auto Dominant Highway** – These are freeways and approach roads (e.g. Ashby Avenue and West MacArthur Boulevard underpass) that serve high volumes of high speed regional motor vehicle traffic including automobiles and trucks. Transbay and express transit buses are also accommodated. Bicycles and pedestrians are prohibited.
- **Intercity Rail** – This is the mainline Union Pacific/Amtrak railroad line serving long distance and local freight and passenger traffic. The Capitol Corridor line is the third busiest route in the U.S. Other passenger routes include cross country trains (California Zephyr and Coast Starlight), San Joaquin, and future "East Bay Express". If a new Transbay tube is built, it should connect to this

Emeryville contains a range of street types, from auto-dominated highways and connector and transit streets (top) to local streets (bottom) which are more amenable for pedestrians and bicyclists.

line to provide direct rail access between San Francisco and Sacramento with a stop in Emeryville. If any new inner-city BART lines are proposed, one should follow this alignment with a station at Powell Street and entrances from Bay Street, Marketplace, Novartis, and the Emery Station complex.

- **Major Transit Hub** – These are transfer points where high volume transit lines intersect. These are located in the Amtrak station with access from both sides of the rail line, and at 40th Street and San Pablo Avenue.
- **Bicycle Path** – Class I Bicycle path as defined by Caltrans standards accommodates both bicycles and pedestrians. Motor vehicle traffic is prohibited.
- **Bike Route** – Class II (bike lanes) or Class III (signed route) bike facilities as defined by Caltrans standards, are overlaid on transit, connector, and local streets. While bicycle use is always accommodated on these streets, it is encouraged along designated bike routes, which provide continuous access and connections to the local and regional bicycle route network.
- **Pedestrian Path** – These are exclusive walkways for pedestrians. Bicycles and motor vehicles are prohibited.
- **Pedestrian Priority Zones** – These are zones on which high volumes of pedestrian traffic are encouraged along the sidewalk. This includes zones around neighborhood centers, regional retail areas, and around school and other public facilities. Sidewalks should be wide with ample pedestrian amenities. Building frontages should provide high level of pedestrian interest. Pedestrian crossings should have a high priority at intersections. In some locations, well-protected mid-block crosswalks may be appropriate.

TRANSPORTATION FACILITIES MATRIX

Facility	Transit	Bicycles	Pedestrians	Autos
Transit Street[1]	■	□	□	□
Bicycle Boulevard	□	■	□	□
Bicycle Path (class I)	X	■	■	X
Pedestrian Path	X	X	■	X
Connector Street[1]	○	□	□	□
Local Street[1]	○	□	□	□
Auto Dominant Road	□	X	X	■

[1] Bike routes (class II and III) can be overlaid on these street types.

■ = Dominant

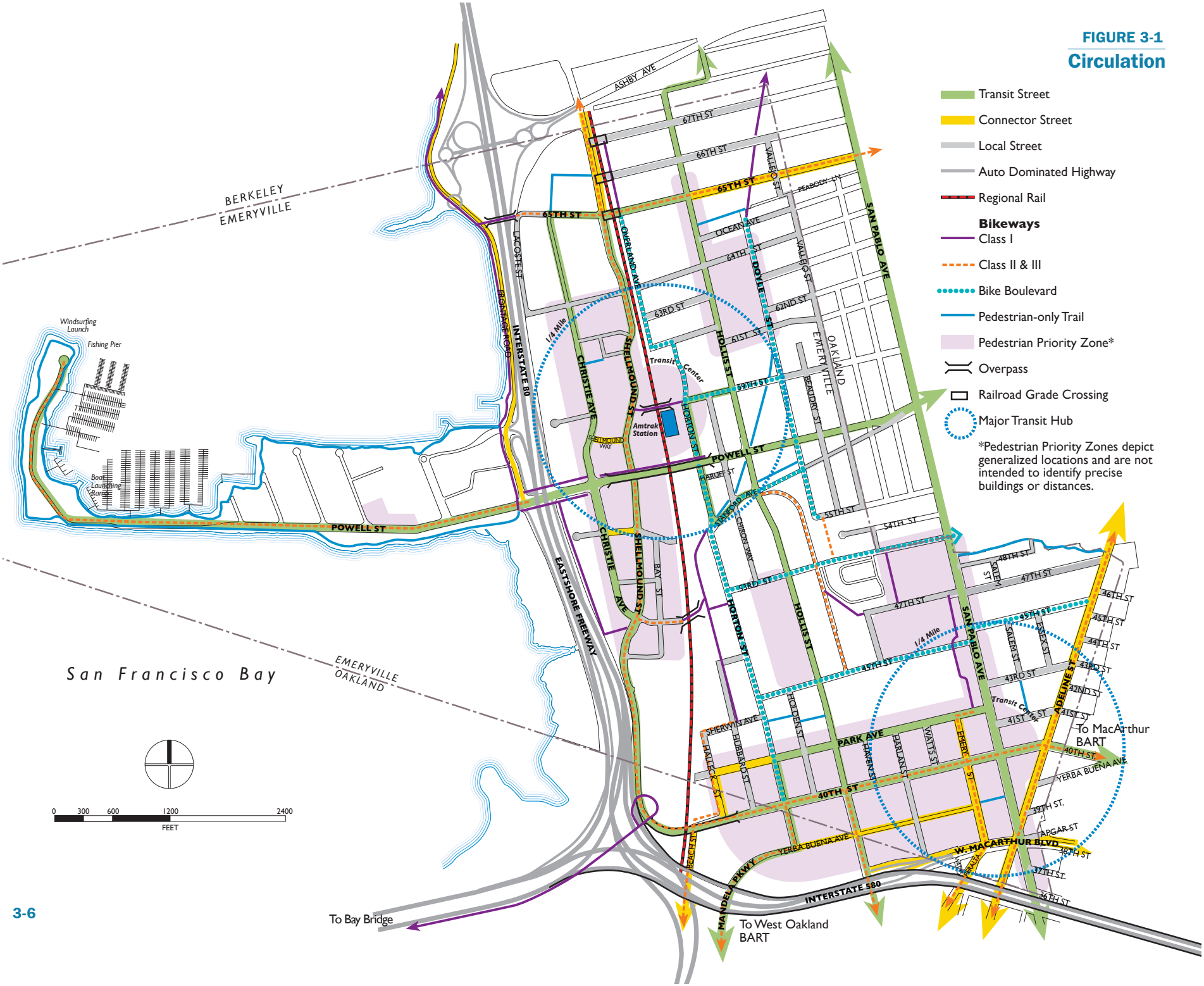
□ = Accommodated

○ = Incidental

X = Prohibited

FIGURE 3-1

Circulation



Multi-Modal Emphasis

The Transportation Element is intended to ensure the accommodation of multiple travel modes on the circulation system and to ensure mobility for all community members. This will require a rethinking of past policies that emphasized automobile circulation and prioritized motor vehicle improvements.

Because automobile travel has been the dominant form of transportation, "Level of Service" (LOS) has traditionally been measured for vehicle drivers, with minimal regard to bicycle, pedestrian, and transit users. This bias unintentionally but inherently ignores overall mobility and conditions for non-auto road users and perpetuates a system that focuses on expanding vehicle capacity, which can reduce the quality of service for pedestrians and bicyclists.

Measurement Standards

This General Plan departs from conventional thinking by doing away with the traditional Level of Service methodology and replacing it with an alternative "Quality of Service" (QOS) standard that optimizes travel by all modes of transportation, not just vehicle travel. This will permit greater development flexibility to take advantage of land use density and diversity which have been shown to increase transit ridership, biking, and walking, while decreasing the need for automobile travel. This can reduce air pollution, energy consumption, and greenhouse gas emissions, while improving the overall travel experience for Emeryville's citizens.

In 2002 the Florida Department of Transportation published the 2002 Quality/Level of Service Handbook. The document's methodologies incorporated extensive research into the road user's perspective of their travel experience. As a result of this research, the analytical techniques used to analyze pedestrian, bicycle, and transit modes are as rigorously developed and tested as those for automobiles. Emeryville intends to use this current state of the practice research and other valid transportation engineering methodologies for assessing and optimizing the quality of service for all travel modes.

Many transit trips begin or end as walking or biking trips. Therefore pedestrian and bicycle amenities such as ample sidewalks, bike parking and shelter, should be provided at these interfaces.

LEVEL OF SERVICE (LOS)

Historically roadway and intersection operations were described from the vehicle driver perspective using the term "Level of Service" (LOS). Level of Service represents a qualitative description of the traffic operations experienced by the driver at the intersection. It ranges from LOS "A", with no congestion and little delay, to LOS "F", with excessive congestion and delays. LOS uses quantifiable traffic measures such as average speed and intersection delay to determine driver satisfaction. LOS ratings are derived from the peak 15 minutes during the commute hours of the day.

COMPLETE STREETS

To further the goal of optimizing travel by all modes, this General Plan incorporates the concept of "Complete Streets." Complete Streets are designed and operated to enable safe, attractive and comfortable access and travel for all users. Pedestrians, bicyclists, motorists and public transit users of all ages and abilities are able to safely and comfortably move along and across a complete street. Complete Streets also create a sense of place and improve social interaction, while generally improving the values of adjacent property. The Governor signed into law the California Complete Streets Act of 2008 (AB 1358) in September 2008, requiring that General Plans develop a plan for a multi-modal transportation system. This Transportation Element outlines the City's policy for Complete Streets.

3.3 STREET SYSTEM

Framework

The backbone of Emeryville's circulation plan is the street system. It provides the basic transportation infrastructure of the city, including routes for public transit, bicyclists, pedestrians, and motor vehicles, as well as access to public and private property. The streets are also the major component of the "public realm," creating a sense of place where social interaction occurs. A balanced approach to accommodating multi-modal transportation on the street network is essential, especially in light of the city's strong retail sector, employment base, and growing residential neighborhoods.

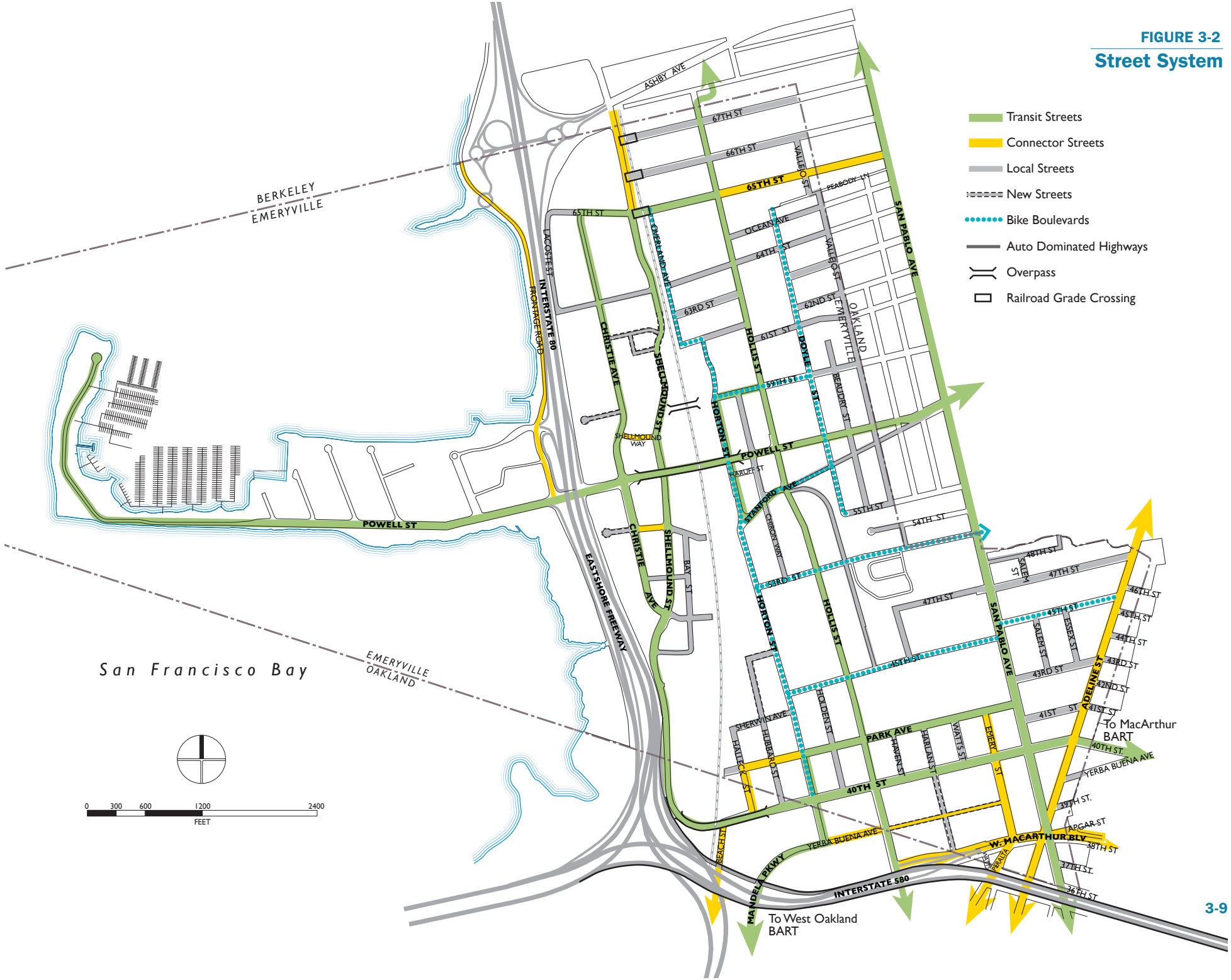
An expanded street grid will create new connections for vehicular and non-vehicular travel.

Recent transportation planning efforts have emphasized the need to maintain and enhance motor vehicle access to these regional retail destinations. At the same time, it is important to enhance travel by other modes, including public transit, bicycling, and walking, both along these regional corridors and throughout the city. The street system is set forth in Figure 3-2 and consists of the following:

- Transit streets, which carry large volumes of through-traffic, and on which public transit vehicles have priority.
- Connector streets, which carry large volumes of through-traffic, and on which all travel modes have equal priority, and where transit use, if any, is incidental.
- Bicycle Boulevards, where bicycles have priority, and on which through-traffic by other modes is discouraged.
- Local streets, which carry low volumes of local traffic, provide access to property, on which all travel modes have equal priority, and where transit use, if any, is incidental.
- Auto-dominated highways, which carry very large volumes of high speed regional traffic and on which bicycles and pedestrians are prohibited. These include the freeways and major approach roads.
- An expanded street grid throughout the city, including the North and South Bayfront areas, Sherwin Williams site, and East Bay Bridge Shopping Center.
- Regional retail access routes, which identify primary routes to regional retail stores, for all transportation modes, including automobiles.

FIGURE 3-2

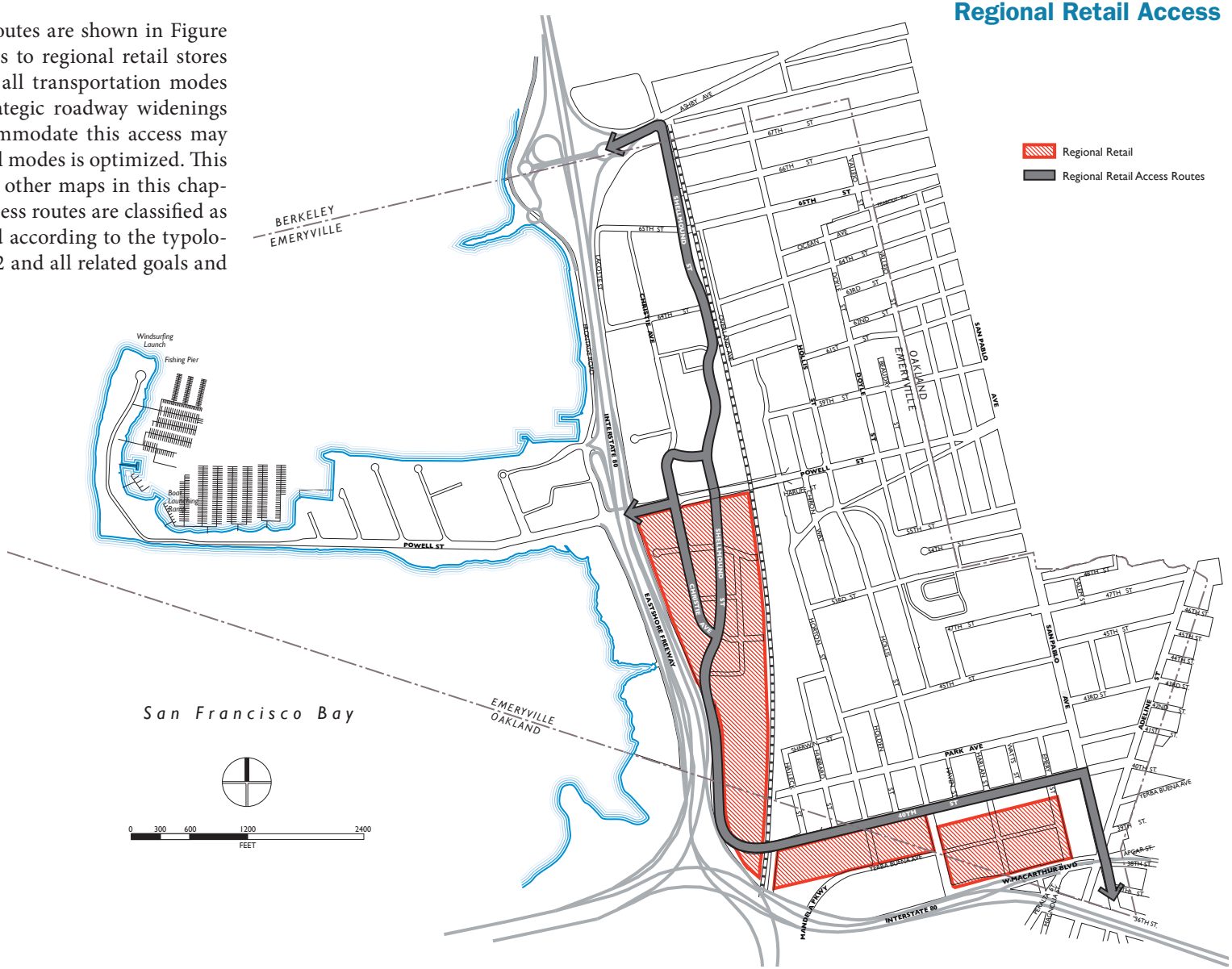
Street System



Regional Retail Access

The regional retail access routes are shown in Figure 3-3. On these streets, access to regional retail stores will be accommodated for all transportation modes including automobiles. Strategic roadway widenings and other changes to accommodate this access may be considered, if travel by all modes is optimized. This map is supplemental to the other maps in this chapter. These regional retail access routes are classified as indicated on Figure 3-2 and according to the typologies discussed in Section 3.2 and all related goals and policies.

FIGURE 3-3
Regional Retail Access



3.4 WALKING

Walking is part of every trip, whether it is from the parking lot to a building or from home to a bus stop, work, or store. The walking environment is an important element of the public realm and a fundamental component of land use planning, design standards, and guidelines.

Emeryville's pedestrian network consists of sidewalks and street crossings with some off-road paths and trails. There are still a few locations in Emeryville with no sidewalks, where pedestrians must share the street with motor vehicles and bicyclists. In the industrial and commercial areas, large blocks, railroad and freeway corridors act as barriers to pedestrian travel. These barriers to pedestrian movement limit the viability of walking as a form of transportation.

Recognizing the importance of walking trips to promote health, provide transportation choice, and reduce vehicle congestion, a pedestrian circulation system has been developed and is set forth in Figure 3-4. It consists of the following:

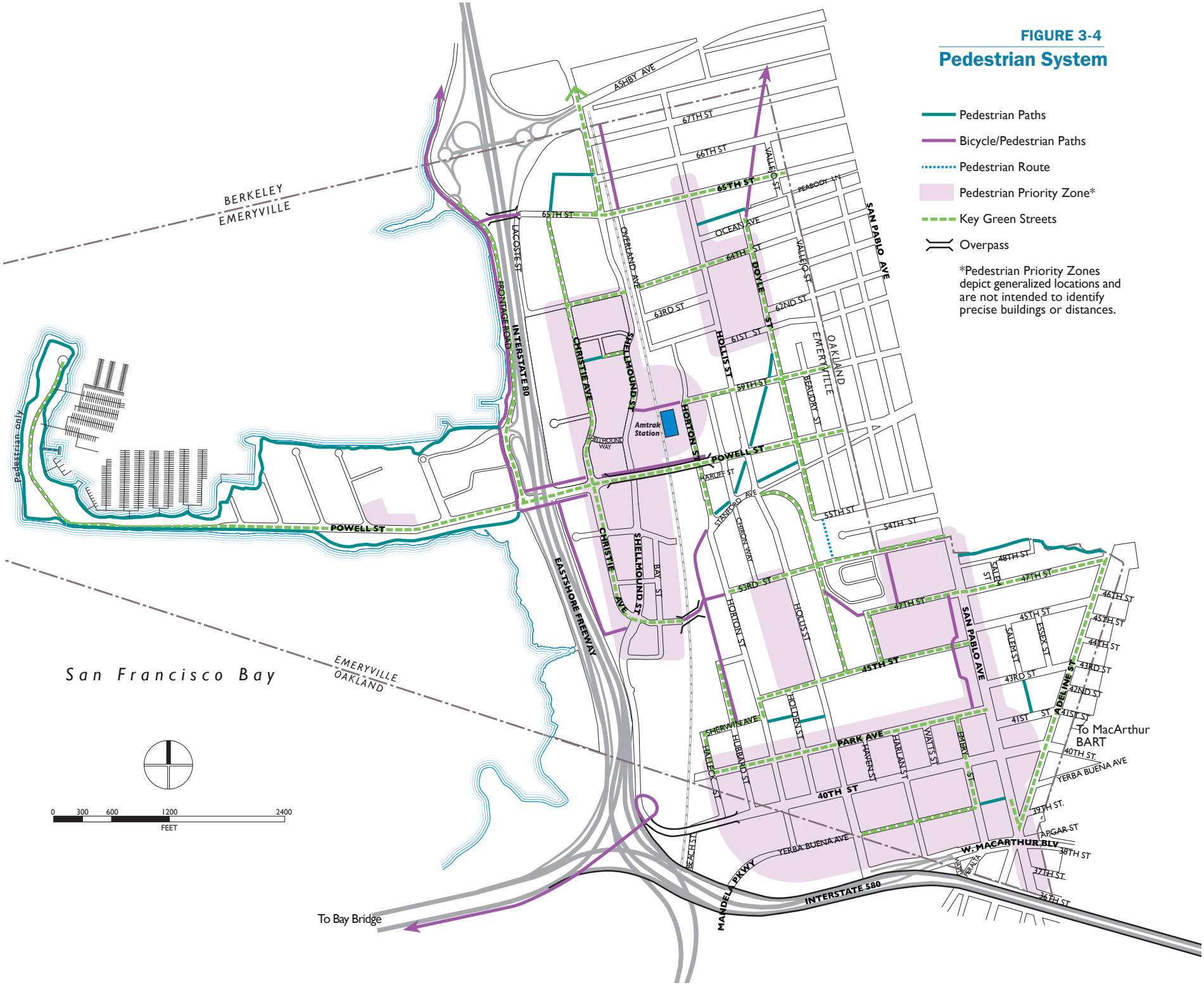
- Off-road pedestrian paths and routes, either exclusively for pedestrians or shared with bicyclists.
- Pedestrian priority zones along city streets.
- "Key Pedestrian Streets" connecting parks and open spaces, as identified in the Open Space Element.
- New and existing overpasses and underpasses across the railroad and freeway.
- The Bay Trail: a regional pedestrian and bicycle route that will eventually encircle San Francisco Bay and cross it at various places. The City of Emeryville's preferred Bay Trail alignment is set forth in Figure 3-5.

A Bicycle and Pedestrian Plan was prepared in 1998 and has been updated to reflect changes since that time. It contains a greater level of detail about pedestrian and bicycle facilities, and their implementation, than is appropriate in the General Plan. The Bicycle and Pedestrian Plan will need to be updated to be consistent with this General Plan.

Walking can feel unsafe along narrow sidewalks when surrounded by wide streets, surface lots, and parking entrances (left). Creating a network of streets with pedestrian-oriented features (right) can improve the connectivity of the pedestrian realm and encourage walking trips.

FIGURE 3-4

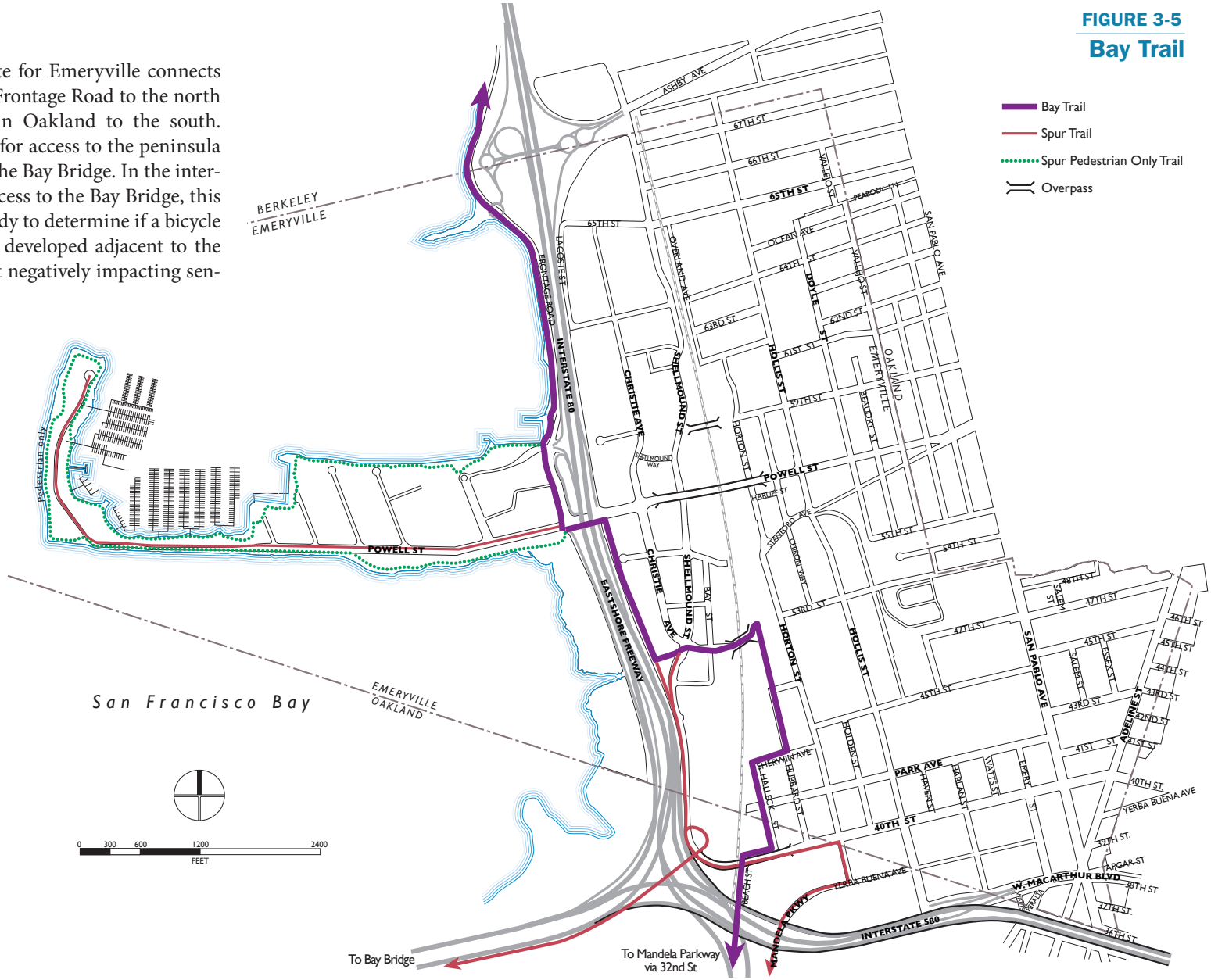
Pedestrian System



Regional Bay Trail

The preferred Bay Trail route for Emeryville connects with Berkeley's route along Frontage Road to the north and to Mandela Parkway in Oakland to the south. There are several spur trails for access to the peninsula and to cross I-580 to access the Bay Bridge. In the interest of providing shoreline access to the Bay Bridge, this Plan calls for a feasibility study to determine if a bicycle and pedestrian path can be developed adjacent to the Emeryville Crescent without negatively impacting sensitive habitat.

FIGURE 3-5
Bay Trail



3.5 BICYCLING

Emeryville's size and flat topography make it an ideal city for bicycling. Bicycles are a convenient means of transportation for short trips within the city. However, Emeryville has several barriers to safe and convenient bicycling. While most streets have low traffic volumes during most times of the day, 40th Street, Shellmound Street, San Pablo Avenue and portions of Christie Avenue and Powell Street have a large number of vehicle trips. These corridors serve regional retail destinations which are auto-oriented, and also serve vehicle traffic traveling through Emeryville.

Construction of a comprehensive citywide bicycle network and support facilities, such as bicycle parking at employment, retail, and other destinations, could greatly increase the mode share of bicycling as a form of transportation. The bicycle circulation system is set forth in Figure 3-6 and consists of the following:

- Off-road bicycle paths (Class I) which are shared with pedestrians.
- On-road bicycle routes, including bike lanes (Class II) and signed bike routes without lanes (Class III). (The General Plan does not distinguish between Class II and Class III. This level of detail is included in the City's Bicycle and Pedestrian Plan.)
- Bicycle Boulevards, a street classification on which bicycles have priority, and which may or may not have bike lanes, depending on the circumstances.
- New and existing grade-separated crossings of the railroad and freeway.
- The Bay Trail.

Constructing a citywide bike network, that includes support facilities such as bike parking, can encourage biking as an alternative transportation mode and a fun safe recreation activity.

3.6 PUBLIC TRANSIT

A coordinated set of policies regarding the City's public transit network seek to reduce greenhouse gas emissions (by attracting trips that would otherwise be taken by private automobile), and improve the viability of linking walking and bicycle trips with transit.

Local Transit System

Given Emeryville's central location in the East Bay, several public transit options serve the city, including the free Emery Go-Round shuttle to the MacArthur BART station, the 72 Rapid Bus on San Pablo Avenue, several other AC Transit bus routes, and numerous commuter trains at the Amtrak station. Moreover, with increases in ridership in recent years, particularly on BART and the Amtrak Capitol Corridor line, there is opportunity for improvements in service. For example, AC Transit transbay bus service to San Francisco is not designed to serve Emeryville, although several buses pass through the city. In addition, Amtrak operates frequent buses between Emeryville and San Francisco, but non-train passengers are not allowed to ride those buses. Although the Emery Go-Round does an excellent job of carrying commuters between Emeryville businesses and BART, it is not designed to meet the needs of Emeryville's residents or to provide service to other destinations. Transit service between the east and west sides of town is particularly lacking. In the long term, barriers to bus transit will be similar to those for automobiles. While roadway improvements will have some benefit to bus transit within Emeryville, additional measures may be necessary to maintain and improve reliability.

The transit system illustrated in Figure 3-7 designates most of Emeryville's major streets as "Transit Streets." Along these streets, techniques such as signal preemp-

FIGURE 3-6

Bicycle System

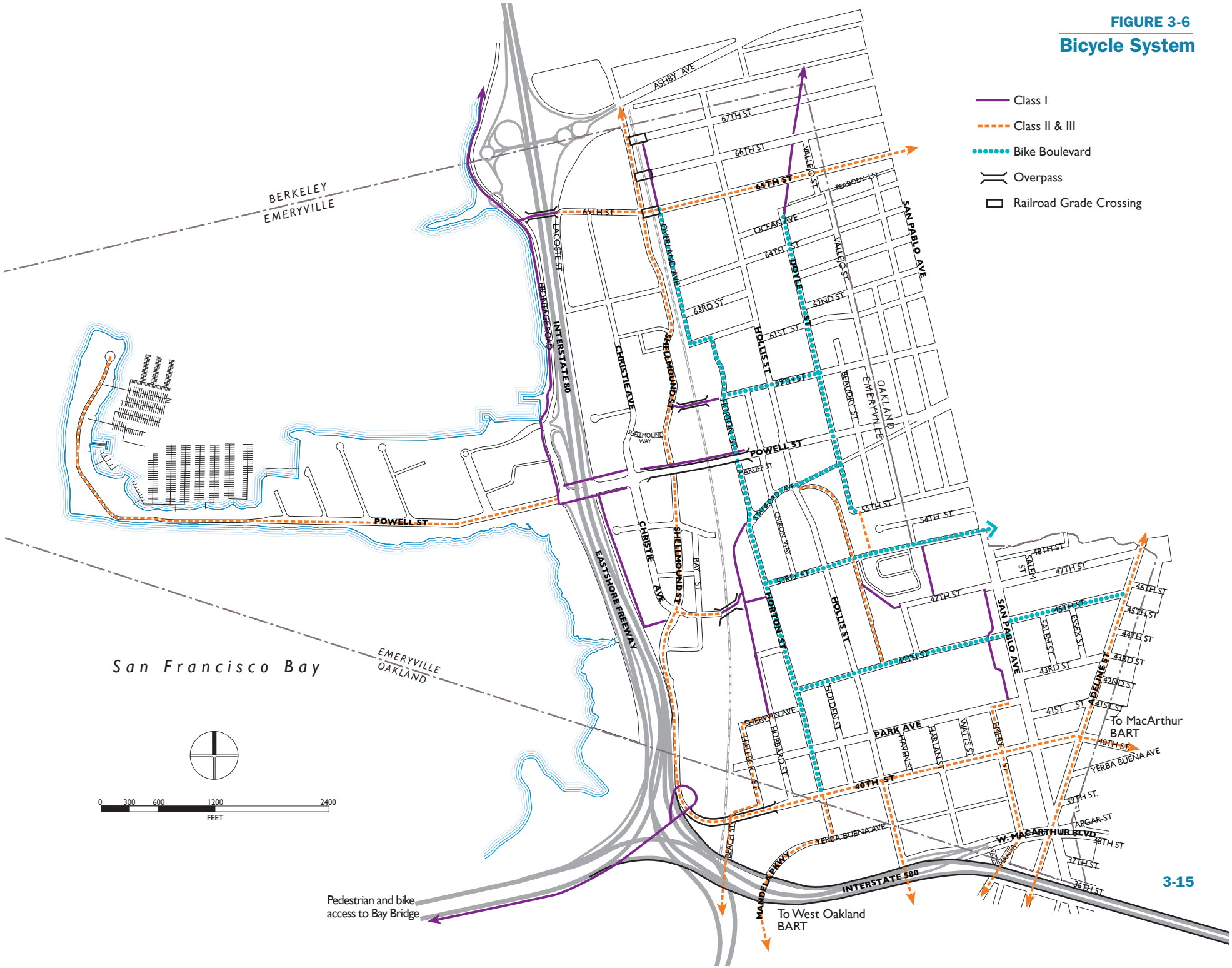
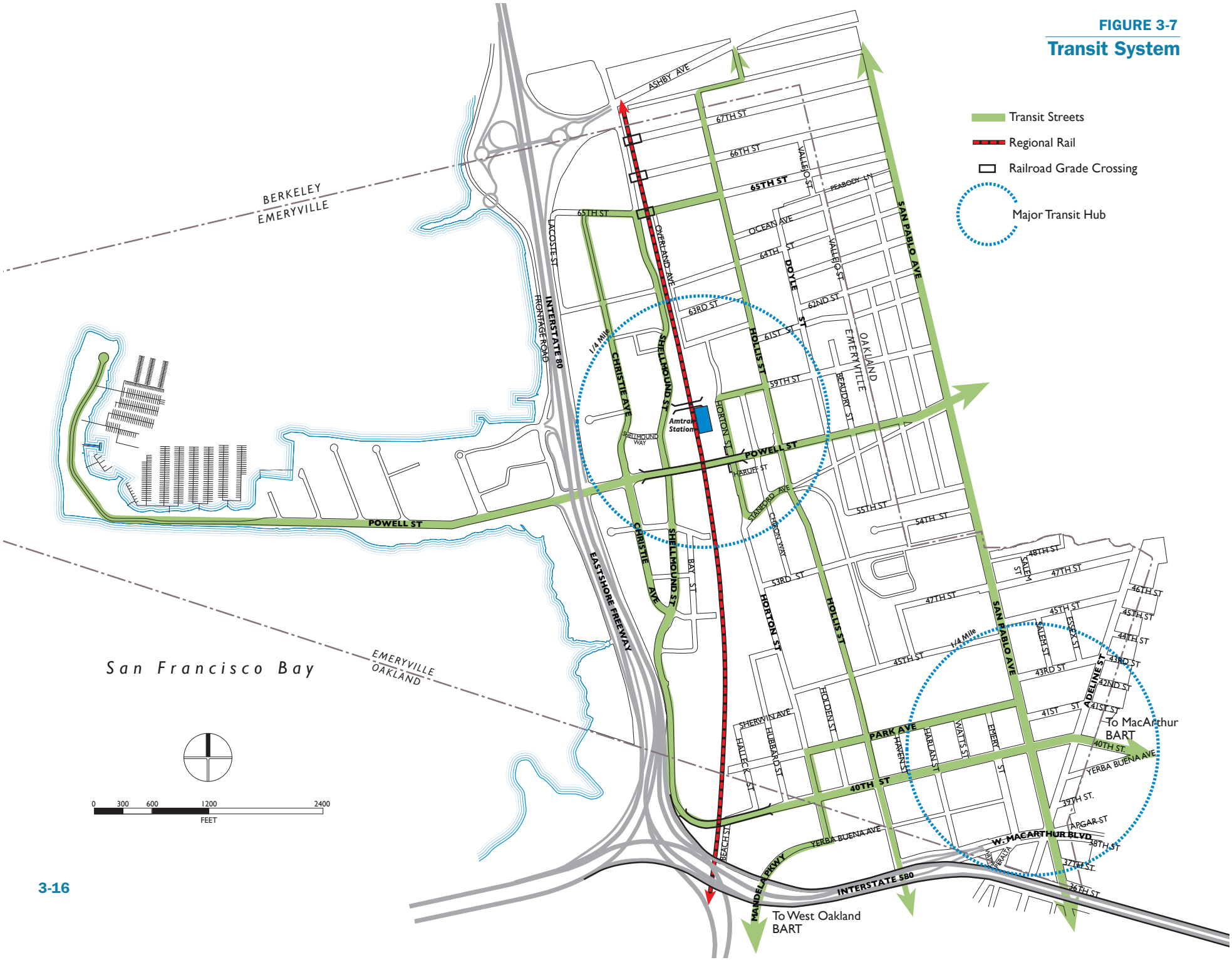


FIGURE 3-7

Transit System



tion, exclusive bus lanes, and "queue jump lanes" (lanes at intersections that allow buses to bypass traffic) will be used to give transit priority. Equally important, these streets will provide attractive, safe, and comfortable bus stops accessed by ample sidewalks with pedestrian amenities to encourage transit use. "Major Transit Hubs" are identified at the Amtrak station and the San Pablo Avenue/40th Street intersection. These are locations where a number of major transit routes intersect, and where high density "transit-oriented development" and enhanced amenities to promote transit ridership are appropriate. Other measures such as parking pricing (see Section 3-7) could increase the financial attractiveness of transit. Expanded service and increased frequency would also make transit more attractive.

Regional Rail

Figure 3-7 also identifies the regional rail line that runs north and south through the center of Emeryville. This historic rail corridor has served Emeryville for well over 100 years, and is the route for regional and transcontinental passenger and freight traffic. In September 2007, the Metropolitan Transportation Commission (MTC) adopted the 50-year Regional Rail Plan. Among other things, it proposes a new transbay tube between San Francisco and Oakland that would include both BART and conventional passenger rail tracks. This would allow the creation of new BART lines in the East Bay, as well as the direct connection of Caltrain, the Capital Corridor, and other commuter trains between San Francisco and the East Bay (although there are technical issues to be worked out with the type of rail equipment used in the tube). It would also allow future high-speed rail trains from Los Angeles to San Francisco to continue on to the East Bay.

While it is probably outside the time frame of this General Plan, a new transbay tube would provide an opportunity to develop a BART station in Emeryville at Powell Street, serving Bay Street, the Marketplace, Novartis, Emery Station, and surrounding hotels, shops, offices, and residents. It would also provide the opportunity for a direct commuter rail link between Sacramento and San Francisco via Emeryville.

In the more immediate future, the Regional Rail Plan identifies a need to expand the Union Pacific mainline to four tracks between Oakland and Martinez (through Emeryville), two serving passenger rail and two serving the increased freight traffic anticipated from the Port of Oakland. In conjunction with this, the Plan proposes "East Bay Express" train service between Pinole and Hayward. While this will allow for increased passenger rail service to Emeryville, the additional trains, especially freight, will bring noise, air pollution, and traffic disruption that will need to be mitigated. Fortunately, no additional rail right-of-way will be required.

Streetcars and Personal Rapid Transit

Streetcars and "Personal Rapid Transit" (PRT) have also been identified as a potential longer term enhancement to public transit service in Emeryville. Streetcars would operate both on city streets and on exclusive rights-of-way, similar to the systems recently developed in Portland, Oregon and many other cities, and would have stops at convenient locations throughout the city. PRT would consist of small vehicles operating above the streets with bypass tracks at each station, and would provide frequent and rapid point-to-point service between any two pairs of stations on demand. Such a system, built by the U.S. Department of Transportation, has been operating successfully since 1975 at the University of West Virginia in Morgantown. Another is under construction at London's Heathrow Airport.

Within the city, Emeryville is served by several public transit modes and agencies, including Amtrak regional rail (top) and the local Emery Go-Round (bottom).

3.7 PARKING

Emeryville currently has an abundance of free parking for residents, visitors, and workers, making driving an attractive alternative to taking public transit, walking or bicycling. In the past, zoning requirements have prescribed parking requirements by land use type, but have not allowed for appropriate off-sets to account for shared parking, transit availability, or to promote bicycling and walking.

Parking costs (including land, construction and maintenance) are substantial in Emeryville and may limit the type of redevelopment that can occur. Flexible parking standards combined with parking pricing of public spaces, works to ensure that appropriate parking supplies are provided and that revenue is generated to offset some of the parking costs. Appropriate materials, screening of parking in pedestrian priority zones, and other design considerations are discussed in Chapter 5: Urban Design. Policies in this section focus on providing sufficient parking for businesses and residents, while protecting adjacent neighborhoods and the environment, and using parking management as a means of encouraging the use of alternative modes of transportation to the automobile.

Currently, surface parking dominates many of the retail areas, supplying ample free parking, but creating consequences for pedestrian connectivity.

The harbor will continue to serve as a functioning marina.

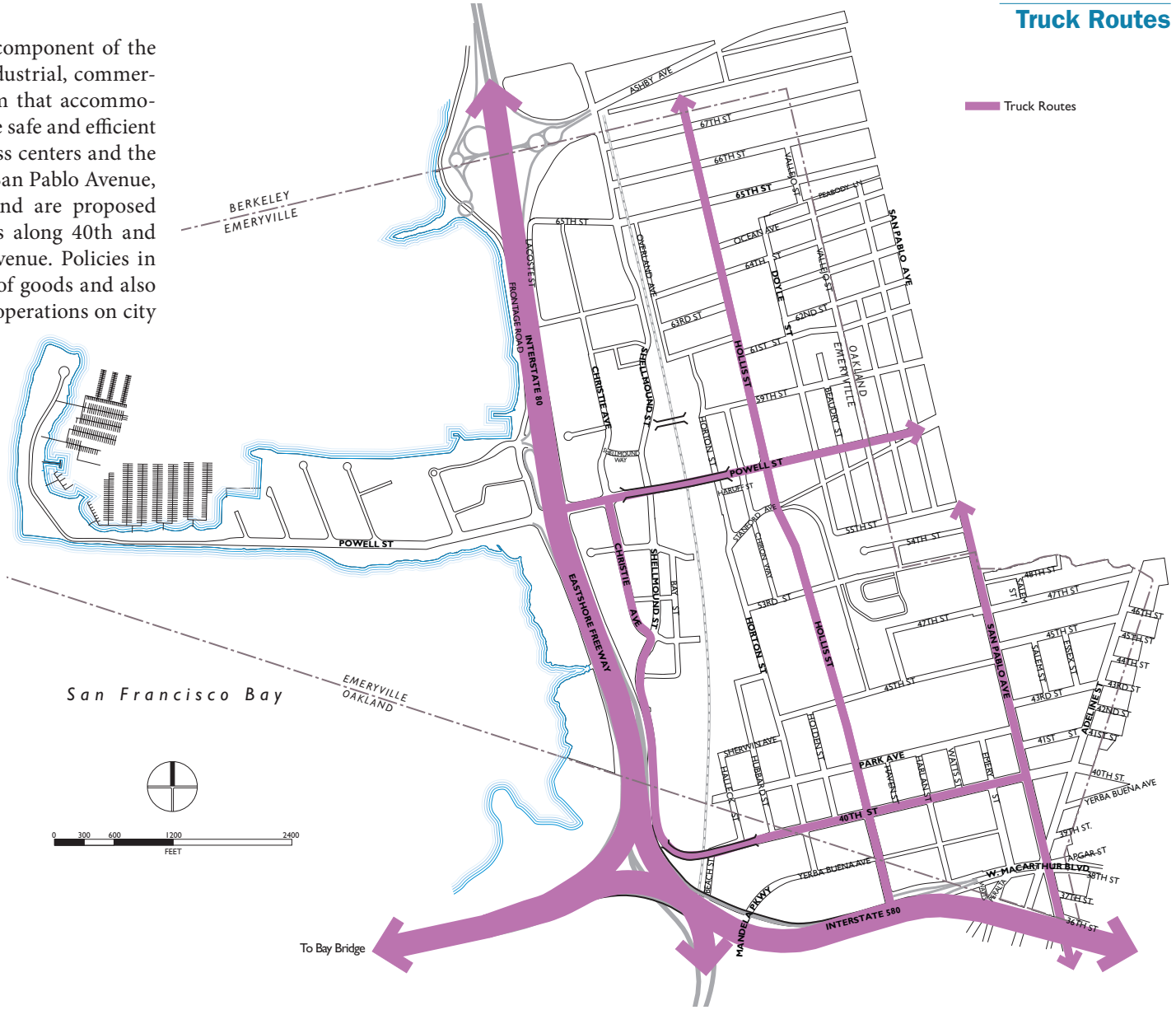
3.8 MARINA

The City of Emeryville's Marina area contains approximately 840 boat slips at the Emery Cove Yacht Harbor and Emeryville Public Marina. In addition, the Marina contains a fishing pier, boat launch, and restaurants, as well as the adjacent Watergate residential complex. There is no public ferry service from the Marina. No major changes are planned for the Marina area.

3.9 GOODS MOVEMENT

Goods movement is an important component of the city's circulation system, serving industrial, commercial, and retail uses. A street system that accommodates trucks is essential to ensure the safe and efficient movement of goods between business centers and the freeways. Trucks routes exist along San Pablo Avenue, Hollis Street, and Powell Street, and are proposed to serve regional retail destinations along 40th and Shellmound Streets and Christie Avenue. Policies in this section support the movement of goods and also seek to reduce the impacts of truck operations on city streets and adjacent land uses.

FIGURE 3-8
Truck Routes



3.10 TRANSPORTATION DEMAND MANAGEMENT

Transportation Demand Management (TDM) refers to a comprehensive strategy to reduce driving by promoting alternatives such as public transit, carpooling, bicycling, walking, and telecommuting. Many of the features that are incorporated into this Transportation Element are part of the City's TDM strategy, including:

- A street typology system that gives priority to alternate modes of travel, including the concept of complete streets.
- Pedestrian and bicycle facilities, including Safe Routes to Schools and safe routes to transit.
- Expanded and enhanced public transit service, including exclusive bus lanes, "fare free zones," and free transit passes.
- Traffic calming measures.
- Parking pricing, "unbundled" parking, parking "cash out," and reduced parking requirements for new development.

These measures are included in the plan for the city's physical transportation infrastructure and implementing actions such as zoning requirements and public transit operations. Additional TDM measures that could be undertaken by the City, private organizations, and employers, include:

- Carpooling and vanpooling: ride-matching services offered by larger employers or by organizations such as the Chamber of Commerce or the Transportation Management Association (TMA). It can be augmented by the provision of preferential parking at employment destinations.
- Car sharing and bicycle sharing programs: membership in a private organization such as Zipcar or City CarShare, where cars are available to members on demand at conveniently located "pods" for a nominal fee. The TMA operates several Zipcar pods in Emeryville. Bicycle sharing is a similar concept involving bicycles.
- Telecommuting, flexible work schedules, and alternative work schedules: Telecommuting involves working from home rather than commuting to an office. This can be facilitated by amenities in residential complexes such as business centers with copiers, fax machines, and Internet service. Sometimes employers provide such facilities to their employees who telecommute. Flexible work schedules and alternative work schedules provide alternatives to the standard "9 to 5" workday. These non-traditional schedules can reduce the number of work trips made during peak commute hours, thereby reducing overall traffic.
- Child care services are often a determining factor in employees' commute schedules. Conveniently located child care with variable schedules, either offered by employers or nearby institutions, can provide commuters with more flexibility in their daily routines. (See Section 4.3: Public Services and Facilities for additional child care policies.)

GOALS AND POLICIES

GOALS

OVERALL CIRCULATION SYSTEM

T-G-1 **A comprehensive transportation system—** A transportation system that is efficient, safe, removes barriers (e.g. accessibility near freeways and rail lines), and optimizes travel by all modes.

T-G-2 **Universally accessible—**A transportation system that meets the needs of all segments of the population, including youth, seniors, persons with disabilities, and low-income households.

T-G-3 **Multi-modal—**A transportation system that eliminates the necessity of owning and/or driving personal vehicles because of the availability of convenient and accessible alternative modes of transportation.

WALKING

T-G-4 **A walkable city—**A universally accessible, safe, pleasant, convenient, and integrated pedestrian system that provides links within the city and to surrounding communities, and reduces vehicular conflicts.

BICYCLING

T-G-5 **A safe, comprehensive, and integrated bicycle system—**A system and support facilities throughout the city that encourage accessible bicycling for all community members.

PUBLIC TRANSIT

T-G-6 **A safe, efficient, comprehensive, and integrated transit system—**A public transit system that allows for a reduction in automobile dependence for residents, employees, and visitors.

STREET SYSTEM

T-G-7 **A multi-functional street system—** A system that will ensure the safe and efficient movement of people, goods, and services and support a high quality of life and economic vitality.

PARKING

T-G-8 **A balanced parking supply system—** Parking supply that balances economic development, livable neighborhoods, environmental and energy sustainability, and public safety, while reducing dependence on the automobile.

GOODS MOVEMENT

T-G-9 **Safe and efficient movement of goods—** Goods movement that supports commerce and industry while maintaining a high quality of life.

MARINA

T-G-10 **An accessible functional harbor—**A harbor and marinas that are accessible to the rest of Emeryville and accommodate the needs of users.

TRANSPORTATION DEMAND MANAGEMENT

T-G-11 **Transportation demand management strategies—**TDM strategies that decrease single-occupant automobile demand and reduce vehicle miles traveled.

POLICIES

Implementing actions supporting each policy are described in Chapter 8: Implementation Program.

OVERALL CIRCULATION SYSTEM

T-P-1 The City's circulation plan shall be as set forth in Figures 3-1 through 3-8 and based on the typologies described in this chapter.

T-P-2 The design, construction, operation, and maintenance of city streets shall be based on a "complete streets" concept that enables safe, comfortable, and attractive access and travel for pedestrians, bicyclists, motorists, and transit users of all ages and abilities.

T-P-3 A "Quality of Service" standard that seeks to optimize travel by all transportation modes shall be developed and used to measure transportation performance. The City does not recognize "Level of Service" (LOS) as a valid measure of overall transportation operations, and sets no maximum or minimum acceptable LOS levels, with the exception of streets that are part of the regional Congestion Management Agency network. (These streets may change, but as of 2008 include San Pablo Avenue, Frontage Road, and Powell and Adeline streets). LOS shall not be used to measure transportation performance in environmental review documents or for any other purpose unless it is mandated by another agency over which the City has no jurisdiction (such as Caltrans, Berkeley, Oakland, and the Congestion Management Agency), and then it shall only be used for the purposes mandated by that agency.

T-P-4 Transportation planning shall be coordinated with emergency service providers to ensure continued emergency service operation and service levels.

T-P-5 The City encourages development that minimizes Vehicle Miles Traveled (VMT).

T-P-6 To the extent allowed by law, the City's Traffic Impact Fee shall include bicycle, pedestrian, transit, and road improvements so that development pays its fair share toward a circulation system that optimizes travel by all modes.

T-P-7 The City shall continue to study and evaluate appropriate traffic and transportation improvements.

T-P-8 Connections across the railroad and freeway shall be provided as noted in Figures 3-1 through 3-6. In addition the City will study, in collaboration with stakeholders and interested agencies and parties, additional pedestrian and bicycle connections across the freeway between the peninsula on the west and high density areas on the east.

T-P-9 The City will work with Caltrans and the City of Berkeley to develop improvements to the Ashby Interchange.

WALKING

T-P-10 The pedestrian circulation system shall be as set forth in Figure 3-4 and based on the typologies described in this chapter.

T-P-11 Sidewalks shall be provided on both sides of all streets; pedestrian connections between new and existing development is required.

T-P-12 The City will plan, upgrade, and maintain pedestrian crossings at intersections and mid-block locations by providing safe, well-marked crosswalks with audio/visual warnings, bulb-outs, and median refuges that reduce crossing widths.

T-P-13 Pedestrian routes will be provided across large blocks, pursuing creative options if necessary such as purchasing private alleys, designating pathways through buildings, and acquiring public access easements.

T-P-14 Establish Pedestrian Priority Zones in Neighborhood Centers, around schools, and in other locations as indicated in Figure 3-4, where wider sidewalks, street lighting, crosswalks, and other pedestrian amenities are emphasized. Link these zones to adjacent land uses to ensure that building frontages respect pedestrians and truck loading takes place on adjacent streets wherever possible.

T-P-15 Walking will be encouraged through building design and ensure that automobile parking facilities are designed to facilitate convenient pedestrian access within the parking area and between nearby buildings and adjacent sidewalks. Primary pedestrian entries to nonresidential buildings should be from the sidewalk, not from parking facilities.

T-P-16 Safe pedestrian walkways that link to streets and adjacent bus stops will be required of new development.

T-P-17 The City will require new development to minimize the number and width of curb-cuts for vehicle traffic to reduce vehicle conflicts with pedestrians.

T-P-18 The City will study, in collaboration with stakeholders and interested agencies and parties, the feasibility of a pedestrian/bicycle trail along the west side of I-80, east of the Emeryville Crescent, to provide access from the Bay Trail to the eastern span of the Bay Bridge.

T-P-19 Following completion of the new east span of the Bay Bridge, the west span should be retrofitted with a pathway to provide continuous pedestrian and bicycle access between San Francisco and the East Bay.

T-P-20 Safe and direct pedestrian access to Aquatic Park and the peninsula will be provided and maintained.

BICYCLING

T-P-21 The City will develop the bicycle circulation system set forth in Figure 3-6 and based on the typologies described in this chapter.

T-P-22 The City's preferred Bay Trail route through Emeryville is set forth in Figure 3-5, including the main trail between Frontage Road in Berkeley and Mandela Parkway in Oakland, and spur trails to the Marina along Powell Street and to the Bay Bridge along the east side of Interstate 80.

T-P-23 On-street bike routes in the City's Bicycle and Pedestrian Plan shall be designated as either Class II (bike lanes) or Class III (signed routes without lanes), as appropriate. These designations are not part of the General Plan and may be changed as circumstances dictate.

T-P-24 Safe, secure, and convenient short- and long-term bicycle parking shall be provided near destinations for all users, including commuters, residents, shoppers, students, and other bicycle travelers. Retail businesses in regional retail areas are encouraged to provide valet bicycle parking.

T-P-25 A numbered bike route system with destination signs, consistent with the regional bike route numbering system shall be developed and implemented with clear signage to bicycle boulevards.

T-P-26 Bicycling will be promoted through public education, including the publication of literature concerning bicycle safety and the travel, health and environmental benefits of bicycling.

PUBLIC TRANSIT

T-P-27 The public transit system will be as set forth in Figure 3-7 and based on the typologies described in this chapter.

T-P-28 Existing public transit to BART, Amtrak, and regional destinations will be supported, and transit within Emeryville for residents, workers, and visitors will be promoted.

T-P-29 The City supports transit service on all Transit Streets, as shown in Figure 3-7. This includes Powell Street to the Marina and east of Hollis Street to the Ashby BART station and downtown Berkeley; Park Avenue west of Hollis Street; and Adeline Street.

T-P-30 The City will undertake a study to enhance transit mobility, including feasibility of transit-only lanes (dedicated, peak-hours only/shared with automobiles at other times, or converted from parking lanes to transit-only during peak hours), especially along congested tran-

sit streets, to provide walking access from most of the city, and connect major destinations within Emeryville and to BART.

T-P-31 The City will develop and implement transit stop amenities such as pedestrian pathways approaching stops, benches, traveler information systems, shelters, and bike racks to facilitate transit stops as place-making destinations and further the perception of transit as an attractive alternative to driving.

T-P-32 Transit stops will be sited at safe, efficient, and convenient locations, and located appropriately within the right of way.

T-P-33 The City supports transit priority on Transit Streets through features such as traffic signal priority, bus queue jump lanes at intersections, exclusive transit lanes, and other techniques as appropriate, with adjustments to technology as conditions change.

T-P-34 The City will continue to support free and/or subsidized transit for both local travel within the City and travel to the regional hubs located at the Amtrak Station, the MacArthur BART station, and San Pablo Avenue at 40th Street.

T-P-35 The City will support the expansion of the Emery Go-Round to accommodate workers, residents, and visitors.

T-P-36 The City supports Transit-Oriented Development with reduced parking requirements, and amenities to encourage transit use and increase pedestrian comfort around the Major Transit Hubs at the Amtrak station and the 40th Street/San Pablo Avenue intersection.

T-P-37 The City will advocate for frequent, direct transit service to all points in Emeryville, especially between the east and west sides of town.

T-P-38 The City encourages Amtrak to allow local travel on Amtrak buses that provide service from Downtown San Francisco to the Emeryville Station.

T-P-39 The City will advocate for AC Transit to provide frequent, direct, two-way service between downtown San Francisco and various points within Emeryville.

T-P-40 The City will investigate and implement, if appropriate, fixed guideway transit systems, such as streetcars or personal rapid transit (PRT).

T-P-41 The City supports a new BART line in the East Bay that includes service to Emeryville along the existing regional rail corridor with a stop at Powell Street.

T-P-42 The City will advocate (in the short term) for BART to rename the MacArthur BART station to "North Oakland/Emeryville" to more accurately reflect the station's market area and to help promote awareness of transit service to Emeryville.

T-P-43 The City supports an additional transbay tube that provides for direct commuter rail service between Sacramento and San Francisco via Emeryville.

T-P-44 The City supports grade-separated crossings and other appropriate measures to mitigate the impacts of increased rail traffic on Emeryville, including noise, air pollution, and traffic disruption.

STREET SYSTEM

T-P-45 The street system will be created as set forth in Figure 3-2, and based on the typologies described in this chapter.

T-P-46 Private developments and major public infrastructure projects will provide adequate rights-of-way for all modes of transportation.

T-P-47 The City supports "traffic calming" and other neighborhood traffic management techniques to enhance the quality of life within existing neighborhoods and to discourage through-traffic on bicycle boulevards and local streets.

T-P-48 The City will establish equal priority to bicycles and public transit (and discourage through-traffic by other modes) on streets in the vicinity of the Amtrak sta-

tion that are designated as both Transit Streets and Bicycle Boulevards.

PARKING

T-P-49 Quality of life and business viability will be promoted by maintaining an adequate supply of parking to serve growing needs, while avoiding excessive supplies that discourage transit ridership and disrupt the urban fabric.

T-P-50 Public garages will be provided strategically, in locations convenient and proximate to eventual destinations.

T-P-51 The City supports parking supply and pricing as a strategy to encourage use of transit, carpools, bicycles, and walking.

T-P-52 Flexible parking standards are encouraged that reflect calculated parking demand for proposed land uses and that allow for appropriate offsets to reduce parking demand and encourage walking, bicycling, carpooling, and transit use.

T-P-53 Employers are encouraged to offer "parking cash out", whereby employees who choose not to drive are offered the cash value of any employee parking subsidy, to be used towards commuting to work by other means.

T-P-54 The City supports public parking strategies, such as variable pricing for on-street and off-street public parking and public use of private garages, to maintain a parking space utilization goal of 85 percent.

T-P-55 The City supports the use of parking revenues within "parking benefit districts" to consolidate public parking, enhance non-motorized connections between parking and land uses, and improve security and the physical environment of the districts.

T-P-56 The City supports shared parking between multiple uses to the extent possible, and will encourage private property owners to share their underutilized off-street parking resources with the general public.

T-P-57 The land area devoted to parking shall be reduced by supporting innovative technologies such as parking lifts and automated parking.

T-P-58 The City supports the expansion of the Residential Permit Parking (RPP) program to ensure adequate parking availability in residential areas, recognizing the need for adequate parking to support neighborhood businesses.

T-P-59 Development will be required to "unbundle" parking spaces from lease payments and condominium purchases, so that property lessees and buyers can choose whether to pay for parking spaces.

GOODS MOVEMENT

T-P-60 Truck freight movement will be accommodated between the freeway system and Emeryville's regional shopping destinations along 40th Street and Shellmound Street, consistent with the typologies described in this chapter.

T-P-61 Truck freight movement will be accommodated to and from local businesses, consistent with the typologies described in this chapter. Through truck traffic is discouraged.

T-P-62 Provide adequate off-street loading areas in large commercial, industrial, and residential developments that do not conflict with pedestrian, bicycle, transit, or automobile movements.

MARINA

T-P-63 The City supports marina and harbor operations and connections to these uses.

TRANSPORTATION DEMAND MANAGEMENT

T-P-64 The City will work with local, regional and state agencies, the Chamber of Commerce, and the Transportation Management Association, as well as employers and residents, to encourage and support programs that reduce vehicle miles traveled, such as preferential carpool parking, parking pricing, flexible work schedules, and ridesharing.

T-P-65 Employers in large new developments will be required to implement comprehensive TDM programs for their employees and customers.

T-P-66 The City supports and encourages the expansion of car-sharing programs in Emeryville.

T-P-67 The City supports and encourages conveniently located child care services with flexible hours.