

San Francisco

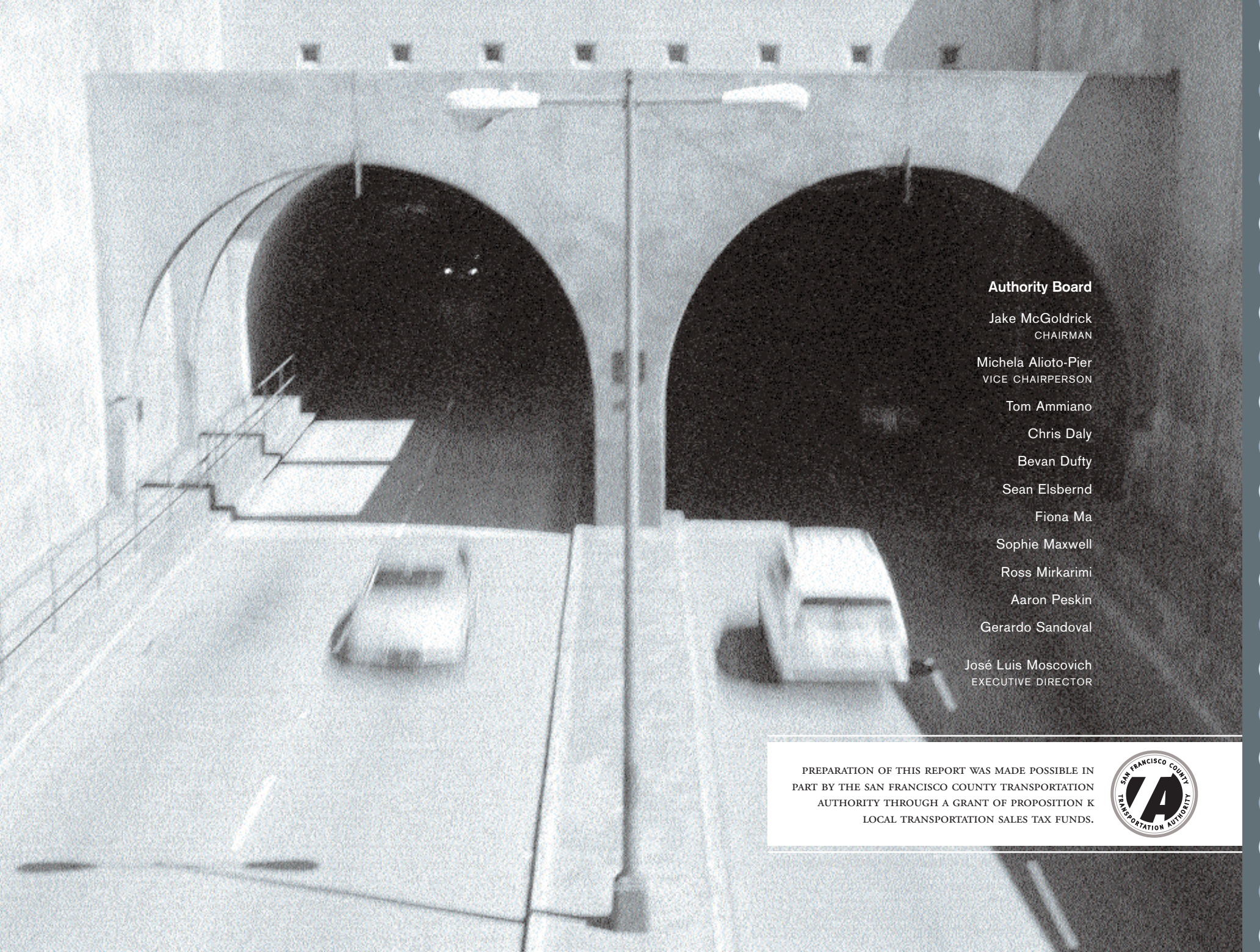
Countywide Transportation

PLAN



SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY

JULY 2004



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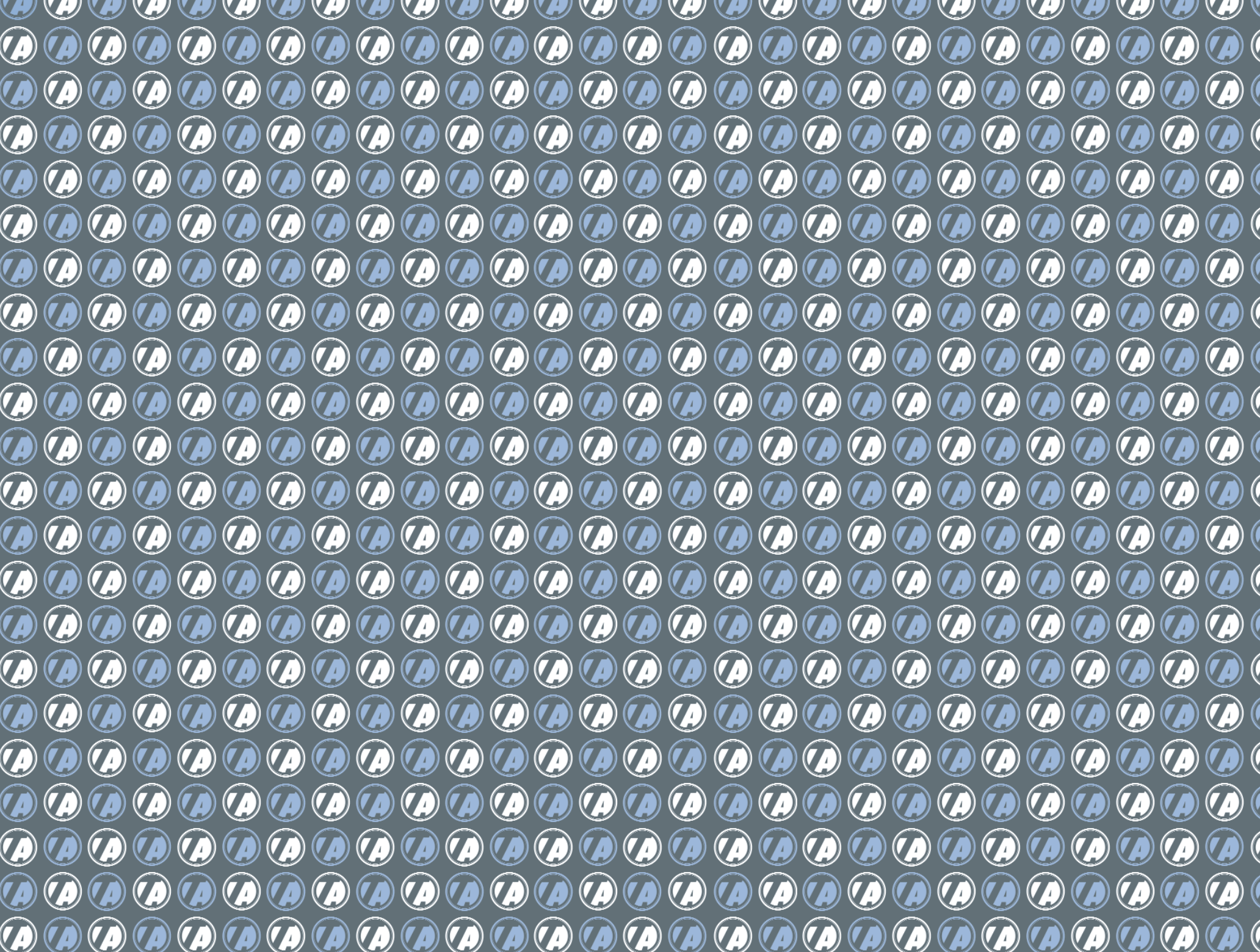
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PREFACE / ACKNOWLEDGMENTS

Preparing a 30-year transportation plan for a city like San Francisco is not a task for the faint of heart.

Apathy towards participation in the business of governing may reign in the rest of the country, but not in San Francisco. When it comes to determining the future of this extraordinary and uniquely beautiful place we call home, we San Franciscans are very passionate. Not surprisingly, this Plan is the result of dozens of neighborhood and citywide public meetings and hundreds of hours of often intense debate, over the course of several years, about the relative merits of different projects, proposed policies and transportation investment decisions.

As if to dispel any doubts that San Francisco remains the center and soul of the region no matter how large the suburbs may get, Bay Area residents outside the city eagerly volunteer advice about what we ought to do to make San Francisco a better place for all of us. If the opposite of love is indeed indifference, San Francisco is well loved: what we do to our city matters passionately to many. Being at once possessively admired and resented is a fate that San Francisco, the quintessential entrepreneurial American frontier town, paradoxically shares with well-heeled capitals of economic or political empires throughout history: Venice, Madrid, London. Passions notwithstanding, San Francisco is not a capital city, it is only queen of hearts, and it must rely on its own resources and on the economic tribute of willing suburban shoppers yearning for freedom from the chains and seeking the refinement and variety of its unique specialty stores, restaurants and cultural offerings. While the city is still in many ways expected to function as the center of the region, population-based formulas for the distribution of state and federal funds have left it with a dwindling percentage of the resources of the region. The rising political clout of the suburbs, coupled with unsustainable local land use policies, have resulted in decisions to build cost-ineffective rail transit extensions which nevertheless compete for federal funding with San Francisco's more cost-effective projects.

San Francisco is an amalgam of two different cities: the dense, 19th Century city of Downtown, Nob Hill, North Beach, the Tenderloin and the Haight, and the more suburban residential outer ring: the Sunset, the Richmond, the Excelsior, the Mission and Bayview, resulting from the expansion that lasted through the 1940's. Transportation is not an end in itself, it results from economic activity: people need to get to work, to school, go shopping. Transportation is strongly influenced by urban form. The transportation needs of the outer neighborhoods are different from those of the inner neighborhoods and downtown. People in the outer neighborhoods have fewer transit options and are more likely to drive for shopping and other purposes. Decisions about land development have tremendous power to change transportation needs, and the debate about how San Francisco should look in the next few decades has been re-energized by the return of district elections, which have refocused people at the level where they can more easily and meaningfully influence policy decisions: their own neighborhoods. This debate has a distinct transportation flavor. For instance, many residents of the outer neighborhoods can more easily reach employment points in the Peninsula than in Downtown. The Plan clears the way for neighborhood-based transportation plans but it provides a strong strategic policy structure, to ensure that the city remains a cohesive whole.

With the leading edge of the baby boomer generation retirees already here, the demographic trend points to a growing mass of people looking for the advantages that a real city can provide: easily accessible world class culture, neighborhood shopping within walking distance, adult day care programs, cutting edge hospitals and reliable public transportation. The return to the city is a phenomenon that has been underway for decades in Europe. As it takes hold here it begs some very big policy questions. How much of the newly urbanized aging boomers should San Francisco be expected to absorb? What kind of housing will they seek? Where in the city should development take place? Since San Francisco is largely built out, these questions trigger others. As we consider recycling some of the city's land, issues come up about preservation of historic character, neighborhood feel, architecture, open space and, of course, transportation. If we are to generate the needed housing, the city will need to learn to accommodate and take advantage of higher residential densities. Handled properly, density could make the city even more attractive as a place to live. The debate about residential density has definitely generated some passion. On the one hand, lack of adequate public transportation and lack of parking are often cited as main impediments to higher residential densities in

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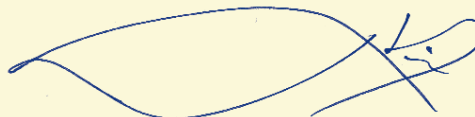
Benjamin Tom

neighborhoods. On the other hand, lower residential densities make it very difficult to justify improvements to transit service and financially impossible to build subways, which can travel faster than cars and lure people back into transit. The Plan sheds light on this debate by defining what is possible and likely within the transportation funding constraints we face in the next 30 years. One important answer is the development, over the next few years, of a bus rapid transit (BRT) network that can help transit regain some of the competitive edge.

Transportation is a key ingredient in the development of effective solutions to the challenges posed by the changing demographic tide. I believe that San Francisco can simultaneously thrive, preserve much of its character and worthy architecture and still absorb significant population growth. In order to do so, the city must take the business of planning, building and maintaining its transportation system very seriously. To win at the transportation funding game our transportation funding priorities must be defined now, even though the land use debate may go on for some time. If we don't determine our funding priorities for ourselves, someone else will do it for us by default, and we probably won't like the answer. The Plan is a living document, designed to adapt to the evolving set of answers to those tough policy questions, and still help us to effectively direct the development of the city's transportation system and maximize the capture of state and federal funds.

This Plan is the result of the collective effort of many individuals who have given generously of their time and talent to make the Plan a truly meaningful document. **Tilly Chang**, the Authority's Deputy Director for Planning, the principal author, managed the development of the Plan, contributing enormous talent and tireless devotion to a high quality product. She was very ably assisted by planner **Rachel Hiatt** who contributed extensively to the writing and helped to supervise the final production of the whole document. Other present and former Authority staff members who contributed significantly to the Plan include **Maria Lombardo**, Chief Deputy Director, who authored the seminal chapter on funding sources, Principal Transportation Planner and travel demand forecasting specialist **Billy Charlton**, as well as **Fred Ridel**, **Nancy Schneider**, **Lilia Scott**, **Ying Smith** and **Forest Atkinson**. We are indebted to the members of the Countywide Plan Subcommittee of the Authority's Citizens' Advisory Committee, **Val Menotti** (Chair), **Eileen Boken**, **Sarah Chan**, **Amy Chow**, **Elizabeth Ann Dunlap**, **Fran Martin**, **Arthur Michel**, **Terry Micheau**, **Jackie Sachs**, **Matt Tuchow**, and **Ben Tom**, for their input, guidance and dedication throughout the process. We also wish to thank the Authority's Technical Working Group, and in particular the following members: **Peter Albert** (BART); **David Beaupre** (Port of San Francisco); **Rajiv Bhatia** (Department of Public Health); **Jose Campos** (Redevelopment Agency); **Bob Bates** and **Doug Johnson** (MTC); **Anna LaForte** (DPW); **Maurice Palumbo** (Golden Gate Transit); **David Alumbaugh**, **Ken Rich** and **Charles Rivasplata** (Planning); **Jerry Robbins** and **Pete Tannen** (DPT); **Corrine Goodrich** and **Beth Thomas** (SamTrans); and **Duncan Watry** and **Marguerite Fuller** (MUNI) for their many contributions to the discussion of difficult technical and policy issues. Consultants contributing to the development of the plan included **Joe Castiglione**, **George Oliver**, **John Seagrave**, **Shannon Cairns** and **Todd Vogel**. Finally, I'd like to acknowledge the Authority Board for its support and guidance, and in particular Chairman **Jake McGoldrick**, for challenging us to produce a Plan that is grounded in the realities of present day San Francisco, rather than a theoretical essay.

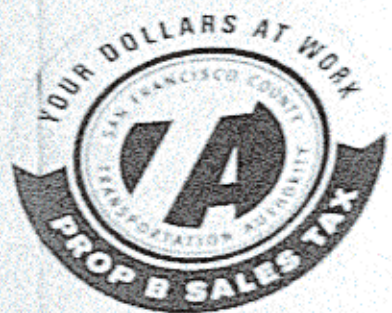
This Plan is more than just the documentation of a broad consensus, it set out to articulate a vision for a transportation system designed to enable San Francisco to become an even better place, for all of us. Whether you agree with every aspect of that vision or not, if the document inspires you to think critically about the future of San Francisco and its transportation system we will have accomplished our goal.



José Luis Moscovich EXECUTIVE DIRECTOR



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The Countywide Transportation Plan is the blueprint to San Francisco's transportation system development and investment over the next 30 years.

Purpose of the Countywide Transportation Plan





SAN FRANCISCO'S MULTIMODAL transportation network is crucial to San Francisco's status as a major regional economic center and as a world-class destination. Our transportation system provides mobility for the city's 780,000 residents and for several hundred thousand regional workers, students, shoppers and visitors who travel to San Francisco each day. San Francisco's businesses, large and small, rely on the transportation system to provide access for their employees and customers, and for efficient delivery and distribution of goods. The safety and attractiveness of our streets, sidewalks, bicycle paths, transit facilities, water services and gateways are also critical to the development and preservation of San Francisco's unique and dynamic neighborhoods. The city's transportation system is integral to our quality of life in all of these ways. As the region decentralized over the last three decades, San Francisco's role in the Bay Area has changed. The transportation system has been a defining factor of the city's role in the region. No longer the only major employment center, downtown nevertheless remains the largest and densest concentration of jobs in the region. This prominence is due in large part to the high level of local and regional rail transit accessibility that has resulted from the Transit First policy provisions contained in the City Charter, which have been implemented over the past several decades.

Over the same period, San Francisco has retained and improved its attractiveness as a shopper's mecca, particularly for specialty shopping, and it remains the region's world-class cultural center. People come to San Francisco to enjoy its pedestrian-scale character and diverse, bustling neighborhood commercial centers.

Part A.



Today the city faces many challenges: a growing homeless population, lack of affordable housing, increasing traffic congestion, and loss of jobs and commercial activity to the suburbs. The decisions that we make today about investing in our transportation system will have a significant effect in helping to maintain San Francisco's vitality and quality of life well into the future. The Countywide Transportation Plan provides a blueprint to systematically guide our investments in the transportation system, so that we can preserve the city's uniqueness and improve mobility and accessibility in ways that keep San Francisco vibrant.

A1. What is the Countywide Transportation Plan?

As the Congestion Management Agency¹ for San Francisco, the Transportation Authority is responsible for setting transportation investment priorities for the city, developing and maintaining a computerized travel demand forecasting model and related databases, and programming state and federal funds for local transporta-

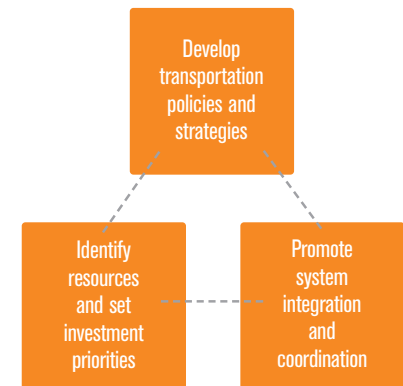
tion projects. The Authority is also responsible for preparing a long-range Countywide Transportation Plan.

This first Countywide Transportation Plan is the city's blueprint to guide transportation system development and investment over the next thirty years. The Plan is consistent with the broader policy framework of San Francisco's General Plan and particularly its Transportation Element. The Countywide Transportation Plan further develops and implements General Plan principles by identifying needed transportation system improvements based on: technical review of system performance; extensive public input on key issues and needs; and analysis of financial opportunities and constraints. The main outputs of the Plan are the three components of the Plan's Action Element (described further in Chapters 4, 5 and 6):

- » **a.** An investment component, addressing local, regional, state, and federal transportation funds, designed to implement the goals of the Countywide

Figure 1-1

CWTP Purpose



¹ In 1990, pursuant to State law, the Transportation Authority was designated as the Congestion Management Agency (CMA) for San Francisco



...a living document, the Countywide Plan will be updated on a regular basis, to address changing needs and regional trends, and align proposed solutions with available transportation funding.

Transportation Plan through citywide investment in the maintenance, expansion and management of the city's multi-modal transportation system;

- » **b.** A policy component, comprised of strategic initiatives to complement the investment component; and
- » **c.** An institutional development and coordination component, to increase the efficiency and effectiveness of transportation program delivery.

A2. What are the Goals of the Countywide Transportation Plan?

The Countywide Plan's goals stem from the following vision statement for transportation system development in San Francisco:

Develop safe, attractive, equitable transportation choices for all users, to strengthen the city's diverse economy while ensuring accessibility and protecting its celebrated quality of life.

The Plan guides the realization of this vision by:

- » **a.** Setting policy goals and strategies for the balanced development of San Francisco's multi-modal transportation system;
- » **b.** Identifying available resources and setting local transportation investment priorities over the next thirty years; and
- » **c.** Promoting system integration and coordination amongst agencies responsible for transportation project implementation and service provision (see Figure 1-1).

Specifically, the major objectives and strategies of the Countywide Transportation Plan are to:



- a.** Support economic vitality by maintaining local and regional accessibility to key employment, cultural, recreation and community activity centers, investing in the multi-modal network to ensure efficient movement of people and goods.



- b.** Promote safety and security for all people sharing the streets, including pedestrians and cyclists, by reducing conflicts, accidents, and seismic vulnerability through improved facility design, education and enforcement.



- c.** Support community vitality by supporting good land use planning, improving neighborhood access, and enhancing neighborhood livability, particularly through promotion of pedestrian activity to support neighborhood commercial activity.



- d.** Ensure equity in transportation investments through a broad distribution of benefits among all city residents; minimizing the negative impacts of transportation investments; and encouraging appropriate pricing strategies to promote efficient use of the system.



- e.** Sustain environmental quality by observing federal, state and regional air quality standards, minimizing and mitigating the negative environmental impacts of transportation projects and activities, and promoting the beautification and greening of the city.



- f.** Invest wisely in our transportation system by maintaining the city's transportation infrastructure in a state of good repair, ensuring the cost-effective use of funds, promoting financially sustainable approaches to transportation service provision, protecting committed funding and maximizing leverage of outside funds, advocating for new revenue sources, and facilitating the timely delivery of projects.

The goals of this first Countywide Transportation Plan were developed through an extensive community planning process steered by the Transportation Authority Board, including public outreach in every district of San Francisco and consultations with partner transportation agencies. The Countywide Transportation Plan is a living document, updated on a regular basis to address changing needs and regional trends, and align proposed solutions with available transportation funding. Future updates of the Countywide Plan will reflect evolving goals and priorities, as identified through the public participation process. ●



Development of the Countywide Transportation Plan

B1 How was the Countywide Transportation Plan Developed?

The key to ensuring that the Plan remains a relevant, living document is to continually reach out to the people and institutions that make San Francisco a great city. The public outreach strategy for this and future Countywide Transportation Plans includes three tiers: 1) policy steering committees, 2) technical working groups, and 3) community workshops. Together, these activities can ensure broad and inclusive public input into the planning process.

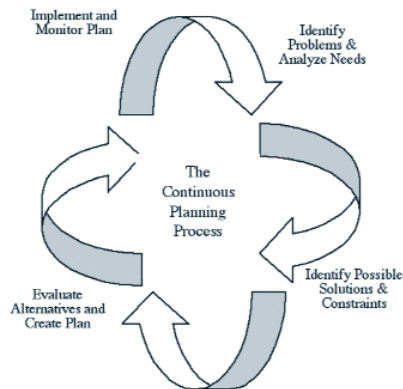
group that advised the Authority on the composition of the Transportation Sales Tax Expenditure Plan, the investment component of the Countywide Plan. The EPAC includes representatives from a broad range of community, business and advocacy groups (for a list of EPAC members, see Appendix B). The EPAC continues to oversee and advise on the implementation of the Prop K Expenditure Plan, which was approved by the San Francisco electorate on November 4, 2003 with 75% of the vote.

Policy Steering Committees: The Transportation Authority Board and the Plans and Programs and Finance Committees – together with the Authority’s Citizen’s Advisory Committee (CAC) and CAC’s Subcommittee on the Countywide Plan – provide regular guidance on development of the Countywide Plan and oversight on the implementation of the transportation sales tax Expenditure Plan.² In addition, the Authority receives advice from the Business Advisory Committee (BAG). In April 2003, the Authority Board convened the Expenditure Plan Advisory Committee (EPAC), a 21-member citizens

Technical Working Groups: Two separate Technical Working Groups consisting of staff from partner City agencies also provided input to, and guidance on, the development of the Countywide Plan and its investment component, the Expenditure Plan. Member agencies of the Authority’s Technical Working Group (TWG) helped to identify and prioritize future transportation system needs. In addition, a special modeling technical working group, comprised of travel demand modeling and land use forecasting experts, reviewed the use of the Authority’s San Francisco Travel Demand Model to test alternatives and evaluate the performance of Countywide Plan investments.

Figure 1-2

Continuous Planning Process



Input from community workshops guided the identification and prioritization of Countywide Transportation Plan initiatives.

² A list of transportation acronyms used in this report is provided in Appendix A.

Community Workshops: The Countywide Transportation Plan public outreach and involvement process spans several years, beginning with a series of public workshops in 1998, and reaching into 2002/03. These meetings included presentations on transportation needs citywide and discussion of specific issues and priorities in each neighborhood. Residents shared their views on the problems and potential solutions to traffic congestion, transit system development, pedestrian and bicycle safety, goods movement, and general livability and quality of life. Input from these meetings guided the identification and prioritization of Countywide Plan initiatives.

Meetings with advocacy and community groups continued in early 2003 and intensified with the release of the draft Transportation Sales Tax Expenditure Plan in April 2003. As the Plan evolved, the EPAC sought public comment and input on it, holding two “Open House” meetings in May and June 2003 and other outreach meetings with neighborhood and community groups. In order to reach a diverse range of residents, the Authority translated Expenditure Plan materials into several languages, and met with many ethnic community and media

groups. From May through July 2003, the Expenditure Plan public comment opportunities, including a public hearing held in July 2003. For a listing/summary of Countywide and Expenditure Plan community meetings, see Appendix C.

B2. Ongoing Plan Development

An additional round of community meetings took place in February and March 2004 with the release of the Draft Plan. Comments from those meetings have been incorporated in the Final Plan. The ongoing planning process involves monitoring of the Plan’s effectiveness. The Authority will accomplish this through system performance measurements, surveys of public views, and by tracking progress in project delivery (see Figure 1-2).

The next Plan update, in 2-3 years, will reflect the lessons learned from the implementation of this Plan in addition to new developments in the local and regional policy framework, in addition to demographics, housing supply updates, and other land development policies. The ongoing nature of the Plan development process enables the Plan to respond effectively to changing conditions and local needs. ●

Part C.



Role of the Countywide Transportation Plan

C1. A Key Link in Local and Regional Transportation Planning

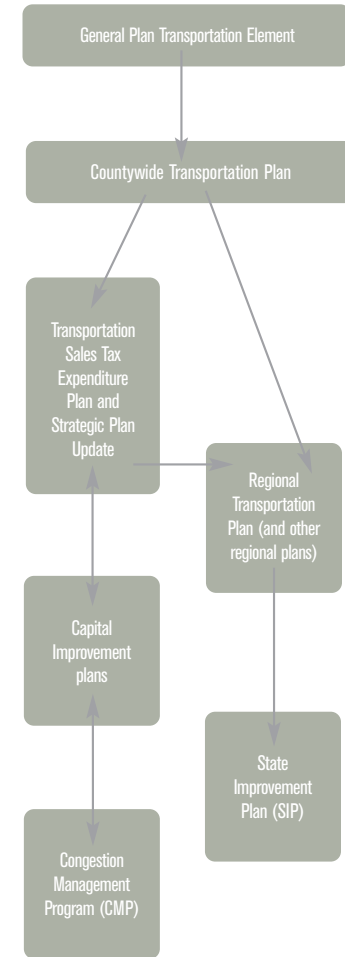
Development of the Plan is a key step in a series of decisions that establish the local, state, and federal funding priorities for transportation projects.

Relationship to the City Charter: The San Francisco Board of Supervisors initially adopted the Transit First Policy in 1973 in response to the growing challenge of motor vehicle congestion.³ Together with other congestion management initiatives, Transit First policy investments succeeded in maintaining mobility and accessibility in

San Francisco’s downtown during the period of rapid growth between the mid 70s and 80s, absorbing 200,000 additional jobs without increasing the parking supply. In 1999, San Francisco voters approved Proposition E, which amended the City Charter to further strengthen Transit First as the primary policy response to future transportation demand growth in San Francisco. Through its policy framework and investment plan, the Countywide Plan reinforces the Transit First Policy and emphasizes system management strategies, particularly for the new growth centers near downtown, along transit corridors, and in the southeast quadrant of the city.

Figure 1-3

Relationship of CWTP to Other Plans



3 The relevant section is Section 16.102 of the City Charter. See Appendix D for a summary of the Transit First Plan

Figure 1-4

“Upward” Consistency Requirements

In order for San Francisco to obtain transportation funding, the policies in the Countywide Plan must be consistent with regional (RTP), state (STIP), and federal policies:

- 1 MTC’s five interrelated goals of mobility, economic vitality, community vitality, sensitivity to the environment, and equity.
- 2 MTC’s Transportation Control Measures (TCMs), designed to reduce transportation impacts on air quality.
- 3 Federal requirement to consider all modes of transportation, not just automobiles.
- 4 Federal requirement to consider new technologies, air quality improvements, the Americans with Disabilities Act, environmental justice, and environmental and economic vitality improvements.
- 5 Federal requirement that plans must commit to maintaining the existing transportation system.

Relationship to the General Plan: The Countywide Transportation Plan is consistent with the policy framework of the San Francisco General Plan and its Transportation Element. The Transportation Element establishes goals, policies, and objectives that guide transportation planning, and which are used to analyze and make recommendations regarding specific land development proposals. The Countywide Plan is the 30-year investment blueprint for transportation system development within that policy framework. It shares the General Plan’s fundamental assumptions: that demand for auto travel must be managed in order to sustain a desirable living and working environment in San Francisco, and that transit should be further developed as the primary response to future transportation demand growth in San Francisco. It does so by providing an implementation roadmap for achieving these goals.

Relationship to Regional and State Plans: The 2001 Regional Transportation Plan (RTP), prepared by the Metropolitan Transportation Commission (MTC), guides transportation planning and funding throughout the nine-county Bay Area to the year 2025. The RTP is a key document memorializing the region’s commitment to funding specific transportation projects and programs using regional, state, and federal funds anticipated to be available to the region over the 25-year period covered in the Plan. The 2001 RTP seeks to improve mobility, promote safety and equity, and support community vitality. Federal transportation planning laws require the Countywide Plan to be consistent with the RTP.

The 2001 RTP memorializes the region’s policy level commitment to several important transportation projects in San Francisco, including: the Third Street light rail extension to Chinatown (Central Subway); replacement of the South Access to Golden Gate Bridge (Doyle Drive); extension of Caltrain to a rebuilt Transbay Terminal; electrification of the Caltrain system and other Caltrain improvements; maintenance of the existing transportation system, and other street network improvements and transit enhancements. Prepared well after the 2001 RTP was adopted, the Countywide Plan demonstrates consistency with the RTP by reflecting San Francisco’s committed investments from the 2001 RTP and the associated Regional Transit



Expansion Policy (RTEP) adopted by MTC in 2001. The 2003 Countywide Transportation Plan also establishes San Francisco’s priorities and estimates of need for the upcoming update of the RTP in 2005.

The RTP, in turn informs the State Transportation Improvement Program (STIP), which memorializes the region’s priorities for the use of state transportation funds. San Francisco projects seeking regional, state or federal planning or capital funds must be consistent with the RTP and Countywide Plan.





Broadway Ave at Columbus:
truly shared street space.

Figure 1-5

Congestion Management in the General Plan and Countywide Transportation Plan

Transit First Policy:

- » Encourage multimodalism – the use of transit and other alternatives to the single-occupant automobile
- » Give priority to the maintenance and expansion of the local transit system and improvement of regional transit connections

Transportation Demand Management:

- » Reducing the demand for the private automobile and promote alternatives such as transit, walking, bicycling and car-sharing

Transportation System Management:

- » Optimize the cost-effective use of existing facilities
- » Prioritize the movement of people and goods rather than vehicles

Parking Management:

- » Minimize needed parking, particularly all-day or long-term parking
- » Encourage short-term parking, ridesharing, transit, bicycling, shared parking, and appropriate pricing of parking services



Countywide Transportation plan goals and performance measures will be considered in the project selection process for each category of Prop K Expenditure Plan investments.

Relationship to Local Plans and Projects: The investment component of the Countywide Plan is outlined in the Prop K Expenditure Plan for San Francisco's 1/2 cent transportation sales tax. Countywide Plan policy goals guide local transportation projects in several ways:

- **Strategic Plan and its Updates (SPU):** The Strategic Plan – a rolling ten-year look at each category in the Transportation Sales Tax Expenditure Plan, updated biennially – is the Authority's main tool for implementing San Francisco's 1/2 cent transportation sales tax program. Following the passage of Proposition K in November 2003, the Authority is preparing a new Strategic Plan, which will also be updated biennially. Countywide Transportation plan goals and performance measures will be considered in the project selection process for each category of Prop K Expenditure Plan investments.
- **Congestion Management Program:** The Countywide Plan guides San Francisco's policies and initiatives for managing congestion described in the Congestion Management Program (CMP). This state-mandated program aims to coordinate local land use and transportation decisions in order to minimize and manage congestion on San Francisco's roadway network. State laws require that the CMP contain a seven-year Capital Improvement Program (CIP), developed by the Transportation Authority as Congestion Management Agency for San Francisco, to maintain traffic Levels of Service (LOS) and transit performance measures adopted in the CMP, and to address impacts on the regional network, as identified through the land use impact analysis program. Capital improvement projects must conform to air quality mitigation measures for transportation-related vehicle emissions, as detailed in the Bay Area Air Quality

Management District's Clean Air Plan and related documents. Implementation of Countywide Transportation Plan policies and strategies will be continuously monitored through the CMP, which is updated every two years.

C2. A Guide for Neighborhood Planning

Recognizing the active role of many San Franciscans in advancing transportation improvements in their neighborhoods, the Countywide Plan provides guidance on the local transportation planning process. ●

Part D.



How to Use the Countywide Plan

The Countywide Plan is organized into six main Chapters:

Chapter 1 describes the purpose of the Countywide Plan, its role, vision, and goals.

Chapter 2 describes the existing state of transportation in San Francisco: the city's distinguishing characteristics, resources, strengths, and particular challenges. We describe the current supply of and demand for transportation infrastructure and services.

Chapter 3 identifies key trends and anticipates San Francisco's transportation needs for the future, assuming only previously committed investments. Needs are identified based on the projected growth in jobs and housing in San Francisco, on forecasts of future conditions using the San Francisco Demand Forecasting Model, as well as on community outreach

and the input from partner transportation agencies.

The outcome of this chapter is a forecast of what future transportation conditions would be without any of the additional investments proposed in the Countywide Plan.

Chapter 4 identifies needs based on the findings reported in Chapter 3, and presents an action plan to address those transportation needs and opportunities. We start by projecting available revenues over the next 30 years and evaluating alternative transportation investment choices to address future needs. An investment program is described using San Francisco's 1/2 cent transportation sales tax to leverage regional, state, and federal funds. We also forecast the expected performance of this investment program.

Chapter 5 discusses the policy initiatives needed to support the implementation of the action plan described in Chapter 4, and to ensure that the strategies presented help to effectively deliver the plan goals and objectives. In particular, we highlight transportation and land use coordination and parking management.

Chapter 6 is a discussion of unmet needs and potential sources of revenue for transportation in San Francisco. We identify strategies to support efficient and effective implementation of planned projects, including institutional coordination and prioritization mechanisms as well as upgraded tools for planning. We identify performance measures that will be monitored over the next planning cycle. ●







Mobility In San Francisco Today

SAN FRANCISCO'S COLORFUL neighborhoods, walkable streets, and dramatic topography make the city a highly desirable place in which to live and work, as well as one of the world's top destinations to visit. The city has long been a magnet for business, culture, commerce, tourism and education. Its rich 150-year history reflects the cultures of the world and gives energetic diversity to its neighborhoods. San Francisco serves as the specialty retail and cultural center of the region, drawing workers and visitors to a wide range of economic and cultural activities including jobs, restaurants, theaters and other nightlife, museums, shopping, special events and festivals, historical sites, and other attractions. At any time of the day, a distinctive combination of cars, buses, streetcars, cable cars, cyclists and pedestrians can be found moving up, over and under the city's many streets and hills.

This chapter presents an overview of the demographic, land use, and transportation conditions of the city, and how each of them shapes the Countywide Plan.



San Francisco's Urban Landscape

A.1 Geography and Topography

The only jurisdiction in California which is both a city and a county, San Francisco occupies 46.7 square miles on the northern end of the San Francisco Peninsula. The city is bounded by the Pacific Ocean to the west, San Francisco Bay to the north and east, and the cities of Daly City and Brisbane to the south (see Fig 2-1).

San Francisco is famous for its wind-swept, hilly topography, which makes for stunning vistas and transportation challenges. San Francisco is an active, compact, pedestrian-scale city, laid out on a street grid over rolling topography (see Fig 2-2). In part owing to the city's geography, many forms of public transportation can be found in the city, including light rail (street-cars), heavy rail (subways), commuter rail, trolleybuses, diesel buses, cable cars, and ferries. San Francisco's transportation system includes a mature street network, two major freeways, bicycle routes and facilities, sidewalks and public stairways, two major regional toll bridges, the Golden Gate Bridge and the Bay Bridge, with priority for high occupancy vehicles at the toll plazas.



A.2 Grid Street System

Altogether, San Francisco's street system comprises close to 30 percent of the entire land area of San Francisco, by far the largest publicly owned resource in the city and second only to housing in terms of the use of land.¹ A typical city street relates on a pedestrian scale to the residential and commercial buildings on narrow lots

that line it.² Residents and tourists often enjoy exploring the city by foot, and walking tours of the city are highly recommended in many travel guidebooks.³

San Francisco's streets are laid out in an almost regular grid of rectangular blocks. Some neighborhoods have smaller blocks, and several (such as Chinatown and the Mission) have public alleys that provide access to the middle of blocks. Blocks in the South of Market Area typically are four times as large as the typical north of Market block. The avenues in the western part of the city – the Sunset, the Richmond – also form large blocks with few alleys.

San Francisco's grid street system is an asset for many reasons. It provides spectacular long views that often end at the water. The grid system is especially

Figure 2-1

San Francisco Regional Geography



1 SF Planning Department, "Civic Streets & Transit: A component of the Citywide Action Plan", p. 4, June, 2002.

2 Although it is noteworthy that many buildings were constructed at the turn of the 20th century without off-street parking or goods loading/unloading facilities.

3 See also "Self Guided Tours of the Bay Area", BART publication.

Figure 2-2

Topography as a defining factor of urban form.

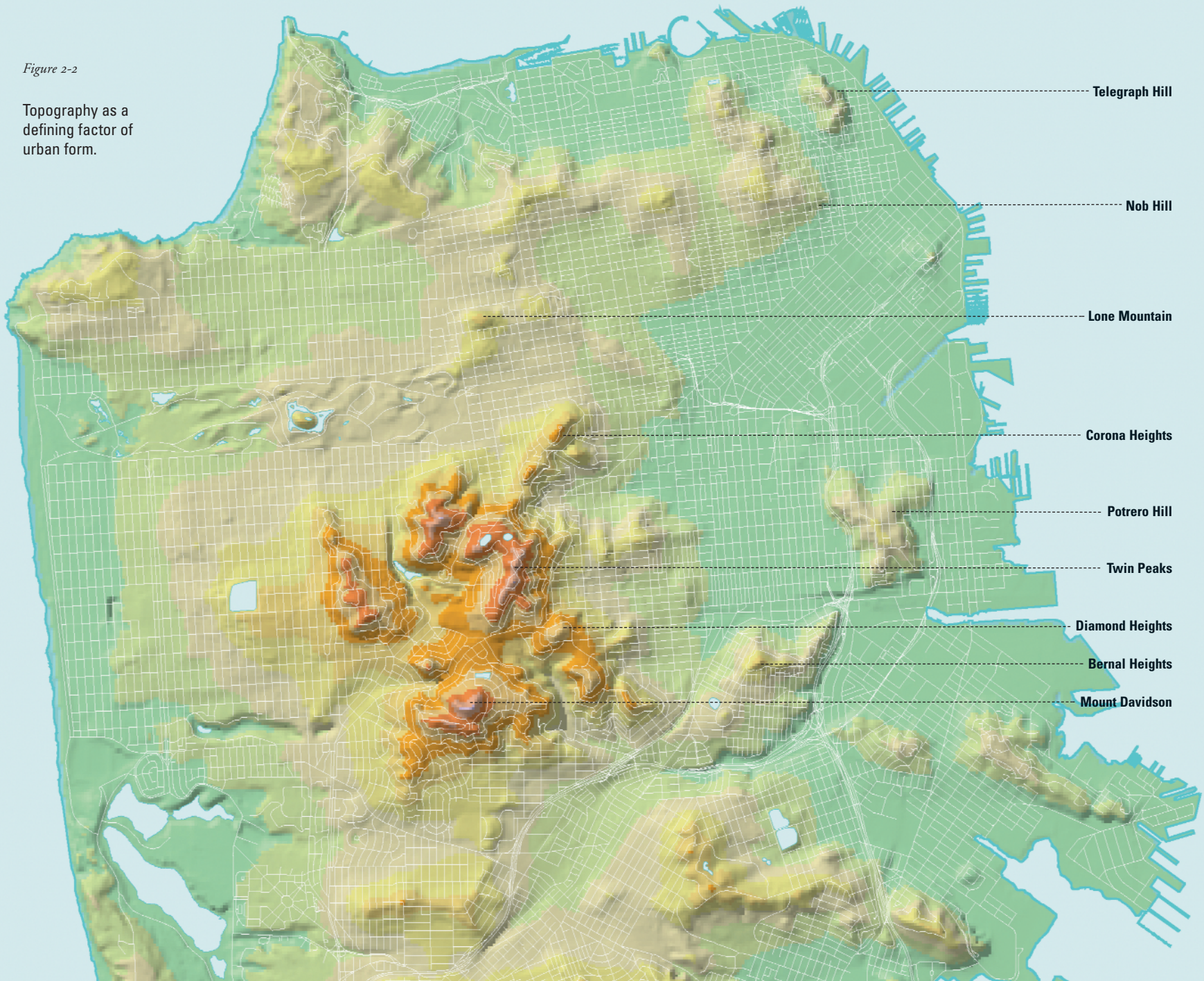


Figure 2-3

San Francisco's grid street network – a transportation asset.



advantageous for the city's transportation needs. It offers multiple route options for getting from place to place. Pedestrians, cars, transit, bicycles - can disperse through many streets rather than funnel onto a few major thoroughfares. Conflicts arise where the grid becomes irregular. For example, Market Street demarcates a significant shift in the orientation of the street grid between South of Market (SOMA) and downtown. This shift accounts for a number of connectivity and circulation problems, as vehicles, pedestrians and cyclists negotiate the complex intersections. The problems are exacerbated by the connections to the regional freeway system, which are concentrated in the SOMA neighborhood, while many of the retail, work and tourist destinations are located north of Market Street.

A.3 Distinctive Neighborhoods

Each of San Francisco's neighborhoods has a distinctive character of its own, but a common shared element is the draw of the main neighborhood shopping street. These core commercial streets serve as neighborhood centers and gathering places where neighbors come to meet, shop, and do business. People come from surrounding residential areas to these streets by foot, bicycle, transit, and other means. San Franciscans value the unique pedestrian atmosphere of their neighborhood shopping streets (see Figure 2-4).

A.4 Interface with Neighboring Counties and Region

About 31% of all trips on the city transportation network are regional in nature (i.e., they have an origin or a destination outside of San Francisco). San Francisco's best-known connections to the rest of the Bay Area are its landmark gateways: the Golden Gate Bridge to the north (110,000 passenger and freight vehicles per day), and the Bay Bridge to the east (270,000

vehicles per day), both of which are tolled facilities. Other important highway connections into San Francisco include US 101 and Interstate 280 from neighboring San Mateo County. These highways and the regional freight rail line operated by Union Pacific to the south also provide access for freight handled at the Port of San Francisco.

San Francisco's extensive regional transit connections provide an affordable and reliable alternative to driving into and out of the city. The Bay Area Rapid Transit (BART) system provides regional grade-separated rail connections to East Bay and Peninsula communities, and to the San Francisco International Airport. BART carries around 16% of the 930,000 transit boardings that take place in the city on an average weekday. The Caltrain commuter rail service, ferries and many regional and inter-city bus and taxi services round out the available transit options. The Transbay bus terminal is one of the most important transfer and distribution nodes in the regional transit system. ●

Figure 2-4

Distinctive Neighborhoods





Population and Demographics

B.1 Residential Population

The 2000 census reports a San Francisco population of 776,700 and ranges in population density from 20 to 157 residents per acre (see Figure 2-5). The average San Francisco household size is 2.3 persons; household size has declined somewhat over the past 10 years, consistent with the nation's historical trend.¹ Over the past 10 years, San Francisco's population has remained flat and its share of the regional population has declined.

Residential densities are highest near the downtown core and Civic Center neighborhoods that developed during an era when most people traveled by foot. These neighborhoods boast historically dense housing stock and good transit access. Many neighborhoods cluster along historically significant transportation corridors, such as the Geary, Mission, BART and MUNI Metro corridors, as shown in Figure 2-5.

B.2 Income

San Francisco's population is well educated, highly skilled, and has a high average income (a mean household income of \$84,000 in 2000).² This compares to an average household income of \$55,300 for the region. However, San Francisco households have a wide range in median income, from census tracts with average household incomes as low as \$12,000 per year to tracts with median household incomes greater than \$90,000.

Income is an important factor in individuals' and households' transportation choices. Households and businesses manage their time



and money expenditures on transportation, an expenditure often considered a "hidden" cost of everyday life.

Recent research has found that the average household in the San Francisco Bay Area spent about \$9,400 or 17% of household income on transportation, a figure that is below the national average of 19%.³ The survey found that transportation costs in SF are among the lowest – 21st out of 28 cities – in part reflecting the city's extensive public transportation system and availability of other affordable transportation options, such as walking and cycling. Historically, transportation expenditures comprised a smaller fraction of household resources – just 10 percent of the average household budget in 1935 and 14 percent in 1960. Over time, transportation expenditures have grown as development has scattered to areas of the region that are more challenging to serve with transit. San Franciscans continue to benefit from the

transportation choices that the city's network makes possible.

B.3 Disadvantaged Populations

In addition to very low income people, the mobility needs of other populations warrant special attention, particularly the needs of those too young or too old to drive. Youth and the elderly comprise about 30% of the city's population. Figure 2-7 indicates that youth and the elderly are a significant part of San Francisco's population citywide, and particularly in the south and southeastern parts of the city. San Francisco's schoolchildren rely on safe routes to schools, whether by walking, cycling, or transit. The majority of seniors walk or use transit

Figure 2-5

Population Density 2000 Census Tracts

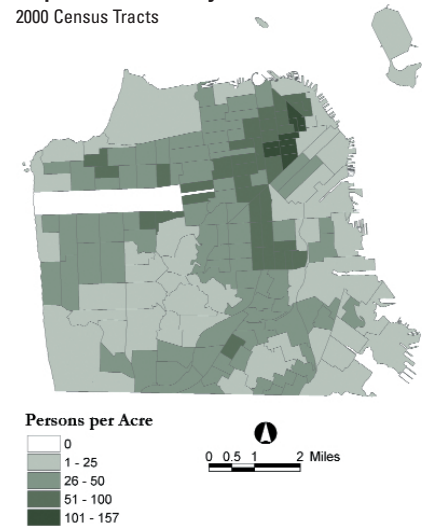
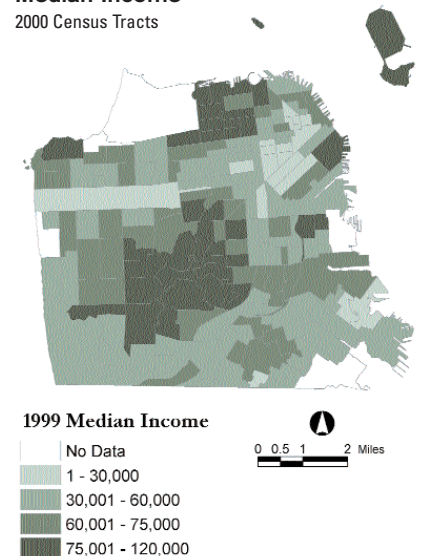


Figure 2-6

Median Income 2000 Census Tracts



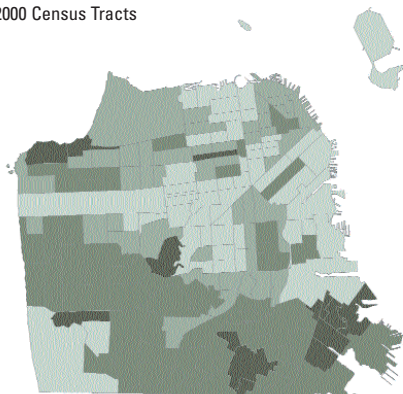
¹ Although average household size declines, this trend varies by neighborhood. BART experienced increased ridership at their Balboa Park, 24th Street, and 16th Street stations possibly as a result of greater household size during the 1997-2000 period. In fact, the areas around the 24th and Balboa Park BART stations have the largest households in San Francisco.

² ABAG, Projections 2003.

³ Transportation Policy Project, Bureau of Labor Statistics Consumer Expenditure Survey 2000-2001

Figure 2-7

Children and the Elderly 2000 Census Tracts



Percent Either Under 16 or Over 75 Years Old

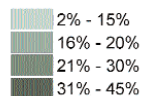
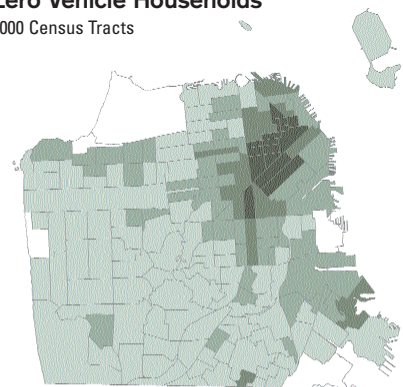
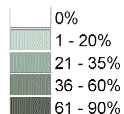


Figure 2-8

Zero Vehicle Households 2000 Census Tracts



Percent Households with No Vehicle Available



and carpools for daily transportation needs, but some frail elderly face significant mobility barriers. Paratransit services and taxis are available for these residents, and for the city's disabled population.

B.4 Car Ownership and Access

Car ownership and use is an indicator of transportation choice and the degree of transit or auto dependency. San Francisco's registered autos number 457,000 yielding an auto ownership rate of 588 vehicles per 1000 population.⁴

One of the advantages of urban living is the ability to forgo owning a car. Approximately 30% of San Francisco households do not own a car, and alternatives to support car-free living are growing. According to recent U.C. Berkeley research on City Carshare, a car-sharing business that makes vehicles available to members on a

per-use basis, 30 percent of members have disposed of one or more cars, and two-thirds of members have opted not to purchase another car.⁵ Zero car households tend to be concentrated in San Francisco neighborhoods with the best transit access, pedestrian and bicycle facilities, and parking controls (see Figure 2-8).

Zero-car households are also an indicator of poverty and dependency on transit, walking or other transportation means. Chinatown, South of Market, the Tenderloin, Western Addition, Bayview and Excelsior have significant numbers of zero-car households.

In some areas, neighborhoods are well set-up for pedestrian, bicycle and transit use. In other areas, conditions are less conducive to these activities and residents' mobility is impeded by more limited transportation choices.



4 The number of registered vehicles includes commercial vehicles not associated with any households. The census data for vehicles available per household may be a better indication of vehicles associated with residential uses (e.g. cars). The 2000 census indicates an average of about 1.1 vehicles per San Francisco household.

5 Certero, R., and Tsai, Y.H., San Francisco City Carshare: Travel Demand Trends and Second Year Impacts, Institute of Urban and Regional Development, U.C. Berkeley, p. 5.



B.5 Employment

San Francisco today is a major regional employment center in the Bay Area with about 634,400 jobs - by far, the densest job concentration in the region. Employment growth in the city since 1980 has been modest but steady - led by commercial services, tourism, retail, and the technology sector.

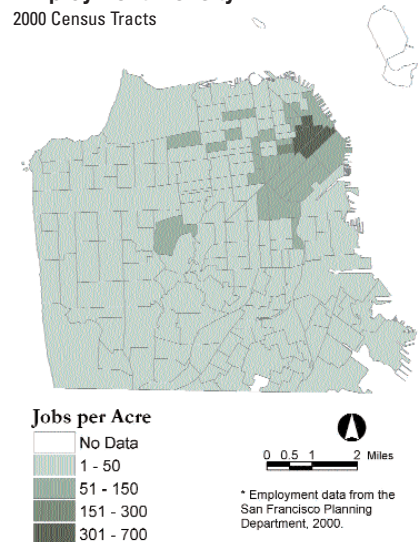
As shown in Figure 2-9, employment is concentrated in downtown and fans out through the northeastern quadrant of the city. The new growth areas in the South of Market, Mission and Potrero Hill areas experienced rapid investment and job growth in the late 1990s and early 2000's, placing new pressures on the

transportation system in these areas. Pockets of above-average employment density also exist in other parts of the city, specifically around schools and medical centers such as San Francisco State University, the University of San Francisco, and California Pacific Medical Center.

Tourism is a cornerstone industry for San Francisco and remains healthy despite a dip following the September 11 terrorist attacks. In 2002, the total tourist-generated employment was 55,700, and the city's 13.7 million visitors in 2002 accounted for \$5.9 billion in revenues. This represents \$16.2 million spent each day by visitors, multiplier effects excluded.⁶ ●

Figure 2-9

Employment Density 2000 Census Tracts



Part C.



Transportation Network and Services

This section describes the existing transportation system in the city, both the facilities on the ground and services that operate on them. San Francisco has a rich transportation history, as summarized in Figure 2-10, which parallels the stages in the city's growth and evolution.

C.1 Streets and Roads

San Francisco has a mature roadway network including a limited number of freeways. Interstate 80 enters San Francisco via the western terminus of the Bay Bridge, and continues for about four miles within the city before becoming U.S. Highway 101. Highway 101 operates at freeway standards from the San Mateo county line to the Mission Street/ Van Ness Avenue ramps via the Central Freeway; thereafter US101 continues through the city via Van Ness Avenue, Lombard, Richardson, and Doyle Drives to the Golden Gate Bridge. The Central Freeway Replacement Project currently under construction will build a new terminus at Market Street crossing into a new arterial roadway - Octavia Boulevard - to be opened in 2005. Interstate 280 runs about 7 miles through San Francisco, from the Mission Bay area to the San Mateo County Line at Daly City.

As noted earlier, most of San Francisco's street network is organized into a grid system. Although travel disperses via multiple modes across the grid, a few key transportation corridors do carry significant volumes of trips. Transportation corridors are defined by their prominent mobility function, either in terms of person-trip volumes, trip-serving capacity, and network connectivity. Some of these high-traffic corridors are characterized by intense concentrations of activity, mixed land uses, and multimodal transportation functions. In other cases, arterials such as 19th Avenue and Van Ness Avenue operate as links in the regional highway system and carry high automobile traffic volumes. Major vehicular corridors in the city include the corridors shown in Figure 2-11.

Appendix E contains the definitions of all of the major transportation corridors shown in Figure 2-11, as well as bi-directional demand in person-trips at major screenlines. Most of these corridors are considered major transit corridors and some are also primary freight routes. Indeed, with the road network essentially built out, the major challenge in the future is the effective management of existing street capacity.¹

⁶ Source: California Travel & Tourism Commission

Figure 2-10

San Francisco Transportation History At a Glance

1852	Public omnibus (horse-drawn transit) service introduced
1873-90	Cable car invented; first streetcar begins operation
1906	Earthquake
1912	MUNI begins service
1914-27	Stockton Street, Twin Peaks, and Sunset streetcar tunnels built
1936-37	San Francisco – Oakland Bay Bridge and Golden Gate Bridge open
1950-60	Freeway building nationwide
1960-70	Freeway revolt
1972-74	BART begins West Bay and Transbay service; Transit First Policy adopted
1974-85	Downtown development boom; 200,000 new jobs are absorbed with no new parking added downtown
1989	Loma Prieta earthquake demolished Embarcadero Freeway and partially demolished the Central Freeway.
1980s	Downtown pedestrian-only zones created in alleys and sidestreets: Maiden Lane, Belden Lane, and Claude Lane are among the first to have vehicle access restricted
1989	Voters approve Proposition B, the city's half-cent sales tax for transportation
1992-2000	Embarcadero rebuilt as an urban boulevard integrated with the historic line; rebirth of the waterfront
1999	Voters approve Proposition E, the Muni Charter amendment on service standards, and Prop I, to build Octavia Boulevard to replace the double deck section of the Central Freeway
2003	Voters approve Proposition K, reauthorizing the city's half-cent transportation sales tax for transportation and a new Expenditure Plan



C.2 Pedestrian Facilities

More attention needs to be paid to recognizing and measuring walking as a mode of travel. Pedestrian activity is often overlooked as a way of getting around, although almost every trip begins with a walk. Walking is promoted by building out the citywide pedestrian network as well as by providing standard pedestrian facilities such as sidewalks, curb ramps, crosswalks, islands, countdown signals and other amenities that improve the pedestrian environment. Notable elements of the pedestrian network include plazas (Ferry Building) and pedestrian-only streets (such as Claude and Belden Lanes and the recent Herb Caen Way) in the downtown area. In addition, mid-block stairways and alleys are found throughout the city, from Chinatown to Twin Peaks, to Bernal Heights, to Visitacion Valley.

Intersection density – the number of intersections per square mile – is one of many indicators of the walkability of an area (see Figure 2-12). Downtown neighborhoods have smaller blocks and alleys, providing more access, direct route choices, and shorter crossing distances for people on foot. These types of short, tight-block streets are characteristic of the Financial District and Chinatown, as well as of Bernal Heights. The blocks in the western area of the city are much larger. As a result, intersections are less frequent, making these blocks less convenient for pedestrians. A more concerted effort at urban amenity and beautification is needed to create a pleasant and safe walking environment in these areas.

While the perception is that hills are pedestrian-unfriendly, the Twin Peaks area shows an unexpectedly high density of intersections. This is because many of the streets at the top of these hills are short and connect frequently, even though they wind around the hills. This area includes a large number of stairways and paths, which were constructed when the neighborhood was designed to provide shortcuts to transit and between neighbors. Thus, even in the hills, San Francisco has evolved an infrastructure that can support walking. On the whole, San Francisco's grid street

system makes direct routes for pedestrians much more frequent than what is found in the typical suburban layout of curvilinear streets with many cul-de-sacs.

C.3 Transit

San Francisco's transit system is extensive; virtually every location in the city lies within a 1/4 mile of a transit route. San Francisco's transit network is oriented toward providing service to downtown in the peak period, but the network also provides cross-town connections. Figure 2-13 shows the density of Muni transit services in the afternoon peak period when the highest frequency transit services operate on Geary Blvd., Market Street, and Mission Street. In order to maintain transit access during the peak period – and as part of implementing of the city's Transit First policy – San Francisco has established bus-only lanes and other transit priority treatments on high-ridership routes that experience routine delays and unreliability due to traffic congestion. These transit preferential street (TPS) treatments ensure the efficient movement of people, not just vehicles.

The transit system in San Francisco is complex, with several types of services offered by different local and regional operators. These are described below:²

San Francisco MUNI: The primary transit operator within San Francisco is the San Francisco Municipal Railway (MUNI).³ An agency of the City and County of San Francisco, Muni operates the largest fleet of buses, trolleybuses and motor coaches, light rail vehicles, historic trolley cars, and cable cars west of the Mississippi River. MUNI service operates seven days a week, and several routes run for 24-hours a day.

The MUNI system carried approximately 752,000 boardings per day in 2000. The highest volume routes in the MUNI system – 38 Geary, 14 Mission, 1 California, 9 San Bruno, 49 Van Ness/Mission, 30 Stockton, 22 Fillmore and the 15 Third Street – comprised eight out of the top ten most heavily used bus routes in the Bay Area in 2002.⁴

Figure 2-11

Major Transportation Corridors

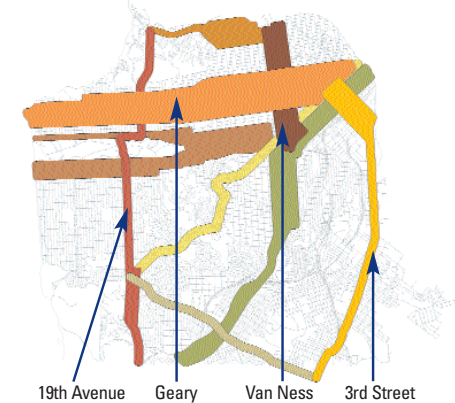
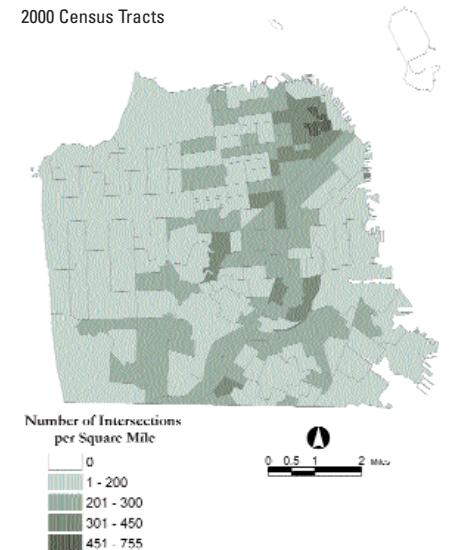


Figure 2-12

Intersection Density 2000 Census Tracts



1 This issue is being advanced in the Authority's Level of Service SAR 03-02

2 Sources: MUNI 2000-2001 Avg Daily Ridership, Nov 2002, BART station to station ridership matrix. October 2000, Caltrain O-D survey Sept/Oct 2001, GGBHTD, 1998 Q3 & Q4 ridership summary; Samtrans – JPB.

3 MUNI is part of a larger umbrella organization – the Metropolitan Transportation Agency (MTA), which was established pursuant to the passage of Proposition E in 2000. The MTA also includes the Department of Parking and Traffic, a sister agency which is responsible for traffic management, parking enforcement, and bicycle system improvements.

4 Metropolitan Transportation Commission, State of the System 2003 Report.

Figure 2-13

Transit Supply: PM Peak

Based on 2003 MUNI Frequency Tables



BART: In addition to Muni’s light rail service, two regional rail operators serve San Francisco. The major operator is the Bay Area Rapid Transit District (BART), which connects San Francisco to Alameda and Contra Costa Counties to the east and San Mateo County to the South. BART operates service to eight San Francisco stations daily, and registered approximately 145,000 boardings per weekday in 2000. BART trips that occur entirely within San Francisco account for about 10% of all internal transit trips, demonstrating that BART is a significant provider of local rapid rail service, in addition to regional service.

Caltrain: The Caltrain commuter rail system operates between Gilroy and San Francisco and served about 5,900 boardings per day in 2000 connected to four stations in the city. The current terminus at 4th and King Streets is served by MUNI buses and N-line Muni METRO (light rail) service. Weekend service was suspended for two years to accommodate construction to enable operation of "Baby Bullet" trains, which now provide service between San Francisco and San Jose in under an hour, with limited stops at heavily patronized stations along the corridor. Baby Bullet service began, and weekend service resumed, in June 2004.

Regional Bus Operators: Three bus operators provide service to San Francisco from neighboring counties: SamTrans (4,200 daily boardings in San Francisco in 2000), Golden Gate Transit (8,400 daily boardings in San Francisco in 2000), and Alameda-Contra Costa Transit (7,600 daily boardings in San Francisco). All three of these systems operate services seven days a week, but most services are prohibited from carrying travelers between two stops within San Francisco; they may only either pick-up or drop-off passengers going to/from other counties.

- SamTrans offers six commuter express routes and two intercity routes into San Francisco from San Mateo County. SamTrans routes were restructured upon the opening of BART service to Millbrae and San Francisco International Airport.
- Golden Gate Transit offers 5 basic (all-day) routes and 19 commuter routes into and out San Francisco

from Marin and Sonoma counties, and service is operated 21 hours a day.

- AC Transit offers service from the East Bay on 23 routes, with many of these routes having variations. Four AC Transit routes are operated on the week-ends, and AC Transit offers some 24-hour service.⁵

The Transbay Terminal serves these regional operators at a common terminus located at Mission and First Streets, in the South of Market area.

Ferries: Ferries connect San Francisco to destinations in Marin County (Sausalito, Tiburon, Larkspur), Solano County (Vallejo), and Alameda County (Alameda, Oakland). These ferries operate primarily at commute times, although some operators offer midday and weekend services for other travelers. According to the Water Transit Authority, ferries carried about 5,800 passengers per day in 2000.

C.4 Paratransit, Shuttles, and Taxi Services

Public transit operators offer a variety of transportation choices in San Francisco. Consistent with the requirements of the Americans with Disabilities Act (ADA), these services are largely accessible to and usable by persons with disabilities. Some persons with disabilities, however, are not able to make use of the fixed route transit system, even when it is fully accessible. For these persons, paratransit services are available. Paratransit is accessible, door-to-door, generally demand-responsive transportation, typically provided by taxis, cars or lift-equipped vans.

The San Francisco Municipal Railway (MUNI) established the San Francisco Paratransit Program in 1978, over a decade before passage of the ADA legislation. The San Francisco Paratransit Program provides a range of services to ADA eligible riders, including Lift Van and ADA Access (pre-scheduled, door-to-door services), Group Van services, and Taxi Services – including ramp taxis for persons in wheelchairs.⁶

Shuttles or jitneys can complement transit when a niche market need exists that is too narrow and specific to be served effectively by MUNI. Shuttles, jitneys and taxis are all also potentially provided via public-private partnership arrangements for funding and operations. Two of the most

⁵ Golden Gate Transit and AC Transit routinely modify the number and frequency of bus routes in and out of San Francisco based on ridership and budgetary considerations.

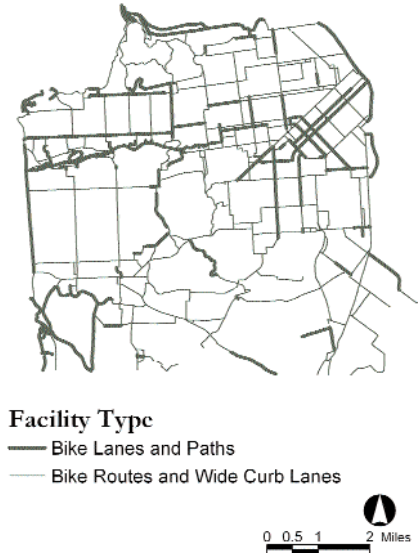
⁶ San Francisco Paratransit Program White Paper Analysis, July 2003.



Treasure Island – new challenges within the city limits.

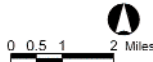
Figure 2-14

Bicycle Network



Facility Type

- Bike Lanes and Paths
- Bike Routes and Wide Curb Lanes



effective shuttles around the Bay area - the UC Berkeley campus shuttle and the Emery-go-found in Emeryville - are funded with parking revenues or business assessment districts.

There is no single model of shuttle or jitney service. Currently in San Francisco, many institutions provide shuttle services for employees or consumers, such as several hospitals with multiple campuses. The travel patterns they serve are very specific and defined. Other examples of shuttle services in San Francisco include the Chinatown TRIP shuttle; the weekend shuttle in Golden Gate Park connecting with MUNI; the jitney van service between the 4th and King Caltrain station and the financial district; and residential shuttles from towers in South Beach to the financial district.

Shuttle operations should be well coordinated, and designed to complement rather than compete with fixed route transit services. Shuttles must be structured with stable sources of operating funds, and their performance must be evaluated against measures such as cost per rider that are competitive with other potential transportation solutions.

Taxicabs are essential to San Francisco's hospitality and tourism industry. Often, taking a taxi is a visitor's first experience when traveling to the city. Currently, about 1,400 medallions are issued in San Francisco - 1,306 regular permits and 75 ramped taxicab permits (i.e. wheelchair accessible). The Taxicab Commission is responsible for permitting and regulating the taxicab industry, although no objective formula is in place to balance demand for permits with supply.⁷ Under the 1978 ballot measure Proposition K, the medallions are free to drivers and are distributed according to a waiting list system.

More than 3,500 people are on the waiting list, and turnover is typically limited to 20 permits per year.⁸

Taxis in San Francisco are too often described as unreliable and scarce. According to the Police Department Taxi Detail's annual survey, telephone requests for a cab are served only 40% of the time. Taxis are typically unavailable in outer parts of the city, but are found clus-

tered at the airport or near downtown hotels. Taxi unreliability may be the result of having too few cabs overall, but is also skewed by disincentives for taxi companies to optimally dispatch drivers. A 2001 study determined that taxi companies need incentives to derive revenue from carrying passengers, rather than deriving revenue from leasing vehicles to drivers, and offered strategies for reforming the regulatory context of taxi companies.⁹ Recently, there has been renewed interest in revising the 1978 system.

C.5 Bicycle Facilities

San Francisco has an evolving bicycle network, first established in the 1997 Bicycle Plan (see Figure 2-14).¹⁰ The network includes the following facilities:

Bicycle Facilities on San Francisco Streets¹¹

Bicycle Lanes	34 miles
Bicycle Paths	29 miles
Bicycle Routes	88 miles
Wide Curb Lanes (signed)	54 miles
Total	205 miles

Bicycle lanes are street lanes dedicated exclusively to bicycles. Bicycle paths are dedicated off-street facilities, usually paved, such as the Panhandle bicycle path. Bike routes are indicated by signs, and sometimes pavement markings, on wide roads where cyclists can ride outside the path of motor vehicles and away from the doors of parked cars. On narrower roads, bicycles and cars share the same lane.

Bicycle facilities also include on-street bicycle parking, a secure Bike Station in the Embarcadero BART station, and a planned Caltrain Depot Bike Station at Fourth and Townsend, scheduled for construction during 2004. MUNI and other transit operators serving San Francisco provide bicycle racks on the front of buses. BART, Caltrain, and the ferries also carry bicycles. Despite the steep hills throughout the city, the popularity of cycling has increased tremendously over the past two decades as a result of

⁷ Taxicab Commission 2002 Annual Report

⁸ "SF considers market in taxi medallions." Hampton, Adriel, *San Francisco Examiner*, June 3, 2004.

⁹ "Making Taxi Service Work in San Francisco." 2001. Prepared for San Francisco Planning and Urban Research Association.

¹⁰ Source: San Francisco General Plan.

¹¹ NOTE: This is the approximate number of miles of city streets with bicycle facilities and not the actual number of miles of bicycle facilities, i.e., it is not 34 miles of bike lanes, but 34 miles of city streets with bicycle lanes (whether a two-way street with bike lanes in each direction or a one-way street with a bike lane in one direction). Source: Department of Parking and Traffic.

bicycle network improvements, bicycle-friendly transit policies, and road user education campaigns, particularly for cyclists and motorists. In response to these expanding needs, the Bicycle Plan is currently undergoing a significant update. Bicycle transportation contributes to cleaner air, healthier living, and sustainable energy use.

C.6 Parking

One of the most important ways in which the City manages both the supply of and demand for street capacity is through its management of the parking supply. San Francisco's parking supply consists of on-street (metered, signed, colored curb and unregulated) and off-street (garages and lots) spaces. There are further distinctions between public or private ownership and short or long-term use of land for. The city's privately owned supplies of parking include publicly available off-street facilities for employees, shoppers and residential use. The publicly-owned supply includes 23,000 metered on-street spaces, and 12,000 signed or colored curb spaces. In addition, the Parking Authority manages nineteen publicly owned parking garages and twenty-one metered parking lots, and the Department of Parking and Traffic manages the Residential Permit Program, encompassing 94,000 on-street parking spaces in neighborhoods throughout the city.

C.7 Freight Facilities and Goods Movement

Though severely constrained by its peninsular location and limited rail access, the Port of San Francisco maintains some cargo operations, serving the needs of commercial and industrial clients in the San Francisco area.

Figure 2-15

Container Marine Cargo at Port of San Francisco, 1997-2000

	1997	2000
San Francisco Containers ('000 Tons)	18	50
	+177%	
Total Bay Area	1549	1827
	+18%	

Figure 2-16

Bulk Cargo at Port of San Francisco, 1997-2000

	1997	2000
San Francisco Break Bulk and Dry Bulk Cargo ('000 Tons)	811	919
	+13%	
Total Bay Area	26,479	26,649
	+1%	

Containerized freight traffic has reduced over time, but the Port of San Francisco has seen growth in break bulk and dry bulk traffic, resulting in part from the closure of the Port of Oakland's last remaining break bulk facility in 2003 (see Figures 2-15 and 2-16).¹²

The port of San Francisco also operates an Intermodal Container Transfer Facility (ICTF) adjacent to the Pier 90-96 terminal and Cargo Way, which handles approximately 100 freight cars a month for the import and export of goods.

Within San Francisco, goods movement related to production, distribution, and retail or service industries is handled by trucks and delivery vans. Truck traffic is directed to the city's major freight routes via signs and permitting processes. In 2002, there were 62,000 vehicles registered as commercial vehicles (a category which includes light trucks) in San Francisco. This constitutes 13% of the registered vehicle population in San Francisco. This is the lowest proportion of commercial vehicles among registered vehicle fleets in the 9-county Bay Area.

In order to manage the conflict between trucks and other traffic, as well as impacts to neighborhoods, permitting and other restrictions regulate goods movement. In general, San Francisco's streets have very few bans on truck traffic. There are over 100 streets with restrictions on vehicles over 3000 lbs. These are listed in Traffic Code Sections 28.1 and 28.5. The exceptions are the designation of some weight-restricted areas (e.g. restrictions for trucks weighing 11,000 pounds or more) in the Excelsior and Bayview districts, and in the vicinity of the port. Tour buses are also restricted as listed in Police Code Section 1183. ●

12 Source: Port of San Francisco, letter dated March 5, 2004.



Transportation Demand

Future transportation needs are investigated based on current travel demand trends and patterns. This section presents an overview of transportation demand at the system level.

D.1 Travel Demand by Mode

This section highlights the modes of transportation that people use to, from, and within San Francisco, and notes significant trends in the various modes of travel.

Travel demand is most commonly summarized by the total number and percentage of trips by “mode” of transportation, e.g. auto (includes carpool), transit, bicycle, and walk. It is estimated that in 2000, San Francisco’s transportation system carried 4.5 million trips per day, most of which occurred by auto (62%) and transit (17.2%) (see Figure 2-18). Of this total, about 1.4 million trips (or 30%) was regional in nature – having an origin or destination outside of San Francisco or passing entirely through the city. The remaining 70% of trips was internal to San Francisco.

Figure 2-19 shows the modal shares of internal San Francisco trips (slightly over 3.1 million trips in 2000). Significantly, when only local trips are summarized, walk trips increase in share to 28%. This is due to the higher incidence of shorter, walkable trips that occur in the city. Transit and auto trip shares decrease for trips entirely within the city, although not proportionally, due to San Francisco’s extensive local transit system and proximate activity centers.

San Francisco’s Transit First policy – including heavy investment in transit services and promotion programs – has been critical to maintaining accessibility in the city, particularly in the downtown area. Transit carries 36% of the 98,700

San Francisco-based trips to downtown in the morning peak period each day. This figure grows to 42% when regional trips are included. Also important in commute decisions are the city’s congestion management and auto use policies, which discourage driving. According to Commute Profile 2003, the main reasons commuters cited for using transit in San Francisco are: lack of parking, commuting costs, and not owning a car.

Transit is used throughout the city, although most often in the northeast quadrant and adjacent neighborhoods, as well as in the Richmond. In part, this reflects available transit services and frequencies in these corridors, as discussed above. Figure 2-20 shows transit use rates citywide. According to MTC’s Commute Profile 2003, the top commute destinations in San Francisco include:

- Financial District
- South of Market
- Civic Center
- Mission District
- China Basin
- UCSF Medical Area

Figure 2-21 illustrates auto use, both driving alone and carpooling. This map reflects the lower transit shares and increased car reliance away from the downtown core. While scheduled transit service and coverage are generally good across the city, there are complex factors that affect people’s transportation mode choices including:

- Geographic coverage and remaining gaps schedule, particularly in the south and southeast sectors of the city, which impact travel time on transit;
- Reliability and safety concerns;

Figure 2-18

Mode Share (All Trips)

	2000 Base
Auto	62.2%
Transit	17.2%
Walk	19.7%
Bike	0.9%
Total	100.0%

Regional and internal Trips (all trip types)
Source: SF Model

Figure 2-19

Mode Share (Internal Trips)

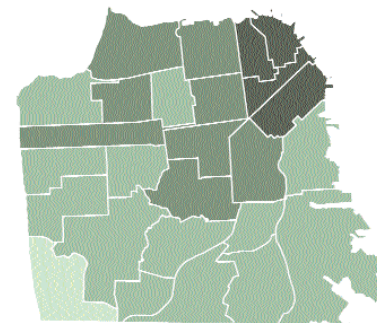
	2000 Base
Auto	54.2%
Transit	16.4%
Walk	28.3%
Bike	1.0%
Total	100.0%

Internal San Francisco Trips only (all trip types).
Source: SF Model

Figure 2-20

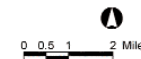
Transit Use Citywide by Neighborhood

Source: SF Model



Percent of Trips by Transit

- 2% - 3%
- 3 - 15%
- 16 - 20%
- 21 - 25%



- Out (reverse) commute to other counties;
- Household and family transportation coordination challenges; and
- Growing rates of motor vehicle ownership and use among more affluent households.

These issues mirror those faced by other Bay Area counties and are further discussed in the next chapter, which addresses on transportation system needs and opportunities.

D.2 Commute Trips

Although work trips only account for about a quarter to a third of all trips in San Francisco, the concentration of these trips during peak periods demands careful attention when analyzing system capacity and performance.

Mode Shares. According to the 2000 Census, San Franciscans use a variety of transportation modes to get to work (Figure 2-22). As this table shows, 31 percent of San Francisco residents use transit to get to and from work. This percentage is lower than in 1990, when 33 percent reported work trips in this category. The proportion of San Francisco workers that walked or carpooled also dropped from 1990. While the data does not specifically state the reasons for these trends, it is likely that the affluence created by economic conditions in the late 1990's caused a shift to auto travel. Possibly due to the economic decline of the early 2000's, data from the San Francisco Model and findings from

Commuter Profile 2003 (see Figure 2-23) show that transit's share of commute trips has reversed its decline, increasing to 35% in 2003. The Commuter Profile also shows that 10 percent of San Franciscans walk to work. The 2000 Census found that about 7,500 San Francisco residents use bicycles to get to work; this is the highest percentage of bicycle use to work (two percent) of any US city with a population over 500,000.

Regional Commuting. As noted above, one of the most pronounced demographic and economic changes for San Francisco over the past 35 years has been the growth in people commuting into and out of the city to work (as opposed to living and working in San Francisco). According to the 2000 Census, 77% of employed San Francisco residents work in San Francisco. However, trend data show that San Franciscans are increasingly working in other counties. The table in Figure 2-22 shows that although the overall number of employed San Francisco residents increased by almost 12 percent, more workers are choosing to commute to locations outside of San Francisco, particularly to San Mateo and Santa Clara counties. Overall, the proportion of San Francisco residents who commute to other counties in the 2000 Census was 22.5 percent, up from 19.2 percent in 1990.

Because San Francisco is a net importer of workers, it is also important to examine the commute patterns of San Francisco workers. According Figure 2-24, San Francisco residents fill slightly more than half of San

Figure 2-21

Drive and Shared Ride Mode Share

Source: SF Model

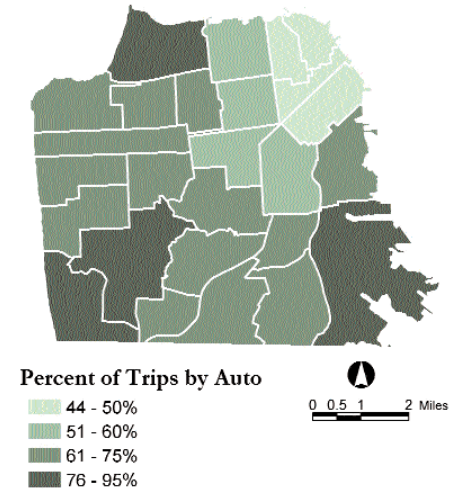


Figure 2-22 Commute Mode of San Francisco Residents, 1990-2000

	Drive Alone	Carpool	Transit	Walk	Other (bicycle, taxis, etc.)	Worked at Home	Workers
1990	147,187	43,925	128,160	37,611	10,947	14,479	382,309
	38.5%	11.5%	33.5%	9.8%	2.9%	3.8%	100.0%
2000	169,508	45,152	130,311	39,192	15,014	19,376	418,553
	40.5%	10.8%	31.1%	9.4%	3.6%	4.6%	100.0%

Sources: U.S. Bureau of the Census, decennial Censuses - 1990, 2000, Summary Tape File 3A (1990) and Demographic Profile 2, 3, 4 (2000).

Figure 2-23 Commute Profile, 2003 for San Francisco County

	1993	1996	2002	2003
Drive Alone	41.0%	46.0%	44.0%	38.0%
Carpool	11.0%	9.0%	13.0%	11.0%
Transit	35.0%	35.0%	31.0%	35.0%
Other	14.0%	10.0%	12.0%	17.0%

Figure 2-24 Commute Destinations of San Francisco Residents 1990-2000

County of Employment	1993		2000	
	Number	%	Number	%
San Francisco	229,926	80.8	322,009	77.5
San Mateo	32,170	8.7	43,306	10.4
Alameda	18,822	5.1	20,834	5.0
Santa Clara	7,992	2.2	15,896	3.8
Others	12,499		13,289	
Total	371,409		415,306	

Francisco's jobs (56 percent). San Mateo and Alameda counties are each home to about 12 percent of San Francisco workers. Contra Costa County contributes 9 percent and Marin County contributes 5 percent of San Francisco's workforce. Since 1990, the number of workers coming into the city from San Mateo has decreased by about 7,000, while the number of workers coming from Alameda has increased by about 2,000 persons. Over the past several monitoring cycles, congestion on the city's Congestion Management Network has remained stable although speeds on some specific network segments have dropped. Notably, most of the freeway segments (and the local approaches to these) do continue to exhibit congested conditions. The growth of regional trip-making reinforces the need to plan for, and invest in, regional transportation facilities and services, as a strategy to maintain San Francisco's economic competitiveness and quality of life.

In addition to investing in major regional transit

investments such as Caltrain electrification, the Transbay Terminal/Caltrain Downtown Extension project, and BART, the city is working with MTC, Caltrans and DPT on operational measures such as real-time information systems and message signs, vanpool programs, studies of regional express bus services, and HOV system development (see Chapter 5).

D.3 Visitor Trips

Visitor travel and tourism are integral to San Francisco's economy. The city attracts almost 14 million visitors per year. Of this total, about 10 million arrive from outside the nine-county Bay Area.¹ The transportation needs of business travelers, tourists and other visitors must be planned for in order to support this growing sector of the city's economy. For example, visitors unfamiliar with the city's transportation system rely on easy-to-read maps, good signage, and pleasant walking, transit and taxi environments to navigate the city's attractions easily and efficiently.

1 SF Convention & Visitors Bureau

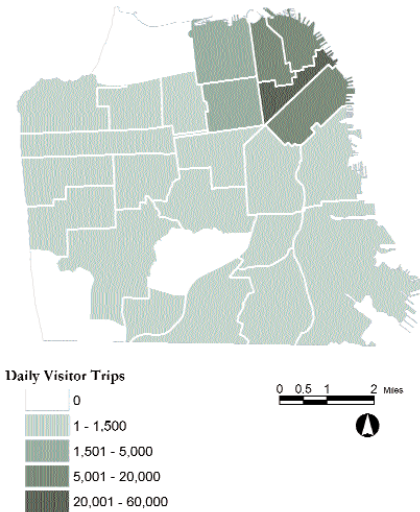
“The growth of regional trip-making reinforces the need to plan for, and invest in, regional transportation facilities and services as a strategy to maintain San Francisco’s economic competitiveness and quality of life.”



Figure 2-25

Visitor Origins by Neighborhood

Source: SF Model



Caltrain heading south from the 4th and King depot.

Figure 2-25 shows the main origin points for tourist and visitor trips, based on the inventory of city hotel rooms in 2000. The most common visitor trip is a downtown trip well suited to travel by transit or by walking. In fact, of the approximately 31,000 hotel rooms in SF, 65% are within walking distance of the Moscone Center. Another cluster of visitor trips originates at the auto-oriented Cow-Palace near the San Mateo County line; this area is less readily accessible by transit or on foot, especially for visitors unfamiliar with the transit system.

San Francisco offers a number of transit and pedestrian choices beyond standard MUNI service to tourists staying in San Francisco, such as cable cars, the historic F-Line streetcars on Market Street, and some pedestrian and

way-finding improvements. Many privately operated transportation services (beyond taxis) also cater to tourists. According to the San Francisco Model, the most popular tourist destinations in the city are:

- Fisherman's Wharf
- Union Square
- Golden Gate Bridge
- Cable car ride
- Powell / Mission Streets
- Chinatown

The cable cars, probably San Francisco's most visible visitor-oriented transportation service, had an annual ridership of 7.7 million in 2002. The fare revenue from the cable cars was about \$11 million that year. ●



Transportation System Needs & Opportunities

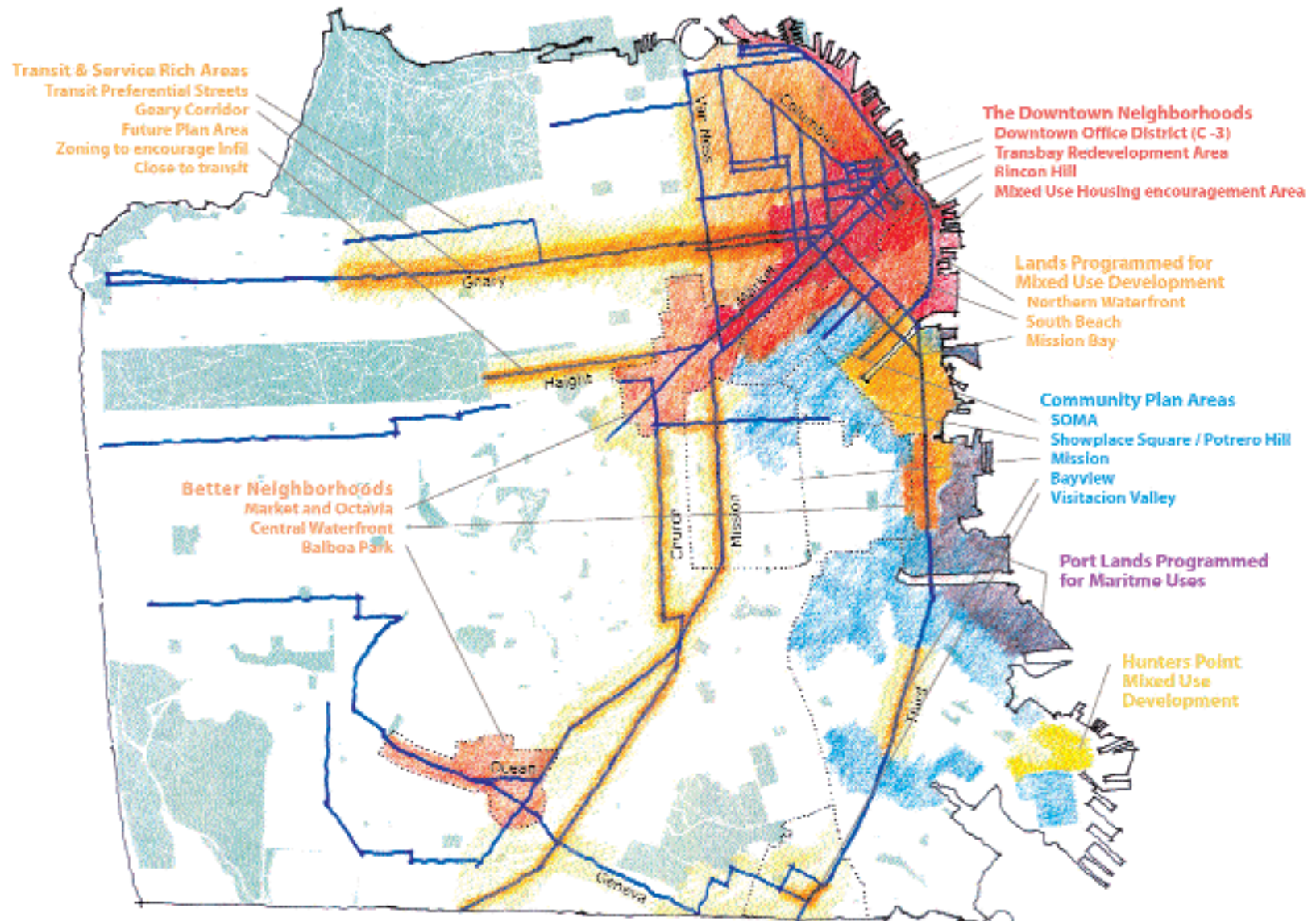
STARTING WITH LAND use and demographic projections, and assuming that previously committed network improvements are implemented, this chapter forecasts future transportation conditions. Needs and opportunities for transportation system development are identified based on those future conditions. In addition, the Countywide Plan needs analysis draws from the findings of other transportation plans and studies, and reflects public views captured through a series of community workshops and the Authority's Countywide Plan CAC.



Broadway Tunnel.



Figure 3-1 Citywide Action Plan



Source: San Francisco Planning Department



Projected Conditions

Figure 3-2

The San Francisco Model

The San Francisco Travel Demand Forecasting Model estimates future travel demand in the city. This model is a computer-based tool that bases these predictions of future transportation needs on people's reported travel behavior, on the changes to land use and socioeconomic characteristics of the population, as well as on changes in transportation infrastructure and services. The San Francisco Model considers all of these factors in an integrated statistical framework.

The model develops forecasts of tours (i.e., chains of linked trips) by purpose for 5 time periods which, combined, represent the entire day. In addition to predicting what time of day trips will occur, and the origin and destination of these trips, the model also predicts the mode of travel selected by the individual for that trip. Mode refers to the type or transportation, such as transit, drive alone, shared ride (e.g. carpool), walk and bike. Vehicle trips by transit and auto are then assigned to travel networks. Combined with regional data, the San Francisco Model is a useful tool for long-range transportation planning.

Transportation demand is often described as a derived demand, because it is the consequence of demand for goods and activities. People use the transportation system not typically for the sake of travel, but in order to access places where economic activity takes place. For this reason, travel demand forecasts start with assumptions about the nature and location of future growth. Transportation analyses in the Countywide Plan used demographic projections from the most recently adopted 2001 Regional Transportation Plan (RTP) and related land use forecasts from the San Francisco Planning Department (see Figure 3-1). These are used as the primary inputs to the San Francisco Travel Demand Forecasting Model in order to maintain consistency with regional plans (see Figure 3-2). The current (2000) and future (2025) base year transportation networks in this Plan are also consistent with the 2001 RTP Track 1 committed network for the entire region. To maintain consistency with the 2001 RTP, the Countywide Plan horizon year for modeling purposes is 2025, even though the Plan itself spans 30 years.²

A.1 Land Use and Demographics

The following figures summarize of key land use and socioeconomic changes expected in San Francisco over the next 25 years. These figures originate with the Association of Bay Area Governments, the regional association of governments which forecasts growth in jobs and housing in the nine Bay Area counties. The San Francisco Planning Department works to allocate this projected growth for the whole city to appropriate locations within the city.³ Figure 3-1, showing the anticipated locations of growth in the city, depicts this land use allocation.

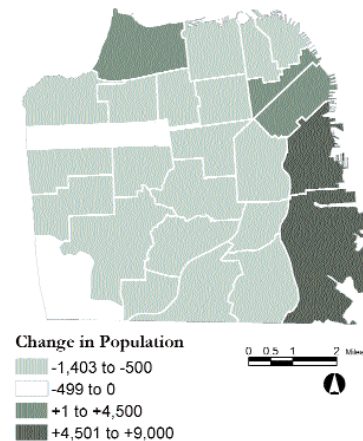
A.1.1 Population

San Francisco's population is expected to grow by 19,000 households, to a total of 334,600 households by 2025. The planned locations for future residential growth are shown in Figure 3-3. Significant population increases are expected along the Bayshore/Third Street light rail corridor, South of Market, Downtown, and in the Presidio. Population in the vast majority of other neighborhoods is expected to decline, primarily due to drop in average household size from 2.46 persons per household in 2000 to 2.33 persons per household in 2025.

Figure 3-3

Change in Population 2000-2025

Source: SF Model



1 The 2001 RTP land use and demographic inputs were based on the Association of Bay Area Governments (ABAG) Projections 2000.

2 The CWTP assumes that all substantial investments will be implemented by 2025, and that only maintenance and other programmatic activities that cannot be modeled are carried out in the remaining years of the Plan.

3 The Planning Department's most recent land use allocations were not available at the time this analysis was prepared. However, in general, most current City policy does assume greater household growth. The forecasts of land use and demographics used in this analysis are the most current adopted projections available at the time of analysis. They are Projections published in year 2000 and used to prepare the 2001 Regional Transportation Plan. A more recent set of projections, published in 2002, had not been allocated to San Francisco's neighborhoods by the Planning Department when this analysis was prepared.



San Francisco - a dense job nucleus and a cultural and retail center – has always experienced demand for more housing. In fact, ABAG’s most recent projections (Projections 2003) identify significantly higher levels of population (+156,600 persons) and household growth (+70,000 households) for San Francisco by the year 2030.⁴ The primary opportunities for new growth, and for housing in particular, are infill sites and redevelopment of already-built areas. A number of efforts are underway to plan and provide for needed new housing, especially for affordable housing.⁵

One of the most significant population shifts expected by ABAG and the City in San Francisco is a large increase in the number of employed San Francisco residents, from 420,000 in 2000 to 463,000 in 2025, a gain of over 10%. A greater share of San Francisco residents will be workers, which has implications for the types of demands placed upon the transportation system. Employed individuals are likely to make more trips overall than non-workers, and travel during peak periods when capacity is most constrained.

Figure 3-4 highlights the San Francisco neighborhoods where increases in employed residents are expected. All neighborhoods show increases in the number of employed residents - even those where the total population declines. Those neighborhoods where the greatest overall increases in population – the Bayshore/Third Street corridor, Downtown and South of Market – are expected to experience the most significant increases in the proportion of employed residents. In addition, the Castro/Haight and Mission neighborhoods also are expected to experience notable increases in the number of employed residents.

A.1.2 Growth in Jobs

Strong future job growth is expected in San Francisco, with over 110,000 new jobs created by 2025. Figure 3-5 shows the projected growth in employment in 26 neighborhoods across the city. While all neighborhoods are forecast to experience some growth in employment, the greatest changes in employment overall will be focused in neighborhoods on the eastern side of the city.

Specifically, the most intense employment growth is expected in the existing Downtown and South of Market core, around Mission Bay, in the Bayview/Hunters Point area, and in the Mission District.

Moreover, while San Francisco will add 110,000 new jobs by 2025, the city’s employed residential base will only grow by 43,000 during the same period. San Francisco will continue to be a net importer of workers from other parts of the region. In addition, San Francisco residents will continue to travel extensively to other parts of the region for work and other purposes. While strong economic growth generally bodes well for San Francisco, the resulting increased transportation demand requires the balancing of two key priorities:

- » 1. maintenance of the existing system and skillful management of existing capacity, and
- » 2. strategic investment in new transportation infrastructure and services.

Anticipating these trends and needs, the Authority and its partner agencies prioritized and successfully advocated for major commitments to system maintenance, and several major capital projects designed to meet the needs of new growth areas in the city and for regional travel demands in the 2001 RTP. Major projects that are either under construction or committed for future implementation include the:

- » Third St light rail line from Visitacion Valley to the Caltrain Depot at Fourth and King Streets, and the Central Subway extension of the Third St line into Chinatown,
- » Extension of the Caltrain terminus to a rebuilt Transbay Terminal just south of Market Street, and
- » Replacement of the south access to the Golden Gate Bridge (Doyle Drive) with a parkway featuring direct access to the Presidio, enhanced multi-modal access, and advances in context-sensitive design.⁶

Figure 3-4

Change in Employed Residents 2000-2025

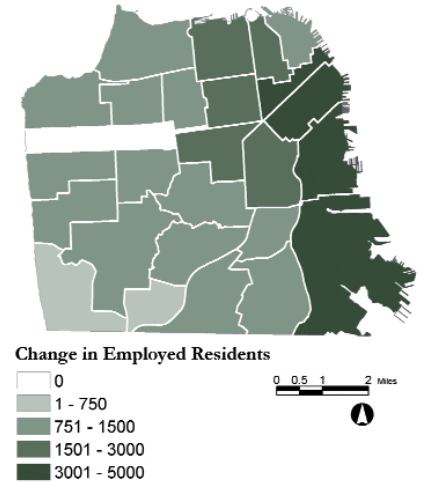
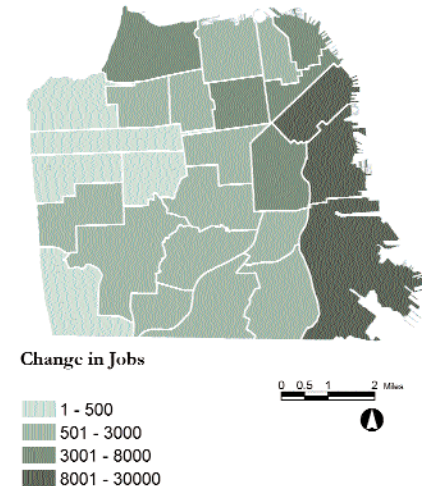


Figure 3-5

Change in Jobs 2000-2025



4 ABAG’s most recent Projections 2003 revised upward to 381,800 the number of households in San Francisco by 2025. An additional 20,000 units are expected by 2030. Population projections were also revised upward to 889,800 by 2025 and 935,100 by 2030.

5 See San Francisco Draft Housing Element, Eastern Neighborhoods Plans and Better Neighborhoods Plans.

6 The Doyle Drive replacement project is not assumed to change the capacity of the current facility, but it is expected to improve safety and operations dramatically.

Figure 3-6
Growth in Daily Transit Trips 2000-2025 to and from the North Bay Source: SF Model

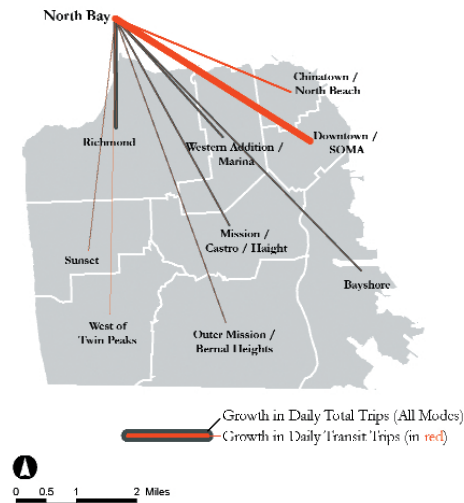
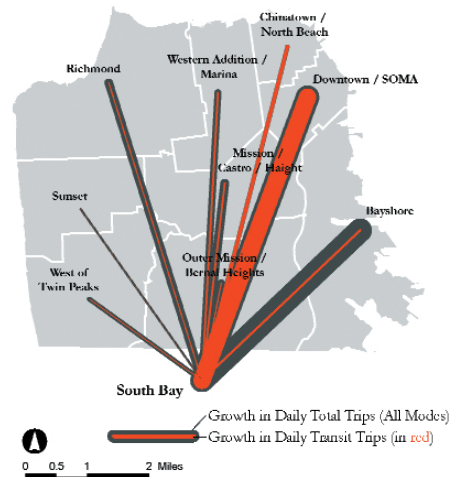


Figure 3-7
Growth in Daily Transit Trips 2000-2025 to and from the Peninsula and South Bay Source: SF Model



A.1.3 Socio-Economic Changes and Motorization Trends

Socioeconomic changes in the San Francisco population will also affect future demand for transportation facilities and services. For example, on average, San Francisco’s population is expected to become wealthier and older, two trends that may portend a continued population of drivers, and which create potential conflicts between drivers and senior or frail pedestrians. The emerging generation of elderly people - the baby boomer generation – grew up with the car as the primary mode of transportation. They are expected to continue their preference for driving, rather than switch to transit or walking as they age.

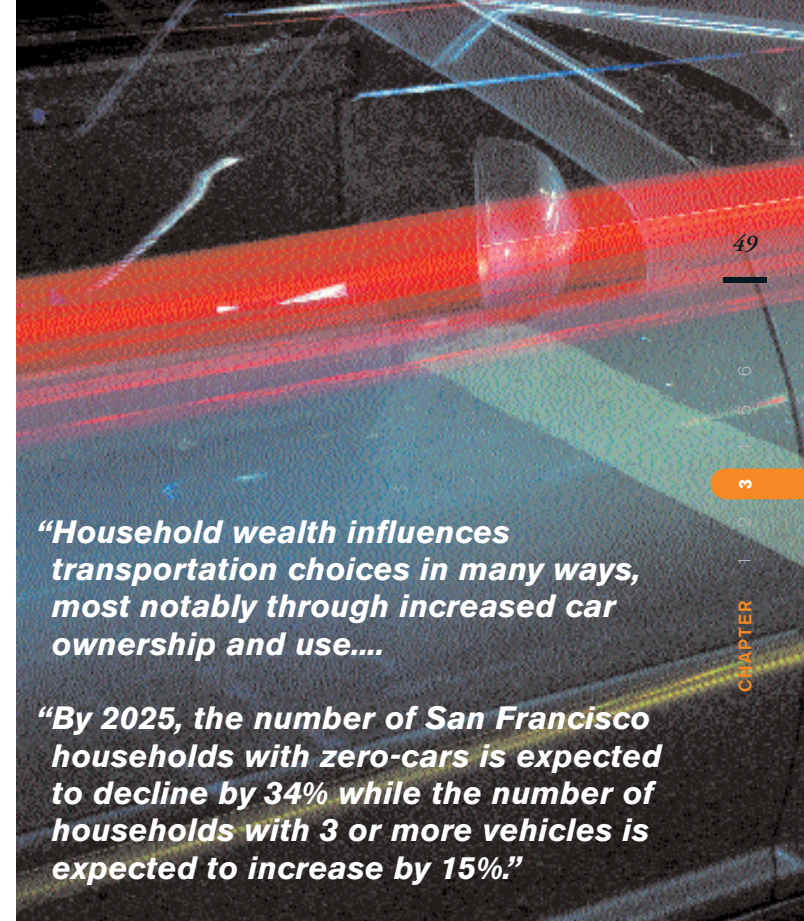
Wealthier. Citywide average household incomes are projected to rise to \$104,100, a 24% increase over the year 2000 average of \$84,000.⁷ Household wealth influences transportation choices in many ways, most notably by increasing car ownership and use. Indeed, it is estimated that, even as household size decreases, auto availability rates for households will increase slightly. As a result, the ratio of cars to residents is expected to increase about 9% by 2025. Another key trend to note is the projected 34% citywide decline in zero-car households, while households with 3 or more vehicles is expected to increase 15%.

Car Ownership Trends

	2000	2025	Growth
Cars per household	1.08	1.11	+2.7%
Cars per '000 Population	439	478	+8.7%

Given San Francisco’s built out street network, the City will need strategies to optimize traffic flow and ensure traffic safety, implement congestion and demand management techniques, and invest aggressively to promote transit, bicycle use and walking, in order to avoid worsening congestion as activity in the city grows.

7 Source: ABAG Projections 2002. Income data are expressed in 2000 dollars.
 8 Source: MTC San Francisco Bay Area Older Adult Transportation Study, 2001



“Household wealth influences transportation choices in many ways, most notably through increased car ownership and use....”

“By 2025, the number of San Francisco households with zero-cars is expected to decline by 34% while the number of households with 3 or more vehicles is expected to increase by 15%.”

A.2 Travel Patterns and Trends: A Tale of Two Cities

This section examines projected transportation conditions⁹ and travel patterns in 2025 if we make no significant transportation investments or policy changes other than those already committed. While growth in trip-making occurs across the city, an interesting contrast emerges when we look at the city in its role as a regional center, compared with everyday trip-making, which is shifting away from transit.

A.2.1 Growth in Regional Trips

Between now and 2025, overall trip-making to, from, and within San Francisco by both San Francisco residents and non-San Francisco residents is expected to increase by approximately 12% from roughly 4.5 to 5.0 million trips per day. Of this total number of daily trips, 65%, or 3.3 million trips, is entirely internal to San Francisco (trips that begin and end in San Francisco), a 4% decline from 2000, indicating the increasingly regional

nature of trip-making in and around San Francisco. This reflects the growth in the flow of trips between San Francisco and other parts of the Bay Area, an understandable trend given the increasing inter-connections within the Bay Area economy. These trips – here called “regional trips,” include people traveling to San Francisco from other parts of the Bay Area. Regional trips also include people out-commuting from San Francisco to other counties, especially the South Bay, as shown in Figures 3-6 to 3-8.

Figures 3-6 to 3-8 illustrate desire lines of demand for travel to and from downtown San Francisco, as well as between San Francisco and other parts of the Bay Area. The thickness of the red outlines represents overall growth in trip-making, while the thickness of the black fill represents growth in trips made by transit. The large increase in San Francisco – South Bay travel is noteworthy, as is the large demand for transit to and from downtown and the southeast quadrant of the city.

Figure 3-8

Growth in Daily Transit Trips 2000-2025 to and from the East Bay

Source: SF Model

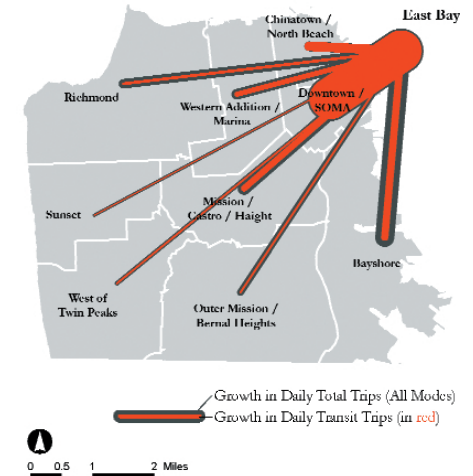


Figure 3-9 Growth In All Trips, 2000-2025 Source: SF Model

	2000 Base	2025 Base	% Growth
Auto	2,809,000	3,078,000	9.6%
Transit	777,000	986,000	26.9%
Walk	892,000	948,000	6.3%
Bike	40,000	44,000	10.0%
Total	4,518,000	5,056,000	11.9%

Figure 3-10 Mode Share Changes – All Trips, 2000-2025 Source: SF Model

	2000 Base	2025 Base	Difference	% Growth
Auto	62.1%	60.8%	-1.3%	-2.1%
Transit	17.2%	19.6%	2.4%	13.6%
Walk	19.8%	18.7%	-1.0%	-5.2%
Bike	0.9%	0.9%	0.0%	-1.6%
Total	100.0%	100.0%		

⁹ The source for travel demand projections is the Authority’s San Francisco Model, unless otherwise noted. Appendix F shows the network assumptions used to model future baseline conditions as described in this chapter, as well as future Plan alternatives described in Chapter 4.

A.2.2 Travel Demand by Mode

Changes in mode share are an important barometer of the relative attractiveness of the different modes of travel in the future, and of the efficiency of the overall transportation system. In particular, transit mode share is an indicator of progress in implementing San Francisco's Transit First Policy. The future transportation patterns in this section reflect conditions expected to exist if no significant transportation investments or policy changes are introduced. The mode share analysis below tells a troubling tale of two cities:

one where Transit First is more true for the San Francisco-bound commuter than for the San Francisco resident.

All Trips. As shown in Figure 3-9, growth in future travel will occur across all modes in the future.¹⁰ Total trip-making is projected to increase by 11.8%, led by transit trips, which are expected to increase by 26.9%. Bicycle trips (10%), auto trips (9.6%), and walk trips (6.3%) are predicted to increase as well, but at a slower rate. This trend is aligned with San Francisco's long standing policy of

Figure 3-11 Transit Mode Shares of AM Downtown Trips Source: SF Model

	2000 Base	2025 Base	% Growth
San Francisco Origins	36.6%	36.5%	-0.1%
Non-SF Origin	52.3%	64.3%	23.0%
Total	42.8%	49.2%	14.8%

Figure 3-12 Growth In Internal Trips, 2000-2025 Source: SF Model

	2000 Base	2025 Base	% Growth
Auto	1,686,000	1,782,000	5.5%
Transit	511,000	530,000	3.9%
Walk	880,000	931,000	5.6%
Bike	32,000	33,000	6.3%
Total	4,518,000	3,276,000	5.3%

Figure 3-13 Mode Share Changes – internal Trips Source: SF Model

	2000 Base	2025 Base	Difference	% Growth
Auto	54.2%	54.4%	0.1%	0.3%
Transit	16.4%	16.2%	-0.2%	-1.3%
Walk	28.3%	28.4%	0.1%	0.3%
Bike	1.0%	1.0%	0.0%	-0.4%
Total	100.0%	100.0%		



¹⁰ Parking supply, which has a profound effect on travel behavior, is not assumed to be constrained or restricted to any significant degree in this projection.

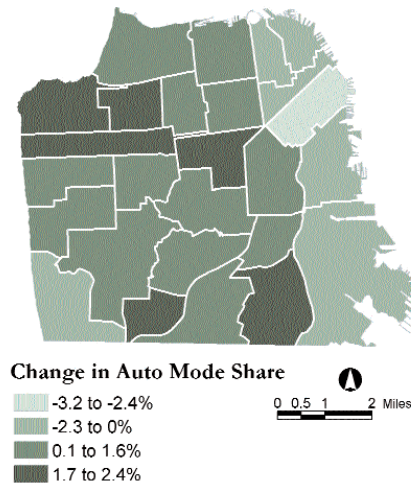


“Stemming the decline in transit’s share of internal San Francisco trips is a major strategic challenge for the city as it grows into the future.”

Figure 3-14

Change in Auto Mode Share 2000-2025

Source: SF Model



meeting future regional connectivity demands primarily through transit service expansion, and it is in contrast with the mode share trends for internal San Francisco trips. (see Figure 3-10).

A key to San Francisco's economic vitality has been its ability to maintain accessibility in the downtown area, during peak periods (see Figure 3-11). Estimates of transit mode share to downtown in the morning peak period show transit's share increasing from 42.8% to almost 50% of all trips by 2025. This 14.8% increase in transit's share of morning trips to downtown outpaces the 13.6% gain by transit of all-day trips. As with the all-trips figure, the bulk of these gains in the morning peak can be attributed to an increase in transit's share of regional trips, which is expected to rise to 64.3% by 2025. Transit is generally most attractive during this peak period because transit services are at their highest levels and auto congestion at it's worst.

This strong transit growth indicates that San Francisco is on the right path when it comes to meeting its own transportation needs as a regional economic and cultural center. An interesting contrast arises however, upon examination of the mode share trends for internal San Francisco trips.

Internal Trips. Internal trips account for 65% of all trips. They are an important activity to understand because they provide a better snapshot of the day-to-day travel patterns of San Francisco residents, and of the travel needs on the city network. Between 2000 and 2025, internal San Francisco travel is expected to increase about 5.3%, from 3.1 to 3.3 million trips per day (Figure 3-12).

As with the above analysis of all trips (including regional ones), transit is not the first choice for trips within the city limits. But unlike all trips, transit use within the city is not keeping pace with overall demand for travel. Figure 3-13 shows the 1.6% change between 2000 and 2025 in the mode shares of internal San Francisco trips between 2000 and 2025. In contrast to the strong gains in mode share when regional trips are included, transit mode shares of internal trips are expected to erode over time. Everyday trip-making is clearly shifting away from transit. Stemming the decline in transit's mode share of trips is a major strategic challenge for the city as it grows into the future.

In order to keep San Francisco moving and accessible, San Francisco must reduce the growth in automobile trips

while re-shaping the transit system to make it more attractive and competitive with the automobile. Transportation mode shares are a reflection of this competitive landscape, and as such can be thought of as market shares of demand for travel. They represent the relative attractiveness of different choices available to the traveler, in terms of travel time, cost and other factors that comprise the overall experience. Thus, a closer examination of the market for drive trips is instructive in understanding where transit is succeeding and where it is losing ground.

Figure 3-14 shows that travel by automobile is becoming more significant at the city's regional gateways, and across most of the central and west side of the city, particularly in the Richmond, Castro and Haight neighborhoods, all of them areas with historically high levels of transit use. A number of factors account for this loss of transit market share. First, the socio-economic changes in San Francisco, described above, play a role. San Franciscans in 2025 are expected to be generally wealthier and older than they were in 2000. All else being equal, this indicates a continued preference for driving. In addition, as the next section describes, in some parts of the network, such as in the Transbay Tube, transit demands reach capacity. Finally, transit in the future fails to close important performance gaps with the auto, such as with respect to trip travel times, reliability, and comfort. A review of transportation performance across the transportation system and in specific corridors helps to explain trends and provides insight into how they can be slowed and reversed.

San Francisco can and should avoid this projected future for several reasons. The city's street network is built out, and San Francisco's streets have a finite capacity to accommodate auto traffic. This capacity of San Francisco streets can be increased somewhat through operational efficiency improvements such as coordinating traffic signals and use of real-time messaging systems to divert traffic from known delay points. Parking management techniques also play a role in managing congestion and optimizing land use.

The 75% approval vote for the reauthorization of the city's sales tax for transportation in November 2003 clearly indicates San Franciscans' support for the city's Transit First policy, which seeks increase the effectiveness of transit, manage auto congestion, and develop alternatives to solo driving. ●



System Performance

This section presents our forecast of the future performance of the transportation system in, if we were to make no major investments or policy changes other than those already committed in officially adopted plans and funding documents. There are many ways to measure transportation system performance. The factors most important to most people are the time it takes to make a trip – expressed in terms of the related concepts of travel time, and average speed, or delay – and the ease, comfort and safety of making the trip. Neighborhood vitality and connectivity are other outcomes of the transportation system captured through the Countywide Plan goals. For the owners and operators of transportation systems, additional considerations for investment include system maintenance and efficiency, and cost-effectiveness of operations. Finally, for the city as a whole, the transportation system is part of the urban realm of public spaces and should represent an asset in terms of environmental quality and urban design.

B.1 Public Views on Transportation Needs and Opportunities

San Franciscans from all districts voiced a number of common needs and wants during the Authority's public outreach process on the Plan (see Figure 3-15), particularly the desire for better transit and other alternatives to the automobile.



1. Transit Development. San Francisco residents consistently expressed a desire for reduced transit travel times, less crowding, and more frequent and reliable transit service in general.



2. Traffic Management and Safety. In addition to improving cross-town connections through better signal coordination, residents prioritized traffic safety,

particularly the need to reduce vehicle speeds and improve pedestrian safety.



3. Pedestrian and Bicycle Networks. San Franciscans demanded safer and more attractive pedestrian pathways, bicycle facilities.



4. Streetscapes. Finally, neighborhoods desired amenities that improve the livability of streets such as lighting and landscaping.



B.2 System Efficiency and Mobility

As a world-class city, San Francisco requires a transportation system to match – one that moves people and goods efficiently and reliably. The Countywide Plan goal of economic vitality is best captured through improvements to system efficiency and mobility.¹ A key indicator of overall system efficiency is average vehicle occupancy for vehicle trips. This ratio refers to the average number of persons carried per vehicle. The higher the average occupancy of vehicle trips, the more efficiently the transportation system is performing in terms of moving people. Because of the rapid growth in trips by cars, between 2000 and 2025, the average vehicle occupancy (auto and transit) in San Francisco is expected to decline 2.2% from 1.66 to 1.62 persons per vehicle.²

It will also take longer to get around San Francisco in the future. As a result of the natural growth of population, employment and economic activities in the city, traffic will increase and travel times will rise modestly for autos in the future. However, even as speeds and travel times remain relatively flat for transit, the gap between transit mobility and auto mobility remains significant. This is an important part of the explanation for travelers' preference for the automobile over transit.

As shown in Figure 3-16, a comparison of future travel times in the city reveals that the average travel time for

Figure 3-15

Most Frequently Mentioned Needs Identified through Public Outreach

- » Reduce traffic speeds and improve traffic safety, especially pedestrian safety
- » Vigorously enforce speeding, red light running violations
- » Prioritize transit street priority treatments; increase speed of rush hour buses
- » Make transit reliable
- » Improve connections to regional transit, especially Caltrain.
- » Reduce crowding on buses
- » Increase transit service frequencies, particularly on weekends and nights
- » Install transit passenger amenities: shelters at stops; better lighting at stops
- » Prioritize pedestrian crossing safety issues; time to cross is generally insufficient; more pedestrian countdown signals needed
- » Vigorously enforce parking violations such as parking on sidewalks, double parking
- » Provide more parking, especially in neighborhood commercial areas
- » More widely regulate parking, increase fees
- » Reduce the environmental impacts of transit: use non-polluting buses, no diesel
- » Improve pedestrian safety and amenities: widen/reconstruct sidewalks, bulb outs, medians, trees, etc.
- » Add bicycle lanes
- » Enforce bicycle law violators, both cyclists and autos
- » Restrict delivery trucks: disallow rush hour deliveries
- » Allow more/better taxi service

1 In chapter 4 and 5 we will discuss the concept of accessibility, another important performance measure for San Francisco to consider in developing land use and transportation systems in an integrated fashion.

2 This compares with 1.28 persons per vehicle for the Bay Area region.

Figure 3-16

Average Travel Time (minutes)			
	2000 Base	2025 Base	% Change
Transit	33.43	33.85	1.3%
Auto	10.86	11.32	4.2%

Figure 3-17

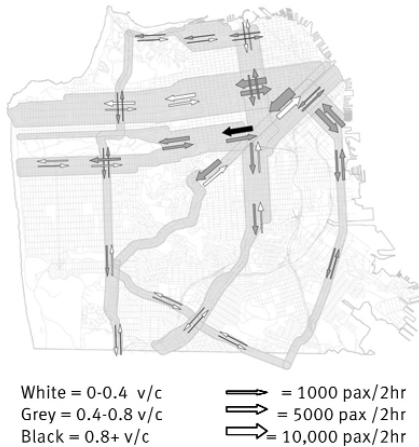
Average Trip Speed (mph)			
	2000 Base	2025 Base	% Change
Transit	6.19	6.16	-0.6%
Auto	18.11	17.56	-3.1%

Source: SF Model

transit will continue to be 3 times longer than average travel time for autos. The transit travel time reported here is door-to-door, and includes wait time and walking time to and from the stops. This travel time differential, and especially the negative perceptions of transfer times and time spent waiting for transit, is a major factor in people's choice to drive instead of taking transit. Other factors such as the price and availability of parking also contribute to the decision to drive. In 2025, the average transit trip is estimated to take 33.7 minutes, while the average auto trip will be 11.3 minutes. As the average lengths of trip distances are similar for both modes (3.3 miles for transit and 3.5 miles for autos in 2025), the difference is attributable to the lower average speed of 6.2 miles per hour for transit compared with 17.5 miles per hour for autos (see Figure 3-17). Transit must close this average travel time/speed gap in order to compete more effectively with autos in the future. A look at key corridors shows where the major opportunities exist to build transit ridership, and to help alleviate congestion.

Figure 3-18

Transit Levels of Service (volume/capacity) in 2025



B.3 Corridor Analysis Transit Demand and Level of Service. An examination of the major passenger volumes on the city's transit network is another way to identify transit needs, and these are shown in Figure 3-18. In terms of volumes, the top demands occur in the Bay Bridge corridor, where the combination of regional and local transit moves about 84,000 people in the p.m. peak hour. The next highest transit flows occur on Market Street near downtown, where regional and local transit combined moves about 42,400 people in the p.m. peak hour. Other major transit corridors include the BART corridor along Mission Street, the Haight Street corridor and N-Judah MUNI line, and the Geary corridor, particularly at the intersection with the Van Ness corridor which serves 7,700 passengers per hour in the p.m. peak by 2025, a 22% increase over current levels. The heaviest transit flows (2,000 to 8,600 persons per hour) can be observed in the Market Street, Geary Boulevard, Haight/Fulton and Van Ness corridors, followed by the Third Street, Mission Street, and Park Presidio/19th Avenue corridors. The Third Street/Central Subway, Mission, and Upper Market Muni bus and light rail corridors also carry heavy transit loads.



Despite heavy demands on San Francisco's transit network in the future, transit levels of service in terms of crowding are fairly good in 2025 due to the committed investments that are assumed. Of the transit screenline locations evaluated, however, two in particular are expected to experience significant demand in excess of capacity by 2025: the BART Bay Bridge service (BART Embarcadero) and Golden Gate Bridge service (Golden Gate Transit).³

This is also expected to be true of the local transit network, as shown in Figure 3-18. In terms of crowding, all of the top screenlines operate within capacity, none exceeding 0.8 in the p.m. peak period. However, screenline volume-to-capacity ratios mask overcrowding on certain lines, as well as crowding that results from

3 Some specific bus lines may however, operate at capacity.





unreliability and bus bunching. The corridors with the greatest volumes of transit riders also tend to be the most crowded: the Haight/Fulton and N-Judah corridor; Mission Street and MUNI Metro; corridor; Geary; Van Ness; and 19th Avenue.

Auto Demand and Level of Service. Countywide Plan corridor analyses were used to identify key load points and delays on the roadway network. As expected, the major auto trip volumes are at the county interfaces with the regional highway network such as on the Bay Bridge, US 101 and I-280 which are expected to carry between 210,000 – 430,000 person-trips by auto per day by 2025. Within the city, the Geary and Van Ness corridors will also witness large traffic flows of over 200,000 person-trips. Other heavy traffic routes include cross-town and reliever corridors such as the Mission Street and 19th Avenue/Junipero Serra corridors.

Figure 3-19 shows these corridors as well as the anticipated levels of service in terms of p.m. peak hour volume to capacity ratios, at key locations. In the future, congestion will generally worsen across the roadway network due to expected growth in trips, particularly at the interfaces with the regional highway network. On the local network, conditions will also worsen along the 19th Avenue and Junipero Serra corridor, Doyle Drive, and Mission St. Although Geary and Van Ness will carry greater volumes of automobile traffic in 2025, they are not expected to be among the top most congested.

These high-vehicle demand corridors and locations present tough traffic management challenges, in terms of maintaining smooth vehicle flows and managing safety conflicts with other road users, e.g. pedestrians. Given the city's mature road network, a key to the City's approach to dealing with these challenges is better managing existing capacity through technology and a

Figure 3-19

**Auto Levels of Service
(volume/capacity) in 2025**

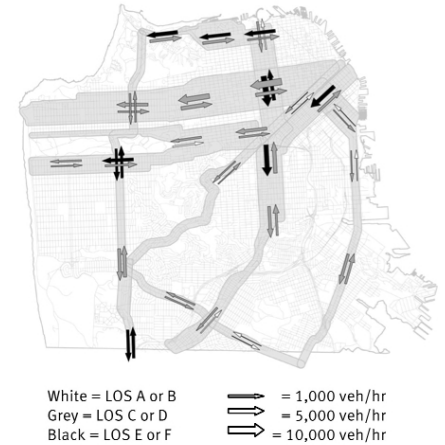
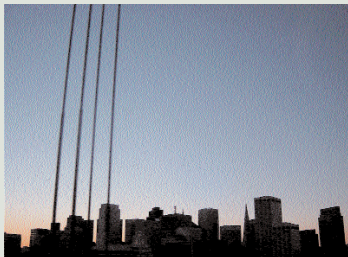


Figure 3-21

Moving People Across the Bay Bridge

In its 2000 San Francisco Bay Crossings Study, MTC observed that in recent years the peak vehicular flow on the Bay Bridge has remained unchanged at 10,000 veh/hr in the peak direction, while the reverse-peak direction also experiences heavy peak traffic of 8,000 veh/hr. Peak direction flows remain steady despite an increase in overall traffic, reflecting a lengthening of the rush hour period and increased reverse commuting. With peak vehicular throughput nearing an effective maximum, MTC proposes instead to work to increase person throughput by encouraging the use of carpools, vanpools, and commuter bus services. Specific to San Francisco, MTC suggests creating:

- » Additional eastbound carpool-only access lanes
- » Exclusive HOV lanes on Downtown San Francisco streets that serve as feeders for Bay Bridge traffic in regional express buses and carpools.



balancing of modal needs. For instance, a single traffic lane can carry ten times as many people in transit vehicles as in autos. The Department of Parking and Traffic is developing smart corridor signal coordination technology, through a system called SFGo! that can respond to real-time changes in traffic conditions to optimize person-trip throughput, including giving priority to transit vehicles. The Authority has led studies of these issues, most recently the Market Street Study. The study examined

how Market Street is used by transit users, drivers, cyclists and pedestrians, as well as how to improve the operations and safety in this historic and important corridor (see Figure 3-22).

Fortunately, San Francisco has invested heavily in an extensive transit network within the key corridors. A single lane of traffic can move up to 800 vehicles per hour, or 1,330 people per hour, or as much as to ten times as many people with bus or rail transit. ●

Part C.



Connectivity, Safety and Amenity

Neighborhood connectivity and transportation safety and amenity are critical factors for healthy neighborhood development, another Countywide Plan goal. These principles are consistent with strategies identified in numerous planning and research studies, including the Planning Department’s Better Neighborhoods studies and general research on ways to protect, enhance, and develop San Francisco’s colorful and distinctive neighborhoods.

C.1 Multimodal Network Development & Connectivity



Given geographic and topographic constraints, San Francisco’s roadway network is essentially built out - although some gaps do remain, such as substandard roads in Bernal Heights, Mission Bay, and parts of Bayview/ Hunter’s Point. However, in general, San Francisco’s roadway network is developed to a greater degree of capacity, connectivity and effectiveness than other networks. Key connectivity gaps remain in the city’s transit, bicycle, and pedestrian networks. These connectivity gaps constitute temporal and physical barriers to quick and direct travel on one mode, or even between modes.

Pedestrian Connectivity. San Francisco has an extensive pedestrian network, because the city was built up over time at a pedestrian-scale. Nevertheless, the pedestrian network has gaps in the level of safety, amenity, and attractiveness of pedestrian facilities. Recent improvements to the pedestrian system include the celebrated Embarcadero waterfront, sidewalk widenings along 4th Street to accommodate new SOMA developments and convention activity, bright yellow zebra crosswalks at many locations, and corner bulb-outs that increase visibility and reduce crossing distances for pedestrians on major routes like Van Ness Avenue.

A number of neighborhoods in the city lack adequate access and facilities. For example, emerging neighborhoods along the 16th Street and Third Street corridors have discontinuous sidewalks. In general, better sidewalks (e.g., the eastern waterfront and south eastern part of the city), stairways and curb ramps are needed citywide. Opportunities to develop pedestrian-only areas such as the ones in Golden Gate Park, Belden Lane, Maiden Lane and Herb Caen Way at the Embarcadero are also important to consider, especially in those areas slated for future growth.

Regional efforts are also underway to improve pedestrian connectivity, such as the Bay Trail, which will



create a 20 - mile landscaped pedestrian/bicycle/water trail along the Southeastern waterfront connecting Market Street to the Southern border of the city. 12 miles of the Bay Trail are complete so far, providing connections to existing parks and recreation facilities as well as transportation facilities.

Transit Connectivity. Some of the most serious transit network gaps are connections between local and regional transit service, such as the gap between the Caltrain terminus at 4th and King streets, and the Transbay Terminal at First and Mission.

The local transit network itself has broad geographic coverage, but it also has some geographic gaps. The local transit network needs more reliable and direct connections from the Mission corridor residents south of Geneva Avenue to Balboa Park BART station. Transit service to and from Treasure Island is not yet adequate to meet new and planned growth in jobs, housing and services on the Island, particularly for low-income residents. The existing Doyle Drive facility—currently being planned for replacement—is a physical barrier to transit service. The elevated roadway bisects the Presidio, separating it from Crissy Field and the waterfront, preventing the kind of direct multi-modal access between the two areas needed to support job and visitor access. Figure 3-23 describes transit access improvements that are planned as part of the Doyle Drive Replacement Project.

To reduce the penalty to transit passengers who transfer from route to route or from one operator to another, better transit feeder services, timed transfers and physical connections between the local and regional transit systems (BART and Caltrain) are needed, particularly in the south and southwest areas of the city. For example, although numerous light rail and bus lines converge at Balboa Park BART Station, these connections tend to be indirect, inconvenient and unsafe. The Authority is also working with other City agencies and the Peninsula Corridor Joint Powers Board to develop a Caltrain station at Oakdale Avenue in the Bayview, a location that is better connected to the heart of the community, and existing MUNI bus and future light rail lines. Additional needs exist to expand transit fare

card and other passenger-serving applications that work across operators, such as Translink, FastPass, and bus/train real-time arrival information.

Finally, although MUNI runs several 24-hour routes, temporal gaps remain. For example, low frequencies on weekends and at night are a barrier for students who need to attend night classes and for individuals commuting to night and weekend jobs.

The concept of connectivity also addresses the effectiveness of the overall network to serve San Franciscans' daily travel needs. As described above, strategic investments are critical in high ridership corridors, and at locations where transit vehicles experience chronic delays. Further development of the city's Transit Preferential Streets network, through more priority treatments such as dedicated transit lanes is needed in key corridors, such as along the Muni Metro light rail lines and bus corridors like Geary Boulevard, Van Ness Avenue, and 19th and Potrero Avenues. Such treatments present new service planning and routing opportunities to dramatically reduce travel times and improve the reliability of the entire transit network.

Bicycle Connectivity. San Francisco's bicycle network is part of the Transportation Element of the General Plan, updated in 1995, and it is also part of the Bicycle Plan that was adopted in 1997. The bicycle network is being revisited as part of the Bicycle Plan Update. Segments of the network are proposed for upgrades where possible, improving connectivity for bicycles throughout the network. Key gaps and network development priorities include provision of better facilities along Illinois Street, in the Broadway Tunnel and throughout SOMA and Downtown. As gaps in the Bay Trail are filled in San Francisco, 20 miles of pathway will eventually be available along the length of the shoreline, from Golden Gate Bridge to Candlestick Point.

Re-allocating right-of-way requires better tools to do planning studies and evaluations. The Authority is working to develop more comprehensive transportation level-of-service tools to better support development of the city's multi-modal transportation system.



Historic streetcar on Market St.

Figure 3-22

Traffic Management Challenges: Market Street Study

MYTHS AND FACTS

Myth: Autos need to be on Market Street

Fact: Most auto trips are not destined for locations on Market street.

Myth: Transit lane violations are the main cause of delays

Fact: wait times at intersections, and during boardings, contribute far more to service delays.

Myth: There is not enough delivery-vehicle parking on Market Street

Fact: better enforcement is needed both of the types of vehicles and length of stay.

⁵ See Authority's Outer Mission SAR

Figure 3-23

Transit Network Benefits of Replacing the South Access to the Golden Gate Bridge (Doyle Drive)



Safety and enhanced access are key priorities for the replacement of the South Access to the Golden Gate Bridge (Doyle Drive). In addition to ensuring



earthquake and operating safety, the new design will provide direct access to the Presidio for pedestrians,



cyclists, and the more than 18,000 daily transit riders that



use Golden Gate Transit service across the bridge. The design can also easily accommodate the potential extension of the E-line to Fort Mason and, in a more distant future, to the Presidio.

Figure 3-24

Top Seven Intersections for Injury Collisions (2002)

7th/Mission

Market/Gough/Haight

Broadway/Battery

San Jose/Sickles

Fell/Masonic

13th/Mission/Otis

Bayshore/Silver

Source: San Francisco 2002 Collision Report, December 2003 (DPT)



C.2. Safety

A top aspiration of San Francisco neighborhoods surfaced through the outreach process is to achieve better traffic safety, and particularly pedestrian safety. Safety concerns are often a reason to avoid walking and cycling. Therefore, safety statistics should not be the only measure of the adequacy of the pedestrian and cycling environment.

Despite reports that both pedestrian injury collisions and pedestrian fatal collisions are down,⁶ San Francisco's pedestrian fatality rate still ranks third in the state, according to California Highway Patrol statistics for 2000, the last year for which such numbers are available.⁷ At the same time, pedestrian exposure is high – we have many more pedestrians than other parts of the state. Although the most recent (2002) injury collision totals as well as fatal collision totals are the lowest in the past ten years, it should be noted that pedestrian collisions are typically underreported. The total number of collisions in 2002 was 3,809, of which 30% involved a pedestrian or bicyclist (see Figure 3-24).

The Authority, working with the Department of Parking and Traffic (DPT), has overseen the delivery of many projects and measures to improve pedestrian and road user safety. San Francisco has been a leader in the use of pedestrian countdown signals, for example. Other measures include signal upgrades, sidewalk bulbouts, ladder cross-walks and road user campaigns.⁸

The Authority and DPT have also developed a new traffic calming program, which provides public education and awareness programs, and improvements designed to slow down traffic and increase safety for non-motorized road users. Making crosswalks more visible and installing pedestrian countdown signals, and particularly near schools, do increase safety; in order to slow traffic, measures such as curb bulbouts, lane reductions, and medians are typically more effective. Safety concerns are, of course, a potentially significant influence on parents' choices for their children's transportation.

⁶ San Francisco 2002 Collision Report, December 2003 (DPT).

⁷ John M. Glionna, "Rise in Pedestrian Deaths Alarms San Franciscans" Los Angeles Times August 12, 2003

⁸ Reductions in severe collisions at signalized intersections are observed at recently upgraded using Prop B sales tax funds. Injury collisions on Bryant, Folsom, Harrison, and Howard streets have declined by half after signal visibility and pedestrian improvements. For instance, DPT believes that the most significant drops in collisions as observed in 1999 owed to traffic signal visibility improvements in the South of Market area the following year. Intersections in SOMA, which previously experienced significant numbers of pedestrian collisions, were not among the top collision intersections in the 2001 Collision Report.

⁹ Published Thursday, September 18, 2003, in the Contra Costa Times "Today's children driven to rely on cars" By Lisa Vorderbrueggen *Contra Costa Times*

Transit safety and security are also important factors to assess. Collisions are by far the most common type of MUNI safety incident (see Figure 3-26 for a list of the top collision intersections). Causes of collisions are varied, and were not assessed systematically in the CWTP. Working together with MUNI, the Authority prioritizes investments to ensure safety, particularly scheduled maintenance, rehabilitation and replacement of system equipment, facilities and vehicles. Other strategies include improving bus stop or transit station waiting areas and various security and enforcement, driver training and passenger awareness programs.

Transit security is a priority for all transportation system operators, made more pressing after the 9/11 terrorist attacks. The federal and state governments recently awarded San Francisco \$4.2 million in antiterrorist grants, including money for the Municipal Railway to make the city's transit system more secure. The Muni's portion will pay for employee training on responding to terrorist acts and for new equipment, such as surveillance cameras and radios. It will also fund fortifications to bus yards and other Muni facilities. The Office of Emergency Services will use its money in part for surveillance cameras in tunnels and protective gear for front-line responders to deal with biological, chemical and nuclear attacks.

Personal safety and security while waiting for and while using transit is a universal need for all transit passengers, particularly for children who rely on transit to get to and from school. Not only are "safe routes to school" a safety issue, they are also an emerging congestion and public health issue. A recent Caltrans report "Can You Give me a Ride, Mom?" details information gleaned in a new survey of children's travel patterns statewide. A trend is emerging of parents opting to drive their children to school rather than send them on foot or bicycle, because of safety concerns. The main issues documented included perceptions of unsafe or unavailable amenities for walking or biking, and fast-moving cars.⁹

C.3 Amenity/Environment

Streets are one of San Francisco’s most important public assets. Livable streets are a common need citywide, since residential development is distributed across the city, promoting the idea of a citywide network of strong and vibrant neighborhoods. Streetscape improvements are needed at the city’s gateways and particularly in neighborhoods with long, uninviting blocks. Inviting streets encourage people to utilize streets as public open spaces. This community activity promotes social cohesion, increases foot traffic for businesses, and increases general safety.

Over the years, the city has delivered pedestrian and streetscape projects downtown and in each neighborhood, ranging from the Embarcadero Roadway and waterfront project to a citywide street tree program.



C.3.1 Environmental Quality

MUNI is on a technology path for cleaner vehicles, spurred in part by the Authority’s ban on funding future purchases of diesel buses, but stalled to some degree by unclear California Air Resources Board guidelines on the eligibility of hybrid vehicles to meet Transportation Control Measure standards.¹⁰ In December 2003, the San Francisco Municipal Railway started retrofitting the first of 375 diesel buses with a new emission control system designed to improve air quality by reducing smog. The new emission control system, called the Longview, is the first product that can be installed on existing diesel engines to reduce both particulate matter, the small particles of black soot in diesel exhaust, and oxides of nitrogen (NOx), a prime contributor to smog. Both particulate matter and smog have been linked to asthma and respiratory illnesses.

Other strategies that the City is pursuing to clean the air include implementation of area traffic control technology and signal coordination systems, to smooth out traffic flows, thus reducing emissions levels. In addition, the city’s workplace trip reduction and demand management programs promote transit and other alternatives to the automobile such as cycling and carpooling. Another promising program that has grown rapidly in recent years is CityCarshare. By providing rental cars by the hour, this

program eliminates the need for some San Franciscans to own a car.

Finally, the continued improvement of San Francisco’s gateways, streetscapes and transportation facilities in general will make a lasting contribution to the urban design and environmental quality of the city.

C.3.2 Equity



In 1997, California passed AB 1542, establishing the California Work Opportunity and Responsibility to Kids (CalWORKs) program. Working with MTC, San Francisco agencies examined how the regional transportation system supports or undermines efforts to move CalWORKs participants from welfare to stable jobs. In June 2001, MTC published the Regional Welfare-to-Work Transportation Planning Project, which included San Francisco’s Welfare to Work Transportation Plan.

The Regional Welfare to Work Plan identifies barriers and gaps in the transportation system and transportation affordability, which are areas of concern to low income communities.¹¹ The San Francisco Welfare to Work Transportation Plan adds San Francisco-specific detail to these concerns (see Figure 3-27 for a case study of one successful project first identified in the Plan). As a part of the San Francisco Welfare To Work Plan, the MTC gathered information through a series of focus groups and stakeholder interviews, resulting in the following prioritized list of barriers to transportation in San Francisco:

- Reliability/Consistency of MUNI service
- Transit from Certain Neighborhoods to Downtown and Certain Employers
- Childcare Issues Related to Transportation
- Transit to San Francisco Airport and San Mateo County
- Passenger Safety While Accessing or Riding Transit
- Transportation At Night
- Cultural, Language and Other Communication Barriers
- Transportation Expense

Many of these needs and concerns are shared at the citywide level. The Plan also identified gaps in the transit

Figure 3-25

Traffic Collisions (2002)

Total non-fatal injury collisions	3,777
Total fatal collisions	32
Non-fatal pedestrian collisions	827
Pedestrian fatality collisions	17
Non-fatal bicycle collisions	284
Fatal bicycle collisions	1

Source: San Francisco 2002 Collision Report, December 2003 (DPT)

Figure 3-26

Top 10 MUNI Collision Intersections

1. 24th St / Mission St.
2. Mission St / 16th St
3. Kearny St / Market St
4. Geneva Ave / San Jose Ave
5. Mission St / Cesar Chavez St
6. 5th St / Market St.
7. Stockton St / Market St
8. Palou Ave / Third St
9. 18th St / Mission St
10. Geary Blvd / Van Ness Ave

Source: MUNI Incident Database 2004

10 Voters also approved Measure I in March 2004, calling for MUNI to retire its diesel-fueled vehicle fleet.

11 Regional Welfare to Work Plan, Metropolitan Transportation Commission. June 2001.

Figure 3-27

Welfare to Work Study Leads to Expanded Transit Access for Treasure Island Residents

The 2000 San Francisco Welfare to Work Action Plan found that Treasure Island is home to over 3000 residents, mostly low-income participants in the Job Corps program (which prohibits car ownership) and TIHDI (TI Homeless Development Initiative) program for extremely low-income individuals and families). The 2000 Plan recommended expanding transit service to this population.

In 2002, with the help of a Low Income Flexible Transportation (LIFT) grant, MUNI did add service on the 108 line to 15-minute frequencies on weekdays, 20-minute frequencies on weekends, and 40-minute OWL services. Within 7 months, weekday ridership increased 74% to 3,354 passengers/day and weekly ridership was over 18,000. The service continues to operate today, providing essential transit access to Treasure Island residents.

As Treasure Island is further developed, transit service should at least keep pace with the community. Because Muni's capital and operating funds for expansion are highly constrained, Treasure Island developer should plan to help fund increased services, in cooperation with an array of sources possibly including funds from MUNI, Redevelopment revenues, or Prop K.



“...San Francisco has the ‘region’s most significant concentrations of essential destinations,’ concentrations of poverty and an extensive transit network.”

network, but this was refined and expanded upon in the Lifeline Transportation Network Report.¹² This network is a set of Bay Area transit routes that meet the transportation needs of low-income persons. The analysis demonstrated that San Francisco has the “region’s most significant concentrations of essential destinations,” concentrations of poverty and an extensive transit network. Bayview/Hunters Point, the Tenderloin and the Mission District have the largest concentration of low-income households. As a result of this concentration of poverty, essential destinations and extensive transit network, much of the transit system was designated as part of the Lifeline Network. Within the City and County of San Francisco, six transit agencies operate service with lines designated as part of the lifeline network. They are: San Francisco

Muni (48 Lifeline Routes, or 60% of Muni’s service), AC Transit (6 Lifeline Routes in San Francisco), BART (4 Lifeline Routes in San Francisco), Caltrain (1 Lifeline Route in San Francisco), Golden Gate Transit (5 Lifeline Routes in San Francisco) and SamTrans (3 Lifeline Routes in San Francisco). The Lifeline analysis identified essentially very few temporal gaps and no major spatial gaps in San Francisco.

Chapter 4 of the Countywide Plan proposes an investment program to respond to these and other needs identified above. Through the review of system performance, the Plan is shown to be responsive to the needs of low-income and minority populations, and supportive of the needs of zero car and female-headed households with children, across the city. ●

12 Lifeline Transportation Network Report, Metropolitan Transportation Commission. April 2000.



Transportation Improvements

THE COUNTYWIDE PLAN is the City's blueprint to guide and prioritize transportation investment funds and policy initiatives over the next 30 years. In previous chapters, we identified existing conditions and future needs in several areas. Each need relates to one of the major policy goals of the Countywide Plan, which are to:

- enhance mobility and accessibility throughout the city,
- improve safety for all transportation system users,
- support the city's economic development and the vitality of our neighborhoods,
- sustain environmental quality,
- promote the equitable distribution of benefits, and
- direct the efficient and effective use of transportation investments.

This chapter identifies a set of strategies to respond to existing and future needs in each policy goal area. The strategies are supported by an investment plan, the New Expenditure Plan, that aligns available funding with projects and programs that respond to needs and opportunities. The chapter concludes with a performance evaluation of the proposed Plan investments.

Part A.



Strategies for Transportation Development

The Countywide Plan strategies identified in Figure 4-1 build upon San Francisco's existing, sound approach to transportation system maintenance, management and development. San Francisco's Transit First policy has been an effective way for the city to support economic growth while maintaining a high quality of life, and should be re-enforced through citywide policies and investments particularly in the new growth areas. System maintenance and management are critical to maintaining safe operations. New investment efforts are warranted in specific

areas such as traffic calming, security and seismic safety. The city's historical development of multi-modal transportation networks should also be continued, with an emphasis on developing attractive options and alternatives to automobile use. Finally, as discussed in Chapter 5 and 6, policy initiatives that complement and support the infrastructure investments are needed, to further integrate the city's land use and transportation policies, and to address transportation needs that exceed what can be achieved with currently available funds. ●

Part B.



Revenue Estimates

Revenue estimates for the Countywide Plan start with a review of existing and potential funding sources for transportation investment. Forecasting revenues 30 years into the future is a difficult task, especially given the uncertainties introduced by the current economic downturn. Fortunately, the Authority has over a decade of experience in managing the city's most important source of funding for transportation capital investment, the Prop B 1/2-cent local transportation sales tax program. Using conservative projections of future sales tax growth, and applying assumptions about the leveraging of other available local, regional, state and federal sources using the sales tax, the Authority forecasts a total of \$12.4 billion in revenues available for transportation investment in San Francisco over the next 30 years (see Figure 4-2).

The majority of the \$12 billion in expected revenues will come from regional, state, and federal funds already

accounted for in MTC's 2001 RTP, as well as from the reauthorized Prop K sales tax, which will account for approximately \$2.6 billion (see Figure 4-3). Other new sources of funding assumed for the Countywide Plan are the passage of revenue bonds for BART seismic improvements and the \$1 toll increase on state-owned Bay Area bridges (known as Regional Measure 2) approved by Bay Area voters in March 2004.¹

One of the major challenges in designing a Countywide Plan investment program is to ensure that local transportation revenues leverage as much funding from other sources as possible (e.g. discretionary regional, state and federal funding), while honoring pre-existing commitments (e.g. RTP) and supporting local priorities, including those that are not as competitive for outside funding (e.g. street trees and curb ramps). The next section describes how the Countywide Plan will achieve this. ●

Figure 4-1a.

Countywide Transportation Plan Goals



Mobility & Access Support economic vitality by maintaining local and regional accessibility to key employment, cultural, recreation and community activity centers, investing in the multi-modal network to ensure efficient movement of people and goods.



Public Health & Safety Promote safety and security for all people sharing the streets, including pedestrians and cyclists, by reducing conflicts, accidents, and seismic vulnerability through improved facility design, education and enforcement.



Neighborhood Vitality Support community vitality by supporting good land use planning, improving neighborhood access and enhancing neighborhood livability, particularly through promotion of pedestrian activity to support neighborhood commercial activity.



Healthy Environment. Sustain environmental quality by observing federal, state, and regional air quality standards, minimizing and mitigating the negative environmental impacts of transportation projects and activities, and promoting the beautification and greening of the city.



Equity. Ensure equity in transportation investments through a broad distribution of benefits among all city residents; minimizing the negative impacts of transportation investments; and encouraging appropriate pricing strategies to promote efficient use of the system.

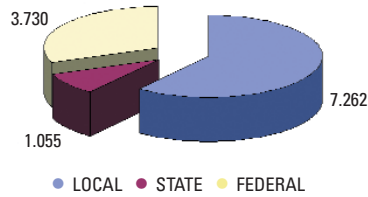


Investment Efficiency. Invest wisely in the transportation system by maintaining the city's transportation infrastructure in a state of good repair; ensuring the cost-effective use of funds; promoting financially sustainable approaches to transportation service provision; protecting committed funding and maximizing leverage of outside funds; advocating for new revenue sources; and facilitating the timely delivery of projects.

¹ San Francisco shares only.

Figure 4-2

**Expected Funds (FY03/04-FY32/33)
Billions of 2003 \$'s**



Total Expected Funds: 12 billion.

Figure 4-3

Expected Funds

Source	\$ Billions
Existing Revenues	\$9,795
- RTP Revenues	
- Other Existing Sources	
Transportation Sales Tax	2,600
- 1/2 cent for 30 years	
BART General Obligation Bond (SF Share)	230
3rd Dollar Toll on Bay Bridge	219
Total	\$12,844

Figure 4-1 **Countywide Plan Response to Needs**

Transportation Needs	Countywide Plan Strategies	CWTP Goals
Maintain the existing system. Maintain the existing system in a state of good repair, and manage it efficiently.	Maintain the city's transportation system systematically. Manage and optimize existing capacity through real-time traffic management tools; transit connectivity and expansion, and congestion/ demand management programs. Maintain sidewalks, staircases and paths in good, clear condition.	
Provide better options for everyone. Stem the projected decline in transit's mode share, to manage congestion and connect neighborhoods. Close transit connectivity gaps between local and regional service. Reduce the performance gap between transit and autos with faster, less crowded, more frequent, more reliable transit.	Increase the efficiency, accessibility and connectivity of the public transportation system as a way to improve connections among San Francisco's neighborhoods and links between San Francisco and the region. Improve the speed, reliability, and ridership of transit in San Francisco and the region, particularly through cost-effective transit priority treatments.	
Mobility for seniors and the disabled. Provide good mobility options for seniors and people with disabilities.	Enhance mobility and safety for all San Franciscans, including seniors and people with disabilities, through pedestrian improvements, transit system improvements and sustainable paratransit services.	
Support economic vitality. Facilitate smooth traffic flows along key corridors, to support economic vitality and maintain good local (neighborhood, cross-town) and regional connectivity.	Facilitate the safe movement of people and goods through multi-modal corridor development (auto and transit trunk and reliever routes), using traffic management tools to optimize travel throughput in key corridors.	
Security and Safety. Improve safety and amenities for pedestrians and cyclists. Improve traffic safety in the neighborhoods. Improve security of transportation facilities and systems.	Implement traffic calming, pedestrian and bicycle safety projects citywide. Develop and manage freight routes to reduce the incidence of goods movement vehicle conflicts in the neighborhoods. Promote the use of streets as public spaces. Facilitate security-related improvements.	
Mobility for the disadvantaged. Provide attractive transportation options for all residents, particularly for underserved or disadvantaged populations. Prevent new growth areas from becoming auto dependent.	Increase transit connectivity and temporal coverage. Develop attractive walking and cycling facilities. Maximize transportation/ land use coordination by prioritizing transit projects that support infill and other transit-oriented development. Promote geographic equity in investment criteria.	
Improve our environment. Reduce the negative effects of motorization on air quality, energy consumption, and the environment.	Promote alternatives to solo driving. Support the conversion to cleaner vehicle technologies and fund neighborhood streetscape improvements including street trees and other amenities.	
Optimizing funds. Optimize the use of scarce transportation funding resources.	Develop clear and equitable methods for prioritizing transportation investments. Improve coordination between transportation agencies. Use local funding to leverage state, federal, and regional matching funds for transportation projects.	





Investment Alternatives



Although the Countywide Plan fund estimate is a large amount, it is insufficient to cover the extensive investment needs of the system. A survey of likely eligible project-sponsoring agencies (including City departments and regional transit providers) in the winter of 2003 yielded a \$20-\$22 billion inventory of transportation investment needs for over 400 separate maintenance and expansion projects over the next 30 years. A portion of the inventory was either duplicative or did not pass screening evaluations for need or cost-effectiveness. Even after accounting for this, the demand still reached \$18 to \$20 billion, outstripping the projected Countywide Plan revenues by \$6 - \$8 billion. In addition to emphasizing the importance of continued advocacy for new transportation revenues, this funding gap forced a look at alternative ways to prioritize competing needs.

In March 2003, the Authority organized the inventory of over 400 projects that were submitted by sponsoring agencies and groups into three alternative programs. Each alternative was based on a common baseline of “committed” projects, and reflected a different policy approach:

- 1. Maintenance & Efficiency (MAE):** In addition to maintaining and rehabilitating existing roadways and transit infrastructure, this alternative concentrated investment in cost-effective operational improvements designed to enhance the efficiency of the existing system.
- 2. Enhanced Transit Corridors (ETC):** Building on the MAE concept, this alternative included development of San Francisco’s network of Transit Preferential Streets, through cost-effective rapid transit treatments that reduce travel time and improve reliability by giving priority to buses and surface rail transit.
- 3. Major Rail Transit (MRT):** This alternative emphasized development of new rail transit and other capital-intensive investment options.



In April 2003, the Authority Board directed the preparation of a New Expenditure Plan (NEP) for the 1/2-cent transportation sales tax, with the goal of placing the reauthorization of the tax on the San Francisco ballot in November, 2003. The Board also appointed a 21-person citizens committee, known as the Expenditure Plan Advisory Committee (EPAC) to oversee the development of the NEP.

Based on the policy strategies described above and on affordability considerations, the Enhanced Transit Corridors approach emerged as the preferred option for the NEP. Programming considerations (color-of-money) and timing (early pay-off) of benefits played a role as well. The ETC and a version of the MRT alternative were evaluated in Spring and Summer of 2003 as part of the environmental review of the NEP, which is the basis for the Countywide Plan investment program. This system performance evaluation supported the ETC alternative, which would deliver comparable performance benefits much more cost effectively than a version of the MRT alternative. Ultimately, the EPAC’s work helped to shape the final policy approach and details of the Plan. These included specific policy direction for further prioritization during downstream planning activities and programming decisions. The next section describes the NEP, its components and its expected performance. ●

Transportation Investment: The New Expenditure Plan

The NEP is a transportation investment strategy tailored specifically to San Francisco. As such, it takes into account the historic development of San Francisco as a pedestrian-scaled city whose urban form and character have evolved together with its transit system, and with a street network that provides open space and accessibility for pedestrians and cyclists, in addition to providing for the movement of cars. In order to maintain the city's

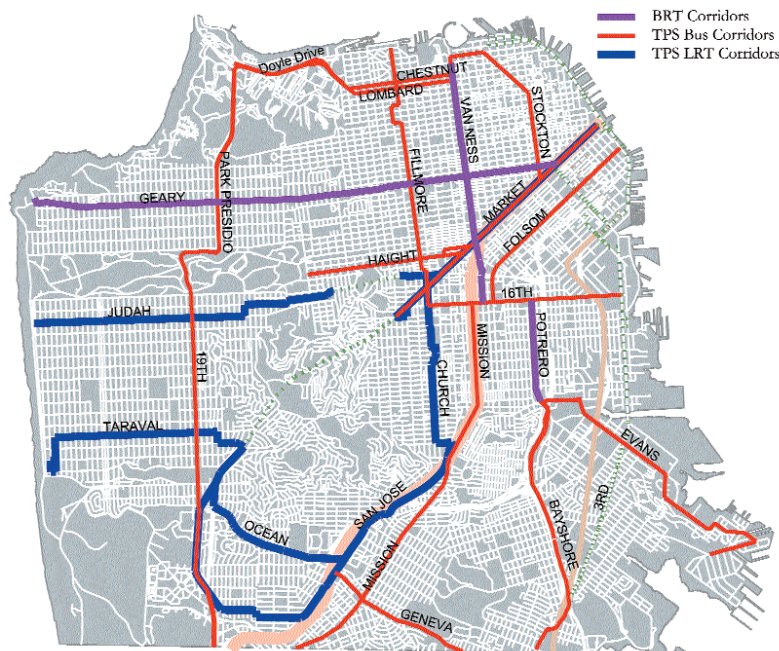
livability and character, the NEP supports an efficient, accessible, and integrated transit system as part of a balanced transportation strategy for the city. Accessibility, cost effectiveness, and compatibility with existing and planned land uses, especially housing, are to be required of projects receiving funds under the Countywide Plan.

The NEP is organized into 4 major categories, similar to the 1989 Prop B Expenditure Plan, but with a few important differences (see Figure 4-4 for a Summary and Appendix G for the full text of the New Expenditure Plan Description).

In keeping with San Francisco's Transit First policy, the NEP continues strong support for Transit (65.5%, or 74% if paratransit is included). Transit funds are allocated not just to MUNI, but also to regional operators like BART, Caltrain, and ferries.

Figure 4-4a

Transit Priority Network



Commitments to paratransit and system rehabilitation and replacement are maintained in the NEP. The NEP also addresses paying for the local share of deferred transit and roadway maintenance. This is a very significant commitment – over half the total revenues expected for the Countywide Plan – but it is inevitable if we are to maintain the existing system and avoid the much larger rehabilitation tab which would result from lack of regular maintenance. This commitment includes ADA improvements.



The Streets and Traffic Safety category of the NEP includes pedestrian and bicycle funding. The total amount of funding dedicated to bicycles and pedestrian projects increased dramatically over the levels devoted to these purposes in the 1989 Prop B sales tax plan. This reflects both rapidly expanding public demand, and a continuum of efforts to

Figure 4-4 SF Prop K Expenditure Plan Summary

2003 \$ Millions	Total Prop K ¹	% of Prop K Funding ²	Other Expected Funds	Total Expected Funds ²	
A. Transit	1,781.1	65.5%	8163.2	9,944.3	
I. Major Capital Projects	689.6		3059.1	3,748.7	
a. MUNI	361.0		1041.0	1,402.0	
Bus Rapid Transit/MUNI Metro Network	110.0		490.0	600.0	
3rd Street Light Rail (Phase 1)	70.0		30.0	100.0	
Central Subway (3rd St. LRT Phase 2)	126.0		521.0	647.0	
Geary LRT	55.0		0.0	55.0	
b. Caltrain	313.1		1827.9	2,141.0	
Downtown Extension to a Rebuilt Transbay Terminal	270.0		1615.0	1,885.0	
Electrification	20.5		162.0	182.5	
Capital Improvement Program	22.6		50.9	73.5	
c. BART Station Access, Safety and Capacity	10.5		89.5	100.0	
d. Ferry	5.0		100.7	105.7	
ii. Transit Enhancements	52.5		148.2	200.7	
iii. System Maintenance and Renovation	1,039.0		4955.9	5,994.9	
a. Vehicles	575.0		2911.0	3,486.0	
b. Facilities	115.7		830.0	945.7	
c. Guideways	348.3		1214.9	1,563.2	
B. Paratransit⁴	291.0	8.6%	105.3	396.3	
C. Streets and Traffic Safety	714.7	24.6%	1318.3	2,033.0	
I. Major Capital Projects	117.5		422.2	539.7	
a. Golden Gate Bridge South Access (Doyle Drive)	90.0		330.0	420.0	
b. New and Upgraded Streets	27.5		92.2	119.7	
ii. System Operations, Efficiency and Safety	60.6		94.9	155.5	
a. New Signals and Signs	41.0		14.5	55.5	
b. Advanced Technology and Information Systems (SFgo)	19.6		80.4	100.0	
iii. System Maintenance and Renovation	281.6		605.9	887.5	
a. Signals and Signs	99.8		70.7	170.5	
b. Street Resurfacing, Rehabilitation, and Maintenance	162.7		517.5	680.2	
c. Pedestrian and Bicycle Facility Maintenance	19.1		17.7	36.8	
iv. Bicycle and Pedestrian Improvements	255.0		195.3	450.3	
a. Traffic Calming	70.0		72.0	142.0	
b. Bicycle Circulation/Safety	56.0		21.6	77.6	
c. Pedestrian Circulation/Safety	52.0		17.7	69.7	
d. Curb Ramps	36.0		30.0	66.0	
e. Tree Planting and Maintenance	41.0		54.0	95.0	
D. Streets Transportation System Management/Strategic Initiatives	33.2	1.3%	29.3	62.5	
I. Transportation Demand Management/Parking Management	13.2		15.7	28.9	
ii. Transportation/Land Use Coordination	20.0		13.6	33.6	
TOTAL	2,820	100%	9616.1	12,436	
Total Prop K Priority 1 (conservative forecast)	2,350				
Total Prop K Priority 1 + 2 (medium forecast; most likely to materialize)	2,626				
Total Prop K Priority 1+2+3 (optimistic forecast)⁵	2,820				



1 The "Total Prop K" column fulfills the requirements in Section 131051(d) of the Public Utilities Code.

2 Percentages are based Prop K Priority 1 and 2 forecasts of \$2.626 billion.

3 Total Expected Funding represents project costs or implementable phases of multi-phase projects and programs based on a 30-year forecast of expected revenues from existing federal, state and local sources, plus \$2.82B in reauthorized sales tax revenues, \$230M from a BART General Obligation Bond, and approximately \$199M from the proposed 3rd dollar toll on the Bay Area state-owned toll bridges. The amounts in this column are provided in fulfillment of Sections 131051 (a)(1), (b) and (c) of the Public Utilities Code.

4 With very limited exceptions, the funds included in the 30-year forecast of expected revenues are for capital projects rather than operations. Of all the funding sources that make up the \$12.4B in expected funding, paratransit operating support is only eligible for Prop K and up to 10% of MUNI's annual share of Federal Section 5307 funds (currently about \$3.5 M annually). Therefore, total expected funding for Paratransit only reflects Prop K and Section 5307. The remaining paratransit operating costs for the next 30-years will be funded using other sources of operating funds, such as those currently included in MUNI's \$460M annual operating budget.

5 Priority 3 projects will only be funded if the revenues materialize under the optimistic scenario for sales tax revenues. They are also included in case Priority 1 or 2 projects realize costs savings, identify other unanticipated sources of funding, experience delays or are canceled.

“Rapid transit corridors both at street level and underground will create an integrated citywide network of high speed transit performance, decreased travel times, and better seamless connectivity between transit services provided by multiple operators throughout the city.”

make better use of the entire street right-of-way, from property line to property line, which is shared by all modes of transportation: pedestrians, buses, cars, and cyclists.



The Plan takes a programmatic approach, which ensures some flexibility to respond to future unknowns. However, the Plan does affirm funding for a few already committed major capital projects: the Third Street Light Rail Line/New Central Subway, the extension of Caltrain to a rebuilt Transbay Terminal, and the replacement of the south access to the Golden Gate Bridge (Doyle Drive) through the Presidio.



The centerpiece of the NEP is the development of a Network of Rapid Bus and Rail Transit corridors. Together, rapid transit corridors, both at street level and underground, will create an integrated citywide network of high speed transit, resulting in increased service reliability, shorter travel times and better, seamless connectivity between transit services provided by multiple transit operators throughout the city. The network approach to transit investment, combined with development of Bus and Rail Rapid Transit, is intended to ensure broad distribution of benefits through cost-effective projects that will improve system performance in the short to medium term.



The NEP establishes a new category of traffic calming and pedestrian safety funds citywide, to respond to safety concerns.

These projects reflect the public’s outcry for an answer to the street safety problems caused by cut-through traffic in neighborhoods or on major arterials such as 19th Avenue, which has experienced 5 pedestrian fatalities since 2001 on the 2-mile stretch between San Francisco State University and Golden Gate Park. This category specifically targets 19th Avenue, and other major arterials where traffic safety is a major concern, and promotes the development of safer pedestrian routes to schools. San Francisco’s first Pedestrian Master Plan and the projects prioritized in it will be funded from this category.



The NEP creates a new category to pay for strategic initiatives, in particular funding for neighborhood planning and coordination of land use and transportation, including parking management and street trees. It is intended to implement small scale, cost-effective solutions in the neighborhoods.

Finally, the NEP emphasizes the use of local transportation sales tax revenues to leverage large amounts of regional, state, and federal funding. ●

Part E.



New Expenditure Plan Performance Measurement

As mentioned above, the investment program was developed from an ETC investment philosophy and refined by the Expenditure Plan Advisory Committee. This section demonstrates the benefits of implementing the Countywide Plan, which include stemming and reversing the decline in transit mode shares in the future, compared with the 2025 baseline conditions described in Chapter 3. This is an important achievement of the Countywide Plan, and one that

requires complementary policy further described in Chapter 4.

The Countywide Plan networks evaluated for performance in this section include the committed RTP investments and a number of assumptions for less defined programmatic categories, such as transit enhancements and service extensions. Although the Countywide Plan contains numerous projects and programs, there are limitations to what can specifically



be represented in the computerized San Francisco Travel Demand Model. For example, traffic signal coordination and other signal projects – which have multimodal benefits for drivers, transit users, and pedestrians alike – are not representable in the SF Model at the specific intersection level. As a result, the Model tends to under-represent benefits where these projects occur.

Project details must often be approximated, since

final designs are not yet available for future projects. Conservative project assumptions were used, so that any potential modelable impacts are reflected in the performance measures. For example, in some cases, as a proposed project condition for transit corridor improvements, the model assumed that one traffic lane would be removed, although this may ultimately not be required once the design is finalized.

Figure 4-5a All Growth In Future Trips - with and without Plan Source: SF Model

	2025 Base	2025 Plan	Increase	% Growth
Auto	3,063,000	3,063,000	-27,000	-0.9%
Transit	986,000	1,009,000	23,000	2.3%

Figure 4-5b Mode Share Changes - Future Trips with and without Plan Source: SF Model

	2025 Base	2025 Plan	Difference	% Growth
Auto	60.8%	60.4%	-0.4%	-0.7%
Transit	19.6%	20.1%	0.5%	2.5%

Figure 4-6a Growth in Internal Trips - Future with and without Plan Source: SF Model

	2025 Base	2025 Plan	Difference	% Growth
Auto	1,779,636	1,753,350	-26,286	-1.5%
Transit	531,204	558,063	22,860	4.3%

Figure 4-6b Mode Share Changes - Future Internal Trips with and without Plan Source: SF Model

	2025 Base	2025 Plan	Difference	% Growth
Auto	54.4%	53.7%	-0.7%	-1.2%
Transit	16.2%	16.97%	0.7%	4.6%

Figure 4-6c Mode Share Changes - Year 2000 vs Plan Source: SF Model

	2000 Base	2025 Plan	Difference	% Growth
Auto	62.1%	60.4%	-1.7%	-2.8%
Transit	17.2%	20.1%	2.8%	16.5%

“Housing, jobs, and shopping opportunities are more accessible when more modes of transportation can serve the location. The spatial distribution of activities and destinations—land uses—also determines how convenient different choices of transportation are, and how mobile people are in reaching a desired location with a variety of transportation modes.”

Figure 4-8

Transit LOS - CWTP



E.1. Travel Demand

Compared with the 2025 Baseline, the Countywide Plan alternative and its heavy emphasis on transit investment results in overall growth of transit person-trips by 2.3% (see Figure 4-5a). In terms of mode share, transit shares gain 2.5% while auto shares remain unchanged (see Figure 4-5b). When examining internal trips only, transit person trips are projected to increase by 4.3%. (see figure 4-6a). This growth in internal transit trips outstrips growth in all internal trips and results in a total transit mode share of 17.0%, and a mode share growth rate of 4.6% (see Figure 4-6b). Thus, the Countywide Plan alternative reverses the projected decline (-1.3%) in transit mode forecast for the 2025 Baseline. The results is a 6.1% swing in the growth rate for transit mode shares between the Baseline and Countywide Plan alternative.

Under the Plan between 2000 and 2025, the overall mode share of auto trips will decline by 2.8%. Transit’s mode share will increase by an impressive 16.5%, for an overall transit mode share of all person-trips of 20% (Figure 4-6c). Thus, the Plan effectively slows down the growth of auto trips and accelerates the growth of transit mode share. In addition, the Countywide Plan succeeds in reversing the disturbing decline anticipated in transit shares of internal San Francisco trips during the same period.

Another measure of system efficiency is person-throughput, as reflected in average vehicle occupancy for auto and transit trips combined. The Countywide Plan network revers-

es the decline in occupancy that is predicted in Chapter 3, increasing vehicle occupancy from 1.62 in the 2025 base network to 1.64 persons per vehicle in the 2025 Plan.

E.2. Mobility



Proposed Countywide Plan results in a 109 second reduction in average transit travel times as compared to the 2025 baseline conditions, while average auto trip times are expected to increase over and above the 2025 base by less than 2 seconds (see Figure 4-7). It is not anticipated that auto travel will be affected to this degree, however, because the model does not fully reflect the benefits of signal coordination on travel times, which can improve average speeds by up to 10%.

Through the implementation of the Countywide Plan alternative, transit begins to narrow the gap in average speeds, which are the inverse of travel time. The system-wide average 7% advantage in transit speeds belies greater differences of 10% - 15% in key corridors where priority treatments are proposed. This is achieved without degrading automobile speeds, which will further benefit from signal coordination, an improvement which is not captured in the San Francisco Travel Demand Model’s estimates.

E.3. Corridor Analysis

Transit Demand and Level of Service. The transit ridership and crowding impacts of the Countywide Plan invest-

Figure 4-7 CWTP Alternative Trip Measures (Internal SF Trips only) Source: SF Model

	2025 Base	2025 Project	% Growth
Average Travel Time (minutes)			
Transit	33.85	32.04	-5.3
Auto	11.32	11.34	0.2
Average Trip Distance (miles)			
Transit	3.47	3.53	1.6
Auto	3.31	3.30	-0.4
Average Trip Speed (mph)			
Transit	6.16	6.61	7.3
Auto	17.56	17.46	-0.5



ments are shown in Figure 4-8. The highest demand for transit still occurs on the Bay Bridge corridor and on Market Street near downtown. Other major transit corridors include the BART corridor along Mission Street, the Haight street corridor and the N-Judah MUNI line, and the Geary corridor, particularly at the intersection with the Van Ness corridor. The heaviest MUNI transit flows of 4,000 to 7,700 persons per hour can be observed in the Market Street, Geary Boulevard, Haight/Fulton and Van Ness corridors, followed by the Third Street, Mission Street, and Park Presidio/19th Avenue corridors. The Third Street/Central Subway, Mission, and Upper Market Muni bus and light rail corridors also carry heavy transit loads. The greatest absolute increases in transit ridership are expected to occur on the Van Ness, Geary, Mission, Market, and Lombard corridors.

Transit crowding along the key corridors decreases somewhat under the Countywide Plan. The greatest improvements to crowding problems are expected in the Haight Street corridor, the Third Street corridor, and the Mission corridor. Despite heavy future demand on San Francisco's transit network, transit crowding levels are fairly good in 2025, due to the planned investments. All of the transit corridor screenlines will operate above crowding standards ($v/c = 0.8$).¹

Auto Demand and Level of Service. The Countywide Plan is intended to relieve key load points and delays on the roadway network. Figure 4-9 depicts system performance taking into account proposed auto and transit improvements that can be modeled. The benefits of signal timing projects are not reflected.² As expected, the major auto trip volumes are at the county interfaces with the regional highway network, such as on the Bay Bridge, US 101 and I-280, which will probably carry between 400,000 – 490,000 auto-based person-trips per day by 2025, with the Countywide Plan investments. The Geary and Van Ness corridors will continue to experience the highest auto volumes of arterial streets in San Francisco, together accounting for over 200,000 auto based person trips daily. Other high traffic routes will be Mission Street and Lombard Street.

The high volumes notwithstanding, implementation of the

Countywide Plan is expected to result in a decrease in the volume of auto traffic along major high-volume arterials. The Van Ness and Geary corridors are expected to experience the greatest decreases in auto traffic under the Plan – over 2,500 fewer vehicles during the peak period on Van Ness, and close to 2,000 fewer vehicles on Geary. These volume figures refer to the entire corridor, not just Geary Blvd and Van Ness Ave; therefore, the decrease is not simply a shift of cars to the parallel streets, but a shift from driving to the rapid bus transit services planned for these corridors.

Figure 4-9 shows the anticipated Countywide Plan levels of service, calculated as p.m. peak hour volume-to-capacity ratios along these corridors at key locations. By this measure, the Countywide Plan reduces congestion along the key high-volume arterials in San Francisco, most notably Geary, Third Street, Lombard, Mission, and 19th Avenue. This decrease results from slower growth in vehicle trips on that corridor, relative to the growth in transit trips. Because freeway capacities are built out, congestion on regional highways will not be significantly improved by implementation of the Countywide Plan unless demand management schemes such as pricing are added.

Our streets and roads and bridge gateways have a finite capacity for vehicles in the future, even as future trips increase. We also recognize that the streets in neighborhoods such as SOMA do not have infinite capacity to absorb the spillover traffic to and from the Bay Bridge, US 101, and I-280, and that these local streets bear the brunt of the regional traffic impacts. Some of the corridors are historic bottlenecks that have operated under congested conditions for over a decade. Clearly, effective management of these facilities is a regional challenge.

San Francisco will to our part continue tracking the performance of bridges and freeways through the Countywide Plan updates and the biennial CMP Level of Service Monitoring reports. The Countywide Plan and the NEP also provide funding under several categories that address conditions on the county gateways. Management of local bridge and freeway access and egress operations will be improved through implementation of the DPT's SFGo program, which incorporates dynamic operations management tools. The demand for Single-Occupant-Vehicle

Figure 4-9

Auto LOS - CWTP Alternative

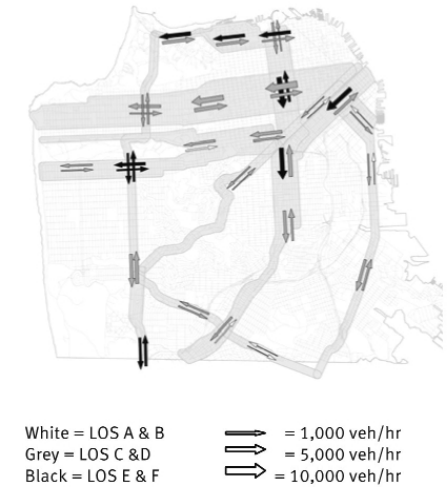
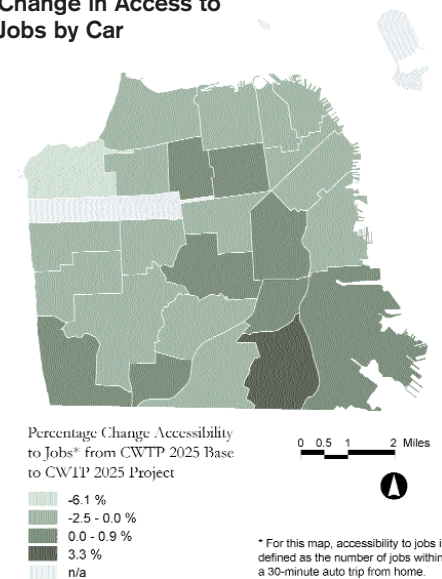


Figure 4-10

Change in Access to Jobs by Car



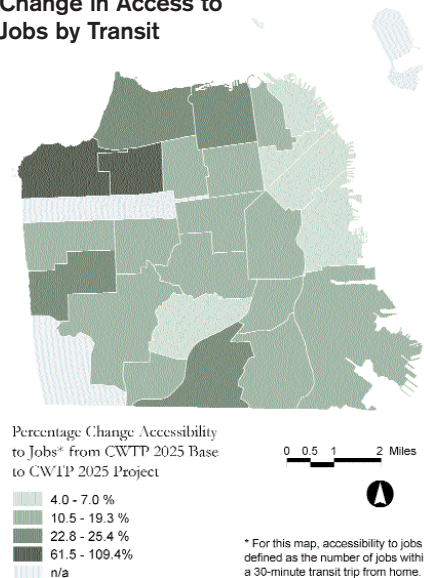
* For this map, accessibility to jobs is defined as the number of jobs within a 30-minute auto trip from home.

1 Where "V" is volume, or number of passengers, and "c" is capacity, or number of seats [plus theoretical standing room.]

2 DPT's SFGo! program receives significant funding in the NEP for new signals that allow better coordination along corridors, transit signal priority, and real-time management of traffic conditions. Signal timing improvements that are planned or already funded include projects on: Lombard Street, 19th Avenue, Geary Boulevard, Mission Boulevard, and Third Street (to be implemented with the opening of the Third Street LRT) and Oak Street/Fell Street and Octavia Blvd. (to be implemented with the completion of the Central Freeway touchdown at Market Street.

Figure 4-11

Change in Access to Jobs by Transit



access to and from San Francisco will be reduced by upgrading the transit service options into the city via BART, Caltrain, and regional express buses. New facilities, such as the Caltrain extension to the Transbay Terminal, will close major regional transit connectivity gaps. Future updates to the Countywide Plan will consider the effectiveness of these first-tier approaches and also explore the potential for more direct demand-management techniques.

Beyond these improvements in person-throughput, there will likely be improvements from traffic management techniques to maintain smooth vehicle flows and manage conflicts with pedestrians and other road users. Implementation of the Countywide Plan offers potential to improve the management of the existing capacity through technology and a balancing of modal needs.

E.4. Accessibility



Accessibility is a concept similar to connectivity (discussed) in Chapter 3, with one important difference.

Accessibility is determined by two key factors: transportation system performance and land use patterns, whereas connectivity generally refers only to transportation-related factors. Housing, jobs, and shopping opportunities are more accessible when more modes of

transportation can serve them. The spatial distribution of economic activities – land uses – strongly influences how convenient different choices of transportation are, and how much mobility people have to reach a desired destination with a variety of transportation modes. The spatial distribution of activities also determines how efficient and effective various transportation modes and services will be in responding to travel demands.

The Countywide Plan accessibility measures are defined similarly to those used in the 2001 RTP, as indicators of accessibility to jobs and shopping opportunities. The measures calculate the total number of jobs or shopping opportunities available within specified time-bands for each mode, and compare these across alternatives. For example, to measure overall access to jobs, the average amount of employment available to workers traveling 30 minutes by auto and 30 minutes by transit during the AM peak was summed.

Implementation of the Countywide Plan will generally maintain current levels of accessibility for drivers but significantly improve accessibility for transit users (see Figure 4-10 and 4-11). On average, it is expected that the average number of jobs accessible to workers traveling 30 minutes by car from their homes in San Francisco will increase by approximately 9.4% between the 2000 baseline and 2025 Countywide Plan. For transit users, the average number

Figure 4-12 **Equity Results: Time Savings for Target Populations** Source: SF Model

	Time Savings (Avg. min)	Transit Time Savings (Avg. min)	Change Transit Share
All	0.11	1.74	0.08%
Zero Vehicle	0.37	1.69	1.2%
Not Zero Vehicle	0.06	1.79	0.7%
Low Income	0.16	1.48	0.7%
Not Low Income	0.10	1.79	0.8%
Female Head w/Children	0.04	1.39	1.1%
Not Female Head w/Children	0.11	1.77	0.8%
Single Parent	0.02	1.25	1.0%
Not Single Parent	0.11	1.79	0.8%
Female	0.09	1.69	0.8%
Male	0.12	1.78	0.8%



of jobs accessible to workers within 30 minutes will increase even more dramatically, by over 35%.

Unlike the accessibility changes between the 2000 baseline and the future scenarios, the change in accessibility between the 2025 baseline and the Countywide Plan are significantly driven by major projects included in the Plan, and by related changes in transportation conditions, not just by the growth in jobs and housing.

Future Countywide Plan updates will measure the performance of alternate land use scenarios as well as transportation investment packages. This will enable fuller elaboration of how land use and transportation decisions, together, can promote accessibility, and will help us to measure an investment plan's performance in supporting the city's growth and development goals.

E.5. Safety



While no adequate way to model future safety conditions exists, the NEP dedicates significant funding to projects that improve the safety of streets in San Francisco for all modes, and especially for pedestrians and cyclists.

Public outreach clearly identified traffic calming as a desired safety improvement. In response, the NEP

includes \$7.2 exclusively for traffic calming. Pedestrian safety treatments on streets and arterials throughout the entire city are also critically important, and the need for these treatments has been clearly articulated by the public. These needs include countdown signals, intersection bulb-outs, bicycle lanes, and highly visible crosswalks. To address this significant need, \$3.6 in pedestrian and bicycle safety funding is dedicated in the NEP. Some specific areas of concern, such as 19th Avenue, are targeted for improvements.

E.6. Environmental Quality



Growth in vehicle trips, especially the total miles and hours traveled by vehicles in San Francisco, is a good indicator of the environmental impacts of transportation patterns.

The total number of vehicle trips generated within San Francisco is anticipated to grow by 6% between 2000 and 2025, with implementation of the Countywide Plan. However, this increase in trips is not primarily attributable to implementation of the Countywide Plan, but rather to anticipated growth in population and economic activity. The Countywide Plan in fact is expected to reduce vehicle trips by 1.4%, relative to the future 2025 conditions

Figure 4-13 Equity Results: Accessibility Impacts on Target Populations Source: SF Model

	% Change Jobs by Auto	% Change Jobs by Transit	% Change Shopping by Auto	% Change Shopping by Transit
All	-0.3	13.9	-0.7	19.1
Zero Vehicle	-0.6	9.1%	-1.5	19.1
Not Zero Vehicle	-0.2	15.9	-0.5	18.5
Low Income	-0.1	9.3	-0.8	14.1
Not Low Income	-0.3	14.6	-0.6	20.2
Female Head w/Children	-0.1	13.1	-0.5	17.1
Not Female Head w/Children	-0.3	14.0	-0.7	19.3
Single Parent	0.0	13.1	-0.5	17.0
Not Single Parent	-0.3	14.0	-0.7	19.3
Female	-0.3	14.1	-0.7	19.3
Male	-0.3	13.8	-0.6	18.9

without Countywide Plan investments. Similarly, vehicle hours traveled will increase 28% even as the Countywide Plan is implemented. However, when compared to the future without the Plan investments, the Countywide Plan does result in a slight reduction of vehicle hours traveled (largely because vehicle trips are projected to decrease 1.4% under the Countywide Plan scenario), which amounts to a decrease of about 4,000 hours a day.

The aggregate vehicle miles traveled are only projected to grow by 13% with the Countywide Plan investments. However, VMT on roadways with congestion - defined as Level of Service F - is anticipated to grow by 117% with the Countywide Plan projects. Much of this traffic is the result of forecast population and employment growth in San Francisco and throughout the Bay Area. With the Countywide Plan investments, however, overall VMT in San Francisco reduces by 0.8% and VMT at LOS F reduces by 2%, compared with the future 2025 Baseline.

Improvements in transit's environmental scorecard are also anticipated. Measure I, the Healthy Air Enforcement Act of 2004, was passed by San Francisco voters in March 2004. It requires that the Municipal Railway replace all pre-1991 diesel buses by the end of 2006. These will need to be replaced by alternative fuel buses³ as the older buses are phased out in order to prevent service cuts; however, as long as cleaner buses are available to replace the phased-out buses, this step will result in cleaner air along Muni routes currently served by diesel buses.

E.7. Equity



The City can help advance equity goals in several ways through its transportation policies and projects. First, it is important to ensure that the planning stage of any project includes wide participation by stakeholders as early in the process as possible. This not only helps to ensure that concerns raised about project design and impacts are addressed effectively in the design process, but also facilitates a more broad and fair distribution of benefits.

In addition, the Plan targets areas with historic under-

investment, such as the Third Street Corridor and the Bayview/Hunter's Point and south county areas (Visitation Valley Watershed Improvements).⁴ Future Bus Rapid Transit network improvements will also enhance transit connectivity citywide, in particular for residents along the Geary, Van Ness, and Potrero corridors. Finally, the Authority is leading a feasibility study to locate a Caltrain station at Oakdale Avenue.

In order to assess the effectiveness of these investments, and the distribution of benefits of the overall NEP, the Authority analyzed the mobility and accessibility benefits under the Plan for four important populations: low income households; zero car households; female-headed households with children; and minority households. This approach is similar to the one used in the 2001 RTP.

The Countywide Plan decreases average travel time in general, and these savings accrue both to target and non-target populations (see Figure 4-12). Zero vehicle households and low income households enjoy the most time savings on average. This is probably because female and single parent households have a more inelastic demand for auto use than zero vehicle and low-income households in general (due to trip-making involving children).

The Countywide Plan performs fairly well for both target and non-target populations in terms of providing accessibility benefits (see Figure 4-13). Access to jobs by transit increases dramatically overall under the Countywide Plan, and this conclusion applies to both target populations and non-target populations. Households without cars and low-income households fare better than non-target populations and other target populations. Female and single parents see greater accessibility improvements by transit than do low income and zero vehicle households. Both target and non-target groups alike also gain increased access to shopping by transit. In general, access to jobs and other activities by auto stays flat or declines slightly with the Countywide Plan, and this effect is shared among target and non-target populations alike. ●

³ Muni prefers hybrids, which were recently approved by CARB

⁴ It should be noted that any measurements of benefit to these groups are an underestimate because they compare results from the Countywide Plan Scenario and the Baseline Future Scenario. The Baseline Future Scenario already includes several large investments that are targeted to these populations, such as the Caltrain downtown extension to a rebuilt Transbay Terminal, and completion of the Third St. light rail Phase 2 (New Central Subway). The benefits that result from those projects are not reflected in this analysis, though they would almost certainly accrue to the target populations. Future updates of the Plan can expand the analysis by

Strategic Policy Initiatives

BEYOND THE PRIORITIZATION of investments in transportation projects and programs, strategic policy initiatives are necessary in order to guide further planning, programming and implementation activities. These initiatives identify ways to leverage the benefits of transportation investment through greater integration of land use decisions and transportation system management policies.





Transportation and Land Use Coordination

A.1. Key Concepts and Background

Transportation and land use decisions are interdependent: transportation provides access to the land, affecting its desirability, productivity and value. Conversely, decisions about the intensity and mix of land uses result in economic activity that generates demand on the transportation system (i.e., trips). While both effects are noteworthy, it is well established that the potential of land use decisions to determine the level and patterns of travel demand is enormous. Conversely, our ability to influence the shape and intensity of land development through decisions about investment in transportation improvements is much more limited. This is particularly true in San Francisco, where opportunities to expand the transportation system are either physically very limited (e.g.: we can't widen existing streets), or they are well beyond what we can afford (e.g.: we can't build an extensive subway network.).

Approval of low-density land uses, which tend to be harder and more costly to serve with public transportation, leads to over-dependence on the automobile for most transportation needs, resulting in a worsening of traffic congestion. This, in turn, leads to investment in roads, to respond to the growing congestion. Supply of fresh road

Figure 5-1 Proposal for Curran House in the Tenderloin



capacity enables further approvals of low density developments, in a cycle of sprawl and auto-dependence that characterizes the development of most American metropolitan areas over the past half century. Provision of extremely costly high-capacity rail transit services cannot by itself reverse this cycle, and it leads instead to over-investment or, at best, inequitable investment in transportation.

The past decade has seen the development of a smart growth movement, which proposes to correct some of these problems and break the cycle of over-dependence on the automobile by improving coordination between land use and transportation decisions, and by emphasizing local land use decisions, such as infill development, that increase the intensity of land uses near transit services, thus improving the competitiveness of transit and providing real options to driving. Healthier, more vibrant communities result from organizing land uses efficiently in locations where they are best supported by transportation facilities and services, especially transit.

Because of its geographic setting and the timing of its development as a city, San Francisco evolved a relatively efficient land use pattern, and a transportation system that complements it well.

In the post-war era, key efforts were made to:

- balance downtown development with neighborhood development to disperse trip-making
- build out the transit network and commit to a Transit First policy, and
- manage auto use through trip-reduction and travel demand management programs.

During the boom of the 1970's and early 1980's the city was able to avoid gridlock in the downtown area despite adding 30 million square feet of new office space. Investing aggressively in transit, limiting the parking supply and promoting alternatives to driving were instrumental steps in achieving this result.¹ The Transit First Policy was

¹ Unlike most central cities, San Francisco has never required the provision of a minimum number of parking spaces as a condition for approval of downtown commercial development.

Figure 5-2

Planning for Housing

The most recent Housing Element was adopted by the Planning Commission this year. The San Francisco Planning Department identifies the potential for about 35,000 new housing units, mostly in the Downtown/SOMA area:

- » Transbay Area (3200 units)
- » Rincon Hill Plan (4000 units)
- » Market and Octavia Plan (7500 units)
- » Downtown Office District (4500 units)
- » Mid-Market Plan (2500)
- » Showplace Square (2000)
- » Central Waterfront (2000)
- » Rest of SOMA (not including Rincon Hill, Transbay) Central Waterfront (8900 units)
- » Visitacion Valley (750 units)
- » Balboa Park Plan (500 units)

Source: SF Planning Department

Figure 5-3

Transit Oriented Development Advances Plan Goals



Mobility & Access By prioritizing transportation investments that serve transit-oriented land uses, more efficient travel patterns are reinforced. Access to jobs and other economic activities increase.



Public Health & Safety Transit-oriented investments support pedestrian activity and bicycle travel. More pedestrian trip-making leads to calmer, safer residential areas, and improved public health.



Neighborhood Vitality Businesses in San Francisco thrive on pedestrian foot traffic. The more pedestrian activity, the more vibrant business districts tend to be and the broader the customer markets for neighborhood business districts. Business districts benefit from the amenity and identity of safe, well designed streetscapes.



Healthy Environment. More efficient development patterns are supported. Efficient development patterns lower vehicle miles traveled and air pollution from cars, as well as energy costs.



Equity. Reduced housing costs are possible through transit-oriented transportation investments. Financing techniques, such as location-efficient mortgages, increase the home-buying capability of San Francisco households by recognizing the savings in transportation cost resulting from transit access. Finally, transit-oriented investments and development increase the accessibility of low-income households to jobs and services.



Investment Efficiency. Transportation investments paired with transit-oriented land uses result in higher transit ridership and shorter trip lengths, yielding a greater farebox recovery ratio and lower transit system operating costs. Public infrastructure and services can be provided more efficiently.

Figure 5-4 Opportunity Sites on Geary Boulevard



followed by the adoption of San Francisco's Transit Impact Development Fee (TIDF) program, a 1981 ordinance that assesses a fee of \$5 per square foot on new or converted office space in the downtown area, to help defray the costs of providing additional transit service. Together, these efforts succeeded in maintaining good accessibility into the downtown area, even as the city added over 100,000 new jobs and 11,300 net new residential units.

A.2. Future Growth Challenges and Opportunities

The Countywide Plan builds on the City's land use and transportation coordination policies, by targeting future transit investment in new growth areas such as the SOMA and southeast quadrant of the city, and by further developing other modes such as bicycling, walking, ride-sharing and car-sharing. Depending on the extent and nature of future growth (particularly housing growth), San Francisco's development policies will also need to evolve

even as new transportation investment is implemented, in order to maintain the accessibility and the high quality of life that make San Francisco such a desirable place.

At both the local and regional levels, there is growing commitment to creating a better balance of jobs and housing (particularly affordable housing) in the Bay Area. As described in Chapters 2 and 3, through 2030 San Francisco will remain a net importer of workers from other parts of the Bay Area and beyond, contributing to the growth in long in-commute trips. As a way to lessen this problem, ABAG's most recent regional land use projections target 72,000 units of housing to be produced in San Francisco by 2030. While San Francisco Planning Department estimates do not match these levels, they do anticipate significant net housing production in the city, compared to historical levels.

Planning Department plans propose to organize new growth efficiently, in infill and redevelopment areas that are better equipped to support development, such as



Downtown and SOMA, as well as in transit-rich areas such as Market/Octavia and the Mission St. and Geary Blvd. transit corridors; near BART stations such as Balboa Park, and along the Third Street light rail transit corridor. Most of these areas are in need of transit service upgrades, regardless of projected growth conditions, to address service reliability, comfort and speed issues.

Three strategic initiatives can help to increase transportation and land use coordination as the city grows:

- » **Prioritize** transportation (especially transit) investments

- that support needed new development (housing, infill development, retail and entertainment, etc.)
- » **Develop** the city's multi-modal transportation network, and **promote** the role of streets as public places and open spaces
- » **Broaden and strengthen** transportation demand management efforts, including smarter parking management.

These concepts are discussed in detail in the following sections.

Part B.



Prioritize Investments that Support Key Land Use Goals

Because all areas of the city have transportation needs, particularly for transit improvements, prioritization criteria are needed to allocate scarce funding resources. The voter-approved New Expenditure Plan (NEP) for Prop K provides clear overall policy guidance on the prioritization of major transit capital projects:

“The Authority shall give priority for funding to major capital projects that are supportive of adopted land use plans, with particular emphasis on improving transit supply to corridors designated for infill housing and other transit-supportive land uses. Transit supportive land uses are defined as those which help to increase the cost-effectiveness of transit service by improving transit ridership and reducing traffic along transit corridors.”

As described in Chapter 4, in order to ensure comprehensive design, all projects should also demonstrate compatibility with:

- » existing and planned land uses,
- » adopted standards for urban design
- » the provision of pedestrian amenities and
- » supportiveness of planned growth in transit-friendly housing, employment and services.

As an added incentive to promote transit-oriented development and infill projects, the New Expenditure Plan provides matching funds for projects that receive grants from MTC's Transportation for Livable Communities and Housing Incentives Program (TLC/HIP).

These prioritization policies provide guidance for programming major transit projects eligible under Category A2 of the NEP (see Appendix G). Together with the strategies described later in this chapter, they help to guide development of integrated neighborhood plans and projects that are funded under Categories D1 and D2 of the NEP. In general, neighborhood plans that accept new growth, or measures to manage existing growth, will fare better in the transportation funding process:

Identify Appropriate Opportunities for Growth.

Neighborhoods that have room to grow and identify opportunities for new, particularly affordable housing, will be eligible for special housing incentive grants and transportation project development funds. Transportation projects in such neighborhoods, particularly those which leverage private sector contributions or support other innovative ideas, will enjoy an advantage in the transportation planning and programming process.

“By continuing and improving San Francisco’s policies of careful parking management coupled with targeted transit investments and thoughtful land use policy, the trend of employment and residential growth can continue without commensurate increases in auto use.”



Figure 5-5

Glen Park considers conversion of parking to housing

Source: Glen Park BART Station Area Plan



Manage Growth. Neighborhoods that are already in demand and /or growing, should identify transportation needs and consider land use and parking regulations to mitigate and manage the transportation effects of growth. They may also consider creative financing schemes to help deliver needed improvements, such as benefit or parking assessment districts, which re-invest funds in area improvements. Neighborhoods that include these strategies as part of approved neighborhood plans will enjoy an advantage in the transportation planning and programming process.

Plan for Growth. Neighborhoods should consider all of these issues in comprehensive area or neighborhood land use and transportation plans. Neighborhoods that reach consensus on comprehensive transportation solutions through an inclusive and holistic approach will be eligible for special land use and transportation planning and project development grants, and will generally enjoy an advantage in the transportation planning and programming process. ●

Part C.



Streets as Vital Public Spaces

A second important land use and transportation coordination strategy is to develop San Francisco's multi-modal street network for transit, bicycle and pedestrian uses and to turn streets into inviting public spaces. These preferential transit, bicycle, and pedestrian networks should be supported by the design and type of adjacent land uses. This concept is advanced in many planning studies, including the Planning Department's Better Neighborhoods studies, and current efforts such as the consideration of streets as public open spaces in the Rincon Hill Plan. Inviting, pedestrian-oriented streets go hand in hand with transit-oriented development; the least car-reliant neighborhoods are full-service neighborhoods with ready access to transit as well as easy access by foot to everyday needs.

Transportation street elements figure prominently in the Planning Department's "8 Elements of a Great Neighborhood" (Figure 5-6). Recognizing this, given that during the outreach process many neighborhoods expressed a high level of interest in neighborhood traffic safety and circulation improvements, the Countywide Plan's investment plan includes funding for both planning and implementation of projects and programs that improve the vitality of streets as public spaces. Planning support includes funds for development of transit, pedestrian and

bicycle plans, and neighborhood planning funds. Project capital support includes funding for traffic calming and safety measures, street beautification, street trees, transit, pedestrian and bicycle facilities, safety and traffic calming projects and landscaping, lighting and other amenities.

Well designed multi-modal streets are needed around the city, and they will advance all six Countywide Plan goals:



Mobility & Access. By investing in vital streets and open spaces, pedestrian trips are encouraged for neighborhood access and everyday needs.



Public Health & Safety. Vibrant streets induce pedestrian activity and bicycle travel; this activity promotes neighborhood cohesion and safety, and healthier lifestyles.



Neighborhood Vitality. Walkable neighborhoods with good bicycle and transit access have increased neighborhood desirability, increasing property values and attracting businesses.



Healthy Environment. Vibrant streets induce walking and bicycling, which helps to reduce transportation-related air and water pollution.

Figure 5-6

8 Elements of a Great San Francisco Neighborhood

- 1. Walk to Shops:** everyday stores and services within an easy walk from home. *
- 2. Safe Streets:** safe and friendly streets. *
- 3. Get Around Easily:** many ways to get around. *
- 4. Housing Choices:** a variety of housing types.
- 5. Gathering Places:** places for people to meet and talk. *
- 6. City Services:** a full range of public services for residents. *
- 7. Special Character:** its own character. *
- 8. Part of the Whole:** Great neighborhoods make great cities.

* = links to transportation system

Source: SF Planning Department





Equity. An automobile-centered transportation system disadvantages those without access to a car, including those with low incomes, children, the elderly, and those who choose not to own a car. Investing in walkable streets and pedestrian and bicycle access to regional transit reduces these inequities.



Investment Efficiency. Pedestrian, transit and bicycle facilities, traffic calming measures and certain streetscape improvements are generally cost-effective means to achieve other Countywide Plan goals. These are even more cost-effective when delivered in combination with private sector/developer contributions or revenue-generating mechanisms, such as benefit/parking assessment districts. ●

Part D.



Travel Demand and Parking Management

Cities around the world struggle to manage the effects of growing motorization. San Francisco is no exception. As described in Chapters 3 and 4, car ownership rates are generally expected to rise with increasing household incomes. The automobile will continue to be the dominant mode of transportation in the future. Efforts to curb this trend will need to continue through the City's demand management programs, and particularly through increased parking management.

D.1. Travel Demand Management

While San Francisco does not have an official citywide travel demand management (TDM) ordinance, over the last two decades the City has adopted a variety of policies stemming from the 1973 Transit First Policy, designed to discourage single-occupant vehicles (SOVs) and promote other modes of transportation. These policies allowed the City to accommodate unprecedented growth in travel demand without commensurate investment in highway and street capacity expansion. Current transportation demand management strategies in San Francisco focus on downtown.

Employer-based programs are an important component of successful parking management in San Francisco.² TDM strategies used by employers include paying for the full or partial cost of commuting by transit as a pre-tax

employee benefit (Commuter Checks); providing information about alternative transportation modes; providing "parking cash-out" programs; providing incentives for carpools and vanpools; limiting the total number of parking spaces provided, and locating SOV parking remotely while locating bicycle, rideshare and transit access on-site. These programs to facilitate transit and rideshare commuting are intended to minimize the transportation impacts of employment growth at major job centers.

D.1.1 Citywide TDM Initiatives

To date, the City's Transportation Demand Management program has focused on employer-based initiatives, in the downtown core; the TDM program has not been extended to other types of organizations or beyond the downtown area. A citywide TDM program is needed to expand trip-reduction programs to include small employers and other institutions, not just large property owners and employers. For instance, schools throughout the city can sponsor TDM initiatives that encourage walking to school.

In 1997, the City instituted the Non-Commute Trip Program, which sought to manage transportation demand for weekend and evening recreational and shopping trips to the Mission and North Beach. This was a response to the increasing demand for night and weekend parking in



Figure 5-7

SF Among Top 12 U.S. Cities for Walking

San Francisco has ranked in the American Podiatric Medical Association's top 12 American cities that are best suited for fitness and walking."

"San Francisco's government devotes 13 city agencies to walking issues and gets input from walking advocacy groups," officials said.

"Recent policy wins include longer walk sequences at traffic lights, and funding for a Pedestrian Master Plan."

Bay City News, Tuesday, March 9, 2004



neighborhood commercial districts. The Non-Commute Trip Program was eventually discontinued, but it should be re-assessed and re-introduced as part of a comprehensive citywide TDM strategy.

Institutional TDM programs (e.g. at schools and universities and building associations) are currently voluntary. There is an opportunity to expand existing programs and pilot-test new ones, such as building-owner sponsored “transit class passes” for students or “condo transit passes” for residents of new high-rise buildings.³

D.1.2 Emergency Guaranteed Ride Home

The City’s Department of the Environment is developing a program that promotes the use of commute alternatives such as transit, carpools, vanpools, walking and cycling, by offering a free or low-cost ride home in certain cases. The program pays for a ride home for registered users in the event of illness, severe crisis, unscheduled overtime, or disruption of car or vanpool schedules. The program is intended to address some of the risks associated with the choice of carpooling or relying on transit service for the commute trip. An example of public/private partnership, the program will be funded through a combination of grants, employer fees, and participant contributions.

D.1.3 Location Efficient Mortgages

A new home mortgage program that recognizes the benefits of transit-oriented housing location choices is being demonstrated in San Francisco. The Institute for Location Efficiency began offering Location Efficient Mortgages (LEMs) in the city two years ago. The program estimates the monthly reduction in driving and driving-related expenses. Those potential savings – estimated by Fannie Mae at about \$200 a month on average – are then counted by program administrators as extra income for mortgage qualification purposes, enabling buyers to purchase more housing value for their money.

D.2. Parking Management

Studies demonstrate that in dense urban environments

such as San Francisco there is a strong correlation between parking availability/cost, and transit use and auto ownership. Parking availability influences mode choice. Any successful effort to manage the growth of auto use in San Francisco must manage parking supply as well. Decisions about where, how much and what type of parking to provide in the city have far-reaching consequences. Recognizing this, the City’s General Plan and zoning ordinances attempt to balance the public’s need and desire for parking with the City’s land and financial resources and transportation system management objectives. For example, the General Plan’s land use policies expressly “discourage the proliferation of surface parking as an interim land use,”(Policy 30.2) because it encourages and facilitates patterns of auto use that are difficult to change once the interim parking is no longer available. This policy recognizes that providing space for parking promotes driving.

As noted above, San Francisco has already demonstrated that growth, particularly in jobs, can be accommodated without providing parking spaces on a one-for-one basis. Elimination of parking requirements for commercial uses in dense districts which are well served by transit, (including downtown, Chinatown, and Jackson Square) has even resulted in the rise of private parking management initiatives in these areas.⁴ Parking capacity increases in the future will come mainly from spaces provided by the private sector with new development approvals, and via parking management measures that increase turnover and utilization of existing spaces, effectively increasing supply. Proper private financing and pricing of the parking supply, and sensitive urban design of parking facilities should be applied to any new facilities. The City can absorb the expected residential and employment growth without commensurate increases in automobile use. In order to do so, it must continue and improve its careful parking policies and complement them with sound land use decisions and targeted transit investments.

Figure 5-8

SF Parking Supply

		Short term	Long term	Total
ON STREET	Paid	22,900	94,000	116,900
	Free	12,200	190,900	203,100
	Total	35,100	284,900	320,000
OFF STREET		Short term	Long term	Total
	Paid	91,000	8,700	99,700
	Free/Res.	21,000	160,500	181,500
	Total	112,000	169,200	281,200
	Total	147,100	454,100	601,200



³ These could be funded partially by students and residents as part of their tuition or condo fees, an approach that has been implemented successfully at UC Berkeley to reduce auto trips.

⁴ Chinatown TRIP markets a parking validation program in concert with a free shuttle service that is funded by DPT. The program provides validated \$2 parking (9 am - 10 pm, Saturday and Sunday) at the Golden Gateway Garage (250 Clay Street) with a free shuttle service to and from Chinatown. This is also a changeable message sign system in the Chinatown area that reports on occupancies at three parking garages, helping to inform drivers of vacancies in each garage.

Figure 5-9

Parking Requirements for New Development

The city's parking requirements for residential projects do not vary to reflect transit accessibility. However, the Planning Commission has granted variances to the Planning Code for several recent projects located in transit-rich areas. Bernal Gateway, at Mission and Cesar Chavez, is a complex of 55 units of affordable housing. Its 45 off-street parking spaces are about 20% fewer than the 1:1 parking-to-unit ratio required for the area. Access to transit is ample, with five bus lines less than a block away and BART a two block walk. Bernal Gateway also contains a child-care facility and open space, increasing the range of daily needs accessible without a car.

Twenty eight units of affordable housing approved for the corner of Market and Mason Streets will contain no new off-street parking. The parking that was eliminated reduced construction costs enough to finance the affordable project. Regional and local transit is readily accessible, with an ample supply of neighborhood shopping.

These projects demonstrate sound land use/transportation policy. Residential parking needs are reduced by ensuring proximity to a good mix of local services and providing a high level of accessibility by alternative modes.

D.2.1 Regulating Parking Supply

D.2.1.1 Parking Supply

It is very difficult to estimate the overall supply of parking in the city. Figure 5-8 summarizes a conservative Authority-generated estimate of parking supply. This estimate provides a detail by location (on or off-street) and by time restrictions (short or long-term).⁵

Of the estimated 600,000 parking spaces in the city, approximately 35% are paid for according to use. The remaining 65% percent are either free to users (e.g. color curbs, free parking in shopping malls) or private off-street residential spaces. Seventy-six percent are long-term spaces (unregulated or minimally regulated on-street spaces, Residential Parking Permit Program spaces, employer-provided spaces) with the balance comprised of short-term metered, signed, and color curb spaces. On-street spaces account for 53% of the supply. The ratio of vehicle trips (which end in San Francisco) per day to parking spaces provides an estimate of the amount of turnover in space use.. At 5.86/1, San Francisco's implied turnover ratio is fairly healthy. A comparison of the supply of spaces to the registered vehicle fleet yields a figure of 1.27 spaces per vehicle (when calculated with the city car population, a subset of the overall vehicle population, the ratio increases to 1.77). Despite a greater than one ratio, parking shortages are becoming increasingly pressing in many San Francisco neighborhoods, pointing to the need for better parking management solutions. We begin to explore these issues with a survey of current parking regulations and their effectiveness.

D.2.1.1 Enforcement of Parking Rules

Parking management should include enforcement of parking prohibitions on sidewalks and other illegal spots. Double parking, particularly involving freight and delivery vehicles, is also a problem that can be managed through time-of-day management of on-street spaces, better site design, and enforcement of vehicle types and time limits at loading spaces.

D.2.1.2 Transit First and Parking Management: A Challenge for New Housing Growth Areas

As discussed above, the Transit First policies were instrumental in facilitating the sustainable absorption of significant growth and development in the downtown area in the 1970s and 1980s. Now, as San Francisco contemplates additional growth in downtown, SOMA and other areas, it is imperative to update and strengthen these policies. The policies that ensured success at accommodating downtown employment growth by transit may not be sufficient to enable San Francisco's new residential neighborhoods to maintain accessibility as they grow.

Transit First support in the General Plan and Planning Code includes financing for transit through transfers from parking tax, parking fees (e.g. meter revenues), and parking enforcement revenues. These cross-subsidies are a positive indicator of strong local support for Transit-First principles and should be maintained and expanded beyond the downtown core (see additional discussion in Chapter 6).

In addition, Transit First policies favor reduced off-street parking supply for new buildings adjacent to transit centers and along TPS corridors. In this regard, the City's record of implementation of the Transit First policies is not as strong. Parking requirements do not currently vary to reflect transportation supply conditions across the city. However, the Planning Department and a number of community improvement advocacy organizations are seeking to modify parking requirements. Efforts include converting minimum parking requirements to maximums, and allowing developers flexibility to instead contribute right-of-way or make in-lieu payments. This should be supported because, among other reasons, such a modification would support San Francisco's housing development goals by reducing housing costs and making housing units more affordable.

Minimum parking requirements inhibit new housing development in San Francisco by increasing building costs and by taking up expensive land that could otherwise be used for housing. Estimates of the cost of constructing parking range from \$17,000 to \$50,000 per space.⁶ This expense increases the average cost of building a unit of housing, which in turn translates into

⁵ See Appendix H: Parking Analysis for sources and assumptions.

⁶ Schrage, Sills and Wagner, "San Francisco Housing Development", U.C. Berkeley Goldman School of Public Policy, May 2003.

higher rental rates and sale prices. Adjusting parking requirements to take into account the surrounding land uses and transportation system options could result in more efficient use of land resources and existing infrastructure. For example, transit-rich and pedestrian friendly areas with good retail and service mixes could support lower parking requirements than could areas with limited transit options and no retail or services within walking distance (see Figure 5-9). Removing parking minimums, or replacing them with parking maximums, could reduce the subsidy required to build affordable housing units anywhere from 12 to 36%.⁷ A SPUR study found that 20 percent more San Franciscan households would qualify for mortgages for units without parking than for units with parking.⁸ The City should continue to pursue both possible strategies.

D.2.1.3 General On- and Off-Street Parking Management: Downtown and Citywide

The City regulates on-street parking supply through several means, including curb colors, metering, and the Residential Permit Program. According to the General Plan, parking rates and the off-street parking fare structure should reflect the full cost, monetary and environmental, of parking in the city, and discounts that encourage weekly or monthly use should not be provided.⁹ In general, San Francisco's parking prices and policies for off-street parking reflect the principle that short-term parking should be encouraged over long term parking through price regulations, particularly in areas within and adjacent to the downtown core. There are a few exceptions, however. For example, the City's parking validation programs do allow businesses to purchase parking validations at a discount at City-owned garages.¹⁰ In addition, monthly discounted parking is offered at public garages when excess capacity exists.

On-street metered parking rates were raised 50 cents per hour in 2003, the first increase in many years, to coincide with the MUNI (transit) fare increase. In general, user fees (meter rates and parking fee structures) should be evaluated and raised regularly to ensure that charges keep pace with inflation and demand and help to maintain



a 15% vacancy rate. Fines should also be subject to regular increases. Another recent improvement is the upgrade to electronic parking meters, which reduce losses from vandalism and increase the City's revenue management and analysis capabilities.

The city's 600 private off-street lots and 30 off-street garages and metered parking lots are concentrated in the downtown and Civic Center areas, and sprinkled throughout the neighborhood commercial districts. The City's ability to develop new off-street parking garage facilities is constrained by Prop E (1999), the MUNI reform legislation which stipulates that financing the construction of new public garages cannot be done at the expense of reducing the City's annual contribution to Muni operations. This requirement makes public financing of new garages prohibitively expensive.

Operational changes would help manage existing off-street parking. Revenue Control Equipment legislation was passed in 2001 to address consumer complaints about inappropriate towing of vehicles and lack of receipts for parking fees. Due to the high cost of the equipment, many private and some public parking lots are having difficulty complying with the regulation. Greater enforcement of this regulation is needed. A review of the program's exemption policy for small businesses whose primary business is not parking may also be warranted. In addition, a financing program should be considered for

7 OLA Housing Incentives Study

8 San Francisco Planning and Urban Research Association, Reducing Housing Costs by Rethinking Parking Requirements, Report 369, November/December 1998.

9 Objective 31 of the Transportation Element of the General Plan.

10 Furthermore, although parking validation programs should be accompanied by parking cash-out or transit validation programs, currently no transit validation programs exist.

Figure 5-10

Parking Assessment Districts in Pasadena

The city of Pasadena, in southern California, pioneered Parking Assessment Districts in 1993. Pasadena charges market prices for curb parking and returns meter revenue to the business districts that generate it, to finance physical improvements. Revenue bonds were used to finance the “old Pasadena streetscape and alleyways



project,” and parking meter revenue was dedicated to paying off the debt. Bond proceeds paid for street furniture, trees, and historic lighting fixtures. Revenue beyond what’s needed to retire the bond debt is used to pay for extra sidewalk maintenance, sweeping, and cleaning; and extra security.

small businesses, to encourage compliance and revenue management. Finally, off-street garages, particularly public garages, should be encouraged to provide spaces for City CarShare and they should be compelled to increase bicycle parking to the levels required under the Planning Code.¹¹

D.2.1.4 Neighborhood Parking Management

In addition to facilitating more neighborhood services to encourage shorter trips by foot, transit or bicycle, there are parking management strategies that should be tested in the coming years, to deal with parking demand. As noted in previous Better Neighborhoods Plans, the City’s Residential Parking Permit (RPP) program is a “one size fits all” program in a city with wide ranging parking supply and demand conditions depending on the neighborhood. The program generally succeeds in protecting residential areas from spillover parking demand problems, but it also tends to promote a sense of entitlement to on-street curb parking; it is underpriced and it leads to inefficient and at times inequitable results.¹²

Under the RPP, the City will only consider a request to establish a new neighborhood permit if at the time of the request the area has at least 80% parking occupancy and 50% or more of the parked vehicles do not belong to residents of that neighborhood. Extensions of the RPP must be approved by 50% of households on a block, making parking management difficult to undertake at a neighborhood level. For example, one group sought relief from its neighbors and succeeded in establishing an RPP zone within an existing RPP zone. The Glen Park neighborhood recently found that 200 some spaces were entirely unregulated and were attracting cars from adjacent neighborhoods and from San Mateo county, and that those drivers could park all day long and for weeks at a time simply by paying for a street cleaning ticket once every 2 weeks. A citywide study, or at least some neighborhood-level studies of opportunities to regulate unregulated on-street spaces (with traditional meters, signage or pay and display machines) would help to identify opportunities to increase the turnover – and the effective capacity – of the city’s on-street parking supply.

Additionally, the very nominal fee for RPP permits

contributes to the over-demand for on-street spaces. Regardless of where they are located in the city, households and businesses may purchase up to 4 permits each at very low prices (\$27 per year for each personal vehicle, and \$35 per year for business vehicles). DPT processes approximately 80,000 permits a year, generating just enough to cover the enforcement and administration costs of the program.

A number of RPP reforms are needed to make the program more effective and equitable. First, the program should set the number of permits for an area by taking into account the actual neighborhood transportation demand and supply conditions (e.g. on-street capacity, accessibility by alternative modes). The pricing of the permits should reflect the marginal social costs of parking. For example, for a given household, the second and third permits should cost more than the first one. The City should also consider restricted permits for new developments in transit-rich areas. Finally, the program should allow neighborhoods that so choose to establish parking assessment districts, raising rates at the neighborhood level and re-investing the incremental proceeds in neighborhood transportation projects. Parking assessment districts are further described in section D2.

Neighborhood commercial districts also have a pressing need for parking management solutions. In some districts, the demand for spaces during nights and weekends warrants examination of extended metered hours and enforcement, to increase turnover and add to the effective supply of parking spaces. Other creative solutions, such as shuttle programs, real-time signage indicating availability of spaces, and shared parking schemes are already being implemented formally and informally throughout the city. The concept of shared parking is further described below.

D.2.1.5 Shared Parking

The land required for parking is used more efficiently when parking is provided for an area with many activities rather than for individual businesses with only one activity. One way to use space and transportation infrastructure more efficiently is shared parking. Policy 17.2 of the Transportation Element is to encourage collaboration

¹¹ Bicycle parking should be provided at a ratio of 1:20 compared with car parking.

¹² For example the Loyola Village development, at the University of San Francisco was approved with the condition that it could not participate in the RPP program.



among property owners, neighboring uses and developers to efficiently use parking spaces. For example, a residential building owner may provide spaces to residents in the evenings, overnight and on weekends, but make parking spaces available to local commercial uses during the day. Conversely, a bank or church may utilize its lot during the day or weekend, but allow or lease the parking to others during nights. The overall effect is to increase the utilization of already-existing spaces and reduce the pressure for new parking construction.

This concept may also have applications in managing parking spaces by time of day, for example to enable sharing of spaces between goods delivery vehicles and shoppers. Using time restrictions for on-street parking

spaces encourages high turnover, accommodating more cars in dense areas. The City uses time restrictions in its Downtown Parking Belt where only short-term parking is provided, as designated by the General Plan. This policy could be expanded to other transit-rich employment and retail centers. For example, the City allows shared use of goods loading/passenger serving parking spaces taking advantage of the ability to share spaces by time of day. Improving the visibility of the time restrictions on shared spaces would increase their effectiveness. Greater use of such spaces would help to ease the problem of double-parking by delivery vehicles that is prevalent on city streets, particularly during peak commute hours, while maintaining spaces for shopper errands.

D.2.2 Demand Side Approaches

Changes in the supply and price of parking can decrease the demand for parking and encourage the use of more efficient modes of transportation. In addition to periodic adjustments to user fees and re-evaluating parking requirements for new developments, the City should consider the following demand-side strategies for parking management.

D.2.2.1 Parking Assessment Districts

Parking assessment districts are an innovative way to manage the limited supply of parking to the direct benefit of neighborhood commercial districts. Some proportion of all parking meter revenue in designated neighborhood districts could be earmarked for public improvements in the neighborhood. This approach is ideal for commercial districts like those in San Francisco, where few stores have off-street parking and curbside spaces are hard to find. By charging the right price at the meter for parking – the lowest price that still keeps a few spaces available at any given time to allow convenient access – the limited supply is managed efficiently (see example from Pasadena, CA in Figure 5-10). Each neighborhood would keep a portion of the parking revenue it generates, and dedicate that revenue to neighborhood infrastructure improvements. Parking assessment district concepts are generally well received as a mechanism to ensure some return to source of the revenues. A portion of the district's meter revenue pays for local amenities that attract customers and pedestrians, such as sidewalk

Figure 5-11

CarShare, Parking and Affordable Housing

Carshare started about three years ago and has since grown into an operation with 80 cars and more than 3,000 members. CarShare users can reserve and pick up a car at a number of locations throughout the city. In return, they do not have to pay for insurance and they benefit from lower gas prices. Cars are cleaned once every two weeks, and a parking spot is always guaranteed. CarShare began its first partnership with a 162-unit affordable-housing development on Eighth and Howard streets in late 2003. The project's developers, Citizen's Housing Corp. and the Tenderloin Neighborhood Development Corp., have agreed to include two parking spots for CarShare cars. Healthy levels of car use mean that the partnership is paying off. Carshare hopes to partner with other developments around San Francisco, including the Piers 27-31 project and the Rincon Hill apartment development.”

San Francisco Examiner
Tuesday, December 30, 2003

cleaning, street trees, utility under-grounding, facade improvements, and the like.

D.2.2.2 Unbundling Parking Costs

Parking at work, at well as at home, is often bundled. Free parking for employees is the equivalent of a job benefit. State law allows employees to cash out parking benefits.

In most apartment buildings in San Francisco where parking is available, rent includes the cost of parking. Increasingly, however, City agencies and developers are unbundling parking units from office and residential units, and renters wishing to lease a parking space must do so for an additional fee. This has the effect of increasing housing choices (more affordable units can be sold or rented to those who choose not to own a car), and of maximizing the profit on each space for the developer, as spaces can be sold to those who value them the most. Once the cost of parking is thus unbundled, parking requirements can be relaxed. The San Francisco Redevelopment Agency has been pilot-testing this requirement in its projects, particularly in those that emphasize affordable housing. Potentially, the exemption from the 25% City parking tax (Section 606(2) of the Business and Tax Regulations Code), which applies to hotels and residents, could be repealed for hotels.

D.2.2.3 Car Sharing

City Carshare is a non-profit organization established in 1999 that offers vehicles for short-term use at affordable rates (see Figure 5-11). Car sharing provides the option of paying for a car only when needed or used (plus an ongoing membership fee), thus reducing vehicle use costs and making car sharing a viable alternative to car ownership. Car sharing is a way to reduce the number of cars in the city and support a practical shift away from over-dependency on automobiles.

The Planning Department and other agencies have supported this idea. For example, the Planning Department has helped to secure parking spaces for City Carshare by encouraging developers to accommodate City Carshare space needs in their projects. The Planning Department should strengthen its support for City Carshare by allowing reduced parking requirements for developers who provide

City CarShare spaces. City Carshare currently has 900 enrolled members within San Francisco alone, sharing 33 vehicles in 11 neighborhood locations throughout the city. There is one car for every twenty-five members, spreading out the fixed costs over many people, yet providing adequate access to a car when it is actually needed.

The Authority has been a strong supporter of the program, providing start-up grants and supporting the allocation of federal funds to Carshare. Two years into the introduction of car sharing in San Francisco, a survey shows that nearly 30% of City Carshare members have ridden themselves of one or more cars, and two-thirds stated they opted not to purchase another car. Members have reduced their vehicle miles traveled by statistically significant proportions since joining Carshare. Because Carshare vehicles are fuel-efficient relative to the general automobile population, per-capita emissions from gasoline have been reduced in the city. A combination of factors has produced these results: reduced car ownership among members; more selective use of cars; and carpooling using carshare vehicles. Carshare widens personal mobility choices in a resource-efficient way.

D.2.2.4 Carpool and Vanpool Parking Priority

Vanpooling is a means of reducing commuting by automobile and congestion on regional corridors such as the bridges and US 101, and it can help to address the projected growth in the inter-county commute. Providing preferential parking for multiple-occupant vehicles is an important way to increase the convenience of this mode. In San Francisco, vanpools with vanpool parking permits are allowed to park all day for free in any metered parking or time-limit space with a time limit of 60 minutes or more (Traffic Code Section 704). In addition, the City enacted a system of preferential carpool parking in 1980. As a result, DPT is able to designate carpool permit parking areas (Traffic Code Sec 404). There are 15 on-street Vanpool parking areas and 3 on-street Carpool areas throughout the city and 113 on-street Vanpool and 41 on-street Carpool parking permits.¹³ In 2000, there were 236 Vanpools and 2,557 Carpools destined for San Francisco registered with RIDES.¹⁴ ●

¹³ SF Transportation Fact Sheet, February 2001

¹⁴ RIDES for Bay Area Commuters is a non-profit organization which promotes commute alternatives and provides trip-reduction support services, such as vanpool and carpool formation and coordination for the Bay Area.



Next Steps

FEDERAL LEGISLATION REQUIRES that long-range transportation plans be prioritized and financially constrained up to the level of available resources. However, as in other cities, San Francisco's transportation needs exceed the \$12.4 billion in revenues that is projected to be available for transportation development over the next 30 years. Identifying new sources of revenue to address unmet needs will be a major priority area for the Authority. This Chapter outlines key potential new revenue sources, and other legislative initiatives that warrant attention over the Plan period. Finally, the chapter describes the monitoring and evaluation methods necessary to track progress toward achieving Plan objectives.



Unmet Needs and New Sources of Revenue

Although the CWTP Investment Plan (Ch 4) and Strategic Initiatives (Ch 5) outline significant steps toward improving San Francisco's transportation system, a gap remains between needs and available resources. The total Countywide Transportation Plan need over the next 30 years is over \$20 billion, an amount that exceeds available revenues by approximately \$8 billion (see Figure 6-1). The estimate of unmet needs can be prioritized into two tracks (Priority 1 and Priority 2), and include:

- Major capital projects (upgrade to LRT on Geary Boulevard, upgrade to LRT on Van Ness Avenue or BRT on 19th Avenue, upgrade to BRT on Geneva Avenue, grade separation at 16th Street and Caltrain tracks)
- Transit System and Streets and Roads Maintenance (citywide)
- Paratransit Support
- Programmatic expansion of transit, bicycle, and pedestrian networks, traffic management facilities, and streetscape improvements (citywide).
- Demand management programs and support for neighborhood planning and coordination

Additional projects will likely be considered for inclusion in future updates to the CWTP, as planning and project development efforts provide sufficient information about them.

For MUNI and virtually all other North American transit operators, operating and maintenance costs are covered only partially out of the farebox. This means annual operating funds are needed to supplement farebox revenue for most transit operators, and for MUNI alone this figure amounts to over \$300 million per year. This figure does not include operating subsidies for BART or other transit operators, nor does it include streets and roads operations and maintenance costs. In San Francisco, the balance is funded out of the General Fund, which as noted above, includes transfers from parking meter fees

and fines to MUNI. The recently passed Regional Measure 2 (see textbox), which raised tolls on state-owned Bay Area toll bridges to \$3, included provisions that allow half of the 3rd dollar toll to be used for operating purposes. These new sources help to increase the overall funding for, and stability of, transit operations and are critical to the ability of transit to meet the needs of San Francisco as it grows into the future.

Development of new revenue sources is an important part of the CWTP strategy and action plan. The following sections introduce several specific ideas for new transportation funding sources that can be pursued over the CWTP period. A number of factors were considered in examining potential new revenue sources, including:

- **Effectiveness.** How effective and reliable is the revenue source at raising needed funds?
- **Transportation efficiency.** Does the new revenue source promote efficient use of the system?
- **Fiscal efficiency.** What proportion of the revenues is directed to transportation, versus to overhead and administration?
- **Equity.** How fair is the revenue source?
- **Likelihood.** What are the prospects for the new source to meet legislative or electoral hurdles?

The revenue sources discussed below are summarized in Appendix I, along with estimates of their revenue-generating potential.

A.1 Transit Impact Fees and Revenue Sources

Impact fees are used to ensure that developments that generate travel demand make a contribution toward funding the incremental infrastructure or services needed to meet that new demand. Typically, development impact fees are used to fund signal upgrades, curb cuts, cross-walk striping, signage, bicycle racks, and traffic safety improvements. The city's main mechanism for directing impact fees to transit is the Transit Impact Development

Figure 6-1

CWTP Unmet Needs

	\$Ms Capital	\$Ms Operating
1 CWTP Investments	\$12,400	\$12,750
2 Unmet Needs (priority 1)	3,635	1,246
SUBTOTAL	16,035	13,996
3 Unmet Needs (priority 2)	4,478	1,535
Total	\$20,513	\$15,530

Line 1 Operating shortfall assumes annual MUN operating budget of \$425M over 30 years

Line 2 Capital figure includes \$118M in Paratransit operating support

Line 2 and 3 Operating figures utilize 1/3 operating cost rate of line 1 to reflect incremental O&M only



Fee (TIDF). The TIDF is overdue for an update, not just to bring the current fee structure to realistic levels, but also possibly to capture new revenues as the city adds development to areas beyond downtown.

A.1.1 TIDF

Enacted in 1981, the Downtown Transit Impact Development Fee (TIDF) ordinance assesses a fee of \$5 per square foot on new or converted office space in the downtown area. The purpose of the TIDF is to help defray the costs of providing transit services to accommodate the trips generated by new development over its useful life. From its inception in 1981, the fee has generated approximately \$144 million for transit expansion.

The TIDF is one of the City's most important policy and funding tools to support transit. After more than two decades of its existence, many recognize the need to update the TIDF to keep pace with the city's growth and transit development needs. In March 2004, legislation was introduced at the Board of Supervisors to address the most urgent deficiencies of the program. The proposed legislation drew from ideas discussed in reports examining this issue by the Planning Department, SPUR and the Authority.¹ Key recommendations from these reports are summarized below:

a. Expand the TIDF to apply to more than just office space. All types of non-residential development place a burden on Muni, not just office space. Specifically, retail trips place a significant burden on Muni service. The City should consider expanding the TIDF to include a broader range of non-residential development.

b. Expand the TIDF beyond Downtown development. Development affects transit in all areas of the city, not just downtown. Muni has had to make significant investments in expanding service throughout the city as a result of development moving away from the largely built-out downtown. Moreover, a substantial portion of future development is expected to take place outside the existing fee boundary. Thus, expansion of the TIDF boundary to other parts of San Francisco is critical to ensuring adequate transit service provision as the city continues to grow.

c. Increase the flexibility of TIDF eligible uses beyond peak service. Currently, the use of fee revenues is

narrowly limited by statute to cover additional peak period service to downtown. However, development also affects Muni during off-peak periods. This will be especially true if retail uses are included in the expanded TIDF application; retail demands on Muni occur during the weekend and during the day. Therefore, the City should consider making the eligible fee uses more flexible. A revised fee should broaden Muni's ability to expend revenues to improve or expand transit services as needed to better serve new development, particularly new housing.

d. Increase the TIDF levels to current price levels. The \$5 per square foot cap set in 1984 has not been adjusted for inflation and it does not accurately reflect the actual cost of meeting new service demands. Studies conducted since 1983 have found that the fee was as much as 60 percent below the actual cost of providing service. Recently proposed legislation would raise the maximum to \$35 per square foot for retail and entertainment uses, \$9 per square foot for hotel and industrial uses, and \$14 per square foot for other uses (except residential, which is always excepted).

If the TIDF is not revised to keep pace with these needs, or to generate supplemental transit expansion resources, the City should consider various public/private partnership opportunities such as: neighborhood business district shuttles, transit concessions, e.g. (for a new tourist service). Muni already contracts out paratransit services on a negative concession basis and regulates these services for service quality, safety and cost. Similar strategies could be used for different types of shuttle or fixed-route services as well.

A.1.2 Transportation Development Act

Another important piece of pending legislation that is needed to help meet transit expansion needs is AB1065 (Longville) which would allow a County Board of Supervisors to place on a countywide ballot an option to increase the existing .025% Transportation Development Act (TDA) sales tax to 0.5%. TDA revenues are used to fund transit and paratransit capital and operating costs, and bicycle and pedestrian projects. The extra 0.25% would not be subject to the cap of 1.5% for local optional sales tax rates, so it would have no impact on a county's ability to

Figure 6-2

Regional Measure 2

Passed March 3, 2004, RM2 raised the tolls on state-owned bridges to \$3. Revenues will fund projects that target congestion relief, including the following:*

- » BART Tube seismic retrofit
- » Transbay Terminal / Caltrain downtown extension
- » Regional Ferry Commute services
- » Regional bus services
- » Muni Metro East and 3rd Street Light Rail Project
- » Muni Historic Streetcar Expansion
- » Electronic transit farecard and real time information systems
- » SafeRoutes to Transit

* 1/2 of the 3rd dollar toll may be used to fund operations.



1 The Authority's CWTP Working Paper 2: Revenue Projections (June, 2002), Planning Department's Transit Impact Development Fee Analysis Report (May 2001) and SPUR Report 398, Planning For Growth: A Proposal to Expand San Francisco's Transit Impact Development Fee (August, 2001).

Figure 6-3

User Fees for All Modes

User fees are an equitable and efficient way to finance facilities for all modes (though no mode covers all costs through user fees alone).



Transit

MUNI fares, which were raised for the first time in a decade from \$1 to \$1.25 in September 2003, are a user fee. Passenger fares contribute 20% of the funds needed to operate MUNI. Transit fares need to rise periodically to keep pace with inflation.

Automobile

In May 2003, the Board of Supervisors approved a \$.50/hour increase to all (non-motorcycle) meter rates throughout the City. The rates had not been increased in over a decade. Parking meter fees cover the cost of managing the parking supply, as well as providing a cross-subsidy for MUNI transit operations. In March 2004, voters approved Regional Measure 2, a \$1 toll increase on state-owned toll bridges.

Bicycle Facilities

Secure bicycle parking stations can be financed in part by a small fee paid by the users of the bike station.

raise its sales tax rate for other purposes. This bill provides local jurisdictions with the option to seek a potential new revenue source for transportation. It also is a potential source of funding for transit and paratransit operations, which are ineligible for most state and federal fund sources. Increased TDA revenues would benefit MUNI and other transit operators serving San Francisco, as well as provide some additional funds for bicycle and pedestrian projects.²

A.2. User Fees

User fees are one of the most efficient, effective, and equitable ways to raise transportation revenue. User fees are equitable because they directly link charges to the use of the system: parking meter fees, for instance, directly link a driver to the amount of parking space used over time. Transit fares and bridge tolls also are examples of user fees. Because they are collected on a “pay as you go” basis, user fees are generally fiscally efficient – collecting revenues at the point of service.³ User fees can also be used as an effective policy tool: for example, when parking meter fees help to fund Muni transit operations. San Francisco has a number of opportunities to optimize user fees to promote efficient choices and travel behaviors, as well as to raise funds to support needed transportation services and infrastructure.

A.2.1 Assessment Districts for Neighborhood Amenities and Infrastructure

Benefit assessment is a fee on a property used to pay part or all of the cost of capital improvements enhancing the value of, and benefiting the property. Los Angeles MTA has used this method to generate funding for metro expansion (see text box). Property owners in a neighborhood or business district can choose to assess a fee to pay for construction and maintenance of transportation projects only or transportation and non-transportation projects together (e.g. transit facilities, street improvements, undergrounding of utilities and landscaping from property-line to property-line). Assessments may be citywide or for sub-areas of the city, but there must be a nexus between who pays and who benefits. Each property owner only pays in direct proportion

to the special benefits received. The amount of revenue that assessment districts could raise for transportation in San Francisco can vary highly, depending heavily on the extent of the area assessed and the fee levied. A potential example of using assessment districts is proposed as part of the proposed Rincon Hill “living streets” plan.⁴

As described in Chapter 5, parking assessment have been successfully established in places like Pasadena, CA, and should be considered as part of a neighborhood parking management and transportation development strategy. Under this model, an increment of parking meter charges are controlled by the assessment district and pay for pedestrian safety and other local improvements.

A.2.2 Congestion Pricing

Congestion pricing, like parking charges, is primarily a technique for managing demand, but it also generate revenue to provide important facilities, service enhancements, and as in the case of Regional Measure 2, cross-subsidies. A congestion pricing scheme increases a toll or fee on a particularly congested corridor or during peak demand periods, with the aim of reducing congestion by inducing the flexible travelers to shift their trip to other modes, other corridors not subject to congestion pricing, or to cheaper, off-peak travel periods. On the Bay Bridge for instance, congestion pricing might involve raising the toll by another dollar during periods of extreme congestion. Technologies such as Fast Trak and San Francisco's new electronic parking meters greatly expand the possibilities for dynamic changes to congestion charges. An additional increase, beyond the current \$3 toll, during peak hours only, would generate approximately \$27 million per year in regional revenue. In order to affect bridge congestion levels during the peak over the long term, the congestion charge must be indexed to inflation. Revenues could be used for myriad purposes, especially transit operations.

As congestion conditions worsen, San Francisco should consider a congestion pricing program, such as the one demonstrated with success in London, where vehicles are charged \$8 per day to access the downtown core. These revenues are directed to transit system development. The

² For FY 2003/04, MTC's TDA forecast estimates that MUNI will receive about \$28.5 M, while another \$600,000 will be split between DPT and DPW for bike and ped projects. If passed, AB1065 would approximately double the revenues from \$30 M to \$60 M annually.

³ Parking meter “pay and display” machines are even more efficient, because one machine can cover the same area as a whole bank of meters, saving on capital and enforcement

⁴ See the Rincon Hill plan

results have been impressive: the scheme has cut down the number of private cars entering the downtown cordon zone by 38% or around 50,000 a day and it is purportedly generating over 60 million pounds per year in net revenues. The Mayor recently launched a survey of public opinion to see if the congestion charge should be extended into nearby areas of Kensington and Chelsea.

A.2.3 San Francisco Vehicle License Fee

The State of California currently assesses an annual Vehicle License Fee (VLF) on the ownership of a registered vehicle in California. The fee is equivalent to 2% of the vehicle's current estimated value. About three fourths of the revenues is sent to local governments to be used for general fund purposes. The allocation formula is based primarily on population. State law authorizes local vehicle license fee surcharges on vehicles registered in San Francisco, not to exceed 15% of the basic license fee.

The Governor recently revoked an increase to the state vehicle license fee, and there are no current proposals to return it to previous levels. However, San Francisco could adopt a local surcharge to the statewide VLF. A surcharge to the VLF in San Francisco has recently been proposed. An increase in the local VLF by 5%, with all additional revenue going to the City for transportation projects, would raise an additional \$4.8 million annually. To enact a surcharge to the local VLF requires approval by a 2/3 majority vote of San Francisco voters. If a surcharge on the VLF is enacted in San Francisco, the new revenues should go toward a multimodal program of transportation investment including street resurfacing and signal operations, transit operations, and pedestrian and bicycle infrastructure. An increased VLF would also be a key opportunity to dedicate a stable source of funding to transit operations. Stability in funding is essential to enable medium and long-term planning for transit service improvements.

A.2.4 Regional Gas Tax and Parking Tax

The Metropolitan Transportation Commission (MTC) has the authority to impose a tax per gallon of gasoline in the Bay Area. By state statute, a maximum regional gas tax of 10¢ is allowed for identified transportation improvements, limited to a duration of 20 years. With a regional gas tax, MTC must adopt a regional expenditure plan for revenues

derived from the tax and ask the Boards of Supervisors from each county to submit the tax to their county's voters for approval. The Boards of Supervisors may choose to refuse to submit the tax, and they may either submit the MTC adopted expenditure plan to their voters or submit an alternative expenditure plan for that county at the same election. The regional tax requires a 2/3 majority of the voters in the region. If approved by 2/3 of the region's voters, MTC may impose the tax in all counties in the region in which the measure appeared on the ballot, regardless of the level of approval in each particular county.

Transportation Authority projections estimate that a regional gas tax could raise \$12.5 million annually in revenue for transportation in San Francisco. Over the 30-year life of the CWTP this would amount to \$250 million.

Currently, a 25% tax is levied on all off-street public and private parking facilities. This parking tax generates approx \$58 million/year.⁵ An increase in the tax on off-street parking from 25% to 35% could generate up to \$9.2 M/yr for Muni transit operations.

A.3. Financing mechanisms

Financing mechanisms are techniques to borrow funds to pay for transportation infrastructure. Borrowed funds must of course be repaid, which means that financing must be structured using an existing, reliable revenue stream to guarantee repayment of the principal. As with all borrowing, there is interest to be paid. The interest paid on financing of transportation projects must also come from an existing revenue stream. Paying interest on borrowed funds reduces the amount of funds available for direct investment in transportation infrastructure, but borrowing is oftentimes inevitable in order to deliver a program of projects. There are many situations where structuring financing and incurring interest expenses is necessary in order to deliver projects. This is particularly the case with large infrastructure projects, which require large infusions of cash in a relatively short period of time as they are built. Typically, those large cash flow requirements cannot be met with the revenues collected annually from sources like a local sales tax for transportation, or even from annual federal contributions. The construction funds are therefore borrowed by issuing debt (in the form of financial instruments like bonds or notes) and used up front to complete

⁵ Parking tax revenues fund Muni operations (39.65%), the General Fund (39.65%) and senior programs (20.7%).

the project, and the annual revenues are pledged to retire the debt. One compelling reason to issue debt to finance transportation improvements is that project costs tend to escalate at a rate that outpaces the growth in revenues. It also tends to outpace the interest rates paid for the borrowing. This makes early project delivery very desirable, even if it involves issuing debt in order to make it happen.

A.3.1 Bond Financing

Despite a defeat at the ballot box in November 2003, BART continues to consider issuing general obligation (GO) bonds to defray the cost of seismic retrofit work of the existing system. The bonds would be paid back by a BART property tax imposed in the three-county (San Francisco, Alameda, and Contra Costa) BART district. San Francisco's share of annual revenue from issuance of \$1.2 billion in GO bonds would be \$14 million. A supermajority of the electorate in the three county BART district must approve this tax and bond issue.

In 2002, the Legislature voted to place a \$10 billion bond measure to finance a High Speed Rail line between San Francisco and Los Angeles on the November 2004 statewide ballot. A high-speed rail bond would provide needed additional revenues for the electrification of Caltrain and for the extension of Caltrain to a rebuilt Transbay Terminal. The Legislature is currently considering legislation to delay to bond measure several years, on account of the state's current budget crisis.

A.3.2 Tax Increment Financing

Tax Increment Financing (TIF) refers to the capture and re-investment of incremental property tax revenues as is done by the Redevelopment Agency in San Francisco for affordable housing and other redevelopment projects. The purpose of this mechanism is to recapture the value added to private property through public investment in transportation infrastructure and services. This technique allows the City to leverage and recycle transportation funds sustainably through the success of the project, rather than assessing property owners directly. Tax increment financing also promotes equity by returning benefit, in the form of transportation facilities and services, to the districts or neighborhoods that demonstrate need or qualify for priority.

One need to address in the current use of tax increment

revenues is to ensure that redevelopment projects advance Transit First investment policies and principles through their use of tax increment finance revenues for transit system development. As redevelopment areas grow, they will place greater demands on MUNI and other transit services. Tax increment revenues should be directed toward meeting these needs, as well as providing for alternative modes of cycling, walking, carsharing. For example, new transit facilities, vehicles and services (capitalized operating costs for say 10 years) should receive due consideration for tax increment revenues earned in redevelopment districts.

Tax increment financing could be useful to help support transportation improvements in areas that will not qualify under current redevelopment guidelines. Many legislative initiatives in the past have tried to extend this redevelopment tool to development of projects in non-blighted areas, e.g. creation of transit corridor or station area districts citywide.⁶ Under such a scenario, the tax increment revenues could be used to retire project debt. The city should support such a legislative change.

A.3.3 Joint Development

Joint development refers to facilitating private and/or public sector development of publicly owned property at or near transit stations and corridors. The purpose of joint development is to leverage private finance in order to develop projects that are both transit-supportive, neighborhood enhancing, and financially rewarding for developers. Key examples of successful joint development include: BART's leverage of entrance fees and improvements at Embarcadero and Powell Stations and the Steuart Street hotel development on MUNI property at Steuart and Mission. The Port's waterfront development initiatives – such as the Ferry Terminal renovation – are also examples of joint development.

Current joint development opportunities in San Francisco include the Transbay Terminal proposal to develop residential and commercial uses together with reconstructed transit facilities, and BART's Hallidie Plaza which is being financed through lease revenues. BART and MUNI are also interested in developing property near the Balboa BART station and at the Phelan Loop. Another possible joint development opportunity is under consideration as part of the Authority's Bayview-Oakdale Caltrain station study. ●

Figure 6-4

Benefit Assessment Districts at the LA MTA

In July 1985, the Southern California Rapid Transit District (RTD) one of the predecessor agencies for the Los Angeles County Metropolitan Transportation Authority (MTA), formed two Segment I Benefit Assessment Districts to help fund construction finance costs of the first segment of the Metro Red (A) Line.

The Segment 1 funding plan included \$130 million (9%) in revenues from the Benefit Assessment Districts and establishment of these districts was a requirement to receive Federal funding for the Red Line Segment 1 project. The assessments will terminate in 2008-2009.

Source: LA MTA website



Project Coordination, Delivery, and Evaluation

The CWTP identifies financial resources necessary to deliver needed transportation projects and programs – but investment funds alone are not sufficient to achieve Plan goals. Recognizing this, the CWTP action plan guides the implementation of New Expenditure Plan (NEP) investments through strategic policy initiatives and stronger inter-agency planning processes. Chapter 5 discussed the policy initiatives that are proposed to complement CWTP investments. The CWTP strategies to strengthen planning and inter-agency coordination are discussed below.

B.1 5-Year Prioritized Plans

Though the CWTP is San Francisco's transportation investment blueprint for the future, the CWTP Investment Plan, the NEP, will be implemented gradually over the next 30 years. One of the main CWTP strategies to strengthen NEP implementation is a rolling 5-year prioritized plan to be prepared for each program category of the NEP. The 5-Year Prioritized Plans are designed to focus project selection on performance and to support on-time, on-budget project delivery, and timely and competitive use of state and federal matching funds. Ultimately, the purpose of the Prioritized Plans is four-fold:

- » **1.** Establish a clear set of criteria for prioritizing projects;
- » **2.** Improve agency coordination at the earlier stages of the planning process;
- » **3.** Allow and ensure public input early and throughout the planning process; and
- » **4.** Establish performance measures.

These 5-year plans will build a strong pipeline of grant-ready projects that can be advanced as soon as funds are available. In order to ensure strategic alignment with the CWTP and the NEP, the goals and strategies of Prioritized Plans should be consistent with this Countywide Transportation Plan, and they will be guided by the Authority's Strategic Plan, a medium-range cash flow financial planning tool that governs the programming

of transportation sales tax dollars in each NEP category over the next 10 years. Prop K calls for 5-Year Prioritization Plans for programmatic categories like pedestrian safety, and those plans will provide the link between the CWTP and programming of sales tax and other funds to projects. The plans will include prioritization criteria and performance measures that will be developed with public and agency input.

To foster inter-agency coordination, a 5-Year Plan for each programmatic NEP category will be developed by a Lead Agency. Lead agencies are responsible for coordination and development of 5-Year Plans, which will recommend project priorities for the Authority Board's consideration and adoption. Such coordination can lead to benefits such as identifying joint grant application opportunities and coordinating implementation schedules to reduce project costs. Lead Agencies will work with partner agencies and the Authority to prioritize the use of NEP funding, though the Authority Board will still have ultimate approval authority for each prioritized plan.

Project selection factors that should guide development of the Prioritized Plans include:

- » **i.** Project readiness, including schedule for completion of environmental and design phases; well-documented preliminary cost estimates, and documented community support as appropriate;
- » **ii.** Compatibility with existing and planned land uses, and with adopted standards for urban design and for the provision of pedestrian amenities; and support of planned growth in transit-friendly housing, employment and services;
- » **iii.** Relative level of need or urgency;
- » **iv.** Cost Effectiveness;
- » **v.** Geographic equity; and
- » **vi.** Strength of the project's funding plan.

In order to ensure an inclusive and comprehensive planning process, the Prioritized Plan development process must encompass adequate opportunities for

substantive public contribution before the approvals phase, and public review and a General Plan referral as required. A key mechanism to complement these planning efforts and tie together planning efforts at the neighborhood level is the Plan's support for comprehensive and integrated neighborhood transportation plans. Investments emerging from these plans will receive priority consideration for approval in 5-year Plans.

Finally, the lead agency will also identify appropriate performance measures that are consistent with the CWTP, such as increased system connectivity, increased transit ridership (net new riders), reductions in travel time for existing riders, and increased use of alternatives to the single-occupant automobile; as well as milestone targets and a timeline for achieving them. Under the requirements of the NEP, the Authority will be responsible for ensuring compliance with adopted 5-Year Prioritized Plans.

B.2. Coordination of Planning Methods and Tools

This new emphasis on planning calls for innovations in how agencies work with each other and with the public. Since many agencies share responsibility for planning, developing and maintaining the city's transportation system, there is a need for greater coordination of policies and multi-agency projects, as well as continual upgrade of tools to aid in common efforts.

Existing mechanisms for coordination illustrate areas of success to be emulated, as well as opportunities for ongoing improvement. Much of the existing coordination occurs through regular agency meetings, such as the Authority's Technical Working Group, Muni's Downtown Streets Management committee, and the Interdepartmental Staff Committee on Traffic and Transportation (ISCOTT), which includes representatives from the Police, Fire, Health and Public Works Departments and the Port of San Francisco. In general, these coordination mechanisms function better as projects near the funding and implementation stages. Greater coordination at earlier stages of project planning and policy development would be beneficial as well, as this can serve to minimize project cost increases and delays, as well as community opposition at later stages.

San Francisco also has many transportation analysis and database tools which aid transportation planning and project development. For example the Authority develops

and maintains the San Francisco Travel Demand Model, which forecasts system-level travel demand effects of land use and transportation network changes. The San Francisco Model relies upon land use allocations of ABAG growth projections from the Planning Department on a periodic basis. The Authority is working closely with the Planning Department to ensure that San Francisco growth policies are reflected accurately in ABAG projections and allocated using state-of-the-art tools and methods. DPT maintains and develops traffic simulation software that is used to predict street operations and delays at a more detailed level, for project traffic impact analysis. The Authority is leading an effort to standardize the use of these and other tools in transportation corridor studies, and in multi-modal transportation impact analysis and decision-making.

Several additional opportunities exist to strengthen shared tools in transportation planning and project development. The Transportation Authority, in cooperation with the Planning Department, will be developing a land use allocation model to establish a systematic method for allocating projected land uses throughout the city. The City's Department of Telecommunications and Information Systems (DTIS) maintains and develops a city GIS database that includes information about the city's transportation assets. This tool has much promise as a state of the art tool for transportation planning. The City's GIS and base map database is an excellent tool that should be continually expanded and utilized by the entire city. As Mayor Newsom has called for, San Francisco may also consider using this GIS database as a way to track system performance and needs, as pioneered by Baltimore's "CitiStat" system. This tool collects and analyzes quantitative statistics of system or departmental performance in meeting objectives, and it can be a valuable resource for tracking "before and after" study data and effects. Other real-time information systems that will be useful for analysis and improving system performance include: transit vehicle location and arrival systems, traffic control systems, electronic toll and fare collection systems, and electronic parking meter systems.

B.3 Coordination for Project Development

While the CWTP and the NEP recognize the need for and importance of coordinating planning efforts through

5-year Prioritized Plans and through an ongoing dialogue about planning methods and tools, there is also an urgent need to provide coordination at the project development stage, to ensure that projects are ready to claim available Prop K sales tax funding, as well as to compete for discretionary regional, state and federal funds, which must be captured in order to realize the leveraging anticipated as part of the CWTP. Coordination is particularly needed for corridor plans and station area plans where multiple agencies, including regional transit operators or jurisdictions beyond San Francisco's county limits are involved. Examples of corridor studies requiring active coordination up front are 19th Avenue and the Central Freeway, both of which require a look at land use assumptions as well as current and likely transportation conditions and potential solutions. Examples of station area plans include the Glen Park and Balboa Park BART stations, and the Bi-County Study/Visitacion Valley watershed area around the Caltrain Bayshore Station, where a multiplicity of agencies, and even private sector developers need to be convened to develop workable scopes and timetables for project development.

As the Authority enters a stage during which it will be issuing debt in order to deliver transportation benefits to San Francisco, achieving timely project readiness for delivery becomes critical. Ensuring coordination of planning and project development becomes the essential step to leverage the individual efforts of each project delivery agency into a joint record of success. The

Authority has already been asked by City departments and regional transit operators to fill this coordination role to deal with situations such as those mentioned above. The Authority will therefore step up its role as convener and/or coordinator for multi-agency projects, to ensure that such efforts keep moving forward apace, and that the benefits of the Prop K sales tax NEP accrue to many different parts of the city simultaneously.

B.4 Performance Measurement

Performance measurement is one of the Authority's ongoing statutory functions in its capacity as Congestion Management Agency, and as administrator of the 1/2 cent transportation sales tax. Appendix J describes the metrics that will be used to monitor San Francisco's progress toward achievement of Plan goals over time.

Performance measures pertain to two main areas: system performance, which refers to how well the transportation system operates (e.g. travel times, non-auto mode shares) and project delivery, which refers to how efficiently transportation projects are built (e.g.: on-time, on budget). The Prop K New Expenditure Plan is organized in a way that allows flexible management of funds, enabling the Authority's Strategic Plan and 5-year Prioritization Plans to respond to trends and needs identified in periodic CWTP updates by adjusting investment strategies as appropriate. ●

Part C.



Future Updates

This CWTP has articulated a long-range vision and objectives for transportation system development. It also flags the major needs in each priority area and strategies for addressing them. In order to keep the CWTP a living document, the Authority will track the performance of the Plan (including public views) over

the next several years; monitor demographic, land use and travel demand trends; and remain active in the transportation policy arena at the Federal, state, regional and local levels. Future regular updates of the CWTP will reflect developments in these areas as they evolve. ●

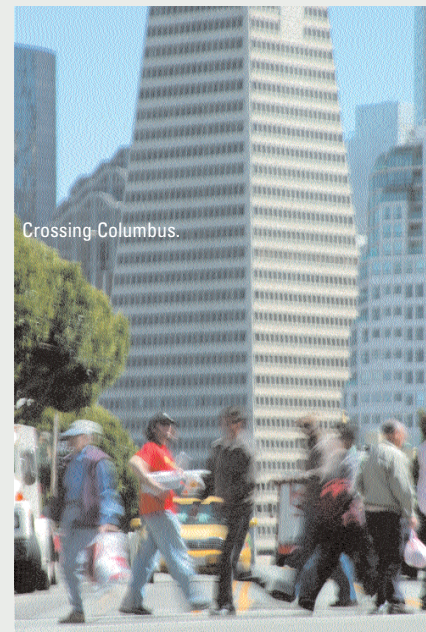


Caen Way.

APPENDIX A

Acronym Glossary

ABAG:	Association of Bay Area Governments
ACTransit:	Alameda-Contra Costa Transit
ADA:	Americans with Disabilities Act
BAG:	Business Advisory Group
BART:	Bay Area Rapid Transit
BRT:	Bus Rapid Transit
CAC:	Citizens Advisory Committee
CARB:	California Air Resources Board
CalWORKS:	California Work Opportunity and Responsibility to Kids
CMP:	Congestion Management Program
CWTP:	Countywide Transportation Plan
DPT:	Department of Parking and Traffic
EPAC:	Expenditure Plan Advisory Committee
ETC:	Enhanced Transit Corridors
LIFT:	Low-Income Flexible Transportation
LOS:	Level of Service
LRT:	Light Rail Transit
MAE:	Maintenance and Efficiency
MRT:	Major Rail Transit
MTA:	Metropolitan Transportation Authority
MTC:	Metropolitan Transportation Commission
MUNI:	San Francisco Municipal Railway
NEP:	New Expenditure Plan
RTEP:	Regional Transit Expansion Policy
RTP:	Regional Transportation Plan (prepared by MTC)
SFCTA:	San Francisco County Transportation Authority
SFSU:	San Francisco State University
SIP:	State Implementation Plan
SOMA:	South of Market Area
SPU:	Strategic Plan and Plan Updates
STIP:	State Transportation Improvement Program
TIDF:	Transit Impact Development Fee
TOD:	Transit Oriented Development
TPS:	Transit Preferential Street
TWG:	Technical Working Group
UCSF:	University of California, San Francisco
USF:	University of San Francisco
V/C:	Volume to Capacity
VMT:	Vehicle Miles Traveled



Crossing Columbus.

APPENDIX B

Expenditure Plan Advisory Committee (EPAC) Members

Tom Radulovich Chair

Gwyneth Borden Vice Chair

- Jim Bourgart** Business Advisory Group
- Gabriel Metcalf** Business Advisory Group
- Duane Papierniak** Business Advisory Group
- Patricia Tolar** Business Advisory Group
- Val Menotti** CAC Member
- Jackie Sachs** CAC Member
- Roger Peters** CAC Member
- Wil Din** CAC Member
- Art Michel** CAC Member
- James Haas** At-Large Member
- Jessie Lorenz** At-Large Member
- Fran Martin** At-Large Member
- Bruce M. Oka** At-Large Member
- Luis Pardo** At-Large Member
- Pi Ra** At-Large Member
- Norman Rolfe** At-Large Member
- Michael Smith** At-Large Member
- Dave Snyder** At-Large Member
- Andrew Sullivan** At-Large Member
- Elizabeth Dunlap** CAC Alternate
- Terry Micheau** CAC Alternate
- Ben Tom** CAC Alternate

- Michael Kiesling** At-Large Alternate
- Dennis J. Oliver** At-Large Alternate
- David Pilpel** At-Large Alternate
- Brett Orlanski** At-Large Alternate



CWTP Outreach Events

Community Workshop Presentations, Summer/Fall 1998

1. Bayview/Hunters Point/Visitacion Valley
2. West of Twin Peaks
3. Excelsior/OMI/Portola/Crocker Amazon
4. Cow Hollow/Marina/Pacific Heights/Presidio Heights
5. Mission/Noe Valley/Glen Park/Bernal Heights/Outer Mission (two presentations)
6. Chinatown/North Beach/Russian Hill/Telegraph Hill/Nob Hill/Fishermans Wharf
7. Potrero Hill
8. Richmond/Seacliff
9. South of Market/NEMIZ (two presentations)
10. Sunset/Parkside
11. Tenderloin/NOMA/Civic Center
12. Haight/Castro/Duboce Triangle/Western Addition/Hayes Valley

Presentations, Summer/Fall 2002

1. Sunset-Parkside Education and Action Committee (SPEAK)
2. Lombard Street Meeting, Attendees included members from Cow Hollow Neighbors in Action and the Lyon Corridor
3. Chinatown TRIP
4. Yerba Buena Alliance
5. Northeast Mission Business Association (NEMIB)
6. District 7 Advisory Council
7. Bernal Heights Neighborhood Center (BHNC) presentation to Bernal Heights and Noe Valley residents
8. Outer Mission Residents Association
9. Rescue MUNI

Presentations, Spring/Summer 2003

1. League of Conservation Voters
2. Harvey Milk Democratic Club
3. SF Coalition of Neighborhoods (Recommended by Govt. and Elections Committee)
4. SPUR
5. Chamber of Commerce
6. TALC
7. District 11 Council
8. Outer Mission Residents Association
9. Speak
10. PAR
11. Visitacion Valley Planning Alliance
12. Sunset Heights Association
13. Chinese Chamber of Commerce
14. SF Tomorrow
15. AAA
16. Hayes Valley Neighborhood Assoc.
17. North of the Panhandle Neighborhood Assoc.
18. Yerba Buena Alliance

Presentations, Spring/Summer 2004

1. SPUR Transportation Committee
2. Rescue Muni
3. Coalition of San Francisco Neighborhoods
4. Japantown Task Force
5. Greater West Portal Neighborhood Association
6. SF Chamber of Commerce
7. SOMA Leadership Council
8. Bernal Heights Neighborhood Center
9. Richmond Planning Association
10. Senior Action Network Pedestrian Safety Committee



Panhandle bike path.

Principles of San Francisco's Transit First Policy

- To ensure quality of life and economic health in San Francisco, the primary objective of the transportation system must be the safe and efficient movement of people and goods.
- Public transit, including taxis and vanpools, is an economically and environmentally sound alternative to transportation by individual automobiles. Within San Francisco, travel by public transit, by bicycle, and on foot must be an attractive alternative to travel by private automobile.
- Decisions regarding the use of limited public street and sidewalk space shall encourage the use of public rights of way by pedestrians, bicyclists, and public transit, and shall strive to reduce traffic and improve public health and safety.
- Transit priority improvements, such as designated transit lanes and streets and improved signalization, shall be made to expedite the movement of public transit vehicles (including taxis and vanpools) and to improve pedestrian safety.
- Pedestrian areas shall be enhanced wherever possible to improve the safety and comfort of pedestrians and encourage travel by foot.
- Bicycling shall be promoted by encouraging safe streets for riding, convenient access to transit, bicycle lanes, and secure bicycle parking.
- Parking policies for areas well served by public transit shall be designed to encourage travel by public transit and alternative transportation.
- New transportation investment should be allocated to meet the demand for public transit generated by new public and private commercial and residential developments.



- The ability of the City and County to reduce traffic congestion depends on the adequacy of regional public transportation. The City and County shall promote the use of regional mass transit and continued development of an integrated, reliable regional public transportation system.
- The City and County shall encourage innovative solutions to meet public transportation needs wherever possible and where the provision of such service will not adversely affect the service provided by the Municipal Railway.

Source: Proposition E, as approved in 1999



APPENDIX E

Major Transportation Corridor Definitions

The CWTP's major transportation corridors were identified to reflect critical travel movements within San Francisco. The corridors were defined to incorporate both transit and roadway facilities. Each corridor is named after the primary street in the corridor, but the corridor is not limited to this single street. All major roadways and transit lines in the corridor are included, even if a transit line does not use the primary, named street.

In order to analyze transportation system performance along the corridor, a series of "screenlines" were defined for each corridor. At these screenlines the volumes of people and vehicles using the corridor, as well as roadway and transit capacities, were calculated to evaluate transportation system performance. Also, note that there are differences between the 2000 Base, 2025 Base, and 2025 CWTP Project alternatives for some of the corridors and screenlines, due to the changes to the transit network (such as the addition of Geary BRT), or to the roadway network (such as the removal of a traffic lane to support BRT). Below is a key detailing shifts in the inclusion of transit lines in the corridors.

Symbol key for transit lines:

If not otherwise indicated, route symbols refer to Muni lines (e.g., "49" refers to the Muni 49 (bus) line).

↖ denotes a line that no longer existed as of April 2004, but was coded for in the CWTP 2000 Base model run (e.g., 42↖)

+ denotes a line that did not exist in 2000 and, hence, was not coded for in the CWTP 2000 Base model run, but did exist by April 2004 (e.g., S+)

⊙ denotes a line that still exists as of April 2004, but is projected to be phased out by 2025 and, hence, is not coded for in the 2025 CWTP Project model run (e.g., 38L⊙)

🚧 denotes a line that has not been completed as of April 2004 but is coded for in the 2025 CWTP Project model run (e.g., Geary BRT🚧)

Geary Corridor

Geary & Park Presidio

Streets: California, Clement, Geary, Anza, Balboa

Transit Lines: 1, 1AX, 2, 31, 31AX, 38, 38AX⊙, 38BX⊙, 38L⊙, Geary BRT

Geary & Masonic

Streets: Clay, Sacramento, California, Euclid/Bush, Geary, Anza, Turk, Golden Gate

Transit Lines: 1, 1AX, 1BX, 2, 4, 31, 31AX, 31BX, 38, 38AX⊙, 38BX⊙, 38L⊙, Geary BRT

Geary & Van Ness

Streets: Clay, Sacramento, California, Pine, Bush, Sutter, Post, Geary, O'Farrell, Ellis, Eddy, Turk

Transit Lines: Muni: 1, 1AX, 1BX, 2, 3, 4, 31, 31AX, 31BX, 38, 38L⊙, Geary BRT, Muni, Westbound Only: 16AXB, 16BXB

Van Ness Corridor

Screenline: Van Ness & Lombard

Streets: Gough, Franklin, Van Ness, Polk, Larkin, Market

Transit Lines: 19, 30X, 42, 47, 49, 90, Golden Gate Transit lines

Screenline: Van Ness & Geary

Streets: Gough, Franklin, Van Ness, Polk, Larkin

Transit Lines: 19, 42, 47, 49, 90, Golden Gate Transit lines

Market Corridor

Screenline: Market & 5th Street

Streets: Market

Transit Lines: 5, 6, 7, 9, 16AX, 16BX, 21, 66, 71, F, J, K, L, M, N, S+, BART

Screenline: Market & Castro

Streets: Market, 16th Street, 17th Street

Transit Lines: 37, F, K, L, M, S+

19th Avenue Corridor

Screenline: Park Presidio & Geary

Streets: Park Presidio, Funston, 14th Ave

Transit Lines: 28, 28L, 91, Golden Gate Transit buses

Screenline: 19th Avenue & Lincoln

Streets: 18th Avenue, 19th Avenue, 20th Avenue

Transit Lines: 28, 28L, 91

Screenline: 19th Avenue & Sloat

Streets: 19th Avenue, Junipero Serra, 20th Avenue

Transit Lines: 17, 28, 28L, 91, M

Screenline: Junipero Serra & County Line

Streets: Junipero Serra

Transit Lines: 28, 28L, SamTrans lines

Geneva/Ocean Corridor

Screenline: Geneva & Ocean

Streets: Ocean, Geneva

Transit Lines: 15⊙, 15AX, 15BX, 15X, 29, 36, 43, 49, 91, K

Screenline: Geneva & Brookdale

Streets: Geneva

Transit Lines: 9AX⊙, 9X⊙, 15, 15AX, 15BX, 15X, 91

Mission Corridor

Screenline: Mission & 3rd Street

Streets: Mission, Howard, Folsom

Transit Lines: 12, 14, 14L+, 14X, SamTrans lines, Valley of the Moon lines+

Screenline: Mission & 13th Street/Division

Streets: Guerrero, Valencia, Mission, South Van Ness, Folsom

Transit Lines: 12, 14, 14L+, 49, BART, Sam Trans lines

Screenline: Mission & Cesar Chavez

Streets: Guerrero, San Jose, Valencia, Mission, Folsom

Transit Lines: 14, 14L+, 67, BART, Sam Trans lines

Screenline: Mission & Ocean

Streets: Cayuga, Alemany, Mission, London

Transit Lines: 14, 14L+, 14X, 49, SamTrans lines

3rd Street Corridor

Screenline: 3rd Street & Palou

Streets: 3rd Street

Transit Lines: 15Ⓞ, 24 (Northbound only), 54Ⓞ, 91, 3rd Street LRT/
New Central Subway 🚇

Screenline: 3rd Street & 16th Street

Streets: 3rd Street

Transit Lines: 15Ⓞ, 91, 3rd St Light Rail/New Central Subway 🚇,
3rd St Light Rail/New Central Subway short line 🚇

Screenline: 3rd Street & Townsend

Streets: 2nd Street, 3rd Street, 4th Street

Transit Lines: 10+, 15Ⓞ, 30, 42↙, 45, 91, 3rd Street LRT 🚇/
New Central Subway 🚇, 3rd St Light Rail/New Central
Subway short line 🚇

Lombard Corridor

Screenline: Doyle Drive

Streets: Doyle Drive

Transit Lines: 28, 91, Golden Gate Transit lines, Valley of the Moon lines+

Screenline: Lombard & Lyon

Streets: Richardson Ramp, Marina Ramp

Transit Lines: 28, 91, E 🚇, Golden Gate Transit lines,
Valley of the Moon lines+

Screenline: Lombard & Van Ness

Streets: Lombard, Bay, Chestnut

Transit Lines: 30, 30X, 82XⓄ, 91, E 🚇, Golden Gate Transit lines

Oak/Fell/Haight Corridor

Screenline: Lincoln & Sunset

Streets: Fulton, Lincoln, Irving, Judah

Transit Lines: 5, 16AX, 29, N

Screenline: Lincoln & 19th Avenue

Streets: Fulton Lincoln, Irving, Judah

Transit Lines: 5, 16AX, 16BX, 29, 71, N

Screenline: Oak/Fell & Stanyan

Streets: Oak, Fell, Hayes, Page, Haight

Transit Lines: 7 (Westbound only), 16AX, 16BX, 21, 33, 66, 71, N

Screenline: Oak/Fell & Fillmore

Streets: Oak, Fell, Hayes, Page, Haight

Transit Lines: 6, 7, 16AX, 16BX, 21, 66, 71, N

US 101 Corridor

Screenline: County Line

Streets: US 101

Transit Lines: SamTrans lines

Screenline: Potrero

Streets: US 101

Transit Lines: 9AXⓄ, 9BXⓄ, 9XⓄ, 14X, 15AX 🚇, 15BX 🚇, 15X 🚇,
SamTrans lines

Screenline: Richardson

Streets: US 101

Transit Lines: 28, 91+, Golden Gate Transit lines

Screenline: Golden Gate Bridge

Streets: US 101

Transit Lines: Golden Gate Transit lines

Screenline: Octavia

Streets: Octavia



I-80 Corridor

Screenline: Bay Bridge

Streets: I-80

Transit Lines: 108, BART, AC Transit lines

I-280 Corridor

Screenline: County Line

Streets: I-280

Screenline: Potrero

Streets: I-280

Screenline: End of 280

Streets: I-280

Transit Lines: 14X+, SamTrans line

APPENDIX F

Person Throughput Analysis

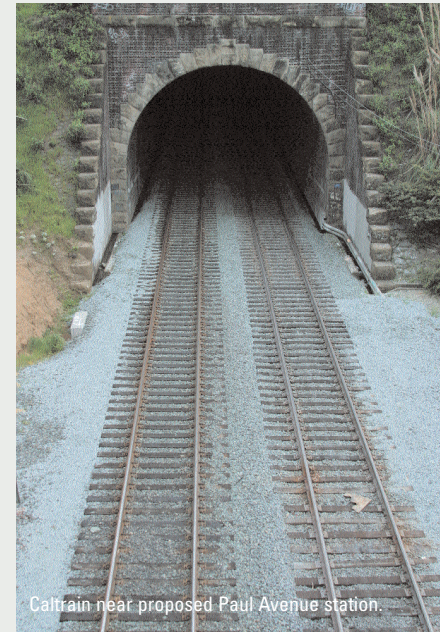


Category	2025 Base	2025 Countywide Plan
Van Ness	The 47 Van Ness route was revised in 2001 (take some of the old 42 route)	Van Ness BRT -- Bus Rapid Transit from Van Ness' and Lombard to Market St; BRT includes an exclusive transit lane in each direction, with permanent stations, and signal preemption for transit vehicles. Existing owl service is retained.
Geary	(N/A)	Geary BRT -- Bus Rapid Transit from Geary's western terminus to Laguna St, and transit preferential street (TPS) treatment from Laguna to downtown. BRT includes an exclusive transit lane in each direction, with permanent stations, signal preemption for transit vehicles, and improved signage. TPS includes signal preemption and bus bulbouts, but does not take any lanes away from regular traffic. The 38 Geary bus would provide Owl service; at all other times the 38, 38L, 38AX, and 38BX are discontinued.
Potrero		BRT along Potrero Ave between 15th and 25th Streets. Includes ridership from the 9 line.
Transit Preferential Streets	(N/A)	Transit Preferential Streets (TPS) - a citywide network of preferred bus and rail service. TPS includes traffic signal preemption for transit vehicles, and real-time indicators for arrival information. TPS corridors include Mission, 19th Ave, Geneva, Folsom, and the J, K, L, M, N, and F Muni lines.
3rd Street	3rd Street LRT from Sunnydale Ave/Bayshore Blvd to Clay/Stockton. Includes New Central Subway and a route from Clay/Stockton to Mission Bay. 9X replaced and extended by 15X, which runs only in the off-peak direction; 9AX replaced and extended by 15AX; 9BX replaced and extended by 1BX	(same)
Caltrain DTX/Transbay	Caltrain Downtown Extension to the Transbay Terminal - All the Caltrain routes begin or end at the Transbay Terminal. Transbay Terminal rebuilt to enable planned express service expansion	(same)



Person Throughput Analysis (continued from previous page)

Category	2025 Base	2025 Countywide Plan
Caltrain	Caltrain Express service between San Francisco and San Jose including electrification.	Caltrain Express service between San Francisco and San Jose. Additional speed and headway improvements as a result of Phase 2 "Baby Bullet" rapid rail plan.
	(N/A)	Relocation of Caltrain Paul Avenue station to Oakdale Avenue
	Capitol Corridor service expansion	4-tracking on shared Capitol Corridor/Caltrain line in Santa Clara
BART	Added 2nd entrance at Balboa Park Station	
	BART extension to San Francisco International Airport and Millbrae	(same)
	BART-Oakland International Airport Connector	(same)
	BART extension from Warm Springs to San Jose	(same)
Ferries	(N/A)	Improvements to downtown ferry terminals. Included are additional intermodal connections, new ferry gates, improved emergency response, and landside improvements to serve increased ferry traffic. Ferry services to San Francisco were increased by reducing headways 20%.
Bus Route Extensions	22-Fillmore southern end was extended east from Sixteenth and Kansas Streets on Sixteenth Street to the Mission Bay Development	(same)
	45 extended to Mission Bay	(same)
Bus Route Removals	The 42 Downtown Loop was removed (dropped between 2000 and 2001)	(same)
	The 83 Pacific was removed (dropped between 2000 and 2001)	(same)
	The 80X Gateway Express, 81X Caltrain Express, and 82X Presidio and Wharf Express were removed because MUNI indicated they would be dropped sometime in the future	(same)
Historic Streetcars	Phase 1 of extension of service along waterfront, from Fisherman's Wharf to Fort Mason.	(same)



Caltrain near proposed Paul Avenue station.

Category	2025 Base	2025 Countywide Plan
Muni Routes Additions and Changes	The 10 Townsend was added between 2000 and 2001 (follows some of the old 42 route)	(same)
	The 12 Folsom was modified in 2001. The route now travels on the Embarcadero	(same)
	The S Castro Shuttle (MUNI Metro) was added in 2001	(same)
	14-Mission and 14L extended to Daly City BART.	
Doyle Drive	The reconstruction of Doyle Drive (without changes)	Design will include an auxiliary lane providing direct access to the Presidio, facilitating bus movement from the South Access onto Richardson Boulevard or directly into the Presidio. Also includes a transit transfer center and connections to Marina Boulevard.
Roadway Changes	Central Freeway was removed north of Market Street	(same)
	The development of Octavia Boulevard on the right of way vacated by the Central Freeway was coded into the 2025 base	(same)
	Illinois Street Bridge was added over the Islais Creek Channel (Port of San Francisco has funding for the project)	(same)
	(N/A)	San Francisco share of San Francisco/San Mateo Bi-County Study projects such as the extension of Carroll Avenue to connect Third Street to Bayshore Boulevard, the extension of Geneva Avenue across US 101, and Candlestick Point improvements.
Other Changes Outside San Francisco	Includes all projects modeled by Metropolitan Transportation Commission in the RTP runs.	(same)
	Transit route changes between 2000 and 2001	(same)
	Rapid Bus Transit in San Pablo Avenue Corridor	(same)
	Vallejo intermodal ferry terminal	(same)



Category	2025 Base	2025 Countywide Plan
Other Changes Outside San Francisco (continued)	Fourth bore for the Caldecott Tunnel	(same)
	Interchange modifications on Interstate 80	(same)
	HOV lanes added to Interstate 580 between Pleasanton and Livermore	(same)
	Roadway and freeway modifications in various locations	(same)
	Additional auxiliary lanes and passing lanes in various locations	(same)
	VTA light rail extensions in the Vasona and Capital Corridors	(N/A)



Octavia Boulevard maquette.

New Expenditure Plan Detailed Summary



The below is a detailed description of the projects, categories and subcategories in the New Expenditure Plan, and the types of items that are eligible for funding under each of them. The Total Funding figures correspond to the Total Expected Funding column in the Plan Summary provided in Section 3, above. Sales tax funding figures are for Priority 1 unless stated otherwise. The percentage allocation of Prop K funds to each of the major categories is as follows: Transit – 65.5%, Paratransit – 8.6%, Streets and Traffic Safety – 24.6% and Transportation System Management/Strategic Initiatives – 1.3%. This reflects Priorities 1 and 2 combined.

A. TRANSIT

i. MAJOR CAPITAL PROJECTS

The Authority shall give priority for funding to major capital projects that are supportive of adopted land use plans, with particular emphasis on improving transit supply to corridors designated for infill housing and other transit-supportive land uses. Transit supportive land uses are defined as those which help to increase the cost-effectiveness of transit service by improving transit ridership and reducing traffic along transit corridors.

a. MUNI

- Bus Rapid Transit Network/MUNI Metro Network including Real Time Transit Information:

Implement Bus Rapid Transit and Transit Preferential Streets programs to create an integrated citywide network of fast, reliable bus and surface light rail transit services connecting to services provided by MUNI rail and historic streetcar lines, BART and Caltrain.

Bus Rapid Transit (BRT): Creation of fast, frequent, and reliable bus rapid transit service, with exclusive transit lanes and dedicated stations, on Geary Boulevard (designed and built to rail-ready standards), Van Ness Avenue and Potrero Avenue.

Transit Preferential Streets (TPS): Includes Improvements to key transit corridors including Mission and Folsom streets, 19th Avenue, Geneva Avenue, Bayshore Blvd, 16th Street, San Bruno Ave., Stockton, and the MUNI rail lines. Includes additional BRT and TPS improvements subject to availability of funds. TPS improvements are intended to improve speed and reliability at cost lower than BRT. TPS improvements include sidewalk bulb-outs at bus stops, transit-priority lanes, traffic signal modifications, and relocation of bus stops.

BRT and TPS projects may include traffic signal modification to speed up service, and real-time passenger information systems improve transit reliability and reinforce the sense of permanence of the improved service, as well as associated landscaping, lighting and signage improvements. It is the intent that buses that operate along BRT corridors should be able to also operate along TPS corridors. Funds in this section may be used to create dedicated stations and exclusive transit lanes for the MUNI light rail and historic streetcar lines. Includes planning, project development, capital and incremental operating and maintenance costs. Sponsoring Agencies: MUNI, DPT, DPW, Planning, SFCTA. The first \$99.2M is Priority 1 and the remainder is Priority 2. Total Funding: \$600M; Prop K: \$110.0M.

- 3rd Street Light Rail (Phase 1):

This is a grandfathered project. Complete construction of trackway, related facilities, and the Metro East light rail maintenance facility and yard, and purchase of new light rail vehicles (LRVs), including additional LRVs for expanded Mission Bay service. (Priority 1). Includes capital and incremental operating and maintenance costs. Sponsoring Agency: MUNI. Total Funding: \$100M; Prop K: \$70M.

- New Central Subway (3rd St. LRT Phase 2):

This is a grandfathered project. Design and construction of the second phase of the 3rd Street Light Rail line as a subway linking the Caltrain Depot at 4th and King Streets and Pac Bell Park to Moscone Center, the BART/MUNI Metro stations on Market Street, Union Square and Chinatown. Includes preliminary and detailed engineering and construction costs. (Priority 1). Includes project development, capital and incremental operating and maintenance costs. Sponsoring Agency: MUNI. Total Funding: \$647M; Prop K: \$126M.

- Geary Light Rail:

This funding is for environmental studies, preliminary and detailed engineering for implementing light rail transit on Geary Blvd (Priority 3). Sponsoring Agency: MUNI. Total Funding: \$55M; Prop K: \$55M.

b. Caltrain

- Downtown Extension to a Rebuilt Transbay Terminal:

Construction of a grade-separated extension of Caltrain to a rebuilt Transbay Terminal at the current site (Mission and 1st Streets) near BART and MUNI Metro. The extension and terminal are to be built as a single, integrated project. If the Caltrain Downtown Extension portion of the project is cancelled, this project shall not be eligible for any funds from the sales tax program. (Priority 1). Includes project development and capital costs. Sponsoring Agency: TJPA. The first \$237.7M is Priority 1 and the remainder is Priority 2. Total Funding: \$1,885M; Prop K: \$270M.

- Electrification:

Convert Caltrain service, line, and locomotives from diesel-powered to electric-powered. The project includes all stationary systems, substations, and signal system modifications, along with new rolling stock and supporting infrastructure and facilities. Costs reflect San Francisco share only. (Priority 1). Includes project development and capital costs. Sponsoring Agency: PCJPB. Total Funding: \$182.5M; Prop K: \$20.5M.

- Capital Improvement Program:

Provides San Francisco's local match contribution for Caltrain's Capital Improvement Program (CIP) projects, including continued implementation of express tracks between San Francisco and San Jose to improve travel time and reliability. This work may include passing sidings, to allow express trains to bypass local service where additional tracks are not appropriate and/or right of way is limited. Maintenance and rehabilitation projects designed to improve service levels. Costs reflect San Francisco share only. Includes project development and capital costs. Sponsoring Agency: PCJPB. The first \$19.9M is Priority 1 and the remainder is Priority 2. Total Funding: \$73.5M; Prop K: \$22.6M.

c. BART Station Access, Safety and Capacity

Improvements to stations and other facilities owned or operated by BART within San Francisco to enhance pas-

senger safety, accessibility and capacity, (e.g. additional staircases), improved signage and security, real-time traveler information, intermodal access improvements (including improved access for passengers transferring from other transit services or bicycles), and street level plaza improvements. Improvements to station or system capacity, including additional staircases, elevators, and escalators, shall be eligible for funding in this category if the Authority finds that the costs of the station and system capacity improvements are shared equitably among the counties BART serves. Includes project development and capital costs. Sponsoring Agency: BART, MUNI, DPT, DPW. The first \$9.2M is Priority 1 and the remainder is Priority 2. Total Funding: \$100M; Prop K: \$10.5M.

d. Ferry

Improvements to downtown ferry terminals to accommodate increases in ferry ridership. Included are additional intermodal connections, new ferry berths, improved emergency response systems, and landside improvements to serve increased passenger flows. Also included is rehabilitation of passenger-serving facilities. Includes project development and capital costs. Sponsoring Agencies: Port of San Francisco, GGBHTD. The first \$4.4M is Priority 1 and the remainder is Priority 2. Total Funding: \$105.7M; Prop K: \$5M.

ii. TRANSIT ENHANCEMENTS

Programmatic improvements that promote system connectivity and accessibility, close service gaps, and improve and expand transit service levels. For Transit Enhancements, the first \$43.0M is Priority 1, the second \$4.5M is Priority 2 and the remaining \$5.0M is Priority 3. Projects include:

- Extension of existing trolleybus lines and electrification of motor coach routes. Includes purchase of additional trolley buses for new service. Includes project development and capital costs. Sponsoring Agency: MUNI. Total Funding: \$47.7M; Prop K: \$9.5M.
- Extension of historic streetcar service from Fisherman's Wharf to Fort Mason. Total Funding reflects Prop K funds only; the remaining project costs will be covered by the

National Park Service/Presidio Trust using Park funds. Includes project development and capital costs. Sponsoring Agency: MUNI. Total Funding: \$5 M; Prop K: \$5 M.

- Purchase and rehabilitation of historic light rail vehicles for new or expanded service. Includes project development, capital, and incremental operating and maintenance costs. Sponsoring Agency: MUNI. Total Funding: \$7.2 M; Prop K: \$1.4 M.
- Balboa Park BART/MUNI station access improvements to enhance BART, bus and MUNI light rail transit connections. Includes project development and capital costs. Sponsoring Agencies: MUNI, BART, DPT, DPW. Total Funding: \$34.5M; Prop K: \$9.72M.
- Relocation of the Caltrain Paul Avenue station to Oakdale Avenue. Includes project development and capital costs. Sponsoring Agencies: PCJPB, DPT, DPW. Total Funding: \$26.43M; Prop K: \$7.93M.
- Purchase of additional light rail vehicles to expand service and reduce overcrowding on existing MUNI Light Rail lines. Includes project development, capital, and incremental operating and maintenance costs. Sponsoring Agency: MUNI. Total Funding: \$28.9M; Prop K: \$5.8M.
- Other transit enhancements to be prioritized by the Authority. Includes planning, project development and capital costs. Sponsoring Agencies: MUNI, BART, PCJPB. Total Funding: \$50.96 M; Prop K: \$14.0 M.

iii. SYSTEM MAINTENANCE AND RENOVATION

a. Vehicles

Programmatic improvements for upgrade, rehabilitation and replacement of transit vehicles, spare parts and on-board equipment. Includes limited incremental operating funds for F-line historic streetcar operations. The first \$506.3M is Priority 1 and the remainder is Priority 2. Projects include:

- Rail car, trolley coach and motor coach renovation and replacement; retrofit of diesel coaches to reduce emis-

sions. Includes project development and capital costs. Sponsoring Agencies: MUNI, BART, PCJPB. Funding for BART rail car renovation and replacement shall be eligible for funding under this subcategory if the Authority finds that the costs of rail car renovation and replacement are shared equitably among the counties BART serves. The first \$486 M in Prop K is Priority 1, and the remainder is Priority 2. Total Funding: \$3,476.7 M; Prop K: \$566 M. Of the \$565.7 M in Prop K funds, the following minimum amounts will be available for MUNI (\$450.75M), BART (\$11.5M), and PCJPB (\$23M).

- Trolleybus wheelchair-lift incremental operations and maintenance. This is a grandfathered project. Provides for incremental operating and maintenance costs according to the schedule described in 2.b.ii.B. The first \$2.62M is Priority 1 and the remainder is Priority 2. Sponsoring Agency: MUNI. Total Funding: \$3.05M, Prop K: \$3.05M.
- F-Line Historic Streetcar Incremental Operations and Maintenance: This is a grandfathered project. Provides for incremental operating and maintenance costs according to the schedule described in Section 2.b.ii.B of this Expenditure Plan. The first \$5.3 M in Prop K is Priority 1 and the remainder is Priority 2. Sponsoring Agency: MUNI. Total Funding: \$6.2M; Prop K: \$6.2M

b. Facilities

Programmatic improvements for upgrade, rehabilitation and replacement of transit facilities and facilities-related equipment. Includes limited incremental operating funds for MUNI Metro Extension/MUNI Metro Turnback operations. The first \$101.9M is Priority 1 and the remainder is Priority 2. Projects include:

- Rehabilitation, upgrades and/or replacement of existing facilities for maintenance and operations, including equipment (Priority 1). Rehabilitation, upgrades and renovation for rail stations including platform edge tiles, elevators, escalators, and faregates (Priority 1). Rehabilitation and/or replacement of facilities for administration (Priority 2). The first \$84.7 M in Prop K is Priority 1 and the remainder is Priority 2. Includes project development and capital costs. Sponsoring Agencies: MUNI, BART,

PCJPB. Total Funding: \$925.7M; Prop K: \$95.7M. Of the \$115.7M in Prop K funds, the following minimum amounts will be available for MUNI (\$92.6M), BART (\$2.3M), and PCJPB (\$9.3M).

- MUNI Metro Extension (MMX) incremental operations and maintenance. This is a grandfathered project. Provides for incremental operating and maintenance costs according to the schedule described in 2.b.ii.B. The first \$17.2 M is Priority 1 and the remainder is Priority 2. Sponsoring Agency: MUNI. Total Funding: \$20 M, Prop K: \$20 M.

c. Guideways

Rehabilitation, upgrades and/or replacement of rail, overhead trolley wires, signals, and automatic train control systems. The intent is to implement TPS standards whenever rehabilitation, upgrade or replacement projects of light rail lines are undertaken. Seismic retrofit and improvements to emergency lighting and ventilation. (PRIORITY 1). The first \$306.7 M is Priority 1 and the remainder is Priority 2. Total Funding: \$1,563.2M; Prop K: \$348.3M. Includes project development and capital costs. Sponsoring Agencies: MUNI, BART, PCJPB. The following minimum amounts will be available for MUNI (\$278.6M), BART (\$7M), and PCJPB (\$27.9M).

B. PARATRANSIT

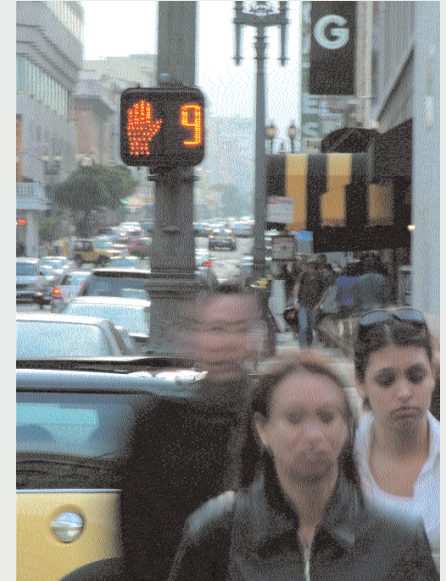
Continued support for paratransit door-to-door van and taxi services for seniors and people with disabilities who are unable to use fixed route transit service. Includes operations support, phased replacement of accessible vans, and replacement and upgrades of supporting equipment such as debit card systems. Sponsoring Agency: MUNI. The first \$201.9M is Priority 1. The next \$24.1M is Priority 2, and the remainder is Priority 3. Total Funding: \$396.3M; Prop K: \$291M.

C. STREETS AND TRAFFIC SAFETY

i. MAJOR CAPITAL PROJECTS

a. Golden Gate Bridge South Access (Doyle Drive)

Construction of a replacement project for the existing facil-



ity to improve earthquake and traffic safety. Project includes direct vehicular and transit access into the Presidio National Park, improved bicycle and pedestrian connections, a transit transfer center and bus rapid transit treatments, and connections to Marina Boulevard and Richardson Avenue. (Priority 1). Includes project development and capital costs and may include associated environmental restoration. Sponsoring Agencies: SFCTA, Caltrans. The first \$79.2 M is Priority 1 and the remainder is Priority 2. Total Funding: \$420M; Prop K: \$90M.

b. New and Upgraded Streets

Upgrading and extension of streets and other vehicular facilities to bring them up to current standards; addition of Transit Preferential Streets (TPS) treatments to transit corridors and construction of major bicycle and pedestrian facilities. The first \$24.2 M is Priority 1; and the remainder is Priority 2. Total Funding: \$119.7 M; Prop K: \$27.5 M

- Bernal Heights Street System Upgrading (Priority 1). This is a grandfathered project. Construction of streets in Bernal Heights where existing streets are unimproved or below city standards to ensure adequate emergency vehicle response times. Includes project development and capital costs. Sponsoring Agency: DPW. Total Funding: \$1.415M; Prop K: \$1.415M.
- Great Highway Erosion Repair, including bicycle path development. (Priority 1) Includes project development and capital costs. Sponsoring Agency: DPW. Total Funding: \$15.0M; Prop K: \$2.03M.
- Visitacion Valley Watershed: San Francisco share of San Francisco/San Mateo Bi-County Study projects such as the extension of Geneva Avenue across US 101 to improve multi-modal access, including a possible light rail extension to Candlestick Point, or other transportation improvements as identified or refined through a community planning process. (Priority 1). Includes planning, project development and capital costs. Sponsoring Agencies: DPW, MUNI, SFCTA, PCJPB, Caltrans. Total Funding: \$46.3M; Prop K: \$15M.
- A new Illinois Street Bridge including multimodal (vehic-

le, rail, bicycle, and pedestrian) access across Islais Creek (Priority 1). Includes project development and capital costs. Sponsoring Agency: Port of San Francisco. Total Funding: \$15.0M; Prop K: \$2.0M.

- A study to identify ways to reduce the traffic impacts of State Route 1 on Golden Gate Park (Priority 1). Includes planning and project development costs. Sponsoring Agency: DPT, Caltrans. Total Funding: \$2M; Prop K: \$0.2M
- Other upgrades to major arterials such as 19th Avenue, to complement traffic calming on adjacent neighborhood streets, including pedestrian and bicycle safety improvements, intersection reconfiguration, transit preferential improvements and landscaping. Includes planning, project development and capital costs. Sponsoring agencies: DPW, DPT, MUNI, Caltrans, SFCTA. Total Funding: \$40M; Prop K: \$6.9M.

ii. SYSTEM OPERATIONS, EFFICIENCY AND SAFETY

a. New Signals and Signs

Programmatic improvements including new traffic signs and signals (including pedestrian and bicycle signals) implementation of transit priority systems on select corridors; and new pavement markings such as raised flashing pavement reflectors and transit lane markings (Priority 1). Installation of red light photo enforcement equipment; electronic parking meters including meters that accept credit or pre-paid debit cards; and relocation of traffic maintenance shop to a new location (Priority 2). Includes project development and capital costs. Sponsoring Agency: DPT; MUNI. The first \$36.1M is Priority 1 and the remainder is Priority 2. Total Funding: \$55.5M; Prop K: \$41.0M.

b. Advanced Technology and Information Systems (SFgo)

Programmatic improvements using advanced technology and information systems to better manage roadway operations for transit, traffic, cyclists, and pedestrians. Includes interconnect and traffic signal controller technology and related communications systems to enable transit and emergency vehicle priority; dissemination of real time information to transit passengers; and management of

vehicular flows and signalization to enhance bicycle and pedestrian safety (Priority 1). Closed circuit TV and communications systems (e.g. Variable Message Signs) for incident and special event traffic management as well as responsive/adaptive signal control and traveler information (Priority 2). Includes project development and capital costs. Sponsoring Agency: DPT, MUNI. The first \$17.3M is Priority 1 and the remainder is Priority 2. Total Funding: \$100.0M; Prop K: \$19.6M.

iii. SYSTEM MAINTENANCE AND RENOVATION

a. Signals and Signs

Programmatic improvements including maintenance and upgrade of traffic signs and signals. Signal maintenance includes new mast arms, LED signals, conduits, wiring, pedestrian signals, left turn signals. Includes transit pre-empts and bicycle route signs and signals. Maintenance and upgrades of traffic striping and channelization to improve safety. Includes maintenance and replacement of red light enforcement cameras. Includes project development and capital costs. Sponsoring Agency: DPT. The first \$87.9M is Priority 1 and the remainder is Priority 2. Total Funding: \$170.5M; Prop K: \$99.8M.

b. Street Resurfacing, Rehabilitation, and Maintenance

- **Street Resurfacing and Reconstruction:** Repaving and reconstruction of city streets to prevent deterioration of the roadway system, based on an industry-standard pavement management system designed to inform cost effective roadway maintenance. Includes project development and capital costs. May include sidewalk rehabilitation, curb ramps and landscaping, subject to approved prioritization plan. Sponsoring Agency: DPW. The first \$118.3 M in Prop K is Priority 1 and the remainder is Priority 2. Total Funding: \$641.3M; Prop K: \$134.3M.

- **Street Repair and Cleaning Equipment**
Replacement of street repair and cleaning equipment according to industry-standards, such as but not limited to, asphalt pavers, dump trucks, sweepers, and front-end loaders. Includes capital costs only. Sponsoring Agency: DPW. The first \$22.8M in Prop K is Priority 1 and the remainder is Priority 2. Total Funding: \$36.4M; Prop K: \$25.9M.

- **Embarcadero Roadway Incremental Operations and Maintenance**

This is a grandfathered project. Provides for incremental operating and maintenance costs according to the schedule described in 2.b.ii.B. Funding shall only be made available after reimbursement of \$2.5 M from the City and County of San Francisco to the Authority for repayment of a capital loan authorized by Authority resolution No. 97-44. Sponsoring Agency: DPW. The first \$2.2 M is Priority 1 and the remainder is Priority 2. Total Funding: \$2.5 M; Prop K: \$2.5 M.

c. Pedestrian and Bicycle Facility Maintenance

Public sidewalk repair and reconstruction citywide. Additional pedestrian facility improvements including stairways, retaining walls, guardrails and rockfall barriers. Upgrades of substandard bicycle lanes; rehabilitation of bicycle paths, and reconstruction of MUNI passenger boarding islands. Includes project development and capital costs. Sponsoring Agencies: DPT, DPW, MUNI. The first \$17.4M is Priority 1 and the remainder is Priority 2. Total Funding: \$36.8M; Prop K: \$19.1M.

iv. BICYCLE AND PEDESTRIAN IMPROVEMENTS

a. Traffic Calming

Programmatic improvements to neighborhood streets to make them more livable and safe to use for all users – pedestrians, cyclists, transit, and autos. Includes strategies to reduce auto traffic speeds and improve pedestrian and bicyclist safety and circulation such as: improvements to bicycle and walking routes (e.g. sidewalk widening, streetscape upgrades including landscaping), speed humps, corner bulb-outs, chicanes and channelization (Priority 1). New or improved pedestrian safety measures such as ladder crosswalks and pedestrian signals (Priority 1). Development of neighborhood and school area safety plans citywide, including above-mentioned strategies and complementary outreach and education programs (Priority 1). New traffic circles, signals and signage including flashing beacons and vehicle speed radar signs (Priority 2). The first \$60.8M is Priority 1. The next \$7.2M is Priority 2 and the remainder is Priority 3. Includes planning, project

development and capital costs. Sponsoring Agencies: DPT, DPW. Total Funding: \$142.0M; Prop K: \$70.0M.

b. Bicycle Circulation/Safety

Programmatic improvements to the transportation system to enhance its usability and safety for bicycles. Infrastructure improvements on the citywide bicycle network, such as new bike lanes and paths. Bicycle parking facilities such as bike racks and lockers. Support for bicycle outreach and education programs. Improvements must be consistent with the city's bicycle plan. The first \$27.6M is Priority 1. The next \$2.4M is Priority 2 and the remainder is Priority 3. Includes project development and capital costs. Sponsoring Agencies: DPT, DPW, BART, PCJPB. Total Funding: \$77.6; Prop K: \$56.0M.

c. Pedestrian Circulation/Safety

Programmatic improvements to the safety and usability of city streets for pedestrians, prioritized as identified in the Pedestrian Master Plan. Includes flashing pavement reflectors on crosswalks, pedestrian islands in the medians of major thoroughfares, sidewalk bulb-outs, sidewalk widenings, and improved pedestrian circulation around BART and Caltrain stations. Includes project development and capital costs. Sponsoring Agencies: DPT, MUNI, DPW, BART, PCJPB. The first \$23.8M is Priority 1. The next \$1.2M is Priority 2 and the remainder is Priority 3. Total Funding: \$69.7M; Prop K: \$52.0M.

d. Curb Ramps

Construction of new wheelchair curb ramps and related roadway work to permit ease of movement for the mobility impaired. Reconstruction of existing ramps. Includes project development and capital costs. Sponsoring Agency: DPW, MUNI. The first \$23.6M is Priority 1. The next \$2.4M is Priority 2 and the remainder is Priority 3. Total Funding: \$66.0M; Prop K: \$36.0M.

e. Tree Planting and Maintenance

Planting of new street trees and maintenance of new and existing trees in public rights-of-way throughout the city.

Sponsoring Agency: DPW. The first \$32.8M is Priority 1. The next \$4.2M is Priority 2 and the remainder is Priority 3. Total Funding: \$95.0M; Prop K: \$41.0M.

D. TRANSPORTATION SYSTEM MANAGEMENT/STRATEGIC INITIATIVES

i. TRANSPORTATION DEMAND MANAGEMENT/PARKING MANAGEMENT

Develop and support continued Transportation Demand Management (TDM) and parking requirements for downtown buildings, special event sites, and schools and universities. Includes neighborhood parking management studies. Support related projects that can lead to reduction of single-occupant vehicle dependence and encourage alternative modes such as bicycling and walking, including Pedestrian Master Plan development and updates (Priority 1), citywide Bicycle Plan updates, and traffic circulation plans. Conduct transit service planning such as route restructuring studies to optimize connectivity with rapid bus network and major transit facilities (e.g. Transbay Terminal and Balboa Park BART station). Funds for studies and projects to improve access of disadvantaged populations to jobs and key services. Includes planning, project development and capital costs. Sponsoring Agencies: MUNI, DPT, Planning, SFCTA, DOE, DAS. The first \$11.6M is Priority 1 and the remainder is Priority 2. Total Funding: \$28.9M; Prop K: \$13.2M.

ii. TRANSPORTATION/LAND USE COORDINATION

Transportation studies and planning to support transit oriented development and neighborhood transportation planning. Local match for San Francisco and regional Transportation for Livable Communities (TLC)/Housing Incentive Program (HIP) grant programs that support transit oriented development and fund related improvements for transit, bicyclists, and pedestrians including streetscape beautification improvements such as landscaping, lighting and street furniture. Includes planning, project development and capital costs. Sponsoring Agencies: DPT, DPW, MUNI, Planning, SFCTA, BART, PCJPB. The first \$17.6M is Priority 1 and the remainder is Priority 2. Total Funding: \$33.6M; Prop K: \$20.0M.



APPENDIX H

Parking Analysis

The Authority has made a conservative estimate of the overall parking supply in San Francisco:

On Street

	Short Term	Long Term	Total
PAID	22900/a	94000/b	116,900
FREE	12,200/c	190900/d	203,100
TOTAL	35,100	284,900	320,000

Off Street

	Short Term	Long Term	Total
PAID	91,000/e	8700/f	99,700
FREE/RES.	21,000/g	160,500/h	181,500
TOTAL	112,000	169,200	281,200
TOTAL	147,100	454,100	601,200

Sources:

- Number of city parking meters (DPT)
- Number of Residential Parking Permits (RPP) (DPT)
- Sum of short-term signed (4280) and colored curbs (7,875) (from GIS analysis of RPP maps and DPT)
- Total on-street supply for city (320,000) as estimated by DPT minus short term spaces to estimate long-term spaces. Then subtract b. to arrive at free (including unregulated) spaces.
- Sum of 1999 SF Model Survey of garages and lots (79,962); SF Parking Authority garages and lots (7,093); UCSF paid, off-street, hourly (1,100 - Parking and Transportation Services, UCSF); City College SF=(1,300 – Authority estimate); SFSU (1,550 - Parking & Transportation Dept. SFSU)
- Sum of 1999 SF Model Survey of garages and lots (6,385); UCSF (2,355 leased - Parking and Transportation Services, UCSF)
- Sum of 1999 SF Model Survey of garages and lots (2,160); Presidio (11,210 – Wilbur Smith Associates, A. Marshall); Stonestown Mall (3,000 – Authority estimate); Golden Gate National Recreational Area (1,300); San Francisco Zoo (450 – Authority estimate); SF Unified School District (2,850) – Authority estimate based on 114 sites x 25 spaces/site)
- Authority estimate of residential parking supply based on assumption of 0.5 spaces per dwelling unit (1/2 x 321,000)



APPENDIX I

CWTP Policy Framework Table

VISION

The Plan’s vision is to develop safe, efficient, and attractive transportation choices for all users in a way that cultivates the City’s diverse economy while protecting its celebrated quality of life.

Category	2025 Base	2025 Countywide Plan	2025 Countywide Plan
Economic Vitality	<p>1. Accessibility: Maintain local and regional accessibility to key economic activity and employment centers</p> <p>2. Mobility: Further develop a multi-modal network for efficient circulation/ movement of people and goods.</p>	<p>1.1 Develop major transit corridors to key employment and activity centers</p> <p>1.2 Increase intra- and inter-modal (system) connectivity</p> <p>1.3 Promote “Transit First” and other policies that encourage mode shift away from single-occupant autos</p> <p>1.4 Coordinate development of land uses and transportation corridors in an integrated fashion</p> <p>2.1 Maintain the existing system</p> <p>2.2 Optimize use of the existing system by facilitating the movement of people, not vehicles</p> <p>2.3 Develop safe, convenient and attractive facilities for transit users, bicyclists and pedestrians.</p> <p>2.4 Provide for the needs of freight vehicles and services while minimizing impacts of goods delivery</p>	<p>1.1 Jobs and shopping opportunities within a set radius, via transit and auto</p> <p>1.2 Implementation of passenger serving systems such as TransLink and NextBus</p> <p>1.3 Rate of change in mode split away from single occupancy vehicles and increases in transit ridership at key screenlines</p> <p>2.1 Reimbursement rate for A2 and relevant C categories</p> <p>2.2 Travel Times for transit and auto trips</p> <p>2.3 Person-throughput of key corridors</p> <p>2.4 Trip mode shares</p> <p>2.5 Freight route plan development (per MTC study)</p>



Category	2025 Base	2025 Countywide Plan	2025 Countywide Plan
Community Vitality	<p>1. Promote Neighborhood Access</p> <p>2. Improve the Urban Environment</p> <p>3. Enhance Neighborhood Livability</p>	<p>1.1 Develop major transit corridors to key employment and activity centers</p> <p>1.2 Increase intra- and inter-neighborhood transit services and bicycle access</p> <p>1.3 Strengthen neighborhood transportation planning</p> <p>1.4 Better utilize and manage existing parking supply through means identified through parking studies</p> <p>2.1 Prioritize maintenance of existing system</p> <p>2.2 Encourage context-sensitive design</p> <p>3.1 Strengthen neighborhood transportation planning</p> <p>3.2 Encourage consideration of traffic calming measures in neighborhood plans</p> <p>3.3 Minimize heavy vehicle (freight, tour buses) traffic in residential areas.</p>	<p>1.1 Number of jobs and shopping opportunities within a set radius, via transit and auto</p> <p>1.2 % implementation of Bike Plan/Ped Plan;</p> <p>1.3 Reimbursement rate of D2</p> <p>1.4 Reimbursement rate of D1</p> <p>2.1 Reimbursement rate for A2 and relevant C categories</p> <p>2.2 Monitor project designs</p> <p>3.1 Reimbursement rate of D2</p> <p>3.2 Reimbursement rate of C3 (traffic calming)</p> <p>3.3 Freight route plan development (per MTC study)</p>
Safety	<p>1. Reduce collisions and the injuries/fatalities associated with them.</p> <p>2. Improve Pedestrian and Bicyclist Safety</p>	<p>1.1 Address facility seismic and security needs</p> <p>1.2 Continue to analyze and implement measures to improve road user safety through projects and outreach</p> <p>1.3 Encourage consideration of traffic calming measures in neighborhood plans</p>	<p>1.1 Number of seismic-related needs funded</p> <p>1.2 collision rates from SWITRS data (but need to be normalized for roadway miles and vmt)</p> <p>1.3 Reimbursement t rate of CX (traffic calming)</p>



Category	2025 Base	2025 Countywide Plan	2025 Countywide Plan
Community Vitality (continued)	2. Improve Pedestrian and Bicyclist Safety	2.1 Encourage consideration of traffic calming measures and awareness programs in neighborhood plans to enhance ped/bike safety 2.2 Develop bike and ped networks, esp. safety features	2.1 Reimbursement t rate of CX (traffic calming) 2.2 Reimbursement of bike and ped categories in C.; % of collisions involving ped or cyclist
Equity	1. Foster broad distribution of benefits among all city residents 2. Minimize impacts, particularly among disadvantaged communities 3. Optimize financing of system costs and encourage appropriate cross-subsidies to promote efficient use patterns	1.1 Take a “network” approach to transit improvements 1.2 Promote geographic equity in projects 2.1 Encourage full and fair participation by all stakeholders in the transportation planning process 3.1 Promote user fees and pricing strategies 3.2 Direct new revenues toward mode-shift promoting uses Promote user fees and pricing strategies	3.1 Periodic review of indexing fees (user and impact fees) with inflation 3.2 Milestone based, e.g. passage of RM2
Environmental Sustainability	1. Meet or exceed federal, state and regional air quality standards 2. Minimize and mitigate the negative environmental impacts of transportation projects and activities 3. Promote city beautification	1.1 Promote mode shift away from single-occupant autos 1.2 Promote the adoption of clean technologies where cost-effective 2.1 Facilitate full and fair participation through a broad and inclusive transportation planning process 2.2 Promote context sensitive designs 3.1 Support streetscape enhancements in travel corridors and throughout city’s neighborhoods 3.2 Promote city greening projects	1.1 Non single occupant auto mode shares 1.2 Compliance with governing laws, regulations, ordinances, etc. 2.1 Compliance with governing laws, regulations, ordinances, etc. 3.1 Reimbursement rate of D2 3.2 Reimbursement rate of C4 (street trees program)

Category	2025 Base	2025 Countywide Plan	2025 Countywide Plan
Investment Efficiency & Cost-Effectiveness	1. Protect committed funding	1.1 Honor regional funding agreements 1.2 Ensure obligation of state/federal funds	1.1. Milestones based implementation of RTP projects 1.2. Monitor obligation deadlines
	2. Optimize use of funds	2.1 Optimize the use of existing infrastructure and services; prioritize maintenance 2.2 Promote the use of standards and performance-based evaluation criteria	2.1 Reimbursement rates/implementation of: BRT/TPS; signals category; and TDM 2.2 Implement Prioritization Plans
	1. Maximize leveraging of other funds	3.1 Leverage discretionary state, federal and regional funds by matching projects to funding sources based on competitiveness 3.2 Leverage private sector contributions 3.3 Encourage multi-jurisdictional projects that maximize opportunities for discretionary funding	3.1 Leverage rates by category 3.2 # / % of projects with private sector funding
	4. Secure new revenue sources	4.1 Support and develop federal, state and local legislation that increases revenues for transportation, especially for transit and a more stable source for transit operations	4.1 Monitor # of projects/initiatives per year, and their values
	5. Facilitate timely project delivery	5.1 Consider Project Readiness in funding decisions 5.2 Facilitate public participation and input in the planning process to avoid surprises 5.3 Require cradle-to-grave project implementation oversight	5.1 EP Reimbursement rates 5.2 Implementation of public outreach requirements for Prioritization Plans 5.3 Age/delivery time of projects by category



APPENDIX J

Potential New Transportation Revenue Sources

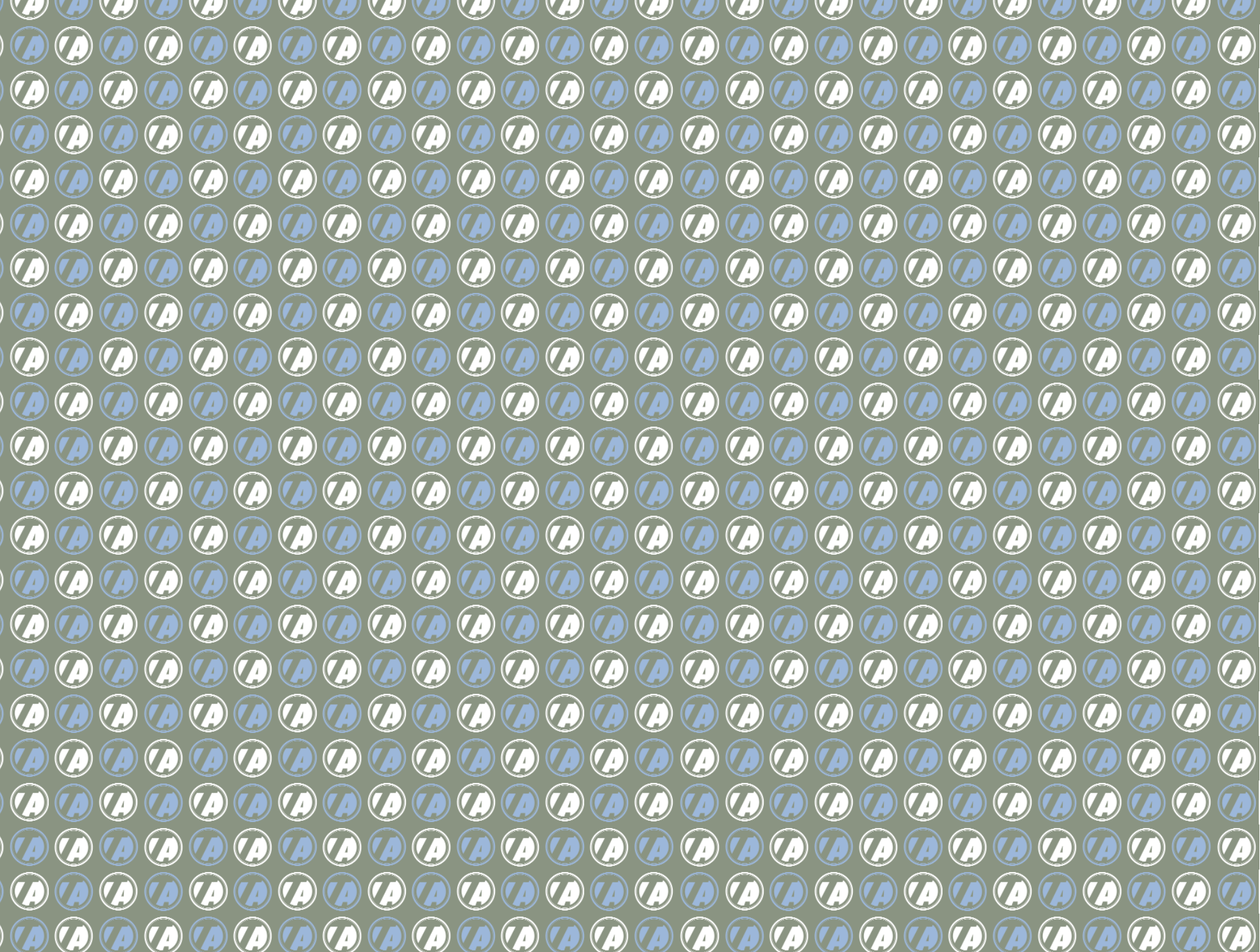
Fund Source	Required Approval	Description	Revenue Estimate (\$F)	Who Pays?
Revenue-Generation Tools				
MUNI fare increase	Municipal Transportation Agency and Board of Supervisors	Increase MUNI passenger fares by and average 25% over time, after adjusting for inflation	\$25 M/yr. (WP 2)	MUNI riders
Modified Transit Impact Development Fee	Board of Supervisors	\$5 per square foot 1x assessment on downtown projects; Expand to cover all non-residential development citywide	\$16.5 M/yr (WP 2)	Developers of non-residential properties
Vehicle License Fee	State Legislature	2% of value of vehicle. Increase vehicle license fee by 5% with all additional revenue going to the City for transportation purposes.	\$4.8 M/yr. (WP 2)	Automobile owners in San Francisco
Vehicle Registration Fee	State Legislature	Increase the Vehicle Registration Fee by \$10 for transportation purposes	\$4.7 M/yr	Automobile owners in San Francisco
Regional Gas Tax	Voter	Collect a 5 cent per gallon local gas tax on motor vehicle fuel in the Bay Area	\$10 M/yr (WP 2)	Automobile users in San Francisco
Parking meter revenue cap	Parking Authority; Board of Supervisors	Increase the parking meter revenue cap allocated to MUNI; change from cap to %	\$1 M - \$3 M /yr	Automobile users
Parking tax increase	Voter	Increase tax on off-street parking from 25% to 35% and maintain existing allocation	\$9.2 M/yr to MUNI (WP 2)	Automobile users in San Francisco
Demand Management Tools				
Parking Fine Increase	Board of Supervisors	Increase and/or index to inflation parking fines in selected categories to deter violation	Minimal (WP 2)	Automobile users
Congestion Pricing on Bay Bridge or in Downtown cordon	State Legislature	Increase the toll by \$1 (to \$4) during peak hours (5-10 a.m., 4-7 p.m.)	\$10.8 M/yr. (WP 2)	Peak hour users on Bay Bridge except transit and 3+ carpools



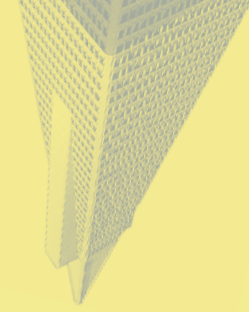
Fund Source	Required Approval	Description	Revenue Estimate (\$F)	Who Pays?
Demand Management Tools (continued)				
Parking Meter Rates	Parking Authority; Board of Supervisors	Increase parking meter rates or index to inflation; retain existing allocation	Flat in real terms	Automobile users in San Francisco
Increase regulated parking supply	Parking Authority; Board of Supervisors	Install meters at currently unregulated on street parking; raise collections by 10%	\$2.1 M/ yr	Automobile users in San Francisco
Modified RPP	Parking Authority; Board of Supervisors, Voters?	25% overall increase in pricing via market rate pricing of permits beyond first or second per household/business.	\$2.8 M/ yr	Automobile users in San Francisco
Self-Financing Tools				
Benefit Assessment District - MelloRoos	Property Owner	Assess fees on properties to pay for public facilities that provide special benefit to those properties	Varies	Property owners in the assessment district
Tax Increment Financing for Transit-oriented improvements	State Legislature	Expand TIF authority to transit-oriented development zones in order to fund transportation improvements	Varies	Property owners in the TIF district
Tax Increment Financing	none	Increase the use of TIF for multimodal transportation infrastructure and services	Varies	Property owners in the assessment district
Joint Development	Local development approvals	Public-Private development of publicly owned land.	Varies	Developers contribute to public infrastructure costs.



MUNI Metro portal at Church Street.







San Francisco County Transportation Authority

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