

1997 REPORT  
TO CONGRESS

BART

SAN FRANCISCO BAY AREA RAPID TRANSIT DISTRICT



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March 1997

Dear Member of Congress:

MARGARET K. PRYOR  
PRESIDENT

JAMES FANG  
VICE-PRESIDENT

THOMAS E. MARGRO  
GENERAL MANAGER

DIRECTORS

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1ST DISTRICT

JOEL KELLER  
2ND DISTRICT

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TOM RADULOVICH  
9TH DISTRICT

Throughout the history of this nation, the availability of efficient and reliable transportation has been pivotal to achieving our national goals. In keeping with that history, the San Francisco Bay Area Rapid Transit District (BART) has embarked upon a program of expansion and revitalization aimed at ensuring that we continue to deliver superior transit service to our customers well into the 21st century. We believe that reinvesting in BART strengthens the communities we serve and facilitates important regional and national goals for improving mobility, productivity, and economic opportunity while alleviating traffic congestion and air pollution.

Our 1997 Report to Congress summarizes the District's major initiatives and describes the progress we have made to date on each. The Report also makes legislative recommendations regarding FY 1998 New Rail Starts appropriations for the BART San Francisco International Airport (SFO) Extension, reauthorization of the Intermodal Surface Transportation Efficiency Act (ISTEA) and funding to enable transit operators to meet the Americans with Disabilities Act (ADA) mandates. I hope that you will find this guide a useful tool as the Congress deliberates important transportation policy questions in the coming year.

On behalf of the Board of Directors, I want to thank the entire San Francisco Bay Area Congressional Delegation for their energetic support of BART. Over the years, you have facilitated federal support for a variety of important initiatives including the SFO Extension, the Oakland Airport Intermodal Connector Project, A & B Car Renovation, the BART Fruitvale Station Transit Village, and allocations of Western Area Power Administration (WAPA) electrical power. We honor your steadfast commitment to improving the quality of life in the Bay Area by addressing critical transportation needs. Though challenges lie ahead, working together we can create a brighter future for Bay Area travelers.

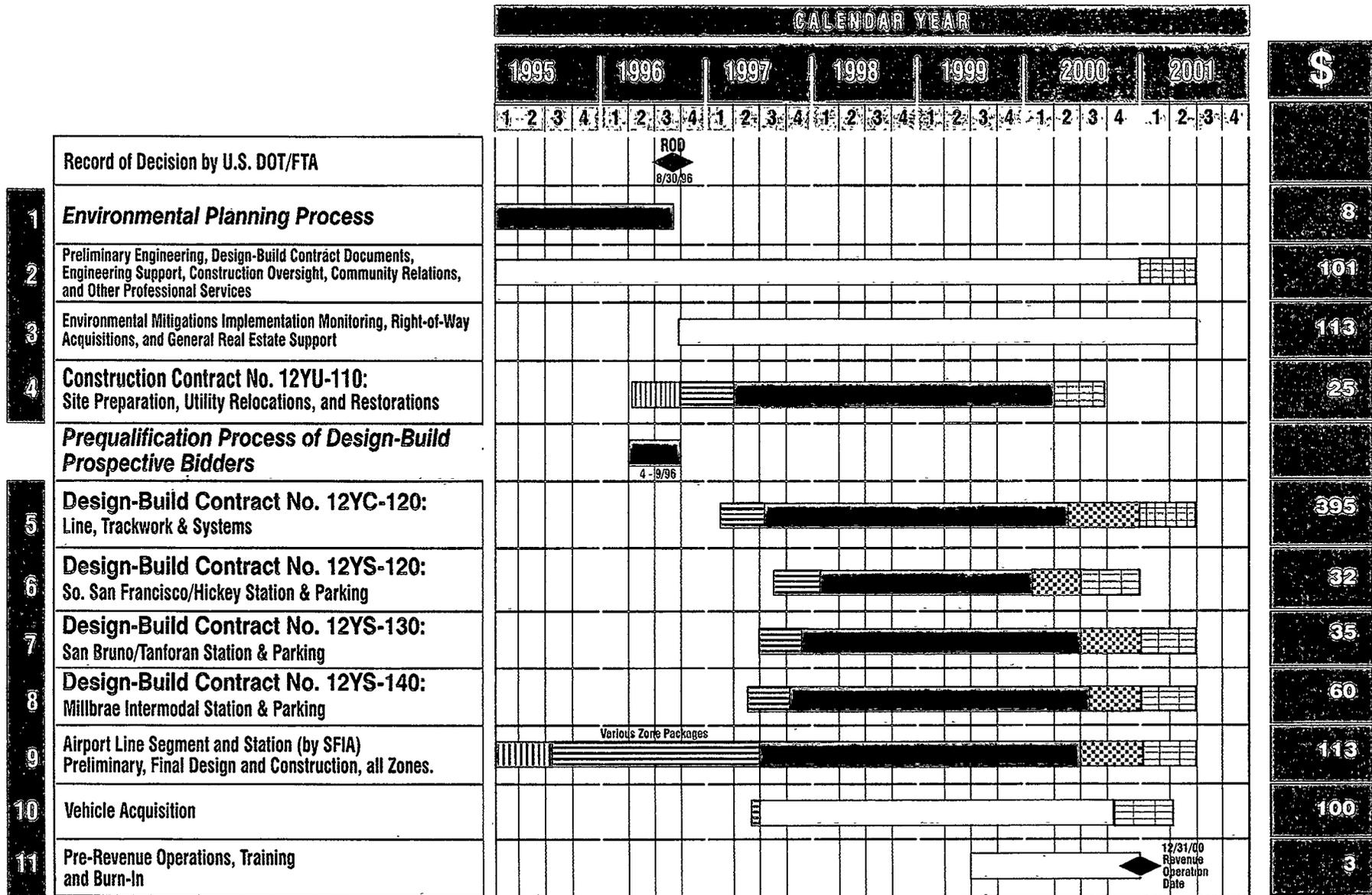
Sincerely,

Margaret K. Pryor  
President

# BART Extension into the San Francisco International Airport

## Project Implementation Plan

(Total Project Budget: \$ 1,167M in 1997 Dollars)



Rev. Date: 1/16/97

**LEGEND:**

	Advertise, Bid & Award		Final Design
	Integrated Testing		Closeout

12	BART Project Management and Support	37
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San Francisco Bay Area Rapid Transit District

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## MOBILITY FOR THE 21ST CENTURY

### *Message from General Manager, Thomas E. Margro*

As the 105th Congress gets underway, I am pleased to have this opportunity to update you on BART's critical expansion and systemwide renovation efforts and other initiatives aimed at enhancing customer service. Thanks to our Congressional representatives' dedicated support for the federal transit programs that have made these critical initiatives possible, we are hard at work preparing to meet the growing mobility needs of the San Francisco Bay Area in the 21st century.

### **Keeping the Bay Area Moving**

With a population of more than 6 million, the San Francisco Bay Area is the fifth largest metropolitan area in the nation, yet the third most congested urban area. By the year 2010, the regional population is expected to climb to 7.5 million, while the number of jobs regionwide will swell from 3 million to 4 million. These dramatic trends in growth will severely strain the Bay Area's already over-burdened transportation network, threatening air quality and long-term economic competitiveness. Keeping the Bay Area moving will increasingly require efficient and reliable transit service and BART is making steady progress to ensure that we continue to meet this growing challenge.

### **Efficient, Reliable Service**

For a quarter of a century, BART has provided efficient, convenient, safe and reliable rapid transit service to well over one billion passengers. Today, there are 37 operating stations on our 81-mile (and expanding) system serving Alameda, Contra Costa, San Francisco and San Mateo Counties. An average of 265,000 trips are made on BART every weekday for access to jobs, health services, recreation and shopping. Last year, annual ridership swelled to an all-time high of 74.2 million, thanks to three new station openings since late 1995. A rail farebox recovery ratio of 60.38 percent (July - December, 1996) - one of the highest in the country - and a dedicated local operating fund source enable BART to deliver consistently high quality service without any federal operating assistance.

### **New Station Openings Fulfill Promise of Expanded Service**

The December 1996 opening of the magnificent new Pittsburg/Bay Point Station in eastern Contra Costa County marked a major milestone for the BART Phase I Extensions Program: completion of the eight-mile, two-station Pittsburg/Antioch Extension. (See page 24 for Map of BART Phase I Extensions Program.) Revenue service to the new line's North Concord/Martinez Station began a year earlier. Meanwhile, BART is readying plans for initiating revenue service this summer on the new 14-mile, two-station Dublin/Pleasanton Extension in Alameda County. The Colma Station in northern San Mateo County, the first leg of the BART extension to San Francisco International Airport, opened its doors to the public in February 1996. Ridership at each station is on target with our forecasts and growing.

### **BART SFO Extension - Putting the Future on Track**

I am pleased to report that we have made extraordinary progress on the BART San Francisco International Airport (SFO) Extension and are preparing to shift the project into high gear as soon

as the Federal Transit Administration (FTA) executes a pending full funding grant agreement (FFGA) for the project. With a FFGA in place, BART will conclude site preparation and utilities relocation, acquire right-of-way and initiate the bid and award process for four major design-build construction contracts. These actions will generate a wave of economic opportunities as we achieve the region's long-awaited goal of connecting BART and SFO, the gateway to booming Pacific Rim trade.

### **Systemwide Renovation Efforts Produce Results**

Our comprehensive \$1 billion system renovation program is well underway and already producing results. This ambitious and essential undertaking will extend the life of existing infrastructure and assets, control costs, improve train availability and on-time performance, and build our base of customers. Last year, BART received the last of 80 new C2 train cars, featuring state-of-the-art train technology. Almost all of these cars were built locally by Amerail, formerly a division of Morrison Knudsen, in a converted steel plant in the East Bay community of Pittsburg. Refurbishment of BART's original fleet of 439 rail cars, a \$330 million contract conducted by AdTranz, will also take place at the retooled Pittsburg plant, providing hundreds of jobs for the next six to seven years. Other aspects of the overall system renovation project include rehabilitation of mainline systems, stations, train controls and communications, and shops and yards.

### **Leading Edge Technology**

Building on the District's legacy of tapping state-of-the-art technology, BART has teamed up with Hughes Aircraft to develop an advanced automatic train control system that will allow trains to operate at closer intervals and at higher speeds increasing the capacity of the existing system to carry more customers. The project is funded in part by a \$19.5 million military dual-use grant awarded in 1994 as part of the federal Advanced Research Project Agency's (ARPA) Technology Reinvestment Program (TRP). Initial prototype testing of the new system produced flawless results at the Hayward test track site. Phase 2 activities, installation and testing of the system at two stations and on 10 revenue cars, are underway and slated for completion in late February 1998. Phase 3, which will involve installation, testing, and operation of the system through the Transbay Tube, is scheduled for completion by the end of the decade.

### **Take BART all the Way to the State Capitol**

BART is broadening its role to encompass management of the Capitol Corridor intercity passenger rail service which provides Amtrak-operated service between the Bay Area and Sacramento. State legislation enacted last year transfers management of the Capitol Corridor service from the state to a regional joint powers board and designates BART as the managing agent over the contract operator. The state continues to provide financial support for the service. BART's new role in the Capitol's rail service will afford customers smooth, timed transfers between the two systems and lead the way for additional peak-hour weekday runs.

As the next millennium approaches, exciting new challenges and opportunities lie ahead. We look forward to working in partnership with our Congressional Delegation to ensure a bright future for the Bay Area with new station openings, a renovated core system and a new line to San Francisco International Airport.

## SUMMARY OF BART'S 1997 FEDERAL LEGISLATIVE AGENDA

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### **BART Recommends the Following Actions to the 105th Congress:**

- ▶ Concur on the Federal Transit Administration's (FTA) execution of a Full Funding Grant Agreement (FFGA) for the BART SFO Extension.
- ▶ Appropriate \$55 million in FFY 1998 to advance the BART SFO Extension.
- ▶ Include an authorization of \$449 million, in addition to BART's share of the region's unappropriated ISTEA authorization (\$217 million), to complete the BART SFO Extension in the Intermodal Surface Transportation Efficiency Act (ISTEA) reauthorization legislation.
- ▶ Reauthorize ISTEA in accordance with the Metropolitan Transportation Commission's (MTC) recommendations which emphasize the preservation of a strong federal transportation program, opposition to efforts to repeal the federal gas tax, and maintenance of the existing transit program structure and flexible funding provisions.
- ▶ Provide funding and regulatory relief to enable transit operators to meet the Americans with Disabilities Act (ADA) mandates, thereby fulfilling the promise of this landmark legislation.
- ▶ Provide funds for a planning study of the Oakland Airport Intermodal Connector Project, a collaborative venture sponsored by the Port of Oakland, the City of Oakland and BART.

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## FULL FUNDING GRANT AGREEMENT (FFGA) FOR THE BART SFO EXTENSION

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### FFGA Request

- ▶ BART strongly encourages the Senate Appropriations Committee to concur on the Federal Transit Administration's (FTA) immediate issuance of a FFGA for the project. FTA Administrator Gordon J. Linton has notified the House and Senate Appropriations Committees of his intention to execute a FFGA for the BART project, following a 60-day review period, which expired January 27, 1997.

### Resolution of Issues Raised by the House and Senate Appropriations Committees

- ▶ As described below, BART, the FTA and the Federal Aviation Administration (FAA) have fully addressed each of the issues raised about the project in the Conference Report which accompanied the FFY 1997 Department of Transportation (DOT) Appropriations Act.
- ▶ The FFY 1997 DOT Appropriations Conference Report instructed the FTA not to execute a FFGA for the project until:

1.) The FAA can certify that the financial contribution by the San Francisco International Airport (SFIA) is consistent with federal transportation policy and regulations.

**Status:** The FAA notified SFIA on October 18, 1996 that the airport's contribution to the BART project is consistent with federal transportation policy and regulations.

2.) A Memorandum of Understanding (MOU) between BART and SFIA is signed.

**Status:** On October 30 and 31, 1996, SFIA and BART, respectively, approved an MOU outlining each agency's responsibilities concerning the budget, schedule, construction insurance and maintenance and operation of the on-airport portion of the SFO Extension.

3.) The House and Senate Appropriations Committees are afforded sixty days to review the development of the project and notify FTA in writing that their concerns have been fully resolved.

**Status:** November 27, 1996 letters from FTA Administrator Linton to House Appropriations Subcommittee Chairman Frank R. Wolf and then-Senate Committee Chairman Mark O. Hatfield initiated a sixty-day review period, which expired on January 27, 1997.

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- ▶ On February 11, 1997, FTA Administrator Linton and Acting FAA Administrator Barry L. Valentine responded to Chairman Wolf's January 7, 1997 request for additional information.
- ▶ The FTA has clearly demonstrated a willingness to satisfy the letter and spirit of the FFY 1997 Conference Report language, which instructs the agency to withhold issuance of a FFGA for the BART SFO Extension until the Appropriations Committees have been afforded a 60-day review period. The 60-day window expired last month and the FTA has now thoroughly addressed every issue raised by the Congress.

#### **Delaying FFGA Poses Serious Risks**

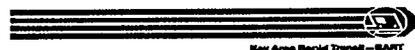
- ▶ Critical timing issues are at stake. It is imperative that construction of the BART SFO station proceed in parallel with the construction of the airport's \$2.5 billion International Terminal. Delaying the issuance of the FFGA dangerously threatens the ability of the airport and BART to meet the construction schedule and project budget. We risk losing the rare opportunity to simultaneously build these complementary infrastructure projects, and thereby, maximize cost efficiencies and customer convenience.

#### **FFGA Will Stimulate Economic Benefits**

- ▶ Issuance of a FFGA will mark a major turning point for the project. With the federal financial backing in place, BART will undertake major design and construction activities, from which the region will derive tremendous economic benefits, including thousands of new jobs.
- ▶ The BART SFO Extension epitomizes a nationally significant intermodal transit project, worthy of federal support. We urge the Congress to honor its commitment to the project established by the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 and reinforced with subsequent annual appropriations totaling over \$200 million to-date (including the Phase 1a Colma Station Extension). We respectfully request that the Senate Appropriations Committee allow the FTA to immediately execute a FFGA for the BART SFO Extension.

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## FFY 1998 APPROPRIATIONS REQUEST FOR SFO EXTENSION

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### FFY 1998 Appropriations Request

- ▶ For FFY 1998, BART requests that the Congress appropriate \$55 million in Section 3 New Rail Starts for the SFO Extension.

### Use of Funds

- ▶ As soon as the FTA executes a full funding grant agreement (FFGA), BART will use existing funds to conclude site preparation and utilities relocation. The FFY 1998 funds will be used to acquire right-of-way and initiate the bid and award process for four major design-build contracts. There are separate design-build contracts for each of the three off-airport stations, plus another for line, trackwork and systems. See page 8 for Project Implementation Plan.

### Past Appropriations

- ▶ Section 3032 of ISTEA authorizes a total of \$568.5 million for two Bay Area transit projects: 1.) the BART San Francisco International Airport (SFO) Extension (Phase 1a to Colma and Phase 1b to SFO) and 2.) the Santa Clara County Transportation Authority's Tasman Corridor Project in Santa Clara County. Listed below are the annual appropriations received to date for these projects.

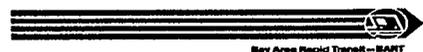
FFY 1990	\$ 28.5 million
FFY 1991	\$ 40.0 million
FFY 1992	\$112.8 million
FFY 1993	\$ 45.0 million
FFY 1994	\$ 28.2 million
FFY 1995	\$ 20.1 million
FFY 1996	\$ 10.0 million
<u>FFY 1997</u>	<u>\$ 27.5 million</u>
Total:	\$312.1 million

### Commitments Against Appropriations

Colma (Phase 1a, now complete)	\$124.0 million
SFO (Phase 1b)	\$ 83.9 million
Tasman	\$102.9 million
<u>FTA oversight</u>	<u>\$ 1.3 million</u>
TOTAL:	\$312.1 million

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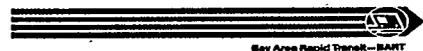


**Recent Project Milestones**

- ▶ In June 1996, BART and SamTrans certified environmental documentation and adopted a project, the Locally Preferred Alternative (LPA), which uses an aerial design approach at the airport for a savings of roughly \$200 million in 1996 dollars over the previous subway alignment. BART has subsequently performed final design on certain elements of the project, initiated plans for site preparation and utilities relocation, and drafted design-build contract documents.

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## ISTEA II - REAUTHORIZATION REQUEST FOR SFO EXTENSION

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### \$449 Million in New Spending Authority Sought for Phase 1b of the SFO Extension

- ▶ BART is seeking a new authorization of \$449 million to complete Phase 1b of the BART Extension to San Francisco International Airport, in addition to the project's share of the region's unappropriated ISTEA authorization (\$217 million). As illustrated below, this authorization request is determined by the total federal share of project costs, as established by the draft FTA full funding grant agreement (FFGA) documents - \$750 million - minus the amount of appropriations received to date for Phase 1b - \$84 million - minus BART's share of the region's unappropriated ISTEA authorization, which is assumed to be carried forward - \$217 million.

Total Federal Share:	\$750 million
Appropriations Received:	<u>- 84 million</u>
Subtotal:	\$666 million
Unappropriated ISTEA auth.	<u>- 217 million</u>
<b>ISTEA Reauthorization Request:</b>	<b>\$449 million</b>

- ▶ The total cost of the BART SFO Extension Project (Phase 1b) is \$1.167 billion. The Project Funding Profile on page 12 depicts the federal, state, local and San Francisco International Airport Commission (SFIA) financial participation in the project costs. The table on page 13 shows the project's cost, participation and yearly funding schedule.

### ISTEA Authorization and Contingent Commitment Authority

- ▶ ISTEA authorized \$568.5 million for the BART SFO Extension (Phase 1a to Colma and Phase 1b to SFO) and the Santa Clara County Transportation Authority's Tasman Corridor Project. The architects of ISTEA recognized, however, that both projects would require additional authorizations. For this reason, Section 3032(g)(2) stipulates that: *"In addition to the \$568.5 million provided under this section, the Secretary shall, subject to annual appropriations, issue full funding grant agreements to complete the projects using the full amount of the unobligated balance in the Mass Transit Account of the Highway Trust Fund."*

### Authorization Request Assumes Unappropriated Balance is Carried Forward

- ▶ Since 1990, Congress has appropriated a total of \$312.1 million against the \$568.5 million ISTEA authorization for the BART and Tasman Corridor Projects. These funds have been used to complete the first leg of the SFO Extension, Phase 1a to Colma, and to

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advance the Tasman Corridor Project and Phase 1b of the SFO Extension. However, an unappropriated authorization balance of \$256.4 million remains. Assuming that this \$256.4 million authorization remains in effect and is carried forward, the project requires an additional \$449 million in new spending authority.

### **Innovative Financing Measures**

- ▶ Innovative financing is an integral part of the BART SFO Extension Project Financial Plan and a centerpiece of the BART Phase I Extensions Program. Under an historic regional agreement reached in 1988, 100 percent of the costs associated with the BART East Bay Extensions - the newly operational two-station, eight-mile extension to Pittsburg/Bay Point; the soon-to-open two station, 14-mile extension to Dublin/Pleasanton; and a future BART extension in southern Alameda County - are borne by local, regional and state fund sources. Seventy percent of the funding required to pay for the overall BART Phase I Extensions Program is provided by local, regional and state sources, while 30 percent of the costs are borne by federal sources.
- ▶ At the core of the 1988 regional accord is a creative financing agreement negotiated between East Bay and West Bay officials, which has enabled BART extensions to proceed on both sides of the Bay, nearly simultaneously. In exchange for expanded BART service into San Mateo County on the West side of the Bay, SamTrans essentially agreed to buy into the BART system by contributing \$200 million (1988 dollars) toward completion of the long-awaited East Bay Extensions and agreed to pay the local match to FTA funds for the Phase 1a Colma Station Extension and Phase 1b SFO Extension.

### **Cost-Effective Project Implementation Strategies Save Time and Money**

- ▶ BART has aggressively pursued project implementation strategies aimed at maximizing the substantial federal, state and local financial investments in the project. In 1993, BART sought and won participation in the FTA Turnkey Demonstration Program which monitors and provides general staff support to four major transit infrastructure projects using the design-build contracting method favored by the private sector. The "turnkey" or design-build approach on the SFO Extension is expected to accelerate the project's final design and construction schedule and provide cost efficiencies and savings compared with conventional contracting methods.
- ▶ In 1995, in response to Congressional directives to reduce costs and project risks, BART modified the original Locally Preferred Alternative (LPA) which would have tunneled BART into the airport. Instead, the new LPA uses an aerial design approach at the airport for a savings of some \$200 million in 1996 dollars.

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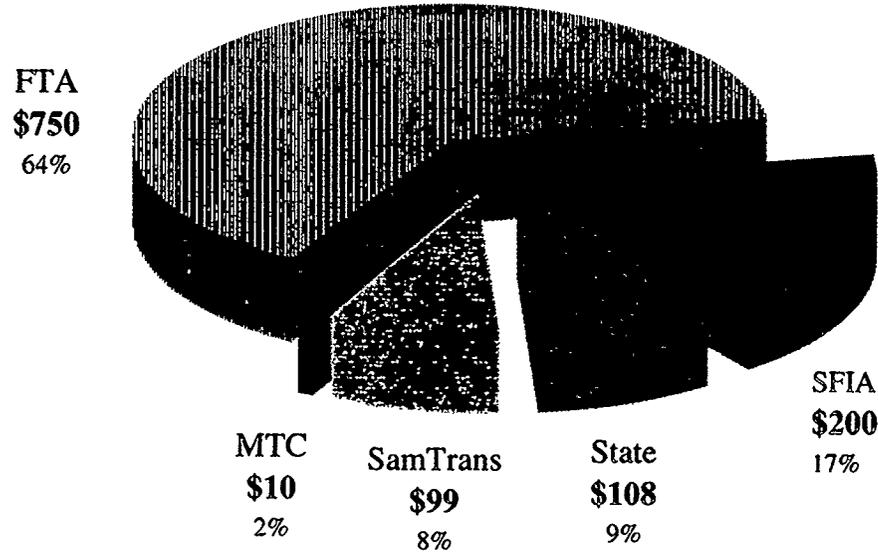
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- ▶ Once revenue service begins on the SFO Extension, the project is expected to become one of the most productive lines on the BART system, with an 85 percent farebox recovery ratio. Base fares are expected to cover all of the incremental cost of operating this extension. Operating expenses on the existing BART system are 100 percent locally funded: roughly 50 percent from fares, 50 percent from local sales taxes, with no federal operating assistance.

**BART EXTENSION INTO  
THE SAN FRANCISCO INTERNATIONAL AIRPORT  
PROJECT FUNDING PROFILE**

**Total Cost: \$1, 167 million (1997 dollars)  
(Includes \$40 million financing cost)**



**Legend:**

- FTA: Federal Transit Administration (US DOT)
- SFIA: San Francisco International Airport
- State: State of California, including Proposition 116 Funds
- SamTrans: San Mateo County Transit District
- MTC: West Bay Bridge Toll Funds

**BART SFO Extension Project  
 Cost, Participation and Yearly Funding Schedule  
 (X 1,000)**

FEDERAL FISCAL YEAR	FEDERAL CAPITAL PROGRAM FUNDS	STATE TCI	STATE FCR	STATE PROP 116	LOCAL WEST BAY BRIDGE TOLL FUNDS	LOCAL San Mateo County (SAMTRANS)	SAN FRANCISCO INT'L AIRPORT	YEARLY TOTAL
THRU 94	22,500	14,561				14,561		51,622
FY 95	33,000							33,000
FY 96	11,115	5,060			1,000			17,175
FY 97	17,308	7,300		10,000	375	5,139	5,542	45,664
FY 98	54,775	15,000	5,000		3,000	60,000	15,121	152,896
FY 99	74,000	16,079	10,000		3,000	19,300	27,034	149,413
FY 00	110,000		25,000		2,625		29,132	166,757
FY 01	160,000						10,171	170,171
FY 02	150,000							150,000
FY 03	117,302							117,302
Federal Project Total	750,000	58,000	40,000	10,000	10,000	99,000	87,000	1,054,000
Addl. SFIA Costs								113,000
<b>TOTAL PROJECT COST</b>	<b>750,000</b>	<b>58,000</b>	<b>40,000</b>	<b>10,000</b>	<b>10,000</b>	<b>10,000</b>	<b>87,000</b>	<b>1,167,000</b>

## SFO EXTENSION - PUTTING THE FUTURE ON TRACK

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The San Francisco International Airport (SFO) Extension is the cornerstone of a \$2.9 billion BART rail expansion program, seventy percent of which is financed by local, regional, and state revenues. Only the SFO Extension is a recipient of federal funds. The culmination of years of planning, analysis, consensus-building, and community and voter input, the project is the Bay Area's number one priority for federal New Rail Starts funds. Once complete, the project will help to fortify our nation's long-range economic health by efficiently transporting people to and from the greater Bay Area, the gateway to booming Pacific Rim trade. The effort to build the project is part of an extraordinary collective partnership among BART, San Mateo County Transit District (SamTrans), the San Francisco International Airport (SFIA), the Metropolitan Transportation Commission (MTC), the California Transportation Commission (CTC), the Federal Transit Administration (FTA) and the Bay Area Congressional Delegation.

### Project Description/Design

- ▶ The project will extend the BART system 8.2 miles south from the newly opened Colma BART Station (Phase 1a of the project) in northern San Mateo County, through the cities of Colma, South San Francisco and San Bruno to the San Francisco International Airport (SFIA), with an intermodal terminus station south of the airport along the CalTrain corridor in Millbrae. Page 17 depicts the line alignment and profile. Page 18 illustrates the CalTrain/BART cross platform transfers at the Millbrae Station.
- ▶ Stations will be located in South San Francisco, San Bruno, Millbrae and at SFO adjacent to the airport's future International Terminal. Parking garages and accommodations for buses and bicycles will be available at every station except SFO.

### A Critical Intermodal Link

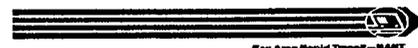
- ▶ The BART SFO Extension is a critical intermodal link in the region's transportation network. The project will dramatically improve mobility by providing a state-of-the-art connection between the 81-mile, four-county BART system and SFO, the fifth busiest airport in the country. The project will, for the first time, provide a seamless, cross-platform connection between BART and CalTrain at the Millbrae intermodal terminus station creating a vastly expanded regional rail network.

### Convenient for Travelers

- ▶ Designed for maximum customer convenience, the project will enable arriving BART passengers to immediately check luggage to all airlines. Over 60 percent of all airport-

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bound passengers will disembark within a five-minute walk of their airline ticket counter. Other passengers will be able to board the planned Airport Light Rail System for trips to more distant terminals and workplaces. Moving sidewalks, escalators and elevators will be also be readily available.

#### **Fosters Economic Growth/Saves Travelers Time and Money**

- ▶ The BART SFO Extension will play a vital role in the continued expansion of the California economy. The project will foster extensive business opportunities and create tens of thousands of jobs, with spill-over benefits to the economies of participating contractors and suppliers nationwide.
- ▶ Highway and transit users will save \$25 million annually in terms of time efficiencies, according to the environmental documents. In addition, the FTA estimates that the project will generate annual out-of-pocket savings of \$20 million for new BART passengers as compared to the cost of airport shuttle fares.

#### **Alleviates Traffic Congestion**

- ▶ The project will help to alleviate traffic congestion, reduce regional vehicle miles traveled, and improve air quality. According to the project's environmental documentation, by the year 2010, ridership on the new BART line is expected to reach 68,600 per day.
- ▶ Commuters on the San Francisco Peninsula currently face some of the worst traffic conditions in the Bay Area. The California Department of Transportation (CalTrans) reports that traffic on Peninsula freeways near SFO regularly exceeds existing highway capacities, particularly during peak commute periods. The project's environmental documents illustrate this point. The report found that traffic conditions on four consecutive segments of Highway 101 south of the airport are currently at levels D, E, and F during morning and afternoon commute hours. This on a scale of A through F, with A representing the best conditions, F the worst.
- ▶ SFO is already the single largest generator of traffic congestion on Peninsula freeways. And, unless transit alternatives to the airport are improved, air passengers and employees will face nightmarish traffic jams once SFO's expansion project is completed. The airport projects that the expanded capacity of the new 2 million square-foot, 24-gate International Terminal will result in a 70 percent increase in passenger travel by the year 2006, rising 51 million a year.

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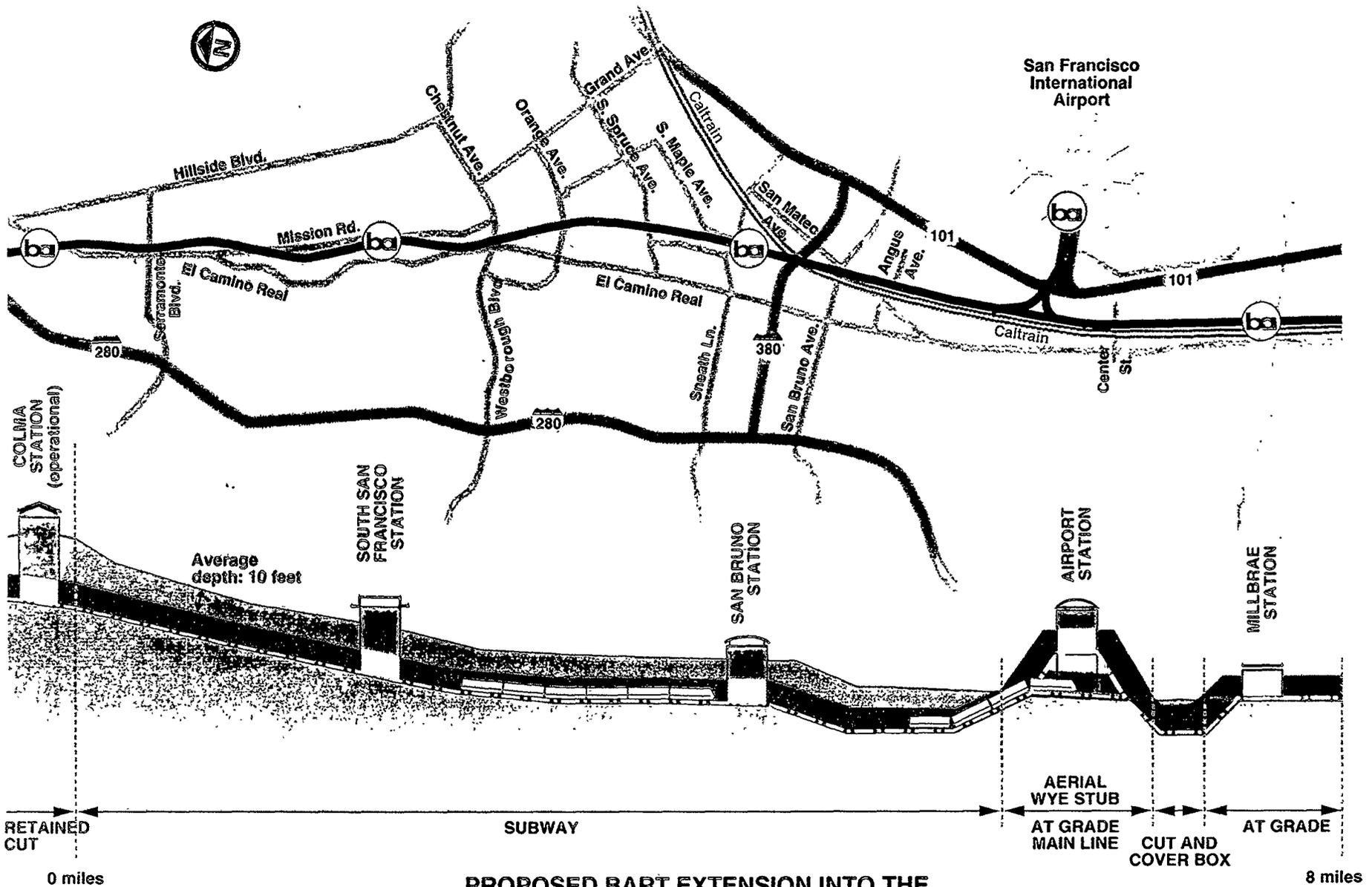


**A Top Transportation Priority**

- ▶ The project has captured the enthusiastic support of the traveling public, business leaders, civic groups, and elected officials. Cities impacted by the project have passed resolutions of support, voters in San Mateo County have twice approved ballot measures directing local funds to be used for the SFO Extension, every major daily newspaper in the BART service area has given editorial support for the project, and a June 1996 telephone survey of 800 Bay Area residents conducted by the San Francisco Chronicle found that over 80 percent supported the BART SFO Extension and wanted further extensions through San Mateo County.

**An Air Quality Improvement Measure**

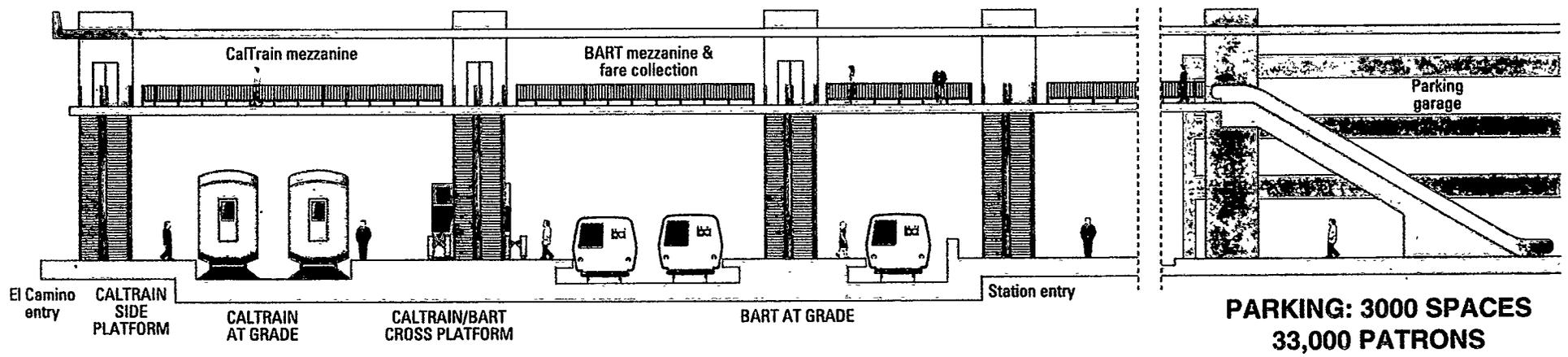
- ▶ Auto emissions account for a major portion of the Bay Area's air quality problem. In an effort to reduce emissions, the Bay Area Air Quality Management District (BAAQMD) has named the BART SFO Extension as one of the region's key transportation-related measures aimed at achieving and maintaining improved air quality.



NOTE: Proposed BART Extension into the San Francisco International Airport: Locally Preferred Alternative adopted by the BART and SAMTRANS Board of Directors November 28 & 29, 1995, and approved by FTA on January 3, 1996.

### PROPOSED BART EXTENSION INTO THE SAN FRANCISCO INTERNATIONAL AIRPORT

#### LINE ALIGNMENT AND PROFILE



**PROPOSED BART EXTENSION INTO THE  
SAN FRANCISCO INTERNATIONAL AIRPORT**

**MILLBRAE STATION SCHEMATIC STATION  
WITH CALTRAIN/BART CROSS PLATFORM TRANSFERS**

NOTE: Proposed BART Extension into the San Francisco International Airport: Locally Preferred Alternative adopted by the BART and SAMTRANS Board of Directors November 28 & 29, 1995; and approved by FTA on January 3, 1996.

## ISTEA II - POLICY RECOMMENDATIONS

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Reauthorization of the Intermodal Surface Transportation Efficiency Act (ISTEA), which expires on September 30, 1997, is likely to be one of the most significant transportation issues addressed by the 105th Congress. The measure will determine federal surface transportation policies and funding priorities through the end of this century and into the next. As the debate over the future of our nation's transportation program intensifies, BART encourages the Congress to enact a reauthorization bill that reinforces ISTEA's overall program structure, particularly the federal transit program.

BART shares the American Public Transit Association's (APTA) view that, *"Federal support for transit investments is a fundamental part of a balanced national transportation program that will strengthen our economic productivity and global competitiveness, improve the quality of life in our nation's communities, and provide all Americans with access to the broad range of affordable transportation services they need to lead fulfilling, productive lives."*

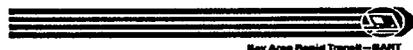
With this in mind, BART is particularly concerned about preservation of ISTEA transit programs that fund our crucial systemwide renovation project. These funding programs are helping to ensure that BART continues to provide reliable, quality transit service to Bay Area communities. Specifically, the Section 3 Fixed Guideway and Congestion Mitigation and Air Quality (CMAQ) Improvement programs will fund, through the year 2004, the largest component of our renovation effort: the rebuilding of 439 aging rail cars. The Section 9 Capital program provides funding for replacement of rail and automatic fare collection equipment.

BART also joins with the Metropolitan Transportation Commission in endorsing the following principles to guide the reauthorization of ISTEA:

- ▶ Support a continued federal role in transportation and oppose efforts to repeal or reduce the federal gas tax.
- ▶ Support ISTEA's basic program structure such as the Surface Transportation Program (STP), the Congestion Mitigation and Air Quality Improvement Program (CMAQ), the discretionary Section 3 New Rail Starts program, the Section 3 Fixed Guideway and Section 9 Capital programs as well as flexible funding provisions.
- ▶ Focus federal-aid funding on integrating and managing the various public and private elements of the transportation system.

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- ▶ Maximize federal investment by dedicating transportation taxes for transportation purposes and encouraging greater private sector investment.
- ▶ Fully fund implementation of the Americans with Disabilities Act (ADA) with additional federal resources that protect existing transportation funds. (See page 21 for further details.)

## ADA FUNDING - A NATIONAL IMPERATIVE

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In 1998, Bay Area transit operators will spend approximately \$59 million in operating costs to provide 3 million paratransit trips - van or taxi transportation to elderly and disabled individuals who are eligible for the service under the Americans with Disabilities Act (ADA). In the past three years, operators have more than doubled their spending for paratransit in order to comply with the January 1997 mandate of this civil rights legislation.

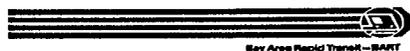
Demand for ADA paratransit service is expected to grow. Without federal support to offset these substantial new costs, transit operators will face significant challenges in maintaining long-term compliance with ADA's complementary paratransit provisions without negatively affecting the quality and quantity of existing fixed route transit service.

Congress must commit to helping public transit operators implement plans that are already in place to achieve and maintain compliance with the ADA. The ISTEA reauthorization legislation should, therefore:

- ▶ Reauthorize and fund the federal transit program at currently authorized levels.
- ▶ Allow flexibility in the federal transit program to extend the definition of eligible capital costs to include the contract costs of providing complementary paratransit services, as is proposed in President Clinton's FFY 1998 Budget.
- ▶ Extend the state and metropolitan planning requirements to include the participation of state and local social service programs that receive federal transportation funding administered by the Department of Health and Human Services.
- ▶ Establish a paratransit technical assistance program within FTA to assist public transit operators to identify and implement cost containment and productivity improvement strategies for ADA complementary paratransit services.
- ▶ Expand eligibility for funding within the Department's Intelligent Transportation Systems initiative to provide funding to public transit operators to identify, test, deploy and evaluate technology that will improve the productivity of ADA paratransit services.

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## OAKLAND AIRPORT INTERMODAL CONNECTOR PROJECT

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The Port of Oakland, the City of Oakland and BART are continuing to pursue federal seed money to advance the Oakland Airport Intermodal Connector Project, a three-mile, grade-separated fixed guideway system between the Oakland International Airport and the BART Coliseum Station. The intermodal rail transit project promises to offer millions of air passengers and employees convenient and reliable access to the Oakland International Airport, the fastest growing airport in California.

The project partners are requesting \$6.5 million in federal urban access/intermodal project funding to complete the planning phase of the Connector Project. The scope of the project would include a technology assessment, environmental review, design/build specifications and preliminary cost estimates.

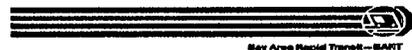
Currently, the Port, the City, and BART are contacting potential systems suppliers and initiating a review of appropriate technologies. The last feasibility study was completed in 1993 under the auspices of the Federal Transit Administration's (FTA) Suspended Light Rail Technology (SLRT) Demonstration Program.

A fixed guideway connection between the Oakland International Airport and the 81-mile, four-county BART system has been considered a key link in the regional transportation system for 25 years. The project is included in the BART Extensions Program, with initial studies going back to the early 1970s. An improved transit link is a critical component to maintaining sufficient ground access to the Oakland Airport.

Air traffic at the Oakland Airport has and will continue to grow dramatically, increasing from 9.8 million passengers in 1995 and to an estimated 22.4 million in the year 2010. The current bus link between BART and the Oakland Airport (carrying approximately 372,000 annual passengers) cannot be expanded to handle the 3.5 million annual passengers projected for an Oakland Airport-BART fixed guideway connector because of existing congestion on Hegenberger Road, the primary avenue of access to the airport. In addition, wetlands surrounding the area make an expansion of the roadway infeasible. A grade separated guideway system is therefore the best solution to these environmental and congestion mitigation issues and would easily accommodate the airport's growth.

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## EAST BAY EXTENSIONS FULFILL PROMISE OF EXPANDED SERVICE

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### **Pittsburg/Antioch Extension**

BART's Phase I Extension Program reached an historic milestone with the December 7, 1996 opening of the new Pittsburg/Bay Point Station: completion of the 8-mile, two-station Pittsburg/Antioch Extension in eastern Contra Costa County. The new station, and two others brought on line since December 1995, are part of BART's first expansion of the basic system in 20 years. (See page 25.)

Located in the median of Highway 4, the angular, modern Pittsburg/Bay Point Station offers passengers a variety of easy intermodal connections with bus bays, bicycle racks and lockers, motorcycle parking, patron drop-off areas, and a 2,000-space parking lot. Like the North/Concord Martinez Station on the same line, which opened a year earlier, the new station features new fare machines equipped to accept debit and credit cards as well as cash. An estimated 12,000 daily passengers are expected to ride the two-station extension by the year 2005. Financed exclusively with state and local funds, the new station was completed four months ahead of schedule and under budget.

### **Dublin/Pleasanton Extension**

Plans are well underway to initiate revenue service by mid-year 1997 to the newly completed 14-mile, two-station Dublin/Pleasanton Extension in Alameda County. Engineers have been carefully installing and testing complex state-of-the-art train control equipment. The challenge has been to integrate the new equipment with existing train control technology to ensure smooth, seamless service where the new line intersects with the main line at the Bay Fair Station. The process has proven to be technically very difficult, but we are making steady progress and expect to welcome customers to the new line in the near future.

### **Warm Springs Extension**

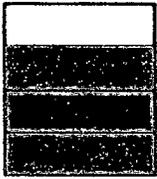
In June of 1993, the BART Board of Directors suspended all work on the Warm Springs Extension in southern Alameda County pending the resolution of several key issues: a lawsuit over the adequacy of the environmental document, a funding shortfall, and the lack of a rail connection to the project from Santa Clara County. Despite these hurdles, BART continues to support improved transit service in the Fremont-South Bay corridor.

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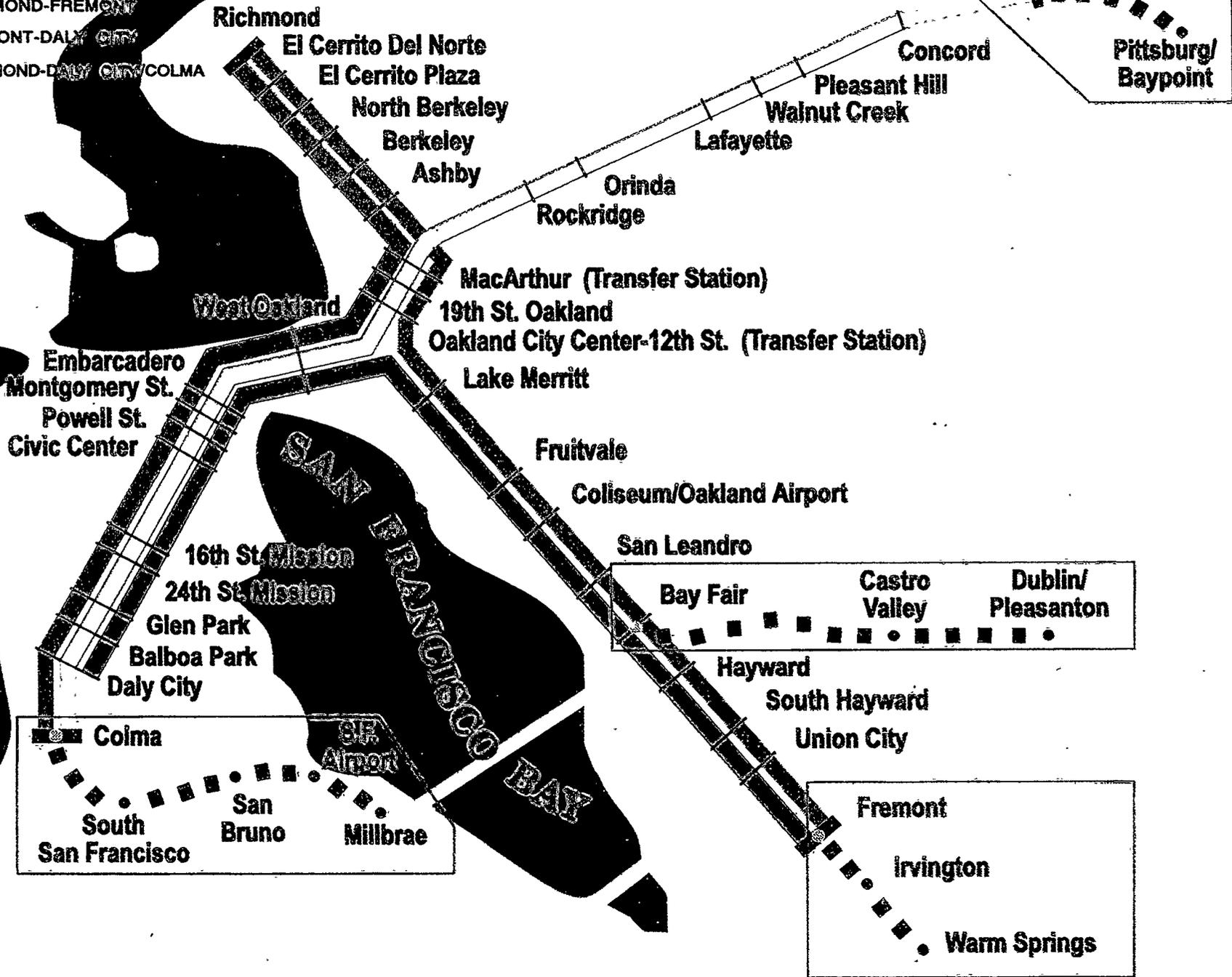
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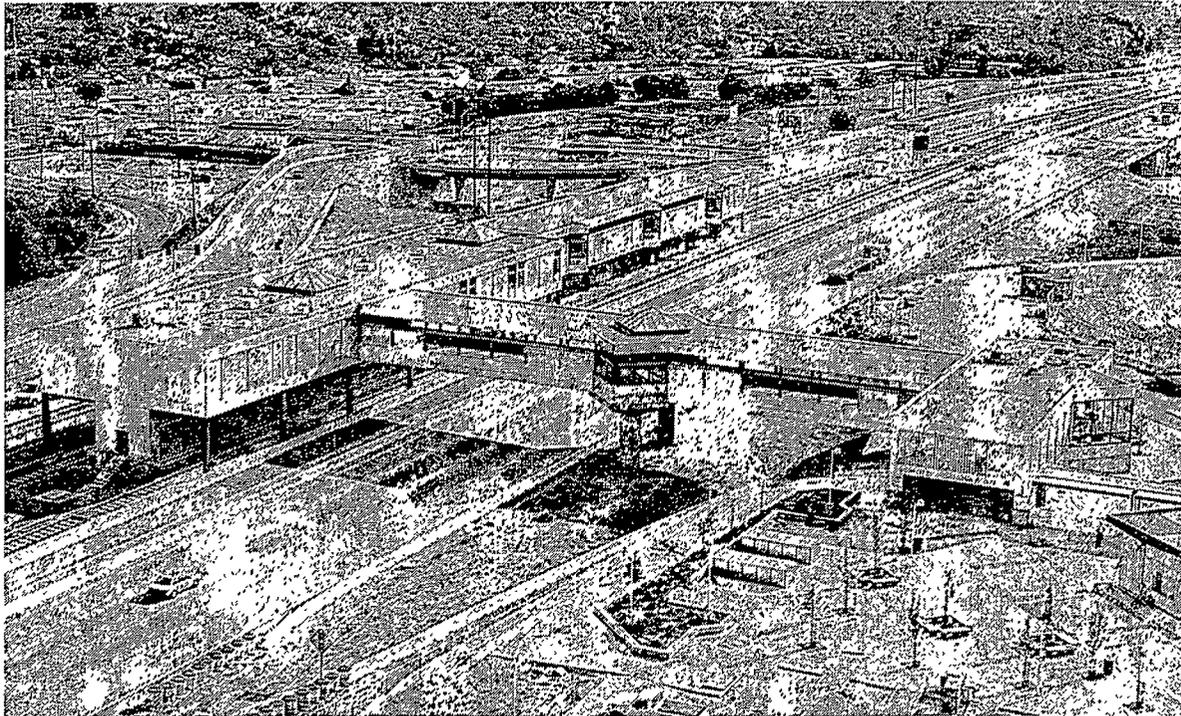


# BART Extension Program

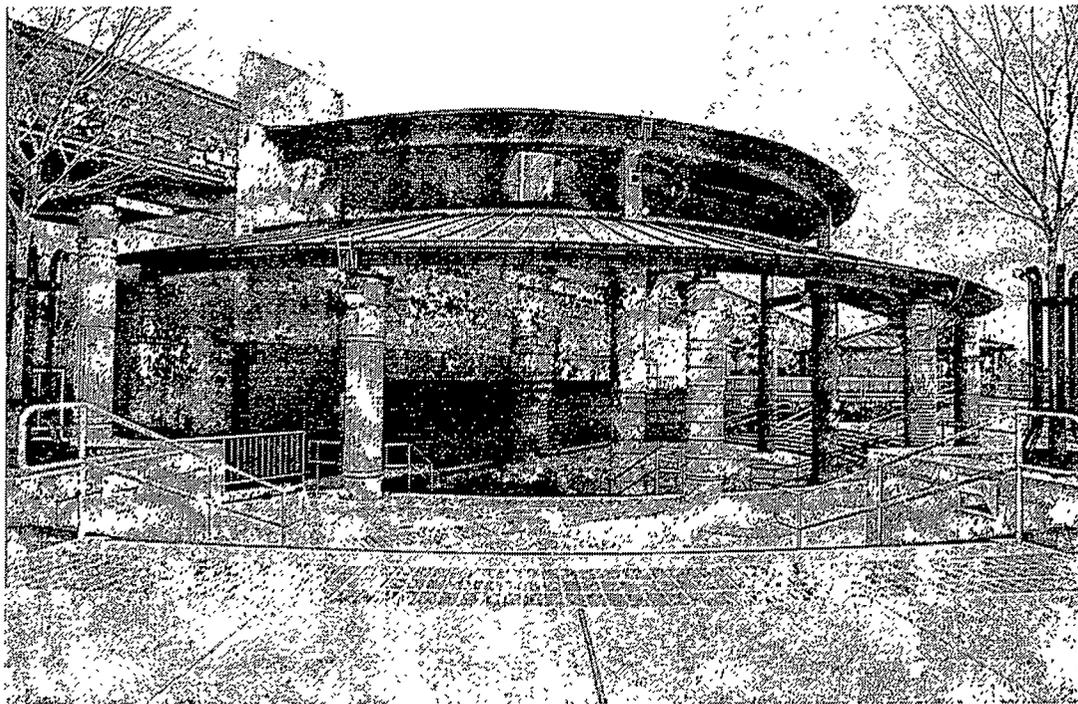


N. CONCORD/MARTINEZ COLMA  
 RICHMOND-FREMONT  
 FREMONT-DALY CITY  
 RICHMOND-DALY CITY COLMA





The new Pittsburg/Bay Point Station opened in December 1996, and marked completion of the eight-mile extension into northeastern Contra Costa County.



The Castro Valley Station's portico. Castro Valley is one station along the new 14-mile extension into eastern Alameda County. The new line, scheduled to open in mid-1997, will end at the Dublin/Pleasanton Station.

## SYSTEMWIDE RENOVATION PROJECT PRODUCES RESULTS

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### **Background**

When revenue service was initiated in 1972, everything was state-of-the-art and BART was heralded as the most modern automated rail system in the world. Now, more than two decades later, BART is no longer the same sparkling new system. Although the transit system operates at a high degree of reliability, BART has begun an essential \$1 billion, 10-year renovation program to ensure that we continue to deliver quality passenger rail service into the 21st century. The program will overhaul the entire 25-year-old system from tracks to third-rail and from upholstery to the computers that control the spacing of trains.

### **Rolling Stock Replacement and Renovation**

The renovation of the District's original fleet of 439 A & B cars, the largest single component of the renovation program, will replace worn out and obsolete components, improve reliability and bring the cars into compliance with the requirements of the Americans with Disabilities Act (ADA). The cost of remanufacturing a vehicle is estimated at approximately 50 percent of a new car cost. The renovation work is being conducted locally at a converted steel plant in the East Bay community of Pittsburg. The same plant was used to build 80 new C2 cars, the last of which BART obtained in 1996.

### **Mainline**

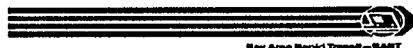
Many components of the trackway and traction power systems are failing with increased frequency and must be reconditioned or replaced. Mainline renovation will prevent rail and traction power failures which would cause disruption and delays to revenue service.

### **Stations**

The latest chapter in the renovation program is now underway with eight stations getting a complete overhaul. The stations, two on each of the four lines, will receive fresh coats of paint, high pressure cleaning, upgraded lighting, new restrooms, updated emergency lighting and fire alarms, improved landscaping and irrigation, and damaged concrete will be replaced or repaired. The cost of the one-year program is approximately one million per station, which is financed by a three-year phased-in fare increase adopted by the Board January 26, 1995. Other station improvements systemwide include the replacement or repair of escalators and elevators and modernizing the fare gates and ticket vending machines. The remaining stations will be renovated as funding permits.

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### **Control and Communications**

The highest priority Controls and Communications Renovation projects include: replacement of on-line operational computer control systems (NXTGEN Program), replacement of radio network, testing and installation of advanced automatic train control, replacement of work station consoles in central control, replacement of maintenance vehicle detection devices, renovation of wayside train control, replacement of electronic display destination signs, replacement of Maintenance and Reliability Information System (MARIS), and replacement of yard voice recorders.

### **Shops and Yard Renovations**

The purpose of this program of projects is to address the deterioration of the shops and yards due to more than two decades of continuous use and age, and to provide adequate facilities to store and maintain a growing fleet of revenue vehicles. These projects will improve passenger transit service by improving revenue vehicle reliability through better maintenance, and by reducing vehicle out-of-service time and keeping as many vehicles in service as possible. The highest priority shops and yard renovations projects include: maintenance of adequate non-stock repairable parts inventory, replacement of wheel truing machine, replacement of dust collector systems, construction of a new central receiving and distribution warehouse facility, replacement of washing facilities, improvement to employee facilities, overhauling of transit vehicle washers, renovation of transportation buildings, reconditioning of shop cranes, and installation of yard fuel tanks.

### **Work Equipment**

The purpose of this program is to replace worn and obsolete maintenance and service vehicles and maintenance equipment. This equipment includes such items as tools, power generator sets, light towers, ground and buildings maintenance equipment, and track maintenance vehicles.

## PROPERTY DEVELOPMENT PROGRAM: INNOVATIVE MANAGEMENT OF TRANSIT FACILITIES

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### **Background**

BART is the custodian of a large-scale public investment which includes important real property assets. In many cases, these properties can sustain additional profitable uses supportive of the District's primary transit function. Through careful management, these assets can be used to promote transit ridership and contribute significantly to the on-going financial viability of the transit system. At the same time, these property development initiatives offer attractive investment opportunities for the private sector and facilitate local economic development goals.

Some of the tangible benefits to communities are: a) increased property and sales tax revenues; b) affordable housing (in some cases); c) reduced air pollution, traffic congestion and energy consumption; d) creation of development opportunities; and e) more effective development patterns (i.e., concentrated development around existing infrastructure).

In 1984, the BART Board of Directors adopted the following property development goal:

*To generate new sources of income (and/or capital offsets) and to increase transit ridership through cooperative public/private sector development projects on or near District-owned properties.*

### **Examples of BART's Property Development Program**

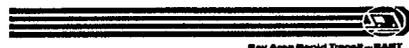
**Castro Valley:** 96-unit affordable housing project under construction. A BART Zone Command Police Facility is being constructed at no expense to BART.

**Hayward:** Property exchange completed with City. Phase I is under construction and consists of a new City Hall, pedestrian plaza connecting BART's station to the downtown area and 5,000 square feet of retail. Phase II is under negotiation and could consist of the sale of BART ground with construction and sale of 85 market rate houses.

**El Cerrito del Norte, El Cerrito Plaza, Fruitvale, Pleasant Hill:** Developers secured for each station, projects in various phases of definition, and long-term ground leases being negotiated.

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**MacArthur, Richmond:** Authorization to solicit for private development approved by the Board. Working with local jurisdictions to pursue development.

**Bay Point, Union City:** Conducting feasibility assessments with cities and communities.

**Real Estate Feasibility Study - Federal Transit Administration (FTA) Grant**

This project is a consultant study aimed at identifying a more efficient and flexible manner in which to implement the District's property development program. Significant legal obstacles exist which prevent the District from effectively conducting property development (e.g., inability to purchase real estate for development purposes). A draft final report has been prepared and is under review by the Metropolitan Transportation Commission (MTC) and the FTA.

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## FOSTERING IMPROVED INTERCITY PASSENGER RAIL SERVICE

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Although many perceive BART as the operator of only its four-county rapid transit system, it is now playing a broader role with respect to new passenger rail corridors. One such corridor, the Capitol (Sacramento-Oakland/SF-San Jose), provides passenger rail service between the Bay Area and the Sacramento area and is part of the state intercity rail system.

In July 1996, the California legislature passed the Intercity Rail Passenger Act, which established the institutional arrangements to transfer governance and management for the Capitol Corridor Rail Service from the state to a regional board known as the Capitol Corridor Joint Powers Board (CCJPB). This transfer gives local transportation officials oversight and direction in the provision of passenger rail service. As part of this transfer, BART was named a member of the CCJPB and the managing agent for the service, responsible for administering the contract operator, which is currently AMTRAK. The state will coordinate the Capitol Corridor with other passenger rail services and provide financial support through the annual state legislative appropriations process. The Capitol Corridor service also benefits from local match contributions. Local transit systems increasingly connect with Capitol Corridor stations and benefit from new regional mobility opportunities and the influx of transfers.

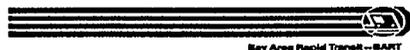
BART's involvement in the Capitol Corridor service will offer the opportunity to extend our trunk line rapid transit system and to develop new public transportation linkages. Plans include increasing the frequency of train service dependent upon upgrading track, expanding rolling stock, securing track capacity from Union Pacific and instituting better coordination with local transit agencies to provide quick and inexpensive intermodal transfers.

To operate within today's financial limitations, economies and service integration within the regional transportation system will be necessary. The CCJPB can focus priorities specific to the Corridor, including local transit system coordination and the need to optimize use of the region's operating and management resources. Ridership of California's passenger rail service is growing, a trend reflected in the Capitol route's success. Over the past year, the Capitol route had the highest ridership and revenue growth rate in the state, up 41 percent from last year.

The CCJPB is scheduled to assume administration of the service on July 1, 1997.

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## INVESTING IN INNOVATIVE TECHNOLOGIES

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### Fiber-Optics Telecommunications System

#### *Generates Operating Revenue*

BART is the first rapid transit operator in the nation to leverage 100 miles of right-of-way to develop a major component of the Bay Area's rapidly developing fiber-optic cable network. Under a lease agreement with MFS Network Technologies, Inc. and Pitney Bowes Credit Corp., fiber optics cable is being installed throughout BART's existing 81-mile (and growing) right-of-way and throughout the new extension track. In exchange, BART will receive a state-of-the-art radio communications control system that provides bandwidth for all types of video, digital and voice communications. For added value, this public/private venture, valued at roughly \$40 million, maximizes taxpayers' investment in the extensions by creating a new revenue stream to help fund operations. Over the 15-year life of the lease, BART will get a share of the revenues generated from private use of its right-of-way that will pay for the capital investment.

#### *BARTNet: a New Generation of Computing and Communication Services*

Fiber-optics is facilitating an important component of the District's systemwide renovation program: upgrading computer and communication systems with state-of-the-art technologies. Known as BARTNet, this new generation of digital data communication systems is a real time data communication "intranet," based on mature and proven internet-working technologies. By providing the District with an infrastructure to move data more effectively, the new system ultimately enables BART to deliver higher quality customer service.

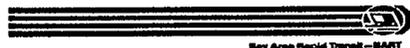
The scope of the BARTNet project is vast, affecting virtually every electronic communication system at BART from central train control operations to train destination signage at the stations to the administration's use of local and wide area network communication systems. A portion of this new fiber-optics based system has already been installed at 14 locations, including the five newest stations. Deployment will continue through the end of 1998.

### Advanced Automatic Train Control (AATC)

BART has teamed up with the Hughes Aircraft Company to form a Regional Technology Alliance to develop an advanced train control system that will allow trains to operate at closer intervals and at higher speeds while using less energy. The \$44.3 million project is funded in part by a \$19.5 million military dual-use grant awarded in 1994 as part of the federal Defense Advanced Research Project Agency's (DARPA) Technology Reinvestment Program (TRP). Operational

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efficiencies made possible by the AATC system are needed to maintain levels of service on the existing BART system as well as to facilitate the increased ridership and service demands associated with operating the extensions.

Phase 1, development and testing of prototype hardware and software was successfully completed in April 1996. Initial prototype testing of the new system produced flawless results at BART's 2.5-mile test track in Hayward. Phase 2 activities are now underway and are scheduled for completion in late February 1998. During this phase, BART will implement production hardware at the Lake Merritt and Fruitvale Stations and on 10 revenue cars. A major goal of the program is to obtain the California Public Utilities Commission safety certification which will enable BART to operate the design in revenue service.

As a defense conversion project, the AATC utilizes radios developed for the Army's Enhanced Position Location and Reporting System (EPLRS), which currently has a prohibitively high unit cost. By developing the technology commercially for transit systems, AATC would help lower the unit cost of EPLRS equipment by as much as 35 to 50 percent.

#### **Electric Station Cars Partner with BART for an All-Electric Commute**

BART has secured \$1.41 million in funding from the Federal Defense Advanced Research Projects Agency (via CALSTART), the Bay Area Air Quality Management District (BAAQMD), Pacific Gas and Electric (PG & E) Company, and the California Energy Commission (CEC) to support a two-year demonstration of 40 Norwegian-built electric station cars. The purpose of the program is to demonstrate the usefulness of electric cars for short, everyday trips to and from transit stations.

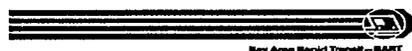
Employees of BART, PG & E, Sybase, Inc., and Bank of America are participating in the pilot project. The cars are used in a variety of settings: home to BART station, station to work site, and company pool cars for work sites. Likewise, recharging of the vehicles takes place at several locations: homes, four BART stations, and potentially at some work sites. Each vehicle is leased by a user for \$100 - \$150 per month.

#### **High Temperature Superconducting Technologies for Traction Power Support**

BART has initiated two FTA funded projects to study the applicability of high temperature superconducting (HTS) materials in transit applications. One is with American Superconductor Corporation to demonstrate a 300kVA DC-DC cryogenic power converter with an HTS coil at BART's Test Track, and to evaluate its efficacy in maintaining third rail voltage under varying

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loads. The second project with Pirelli Cable Corporation will produce a conceptual design and analyze the economic feasibility of using HTS feeder cables for traction power transmission. Through these projects, BART and the transit community will gain an understanding of the applicability, potential economic benefits, and operating requirements of HTS systems for traction power support and transmission.

The need to increase the third rail power capacity will become more severe as trains are added to the BART system and operated at closer headways. Inadequate capacity causes voltage sags at the trains and degrades system performance. One approach to maintain the required voltage level is to increase the number of substations, but this requires large capital expenditures for the installation of additional substations and feeders. Also, due to topographical constraints (e.g. Transbay Tube at BART) electrical substations cannot be added at some desired locations. A goal of these studies is to find lower-cost alternative approaches to improve traction power capacity.

## COMMUNITY-BASED CRIME PREVENTION AND SAFETY PROGRAMS

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BART's Police Department provides a safe and secure environment for over 265,000 weekday BART customers and 2,800 employees. Officers patrol stations, parking facilities, and platforms, and keep watch over all BART facilities and property.

### **Security Improvement Program**

With safety a top concern of many BART passengers, BART Police constantly strive to be visible and accessible. BART's recently implemented Security Improvement Program (SIP) has enabled BART Police to provide more visible and efficient coverage to all parts of the system by decentralizing its headquarters into three strategically located zone facilities. The SIP also includes improved lighting and emergency call boxes at BART parking facilities and an enhanced radio communications system in parking structures.

To combat auto thefts from BART parking facilities, the Police Department developed the BART Against Auto Theft (BAAT) program. BART passengers who use BART parking facilities place a special BAAT sticker in their auto's rear window. The sticker authorizes police to stop the car without probable cause. If the car is seen on the streets during the workday, BART police stop the vehicle to ascertain whether or not it might be stolen.

Graffiti is becoming a serious problem on BART trains and property. To prevent this form of vandalism, BART has adopted a zero tolerance policy that is the cornerstone of the new anti-graffiti campaign. "Don't 'dis the train," and "BART is your turf," are two of the advertising slogans aimed at patrons utilizing the system. Educational presentations are being implemented throughout the District to inform youths about the legal and financial consequences they may face when caught defacing property. The BART Tag Team (undercover police officers) has been very successful in apprehending "taggers" who etch their moniker into train windows and draw and paint on seats and walls. The anti-graffiti program is new, but it already shows tremendous success.

### **Community Participation Program**

This program brings together BART and the communities it serves to promote safety on the BART system. Service awards were presented to local community programs to assist in promoting a safer and more secure environment in and around BART stations.

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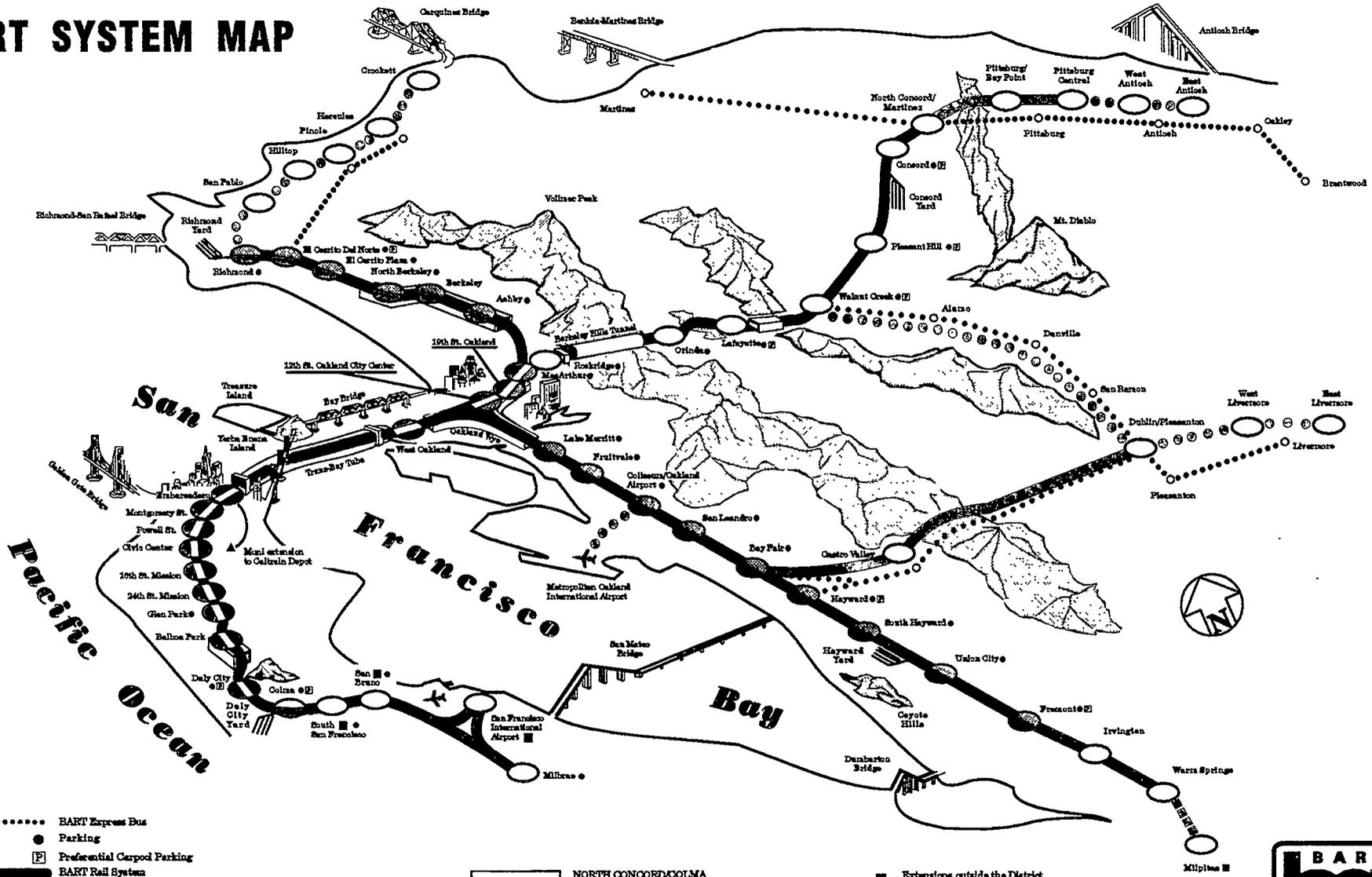
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One service award was presented to two elementary schools in Contra Costa County for the creation of a "Student Safety Guide." Under the supervision of their teachers, the students will write much of the text and design the art work. They will explain in "kid-talk" how the system operates, how to safely ride the trains and many other issues important to kids. The workbooks, interactive computer disks and a complementary video will make up the final package, and will be available for use by all individuals and schools within the BART District.

Past awards have been made to the City of Berkeley for a station-to-parking lot escort program, and to San Francisco's City Center Partnership for promoting Community Service Ambassadors (CSA). The CSAs' provide information and direction for visitors, tourists and commuters alike. They serve as an extra set of "eyes and ears" for the police and can communicate via radio with central dispatch if police or medical assistance is needed. When requested they may also refer individuals to appropriate social services, shelters and food kitchens.

# BART SYSTEM MAP



- ..... BART Express Bus
- Parking
- Ⓟ Preferential Carpool Parking
- ▬ BART Rail System
- ▬ BART First Phase Extensions Inside District
- ▬ BART First Phase Extensions Outside District
- BART Second & Third Phase Extensions Inside District

NORTH CONCORD/COALMA  
 RICHMOND/COALMA  
 RICHMOND/FREMONT  
 FREMONT/DALY CITY

- Extensions outside the District are subject to a satisfactory cost-sharing arrangement.
- ▲ Muni Metro Turnaround and Extension. Under construction.



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