

Draft San Joaquin Regional Rail Commission Short Range Transit Plan

Fiscal Year 2006/07 - 2016



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SAN JOAQUIN
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Draft Short Range Transit Plan

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EXECUTIVE SUMMARY

SHORT RANGE TRANSIT PLAN SUMMARY

The San Joaquin Regional Rail Commission (SJRRRC) Short Range Transit Plan (SRTP) is a guide for the development of the Altamont Commuter Express (ACE) Service and potential to expand service into other corridors over the next ten years. The SRTP was developed with the goal of increasing the overall system ridership through a series of projects aimed to improve on-time performance, streamline support functions, expand connectivity and improve the safety and security of the system.

The SJRRRC SRTP takes a conservative approach to expansion with only a fifth and sixth rail proposed during the 10-year period. The SRTP documents and assesses the financial capacity of ACE to fund the projected capital, operating and service projects aimed to meet the goal of increasing the overall system ridership.

The Capital Improvement Plan emphasizes the purchase of a publicly owned alignment through the Altamont improvement projects such as the Tunnel Rehabilitation and the Shoe Fly Replacement that will greatly reduce run times and improve on-time performance.

Improvements at the ACE stations, securing shuttle funding and the continued efforts of San Joaquin Regional Rail Commission to explore additional ways to move riders to and from job sites will continue to expand the connectivity of the ACE system. SJRRRC is working on a Trade Corridor purchase which will greatly enhance rail transit for commuters.

Activities in system safety, security and communication will improve the safety and security of the ACE system.

Throughout the SRTP 10-year period, SJRRRC will continue to work to ensure that the support functions and services will be as efficient and streamlined as possible.

CHAPTER 1

SHORT RANGE TRANSIT PLAN

1.1. PURPOSE OF THE SRTP

As a regional transit operator, the San Joaquin Regional Rail Commission (SJRRC) is required by the San Joaquin Council of Governments (SJCOG), the Metropolitan Transportation Commission (MTC), and the Federal Transit Administration (FTA) to prepare and update the Short Range Transit Plan (SRTP) every two years.



The SRTP is designed to document SJRRC's ongoing transit development and planning process for a 10-year planning horizon. The SRTP is used as documentation to support the projects included in Regional Transportation Plan (RTP) for San Joaquin County and the RTP for the Metropolitan Transportation Commission.

The SRTP is used by MTC and SJCOG to develop regional transit capital programming documents that are the basis for programming and allocating state and federal funding. The SRTP provides the detailed planning justification for awarding operating and capital grants to ACE. These grants are programmed in the federal Transportation Improvement Program (TIP), as well as other state and regional funding programs.

In order to conform to federal and regional guidelines, the SRTP must contain the following elements:

- Documentation and support for annual operating and capital plans with emphasis on capital projects and service changes;
- Assessment of the financial capacity to fund the projected operating plan and meet the capital requirements associated with rehabilitation and service expansion, if anticipated;
- Documentation of regional coordination efforts, productivity improvement efforts, and ADA services;

- Justification for any required federal support that would necessitate programming at the federal, state, or regional level for capital projects; and
- Documented goals, objectives, and standards used to provide a basis for measuring an operator's performance. This will also address the efficiency and effectiveness of the service being provided.

This SRTP has been developed with these guidelines and requirements in mind.

1.2 AGENCY AND SERVICE OVERVIEW

The ACE service was initiated on October 19, 1998 with two (2) daily round-trip trains between Stockton and San Jose. The 86-mile ACE corridor parallels Interstate 5, Interstate 205, Interstate 580, Interstate 680, and Interstate 880. I-580 and I-880 are key congested corridors in Alameda and Santa Clara counties. On March 5, 2001, a third round-trip train was added to meet the growing ridership demand.

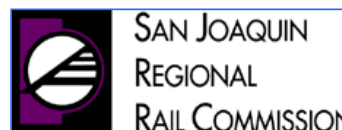
An integral part of the commute trip for nearly 60% of the ACE passengers is the connecting shuttle services at the destination stations. Transit providers in Alameda County and Santa Clara County provide services coordinated with the arrival of trains for the crucial link to jobsites. For more information regarding the shuttle services, please see Section 3.1.

1.3 ORGANIZATIONAL STRUCTURE

The Altamont Commuter Express Service is governed by the eight-member San Joaquin Regional Rail Commission Board of Directors consisting of six elected officials from the San Joaquin County and two elected officials from Alameda County who are voting members on issues relating to the ACE Service.



The San Joaquin Regional Rail Commission is the Managing Agency for day-to-day rail operations, planning, and support services, and has cooperative services agreements with the Alameda County Congestion Agency (ACCMA) and the Santa Clara Valley Transportation Authority (VTA) for funding of the operations/maintenance and the capital improvements associated with the ACE Service.



1.4 SJRRC GOALS AND OBJECTIVES

■ Goal Statement

The primary goal of SJRRC is to provide a cost-effective, sustainable commuter rail service that benefits the Central Valley, Tri-Valley and Santa Clara Valley, and is a tool in mitigating the impact of congestion along the I-5, I-205, I-580, I-680, and I-880 corridors. The SJRRC Board of Directors are committed to improving the ACE Service to be an effective alternative to single occupant automobiles, as well as, implementing Commuter Rail Service in the Central Valley between Stanislaus, San Joaquin and Sacramento Counties.

■ Strategic Directions

The SJRRC Board of Directors have identified a number of goals to provide direction for the future of the ACE service and future expansion of the ACE Service, such as connecting cities in the Southern part of the Central Valley with the rest of the Sacramento Region. The following strategic objectives or directions were discussed and identified as priority areas for the SJRRC work program in the near and mid-term future:

1) Insure long-term sustainability of the ACE Service

- The sustainability of the ACE service will depend upon matching the service levels to the available funding sources. Alameda, Santa Clara and San Joaquin Counties rely primarily on locals sales tax revenues to support the ACE service, and advance planning work will be necessary to justify ACE projects in future sales tax measures or other revenue programs.

2) Secure a long-term facility for the maintenance and storage of ACE and Central Valley Rail Service equipment

- The Trackage Rights Agreement with Union Pacific included an initial 2-year lease of a temporary maintenance facility in Stockton while the success of the ACE service was being evaluated by the Member Agencies. The lease expired in October of 2000 and Union Pacific is currently extending the lease on a month-to-month basis. However, because of mainline track interference associated with this site, Union Pacific is requiring that the ACE trains move to a new maintenance facility. Further, Union Pacific has indicated that no expansion beyond the 4th train will be permitted until the facility is complete.

3) Increase overall ACE system ridership

- The current ACE train schedules are primarily structured to serve the major employers in the Silicon Valley. The schedule, along with the limited number of trains in service, combines to result in under serving the employment centers in Pleasanton, San Ramon, Dublin and Livermore

along the I-580 corridor. Strategic efforts in overall marketing to all employment centers and focused marketing to better serve the Tri-Valley employers will be required to attract new riders.

4) Improve on-time performance and track speeds

- Though the ACE system averages nearly 80% on-time performance (see Chapter 5 on System Performance), there continues to be a number of train delays each month due to the condition of the track and the antiquated nature of the signalization system. A dedicated program of infrastructure rehabilitation and upgrade will be required to provide the service reliability necessary for employee work schedules.
- Additionally, for the ACE service to be attractive to commuters, travel time has to be improved to provide a competitive alternative to driving. The Board of Directors has directed staff to work with Union Pacific Railroad to develop a capital program that will improve track geometry and improve track segments that contribute to the delays and potentially reduce the current 2-hour and 10-minute travel time to below 2 hours. The program is identified in Chapter 6, the Service Improvement Program.
- The ACE Trade Corridor Study is currently underway and is designed so that the San Joaquin Regional Rail Commission can secure future rail access for its fleet of trains and passengers. The Trade Corridor Purchase is further discussed in Section 6.1 of this Short Range Transit Plan.

The SJRRC Board of Directors will measure progress against these goals by evaluating the success of the work program as part of the annual budget process.

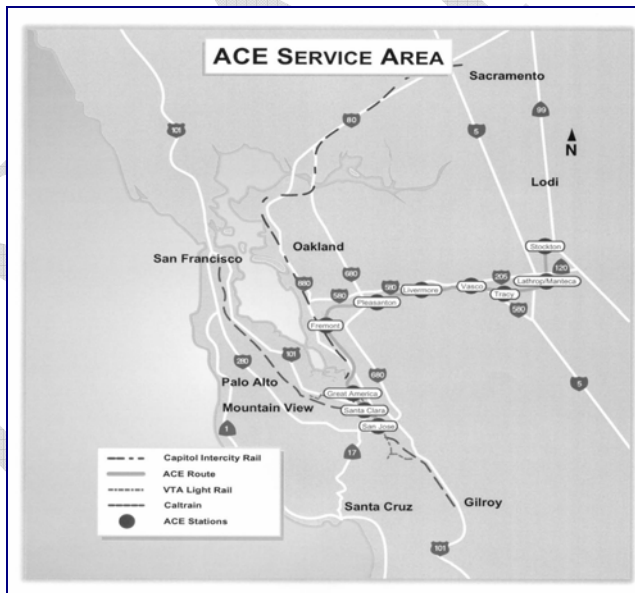
CHAPTER 2

ALMAMONT COMMUTER EXPRESS SERVICE DESCRIPTION

2.1 ACE SERVICE AREA

The 86-mile ACE corridor directly serves three counties and eight cities between the Central Valley and the Silicon Valley. The trains stop at three San Joaquin County stations (Stockton, Lathrop/Manteca, and Tracy), at four Alameda County stations (Livermore (2), Pleasanton, and Fremont), and three Santa Clara County stations (Great America, downtown Santa Clara, and San Jose Diridon). Please see Service Area Map.

FIGURE 1 – Service Area Map



Note: Due to track construction at California Pacific Coast, the Downtown Santa Clara station stop has been suspended until the end of construction. A Shuttle from the Great America Station will serve the station during the construction period.

The population of the three-county ACE service area was just under 3.7 million in the year 2000. By 2025, the service area is expected to grow by over 24%, an



additional 910,000 people. Employment opportunities over the same period are expected to grow by 33%, adding 648,000 jobs to the region. The majority of that job growth is anticipated in the key destination areas served by the ACE trains and shuttle services, such as Pleasanton, Fremont and Santa Clara County. The ACE service also draws significant ridership from surrounding areas such as Stanislaus and Contra Costa Counties, which have growth projections similar to the ACE service area. Continuing growth in population and jobs along the ACE service corridor will intensify the need for commute alternatives to the ever worsening highway congestion.

2.2 SERVICE CHARACTERISTICS

The ACE corridor utilizes track owned by Union Pacific Railroad (UPRR) between Stockton and Santa Clara, and utilizes Peninsula Corridor Joint Powers Board (PCJPB) track between Santa Clara and San Jose (approximately 4 miles). Union Pacific dispatches the trains on their segment of track and Amtrak dispatches the trains on the PCJPB segment.

Track conditions and track speeds along the ACE corridor vary greatly. Approximately 52 miles of track along the corridor allow between 60 MPH and 79 MPH train speeds, another 26 miles average 45 MPH and approximately 8 miles average 30 MPH. The end-to-end run time is currently just under 2 hours and 10 minutes. Future track upgrade projects will improve the run time to approximately 2 hours.

Three (3) daily round-trip commute trains are currently scheduled approximately 1 hour and 10 minutes apart. With morning departures out of Stockton starting at 4:20 a.m. and evening departures starting out of San Jose at 3:35 p.m., the ACE trains are primarily structured to serve the employment centers of the Silicon Valley. Train schedules designed to serve the Silicon Valley tend to under serve the Tri-Valley. Given the length of the ACE corridor, additional trains would be necessary to effectively serve Tri-Valley businesses without impacting Silicon Valley commuters.

A fourth daily round-trip, added in August 2006, offers midday service. The mid-day service is part of a collaborative effort between Caltrans District 10, Caltrans Division of Rail and SJRRC to help mitigate congestion on I-205 during Caltrans' I-205 widening project and also to replace a mid-day AMTRAK San Joaquin Bus between Stockton and San Jose with a train connection.

The length of the corridor and the limited number of round-trip trains also affects the scheduling of the train crews. With only three round-trip trains, the crews and equipment lay over in San Jose until the evening return runs. These underutilized resources may allow for future daytime service opportunities in order to increase utilization of labor and maximize return on the equipment investment.

2.3 ACE SERVICE IMPROVEMENTS IN FY 2006/07

In August 2006 ACE initiated a 4th roundtrip between Stockton and San Jose. This additional service is a partnership with Caltrans District 10 and Caltrans Division of rail to provide highway mitigation for the I-205 widening project in San Joaquin County, and as a replacement for 3 Caltrans/Amtrak bus connections between Stockton and San Jose for Caltran's San Joaquin Service.

During FY 2006/2007 installation of train security cameras and recording devices was completed in all cars and locomotives. This project was completed through funding from the Department of Homeland Security. The system will allow for recording of entrance and exit of passengers at all access points of the train. Cameras will also record from the lead of the cab car and locomotive to provide evidence and documentation of rail incidents.



During FY 2006 / 2007 ACE completed the first phase of installation of a real time GPS monitoring system. This system allows real time information and automatic messaging at stations to advise passenger of train status. ADA compliant signage and voice announcements are installed at Stockton, Lathrop, Tracy, Fremont, Great America, and San Jose. Our Operations Center, and Customer Service Department will have a map of the corridor that will display exact train location, and speed. This information will be used for customers and Incident First Responders. This is the same system that is in use on the Capitol Corridor and the San Joaquin services. ACE is prepared to complete installation of electronic signs at the remaining stations of Vasco Rd, Livermore, and Pleasanton in FY 2007/08 through funding through Alameda County and the Federal Transit Administration

With the growing use of technology, ACE installed a satellite Wi-Fi system available to all cars on the train. The system provides T1 connection speeds to all passengers on board the train. This service will provide the necessary infrastructure to supports ACE's electronic fare collection plan that is currently under development. ACE was the first rail property in the nation to use this technology. Wi-Fi services are provided through a unique partnership agreement between ACE and the University of Phoenix.

2.4 FARE STRUCTURE AND POLICY

The ACE fare structure is based on a point to point system that was adopted by the SJRRC Board in April 2006 and went into effect in August to coincide with the start of the midday train.. The zoned system that was previously used was replaced with a system that determines fares based on origin and destination stations. Figure 2 depicts the fare structure for the ACE system.

FIGURE 2 – Fare Chart

ALTAMONT COMMUTER EXPRESS REGULAR TRAIN FARES										
EFFECTIVE JULY 1, 2006										
ORIGIN STATION	DESTINATION STATION	LATHROP	TRACY	VASCO	LIVERMORE	PLEASANTON	FREMONT	G. AMERICA	SANTA CLARA	SAN JOSE
SKT	ONE WAY	3.50	4.50	7.75	7.75	7.75	8.75	11.00	11.00	11.00
	ROUND TRIP	4.50	8.75	12.00	12.00	12.00	15.75	19.75	19.75	19.75
	20 RIDE	38.25	67.75	96.00	96.00	96.00	124.50	153.75	153.75	153.75
	MONTHLY	71.00	123.25	176.75	176.75	176.75	229.00	282.50	282.50	282.50
LAT	ONE WAY		4.25	7.50	7.50	7.50	8.50	10.75	10.75	10.75
	ROUND TRIP		8.50	11.75	11.75	11.75	15.00	19.25	19.25	19.25
	20 RIDE		66.50	94.50	94.50	94.50	122.50	151.50	151.50	151.50
	MONTHLY		121.00	174.00	174.00	174.00	225.75	278.50	278.50	278.50
TRC	ONE WAY			4.25	4.25	4.25	7.50	8.50	8.50	8.50
	ROUND TRIP			8.50	8.50	8.50	11.75	15.00	15.00	15.00
	20 RIDE			66.50	66.50	66.50	94.50	122.50	122.50	122.50
	MONTHLY			121.00	121.00	121.00	174.00	225.75	225.75	225.75
VAR	ONE WAY				3.25	3.25	4.25	7.50	7.50	7.50
	ROUND TRIP				4.25	4.25	8.50	11.75	11.75	11.75
	20 RIDE				37.50	37.50	66.50	94.50	94.50	94.50
	MONTHLY				70.00	70.00	121.00	174.00	174.00	174.00
LVA	ONE WAY					3.25	4.25	7.50	7.50	7.50
	ROUND TRIP					4.25	8.50	11.75	11.75	11.75
	20 RIDE					37.50	66.50	94.50	94.50	94.50
	MONTHLY					70.00	121.00	174.00	174.00	174.00
PLD	ONE WAY						4.25	7.50	7.50	7.50
	ROUND TRIP						8.50	11.75	11.75	11.75
	20 RIDE						66.50	94.50	94.50	94.50
	MONTHLY						121.00	174.00	174.00	174.00
FMT	ONE WAY							4.25	4.25	4.25
	ROUND TRIP							8.50	8.50	8.50
	20 RIDE							66.50	66.50	66.50
	MONTHLY							121.00	121.00	121.00
GAC	ONE WAY								3.25	3.25
	ROUND TRIP								4.25	4.25
	20 RIDE								37.50	37.50
	MONTHLY								70.00	70.00
SCC	ONE WAY									3.25
	ROUND TRIP									4.25
	20 TRIP									37.50
	MONTHLY									70.00

DISCOUNT TRAIN FARES ARE 50% OF THESE REGULAR FARES

In the past nearly 70% of the passengers purchase the 20-trip ticket. This is due to the fact that unlike the monthly pass, 20-trip tickets do not have an expiration date, which provides flexibility for commuters who do not ride daily. Slightly over 28% of the passengers opt for the monthly pass.

2.5 TICKET SALES PROGRAM

Prior to the start of service, various methods of ticketing and fare collection were evaluated, ranging from automated ticket vending machines to manual sales. In addition, “barrier” systems such as those used by BART, and the “proof of payment” system used by the commuter systems such as Metrolink and COASTER, were also reviewed.

METHOD OF FARE COLLECTION

The barrier system proved cost-prohibitive, given the barrier free system utilized by the ACE service. Based upon the long distances between stations that allowed time for onboard fare inspection, the barrier-free proof-of-payment system was selected and implemented. The proof-of-payment system requires that the passenger purchase a ticket and validate it at a station validator machine prior to boarding the train. Once onboard, the passenger must display the validated ticket at all times to allow visual inspection by fare enforcement officers.



■ Ticket Sales at Stations

ACE provides ticket sales at the Stockton, Lathrop/Manteca, Tracy and Downtown Livermore, Pleasanton, and Fremont Stations prior to departure of the morning trains. Ticket sales are provided in the afternoons at the San Jose and Santa Clara Great America Stations.

Tickets are also available during regular business hours at the Stockton, Fremont and Pleasanton Stations, and in Downtown San Jose at the VTA ticket office.

■ On-Line Ticketing and Instant Ticketing

ACE was the first commuter rail agency to offer Internet On-Line Ticketing and Instant Ticketing to their passengers starting in 2004. Tickets for Daily, Weekly, 20 Trip and Monthly Passes are available via the Internet. You can purchase a ticket utilizing an online shopping cart which accepts all credit cards and have your ticket(s) mailed or sent overnight directly to the passenger.

“On Demand” Internet Instant Tickets are purchased using the same online shopping cart, but can be printed directly from your home or office printer. Instant Tickets are available In One-Way, Round Trip and a new one week ticket only available through the internet.

■ Employer Based Ticket Sales

ACE tickets are available at various employment centers in the Tri-Valley and Silicon Valley.

■ Electronic Ticket Sales and Validation System

As part of the Rail Commission's commitment to be an innovator in the industry we are working with Abanco and the Capitol Corridor Joint Powers Agency (CCJPA) to modify the system to fit the needs of both services.

In 2002 the CCJPA worked with Amtrak and Abanco to develop a ticket validation system that would electronically validate tickets used on Capitol Corridor trains. This system would allow the CCJPA to immediately validate tickets used on board, and would allow for On-Board ticket sales with real time validation of credit card sales. The system also allows a better accounting for on-board sales and insured timely compliance with established revenue remittance procedures. The other main component of the system is the ability to create a positive train manifest in real time. Even though concept for the project was completed, Amtrak was unable to implement it at the time.

Completion and implementation of the project will allow for the following:

- Station Ticket Sales
- On-Board Ticket Sales
- On-Board Ticket Validation
- Real Time Validation of Credit Card Transactions
- Internet Based Recharging of Fare Media
- Real Time Passenger Manifesting
- Detailed Ridership Data by Origin and Destination
- Automated Accounting Procedures
- Selling of other Services (i.e. Paramount Great America Tickets)

As part of the initial design of the system our entire ticketing and validation process would be automated. The system will also allow for future use of kiosk type vending machines at all stations. The COMmuter Electronic Ticket (COMet) system is expected to be operational in Fall 2008.



2.6 ACE PROMOTIONAL PROGRAMS

■ Five Free Days for New Rider

ACE effectively markets to commuters and workers in the Central Valley with innovative advertising strategies. We are able to reach the employee at their point of need by utilizing company sponsored transportation and benefit fairs, human resources department resources and targeted onsite promotions. Currently, ongoing promotions to potential new riders are being marketed primarily at places of employment. The new rider receives five free consecutive days of travel and a discount voucher worth fifty percent off of their first purchase of a monthly pass.



■ ACE Buddy Program

The Buddy Program has been a very successful program which encourages existing ACE passengers to invite new riders to the service by means of a free five day pass. If the new rider purchases a 20-trip ticket or monthly pass the existing rider is rewarded for their efforts with a fifty percent discount towards their next ticket purchase. This program consistently produces the greatest number of new riders of all our marketing efforts, proving personal referral is still the best promotion of all.

■ Loyalty Reward Program

In order to retain and attract new passengers on ACE trains, ACE continues to promote its Loyalty Reward Program. For every 11 consecutive monthly passes purchased, the 12th monthly pass is free. Promotion programs such as this help maintain and increase ridership each year.





2.7 PASSENGER AMENITIES PROGRAM

■ Emergency Ride Home Program

ACE has developed an Emergency Ride Home Program available at no charge to ACE passengers between the hours of 6:00 a.m. and 3:00 p.m. Under this program, ACE provides emergency ride home options depending on the severity of the emergency. These options include alternate trains, buses, shuttles, rental cars, or taxis. Qualifying emergencies include passenger illness, illness or accident of an immediate family member, or a home emergency such as fire or theft.

■ Amtrak Bus Service *(part of the San Joaquin's system)*

To achieve maximum utilization of public transit resources, Caltrans has partnered with SJRRC to create a dual purpose for existing Amtrak bus #3910 that allows the buses to stop at designated ACE stations and boarding points in order to allow ACE passengers to board/de-board. With slight modifications to the route and schedules, the buses now serve both Amtrak and ACE passengers. This provides ACE riders with the option of working late.

The Amtrak 3910 bus provides passengers with a 'last chance' to make their commute in the event they need to stay late after work or have simply missed their earlier trains. This bus runs an evening route from San Jose to Stockton that is parallel to the ACE corridor. Passengers have found it very useful and convenient.

CHAPTER 3

COORDINATION WITH LOCAL TRANSIT SERVICES

Many ACE commuters rely on several transit providers in the course of their home-to-work trips. Optimal ACE service requires a coordinated effort with connecting transit partners so that passengers can transfer conveniently to other transit modes. These same partners also provide support in the case of emergencies situations or service interruptions. This ongoing coordination is crucial for continued success. A commitment to this effort requires synchronized policies and procedures in addressing passenger needs for safety, connectivity, and information distribution. ACE has established cooperative relationships in the following areas:

ACE provides high quality services with continued collaboration with other transit agencies

3.1 CONNECTIVITY

■ BART, Caltrain, CAPITOLS, VTA Light Rail

The ACE service connects passengers with a variety of other rail options. These include:

- **BART** (via short shuttle trip) at the Pleasanton station;
- **Caltrain** at the Santa Clara and San Jose stations;
- **CAPITOLS** at the Fremont, Great America and San Jose stations;
- **VTA light rail** at Great America and San Jose stations.

The limitations of a three-round-trip train schedule present a challenge to match ACE train times to the transfers at the various locations along the corridor. Improving the connectivity with these systems will likely require that ACE offer additional trains with shorter headways. Another challenge for time-sensitive connectivity is the train delays that occur due to track and signal conditions or other train interference. Capacity and rehabilitation projects are imperative to ensure reliable connections to these transit links.

■ Cross-Ticketing with CAPITOLS

In an effort to demonstrate the overall benefit of cross-ticketing programs, ACE and CAPITOLS entered into a ticketing agreement that allows passengers to ride

on either system between San Jose and Fremont (including buses) with a valid ticket. The SJRRC will be evaluating the results of the MTC pilot TransLINK program for establishing a unified fare media for the Bay Area transit systems for possible future implementation.

Shuttles

Through agreements between the SJRRC and various transit providers, ACE passengers can access various dedicated shuttles and fixed route bus services free of charge to reach their final destinations. A significant percentage of ACE passengers rely on shuttle services at their destination stations, as the employment sites are not located within reasonable walking distance. Currently, approximately 75% of the morning passengers destined for the Vasco Road and Pleasanton stations transferred to shuttle services. Similarly, over 80% of the morning passengers destined for the Great America station used VTA shuttles or private shuttles sponsored by their employers (an average of over 680 passengers per morning).

In the ACE sponsored shuttle program where there is dedicated service between the ACE station and the jobsites, SJRRC contributes funds toward the shuttle services. These services include Livermore Amador Valley Transit Authority (WHEELS), Central Contra Costa Transit Authority (County Connection), and Santa Clara Valley Transportation Authority (VTA). Brief descriptions of the ACE sponsored shuttles and other supplemental shuttle services are listed below.

FIGURE 3 - ACE Sponsored Shuttles:

Sponsored Shuttles	Description
<p>CCCTA (COUNTY CONNECTION)</p>	<p>Provides service to the Pleasanton station from Walnut Creek via stops in Danville and San Ramon. Buses are then reversed to carry Pleasanton passengers back to Bishop Ranch Business Park in San Ramon. The service is reversed for the evening commute.</p>
<p>VTA</p>	<p>Providing the most extensive shuttle coverage for the ACE service, VTA offers dedicated ACE shuttles from the Great America station. Through third party contracting, a fleet of fourteen (14) vehicles provides service on eight (8) shuttle routes extending to the Palo Alto, Sunnyvale, and Milpitas areas.</p> <p>VTA also provides fixed route shuttles at the Santa Clara Station (Airport Flyer to the San Jose Airport, 15-minute intervals) and at the San Jose Station (DASH to Downtown, 10-minute intervals).</p>
<p>LAVTA (WHEELS)</p>	<p>Provides service to the downtown Livermore transit center via fixed route service with 20 to 30-minute headways on various routes. It also operates two dedicated fixed route services from the Pleasanton ACE Station to various Business Parks, as well as providing a direct link to the Dublin/Pleasanton BART station and Stoneridge Business Park.</p>

Dedicated shuttle services, in partnership with the ACE, are funded through a combination of Bay Area Air Quality Management District grants, local contributions and employer contributions in proportion to the ACE operations cost-sharing formula. However, these grant funds are not guaranteed in the future, and the identification of a dedicated source for this vital link to the jobsites is a significant priority.

Supplemental Shuttle Services:

Supplemental Shuttles	Description
AC TRANSIT	Operates a cross-bay Stanford Express (U Line) route partly funded by Stanford University, connecting with ACE trains at the Centerville Station in Fremont. Routes 210 and 211 also operate in the area along Fremont Boulevard in northbound and southbound directions. Major destinations along these routes include Ohlone College, Fremont BART and Union City BART.
MODESTO MAX	Modesto MAX provides service to the Lathrop/Manteca station via a shuttle originating at the Vintage Faire Mall Park & Ride lot, which costs \$2.00 each way for all passengers.
Lab Shuttle LLNL	The Lawrence Livermore National Laboratory provides private shuttle service for their employees, connecting with most ACE trains at the Vasco Road station.

SJRRRC is currently completing the Altamont Commuter Express Corridor Analysis to improve the existing shuttle services in the Tri-Valley and Silicon Valley areas.

FIGURE 4 – Shuttle/Fixed Route Providers by Station

ACE Station	Shuttle Providers
Lathrop/Manteca	Modesto MAX
Tracy	No service available
Downtown Livermore	WHEELS
Pleasanton	County Connection, WHEELS
Fremont	AC Transit, private shuttle operators
Great America	VTA, private shuttle operators
Santa Clara	VTA, VTA Airport Flyer
San Jose Diridon	VTA (Dash)

3.2 SAFETY/SECURITY PREPAREDNESS

The SJRRC has developed cooperative relationships in the areas of system safety and security. The related programs are described below.

■ Emergency Bus Bridges:

In the event of train service disruption, a quick and efficient response is necessary to maintain passenger convenience and confidence in the ACE system. Pre-arranged transportation options and timely communication to the passengers are the keys to success in this area.

ACE has agreements with transit agencies throughout the ACE corridor to provide alternative transportation in the event of a train service disruption. VTA assists within Santa Clara County; WHEELS and SJRTD serve the Alameda County and San Joaquin County areas. In a more limited capacity, A/C Transit can assist in the Fremont area, CCCTA can assist in the Tri-Valley area, and MODESTO MAX can provide supplemental support in San Joaquin County.

■ Safety/Security Programs:

SJRRC is committed to maintaining the maximum safety of passengers, staff, contractors, and the general public. To remain current on the best safety and security practices, SJRRC participates in the APTA System Safety Program Plan (SSPP), the California Operation Lifesaver Program, Department of Homeland Security Programs and all of the on-going APTA/FRA discussions on transit security and terrorism on passenger rail systems and utilizes the information discussed for improving station and system security. The programs in which SJRRC participates are described below:

■ APTA SAFETY/SECURITY PROGRAM

SJRRC participates in the APTA SSPP, which is audited by APTA and the FRA on a tri-annual basis.

The following policies and protocols have been established in the ACE SSPP.

- **Qualification:** Employees or contractors involved in the ACE service will be evaluated and determined to be qualified for the duties to which they have been assigned before being permitted to perform them. Each class or craft of employee has initial training and periodic refresher training schedules set by the department/organization in which they are employed. Additionally, there are provisions for remedial training, as necessary upon employee evaluation, to re-train employees to safety and successfully perform their duties. Each department sets the standards for determining proficiency of employees, in compliance with all applicable regulations.

- **Responsibility:** All employees and relevant contractors will be informed that they have the obligation to identify hazards, authorization to initiate action to mitigate/control them within the limits of the procedures in which they have been trained, and the responsibility to notify the appropriate authorities.
- **Assessment:** The system safety programs, policies and responses to hazards/accidents/incidents will be evaluated periodically to identify ineffective or outdated elements in the Plan.
- **Revision:** The SSPP (and the applicable safety practices, procedures, and documents) will be revised as necessary in response to evaluations and audits to incorporate effective responses and procedures.

■ SAFETY EVALUATIONS

SJRRC has an annual independent evaluation of the System Safety Program Plan for the ACE Service, which focuses on the following areas:

- Maintenance of Equipment
- Train Operations
- Stations
- Right-of-Way
- Staff/Train Crew Training
- Emergency Preparedness Plan

The safety evaluation in coordination with the SSPP provides a systematic approach to identify hazards and/or potential hazards and to resolve them in order to achieve the safest possible operating environment.

■ OPERATION LIFESAVER

As a member of the California Operation Lifesaver Organization, ACE actively solicits public/private schools and public interest groups along the Corridor, coordinating a schedule of presentations to educate students and individuals about railroad safety.

ACE also participates in “Operation Lifesaver” trains with the following agencies:

- Federal Railroad Administration (FRA)
- Union Pacific Railroad Company (UPRR)
- Burlington-Northern Santa-Fe Railroad
- Amtrak
- Local Law Enforcement Agencies
- California Highway Patrol

These trains are operated as part of Operation Lifesaver's National Public Awareness Campaign and are provided for students and the public.

■ REGIONAL TRANSIT SECURITY WORKING GROUP (RTSWG)

As a member of the Regional Transit Security Working Group, SJRRC works with Bay Area Transit Agencies, the California Office of Homeland Security and MTC to reach consensus on regionally significant security projects. These projects then receive funding from the Department of Homeland Security.

■ EMERGENCY RESPONSE COORDINATION WITH LOCAL AGENCIES

In addition to general training with local law enforcement agencies on emergency response procedures, SJRRC is also coordinating training and response programs through the following activities:

- Hosting annual Emergency Preparedness drills to familiarize first responders along the corridor with the ACE equipment.
- Participating in Emergency Preparedness drills with Caltrain JPB, Capital Corridor and Amtrak.
- Facilitating simulated hostage situation drills onboard the ACE train to familiarize hostage response teams with the ACE equipment and to identify the appropriate support actions by ACE contractors and staff.
- Videotaping the simulation drills for first responder agencies that were unable to attend the simulation for training and equipment familiarization purposes.
- Participating with the Bay Area Transit Agencies as part of the Regional Transit Security Working Group #2 (RTSWG). The RTSWG is charged with developing regionally agreed upon security goals and objectives. These goals and objectives in safety/security programs will be the basis for current and future funding from the Department of Homeland Security.
- Participating in tabletop emergency drills with other West Coast Commuter agencies.
- Maintaining a phone tree system for streamlined local response when ACE is notified of track hazards or trespassers near the track.

CHAPTER FOUR

EQUIPMENT AND FACILITIES

4.1 FLEET CHARACTERISTICS

The current ACE operating fleet consists of three 6-car train sets each pulled by one diesel-electric locomotive. Each train set has a seating capacity of 822, and all cars are accessible in accordance with ADA requirements. Four trailer cars have been modified with a unique storage design to accommodate 20 bicycles each, providing a smooth system for securing bicycles and avoiding seating conflicts. The total inventory is listed below and details of the fleet are outlined in Figure 5.



- Fifteen Bi-Level Coach Cars – Seating Capacity of 142 each
- Nine Bi-Level Cab Cars (includes 2 spares) – Seating Capacity of 134 each car
- Six Diesel-Electric Locomotives (includes 2 spares)

FIGURE 5 - Inventory of ACE Vehicle Fleet

MODEL YEAR	MANUFACTURER	TOTAL VEHICLES
1998	Bombardier	8 Rail Cars
2000	Bombardier	12 Rail Cars
2003	Bombardier	4 Rail Cars
1998	Motive Power Industries	3 Locomotives
2001	Motive Power Industries	2 Locomotives
Planned Acquisition	Unknown	4 Rail Cars
2006	Motive Power Industries	1 Locomotive

ACE has a proactive preventative maintenance program (PMP), which goes beyond federally required programs and can extend the expected life of the equipment from 20 years for a rail car, to over 50 years, as experienced by east coast agencies using a proactive PMP.



REGULATORY MODIFICATIONS

■ Passenger Rail Equipment Safety Standards (*PRESS*)

The American Public Transit Association (APTA) and the Federal Railroad Administration (FRA) have a Passenger Rail Equipment Safety Standards (*PRESS*) Committee which recommends modifications or changes to passenger rail equipment and other additional safety measures in response to data compiled from rail incidents over the past 10 years. As part of the recommended changes a number of modifications to the existing ACE equipment will be required over the next several years.

■ Environmental Protection Agency (EPA)

The Code of Federal Regulations, Part 89 describes the emission reduction measures for diesel engines. This includes both the locomotive prime engine and the Head End Power (HEP) unit. These reduction measures require that at the time of rebuilding/overhauling an engine, the rebuilt engine must meet specific improved emissions criteria. Typically engine manufacturers develop a modification kit to allow the rebuilt engines to meet the new emissions requirements, but to date neither Cummins nor Caterpillar, who supply the Head End Power engines for the ACE locomotive, plans to develop a modification kit for their engines. If modifications cannot be made to the engines at the time of overhaul to comply with EPA regulations, new HEP units will be required.

4.2 TRAIN LAYOVER AND MAINTENANCE FACILITIES

■ Stockton Facility

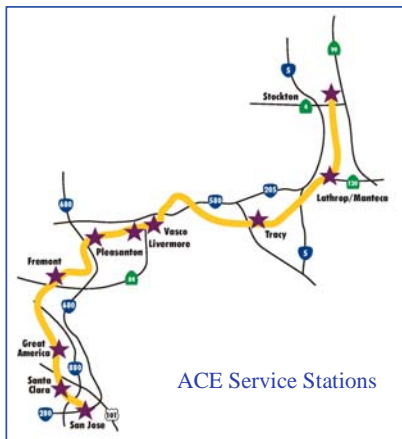
Prior to the start of service, SJRRC entered into a temporary 2-year lease agreement with the Union Pacific Railroad (UPRR) for use of their locomotive maintenance facility and layover yard in Stockton. The lease was a temporary arrangement to evaluate the success of the new service, prior to investing in a permanent maintenance facility. In October 2000, at the end of the 2-year lease period, UPRR agreed to extend the lease on a month-to-month basis with the understanding that ACE would proceed with acquiring a site and constructing the new facility. This requirement was reiterated in the Memorandum of Understanding (MOU) for the operation of the 3rd and 4th ACE trains, which states that SJRRC agrees to develop and construct an alternate maintenance facility that would eliminate the need for any SJRRC trains to cross over UPRR's mainline through Stockton and would allow for the termination of the current lease of UPRR's facilities at Stockton."

SJRRC is currently in the environmental study phase of purchasing a rail yard in Stockton. Upon FTA approval of the NEPA document the Rail Commission will proceed on the site purchase and initiate construction in late 2007.

■ San Jose Facility

SJRRC entered into an agreement with the Peninsula Corridor Joint Powers Board (PCJPB) for the use of daytime train storage tracks (for up to four trains) near the Santa Clara station. This agreement is re-negotiated annually after PCJPB has had an opportunity to evaluate related construction projects and available storage capacity. Expansion beyond four trains will require additional capital contribution to PCJPB for the necessary layover tracks and signaling.

4.3 STATION DESCRIPTIONS



The ACE trains serve ten stations along the 86-mile corridor. The member agencies from each of the three counties are responsible for the planning, engineering, construction, security and maintenance of stations in the county the station is located. The exception to this is that any system wide improvements such as an automated ticketing system, security or informational systems will be implemented by SJRRC.

Prior to the start of the ACE service, the San Joaquin Regional Rail Commission and the Alameda County Congestion Management Agency each constructed 3

new stations in the corridor. The stations were constructed for the initial service period, with minimal parking and amenities. Additional parking and amenities are anticipated with the continuation of service beyond the initial period.

Based upon the results of the onboard surveys, the passengers have suggested that ticket vending machines, electronic reader boards (with real-time information) and information kiosks would significantly improve the usability of the system. Public address systems were also suggested for those stations that currently do not have them.

Descriptions for each of the stations are listed below.

■ Stockton

The Stockton station is located at 949 E. Channel Street between Weber Street and Channel Street in Stockton at the old Southern Pacific train depot. The station went through a historic renovation in 2002/2003 and currently serves as the headquarters for SJRRC and the ACE Service, and as an anchor for the Downtown Stockton Eastern Redevelopment Program. The station is served by the ACE trains and the SAN JOAQUINS intercity trains between Bakersfield and Sacramento.



ACE passengers utilize two parking lots south of the station. The existing parking lots are 1.0, 0.7 and 0.5 acres in size, and have 200 total parking stalls. Parking at the station is sufficient for the existing service, but as service grows and ridership increases, the ability to expand parking will be limited because the station is landlocked by existing development. The parking lots are fenced and gated during non-operating hours and are monitored by an on-site staff.

This station accounts for **14.5%** of the total morning boardings, and has no morning deboardings. The station is equipped with:

- A mini-high platform for ADA access,
- bicycle lockers,
- overhead passenger shelters,
- soda machines on the platform as well as in the Depot Lobby
- real time messaging boards
- security cameras on the platform and in the parking lot,
- a public address system, and
- a call-out only pay phone near the platform.

■ Lathrop/Manteca

The Lathrop/Manteca station is located at 17800 Shideler Parkway (adjacent to Yosemite Ave.) between McKinley Ave. and Airport Way. The location of this station captures commuters from San Joaquin County as well as Stanislaus County, making this the largest origination point in the system.

The parking lot is 5.6 acres in size, and has 565 parking stalls.

This station accounts for **31%** of the morning boardings and has no morning deboardings. The station is equipped with:

- A mini-high platform for ADA access,
- bicycle lockers,
- ticketing kiosk,
- overhead and enclosed passenger shelters,
- security cameras on the platform and in the parking lot,
- real-time messaging boards
- a public address system, and
- a call-out only pay phone near the platform.

■ Tracy

The Tracy station is located at 4800 Tracy Boulevard near the intersection of Tracy Boulevard and Linne Road. The existing lot is 5 acres in size and has 500 parking stalls.

This station accounts for **25%** of the morning boardings and has no morning deboardings. The station is equipped with:



- A mini-high platform for ADA access,
- bicycle lockers,
- ticketing kiosk,
- overhead passenger shelters,
- security cameras on the platform and in the parking lot,
- real time messaging boards
- a public address system, and
- a call-out only pay phone near the platform.

■ Vasco Road

The Vasco Road station is located at 575 Vasco Road on the 60' wide ½ mile long former Vasco Road right-of-way, owned by the City of Livermore and maintained by the County of Alameda. The configuration of this station (long and narrow) does not allow for an adequate turning radius for buses to pick passengers up at the platform, therefore passengers must walk to the entrance of the station at the base of the Vasco Road. overpass for bus service. The City of Livermore is currently in the design stage of expanding parking and access to the station on the east side of the Vasco Road. This will require the addition of passenger amenities to the expanded area. The City of Livermore is proposed to maintain the station once the parking expansion improvements have been completed.

This station accounts for **5.5%** of the morning boardings and **2%** of the morning deboardings. The station is equipped with:

- A mini-high platform for ADA access,
- bicycle lockers,
- overhead passenger shelters, and
- a public address system.

■ Downtown Livermore

The downtown Livermore station is located at 2418 Railroad Ave. next to the LAVTA Transit center at Livermore Ave. and Railroad Ave. in Downtown Livermore. The City of Livermore constructed a 3-story parking structure, in

which 175 parking stalls for transit users (ACE and WHEELS). The City of Livermore is responsible for the maintenance of the parking structure.

This station accounts for 7% of the morning boardings and 2% the morning deboardings. The station is equipped with:

- A mini-high platform for ADA access,
- bicycle lockers,
- ticket sales at the Downtown Transit Center
- a public address system, and
- a pay phone near the platform.

■ Pleasanton

The Pleasanton station is located at 4950 Pleasanton Ave. at the Alameda County Fairgrounds. The lot is owned by the Alameda County Fair Association and maintained by the County of Alameda. ACE shares the parking with the Fair Association and has 305 parking stalls during non-Fair times. During the Alameda County Fair, ACE passengers are provided off-site parking and shuttled to the station by LAVTA shuttles provided through a contract with the ACE Authority.

ACE staff has worked with the City of Pleasanton to identify a permanent site for the Pleasanton ACE station on property the City purchased from the City of San Francisco Water District, which is ½ mile west of the existing station. Funding for the new station has not been identified.

This station accounts for 13% of the morning boardings and 16% of the morning deboardings. The station is equipped with:

- A mini-high platform for ADA access,
- bicycle lockers,
- ticket kiosk,
- overhead passenger shelters,
- a public address system.

■ Fremont – Centerville Station

The Centerville station located at 37260 Fremont Blvd. and is owned and maintained by the City of Fremont. The station serves both ACE and the Capitol Corridor intercity trains. This is a fully functional station with a passenger waiting room and coffee shop which provides ticket sales to ACE passengers. There are 160 parking stalls at the station with the City looking to increase the parking by



adding two additional lots near the station in the future. Daily parking is also available for a fee in a lot adjacent to the station.

Ridership at this station accounts for 4% of the morning ridership and 15% of the morning deboardings. The station is equipped with:

- A portable wheelchair lift for ADA access,
- bicycle lockers,
- real time message board (operated by the Capitol Corridor and ACE),
- overhead passenger shelters, and
- a pay phone near the platform.

■ **Santa Clara – Great America**



The Great America Station is located at 2121 Stars and Stripes Drive and is owned and maintained by Amtrak and is served by both ACE and the Capitols. Improvements to this station on behalf of ACE are the responsibility of the Santa Clara Valley Transportation Authority (SCVTA).

Prior to the start of the ACE service, parking at the Great America station was not a problem. With the start of service, some passengers began leaving a car parked overnight on the street at the Great America station to drive to and from their worksites. As this practice became more popular, the number of parked cars increased and congestion at the station made it difficult for the shuttle buses to get in and out of the station. In order to alleviate the parking problem, the City of Santa Clara and SCVTA constructed a parking lot with 220 parking stalls to allow for overnight parking at the station and reduce the parking issues.

This station is a morning destination only and accounts for 51% of the morning deboardings. The station is equipped with:

- A mini-high platform for ADA access,
- bicycle lockers,
- real time message boards (operated by the Capitol Corridor and ACE),
- overhead passenger shelters, and
- a pay phone near the platform.



■ Downtown Santa Clara – Caltrain

Service has been suspended to this Station during construction at CP Coast. Upon completion Service to the station will be restored.

The Santa Clara station is located at 1005 Railroad Ave. at Franklin Street. This is an unmanned station owned and maintained by Caltrain.

There are 100 parking stalls onsite with all day parking available for \$1.50 daily. ACE Monthly pass-holders have the option of purchasing a monthly parking permit, however, there are only 10 parking permits available each month on a first-come, first-served basis.

This station is a morning destination only and accounted for 8% of the morning deboardings when in operation. When completed it will be equipped with

- A mini-high platform for ADA access,
- bicycle lockers, and
- a pay phone near the platform.

■ San Jose – Diridon Station



The station is located at 65 Cahill Street across from the San Jose Arena in downtown San Jose, and is served by Caltrain, ACE, Amtrak, and Capital Corridor trains. This is a fully functional station with a passenger waiting room and coffee shop.

All day parking is available for \$1.50 daily. ACE monthly pass-holders have the option of purchasing a monthly parking permit,

however, there are only 15 parking permits available each month on a first-come, first-served basis.

This station is a morning destination only and accounts for **14%** of the morning deboardings. The station is equipped with:

- A portable wheel-chair lift for ADA access,
- real time message boards,
- bicycle lockers, and
- a pay phone near the platform.

Caltrain is in the process of major modification to the Diridon Station, which may require future contributions from those agencies that use the station. As a result, there may be some allocation of costs to ACE which will be added to the SRTP during a future update.

CHAPTER FIVE

SYSTEM PERFORMANCE

ACE's operational performance is evaluated from four perspectives. The first examines the growth of ridership during the three and a half years of ACE operations. The second reviews farebox recovery history over the same period of time. The third identifies on-time performance statistics as documented on a monthly basis by the ACE Authority and contractor staff, and the fourth reports on customer service and passenger satisfaction as determined by an on-board passenger survey conducted in July 2001.

ACE performance is measured by:

- 1) Ridership**
- 2) Farebox Recovery**
- 3) On-time statistics**

5.1 RIDERSHIP HISTORY



During the first several years of service, passenger trips grew by 74.5%. On March 5, 2001, ACE ridership reached its highest level when a record 4,762 passenger trips were recorded, exceeding available seating capacity by over 15%.

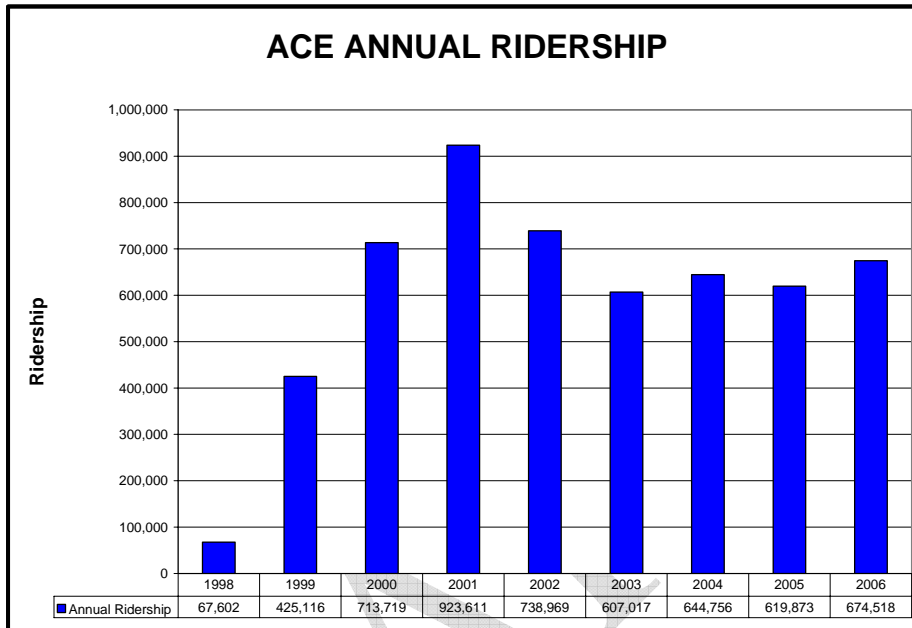
The economic downturn beginning in late Spring of 2001 had a crippling impact on Silicon Valley jobs, particularly those associated with the "dot.com" industry.

According to the 2001 ACE passenger survey, nearly 83% of the ACE riders are destined for Silicon Valley jobs. Figure 6 on the following page shows that the impact of the economic downturn on ACE ridership lasted throughout 2003, with a 23% decline in annual ridership from the prior year.

While the majority of the job loss and corresponding ridership loss has been for the passengers in the market segment between the Tri-Valley and Silicon Valley, Ridership from the Central Valley to the Tri-Valley has increased while ridership to the Silicon Valley areas has remained relatively stable.



FIGURE 6 – ACE Ridership History in Daily Trips
(Calendar Years)



Since 2003 ridership has steadily increased from year to year. Total ACE Ridership for 2006 was 674,518, which is an increase of 8.8% from the prior year.

5.2 FAREBOX RECOVERY

The financial performance of ACE is measured primarily by farebox recovery (the ratio of passenger fare revenue to train operating expense). The fare recovery has remained significantly higher than other newer commuter rail services, even throughout the economic downturn and the ridership fluctuation mentioned in the previous section. Fare revenues and the farebox recovery ratio have mirrored the ridership levels and the historical data is summarized in Figure 7 on the following page. As part of ACE's biennial review of fares, a fare increase of 10% occurred in November of 2001. This was the first time fares were increased since ACE began service in October 1998.

FIGURE 7 – ACE Farebox Recovery

	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006
FARE \$	\$4,225,739	\$3,844,316	\$2,938,079	\$3,461,842	\$3,800,000 ²
OPERATING COSTS¹	\$8,067,092	\$7,883,936	8,419,418	\$9,927,158	\$9,800,000
FAREBOX RATIO	52%	49%	35%	34%	39%

1. Cost for shuttles not included in fare box recovery calculation
2. Estimated

ACE farebox recovery grew consistently over the first three years of operation (from 34% to 61%). During 2002, farebox recovery was still impressive (52%), but reflected the drop in ridership and revenue caused by the economic downturn which continued until 2005.

5.3 ON-TIME PERFORMANCE

The most important measure of performance to passengers is the on-time performance of the trains. On-time performance refers to the ability of the trains to adhere to the schedule of published train arrivals and departures by station. For many ACE riders, the on-time performance of the trains is critical to their ability to arrive at their work site, or make other transit connections on time. As a consequence, on-time performance directly correlates with how passengers view the reliability and usability of the ACE service. To retain and increase ridership, the SJRRC is investing significant resources into improving the rail system and preventing occurrences of train delays. On-time performance for the ACE trains is primarily a function of priority dispatching and upgrading and maintaining track condition, both of which are controlled by Union Pacific Railroad. Much of the capital improvement program (see Section 6.2), including rehabilitation and replacement projects, are designed to eliminate physical problems with the track and signal system and improve time-sensitive train dispatching.

In general, ACE has historically maintained good on-time performance, which is defined as arriving within six minutes of the scheduled arrival time. As seen in Figure 8, between 2002 and 2005, ACE has generally achieved between 94% and 88% on-time performance, with the exception of 75.7% on-time performance in 2005. The low on-time performance suffered in 2005 was primarily due to Union Pacific Railroad’s weather related track damage in Southern California, which caused a large influx of freight to being diverted from the Ports Long Beach and Los Angeles to the Port of Oakland. The diversion of this freight traffic cumulated with ACE’s lowest on-time performance month ever in July 2005 of 41%. While the on-time performance (OTP) has improved since July, it is an

issue SJRRC reviews monthly with the UPRR to ensure a month like July 2005 doesn't happen again. ACE on-time performance continues to improve and in for 2006 was 77.1%, two percentage points higher than 2005.

FIGURE 8 – On-Time Performance (FY 2002-2006)

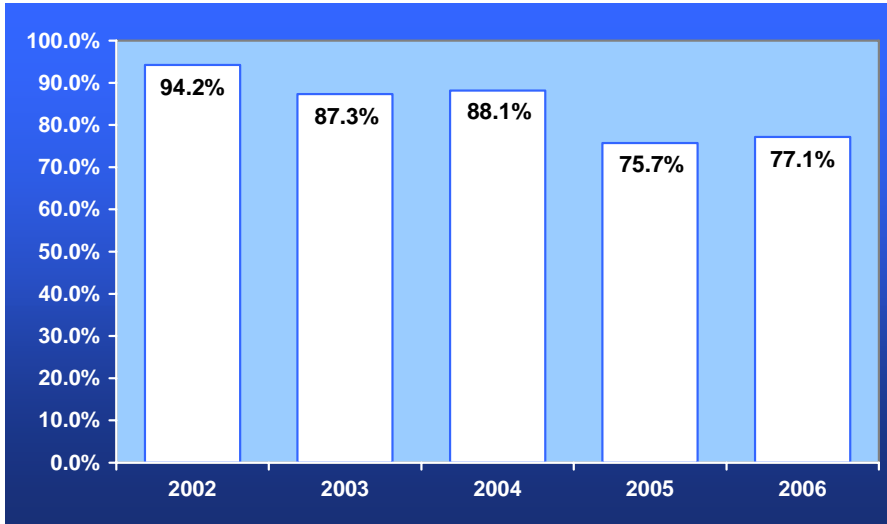
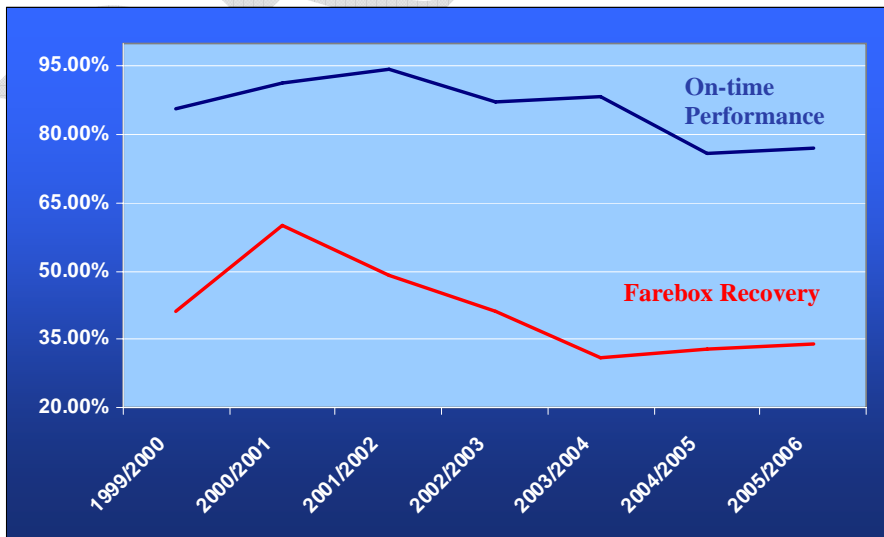


FIGURE 9 – On-Time Performance & Farebox Recovery (FY 2002-2006)



5.4 CUSTOMER SERVICE



In past years, SJRRC has conducted in-depth, on-board passenger surveys designed to elicit opinions of ACE riders on the quality of the service and to identify ways in which passengers believe the service could be improved.

When asked how ACE could improve its service, the strongest support was to improve seat design and comfort. The second most important improvement is to

improve on-time performance. Improvements to the ACE service will be focused on providing a high rating of customer satisfaction and addressing the issues raised by the passengers.

In order to get a better understanding of passenger needs, SJRRC has solicited interested passenger to participate on an ACE Passenger Council (APAC). The APAC consists of two councils, one that meets in Stockton and has representation from passengers from the Central Valley and one that meets in Pleasanton and has representation from passengers in the Tri-Valley and Contra Costa County. This allows SJRRC to better define the needs of ACE passengers.

SJRRC introduced an ACE alert program, where passengers can sign up to be notified if the train is begin delayed by more then 15 minutes. Passengers are able to sign up for all trains or select the train they would like notification on.

■ ACE Personal Trip Consultant Service

In March 2007, ACE Customer Service staff offers personal trip consultation services. Commuters and travelers are able to submit travel questions via email, and within 48 hours they will receive a personalized trip advisory which can include directions, place of interests, and train/shuttle connection schedules.



■ ACE Getaways

As a new service on the ACE website (acerail.com), ACE provides detailed information on vacation getaways near the San Francisco Area, Tri-valley Area, San Joaquin Area, San Jose Area, and the Monterey Area. Customers can find hotel information, places of interests, public transportation schedules, dining information, and details on the major local attractions and events.



DRAFT

CHAPTER SIX

SERVICE IMPROVEMENT PROGRAM

6.1 BACKGROUND ON INCREASING DEMAND

Currently, over 30,000 Central Valley residents commute over the Altamont Pass each day to employment sites in the Bay Area. By the year 2020, this number is expected to triple to more than 95,200 commuters. MTC projects that 41% of these Altamont trips will terminate in the Tri-Valley area while 24% will go on to the Santa Clara Valley area. Additionally, the MTC has identified the following highway segments that parallel the ACE route as “key congested corridors”:

In the next 15 years ACE expects to serve over 95,000 Central Valley commuters and residents.

- I-680 (Central Contra Costa/Tri-Valley/Silicon Valley)
- I-580 (San Joaquin County to Dublin/Pleasanton Bart)

One of the main reasons for this anticipated traffic growth is the continuing rise in housing prices in the Bay Area. These high prices have driven and will continue to drive many Bay Area employees to seek affordable homes in the communities along the I-580, I-205, I-5 and SR-99 in the Tri-Valley and Central Valley areas.

By 2025, the San Joaquin County Council of Governments (SJCOG) projects a population increase of 60% (330,000 people), compared to a 40% increase in jobs (82,000 new jobs). As an example, the City of Tracy population is projected to grow by 153% while only increasing the employment opportunities by 8%.

As the major gateways between the Central Valley and the Bay Area, maintaining mobility on the I-580 and I-680 corridors poses a significant challenge for regional transportation planners. As a result of the commute patterns of the Central Valley residents, the congestion on I-580 has become severe.



The I-580 Corridor Study notes that Caltrans reported no vehicles hours of delay (VHD) between Hopyard and El Charro interchanges until 1992. Beginning in that year, congestion was measured at a modest 70 VHD over one and a half hours (between 4:30 and 6:00 p.m.). But over the following eight years, VHD increased 42 times to just under 3,000 in the year 2000 and the VHD began rising rapidly during the morning peak period as well. With only limited roadway expansion capacity



planned for I-580 corridor during the next 20 years, the duration of severe congestion will likely spread to the shoulders of the peak period.

Although the ACE service has been very successful to date, it has heavily focused on the employment sites of the Silicon Valley. The current train schedules do not adequately serve commuters seeking an alternative commute from the Central Valley to the Tri-Valley area. At a minimum, two additional trains are required to adequately serve the work schedules of Tri-Valley commuters. Due to the flexibility of work schedules in the Silicon Valley, these new trains should also increase ridership by providing increased schedule options for existing riders.

Currently, the ACE service carries approximately 3% of the morning commute trips in the I-580/I-680 vicinity (1025 passengers vs. 30,000 commuting). If it is assumed that half of the projected traffic growth through 2025 occurs during the SRTP horizon, and the five planned ACE trains (three current, two additional) carried 5% of the future commute traffic (3130 passengers vs. 62,600 commuting) the trains would be at 76% of the total seating capacity. In the industry, the threshold of 80% of seated capacity is often a trigger for securing the finances to add capacity or additional trains.

Due to the lack of long-range modeling forecasts for projected ridership, only two additional trains are planned in the current SRTP 10-year period. SJRRC has worked with VTA modeling staff to modify the Silicon Valley Rapid Transit Corridor model and develop specific ridership projections for the mid and long-range planning periods. Additional trains up to eight (8) daily round-trips have been matched to the anticipated ridership levels out to the year 2025, provided that there are adequate operating revenues to support the additional service.

6.1 CORRIDOR PURCHASE

SJRRC is conducting a regional study aimed at improving the ACE rail service. This is approximately 75% complete and has already come up with a significant finding. For the ACE service to realize its' full potential to carry large numbers of passengers and significantly contribute the region's mobility, SJRRC must own and control the rail corridor.

Whenever passenger trains share a rail line that is configured for long-haul freight trains and controlled by a freight railroad, the differences in speed, operation and maintenance requirements make it very difficult for the passenger trains to achieve the necessary high level of reliability and travel times to attract and retain passengers.

ACE trains currently operate on tracks owned by Union Pacific Railroad (UP). Initially in 1997, UP was willing to grant access rights for the ACE trains to use the UP rail lines. However, UP has indicated that they will not be allowing any additional passenger trains on their primary routes due an unprecedented amount of freight growth over the next five to 10 years. Most Class 1 Railroads prefer to handle the more profitable long-haul freight trains, and understandably,

them a higher priority for their national operations. This is having increasingly negative impact on the ACE service (as well as other passenger rail services across the country) in terms of on-time performance, train speeds, and flexibility in scheduling.

Short-haul freight suffers from the same disadvantages as the passenger trains, in that they are not a business priority for Class 1 Railroads. However there has been increasing interest and demand for short-haul freight shipments between the Port of Oakland, the Central Valley and the Port of Stockton. At a time when goods movement is increasingly hampered by the regional highway congestion, and predicted to be further burdened by future population growth, rail capacity for short-haul freight has to be explored.

Based upon similar operating characteristics such as fixed scheduling, short train miles (approximately 100 miles or less) and the need for reliability, passenger trains and short-haul trains can be much more compatible than either could be with long-haul freight. Even with the ultimate ACE scenario of 8 roundtrip trains, the corridor would still be a viable route for moving goods between the Central Valley and the Ports.

■ **General Benefit of the Corridor Purchase**

- A. The ability to better organize and improve the overall configuration, operation and dispatch of the ACE corridor to carry significantly more passengers
- B. The ability to divert truck traffic off the regional highway system and onto the ACE corridor for a new short haul operation, supporting the expansion of international trade through the Port of Oakland and expansion of the Port of Stockton
- C. Considerable vehicle equivalents removed from the region's highways due to both passenger rail expansion and diverted short-haul shipments (For every 3 containers, 4 trucks are removed from the highways and every truck is the equivalent of 3 regular vehicles)
- D. Significant contribution towards maintaining air quality through the removal of truck trips and vehicle trips from congestion of the parallel highway corridors
- E. Improved ACE Corridor also benefits the state sponsored SAN JOAQUINS Intercity Rail Service between Stockton and San Jose
- F. Improved ACE Corridor between Stockton and Lathrop will also benefit any potential new commuter rail service between the Central Valley and Sacramento
- G. The acquisition of the corridor becomes a tangible real estate asset that appreciates in value



■ Corridor Options

The Altamont Service Improvement Study evaluated three basic corridor options:

1. Current ACE Corridor
2. Upgraded parallel corridor to current alignment (primarily the Fresno and Tracy Subdivisions)
3. Develop new corridor

Due to cost, environmental and development issues, the third option of a new corridor option was eliminated early on and the two remaining options have been studied in great detail. In these options, an independent corridor is only feasible between Stockton and Newark. The segment between Newark and San Jose is a primary route for Union Pacific and is also used by the CAPITOLS and the long-distance Amtrak trains. Options for this segment have been studied and may result in a dedicated passenger rail track (which ACE trains could utilize) at some future date.

Option 1: Current ACE Corridor

Costs for acquiring and upgrading the current ACE Corridor between Stockton and Newark are estimated at \$300M. At this time however, there is no clear indication of whether Union Pacific is willing to sell the existing corridor. The benefits of this option include the ability to use the existing stations, minimal engineering and environmental mitigation requirements, significant future expansion opportunities, and the fact that it's ready to go,

Option 2: Upgraded Parallel Corridor

The parallel corridor is pieced together along several segments of rail right of way owned by Union Pacific and Alameda County. It involves the:

- Fresno Subdivision between Stockton and Lathrop
- Tracy Subdivision between Lathrop and the County line in the Altamont Pass
- Abandoned ROW owned by Alameda County between the Altamont Pass and Livermore
- Approval from Union Pacific to construct a dedicated track within their 100' right of way between Livermore and Pleasanton
- Use of the Sunol Canyon Railway owned by Alameda County between Pleasanton and Fremont (currently operated by the Pacific Locomotive Association)
- Approval from Union Pacific to construct a dedicated track between Fremont and Newark within their existing ROW

Costs for acquiring and upgrading the Parallel Corridor are estimated at \$270M. The benefits of this option are that Union Pacific might be more willing to negotiate for these segments (although there is no specific indication about their willingness to sell the segment of the active Fresno Subdivision) and the costs are somewhat less than the other option. The potential challenges are that Alameda County would have to agree to the use of the ROW, more environmental review and mitigation is likely in the Altamont Pass where new track would have to be constructed, new stations would have to be built, and the transition of the ACE trains to the new corridor would likely take 2-4 years.

6.2 CAPITAL IMPROVEMENT PLAN



The ACE Capital Improvement Program (CIP) for the SRTP includes capital projects designed to construct, rehabilitate, replace or upgrade the equipment, facilities and infrastructure used to operate the ACE service. The SJRRC does not own the rail line, but leases the rights to operate the trains from Union Pacific Railroad. Any investments made in the rail line will be credited to SJRRC (on an amortized schedule) in the event SJRRC purchases

the rail line. The projects that are contemplated in the CIP are improvements that SJRRC would undertake even if they were already the owner of the rail line, because they have a direct benefit to the speed and reliability of the commuter service. Past capital projects have shown immediate benefits by allowing the ACE trains to bypass slower freight trains without delay, and by reducing the commute time through track and signal upgrades. The projects are also consistent with the ACE passengers' priorities for service improvements that were identified in the various onboard surveys. A more detailed description of the CIP and the specific future projects is included below.

The ACE Capital Program consists of two major components: Rehabilitation/Replacement projects, which are projects designed to restore the integrity and reliability of existing assets, and Capital projects designed to increase capacity along the corridor. Projects that are anticipated under this program are discussed below.

REHABILITATION/REPLACEMENT

These projects address deficiencies in track structure, equipment or facilities within the corridor and which contribute to service inefficiency. Without rehabilitation the service will become unreliable in terms of speed and on-time performance. Listed below are specific rehabilitation projects identified in the ACE Capital Plan.

■ Tunnel Rehabilitation

In Niles Canyon (Sunol), a $\frac{3}{4}$ mile long tunnel between milepost 32.9 and milepost 32.1 was modified from its original configuration to accommodate inter-modal double stack freight trains. This work has caused the ballast to become fouled and concrete ties to disintegrate causing an uneven track structure reducing track speeds from 45 mph to 25 mph in the summer and down to 10 mph during the rainy season. While freight service is not significantly affected by the reduced train speeds, commuter train on-time performance is adversely affected by those reduced speeds. The tunnel rehabilitation project will allow for an increase in train speeds and reduce the scheduled running time of the



service. The cost estimate for this project is \$3.5 million and is anticipated to be funded by ACCMA and VTA local funds.

■ Bridge Rehabilitation

Many of the bridge structures on the ACE corridor between milepost 37.0 and 80.3 (Between Sunol and Lathrop) are constructed of wood timbers which require periodic rehabilitation to reduce the chance of slow orders. While freight service is not significantly affected by slow orders, commuter train on-time performance is adversely affected by these delays. Periodic rehabilitation on the bridges in this system will improve system performance and reliability. The cost estimate for the Bridge Rehabilitation program over the 10-year SRTP is \$3.0 million and is anticipated to be funded by State General funds, and ACCMA and VTA local funds.

■ Shoe Fly Replacement

Landslides west of the Altamont Pass at milepost 55.2 have caused the UPRR to construct a permanent detour around this location. This detour has created tight radius turns that require all trains to greatly reduce speeds. While these reduced speeds are not disruptive to freight trains, they significantly slow passenger trains, necessitating longer run times. This replacement project would realign the track, allowing for increased speeds and reduced run times. The cost estimate for this project is \$7.0 million and is anticipated to be funded by Section 5307 funds, Alameda CCMA, STIP, and ACCMA and VTA local funds.

■ Equipment Maintenance

To maintain a proactive PMP, it is anticipated that projects such as the following will be necessary due to regulatory requirements:

- HEP modification and/or replacement,
- Locomotive mid-life overhaul,
- HVAC overhaul,
- Seat change-outs, and
- Window replacement.

The cost estimate for this program over the 10-year SRTP is \$2.58 million and is anticipated to be funded by Section 5307 funds and ACCMA and VTA local funds.

■ Facilities

As discussed in Section 4.3, Station Descriptions, Caltrain is currently making major modifications to the San Jose Diridon Station that may require contributions from agencies that use the facility. ACE allocated costs will be added to the SRTP during a future update.

CAPITAL PROJECTS

Capital projects increase system capacity and are negotiated with UPRR at the time of service expansion. The projects are identified through coordinated modeling efforts, and are mutually agreed upon by both ACE and UPRR. The projects identified are required to minimize or eliminate delays attributable to freight/passenger train interference. Projects sites are located on or in areas adjacent to the ACE corridor and discussed below:

■ New Vehicle Maintenance Facility

As discussed in Section 4.2, ACE is required to build a new maintenance facility which will begin construction in Fall 2007. ACE has had a preliminary feasibility study prepared for a facility adjacent to the current UPRR facility. Costs have been estimated at approximately \$32 million. This project is included in the Capital Financial Plan.

■ Equipment - Procurement

It is anticipated that the acquisition of one additional locomotive will be necessary for use as a spare upon implementation of the 4th train and also one train consist (six passenger cars with one locomotive) to provide equipment for a fifth train in FY 2010/2011.

■ System-wide Station Improvements

As discussed earlier in Section 4.3, on-board passenger surveys identified amenities most desired by ACE passengers. Improvements that benefit the ACE service in general are viewed as system-wide improvements for which the cost will be borne by the ACE Authority.

Station improvements which qualify as system-wide are:

- Automated Ticketing Machines
- Additional ticket validating machines
- Integrated Reader Boards
- Public Address System
- Geographical Information System (GIS)
- Unified Security Camera System

■ Non System-wide Station Improvements

Station improvements which address aesthetics or passenger safety and comfort while at the specific station are not expenditures borne by ACE. In an effort to tie the stations to the communities in which they serve, the ACE JPA has identified



the member agency in which the station is located as the responsible party for station construction and maintenance. Therefore, the following station improvements are not included in the capital improvement plan because they are not identified as an ACE expenditure. The following station improvement projects are currently underway or in planning stages:

San Joaquin County Stations are located at Stockton, Lathrop/Manteca and Tracy and managed by SJRRC. These stations are scheduled for the following general improvements:

- Improved security camera systems
- Informational kiosks
- Additional Shelters
- Additional bicycle lockers

San Joaquin County Stations with Specific Improvement Projects

The Stockton, Lathrop/Manteca and Tracey stations will receive upgraded security camera systems to improve the safety through and around the stations.

Alameda County Stations are located at Vasco Road, Downtown Livermore, Pleasanton and Fremont. These stations are currently managed by Alameda County Congestion Management Agency (Vasco Road and Pleasanton), Downtown Livermore, by the City of Livermore, and the City of Fremont (Fremont). General improvements identified for these stations include:

- Additional parking
- Bike lockers
- Shelters
- Information kiosks

Alameda County Stations with Specific Improvement Projects

VASCO ROAD: The City of Livermore will go to construction on a parking lot with 140 parking stalls and R.O.W. for an additional 160 parking stalls.

FREMONT: A mini-ramp would provide more convenient wheelchair access on and off the train.

Santa Clara County Stations are located at Great America, downtown Santa Clara and San Jose Diridon. General improvements for these stations are:

- Additional parking
- Bike lockers
- Shelters
- Information kiosks

Santa Clara County Stations with Specific Improvement Projects

SAN JOSE DIRIDON: A mini-high ramp would make wheelchair access more convenient. Since this station is undergoing major renovation by Caltrain, this issue may be addressed within that project.



DRAFT

CHAPTER SEVEN

SJRRRC 10-YEAR FINANCIAL PLAN

7.1 INTRODUCTION

The SJRRRC 10-Year Financial Plan documents the financial assumptions for implementing the Capital Improvement Program (CIP) discussed in the previous chapter. The CIP projects are necessary to maintain, expand, and enhance the ACE service. The Financial Plan also demonstrates that ACE has the financial capacity to operate and maintain all the services planned for in this SRTP, and highlights the combination of federal, state, and local sources that are anticipated in the 10-year period.



Since the San Joaquin Regional Rail Commission has contributed significant discretionary resources toward the initial service, the majority of local contributions required for the CIP projects will be funded by Alameda and Santa Clara counties. The ACE Authority will annually monitor all operating and capital contributions for the purpose of determining when equivalent local contributions to the system have been made, and at such time, the ACE Board will determine the ongoing method for allocating future capital and operating costs (Source: ACE JPA).

The Financial Plan is divided into the Capital Financial Plan, the Operating Financial Plan, and the Connecting Shuttle Financial Plan which are discussed below.

7.2 CAPITAL FINANCIAL PLAN

Cost estimates and projected revenues for the CIP are incorporated into the Capital Financial Plan in Figure 10. The ten-year SRTP envisions a \$10.5 million program, of which the principal components are the fifth train equipment and associated track improvements, and the ACE Corridor Purchase. The remaining expenditures are part of the existing ACE/UP Trackage Rights Agreement, which requires a \$1.0 million annual contribution by ACE for each round trip. These funds will support track rehabilitation/replacement projects designed to increase reliability and on-time performance. The revenues for FY 06/07 in the Capital Financial Plan are already programmed and committed to the identified projects. However, beyond FY 06/07, a range of federal, state, and local sources are proposed according to best estimates of their availability and the applicable project eligibility.

FIGURE 10 – Capital Financial Plan

(\$ millions, current dollars)

	Train Starts		4					5			6		Total
	Fiscal Year	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16		
EXPENSES													
Rehabilitation/Replacement													
Track Improvements for the 4th, 5th and 6th Trains	5.00	5.00					5.00	5.00				\$20.00	
Track Improvements				2.00	-	2.00	-	2.00	3.45	2.00	3.45	14.90	
Tunnel 1 Rehab	-	-	2.50	-	-	-	-	-	-	4.00	-	6.50	
Tie Replacement	-	-	-	2.50	-	-	4.00	-	3.00	-	3.00	12.50	
Signal Rehab	5.82	3.50	4.50	-	-	-	-	-	-	-	-	8.00	
Bridge Rehab	-	-	-	1.50	-	-	-	-	1.00	3.00	-	5.50	
Shoefly Replace	-	5.00	2.00	-	-	-	-	-	-	-	-	7.00	
Equipment	0.51	0.51	0.51	0.52	0.61	0.61	0.61	0.61	0.61	0.61	0.71	5.81	
Facilities	0.10	0.10	0.10	0.10	0.10	0.20	0.20	0.30	0.20	0.30	0.30	1.70	
Subtotal - R/R	5.61	14.11	11.61	4.62	2.71	9.81	7.81	8.36	9.81	7.46		81.91	
Capital Projects													
ACE Corridor Purchase			100.00	100.00	100.00							300.00	
Track Projects	6.00	3.10	-	-	-	-	4.00	4.00	2.00	4.00		23.10	
Equipment (Rolling Stock)	4.00	5.40	-	-	9.00	4.00	4.00	-	4.00	-		30.40	
Maint. Facility/Layover Facilities	3.00	5.00	3.50	2.75	-	-	0.25	-	0.25	-		14.75	
Systemwide Station Improvements	0.50	-	-	-	1.00	1.00	-	-	-	-		2.50	
UPRR Capital Access Fee	1.81	1.81	1.81	1.81	1.81	1.81	2.00	2.00	2.00	2.00		18.86	
Security Projects	0.50	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30		3.20	
Subtotal - Capital Projects	15.81	15.61	105.61	104.86	112.11	7.11	10.55	6.30	8.55	6.30		392.81	
TOTAL EXPENSES	\$21.42	\$29.72	\$117.22	\$109.48	\$114.82	\$16.92	\$18.36	\$14.66	\$18.36	\$13.76		\$474.72	
REVENUES													
Federal													
CMAQ/STP	2.79	5.00	-	-	1.40	-	3.35	-	3.35	-		15.89	
Section 5307 (Urbanized Area Formula Funds)	3.20	3.50	3.00	3.00	3.20	2.00	3.00	2.00	3.00	2.00		27.90	
Section 5309 (Fixed Guideway Funds)	2.50	5.50	5.50	15.90	5.50	4.00	5.00	5.00	5.00	5.00		58.90	
Section 5309 (Bus Facility)		2.00	1.30	-	-	-	-	-	-	-		3.30	
Section 5309 (New Starts)	2.40	8.00	3.00	-	-	-	-	-	-	-		13.40	
Department of Homeland Security	1.00	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30		3.70	
Subtotal - Federal	11.89	24.30	13.10	19.20	10.40	6.30	11.65	7.30	11.65	7.30		123.09	
State													
Trade Corridor Bond Funds	-	-	50.00	50.00	30.00	-	-	-	-	-		130.00	
STP	-	-	-	-	-	-	-	-	-	-		0.00	
STA	-	-	5.00	5.00	5.00	-	-	-	-	-		15.00	
TDA	-	-	-	-	-	-	-	-	-	-		0.00	
Prop 116	-	-	-	-	-	-	-	-	-	-		0.00	
Sales Tax Rebate from prior Equip. Purchases	0.70	0.60	-	-	-	-	-	-	-	-		1.30	
Alameda CCMA STIP	-	-	-	2.00	1.00	-	-	3.00	-	3.00		9.00	
ITIP	-	-	-	-	-	-	-	-	-	-		0.00	
Subtotal - State	0.70	0.60	55.00	57.00	36.00	0.00	0.00	3.00	0.00	3.00		155.30	
Local													
ACCMA	0.72	0.14	1.93	0.72	8.00	-	-	-	-	-		11.52	
VTA	-	-	-	-	-	5.00	2.36	4.00	2.35	3.10		16.81	
SJRRRC	8.11	4.68	47.19	32.56	59.88	5.62	4.35	0.36	4.36	0.36		167.47	
Subtotal - Local	8.83	4.82	49.12	33.28	67.88	10.62	6.71	4.36	6.71	3.46		195.80	
TOTAL REVENUES	\$21.42	\$29.72	\$117.22	\$109.48	\$114.28	\$16.92	\$18.36	\$14.66	\$18.36	\$13.76		\$474.19	

■ Federal Funding

Congestion Mitigation/Air Quality (CMAQ) and Surface Transportation Program (STP) funds are administered through a competitive process by MTC and SJCOG, the metropolitan planning organizations within the ACE corridor. Any contributions from this source are credited toward equalization (Source: ACE JPA). Based upon MTC's project eligibility and project ranking criteria, \$16 million in CMAQ/STP funds will be anticipated.

FTA Section 5307 - Urbanized Area Formula funds are allocated to three different agencies in the ACE service area. They include VTA, for the San Jose Urbanized Area, MTC for the San Francisco/Oakland Urbanized Area and San Joaquin Council of Governments for the Stockton Urbanized Area. Beginning in FY 06/07, amounts fluctuating between \$2 million and \$4 million are projected each year between the recipient areas. Any contributions from this source are credited toward equalization. The total amount from this source over the life of the SRTP is expected to reach \$28 million.

FTA Section 5309 - Fixed Guideway funds can be used for rail rehabilitation and replacement uses as well as for the acquisition of rail cars and equipment. Because the need for section 5309 funding far outstrips the available funding of the Bay Area, MTC has "capped" the amount of section 5309-Fixed Guideway funding to \$7.5 million annually. Until equivalent discretionary contributions are made to ACE by both Alameda and Santa Clara counties, this source is currently limited to those funds administered by MTC. Any contributions from this source will be credited toward equalization. Based upon MTC's project eligibility and project ranking criteria, \$58.9 million is anticipated from Section 5309 revenues during the SRTP period.

Revenues from Federal sources are expected to contribute \$123 million towards improving and maintaining ACE service and facilities throughout the San Joaquin Region.

■ State Funding

In the SRTP, due to the significant decline in state revenues caused by the economic downturn, limited state funding is projected beyond that which is already programmed. However this situation is improving. As discussed in section 6.1, the SJRRRC is conducting a regional study aimed at improving the ACE rail service. The Rail Commission has focused all recent programming efforts toward acquiring an independent corridor for the ACE Service. The Trade Corridor Bond Funds are expected to generate \$130 million starting in FY 08/09. The following chart, Figure 11 describes secured revenues to be dedicated as Potential Local Match Sources for the Infrastructure Bond Program.

FIGURE 11 – Trade Corridor Bond Funds

Potential Local Match Sources for the Infrastructure Bond Program	
Regional Traffic Impact Fees (RTIF)	\$ 5.7 Million*
Federal Formula Funds (Section 5307 & 5309) (5-year period)	\$ 15.0 Million
Current Measure K Un-programmed Funds	\$ 30.0 Million
Gap Closure	\$ 4.9 Million Federal \$ 5.5 Million State
ACCMA	\$ 8.0 Million (Capital \$ in Measure B)
Potential STA Funds STIP/PTA Funds	\$ 15.0 Million
Measure K II	\$ 67.0 Million
TOTAL	\$ 150.1 Million

* \$10M identified for transit in RTIF. No % split determined yet for bus and rail

Under SJRRC the large denomination of funds for the Trade Corridor are from unprogrammed Measure K funds (\$30 million) and from the Measure K II Program (\$67 million) which will be bonded against future revenues. An additional \$5.7 million will be raised from Regional Traffic Impact Fees.

Other capital revenues in the Capital Financial Plan include \$9.0 million in STIP funding from Alameda County for required track projects, and \$15 million from STA revenues. The total state revenue produced over the 10 year period encompasses \$155 million.

■ Local Funding

Local funding consists primarily of transportation sales tax revenues earmarked for the ACE service in the Measure B program in Alameda County and the Measure A program in Santa Clara County. In Alameda County, \$12 million was identified in the adopted Expenditure Plan, which will escalate with inflation over the life of the Plan. In Santa Clara County, \$17 million was identified in the Expenditure Plan, which will escalate with inflation over the life of the Plan. Currently, SJRRC is expected to generate \$167 million, bringing the total revenues generated by local funding to \$196 million over the 10 year transit plan.

7.3 OPERATING FINANCIAL PLAN FOR THE ACE SERVICE

The ACE Operating Financial Plan serves as a planning tool for identifying the local cost-sharing impacts of maintaining and expanding ACE service in the future. The Operating Financial Plan is based upon projections of long-term cost trends and potential revenue availability. It is not intended to portray an actual operating budget for a given year in the forecast period. Short-term fluctuations in the regional economy will impact individual fiscal years, however, the Financial Plan assumes that these cyclical impacts are smoothed out over the 10-year period. The Operating Financial Plan is shown in Figure 12.

FIGURE 12 – ACE Operating Financial Plan
(\$ millions, current dollars)

Train Starts	4				5				6		TOTAL
Fiscal Year	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	
EXPENSES											
Project Management											
Salaries/Benefits	\$2.01	\$2.06	\$2.11	\$2.16	\$2.32	\$2.38	\$2.44	\$2.50	\$2.56	\$2.72	\$23.26
Services and Supplies	0.34	0.35	0.36	0.37	0.38	0.38	0.39	0.40	0.41	0.42	3.81
Sub-total	2.35	2.41	2.47	2.53	2.69	2.76	2.83	2.90	2.97	3.15	27.07
Contracted Services											
Ops & Maint; Fuel/Sand/Lube	4.92	5.04	5.17	5.30	6.43	6.59	6.76	6.93	7.10	8.28	\$62.51
RR Maint, Oversight & Disp.	1.03	1.03	1.03	1.03	1.23	1.23	1.23	1.23	1.23	1.13	11.36
Insurance	1.30	1.33	1.35	1.38	1.41	1.44	1.46	1.49	1.52	1.55	14.23
Marketing	0.40	0.41	0.42	0.43	0.44	0.45	0.46	0.48	0.49	0.50	4.48
Equipment & Spare Parts	0.50	0.51	0.53	0.54	0.65	0.67	0.68	0.70	0.72	0.84	6.34
Other (Ticketing, Safety, Prof Services)	2.40	2.20	2.27	2.33	2.40	2.48	2.55	2.63	2.71	2.79	24.75
Shuttles (ACE Local Share)	0.30	\$0.31	\$0.31	\$0.33	\$0.40	\$0.40	\$0.40	\$0.40	\$0.40	\$0.40	3.65
Contingencies	0.10	0.10	0.11	0.11	0.11	0.11	0.12	0.12	0.12	0.12	1.12
Sub-total	10.95	10.93	11.17	11.44	13.07	13.36	13.66	13.97	14.28	15.60	\$128.44
TOTAL EXPENSES	13.30	13.34	13.64	13.97	15.76	16.12	16.49	16.87	17.25	18.75	\$155.50
REVENUES											
Fare Revenues	4.00	4.25	4.25	4.50	6.00	6.00	6.25	6.25	6.25	6.75	\$54.50
Santa Clara VTA Local	2.58	2.66	2.74	2.82	2.90	2.99	3.08	3.17	3.27	3.36	29.56
Alameda CCMA Local	1.81	1.86	1.91	1.97	2.03	2.09	2.16	2.22	2.29	2.36	20.69
SJRRC Local	2.32	2.07	2.24	2.18	2.33	2.54	2.51	2.73	2.95	3.78	25.64
Other Revenues	2.60	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	25.10
TOTAL REVENUES	\$13.30	\$13.34	\$13.64	\$13.97	\$15.76	\$16.12	\$16.49	\$16.87	\$17.25	\$18.75	\$155.50

■ **Assumptions for the Operating Financial Plan**

Principal assumptions used in the Operating Financial Plan are discussed below:

- **Consumer Price Index (CPI)**

One important assumption in the Operating Financial Plan is the growth rate for each major expense category. The Plan assumes that most operating expenditure categories will grow at a rate that is correlated to the rate of inflation. Various contractor and supplier contracts provide for annual escalation based upon an agreed upon inflation index. The CPI

growth rates used in the Operating Financial Plan are derived from forecasts prepared by the U.S. Congressional Budget Office (CBO) for “U.S. Cities.” This forecast assumes 2.5 percent from FY 2006/2007 through FY 2015/2016, and the operating expenses are escalated annually by this amount.

- **Service Levels**

The Operating Financial Plan accounts for the train that was added in FY 2006/2007 and assumes a fifth train is added in 2010/2011. Costs for these expansions are identified in each of these expansion years, and the costs also include the 2.5 percent escalation identified above.

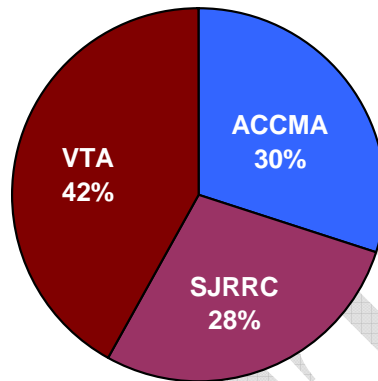
- **Revenue Assumptions**

ACE operating revenues consists of two primary sources: passenger fares and operating contributions from the Member Agencies. For planning purposes, the Operating Financial Plan assumes a constant operating farebox recovery ratio of 50 percent. This recovery percentage is slightly less than the average over the past three years of service where the recovery has ranged from 41 percent to 61 percent. At such time as future ridership estimates are available from the long-range modeling effort, the Financial Plan will be updated to reflect the new data.

The difference between the total operating costs and the fare revenues (or net operating costs) is funded by a cost-sharing formula adopted in the ACE JPA. The formula is based upon the number of daily boardings and deboardings in each county, which approximates the benefit derived by the commuters and businesses in each county (See Figure 13 – Allocation of Net Operating Costs). These percentages are used for the SRTP period; however, any given year may fluctuate based upon the economy and ridership trends.

While SJRRC has established a policy of reviewing potential fare increases on an annual basis, the Plan assumes a fare increases in the 10-year period. A 10 percent increase is assumed in 2009/2010. The two other historical 10 percent fare increases were in November 2001 and most recent in July 2006.

FIGURE 13 – 2006 Allocation of Net Operating Costs



■ Funding Sources for the Operating Financial Plan

Funding for the net operating costs is allocated primarily from local transportation sales tax revenues in Alameda, San Joaquin and Santa Clara counties. Based upon changing federal guidelines on the use of various formula program revenues, some preventative maintenance expenses in the Operating Financial Plan may be funded with these federal sources to supplement the local sales tax contributions for operations.

7.4 CONNECTING SHUTTLE FINANCIAL PLAN

As was previously discussed, the extensive shuttle services that the SJRRRC participates in are critical to ensuring that passengers arrive at their work sites as quickly and efficiently as possible. The current hourly headways of the train schedule allow for adequate cycle-back of the shuttles to meet each train. In the future however, if schedules are compressed to provide more frequent headways, shuttle costs may increase due to the need for additional equipment and drivers. These costs, along with the lack of a dedicated funding source for the connecting shuttles, will limit the SJRRRC's ability to provide shuttles to meet additional trains. The Connecting Shuttle Financial Plan in Figure 14 projects the shuttle operating costs based upon continuing a program in the Tri-Valley and Silicon Valley similar to the current program.

SJRRRC will also explore supplemental ways of connecting passengers to the work sites, such as, car-sharing, dynamic ride sharing, vanpools, employer sponsored transportation, or other low-cost options.

FIGURE 14 – Shuttle Operating Financial Plan
(\$ millions, current dollars)

Train Starts	5					6					Total
Fiscal Year	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	
EXPENSES											
Tri-Valley Area	.40	.41	.42	.43	.94	.97	.99	1.01	1.04	1.57	9.69
Silicon Valley Area	1.66	1.70	1.75	1.79	2.33	2.39	2.45	2.51	2.58	3.14	28.56
TOTAL EXPENSES	\$2.06	\$2.11	\$2.17	\$2.22	\$3.28	\$3.36	\$3.44	\$3.53	\$3.62	\$4.71	\$38.25
REVENUES											
Grant Funds											
SCVTA	.87	.89	.91	.93	.96	.98	1.00	1.03	1.06	1.08	12.96
ACCMA	.17	.17	.17	.18	.18	.19	.19	.20	.20	.21	2.49
CCCTA (grant & local funds)	.19	.20	.20	.21	.21	.22	.22	.23	.23	.24	2.88
VTA Employer Match	.04	.04	.04	.04	.04	.04	.04	.04	.05	.05	.56
Sub-total	1.26	1.29	1.33	1.36	1.39	1.43	1.46	1.50	1.54	1.58	18.89
Local											
SCVTA	.34	.34	.35	.36	.79	.81	.83	.85	.87	1.31	8.13
ACCMA	.24	.25	.25	.26	.56	.58	.59	.61	.62	.94	5.81
SJRR	.22	.23	.24	.24	.53	.54	.55	.57	.58	.88	5.42
Sub-total	.80	.82	.84	.86	1.88	1.93	1.98	2.03	2.08	3.13	19.36
TOTAL REVENUES	\$2.06	\$2.11	\$2.17	\$2.22	\$3.28	\$3.36	\$3.44	\$3.53	\$3.62	\$4.71	\$38.25

■ Funding Sources for the Connecting Shuttle Financial Plan

Funding for the ACE shuttles has consisted of grants from Air Pollution Control Districts within the Bay Area and Central Valley regions. These revenues are projected to average slightly over 50 percent of the connecting shuttle costs. The remaining shuttle revenues are projected from local sales tax contributions from Alameda, San Joaquin, and Santa Clara counties. As a result, the expenses and revenues for shuttle operation are projected to \$38 million.

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APPENDIX A

GLOSSARY OF TERMS

ACCMA *Alameda County Congestion Agency*: The government agency created by the joint powers agreement between Alameda County and all its cities, primary responsibility is to coordinate transportation planning, funding and management services.

ACE *Altamont Commuter Express Service*

AC Transit *Alameda County Transit*: This is the public transportation agency serving Alameda County.

ADA *Americans with Disability Act of 1990*: This Act dictates federal transportation requirements for transportation providers.

BART *San Francisco Bay Area Rapid Transit*: The San Francisco Bay Area Rapid Transit Authority manages passenger trains and lines throughout the San Francisco Bay Area.

CCJPA *Capital Corridor Joint Powers Agency*: This agency works with six local transit agencies in the eight counties which share the administration and management of the Capital Corridor.

CMAQ *Congestion Mitigation and Air Quality Improvement Program*: This is federal money that the Transportation Equality Act for the 21st Century specifically sets aside for project and activities that contribute to attainment or maintenance of the national ambient air quality standards for ozone or carbon monoxide.

COMet *Commuter Electronic Tickets*: Commuter Electronic Tickets are online tickets provided by ACE to their commuters.

EPA *Environmental Protection Agency*: This is a component of the U.S. Department of Transportation to ensure environmentally friendly measures are employed during construction and maintenance of facilities.

FRA *Federal Railroad Administration*: The FRA is a Federal Regulatory Agency for U.S. rail operations.

FTA *Federal Transit Administration*: This is a component of the U.S. Department of Transportation. Through the Federal Transit Administration, the federal government is able to provide financial and technical assistance to state and local transit systems.



MTC *Metropolitan Transportation Commission*: The Metropolitan Transportation Commission, or MTC, is the transportation planning and financing agency for the nine-county San Francisco Bay Area.

OTP *On-time Performance*: This is a measure of the reliability of the facility and rail cars to meet set time schedules.

PCJPB *Peninsula Corridor Joint Powers Board*: This government agency manages the Caltrain commuter rail line, and oversees the Caltrain service and operational futures. The PCJPB consist of three member agencies for the three counties in which Caltrain line services: San Francisco, San Mateo, and Santa Clara Counties.

PMP *Preventative Maintenance Program*: A maintenance program designed to preserve the quality of locomotive equipment, and insure its functionality for extended years.

RTP *Regional Transportation Plan*: This is a comprehensive, long-range transportation planning document. As a twenty to thirty year blueprint for the region, the Regional Transportation Plan guides public policy decisions regarding transportation expenditures and financing. The Regional Transportation Plan is updated every two years by the regional transportation planning agency in that area. Since the Regional Transportation Plan is a list of future projects, each project is based on projections of growth, travel demand, and financial resources and capability.

RTSWG *Regional Transit Security Working Group*: Transit agencies looking to receive funding through Transit Security Grant Program are required to participate in the Regional Transit Security Working Group.

SJRRRC *San Joaquin Regional Rail Commission*: This agency is the supervising and authority transit agency for the Altamont Commuter Express.

SJCOG *San Joaquin Council of Governments*: Association of local governments formed by six counties and nineteen cities. Counties of El Dorado, Placer, Sacramento, Sutter, Yola and Yuba, and the Cities of Auburn, Citrus Heights, Colfax, Davis, Elk Grove, Folsom, Galt, Isleton, Lincoln, Live Oak, Marysville, Rocklin, Roseville, Sacramento, West Sacramento, Wheatland, Winters, Woodland and Yuba City.

SRTP *Short Range Transit Plan*: A ten year plan outline future financial and operation goals of a transit authority.

SSPP *System Safety Program Plan*: A comprehensive and organized plan to ensure safety and organization in program facilities and operation.

STIP *State Transportation Improvement Program*: Each of California's fifteen major metropolitan Planning Organizations prepare a State Transportation Improvement Program incorporating all highway and transit projects funded with state funds or are of regional significance.

STP *Surface Transportation Program*: Originally established under the Intermodal Surface Transportation Efficiency Act, this is now one of the most essential funding programs of the Transportation Equity Act for the 21st Century. Since Surface Transportation Program funds are "flexible", they can be spent on numerous types of transportation projects including projects pertaining to roads, highways, bicycle facilities, mass transit, and pedestrian facilities. For many regions, a majority of funds are spent on local streets rehabilitation or reconstruction.

TIP *Transportation Improvement Program*: This is a component of the U.S. Department of Transportation that provides funding to transportation projects.

UPRR *Union Pacific Rail Road*: The Union Pacific Rail Road operates the largest rail transportation networks across the U.S.

VHD *Vehicle Hours Delay*: This is a measure of vehicle traffic and delays on major interchanges and roadways.

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