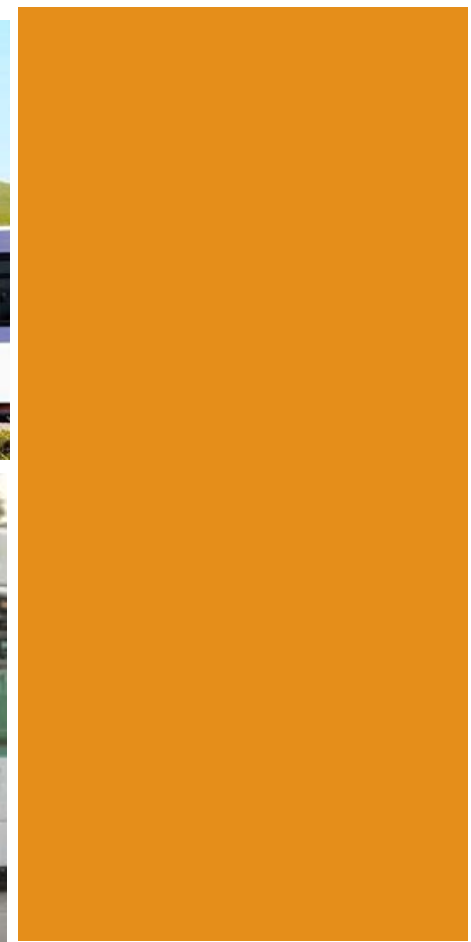
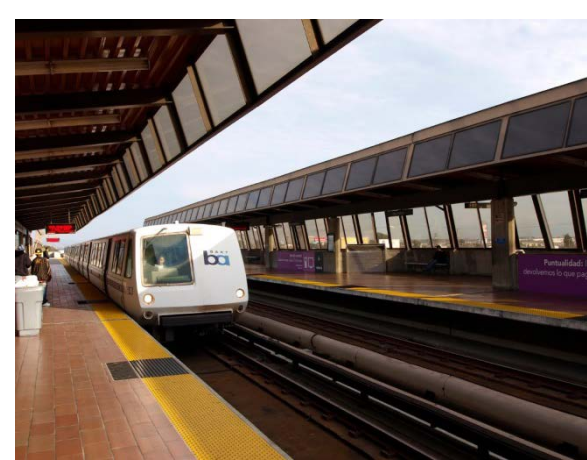


Appendix A

Technical Memorandum #1
Inventory of Existing Plans,
Studies and Data



Inventory of Existing Plans, Studies, and Data
Countywide Transit Plan
 FINAL Technical Memo #1



Prepared for:
 Alameda County Transportation Commission

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With

Community Design + Architecture
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November 21, 2014



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Acronyms

Acronym/Abbreviation	Definition
AB 32	Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006
ABAG	Association of Bay Area Governments
ACE	Altamont Corridor Express
AC Transit	Alameda-Contra Costa Transit District
ACCMA	Alameda County Congestion Management Agency
ADA	Americans with Disabilities Act
Alameda CTC	Alameda County Transportation Commission
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit
BRT	Bus Rapid Transit
CARB	California Air Resources Board
CBTP	Community-Based Transportation Plans
CCCTA	Contra Costa County Transportation Authority
CCJPA	Capitol Corridor Joint Powers Authority
CO ₂	Carbon dioxide
COA	Comprehensive Operations Analysis
CHSRA	California High Speed Rail Authority
CIP	Capital Improvement Program
CMA	Congestion Management Agency
CMP	Congestion Management Plan
CTP	Alameda Countywide Transportation Plan
EIR	Environmental Impact Report
FTA	Federal Transit Administration
FY	Fiscal Year
GHG	Greenhouse Gas
GTFS	General Transit Feed Specification
IPR	Initial Project Reports
LAVTA	Livermore Amador Valley Transit Authority
LOS	Level of Service
MAP-21	Moving Ahead for Progress in the 21 st Century
MTC	Metropolitan Transportation Commission
MTS	Metropolitan Transportation System
OAC	Oakland Airport Connector
PAPCO	Paratransit Advisory and Planning Committee
PDA	Priority Development Area
RM2	Regional Measure 2
RM3	Regional Measure 3
RTEP	Regional Transit Expansion Program
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
SB	Senate Bill
SB 375	California Sustainable Communities and Climate Protection Act of 2008
SCOA	Sustainable Communities Operations Analysis
SCS	Sustainable Communities Strategy
SFMTA	San Francisco Municipal Transportation Agency
SJRRC	San Joaquin Regional Rail Commission
SRAC	Service Review Advisory Committee
SRTP	Short Range Transit Plan
STA	State Transit Assistance

Continued...

Acronym/Abbreviation	Definition
STIP	State Transportation Improvement Program
TAP	Transit Access Pass
TDA	Transportation Development Act
TEP	Transportation Expenditure Plan
TOD	Transit Oriented Development
TPI	Transit Performance Initiative
TSP	Transit Sustainability Project
UPRR	Union Pacific Railroad
VTA	Santa Clara Valley Transportation Authority
WETA	Water Emergency Transportation Authority
WestCAT	Western Contra Costa County Transit Authority
WSX	Warm Springs Extension

1.0. Purpose and Background

This technical memorandum identifies and summarizes the existing plans, studies, and other data that will form the foundation for the development of the Countywide Transit Plan. The resulting inventory will inform the future tasks of establishing vision, goals, and objectives; identifying performance measures; and outlining potential projects. It will also provide the base understanding of the funding status and strategies for transit projects. This memo addresses existing transit and paratransit services and policies, land use plans and policies, and provides a summary of issues, needs, and opportunities.

Access to transportation funding is becoming increasingly competitive and there is a continuing trend away from the federal and state government as the primary funding contributors to transportation project delivery. While there continues to be some reliance on the higher levels of government for these services, the trend is toward greater reliance on funding at the local level. In California, a major source of transportation funding comes from the county sales tax authorities.

Transportation networks received a heavy infusion of public investment starting with interstate highway funding in the 1950s. Transit systems experienced increased levels of federal investment starting in the 1970s and with the creation of the Mass Transit Account in 1983, but are now showing signs of deterioration. For transportation managers, there is an increasing need to focus on maintenance and rehabilitation of existing networks, while still planning for future growth. This has brought increasing focus on asset management and a need to make the most efficient use of limited resources.

Coincident with the more constrained funding condition at the beginning of the 21st century, concern over global warming and increased greenhouse gas (GHG) emissions has grown. This has led to the enactment of a stricter federal and state regulatory framework that has forced transportation decision-makers to consider a more sustainable approach for funding and delivering transportation projects. This combination of increasingly limited resources and a move towards a more sustainable future are forcing transportation decision-makers to develop a new paradigm for the future.

California has been on the forefront of change in this arena. With the enactment of Assembly Bill (AB) 32 and Senate Bill (SB) 375, the state placed the reduction of GHGs and the coordination of land use and transportation investment in the forefront. The Metropolitan Transportation Commission (MTC), through its approval of Plan Bay Area in 2013, provided a new approach within which local jurisdictions support implementation of these regulations in the Bay Area. The establishment of Priority Development Areas (PDA) throughout the region and the use of performance standards to guide the investment of

transportation dollars have set a new transportation framework for local governments.

Alameda CTC and its predecessor organizations – the Alameda County Congestion Management Agency (ACCMA) and the Alameda County Transportation Improvement Authority, the county transportation sales tax authority, have been providing substantial funding for transportation projects in Alameda County for over 25 years. This has had a strong influence in determining how transportation investments have occurred in the county. Alameda County provides investments towards the expansion of transit services, while completing gaps in the highway and roadway network. With the adoption of the Countywide Transportation Plan (CTP) in 2012, Alameda CTC incorporated the new regulatory framework and a new approach towards the delivery of sustainable transportation services, increasing the emphasis on a multimodal transportation approach that is well integrated with land use.

Prior to adoption of the 2012 CTP, Alameda CTC relied on a straightforward approach for prioritizing the projects in the Alameda CTP and Transportation Expenditure Plan (TEP) – a call for projects followed by an evaluation process that ranked projects based on their ability to achieve long-term transportation goals.

With the adoption of the 2012 CTP, Alameda CTC articulated a new vision for the county, integrating transportation and land use goals. This was an initial step towards addressing new statewide regulations governing sustainability and the reduction of GHG emissions and acknowledging the new regional planning framework of Plan Bay Area. The CTP has moved towards a more quantitative assessment of candidate projects for limited funding at the county level. The Countywide Transit Plan is intended to more fully-articulate the transit vision that was broadly stated in the CTP and to advance Alameda CTC towards a more data-driven performance assessment for determining which transportation investments would best serve the county goals.

The Countywide Transit Plan provides an opportunity for Alameda County to create its vision for a transit network that can effectively meet a growing demand for services and move the county towards a more sustainable future. This new vision will allow Alameda CTC to transition from a transportation investment strategy based on ranked capital project lists generated by local jurisdictions and transit agencies, to a well-defined set of investments collectively determined and that have been objectively demonstrated to efficiently and effectively move the county toward its future vision.

Plans and policies put forward by MTC, transit agencies, and local jurisdictions in and adjacent to Alameda County provide the regulatory framework and context from which the Countywide Transit Plan will be developed. The Countywide Transit Plan also provides an opportunity for Alameda CTC to examine and begin to set a course as to how it will deal with the expanding role

of private businesses in the provision of transportation services. Private shuttles, private ride-sharing services, and new technology applications providing greater access to transit information provide an opportunity to consider new approaches to public private partnerships in delivering transportation to the customer.

2.0. Transit

This chapter describes the state, regional, and countywide context within which transportation decisions are made and the key plans and policies at the county and regional level that are currently governing transit investment in Alameda County.

2.1. Context

A. State

Over the past decade, the state has established a new regulatory framework that links transportation planning and investments with land use patterns, and reduces GHG emissions. The key legislative actions are AB 32 and SB 375, both summarized below. These mandates have set a new imperative for local jurisdictions in the state to develop new and more sustainable approaches to land use development and transportation services.

1. Assembly Bill 32

AB 32, the California Global Warming Solutions Act of 2006, targets statewide GHG emissions. GHGs and groups of GHGs covered include:

- Carbon dioxide (CO₂)
- Methane
- Hydrofluorocarbons
- Perfluorocarbons
- Sulfur hexafluoride
- Nitrogen trifluoride

The act requires that California reduce GHG emissions to 1990 levels by 2020. The California Air Resources Board (CARB) is responsible for adopting regulations to reduce GHG emissions based on feasible technology and cost-effective measures. Additionally, AB 32 authorizes fee collection from large sources of GHGs such as refineries, power plants, cement plants, and food processors. In the Bay Area, the Bay Area Air Quality Management District (BAAQMD) sets performance objectives in its Clean Air Plan to reduce emissions in compliance with AB 32.

In 2006, the Alameda County Board of Supervisors adopted Resolution-2006-204 creating the County Climate Change Leadership Strategy to reduce GHG

emissions to 1990 levels by 2020 and to 80 percent below 1990 levels by 2050. The BAAQMD identified and recommended GHG significance thresholds, analytical methodologies, and mitigation measures to ensure new land use development meets its fair share of the emission reductions needed to address the cumulative environmental impact from GHG emissions.

2. California Senate Bill 375

SB 375, Sustainable Communities and Climate Protection Act of 2008, targeted reducing GHG emissions through integrated land use and transportation planning. Specifically, metropolitan planning organizations, such as MTC, prepare either a Sustainable Communities Strategy (SCS) that demonstrates how plans and programs would achieve the targets, or an alternative planning strategy that shows how the targets would be achieved through other means. These SCSs identify land use, housing, and transportation strategies aimed at helping the region meet GHG targets set by the state Air Resources Board. The target set for the Bay Area is a seven percent GHG reduction by 2020, and a 15 percent GHG reduction by 2035. The Regional Transportation Plan (RTP), and therefore the CTP, is required to meet the requirements for GHG reduction from automobiles and light trucks.

B. Metropolitan Transportation Commission

MTC is the transportation planning, coordinating and financing agency for the nine-county San Francisco Bay Area. MTC is governed by a 21-member policy board composed of representatives from the cities and counties of the Bay Area, the Bay Conservation and Development Commission, federal and state transportation agencies, and the federal housing department.

As the regional transportation planning agency, MTC is responsible for updating the RTP, a comprehensive blueprint for the development of all modes of transportation, including mass transit. MTC works with transit, county, and local agencies to determine the expenditure of federal and state transportation dollars allocated to the region.

There are four critical transportation documents that govern transit decisions and funding in the Bay Area:

- Regional Transportation Plan/Plan Bay Area (RTP)
- Regional Transit Expansion Program (RTEP)
- Regional Rail Plan
- Transit Sustainability Project (TSP)
- Regional Measure 2 (RM2)

1. Regional Transportation Plan/Plan Bay Area

The RTP is the long-term blueprint of a region's transportation system. It identifies and analyzes transportation needs of the metropolitan region and creates a framework for prioritizing projects. The RTP also provides the vehicle for implementing federal and state legislation and strengthening the relationship among countywide plans and with the regional plan. Plan Bay Area is the current RTP for the San Francisco Bay Area region. The plan, adopted in 2013 by the Association of Bay Area Governments (ABAG) and MTC provides an integrated transportation and land use strategy through 2040. Plan Bay Area is the region's first long-range plan to meet the requirements of SB 375, providing an SCS to accommodate future population growth while reducing GHG emissions from cars and light trucks.

Plan Bay Area builds upon FOCUS, a regional MTC/ABAG initiative, which supports local efforts to link local community development plans with regional land use and transportation planning objectives. Local governments have identified PDAs and Priority Conservation Areas, and these form the implementing framework for the linkages to implement Plan Bay Area.

In addition to being the first RTP to embrace the idea of focusing transportation investment decisions against a background of land use patterns and future development strategies, Plan Bay Area also advanced the concept of basing transportation funding decisions on project performance and the ability to achieve enhanced system efficiency and environmental goals. The plan focuses on enhanced mobility by investing in regional and county priorities, but also on maintaining the existing system, supporting focused growth, building the next generation of transit, protecting the climate, and improving system efficiency. It promotes a bold strategy for meeting approximately 80 percent of the region's future housing needs in PDAs within walking distance of frequent transit service.

Goals and Objectives

Plan Bay Area promotes equitable mobility opportunities for all residents as a part of the broader vision for the region. The plan invests \$292 billion in transportation investments, of which \$60 billion are discretionary funds. The discretionary funds are invested via six key investment strategies:

- Invest in county priorities
- Maintain our existing system ("Fix It First")
- Support focused growth through the One Bay Area Grant Program
- Build next generation transit
- Boost freeway and transit efficiency
- Protect our climate

Policies

Housing distribution in Plan Bay Area is guided by the direction of the ABAG Board, which adopted a policy to maximize the regional transit network and reduce GHG emissions by providing convenient access to employment to people at all income levels. Plan Bay Area itself does not introduce new policies, but it introduces the One Bay Area Grant program. The One Bay Area Grant provides funding to support jurisdictions that focus growth in PDAs through local policies.

Projects

Figure 1 and Figure 2 show the regional transit system improvements and local transit improvements, respectively, included in Plan Bay Area. Major regional transit system improvement projects in Plan Bay Area include a Bay Area Rapid Transit (BART) extension from Fremont to San Jose/Santa Clara (Project 1 in Figure 1), expanded ferry service around the region (Project 10 in Figure 1), Irvington BART Station (Project 7 in Figure 1), and Union City commuter rail station (8 in Figure 2). Major transit improvements in Alameda County include BRT service on Oakland's Grand-MacArthur Corridor (Project 5 in Figure 2), East Bay BRT (Project 4 in Figure 2), Alameda-Oakland BRT (Project 6 in Figure 2), Oakland Airport Connector (Project 15 in Figure 2), and Dumbarton Express Bus frequency improvements (Project 20 in Figure 2). All Plan Bay Area projects within Alameda County are part of the CTP.

Figure 1: Plan Bay Area – Regional Transit System Improvements



Source: MTC, RTP, 2013

Figure 2: Plan Bay Area – Local Transit Improvements



Source: MTC, RTP, 2013

Performance Measures

Plan Bay Area evaluated major projects based on two criteria: a benefit cost ratio that captures cost-effectiveness of a project and a target score, which measures the contribution a project makes toward achieving the plan’s performance targets. Additionally, MTC conducted a separate analysis of the plan’s equity impacts, comparing Plan Bay Area to the year 2040 baseline forecast.

Plan Bay Area includes ten performance targets, based on regional goals, and developed collaboratively with state, regional, and local public agencies, as well as stakeholder groups. The adopted targets addressed a broad spectrum of issues including climate change, housing, health and safety, open space, equity, economic vitality, and transportation efficiency. Two of the targets are mandated by SB 375 and the remaining eight are voluntary targets. Table A 1 in Appendix A lists the performance targets for the RTP. Based on an evaluation of a benefit-cost ratio and the project contribution to meeting the 10 performance targets, two Alameda County projects, the Alameda-Contra Costa Transit District (AC Transit) Grand MacArthur BRT project and BART Irvington Station project are among the highest-performing transportation projects in the region (see Table 1).

Table 1: RTP - Highest-Performing Projects in Alameda County

Overall Rank in Region	Project	County	Benefit / Cost Ratio	Overall Targets Score	Project Capital Costs* (Million \$)	Project Description
4	AC Transit Grand-MacArthur Bus Rapid Transit	Alameda	18	5.5	36	Constructs a bus rapid transit line along the Grand Avenue and MacArthur Avenue corridors in Oakland, providing faster service for AC Transit Line NR.
8	Irvington BART Station	Alameda	12	5.5	123	Constructs a new infill BART station in the Irvington district of Fremont.

Source: MTC, RTP, 2013. Note: Ranked by benefit/cost ratio

Funding and Implementation Plan

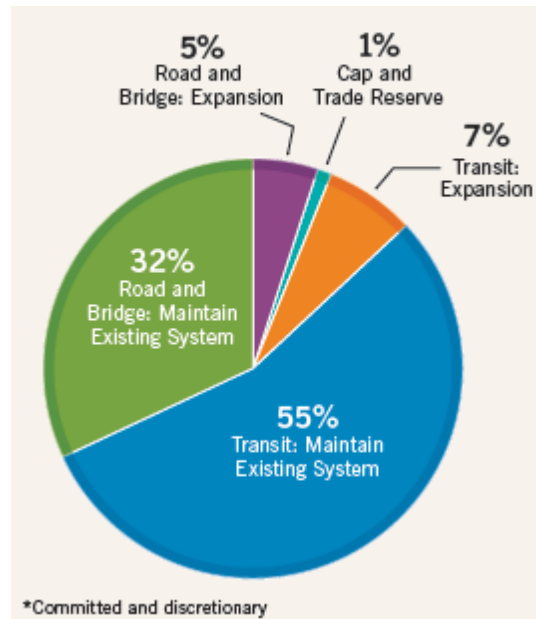
Plan Bay Area’s transportation element specifies how \$292 billion in anticipated federal, state, and local funds will be spent through 2040 (see Figure 3). Maintenance and operation of the Bay Area’s existing public transit services will receive about 55 percent, transit expansion about seven percent, and Cap and Trade Reserve about one percent of the total revenues. The Plan identifies transit-oriented affordable housing as an eligible use for Cap and Trade revenues.

Plan Bay Area’s priorities for the next generation of federal New Starts and Small Starts funding include major rail and Bus Rapid Transit (BRT) investments (see Figure 1 and Figure 2). Along with identifying these significant future transit

investments, Plan Bay Area also retains \$660 million in financial capacity for projects that are in the planning stages.

While Plan Bay Area was developed concurrently with the Alameda CTP, it was finalized following the adoption of the CTP. The regional transit vision from Plan Bay Area provides the broad regional context within which a more focused Transit Plan for Alameda County will be developed.

Figure 3: Plan Bay Area - Investment by Function



Source: MTC, Plan Bay Area, 2013

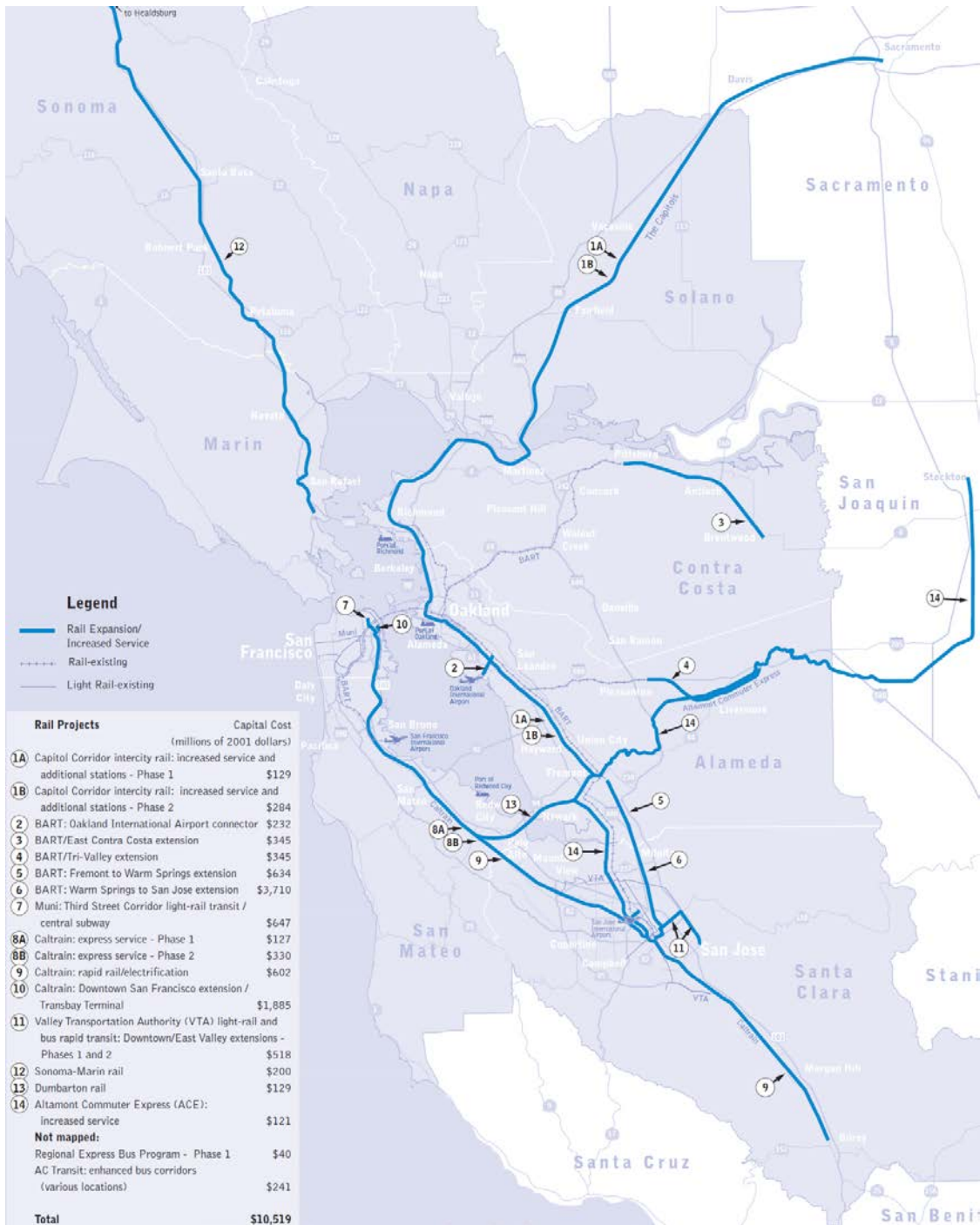
3. Regional Transit Expansion Program

MTC’s Regional Transit Expansion Program (RTEP), or Resolution 3434, identified specific bus, rail, and ferry priority projects for transit expansion. Initially adopted in 2001 as part of the RTP update, Resolution 3434 is a multi-year transit expansion program that included 19 bus and rail projects with a total cost of \$10.5 billion. The program was designed to enhance the Bay Area’s transit network with 140 miles of new rail, 600 miles of new express bus routes, and a 58 percent increase in transit service levels in existing corridors (see Figures 4 and 5).

Resolution 3434 built upon Resolution 1876 that delivered new BART service to Dublin and Bay Point in the East Bay.

A companion resolution to the RTEP, Resolution 3375, adopted criteria for identifying and prioritizing bus and rail transit projects for inclusion in the RTEP. Resolution 3375 provided the framework for evaluating projects based on multiple criteria including: previous commitment of federal, state, and local funding; project readiness; availability of funds for operation and maintenance;

Figure 4: RTEP – Recommended Rail Projects



Source: MTC, RTEP, 2002

Figure 5: RTEP – Recommended Express and Rapid Bus Routes



cost-effectiveness; supportive of land use policies; and system connectivity and access.

Goals and Objectives

MTC's goal for the RTEP is to coordinate regional priorities for transit investment so as to best position the Bay Area to compete for limited discretionary funding sources at the state and federal level.

Policy

The RTEP provides a framework for comprehensively evaluating the next generation of major regional transit expansion projects to meet the challenge of congestion in major corridors throughout the nine-county Bay Area. The RTEP adopted a program of projects consistent with the MTC policy for the development of an inter-related program of rail extensions/improvements and express/rapid bus projects described in Resolution No. 3357. This policy framework largely supports prioritizing projects that either have current federal, state, or local funding commitment and/or are able to proceed expeditiously to implementation.

MTC has developed a Transit-Oriented Development (TOD) companion policy for the expansion program. There are three key elements of the regional TOD policy:

- Corridor-level thresholds to quantify appropriate minimum levels of development around transit stations along new corridors;
- Local station area plans that address future land use changes, station access needs, circulation improvements, pedestrian-friendly design, and other key features in TOD; and
- Corridor working groups that bring together Congestion Management Agencies (CMA), city and county planning staff, transit agencies, and other key stakeholders to define expectations, timelines, roles and responsibilities for key stages of the transit project development process.

Projects

The RTEP included a recommended program of projects, which included many of the major projects in Alameda County. Table A 2 in Appendix A provides the status of the program of projects. Collectively, the program of projects in the RTEP would add over 140 new route miles of rail (Figure 4) and 600 new route miles of express bus (Figure 5). Roughly half of the projects are in service or under construction. Many of the others are reconfirmed as priorities for continued funding, or are included in the RTP for early phases of work as the projects are being developed.

Alameda County was a major beneficiary of the program with 11 of the 19 projects providing direct benefits to the county. Funds totaled \$5.9 billion for these projects (see Table 2).

Table 2: Resolution 3434 Projects in Alameda County

Project	Project Sponsor	Project Cost (Millions 2001)
BART to Warm Springs	BART	\$634
BART: Warm Springs to San Jose	VTA	\$3,710
BART/Oakland Airport Connector	BART	\$232
Capitol Corridor: Phase 1 Expansion	CCJPA	\$129
AC Transit Oakland/San Leandro BRT: Phase I (Enhanced Bus)	AC Transit	\$151
Regional Express Bus Phase 1	MTC/Operators	\$40
Dumbarton Rail	JPB	\$129
BART/Tri-Valley Extension	ACCMA	\$345
Altamont Corridor Express service expansion	ACE	\$121
Capitol Corridor: Phase 2 Expansion	JPB	\$330
AC Transit Enhanced Bus: Hesperian/Foothill/MacArthur corridors	AC Transit	\$90
Total		\$5,911

Source: Resolution 3434

Resolution 3434 has been amended multiple times to incorporate a TOD Policy and to refine projects, costs, and funding commitments. In 2008, MTC adopted the RTEP Strategic Plan, which identified \$222 million to speed the delivery of the AC Transit BRT and the BART to Warm Springs projects.

Performance Measures

MTC adopted Resolution 3357 as the basis for evaluation of rail and express bus projects in the RTEP. Resolution 3357 defines and provides performance measures for financial and performance criteria in the following areas:

- Land Use
- Cost-Effectiveness
- System Connectivity
- System Access
- Project Readiness

Figure A 1 in the Appendix A provides a comprehensive list of performance measures defined in Resolution 3357.

Funding and Implementation Strategy

The RTEP does not identify or provide any new sources of funds, but seeks to identify an integrated program of new rail transit starts and extensions that could be primarily funded with local and regional sources of funds.

Funding agreements for these projects were adopted in December 2001. The total capital cost of the program of projects in the RTEP is about \$18 billion (year of expenditure dollars).

The RTEP established the region's priority projects for federal New Starts and Small Starts funds, creating a unified regional strategy to secure commitments from this highly competitive national funding source.

4. Regional Measure 2

In March 2004, voters passed RM2, to raise tolls by \$1 on seven state-owned bridges in the San Francisco Bay Area. This program funds capital projects and programs to reduce congestion or improve travel in the bridge toll corridors. Passage of RM2 created the Regional Traffic Relief Plan and identifies specific transit operating assistance and capital projects and programs eligible for RM2 funding.

Three of the bridges (San Francisco-Oakland Bay, San Mateo-Hayward, and Dumbarton) have a direct connection to Alameda County and account for approximately 57 percent of overall annual toll crossings¹. Those three bridges combined with the Richmond-San Rafael and Carquinez bridges account for 83 percent of all annual toll crossings in the Bay Area. These five bridges are located in corridors that result in a substantial number of trips on the Alameda County transportation network.¹

The Bay Area Toll Authority collects RM2 funding and MTC coordinates the program. Additionally, MTC may act as the project sponsor for projects funded by RM2.

Goals and Objectives

The goal of RM2 is to reduce congestion along bridge corridors in the San Francisco Bay Area through the investment in transit projects and services.

Policies

RM2 funds for capital projects are allocated with the specific intent of delivering specific projects that will meet the goals of the program. Projects are funded and implemented by phase:

- Planning Activities, Environmental Studies, and Preliminary Engineering
- Final Design - Plans, Specifications and Estimates
- Right-of-Way Activities/Acquisition/Utility Relocation

¹ MTC Resolution No. 3636. Regional Measure 2 Regional Traffic Relief Plan Policies and Procedures. April 28, 2010.
www.mtc.ca.gov/funding/RM2/downloads/P_and_P_Changes_for_PAC_final3.pdf

- Construction/Rolling Stock Acquisition/Operating Service

Projects

Thirty-six capital projects were identified in the authorizing legislation (California Streets and Highway Code Section 30914(c)). These projects range from transit studies to transit vehicle procurement to major transit capital improvements. Project sponsors are required to submit and update project summary documents called, Initial Project Reports (IPR), to MTC, as necessary. MTC approves the IPRs (and any updates) in conjunction with the allocation of RM2 funds. The IPRs contain details such as the project scope, cost, schedule, and other fund sources.

Fourteen operating projects are listed in the RM2 legislation. On October 13, 2004, Federal Highway Administration approved the segregation of revenues from the four non-federalized Bay Area toll bridges for funding transit operations through the RM2 program. This decision allows MTC to allocate operating funds to the projects that were approved as part of RM2. MTC requested project sponsors to submit an initial five-year operating assistance program. These operating assistance programs outline the scope, detail the operating budget, and project operating performance data for the proposed transit service.

MTC began allocating RM2 funds in July 2004. Allocations are generally awarded based on project readiness and completeness for a specific project phase.

Performance Measures

As requested by MTC, sponsors submit annual updates and semi-annual progress reports. Project Sponsors are not subject to specific performance measures.

Funding and Implementation Strategy

The Regional Traffic Relief Plan identifies about \$425 million for capital projects providing direct benefits to the Alameda County transportation system. The plan also identified about \$800 million for operational programs directly benefiting Alameda County.

The following capital projects are part of the RM2 program investment in Alameda County:

- Dumbarton Commuter Rail
- Union City Intermodal Station
- BART Oakland Airport Connector
- Telegraph Avenue/International Boulevard Enhanced Bus (BRT)
- BART Warm Springs Extension
- I-580 Tri-Valley Rapid Transit Corridor

In addition, three regional programs provide benefits to Alameda County transit: Safe-Routes to School; Regional Rail Plan; and BART Transit Capital Rehabilitation.

5. Regional Rail Plan

In September 2007, MTC adopted the Regional Rail Plan. The plan, prepared by MTC, Caltrain, BART, and the California High-Speed Rail Authority (CHSRA), in collaboration with rail passenger and freight operators, regional partners, and rail stakeholders, presented a long-range vision for improving the regional passenger rail system. The plan was a requirement of the RM2 Traffic Congestion Relief Program adopted by Bay Area voters.

The Regional Rail Plan focused on the incorporation of passenger trains into the existing freight rail system, expanding the regional rapid transit network, and increasing rail capacity and connectivity to other transit systems. It provided a vision for railroad, rapid transit, and high-speed rail service for the near (5 to 10 years), intermediate (10 to 25 years), and long-term (beyond 25 years).

The plan also attempted to address and reconcile how best to expand rail service to serve regional growth, increasing demand for in-commuting from the Central Valley and Sacramento regions; growing traffic congestion, and the anticipated large increase in freight demand. Economic and environmental concerns were paramount in developing the plan.

The vision for the plan included ringing the bay with rail, with BART and Caltrain serving as the backbone of the regional rail system. It identified the need for the BART system to be supplemented by a regional rail express system serving longer distance trips and a high-speed rail system serving California. The Regional Rail Plan also advocated for focused TOD to support the rail investment.

Key recommendations from the Regional Rail Plan included:

- BART improvements to focus on extensions to Warm Springs, Santa Clara County, and eastern Contra Costa County; core capacity and further refinement of the “Metro” service plan for the Inner Bay Area (to increase BART frequency in core stations); interface with regional rail and bus services, including an intermodal connection to the Altamont Corridor Express (ACE) at Isabel/Stanley in the City of Livermore; fourth track through Oakland to facilitate throughput; infill stations at various locations in conjunction with BART policies; and, in the long-term, pursue construction of a second transbay tube.
- Expand the East Bay rail network from San Jose to Sacramento to three tracks with four-track sections from Oakland to Richmond and in Solano County. Reduce travel time from Sacramento to San Jose.

- Provide rail service on the Dumbarton rail corridor between Union City and Redwood City with 30-minute peak period service.
- Expand passenger service in the Tri-Valley (the Amador, Livermore, and San Ramon valleys)/I-680 corridor by adding trackage to the Union Pacific Railroad (UPRR) line and/or reinstating service on the abandoned SPRR line.
- Add regional rail service between Modesto and Oakland or San Jose on an hourly schedule over the Altamont Pass between the San Joaquin Valley and the Bay Area.

The Regional Rail Plan also included options for High-Speed Rail in the Pacheco and Altamont Corridors. Subsequently, the CHSRA adopted the Pacheco Pass as the primary connection to the Bay Area from the Central Valley. High-Speed Rail funds have been allocated to the Altamont Corridor to determine how to provide enhanced connections from the Central Valley to the East Bay.

6. Transit Sustainability Project

Transportation 2035, the RTP adopted in 2009, identified region-wide transit capital and operating budget shortfalls of \$17 billion and \$8 billion respectively, over the upcoming 25 years. This significant deficit came at a time when transit agencies were facing service cuts and structural problems in transit financing. In addition, passenger service and trips were not trending with the increase in real operating costs.

Goals and Objectives

In response, MTC launched the Transit Sustainability Project (TSP) in early 2010 to assess the major challenges facing transit and identify a path toward an affordable, efficient and well-funded transit system that more people will use as the region seeks to focus growth around transit. The three primary goals of the study were:

- Improving transit financial conditions by containing costs, covering a greater percentage of operating and capital costs with farebox revenues; and securing more reliable streams of public funding.
- Improving customer service by upgrading the system to function as an accessible, user-friendly and coordinated network for transit riders, regardless of mode, location or jurisdiction.
- Attracting new riders to the system to advance emission reduction goals and supporting ridership growth through land use and pricing policies.

A Project Steering Committee, comprised of executives from the transit operators, transportation agencies, government, labor, business, environmental and equity sectors, helped guide this project. In May 2012, MTC approved the TSP recommendations, which included performance measures and targets;

transit service, paratransit, and institutional recommendations; and paratransit cost containment and service strategies.

The TSP focused on three project elements: improving financial and service performance and simplifying institutional frameworks. The study made the following key findings:

- Financial
 - a) Operator base wages appear reasonable when compared to national peers and Bay Area wage indices.
 - b) Fringe benefits are a major cost driver in the short and long term (similar to most government sectors).
 - c) Changes in work rules and business models provide meaningful opportunities for cost savings.
 - d) Bay Area Paratransit cost structure performs better than national peers, but faces increasing cost pressure through future growth in demand.
 - e) Sales tax receipts, the single largest source of non-fare subsidy in the Bay Area, have been flat in real terms over the past decade.
- Service
 - a) Improving transit travel times on major corridors will provide significant gains in productivity.
 - b) Integrated land use/transportation planning will attract new transit riders.
 - c) A consistent fare structure across multiple transit systems can boost transit ridership and improve the customer experience.
- Institutional
 - a) Integrated transportation policy decision making, across jurisdictions and across modes (transit, arterial management, parking, etc.), can lead to more effective investment and service decisions.
 - b) Bay Area transit administrative costs are higher than national peers, owing in part to the existence of multiple operators serving a metropolitan region of this size.

Table 3 summarizes the TSP recommendations adopted by MTC.

Performance Measures

MTC developed performance measures and targets to monitor the performance of the seven largest transit agencies in the Bay Area, including AC Transit and BART. The adopted performance measures and targets now require the seven major transit operators to reduce “real” operating cost per service hour, cost per passenger, or cost per passenger mile by five percent within five

years. Table 4 presents these performance measures and the current status of transit operator performance.

Table 3: TSP - Recommendations

Recommendation	Description	Cost	Funding	Status
Performance Measures and Targets	Link existing and new operating and capital fund to targets	No additional	\$300 million in operating funds \$300 million in capital for rehabilitation	Largest 7 operators adopt strategic plans
Transit Performance Initiative	Investment and incentives to improve transit performance	\$20M annually	OneBayArea Grant funded \$30 million first year; redirect \$20 million in annual formula funds	\$27 million proposed for investment in late 2013 and early 2015 Incentive revised to \$60 million over 4 years
Service, Institutional and Paratransit Recommendations	Several strategies identified	Not identified	\$9.2 million in FTA Section 5310 funding	FTA funds to remove transportation service barriers and expand mobility options for senior and individuals with disabilities

Source: MTC Select Committee TSP Update, March 27, 2013 and Naomi Armenta, Alameda CTC, November, 2014.

Table 4: TSP – Performance Measures

Goal	Performance Measure	Target	Status
Improve Financial Condition	Cost Per Hour or Cost Per Passenger or Cost Per Passenger Mile	5% real reduction in metric over 5-year period and no growth beyond CPI thereafter	<ul style="list-style-type: none"> - In FY08-FY11, AC Transit has achieved 5% reduction in cost per hour. - In FY08-FY11, BART has achieved an 8% reduction in cost per passenger. - In FY09-FY12, BART achieved 11% reduction in cost per passenger mile.
Improve Service for the Customer	Transit Performance Initiative: Investment and Incentive Programs and Regional Customer Satisfaction Survey	Continuous Improvement	AC Transit on-time performance is currently 66%. BART on-time performance is currently 91%.
Attract New Riders to the System		Increase ridership levels at or above the rate of population growth in counties/corridors in which service operates	AC Transit ridership on fixed-routes increased 3% between FY 11/12 and FY 12/13; the first increase since FY 09/10. BART ridership has increased 6% between FY 11/12 and FY12/13 and has steadily increased since FY 09/10.

Source: Transit Sustainability Program, 2013; Transit Sustainability Project Recommendations, 2012; BART Board Agenda Packet, March 2013, MTC; MTC Statistical Summary of Bay Area Transit Operations, July 2014, and AC Transit and BART 2014.

The TSP required each of the seven major transit operators in the region to adopt a strategic plan to meet one or more of the targets by March 31, 2013. It also requires each agency to submit performance measure data on all three targets to MTC. MTC will then analyze each agency's progress in meeting targets in 2017-2018, and link existing and new operating and capital funds to progress towards achieving the performance targets.

AC Transit adopted a TSP Strategic Plan for a five percent reduction target by Fiscal Year (FY) 2016- 2017 and submitted it to MTC for approval. The strategic plan estimates saving \$15 million from AC Transit's operating budget through initiatives such as implementation of day passes, implementation of the International/E. 14th BRT project, and investments in improving service reliability. AC Transit has started an internal monitoring process to meet continued reporting requirements.

BART adopted operating performance measures and targets in March 2013. As per BART's executive decision document, BART had already met the five percent cost reduction targets for cost per passenger and cost per passenger miles.

Funding and Implementation Plan

The TSP program developed an investment and incentive approach to achieving improved transit service performance. Under the program, MTC will make investments in supportive infrastructure to achieve performance improvements in major transit corridors, and reward the agencies that achieve improvements in ridership and service productivity.

Under a competitive process, MTC is providing Transit Performance Initiative (TPI) funding for projects that advance the TSP objectives.

7. Tri-City Transit Study

The Tri-City Transit Study was an outgrowth of MTC's TSP program. The Tri-City area - consisting of Fremont, Newark, and Union City - currently has very few areas with concentrations of "transit-dependent" populations and most households have access to cars. There are also large areas of relatively low employment density. Extension of BART service through the Tri-City area into Santa Clara County provides an opportunity to develop a stronger market for transit and to support growth in designated PDAs. As a result, following the adoption of TSP recommendations, MTC started investigating ways to improve service in the Tri-City area.

Market and service analysis revealed significant demand between the Tri-City area and Santa Clara/San Jose area that is not served with high-capacity transit service, but the BART extension into Santa Clara County will align well with travel demand. The study, currently underway, has developed a set of service design

principles focused on providing linear, direct, and frequent transit service connecting to the extended BART service in the corridor. The study is in draft form and will be incorporated into this Transit Plan.

C. Alameda CTC

Alameda CTC coordinates countywide transportation planning efforts; programs local, regional, state and federal funding; and delivers projects and programs including those approved by Alameda County voters in the transportation expenditure plans. The Alameda CTC is a joint powers authority governed by a 22-member Commission comprised of elected officials from each of the 14 cities in Alameda County, all five members of the Alameda County Board of Supervisors and elected representatives from AC Transit and BART.

The mission of Alameda CTC is to plan, fund and deliver transportation programs and projects that expand access and improve mobility to foster a vibrant and livable Alameda County. Alameda CTC develops the CTP, the TEP and the Congestion Management Plan (CMP) to assist in guiding long term and nearer term transportation investment in Alameda County. Figure 6 shows the relationship between these documents. This section summarizes the following Alameda CTC documents:

- Countywide Transportation Plan (CTP)
- Transportation Expenditure Plan (TEP)
- Community-Based Transportation Plans (CBTP)
- Congestion Management Plan (CMP)

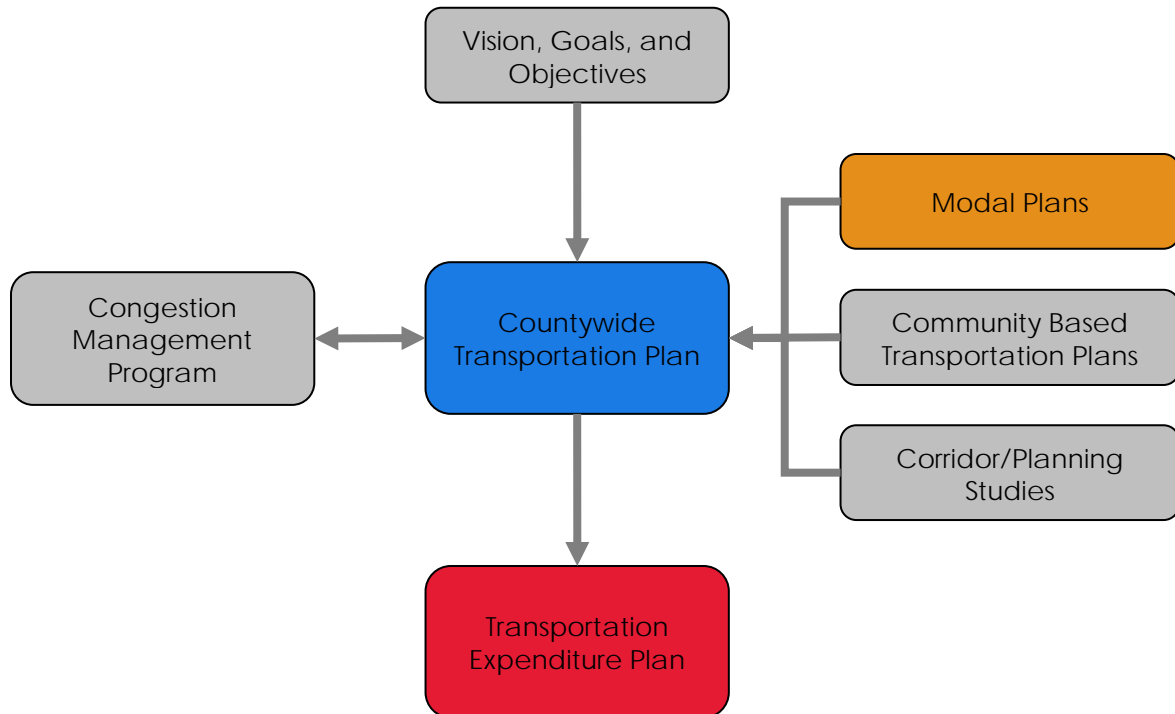
1. Countywide Transportation Plan

Alameda CTC's CTP is a long-range policy document that guides future transportation investments, programs, policies and advocacy for all of Alameda County through 2040. The CTP establishes a general vision for Alameda County's transportation system, inventories needs and available funding, identifies gaps where funding needs and availability do not match and where additional sources of funding need to be secured, and ties funding to the County's project and program investments identified as committed, Tier 1 (fully funded), or Tier 2 (partially funded) projects.

The current CTP was completed in 2012, in conjunction with the 2012 TEP that identified the proposed spending for a new sales tax measure. The sales tax measure, put before the voters in November 2012, failed by a narrow margin. The CTP was developed concurrently with MTC and ABAG's Plan Bay Area,

which was adopted in 2013. The CTP was adopted in May 2012 and Plan Bay Area was adopted in July 2013.

Figure 6: Relationship between Alameda CTC documents



Source: Parsons Brinckerhoff

Vision and Goals

The CTP introduces a vision for “a connected and integrated multimodal transportation system” in Alameda County, and lays out sound goals for its transit system.

“Alameda County will be served by a premier transportation system that supports a vibrant and livable Alameda County through a connected and integrated multimodal transportation system promoting sustainability, access, transit operations, public health and economic opportunities.”

The CTP states the following goals for the transportation system:

- Multimodal
- Accessible, affordable and equitable for people of all ages, incomes, abilities and geographies
- Integrated with land use patterns and local decision-making

- Connected across the county, within and across the network of streets, highways and transit, bicycle and pedestrian routes
- Reliable and efficient
- Cost effective
- Well maintained
- Safe
- Supportive of a healthy and clean environment

Policies

The CTP is the first comprehensive transportation planning document for Alameda County to respond to the many recent legislative and regulatory changes that seek to coordinate transportation investments with land use patterns. Key regulatory changes include:

- AB 32 – the California Global Warming Solutions Act, 2006
- California Senate Bill 375 (SB 375)— Sustainable Communities and Climate Protection Act, 2008
- MTC’s Resolution 3434—TOD Policy for Regional Transit Expansion Projects, 2005

The CTP seeks to better coordinate transportation investments with land use patterns in the county as put forth in state legislation and Plan Bay Area.

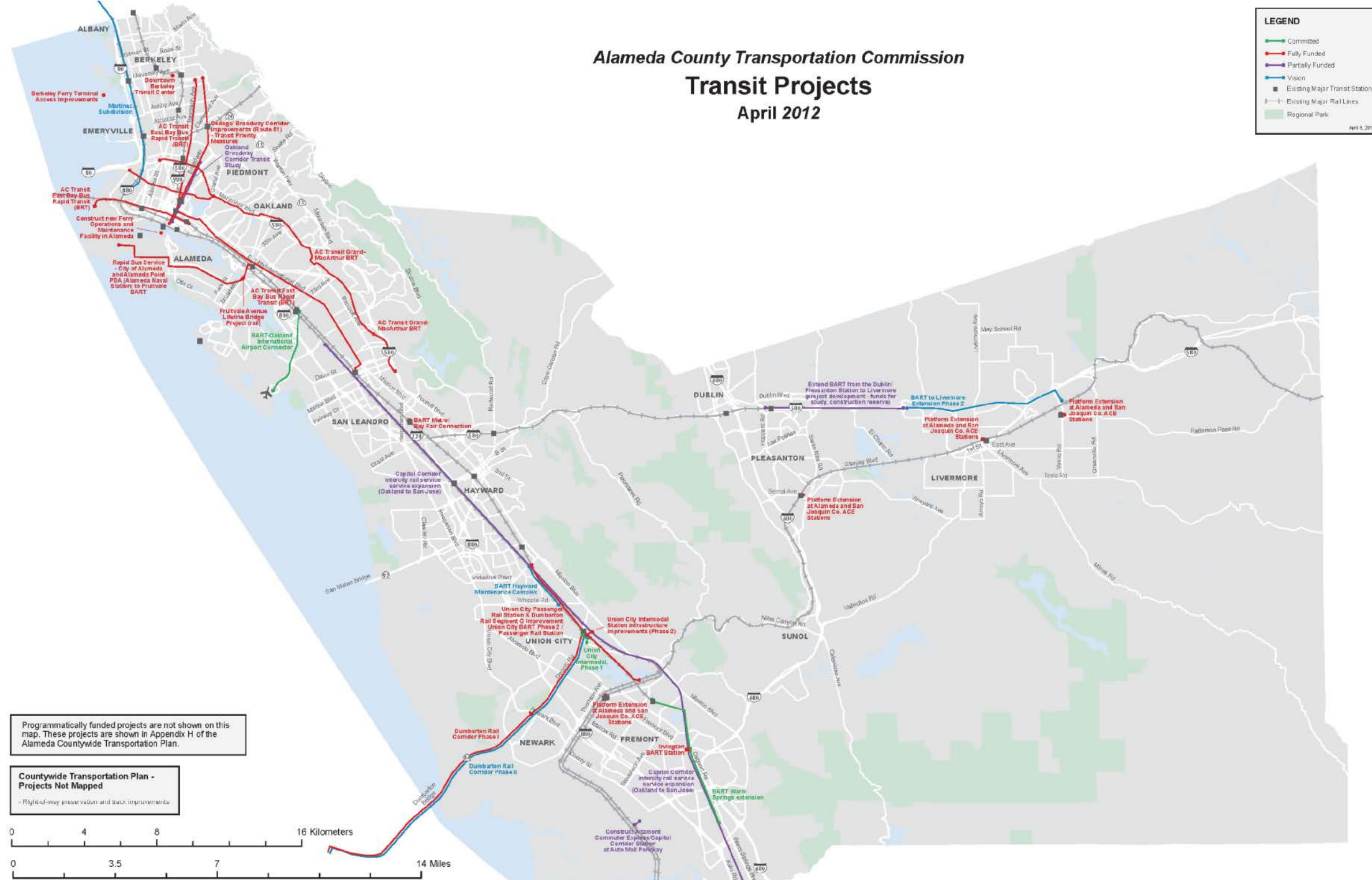
Projects

The CTP presents projects in four tiers based on level of funding committed:

- Committed Projects: Fully funded projects that are part of the 2035 future baseline transportation network and are either under construction or moving toward construction. These projects do not count against Alameda County’s discretionary budget.
- Tier 1 Projects: Fully funded projects in the 2012 CTP that are ready for short-term implementation.
- Tier 2 Projects: Projects partially funded with funding commitments in the 2012 CTP. These projects will be eligible for future funds as project development continues.
- Vision Projects: Projects that have not received discretionary funds in the 2012 CTP update. These projects are important to the county and may be eligible for funding if new fund sources are identified.

Figure 7 shows the transit projects included in the CTP. Programmatic spending is about 60 percent of the total discretionary budget, and the transit category, including enhancements, operations, maintenance, and paratransit, would receive the largest share of program funding, at approximately 53 percent.

Figure 7: CTP – Transit Projects



Source: Alameda CTC, CTP, 2012

The CTP includes the following major transit capital projects:

- BART completion of the Oakland Airport Connector and Warm Springs Extension, and further development of the Livermore Extension;
- Intermodal Improvements at the Union City BART Station, Downtown Berkeley transit center, and BARTMetro/Bay Fair Connection
- BART infill station at Irvington in Fremont, expansion of west side access at Warm Springs station, and transit enhancements at the Coliseum BART station;
- BART Hayward Maintenance Facility Improvements;
- TOD/Specific plans at Ashby, West Oakland, MacArthur, 19th Street, Lake Merritt, Bay Fair, and Downtown San Leandro BART stations, West Dublin and Downtown Dublin, Eastmont PDA and Broadway Valdez Specific Plan transit enhancements, and Dumbarton TOD in Newark;
- Improvements in the Dumbarton Rail Corridor;
- Capitol Corridor intercity rail service expansion between Oakland and San Jose, Martinez subdivision improvements, and ACE/Capitol Corridor station at Auto Mall Parkway in Fremont;
- Rail right-of-way preservation and track improvements in North, South, and Central county and rail crossing improvements at Gilman Avenue;
- Platform extensions at Alameda and San Joaquin ACE stations;
- New Ferry Maintenance at Alameda Point and Berkeley Ferry Terminal Access Improvements;
- BART Fruitvale Lifeline Bridge Project (rail);
- AC Transit East Bay and Grand-MacArthur BRT projects, Rapid Bus Alameda Point to Fruitvale; College/Broadway Transit Priority Measures, and Oakland/Broadway Corridor Transit Study;
- AC Transit park-and-ride facilities in Central and Northern Alameda County;
- AC Transit bicycle and pedestrian improvements in Central and South County; and
- Fremont Boulevard and San Leandro Streetscape Improvements

Table B 1in Appendix B provides a full list of transit projects in the CTP with their level of funding commitment.

Performance Measures

Alameda CTC developed specific performance measures to assess progress towards adopted goals. Generally the performance measures relate to transit

modal share and level of use, passenger experience and convenience, accessibility, reliability, and environmental benefits.

Table 5 lists the transit performance measures included in the CTP. Funding recommendations in the CTP were based on an aggregated performance assessment using multiple tools to determine how projects and programs worked together to meet the countywide transportation goals.

Table 5: CTP - Performance Measures

Performance Measure	Definition
Alternative modes	% trips made by non-automobile modes
Activity center accessibility	% of low-income (<\$25k annual) households within 20 min. drive or 30 min. transit ride of activity center or 0.5 mi from grade school
Public transit accessibility	% of low-income (<\$25k annual) households within 0.25mi of bus route or 0.5mi rail transit stop
Public transit usage	Daily public transit ridership
Transit efficiency	Transit passengers carried per transit revenue hour of service offered (bus only)
Travel time	Average travel time per trip in minutes for selected origin-destination pairs in the AM (PM) 1-hr peak period, transit trips
Reliability	Average ratio of AM (PM) 1-hr peak period to off-peak period travel times for selected origin-destination pairs, transit trips
Maintenance	Percentage of remaining service life for transit vehicles in 2035
Safety	Annual projected injury and fatality crashes
Clean Environment	Tons of daily GHG emissions
	Tons of daily particulate emissions

Source – Alameda CTC, CTP, June 2012

Funding and Implementation Plan

A total of \$3.79 billion is allocated to capital projects in the CTP. Transit, including both rail and bus projects, would receive about \$1.5 billion, or about 40 percent of the total budget.

The CTP includes a draft projected discretionary budget for Alameda County over the next three decades (see Table 6). The budget assumed passage of Measure B in 2012, which would have augmented the existing half-cent sales tax by another half-cent from FY 2012/13 until FY 2021/22, and then extended a full one cent tax. While the measure failed to pass in 2012, it passed as Measure BB in 2014 with modest amendments as noted below.

Table 6: CTP - Projected County Discretionary Budget

Source	Amount (billions)
Federal	
STP/CMAQ	\$0.6
State	
Regional Improvement Program (including RTIP/STIP/TE)	\$1.5
Local	
Proposed Measure B (FY 12/13 – FY 39/40)	\$7.0
Vehicle Registration Fee	\$0.4
Total cost	\$9.5

Source: Alameda CTC, CTP, June 2012

8. Transportation Expenditure Plan

In November 2014, Alameda County voters approved ballot Measure BB, which augments by an additional half-cent the existing Alameda County Measure B half-cent transportation sales tax and extends it to April 1, 2045. The sales tax revenue would largely fund the transportation improvements identified in the CTP. Funds would be allocated for both transit operations and transit capital projects.

Reauthorization of Measure BB was requested due to the following circumstances:

- A majority of current Measure B capital projects have either been built or are fully funded, 10 years ahead of schedule. To proactively prepare for future transportation needs, a new plan and source of funds are needed for capital projects that could take several years to plan, design, fully fund, and build.
- The economic downturn reduced funding for many programs supported by Measure B, and despite the upswing in the economy, growth in transportation demand continues to outpace the growth in transportation revenues. This is particularly critical for transit agencies.

Alameda CTC made minor amendments to the 2012 TEP to respond to voter concerns and has adopted the 2014 TEP. The 2014 TEP lays out how the funds generated by the sales tax would fund critical transportation needs in Alameda County.

Funding and Implementation Plan

It is anticipated that the sales tax extension and augmentation in the measure would generate about \$8 billion over the 30 year period from 2015 to 2045. The TEP proposes to use these funds to fund three types of transit investments. Table 7 and Figure 8 provide a summary of these investments.

The TEP proposes up to \$3.7 billion, or about 48 percent of total funding, going to BART, bus, senior, and youth transit (Table B 2 in Appendix B). The TEP would

provide funds for operations and maintenance to transit operators in the county as well as to ferries and the ACE rail service.

The TEP would allocate a total of \$35 M to projects that enhance the reliability and speed of bus transit services in the East Bay. These projects include the implementation of BRT and transit priority projects on some of the busiest corridors in the AC Transit system. Figure 9 shows the major corridors that would receive these funds.

The capital projects funded as part of the BART System Modernization and Expansion investments include projects that increase the capacity and utility of the existing system, as well as provide local funding for a proposed BART extension in the eastern part of the county (see Figure 10).

The TEP would contribute funding to the first phase of the proposed BART Extension to Livermore, the Bay Fair Connector, and the Irvington BART Station. The TEP investments would also include maintenance and service enhancements on existing rail lines, development of transportation investments serving the Dumbarton Corridor Area, and support track improvements and train car procurement to increase Capitol Corridor service frequency. Figure 11 shows major investments in rail corridors.

The transit projects in the TEP would continue implementation of the rail program laid out at a regional level by the Transit Expansion Plan, Regional Rail Plan, and the transit network identified in Plan Bay Area and the CTP.

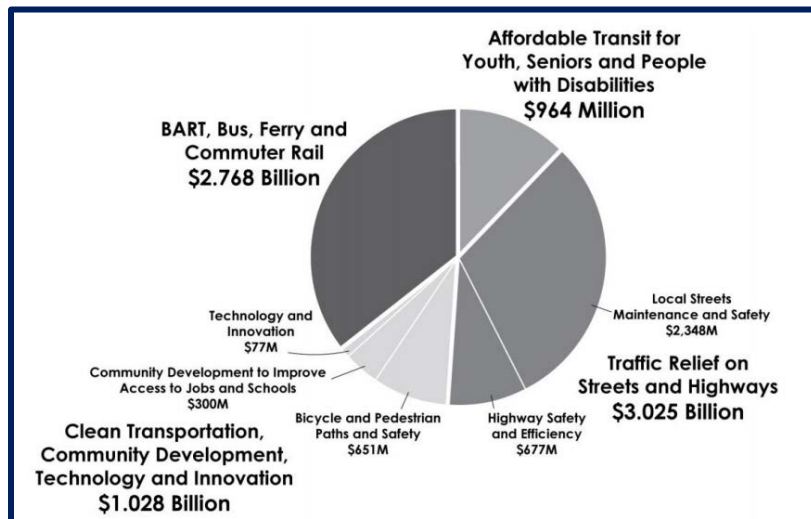
Table 7: 2014 Transit Expenditure Plan – Summary of Investments

Summary of Investments	Fund Allocation (millions)
BART, Bus, Ferry and Commuter Rail for Reliable, Safe and Fast Services	\$2,768
BART Expansion and Maintenance	\$749
Bus Operations, Maintenance and Rapid Bus Projects	\$1,548
Commuter Rail Improvements	\$432
Ferry Services in Alameda County	\$39
Affordable Transit for Youth, Seniors and People with Disabilities	\$964
Affordable Youth Transit to School and Transit Innovation	\$190
Affordable Transit for Seniors and People with Disabilities	\$774
Traffic Relief on Streets and Highways	\$3,025
City and County Streets*	\$2,348
Highway Safety and Efficiency	\$677
Clean Transportation, Community Development, Technology and Innovation	\$1,028
Bicycle and Pedestrian Paths and Safety Projects and Educational Programs	\$651
Community Development Projects to Improve Access to Jobs and Schools	\$300
Technology and Innovation	\$77
Total Investments (year 2015 to 2045)	\$7,785

*15 percent of city and county streets funding will support bicycle and pedestrian paths and safety improvements on local streets.

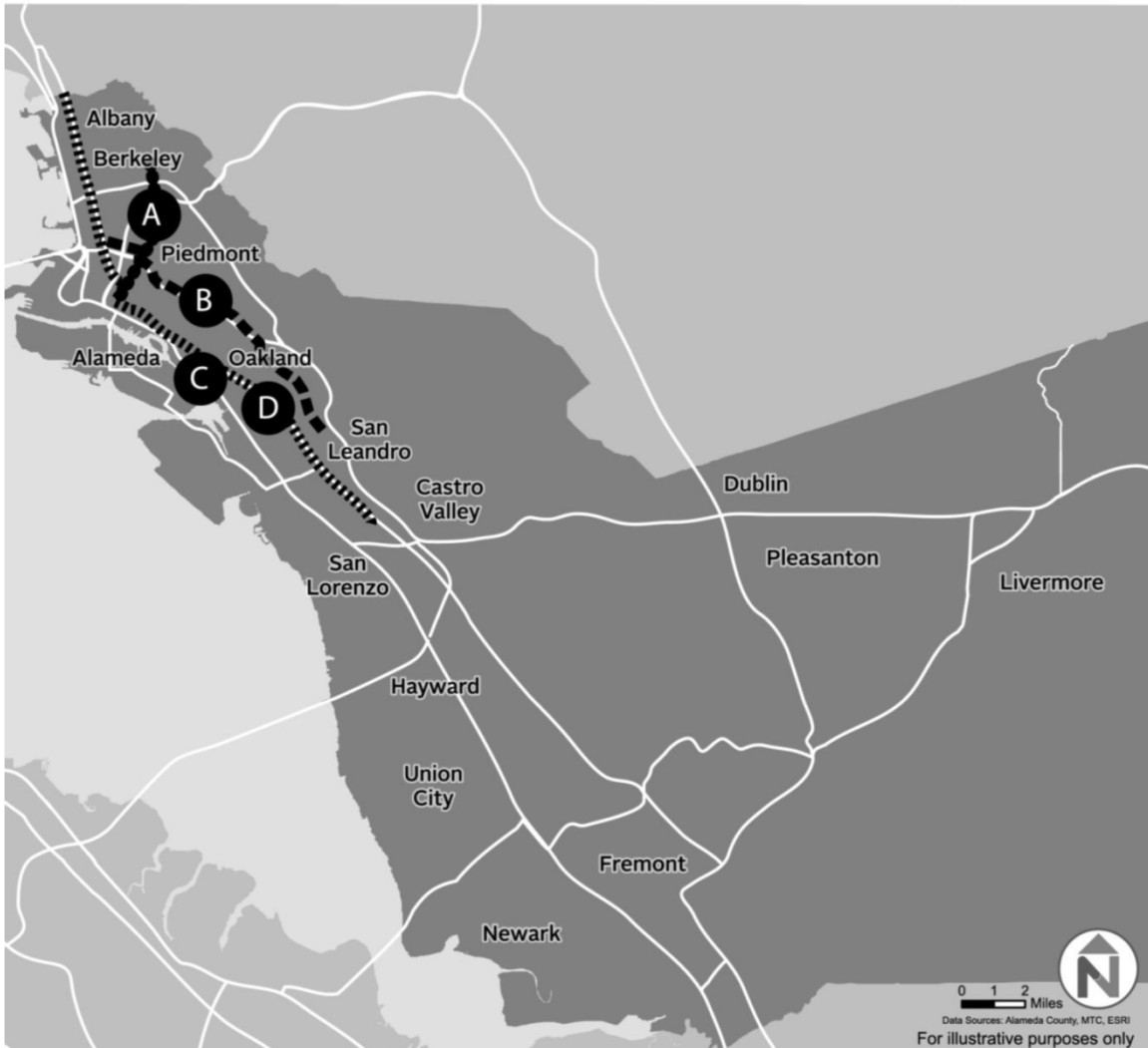
Source: Alameda CTC, TEP, 2014

Figure 8: TEP – Investments



Source: Alameda CTC, TEP, 2014

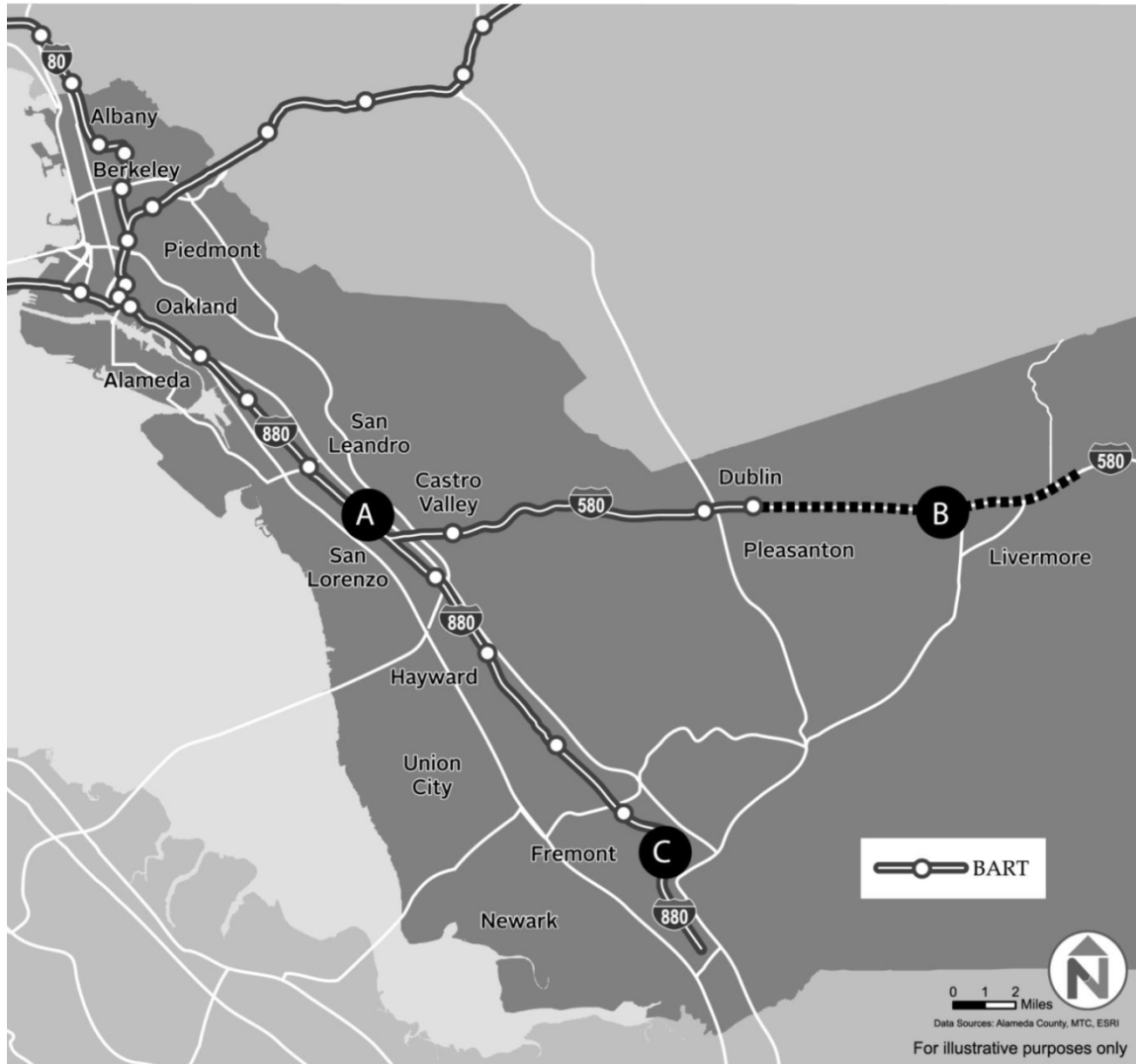
Figure 9: TEP – Rapid Bus Transit Investments



- A** College/Broadway Corridor: Transit Priority
- B** - - - - - AC Transit Grand MacArthur Bus Rapid Transit
- C** ——— City of Alameda to Fruitvale BART Bus Rapid Transit
- D** - · - · - AC Transit Telegraph Ave/ East 14th/ International Blvd Project

Source: Alameda CTC, TEP, 2014

Figure 10: TEP – BART Investments



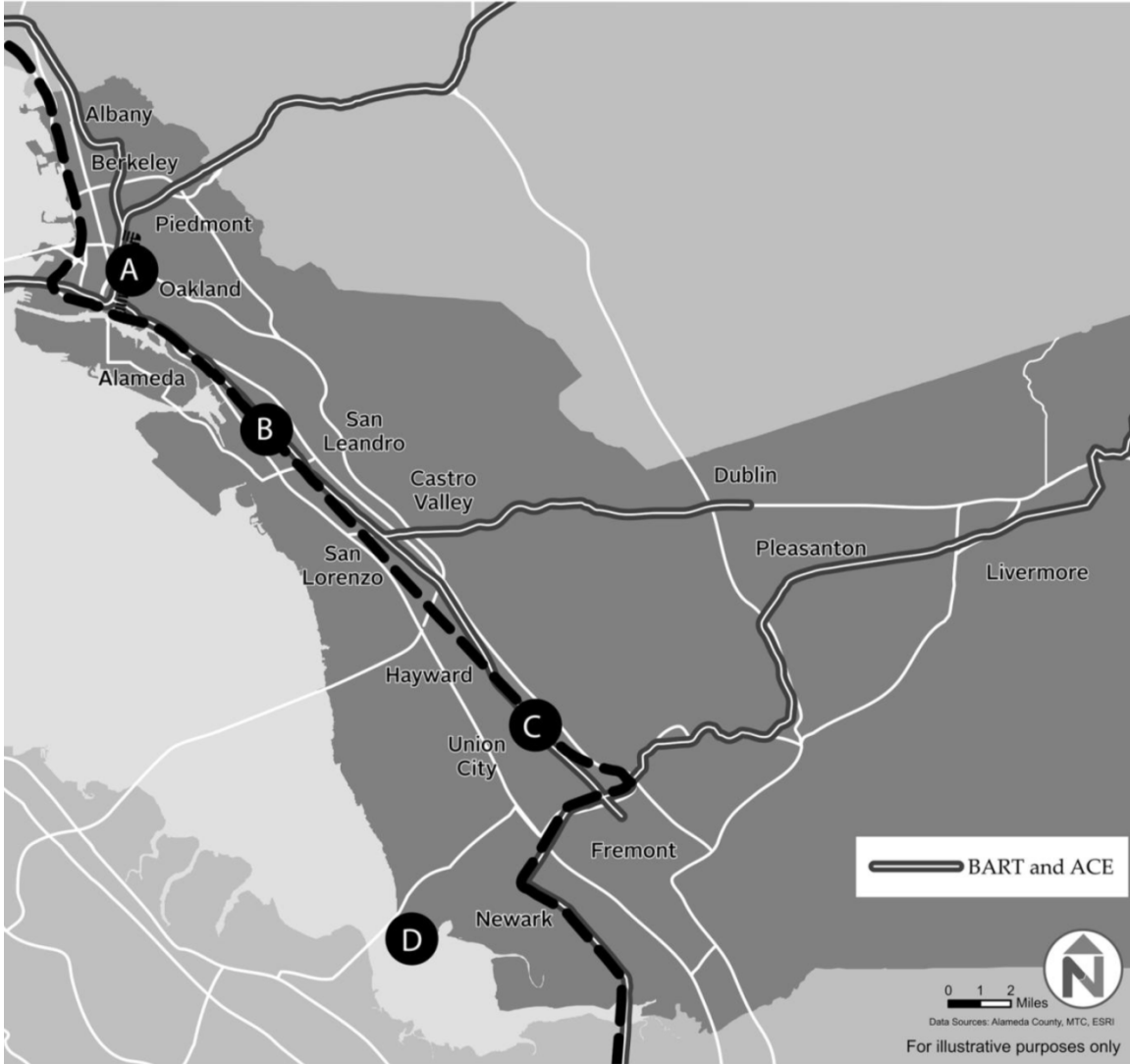
- A** Bay Fair Connector / BART METRO
- B** BART Extension to Livermore (within the I-580 corridor)
- C** Irvington BART Station

Not Shown:

- BART Station Modernization and Capacity Improvements
- Affordable Transit for Seniors and People with Disabilities

Source: Alameda CTC, TEP, 2014

Figure 11: TEP – Major Transit Corridors and Commuter Rail Improvements



- A** Broadway Corridor Transit
- B** Capitol Corridor Service Expansion
- C** Union City Intermodal Station
- D** Dumbarton Corridor Area Transportation Improvements

Source: Alameda CTC, TEP, 2014

9. Community-Based Transportation Plans

Alameda CTC developed five CBTPs to address findings in MTC's *Lifeline Transportation Network Report* (2001) and *Environmental Justice Report* (2001). These plans identified transportation gaps in underserved communities and transportation solutions and potential fund sources to address them. The reports identified the need to support planning efforts for low-income communities in the region. CBTP boundaries are in low-income areas where MTC had identified gaps in transportation provision. The CBTPs examined existing conditions and services; used community outreach processes to identify needs and concerns; and identified and prioritized solutions.

The CBTPs were prepared for the following five communities:

- Alameda (2009)
- Central and East Oakland (2007)
- West and South Berkeley (2007)
- West Oakland (2006)
- Central Alameda County (2004, includes communities of Cherryland, Ashland, South Hayward)

These CBTPs provide potential solutions to improving transit service and access to transit for low-income communities.

Goals and Objectives

The five CBTPs each have a similar purpose. As summarized in the Central Alameda County CBTP, the goal of a CBTP is to "provide low-cost, short-term or high priority transportation solutions to meet some of the most critical community transportation needs."

Projects

Each CBTP identifies several solutions and strategies for addressing transportation needs, such as:

- Improve bus stops/shelters
- Enhance on-time bus performance/reliability
- Increase bus frequencies
- Reestablish night services
- Expand transfer windows
- Provide transit fare subsidies for low-income riders and seniors
- Reduce noise near BART

- Increase BART parking
- Improve sidewalk amenities
- Enhance safety at street crossings, bus stops, and BART stations
- Provide real time information
- Improve transit education and provide multilingual information

Table B 3 through Table B 8 in Appendix B summarize the detailed solutions identified in each of the five CBTPs.

Performance Measures

Most of the CBTPs rank the projects recommended for implementation based on the following four criteria:

- Community: Level of community support and needs and diverse community served
- Transportation Benefits: Number of beneficiaries, concerns addressed and measurable solutions
- Financial: Overall and per beneficiary cost, funding availability and sustainability
- Implementation: Implementation time-frame and staging

The specific criteria definitions are shown in Table B 9 in Appendix A.

The West Oakland CBTP does not rank the projects, but rather assigns each project to a tier based on funding availability, such as:

- Tier One projects can be directly linked to a specific, identified funding source available between 2006 and 2009 or they can be primarily implemented through agency partnerships, advocacy or policies.
- Tier Two projects are linked to a possible funding source after 2009. Tier Two projects can be moved to Tier One when a specific near-term funding source is identified.
- Tier Three projects have no known funding source and are beyond estimated available funds.

Funding and Implementation Plan

Most of the funding for public transit related projects in CBTPs is derived from state and federal formula funds that are distributed through Alameda CTC based on population and ridership. The CBTPs also describe competitive funding programs and revenues from non-traditional sources, including private foundations.

10. Congestion Management Program

As the CMA for Alameda County, Alameda CTC develops and updates the legislatively required CMP. The CMP describes the strategies to assess, monitor and improve the performance of the county's multimodal transportation system; address congestion; and ultimately protect the environment with strategies to help reduce GHG emissions.

The CMP sets forth fundamental congestion management strategies for implementing the long-range CTP. Updated every two years, the CMP aligns with the long-range CTP, the RTP and SCS and other related efforts and legislative requirements. The current CMP report was approved by Alameda CTC in October 2013.

The CMP consists of five main elements:

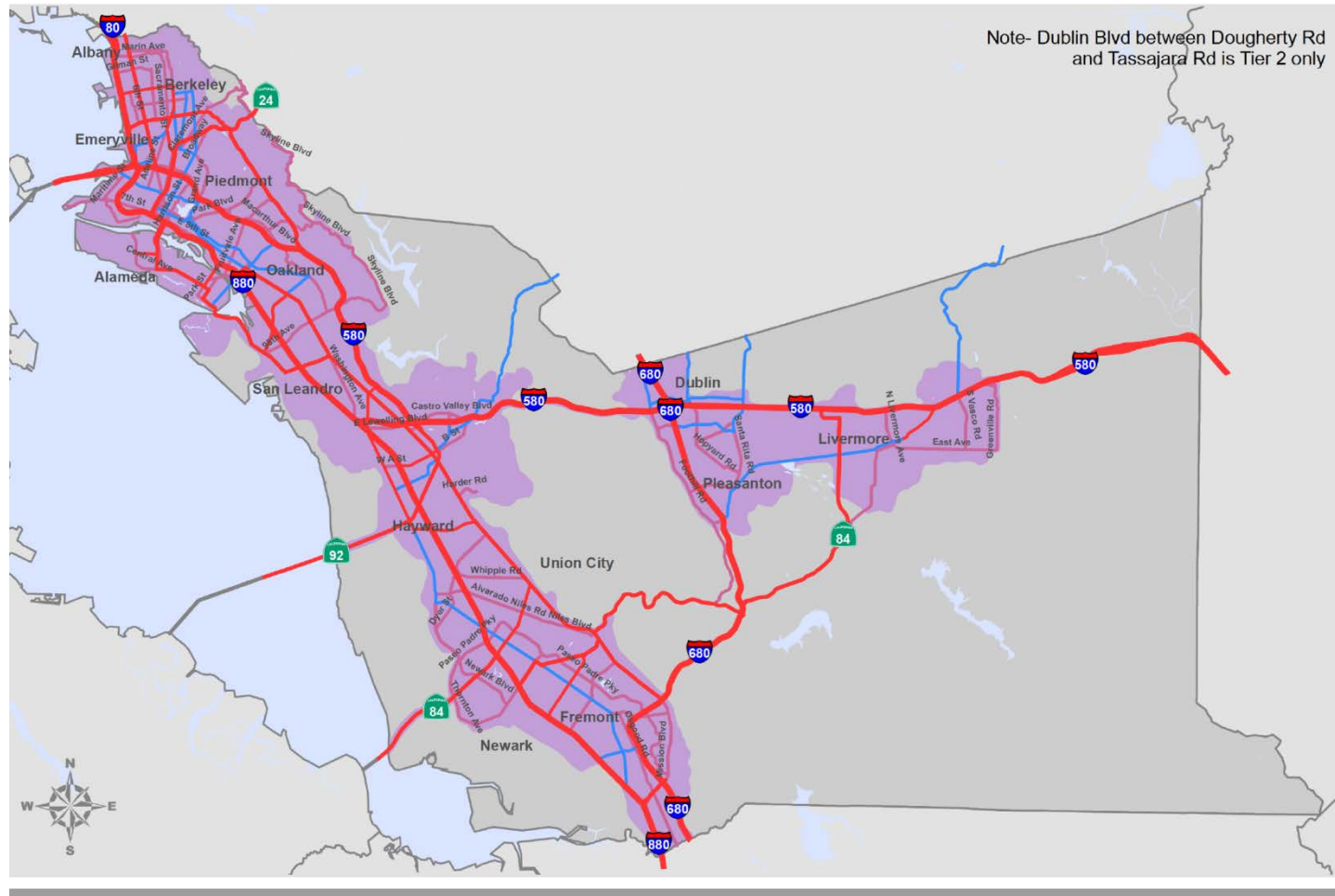
- Setting Level of Service (LOS) standards for roadways and monitoring LOS trends,
- Establishing and reporting on multimodal performance measures,
- Exploring ways to manage travel demand,
- Analyzing the impact of land development on transportation, and
- Developing a Capital Improvement Program (CIP).

Alameda CTC defines and identifies components of the transportation system for monitoring and improvement. For the purposes of the CMP, two different systems are used: the designated CMP roadway network (Tiers 1 and 2) and the broader Metropolitan Transportation System (MTS). The CMP roadway and transit network is a subset of the MTS. Tier 1 is the original adopted CMP network, and Tier 2 consists of principal and major local arterials of countywide significance. The MTS transit corridors in Alameda County appear in Figure 12. Given the density of the transit network in northern Alameda County, Figure 13 provides a larger-scale view of the MTS transit corridors, BART, and ferry routes in the northern part of the county.

Alameda CTC monitors performance of the CMP roadway network in relation to established LOS standards. There are several congested corridors on the CMP network that also support transit service (e.g., I-880, I-580, MacArthur Boulevard, International Boulevard, and Washington Avenue). The congestion on these corridors inhibits reliability and delivery of transit services.

Alameda CTC also has a Land Use Analysis Program, required through the CMP, which enables Alameda CTC to monitor and comment on the effects local land use decisions may have on the transportation network.

Figure 12: CMP – Transit Corridors of Alameda County

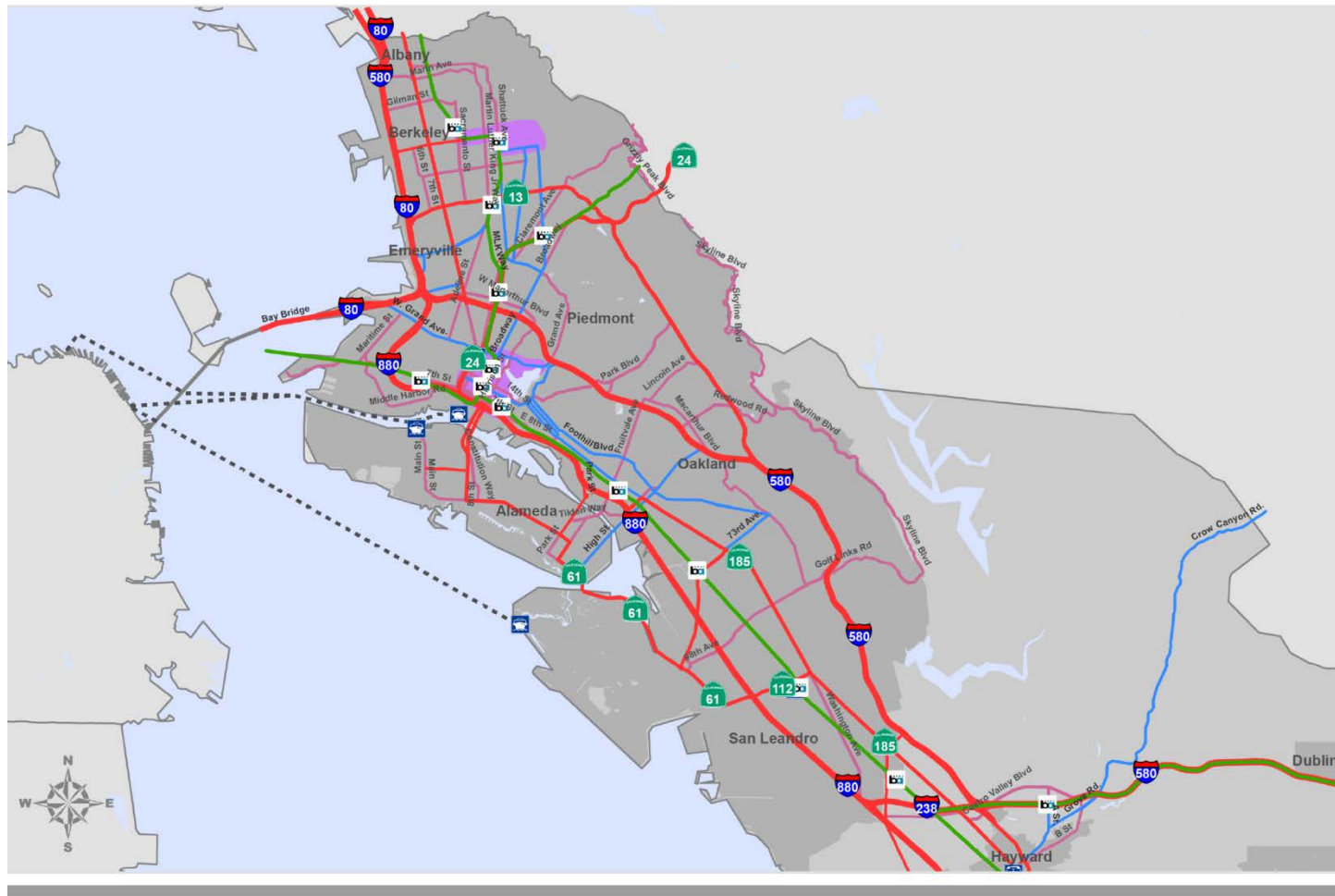


**Metropolitan Transportation System
Transit Corridors of Alameda County**

- Legend**
- Interstate/Freeway (CMP - Tier 1 & MTS)
 - State Highway (CMP - Tier 1 & MTS)
 - Principal Arterial (CMP - Tier 1 & MTS)
 - Principal/Other Arterial (CMP - Tier 2 & MTS)
 - MTS Routes
 - Transit Service Area BART/Transit Corridor

Source: Alameda CTC, CMP, 2013

Figure 13: CMP – Transit Corridors of Northern Alameda County



**Metropolitan Transportation System
Transit Corridors of Northern Alameda County**

- Legend**
- Interstate/Freeway (CMP - Tier 1 & MTS)
 - State Highway (CMP - Tier 1 & MTS)
 - Principal Arterial (CMP - Tier 1 & MTS)
 - Principal/Other Arterial (CMP - Tier 2 & MTS)
 - MTS Routes
 - Rail Transit / BART
 - Ferry
 - Key Service Area

Source: Alameda CTC, CMP, 2013

Projects

The CMP includes a seven-year CIP that covers FY 2013-2014 to 2019-2020. The CIP projects are a subset of the CTP, either as specific capital projects or from funding set aside to cover categories of projects. The 2013 CMP CIP consists of:

- Major capital projects and rehabilitation projects programmed in the 2014 STIP and Moving Ahead for Progress in the 21st Century (MAP-21); and
- Other major highway, transit, bicycle and pedestrian and local projects intended to maintain or improve the performance of the CMP network.

Table 8 shows major transit projects included in the 2013 CMP CIP. It does not include all of the major transit projects planned.

Table 8: CMP – Transit Capital Replacement Rehabilitation Improvements

Sponsor	Project Name/ Description	Project Funding (\$ X 1,000)			
		Federal	State	Local	Total
AC Transit	East Bay BRT	79,000	44,400	54,600	178,000
AC Transit	Revenue Vehicle Replacement	201,675	23,318	27,101	252,094
AC Transit	Broadway College (Route 51) Corridor Improvements	10,516		124	10,640
AC Transit	Facilities Rehabilitation and Maintenance	40,100	8,300	89,800	138,200
AC Transit	Grand MacArthur BRT	2,880		720	3,600
AC Transit	Zero Emission Bus Delta	148,625		29,725	178,350
AC Transit	Contra Flow Lanes/SF-Oak Bay Bridge			5,100	5,100
BART	BART Metro Program/Bay Fair Connection			150,000	150,000
BART	BART Rail Vehicle Capacity Expansion (Alameda County portion)		444,000		444,000
BART	BART Security Program (Alameda County portion)	43,200	43,200		86,400
BART	BART to Livermore Extension, Phase I			5,000	5,000
BART	Secure Bike Parking		237	2,635	2,872
Fremont/ BART	Irvington BART Station				127,000
Fremont	ACE/Capitol Corridor Station at Auto Mall Parkway				11,000
LAVTA	Fixed Route Vehicle Replacement	13,008		3,252	16,260
LAVTA	Paratransit Vehicle Replacement	1,094		274	1,368
LAVTA	Facilities Planning & Construction	367		29,633	30,000
LAVTA	Capital Improvements subsequent to Tri-Valley Multimodal Access and PDA Connectivity Study	10,000			10,000

Source: Alameda CTC, CMP, 2013

Following the adoption of the 2013 CMP by the Alameda CTC, MTC found the CMP to be consistent with the RTP, and incorporated the projects listed in the CMP’s CIP into MTC’s Regional Transportation Improvement Program (RTIP).

In 2013, Alameda CTC initiated a new process for an enhanced Strategic Plan/CMP that will become Alameda CTC’s Comprehensive Investment Plan. It will include all fund sources related to Alameda CTC decision-making. The CIP will have a five-year funding window with a two-year allocation plan. To meet legislative requirements and help maintain and improve the performance of the

multimodal transportation system, the CIP will be incorporated in to the 2015 CMP update.

Performance Measures

In addition to the required roadway and transit measures, the CMP contains multimodal performance measures that evaluate the frequency, routing, and coordination of transit services. However, only the roadway LOS standards are used to trigger the need for a deficiency plan. The performance measures serve as a link between the goals and management strategies adopted for the CTP and policies set forth in the CMP.

Alameda CTC uses nineteen multimodal performance measures to monitor performance throughout the Alameda County transportation network. Alameda CTC prepares a Performance Report annually to track progress and assess the state of the transportation system in the county. Table 9 lists the CMP performance measures. These measures apply to both existing services and future year (proposed) services. Table B 10 in Appendix B also provides performance targets for frequency of transit service.

Table 9: CMP - Performance Measures

CMP Performance Measures	
Average Highway Speeds	Roadway Maintenance
CO ₂ Emissions*	Transit Availability
Completion of Countywide Bicycle Plan	Transit Capital Needs and Shortfall
Completion of Countywide Pedestrian Plan*	Transit Frequency
Coordination of Transit Service	Transit Ridership
Duration of Traffic Congestion	Transit Routing
Fine Particulate Emissions*	Transit Vehicle Maintenance
Low-income Households Near Activity Centers*	Travel Time*
Low-income Households Near Transit*	Trips by Alternative Modes*
Roadway Collisions*	

*Denotes new or expanded existing performance measure resulting from integrating the measures from the 2012 CTP. Extent of data collection for these measures depends on additional fund being available.

Source: Alameda CTC, CMP, 2013

Funding and Implementation Plan

The CMP projects and programs are funded by a combination of federal, state, and local funding. To obtain funding from these sources, projects and programs must meet specific requirements outlined by the funding program.

2.2. Transit Services and Plans

This section provides an overview of each transit agency that provides service in Alameda County. It includes an overview of the agencies' service, planned and proposed projects, major planning activities, mission, vision, and goals.

A. Inter-regional Transit Services

This section lays out the existing plans and policies for agencies operating inter-regional services within Alameda County, defined as services operating across the boundary of the Bay Area region. These services primarily consist of passenger rail services (ACE and Capitol Corridor).

1. Altamont Corridor Express

The San Joaquin Regional Rail Commission (SJRRC) owns and operates, and is the policy-making body for the ACE commuter rail service between Stockton and San Jose, operating four trains in each direction per day on weekdays. The ACE commuter rail serves four stations (Vasco Road, Livermore, Pleasanton, and Centerville/Fremont) in Alameda County, and provides rail connections to Stockton in the Central Valley and San Jose in the south bay. Figure 14 shows the current ACE service and other connecting rail services. ACE is an intercity passenger train service operating in an 86-mile rail corridor along the I-5, I-205, I-580, and I-880 freeways.

ACEforward

The CHSRA proposed to run enhanced rail service in the ACE corridor as part of its statewide plan. In June 2013, CHSRA and SJRRC signed a Memorandum of Understanding to "transfer full leadership and funding for rail planning" in the corridor to SJRRC. SJRRC is now focused on modernizing the existing ACE train and extending the service to downtown Modesto and downtown Merced as part of the ACEforward program. Figure 15 shows the ACEforward program of projects.

ACEforward proposes to offer more service in its service area (six daily round-trips by 2018 and 10 daily round-trips by 2022) and safety improvements such as grade crossings and additional track in key locations. SJRRC is also planning to extend ACE service to the downtowns of Modesto, Turlock, and Merced, and is investigating moving the ACE station from its current location near Tracy

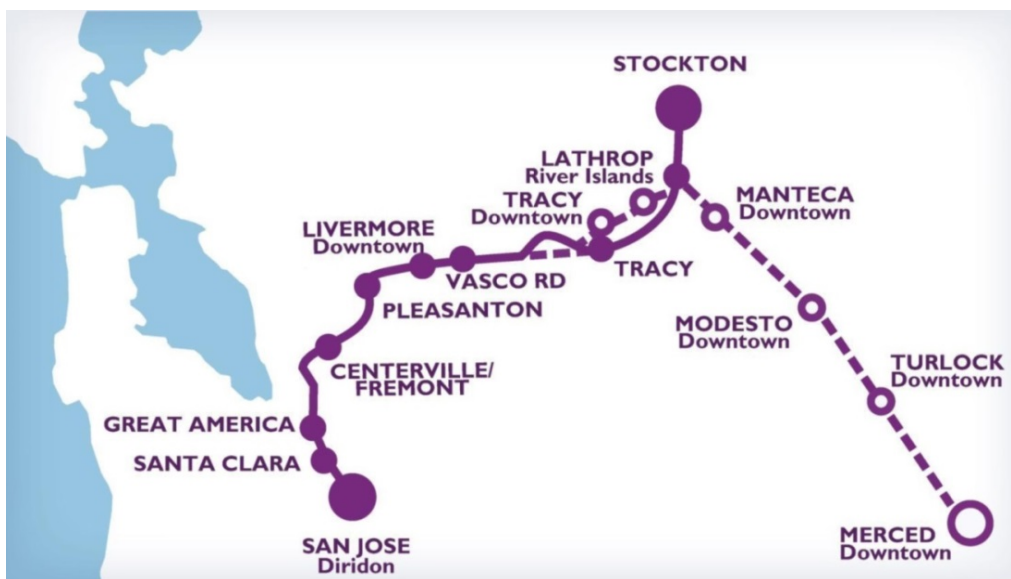
Municipal Airport to downtown Tracy along the UPRR tracks. All of the capital projects are located outside of Alameda County, but would potentially increase ridership within the county. The ACEforward program is currently in the scoping stage of the environmental review process.

Figure 14: ACE Current Service



Source: SJRRC, www.acerail.com, 2014

Figure 15: ACEforward Program of Projects



Source:

SJRRC, ACEforward Fact Sheet, 2014

11. Capitol Corridor

The Capitol Corridor Joint Powers Authority (CCJPA) is a partnership of the eight counties in the corridor and is represented by Placer County Transportation Planning Agency, Sacramento Regional Transit District, BART, Santa Clara Valley Transportation Authority, Solano Transportation Authority, and the Yolo County Transportation District. The CCJPA is also supported by MTC and Sacramento Area Council of Governments. BART provides day-to-day management support to the CCJPA.

Capitol Corridor is an intercity passenger train service operating in a 170-mile rail corridor along the congested I-80, I-680 and I-880 freeways. An extensive, dedicated motor coach network provides bus connections to serve the second-largest Amtrak urban service area in the western United States. Capitol Corridor serves six stations (Berkeley, Emeryville, Oakland Jack London Square, Oakland Coliseum, Hayward, and Fremont/Centerville) in Alameda County, and provides rail connections to Sacramento and Auburn to the north and San Jose to the south. Figure 16 shows the Capitol Corridor rail route map and bus connections.

Capitol Corridor Vision Plan

The Capitol Corridor Vision Plan lays out the short-term (5-10 years) and long term (10+ years) vision for the rail service. The short-term vision includes extending service to Salinas/Monterey and Truckee/Reno; adding new stations in Vacaville/Fairfield, Hercules, and North Sacramento; maintaining 90 percent on time performance, increasing daily service frequency, and reducing travel time by 12 percent through implementation of a positive train control system.

Figure 16: Capitol Corridor Route Map



Source: CCJPA, <http://www.capitolcorridor.org>, 2014

B. Inter-County Transit Services

This section lays out the existing plans and policies for agencies operating primarily within the Bay Area region and serving Alameda County.

1. Bay Area Rapid Transit

The BART rail system has provided 40 years of frequent and fast transit service in San Francisco, Contra Costa, San Mateo, and Alameda Counties, in the Bay Area. Over the last 20 years, BART has increased service and reliability, fulfilling its original mandate to help shape growth and development in the Bay Area and reduce the region's dependence on the automobile. The system now carries more than 420,300 passengers daily and delivers about half of the region's total transit passenger miles. BART has five lines and serves 44 stations, 20 of which are in Alameda County. Figure 17 shows the current BART system.

Figure 17: BART System Map



Source: BART, www.bart.gov, 2014

BART adopted a strategic plan in 2008 that outlined a vision, mission, values, goals, and implementing strategies for the agency. BART's mission is to provide safe, clean, reliable and customer-friendly regional public transit service that increases mobility and accessibility; strengthens community and economic prosperity; and helps preserve the Bay Area's environment. Its vision is to be a high-quality transit service that supports a sustainable region (BART, 2008).

BART plans for service expansion include extensions to East Contra Costa County, Livermore (BART to Livermore), and Santa Clara County/San Jose (Silicon Valley Extension).

This section describes the following BART documents relevant to the Countywide Transit Plan.

- Sustainable Communities Operational Analysis
- Future BART and BART Vision Plan

These documents not only outline plans for future expansion, but also focus on improvements to BART's existing core system and operational efficiencies.

Sustainable Communities Operational Analysis

BART ridership is expected to increase by more than 50 percent by the year 2025. Much of this growth is expected to be concentrated in PDAs adjacent to BART stations and in the San Francisco and Oakland downtowns as reflected in Plan Bay Area. Plan Bay Area allocates growth to locally-identified areas near transit, and reinforces development within the Bay Area's central cities. In response, BART ridership is expected to increase more dramatically in the Bay Area core (inner ring of development), leading to changes in BART service patterns. More service will be needed in the core, but current levels of service will likely suffice towards the system's fringes. In response to these anticipated changes in transit demand, BART developed the Metro Core-Metro Commute strategy. BART Metro is described in the Major Projects Section.

The Sustainable Communities Operations Analysis (SCOA) Study further develops these service strategies into service plans, and then identifies the improvements needed over the coming years for BART to maintain its current quality of service and meet the projected ridership increases in the Bay Area. These improvements focus on capacity upgrades, efficiency projects, fleet increases and other related capital investments.

Goals and Objectives

The overall purpose of the SCOA is to define the improvements necessary to position the BART system to:

- Provide transit services that sustainably delivers access for the region's future land use,
- Capture more reverse commute trips and a greater share of off peak travel, and
- Identify the necessary service and operational improvements – and the associated capital program – critical to implementation.

The overall service design objective – and the guiding principles for the development of the scenarios and service plans – seeks to provide a high quality transit service by maximizing service (trains per hour), while minimizing the amount of train miles incurred (cars per train). The following seven objectives for evaluating the SCOA concepts and service plans were identified:

- Safety
- Reliability
- Market driven
- Forward thinking
- Effectiveness
- Efficiency

- Equity

The service planning goal for developing the service plans is that during midday, evenings and weekends sufficient capacity is provided so that on average every seat is occupied (loads of around 60 passengers per car), while during the peaks some standees should be accommodated increasing the average load to around 100 passengers per car.

Projects

The SCOA developed phased investment plans to ensure availability of vehicles to meet the projected demand. The SCOA identifies a suite of projects to increase line, station, and access capacity to meet state-of-good-repair requirements and expected demand from normal growth and programmed expansions. Table 10 lists these prerequisite projects or base case improvements for 2025.

Table 10: SCOA – Prerequisite Projects

Project	Justification	Estimated Capital Cost (Million \$)
Hayward Maintenance Project – Phase 1	Allows for greater focus on scheduled maintenance and mid-life vehicle overhauls, rather than reactive maintenance	\$370
Train Control System Modernization – Initial Phase and Systemwide	Provides additional capacity in system. Replaces system at end of its useful life	\$600 - \$800 (total project cost)
Selected Station Capacity Improvements	Additional station capacity improvement projects to accommodate increased ridership and some key stations	\$250 - \$900
Prerequisite Projects Total Cost		\$1,220 - \$2,070

Source: BART, SCOA, 2013

Additionally, the Phase 1 service plan would allow BART to run 24 trains per hour transbay during peak periods with all trains 10 cars long. Table 11 lists the projects necessary for the Phase 1 service plan. These capital improvement projects would cost around \$60 million and would result in about an equal amount of savings in vehicle costs plus operating costs.

Table 11: SCOA – Phase 1 Capital Project

Phase 1 Capital Project	Rough Order Magnitude Cost (2012 million \$)
Additional Crossovers (or improvements to existing crossovers) at 24 th /Mission, Richmond, South Hayward, Lafayette pocket track and Pleasant Hill	\$55 - \$60
Tail Track Extensions at Millbrae and Dublin	\$4 - \$6
Highway Barrier Improvement, Dublin Line	\$10 - \$12
Total Cost	\$69 - \$78

Source: MTC, SCOA, 2013

In Phase 2, BART would increase transbay service to 27 trains in the peak hour, peak direction. This, in turn, requires a fleet size of 1,000 vehicles. Table 12 lists the projects necessary for Phase 2 service plan implementation.

Table 12: SCOA – Phase 2 Capital Project

Phase 2 Capital Project	Rough Order Magnitude Cost (2012 million \$)
Hayward Maintenance Complex Project (Phase 2)	\$169
Turnback – Glen Park	\$40 - \$45
Turnback – Bayfair (3 rd Track in Station) and new platform to the west	\$190 - \$210
Maintenance Facilities – Millbrae and Colma (all full 3 track operations at Colma station, move carwash and other maintenance functions to Millbrae).	\$167 - \$183
Total Cost	\$566 - \$607

Source: MTC, SCOA, 2013

Performance Measures

A 2025 Base Case service plan with the improvements identified in Table 10 was developed to provide a baseline comparison for the evaluation of scenarios against key performance measures. Table 13 shows the key performance measures and results for the Base Case evaluation against which other investment scenarios were evaluated.

Table 13: SCOA –Performance Measures and Evaluation

Performance Measure	Base Case Enhanced
Capacity Utilization	40%
Operations and Maintenance Cost	\$592 million
Farebox Recovery Ratio	82%
Peak Fleet Requirement (cars)	896
Transbay Peak Passengers per Car (Peak Direction)	112*
Transbay Peak Capacity (passengers per hour, peak direction)	25,680

*Exceeds BART Threshold of 107 passengers per car

Source: BART, SCOA, 2013

In addition to these key performance measures, other indicators that were considered included:

- Passengers per Revenue Vehicle Miles
- Operations and Maintenance Costs per Boarding
- Operations and Maintenance Costs per Seat Mile
- Revenue per Seat Mile
- Peak Car Usage (Operating and Ready Reserve)
- Maximum Load Section Capacity Utilization

Future BART and BART Vision Plan

Faced with increasing ridership and deteriorating infrastructure, BART initiated an effort in 2012, called Future BART, to explore the role of BART in the future of the region. The first component of Future BART is the BART Metro concept, identified under the BART SCOA in the previous section and described in under Major Projects. The second study is the BART Vision Plan, focusing on BART's longer-term future, including where BART might make significant investments in new lines or new "infill" stations along existing lines. BART began conducting outreach in the fall of 2014, but has not published any significant documents pertaining to Future BART and the BART Vision Plan effort yet.

12. AC Transit

AC Transit is the third-largest public bus system in California, serving 13 cities, and adjacent unincorporated areas in Alameda and Contra Costa counties. AC Transit also provides service to Union City, which is geographically surrounded by, but is not formally a member of AC Transit. AC Transit also operates service to Milpitas, Pinole, the Dumbarton Express to Menlo Park and Palo Alto, and transbay service to Foster City, San Mateo, and San Francisco.

AC Transit operates 116 bus lines, including 79 local lines within the East Bay, 30 transbay lines to San Francisco and the Peninsula, and five All Nighter lines. Its network serves about 1.5 million people in 364 square mile service area. AC Transit has an average weekday ridership of approximately 173,170 passengers on its fixed routes.

The mission of AC Transit is to provide safe, convenient, courteous and reliable transit service. AC Transit's vision is to be the mobility manager for the East Bay; allowing anyone to go anywhere they want safely, quickly and efficiently.

This section describes the draft SRTP, the Inner East Bay Comprehensive Operations Analysis (East Bay COA), TPI, Major Corridor Study, and "Designing with Transit." The Line 51 and the East Bay BRT are described in the Major Projects Section.

Short Range Transit Plan

AC Transit is updating its Strategic Vision and the Short Range Transit Plan (SRTP) that it adopted in 2003. AC Transit staff provided updates on the development of the SRTP at the June and July 2014 AC Transit board meetings. AC Transit plans to have the final SRTP with Comprehensive Operations Analysis (COA) recommendations submitted to MTC by April 2015.

Goals and Objectives

The draft SRTP includes a vision section to address a longer-term viewpoint, using 2040 as the vision year, which matches Plan Bay Area. AC Transit's vision consists

of providing “safe, reliable, frequent, fast, comfortable bus service”. It identifies the anticipated “city-centered” growth as a key opportunity for AC Transit to be a key driver of growth and change in the county. The draft SRTP draws from AC Transit Board Policy 550 (see Figure 18) to establish its service goals. A more comprehensive set of goals will also be proposed for the SRTP.

Projects

AC Transit’s capital budget outlines the physical facility and durable goods improvements that the agency will need to provide service and continue operations. The capital budget sets out major capital needs, projected for the next 10 years. This includes:

- Replacement of 632 existing buses and addition of 104 new buses
- Renovation of major existing maintenance facilities and reopening of a currently closed operating division
- Future BRT and corridor improvements
- Transbay
 - a) Transbay Capital Commitment
 - b) Transbay Terminal – Bus Storage Facility
 - c) Contra flow bus lane on the Bay Bridge
- Alternative Transit Access (Alameda/Oakland)
- BART Intermodal Transit Centers
- GHG Reduction Initiatives and Alternate Fuel Enhancement Program
- New Park and Ride in District 2 (Newark, Fremont)
- Fare Collection System Improvements

In addition, the draft SRTP identifies other technology-related enhancements such as an Automatic Vehicle Location system.

Performance Measures

As required by MTC, appropriate performance measures will be identified in the SRTP that is under development now. AC Transit is using its Policy 550 as its guide in the interim. Policy 550 is AC Transit’s service standards and design policy that was last amended in 2008.

Funding and Implementation Plan

The SRTP will include a ten-year operating and capital budget. These budgets, especially the operating budget, will be greatly affected by the recent passage of the Alameda County transportation sales tax measure on the November 2014 ballot (commonly known as Measure BB).

Figure 18: AC Transit Draft SRTP - Guiding Principles

Guiding Principles for the Design and Allocation of Transit Service from Board Policy 550

For “local” service in the East Bay:

1. **Stable, Cost Effective Service**— “The AC Transit fixed-route network should be stable and cost-effective” and new service should provide patronage comparable to expanding existing service;
2. **Understandable service focused on routes with greatest patronage**—Service should be understandable to the public with intuitive way finding, service should be “prioritized” to areas with the greatest potential for transit use.
3. **Schedule-free Service**—“... lines with high patronage should run frequently enough that over most of the service period, passengers do not need a schedule to use the system;”
4. **Smart Growth and Transit Preferential Measures to Fight Climate Change:** AC Transit’s greatest role in fighting climate change is shifting people from traveling by car to traveling by bus. AC Transit will seek to induce this mode shift by improving transit operations through transit preferential measures and by improving the bus stop environment;
5. **Multi-destination, multi-agency system open to appropriate modal conversions**—AC Transit will operate a multi-destination system serving traffic generators throughout the East Bay. The agency is part of a “total transit system” for the region and will support efforts to make both transit use and fares as seamless as possible. AC Transit “will serve other modal conversions as demand and total travel efficiency warrant.”

Transbay Service:

1. **Extensive commute service:** “AC Transit will provide extensive commuter Transbay bus service where rail and road are approaching capacity. Non-peak service will be provided as justified by patronage;”
2. **Many to one, walk access based service**—“AC Transit will provide a many to one service from the dense areas of the East Bay to San Francisco.” Our service will primarily encourage walk access to transit, but may include park and ride access in low density areas and across the San Mateo and Dumbarton Bridges;
3. **Funded from sources other than the General Fund**—Transbay service should be funded from fares and regional source, especially sources generated in the bridge corridor.

Source: AC Transit, Board of Directors Meeting Agenda, July 2014

Inner East Bay Comprehensive Operations Analysis

The Inner East Bay Comprehensive Operations Analysis (COA is a sub-study of MTC’s TSP), completed in 2013, that specifically reviewed service delivery in the Inner East Bay. The study was not adopted by the AC Transit Board, and AC Transit is in the process of undertaking an independent study that will reconsider the findings of the Inner East Bay COA.

Strategic Vision

Working with community groups and riders, AC Transit is developing a strategic vision for the future that would provide the East Bay with a truly world-class transit system. The Strategic Vision combines service enhancements and fare changes to improve mobility for the entire community. The Strategic Vision is a longer range transit vision for the East Bay that will identify major system improvements and the funding required for implementation. The plan is currently in development and is intended to help AC Transit advocate with state and federal officials to make the funding for plan implementation a regional priority.

Transit Performance Initiative Grant

In October 2012, MTC committed \$60 million to the TPI Incentive Program. Under a competitive process, MTC is providing TPI funding for projects that advance its TSP's objectives. AC Transit's Line 51 Corridor Delay Reduction and Sustainability Project was one of the first TPI grant recipients. Line 51 is described in the Major Projects Section.

AC Transit has also applied to the TPI program for its South Alameda County Major Corridors Travel Time Improvement Project. The corridor traverses through eight PDAs and two potential PDAs. The project would implement segments of Adaptive Traffic Control Systems, corridor-wide transit signal priority, signal coordination, and relocation of key bus stops. The project would reduce the travel time for Line 97 by 15 percent (20 minutes) and for Line 99 by 10 percent (16 minutes), and improve the on-time performance of these routes to be closer to AC Transit's goal of 75 percent. MTC announced an additional \$5.5 million for TPI Investment for the next round of grants in September 2014².

Major Corridor Study

The Major Corridor Study focuses on the District's service area with the goal of developing a set of near- and long-term projects on the nine highest ridership corridors in the East Bay:

- Webster, Santa Clara, Broadway (Alameda and Oakland), College, University (Line 51)
- San Pablo, Macdonald
- International, East 14th BRT
- 40th, West Grand, MacArthur
- Foothill
- Shattuck, Martin Luther King, Park Blvd

². MTC Resolution No. 4035. MTC Programming and Allocation Committee. September 10, 2014. http://apps.mtc.ca.gov/meeting_packet_documents/agenda_2284/7d_TPI_Round2_Programming_RESO-4035.pdf

- Telegraph
- Hesperian, Union City Blvd, Alvarado-Niles
- East 14th, Mission, Decoto, Fremont

The study is being undertaken in conjunction with the Countywide Transit Plan and the recommendations from this project will be integrated into the Countywide Transit Plan.

Designing with Transit

AC Transit's "Designing with Transit" manual serves as a toolbox for cities, counties, communities, and transit and governmental agencies to use during planning to make streets more pedestrian and transit-friendly. This land use and design guide will be a foundation for developing countywide guidelines for integration with transit.

13. Water Emergency Transportation Authority

The Water Emergency Transportation Authority (WETA) was established by SB 976, and replaced the Water Transit Authority. The intention of SB 976 is to improve the ability of ferries to respond to transportation needs in an emergency and to consolidate regional ferry services. WETA operates daily service on four lines serving nine terminals, and carries about 4,850 passengers on an average weekday; of those, about 2,460 are Alameda County passengers. In Alameda County, WETA serves Alameda, Oakland, and Harbor Bay terminals providing service to San Francisco, Angel Island, and South San Francisco. Figure 19 shows the existing route map for the ferry system.

Figure 19: WETA – Route Map



Source: WETA, sanfranciscobayferry.com, 2014

Short Range Transit Plan

The SRTP is a 10-year (FY 2012–2021) projection of transit capital and operating expenses and revenues. The plan focuses on increasing ridership in the coming years in order to counteract the increased operating subsidy associated with ridership losses and cost increases. Efforts to increase ridership include: enhanced marketing and communications, increased system efficiency and effectiveness through a system service review and identification of new opportunities to increase operational dollars to support the services.

Goals and Objectives

WETA's core system wide goal is to plan, implement and operate productive, effective and cost-efficient regional ferry transit services consistent with demand and available resources.

Projects

The SRTP identifies seven potential new ferry terminals, including one at Berkeley, expansion of the San Francisco Downtown Ferry terminal, and two new maintenance facilities, one of which would be located at Alameda Point.

The SRTP identifies three new near-term service routes to Berkeley, Richmond, and Treasure Island. These projects have significant dedicated capital and operating funds from a number of funding initiatives such as RM 2 and the Contra Costa County Measure J transportation sales tax initiative (Richmond only).

The SRTP also includes longer-term expansion services to Antioch, Hercules, Martinez, and Redwood City. These expansion projects are not included in the operating plan due to the lack of a dedicated operating funding source.

Figure 20 shows the proposed expansion to Antioch, Berkeley, Hercules, Martinez, Redwood City, Richmond, and Treasure Island as well as expanded maintenance facilities.

Capital Improvement Program

The SRTP includes a 10-year CIP, which consists of \$422 million in core capital needs. The capital program includes new terminals, vessel replacement, and new maintenance facilities. Table 14 presents a summary of the CIP.

Figure 20: WETA – Proposed Routes



Source: WETA, watertransit.org, 2014

Table 14: WETA SRTP – Capital Improvement Program

Program	10-Year Total Cost
Revenue Vessel Projects	\$159,646,000
Vessel Rehabilitation	\$39,830,600
Vessel Expansion	\$69,000,000
Major Facilities Rehabilitation/Replacement	\$17,485,700
Floats and Gangways	\$11,441,600
Dredging	\$5,150,400
Terminal Maintenance	\$893,700
Service Expansion Projects	\$179,675,400
Downtown SF Terminal Expansion	\$115,585,700
Berkeley Terminal	\$28,771,100
Richmond Terminal	\$7,789,200
Additional Expansion Services	\$27,529,400
Maintenance Facility Projects	\$64,600,000
Central Bay Facility	\$39,100,000
North Bay Facility	\$25,500,000
Miscellaneous	\$643,700
Total cost	\$422,050,800

Source: WETA, SRTP, 2013

Performance Measures

The SRTP identifies service objectives and standards for reliability, safety, and effectiveness and efficiency. Table 15 presents the performance measures included in the SRTP.

Table 15: WETA SRTP – Performance Measures

Objective	Measure	Standard
Reliability	Trip Reliability	Operate 99% of scheduled ferry trips
	On-Time Arrivals	95% of trips will arrive no more than ten minutes after the scheduled arrival time.
Safety	Accidents and Injuries	No accidents No injuries
Effectiveness & Efficiency	Total Annual Ridership	<i>Minimum:</i> Total number of annual passenger boardings tracks with service area travel market volume <i>Target:</i> Annual ridership increases
	Average Weekday Ridership	<i>Minimum:</i> No decrease in average weekday ridership compared to the prior FY average <i>Target:</i> Increased average weekday ridership consistent with growth in transit use of the region
	Passengers per Revenue Hour	System Total: Minimum- 80; Target- 100 Peak Hour & Direction: Minimum- 100; Target- 125
	Labor Efficiency	Revenue hours are no less than 80% of total crew hours
	Operating Cost	Limit annual cost rate increases to no more than the annual
	Farebox Recovery	Bay Area CPI with the exception of fuel
	Trip Reliability	40% for commute-only services 30% for all-day services New services have 3 years to achieve these targets Special event services will recover the full incremental cost of this service through fares and/or other special revenues

Source: WETA, SRTP, 2013

Funding and Implementation Plan

The proposed ferry expansion focuses on delivering new routes to San Francisco and support facilities using identifiable funding sources such as new bridge toll revenues from RM 2, local sales tax measures (San Francisco, Contra Costa, and San Mateo counties), federal grants, and farebox recovery.

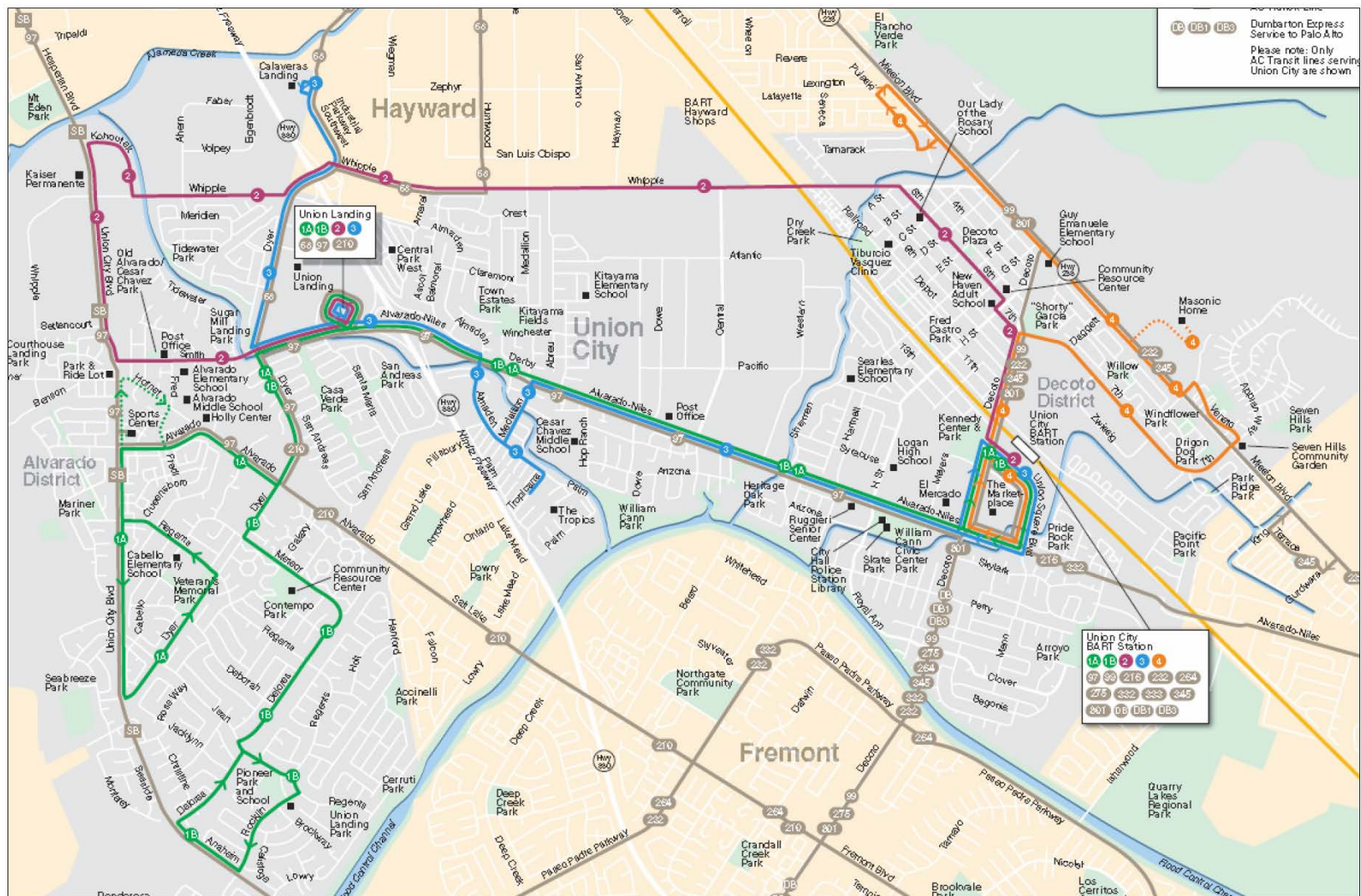
C. Local Transit Services

1. Union City Transit

Union City Transit is the City of Union City’s bus system. Union City Transit operates five fixed routes daily within the city limits, and carries approximately 1,780 average daily passengers. Figure 21 shows the current service network for Union City Transit.

Routes are coordinated with the arrival and departure of BART trains at the Union City BART Station. Union City Transit provides connections with AC Transit and the Dumbarton Express for additional regional transportation options. The main transfer points for Union City Transit are located at the Union City BART Station and the Union Landing Transit Center.

Figure 21: Union City Transit – Route Network



Source: Union City Transit, SRTP, 2013

This section describes the SRTP for Union City Transit.

Short Range Transit Plan

The SRTP covers Union City’s fixed route transit services as well as the complementary paratransit services. The SRTP recommendations are divided into two phases. Phase I outlines the service recommendations for the coming five years (FY 07/08 – FY 11/12). Phase II focuses on the second five years of the SRTP planning period, which will be influenced by the completion of the new Intermodal Station. The SRTP lays out the following as key operational issues:

- Indirect routing
- Low ridership and productivity on route segments
- Long cycle time
- Service to new activity centers

Goals and Objectives

The goals and performance measures recommended for Union City Transit are designed to focus on improving system productivity and on achieving a sustainable system that meets local mobility needs. Table 16 presents the goals and objectives as presented in the current SRTP.

Table 16: Union City Transit SRTP – Goals and Objectives

Goal	Objective
Provide a transit system that effectively meets community needs	Provide convenient transit service
	Provide reliable transit service
	Provide safe transit service
	Provide attractive services which respond to market demands for transportation
	Provide coordinated transit services
	Provide accurate and timely marketing information
Operate and manage the transit system efficiently	Minimize operating costs per unit of service
	Maximize vehicle life through preventative maintenance
	Maximize service productivity
	Maximize cost recovery through farebox receipts
Provide accessible transit service	All vehicles equipped with working lifts or ramps
	Concentrations of elders and persons with disabilities served by transit
	Provide adequate capacity to meet demand
	Work with community to identify areas where new services are required
	Provide language assistance to Limited English Proficiency customers per Federal Transit Administration (FTA) requirements
	Provide Environmental Justice assistance to low-income and minority customers per FTA requirements

Source: Union City Transit, SRTP, 2013

Performance Measures

The SRTP recommends two types of performance standards for Union City Transit. The efficiency standards focus on factors largely within the control of the agency. These include operating cost per revenue service hour, revenue to non-revenue hour ratio, passengers per revenue service hour, and farebox recovery ratio. In addition, the SRTP also recommends new service quality and reliability standards. These include passenger complaints, bus shelter cleanliness, and reliability.

Projects

The SRTP proposes adding four new fixed-service routes to the Union City Transit network and replacing its aging fleet. Figure 22 shows the proposed network of routes.

14. Wheels

Livermore Amador Valley Transit Authority (LAVTA) was established in 1985 under a Joint Powers Agreement to provide public transit in the cities of Dublin, Livermore, Pleasanton, and in unincorporated areas of Alameda County.

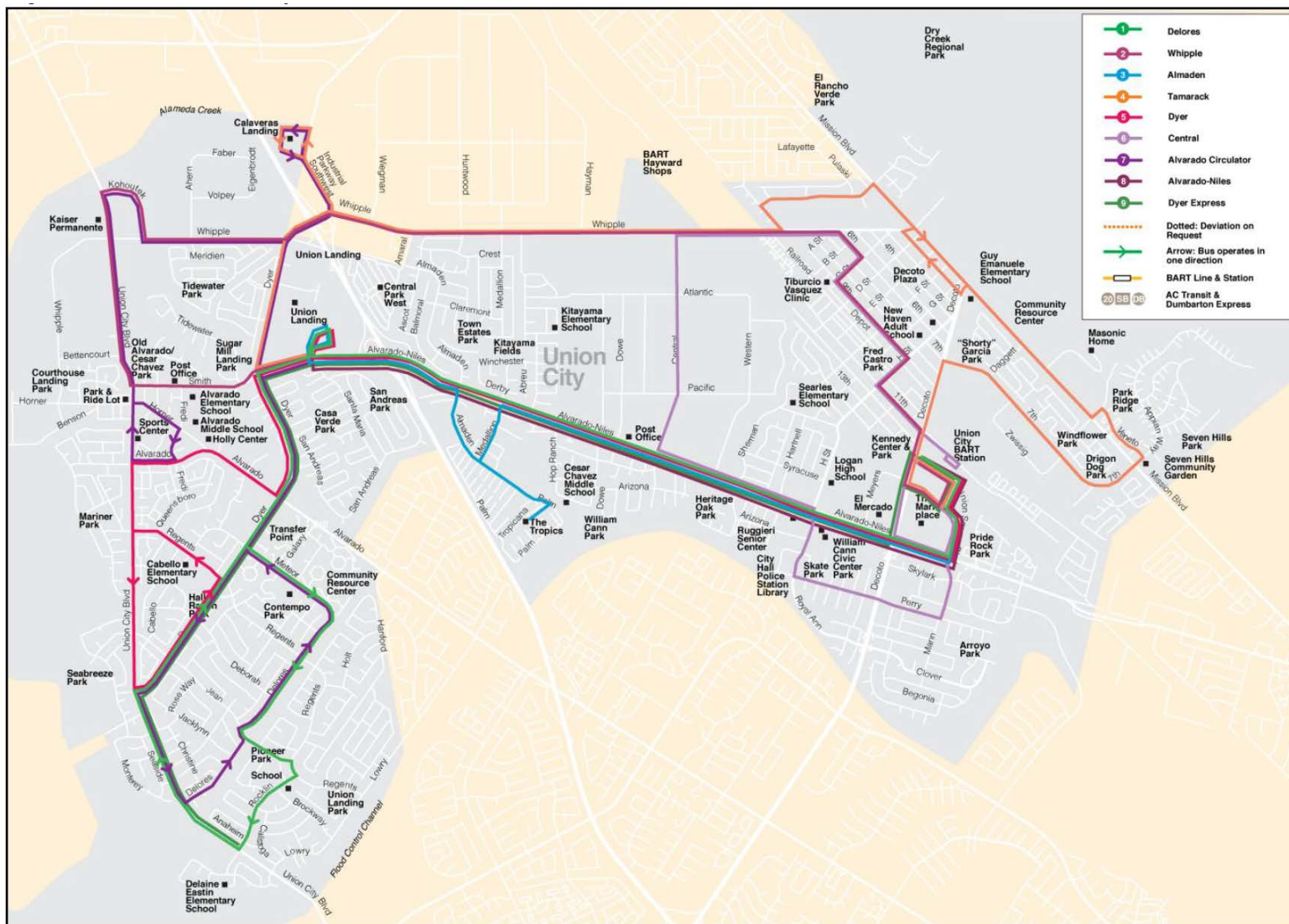
LAVTA operates the Wheels service, which includes 16 fixed bus routes and 15 “school tripper” routes (LAVTA, 2011). Many of the routes provide connections to BART, ACE and Central Contra County Transportation Authority (County Connection). The service area is approximately 40 square miles with a population of over 200,000. Wheels fixed-route buses had 6,100 average daily passengers in FY 2013. Figure 23 shows the LAVTA system map.

LAVTA’s mission is to provide equal access to a variety of safe, affordable and reliable public transportation choices, increasing the mobility and improving the quality of life of those who live or work in and visit the Tri-Valley area (LAVTA, 2014). This section describes the Wheels SRTP.

Short Range Transit Plan

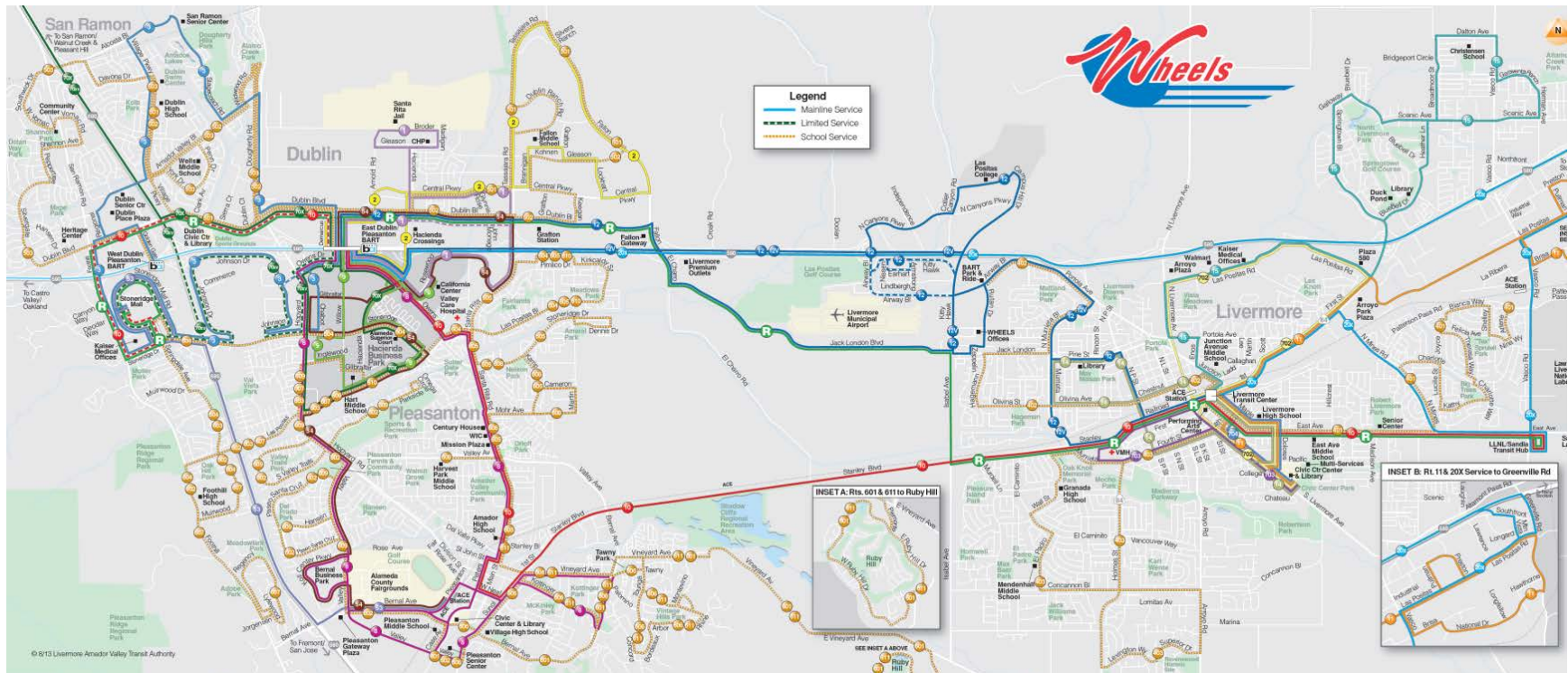
The SRTP serves as a management and policy document for LAVTA. It includes a recently approved round of schedule and service revisions. Table 17 lays out these proposed service changes.

Figure 22: Union City Transit – Proposed Network, Phase II SRTP



Source: Union City Transit, SRTP, 2013

Figure 23: LAVTA – System Map



Source: LAVTA, www.wheelsbus.com, 2014

Table 17: LAVTA SRTP - Imminently Anticipated Service Changes

Service	Change in Annual Revenue Hours	Change in Annual Ridership	Peak Vehicle Required Difference
Baseline - Current service levels Fall 2012	126,207	1,749,168	50
Add RT 53/54 service to accommodate fourth Ace train	693	14,193	0
Reduction of Rt 30/R peak frequency to 15 min	-3,294	0	-4
Increase Rt 3 frequency to 30 min	1,260	6,174	1
Increase Rt 12 am peak frequency to 30 min	1,000	8,850	2
Add limited Rt 12 Sunday service	720	4,806	n/a
Start Rt 10 earlier to meet earlier outbound BART train	560	5,544	0

Source: LAVTA, SRTP, 2012

Goals and Objectives

The SRTP outlines the following transit goals and objectives:

- Provide effective transit services that increase the accessibility to community, services, and jobs;
- Improve visibility, image, and awareness of Wheels;
- Utilize transit as an essential community and economic development tool for local communities;
- Strengthen Wheels’ leadership position within the region to enhance opportunities for development and maintenance of quality transit service;
- Strengthen organization-wide capabilities and resources to improve overall performance and customer satisfaction; and
- Maintain fiscal responsibility to ensure financial sustainability of existing and new transit services.

Performance Measures

The SRTP includes one or more performance standards corresponding to each goal or objective. The performance standards are very comprehensive, ranging from qualitative assessments of whether the stated objectives have been met to elaborate statistical standards. Standard performance measures used by LAVTA include:

- Service coverage, hours, reliability and effectiveness
- Ridership
- On-time performance
- Farebox recovery ratio
- Customer Satisfaction
- Safety

- Affordable and Sustainable Service

Table C 1 in Appendix C presents the comprehensive performance standards for each strategic goal.

Projects

The SRTP includes a host of geographically focused service plan alternatives. The capital plan identifies projects in five categories: fixed route vehicles; service vehicles; and major components, which includes items such as engine replacements and miscellaneous. The SRTP also includes adding additional revenue hours for fixed routes in FY 2015 and FY 2016.

Table 18 summarizes, by priority, the outlined service modifications envisioned for implementation during the SRTP planning horizon and the incremental ridership anticipated from these service improvements. LAVTA is initiating a Comprehensive Operational Analysis (COA) in early 2015 and is expecting to complete the study within a year, with near-term recommendations implemented in their fiscal year starting July 2016.

Financial and Implementation Plan

LAVTA draws from traditional federal, state, and local funding sources. The SRTP financial plan focuses on dropping ridership and service cuts that are occurring as rider costs increase. LAVTA has taken measures that have resulted in recent cost reductions to address these issues.

Table 18: LAVTA SRTP – Service Plan Priorities

Priority	Service	Service Type	Annual Revenue Hours	Cumulative Hours
Beginning Annual Revenue Hours (FY12)				126,207
FY13	Add Rt 53/54 service to accommodate fourth ACE train	Local	693	
	Increased Rt 3 frequency to 30 min	Local	1,260	
	Increase Rt 12 am peak	Primary	1,000	
	Add limited Rt 12 Sunday service	Primary	720	
	Start Rt 10 earlier to meet earlier outbound BART train	Primary	560	
	Rt 11 coverage optimization	Local	0	
	Reduction of Rt 30/R peak frequency to 15 min	Primary	-3,294	
FY 13 Total Annual Revenue Hours				127,146
FY14	Rt 15 alignment adjustment away from Springtown Blvd	Local	0	
	Connect/link Hacienda line with east Dublin line	Local	0	
	Rt 20 potential reallocation of service to Springtown	Local	0	
	Simplification of service to Kottinger Park	Local	0	
	Realignment of service downtown-to-College	Local	0	
	Review/adjust service duplication along Railroad Ave	Local	0	
FY 14 Total Annual Revenue Hours				127,146
FY15	Rt 30/Rapid peak 10-min frequency restoration	Primary	3,294	3,294
	Reduction of service to Johnson Dr area	Local	-1,170	
	Limited school tripper expansion in Pleasanton	Local	250	
	Restructure service to Santa Rita Jail	Local	-1,300	
	Expand tripper service to Shafer Ranch	Local	250	
	Rt 18 service level adjustment	Local	-1,300	
FY 15 Total Annual Revenue Hours				127,170
Illustrative Service Plans				
Undetermined	Eastern Pleasanton Specific Plan development	Local	2,500	n/a
	Springtown service frequency improvements	Local	2,500	n/a
	Local routes span and frequency improvements	Local	8,000	n/a
	BART to Livermore Restructuring	Regional	1,500 - 3,000	n/a
	Park and Ride Express	Regional	1,250	n/a

Source: LAVTA, SRTP, 2012

15. Shuttle Service

Shuttles are playing an increasingly important role in the county’s transit network. They bridge gaps in public transit between employment centers, medical/educational institutions, shopping centers, and BART. For example, 80 percent of all shuttle trips in Alameda County begin or end at the MacArthur BART Station.³ While these shuttles serve a critical need in Alameda County, they also present potential conflicts at existing transit stations and bus stops.

Major shuttles operating in Alameda County are as follows:

³ http://www.alamedactc.org/files/managed/Document/10616/Appendix_B-Briefing_Book.pdf

- The Alta Bates shuttles from both the Ashby and MacArthur BART stations to the Berkeley Medical Center are free.
- CSU East Bay has shuttles to the Hayward Campus from Castro Valley and Hayward BART stations. The shuttle is free to all riders with priority given to CSUEB ID card holders.
- The Estuary Crossing shuttle from Lake Merritt BART Station to the College of Alameda and Marina Village is free.
- Emery Go-Round, funded by fees assessed through a Transportation Management Association (local funds), runs service between MacArthur BART Station and locations throughout Emeryville, including the Amtrak Station and Pixar. Service is privately administered, but is free of charge to the public.
- Oakland's "B" Line, operated by AC Transit and funded by contributions from private business organizations and Alameda CTC, provides service along Broadway through downtown Oakland.
- San Leandro LINKS is a free shuttle that provides a direct connection between San Leandro BART Station and West San Leandro. Service is funded by Alameda CTC, BAAQMD, City of San Leandro, and the West San Leandro Shuttle Business Improvement District.
- West Berkeley Shuttle is a free service that provides connections from the Ashby BART Station and major employment centers in West Berkeley. The shuttle service is a partnership among West Berkeley corporate sponsors. Daily operations are managed by the Berkeley Gateway Transportation Management Association.
- UC Berkeley Bear Transit is a university shuttle that serves the main campus, downtown Berkeley, and neighborhood and residences near the main campus. Students with a current campus ID ride most routes for free, whereas riders without a campus ID must pay a nominal fee⁴.
- Mills College in Oakland operates a free shuttle service between the college, Kaiser Medical Center, UC Berkeley, and the Rockridge (weekdays) and MacArthur (weekends) BART stations. The shuttle is free to students with nominal fees for staff, faculty, and guests.⁵
- Lawrence Berkeley National Laboratory shuttle provides service between the Lawrence Berkeley National Laboratory (which is located on the hillside above the UC Berkeley campus), the main campus, downtown Berkeley, off-site facilities, and the Downtown Berkeley and Rockridge BART stations.

⁴ <http://pt.berkeley.edu/around/transit/routes>

⁵ http://www.mills.edu/student_services/safety_and_transportation/shuttle_schedule.php

- Kaiser-Permanente operates shuttle service between MacArthur BART Station and the Oakland Kaiser Permanent Medical Center and between San Leandro BART Station and the Kaiser San Leandro Hospital.
- Bishop Ranch office park located in the San Ramon Valley provides free shuttle service for its 30,000 employees. Four of the nine routes serve the Dublin/Pleasanton BART Station and the Pleasanton ACE train station in Alameda County.
- LAVTA provides shuttle service from Lawrence Livermore National Laboratory between Vasco Road ACE Station and the Dublin/Pleasanton BART Station.
- Other office parks offering free service for employees include: Harbor Bay Business Park (from Coliseum BART) and Hacienda Business Park (via WHEELS buses from Dublin/Pleasanton)⁶.
- Google currently owns and operates a fleet of buses for its employees that serve 16 shuttle stops throughout Alameda County. Buses use both BART stations and AC Transit bus stops for pick up. Locations include:⁷
 - North Berkeley BART
 - Ashby BART
 - MacArthur BART
 - West Oakland Park and Ride
 - West Oakland BART
 - Fruitvale BART
 - High Street and Bayo Vista in Alameda
 - High Street and Otis in Alameda
 - Island Drive Park and Ride (AC Transit stop) in Alameda
 - Sequoyah Church Park and Ride in Oakland
 - San Leandro/Bay Fair
 - Pleasanton
 - Bay Fair BART (on request only)
 - Newark Blvd
 - Fremont BART
 - SR-238 and SR-680 Interchange

⁶ <http://transit.511.org/providers/bartshuttles.aspx>

⁷

<https://maps.google.com/maps/ms?msa=0&msid=214267803155448548070.00045d1855c3d7d325205>

- Several other Silicon Valley employers, such as Apple and Genentech, provide employee shuttle services to their campuses on the Peninsula from the East Bay⁸.

Private Shuttle Service and Public Transit Coordination

Private and public entity partnerships are common in coordinated transportation systems; MTC recently published an update to its Coordinated Public Transit-Human Service Transportation Plan, which was initially developed in 2006 and 2007. The Plan outlines a comprehensive strategy for delivery of public transportation service to meet the needs of individuals with disabilities, older adults, and individuals with limited income. Service provided by private shuttles, such as those operated for office parks and hospitals, is especially important in those areas where public transit is limited or unavailable, including areas that benefit from these first and last-mile connections to train stations.

Shuttle Partners Program

With the large growth in privately-operated shuttles in the Bay Area in recent years, the potential for conflicts with existing public transit operations have also increased. The City of San Francisco has initiated a “Shuttle Partners Program” to address the concerns of the public and the San Francisco Municipal Transportation Agency (SFMTA) regarding these potential conflicts.

The Shuttle Partners Program seeks to:⁹

- Provide a safe environment for shuttle riders and other affected street users.
- Identify and address adverse effects from shuttle operations on the performance of surface-running public transportation in San Francisco.
- Consistently and fairly apply and enforce any regulations/policies.
- Establish ongoing, positive communication and problem resolution between shuttle operators, City agencies, and the public regarding shuttle issues, growth, and changing needs.

SFMTA is developing a draft policy approach and a pilot program to accommodate participating shuttles at designated Muni stops for a trial period. Shuttle operators will need a city permit to use Muni bus stops, at a fee of \$2 per day per stop. Permits will only be available at select stops (200 of Muni’s 2,500 bus stops), and private shuttles will be prohibited from using stops that are

⁸ <http://www.gene.com/careers/benefits/commuting>

<http://io9.com/5976477/the-hidden-bus-routes-in-san-francisco-that-are-only-for-techno-elites>

⁹ <http://www.sfcta.org/transportation-planning-and-studies/current-research-and-other-projectsstudies/transportation-demand-management-partnership-project>

heavily trafficked. The stops in San Francisco currently handle more than 35,000 shuttle boardings per day.¹⁰

SFMTA's experience in this pilot program will provide valuable input on the effectiveness of creating public-private partnerships that address the role that private shuttle services play in meeting growing non-automobile transportation demand.

D. Connecting Services

In addition to transit services that operate primarily within or across Alameda County, three other public transit agencies provide or envision providing connecting services to Alameda County - Contra Costa County Transportation Authority (CCCTA), Santa Clara Valley Transportation (VTA), and Western Contra Costa Transit Authority (WestCAT). This section describes these services and identifies projects and programs relevant to the Countywide Transit Plan.

1. Contra Costa County Transportation Authority

The CCCTA operates the County Connection bus service that provides fixed-route and paratransit bus service in the central portion of Contra Costa County. Some of the fixed routes also serve activity centers and transportation hubs in Alameda County. County Connection routes 35 and 36 from the San Ramon Transit Center and 97X from Bishop Ranch serve the Dublin/Pleasanton BART Station. Route 92X from the San Ramon Transit Center serves the Alameda County Fairgrounds and Pleasanton ACE Station.

Short Range Transit Plan

The County Connection SRTP represents the goals, objectives, and standards for CCCTA along with a general evaluation of system performance; description of the CCCTA service area and transit services; and an outline of the CCCTA capital, financial and operational ten year plan.

The SRTP includes no recommendations for changing service linking to Alameda County. CCCTA considered re-routing the three routes that terminate at the Dublin/Pleasanton BART station, but ultimately decided against it.

16. Santa Clara Valley Transportation Authority

The VTA currently provides connecting bus service between Alameda and Santa Clara counties. Lines 120 from Lockheed Martin Transit Center, 140 from

¹⁰ <http://www.sfgate.com/news/article/S-F-to-charge-operators-of-tech-commuter-buses-5118477.php>

Mission College, 180 from Great Mall, and 181 from San Jose Diridon Transit Center all provide connections to the Fremont BART Station.

Draft Short Range Transit Plan

VTA’s 2014 Draft SRTP plans for a number of transit service changes that respond to the introduction of BART service into Santa Clara County, (see Table 19).

Table 19: VTA Draft SRTP – Proposed Service Changes

Date	Route	Description
July 2014	120	Operate an additional trip in each direction if passenger volume warrants
October 2015	120, 181	Terminate at Warm Springs BART instead of Fremont
October 2015	140, 180	Combine and convert to limited route 380 with opening of Warm Springs BART
January 2017	181	Discontinue Route with BART service beginning to Berryessa and Montague

Source: VTA, Draft SRTP, 2014

17. Western Contra Costa Transit Authority

The WestCAT currently does not have connecting services with Alameda County. The WestCAT SRTP discusses a financially unconstrained vision that would serve the strong commuter demand for downtown Oakland from the WCCTA service area. It discusses a study undertaken in 2005 that indicated the potential demand for express bus service to West Berkeley and Emeryville, but there are currently no plans to implement this service.

2.3. Goals and Objectives

This section summarizes the goals and objectives for transit service that have been adopted by MTC and the transit operators serving Alameda County. The goals for each individual transit operator are listed in previous sections of this report.

Goals for all transit planning and delivery agencies across the region are very similar to and well-aligned with transportation/transit goals adopted by Alameda CTC. What MTC’s Plan Bay Area refers to as the Three E principles of sustainability – economy, environment, and equity – have been translated to local plans and are virtually universal goals of transportation planning and operating agencies.

The goals of planning and funding agencies also include development of a multimodal system that offers multiple ways to make a trip. Like MTC, Alameda CTC recognizes transit as a key component of the multimodal transportation system. Alameda CTC acknowledges the need to develop a transportation and transit system that is financially sustainable and can support its operations and maintenance without continued financial subsidies or assistance. Alameda CTC also identifies transportation as a key driver for economic development.

The goals and objectives of transit agencies tend to focus on their system and riders as summarized below.

- BART is focused on delivering “show up and go” service in its core service areas, in consideration of development patterns in the region and its own service networks.
- AC Transit’s goal is to improve the quality and reliability of its service.
- WETA has a distinct goal of providing emergency response services, in addition to regional ferry services.
- Union City Transit is focused on serving local markets and providing feeder service to larger BART and AC Transit systems.
- LAVTA is focused on serving local markets and on raising public awareness of its services to increase ridership.

None of the planning and funding agencies or transit agencies has identified goals or objectives that address or consider the rapid growth of private shuttle operators and ride-sharing services in the region. These services are rapidly blurring the boundary between private and public transportation and provide new opportunities for public-private partnerships in the delivery of transit services.

Table 20 provides a summary of major goals and objectives of planning and funding agencies and transit operators serving Alameda County.

Table 20: Major Goals and Objectives by Agency

Major Goal Categories	MTC	Alameda CTC	BART	AC Transit	WETA	Union City Transit	LAVTA
Effectiveness	✓	✓	✓	✓	✓	✓	
Efficiency	✓	✓	✓	✓	✓	✓	
Equity	✓	✓				✓	✓
Maintenance and Safety	✓	✓	✓	✓			
Reliability	✓		✓	✓			
Security and Emergency Management	✓				✓		
Environment	✓	✓	✓				
Livable Communities	✓	✓	✓				
Agency coordination	✓	✓					
Fiscal Sustainability	✓	✓	✓	✓			✓
Economic Development	✓	✓	✓				✓
Public Awareness			✓				✓

Source: Parsons Brinckerhoff, August 2014

2.4. Performance Measures

Performance measures are generally used to track, analyze, and report transit performance with respect to established or adopted goals. Some of the

performance measures are dictated by reporting or regulatory requirements, such as the National Transit Database maintained by the Federal Transit Administration (FTA). Use of a common set of performance measures provides transit and funding agencies with an objective assessment of trends and a better understanding of system characteristics.

Transportation planning and funding agencies use many performance measures to prioritize capital projects and needs. MTC's Plan Bay Area includes performance measures and targets primarily related to environment (per capita emissions of CO₂ from cars and light duty trucks) and community benefits of transit (share of non-automobile modes). The RTEP adopted performance measures to facilitate evaluation of capital projects across the region, and focused on transit efficiency (cost per passenger), network connectivity (number of connecting operators, frequency), and project readiness. The TSP established transit efficiency performance targets to reduce cost per revenue hour, cost per passenger, or cost per passenger mile.

Similarly, Alameda CTC's CTP provides performance measures pertaining largely to equity and environmental aspects of transit. The CMP reports on efficiency and effectiveness of various transit services operating within Alameda County.

The measures used by transit agencies tend to be focused on their own operations and are used to evaluate and improve their service delivery. Transit agencies serving Alameda County use a wide range of performance measures concerned with service delivery. All transit agencies operating in Alameda County use traditional performance measures - such as cost per passenger, farebox recovery ratio, cost per revenue hour, and cost per revenue mile - to monitor their service delivery and assess their economic performance.

Some of the transit agencies have adopted goals and objectives, but have not identified performance measures to track the progress in achieving them. For example, MTC and Alameda CTC identify coordinating transit and land use as one of their top priorities, yet neither agency yet has an effective means to report on its targets or achievements in this area.

LAVTA has one of the more extensive performance measurement programs among the transit agencies operating in Alameda County. The LAVTA program includes, in addition to traditional transit measures, a measure to track service provision to developments that meet best transit-oriented land use practices. LAVTA uses MTC's 4D performance standard (consisting of density, diversity, design, and distance criteria) to identify such developments. Such measures ensure coordination between land use and transportation policies on the ground. LAVTA uses contractual penalties and incentives clauses tied to system performance to ensure high-quality service delivery through contracted operations. It is also the only transit agency to have adopted performance measures directly associated with fiscal sustainability, economic development, and public awareness of transit services.

Security and emergency management is an area with relatively sparse performance measures. BART monitors its response times during emergencies, but no other transit agency has adopted performance measures to track their response in emergency situations. WETA is responsible for coordinating and providing ferry transportation response to emergencies or disasters affecting the Bay Area transportation system, but it does not have adopted performance measures that quantify its response. Table 21 provides a summary of major performance measures used by the planning and funding agencies, and transit operators serving Alameda County.

Table 21: Major Performance Measures by Agency

Performance Measure	MTC	Alameda CTC	BART	AC Transit	WETA	Union City Transit	LAVTA
Effectiveness							
System ridership		✓	✓	✓	✓	✓	✓
Passengers per revenue hour		✓	✓	✓	✓	✓	✓
Passengers per revenue mile			✓	✓			
Passengers per car			✓				
Revenue to non-revenue hour ratio						✓	
Farebox recovery ratio			✓	✓	✓	✓	✓
Frequency of service	✓			✓			✓
Span of service				✓			✓
Operating speed (revenue miles per revenue hour)				✓			
Capacity utilization (passenger miles per seat mile)			✓				
Maximum load section capacity utilization			✓				
Vehicle load factor (passengers per seat)				✓		✓	
Peak fleet requirement			✓				✓
Fare revenue per seat mile			✓				
Efficiency							
Operating cost			✓	✓	✓		✓
Cost per passenger	✓		✓	✓			✓
Cost per revenue hour	✓			✓		✓	✓
Cost per passenger mile	✓						
Cost per seat mile			✓				
Equity							
Low-income households around stops		✓					
Low-income households within 30-min transit ride of activity center		✓					
Maintenance and Safety							
Injuries and fatalities	✓	✓					
Number of accidents			✓	✓	✓		✓
Miles between preventable accidents/road calls				✓		✓	✓
Mean time between system failures			✓				
Transit assets past useful life/remaining	✓	✓					

Performance Measure	MTC	Alameda CTC	BART	AC Transit	WETA	Union City Transit	LAVTA
service life of fleet							
Travel Time and Reliability							
On time performance			✓	✓	✓	✓	✓
Percent of service operated/missed trips				✓		✓	✓
Peak to off-peak period transit travel time ratio for select trip pairs		✓					
Average transit travel time for select trip pairs		✓					
Security and Emergency Management							
Crimes against persons			✓				
Average emergency response time			✓				
Environment							
Non-automobile mode share	✓	✓					
GHG emissions (Total or per capita)	✓	✓					
Particulate matter emissions	✓	✓					
Livable Communities							
Residential/employment density around stops or transit corridors	✓			✓		✓	✓
Percentage of major activity centers within 1/8-mi of transit route						✓	
Agency Coordination							
Number of connecting operators/Percent of routes with regional connection	✓	✓					✓
Schedule coordination						✓	✓
Gap closure in regional transit network	✓						
Customer Service							
Customer satisfaction ratings							✓
Number of complaints			✓	✓		✓	
Response time to comments						✓	✓
Cleanliness of facilities			✓			✓	

Source: AC Transit Board Policy 550, 2008; AC Transit Quarterly Operations Performance Report August 2014; Alameda CTP 2012; BART Strategic Plan 2008; BART SCOA 2013; BART Quarterly Service Performance Review FY 2015, November 2014; LAVTA SRTP 2012; LAVTA Executive Director’s Report October 2014; MTC RTEP 2001; MTC Plan Bay Area 2013; MTC TSP 2013; Union City Transit SRTP 2013; WETA SRTP 2013

2.5. Technologies

Technology is playing an increasing role in the delivery of transportation services. For transit agencies, technological developments are impacting fare collection, vehicles, systems management, and information availability. This section provides an overview of some of the technologies currently used and emerging in the transit industry.

A. Fare collection

Various technology advancements have allowed for automated collection of transit fares. The Bay Area has adopted automated fare cards, but is not as advanced as some transportation service providers in other parts of the nation.

1. Clipper Card

Clipper® is the transit card used for passes, discount tickets, ride books, and cash value for transit on eight Bay Area operators:

- Muni
- BART
- AC Transit
- VTA
- SamTrans
- Caltrain
- Golden Gate Transit and Ferry
- San Francisco Bay Ferry

MTC plans to expand the Clipper system to the LAVTA Wheels system by the end of 2015.¹¹

Cash value and transit passes can be loaded to the Clipper Card and used to ride any of the transit systems listed above. Value can be added at various stations and service centers (includes retail outlets such as Walgreens), online, automatically by enrolling in Autoload, and through employee transit benefit programs. Users tag their card to a card reader on the vehicle to deduct fare from the rider's account. For fares based on distance or zones and at rail stations (e.g., on BART, Caltrain, and Golden Gate Transit) riders tag their cards upon entering and exiting the system. Additionally, daily parking at BART lots and five garages in San Francisco are equipped with Clipper card readers that accept payment via cash value on a Clipper card.

¹¹ http://www.mtc.ca.gov/news/press_releases/rel642.htm

Future updates to the program could include a standard fare discount for transit riders when transferring between transit agencies on a single trip, parking at Caltrain stations, monthly parking at BART stations, bike parking (e.g., at bike lockers such as BikeLink™), and bike and car sharing programs.

2. Advanced Universal Fare Collection

Advance universal fare collection systems offer a pay-in-advance model for riders and allow for payment on multiple participating operators. Examples from other transit agencies are discussed below.

The Los Angeles County Metropolitan Transportation Agency uses a universal fare collection system, similar to the Clipper Card, for their regional contactless smart card, the Transit Access Pass (TAP). The TAP smart card is built on the Nextfare hardware and software platform for managing fare collection and operational data. Transfers between Metro services can be purchased and loaded on to the TAP card. TAP can be used on 11 of the more than 70 transit systems in the Los Angeles County and surrounding area (Tap 2014).

Internationally, advanced universal fare collection cards have been used to pay for services beyond traditional transit-related fares. Thailand's Rabbit® system allows for transit on Bangkok's mass transit system in addition to storing cash value for food and beverage, retail and service, and entertainment establishments. The Rabbit® system even offers Carrot Rewards, a benefits program for users (Bangkok Smartcard System Company Limited 2014).

Singapore's EZ-Link system uses one card for transit on public buses and trains, taxis and other private transport, for food and beverage, shopping and retail, entertainment, government services (e.g., health centers and pharmacies), at educational institutions (e.g., bookstores, food areas, libraries, school uniforms), community centers, and vehicle pricing on toll roads and in parking areas (EZlink website 2014).

In Germany the City-Ticket is a component of Germany's national railway company, Deutsche Bahn. The BahnCard offers free transit on public transportation such as buses, suburban trains, trams or the underground to and from ticketed rail travel as long as the rail trip is over a certain distance and the location is within the network covered by the program (Deutsche Bahn 2014). It also includes a rewards program and the option to turn the card into a credit card in order to expand the potential uses of the card.

B. Automatic Vehicle Locators/Real-Time Arrivals/Changeable Message Signs

Automatic vehicle locator devices calculate and transmit the geographic location of a vehicle. Various technologies can be used to track vehicle location, with GPS the most commonly used technology.

Signpost transmitters track transit lines when vehicles pass transponders creating “handshakes.” These handshakes can then be reported to the system to identify the position and progress of the vehicle. These technologies can be assisted by calculating the vehicle’s location based on previous position and estimated speed to estimate the current vehicle locations (“dead reckoning”). Signpost transmitters and dead reckoning technology is useful inside tunnels or other areas where GPS signals may be impeded.

Tracking technology can be used to inform real-time arrivals, which can be broadcasted at transit stops and waiting areas or made available online and to smartphone applications.

Changeable message signs at transit stops display a variety of messages to inform riders of transit conditions. Changeable message signs can convey information such as predictions for arrivals and departures, alternative routes, schedule or performance modifications, incident management, or general agency information (e.g., fare pricing, special event transit information). Typically, sign size limits the amount of information displayed. Resources such as the Federal Highway Administration’s Changeable Message Sign Operation and Messaging Handbook offer guidance and standardization on messaging and use of these signs.

All of these technological applications are in use by transit agencies in the Bay Area.

C. Applications

In recent years with the advent of Smart Phones, the development of software applications to provide transit information is becoming increasingly common. Software developers write applications or “apps” based on transit data for riders to use to determine methods of transit and travel. Software is being developed for agency use and by private companies that are creating new markets.

1. Agency Owned

In the Bay Area, 511 operates their own app, “511 SF Bay Transit,” incorporating transit trip planning with over 30 transit agencies. Some agencies, such as BART, have their own mobile web app which can be bookmarked as a favorite on mobile devices and computers, but does not operate as its own independent application.

3. Third Party Apps

Some transit agencies prefer to leave app design and operation to third parties. Typically agencies will publish data in a standardized format; commonly in General Transit Feed Specification (GTFS), for developers use to create apps. For example, VTA supplies GTFS data for developers and hosts links to these third party apps. Although 511 has its own 511 SF Bay Transit app, it also provides data to developers and hosts a page with links to third party apps. BART has a simplified mobile web app and also hosts a webpage with third party apps. AC Transit hosts a data resource center page with transit data (e.g., GTFS) for developers while also hosting information (e.g., Google Earth and other geographic informational software applications) for riders.

4. Google Transit

Google Transit uses Google Maps along with data provided by transit agencies to produce a trip planning tool. Google Transit uses schedules and geographic information provided by transit agencies for their developers to write tools to use the data in Google apps.

D. Intelligent Transportation Systems

1. Transit Signal Priority/Coordination

Transit signal priority and coordination encompasses techniques to improve service and reduce transit vehicle delay at locations controlled by traffic signals. Transit Signal Priority works by optimizing signal timing or coordinating signals to reduce congestion, reduce transit vehicle stopping at intersections, and improve traffic flow.

AC Transit uses infrared communications between buses and traffic signal controllers to activate transit signal priority at signalized intersections. For specific routes, Muni uses transit signal priority with antennae on buses communicating with antennae near a traffic light, which signals the traffic computer to keep lights green longer or change the light to green sooner. Similar to Muni, VTA's transit signal priority program for various routes uses sensors on buses communicating with traffic signals.

E. Vehicle Technology

1. Onboard Wi-Fi

Local area wireless, Wi-Fi, is now an increasingly common feature offered by a number of transit agencies in the Bay Area and the world at large. While Wi-Fi is

provided to transit patrons as a benefit, the technology used by transit agencies to supply Wi-Fi varies as does the reliability of service. AC Transit offers free Wi-Fi onboard select Transbay routes using a mobile Wi-Fi hotspot that travels with the bus. The Capitol Corridor has Wi-Fi throughout the system, though bandwidth may be limited and is slower during transit as compared to at stops and stations, as the network's bandwidth is from cellular carrier towers along the routes. Wi-Fi on BART is provided through a third party provider via above- and below-ground wayside wireless and fiber-optic infrastructure.

5. Left and Right Side Doors

Left and right sided door, or dual door, vehicle designs can support loading at side platform stations.

In the Bay Area, right-sided doors are the standard with the exception of rail transit lines such as BART, Caltrain, VTA Light Rail, and Muni Metro where boarding and alighting may occur on either the right or left side depending on the configuration of the platform. Dual doors can increase the efficiency of boarding and alighting and have been considered in the implementation of various BRT projects.

6. Seat Configuration

Seat configuration can vary depending on the goals of the agency for specific vehicles. For shorter trips with high ridership, buses may be configured to allow the greatest number of passengers. Configuration also considers mobility impaired individuals and other users (e.g., travelers with luggage, strollers, or bicycles).

7. Bike Racks

On buses, bike racks are typically affixed to the front of the vehicle, while on trains, dedicated cars or portions of cars are used for bike storage during transit. All AC Transit buses are equipped with front-mounted racks accommodating two bikes, and the larger commuter coaches can store two additional bikes in cargo bays. Additionally, folded or collapsible bikes can be carried onboard as long as they do not block seats or aisles.

Similar to AC Transit, most other Bay Area transit operators, including Muni, Wheels and Union City Transit, have front-mounted racks with space for two bikes. In addition to the front-mounted racks, SamTrans and VTA offer two additional spaces inside the bus, depending on passenger load. WETA allows bikes on board ferries. ACE trains have a bike car that has 16 bike stalls, and regular coach cars have four bike tie-downs. Bicycle racks are also provided on the Capitol Corridor trains.

As bicycle ridership has increased, transit agencies have planned for increasing numbers of riders using bikes to get to or from stations and stops. In 2013, the BART Board approved rules to allow bikes on all trains and in stations without time restrictions. As a result of this, BART reconfigured cars to have additional space for bikes, in addition to space for luggage, wheelchairs, and strollers. BART also added a number of new bike racks and lockers at stations.

8. Precision Docking

Precision docking systems assist transit vehicles in parking or stopping at exact locations. Precision docking helps achieve better alignment with platform edges at bus stops and islands, thereby lessening the gap riders have to navigate between the platform and the vehicle door; a benefit for mobility impaired riders and for efficiency in boarding and alighting. Various technologies can be used to achieve precision docking, including optical guidance (e.g., roadway markings read by optical sensors at the front of the vehicle) and magnetic sensors (e.g., guidance studs embedded in the roadway to guide the bus along a specific path).

AC Transit has been participating in a study testing magnetic docking.

9. Stop Annunciation - Multi-Lingual

The population served in a transit area or by a specific route should inform the use of multi-lingual stop announcements. AC Transit publishes routes and transit information in multiple languages. AC Transit and other transit systems (such as Muni and SamTrans) in the region are using recorded messages in multiple languages on their buses.

10. On-Board Security Cameras

The use of on-board security cameras can enhance the safety of patrons, property, and farebox revenues. Uses include surveillance of revenue-taking activities, fare evasion, vehicle and station security. The known presence of cameras may lower rates of crime on buses.

11. Fuel Cell Technology

Fuel cells can be used for primary power or auxiliary power units in a variety of transportation applications (passenger vehicles, buses, trucks). Fuel cells generate electricity via an electrochemical reaction in which oxygen and a hydrogen-rich fuel combine to form water. Unlike internal combustion engines, the fuel is not combusted, and the energy is released electro-catalytically. This allows fuel cells to be highly energy efficient.

Benefits associated with fuel cells include lower air pollutant emissions (including GHGs) as compared to a combustion engine, quieter operation, and the ability to operate in parallel with the power grid. Limitations associated with fuel cells include costs, specialized maintenance, limited equipment life, space requirements for re-fueling (if in a constrained area), and the potential need for back-up or emergency power generation.

Between 2006 and 2010, HyRoad , AC Transit's hydrogen fuel cell demonstration project, operated three zero-emission fuel cell buses, two fueling stations, and tested ten light-duty fuel cell vehicles. As of 2014, HyRoad now operates 12, third-generation fuel cell buses with hydrogen tanks on the roof allowing the buses a range of 220 to 240 miles.

Zero Emission Bay Area, a group of regional transit agencies, jointly operates a number of zero-emission fuel cell buses in the Bay Area. Zero Emission Bay Area partners include AC Transit, Golden Gate Transit, MUNI, SamTrans, and VTA.

F. Modeling and Tools

The ability to collect large amounts of data using new technology is affecting the transportation industry's approach to modeling of travel demand and assessing transit markets. Companies such as AirSage are able to provide large data banks that provide origin/destination data to assist in the estimation of travel demand. While these systems do not yet provide accurate information related to mode split, with the development of new universal fare collector systems that provide data as to when users enter (and sometimes exit transit systems) the ability to collect and use transit data may be vastly expanded in the near future. These new data sources may also provide new information related to the complexity of travel patterns and the interplay between various modes of transportation.

2.6. Funding and Implementation Plans

Transit funding comes from federal, state, regional, and local sources. The funding climate in recent years has shifted away from the federal and state level to increased reliance on funding at the local level. In California, this has meant an increasing role for county sales tax authorities. This section provides a summary of the funding context for Alameda County, with a focus on transit funding. The following sections discuss funding sources for transit and TOD at the federal, state, and regional/local level.

A. Federal

Federal transportation policy and spending priorities are set by the federal Surface Transportation Act, a multi-year authorization program that includes

highway, safety, transit, rail, and non-motorized transportation programs. The latest iteration of the act, MAP-21, was a two-year bill signed into law in 2012, and in July 2014, was extended through May 2015. MAP-21 consolidates certain transit programs to improve efficiency and targeted funding increases particularly for state of good repair. Key federal programs that provide transit funding are listed below:

- MAP-21
 - State of Good Repair Grants (Section 5337)
 - Bus and Bus Facilities Formula Grants (Section 5339)
 - Public Transportation Emergency Relief (Section 5324)
 - TOD Planning Pilot Grants (Section 20005(b))
 - Urbanized Area Formula Grants (Section 5307)
 - Enhanced Mobility of Seniors and Individuals with Disabilities (Section 5310)
 - Fixed Guideway Capital Investment Grants (Section 5309)
- Grant programs, such as Transportation Investment Generating Economic Recovery (TIGER) Discretionary Grant Program and Urban Partnership Program.

One important change in the federal grant program with MAP-21 was the introduction of a “core capacity” element to the Section 5309 grant program. This program provides funding for core capacity improvements that achieve a capacity increase of 10 percent or greater for existing fixed guideway systems. This program, while not providing a net increase in transit funding (projects compete for funds with New Starts and Small Starts projects), recognizes the need for upgrades to older transit systems such as BART that serve large urban centers. The guidelines for the implementation of this program are in the development process at FTA.

B. State

The State Transportation Improvement Program (STIP) is the biennial five-year plan adopted by the California Transportation Commission for future allocations of certain state transportation funds for state highway improvements, intercity rail, and regional highway and transit improvements. State law requires the Commission to update the STIP biennially, in even-numbered years, with each new STIP adding two new years to prior programming commitments. As the CMA for Alameda County, Alameda CTC programs the county's share of the Transportation Improvement Program.

The Cap and Trade program establishes a new funding source for projects that will reduce GHG emissions. Cap and Trade funds provided \$25 million to the Low

Carbon Transit Operations Program, \$25 million to the Transit and Intercity Rail Capital Program, and \$130 million to the Affordable Housing and Sustainable Communities Program in FY 2014/2015. Future revenue streams would give 35 percent to these categories starting in FY 2015/2016.

Other key state programs that provide transit funding are listed below:

- Highway Users Tax Account (gas tax subvention)
- State Transportation Development Act (TDA) which includes State Transit Assistance (STA) and Local Transportation Fund
- Public Transportation Modernization, Improvement, and Service Enhancement Account Program
- Transit System Safety, Security & Disaster Response Account Program
- Caltrans Local Assistance Programs, including Safe Routes to School, the Bicycle Transportation Account, and Environmental Enhancement and Mitigation Program
- Caltrans Planning Grants Program

C. Regional and Local

Various sources of transportation funding are available at the regional and local levels. Both MTC and Alameda CTC are envisioning potential new funding sources such as Regional Measure 3 (RM3) and the passage of Measure BB in November 2014 to supplement existing transit funding sources.

1. Regional Measure 3

MTC has sponsored two regional bridge toll measures to fund transportation improvements, RM1 and RM2. RM1, adopted by the voters in 1988, authorized a \$1 increase in bridge tolls for critical bridge improvements in the Bay Area. RM2 adopted by the voters in 2004, funded a combination of transit and highway choke-point improvements through a dedicated \$1 increase in bridge tolls. MTC is currently considering the introduction of an RM3, but the details of the proposal have yet to be developed.

12. Measure B

The first half-cent sales tax measure was passed in Alameda County in 1986 to finance improvements to the county's overburdened transportation infrastructure. This original tax expired in 2002. In 2000, nearly 82 percent of Alameda County voters approved Measure B, the second half-cent transportation sales tax. Alameda CTC administers Measure B funds to deliver essential transportation improvements and services. The [Alameda County 20-](#)

[year TEP](#) guides the expenditures of more than \$1.4 billion in Measure B funds generated through the continuation of the sales tax over a 20-year period, until 2022. The expenditure plan was developed to serve major regional transportation needs in Alameda County and to address congestion in every major commute corridor in the county.

In 2012, Alameda County placed a new Measure B on the ballot. Measure B was a half-cent sales tax measure that would have doubled the county's transportation sales tax from a half-cent to a full cent in perpetuity to fund road, freeway and transit projects. It was narrowly defeated, garnering 66.53 percent votes in favor, short of the 66.67 percent required to pass. As declining federal and state funding continues to be an issue, Alameda County reintroduced a slightly modified version of the sales tax measure, Measure BB, to voters on the ballot in November 2014 and the measure was approved by the voters.

Other existing funding sources are listed below:

- Seismic bridge tolls
- Transportation Fund for Clean Air - Vehicle Registration Fee
- Measure F – Vehicle Registration Fee
 - Transit for Congestion Relief
 - Local Transportation Technology
- Gas tax subventions
- AB 1107 half-cent sales tax for transit (BART and AC Transit)
- HOT lanes
- Various impact and development fees

2.7. Major Projects and Plans

This section elaborates on the major transit projects and plans currently under development or in construction in Alameda County.

A. BART Warm Springs Extension

The \$890 million Warm Springs Extension (WSX) will add 5.4-miles of new tracks from the existing Fremont Station south to a new station near the southern Alameda County border. The Warm Springs/South Fremont Station will feature an at-grade island platform with an overhead concourse, intermodal access to VTA and AC Transit buses, as well as taxi and "kiss and ride" passenger drop off areas accessed via Warm Springs Boulevard. Approximately 2,000 parking spaces will also be provided. The new station will be fully accessible to

pedestrians and bicyclists, and will provide bike lockers, elevators and escalators, Braille signs and a tactile sight path to aid riders with disabilities.

The WSX project was implemented via two contracts: the \$137 million Fremont Central Park Subway Contract and the \$299 million Line, Track, Station and Systems Contract. The subway portion of the project began construction in 2009 and was completed in the spring of 2013. Preparing the final design and constructing the trackway, systems, and the new Fremont station began in 2011 and is expected to be completed in the fall of 2015. The Washington Boulevard/Paseo Padre Parkway Grade Separation project in the City of Fremont was designed and constructed to facilitate the WSX project. It was completed in 2010.

The project funding plan includes substantial contributions from a variety of local and state sources and surplus revenues from the San Francisco International Airport Extension. The project has no federal funding.

B. BART Oakland Airport Connector

The recently completed \$484 million Oakland Airport Connector (OAC) project provides an improved transit link between the Oakland International Airport and BART. The OAC project follows a 3.1-mile, aerial and at-grade alignment from the Coliseum BART Station to the airport, and is designed to accommodate a potential future intermediate station. An automated driverless, cable-propelled people mover travels between BART and the airport in about eight minutes, primarily on an elevated guideway structure along the median of Hegenberger Road.

Funding for the project is a combination of local funding commitments from several sources and BART financing. A \$361 million design-build contract and 20-year operations and maintenance contract were awarded in 2010. Alameda CTC is providing \$89 million in Measure B funds and MTC is providing \$146 million in RM1 and RM2 funds. The OAC project opened for revenue service in November 2014.

C. BART Metro Vision

The BART Metro concept was first defined as part of the 2007 Regional Rail Plan developed by the MTC. The BART Metro concept incorporates two distinct categories of service: "Metro Core" service between dense urban centers, and "Metro Commute" service throughout the BART system. Metro Core service would operate on "show up and go" frequencies all day long, while Metro Commute service would provide faster trips during peak periods while maintaining off-peak service.

The “Metro Core” is defined as is the service area between Daly City and Richmond, MacArthur and Bay Fair stations. These are locations with denser development, lower rates of car ownership, and transit can be highly competitive for all trips. Many of the BART stations in Alameda County fall in the Metro Core area, and would benefit from the improvements.

The central rationale for the BART Metro concept is that as the BART system matures, ridership builds, and the system expands, BART’s services and infrastructure need to change to serve the different travel markets that have emerged in the region since the BART system was planned over 50 years ago.

It is likely that significant new infrastructure would be needed to facilitate the different types of services needed to serve the BART Metro markets. Projects that could result from the BART Metro study are:

- “infill” stations along existing lines in strategic locations;
- additional tracks, including express, crossover and turn-back tracks, at locations strategically identified to improve operational flexibility and capacity and enable more complex service patterns; and
- potential new lines using standard BART or other technologies.

D. BART to Livermore

This project proposes a 4.8-mile extension of the BART line from the existing Dublin/Pleasanton Station within the I-580 freeway median to a new station in the vicinity of the I-580/Isabel Avenue interchange.

BART completed a Program Environmental Impact Report (EIR) for the BART to Livermore extension in July 2010 and is now preparing a Project EIR, which will provide more engineering detail on the proposed extension and a more detailed assessment of benefits and impacts and evaluation of alternatives, which, in addition to the proposed project, include the following:

- No Build Alternative – The No Build Alternative assumes that the proposed project is not constructed. Limited low cost improvements currently planned and funded for the existing intermodal connections may be included.
- Enhanced Bus Alternative – The Enhanced Bus Alternative would include modest improvements to existing bus services at the Dublin/Pleasanton BART station.
- Express Bus/BRT Alternative - This alternative would implement Express Bus/BRT service to the Dublin/Pleasanton Station with improvements that would provide for more seamless intermodal transfers to the BART system, such as potential improvements to bus access and operations. Transit access would be providing via reserved lanes and direct ramps at the Dublin/Pleasanton Station.

- DMU/EMU Alternative – Using DMU or EMU technology, this alternative would implement a new rail service between the existing Dublin/Pleasanton BART station to a new station in the vicinity of the Interstate 580/Isabel Avenue interchange. Limited parking would be provided at this station. A network of express buses linking inter-regional rail and PDAs in Livermore would also be included.

Developmental funds for this project are identified in the Measure BB program.

E. BART to San Jose

The BART Silicon Valley Program is a planned 16-mile extension of the regional BART system from BART's Warm Springs Station in Fremont to the cities of Milpitas, San Jose, and Santa Clara in Santa Clara County. The Program is being financed and implemented by VTA per the VTA/BART Comprehensive Agreement executed on November 19, 2001. The program will include: six stations - one in Milpitas, four in San Jose and one in Santa Clara; a five-mile tunnel in downtown San Jose and a yard and maintenance shops at the end of the line in Santa Clara. The capital cost for the six-station extension is estimated at \$6.81 billion.

The first phase of the program, a 10-mile extension of BART service that includes stations in Milpitas and Berryessa, is currently under construction. The first phase also includes a revenue vehicle maintenance facility at BART's Hayward Yard and adding 60 cars to the revenue vehicle fleet. The first phase, with an estimated capital cost of \$2.42 billion, was granted a FTA Full Funding Grant Agreement in March of 2012. The design is anticipated to be substantially complete by the third quarter of 2014. Revenue service is forecasted to begin in the last quarter of 2017.

Planning and environmental studies for the second phase have begun with the Federal Record of Decision anticipated in winter of 2015. Preparation for entry into the Federal New Starts Program is planned for the first quarter of 2014 with the FTA's approval of VTA's request anticipated in late 2014.

F. BART Station Area Development

During 2004, a comprehensive review of BART development activity was conducted in order to revise existing BART policies regarding real estate development. On July 14, 2005, the Board of Directors adopted the revised TOD Policy, which is intended to guide development on BART land, to provide for interface with private development adjacent to BART stations, and to assure that access to BART stations will be accommodated by all development around BART stations.

BART and its development partners have completed residential and commercial projects at the Castro Valley, Ashby, and Fruitvale stations, while projects at West Dublin/Pleasanton, MacArthur and South Hayward are under construction. Other projects are planned for the Coliseum and San Leandro stations in Alameda County. Additional TOD activity at the Hayward and Dublin/Pleasanton stations includes property exchanges with the local land use jurisdictions.

G. Dumbarton Corridor

The proposed Dumbarton Rail Corridor Project would extend commuter rail service across the southern portion of the San Francisco Bay between the Peninsula and the East Bay by improving 20.5 miles of existing rail infrastructure. When completed, the proposed project would link Caltrain, ACE, Capitol Corridor, and BART, as well as East Bay bus systems, at a multi-modal transit center in Union City. The reconstruction of the rail corridor would include:

- the improvement, rehabilitation, and reconstruction of tracks, including rehabilitation of a rail bridge currently not in use;
- new stations and modification to existing stations;
- improvements to signals and grade-crossing warning systems;
- the replacement and/or retrofit of structures; and,
- marsh enhancements.

Dumbarton Rail Corridor stations were proposed at:

- Redwood City (existing Redwood City Caltrain Station)
- Menlo Park (new station at Willow Road)
- Newark (new station at Willow Street)
- Fremont (existing Fremont-Centerville Station)
- Union City (existing Union City BART Station)

On May 28, 2014 MTC reallocated \$34.8 million of RM2 funds for the Dumbarton Bridge project to the Dumbarton bus service (\$14.8 million) and Caltrain electrification (\$20 million, subject to a full funding plan). BART was forgiven \$91 million from a “loan” of Dumbarton Bridge money to the WSX project. The failure of the 2012 transportation sales tax measure meant that significant funding for the project did not materialize. Funding for the Dumbarton Project will now focus on right of way acquisition and bus service improvements to build transit ridership in the corridor.

H. AC Transit BRT/Rapid Bus

Following completion in 2001 of a two-year Major Investment Study conducted by AC Transit, the East Bay BRT Project was recommended as the preferred vehicle and operations technology for the Oakland and San Leandro corridor. The BRT project will improve transit service and better accommodate high existing bus ridership; increase transit ridership by providing a viable and competitive alternative to auto travel; improve and maintain the efficiency of transit service delivery; and support local and regional goals to enhance TOD. The BRT project will also substantially increase service frequencies, expand transit capacity, and enhance bus reliability and speeds in a high demand, congested travel corridor with large ethnic minority and low income populations.

The 9.5-mile corridor will begin at the 20th Street Uptown Station in Oakland; follow Broadway to 11th and 12th Streets, and continue around Lake Merritt on E 12th Street. From there, the route will follow E 12th Street and International Boulevard to 14th Avenue, continuing on International Boulevard through East Oakland. At the city limit with San Leandro, it will continue along East 14th Street to downtown San Leandro, then along Davis Street to San Leandro BART. Through most of this corridor the buses will use a dedicated travel lane and buses will communicate with traffic signals to allow for signal priority for the bus, improving the speed and reliability of travel. Buses will travel on five minute headways during peak periods. This project is in the final design phase with construction anticipated to start in 2015 and be completed in 2017.

I. AC Transit Line 51 Corridor Delay Reduction and Sustainability Project

The Line 51 Corridor Delay Reduction and Sustainability Project aims to improve transit service along a 15-mile corridor through the cities of Berkeley, Oakland, and Alameda.

AC Transit's Line 51 TPI project was one of the first recipients of MTC's TPI funding for projects that advance TSP objectives. This project developed short-term recommendations for service design and operational changes to Lines 51A and 51B to improve travel time and reliability, including:

- Changes to existing bus stops, including stop consolidation, relocation, and construction of bus bulbs;
- Changes to intersections and signals, including installation of queue jumps and TSP; and
- Changes to the roadway, including construction of queue bypass or shared right-turn lanes and some dedicated bus lanes.

Lines 51A and 51B, two of AC Transit's most heavily used bus lines, serve 19,000 riders each weekday.

J. Emeryville, Berkeley, Oakland Transit Study

The City of Emeryville is leading this study, funded through an FTA grant, in coordination with the cities of Berkeley and Oakland. The study analyzes how public transportation can be enhanced in the Oakland-Emeryville-Berkeley corridor west of San Pablo Avenue. The goal is to increase access between employment centers and primarily residential neighborhoods, while also improving connections from all three cities to regional transportation services such as BART and Amtrak Capitol Corridor. A phased plan addressing short- and long-term needs along with an implementation plan that specifies the mode(s), route(s), regional transit connections, and capital and operating cost of the new or improved transit facilities are being developed. The project objectives include:

- Engage the public, community-based organizations, transit agencies and cities;
- Understand the context of existing and potential transit service, transit infrastructure, land use, and economic development;
- Identify several composite, phased options for short- and long-term transit, land use and economic development, in terms of densities, routes, infrastructure, vehicle types, operators, institutional relationships, fares and funding;
- Compare options in terms of how well they would support desired development and transit service, reduce emissions and energy use, have positive effects on minority communities and existing transit, and be cost-effective; and
- Develop a preferred land use and transit option and implementation plan.

Between August 2013 and November 2013, the project team conducted a variety of outreach activities to inform stakeholders and the public about the project and to solicit input on future visions for transit in the study area. Between March 2014 and May 2014 the project conducted outreach activities to evaluate ideas for improving transit in the study area.

The study is being coordinated with the City of Oakland's Broadway Urban Circulator Study. The draft report, released in September 2014, proposes short-term, operational changes to AC Transit's 48, 49, and F lines and enhanced bus and shuttle connections to the Berkeley Amtrak station and West Oakland businesses. In the long-term, the draft report also proposed a north-south trunk line connector service in 5 to 10 years to connect residential areas in West Oakland with activity centers around Jack London Square, West Oakland BART station, Shellmound Street, and West Berkeley.

K. Broadway Urban Circulator

The City of Oakland is studying the feasibility and potential for a Broadway transit line to enhance the local and regional transit systems' efficiency, improve connectivity between the corridor's neighborhoods, and spur economic development on and adjacent to Broadway. The study area includes Broadway, the city's central downtown corridor, from Jack London Square to MacArthur BART, and 40th Street from Broadway to MacArthur BART. Electric Streetcar (on tracks) and Enhanced Bus alternatives are both being considered as mode options. The potential project would connect BART, AC Transit, Capital Corridor/Amtrak, and the Oakland/Alameda Ferry, and potentially serve as a catalyst for mixed use development and business attraction along the Broadway corridor.

Funded by the Caltrans Transportation Planning Grant program with funding from FTA, the study is also reviewing Enhanced Bus alternatives that would connect downtown to the Brooklyn Basin project (formally called the Oak to 9th project) and Jack London Square to the Rockridge BART Station. Additionally, the study is considering how to make the Broadway Shuttle (also called the "Free B"), which currently serves a portion of the Broadway corridor with 2,700 average daily riders, more effective and sustainable.

The study will analyze capital and operating costs, ridership, and the economic development potential for both Electric Streetcar and Enhanced Bus, as well as the potential for the project to be integrated within and strengthen an already transit rich corridor. The study is expected to be completed in early 2015 and will be presented to the Oakland City Council with a potential recommendation to further develop one or more alternatives.

L. Ferry Expansion Program

WETA is responsible for consolidating and operating public ferry services in the Bay Area, planning new service routes and coordinating ferry transportation response to emergencies or disasters affecting the Bay Area transportation system. Near term expansions (within the next 10 years) are planned for Berkeley, Richmond, and Treasure Island. These new services have significant dedicated capital and operating funds provided through a number of funding initiatives such as RM 2 and the Contra Costa County Measure J transportation sales tax initiative (Richmond only).

Planning for longer term expansions to the cities of Antioch, Hercules, Martinez, and Redwood City began in 2007 and 2008, but were put on hold indefinitely due to the state budget crisis in 2008. Conceptual design and planning resumed in early 2011 and WETA staff continues to coordinate with the cities on project development. The recently updated 2035 ridership projections for services to these cities, which show substantial decreases in projected ridership from earlier

projections, are being used to evaluate the feasibility of starting new services and the long-term sustainability of these services. The reduced ridership projections are attributed to changes in economic conditions in the Bay Area (economic downturn of 2008), changes to the regional transportation network, and new projects identified in the current RTP. These services also have longer travel times to downtown San Francisco, making other travel modes more competitive and ferry service more costly due to higher fuel consumption and longer roundtrip travel times.

M. LAVTA Rapid Bus

The LAVTA Rapid, a BRT line, was implemented in January 2011 to connect East Livermore and Dublin, with points in-between, as well as providing feeder service to the BART stations in the Dublin/Pleasanton area. The addition of this new service increased ridership and started LAVTA's recovery from the 2008 economic downturn.

Local sales tax funding from Alameda CTC (Measure B Express Bus) and MTC RM2 (Express Bus Operations) programs committed to the initial LAVTA Rapid operations funding. The route utilizes increased stop spacing and Transit Signal Priority, so that buses can "hold" green lights longer to enable quicker passage and reduced schedule and dwell time.

The Rapid (Route 30/R) averages a total of 776 daily passenger boardings on the Westbound Rapid and 706 daily passenger boardings on the Eastbound Rapid, based on LAVTA FY 2011 operating data. . Boardings peaked at 121 during the 3 PM hour and at 108 during the 7 AM hour. Top boarding and alighting locations on the Rapid occurred at the Dublin/Pleasanton BART Station and Railroad Avenue at Maple Signature Stop/Bankhead Theater.

As previously mentioned, in the fall of 2015, LAVTA is initiating a COA early 2015 that will propose modifications to the Wheels bus network, which may include potential modifications to the Rapid service.

3.0. Paratransit Services

This chapter describes the countywide paratransit services; federal, state, and local regulations; ridership; and funding mechanisms.

3.1. Context

The Countywide Transit Plan will focus on American with Disabilities Act (ADA) Paratransit service as a Complement to Fixed Route Transit and how recommended changes to the Alameda County transit network design will affect ADA Paratransit services. ADA Paratransit is a civil rights requirement for all fixed route bus and rail services as part of the 1990 Americans with Disability Act. The ADA Paratransit, regulations including eligibility requirements and service criteria are essentially the primary federally mandated policies that will be reviewed below.

In Alameda County, Measure B funds both ADA Paratransit and supplementary city based paratransit programs and gap services. The 2000 Measure B Expenditure Plan allocates 10.45 percent of net revenue to special transportation services for seniors and people with disabilities, both for ADA Paratransit eligible individuals and seniors and disabled individuals who are not eligible for ADA Paratransit. The goal of this program is to ensure that seniors and people with disabilities in Alameda County are able to meet their daily needs and maintain a high quality of life through accessible transportation options.

The Paratransit Advisory and Planning Committee (PAPCO) makes recommendations on transportation funding for seniors and people with disabilities to address planning and coordination issues regarding paratransit services in Alameda County. PAPCO members advise the Alameda CTC on the development and implementation of paratransit programs, including a grant program. All 23 members of PAPCO must be Alameda County residents who use transportation that supports seniors and people with disabilities. A Paratransit Technical Advisory Committee comprised of Measure B funded paratransit providers supports PAPCO.

3.2. ADA Paratransit Services in Alameda County

The 1990 ADA included requirements for complementary paratransit service for individuals who could not use fixed route bus or train service due to a disability. ADA Paratransit is meant to provide a parallel and comparable level of service for persons with a disability. The ADA requirements are the same for all public transportation systems in the United States.

In Alameda County, there are three ADA Paratransit Programs:

- East Bay Paratransit
- Union City Paratransit
- Wheels Dial-A-Ride

In the AC Transit and BART service areas, the two agencies have partnered with the East Bay Paratransit Consortium that manages East Bay Paratransit. The East Bay Paratransit's Service Review Advisory Committee (SRAC) provides input on policies, budgets, paratransit documents, driver training, outreach and a general public forum for expressing and addressing concerns about paratransit issues.

Union City manages Union City Paratransit as part of Union City Transit. The Accessibility Advisory Committee holds quarterly meetings to discuss transit issues in Union City and advise Union City Paratransit.

Wheels Dial-A-Ride is managed by LAVTA as part of their transit family of services. The Wheels Accessible Advisory Committee provides input on accessibility issues facing senior and disabled residents on both fixed route and paratransit services.

There are minor differences in how the ADA Paratransit services are carried out in these three areas. Some of the services available go beyond what is required by ADA Paratransit regulations, such as Wheels Para-Taxi service. The ADA Paratransit regulations provide the baseline of what is required by ADA. Entities have the policy choice of going beyond the requirement to meet the needs of their constituents.

A. ADA Complementary Paratransit Regulations

The basic requirement of ADA Paratransit service is defined in the Code of Federal Regulations (CFR), Part F, commencing with 37.121. (hereinafter referred to as ADA Paratransit regulations).

"...each public entity operating a fixed route system shall provide Paratransit or other special service to individuals with disabilities that is comparable to the level of service provided to individuals without disabilities who use the fixed route system."

The ADA Paratransit regulations were adopted in September 1991 and several sections have been amended over the years. The regulations are quite lengthy and are only summarized here with a focus on the eligibility, service criteria, and other common features. Some of the key provisions are summarized in this section.

1. ADA Paratransit Eligibility Requirements

There are three categories for ADA eligibility in the federal regulations:

- “Any individual with a disability who is unable, as the result of a physical or mental impairment (including a vision impairment), and without the assistance of another individual (except the operator of a wheelchair lift or other boarding assistance device), to board, ride, or disembark from any vehicle on the system which is readily accessible to, and usable by, individuals with disabilities.
- “Any individual with a disability who needs the assistance of a wheelchair lift or other boarding assistance device and is able, with such assistance, to board, ride and disembark from any vehicle that is readily accessible to and usable by individuals with disabilities. If the individual wants to travel on a route on the system during the hours of operation of the system at a time, or within a reasonable period of such time, when such a vehicle is not being used to provide designated public transportation on the route. (Regulations specify the circumstances under which this paragraph is applicable.)
- Any individual with a disability who has a specific impairment-related condition which prevents such individual from traveling to a boarding location or from a disembarking location on such system.”

ADA Paratransit regulations require that the “eligibility process strictly limit” ADA Paratransit eligibility to those who are eligible under the standards described above (and in significantly more detail in the ADA Paratransit regulations).

All three Alameda County ADA Paratransit programs are part of the regional ADA Paratransit Eligibility Program. In the Bay Area, most of the transit agencies use the same ADA paratransit application form and follow a common certification process. If an individual is found to be “ADA Paratransit Eligible” by one transit operator, the individual is able to use any ADA paratransit program throughout the Bay Area.

All ADA Paratransit eligibility applications must be approved or denied within 21 days of submittal or “the applicant shall be treated as eligible.” There are three types of eligibility:

- Full eligibility.
- Conditional (limited) eligibility. ADA paratransit is provided for some trips, but not ones on which the ADA Paratransit eligible individual can utilize fixed route public transportation.
- Temporary eligibility. You can use paratransit, for a specific length of time, after which the individual is expected to be able to use regular fixed route bus or train service.

The regulations also specify the eligibility and conditions for personal care attendants and family members accompanying ADA Paratransit individuals. Eligibility and conditions of visitor use are also specified.

13. ADA Service Criteria

The service policies for ADA Paratransit are specified in the ADA Paratransit regulations. Key provisions are summarized below:

Service Area

“Provide complementary paratransit service to origins and destinations within corridors with a width of three-fourths of a mile on each of side of each fixed route.”

The service areas for the ADA Paratransit Programs are shown below in Figure 24. Union City Paratransit also offers an additional service known as Paratransit Plus. Paratransit Plus offers limited service to southern Hayward, and northern Fremont and Newark. LAVTA provides Dial-A-Ride service within the entire LAVTA service area regardless of whether Wheels DAR is within three-fourths of a mile of a fixed route.

Fares

“Fare for a trip charged to an ADA Paratransit eligible user of the complementary Paratransit service shall not exceed twice the fare charged to an individual paying full fare (i.e. without regard to discounts) for a trip of similar length, at a similar time of day, on the entity’s fixed route system.”

The operative word in the regulations is “shall not exceed”. Alameda County ADA Paratransit Programs have discretionary policies that are typically less than twice the full fare. Union City’s full fare is \$2.00, and the ADA Paratransit fare is \$2.75. The fares on East Bay Paratransit are distance-based with different fare matrices for trips within East Bay and trips to or from San Francisco. LAVTA has a \$2.00 full fare and the ADA Paratransit fare is \$3.75.

Hours and Days of Service

“The complementary paratransit service shall be available throughout the same hours and days as the entity’s fixed route service.”

All Alameda County ADA Paratransit programs meet the minimum requirements. By offering LAVTA’s Para-Taxi for ADA Paratransit Eligible individuals, the taxi service provides services during hours when LAVTA fixed route buses are not operating. In the LAVTA service area, service is expanded to serve ADA-eligible riders in Pleasanton when City of Pleasanton Paratransit service is not operating or cannot accommodate a trip.

Figure 24: Alameda County ADA and City-Based Paratransit Program



Source: Access Alameda, Transportation Services for Seniors and People with Disabilities in Alameda County. Fall 2012, 4th edition, p. 15.

Response Time

“The entity shall schedule and provide paratransit service to any ADA paratransit eligible person at any requested time on a particular day in response to a request for service made the previous day.”

The regulations specifically require that a reservation service be made available during business hours, but also “as well as during times, comparable to normal business hours, on a day when the entity’s offices are not open before a service day.” Other response time provisions include:

“...may negotiate pickup times with the individual, but the entity shall not require an ADA paratransit eligible individual to schedule a trip to begin more than one hour before or after the individuals departure time.”

With a public participation process, advanced reservation policies can be established to meet local needs with a maximum 14-day reservation period.

The policies for advance reservation vary in Alameda County. For Wheels Dial-A-Ride and East Bay Paratransit, passengers can make reservations up to seven days in advance. For Union City Paratransit, it is up to 3 days in advance.

No Trip Purpose Restrictions

“Shall not impose restrictions or priorities based on trip purpose.” None of the Alameda County ADA Paratransit programs have trip purpose restrictions.

Capacity Constraints

“The entity shall not limit the availability of complementary paratransit service to ADA paratransit eligible individuals by any of the following:

- Restrictions on the number of trips an individual will be provided.
- Waiting lists for access to the service.
- Any operational pattern or practice that significantly limits the availability of service to ADA paratransit eligible persons.”

Union City Transit in its SRTP noted that it did not have any trip denials the previous three years.

Subscription Service

Subscription service is regularly scheduled service by a passenger. For example, an ADA eligible individual who needs dialysis every Tuesday can have a standing reservation for the time slot they need for dialysis. ADA Paratransit regulations require that “subscription service may not absorb more than fifty percent of the number of trips available at a given time of day, unless there is non-subscription capacity.”

B. ADA Paratransit Plans and Updates

Each transit agency determined how they would meet the ADA Paratransit requirements in ADA Paratransit Plans that were due to the Federal Transit Administration (FTA) on January 26, 1992. Originally, AC Transit, BART, LAVTA and Union City submitted separate ADA Paratransit Plans. A consolidated plan was then submitted as the first required annual update in 1993. Changes in regulations deleted the requirements for annual updates.

C. MTC Transit Sustainability Project Paratransit Report

As part of the TSP, MTC developed a Paratransit Element. The provisions for the Paratransit element of the TSP included the following to address the accessibility, cost and efficiency of services:

Agency Specific

- Consider fixed-route travel training and promotion to seniors.
- Consider charging premium fares for trips that exceed ADA requirements.

Regional or Sub-Area

- Consider Enhanced ADA Paratransit Certification Process that may include in-person interviews and evaluation of functional mobility to confirm rider eligibility.
- Implement Conditional Eligibility for paratransit users who are able to use fixed-route service for some trips.
- Create one or more sub-regional Mobility Managers (e.g., CTSA) to better coordinate resources and service to customers.

Regional

- Improve fixed route transit services to provide features such as low floor buses, seating designed for older riders, and other improvements that accommodate more trips that are currently taken on paratransit.
- Implement Plan Bay Area programs focused on walkable communities, complete streets, and land use planning that improve access and mobility options for ADA eligible transit riders.

D. Paratransit Goals and Policies in Short Range Transit Plans**1. AC Transit**

AC Transit is in the process of updating its SRTP and current adopted goals, objectives and policies relative to ADA Paratransit were not available.

14. BART

BART's 2007 Short Range Transit Plan focuses on meeting ADA Service Criteria through East Bay Paratransit in its east bay service area. Funding allocations are also addressed in the plan. There are no other policy statements regarding ADA Paratransit in the 2007 BART SRTP.

15. LAVTA

LAVTA has a mission statement that is inclusive of all residents including ADA Eligible individuals:

“The Mission of Livermore Amador Valley Transit Authority (Wheels) is to provide equal access to a variety of safe, customer oriented, reliable, and affordable public transportation choices, increasing the mobility and improving the quality of life of those who live or work in and visit the Tri-Valley area.”

There are two objectives or performance standards that specifically address ADA Paratransit services: monitor Dial-A-Ride services monthly and implement and monitor status of Dial-A-Ride demand management techniques. The latter includes: conducting eligibility screening every three years; conducting two travel trainings monthly; and encouraging ten users of LAVTA parataxi program per month.

16. Union City Transit

Table 22 shows Union City Paratransit’s goals and objectives for Union City Paratransit. Key performance standards include a seven percent farebox recovery ratio, no capacity constraints, and no more than one missed paratransit trip per month.

Table 22: Union City Paratransit – Goals and Objectives

Goals	Objectives
Provide a transit system that effectively meets community needs	Provide a local paratransit system which meets all Americans with Disabilities Act criteria
	Provide reliable transit service
	Provide safe transit service
Operate and manage the transit system efficiently	Minimize operating costs per unit of service
	Maximize vehicle life through preventative maintenance
	Maximize service productivity
	Maximize cost recovery through farebox receipts
Provide accessible transit service	All vehicles equipped with working lifts or ramps
	Provide language assistance to Limited English Proficiency customers per FTA requirements
	Provide Environmental Justice assistance to low-income and minority customers per FTA requirements

Source: Union City Transit S RTP 2013

E. East Bay Paratransit Performance Indicators

At regular SRAC meetings, a performance report provides information comparing month to month or fiscal year performance comparison. The performance indicators include:

- Ridership Statistics including total passengers, ADA passengers, percent companions, percent personal care assistants, average passengers per weekday and average passengers per weekend and holiday day.

- Scheduling Statistics including percent rider fault no shows and late cancels, percent cancellations, and re-scheduled trips.
- Effectiveness indicators including passengers per revenue vehicle hour, ADA passengers per revenue vehicle hour, average trip length, average ride duration, total cost per passenger, total cost per ADA passenger and total cost per revenue hour.
- On-time performance indicators including percent on-time, percent 1-20 minutes past window, percent of trips 21-59 minutes past window and percent of trips 60 minutes past window.
- Customer service indicators including total complaints, timeliness, driver, scheduling, and broker complaints and commendations.
- Safety and maintenance indicators including total accidents per 100,000 miles and road-calls per 100,000 miles.
- Eligibility indicators including total ADA riders in the database, total certification determinations, initial denials, and denials reversed.

F. Rider Guides and Policies

All three ADA Paratransit programs have rider guides that provide detailed policy and procedure guidance for the passenger. Some of the guides, such as the LAVTA Bus Book, go well beyond the availability of ADA Paratransit Services. The rider guides include:

- East Bay Paratransit Riders Guide, July 2008
- Wheels Bus Book and Riders Guide, August 2013
- Union City Paratransit Riders Guide, October 2013

G. Access Alameda

Alameda CTC publishes both a guidebook and website called "Access Alameda" (available online at www.AccessAlameda.org) that provides valuable information on transportation for seniors and people with disabilities in Alameda County. The main headings are:

- Using Public Transportation
- ADA Paratransit
- City-Based Programs
- Paratransit Tips
- Riding Safely
- Accessible Transportation Resources

H. Funding

1. East Bay Paratransit

According to the 2007 BART SRTP, "In their areas of joint service, BART and AC Transit fund and administer the East Bay Paratransit Consortium (EBPC). Service is provided through contractors. BART assumes 31 percent and AC Transit 69 percent of the costs based on their proportionate areas of responsibility."

Based on figures from FY 2014/15 Paratransit Program from Alameda CTC, AC Transit will spend \$20.3 million from non-Measure B sources on ADA Paratransit and BART will spend \$9.7 million in non-Measure funding. Measure B funding for East Bay Paratransit is discussed in more detail below.

17. LAVTA

According to the 2012 LAVTA SRTP, funding for paratransit comes from:

- Paratransit Fares
- Special Contract Fares
- TDA 4.5
- STA Regional Paratransit
- Measure B Paratransit
- FTA Section 5307 ADA Paratransit

Based on figures from the FY 2014/15 Paratransit Program from Alameda CTC, the total spending on paratransit services is estimated at \$1.6 million for that year. This includes ADA Paratransit, and gap services.

18. Union City Transit

According to the 2013 Union City Transit SRTP, funding for paratransit comes from the following sources:

- Paratransit Fares
- Measure B
- TDA Article 4.5, Paratransit
- STA Revenue Based, Paratransit
- STA Pop Small Operator, Paratransit
- STA Pop Based Regional Paratransit

- Interest, Paratransit

Based on figures from the FY 2014/15 Paratransit Program from Alameda CTC, the estimated total spending on paratransit services is estimated at \$882,660 for that year. This includes ADA Paratransit, city-based and gap services.

19. Measures B and BB

All of the Measure B monies allocated for East Bay Paratransit are for ADA Paratransit purposes. Measure B funds \$4.7 million of the estimated \$25 million in FY 2014/15 ADA Paratransit costs for AC Transit and \$1.7 million of the estimated \$11.5 million in FY 2014/15 ADA Paratransit costs for BART.

For Union City, approximately \$272,700 of \$882,700 total paratransit funding comes from Measure B. This includes ADA Paratransit, city-based programs and gap funding.

For LAVTA, \$145,900 of a total \$1.6 million in paratransit costs come from Measure B. This includes ADA Paratransit, and gap funding.

3.3. City-Based Paratransit Programs

Ten cities in Alameda County have city-based paratransit programs. Each city with a paratransit program has designed their program to meet the needs of consumers in their local jurisdiction.

The major differences between the city-based non-mandated and ADA-mandated programs, aside from the absence of federally-regulated service requirements, is that they also provide transportation services to seniors rather than exclusively to those with disabilities. Also, they are able to offer a range of different types of services, including accessible door-to-door, shuttles and group trips, taxi, and volunteer driver services.

A. Goals

The goal of the city-based programs is to ensure that seniors and people with disabilities in Alameda County are able to meet their daily needs and maintain a high quality of life through accessible transportation options.

B. Mobility Management Policy and Practices

Most city-based programs have incorporated mobility management concepts and practices into their services to improve efficiency and customers' ability to access services. Mobility management is a comprehensive approach to

transportation that is focused on individual customer travel needs rather than a “one size fits all” solution.

C. Implementation Guidelines

Through efforts such as standardized Measure B Implementation Guidelines and the 2011 Coordination and Mobility Management Planning efforts, eligible city-based program components are designed to expand and enhance available services, rather than duplicate existing ADA services.

The Paratransit Implementation Guidelines for the Special Transportation Program for Seniors and People with Disabilities, adopted in November 2013 and revised January 2014, lay out the service types that are eligible to be funded with Alameda County Measure B revenues under the Special Transportation for Seniors and People with Disabilities Program (Paratransit).

For most types of service, the Guidelines include both cost per trip and fare limitations to ensure programs remain cost-effective and affordable to the consumer.

All programs funded partially or in their entirety through Measure B or the VRF, including ADA-mandated paratransit services, city-based non-mandated programs, and discretionary or gap grant funded projects, needed to be in full compliance with these guidelines by the end of FY 2012-2013.

City based program fund recipients are able to select which of these service types is most appropriate in their community to meet the needs of seniors and people with disabilities. Overall, all programs should be designed to enhance quality of life for seniors and people with disabilities by offering accessible, affordable, and convenient transportation options to reach major medical facilities, grocery stores and other important travel destinations to meet life needs.

D. FY 2014-15 Measure B Paratransit Program and Overview

Each year, agencies that receive city-based paratransit program funding are required to submit a program plan and budget for the services to be provided for the forthcoming fiscal years. The Alameda CTC's PAPCO reviews these plans and provides recommendations to the Commission.

Table 23 summarizes the types of services that each city applied for.

Table 23: Summary of FY 2014/15 Paratransit Program Components

City	Shuttle	Taxi Program	Specialized Van	Door-to-door	MM/Travel Training	Group Trips	Scholarship/Subsidized Fare Program	Volunteer Drivers	Meal Delivery
Alameda	✓	✓				✓	✓		
Albany		✓				✓			
Berkeley		✓	✓	✓		✓	✓		
Emeryville		✓		✓		✓	✓		✓
Fremont		✓		✓	✓	✓		✓	✓
Hayward		✓	✓	✓	✓	✓			✓
Newark		✓		✓	✓	✓		✓	✓
Oakland		✓	✓	✓					
Pleasanton	✓			✓					
San Leandro	✓	✓							
Union City		✓			✓			✓	
LAVTA		✓							

Source: Mobility Planners, 2014

E. Measure B City-Based Program Funding Formula

For the Measure B non-mandated city-based paratransit programs, 3.39 percent of annual net Measure B revenues are distributed through a Commission-approved funding formula. Per the 2000 TEP, the 3.39 percent of net revenue is distributed to the planning areas as follows:

- North County = 1.24 percent
- Central County = 0.88 percent
- South County = 1.06 percent
- East County = 0.21 percent

Funds from each planning area may not be transferred into another area. Table 24 is a summary of estimated city-based program costs and planned trips.

Table 24: Program Costs and Planned Trips

City	Estimated Measure B Paratransit Funding*	Other Funding**	Estimated Total Program Cost	Planned Trips
Alameda	\$158,549	\$84,330	\$242,879	9,300
Albany	\$31,710	\$21,800	\$53,510	4,500
Berkeley	\$257,395	\$316,500	\$595,800	19,210
Emeryville	\$23,073	\$378,435	\$401,508	10,650
Fremont	\$780,003	\$532,128	\$1,312,131	24,775
Hayward	\$722,046	\$135,000	\$907,500	27,200
Newark	\$155,346	\$8,000	\$152,000	4,200
Oakland	\$942,497	\$161,647	\$1,104,144	29,500
Pleasanton	\$93,402	\$507,796	\$601,198	12,500
San Leandro	\$280,887	\$28,130	\$309,007	18,440
Only City Based Programs Are Shown. Funding for LAVTA, Union City and East Bay Paratransit are shown in the ADA Paratransit Section (and includes their city based paratransit funding)				
* Amount based on FY 2014-15 revenue estimates as of January 2014.				
** Other funding includes Measure B reserves and Gap grants, fare revenue				

Source: Mobility Planners, 2014

F. Competitive Gap Grant Program

The 2000 Measure B also designates 1.43 percent of net revenues for “Coordination/Gaps in Service”. These discretionary grant funds are available to both public agencies and eligible non-profits to improve coordination, fill gaps and reduce differences in services that might exist based on geographic residence of individuals needing services.

Priority projects and programs for gap funding include implementing a range of services (e.g., shuttles and volunteer driver programs), filling ‘emergency’ gaps (e.g., Wheelchair Scooter Breakdown Transportation Service and Hospital Discharge Transportation Service), maximizing the use of accessible fixed-route transit (e.g., travel training), and expanding community education and information (e.g., the Access Alameda guide, Paratransit Hotline, “one call/one click” resources for consumers such as 211, and outreach events).

4.0. Land Use Plans and Policies

This section inventories all the land use policy, design and development standards of the local jurisdictions within the county that relate to transit stations and corridors. This review of the policies and standards focuses on tabulating policies, goals, and standards outlined in general plans, specific/area plans; building development standards under zoning ordinances; and other design standards or guidelines for streetscape and urban form that encourage transit supportive development.

The review is tabulated in a set of Microsoft Excel tables (see Appendix D) wherein local land use policy documents (general plans, specific plans, area plans), zoning ordinances; and form-based codes¹², and design standards documents (design guidelines, street design documents, and other built form guidance as part of area plans) have been organized by major existing and known potential transit systems. The organization helps in reviewing all the disparate jurisdiction documentation influencing various transit types within the county's system. Under each transit type the jurisdictions are organized alphabetically. This chapter provides a brief summary of the information compiled in the tables.

4.1. General Plans/Specific Plans

A. Community Identified Employment Districts

In most jurisdictions' general plans, there are several corridors and districts that have been identified as employment and/or mixed use zones. Some of these areas have been designated as such in anticipation that local transit would help in moving residents and employees to and from these areas. Most of these districts and zones are planned to be pedestrian-friendly, with urban form regulations to help create or retain active street frontages. Foothill & Mission Boulevard in Hayward, South East 14th Street in San Leandro, and Fremont Boulevard are such corridors that allow for higher intensity uses and rely on local bus services.

Urban form and streetscape standards for these corridors and districts are limited to design guidelines as part of area plans and general citywide zoning development standards. The City of Oakland's *Guidelines for Commercial Areas*

¹² A form-based code is a land development regulation that fosters predictable built results and a high-quality public realm by using physical form (rather than separation of uses) as the organizing principle for the code. A form-based code is a regulation, not a mere guideline, adopted into city, town, or county ordinance.

and Corridors is the only set of citywide design guidelines that exclusively covers all identified commercial corridors within the city.

The same cannot be said for employment areas that many communities have already developed, and are continuing to develop, which are generally located in proximity to freeway corridors, such as I-880 and I-580. Many of these areas are not built to be walkable, and do not have development policies that would require more walkable designs in the future. The combination of their location, the lack of walkability, relatively low density, and single use nature makes it a challenge to provide high quality transit in these areas. This is one of the challenges/opportunities for the Countywide Transit Plan as the effort moves forward.

B. Priority Development Areas

In addition to designated corridors and districts, local jurisdictions in Alameda County have also identified PDA locations as part of the regional SCS, Plan Bay Area. Many of these PDAs are based on the already identified corridors and districts in general plans. These PDAs, and the expected growth within them, have been documented by MTC and ABAG in Plan Bay Area, and Alameda CTC in the CTP. Moving ahead in the future, these areas will be the focus for new land use policy development to enhance the effectiveness of integrated land use development and transportation investment. Figure 25 shows a map of the 43 PDAs within Alameda County.

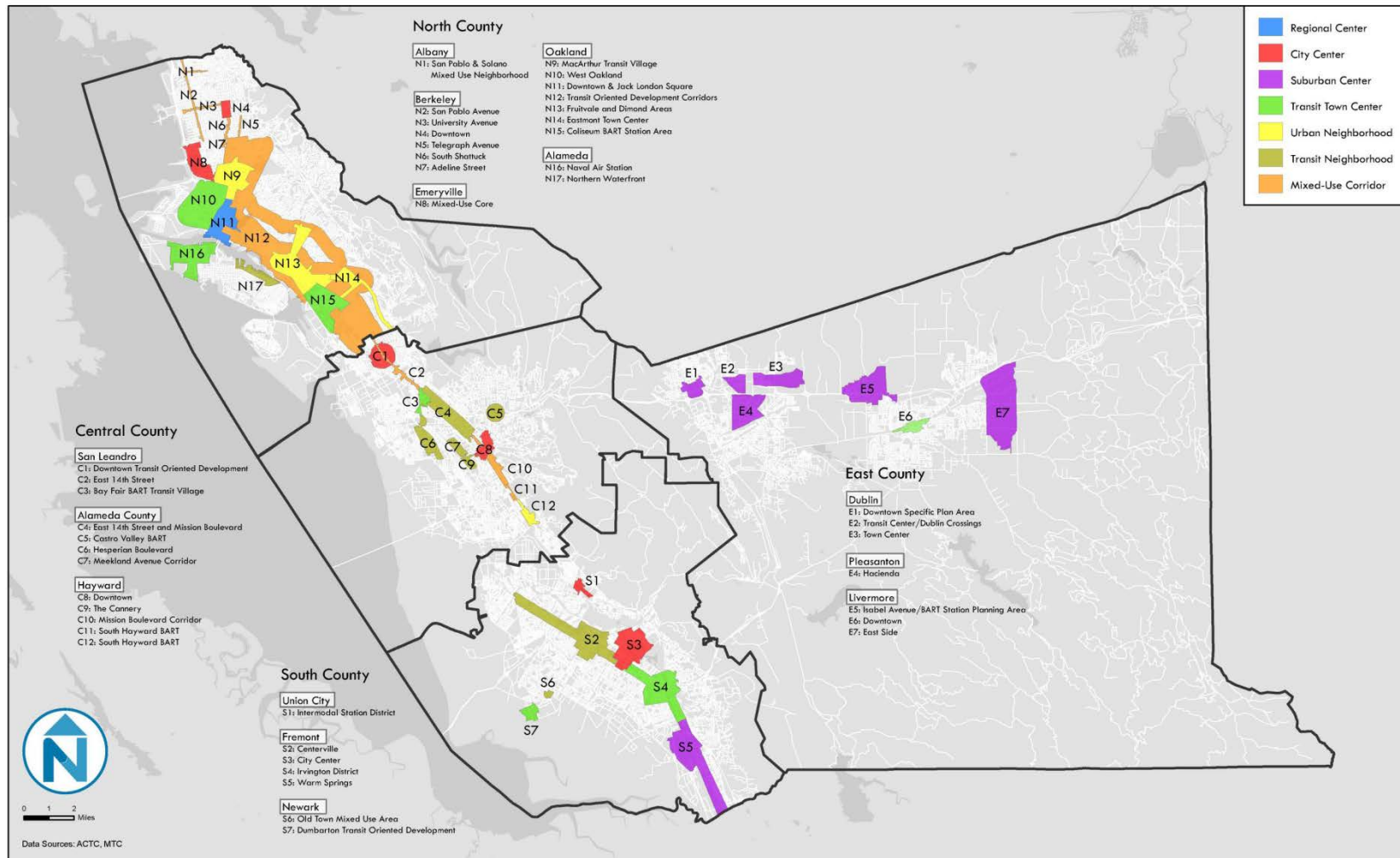
4.2. Specific or Area Plans

A specific or area plan is a tool for systematic implementation of general plan policies within a specific geographic area. Cities in Alameda County have used specific plans to create targeted development standards (density, building heights/setbacks, parking requirements, etc.) that support and require TOD around BART and other transit stations. The plans define development standards that either supersede existing zoning ordinances, or are added as an overlay to the existing zoning ordinance.

Corridors

Several communities have identified key districts and corridors for intensification of development that rely on frequent transit services to help residents and employees travel to and from their destinations. These areas have either been identified in their respective general plans, or have approved area or specific plans.

Figure 25: Alameda County PDAs by Place Type



Source: Alameda CTC, PDA and Growth Strategy, 2012

Stations

In Alameda County, BART station areas are influenced by the land use policies of nine jurisdictions. Most of the jurisdictions have pursued active station area plans that have targeted policy and standards for the areas around their stations, generally within a half-mile.

The cities of Oakland, Berkeley, Dublin, and Fremont have developed or are developing specific plans or area plans for areas surrounding or accessible from BART stations. The City of Oakland has draft specific plans for the West Oakland, Lake Merritt and Coliseum station areas. Berkeley completed its Downtown Plan in 2012.

The City of San Leandro's Downtown Plan, adopted in 2007, includes TOD-based policies and standards with respect to the San Leandro BART Station. The City of Hayward and the Castro Valley unincorporated community have older area plans for their downtown areas that rely on the BART station access as an impetus for higher intensity growth around the station. The Castro Valley Specific Plan has been incorporated into the 2012 update of the Castro Valley General Plan. Also, Hayward has recently received a Sustainable Communities Technical Assistance Program PDA Grant from Alameda CTC to update their Downtown Specific Plan, which should be completed by 2016-17, and Regional PDA Planning Grants from MTC have been awarded to San Leandro to undertake a Bay Fair BART Transit Village Specific Plan and Berkeley to undertake a South Berkeley/Adeline/Ashby BART Specific Plan.

The City of Fremont is working this year to adopt a Community Plan for the Warm Springs area and the Civic Center Precise Plan near the Fremont station, both of which are planned as TODs. The City's general plan also identifies a TOD overlay around the planned Irvington BART Station; however, no area plan is being developed at present and there has not been any follow-on planning to develop a specific plan or similar ordinance change at the potential station area.

The City of Dublin's Downtown Specific Plan was completed in 2010. The city is in the process of adopting the Dublin Crossing Specific Plan, which is in proximity of the Dublin/Pleasanton BART Station. The area surrounding the Dublin/Pleasanton station is in the process of being built-out in accordance with the station area plan.

Alameda completed a Master Plan for the Alameda Point area in 2014. It focuses the most intense commercial and residential development around a relocated Ferry Terminal in the Seaplane Lagoon. This area will serve as the town center of Alameda Point. The plan relies on the ferry service to get commuters to and from Alameda without significantly increasing private auto trips through

the tunnels and bridges into Oakland, and focuses commercial mixed use development around the ferry terminal.

4.3. Zoning

Zoning regulates development of land within a jurisdiction's boundaries. Zoning ordinances not only define the types and mix of uses allowed, but also regulate the building envelope by defining the location of buildings and other features of development on a parcel, setbacks from property boundaries, building heights, and the location of access points to the buildings/land parcel. In addition, zoning also defines parking requirements for different types of uses. Transit supportive zoning ordinances use these regulatory tools to direct land and building development to be more pedestrian friendly, have greater intensities, and reduce parking requirements in proximity to mass transit stations. Zoning can also require TDM measures to reduce reliance on single-auto occupancy.

Corridors

Most cities in the inner Bay Area have zoning ordinances that support higher intensity development along major commercial or transit corridors. Berkeley and Albany have specific zoning designations for San Pablo Avenue, while the City of Oakland has International, MacArthur, Broadway, and Telegraph Avenues amongst others covered by specific zoning regulations that encourage pedestrian and transit supportive development.

In the Tri-Valley area, the zoning regulations for the cities of Dublin, Pleasanton, and Livermore only cover specific segments along the LAVTA Rapid corridor that are in proximity to BART stations. Dublin Boulevard in the City of Dublin has transit-friendly zoning designations over a significant length; however, it is not governed by a corridor-specific zoning overlay. It reflects several area and specific plans such as the Downtown Specific Plan and Dublin Crossings area plan.

Stations

Most cities have updated their zoning ordinances to allow for higher intensity, mixed use development within BART station areas in order to implement policies in their general plans and area plans. Most station area land use regulations governing floor area ratio, residential densities, building heights, frontage setbacks, reduced parking requirements, and density bonuses are designed to match regional goals for housing thresholds within a half-mile radius of a BART station (average 3,850 housing units per station area - MTC resolution 3434).

There are a few station areas where the potential for higher density and mixed use development around the BART station would only be allowed through zoning amendments. For example, the existing zoning around North Berkeley and Rockridge stations does not allow for significant densification in the station

areas. The City of Pleasanton relies on zoning designations near BART stations that do not specify building limits for parcels, but require conditional review by the planning commission and city council for development approval.

4.4. Urban Form / Streetscape Design Standards

Design standards or guidelines for urban form or streetscape design are often part of area or corridor plans to guide new development to achieve the desired vision for the neighborhoods or districts within the planning area. These are particularly utilized in areas that have unique character as historic (old downtowns, architecturally significant buildings, etc.) or to facilitate a prime commercial activity (main streets, business districts, downtowns, etc.). They are also utilized to create high quality pedestrian environments to support retail activity along streets. These standards are important to transit systems as they encourage better access to public transit and make pedestrian and bicycle connections easier for commuters. Guidelines are discretionary while design standards are typically requirements and may be integrated into zoning ordinances or specific plans.

Corridors

All jurisdictions in the county have general design standards/guidelines as part of their general plans, area/specific Plans, or form-based zoning ordinances that encourage better pedestrian access and environments. Policies and standards that encourage higher density and mixed use development have also been developed by jurisdictions along enhanced bus transit routes to encourage greater transit ridership. However, only Berkeley, Albany and Oakland have corridor specific design standards and guidelines. Albany's guidelines for San Pablo Avenue are the oldest, dating from 1993. Berkeley's University Avenue guidelines are part of the 1996 Strategic plan for the corridor. Oakland's *Guidelines for Commercial Areas and Corridors* was recently completed in 2013.

Most of these standards focus on regulating the interface between private development and the public right-of-way to improve the pedestrian environment. Dublin is the only city that has developed a street design master plan that includes standards for street fixtures and furnishings. In general, specific guidance is not provided in these design standards and guidelines for transit stops or amenities.

Stations and Terminals

Most recent area plans being developed around BART stations contain urban form and streetscape design standards that encourage better pedestrian environments. Livermore has a city-wide form-based code that encourages better pedestrian environments in the vicinity of future transit stations through

the creation of TOD.¹³ Hayward has developed form-based zoning for future development around the South Hayward BART Station. The City of Pleasanton has adopted a TOD Standards and Design Guidelines document for the Hacienda area adjacent to the Dublin/Pleasanton BART Station in concert with the Hacienda Planned Unit Development regulations.

With the exception of the City of Dublin (as detailed below), no jurisdictions have adopted an overarching public streetscape design strategy. Some jurisdictions have streetscape and urban form design standards and improvement programs focusing on specific areas or corridors, some of which impact access to BART stations.

The City of Dublin's *Streetscape Master Plan* is focused towards providing guidance to large subdivision projects with respect to street furniture and amenities. The plan does not specifically focus on access to BART, although the City has specific plans covering most of the BART station areas.

The City of Oakland has a commercial corridor design guidelines document that outlines urban form and streetscape design standards. With several BART stations in the City on commercial corridors, the guidelines would have significant influence on future development around the MacArthur, Fruitvale, Coliseum, Rockridge, 12th Street/Oakland City Center, and 19th Street Oakland stations.

The City of Berkeley's Downtown Streets and Open Space Improvement Plan includes improvements within the public rights-of-way providing access to the Downtown Berkeley BART Station. The City's other two stations, North Berkeley and Ashby, do not have streetscape design standards, although the City has funding to undertake a specific plan for the Ashby BART Station.

4.5. Future Programs

In addition to plans and policies outlined above, local jurisdictions are also looking at opportunities for providing local transit to connect underserved concentrations of employment and housing to higher capacity transit such as BART. The ongoing EBOTS and the Broadway Urban Circulator Study are evaluating connections to districts and corridors that are currently served by existing local bus or shuttle services. These future transit programs would also be catalysts for programs to create higher intensity mixed use and transit-friendly development along the I-880 corridor in the southern part of the county. Similarly, the BART Metro effort may result in new transit corridors and infill stations that would create new TOD opportunities and transit hubs in the county.

¹³ Chapter 2.02: Traditional Neighborhood Development and Transit-Oriented Development Site Planning Standards, Livermore Development Code.

5.0. Summary of Issues/Needs/Opportunities

This section summarizes the findings of this Inventory Report. It identifies issues and opportunities to address and correct these issues.

5.1. Funding and Cost Containment

Issues

Funding continues to be the single biggest challenge facing transit agencies in Alameda County and nationwide today. Revenue is declining and costs and demand are increasing. The key issues are:

- The region has identified a major shortfall in transportation funding over the next 25 years.
- The shift continues away from federal and state support for transit infrastructure and operations, and towards increased reliance on regional and local funding. There is limited capacity for federal New Starts and Small Starts projects in the region.
- Sales tax revenues are subject to fluctuations in the economy and have remained relatively flat in recent years.
- The allocation of limited funds is becoming more performance-based, focusing on economy, equity, and environment.
- There will be continued tension between funding state-of-good repair and core capacity needs as well as capital improvements that are necessary to serve new growth areas.
- The increase in the cost of providing transit service is outstripping the increase in farebox revenues.

Opportunities

Though transit funding continues to be highly competitive, the move towards more efficient and effective use of available funds provides new opportunities for Alameda County. The potential exists to create more reliable and robust funding streams as new funding sources emerge. New funding sources are anticipated to include the following:

- Alameda County approved the Measure BB sales tax measure on the November 2014 ballot. It will provide an important funding source for new investments in transit.
- At the state level, the cap and trade program, created by AB 32, will allocate new funds to transportation. In FY 2014/2015, \$630 million will be allocated to Sustainable Communities and Clean Transportation Projects. By

2020, the program could generate as much as \$8 billion a year. The state has permanently allocated 60 percent of future Cap and Trade funds for public transit, sustainable communities, and high-speed rail:

- a) 10 percent for transit and rail capital program,
 - b) 5 percent for low carbon transit operations through STA, and
 - c) 40 percent for low carbon transit and related programs.
- As part of MAP-21 implementation, the Transit Capital Program (Section 5309) has identified a new funding program for “core capacity” projects. MTC has also established a core capacity program for the region that will allocate funds to BART and AC Transit core system improvements.
 - Economic conditions are hastening the transition to a performance-based allocation system of transportation funding, in alignment with new regulations.

5.2. Network connectivity/Agency Coordination

Issues

The multitude of transit agencies in the Bay Area continues to challenge the efficient and effective delivery of transit services. There are 25 transit agencies in the Bay Area with seven in Alameda County, excluding shuttle operators, and an additional two from outside of the County providing connector service to the County. Key issues and trends presenting challenges for these agencies include:

- While operating and funding agencies constantly strive to coordinate the delivery of transit services to improve rider experience, there are significant service gaps and overlaps due to split jurisdictional responsibilities.
- Private shuttle bus operations have expanded and new shared-ride operators (e.g., Uber, Lyft) have emerged to close transportation service gaps and provide service that is more responsive to specific markets and employment centers.
- While MTC is providing regional policy guidance for transit investment, particularly for rail services, there is not a single transit agency with responsibility for coordination of the delivery of transit services. This is particularly challenging for bus transit operators who have more diverse service networks than rail operators.
- The Clipper Card has improved the ease of transfers between transit systems, but not all transit operators are yet participating in the program, so transit users must use multiple fare cards and tickets.
- Existing rail corridors have limited spare capacity to accommodate anticipated growth in freight and passenger demand.

- The lack of a standardized and integrated fare policy is confusing and difficult from the rider's perspective.

Opportunities

The development of a Countywide Transit Plan for Alameda County provides an opportunity to address network connectivity issues in the county by establishing a vision for a comprehensive transit network. This vision will be shaped by the following:

- For the first time, the Alameda CTC will be engaging transit operators and stakeholders to consider a comprehensive transit vision and network for the county and how it can be most effectively provided.
- The CTP adopted by Alameda CTC in 2012 laid the groundwork for local jurisdictions and transit agencies for a dialogue about how best to integrate transportation funding decisions with land use development. The Countywide Transit Plan will help to articulate a more detailed strategy for implementation.
- Technological advances in universal fare collection provide new opportunities for creating a smoother and more convenient trip for transit users. International examples have shown how a single payment card can be linked to multiple transactions, including parking, toll collection, and retail services.
- The concurrent evaluation of goods movement and transit currently undertaken by Alameda CTC provides an opportunity to enhance coordination with the railroads.

5.3. Performance

Issues

The traditional model of suburban development that has predominated in many parts of the Bay Area for several decades is not conducive to providing efficient transit service and a reduction in GHG emissions. Changing this model requires a paradigm shift among local jurisdictions, funding agencies, and transit providers. Key issues affecting meeting performance objectives in the future include:

- Many transit agencies have low operating performance largely due to factors that are not within their direct control, such as low density development or high number of populations with subsidized fares.
- Labor plays a significant role in the cost of service provision and is subject to negotiated contracts. As a result, the threat of service disruption persists.
- Congested highways and arterials often inhibit the reliability of transit and cause delays to riders and additional operating costs.

- Traditional suburban land use development patterns, such as those in the Tri-Valley area, are more difficult and costly to provide transit service to because the road network is not a grid, resulting in more circuitous transit routes (as opposed to straight-line, direct routes). This leads to lower ridership and farebox recovery in these areas.
- Transportation funding, which occurs at the county, regional, and state level, will increasingly become dependent upon integration with land use decision-making, which occurs at the local level. This poses challenges for Alameda County, which has both urban and suburban types of development patterns and must determine how best to allocate county resources given the new funding stipulations.
- While land use is a consideration in service planning, transit agencies focus more on ridership than performance measures that evaluate the progress on linking transit improvements and land use decisions.
- Local jurisdictions have little control over deployment of regional and county-wide transit service, and transit operators have little control over the rights of way within the corridors in which they travel. In addition, the decisions of local cities are not linked or directly accountable for transit performance.

Opportunities

The relatively new state regulatory framework, the increasing presence of private transportation providers, and the trend back to urban living create new opportunities for a paradigm shift. Primary factors driving this shift would include:

- SB 375 and Plan Bay Area provide a framework to achieve coordination between land use and transportation planning.
- MTC has launched regional measures to improve transit performance by providing funding incentives for operational improvements. The TSP provides a regional mandate for transit operators to reduce costs, increase ridership, and/or improve service delivery.
- There is an opportunity for Alameda County, working with its key stakeholders, to take a comprehensive look at its transit network and create a system that directs resources to projects and programs that improve performance.
- Dedicated transit lanes and signal priority offer opportunities to reduce delays and improve reliability of transit services and reduce operating costs.
- New federal and regional funding programs support focusing the allocation of limited resources on projects and programs that provide the greatest benefits in terms of cost-effective service.
- Improving cost-effectiveness, service quality, and reliability will improve public perception.

- Many local jurisdictions have put land use controls in place to intensify development near PDAs, along transit corridors, and near transit stations, and support for such measures is increasing.
- Work rule revisions and new business models provide an opportunity to control transit service delivery costs.

5.4. Technology

Issues

Wide adaptation of recent developments in technology, especially those focusing on mobile devices, has increased the general expectations for quick access to information and high quality services. This expectation has carried over to public transit. These developments in technology have also given rise to a range of private transportation services that compete with public transit.

- Technology is blurring the boundaries between traditional definitions of “public” and “private” and in some instances creating conflicts for the use of transit facilities.
- The private sector is pushing the limits of the current regulatory framework and transportation agencies are attempting to determine the best ways to integrate these new services with the traditional transit services provided by public agencies.
- Public agencies are beginning to explore how to take advantage of new technologies, such as automatic passenger counters and automatic vehicle locators, and databases that are now available.

Opportunities

Technology has provided new methods for managing both transit demand and transit capacity, and recent advances hold promise to improve other aspects of our transit systems. The explosion of new applications for sharing transit information and accessing transportation options and the creation of large data bases create new opportunities for the transportation industry.

- From service planning and coordination, to information availability and fare collection, advanced internet and smartphone based technologies are and will continue to provide opportunities for radically improving attractiveness of transit options.
- Local, state, and federal governments provide an effective regulatory framework that identifies the potential for new service models and technologies.
- The potential applications of big data include:

- a) Crowd sourced data collection and analysis is going through a renaissance.
- b) Opportunities lie in transit planning (using crowd sourced data to improve planning processes), coordination (from network connectivity down to time of day), and information availability (schedules, real time arrival information).
- c) Public transit agencies are capturing and storing transportation-related big data that may be used to assess transit services and passenger characteristics.
- d) There is an opportunity to open up this data repository and provide private companies access to the data, and let them develop products using this data.
- e)
- f) Opportunities to monetize this information, through nominal data license fees etc. so that the public data systems pay for themselves.

5.5. Public Private Partnerships

Issues

Private transit and shared-ride services are increasing their share of the transportation market. Public agencies have not yet developed a strong model to integrate these private services into the traditional transit delivery model.

- Public transit operations tend to focus on serving low-income communities.
- Private shuttles tend to focus on higher-income professionals in the technology industry and are creating anxiety about a two-tiered system.

Opportunities

The opportunity exists to define a new framework for public-private partnerships in the delivery of transit services.

There is an opportunity to integrate public and private services and ensure a comprehensive transit network for Alameda County that serves all socio-economic levels in the community and provides vital “last-mile” connections not presently served by public transit. For example, public private partnerships could provide public access to private shuttle service or pay fees to use public transportation facilities (stops and park-and-ride lots).

5.6. Paratransit

Issues

Alameda County anticipates significant growth in the elderly population, which is likely to increase the demand for paratransit services over the next 20 years. Paratransit services are critical for the community, but their delivery is costly on a per passenger basis.

Opportunities

The TSP has set a regional framework for improving efficiency of paratransit services. Opportunities include:

- With increased awareness and coordination, more paratransit needs could potentially be accommodated through fixed-route services. This would also be enhanced by providing amenities such as low floor buses.
- New private transportation services, which tend to be less costly, may provide opportunities to reduce costs of delivering paratransit services.
- Charging premium fares for trips that exceed ADA requirements.
- Demand-side solutions, such as more walkable and accessible communities, could increase use of fixed-route transit services and reduce demand for paratransit services.
- Autonomous vehicles may provide opportunities for paratransit transportation in the future.

5.7. Resiliency and Emergency Preparedness

Issues

Transit networks are prone to disruption during natural and other disasters, yet they also provide the potential for transporting the greatest number of people during these occurrences. Redundancy in the system is needed to ensure availability of appropriate transit services.

- While there are plans to protect our transit systems in the event of natural or other disasters, WETA is the only one with a clear mandate for emergency response.
- Short range transit plans are not yet responding to resiliency issues associated with climate change.
- Ensuring redundancy in a transit system is an added cost in an already difficult funding climate.

Opportunities

The opportunity exists to set a framework for coordinated multimodal transit emergency response in the Countywide Transit Plan.

- Identify the potential of our transit systems to serve communities during recovery periods.

Appendices

Appendix A – Metropolitan Transportation Commission

Table A 1: Plan Bay Area Performance Targets

Goal/Outcome	#	Target
CLIMATE PROTECTION	1	Reduce per-capita CO ₂ emissions from cars and light-duty trucks by 15% <i>Statutory - Source: California Air Resources Board, as required by SB 375</i>
ADEQUATE HOUSING	2	House 100% of the region’s projected growth by income level (very-low, low, moderate, above-moderate) without displacing current low-income residents <i>Statutory - Source: ABAG, as required by SB 375</i>
HEALTHY & SAFE COMMUNITIES	3	Reduce premature deaths from exposure to particulate emissions: <ul style="list-style-type: none"> • Reduce premature deaths from exposure to fine particulates (PM_{2.5}) by 10% • Reduce coarse particulate emissions (PM₁₀) by 30% • Achieve greater reductions in highly impacted areas <i>Source: Adapted from federal and state air quality standards by BAAQMD</i>
	4	Reduce by 50% the number of injuries and fatalities from all collisions (including bike and pedestrian) <i>Source: Adapted from California State Highway Strategic Safety Plan</i>
	5	Increase the average daily time walking or biking per person for transportation by 70% (for an average of 15 minutes per person per day) <i>Source: Adapted from U.S. Surgeon General’s guidelines</i>
OPEN SPACE AND AGRICULTURAL PRESERVATION	6	Direct all non-agricultural development within the urban footprint (existing urban development and urban growth boundaries) <i>Source: Adapted from SB 375</i>
EQUITABLE ACCESS	7	Decrease by 10% the share of low-income and lower-middle income residents’ household income consumed by transportation and housing <i>Source: Adapted from Center for Housing Policy</i>
ECONOMIC VITALITY	8	Increase gross regional product (GRP) by an average annual growth rate of approximately 2% <i>Source: Bay Area Business Community</i>
TRANSPORTATION SYSTEM EFFECTIVENESS	9	<ul style="list-style-type: none"> • Increase non-auto mode share by 10% • Decrease automobile vehicle miles traveled per capita by 10% <i>Source: Adapted from Caltrans Smart Mobility 2010</i>
	10	Maintain the transportation system in a state of good repair: <ul style="list-style-type: none"> • Increase local road pavement condition index (PCI) to 75 or better • Decrease distressed lane-miles of state highways to less than 10% of total lane-miles • Reduce share of transit assets past their useful life to 0% <i>Source: Regional and state plans</i>

Source: MTC, Plan Bay Area Performance Assessment Report, 2013

Table A 2: MTC Regional Transit Expansion Policy - Program of Projects

PROJECT	COST (millions of 2001 \$)	2001 RTP
BART: Fremont to Warm Springs	\$634	X
BART: Warm Springs to San Jose	\$3,710	X
MUNI Third Street Light Rail: Phase 2-Central Subway	\$647	X
BART/Oakland Airport Connector	\$232	X
Caltrain Downtown Extension/Rebuilt Transbay Terminal	\$1,885	X
Caltrain Rapid Rail/Electrification	\$602	X
Caltrain Express: phase 1	\$127	X
Downtown to East Valley: Light rail and Bus Rapid Transit: Ph. 1&2	\$518	X
Capitol Corridor: Phase 1 Expansion	\$129	X
AC Transit Oakland/San Leandro Bus Rapid Transit: Ph. 1 (Enhanced Bus)	\$151	X
Regional Express Bus Phase 1	\$40	X
Dumbarton Rail	\$129	
BART/East Contra Costa Rail Extension	\$345	\$95 for right of way
BART/Tri-Valley Rail Extension	\$345	\$80 for right of way
Altamont Commuter Express (ACE): service expansion	\$121	
Caltrain Express: Phase 2	\$330	
Capitol Corridor: Phase 2 Expansion	\$284	
Sonoma-Marin Rail	\$200	
AC Transit Enhanced Bus: Hesperian/Foothill/MacArthur corridors	\$90	
TOTAL:	\$10,519	

RTEP Studies (funded outside of the RTP)

PROJECT	COST (millions of 2001 \$)
Napa/Solano Passenger Train Study	\$0.4
BART:30 th /Mission Station Study	\$0.5
San Francisco Geary Corridor Major Investment Study	\$0.6
TOTAL: RTEP Studies	\$1.5

Source: MTC, RTEP, 2001

Figure A 1: RTP – Performance Measures

Resolution No. 3357 Criteria: Definitions and Measurement

Financial Criteria:

Honor 1876 commitments: Priority assigned to those projects of the original seven “Tier 1” Resolution No. 1876 projects that do not yet have a defined and secured financial agreement.
Rating: “Yes” or “No”

TEA-21/federal reauthorization: Current federal financial support exists for the project, through TEA-21 authorizing language for New Starts funding, or other federal appropriation commitments.
Rating: “Yes” or “No”

TCRP/State commitments: Current state financial commitment is secured by the project, through Traffic Congestion Relief Program funds, or other existing state funding commitments.
Rating: “Yes” or “No”

Dedicated local commitments: Local financial commitment for the project, based on percentage of local funds to total capital costs.
Rating: “High”: Greater than 50%; “Medium”: 30% to 50%; “Low”: under 30%

Operations/Maintenance: Project can be maintained and operated once built, based on financial plans and policies submitted by the project sponsor, outlining sources and commitments of fund for the period of operations through the end of the RTP (2025) or for at least 10 years, whichever is longer. Any financial burden imposed by the transit expansion project may not undermine core bus service within the same system, especially that needed by transit dependent persons.
Rating: “Yes” or “No”

Performance Criteria:

Land Use: Evaluate potential system benefits accrued as a result of adjacent land uses along rail/bus corridors, based on year 2025 projected net residential and employment land use densities around planned stations or transit corridors.
Rating: “High”: urban or urban core/CBD; “Medium”: suburban; “Low”: rural or rural suburban, as measured below:

Net Population Density	Total Population/ Residential Area square miles	Net Employment Density	Total Employment/ Commercial Area square miles
Rural	< 5,000	Rural	< 5,000
Rural-Suburban	5,000-10,000	Suburban	5,000-20,000
Suburban	10,000-20,000	Urban	20,000-50,000
Urban	20,000-50,000	Urban Core	50,000-100,000
Urban Core	>50,000	Urban CBD	>100,000

Cost-effectiveness: “Cost per new rider”, measured as dollars per new rider (shifting from auto to transit; not transit to transit).
Rating: “High”: \$0 - \$15/new rider; “Medium”: \$16 - \$30/new rider; “Low”: over \$30/new rider

Note: Resolution No. 3357 also provides for another measure of cost effectiveness: “transit user benefits” that will be incorporated into this analysis at a later date once the methodology is available from the Federal Transit Administration.

System Connectivity: Assess the interconnected relationship of the transit expansion and the existing transit network, through measures of connections, service frequency and gap closures.
Rating:

A. Number of Connecting Operators: “High”: 5 or more; “Medium”: 3 to 4; “Low”: 1 to 2

B. Frequency: Peak Period Headways: “High”: 10 minutes or less; “Medium”: 20 minutes to 11 minutes; “Low”: Greater than 20 minutes

C. Gap Closures: “Yes” or “No” for completion of a major closure in the regional network.

System Access: Determine the ability of users to easily access (via walking, biking, auto or transit transfers) the new extensions, based on number of modal access options
Rating: “High”: 4 or more; “Medium”: 3; “Low”: 1 to 2

Project Readiness: Priority assigned to projects that are able to proceed expeditiously to implementation, based on pre-construction activities completed or in progress as of December 2001.

Rating: “High”: corridor evaluation+environmental analysis+preliminary design and engineering; “Medium”: corridor evaluation+environmental analysis; “Low”: Sketch planning or corridor evaluation only.

Source: MTC, RTP, 2001

Table A 3: RTEP Project Status

TABLE 19: MTC Resolution 3434 Project Status		
Project	Project Cost* (in millions of YOY \$)	Status
Caltrain Express: Baby Bullet	\$128	Open for Service
Regional Express Bus	102	
BART to Warm Springs	890	In Construction
East Contra Costa BART Extension (eBART)	493	
Transbay Transit Center: Phase 1	1,589	
BART/Oakland Airport Connector	484	
Sonoma-Marin Rail Initial Operating Segment	360	
Expanded Ferry Service to South San Francisco (Berkeley, Alameda/Oakland/Harbor Bay, Hercules and Richmond, and other improvements)	180	
MUNI Third Street Light Rail Transit Project – Central Subway	1,578	
BART: Warm Springs to Berryessa	2,330	
BART: Berryessa to San Jose/Santa Clara	3,962	Environmental Docs Approved
Transbay Transit Center/Caltrain Downtown Extension: Phase 2	2,596	
AC Transit Berkeley/Oakland/San Leandro Bus Rapid Transit	218	
Downtown to East Valley; Light Rail & Bus Rapid Transit Phases 1 & 2	559	Environmental Docs in Process
Caltrain Electrification	785	
Caltrain Express: Phase 2	427	
Van Ness Avenue Bus Rapid Transit	126	
Tri-Valley Transit Access Improvements to/from BART	168	
AC Transit Enhanced Bus: Grand-MacArthur corridor	41	
Dumbarton Rail	701	
ACE Right-of-Way Acquisition for Service Expansion	150	
Capitol Corridor: Phase 2 Enhancements	254	
Total	\$18,121	

*Full project cost may not be included in Plan Bay Area.

Source: MTC, Regional Transit Expansion Policy, 2001

Appendix B – Alameda County Transportation Commission

Table B 1: Projects in the Alameda County Countywide Transportation Plan

RTPID	Project Name	Project Sponsor	Source Document	Planning Area	Other Planning Process	Total Capital Cost Estimate (\$millions)
Alameda County Projects						
						(YOE\$)
21131	BART Oakland International Airport Connector	BART	CWTP	North		\$ 516
21132	BART Warm Springs extension	BART	CWTP	South		\$ 978
94012	Union City Intermodal, Phase 1	City of Union City	CWTP	South		\$ 86
21123	Union City Intermodal Station infrastructure improvements (Phase 2)	City of Union City	CWTP	South	Measure B	\$ 27
240014	Construct new Ferry O&M Facility in Alameda	WETA	CWTP	North		\$ 38
240018	Dumbarton Rail Corridor Phase I	ACTC / SamTrans	CWTP	South	Measure B, Res. 3434	\$ 169
240077	Rapid Bus Service - City of Alameda and Alameda Point PDA (Alameda Naval Station) to Fruitvale BART	City of Alameda	CWTP	North		\$ 9
240101	Fruitvale Avenue Lifeline Bridge Project (rail)	City of Alameda / Alameda County	CWTP	North		\$ 142
240179	Downtown Berkeley Transit Center	City of Berkeley	CWTP	North		\$ 28
240226	Berkeley Ferry Terminal access improvements	City of Berkeley	CWTP	North		\$ 109
240304	Platform Extension at Alameda and San Joaquin County ACE Stations	ACE	CWTP	South		\$ 8
240372	College/ Broadway corridor (Route 51) improvements - Transit Priority Measures	AC Transit	CWTP	North		\$ 35
22062	Irvington BART Station	City of Fremont / BART	CWTP	South	Res. 3434-related	\$ 127
22455	AC Transit East Bay BRT	AC Transit	CWTP	North	Measure B, Res. 3434	\$ 218
22780	AC Transit Grand-MacArthur BRT	AC Transit	CWTP	North	Res. 3434	\$ 41

...continued


RTPID	Project Name	Project Sponsor	Source Document	Planning Area	Other Planning Process	Total Capital Cost Estimate (\$millions)
230101	Union City Passenger Rail Station & Dumbarton Rail Segment G Improvement; Union City BART Phase 2 / Passenger Rail Station	City of Union City	CWTP	South	Res. 3434 (partial)	\$ 231
240180	BARTMetro / Bay Fair Connection	BART	CWTP	Multiple		\$ 150
22009	Capitol Corridor intercity rail service expansion (Oakland to San Jose)	Capital Corridor	CWTP	South	Res. 3434	\$ 579
22021	AC Transit transfer station/park-and-ride facility in Alameda County (1. Central, 2. Northern)	AC Transit	CWTP	Central		\$ 41
98139	Right-of Way preservation and track improvements in Alameda County	Countywide	CWTP	Central		\$ 301
98139	Right-of Way preservation and track improvements in Alameda County	Countywide	CWTP	North		\$ 301
98139	Right-of Way preservation and track improvements in Alameda County	Countywide / ACE submission	CWTP	South		\$ 301
230116	Railroad crossing improvements at Gilman St	City of Berkeley	CWTP	North		\$ 112
240196	BART to Livermore Extension (project development funds for study and construction reserve)	BART	CWTP	East	Measure B	\$ 1,883
240268	Construct Altamont Commuter Express/Capitol Corridor Station at Auto Mall Parkway	City of Fremont	CWTP	South		\$ 11
240373	Bicycle and ped expansion - Livable Communities and Complete Streets	AC Transit	CWTP	Central, South		\$ 15
N/A	Oakland Broadway Corridor Transit Study	City of Oakland	CWTP	North		\$ -
22089	Martinez Subdivision	Port of Oakland / MTC	CWTP	North		\$ 100
22667	BART to Livermore Extension Phase 2	BART	CWTP	East	Measure B	\$ 2,927

...continued

RTPID	Project Name	Project Sponsor	Source Document	Planning Area	Other Planning Process	Total Capital Cost Estimate (\$millions)
240113	BART Hayward maintenance complex	BART	CWTP	Central		\$ 585
240216	Dumbarton Rail Corridor Phase 2	ACTC / SamTrans	CWTP	South	Measure B, Res. 3434	\$ 795
240135	Ashby BART TOD and Station capacity expansion	City of Berkeley	CWTP	North		\$ 20
240267	Dublin TOD: West Dublin and Downtown Dublin programs	City of Dublin	CWTP	East		\$ 15
21132	BART Warm Springs Station West Side Access	City of Fremont	CWTP	South		\$ 11
240257	Fremont Boulevard Streetscape Project: Centerville PDA	City of Fremont	CWTP	South		\$ 7
240293	Dumbarton TOD transportation infrastructure improvements	City of Newark	CWTP	South		\$ 1
240230	Coliseum/Oakland Airport BART transit enhancements	City of Oakland	CWTP	North		\$ 105
240231	West Oakland PDA/TOD: transit enhancements	City of Oakland	CWTP	North		\$ 21
240234	Eastmont Transit Center PDA: transit enhancements	City of Oakland	CWTP	North		\$ 20
240235	MacArthur BART Station PDA/TOD: transit enhancements	City of Oakland	CWTP	North		\$ 14
240236	Lake Merritt BART Specific Plan Implementation: transit enhancements	City of Oakland	CWTP	North		\$ 5
240323	Broadway Valdez Specific Plan Area transit access improvements	City of Oakland	CWTP	North		\$ 6
N/A	19th Street BART TOD	City of Oakland	CWTP	North		N/A
240269	Downtown San Leandro TOD	City of San Leandro	CWTP	Central		\$ 70
240296	Bay Fair BART Transit Village (TOD)	City of San Leandro	CWTP	Central		\$ 70
240271	City of San Leandro streetscape improvements to support TOD	City of San Leandro	CWTP	Central		\$ 10

Source: Alameda CTC, CTP, June 2012

Table B 2: 2014 TEP – BART, Bus, Senior and Youth Transit Investments

Type	Investment Category	Project/Program	Amount (\$ x millions)	% of Total Funds
 <p>BART, Bus, Senior, and Youth Transit (48%)</p>	Transit: Operations, Maintenance, and Safety Program	AC Transit	\$1,455.15	18.8%
		Altamont Commuter Express	\$77.40	1.0%
		BART Maintenance	\$38.70	0.5%
		San Francisco Bay Area Water Emergency Transportation Authority	\$38.70	0.5%
		Livermore Amador Valley Transit Authority	\$38.70	0.5%
		Union City Transit	\$19.35	0.25%
		Innovative grant funds, including successful student transportation programs	\$174.63	2.24%
	Affordable Transit Program for Students and Youth	Affordable Student Transit Pass Program	\$15.00	0.19%
		Subtotal	\$1,857.63	24%
	Affordable Transit for Seniors and People with Disabilities	City-based and Locally Mandated	\$232.20	3.0%
		East Bay Paratransit - AC Transit	\$348.31	4.5%
		East Bay Paratransit - BART	\$116.10	1.5%
		Coordination and Service Grants	\$77.40	1.0%
		Subtotal	\$774.01	10%
	Rapid Bus Projects	Telegraph Avenue/East 14th/ International Boulevard project	\$10.0	14%
		Alameda to Fruitvale BART Rapid Bus	\$9.0	
		Grand/MacArthur BRT	\$6.0	
		College/Broadway Corridor Transit Priority	\$10.0	
		Subtotal	\$35.0	
	BART System Modernization and Expansion	Irvington BART Station	\$120.0	14%
		Bay Fair Connector/BART METRO	\$100.0	
		BART Station Modernization and Capacity Program	\$90.0	
		BART to Livermore	\$400.0	
	Subtotal	\$710.0		
Major Transit Corridor Enhancements and Rail Connections	Dumbarton Corridor Area Transportation Improvements	\$120.0	14%	
	Union City Intermodal Station	\$75.0		
	Railroad Corridor Right of Way Preservation and Track Improvements	\$110.0		
	Oakland Broadway Corridor Transit	\$10.0		
	Capitol Corridor Service Expansion	\$40.0		
	Subtotal	\$355.0		
	TOTAL		\$3,731.64	48%

Notes: Priority implementation of specific investments and amounts for fully defined capital projects and phases will be determined as part of the Capital Improvement Program developed through a public process and adopted by Alameda CTC every two years and will include geographic equity provisions.

BART Maintenance funds will require an equal amount of matching funds and must be spent in Alameda County.

All recipients of sales tax funds will be required to enter into agreements which will include performance and accountability measures.

Source: Alameda CTC, TEP, 2014

Table B 3: Alameda CBTP – Recommended Solutions and Strategies

Strategy	Ranking	Cost	Lead Agency
Implement Bus Stop and Shelter Improvements	High	\$220 per trash can (plus \$36 weekly per trash can for servicing); approximately \$3,000 per bus stop for lighting; \$18,000 per shelter (plus \$1,500 annually per shelter for maintenance)	City of Alameda
Improve Transit Access from Alameda Point to Downtown Oakland:			
- Create an Alameda Point Shopper Shuttle on Weekends	High	\$33,000 annually	City of Alameda and private sector
- Increase Route 63 Service and Frequency	Medium-High	\$293,000 annually for service improvements; \$2.7 million annually for frequency improvements	AC Transit
Implement Route 51 On-Time Performance Improvements	Medium-High	\$200,000 per mile for Route 51 Service and Reliability Study implementation; \$1.2 million for Webster Street SMART Corridor Management Project implementation	AC Transit
Install "Real Time" Information, such as NextBus, at Alameda Bus Stops	Medium-High	\$3,500 for each sign, plus \$5,000 annually for maintenance	City of Alameda
Improve Bus Service to Alameda Hospital and City of Alameda Schools	Medium-High	\$226,000 annually	Multiple agencies, including AC Transit
Increase and Improve Information Regarding Transit Services	Medium-High	\$8,000 to \$10,000 for initial production, plus \$1,700 to \$3,000 for each printing	AC Transit and City of Alameda
Increase Education Regarding Paratransit Services	Medium-High	Up to \$500 for each printing	Various agencies including the City of Alameda, ACTIA, and Mastick Senior Center
Increase Transit Education for Seniors	Medium-High	Up to \$500 for each printing of existing transit brochures	Various agencies including the City of Alameda, ACTIA, and Mastick Senior Center
Expand the Safe Routes to Schools Program	Medium-High	\$50,000 to \$500,000 annually	ACTIA
Improve the Pedestrian Experience in Alameda Point	Medium-High	\$500 to \$1,250 for street trees; \$250 to \$1,000 per tree for a program modeled after Urban Relief; \$200 to \$400 per linear foot of landscaped medians, including irrigation; \$1,800 per tree in a planter box; \$20 per square foot of sidewalk repairs	City of Alameda and non-profit organization
Install Pedestrian Street Lights	Medium-High	\$8,000 to \$15,000 per lamp including trenching and electrical, plus \$100 per lamp every four years for bulb changing	City of Alameda
Create More Bicycle Lanes throughout Alameda	Medium-High	\$10,000 per linear mile	City of Alameda
Increase the Bicycle Capacity Onboard Buses	Medium-High	\$900 to \$1,350 each for racks that mount to front of bus; \$500 to \$700 each for onboard racks	AC Transit
Increase Bicycling Options for Youth and Low-Income Residents	Medium-High	Cycles of Changes has an annual budget of \$146,000 and financial support should contribute to this amount or augment it.	Various agencies, including Cycles of Change, ACCMA, Safe Routes to School, and ACTIA
Increase Knowledge of 511 Rideshare	Medium-High	Cost would be minimal due to this strategy's utilization of existing services and staff members.	Various agencies, including the Metropolitan Transportation Commission and Bay Area Air Quality Management District
Institute an Auto Loan Program for Low-Income Residents	Medium-High	Approximately \$480,000.	Metropolitan Transportation Commission
Implement a Low-Income Transit Fare Subsidy:			
- Create a Low-Income Fare Discount	Medium	Costs would vary based on the level and type of fare subsidy instituted and the eligibility criteria established, but would have the potential to be relatively high.	Multiple agencies, including the City of Alameda, AC Transit, and BART
- Maximize Accessibility of Existing Discounts	Medium	Costs would vary depending on which specific strategy would be implemented, but are potentially relatively high.	Multiple agencies, including the City of Alameda, AC Transit, and BART
Improve Accessibility to the Oakland-Alameda Ferry	Medium	This strategy's focus is on increasing awareness of existing services. Costs would have the potential to be relatively low.	Oakland-Alameda Ferry, AC Transit, and City of Alameda
Increase Bus-to-BART Frequency	Medium	\$66,000 annually for an Alameda to BART Feeder Shuttle	Various public and private agencies, community-based organizations, health providers, or community action agencies
Improve Pedestrian Access between West Alameda and Oakland	Medium	\$5 million for a pedestrian barge (plus \$2.5 million annually for operation); \$40 million for a one-way path for pedestrians and bicyclists in the Webster/Posey Tube	Cities of Alameda and Oakland, pedestrian barge provider, and Caltrans

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Strategy	Ranking	Cost	Lead Agency
Increase Pedestrian and Bicyclist Safety in the Tube	Medium	\$7 million, plus an annual cleaning cost of \$50,000	Cities of Alameda and Oakland and Caltrans
Increase Pedestrian Crossing Visibility and Safety	Medium	\$3 per linear foot for striping new crosswalks; \$80,000 to \$100,000 per lighted crosswalk; \$8,000 to \$15,000 per refuge island	City of Alameda
Improve Bicycling Access between Alameda and Oakland	Medium	\$5 million for a pedestrian/bicycle barge (plus \$2.5 million annually for operation); \$300,000 for a bicycle shuttle (plus \$2 million annually in operating costs); \$7 million for Webster/Posey Tube improvements (plus an annual cleaning cost of \$50,000)	Cities of Alameda and Oakland, pedestrian/bicycle barge provider, and Caltrans
Improve Pavement and Bicycle Striping near the Ferry Terminal	Medium	\$4 per square foot to repave roadways; \$2.30 per linear foot to stripe bicycle lanes	City of Alameda
Increase Education Regarding Bicycling Routes and Safety	Medium	\$500 per wayfinding signage; \$10,000 for marketing material production (plus \$5,000 per printing); contributions toward the Cycles of Change annual budget of \$146,000	City of Alameda and Cycles of Change
Implement Route 50 Frequency Improvements	Low-Medium	\$453,000 annually	AC Transit
Increase Frequency of the Oakland-Alameda Ferry	Low	\$700,000 per water shuttle (plus annual maintenance and operating costs of \$2.5 million); \$8 million per ferry for capital costs	Oakland-Alameda Ferry and water taxi provider

Table B 4: Central and East Oakland CBTP – Overall Ranking for Strategies

Needs	Strategy	Ranking				
		C	T	F	I	Overall
<ul style="list-style-type: none"> ◆ Safety at bus stops ◆ Experience at bus stops ◆ Safety at BART 	Streetscape and bus stop improvements <ul style="list-style-type: none"> ◆ Along transit corridors ◆ At BART stations ◆ Existing CEDA streetscape improvement projects 	H	H	M-H	M-H	H
<ul style="list-style-type: none"> ◆ Time of trip ◆ Frequency of service 	Provide nighttime service on AC Transit Route 14	H	H	L	M	M-H
<ul style="list-style-type: none"> ◆ Time of trip ◆ Frequency of service 	Reinstate AC Transit Route 98 night and weekend service	H	M-H	L	M	M
Information availability	Transit information strategies <ul style="list-style-type: none"> ◆ Produce and distribute existing multilingual BART and AC Transit Information in the Fruitvale and San Antonio neighborhoods 					
	<ul style="list-style-type: none"> ◆ Create and distribute an Oakland Transit Brochure (in English, Spanish and Chinese) ◆ Place signs or stickers listing the phone numbers for multilingual transit assistance on bus stop poles in Fruitvale and San Antonio 	L-M	L-M	H	H	M-H
Cost of ticket	Offer pay-as-you-go monthly discount passes on BART and AC Transit	L	M	M	M	M
	Offer a joint AC Transit-BART discount pass to low income residents	H	H	L	M	M-H

Notes:
 C: Community
 T: Transportation Benefits
 F: Financial
 I: Implementation
 H: High
 M-H: Medium-High
 M: Medium
 L-M: Low-Medium
 L: Low

Table B 5: Central and East Oakland CBTP – Overall Ranking for Strategies

Needs	Strategy	Ranking				
		C	T	F	I	Overall
Transfer window and cost	Extend AC Transit transfer window	H	L-M	M	H	M-H
Paratransit cost and availability	Provide additional OPED round trips in vans and taxis	H	L-M	L	H	M
Paratransit cost and availability	Provide OPED service for group trips	L-M	L-M	M	H	M
<ul style="list-style-type: none"> ◆ Speed of traffic/safety ◆ Street and intersection crossings ◆ Pavement quality 	Signing and striping and/or lane conversion projects to improve bicycle connections to BART stations					
	◆ Class 3A Bicycle Route on East 12 th Street from Fruitvale Ave to 40 th Ave					
	◆ Class 2 Bicycle Lane on San Leandro Street from 66 th Ave to 85 th Ave	L	L-M	M	H	M
	◆ Class 2 Bicycle Lane on Camden Street and Havenscourt Blvd from MacArthur Blvd to International Blvd					
	◆ Class 2 Bicycle Lane on Fruitvale Ave from Foothill Blvd to East 12 th Street					
Speed of traffic/safety	Coliseum BART to Bay Trail Connector Path	M	M	L	L	M
	Bicycle Programs					
	◆ Offer Road I Courses to residents in the project area	L	M	H	H	M
	◆ Provide funding for Cycles of Change program					
<ul style="list-style-type: none"> ◆ Cost of ticket ◆ Availability/frequency of service ◆ Low-rate of vehicle ownership 	Subsidized Car Sharing	L-M	L	M	M	L-M
Notes:						
C: Community	M-H: Medium-High					
T: Transportation Benefits	M: Medium					
F: Financial	L-M: Low-Medium					
I: Implementation	L: Low					
H: High						

Table B 6: West and South Berkeley CBTP

Strategy	Ranking				
	C	T	I	F	Overall
Bus Stop and Shelter Improvement	H	M	H	H	H
Improved Signal Timing	H	H	H	M-H	H
Provide Secure Bicycle Parking	H	MH	H	H	H
Route 9 Frequency and Span Improvements	H	H	L	M	M-H
Route 19 Frequency Improvements	M-H	H	L	M	M-H
Low-income Transit Fare Subsidy	H	H	L	M	M-H
Educating Cyclists about Bicycle Boulevard Network	LM	M	MH	H	M-H
Improved Crosswalk Visibility at Uncontrolled Intersections	MH	LM	MH	H	M-H
Transit Information (Not at Bus Stops)	M	L-M	H	H	M
AC Transit Weekend Transfer Window Extension	M	LM	M	H	M
Expansion of Berkeley Paratransit Programs	M	L-M	M-H	H	M
BART Frequency Improvements	M-H	M-H	LM	M	M
Sharrows on Class II.5 Bikeways and Traffic Circle Approaches	M	LM	M	H	M
Improved Crossing as Bicycle Boulevards	M	M	M	LM	M
Improved Lighting	H	M	L	LM	L-M
Subsidized Car Sharing	LM	L	M	M	L-M
BART to Bus Real-time Arrival Information	LM	L	M	M	L-M
C: Community	H: High				
T: Transportation Benefits	M-H: Medium-High				
F: Financial	M: Medium				
I: Implementation	M-L: Medium-Low				
	L: Low				

Table B 7: West Oakland CBTP

Project	Implementation Lead	Potential Funding Sources	Capital Cost	O&M Cost (operations & maintenance)
TIER ONE Projects (funding 2006-2009)				
Neighborhood Bus and Shuttle Services				
Improved AC Transit Bus Transit and/or new Community Shuttle. <i>NOTE: 8 AC Transit improvement projects and 1 community shuttle project were outlined in March and are summarized in Section 5 of the CBTP. The specific project(s) to be proposed for funding and implementation will be determined after further AC Transit/community organization meetings in April.</i>	AC Transit WOPAC	<ul style="list-style-type: none"> Lifeline Transportation Program (ACCMA and ACTIA) BAAQMD Transportation Fund for Clean Air BART Access fund City of Oakland 	\$\$ TBD after April-May meetings with AC (\$350K/vehicle as needed)	\$\$ TBD after April-May meetings with AC (\$100K-\$300K/year)
BART Access Evening Shuttle	TBD	<ul style="list-style-type: none"> BART Station Access Improvement Fund Air District's Transportation Fund for Clean Air (TFCA) Lifeline Transportation Program (ACCMA and ACTIA) 	\$0	\$120,000/year
Senior Shuttle Expansion	City of Oakland Bay Area Community Services (BACS)	<ul style="list-style-type: none"> Alameda County Transportation Improvement Authority (ACTIA) paratransit gap funding Lifeline Transportation Program (ACCMA, ACTIA) 	\$65,000	\$85,000/year
BART Noise and Parking				
BART Noise Study	WOPAC City of Oakland	<ul style="list-style-type: none"> Caltrans Environmental Justice grants 	\$50,000-\$100,000	\$0
BART Rail Grinding	WOPAC	<ul style="list-style-type: none"> BART 	\$0	\$1,500/pass-mile
BART Transit Village Parking	WOPAC	<ul style="list-style-type: none"> BART 	\$5,000 (community monitoring)	\$0
Diesel Truck Emissions, Traffic and Parking				
Truck Services at Oakland Army Base	West Oakland Toxics Reduction Collaborative	<ul style="list-style-type: none"> City of Oakland Port of Oakland 	\$20 million (land costs only)	\$0
Truck Route Enforcement and Education	West Oakland Toxics Reduction Collaborative	<ul style="list-style-type: none"> City of Oakland Port of Oakland 	\$0	\$200,000-300,000/year
Diesel Truck Replacement	West Oakland Toxics Reduction Collaborative	<ul style="list-style-type: none"> Port of Oakland BAAQMD Moyer Fund 	\$25,000 per truck	\$0
Pedestrian and Bicycle Facilities				
Pedestrian Improvements / Bikes Lanes: Mandela, 8th, Wood	City of Oakland	<ul style="list-style-type: none"> Bay Trail (ABAG) Air District's Transportation Fund for Clean Air (TFCA) MTC's Transportation for Livable Communities Lifeline Transportation Program (Alameda County CMA and ACTIA) Transportation Development Act (TDA) ACTIA (Measure B) Regional Bicycle/Pedestrian Program (MTC) Local Bicycle/Pedestrian Program (ACCMA) 	\$1.4 million	\$0

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Project	Implementation Lead	Potential Funding Sources	Capital Cost	O&M Cost (operations & maintenance)
7th Street Streetscape Project Phase I	City of Oakland	<ul style="list-style-type: none"> ▪ MTC's Transportation for Livable Communities ▪ Safe Routes to Transit ▪ Air District's Transportation Fund for Clean Air (TFCA) ▪ TDA ▪ ACTIA (Measure B) ▪ Regional Bicycle/ Pedestrian Program (MTC) ▪ Local Bicycle/ Pedestrian Program (ACCMA) ▪ Lifeline Transportation Program (ACCMA and ACTIA) 	\$1.3 million	\$0
Bike Lanes: Market Street	City of Oakland	<ul style="list-style-type: none"> ▪ ACTIA 	\$400,000	\$0
Bike Racks	WOPAC	<ul style="list-style-type: none"> ▪ TDA via Oakland's CityRacks program ▪ BAAQMD's TFCA program 	\$150/rack	\$0
Cycles of Change	Cycles for Change ACTIA	<ul style="list-style-type: none"> ▪ Alameda County Transportation Improvement Authority (ACTIA) ▪ Lifeline Transportation Program (ACCMA and ACTIA) 	\$0	\$90,000 for two years
Other Tier One Projects				
Medical Service Access (Taxi Return)	TBD	<ul style="list-style-type: none"> ▪ Lifeline Transportation Program (ACCMA and ACTIA) ▪ ACTIA Paratransit Gap funding 	\$0	\$50,000/year
Comprehensive Transportation/Land Use Plan	WOPAC	<ul style="list-style-type: none"> ▪ Caltrans Environmental Justice grants ▪ MTC Transportation for Livable Communities (TLC) Planning Grant 	\$150,000	\$0
Project Implementation Assistance	WOPAC	<ul style="list-style-type: none"> ▪ Lifeline Transportation Program (ACCMA and ACTIA) ▪ Alameda County Congestion Management Agency (ACCMA) 	\$0	\$10,000-\$15,000 (6 months)
TIER TWO Projects (funding 2009 and beyond)				
Transit Affordability				

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Project	Implementation Lead	Potential Funding Sources	Capital Cost	O&M Cost (operations & maintenance)
Youth Transit Subsidies	TBD	Lifeline Transportation Program (ACCMA and ACTIA) AC Transit	\$0	TBD after specific project is designed. (\$75,000-\$100,000/year)
Pedestrian and Bicycle Facilities				
7th Street Streetscape Project Phase II	City of Oakland	<ul style="list-style-type: none"> MTC's Transportation for Livable Communities Safe Routes to Transit Air District's Transportation Fund for Clean Air (TFCA) 	\$5-6 million	\$0
Bike Lanes: Grand Avenue and 14th Street	City of Oakland	<ul style="list-style-type: none"> ACTIA Regional Bicycle/Pedestrian Program (MTC) Local Bicycle/Pedestrian Program (ACCMA) Lifeline Transportation Program (ACCMA and ACTIA) Air District's Transportation Fund for Clean Air (TFCA) 	Grand: \$200,000-\$250,000 14th: \$500,000-\$800,000	\$0
Traffic Calming: Peralta Street	City of Oakland	<ul style="list-style-type: none"> City of Oakland 	\$100,000 (design only)	\$0
Other Tier Two Projects				
Street Pavement Improvements	City of Oakland	<ul style="list-style-type: none"> City of Oakland 	N/A	\$0
Subsidized Car Sharing	TBD	<ul style="list-style-type: none"> Lifeline Transportation Program (ACCMA and ACTIA) BAAQMD's Transportation Fund for Clean Air 	\$0	\$110,000/year
Youth Library Shuttle	Oakland Public Library	<ul style="list-style-type: none"> Lifeline Transportation (ACCMA, ACTIA) 		\$50,000-60,000/year
TIER THREE Projects (no known funding)				
BART Underground	WOPAC	<ul style="list-style-type: none"> BART Regional Rail funding 	\$200-350 million/mile	\$0
Bikeway: Middle Harbor Shoreline Park	Port of Oakland	<ul style="list-style-type: none"> Port of Oakland Lifeline Transportation Program (ACCMA and ACTIA) BAAQMD's Transportation Fund for Clean Air (TFCA) Regional Bicycle/Pedestrian Program (MTC) Local Bicycle/Pedestrian Program (ACCMA) 	TBD: Part of multi-million roadway project that has not been designed	\$0

Table B 8: Central Alameda County CBTP

	Solution	Lead Agency	Total Cost	Comments
1	Adjustments to AC Transit Service	AC Transit	\$9,047,000	Per year, for service changes to routes 77, 84, 93, 97, 99 and new door-to-door service for South Hayward and Bayfair BART.
2	Bus Shelters	AC Transit	\$215,000	One-time cost for forty shelters
3	Transportation Information on Cable Television	AC Transit, Local Access Channel 3, etc.	\$6,000	One-time cost to adapt existing video
4	Information Center	Eden I & R or other	\$140,000	2 Communities (\$60K each per year) plus equipment (\$20K one-time)
5	Information at Stops and on Buses	AC Transit	\$10,000	Info at shelters for both equipment and materials
6	Multilingual information	AC Transit, Eden I & R, etc.	\$15,000	One-time cost for translation of key materials into up to 10 languages
7	Sidewalks in Cherryland	ACPWA and City of Hayward	\$36,000,000	One-time cost for roughly 72 blocks need sidewalks; improvements can be made as funds are available
8	Lighting	ACPWA and City of Hayward	\$120,000	Capital and operating costs for one year; as funds are available, 1 per new bus shelter location assumed here.
	Bicycle Purchase Assistance	Non-profit	\$60,000	To provide 200 bicycles, the minimum to justify administrative costs is \$20K. per year
9	Bicycle Racks	ACPWA and City of Hayward	\$3,000	5 per community (for 3 communities)
	Auto Loan Program	EYFC	\$90,000	\$30,000 for administration (1 person as part of an existing program) and \$60,000 for collateral for 20 loans per year
10	Carsharing	City CarShare	\$100,000	Per year
	TOTAL		\$45,806,000.00	

Table B 9: Evaluation Criteria for Transportation Strategies

Evaluation Category	Definition
COMMUNITY:	
Level of community support, serves greatest need, serves needs of diverse community	
High ranking	High community support and serves greatest need
Medium ranking	Moderate community support and serves greatest need
Low ranking	Low community support
TRANSPORTATION BENEFITS:	
Number of beneficiaries, number of problems solved, measurable solutions	
High ranking	Large number of residents benefit, solves multiple problems
Medium ranking	Moderate number of residents benefit, solves multiple problems
Low ranking	Small number of residents benefit, solves one problem
FINANCIAL:	
Overall cost, cost per beneficiary, funding availability and sustainability	
High ranking	Low cost to implement (under \$50,000), cost effective and financially feasible
Medium ranking	Medium cost to implement (\$50,000-\$150,000), moderately cost effective and feasible
Low ranking	High cost to implement (\$150,000+), high cost per beneficiary
IMPLEMENTATION:	
Implementation time-frame and staging	
High ranking	Short term (1-2 years), or capable of being implemented in stages
Medium ranking	Medium term (3-4 years)
Low ranking	Long term (5+ years), may require large upfront fixed costs

Source: Alameda CTC, Alameda CBTP, 2009

Table B 10: Congestion Management Plan – Performance Measures for Frequency of Transit Service

Service Type	Peak	Midday	Night	Owl	Sat/Sun/Holiday
(minutes between services)					
Bus					
Primary Trunk	15	15	30	60	15
Major Corridor	15	30	30	N/A	30
Local/Crosstown	30	30	60	30-60	60
Suburban Local/Crosstown	30-45	60	N/A	N/A	N/A
Transbay Basic	15	30	60	N/A	60
Transbay Express	15-30	N/A	N/A	N/A	N/A
Rail					
BART	3.75-15	up to 20 (off-peak) ³⁰			
Ferries	60	varies	N/A	N/A	varies

Note: Overlapping bus routes provide more frequent service on some corridors.

As of September 2009, Saturday daytime service is via five routes with up to 15-minute headways and all other off-peak times (week night/weekend night/Sunday) service is via three routes with 20-minute headways. The off-peak service includes service between San Francisco International Airport and Millbrae.

Source: Alameda CTC, CMP, 2013

Appendix C – LAVTA

Table C 1: LAVTA SRTP – Objectives and Standards

<i>Service Development: To provide effective transit services that increase the accessibility to community, services, and jobs.</i>	
Objective	Performance Standard
Provide service hours that are reasonably distributed relative to the population in each of the agency's three member municipalities	Stay within +/- 15% joint powers agreement formula
Provide service with a time span that is sufficient to effectively serve the primary target markets for each route	0400 -0100 h/day on backbone lines(s); 0500-0000 on other primary lines; 0600-0900 and 1600-1900 on neighborhood, local feeder, and regional express lines; and one daily round trip for school tripper lines
Provide trip frequencies that effectively serve the primary target markets for each route	15/30 min on backbone lines, 10 min peaks if demand warrants; 30/60 min on other primary lines; 60/0 min on neighborhood, local feeder, and regional express lines; Single daily round trip for school tripper lines (peak/base)
Create and maintain services/routes that are productive, based on unlinked passenger boardings per vehicle revenue hour	20/10 pax/h on backbone lines, other primary lines and regional express lines; 8/5 pax/h neighborhood and local feeder lines; and 40/-- pax/h on school tripper lines (peak/base)
Provide fixed route service to all middle and high school students who attend the main bell at a public school, subject to the agency's global route performance standards	20/10 pax/h on backbone lines, other primary lines and regional express lines; 8/5 pax/h neighborhood and local feeder lines; and 40/-- pax/h on school tripper lines (peak/base)
Provide service coverage to large residential clusters and major employment centers in the Wheels service area	Provide fixed route service within a quarter-mile radius of medium- to high density residential areas and to 80% of 100+ employee locations
Provide basic fixed route service to areas that might not meet transit-oriented land-use practices but that house and/or employ a significant socio-economically disadvantaged population	Conduct a service evaluation prior to every major service change
Coordinate, to maximum feasible extent, services and schedules to optimize transfer opportunities with other transit systems	Pulse bus departures at the Dublin/Pleasanton Bart station with train arrivals, departures, or both
Provide continuous fixed route service to all new and existing developments or re-developments that meet best transit-oriented land-use practices	Meet standard MTC "4d": Developments/redevelopments that incorporate density, diversity (mixed land-uses), design (safe, pleasing pedestrian network), and distance (close proximity to transit)
Operate routes on their scheduled times	90% as defined by departing a timepoint zero minutes early and zero to five minutes late
Minimize service redundancies	Stagger schedules and/or disperse routes geographically
Minimize fleet deadhead hours	Use interlining and other supportive scheduling approaches
Minimize fleet peak requirement	Use interlining and other supportive scheduling approaches

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<i>Service Development: To provide effective transit services that increase the accessibility to community, services, and jobs.</i>	
Objective	Performance Standard
Minimize the inconvenience of bus-to-bus transfers	Coordinate scheduled arrivals/departures at hubs and other major transfer points; 90% route recovery assigned to hubs/ terminals
Make service changes several times annually to optimize services	Two service changes per year
Plan new services (such as Rapid, Express Bus) to meet changing demands and to connect regionally	Re-evaluate bus stop locations on the Rapid line; Ensure that 60% of routes system-wide include a regional connection
Conduct route evaluations annually and identify routes in need of adjustment to meet demand and to improve regional connections	Use monthly statistics and OTP report to do service evaluations
Maintain bus stop spacing that optimally balances average route speeds against customer convenience and access time	1 mile between stops on Rapid line; No min/max spacing on other 1/3 mile (500m) between stops on backbone lines and other primary lines, except where on undeveloped or on freeway segments
Monitor Dial-A-Ride and Fixed Route statistics and identify trends in usage, modify as necessary	Prepare monthly monitoring reports.
Implement and monitor status of Dial-A-Ride demand management techniques	Prepare monthly statistics and reports; Conduct eligibility screening once every three years; Conduct travel training for 2 persons every month; Encourage 10 people per month to utilize LAVTA parataxi program
Evaluate effectiveness of SQSI (Service Quality Standards Index) as a tool to meet operational goals, adjust as necessary	Adjust measures every year
Compile SQSI monthly and annual report	Prepare monthly, quarterly, and annual SQSI reports
Annually submit NTD data to FTA.	To meet objective
Integrate local transit plans into regional plans	Complete SRTP and mini SRTP based on schedule set by MTC
Coordinate fare payment media with other SF Bay Area operators	Implement Clipper card
Maintain a minimum farebox recovery ratio	20% system-wide
Apply fares and utilize fare media that minimize average dwell times at stops	Charge cash fares in 25 cent denominations; Promote use of bulk tickets and flash passes; Implement Clipper card
Operate routes with a high degree of traffic- and passenger safety	100,000 vehicle miles between traffic accidents; One passenger boarding or onboard injury per 100,000 boardings
Maximize access to local and regional schedule- and route information on the Internet	Maintain a user-friendly web page, including access to real-time bus position information; Participate in regional 511 trip planning system
Monitor and optimize effectiveness and organizational usage of existing transit technology products and tools.	Upgrade to newer version/different when available and when finances permit

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<i>Service Development: To provide effective transit services that increase the accessibility to community, services, and jobs.</i>	
Objective	Performance Standard
Evaluate new transit technology products and recommend those most appropriate for LAVTA to pursue.	Attend transit technology/vendors conferences to identify newest technology
Operate routes with vehicles that are quiet and offer a comfortable environment for all passengers	Use newest transit technology for quieter vehicles and comfortable amenities as finances permit
Offer a safe and secure passenger environment	Install cameras in the buses and at transit center; seek funding for safety improvements at transit center and at transit stops
Receive and respond to customer suggestions and complaints, including research and analysis of operational challenges	Take action on customers' comments within 3 days; Resolve customers' complaint within 1 month; Resolve action on customers' suggestions within 12 months
Complete full Short Range Transit Plan (SRTP) and get Board adoption every 4 years	To meet objective
Complete annual Mini SRTP in years when no full SRTP is required, and get Board adoption	To meet objective
Ensure all capital projects are accurately portrayed in terms of scope, schedule and budget.	Perform 2 levels of QA/QC
Develop and implement capital projects that enhance LAVTA's operations, marketing, and maintenance capacities.	Prepare a capital improvement plan assessing LAVTA needs
Maximize LAVTA resources by identifying, applying for, and obtaining an optimal level of regional, state, and federal funding	Attend regional funding meeting to identify funding opportunities

<i>Marketing and Public Awareness: Improve visibility, image, and awareness of Wheels</i>	
Objective	Performance Standard
Maintain high levels of customer satisfaction ratings	75% of Wheels riders rating the service as good to excellent on satisfaction surveys
Use directional signage to increase visibility of major boarding locations	Install wayfinding signage at hubs and transfer points and vicinity maps at major transit stops
Continue to make the electronic customer comment card available on the Wheels website	Maintain customer complaint system; Respond to all requests in a timely manner
Utilize electronic communications to enhance rider experience	Integrate Clipper card; create smart phone applications for Wheels schedule and information
Provide presentations before civic organizations and human service groups to build support for LAVTA	Attend regular meeting with civic organizations and human services groups, including Hispanic Business Council, Livermore Chamber of Commerce, Tri-Valley Senior Centers, Tri Valley Senior Support group, Tri-Valley Cities Economic Departments, Local Businesses and Apartment complexes that join LAVTA new outreach program, Livermore Needs Committee, Tri-Valley Spare the Air and School Districts; Provide orientation to teachers to promote the Class Pass Program for school field trips

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Marketing and Public Awareness: Improve visibility, image, and awareness of Wheels	
Objective	Performance Standard
Plan, organize and direct public involvement activities to support fare/service changes	Hold one or more informal public workshops before finalizing recommendations; Hold public hearing when final draft recommendations are ready
Conduct Commuter Fairs at employer worksites to promote Wheels services and regional connectivity	Target employers that have 100+ employees
Work with local high schools to develop art for bus shelters	Complete two art shelters projects every year
Print Wheels Transit Guide and bus stop information displays to coincide with service changes	Prepare with every major service changes
Hold in-house training sessions for drivers so they understand they are our front-line ambassadors	Conduct monthly training

Community and Economic Development: Utilize transit as an essential community and economic development tool for local communities	
Objective	Performance Goal
Review development plans for inclusion of transit stops and transit stop furnishings	To meet objective

Financial Management: Maintain fiscal responsibility to ensure financial sustainability of existing and new transit services	
Objective	Performance Goal
Develop service plans that are affordable in the current year and sustainable over the longer term.	To meet objective

Source: LAVTA, SRTP, 2012

Appendix D – Land Use

Excel Spreadsheet

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