



**METROPOLITAN  
TRANSPORTATION  
COMMISSION**

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***Memorandum***

TO: Select Committee on Transit Sustainability

DATE: March 27, 2013

FR: Deputy Executive Director, Policy

W.I. 1517

RE: Inner East Bay Comprehensive Operational Analysis

Staff recommends the Select Committee refer Resolution No. 4060, Revised to the Commission for approval to incorporate the Inner East Bay Comprehensive Operational Analysis (COA) recommendations, as described in this memorandum and presentation slides.

**Inner East Bay Comprehensive Operational Analysis**

Early in the TSP process, the Commission identified the Inner East Bay as a strong transit market with capacity for further ridership growth and interagency coordination. An Ad-Hoc Committee of board members from AC Transit, BART and MTC provided direction to staff. In cooperation with AC Transit and BART, the Commission has developed a framework for addressing service improvements in the Inner East Bay including joint agency planning and coordination for Transbay services, service designs that reinforce spontaneous use in the urban core, and a joint fare product pilot program.

The Inner East Bay COA was developed to promote a seamless Inner East Bay bus and rail transit system. Specific recommendations are outlined below and detailed in the attached presentation.

***BART Service Recommendations for the Inner East Bay***

1. Change the dominant BART role from commute to Urban Metro integrated with the Inner East Bay bus network.
2. Implement capacity utilization strategies.
3. Ensure Title VI/Environmental Justice considerations are addressed in both service quality and coverage.

*AC Transit Service Recommendations for the Inner East Bay*

1. Focus resources on key urban trunk corridors to provide “spontaneous use” Metro network.
2. Redefine “coverage service” or service that provides basic access to transit regardless of ridership levels, as 30 minutes or higher.
3. Invest in service speed improvements.
4. Transbay pilots based on the following design options:
  - a. Current service model modified to improve productivity and cost effectiveness
  - b. Fast, frequent shuttles to BART stations
  - c. Augment BART with Transbay service
5. Ensure Title VI/Environmental Justice considerations are addressed in both service quality and coverage.

*Joint Fare Product Pilot Programs Recommendation*

Staff recommends implementing two pilot fare product programs to provide incentives for customers to use AC Transit and BART interchangeably. The pilots will test the concept that reducing transfer barriers between AC Transit and BART service allows customers to select the optimal mode for each trip. The evaluation of the programs will assess the tradeoffs between Inner East Bay fare revenue and ridership growth.

The first pilot would increase the current 25 cent discount to \$1 for customers transferring from AC Transit to BART. The second pilot would establish a \$1 discount on any trip that utilizes both systems. The pilots would be limited to several hundred participants each and utilize Clipper cards without any hardware or software changes to the Clipper system.

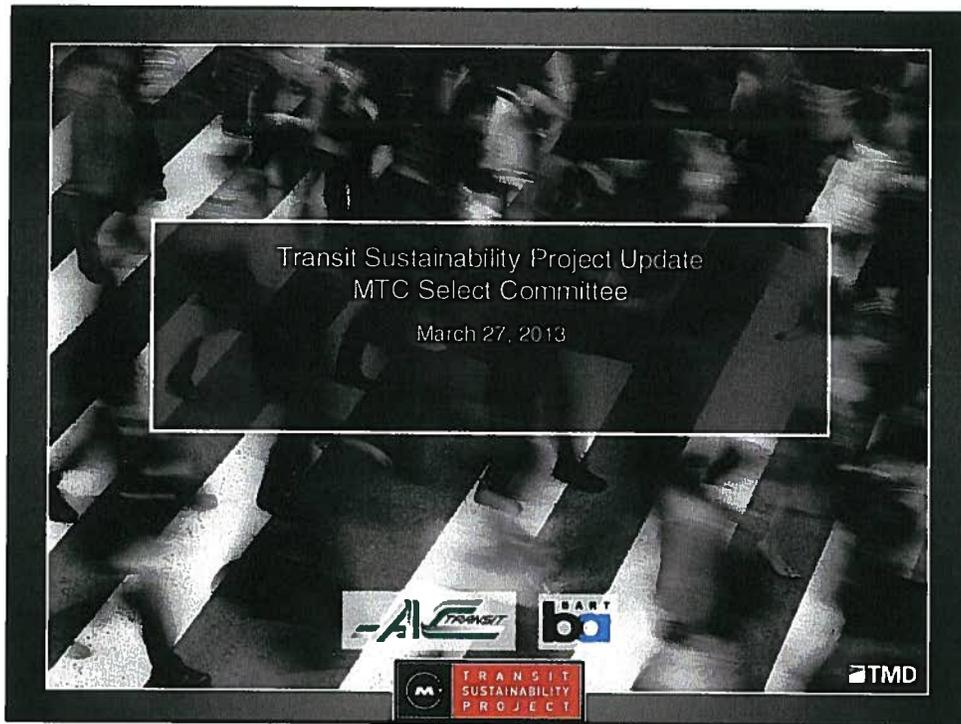
Staff intends to develop a funding and implementation plan for the Joint Fare Product Pilot Programs for consideration by the Programming and Allocations Committee later this summer.

**Recommendation**

Staff recommends the Select Committee refer Resolution No. 4060, Revised, to the Commission for approval.

  
\_\_\_\_\_  
Ann Flemer

Attachment



## Agenda

1. TSP Implementation Update
2. Inner East Bay Comprehensive Operational Analysis (COA)
  - a) AC Transit COA Progress Update
  - b) BART Metro Update



## TSP Implementation Update



3

## Transit Performance Initiative – Investment

Low cost capital investments to improve operations and customer experience

### Funding:

- \$28 million - programmed to five projects (1st round)
- \$54 million - remaining to be programmed
  - Late 2013 - \$27 million (2nd round - proposed)
  - Early 2015 - \$27 million (3rd round - proposed)



## Transit Performance Initiative – Incentive

- Provide a financial reward to those agencies that improve ridership and/or productivity
- Funding:
  - \$60 Million over four fiscal years
    - Transition year: \$15 million distributed based on ridership (90% programmed to projects in January 2013)
    - Future years: \$15 million based on formula
      - 85%/15% Large/Small Operator Split
      - Small Operator Formula: 50% Annual Ridership; 25% Ridership Increase; 25% Passenger per Hour Increase
      - Distribution formula for Large Operators to be determined by future Commission action



## Large Operator Strategic Plans

- Strategic Plans under development by the largest seven operators to demonstrate plan to meet the 5% reduction in one of the following metrics:
  - Cost Per Service Hour
  - Cost Per Passenger
  - Cost Per Passenger Mile
- Plans due to MTC by end of March 2013
- Staff will provide update on strategic plans at next Select Committee meeting



## Tri-City/Tri-Valley Transit Study

- TSP Inner East Bay Comprehensive Operational Analysis identified the need for a more focused transit study in Southern Alameda County.
- MTC created a Policy Advisory Committee to investigate ways to improve service in the Tri-City/Tri-Valley areas served by LAVTA, Union City and AC Transit
- TCTV Transit Study is divided into two components:
  - Develop a service plan with service delivery options (Summer 2013)
  - Review service delivery models and institutional structures to best meet service recommendations (Late 2013)
- The Policy Advisory Committee will report findings and recommendations to the MTC Select Committee



## Additional TSP Focus Areas

- Coordinated Short Range Transit Planning in North Bay
- Coordinated Transit Passenger Surveys
- Additional Sub-regional and corridor specific planning under development



## Inner East Bay Comprehensive Operational Analysis (COA)



9

### Goals of the Inner East Bay COA

- Promote a **seamless Inner East Bay** bus and rail transit system
- **Build the Urban Core** to allow for spontaneous bus and rail network use by customers
- Match bus and rail service levels with demand, focusing on **improving service productivity** while **increasing overall system ridership**
- Ensure on-going **financial sustainability**



10

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11

## Recommendations

- 1 BART Service Recommendations**
- 2 AC Transit Service Recommendations**
- 3 Develop Joint Fare Product Pilot programs**



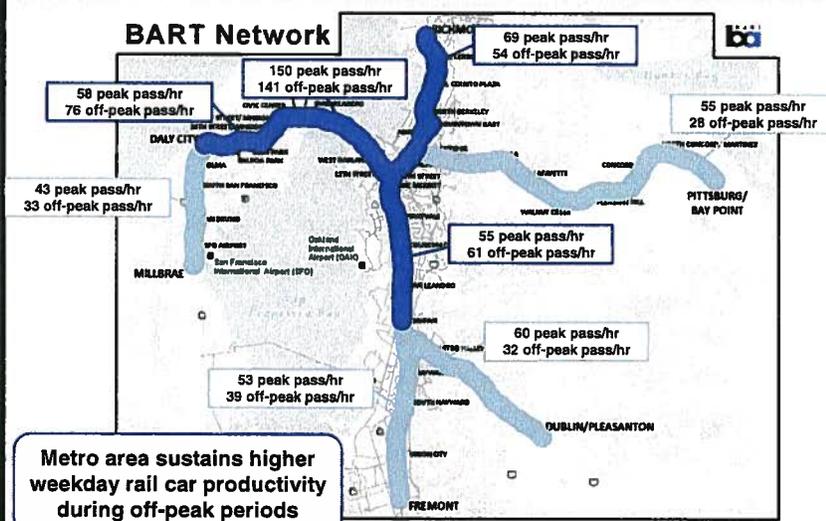
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# 1 BART Service Recommendations (IEB only)

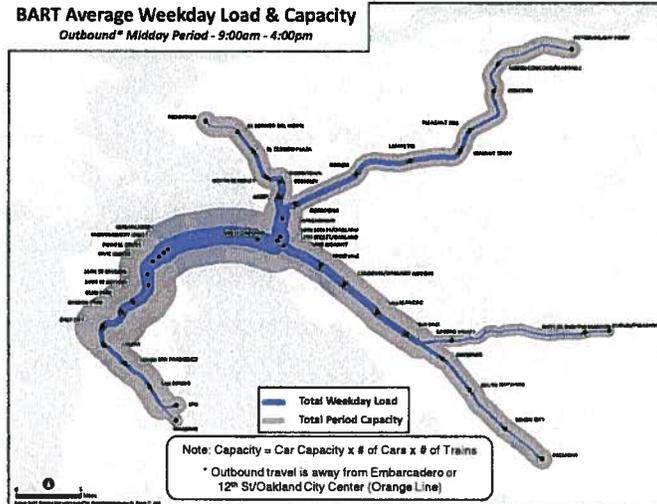
- Change dominant **BART role** from Commute to **Urban Metro** integrated with Inner East Bay bus network
- Implement **Capacity and Utilization Strategies**
  - Peak: operate max trip levels longer; achieve 10-car trains consistently; increase car capacity; use Metro line tumbucks; transit congestion pricing
  - Off-Peak: reconsider "one-seat" Commuter network during lower demand periods; "seamless" system will generate more riding during off-peak
- Ensure Title VI/Environmental Justice considerations are addressed in both service quality and coverage



## Focus BART Role on Urban Metro (IEB only)



## Address Capacity Imbalance



## 2 AC Transit Recommendations

- Focus resources on key urban trunk corridors to provide “spontaneous use” Metro network
- **Redefine coverage service** as 30 minutes or higher
- **Invest in service speed improvements**
- **Transbay pilots** based on the following design options:
  - **Current Service Model** modified to improve productivity and cost effectiveness
  - **Fast, Frequent Shuttles** to BART stations
  - **Augment BART** with Transbay service
- Ensure Title VI/Environmental Justice considerations are addressed in both service quality (spontaneous use) and coverage



## Support Spontaneous Bus and Rail Use

- Create an Urban Trunk and BART network of “**spontaneous use**” services (target is **10 minutes** or better) that reduce wait times and attract ridership

Frequency	Percent of Cost	Productivity	
10 Minutes	26%	52.2 pph	Spontaneous Use
11-15 Minutes	19%	41.0 pph	
20-30 Minutes	37%	24.7 pph	Coverage
45-75 Minutes	18%	16.8 pph	

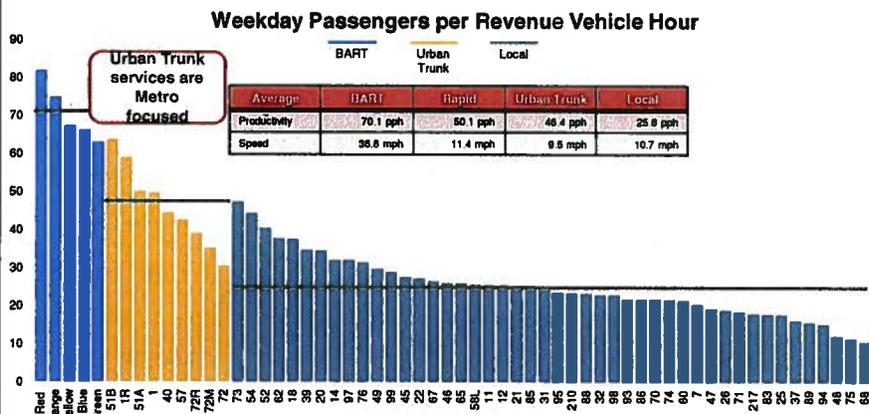
- Manage role and minimize cost of network coverage
  - Redefine threshold between spontaneous use network (15-min or better) and coverage (30-min or more)
  - Identify alternative service options tailored to specific market needs



17

## Invest in Speed Improvements

- Focus service investment where productivity is highest (spontaneous use network)
- Reduce cost through more efficient service design and faster operating speeds



18

## Rethink Transbay Bus

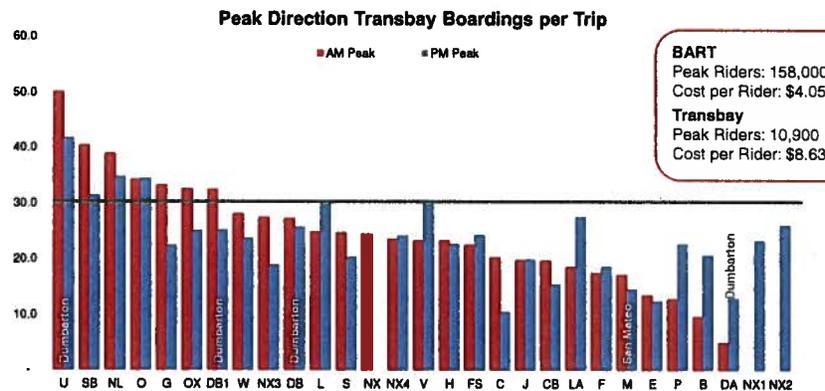
- Transbay service overlaps with BART for some trips to/from San Francisco
  - Transbay costs more per passenger boarding than BART
  - Transbay service is underutilized
- Current Transbay service role extends beyond just augmenting BART capacity
  - Where is additional cross-bay bus capacity needed?
  - Are there holes in the BART network where Transbay can have a complementary role?
  - Can some Transbay service be reconfigured in a "higher frequency shuttle to BART station" role?
  - Potential new role to fill time-of-day BART service gap?
  - How can fares and parking pricing support an integrated network?



19

## Transbay Bus is Underutilized

- On average Transbay routes carry 26 passengers per trip in the peak direction
- General industry standard is ~30 passengers per trip for express services
- All routes recover less than half of peak period operating costs



20

### 3 Joint Fare Product – Pilot Concepts

**Seamless IEB transit network will require shift of BART and bus service toward Metro role with supporting fare structure**

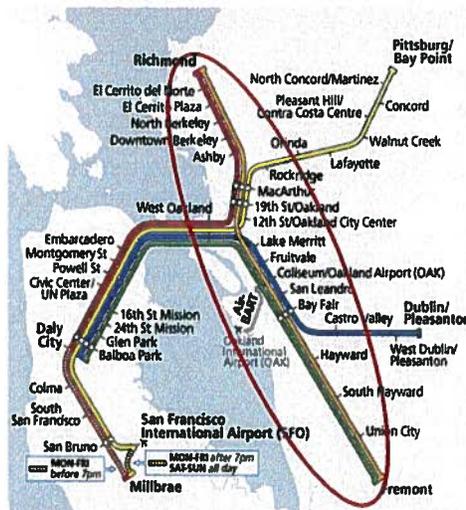
- Implement pilot program to remove transfer barriers between rail and bus modes
  - Develop two fare products that allow for seamless transit use
  - Assess tradeoffs between IEB revenue and ridership growth
  - Test pilot program



21

### Inner East Bay (IEB)

- 21 IEB BART stations (16 between Richmond and Bay Fair)
  - 91% of AC Transit ridership is in the IEB (large circle, excludes Transbay ridership)
  - 11% of BART ridership is fully contained within the gray zone
- 3.3 to 5 million transfers between AC Transit and BART annually
- Average fare paid per linked trip, including both segments: \$3.17
- 61% of AC Transit – BART transfers involve travel contained within the IEB



22

## Recommend Joint Fare Products – Pilot Programs

Implement two six-month pilot programs to test 1) Increase in current transfer discount from 25 cents to \$1; and 2) Expanded two-way \$1 discount on trips utilizing both systems

**Rationale:**

- Test travel behavior
- Survey customer response
- Limit risk and throw-away cost

**Proposed Pilot Concept:**

- Approximately 100 pilot participants per program (Current AC Transit pass holders, current BART riders, new riders)
- Cost estimated at ~\$500,000 for both programs (fare subsidy and pilot program administration)
- Participants will use Clipper cards but pilot programs will not require hardware/software changes



23

## Preliminary Analysis – Based on Price Elasticity

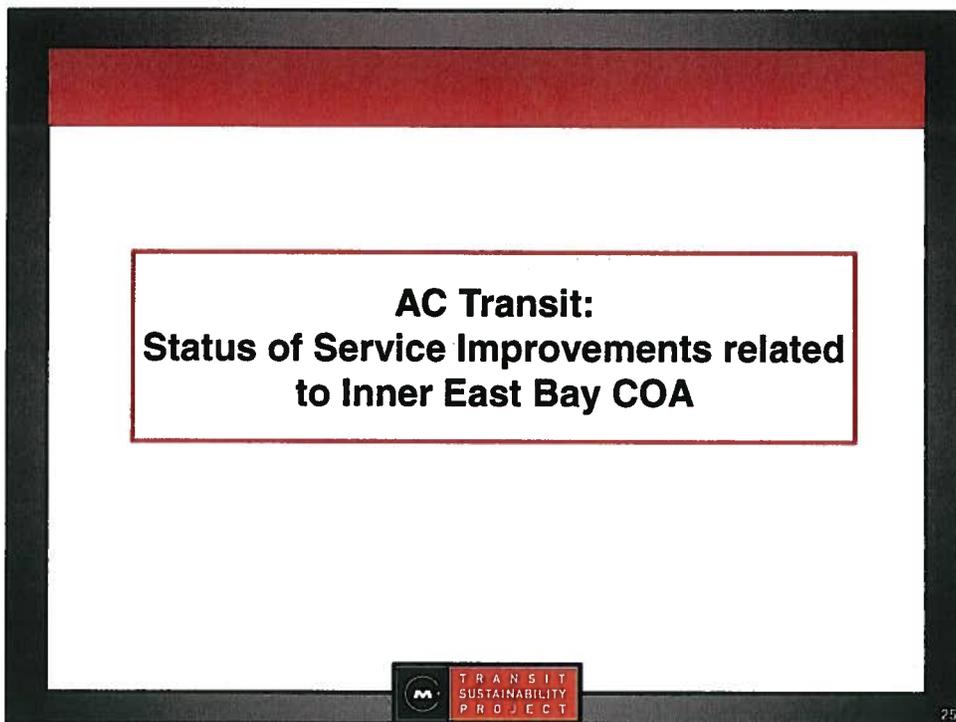
	Annual Total* Ridership Increase	Annual Total* Fare Revenue Loss
Expanded two-way transfer discount	400,000 – 650,000	\$1.7 – 2.7 Million

\* Includes AC Transit and BART

- Estimates above are driven solely by price (the \$1 two-way transfer discount). Other potential customer advantages include:
  - Incentive for customers to use transit for entire trip
  - Increases price competitiveness of transit
  - Pilot programs could be replicated across region
- Data not available for Pilot #1 (BART to Bus Discount)



24



**AC Transit:  
Status of Service Improvements related  
to Inner East Bay COA**

**M** TRANSIT  
SUSTAINABILITY  
PROJECT

25



**Inner East Bay  
Comprehensive Operations  
Analysis**

TSP Select Committee  
March 27, 2013

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26

## Inner East Bay COA Guiding Principles

- Focus resources on key urban trunk corridors to provide “spontaneous use” urban core network
- **Redefine coverage service** as 30 minutes or better
- **Invest in service speed improvements**
- **Enhance Transbay service** using several service design options
- Improve productivity and efficiency



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27

## Urban Trunk Toolkit

- Guiding principles/service design context
- Service options
- Speed improvement toolbox
- Urban Trunk recommendations
- Branding



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28

## Urban Core

- Boundaries are defined as Bayfair BART Station to Richmond/Pinole border
- Focus investments where there is ridership and productivity
- Identify highly productive corridors outside of the urban trunks
- Define coverage frequency as 30 minutes or better



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29

## Transbay Guiding Principles

- Improve Transbay service productivity
- Maximize operating efficiency
- Improve time-competitiveness with other modes of transportation
- Effectively reduce overall Transbay crossing congestion
- Provide a broader regional benefit



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30

## Transbay Recommendations

- High-Density Residential Market Service – focus service on high density corridors with limited stops or potentially on-route park-and-rides
- Park-and Ride Service – reorient service around 1-2 park-and-ride facilities with space for around 35-40 cars per trip
- Augment BART service – Provide express bus service to add capacity to the Transbay network
- Marketing – New service proposals must be co-marketed with BART to ensure success and viability



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31

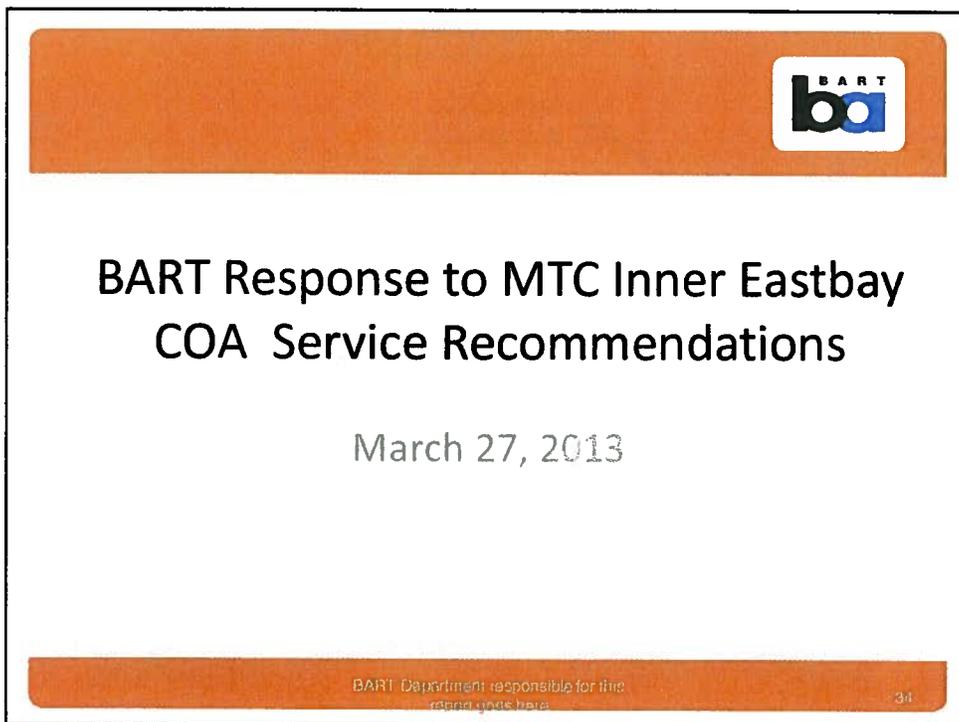
## Flex Service

- Flex Service is a new component of the COA that will help to improve productivity and efficiency of service. It includes the following characteristics:
  - bus service with deviations to cater more toward individual passengers
  - subscriptions and reservations, or routing can be determined at the start of the line
  - appropriate for low density areas such as the East Bay Hills and parts of Central and South County where demand is lower
- Flex Service will be considered as a service delivery option in the Tri-City/Tri-Valley Study and will be explored as subset of the COA



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32



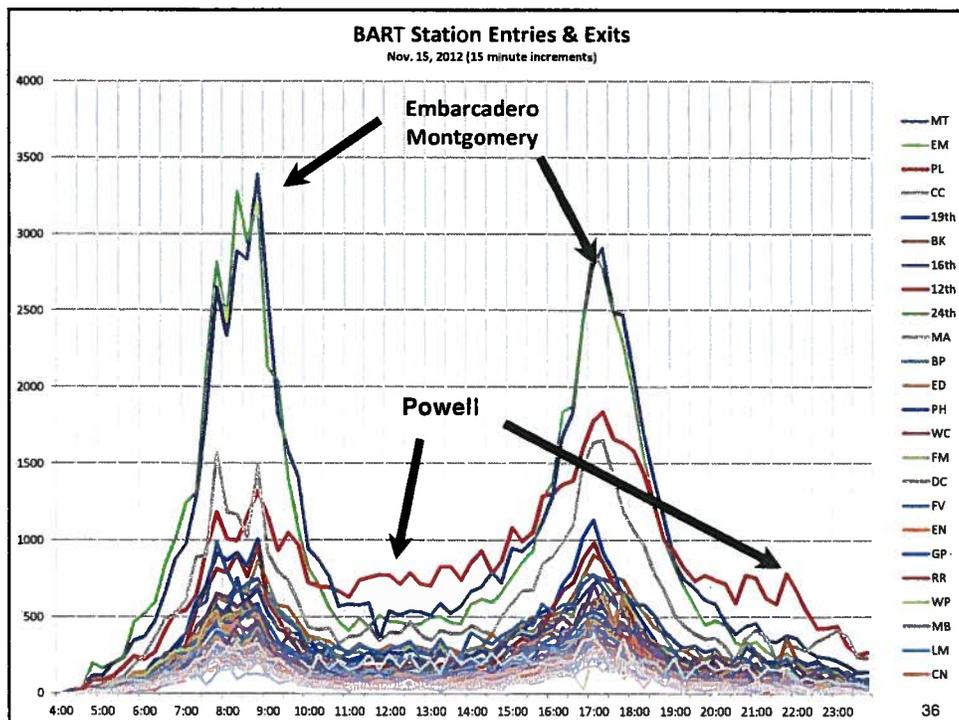
## Carrying 500,000 Passengers/Day and Beyond



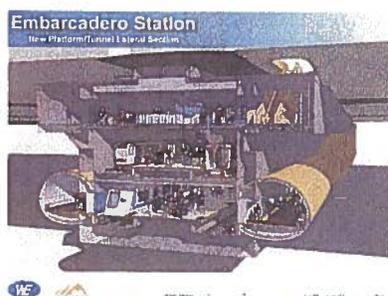
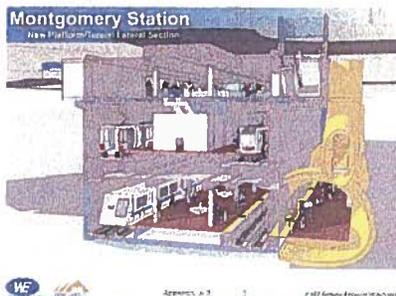
- 3% growth = 500,000 by 2018, 750,000 by 2030
- Three big ticket capacity improvement projects are on the near-term critical path:
  1. 225 more cars → 1,000 Rail Vehicle Fleet
  2. Closer running trains → Train Control System Modernization
  3. Expanded / Improved maintenance facilities → Hayward Maintenance Complex
- Approximate cost = \$2.1 Billion (proposed BART Share \$650 Million)
- Price tag for other key capacity projects is \$1.5 Billion: (New Rail Yard, Saddlebags, Crossovers, Connector, Pocket Tracks, Elevators)

San Francisco Bay Area Rapid Transit District

33



## The Ultimate Solution to Station Capacity Issues: "New Side Platforms"

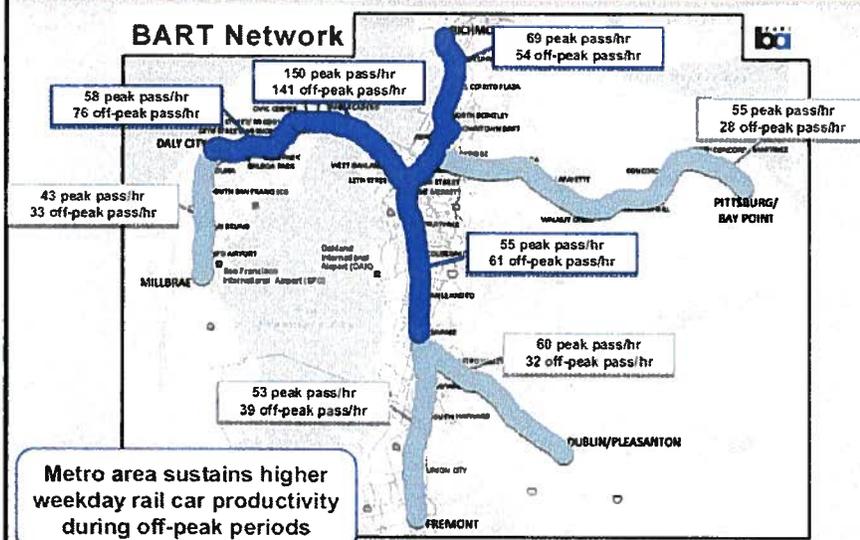


Total Estimated Construction Cost: \$615 million (2009 dollars)  
 Mission Critical Improvement as ridership starts to exceed 500,000 per weekday

San Francisco Bay Area Rapid Transit District

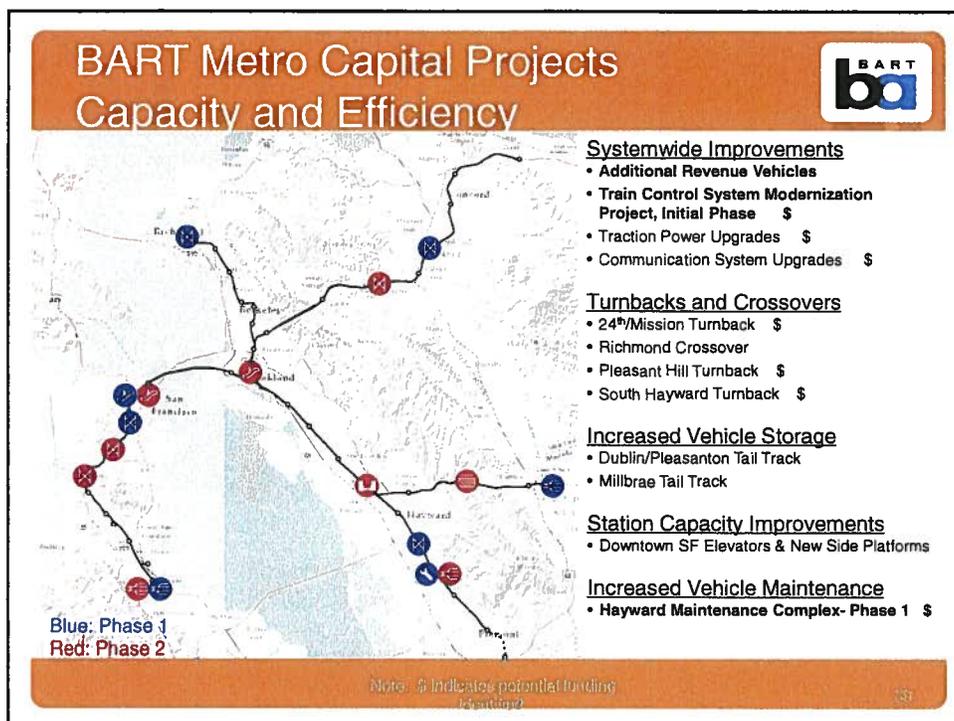
37

## Rail Productivity



Metro area sustains higher weekday rail car productivity during off-peak periods





## Next Steps: Inner East Bay COA

- Receive input from AC Transit and BART board members and the public
- MTC to consider adopting COA recommendations on April 24
- MTC to develop and approve Joint Fare Product Pilot programs implementation plan in Summer 2013
- Implementation of COA recommendations