



## **West County High-Capacity Transit Study**

# **Council Presentations**

February 28, 2017 – March 21, 2017





# Introduction



# West County High-Capacity Transit Study

## Member Agencies



## Study Sponsors



## Study Partners



## Study Team



M Lee Corporation



VALLIER DESIGN ASSOCIATES, INC.



# What is “high-capacity” transit?



High-capacity transit provides:

- Substantially higher levels of passenger capacity
- Fewer stops and higher speeds than local public bus services
- Daily commute-to-work options

# Study Process

Public Outreach & Participation

## Assessment

- Goals & Objectives
- Relevant Prior Studies
- Existing & Future Transportation & Land Use
- Market Analysis

## Alternatives Development & Analysis

- Conceptual Alternatives
- Evaluation Criteria
- Preliminary Evaluation
- Alternatives Refinement
- Ridership Modeling
- Cost Estimates

## Final Alternatives

- Funding Options
- Final Alternatives Evaluation ← *We are here*

## Final Plan

- Summary of Findings/Recommendations
- Next steps beyond this study

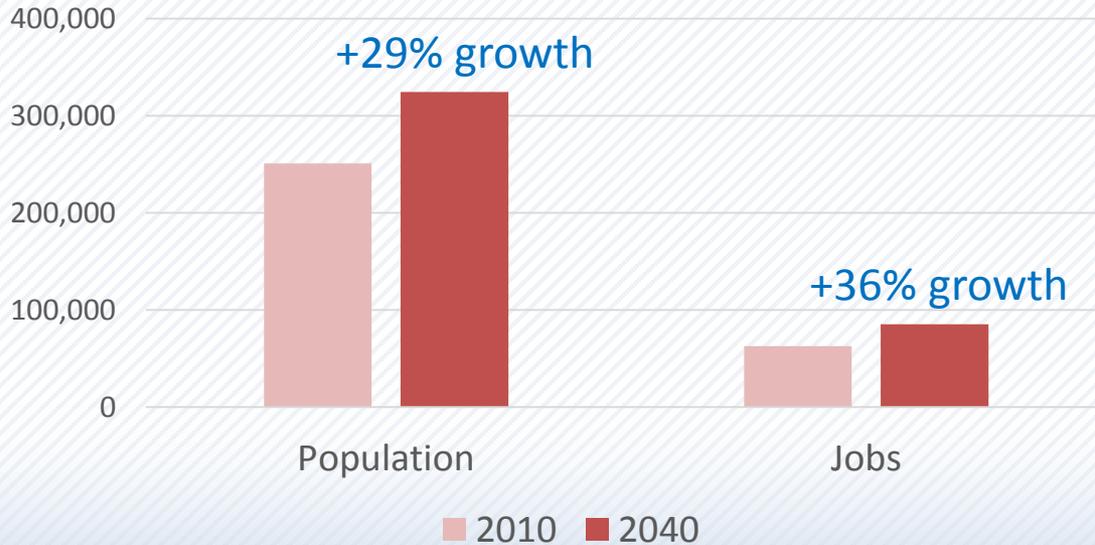
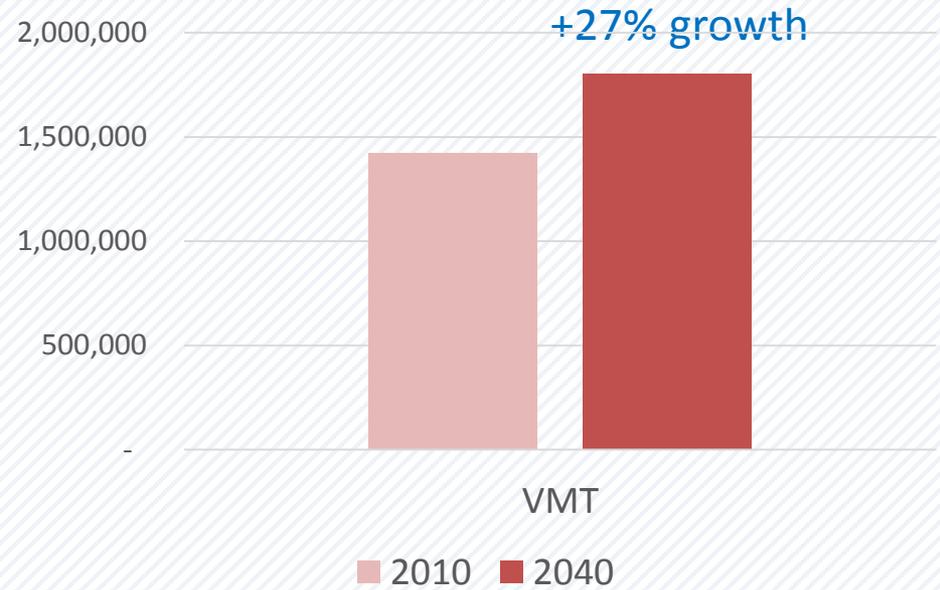
# Public Outreach and Participation

WHAT	<p><b>WEST COUNTY TELEPHONE CALL-IN</b></p> <p><i>*Note: Toll-free call-in details will be mailed out and posted online</i></p> 	<p><b>ROUND 1 ONLINE SURVEY</b></p> 	<p><b>ROUND 1 COMMUNITY WORKSHOPS</b></p> 	<p><b>ROUND 2 ONLINE SURVEY</b></p> 	<p><b>ROUND 2 COUNCIL PRESENTATIONS</b></p> 	<p><b>FINAL PROPOSAL</b></p>
	<p><i>Learn more about the Study and concurrent planning efforts</i></p>	<p><i>Provide input on the preliminary list of alternatives</i></p>	<p><i>Provide input on the draft alternatives</i></p>			
WHEN	<b>NOVEMBER 2015</b>	<b>APRIL 2016</b>		<b>FEBRUARY - MARCH 2017</b>		<b>MAY 2017</b>



*We are here*

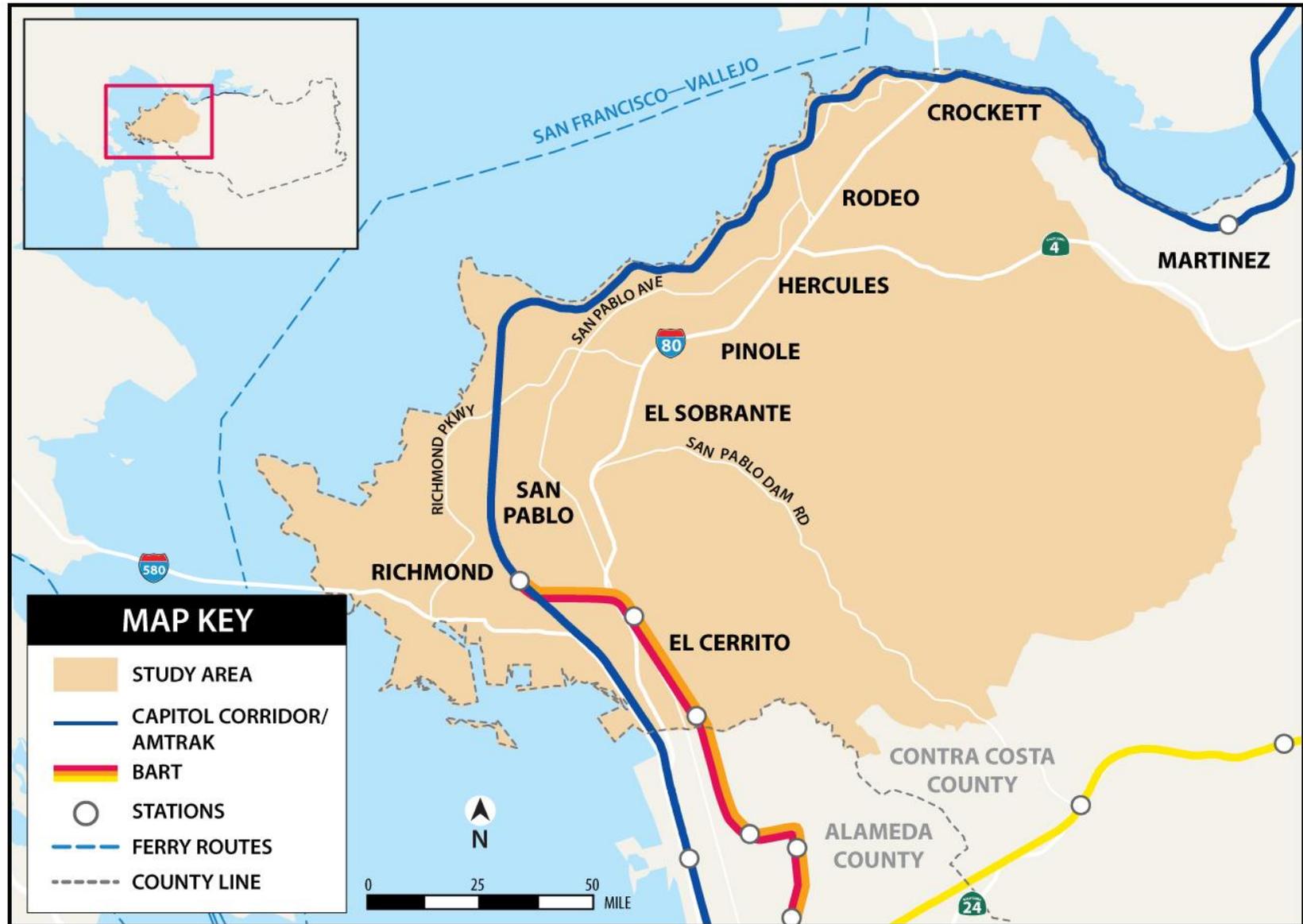
# Study Background



# Study Purpose

- Evaluate high-capacity transit options in West County's travel corridors
- Consider multimodal transit options including:
  - Freeway-based express bus
  - Bus rapid transit (BRT)
  - Light rail transit
  - Commuter rail
  - BART and
  - Ferry
- Provide a planning and road map for West County jurisdictions to pursue funding for transit improvements

# Study Area





# Overview of Alternatives



# Remaining Alternatives

## Alternatives



1: Express Bus



2: BRT on San Pablo/MacDonald



3: BRT on 23rd Street



4: Commuter Rail



6A: BART Extension – Rumrill Boulevard



6B: BART Extension – Richmond Parkway



# Express Bus





# Alternative 1: Express Bus

- Provide more service
- Expand service to new markets - Berkeley, Emeryville, and Oakland as well as San Francisco
- Improved links to freeway and effective use of HOV lanes
- Direct access ramps allows faster service
- Can be done in stages:
  - 3 years for operations to East Bay along I-80
  - 15 years for full suite of proposed improvements
- Projected ridership 2040
  - 11,160 total daily riders
  - 3,030 net new daily riders





# Express Bus: Capital Cost



Time Horizon	Cost (2017 \$)
<b>Short-term</b> <ul style="list-style-type: none"> <li>Increase existing bus frequency</li> <li>New service to Berkeley, Oakland, Emeryville</li> <li>Transit priority improvements</li> </ul>	\$11 m
<b>Medium-term</b> <ul style="list-style-type: none"> <li>Bus stop improvements – Berkeley, Emeryville, Oakland</li> <li>Expanded parking Richmond Pkwy. and Hercules Transit Centers</li> </ul>	\$91 m
<b>Long-term</b> <ul style="list-style-type: none"> <li>Freeway ramp improvements at I-80/Macdonald, Richmond Parkway and Hercules Transit Centers</li> <li>New Express Bus-BRT transit center at Macdonald and I-80</li> </ul>	\$143 m
<b>Total</b>	<b>\$245 m</b>



# Express Bus: Service to Alameda County

## Direct Service to Alameda County

- Downtown Berkeley
- Emeryville
- Downtown Oakland



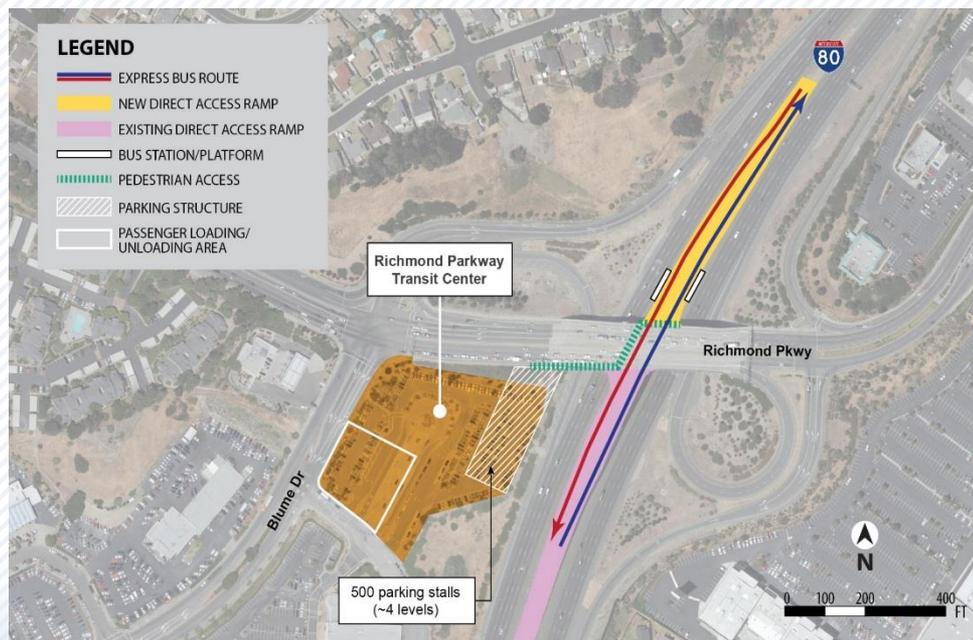


# Express Bus: Access Ramps

- Purpose to facilitate bus operations between transit centers and HOV/HOT lanes
  - Reduce weaving across multiple freeway lanes
  - Improve travel times and reliability for transit vehicles
- Potential access ramps at:
  - Richmond Parkway Transit Center
  - Hercules Transit Center



Direct access ramp, Bellevue, WA





# Bus Rapid Transit (BRT)





## *Rapid Bus*



## *Hybrid BRT*



## *Full BRT*



### **Line 72 Rapid, AC Transit**

- A. More frequent service
- B. Transit signal priority
- C. Queue-jumps
- D. Branding

### **EmX, Eugene, OR**

- A-C plus*
- D. Some bus-only lanes
- E. More station amenities
- F. Specialized vehicles
- G. Off-board fare collection

### **Health Line, Cleveland, OH**

- A-G plus*
- H. Bus-only lanes for majority of corridor

*BRT is customizable. Specific features will depend on each specific system's needs.*



# BRT on San Pablo Avenue/ Macdonald Avenue



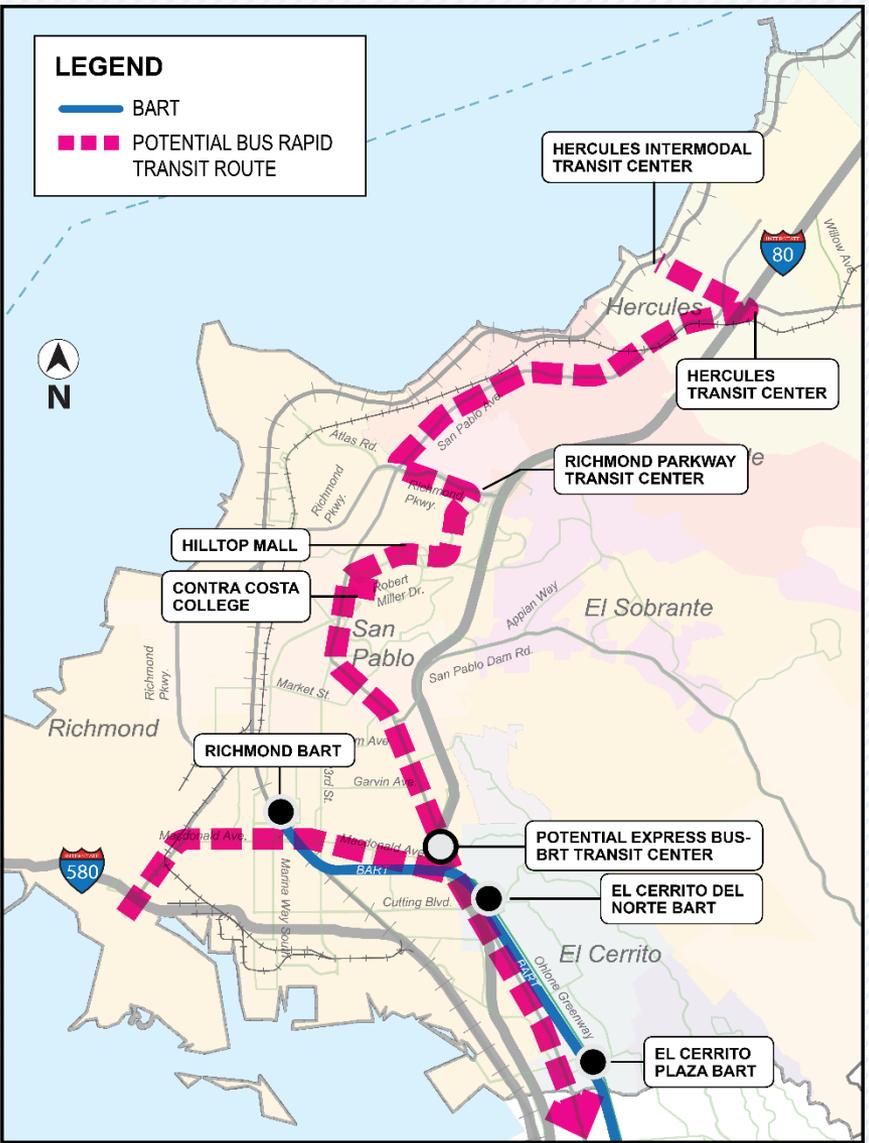
# Alternative 2: BRT on San Pablo/Macdonald Avenues



- Serves the heart of West County transit market
  - One of East Bay's highest ridership corridor
  - Includes many PDAs
- Extension of potential AC Transit BRT project
- Service affords flexibility in implementation
  - Builds on Rapid Bus infrastructure currently in place in corridor
- Projected ridership 2040
  - 11,460 total daily riders
  - 3,210 net new daily riders



# BRT on San Pablo/Macdonald: Capital Costs



Time Horizon	Cost (2017 \$)
<b>Short-term</b> <ul style="list-style-type: none"> <li>Transit priority improvements</li> <li>Extend Rapid Bus improvements to Richmond Parkway</li> </ul>	\$3 m
<b>Medium-term</b> <ul style="list-style-type: none"> <li>Extend Rapid Bus service to Hercules Transit Center</li> <li>Expanded parking at Richmond Parkway and Hercules Transit Centers</li> <li>San Pablo bus-only lanes – El Cerrito del Norte to 23rd Street</li> <li>Macdonald bus-only lanes – San Pablo to 23rd Street</li> </ul>	\$180 m
<b>Long-term</b> <ul style="list-style-type: none"> <li>San Pablo bus-only lanes – 23rd Street to Richmond Parkway</li> <li>Express Bus-BRT TC at Macdonald/I-80</li> <li>Extend Rapid Bus service to RITC</li> </ul>	\$60 m
<b>Total</b>	<b>\$243 m</b>



# BRT on 23rd Street





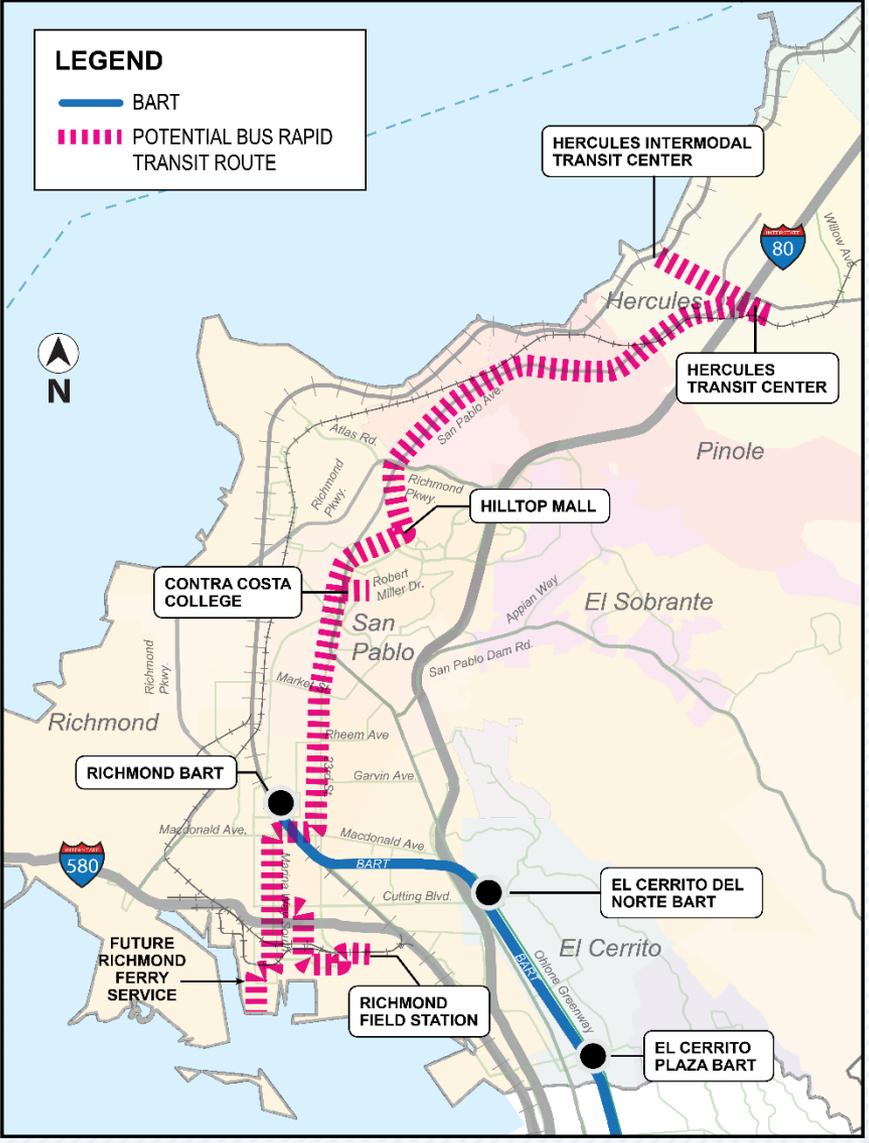
# Alternative 3: BRT on 23rd Street

- Serves the heart of West County transit market
- 23rd Street serves strong markets
  - Richmond and San Pablo
  - Richmond Field Station
  - New Ford Point ferry terminal
  - Marina Bay/Richmond Harbor districts
- Service affords flexibility in implementation
- Projected ridership 2040
  - 5,340 new daily riders





# BRT on 23rd Street: Capital Costs



Time Horizon	Cost (2017 \$)
<b>Short-term</b> <ul style="list-style-type: none"> <li>Transit priority improvements</li> <li>Improvements on 23rd Street from Macdonald to Richmond Field Station</li> <li>BRT station at Ford Point</li> </ul>	\$17 m
<b>Medium-term</b> <ul style="list-style-type: none"> <li>Expanded parking at Richmond Parkway and Hercules Transit Centers</li> <li>Bus-only lanes on 23rd Street between Macdonald and Rheem Avenues</li> <li>Extend Rapid Bus service to Hercules Transit Center</li> <li>New vehicles (20 buses)</li> <li>BRT stations</li> </ul>	\$99 m
<b>Long-term</b> <ul style="list-style-type: none"> <li>Bus-only lanes on 23rd/San Pablo from Rheem to Hilltop Mall</li> <li>Extend Rapid Bus service to RITC</li> <li>BRT stations</li> </ul>	\$63 m
<b>Total</b>	<b>\$179 m</b>



# Commuter Rail

(Regional Intermodal Transit Center and  
Capitol Corridor Fare Subsidy)





# Alternative 4: Commuter Rail

- Significant transit travel time savings
- Full build-out of Regional Intermodal Transit Center (RITC) at Hercules, with Capitol Corridor stop
- Fare subsidy for West County travelers
  - Estimated cost for 75% subsidy
    - \$5,708,000 for three-year pilot
    - \$11 cost per rider
    - \$39 cost per new rider
  - Estimated new daily riders
    - 186 riders with 75% subsidy
- Projected ridership 2040 with RITC
  - 440 new daily riders



# Capitol Corridor Fare Subsidy + RITC: Capital Costs



Time Horizon	Cost (2017 \$)
Short-term <ul style="list-style-type: none"><li>Fare subsidy pilot (operating costs)</li></ul>	--
Short/Medium-term <ul style="list-style-type: none"><li>Build-out of Regional Intermodal Transit Center (RITC)</li></ul>	\$51 m
<b>Total</b>	<b>\$51 m</b>





# BART





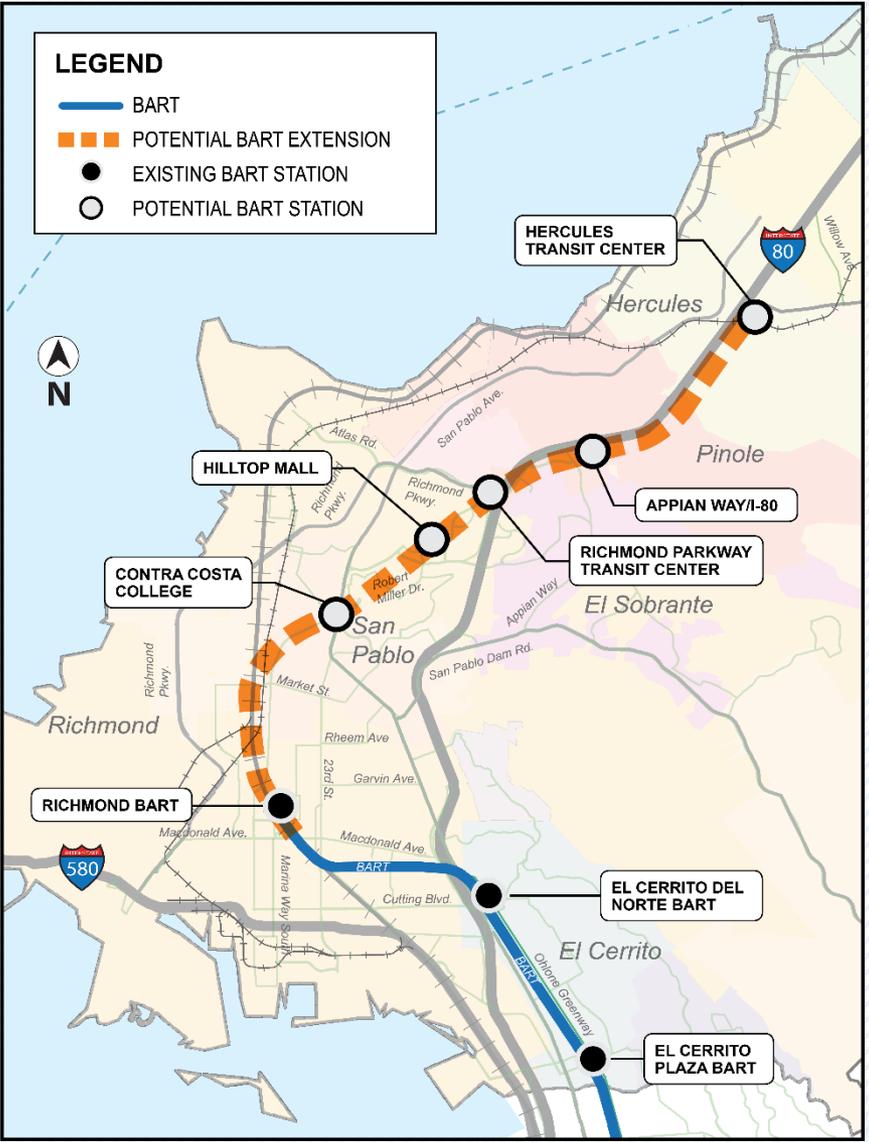
# Alternatives 6A and 6B: BART Extension from Richmond station

- BART carries 35% of transit ridership in West County on an average weekday
- El Cerrito del Norte BART station is reaching capacity
- Provides most connections to major destinations in Bay Area
- Draws transit riders closer to their trip origin
- Provides most reliable transit service
- Projected Ridership 2040
  - 32,530 total daily ridership
  - 6,370 net new daily ridership



(c) Jeremiah Cox

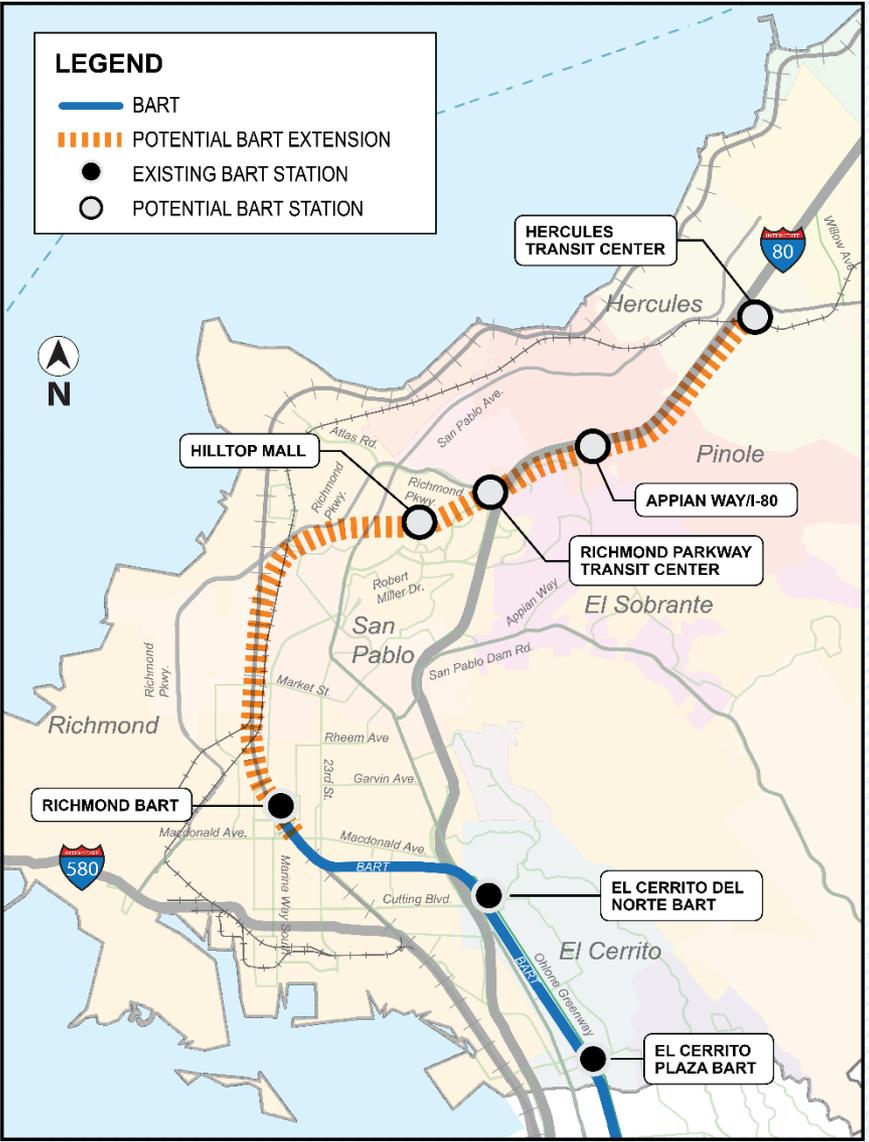
# BART Extension via Rumrill Blvd: Capital Cost



Time Horizon	Cost (2017 \$)
<b>Short-term</b> <ul style="list-style-type: none"> <li>• Conceptual engineering</li> <li>• Program-level environmental clearance</li> </ul>	\$56 m
<b>Medium-term</b> <ul style="list-style-type: none"> <li>• Preliminary engineering</li> <li>• Project-level environmental clearance</li> </ul>	\$74 m
<b>Long-term</b> <ul style="list-style-type: none"> <li>• BART service to Hercules</li> <li>• ROW Acquisition</li> <li>• Vehicles (60 cars)</li> <li>• Stations and terminal yard</li> </ul>	\$3,452 m
<b>Total</b>	<b>\$3,582 m</b>

Note: There is a potential for phasing construction to reduce initial costs

# BART Extension via Richmond Parkway: Capital Cost



Time Horizon	Cost (2017 \$)
<b>Short-term</b> <ul style="list-style-type: none"> <li>• Conceptual engineering</li> <li>• Program-level environmental clearance</li> </ul>	\$69 m
<b>Medium-term</b> <ul style="list-style-type: none"> <li>• Preliminary engineering</li> <li>• Project-level environmental clearance</li> </ul>	\$92 m
<b>Long-term</b> <ul style="list-style-type: none"> <li>• BART service to Hercules</li> <li>• Vehicle acquisition (60 cars)</li> <li>• Stations and terminal yard</li> </ul>	\$4,000 m
<b>Total</b>	<b>\$4,161 m</b>

Note: There is a potential for phasing construction to reduce initial costs

# Summary of Alternatives

Alternative	Cost (millions) *	2020 Daily Ridership	2040 Daily Ridership	2040 Net New Daily Ridership
 1: Express Bus	\$245	8,780	11,160	3,030
 2: BRT on San Pablo/MacDonald	\$243	8,660	11,460	3,210
 3: BRT on 23rd Street	\$179	4,110	5,340	5,340
 4: Commuter Rail – RITC	\$51	--	440	440
 6A: BART Extension – Rumrill Boulevard**	\$3,600	21,980	32,530	6,370
 6B: BART Extension – Richmond Parkway**	\$4,200	21,980	32,170	6,010

\* Cost are in 2017 dollars.

\*\* Ridership numbers are for West County stations only.

EVALUATION CRITERIA	PERFORMANCE MEASURE
---------------------	---------------------



**RIDERSHIP**

Total riders

Net new riders



**COST AND EFFICIENCY**

Capital cost

Operating and maintenance cost

Annualized cost per rider



**SPEED AND RELIABILITY**

Transit travel time improvement

Transit travel time reliability



**ACCESS AND CONNECTIVITY**

Regional transit centers served

Quality of connections to existing transit systems and facilities

Service to West County markets lacking major transit connections



**FEASIBILITY**

Time to implementation



**COMMUNITY**

Consistency with local plans and policies

Public and stakeholder support

Economic and transit-oriented development (West County PDAs served)



# Looking for Feedback



# Next Steps for the Study

- Council Presentations

- 2/28 Richmond
- 3/6 San Pablo
- 3/7 Pinole
- 3/8 El Sobrante
- 3/14 Hercules
- 3/21 El Cerrito

- Online Survey

- Available 2/21 – 3/26

- Finalize Draft Plan with recommendations for next steps – May 2017



***Thank you!***

Stay informed. Get involved!

[www.WestCountyTransitStudy.com](http://www.WestCountyTransitStudy.com)

## **Make sure your voice is heard!**

- ✓ Fill out the online survey to give us your feedback on the alternatives being studied
- ✓ Submit a comment card
- ✓ Visit the website to learn more about the study