



## **West Contra Costa High-Capacity Transit Study**

### **WCCTAC Board Meeting**

January 22, 2016



# Project Overview

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
  - Funding Options
- We are here*

## Final Alternatives

- Final Alternatives Evaluation

# Board Actions

1. Overview of Telephone Town Hall Meeting
2. Concurrence on Alternatives and Evaluation Criteria
  - Tech Memo #7 – Travel Markets
  - Tech Memo #8 – Conceptual Alternatives
  - Tech Memo #9 – Evaluation Criteria
3. Action Items
  - Budget Amendments

# Telephone Town Hall – November 12, 2015

- Panel
  - Julie Pierce, CCTA Chair
  - Ross Chittenden, CCTA Chief Deputy Executive Director
  - John Gioia, Contra Costa County Supervisor
  - Sherry McCoy, WCCTAC Chair
  - John Nemeth, WCCTAC Executive Director
- 2,045 total attendees over 60 minutes
  - 700 at peak
  - 150 on average
- 18 questions answered on air



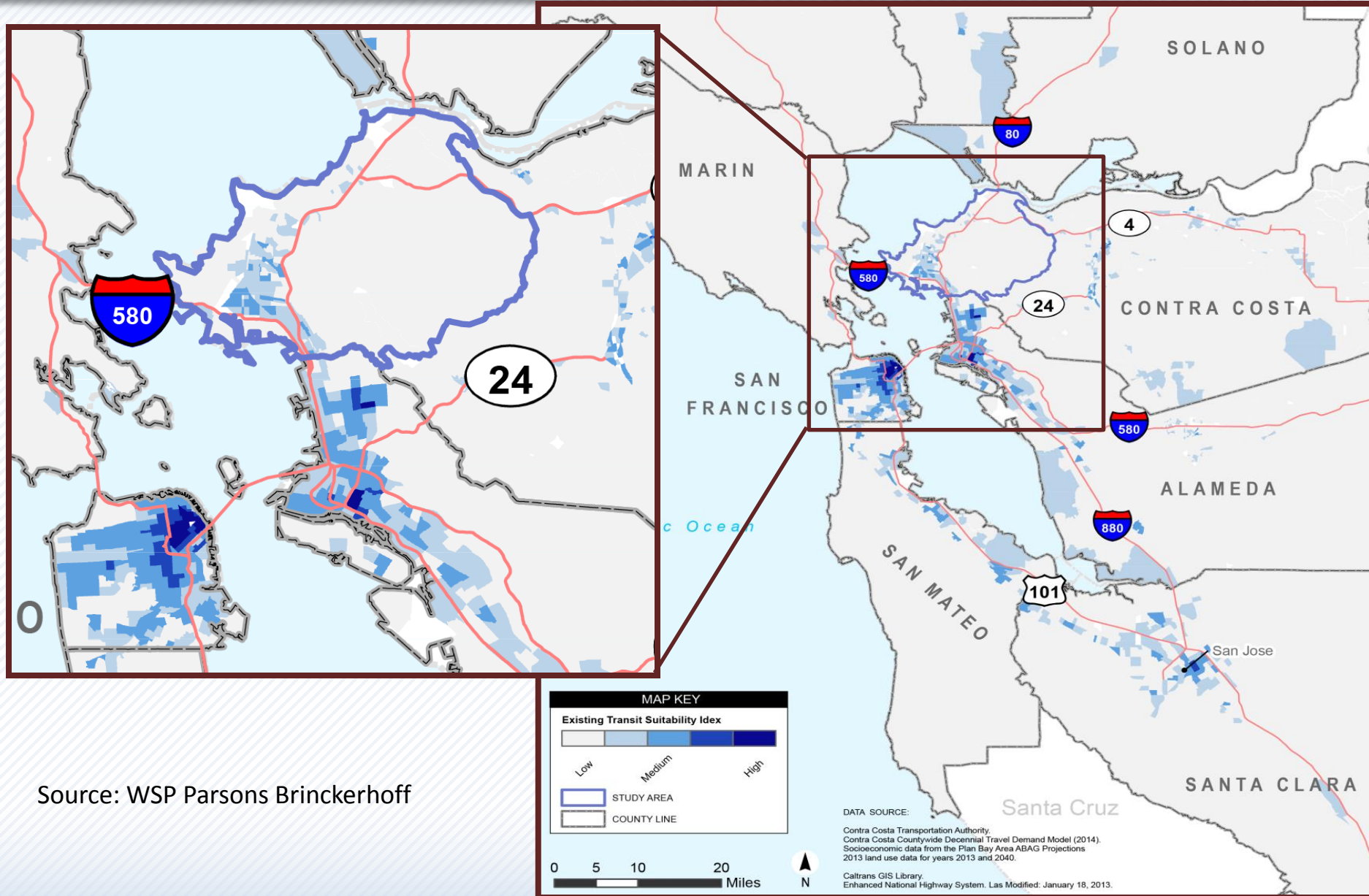
# Telephone Town Hall – Responses to Survey Questions

- 78% identified transportation or traffic congestion as a top concern for Contra Costa County
- 72% agreed that transit should be a West County transportation priority
- 57% favored BART investments, 25% Express Bus improvements, and 18% Capitol Corridor improvements
- Transit obstacles included:
  - Lack of good transit options – 39%
  - Transit too Slow – 25%
  - Transit too Expensive – 19%
  - Operating hours don't work with schedule – 17%

# Travel Markets

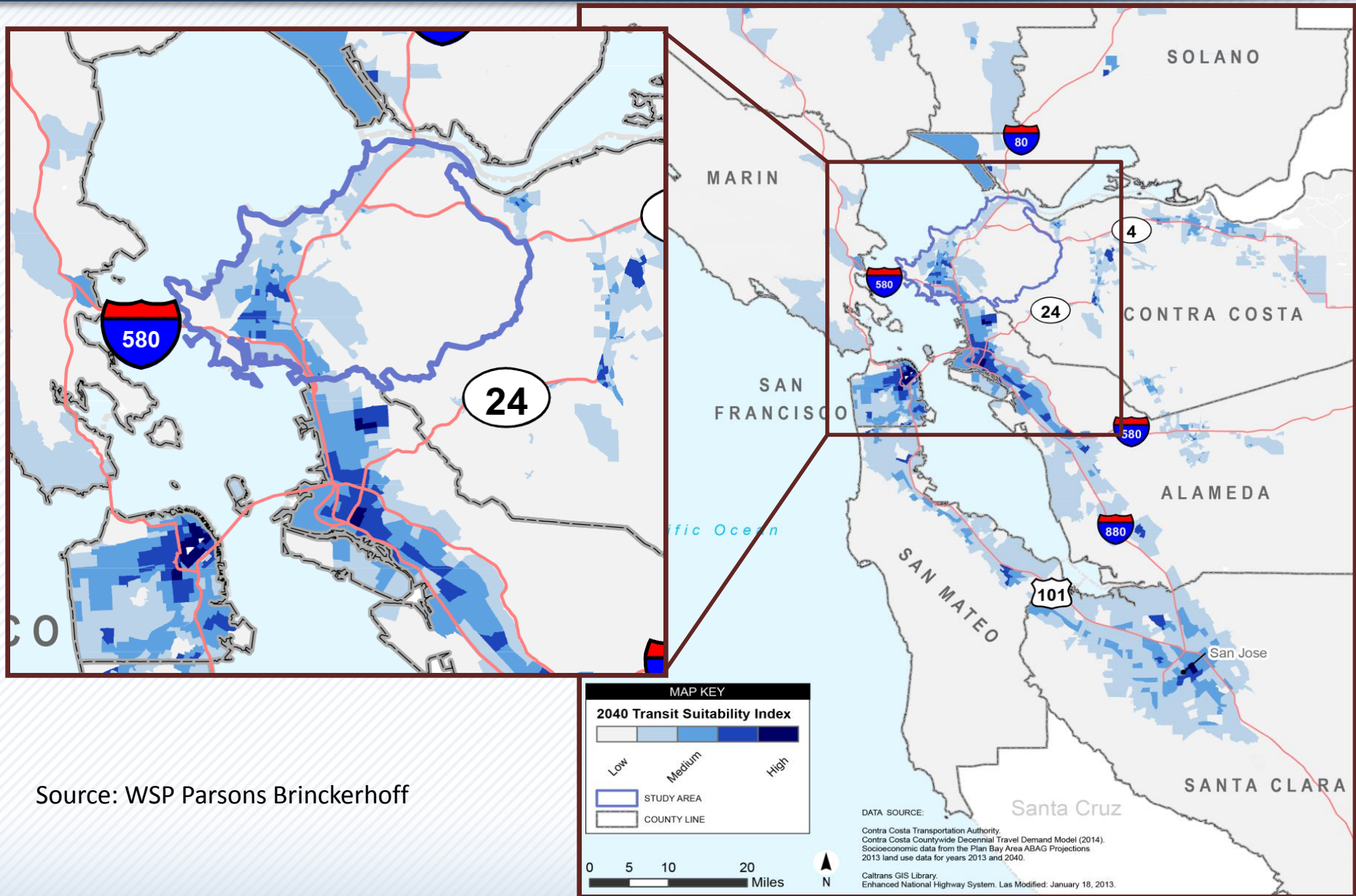


# TSI Findings – Bay Area, Existing Conditions



Source: WSP Parsons Brinckerhoff

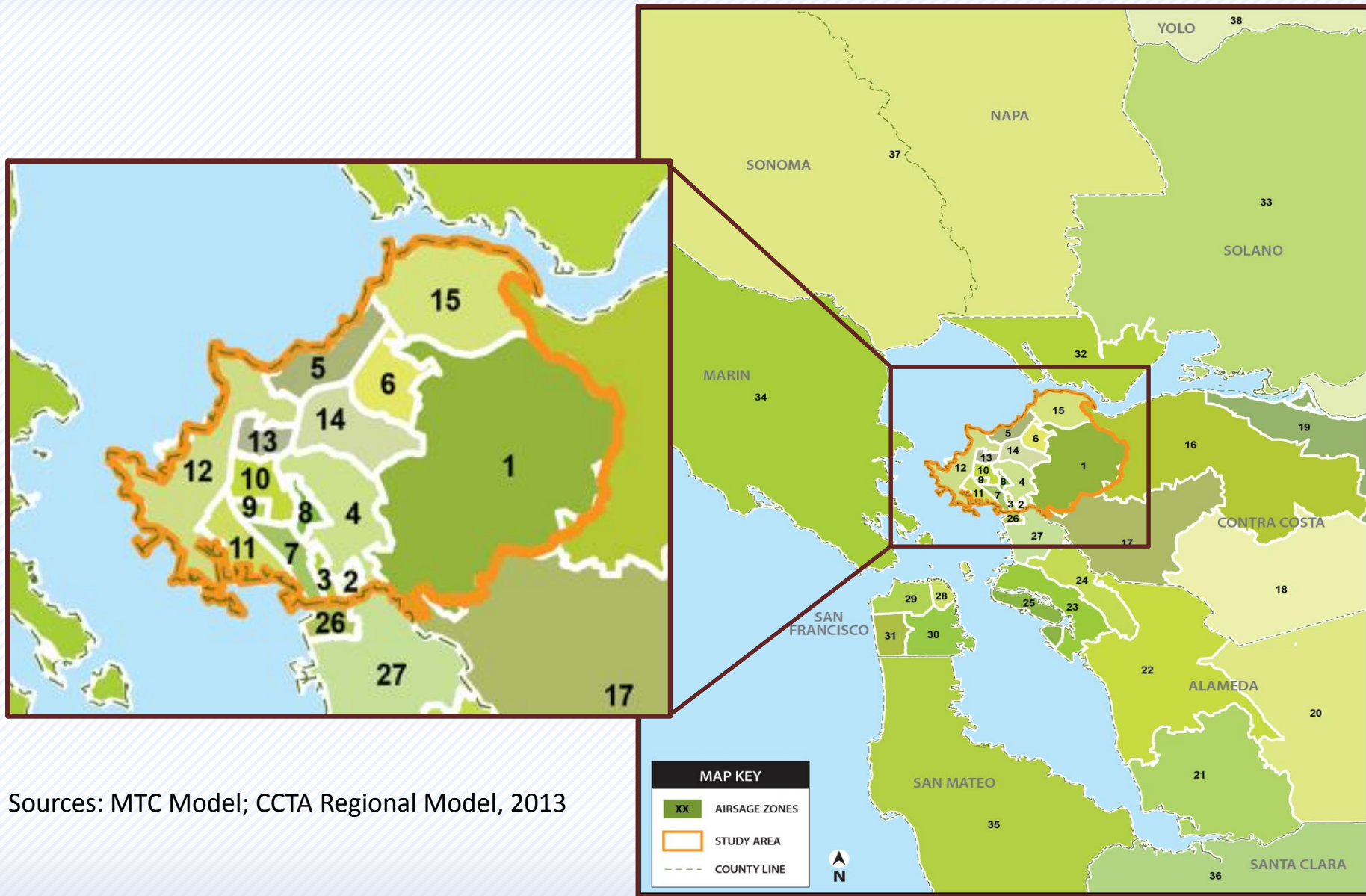
# TSI Findings – Bay Area, 2040



Source: WSP Parsons Brinckerhoff



# Origin-Destination – Analysis Zones



Sources: MTC Model; CCTA Regional Model, 2013

# Daily Person Trips - Predominant Trip Origins (2013)

Zone No.	Location
<b><i>Top 5 Internal Origin Zones*</i></b>	
10	Richmond, San Pablo – 45,900
5	Pinole, Hercules – 38,000
13	San Pablo, Richmond – 30,000
14	Richmond, El Sobrante – 29,000
11	Richmond – 28,000
<b><i>Top 5 External Origin Zones*</i></b>	
27	Berkeley, Emeryville – 25,300
32	Solano County – Vallejo, Benicia – 15,400
34	Marin County – 10,700
23	Oakland, Piedmont – 9,200
26	Albany – 8,200

\* Unadjusted  
Total Trips

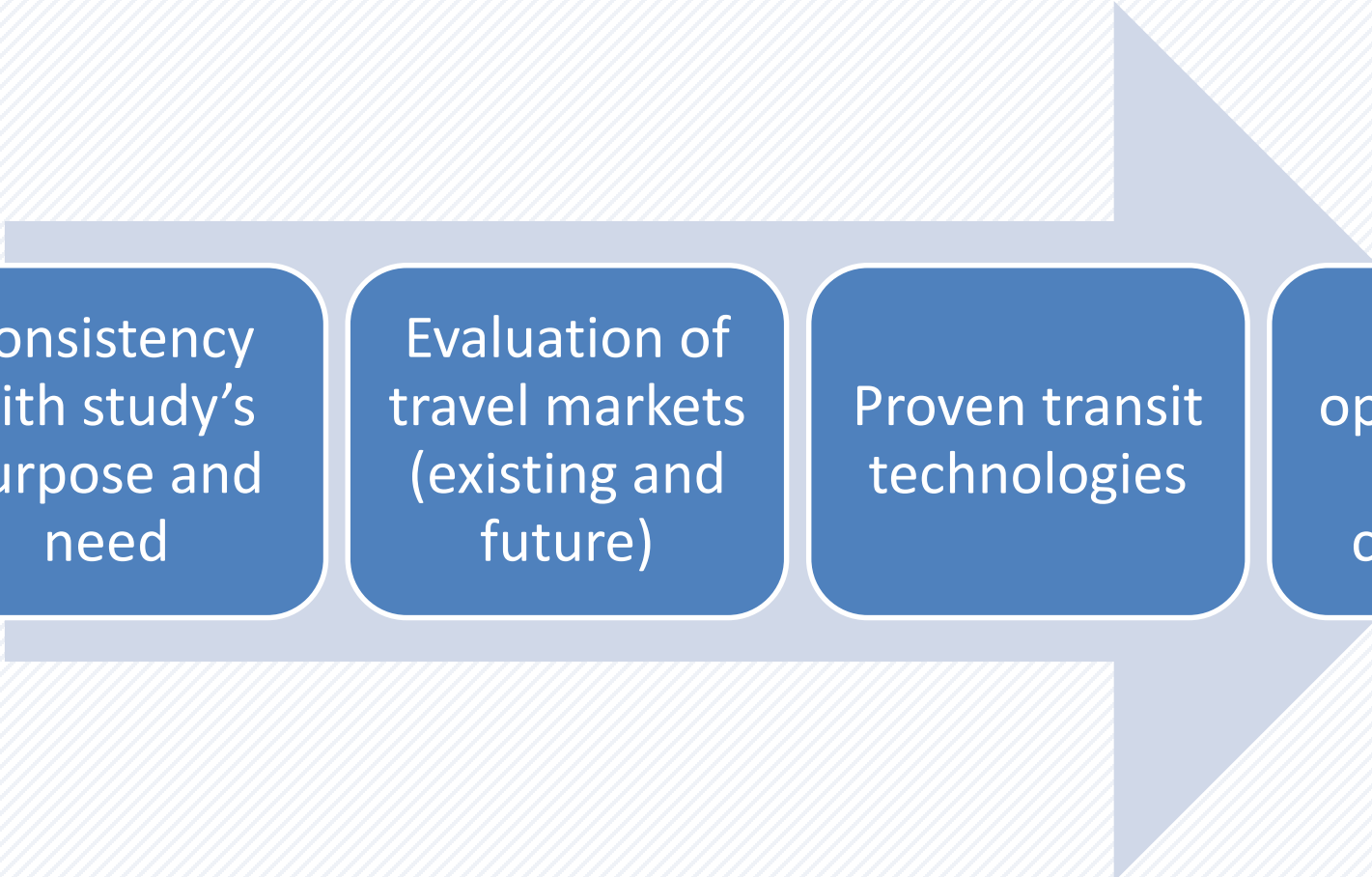
# Daily Person Trips - Predominant Trip Destinations (2013)

Zone No.	Location
<b><i>Top 5 Internal Destination Zones*</i></b>	
12	Richmond – 75,100
10	Richmond, San Pablo – 46,600
14	Richmond, El Sobrante – 32,500
13	San Pablo, Richmond – 28,600
7	El Cerrito, Richmond – 27,300
<b><i>Top 5 External Destination Zones*</i></b>	
27	Berkeley, Emeryville – 47,500
28	Northeast San Francisco - 24,100
23	Oakland, Piedmont – 21,900
32	Solano County – Vallejo, Benicia – 14,900
16	Central Contra Costa County – 10,300

\* Unadjusted  
Total Trips

# Conceptual Alternatives

# Developing the Conceptual Alternatives



Consistency  
with study's  
purpose and  
need

Evaluation of  
travel markets  
(existing and  
future)

Proven transit  
technologies

Physical  
opportunities  
and  
constraints



# Eight Preliminary Alternatives

## Alternatives

1 - I-80 Express Bus Service

2 - San Pablo Avenue/Macdonald Avenue BRT

3 - 23rd Street BRT

4 - UPRR Corridor Commuter Rail

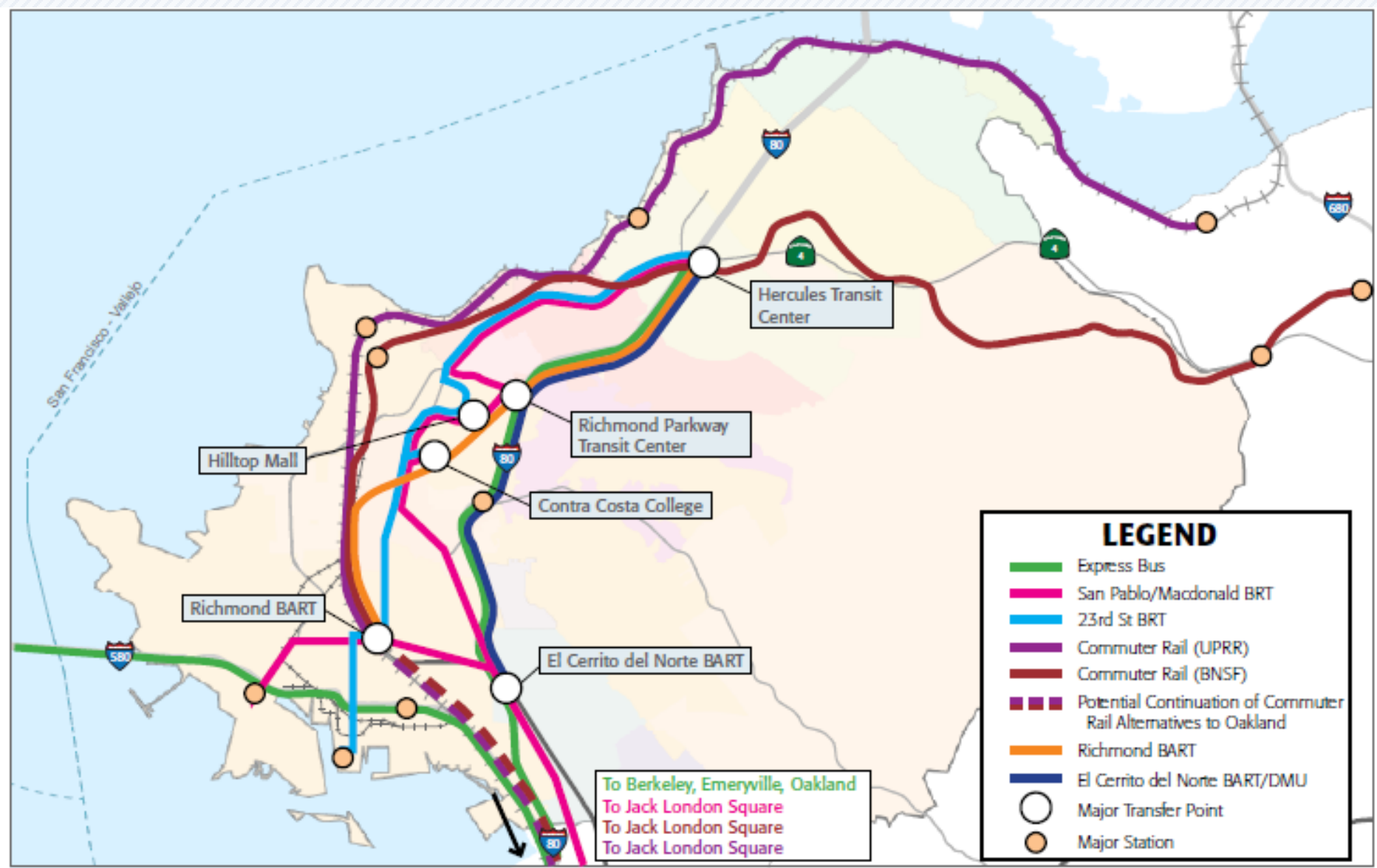
5 - UPRR-BNSF Corridor Commuter Rail

6 - BART Extension from Richmond Station to Hercules

7.1 - BART Extension from El Cerrito del Norte Station to Hercules

7.2 - BART/DMU Extension from El Cerrito del Norte Station to Hercules

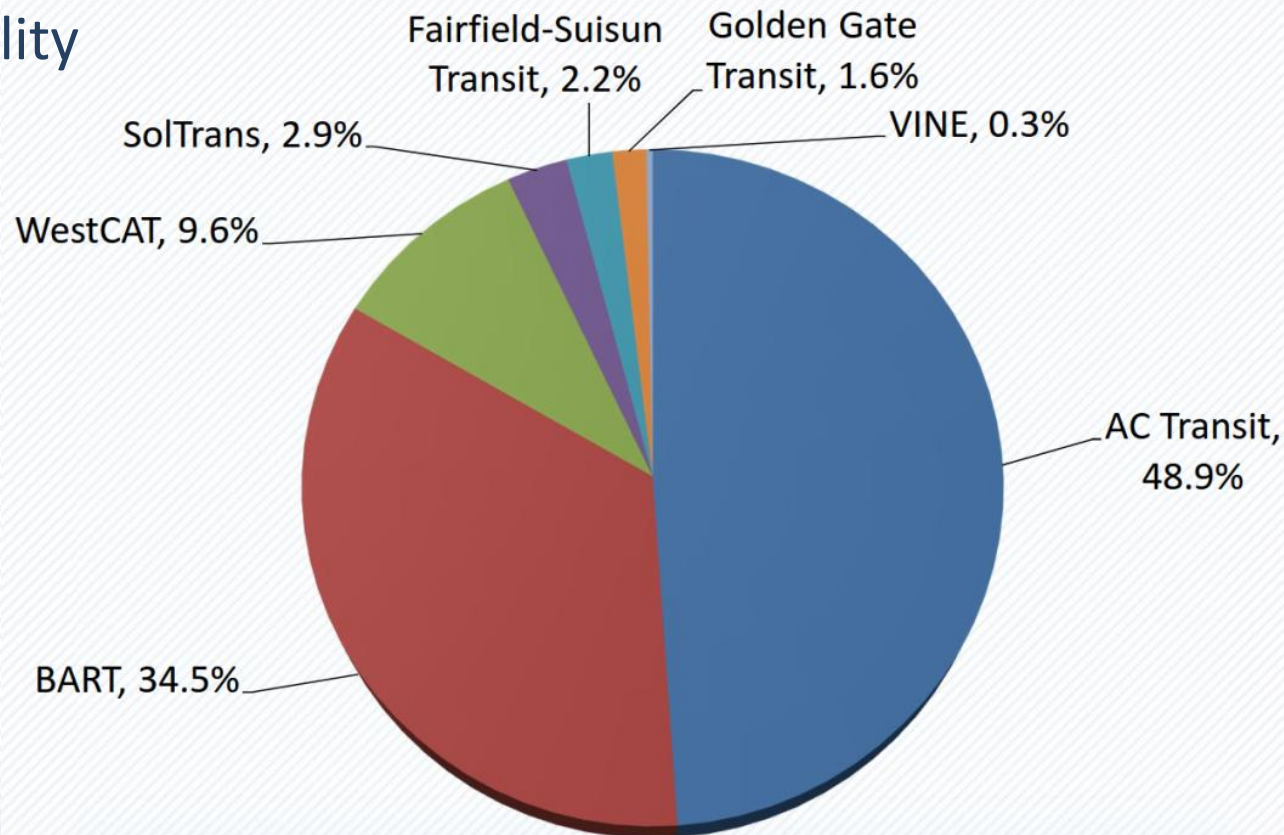
# Eight Preliminary Alternatives



# Bus Alternatives

# Why Expanded Bus Service?

- Buses carry 65% of transit users in West County – both local and express bus
- Anticipated increase in commuter bus service demand
- Improve bus reliability
- Implementation flexible, scalable, and fast

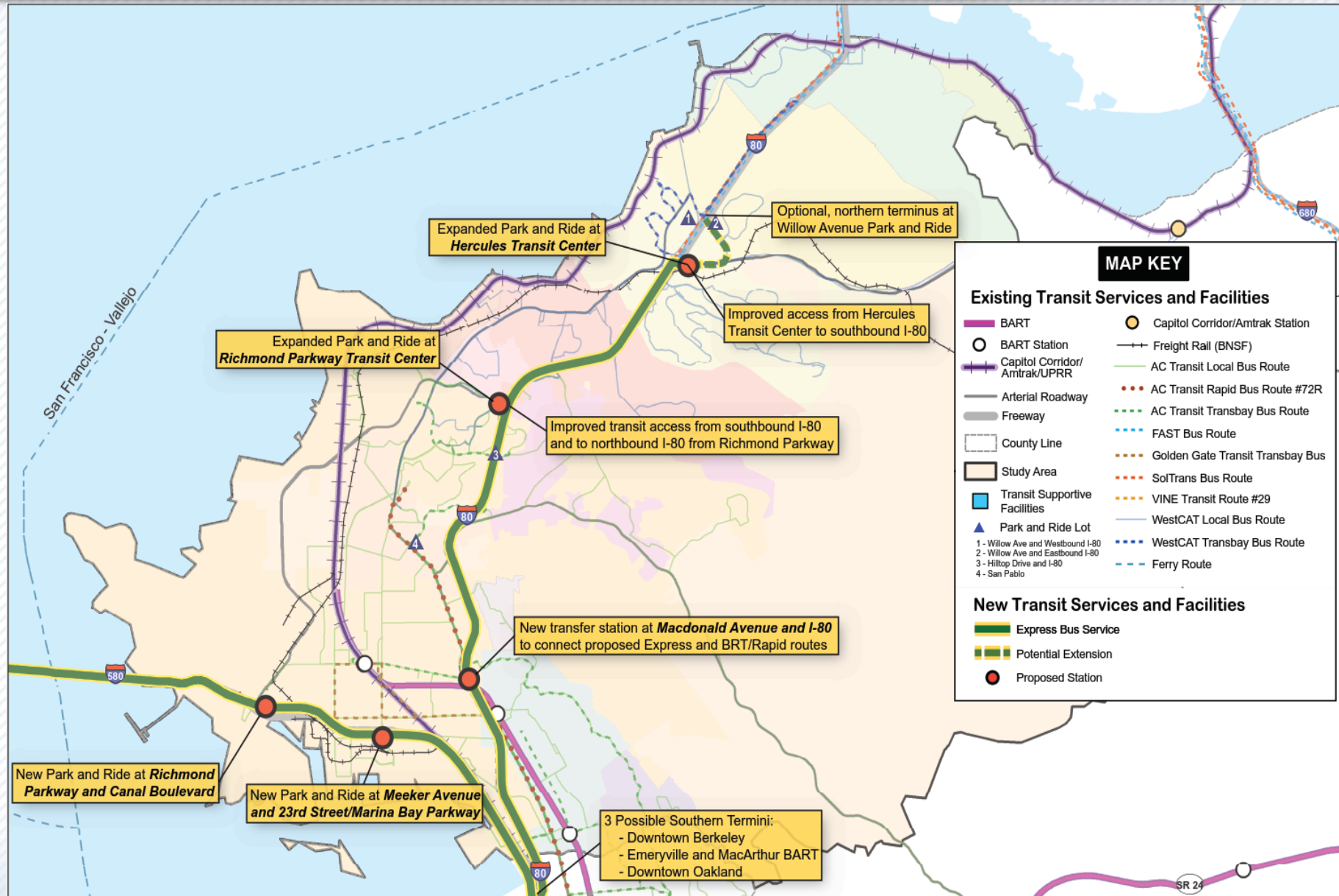


Source: Transit Operators, 2014 Ridership Data

# **Bus Alternatives – Express Bus**



# Alternative 1 – I-80 Express Bus Service



# **Bus Alternatives – BRT**

# BRT Spectrum

## *BRT Light*

\$1-4m per mile



### **Line 72R, AC Transit**

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

## *Hybrid BRT*

\$4-12m per mile



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

- A-C plus*
- D. Some dedicated bus lanes
- E. More station amenities
- F. Specialized vehicles

## *Full BRT*

\$12-28m per mile

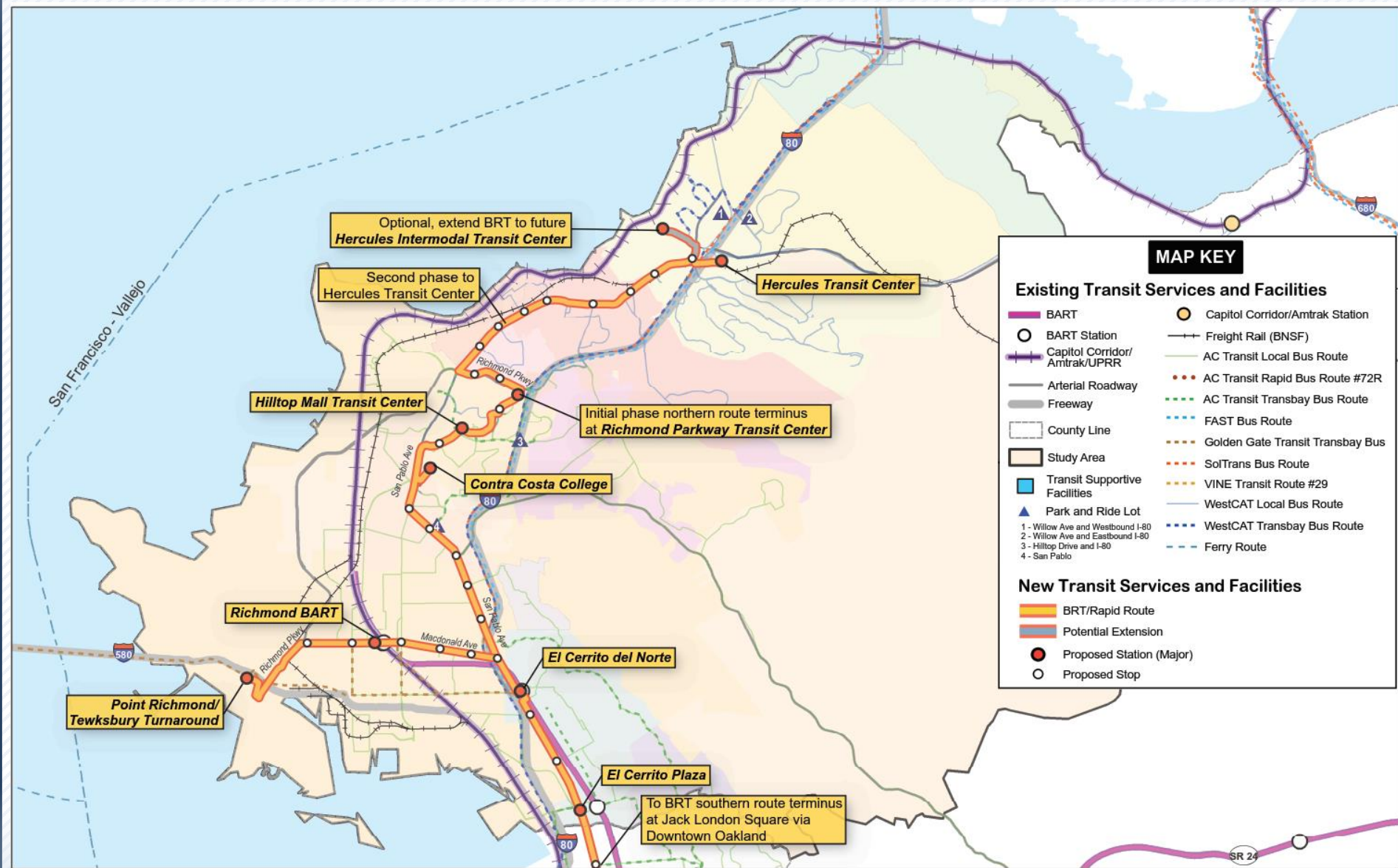


### **Health Line, Cleveland, OH**

- A-F plus*
- G. Dedicated bus lanes for majority of corridor
- H. Off-board fare collection

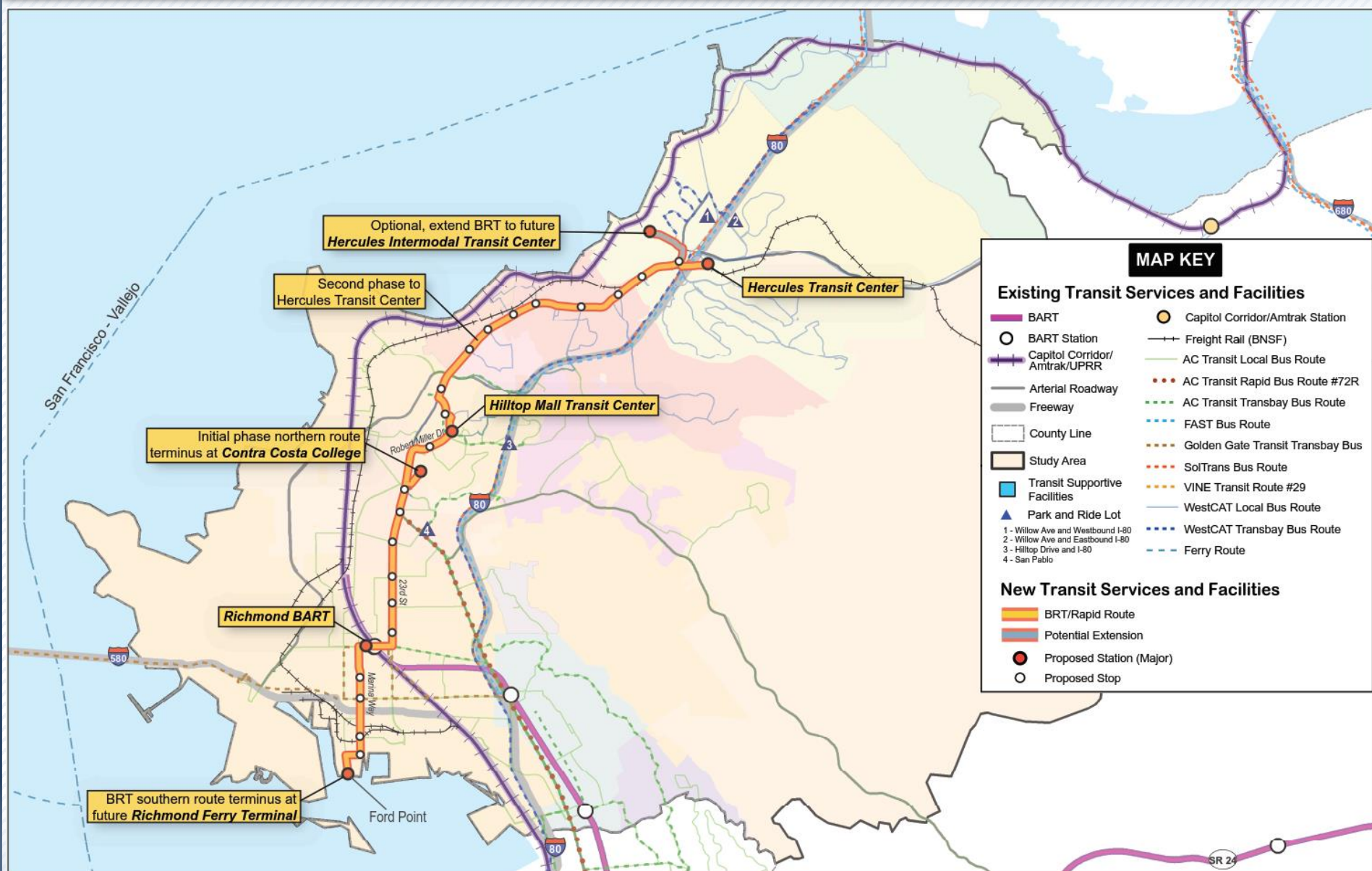
*BRT is customizable. Specific features will depend on each specific system's needs.*

# Alternative 2 – San Pablo Avenue/Macdonald Avenue BRT





# Alternative 3 – 23rd Street BRT





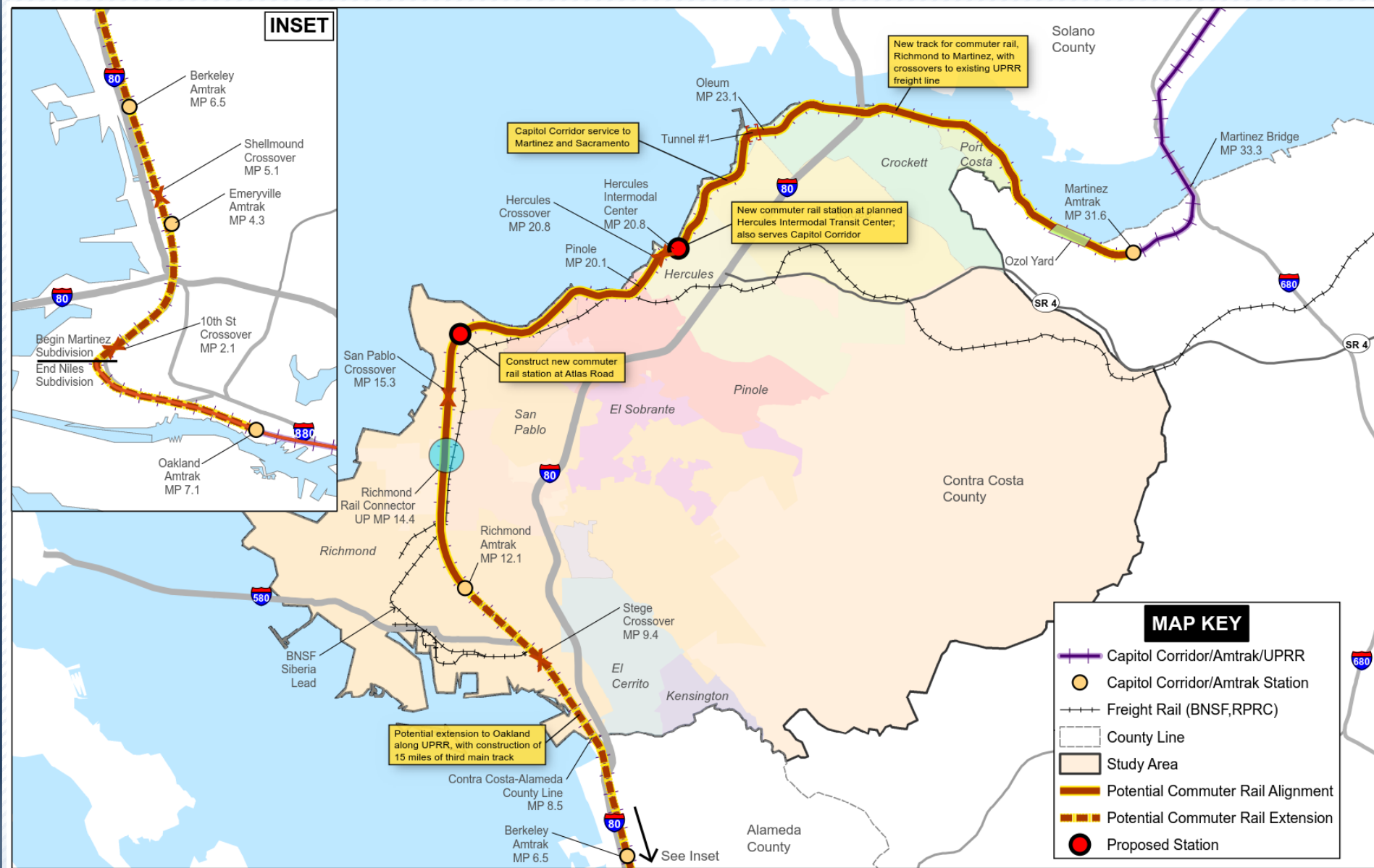
# Commuter Rail Alternatives

# Why Expanded Commuter Rail Service?

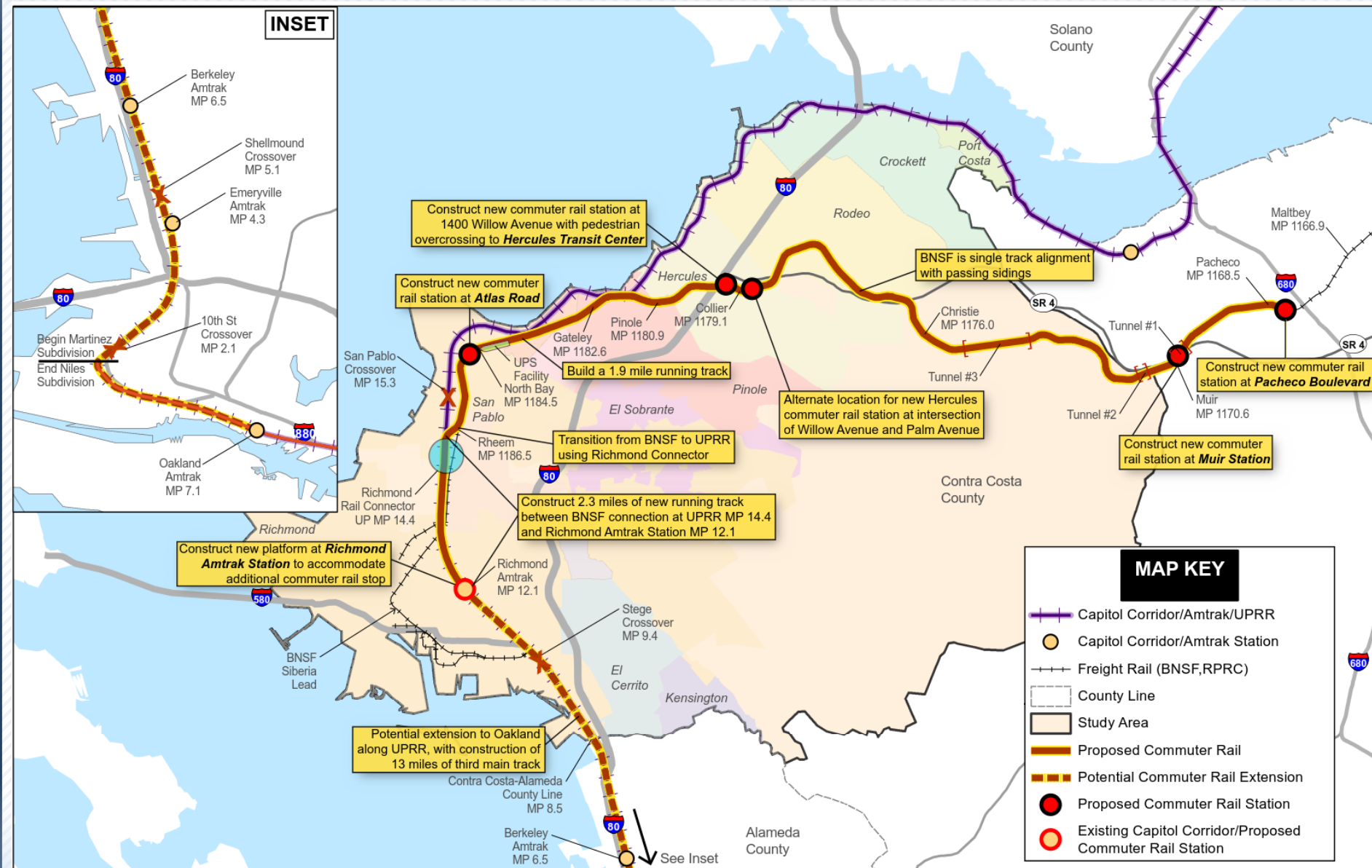
- Uses existing rail ROW
- Intercepts more through trips
- Provides connections to travel markets to the north and south



# Alternative 4 – UPRR Corridor Commuter Rail



# Alternative 5 – UPRR-BNSF Corridor Commuter Rail



# BART Alternatives

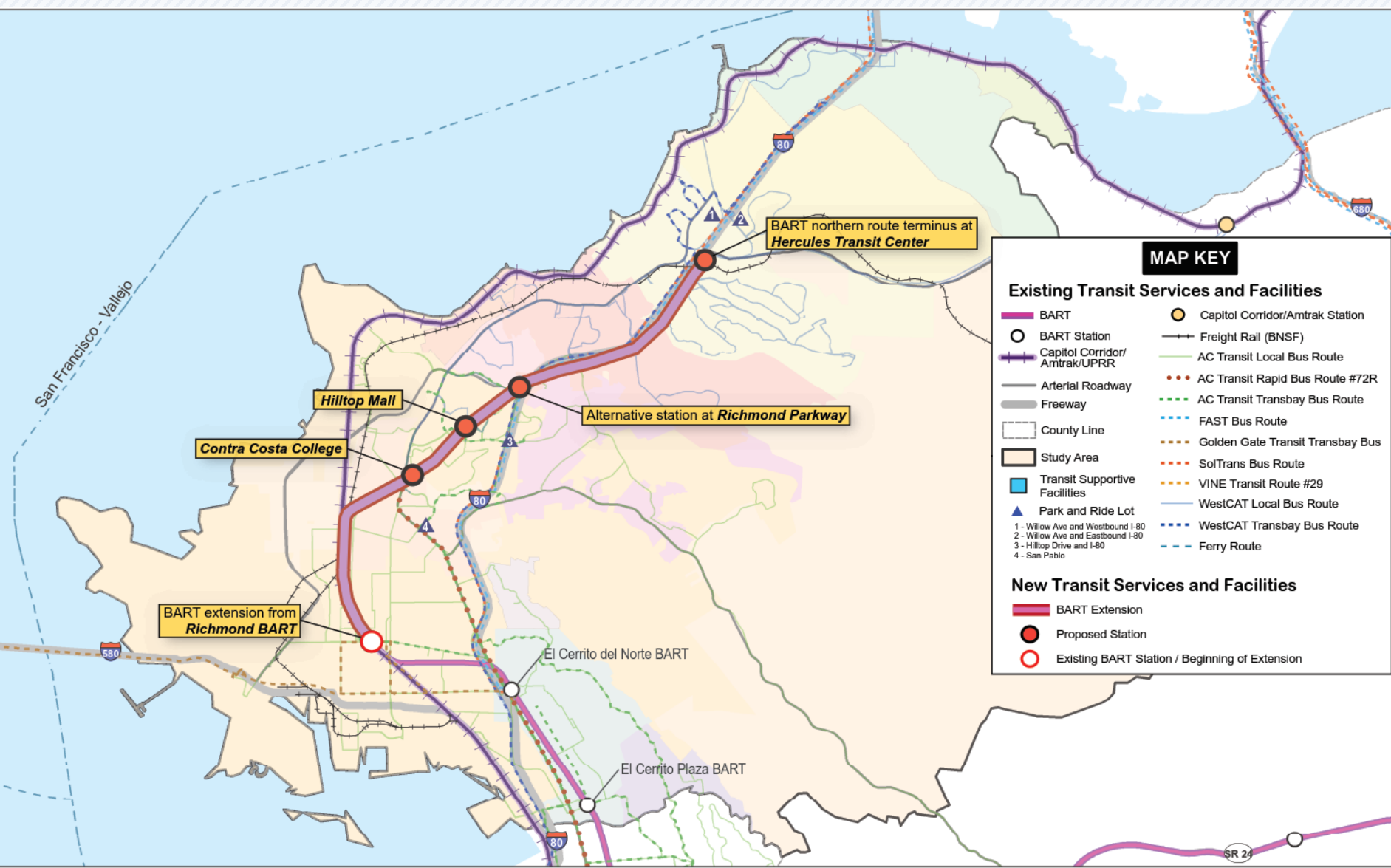


# Why Expanded BART Service?

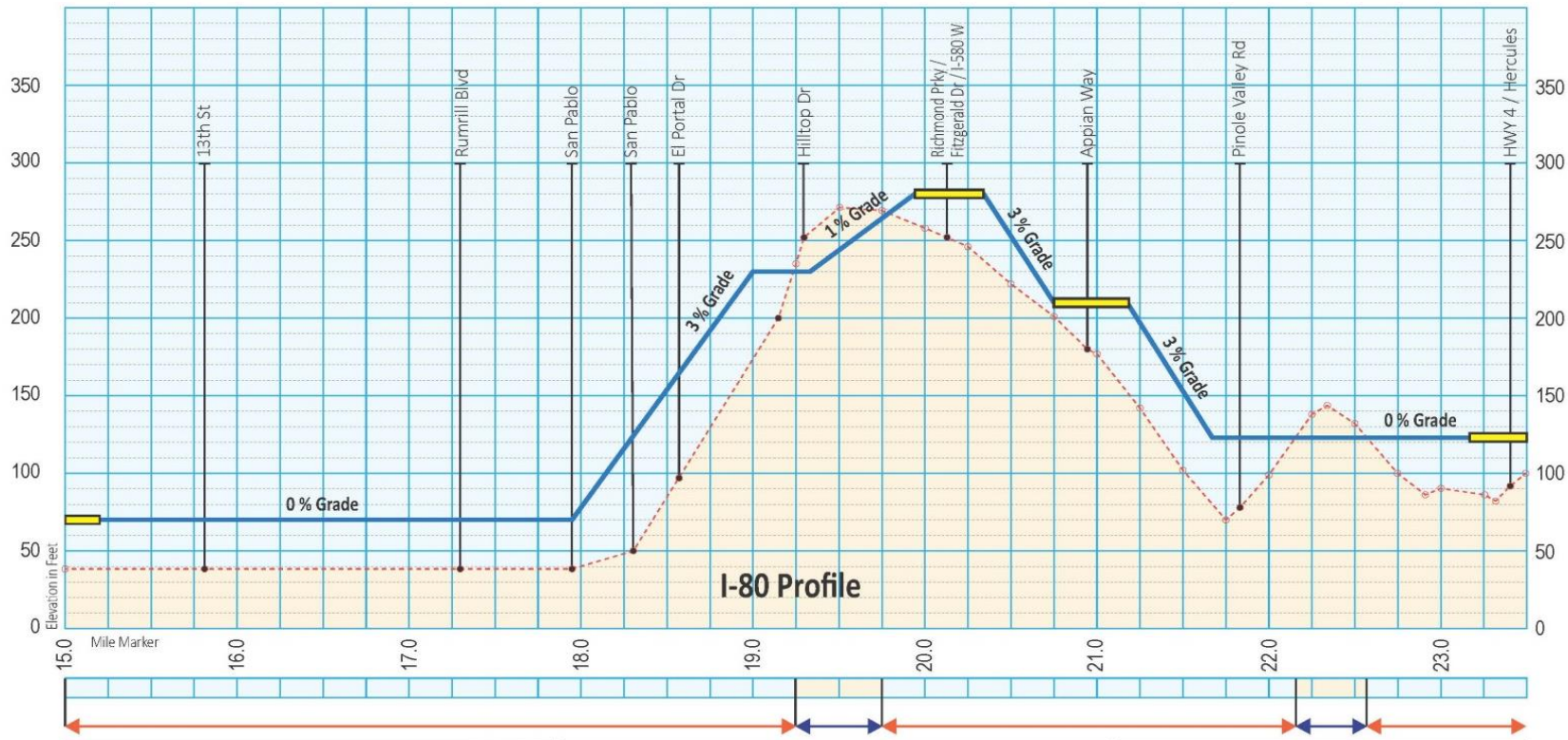
- BART carries 35% of transit ridership in West County on an average weekday
- El Cerrito del Norte BART station is reaching capacity
- Provides greatest connectivity to major destinations in Bay Area
- Captures transit riders closer to their trip origin
- Provides most reliable transit service



# Alternative 6 – BART Extension from Richmond Station to Hercules



# Alternative 6 – BART Extension from Richmond Station to Hercules



**I-80 Profile UPRR to I-80 Corridor**

Profile Scale (Postmile)  
H: 1" = 3,000'  
V: 1" = 60'

**KEY**

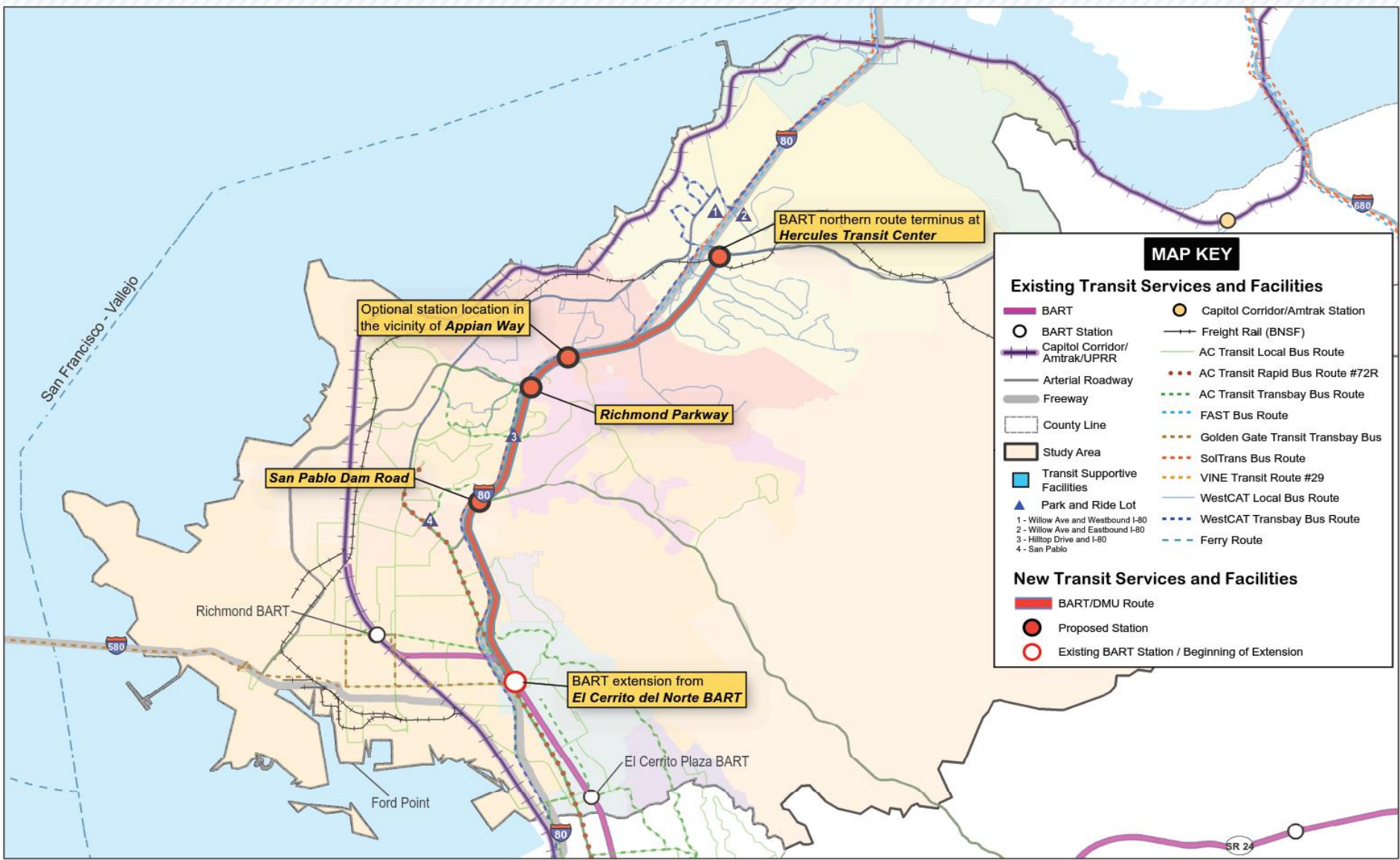
- I-80 Surface Profile
- Proposed BART Profile Elevations
- BART Station
- BART on Aerial Structure
- BART in Tunnel

Note: (1) BART elevated 30' above road  
(2) BART below ground (Tunnel Section)

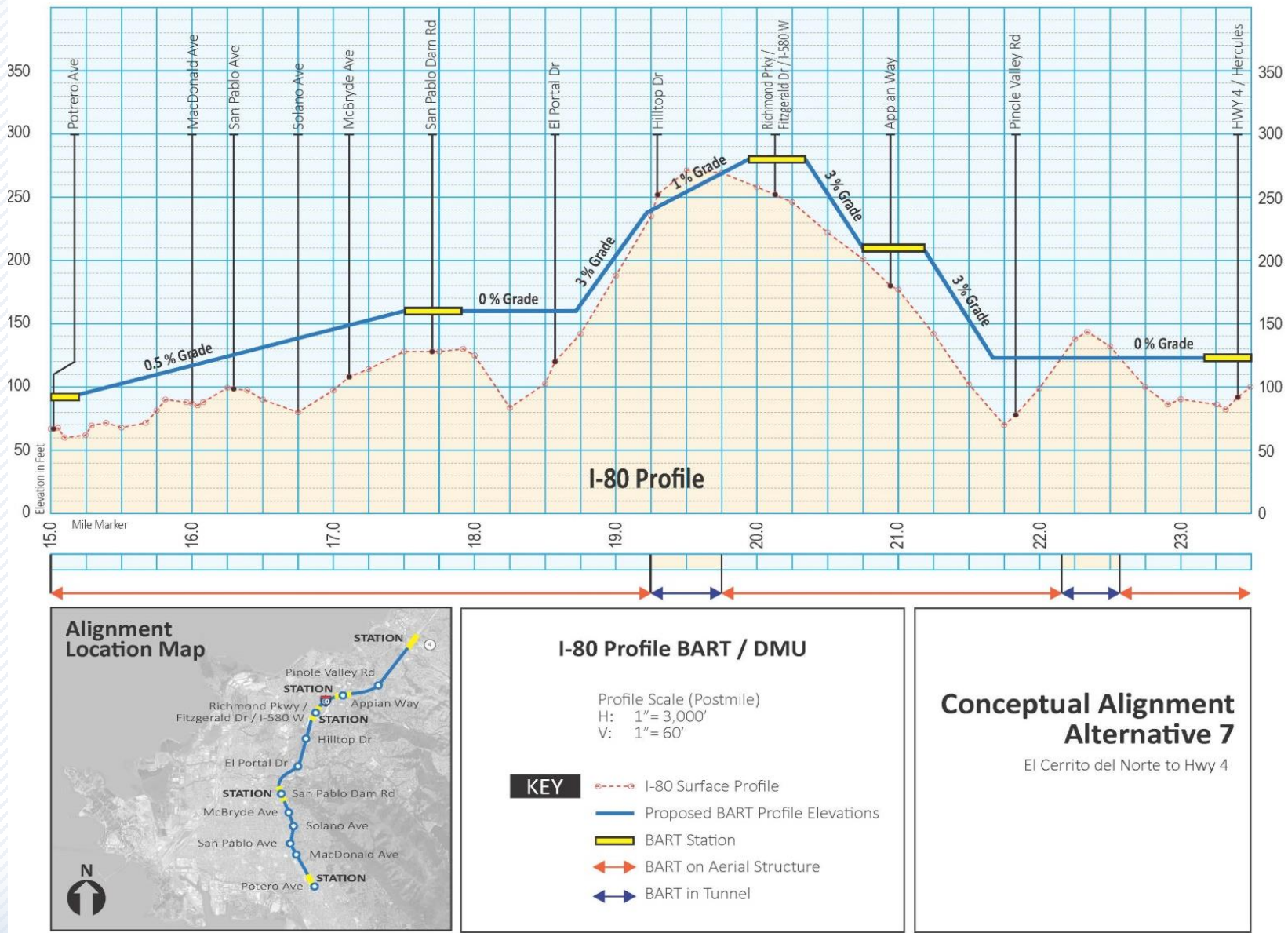
**Alternative 6**  
UPRR to I-80 Corridor BART Rail  
**Proposed BART Alignment**  
BART Richmond Station to Hwy 4



# Alternative 7 – BART /DMU Extension El Cerrito del Norte to Hercules



# Alternative 7 – BART /DMU Extension El Cerrito del Norte to Hercules





# Evaluation Criteria





# Establishing Evaluation Criteria

## To provide measures for assessing performance of HCT investment alternatives

- Objective, rational basis for rating how well individual alternatives meet study goals
- Qualitative and quantitative comparisons of performance across all alternatives under consideration
- Framework for screening of alternatives

## HCT study's purpose reflected in goals and objectives

- 7 goals approved by WCCTAC Board on Sep 25
- 15 objectives established to amplify goals



# Two-Step Evaluation Process

## Step 1

- Rate initial alternatives
- Select 4 alternatives for further study



## Step 2

- Refine attributes of the 4 alternatives (e.g., costs, ridership)
- Identify preferred alternative(s) for possible implementation

Subject to public review and approval by WCCTAC Board

Must then proceed through environmental review and design

# Evaluation Criteria

- Travel time and reliability
- Potential for transit ridership
- Access and connections to areas where service is needed
- Environmental benefits/impacts
- Consistency with local plans
- Congestion Relief
- Cost-effectiveness
- Public and stakeholder support





## Next Steps



# Next Steps

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 ← *Next steps*
- Alternatives Refinement ← *Next steps* *Board Concurrence*
- Ridership Modeling
- Cost Estimates
- Funding Options

## Final Alternatives

- Final Alternatives Evaluation



# Community Meetings – Winter 2016

- Community Meetings
  - March 2, 2016 – San Pablo
  - March 9, 2016 – Pinole
  - March 10, 2016 – Richmond





# Discussion, Q&A





# Back-up Slides



# Evaluation Criteria

Study Goals	Evaluation Criteria
1. Increase transit ridership	<ul style="list-style-type: none"><li>• Improvements to travel time &amp; reliability</li><li>• Transit market potential</li></ul>
2. Improve transit connections	<ul style="list-style-type: none"><li>• Regional centers served</li><li>• Quality of connections to transit systems/facilities</li></ul>
3. Expand transit to new and under-served markets	<ul style="list-style-type: none"><li>• Service to low-income areas</li><li>• Service to markets without major transit connections</li></ul>
4. Protect and enhance the environment and maintain a high quality of life	<ul style="list-style-type: none"><li>• Environmental Impacts</li><li>• Air Quality Pollutants &amp; GHG emissions</li><li>• Energy use</li><li>• Risk associated with sea level rise</li><li>• Consistency with local plans and local policies</li></ul>

# Evaluation Criteria

Study Goals	Evaluation Criteria
5. Support sustainable urban growth	<ul style="list-style-type: none"><li>• West County PDAs served</li><li>• Developable land served by transit</li></ul>
6. Provide equitable access for residents and businesses	<ul style="list-style-type: none"><li>• Ease of access to/from transit stations</li><li>• Congestion relief (reduction in VMT)</li></ul>
7. Make efficient use of public funds	<ul style="list-style-type: none"><li>• Capital costs</li><li>• O &amp; M costs</li><li>• Costs per rider</li><li>• Support for proposed alternative</li></ul>



# Scope and Budget Update

- **Additional Tasks: \$41,770**
  - Two additional public workshops: \$14,790
  - One additional Board meeting presentation: \$1,750
  - Additional travel demand analysis: \$5,400
  - Additional outreach costs: \$6,830
  - Additional analysis on Tech Memo 8: Conceptual Alternatives: \$13,000
- **\$22,000 unused budget for Telephone Town Hall available for re-allocation**
- **\$19,770 contingency request**

