

WCCTAC

West Contra Costa Transportation Advisory Committee



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 ← *We are here*
- Evaluation Criteria ← *We are here*
- Preliminary Evaluation
- Alternatives Refinement
- Ridership Modeling
- Cost Estimates
- Funding Options

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

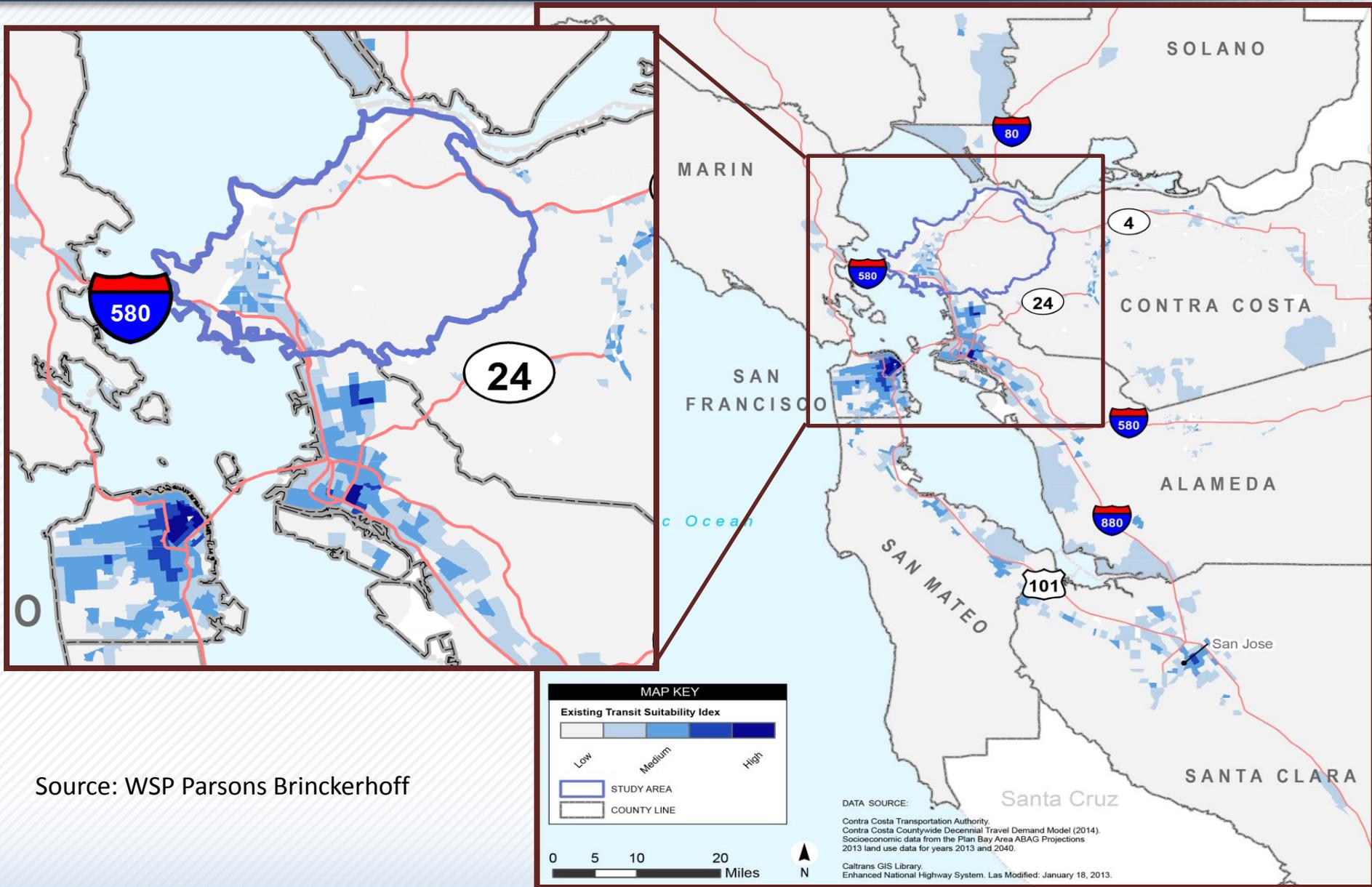


Telephone Town Hall – Responses to Survey Questions

- 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%

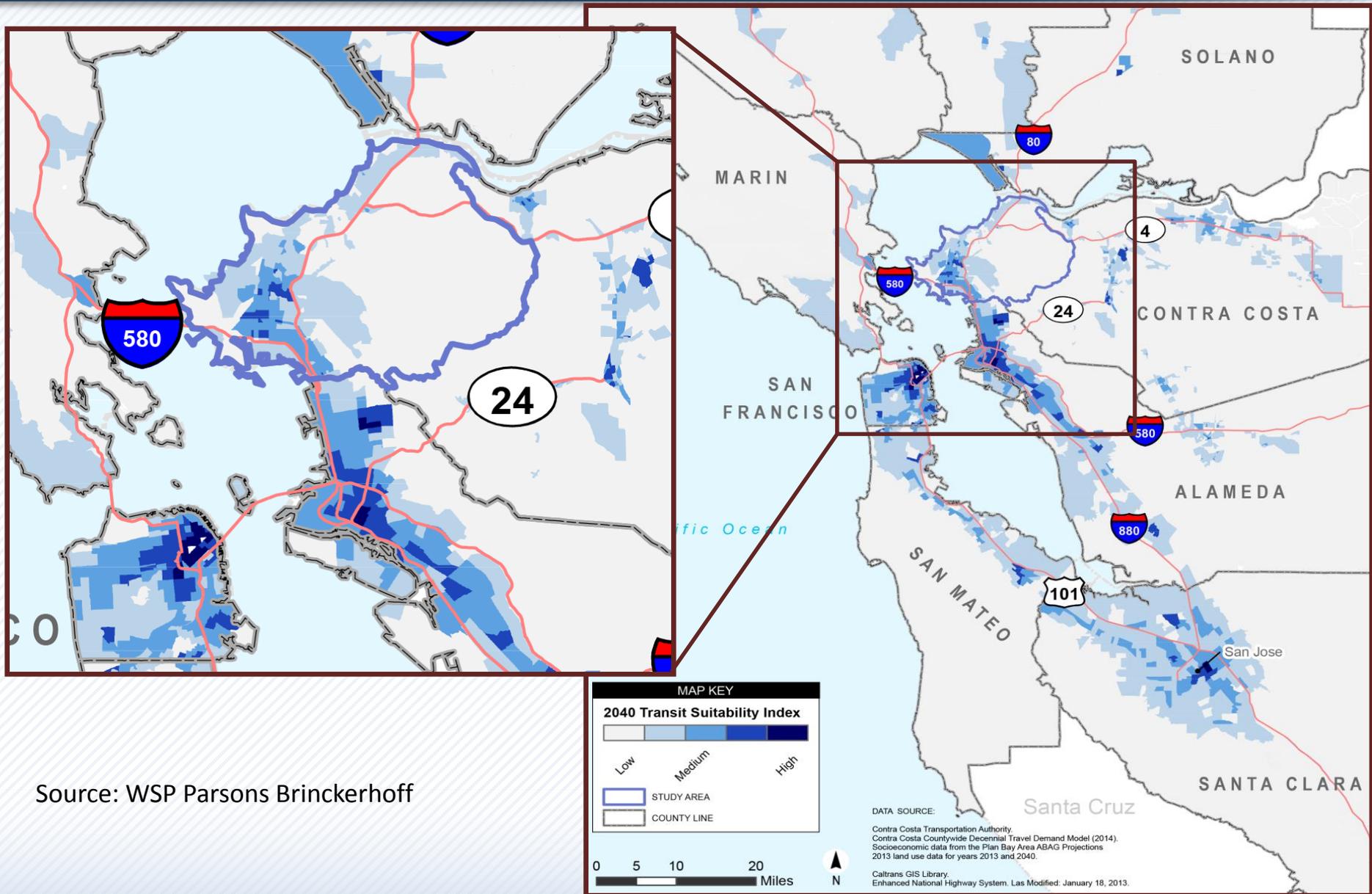
Travel Markets

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
<i>Top 5 Internal Origin Zones*</i>	
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
<i>Top 5 External Origin Zones*</i>	
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
<i>Top 5 Internal Destination Zones*</i>	
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
<i>Top 5 External Destination Zones*</i>	
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

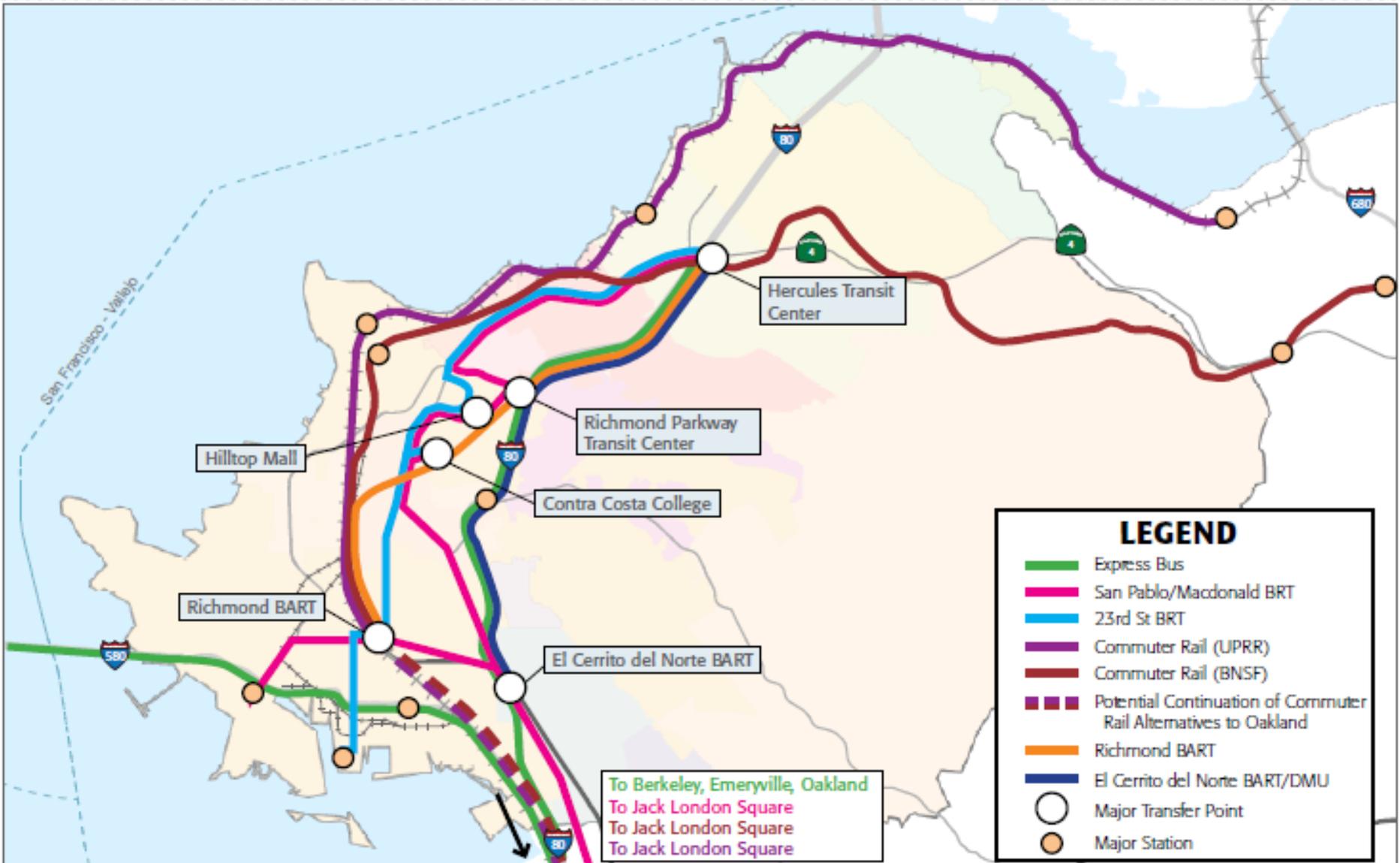
5 - UPRR-BNSF Corridor Commuter Rail

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

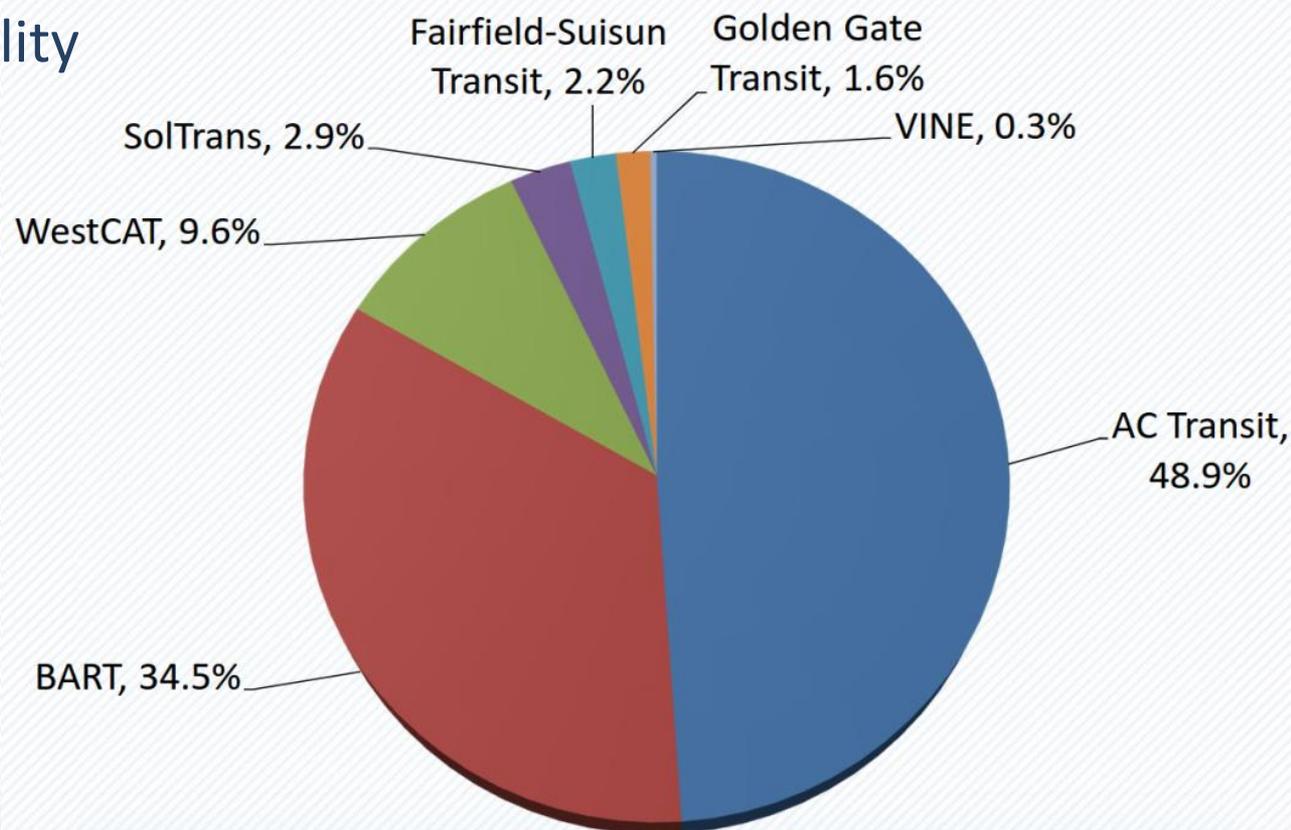
Eight Preliminary Alternatives



Bus Alternatives

Why Expanded Bus Service?

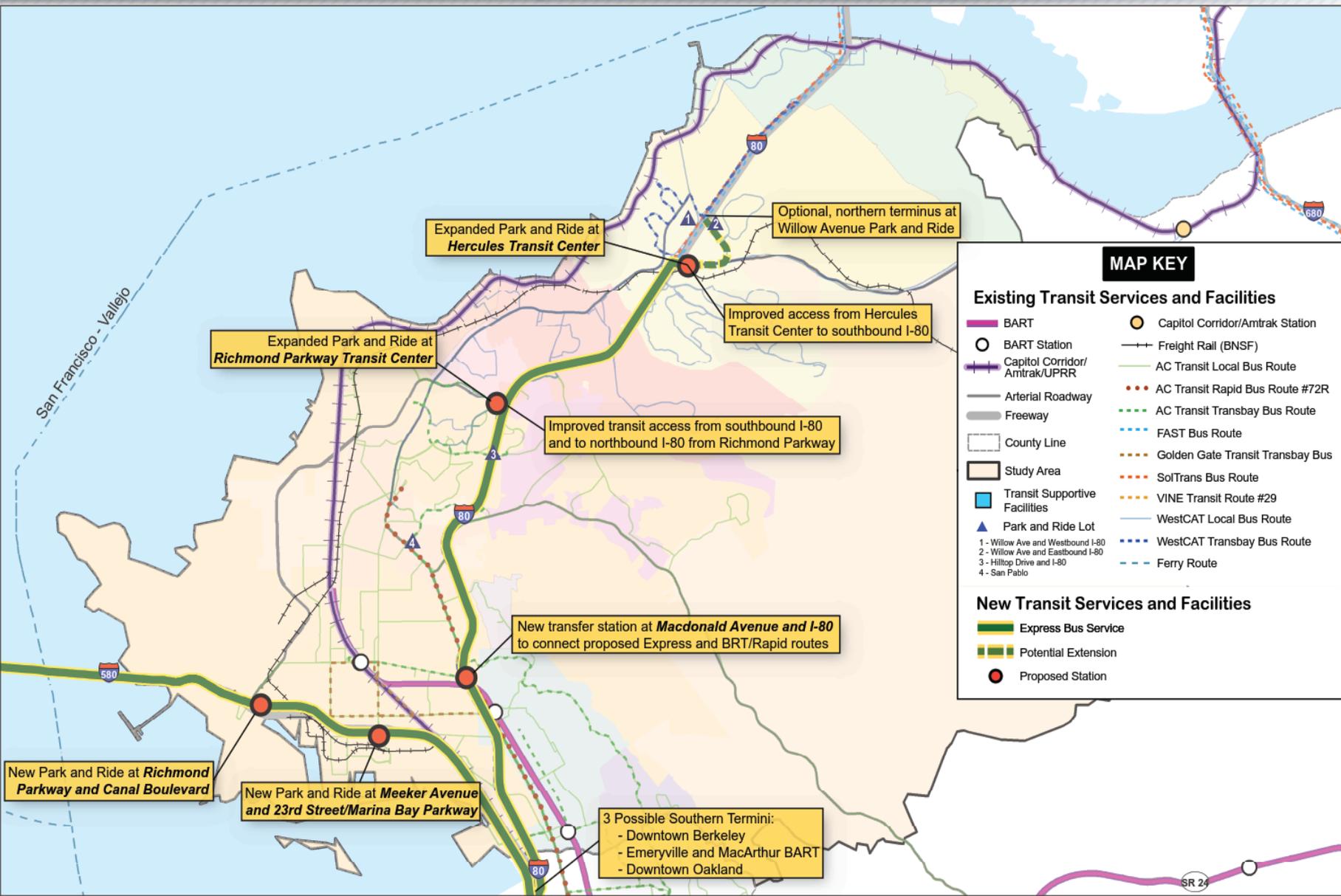
- Buses carry 65% of transit users in West County – both local and express bus
- Anticipated increase in commuter bus service demand
- Improve bus reliability
- Implementation flexible, scalable, and fast



Source: Transit Operators, 2014 Ridership Data

Bus Alternatives – Express Bus

Alternative 1 – I-80 Express Bus Service



MAP KEY

Existing Transit Services and Facilities

- BART
 - BART Station
 - Capitol Corridor/Amtrak/UPRR
 - Arterial Roadway
 - Freeway
 - County Line
 - Study Area
 - Transit Supportive Facilities
 - ▲ Park and Ride Lot
 - Capitol Corridor/Amtrak Station
 - Freight Rail (BNSF)
 - AC Transit Local Bus Route
 - AC Transit Rapid Bus Route #72R
 - - - AC Transit Transbay Bus Route
 - - - FAST Bus Route
 - - - Golden Gate Transit Transbay Bus
 - - - SolTrans Bus Route
 - - - VINE Transit Route #29
 - WestCAT Local Bus Route
 - - - WestCAT Transbay Bus Route
 - - - Ferry Route
- 1 - Willow Ave and Westbound I-80
 2 - Willow Ave and Eastbound I-80
 3 - Hilltop Drive and I-80
 4 - San Pablo

New Transit Services and Facilities

- Express Bus Service
- - - Potential Extension
- Proposed Station

Expanded Park and Ride at Hercules Transit Center

Optional, northern terminus at Willow Avenue Park and Ride

Improved access from Hercules Transit Center to southbound I-80

Expanded Park and Ride at Richmond Parkway Transit Center

Improved transit access from southbound I-80 and to northbound I-80 from Richmond Parkway

New transfer station at Macdonald Avenue and I-80 to connect proposed Express and BRT/Rapid routes

New Park and Ride at Richmond Parkway and Canal Boulevard

New Park and Ride at Meeker Avenue and 23rd Street/Marina Bay Parkway

3 Possible Southern Termini:
 - Downtown Berkeley
 - Emeryville and MacArthur BART
 - Downtown Oakland

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

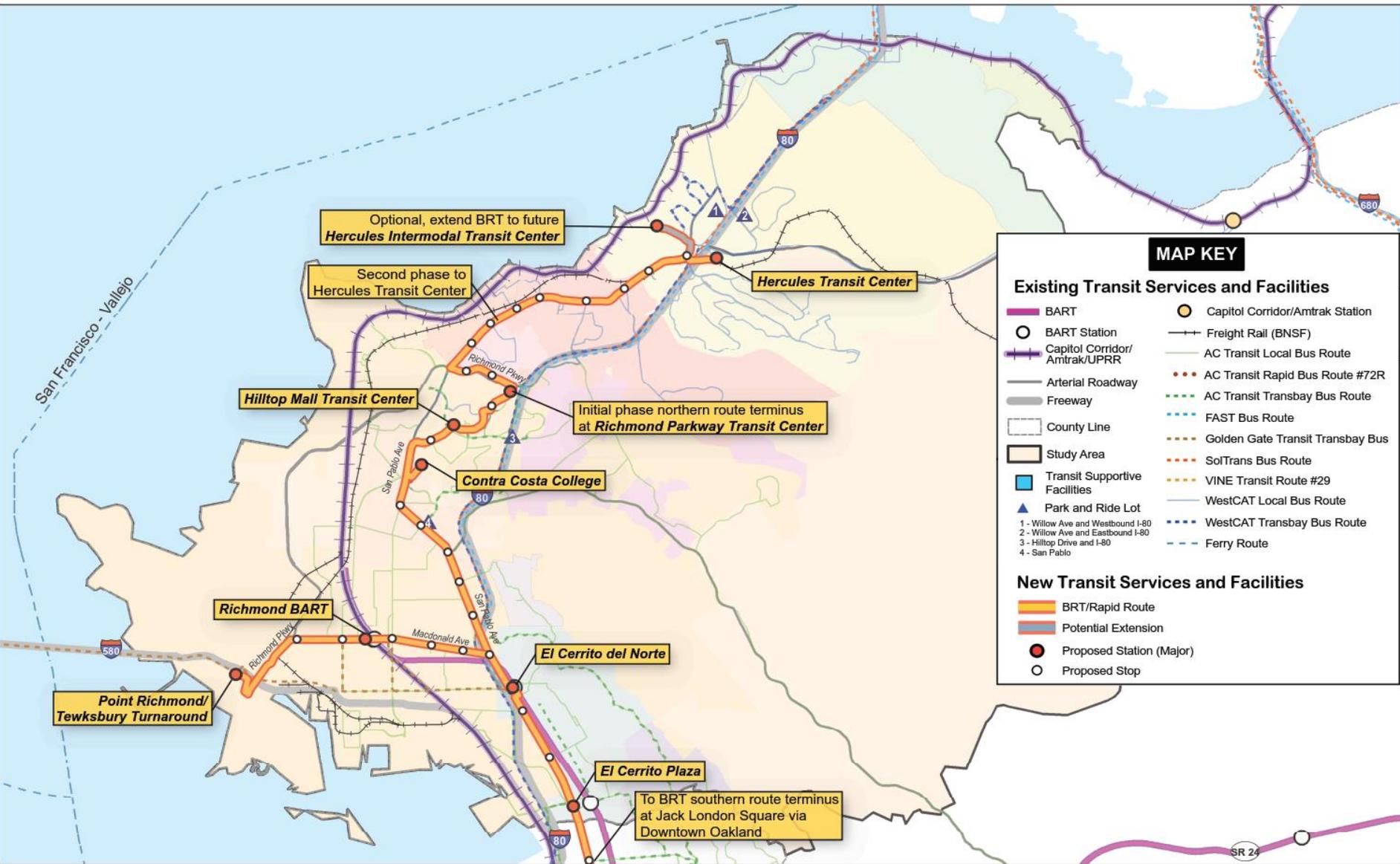


Health Line, Cleveland, OH

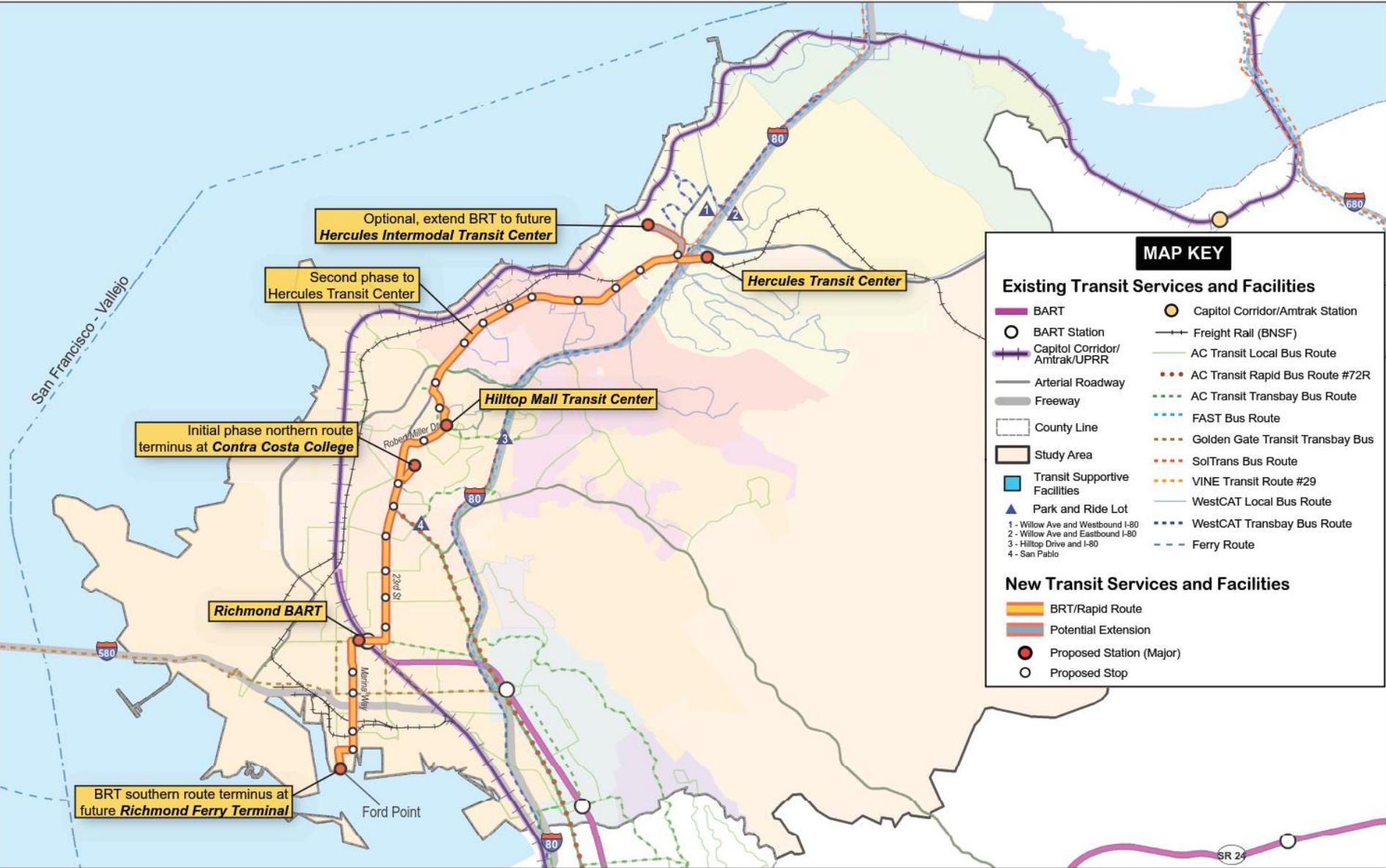
- A-F plus*
- G. Dedicated bus lanes for majority of corridor
- H. Off-board fare collection

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



MAP KEY

Existing Transit Services and Facilities

- BART
- BART Station
- Capitol Corridor/Amtrak/UPRR
- Arterial Roadway
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- Transit Supportive Facilities
- Park and Ride Lot
- Capitol Corridor/Amtrak Station
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- WestCAT Local Bus Route
- WestCAT Transbay Bus Route
- Ferry Route

New Transit Services and Facilities

- BRT/Rapid Route
- Potential Extension
- Proposed Station (Major)
- Proposed Stop

Legend for Park and Ride Lot:

- Willow Ave and Westbound I-80
- Willow Ave and Eastbound I-80
- Hilltop Drive and I-80
- San Pablo

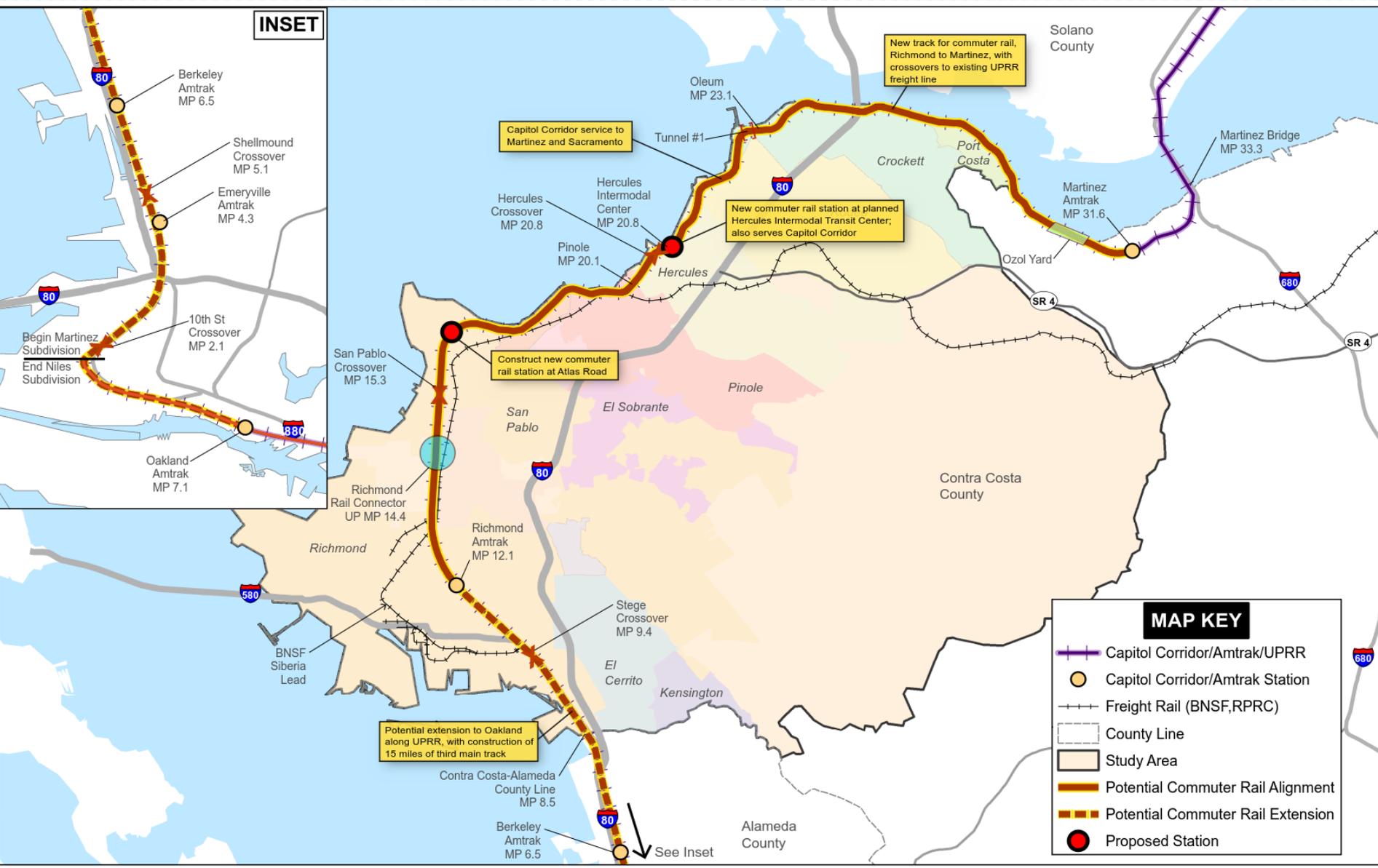
Commuter Rail Alternatives

Why Expanded Commuter Rail Service?

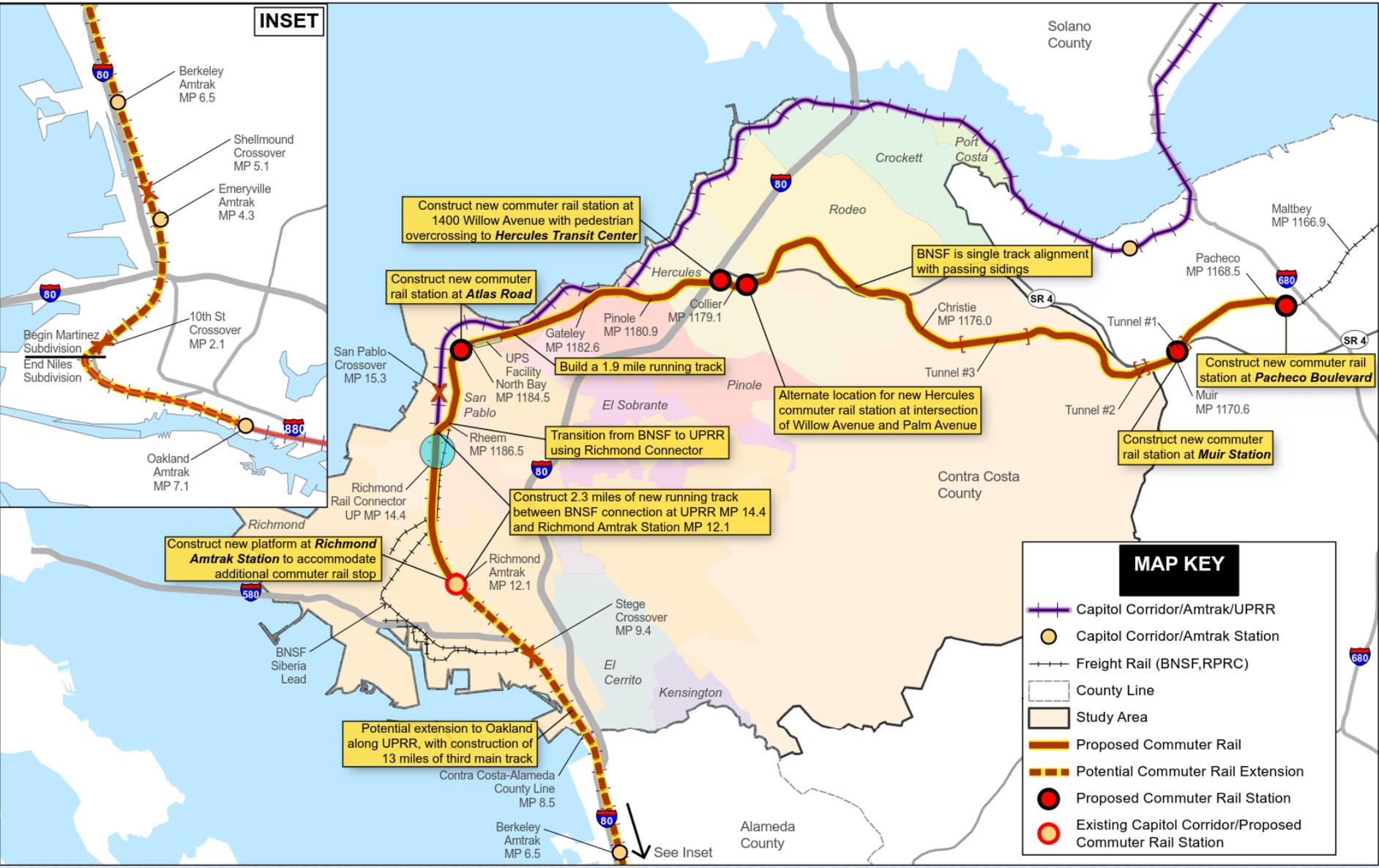
- Uses existing rail ROW
- Intercepts more through trips
- Provides connections to travel markets to the north and south



Alternative 4 – UPRR Corridor Commuter Rail



Alternative 5 – UPRR-BNSF Corridor Commuter Rail



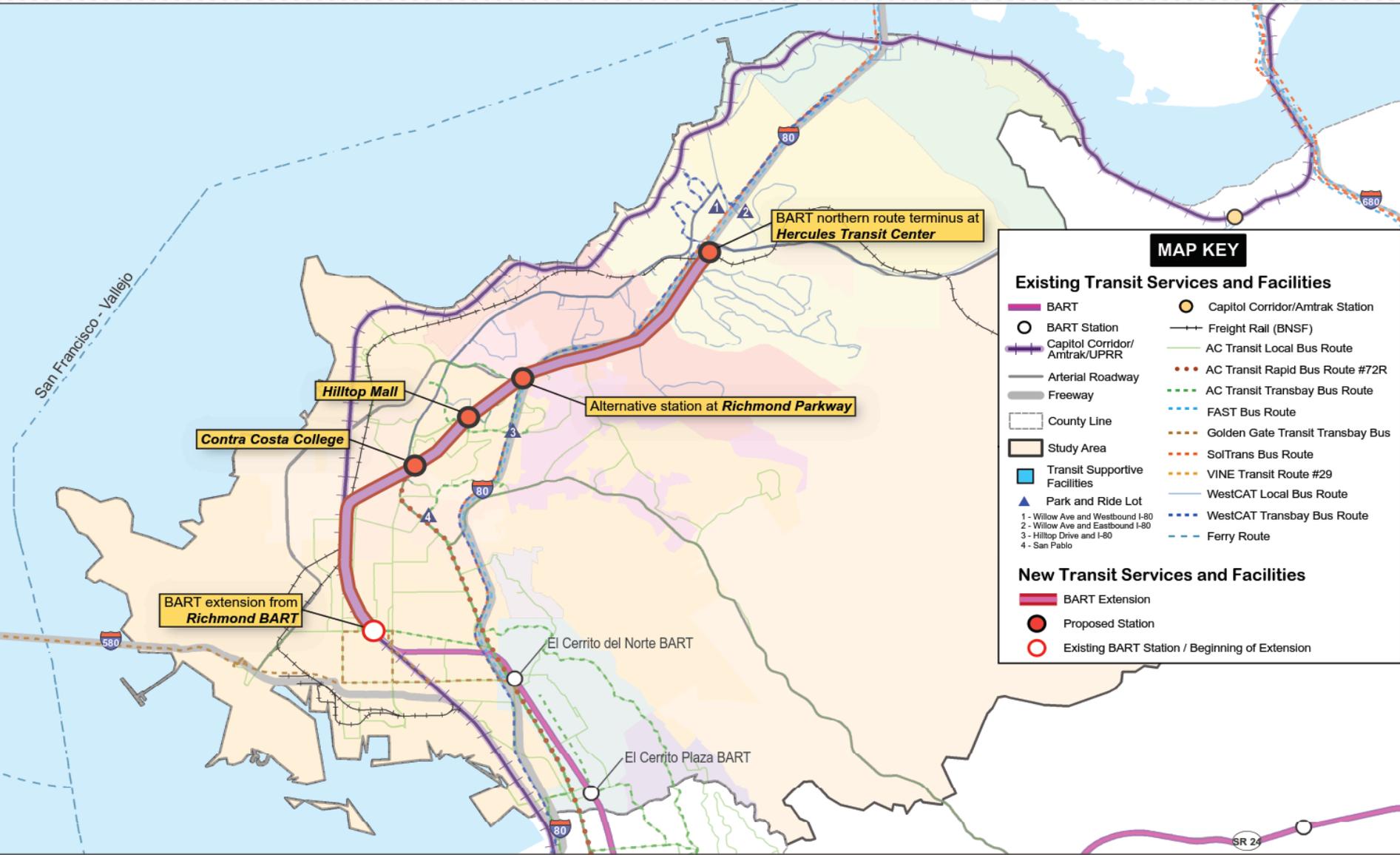
BART Alternatives

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



MAP KEY

Existing Transit Services and Facilities

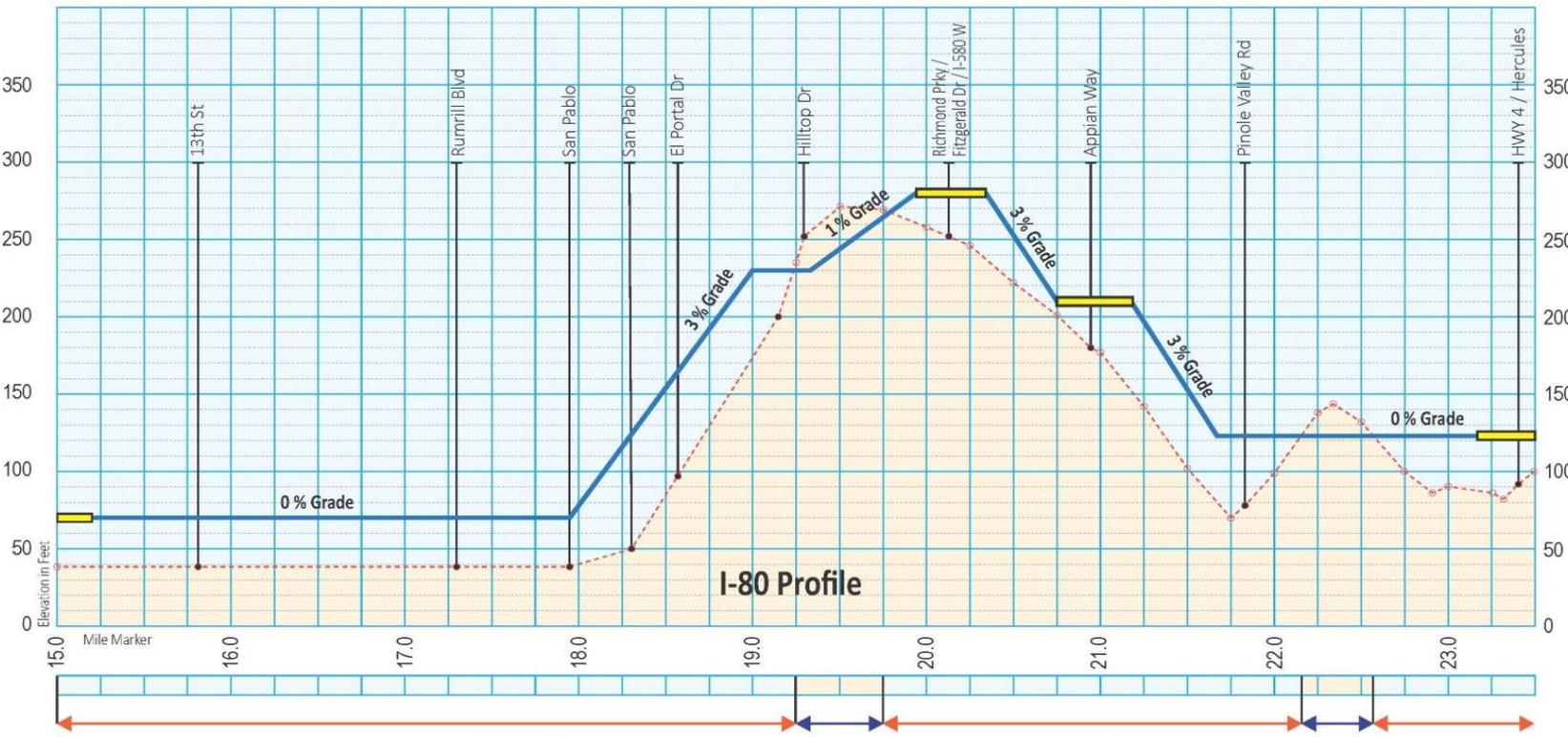
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- WestCAT Local Bus Route
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- Ferry Route

New Transit Services and Facilities

- BART Extension
- Proposed Station
- Existing BART Station / Beginning of Extension

1 - Willow Ave and Westbound I-80
 2 - Willow Ave and Eastbound I-80
 3 - Hilltop Drive and I-80
 4 - San Pablo

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)

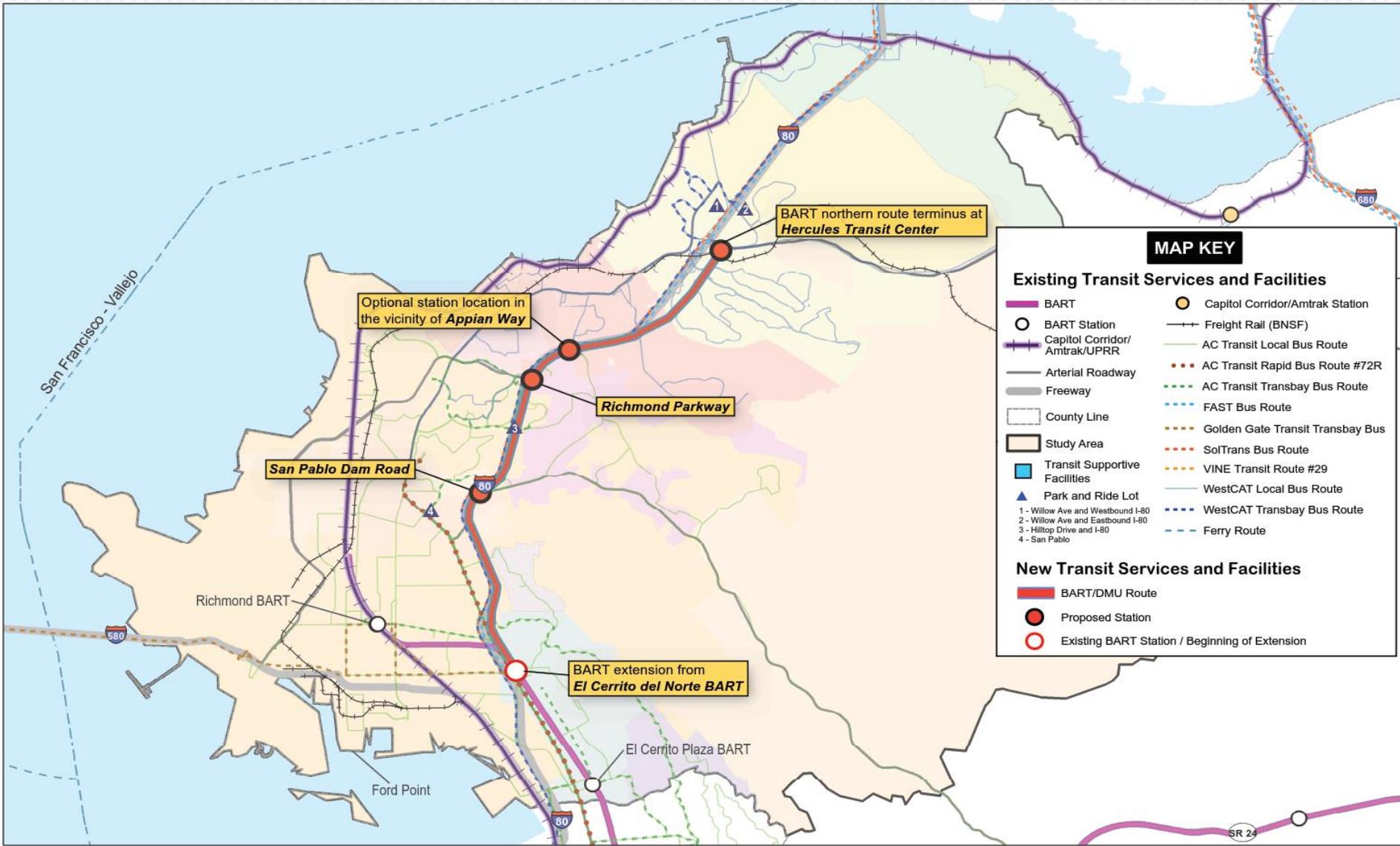
Alternative 6

UPRR to I-80 Corridor BART Rail

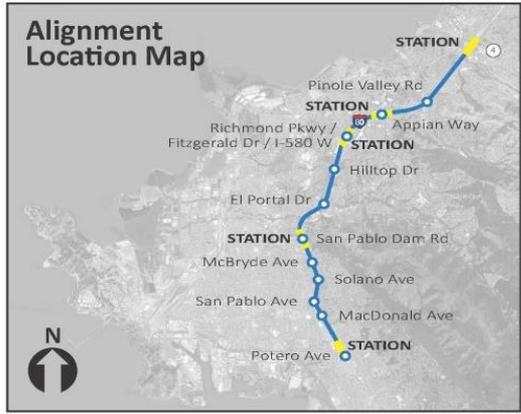
Proposed BART Alignment

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



I-80 Profile BART / DMU

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

Conceptual Alignment Alternative 7

El Cerrito del Norte to Hwy 4



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

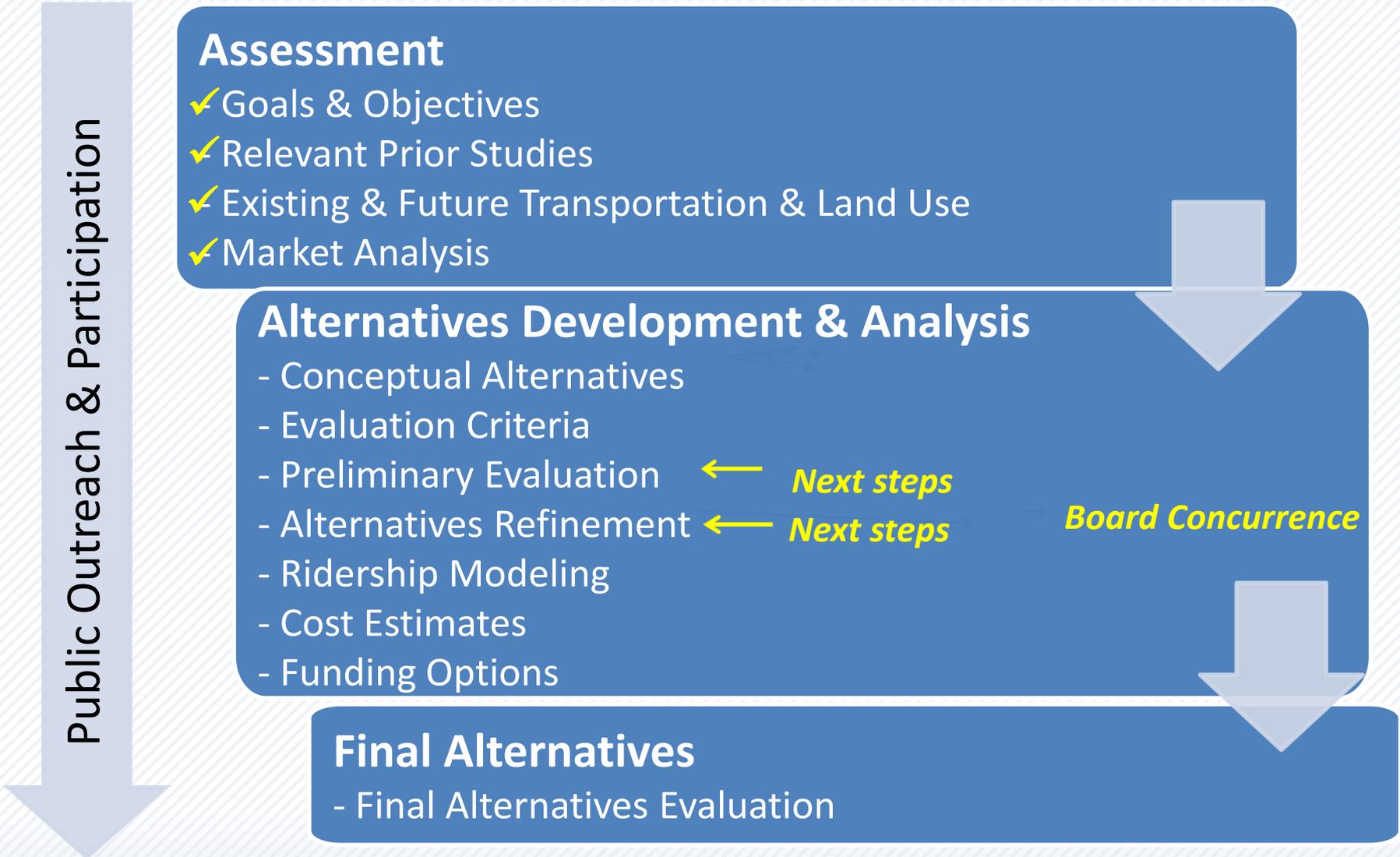




Next Steps



Next Steps



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

Evaluation Criteria

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

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**

