WCCTAC

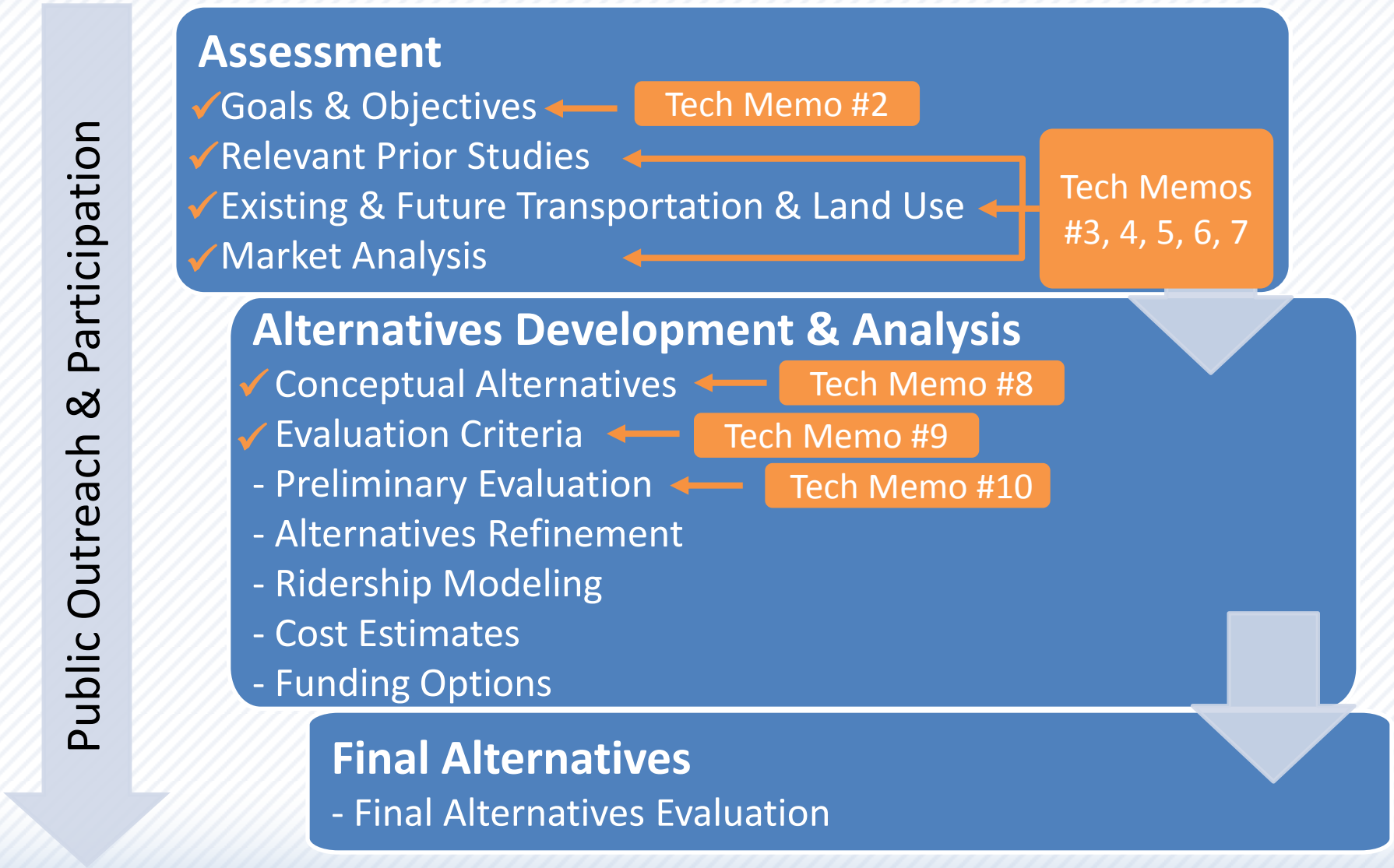
West Contra Costa Transportation Advisory Committee

West Contra Costa High-Capacity Transit Study

WCCTAC Board Meeting

May 27, 2016

How did we get here?



What do we want to do today?

1) Present highlights from April community workshops
2) Provide a summary of the technical review of alternatives
3) Narrow the set of alternatives that move forward to the next phase of the study

Summary of Survey Results

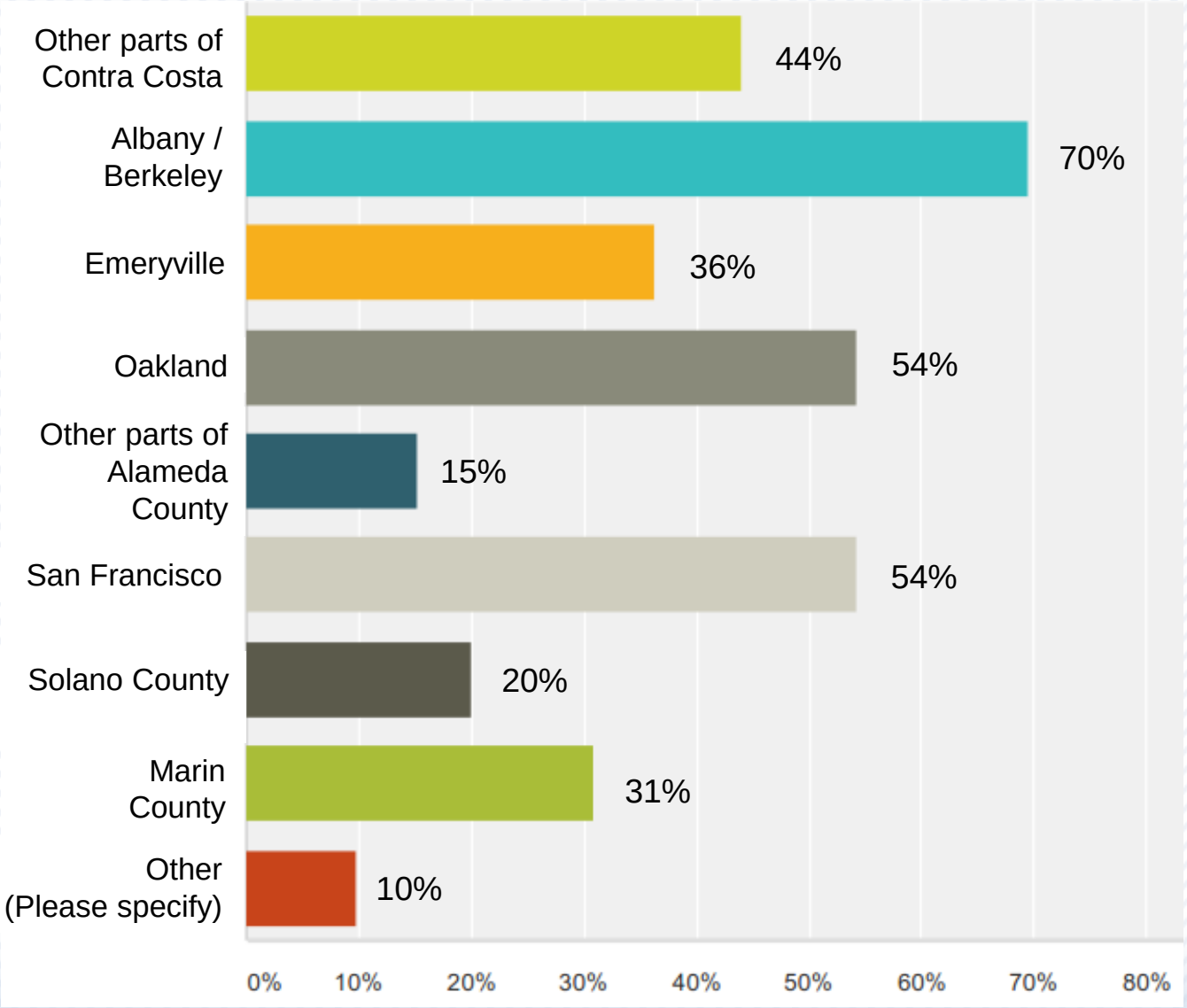
Survey

- Survey available 4/5 to 4/29
- 184 respondents
  - Representation from all parts of West County
  - 27 surveys were completed at public workshops and 157 online
- We asked 19 questions
  - Covered all modes
  - Included demographics
- Survey results available on project website
  - WestCountyTransitStudy.com

Survey

Q: When traveling outside West County, what areas do you most frequently visit?

(Check all that apply.)

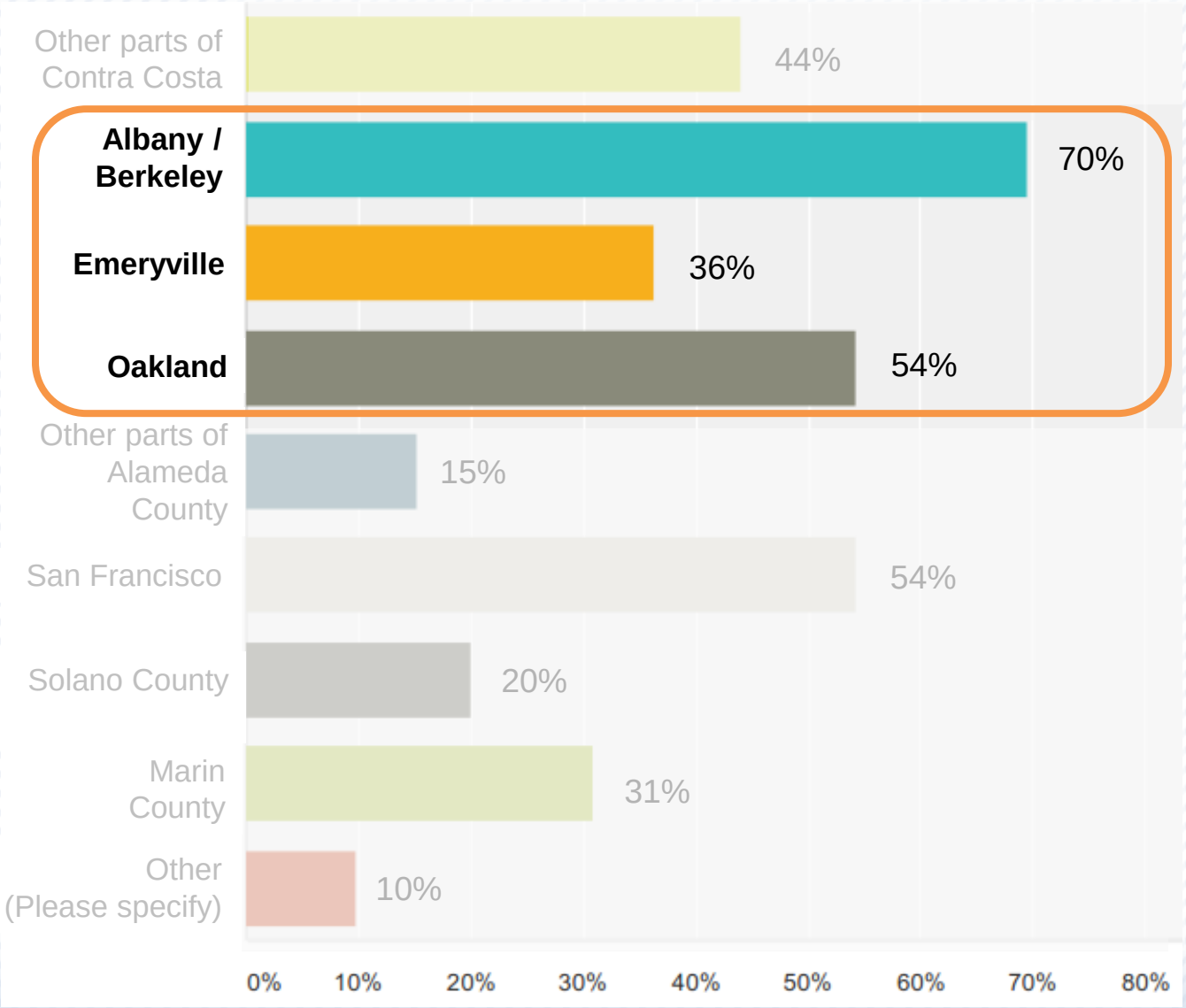


N = 184

Survey

Q: When traveling outside West County, what areas do you most frequently visit?

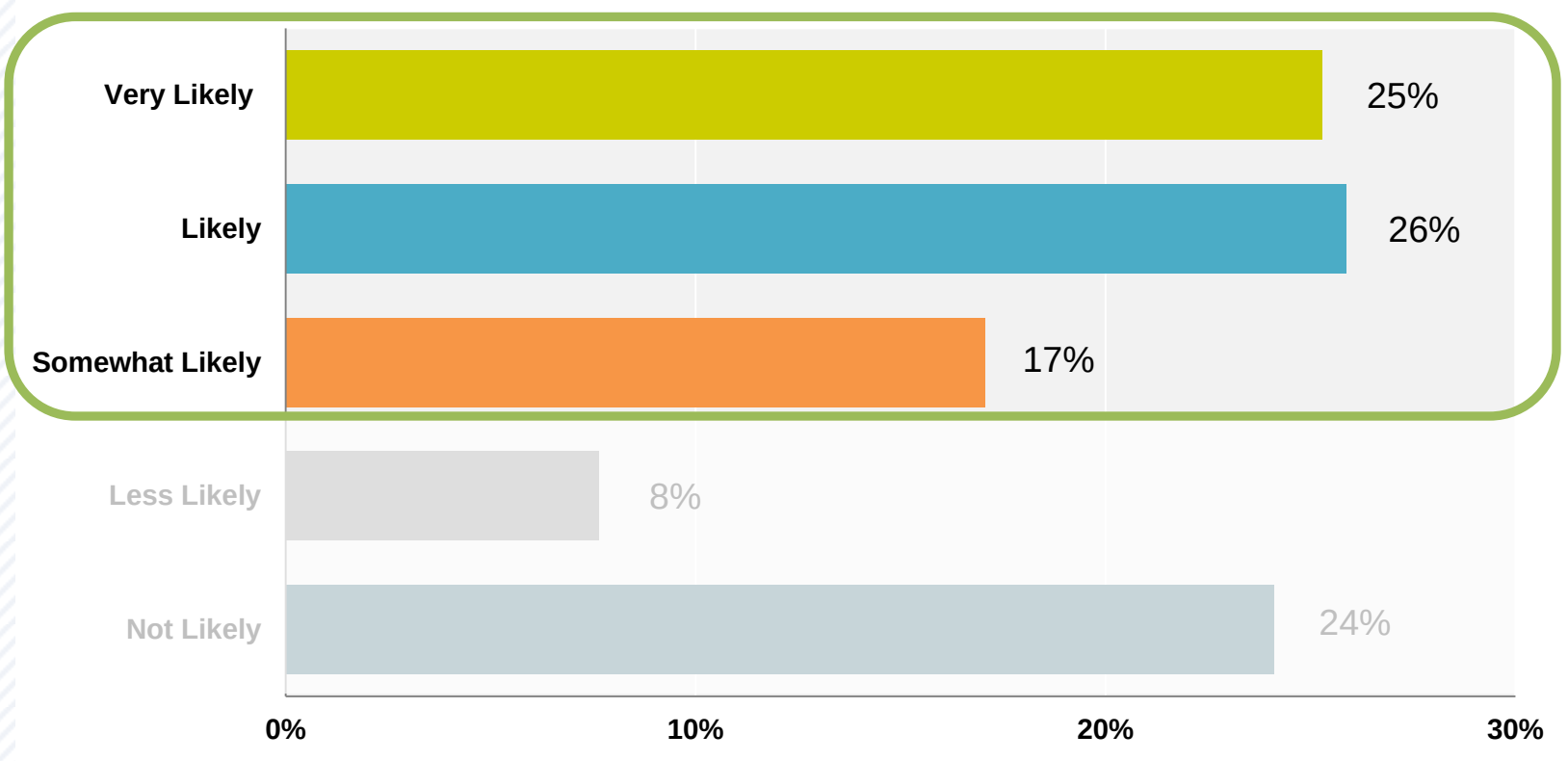
(Check all that apply.)



N = 184

Survey

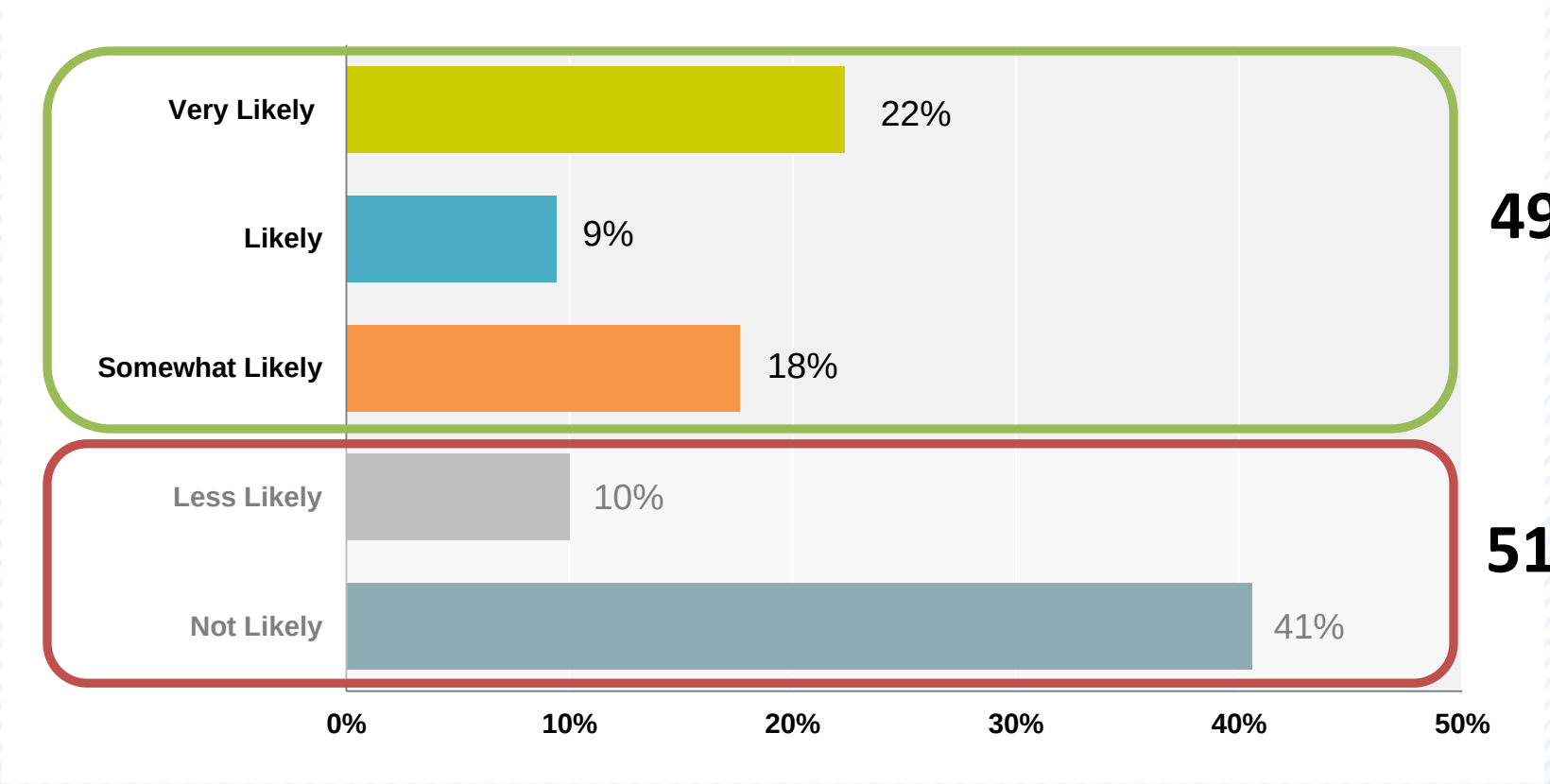
Q: …If BRT improvements were implemented, how likely would you be to take a BRT bus to work or school?



N = 170

Survey

Q: If it meant we could make street improvements that would reduce overall bus travel time and improve reliability, how likely would you be to support moving some on-street parking spaces to off-street locations?

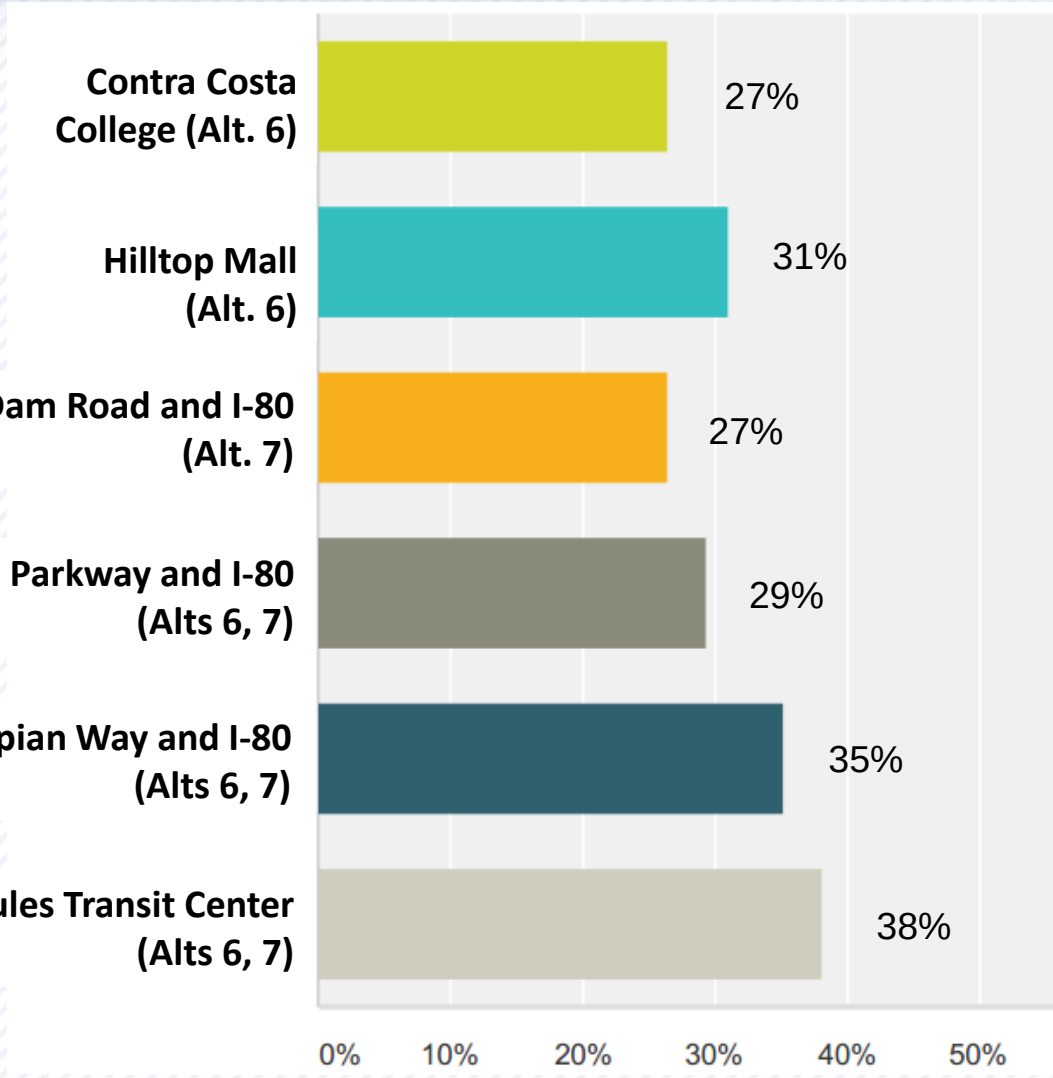


N = 170

Survey

Q: If BART were extended north to Hercules, where would you prefer stations be located?

(Check your top two choices.)



N = 170

Summary of April Workshops

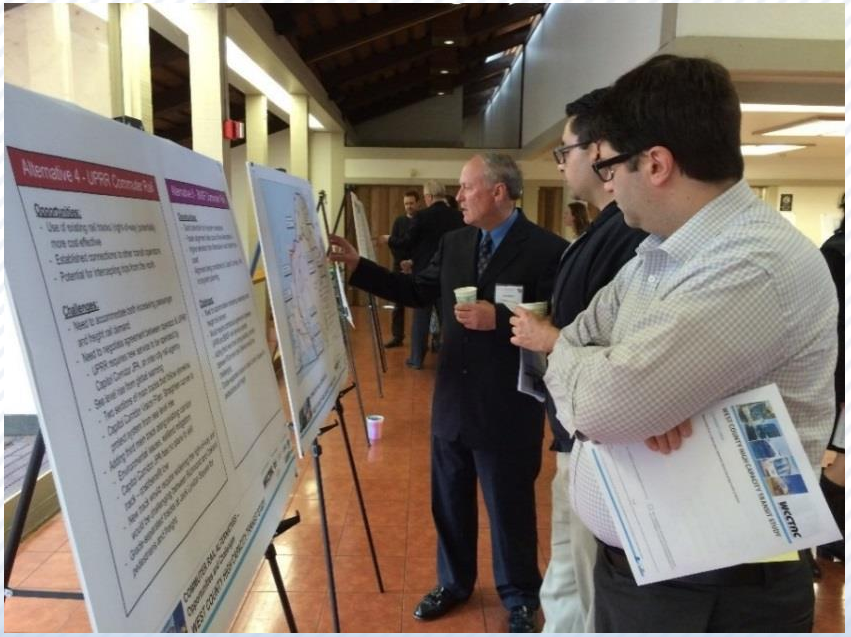


April Workshops

- 3 workshops in mid-April:
  - Pinole
  - Richmond
  - San Pablo
- About 20 attendees at each workshop
- High-quality feedback

Workshops – Sampling of Feedback

- Bus alternatives
  - Liked short-term improvements
  - Concerns about locations of stops
- Commuter Rail alternatives
  - Concerns about passenger and freight conflicts
- BART alternatives
  - Liked connection to rest of Bay Area
  - Capacity concerns
  - Questioned cost impact on local taxes
- Other
  - Interest in West County ⟺ Central/East County connections



Workshops – Dollar Investment Game

Workshop Location	Express Bus	BRT	Commuter Rail	BART
San Pablo	$11	$11	$2	$12
Pinole	$13	$5	$10	$10
Richmond	$11	$5	$6	$11
Total	**$35**	**$21**	**$18**	**$33**

Technical Analysis of Alternatives



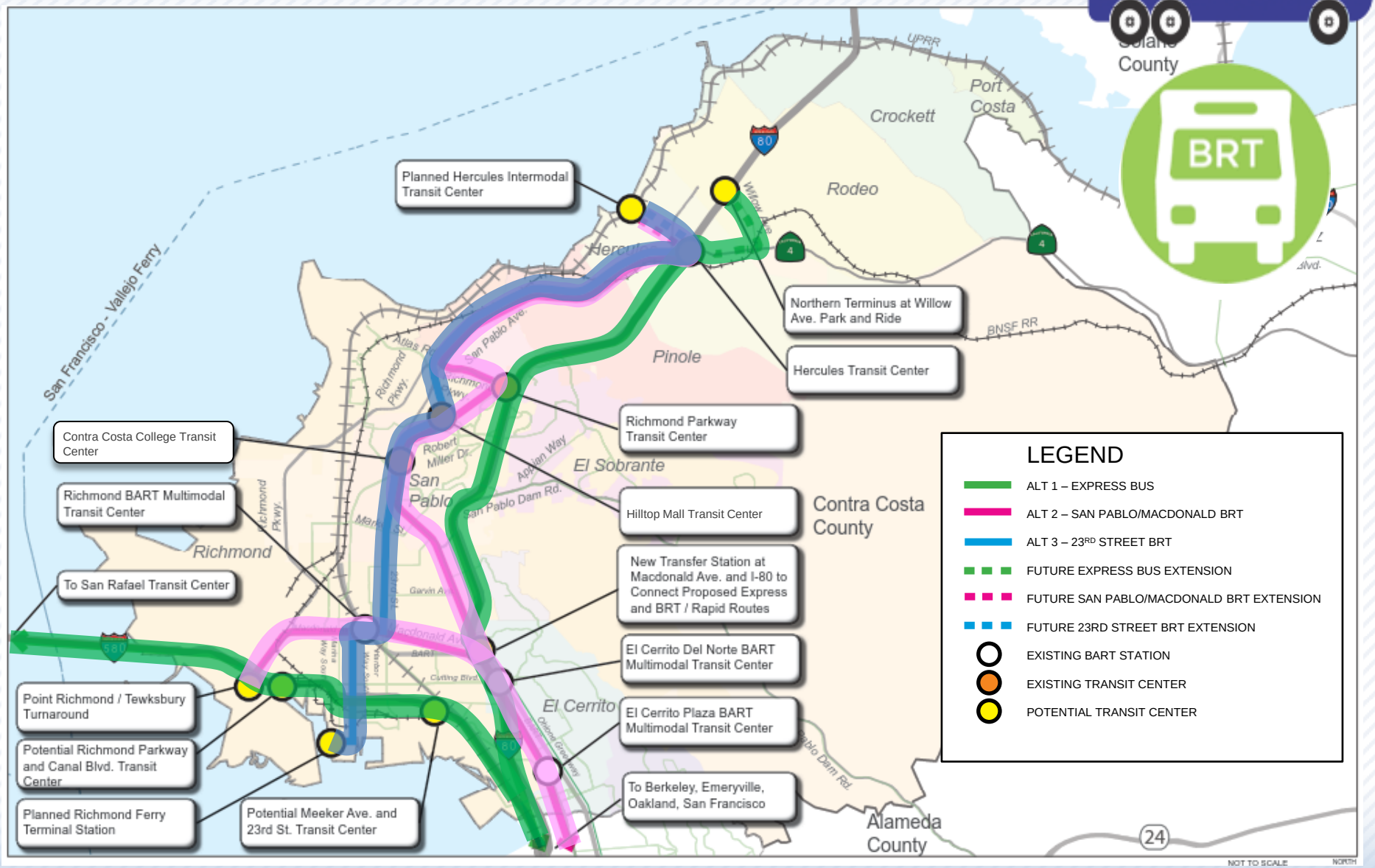
Eight Preliminary Alternatives

Alternative
 Alternative 1: Express Bus on I-80
 Alternative 2: San Pablo Avenue/Macdonald Avenue BRT
 Alternative 3: 23rd Street BRT
 Alternative 4: UPRR Commuter Rail
 Alternative 5: BNSF Commuter Rail
 Alternative 6: BART Extension from Richmond
 Alternative 7A: BART Extension from El Cerrito del Norte
 Alternative 7B: BART DMU Extension from El Cerrito del Norte

Technical Analysis of Express Bus and BRT Alternatives



Alts. 1-3: Express Bus and BRT Alternatives



Alternative 1: Express Bus on I-80

- Key Opportunities
  - Fast to implement and relatively low cost
  - Untapped markets and demonstrated demand
  - Least environmental impacts and good for GHG reduction
- Key Limitations
  - Speed dependent on improved operating conditions
    - HOV/HOT Lanes
    - Local streets

Recommended to Advance?	Yes	No
Alt. 1: Express Bus on I-80	✖	

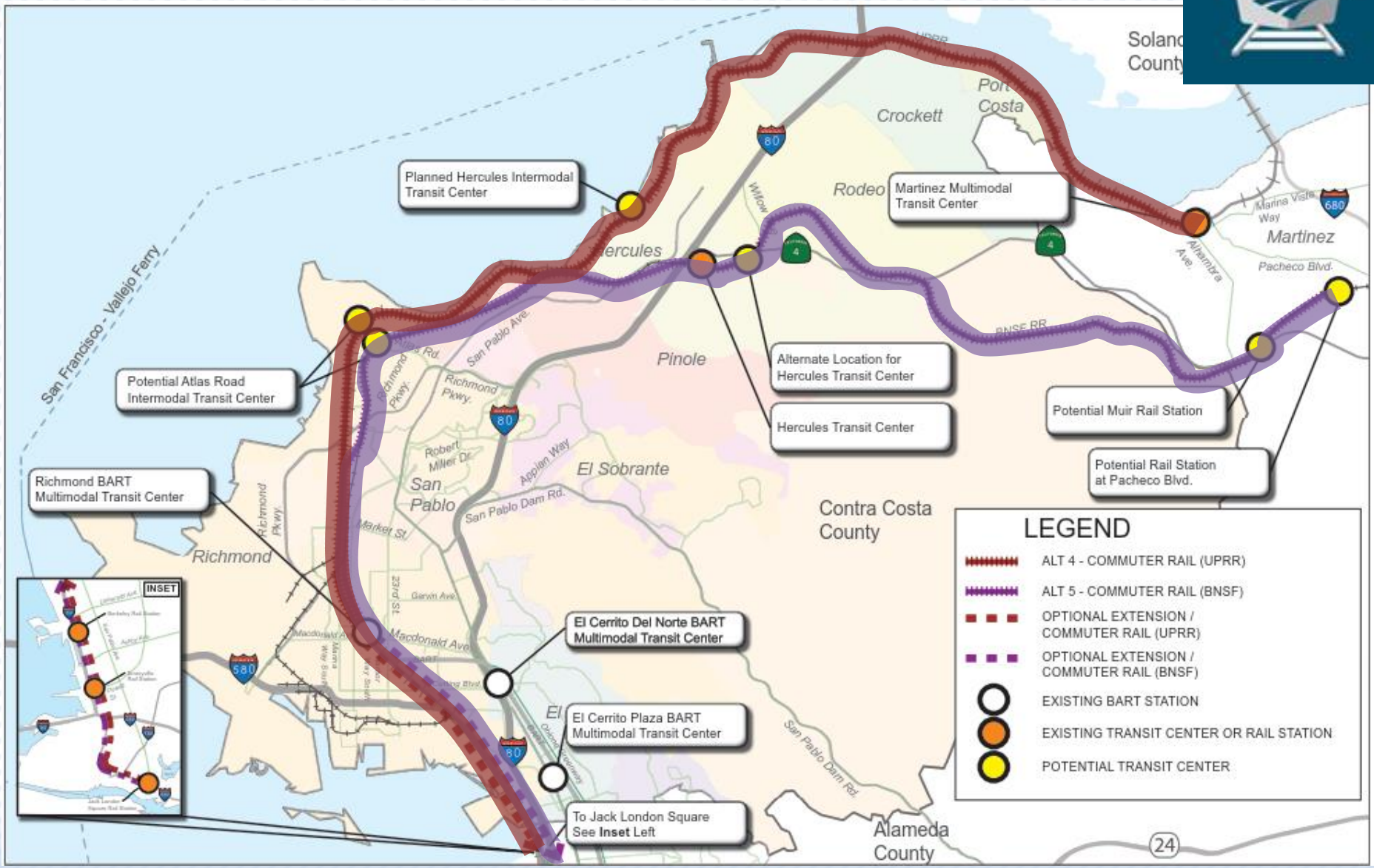
Alternatives 2 and 3: Bus Rapid Transit

- Key Opportunities
  - Improves bus reliability at modest cost
  - Easily tailored to meet local conditions and demand
  - Proposed routes serve:
    - Underserved travel markets;
    - Low-income populations;
    - Regional destinations;
    - Population/employment centers and PDAs
- Key Limitations
  - To maximize effectiveness, some parking and travel lanes may need to shift to bus-only lanes

Recommended to Advance?	Yes	No
Alt. 1: Express Bus on I-80	✖	
Alt. 2: San Pablo/MacDonald BRT	✖	
Alt. 3: 23rd Street BRT	✖	

Technical Analysis of Commuter Rail Alternatives

Alternatives 4 and 5: Commuter Rail



Alternative 4: UPRR Commuter Rail

- Key Opportunities
  - Subsidized fares for West County residents on existing service
  - Implementation of Hercules Intermodal Station already underway
  - Analysis suggests short- and mid-term options on existing UPRR is most promising
- Key Limitations
  - High-cost improvements provides limited service gains
  - Limited value service, if solely within Contra Costa

Recommended to Advance?	Yes	No
Alt. 1: Express Bus on I-80	✖	
Alt. 2: San Pablo/MacDonald BRT	✖	
Alt. 3: 23rd Street BRT	✖	
Alt. 4: UPRR Commuter Rail*	✖	

* = Short & mid-term options only

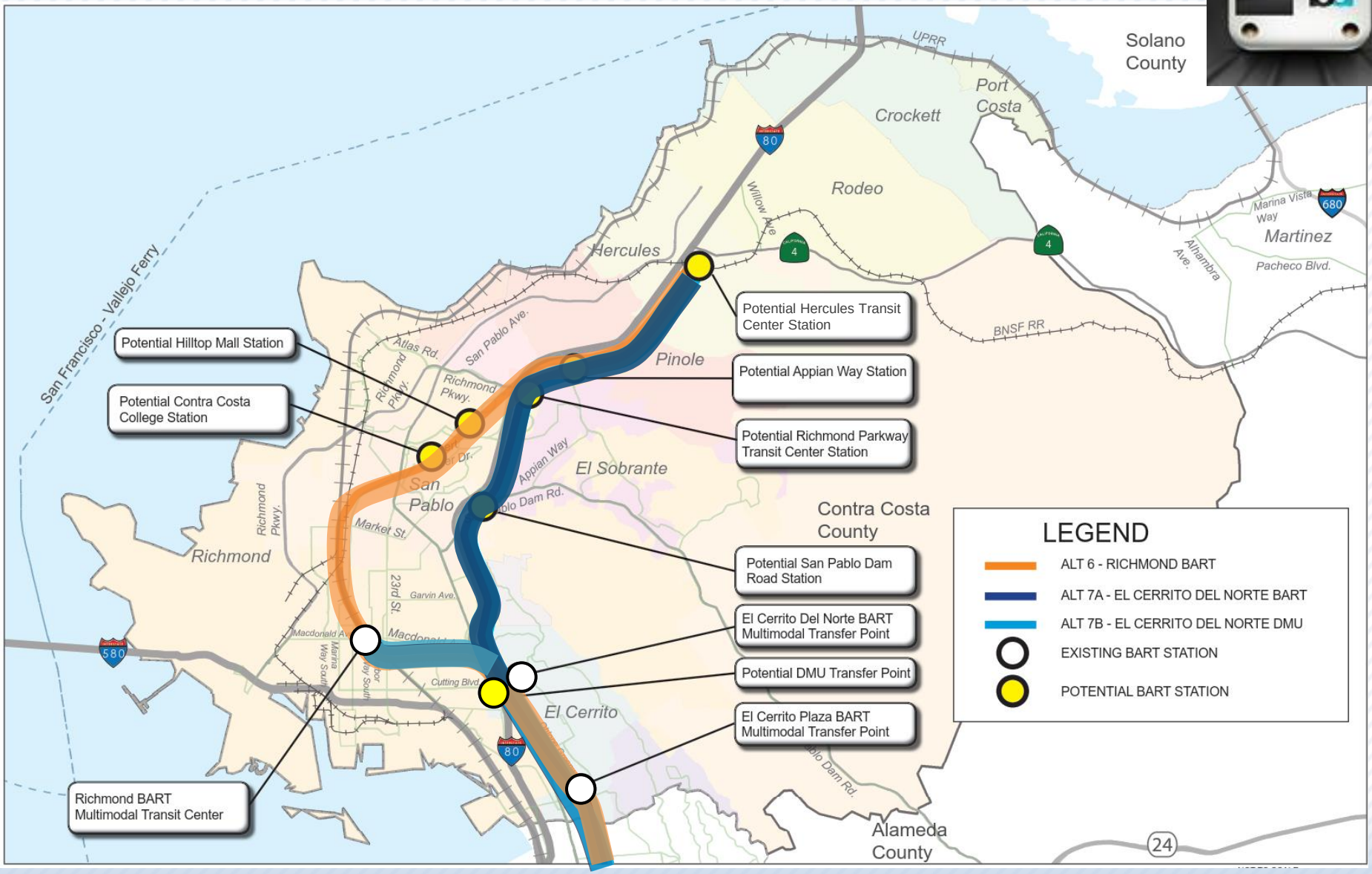
Alternative 5: BNSF Commuter Rail

- Key Opportunities
  - Fewer curves than UPRR to limit speed of operations
- Key Limitations
  - Extensive new infrastructure initially required to establish passenger service
  - Limited value service, if solely within Contra Costa
  - Requires new operating agreements with RRs

Recommended to Advance?	Yes	No
Alt. 1: Express Bus on I-80	✖	
Alt. 2: San Pablo/MacDonald BRT	✖	
Alt. 3: 23rd Street BRT	✖	
Alt. 4: UPRR Commuter Rail	✖	
Alt. 5: BNSF Commuter Rail		✖

Technical Analysis of BART Alternatives

Alternatives 6, 7A, 7B: BART Alternatives



Alt. 7B: BART DMU Extension from El Cerrito del Norte

- Key Opportunities
  - Travel time and reliability
- Key Limitations
  - Requires transferring between trains at El Cerrito del Norte
  - Requires timing coordination to minimize transfer time
  - Requires new maintenance service area
  - Requires new track and aerial structures to access maintenance yard
  - DMU technology has no major cost savings due to extensive structures and tunnels
  - DMU technology has similar costs, but lower service quality

Recommended to Advance?	Yes	No
Alt. 1: Express Bus on I-80	✖	
Alt. 2: San Pablo/MacDonald BRT	✖	
Alt. 3: 23rd Street BRT	✖	
Alt. 4: UPRR Commuter Rail	✖	
Alt. 5: BNSF Commuter Rail		✖
Alt. 7B: BART DMU Extension from El Cerrito del Norte		✖

Alt. 6: BART Extension from Richmond
Alt. 7A: BART Extension from El Cerrito del Norte

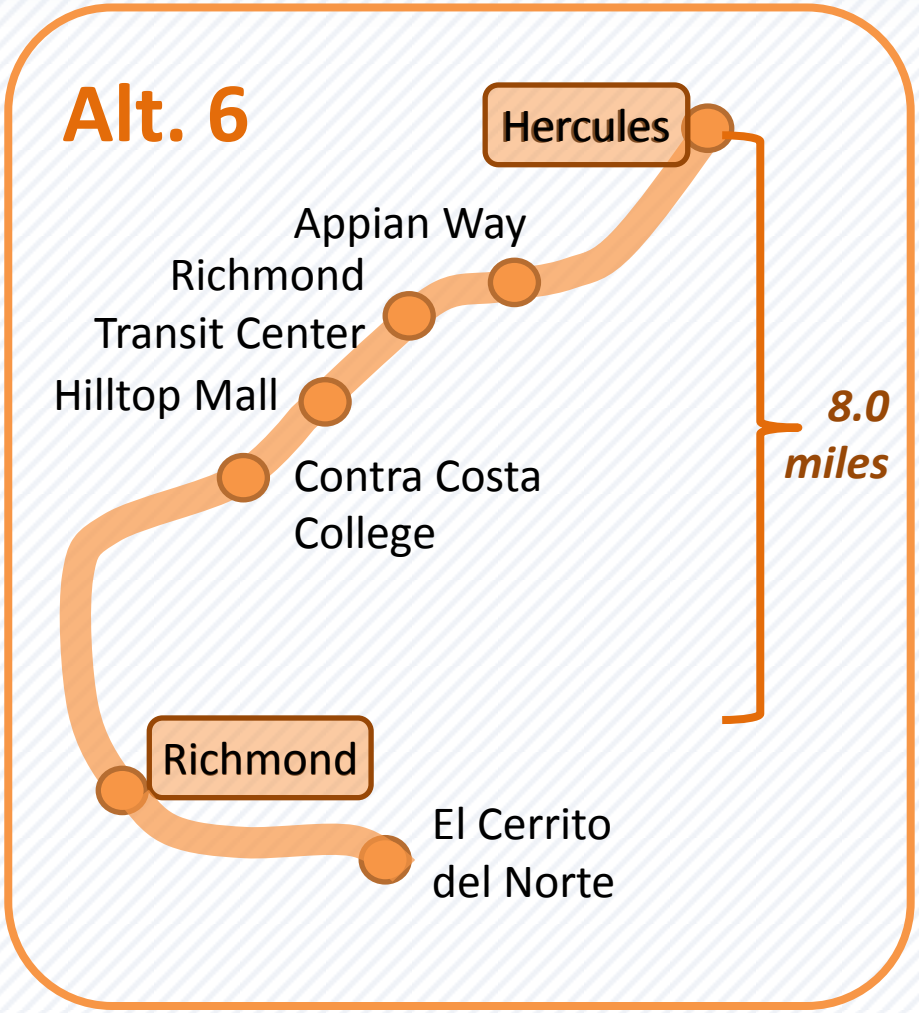
- Key Opportunities
  - Fast travel time
  - Excellent connections to regional destinations
  - Attracts and carries large quantity of passengers
  - Best for congestion relief
  - Air quality, GHG, environmental benefits
- Key Limitations
  - Steep grades require structures and tunnels
  - Cost
  - Long time to implement

Comparison of Alt. 6 (Richmond) and Alt. 7A (El Cerrito del Norte)

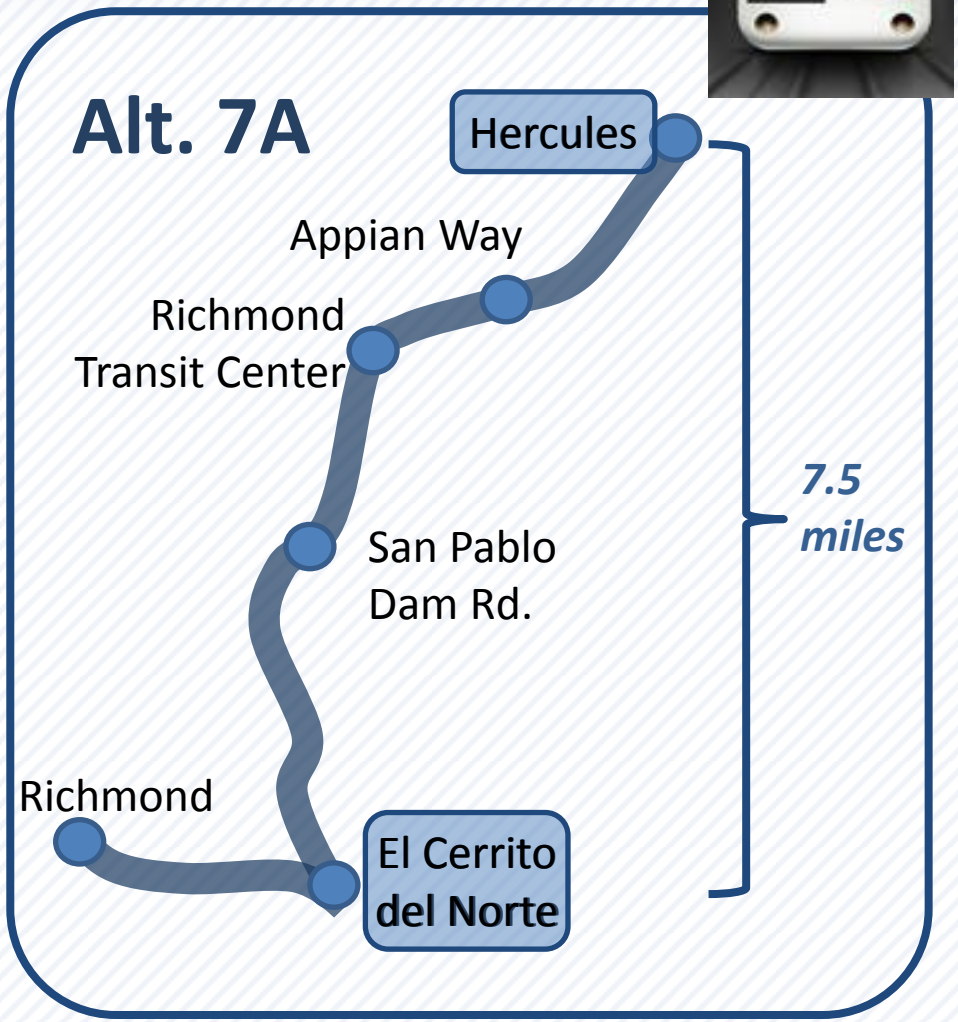
	Alt. 6: Richmond	Alt. 7A: Del Norte
Length		
Station potential, PDA access		
Travel time		
Split service		
Seismic issues, soil stability		
Consistency with local plans		
Capital costs		

Potential Stations

Alt. 6



Alt. 7A



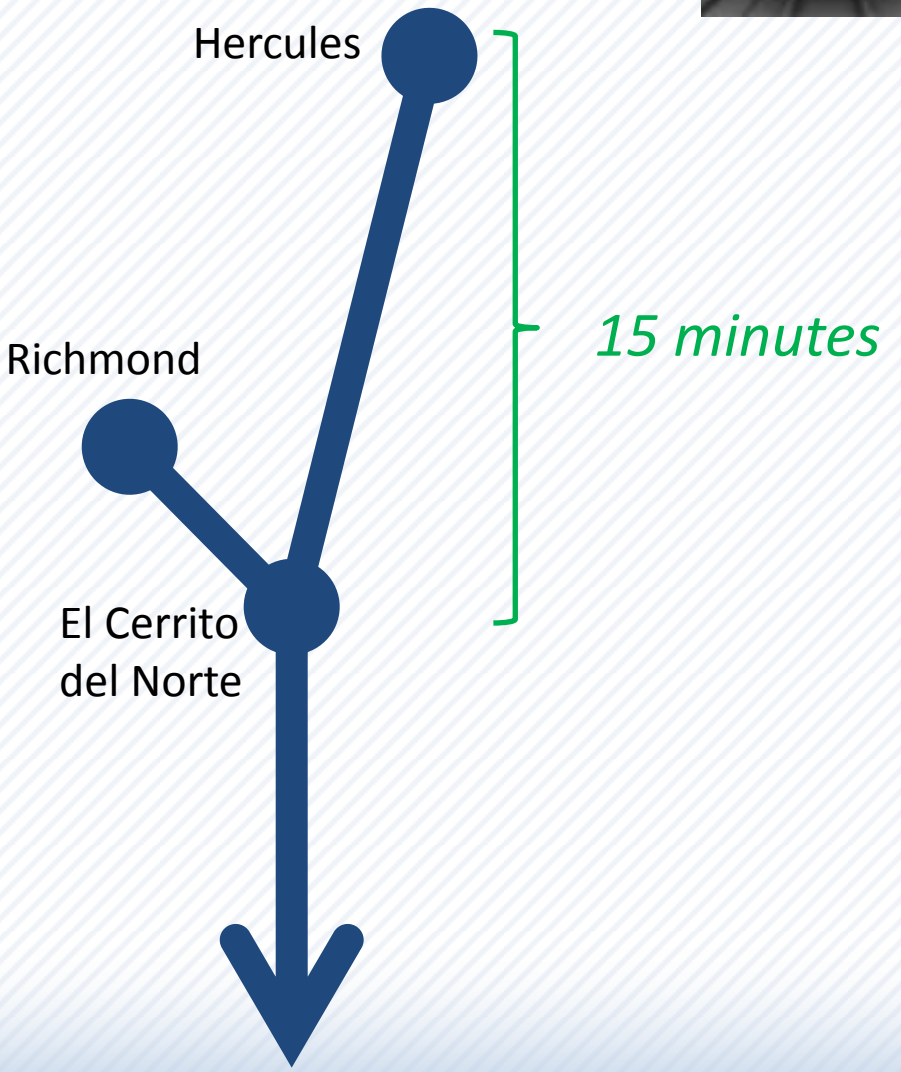
Comparison of Alt. 6 (Richmond) and Alt. 7A (El Cerrito del Norte)

	Alt. 6: Richmond	Alt. 7A: Del Norte
Length	8.0 miles	7.5 miles
Station potential, PDA access	++	+
Travel time		
Split service		
Seismic issues, soil stability		
Consistency with local plans		
Capital costs		

Stations: How do transit travel times compare?

Alt. 6

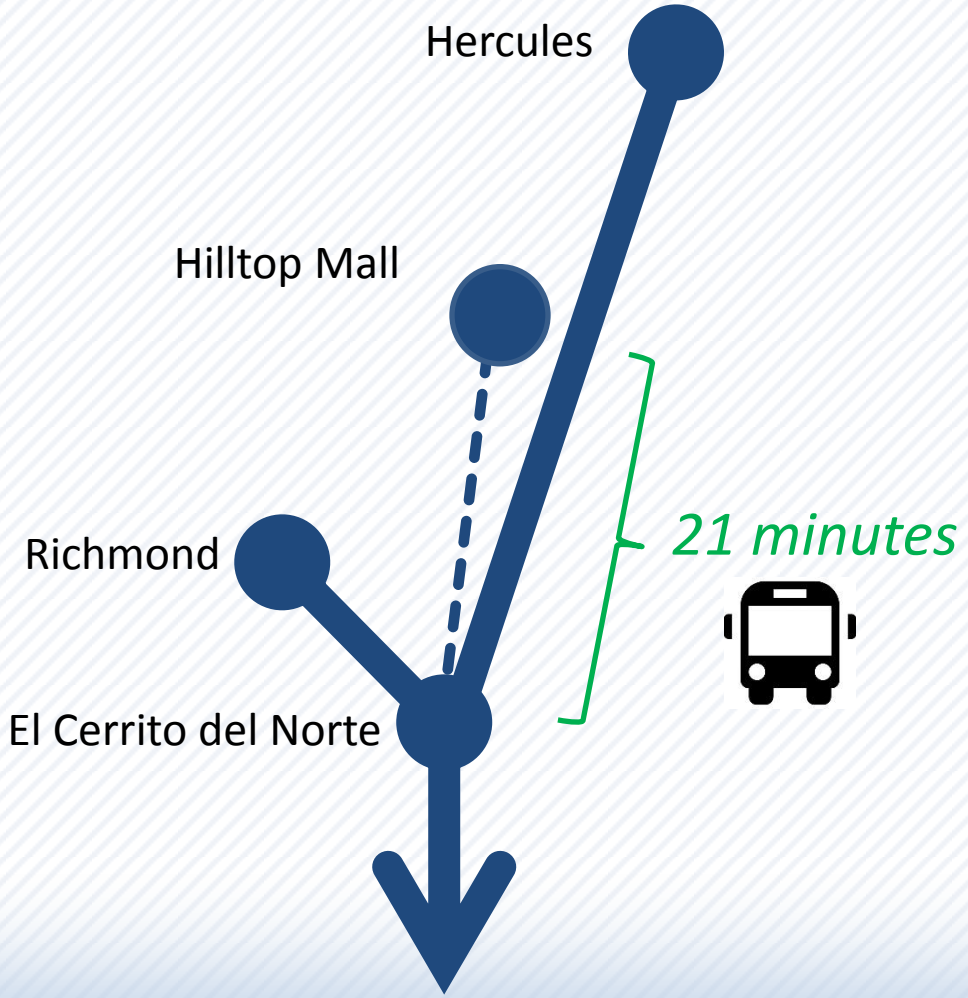
Alt. 7A



Transit centers: How do overall travel times compare?

Alt. 6

Alt. 7A



Comparison of Alt. 6 (Richmond) and Alt. 7A (El Cerrito del Norte)

	Alt. 6: Richmond	Alt. 7A: Del Norte
Length	8.0 miles	7.5 miles
Station potential, PDA access	++	+
Travel time	++	++
Split service		
Seismic issues, soil stability		
Consistency with local plans		
Capital costs		

What is split service and its impacts?

Alt. 6

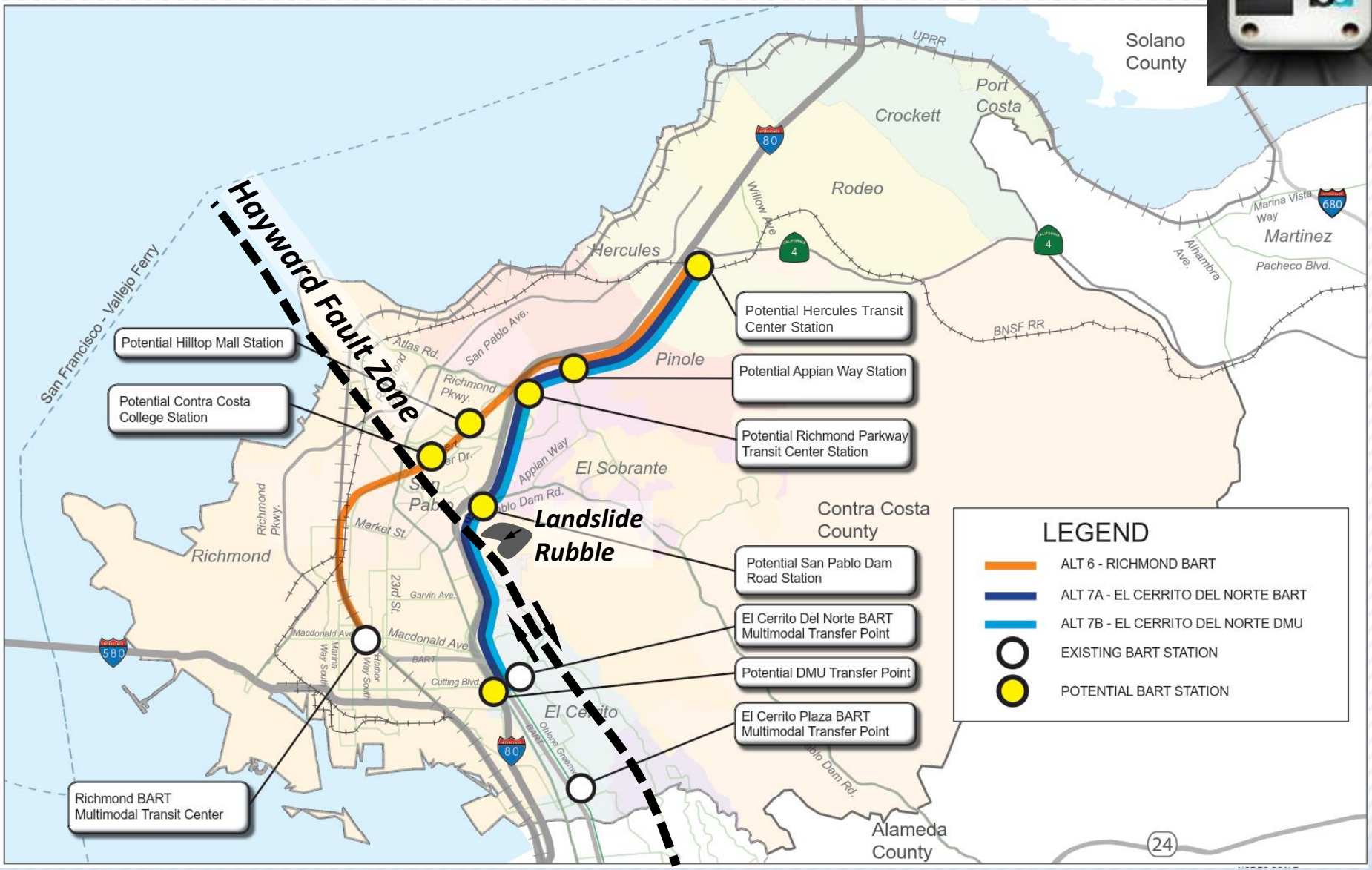
Alt. 7A

Example headways for illustration purposes only

Comparison of Alt. 6 (Richmond) and Alt. 7A (El Cerrito del Norte)

	Alt. 6: Richmond	Alt. 7A: Del Norte
Length	8.0 miles	7.5 miles
Station potential, PDA access	++	+
Travel time	++	++
Split service	++	−−
Seismic issues, soil stability		
Consistency with local plans		
Capital costs		

Seismic issues and soil stability



Comparison of Alt. 6 (Richmond) and Alt. 7A (El Cerrito del Norte)

	Alt. 6: Richmond	Alt. 7A: Del Norte
Length	8.0 miles	7.5 miles
Station potential, PDA access	++	+
Travel time	++	++
Split service	++	−−
Seismic issues, soil stability	−	−−
Consistency with local plans		
Capital costs		

Consistency with local plans

Alt. 6

- Predominantly existing right-of-way, but some community impact in the vicinity of Rumrill Blvd.
- Consistent with Richmond General Plan
- Consistent with BART expansion policies

Alt. 7A

- Predominantly existing right-of-way, some right-of-way acquisition required, but along freeway corridor
- Inconsistent with Richmond General Plan
- Rates lower for BART expansion policies

Comparison of Alt. 6 (Richmond) and Alt. 7A (El Cerrito del Norte)

	Alt. 6: Richmond	Alt. 7A: Del Norte
Length	8.0 miles	7.5 miles
Station potential, PDA access	++	+
Travel time	++	++
Split service	++	−−
Seismic issues, soil stability	−	−−
Consistency with local plans	+	−
Capital costs	$2.453 B	$2.465 B

Alternatives Proposed for Further Review in this Study

Recommended to Advance?	Yes	No
Alt. 1: Express Bus on I-80	✕	
Alt. 2: San Pablo/MacDonald BRT	✕	
Alt. 3: 23rd Street BRT	✕	
Alt. 4: UPRR Commuter Rail	✕	
Alt. 5: BNSF Commuter Rail		✕
Alt. 6: BART Extension from Richmond	✕	
Alt. 7A: BART Extension from El Cerrito del Norte		✕
Alt. 7B: BART DMU Extension from El Cerrito del Norte		✕

Estimated Capital Costs and Implementation Timelines – All Alternatives

Capital Cost Estimates

Description	Length (miles)	Estimated Cost (millions)	Cost per mile (millions)
Alt 1: Express Bus on I-80	17.5	$7 - $248	$14
Alt 2: San Pablo/Macdonald BRT	16.8	$50 - $248	$15
Alt 3: 23rd Street BRT	10.7	$15 - $121	$11
Alt 4: UPRR Commuter Rail*	32.5	$186 - $338	$10
Alt 5: BNSF Commuter Rail*	14.9	$193 - $347	$23
Alt 6: BART Extension from Richmond	8.0	$2,453	$307
Alt 7A: BART Extension from El Cerrito del Norte	7.5	$2,465	$329
Alt 7B: BART/DMU Extension from El Cerrito del Norte	7.5	$2,170	$289

All figures in 2015 dollars.

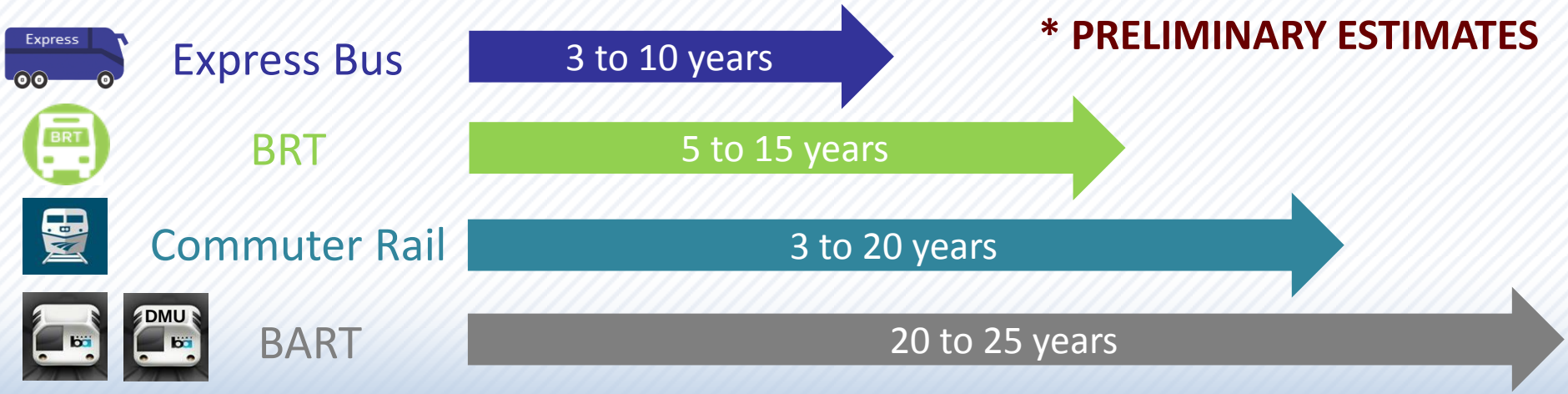
* Costs do not include improvements beyond Richmond.

PRELIMINARY ESTIMATES

Capital Cost Estimates and Implementation Schedules*

Express Bus	BRT	Commuter Rail	BART
$7M to $250M	$15M to $250M	$186 to $350M	*Up to* $2.8B
$$	$$	$$$	$$$$$$$

$= $100 million



*** PRELIMINARY ESTIMATES**

Study Schedule

Project and Schedule 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

June – August

Final Alternatives

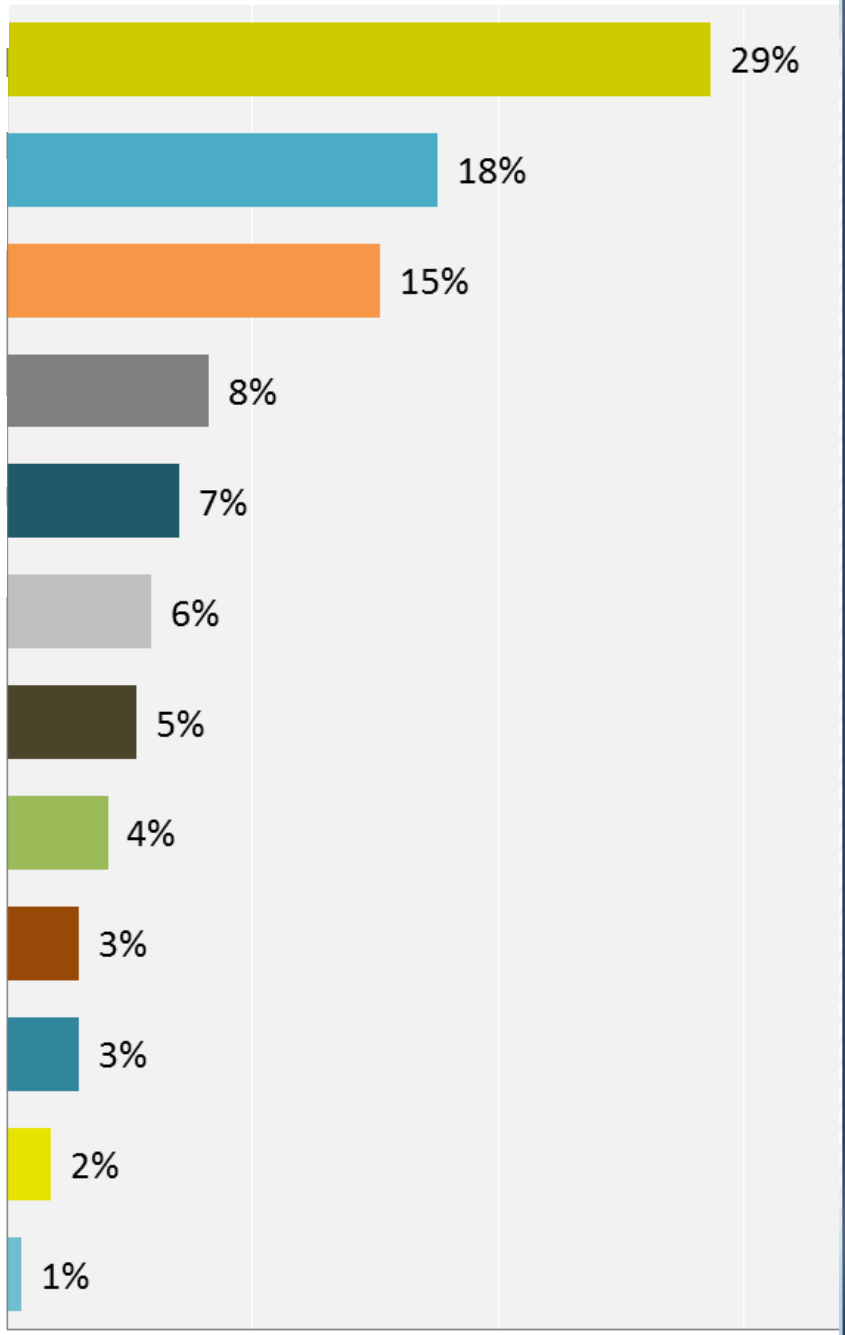
- Final Alternatives Evaluation

Discussion

Back-up Slides

Survey

Q: What is your biggest challenge in using transit to get to or from the place you travel to the most?



N = 171

Survey

Q: What are your biggest challenges in using transit to get or from the place you travel to the most?

(Indicate your top three challenges.)

N = 177