El Camino Real Bus Rapid Transit Study

Board of Directors
November 5, 2014
Agenda Item #

What is Bus Rapid Transit?

- **Rapid Bus**
  - **Mixed-flow operations**
  - **Skip-stop service**
  - **Signal/street priority**
- **Full BRT**
  - **Dedicated lanes**
  - **Enhanced stations**
  - **Rail-like operations**
  - **High capital outlay**
  - **Challenges**

Local Service

Skip-stop Service

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Background

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- **Caltrans 2013 Planning Grant**
    - **Board briefed August 2013**
    - **Focus is long-term BRT implementation phasing plan**
    - **Short-term Rapid Bus service opportunities**
    - **Build off SSP, Grand Boulevard Initiative**
- **An opportunity to**
    - **Improve experience for current customers**
    - **Attract new riders**
    - **Support planned growth per the Grand Blvd. Initiative**
    - **Improve options for Caltrain riders**
- **Feasibility study, non-binding results**

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Phasing Plan

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- **Short-term operating plan focused on Rapid service**
- **Potential long-term operating plan focused on intensive "Full BRT" service**

ECR	Rapid	BRT
Now	Short Term	Long Term

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Study Goals

- **Essential system components**
- **Impacts to customer**
- **Ridership forecasts**
- **Capital and operating costs**
- **Funding strategy**
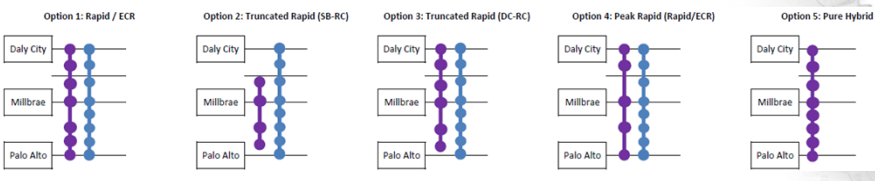
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Service Concepts

- **How many stops?**
- **How frequent?**
- **What about ECR?**
- **Maximum ridership, minimize costs**

Option 1: Rapid / ECR	Option 2: Truncated Rapid (SB-RC)	Option 3: Truncated Rapid (DC-RC)	Option 4: Peak Rapid (Rapid/ECR)	Option 5: Pure Hybrid
Daly City	Daly City	Daly City	Daly City	Daly City
Millbrae	Millbrae	Millbrae	Millbrae	Millbrae
Palo Alto	Palo Alto	Palo Alto	Palo Alto	Palo Alto

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Rapid Bus Alternatives

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- **ECR: 102-104 stops in each direction**
- **Service concepts**
  - **Overlay Rapid over current ECR**
    - **Full Overlay with 37 stops (Daly City – Palo Alto)**
    - **Truncated Overlay with 32 stops (Daly City – Redwood City)**
    - **Truncated Overlay with 23 stops (San Bruno – Redwood City)**
  - **Hybrid Route (ECR with fewer stops)**
    - **Hybrid A: 76 stops, 10 to 12 minute frequency**
    - **Hybrid B: 50 stops, 7.5 to 12 minute frequency**

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Key Study Findings

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- **Ridership Forecasts**
  - **Fewer stops = reduced travel time**
    - **Can save 15-30 minutes per trip**
  - **Transit priority at signals**
    - **Can save up to 15 minutes per trip**
    - **Technologically viable**
- **Rapid Service can reduce travel times by 25%**

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Rapid Overlay of ECR

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- **ECR ridership in 2020**
  - **16,600 daily boardings**
  - **$14.5 million annual net operating cost**
    - **15% of fixed-route system**
- **Impact of Rapid Bus overlay**
  - **Ridership grows 19% to 34%**
    - **19,700 to 22,200 daily boardings**
    - **3,100 to 5,600 new daily boardings**
  - **Operating costs increase 34% to 59%**
    - **$5.7 million to $10.3 million annually**
  - **Capital costs potentially minimal**

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Rapid Hybrid Replaces ECR

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- **Hybrid bus ridership**
  - **25% to 50% fewer stops**
  - **Ridership grows 6% to 35%**
    - **17,700 to 22,500 daily boardings**
    - **1,100 to 5,900 new daily boardings**
  - **Operating costs increase 8% to 51%**
    - **$1.3 million to $8.4 million annually**
  - **Capital costs potentially minimal**
- **Difference with Rapid overlay**
  - **Ridership growth similar**
  - **18% to 77% lower in operating costs**

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Rapid Bus Capital Costs

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- **Optional features**
  - **Enhanced stops ($11 million)**
    - Canopy, benches, windscreen, lighting, signage
    - Real-time information
    - About $150,000 per stop
  - **Transit signal priority ($2.4 million)**
    - 120 signals
    - Reduces travel time by another 15 minutes

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Full BRT Concept

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- **Potential long-term option**
  - **Exclusive bus lanes in each direction**
  - **Queue jumps, transit signal priority**
  - **37 stops, maintain ECR**
  - **15-minute frequency for both ECR and BRT**
- **Ridership grows 27%**
  - **33,800 daily boardings in 2040**
- **Operating costs increase $6.9 million annually**
- **Capital costs $100 million for bus lanes, $47 million for 74 enhanced stops**
- **Engineering and other challenges**

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Next Steps

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- **Public input**
  - **Public meetings**
    - **Nov 13 – South San Francisco Council Chambers**
    - **Nov. 18 – SamTrans**
  - **GBI Task Force and Working Committee**
  - **SamTrans CAC**
  - **Cities and others upon request**
- **Transit signal priority**
  - **Ongoing coordination with Caltrans, C/CAG**
  - **Pursue grants**
- **Monitor system performance and consider within context of Strategic Plan**

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