Two Bridges
Complex Corridor
Headlines

• Corridor requires phased improvements
• Solutions require consensus, other approvals
  − Rail bridge: FTA, Coast Guard, Union Pacific, etc.
  − Highway bridge: Caltrans, MTC/BATA
  − Approaches: Caltrans, cities
• Funding challenges/opportunities
  − Public funding, private sector, P3 financing
• Other challenges/value
  − Environmental, connecting to other rail lines
Comparative Analysis of Alternatives – Goals and Metrics

• Enhance mobility
  − Transbay ridership
  − Load factor
  − Peak period riders per seat mile
  − Per person minutes delay
  − Operational benefit

• Cost effective improvements with return on investment
  − Annualized capital cost per user
  − O&M cost per user
  − Fundability
• Minimize environmental impacts, financial risk and maximize safety
  – Environmental impacts
  – Financial risk
  – Safety

• Ensure local communities are protected from adverse impacts
  – Disproportionate burden on low-income populations
  – Disparate impacts on minority populations
Alternatives Studied and Draft Recommendations
2020: Bus and Approach Improvements on Highway Bridge
Approach improvements:
- Decoto TSP, queue jumps I-880 east to Union City BART (if possible)
- SR 84/Newark Blvd HOV bypass lane
- SR 84 FasTrak extension east of Paseo Padre
- SR 84 toll booth removal at FasTrak
- Bayfront and Willow TSP, queue jumps
- Bayfront shoulder bus-only lanes
2020: Bus and Approach Improvements (Recommended)

- Short-term (2020)
  - Expand Dumbarton Express bus on Highway Bridge
  - Approach improvements

- Impact
  - $51m capital, $12m O/M
  - 13,700 daily transbay riders (34% increase)
• Short-term (2020)
• Bike/ped multi-use path from Redwood City to East Palo Alto
  − Overpasses at Willow, Marsh, University, US-101
• Impact
  − $60m capital (includes overpasses at Willow, Marsh, University and US-101), ~$53,000 O/M
• Paired with either bus or rail (but not both) per right-of-way (ROW) constraints
• Expand Dumbarton Express bus including new routes to Menlo Park/Redwood City and Mountain View/Sunnyvale
• Approach improvements
• Impacts
  - $51m capital, $12m O/M
  - 34% increase in transit
  - Involved entities: AC Transit, ACTC, MTC, Caltrans, cities, etc.
Recommendations 2020

- Not recommending bike/ped multi-use path due to ROW limitations
- Other potential improvements:
  - Sections of Bay Trail between Seaport and University
  - Upgrade/extend Highway Bridge path to Marshlands
  - County/city-identified improvements to enhance access to Highway Bridge
# Required Width Per Mode

<table>
<thead>
<tr>
<th>Mode</th>
<th>Space Requirement (feet)</th>
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<tbody>
<tr>
<td>Class I Path</td>
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<tr>
<td>Rail</td>
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<tr>
<td>Class II Busway</td>
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<tr>
<td><strong>Total</strong></td>
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<tr>
<td>DRC Available</td>
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<tr>
<td><em>Space Deficit</em></td>
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</tbody>
</table>
2025-2030: Bus and Approach Improvements on Highway Bridge
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2025-2030: Bus and Approach Improvements on Highway Bridge

- Approach improvements:
  - SR-84 eastbound express lanes (to I-880/Decoto)
  - SR-84/I-880 express lanes flyover
  - SR-84 Fastrak conversion to express lane
  - SR-84 all-electronic tolling
  - Bayfront express lanes
  - Willow/Bayfront, University/Bayfront grade seps
  - Willow bus-only lanes
  - US-101/Marsh express lanes DAR
  - Ardenwood Park-and-Ride expansion
2025-2030: Express Lanes on Highway Bridge

Reversible express lanes 4/2

One express lane per direction 3/3
2025-2030: Bus, Approach and Express Lanes (Recommended)

- **Mid-term (2025)**
  - Convert #1 lane to toll lane in each direction
  - More approach improvements east and west bay (flyovers, grade separations, etc.)
  - Connect rail ROW to US 101 via flyover

- **Long-term (2030)**
  - Further enhanced Dumbarton Express bus

- **Impact**
  - $849m capital, $20m O/M in mid-term
  - $82m capital, $14m O/M in long-term
  - ~21,300 daily transbay riders (147% increase)
2025-2030: Rail Shuttle on Rail Bridge
2025-2030: Rail Shuttle on Rail Bridge (Recommended)

- **Mid-term (2025)**
  - New double-tracked rail service from Redwood City (RWC) to Newark, not “interlined” at Caltrain

- **Long-term (2030)**
  - Further extend rail to Union City

- **Impact**
  - $975m capital, $23m O/M (for Rail Shuttle to Newark) in mid-term
  - Additional $295m capital, $32m O/M (to extend to Union City) in long-term
  - ~15,600 daily transbay riders (81% increase)
• Also looked at operating an exclusive busway on Rail Bridge
• Mid- to long-term (2025-2030)
  - No dedicated lanes in East Bay
• Impact
  - $615m capital, $14m O/M
  - ~18,600 daily transbay riders (116% increase)
• Not recommended if express lanes are constructed on Highway Bridge
Recommendations 2025

- Improve the Highway Bridge and Approaches
  - One express lane in each direction
  - More approach improvements east and west bay (flyovers, grade separations, etc.)
  - Buses use ROW to US-101 flyover
- Rail service on the Rail Bridge
  - Rail Shuttle to Newark (double-tracked bridge)
- Impact
  - $1.8b capital, $44m O/M
  - Involved entities: Caltrain, UP, ACTC, MTC, Caltrans, STB, cities, etc.
• Further enhanced Dumbarton Express bus service

• Extended rail service
  - Rail Shuttle from Newark to Union City

• Impact
  - $377m capital (in addition to $1.8b in 2025), $46m O/M
  - Involved entities: Caltrain, UP, ACTC, MTC, Caltrans, STB, cities, etc.
2035: Rail Commuter on Rail Bridge, Double-Track (Recommended)

- Longer-term (2035 or beyond)
  - Interline with Caltrain
  - Better connect to ACE, Capitol Corridor

- Impact
  - $327m additional capital, $38m O/M
  - ~23,300 daily transbay riders (270% increase) paired with express lanes on Highway Bridge
  - Involved entities: AC Transit, Caltrain, UP, ACE, Capitol Corridor, MTC, etc.
2035: Rail Commuter on Rail Bridge, Single-Track
2035: Rail Commuter on Rail Bridge, Single-Track

• Longer-term (2035 or beyond)
  – Interlining with Caltrain mainline but with less frequent service

• Impact
  – $327m additional capital, $32m O/M
  – 15,500 daily transbay riders (180% increase)
Recommendations 2035

- Interline with Caltrain mainline
- Better connect to ACE, Capitol Corridor
- Impact
  - $327m capital, $38m O/M
  - 23,300 daily transit riders (171% increase) with managed lanes on highway bridge
  - Involved entities: AC Transit, Caltrain, UP, ACE, Capitol Corridor, MTC, etc.
Funding Challenges & Opportunities

- Use existing local funding
- Seek state, regional funding: SB1, RM3, etc.
- Solicit private contributions
- Pursue federal, state grants and financing
- Explore value capture
- Identify project elements attractive for P3
- Consider other alternative packages or phasing based on available funding
- Partnerships: ACE, State, Caltrans, etc.
Next Steps

• August 2017:
  – SamTrans Board briefing
  – Stakeholder and public outreach

• September 2017:
  – Close of 45 day public comment period

• October/November 2017:
  – Finalize report
  – SamTrans Board consideration
Comments/Questions
Opportunities to Comment

• Stakeholder/public meetings
• Website: www.samtrans.com/DBCstudy
• Email: reggiardom@samtrans.com
• Telephone: 650-508-6283
• Mail: Attention Melissa Reggiardo, San Mateo County Transit District, P.O. Box 3006, 1250 San Carlos Avenue, San Carlos, 94070

• Draft Report: www.samtrans.com/DTCS2017