Silicon Valley Rapid Transit Project

*BART to Milpitas, San Jose & Santa Clara*

San José City Council Study Session
March 22, 2007
Introduction

Project Scope & Status

Michael T. Burns
General Manager

AGENDA Item 1.c
Need A Solution to . . .

- Support robust job growth
  - 36% increase in region and SC County
- Accommodate future travel
  - 90% increase in Fremont-South Bay Corridor
- Provide transportation options
- Manage congestion
- Support economic & community goals
- Improve quality-of-life
Regional Transit Network

- Enhance regional transit connectivity
- Existing Services
  - BART
  - Caltrain
- BART Extension
- Integrate with existing Local Service
BART to Silicon Valley

• Regional connectivity with no transfers to BART
• Fastest travel times
• Highest ridership
• Greatest congestion relief
• Transit oriented development opportunities
• Support for BART remains high
Project Funding

Estimated Cost

• Cost - $4.7 Billion (2005$)

Funding

- $3.3 Billion from Measure A
- $0.7 Billion from Federal Sources
- $0.7 Billion from State/Other Sources
Current Status

- Completed state EIR – December 2004
- Completed Preliminary Engineering – Dec. 2006
- Supplemental EIR – June 2007
- Administrative draft EIS to FTA – mid 2007
- Complete 65% Design – 2008
- Federal Record of Decision – early 2009
- Construction – 2009 to 2015
- Testing – 2015 to 2016
- Revenue Service – late 2016
Project Tour

Jack J. Collins
Chief Construction Officer
Preferred Alternative

- 16.3-miles
- 6 Stations
  - 3 above ground
  - 3 subway
- Yard & Shops in San Jose/Santa Clara
- Operational 2016
- $4.7 Billion (2005$)
- 104,127 daily riders in 2030 (SEIR 2007)
Tunnel Alignment
Twin Bored Tunnels

- 20 feet in diameter
- 40 feet center to center
- 60 feet total width
- 40 to 70 feet below ground
Tunnel Boring Machines

Copenhagen Metro EPB

Toronto Subway – Sheppard Line
Project Area
Santa Clara Station Area
Santa Clara Station

Existing Caltrain Commuter Rail Service

Planned BART Service
Santa Clara Multi-Modal
San Jose Subway
Diridon /Arena Station
Downtown San Jose Station
Alum Rock Station
Surface Guideway to North
Berryessa Station
Berryessa Station
Montague/Capital Station
Parallel Freight Operations
Connection to BART
Regional Policy Issues

Agency Roles & Relationships

Michael T. Burns, VTA
Vinod Chopra, BART

AGENDA Item 3 a.
Roles & Relationships

- VTA & BART realize the importance of working in a partnership, during project implementation, particularly during the development of the federal and state environmental clearance phase.

- A joint 10 member SVRT Policy Advisory Board (PAB) was established to provide policy guidance throughout project implementation.

- BART and VTA both appoint 5 members to the PAB. VTA Director serves as Chair and BART Director serves as Vice Chair.
Policy Advisory Board

BART Members:  
Tom Blalock-Vice Chair  
Scott Haggerty-Supervisor  
Zoyd Luce-Director  
Gail Murray-Director  
Bill Wasserman-Fremont  
Alternates  
James Fang-BART  
Anu Natarajan-Fremont

VTA Members:  
Joe Kornder-Santa Clara  
Sam Liccardo-Director  
Bob Livengood-Milpitas  
Madison Nguyen-San Jose  
Ken Yeager-Supervisor  
Alternates  
Armando Gomez-Milpitas  
Patricia Mahan-Santa Clara
VTA Role

- VTA & BART entered into a Comprehensive Agreement in November 2001. Key elements are:
  - VTA will plan, design, and build the Project in a manner that is consistent with BART standards and practices maximizing transit oriented development and system access
  - VTA will own the extension
  - VTA will be responsible for all capital costs including capital improvements to address core system impacts
  - VTA will bear all costs associated with operations and maintenance, including core system impacts. VTA will have financial responsibility for ongoing capital costs for the extension and associated core system impacts
BART Role

- BART will operate and maintain the extension in a manner consistent with BART system service levels
- BART & VTA will mutually agree to service levels for the extension
- BART will collect fares and revenues and credit against VTA’s operating and maintenance costs and then to capital reserve funds for the extension
- As a partner, BART staff is fully integrated into the project team and some are located in the project office
- BART staff (Vinod Chopra who is here today) will take the technical lead on System Implementation & Pre-Revenue Operation. BART will procure rail cars and automated fare collection equipment
Federal & State Roles

Federal Transit Administration:
- Approval of Environmental Impact Study (NEPA)
- Recommend New Rail Starts Funding to Congress
- Full Funding Grant Agreement-$750 million
- Project Management Oversight

State:
- CTC Allocation of Transportation Congestion Relief Program funds (TCRP)
- TCRP funding estimated at $649 million
The Metropolitan Transportation Commission (MTC) is the transportation planning, coordinating and financing agency for the nine-county San Francisco Bay Area. It functions as the state regional transportation planning agency and the federal metropolitan planning organization (MPO). The MTC is responsible for:

- Updating the Regional Transportation Plan (RTP)
- Screens funding requests from local agencies for state and federal transportation projects to determine compatibility with approved RTP.
- Approved Resolution No. 3434-Regional Transit Expansion Program in December 2001, that includes BART extensions to Warm Springs and Silicon Valley
Local City Roles

- All four Cities involved with the project (Fremont, Milpitas, San Jose and Santa Clara) are working closely with VTA Planning, Development and Construction Division staff on:
  - Environmental Impact reviews
  - Station Area Planning studies
  - Maximizing land use and transit oriented development
  - Reviewing station design concepts and access
  - Developing integrated station art proposals
  - Expediting project permits and approvals
Regional Policy Issues

Funding Status & Strategies

Michael T. Burns, VTA
Carl Guardino, SVLG

AGENDA Item 3 b.
Funding Plan

• Project construction of $6.2 billion (year of expenditure $) is funded with exception of federal share:
  – 1/2 Cent Sales Tax (2000 Measure A)
    • $ 4.65 billion (76% local)
  – State Support (12%)
    • $ 649 million TCRP
    • $ 119 million Other State funds
  – Federal Support (12%)
    • $ 750 million
Current Funding

- State has committed $409 million in TCRP funds
  - $45 million for Conceptual Engineering and Environmental Studies
  - $151 million for Preliminary Engineering
  - $213 million to fund 65% Design
- Recent support from CTC in funding design work will save VTA Bond Interest
Current Funding

- VTA has financed $458 million in 2000 Measure A bonds to advance the project design, railroad right of way acquisitions and railroad relocation
- No additional financing is anticipated until late 2009
- The FTA has authorized $2.5 million in federal funds
Issues for FTA Funding

- In order to re-enter the Federal New Starts Process and get a recommended rating, VTA must:
  - Complete a federal EIS (we now have FTA agreement on ridership model)
  - Achieve Cost Effectiveness Index
  - Continue cooperation with new FTA Team
  - Complete cost and schedule risk assessments
  - Complete a **Funding Plan** with a dedicated source of BART operating & maintenance funds
Dedicated O&M Funds

• Project Operating & Maintenance Costs
  – Estimated at $80 million annually in 2020 net of fares and other revenue
  – VTA also funds annual contribution to long term BART capital maintenance fund
  – Requires New Funding Source equivalent to $80 million a year
Funding Strategies

• FTA
  – Work closely with FTA staff

• State
  – Evaluate other funding opportunities

• Local
  – Evaluate new tax measure
  – Special assessment district around stations
  – Encourage Joint Development
Regional Policy Issues

MTC Perspectives on Project Funding & Land Use

Randy Rentschler
MTC

AGENDA Item 3 c.
MTC Perspectives

SVRT Project:

• The extension of BART to Silicon Valley is one of two New Starts projects competing for funds nationally

• This project already has two of three key elements needed to compete successfully for funding in Washington
MTC Perspectives

Elements for Success

1. A Compelling Story: The project connects the largest city in Northern California with the Bay Area’s regional rail system, linking San Jose with Oakland and San Francisco.

2. Regional Significance: The extension’s multi-county scope attracts wide support across the Bay Area’s congressional delegation.

3. Technical Soundness: However, more work needs to be done, including the completion of a fully funded finance plan.
MTC Perspectives

Transportation & Land Use Initiatives

• MTC encourages communities to support transit by implementing complementary land use decisions

• The Commission allocates $27 million annually to plan and build improvements that benefit transit and livable communities

• VTA and communities across Santa Clara county are taking steps to coordinate transit land use decisions needed to bring BART to Silicon Valley. Continued commitment to these efforts will greatly benefit transit across the valley
Environmental Clearance
Station Area Planning
Community Outreach
Carolyn Gonot
Chief Development Officer

AGENDA Item 4 a.
State Environmental Process

- 2004: Final EIR Adopted (10% Engineering)
- June 2007: Complete Supplemental EIR (35% Engineering)
- Outreach
  - 16 Public Meetings
  - Publications: ads ran in 4 widely distributed newspapers (multilingual), stories published in 6 community papers, 4 radio and 3 television broadcasts
  - Mailing List: 35,000+ to residents, business/property owners, stakeholders/city partners, community working groups
- Public Comments
  - Final EIR: 67 individuals/agencies commented
  - Supplemental EIR: 80 individuals/agencies commented
Federal Environmental Process

- Federal Environmental Clearance Needed to Qualify for FTA New Starts Funding ($750 million)

- Process
  
  Spring 2007: Public Scoping Meeting
  
  Early 2008: Draft EIS Public Hearing and Circulation
  
  December 2008: Final EIS to be Adopted

- Goal: Receive FTA Record of Decision---early 2009
Station Area Planning Process

• Primary Sources of Input (Since 2001)
  – General Public Meetings (66)
  – Community Working Group Meetings (57)
  – City Partners and regional transit/transportation agencies through quarterly and monthly meetings

• Planning Progress for Each Station
  – 2003: Completed Preliminary Station Area Plans
  – 2006: Designed Station Facilities (to 35% Engineering)
  – 2007: Further Station Area Plans
    • Finalize Land Use Vision and Integrate Station Facilities
    • Define Parking Reduction and Implementation Strategies
Station Area Planning Berryessa

**Above-Ground Station**
- 7,900 Daily Boardings
- 4,100 Space Parking Garage
- Absorb Parking from Alum Rock

**Land Use Vision**
- 2,000+ Residential Units
- Towers by Station
- Retail Center

**Coordinated Planning**
- City of San Jose
- Flea Market Development
Station Area Planning Alum Rock

Underground Station
- 10,900 Daily Boardings
- 2,500 Space Parking Garage
- Shift Parking to Berryessa

Land Use Vision
- Support SNI Plan
- Community Plaza
- Residential towers along Freeway

Coordinated Planning
- City of San Jose
- Alum Rock Community
- Communiversity (SJSU)
Station Area Planning Diridon

Underground Station
- 11,200 Daily Boardings
- 0 to 1,313 Parking Spaces

Land Use Vision
- Downtown Extension
- Future Grand Central Station of the South Bay
- 65 Acre Redevelopment Opportunity
- Commercial: 4M sq.ft.

Coordinated Planning
- City of San Jose
- Caltrain
- HP Pavilion
Design & Construction Plan
Construction Impact Mitigation

Jack J. Collins
Chief Construction Officer

AGENDA Item 4 b.
Design & Construction

- Recognize that Downtown Station construction is significant
- Develop construction methods that help minimize disruption to greatest extent
- Active community outreach about construction impacts now and before design phase is complete with downtown businesses and community
Downtown Construction
Station Construction

Station Box

- 60 feet wide
- 40 feet high
- Top of station approximately
  20 feet underground
Station Construction

Station Box

- 1000 feet long
Station Construction
Station Box
Station Construction

Station Box
Station Construction

Station Box
Station Construction

Cut & Cover

• “Cut & Cover” construction from street level down with subsequent covering of opening
• Used at tunnel portals & stations

Cut & Cover Construction Example
Station Construction

Sequence - Cut & Cover Construction

UTILITY RELOCATION 9 MONTHS

WALLS & DECKING 6 MONTHS

EXCAVATION & BRACING 6 MONTHS

STATION CONSTRUCTION 16 MONTHS

FILL & RESTORATION 4 MONTHS
Station Construction

Utility Relocation – 9 months

- Relocate utilities to provide room for construction
Station Construction

Walls & Decking – 6 months

- Place outside walls, one side of road at a time; traffic restricted to one side
- Shallow excavation
- Place main deck beams
Station Construction

Walls & Decking

- Typical equipment for excavation wall construction: Deep Soil Mix (DSM)
Station Construction

Walls & Decking

• Concrete decking over support walls
• Rerouting of traffic
Station Construction

Concrete Deck Panels
Station Construction

Concrete Deck Panels
Station Construction

Excavation & Bracing – 6 months

• Traffic may be restricted to allow excavation & bracing to proceed
• Utilities will be supported from deck beams or diverted as required
Station Construction

Excavation & Bracing

- Completed deck over excavation
Station Construction

Excavation & Bracing

• Restore traffic on completed deck with excavation continuing below
Station Construction

Excavation & Bracing
Station Construction

Station Construction – 16 months

• Construction of base slab for box structure
Station Construction

- Partial removal of supports & construction of station base while excavation continues
Station Construction

Fill & Restoration – 4 months

- Begin backfill over station
- Remove deck, complete backfill, pave & restore street/utilities
Station Construction

Fill & Restoration

• Backfill over completed station structure
Design & Construction

- VTA will submit draft Construction Impact Mitigation Plan to City Staff for input before designs are complete.
- Will review plans with Downtown Association and other stakeholders before design is complete and construction begins.
- On-site VTA liaison for each station during construction with businesses and community.
Questions

Silicon Valley Rapid Transit Project

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