MEMORANDUM

DATE: October 3, 2007

TO: Silicon Valley Rapid Transit Policy Advisory Board (PAB)

FROM: Jack J. Collins
Chief Engineering & Construction Officer

SUBJECT: Silicon Valley Rapid Transit Project
Engineering Progress Report – September 2007

FOR INFORMATION ONLY

Engineering Activities:

The Project's 65% Engineering phase progressed with the design teams focusing on design development, geotechnical activities, third party utility relocation and engineering support agreements, and evaluating Value Engineering alternatives. As of the end of September 2007, 65% Engineering work is 35% complete with all major areas progressing as planned.

To facilitate management and reporting during the 65% Engineering phase, the Project has been organized into three geographic areas plus Project-Wide Systems. Design of the guideway, stations, campus facilities and parking structures from the end of the proposed Warm Springs extension to the East Tunnel Portal is included in the **Northern Area**. The **Central Area** design efforts include approximately five miles of tunnel guideway, three underground stations, campus facilities and parking structures from the East Tunnel Portal to the West Tunnel Portal. The **Western Area** includes design of the guideway, Yard & Shops facilities, Santa Clara Station, campus facilities and parking structure from the West Tunnel Portal to the end of the tail track. **Project-Wide Systems** is responsible for design of Project-wide train control, security, communications, and traction power systems.

Northern Area

The Guideway Design Team issued updated trackway alignment configuration drawings, establishing the baseline alignment for the 65% Engineering phase. The Team initiated raceway and ductbank, electrical and mechanical designs for the Civil Construction Trade Zone to Sierra/Lundy contract package. They concluded a study on the effects of stray current

on utility piping and BART facilities near the alignment in the Northern Area and issued a report with recommendations for mitigating the effects of stray current. Following the project's decision to maintain one Dixon Landing Road lane open in each direction to traffic during construction, the Team assessed structural impacts of the proposed underpass at Dixon Landing Road and initiated design of the Dixon Landing Road grade separator.

The Stations Design Team issued updated cost trends reflecting the architectural design concepts for Milpitas and Berryessa Stations and is preparing exhibits for confirmation of the approved architectural design theme for the Berryessa Station. Efforts on the Formal Design Review Report on the 35% Preliminary Engineering drawings concluded with a final submittal in September.

Central Area

The Guideway Design Team circulated draft procurement documents for the Tunnel Boring Machines and Tunnel Conveyors packages and issued final documents for the pre-qualification of bidders and procurement of Tunnel Liners. Ground boring along the tunnel alignment for geotechnical analysis is complete and efforts to investigate groundwater conditions progressed. They finalized a Technical Coordination Memorandum associated with the location of a Mid-Tunnel Ventilation Structure at Stockton Avenue and issued it for City of San Jose approval.

The Stations Design Team optimized the Downtown San Jose Station plan by relocating a few ancillary facilities to the crossover box effecting a reduction in the length of the station box by 70 feet and presented a cost-effective "Notched" roof design for the Diridon Station box to accommodate an existing sanitary sewer. They issued exhibits confirming the approved architectural design theme for the Alum Rock Station. The Team finalized the report on the location of Downtown San Jose Station entrances and appendages, and issued an update to the Noise Mitigation & Acoustic Treatment Study. They issued the Formal Design Review Report on the 35% Preliminary Engineering drawings addressing review comments.

Western Area

The Yard & Shops Design Team issued updated floor and roof plans, equipment layout drawings, and exterior elevations for key facilities for approval. They completed geotechnical field exploratory works on the Newhall Yard and on a few City of Santa Clara properties adjacent to the yard. The Team issued the Formal Design Review Report on the Preliminary Engineering designs. An approved Technical Coordination Memorandum with the City of San Jose establishing agreements on several design and technical issues relative to the location/layout/design of the Newhall Yard and its impact on adjoining street/utilities and properties was issued. Work on installation of the Newhall Yard security fence is complete. The contractor for demolition of existing structures and hazardous material remediation at Newhall Yard submitted a draft baseline schedule for review.

The Stations Design Team issued the final report on the conceptual design of the proposed San Jose Airport People Mover's aerial alignment and its connection to the proposed Santa Clara Station. The Team circulated updated architectural drawings and architectural design theme confirmation exhibits for the Santa Clara Station for review. They issued the Formal Design Review Report on the Preliminary Engineering designs and are finalizing the Statement of Work for the Santa Clara Design-Build package.

Project Wide Systems

The Systems Design Team issued the interim design submittals of the Line Electrical Power System Equipment and Traction Power System contracts for review. The Team finalized the development of potential laydown areas for trackwork material storage. A report summarizing the design requirements and guidelines for system-wide grounding, bonding and lightning protection designs was circulated for review. Development of the Tunnel Ventilation and Communications design packages continued with interim submittals planned for October.

Design Integration

The Design Integration Team established the committee for the trackwork coordination. The Team's effort on standardization of design criteria for Emergency Management Panel Room concluded with a design technical memorandum issued for use. The Team developed two memoranda recommending revisions to Administration and Trackway Clearances, and CADD Standards sections of BART Facility Standards.

Community Outreach:

The Community Outreach team met with community leaders to discuss the BART alignment at Coyote Creek and held a public meeting in September presenting alignment options. Efforts on the development of a plan to educate the public about future SVRT construction activities continued. The Team continued coordination with private property owners, Santa Clara Street business and the San Jose Downtown Association in support of field investigative activities.

Fire/Life/Safety:

The Fire/Life/Safety Team met with Fremont, Milpitas, San Jose and Santa Clara Fire Departments on the tunnel ventilation system. All four fire departments have expressed their approval of the proposed system. The Team conducted a workshop presenting an overview of the project with the Santa Clara Fire Department. Efforts continued on a proposed training workshop for all four fire department's Confined Space Rescue Team.

Right of Way, Railroad & Third Party Coordination:

VTA sold to BART for $20.1 million, the northern most section of the UPRR Right of Way, which VTA had purchased from UPRR in 2002. BART will be using this Right of Way for the Warm Springs Extension Project.

The **Right-of-Way** Team continued to review title reports of properties impacted by the project. To date, about 115 requests for permit-to-enter for field activities that support engineering design have been received.

The **Railroad Coordination** Team continued planning for engineering fieldwork at the Northern and Western areas. Efforts continued on working solutions for severing the rail services to industries along the SVRT alignment in the Northern Area due to freight rail relocation.

The **Third Party Coordination** Team continued to review and refine draft third party utility relocation and engineering support agreements with respective third parties. The Team continued to coordinate with design teams and public agencies, facilitating the development and approval of technical coordination memoranda.

Budget Status:

The current authorized budget for the SVRT Project through June 2007 is $651.2 million and includes the Environmental, Conceptual, Preliminary and 65% Engineering Phases of project development and Right of Way acquisition. Approximately 51% of the approved budget has been incurred through August 2007, as shown on Table 1.

Table 1: SVRT Budget Report

(Status as of August 2007; $ in millions)

Phase	Approved Budget	Incurred To-Date	% Incurred	Balance
Conceptual Engineering/EIR	$45.2	$44.2	98%	$1.0
UPRR Right of Way [Note 1]	$81.7	$61.6	75%	$20.1
Newhall Yard Property	$38.4	$38.4	100%	$0
Early Right of Way Requirements	$80.0	$0.0	0%	$80.0
UPRR Relocation	$45.0	$0.0	0%	$45.0
Sub-total:	$290.3	$144.2	50%	$146.1
Preliminary Engineering:				
Design Consultants	$121.1	$121.1	100%	$0
VTA/BART	$28.0	$ 28.0	100%	$0
65% Engineering				
Design Consultants	$159.8	$30.7	19%	$ 129.1
VTA/BART	$46.2	$10.1	22%	$ 36.1
Contingency	$5.8	$0.0	0%	$ 5.8
Sub-total PE/65% Engineering:	$360.9	$189.9	53%	$171.0
TOTALS	**$651.2**	**$334.1**	**51%**	**$317.1**

[Note 1] $20.1 million balance generated from sale of Warm Springs Extension Right of Way to BART.