

STAFF REPORT

SUBJECT: Route 10 Rapid Bus Project – Downtown Pleasanton Corridor Alternatives  
FROM: Barbara Duffy, Executive Director, Joseph Rye, Deputy Executive Director  
DATE: February 4, 2008

---

**Action Requested**

Select to either keep the Route 10 Rapid alignment that was approved by the Board previously (Old Stanley to serve Downtown Pleasanton) or select an alternative corridor (Neal, Valley, or the new concept via Dublin Blvd.) to connect Livermore with Dublin/Pleasanton BART station.

**Background**

The Rapid project emerged in 2003-2004 as a cost effective way of increasing transit patronage and reducing congestion in the Tri-Valley, and as a step toward the eventual Livermore BART system expansion. In July, 2006, LAVTA actively began work to take the project from general concept to fruition.

In developing the proposed project LAVTA conducted four public workshops and spoke at meetings of local civic/business groups. The most recent public outreach effort was the December 10, 2007 Open House/Public Hearing. Early outreach efforts resulted in strong support for the project, particularly from Livermore residents. However, to ensure that all voices were heard on the project, a particular effort was made to promote the December 10, 2007 Public Hearing to residents on the small segment of the of the project set to traverse Old Stanley Blvd, between Stanley and Main adjacent to Downtown Pleasanton: a segment of Old Stanley that currently has minimal bus service (trippers).

At the December 10<sup>th</sup> Open House/Public Hearing, several people attended in support of the project, as well as about a dozen people from the Old Stanley neighborhood who expressed concerns about various aspects of the project. Most concerns centered on the selection of Old Stanley as the optimal connection between Stanley and Santa Rita/Main. The Board then directed staff to conduct additional analysis to address the wide range of concerns expressed by the Old Stanley residents. The attached Draft White Paper is the product of this added study.

The three corridor alternatives to get from Stanley @ Valley to Santa Rita @ Valley being discussed are:

- Old Stanley Road between Stanley and Main/Santa Rita
- The Existing Route 10 Path, First Street to Neal, through downtown using Peters, Main
- Valley Avenue between Stanley and Santa Rita

At the Operations, Planning, and Scheduling (OPS) Committee meeting on January 28, 2008 this item was discussed before a record crowd of about 10 persons, all concerned residents from the Old Stanley neighborhood. The residents also submitted a petition with a number of signatures of those opposed to the “new bus route and creation of the bus station on Main”. The residents testified that they would support any of the other options other than Old Stanley for this project. Also at the OPS meeting, the new option of bypassing Pleasanton on the Rapid entirely, and reaching the BART station via Isabel, Jack London, El Charro/Fallon, and Dublin Blvd. was discussed and received some support. Board Member McGovern stated support of this scope change contingent upon LAVTA adding TSP elements to Pleasanton’s current (robust) Route 10 as soon as practical between Downtown and BART. The OPS Committee wanted to ensure that the scope change would not cause loss of any of the project’s current grant funding.

**Discussion**

After receiving comments from Old Stanley Blvd. residents who are concerned about adding significant amounts of new traffic (8 buses per hour, 4 in each direction) to the street, the LAVTA Board directed staff to provide additional analysis of the Downtown Pleasanton Rapid corridor options, with bus travel time, ridership projections, operational and capital cost impacts, traffic analysis, and noise analysis for each of the three remaining alignment options.

Transit Travel Times

Transit travel time estimates were created using actual Route 10 operating data for the First & Neal option (our current alignment) with a reduction in time of 1 minute to simulate the removal of two pairs of existing stops in downtown (First/Vineyard and Peters/Division). Travel times for the Old Stanley and Valley options were created using a combination of known Route 10 travel data plus field simulations using the LAVTA bus stop van and assuming 30 and 45 second dwell times for planned bus stops along each alignment. Kimley-Horn also modeled the planned application of Traffic Signal Priority (TSP) into each alignment, and is estimating a 10% reduction in bus travel time for each scenario. Travel times shown below are from Stanley and Valley to Santa Rita and Valley:

Scenario	Eastbound to Livermore w/TSP	Westbound to BART w/TSP
First & Neal (Existing Corridor)	8:51	8:55
Old Stanley	5:47	5:28
Valley Avenue	2:42	2:06

This table highlights why Old Stanley was always considered as a compromise between the sluggish, slow, First and Neal corridor (with its multiple stop lights, stop signs, slow speeds, and frequent closures for Downtown events) and the fast, Valley Option, which is the choice of most automobile traffic, but fails to serve Downtown Pleasanton. These travel time figures are one-way, showing that Old Stanley is 3-3.5 minutes longer than Valley, and First & Neal is another 3-3.5 minutes longer than Old Stanley.

Runtimes by Segment	BART	Santa Rita & Valley	First & Neal	Stanley & Murdell (West Livermore)	LTC Downtown Livermore	LLNL Labs
Current Runtime	:00	:10	:18	:25	:36	:56
Rapid Runtime (with 10% TSP + 10% Limited Stops Time Savings)	:00	:08	:15	:20	:28	:44

\*Note that this is a ROUGH application using a generalized 20% reduction of travel time from current scheduled runtime, based on limiting of stops and use of TSP. For detailed analysis of the Downtown Pleasanton time impacts, see the earlier discussion and the White Paper. The savings between LTC and LLNL Labs may be greater due to construction of the new bus stops on Railroad that allow the Rapids to avoid the slow egress into the LTC Transit Center.

### Ridership Projections

Nelson Nygaard took the lead on creating some ridership projections for each potential alignment. This is a very complex endeavor, more art than science in many respects, as LAVTA tries to predict bus rider behavior with regards to service that doesn't yet exist. One major challenge is the lack of solid origin and destination data on our current Route 10, with regards to how many current Route 10 patrons from Livermore actual deboard in the Downtown Pleasanton area, versus how many deboard along Santa Rita, at BART, or in Dublin. Should this matter require heightened levels of confidence, it may be possible to conduct extensive onboard observations to ascertain the percentage deboarding in Downtown.

Scenario	Total Projected Daily Weekday Boardings	Net Percentage Change from Old Stanley Option (Option Originally Modeled)
First & Neal (Existing Corridor)	4233	-5.9%
Old Stanley	4500	0% (same)
Valley Avenue	3942	-12%

These numbers show that the Old Stanley option promises the best ridership, with First & Neal a close second. This is likely attributed to the fact that Old Stanley is fast enough to satisfy the Livermore riders (who mostly go to Hacienda and BART) but yet still will generate some robust Downtown Pleasanton ridership.

The Valley Avenue projections may be understating the impact that a Valley Avenue alignment could do for the Livermore "choice" rider. These "BART to Livermore" supporters, who only use Wheels Route 10 occasionally due to its perceived weaknesses (slowness, out of direction travel, lots of stops) versus train travel, may choose to ride the Route 10 Rapid should the Board select Valley. By placing the Rapid on Valley, the bus would follow the same path of travel of the majority of Livermore-based automobile traffic, which is also the fastest way to BART from South Livermore. However, there is no doubt that bypassing Downtown Pleasanton will reduce ridership somewhat, offsetting much or all of the potential gained "choice" riders from Livermore.

The 5.9% reduction in ridership should the Board choose the existing, First and Neal Option reflects the consensus that First & Neal will not present enough of a “new” or “Rapid” service and will not be attractive to the Livermore “choice” market. The First & Neal option will increase ridership in Downtown Pleasanton above current levels, but likely at the expense of the Livermore market. Livermore choice riders avoid Route 10 now, and this historical trend could continue if we take the slower path through Downtown Pleasanton with the Rapid.

Operational and Capital Cost Impacts

The Old Stanley option has been the preferred choice for the project since its inception, and all previous operational cost estimates have been derived from this option. To supply buses every 15 minutes from 5:30am to 10:30pm on weekdays is projected to cost \$1.8 Million annually. This is not the NET increase in operations on this corridor, as the existing Route 10 is very robust (every 15 minutes also, from 6am to 7pm) and LAVTA will be able to scale back the Local Route 10 somewhat, reducing costs. Old Stanley requires 7 buses to operate (plus 2 spares) and all other capital costs are those that the Board has previously approved. The table below shows the CHANGES to costs should either First & Neal or Valley be chosen as the corridor for the Route 10 Rapid.

Scenario	Operations Costs	Fleet Required	Bus Stops	TSP Equipment	Total Costs Impacts
First & Neal	+200,000/yr	+ \$1,200,000	Up to +\$1,000,000	Up to +\$134,200	One Time: up to \$2,334,200 Ongoing: \$200,000 per year
Old Stanley	same	same	same	same	same
Valley Avenue	same	same	Up to - \$1,100,000	-\$34,250	One Time: up to \$1,134,250 savings

The capital costs impacts relate directly to additional design work, intersection TSP equipment, bus stop improvements and buses. Hybrid buses are selling for around \$600,000 each, and Route 10 Rapid bus stops vary in price from \$50,000 for basic Rapid sheltered stops to \$375,000 for Downtown Signature stops. TSP equipment is projected to cost about \$12,000 per intersection plus design costs.

The Valley Option reduces Capital Costs (less two to four signature stops, and two standard stops) but has no operational costs savings due to the fact that the 3-8 minutes it will save in each direction on every trip is not expected to be enough to reduce the overall number of buses required to provide 15 minute frequencies. The First and Neal Option adds a pair of signature stops, likely a pair of standard stops, and its extra 3-4 minutes in each direction (8 extra round trip minutes) which may force the Rapid to use 10 buses (8 in service, plus 2 spares) rather than 8 as the round-trip cycle time may not allow sufficient recovery (break) time at the ends of the route to stay within the ideal, 120 minute cycles. This is very speculative, and only once Rapid Buses are placed in revenue service, and TSP activated, will we know exactly how long the travel time will be, end-to-end.

### Traffic Impacts

Intersections and roadway operations were analyzed by Kimley-Horn using traffic models supplied by City of Pleasanton. Four buses per hour were assumed in each direction. Traffic volumes were not provided by the City for every intersection, so not all intersections along each alternative corridor could be evaluated.

In spite of the expressed concerns of Old Stanley residents, none of the three corridors and intersections under consideration showed any significant impacts from adding 4 buses per hour in each direction. It is acknowledged that there are school-driven traffic challenges around bell times at Amador Valley High that impact Old Stanley (and the other corridors, to a certain extent) and occasional train-delays from the crossing just north of Old Stanley on Santa Rita, however, the analysis shows no significant traffic impacts on any of the three corridors from the added Rapid bus traffic.

TSP application is modeled to show very little impacts. Side-street queues are anticipated to increase slightly during signal phases that actually provide preferential treatment to a Rapid Bus. The maximum increased queue length during the peak-hour application of the TSP is projected to be an additional 8' of queued traffic. Peak hour traffic volumes for the three corridors under consideration are presented below, along with a percentage that depicts the impact of our added Rapid Bus traffic upon current vehicle flows:

Scenario/Corridor	Existing AM Peak Hour Traffic Volumes	New Buses	% of New Vehicular Traffic
First Street	1790	8	.5%
Old Stanley	886	8	.9%
Valley Avenue	2434	8	.3%

### Noise Impacts

The First & Neal option already hosts 8 buses per hour, and 24/7/365 bus service on the Route 10. Old Stanley only has tripper buses passing through at this time, and features relatively little large vehicle traffic at this time. Valley Avenue is modeled to carry 2.5% medium and heavy duty trucks at this time, and is mostly surrounded by soundwalls as mitigation. Neither Old Stanley nor First & Neal feature any soundwalls.

The Cities of Pleasanton, Dublin, and Livermore consider noise levels of up to 60 dBA CNEL to be normally acceptable at residential land uses. Increases or decreases of less than 3 dBA are not generally perceptible to the average human ear, and considered less than significant.

Kimley-Horn conducted noise impact analysis using the Federal Highway Administration Traffic Noise Model version 2.5 to predict peak-hour noise with and without the project. The standard diesel bus engine is factored into the Federal noise model, however, LAVTA is striving to deploy quieter than average, diesel-electric hybrid buses on this project. This will further reduce what is being projected as very minimal noise increases in each potential alignment:

Scenario/Corridor	Existing Peak Hour Noise Levels (50 feet from Street Centerline)	Peak Hour Noise Levels with addition of 8 buses per hour	% change in Noise attributable to Rapid Bus Project
Neal Street/First	58.3 dBA	59.1 dBA	+1.4% dBA
Old Stanley	59.3 dBA	59.6 dBA	+0.5% dBA
Valley Avenue	68.6 dBA	68.7 dBA	+0.01% dBA

LAVTA staff presented some of the information included in this white paper in a meeting with City of Pleasanton staff on January 22, 2008. A very collaborative and informative discussion followed. Pleasanton City staff strongly support the First & Neal option and its high level of transit service to Downtown Pleasanton. They are willing to provide the highest possible level of TSP to help matriculate the buses through downtown. In addition, choice of the First and Neal option avoids placing the project along Old Stanley or Valley where there is or may be resident opposition. LAVTA and its consultant team warned of the potential loss of project support from the Livermore market, which City staff understood but felt that if Downtown Livermore was a part of the Rapid, so should Downtown Pleasanton. A discussion also ensued as to whether or not taking the project off of Old Stanley at this eleventh hour would endanger the project's array of grant funding. Staff is pursuing this critical information. Early indications, especially from the FTA, administrators of the recently obtained Congressional Earmark Very Small Starts Funding, from Congressman Jerry McNerney, indicate that they will have to take another look at the project and funding hinges mainly upon cost benefits (costs vs. ridership projections).

City staff conveyed that at this point in time, Valley is not an option due to high traffic volumes and elimination of the downtown stop.

#### Situation Assessment

With full support from the City of Livermore already for the project, including our recent successful completion of the design review process, the Livermore portion of the project is ready for final design and construction. Although much design work has been completed on the Pleasanton portion of the project, the project development cycle is trailing its Livermore counterpart significantly. Should the Board choose not to retain the current alignment and move the project forward as originally planned, an alternate option exists.

#### Combine this Rapid with Future Dublin Rapid

In recent years, LAVTA has begun project development activities for a second Rapid Bus line, this time to serve east-west in the City of Dublin, connecting the emergent neighborhoods and businesses of East Dublin with the BART stations and the Downtown Dublin area. This concept evolved significantly during the Stoneridge Drive Extension study that LAVTA conducted with the expertise of Nelson Nygaard in late 2006. The concept of a "Dublin Rapid Bus" (called Dublin Diablo at the time!) providing high-frequency shuttle services along Dublin Boulevard from approximately Fallon Road (El Charro) to Stoneridge Mall was warmly received, and the (conceptual) project was adopted as part of the list of capital projects included in the 2008 LAVTA Short Range Transit Plan.

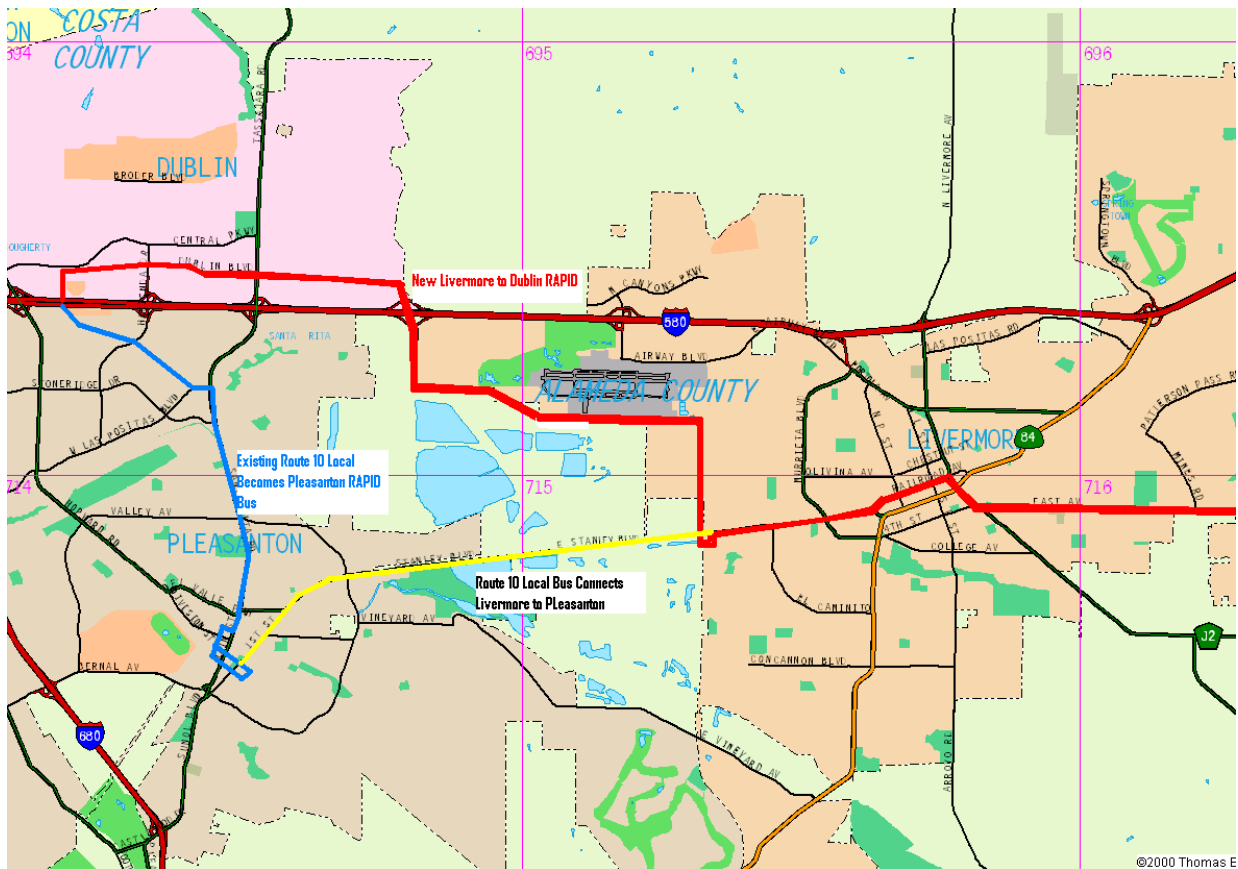
While a huge change in scope, it is not impossible to morph the Route 10 Rapid Bus project into the Dublin BRT and bypass Pleasanton entirely with this project. The Route 10 Rapid Bus

could serve Livermore exactly as planned, then divert north on Isabel to Jack London, west on Jack London to El Charro (Fallon) to serve the imminent Factory Outlets Mall, then cross I-580 at Fallon and turn onto Dublin Boulevard. If we could obtain support from our funding partners for this change in project scope, this would meld the Dublin Rapid and the Route 10 Rapid projects into one. LAVTA could then amend its SRTP to change the name and project scope for what is currently called the “Dublin BRT” to a “Pleasanton Rapid Bus” project. Should the Board direct staff to pursue this dramatic change, staff will direct our consultant team to work to logical stopping points on the Pleasanton segment, then negotiate a (significant) contract amendment to engage the Dublin segment of the planning, then engineering work. The project could potentially launch in August of 2009, subsequent to the opening of the Outlets Mall, and the improvements to the Fallon Bridge over I-580, and connection of Dublin Blvd. to Fallon. See red corridor on below sketch. Staff is working with our consultant team to pull together additional data on the new “Dublin Option” and may be able to distribute new information at the Board Meeting on February 4. Should the Board express interest in exploring this option further, staff will return to the Board with preliminary data on projected travel times, capital and operations costs, and a revised project schedule.

#### “Rapidizing” the Pleasanton Route 10

Due to all the bus stops in Livermore (and along Santa Rita in Pleasanton) that were not selected to become Rapid stops, there remains a need to provide a base “Local Route 10” service regardless of which direction the Board moves with regards to the Downtown Pleasanton Rapid Bus situation. The Local Route 10 will continue to service Downtown Pleasanton under all conceivable scenarios, including shifting the Route 10 Rapid to Dublin. This would maintain the current (2008) levels of service to Pleasanton while allowing the Route 10 Rapid to fulfill its mission of providing fast, premium service to the Livermore transit market, albeit in a dramatically differing fashion.

LAVTA would then adjust its Short Range Transit Plan to create a separate, future project to modify the Route 10 Local to include TSP, enhanced bus stops, a key “turn around path” in/near Downtown, and any other modifications that the City desired, and create a “Pleasanton Rapid Bus” or “Downtown Super Shuttle” from the remaining Route 10 Local. See blue corridor on below sketch. In general, the project would retain the Local 10s traveling to/from Livermore every 30 minutes, and add a bus that only serves between BART and Downtown Pleasanton to reach the overall 15 minute bus frequency level. It is possible that the TSP element of this future project could be delivered quicker due to recently completed engineering work and the relatively low cost associated with the TSP equipment.



**Next Steps**

LAVTA’s Route 10 Rapid project has proceeded quickly in Livermore and moderately in Pleasanton. LAVTA is at the point where the project is about to enter final design. Once final design commences, substantive changes become difficult, and expensive. The LAVTA Board faces a critical decision today. Most aspects of the project development are now at a halt awaiting the decision on exactly where these buses will run once they exit Livermore.

Should the LAVTA Board choose to pursue the relocation of the western segment of the project from Pleasanton to Dublin, a great deal of additional staff and consultant effort will commence ASAP on the new Livermore and Dublin portions of the project corridor.

**Recommendation**

The attached White Paper was presented and discussed at the OPS Committee and forwarded to the full Board without a recommendation. The Board can choose to retain or change the July 2007, Board-adopted corridor, which includes using Old Stanley Boulevard to serve Downtown Pleasanton.

**Attachments:**

1. Kimley-Horn White Paper: “Intersection and Roadway Operations Analysis for Route 10 Alternatives”

2. Petition submitted at January 28, 2008 LAVTA OPS Committee Meeting
3. Sign-in sheet from January 28, 2008 LAVTA OPS Committee Meeting

*Submitted:* \_\_\_\_\_