

STAFF REPORT

SUBJECT: East Dublin School Trippers Capacity and Alignment Partitioning

FROM: Christy Wegener, Director of Planning and Communications
Cyrus Sheik, Senior Transit Planner

DATE: May 2, 2016

Action Requested

Approve the splitting two of the high school-oriented Wheels routes in eastern Dublin into three routes in response to increased demand; finalize service levels for 2016/2017 academic year.

Background

The school districts in the LAVTA service area do not operate yellow school buses for their general student population. Instead, students in the middle- and high school grades are expected to make use of existing public transportation (Wheels mainline routes). In cases where either (or both) the school and the neighborhood(s) from which its students need to travel is not located on a mainline, and where there is sufficient demand, LAVTA in some areas supplements its mainline routes with limited “school tripper” service operating only during school days. In some cases, the supplemental routes also serve as overflow capacity for one or more existing mainline routes.

In Dublin, Wheels school tripper routes 501 and 502 connect eastern residential areas with Dublin High School (DHS), while Route 503 connects the Shannon Park neighborhood with both DHS and Wells Middle School (WMS). Additionally, Route 2, a mainline that operates during commute hours in eastern Dublin, provides certain trips that are timed for the bell at Fallon Middle School (FMS).

As eastern Dublin has seen expanded residential development, ridership demand on these routes has continued to climb. Currently, routes 501 and 502 carry a combined 300 unlinked boardings per school day, and an overflow bus is supplied both in the AM and PM for the 501, and in the PM for the 502. The adjacent table shows the February 2016 ridership breakdown across the routes operating in the residential areas of eastern Dublin, and the increase trend compared with the same month in the previous year.

CURRENT RIDERSHIP AND TRENDS, EAST DUBLIN ROUTES				
February 2016 vs. February 2015				
	Current daily average boardings	Percent Increase YoY	AM overflow bus	PM overflow bus
Route 2	72	202%		
Route 501	184	23%	X	X
Route 502	115	24%		X

Discussion

Among the two high school routes shown above (501 and 502), three out of four daily one-way trips currently require an overflow bus in order to safely accommodate passenger loads. Given this, Staff analyzed the distribution of boardings and alightings on routes 501 and 502 in order to determine whether the ridership could be better accommodated by three instead of two routes serving the same general area. Although the aim for the moment is not geographic expansion, the addition of a route could allow capacity growth to be better accommodated without a gradual increase in travel times, and allow more flexibility to expand to new neighborhoods in the near future, as additional subdivisions are completed.

The boarding and alighting analysis indicated that activity on the existing 501 and 502 routes is somewhat evenly distributed within the eastern Dublin area. The busiest locations are Central Parkway near Dougherty Elementary School, Bray Commons/Keegan Street, the Dublin Ranch Drive loop, the area north of Fallon Sports Park, and Positano Hill.

Based on the locations and numbers of this boarding activity, Staff determined that the current 501 and 502 could potentially be partitioned into three routes, as follows.

- New ROUTE 501: Positano Parkway – Fallon Road – Tassajara Road – Gleason Drive – Hacienda Drive – Dublin Boulevard – Village Parkway
- New ROUTE 502: Dublin Boulevard – Lockhart Street – Central Parkway – Hacienda Drive – Dublin Boulevard – Dougherty Road – Wildwood Road – Amador Valley Boulevard – Village Parkway
- New ROUTE 504 : Gleason Drive – Fallon Road – Antone Way – Dublin Ranch Road – Tassajara Road – Dublin Boulevard – Village Parkway

Map depictions of these alignments are shown in the attachment.

Per LAVTA’s overflow policy, the threshold for deploying an overflow bus is a load of 60+ passengers on a particular trip, on a consistent basis. The following table summarizes the anticipated passenger loads, together with vehicle and hours requirements for the potential routes 501, 502 and 504. Note that passenger loads were estimated based on known current boarding and alighting numbers by location, and do not reflect future growth.

POTENTIAL EAST DUBLIN TRIPPER PARTITION					
Route (new)	# AM buses	# PM buses	Est'd AM boardings	Est'd PM alightings	Est'd daily rev hours
504	1	1	36	46	0.97
501	1	2	53	76	1.35
502	1	1	38	53	1.17
Total	3	4	126	175	3.48

With the would-be partitioning into three routes being optimized to minimize bus requirements, the analysis shows that the three routes would require 3 morning and 4 afternoon bus trips, for a total of 7 daily bus trips. This would be no more than the 7 that are required by today’s two-route setup. It should be noted, however, that the AM Route 501 and the PM Route 502 show as not being far from the 60+ threshold, and would thus require overflow buses at some point if ridership continues to grow.

End to end travel times for these routes would range from 29 to 35 minutes, compared with the current 30-37 minutes. While not a drastic reduction, this represents about a 10-percent decrease in total route trip times.

The estimate also shows a revenue hours requirement of 3.48 per day of operation – this is actually slightly lower than the current level of 3.85 hours.

The next table summarizes the daily and annualized ridership, cost, and revenue assumptions for the potential three-route setup:

POTENTIAL EAST DUBLIN TRIPPER PARTITION	
Cost estimate - total for all three routes	
Daily revenue hours	3.48
Number of days operated	181
Total revenue hours	630
Total fully allocated cost	\$62 531
Daily ridership	302
Total annual ridership	54 590
Estimated fare revenue	\$67 691
Total net cost (est'd)	-\$5 160

These numbers indicate that, due to the heavy-ridership nature of the eastern Dublin trippers, fare revenues are anticipated to exceed the operating costs for the service. The fully allocated cost to operate the new setup is estimated at approximately \$62,500, while anticipated fare revenues are in the order of \$67,700 annually. Total unlinked boardings are expected to be at least in the order of currently seen levels, or close to 55,000 one-way boardings per year.

Zero Period Service: At the March Projects and Services Committee, Mayor David Haubert inquired about providing bus service to zero period students at Dublin High School. Staff reached out to DUSD for zero period enrollment numbers in order to determine the likelihood of ridership. According to current enrollment information obtained from the district, only

about 8 percent of the total student population at DHS are enrolled in zero period. Based on the assumption that extra Wheels service would carry a similar percentage portion of the student population for the zero bell as it does for the main morning bell (~5-6% of students), the ridership for an extra morning Wheels trip on each Route 501 and 502 is estimated at less than 15 daily boardings combined. As such, Staff does not recommend adding zero period service to DHS at this point.

Budget

As indicated above, the potential partitioned setup of the eastern Dublin to Dublin High School trippers into three routes is not anticipated to incur a required increase in resources based on current ridership levels. However, given the pace of residential development and the current upward ridership trend in eastern Dublin, Staff will request an increase in the budgeted service hours of 120 revenue hours for FY2017 to reflect overflow service contingency needs in this area.

Next Steps

The partitioning of the eastern Dublin tripper routes, as outlined, would be a logistical change that would neither increase travel time, remove the current ability of students to travel between their home and the school, take net resources away from other routes, nor otherwise degrade service. As such, no formal public hearing would be required.

Recommendation

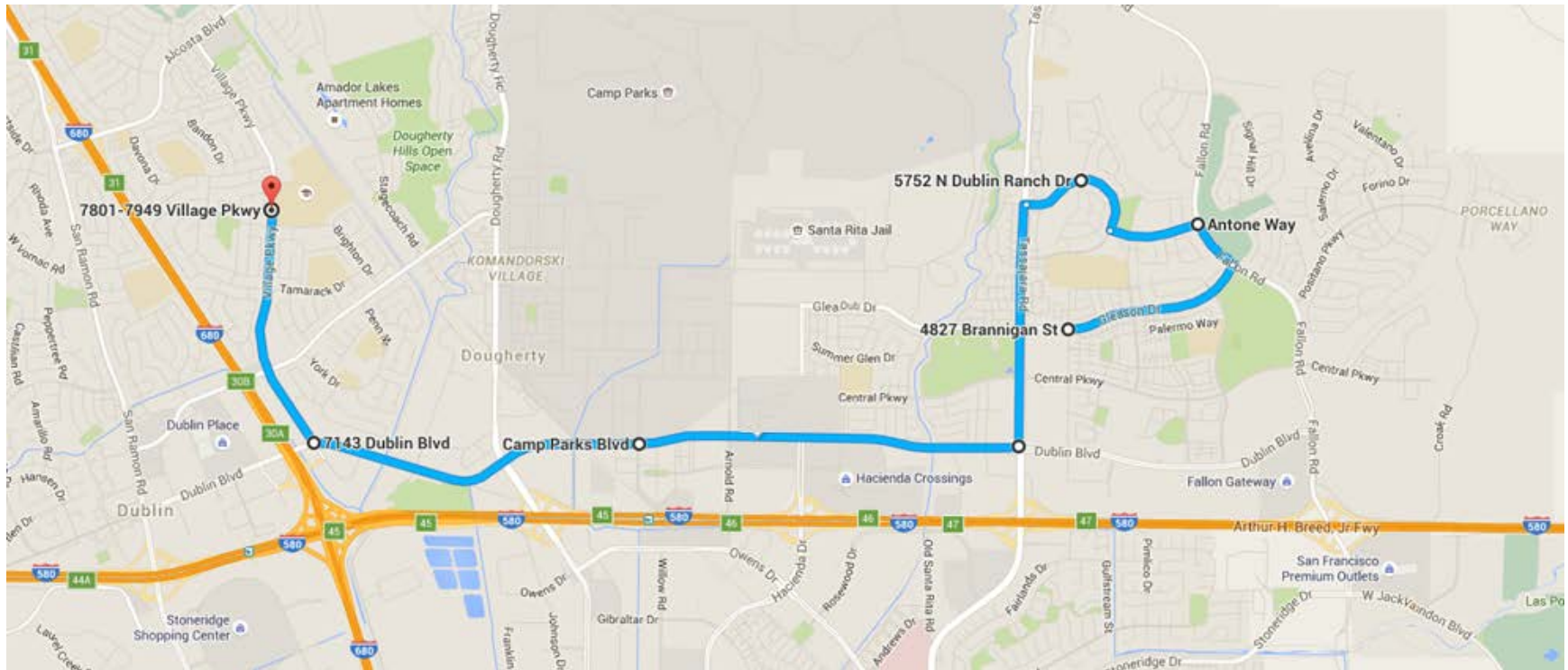
The Projects & Services Committee recommends that the Board of Directors approve the cost-neutrally partition of the two current eastern Dublin school trippers oriented for Dublin High School into three routes for logistical purposes as outlined above and shown on the attached maps, effective with school starts on August 15, 2016.

Attachments:

1. Proposed Route 501, 502 and 504 alignment maps
2. Resolution 14-2016

Approved: _____

ROUTE 504



RESOLUTION 14-2016

A RESOLUTION OF THE LIVERMORE AMADOR VALLEY TRANSIT AUTHORITY AUTHORIZING THE PARTITIONING OF THE EXISTING TWO EAST DUBLIN SCHOOL-ORIENTED ROUTES 501 AND 502 INTO THREE ROUTES

WHEREAS, the current school-oriented Wheels routes 501 and 502 operate between eastern Dublin and Dublin High School; and

WHEREAS, said routes are at capacity, and overflow buses currently being provided to safely accommodate all students; and

WHEREAS, partitioning the current two routes into three would reduce travel times for existing users and better enable the accommodation of future ridership growth in eastern Dublin; and

WHEREAS, such change would be cost-neutral and neither displacing existing riders nor encroach upon the provision of other Wheels services.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Livermore Amador Valley Transit Authority that the LAVTA Board approves partitioning the current two routes 501 and 502 into three routes, effective with fall school starts on August 15, 2016.

PASSED AND ADOPTED this 2nd day of May 2016.

Don Biddle, Chair

ATTEST:

Michael Tree, Executive Director

Approved as to form:

Michael Conneran, Legal Counsel