

To: O&S Committee

Date: 01/19/2017

From: Anne Muzzini, Director of Planning and Marketing

Reviewed by:

SUBJECT: Fixed Route Productivity

Background:

At the January 6, 2017 O&S meeting, the Director of Planning and Marketing shared various strategies to increase fixed route productivity, per the goals set by the Board of Directors. Fixed route productivity is currently around 16 passengers per revenue hours. In order to identify the most productive routes, staff employed the methodology of analyzing passengers per revenue hours, on a route by route basis. Staff also took into account various funding streams originating from other sources, such as the contractual agreements with Bishop Ranch and the City of Walnut Creek, as well as Measure "J" and LCTOP funds programmed for specific services.

Summary:

County Connection offers 55 weekday routes and 11 weekend routes. Of the 55 weekday routes, 19 are school routes, 7 express routes, and 3 special shuttle service (St. Mary's, Cal State East Bay and Alamo Creek). Of the 11 weekend routes, only 1 is a special shuttle service – St. Mary's.

Data collected for all fixed routes was organized to be able to rank the routes based on cost (to County Connection) per passenger. All of the shuttle services have their separate funding stream and are completely paid for by the supporting entity. For example, Contra Costa County provides the funding to run Alamo Creek service. Therefore, the cost per passenger to County Connection is \$0. Additionally, some of the free fixed routes, such as Route 4, are partially covered by the City of Walnut Creek. In this case, the cost per passenger is \$2.11.

Given the data provided, committee members could develop various policy decisions. For example, if the goal is to increase fixed route productivity to more than 16 passengers per revenue hour, the recommendation would be to eliminate costly routes and allocate those resources to more productive routes. Based on this analysis, 21 routes have a cost per passenger exceeding \$5 and 8 routes exceed \$10. Route 2 has the greatest cost per passenger, at \$20.65. The 21 routes exceeding \$5 per passenger utilize 92,426 service hours, about 38% of all weekday hours, yet only carry 28% of all passengers.

The 2016-2025 Short Range Transit Plan (SRTP) included a proposal for a 15-minute BART feeder Network. The additional annual platform hours calculated total 76,245. County Connection routes serving BART stations tend to have high productivity levels, despite some having long headways. If service hours were allocated to a 15 minute feeder network, one would expect those routes to have an increase in productivity. However, a cut in service will undoubtedly leave some communities with limited, if any, service. In those cases, it may be more efficient to replicate, if successful, the type of service LAVTA is beginning to implement with Transportation Network Companies (TNCs) such as Lyft and Uber.

Routes Ranked by Cost/Passenger

	Route	Passengers	Bishop Ranch Passengers	BR Fares (\$2.23/pass)	Special Contract Revenues	Passengers Paying Their Fare	Fare from Everyone Else	Total Fares, Contract Fares, BR	Total Miles	Total Hours	Marginal Cost (1.81/mile & \$54.26/hour)	Cost Less Fares, Contract, BR	Cost per Passenger
Weekday													
1	250 *	1,477			\$57,715			\$57,715		438	\$57,715	\$0	\$0.00
2	260 *	2,579			\$101,675			\$101,675	27,966	2,307	\$101,675	\$0	\$0.00
3	Alamo Creek *	5,366			\$162,498			\$162,498	60,414	2,560	\$162,498	\$0	\$0.00
4	649	139			\$25,730	139	\$153	\$25,883	5,067	308	\$25,883	\$0	\$0.00
5	627	14,272	3	\$7		14,269	\$15,696	\$15,703	4,119	385	\$28,345	\$12,643	\$0.89
6	613	7,570				7,570	\$8,327	\$8,327	1,354	307	\$19,109	\$10,782	\$1.42
7	611	15,734				15,734	\$17,307	\$17,307	4,607	587	\$40,189	\$22,882	\$1.45
8	615	5,663				5,663	\$6,229	\$6,229	1,210	255	\$16,026	\$9,797	\$1.73
9	619	6,957	1	\$2		6,956	\$7,652	\$7,654	1,829	314	\$20,348	\$12,694	\$1.82
10	4	212,999			\$180,000			\$180,000	53,167	9,832	\$629,717	\$449,717	\$2.11
11	10	299,493	1,702	\$3,795		297,791	\$327,570	\$331,366	152,414	12,760	\$968,227	\$636,861	\$2.13
12	20	294,354	1,456	\$3,247		292,898	\$322,188	\$325,435	98,678	14,759	\$979,431	\$653,996	\$2.22
13	5	127,336			\$54,999			\$54,999	49,812	5,485	\$387,776	\$332,777	\$2.61
14	602	26,297	31	\$69		26,266	\$28,893	\$28,962	19,031	1,292	\$104,550	\$75,588	\$2.87
15	612	8,259				8,259	\$9,085	\$9,085	6,436	416	\$34,221	\$25,136	\$3.04
16	614	7,289				7,289	\$8,018	\$8,018	4,970	396	\$30,483	\$22,465	\$3.08
17	14	165,516	1,594	\$3,555		163,922	\$180,314	\$183,869	75,664	10,442	\$703,535	\$519,666	\$3.14
18	11	81,162	433	\$966		80,729	\$88,802	\$89,767	49,428	5,324	\$378,345	\$288,577	\$3.56
19	15	136,904	2,405	\$5,363		134,499	\$147,949	\$153,312	104,755	8,657	\$659,335	\$506,023	\$3.70
20	16	206,737	865	\$1,929		205,872	\$226,459	\$228,388	146,201	13,890	\$1,018,295	\$789,907	\$3.82
21	17	70,518	582	\$1,298		69,936	\$76,930	\$78,227	42,587	5,002	\$348,491	\$270,264	\$3.83
22	605	12,479				12,479	\$13,727	\$13,727	7,309	892	\$61,629	\$47,902	\$3.84
23	606	65,539	21	\$47		65,518	\$72,070	\$72,117	56,339	4,259	\$333,067	\$260,950	\$3.98
24	622	5,063	102	\$227		4,961	\$5,457	\$5,685	5,729	315	\$27,461	\$21,777	\$4.30
25	9	148,397	3,536	\$7,885		144,861	\$159,347	\$167,232	105,042	11,495	\$813,845	\$646,612	\$4.36
26	616	6,929	1	\$2		6,928	\$7,621	\$7,623	3,648	576	\$37,857	\$30,234	\$4.36
27	601	13,205				13,205	\$14,526	\$14,526	11,656	948	\$72,536	\$58,010	\$4.39
28	18	115,516	575	\$1,282		114,941	\$126,435	\$127,717	97,576	8,650	\$645,962	\$518,244	\$4.49
29	98X	107,791	6,956	\$15,512		100,835	\$110,919	\$126,430	128,817	7,134	\$620,250	\$493,819	\$4.58
30	623	7,600	2	\$4		7,598	\$8,358	\$8,362	6,524	583	\$43,442	\$35,080	\$4.62
31	636	11,528	252	\$562		11,276	\$12,404	\$12,966	11,481	843	\$66,522	\$53,556	\$4.65
32	7	89,487			\$73,200			\$73,200	82,641	6,410	\$497,387	\$424,187	\$4.74
33	608	4,446				4,446	\$4,891	\$4,891	5,487	299	\$26,155	\$21,265	\$4.78
34	35	146,754	19,311	\$43,064		127,443	\$140,187	\$183,251	184,950	10,598	\$909,807	\$726,556	\$4.95
35	19	42,764	284	\$633		42,480	\$46,728	\$47,361	42,766	3,705	\$278,440	\$231,078	\$5.40
36	1 (1M)	93,252	1,608	\$3,586		91,644	\$100,808	\$104,394	79,090	8,706	\$615,540	\$511,146	\$5.48
37	6	117,214	153	\$341		117,061	\$128,767	\$129,108	133,530	9,843	\$775,770	\$646,662	\$5.52
38	91X	16,650	221	\$493		16,429	\$18,072	\$18,565	15,810	1,510	\$110,549	\$91,984	\$5.52
39	95X	45,854	15,832	\$35,305		30,022	\$33,024	\$68,330	76,285	3,407	\$322,940	\$254,610	\$5.55
40	96X	144,078	109,364	\$243,882		34,714	\$38,185	\$282,067	268,654	11,197	\$1,093,813	\$811,746	\$5.63
41	21	155,677	6,247	\$13,931		149,430	\$164,373	\$178,304	186,703	14,147	\$1,105,549	\$927,245	\$5.96
42	92X	54,678	20,145	\$44,923		34,533	\$37,986	\$82,910	103,175	4,377	\$424,243	\$341,333	\$6.24
43	625	6,914				6,914	\$7,605	\$7,605	10,760	582	\$51,055	\$43,450	\$6.28

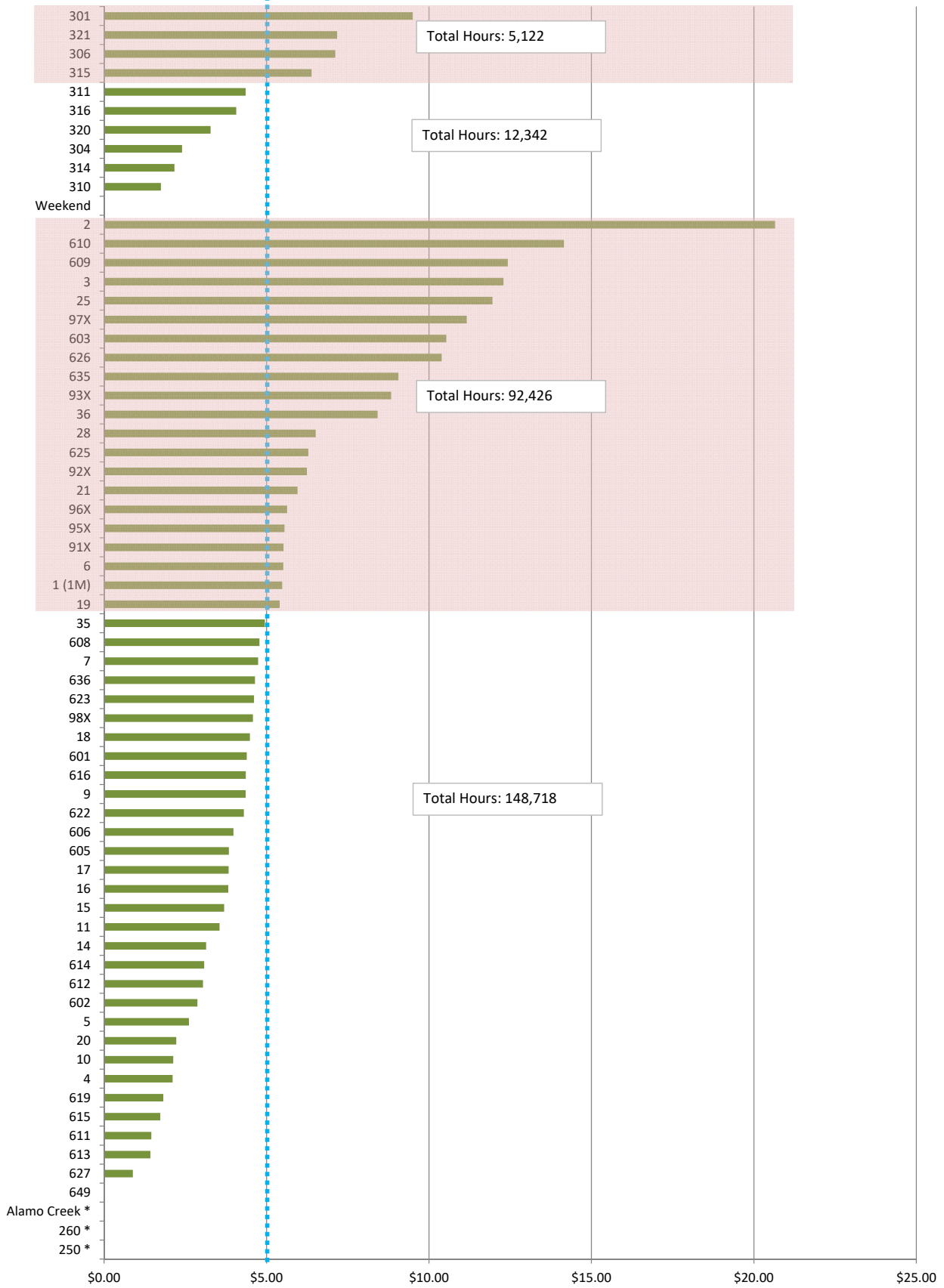
Routes Ranked by Cost/Passenger

	Route	Passengers	Bishop Ranch Passengers	BR Fares (\$2.23/pass)	Special Contract Revenues	Passengers Paying Their Fare	Fare from Everyone Else	Total Fares, Contract Fares, BR	Total Miles	Total Hours	Marginal Cost (1.81/mile & \$54.26/hour)	Cost Less Fares, Contract, BR	Cost per Passenger
44	28	81,533	353	\$787		81,180	\$89,298	\$90,085	102,382	8,030	\$621,019	\$530,934	\$6.51
45	36	69,278	7,637	\$17,031		61,641	\$67,805	\$84,836	125,982	8,112	\$668,185	\$583,349	\$8.42
46	93X	49,003	17,151	\$38,247		31,852	\$35,037	\$73,284	121,994	5,261	\$506,271	\$432,987	\$8.84
47	635	3,014	10	\$22		3,004	\$3,304	\$3,327	6,611	344	\$30,631	\$27,305	\$9.06
48	626	5,571				5,571	\$6,128	\$6,128	13,157	741	\$64,021	\$57,893	\$10.39
49	603	4,680				4,680	\$5,148	\$5,148	13,562	551	\$54,444	\$49,296	\$10.53
50	97X	26,224	19,704	\$43,940		6,520	\$7,172	\$51,112	79,751	3,676	\$343,809	\$292,697	\$11.16
51	25	17,526	310	\$691		17,216	\$18,938	\$19,629	38,320	2,945	\$229,155	\$209,526	\$11.96
52	3	18,987	20	\$45		18,967	\$20,864	\$20,908	33,926	3,555	\$254,300	\$233,392	\$12.29
53	609	969	2	\$4		967	\$1,064	\$1,068	1,967	176	\$13,110	\$12,042	\$12.43
54	610	1,294				1,294	\$1,423	\$1,423	3,200	257	\$19,737	\$18,313	\$14.15
55	2	4,598	23	\$51		4,575	\$5,033	\$5,084	16,181	1,304	\$100,043	\$94,959	\$20.65
Weekend													
1	250 *	1,063										\$0	\$0.00
2	310	50,116	640	\$1,427		49,476	\$54,424	\$55,851	23,875	1,849	\$143,541	\$87,690	\$1.75
3	304	49,727			\$27,058			\$27,058	12,162	2,076	\$134,683	\$107,625	\$2.16
4	314	61,090	259	\$578		60,831	\$66,914	\$67,492	27,416	3,033	\$214,214	\$146,722	\$2.40
5	320	20,288	117	\$261		20,171	\$22,188	\$22,449	8,463	1,357	\$88,924	\$66,475	\$3.28
6	316	33,416	232	\$517		33,184	\$36,502	\$37,020	26,493	2,304	\$172,962	\$135,943	\$4.07
7	311	22,500	354	\$789		22,146	\$24,361	\$25,150	16,429	1,723	\$123,232	\$98,082	\$4.36
8	306	11,586	2	\$4		11,584	\$12,742	\$12,747	17,739	1,007	\$86,729	\$73,982	\$6.39
9	321	24,110	950	\$2,119		23,160	\$25,476	\$27,595	37,450	2,421	\$199,137	\$171,542	\$7.11
10	315	5,977	68	\$152		5,909	\$6,500	\$6,652	7,259	670	\$49,511	\$42,859	\$7.17
11	301	6,406	25	\$56		6,381	\$7,019	\$7,075	6,820	1,025	\$67,943	\$60,868	\$9.50

Route	Cost per Passenger	Total Hours
Weekday		
250 *	\$0.00	
260 *	\$0.00	2,307
<i>Alamo Creek *</i>	\$0.00	2,560
649	\$0.00	308
627	\$0.89	385
613	\$1.42	307
611	\$1.45	587
615	\$1.73	255
619	\$1.82	314
4	\$2.11	9,832
10	\$2.13	12,760
20	\$2.22	14,759
5	\$2.61	5,485
602	\$2.87	1,292
612	\$3.04	416
614	\$3.08	396
14	\$3.14	10,442
11	\$3.56	5,324
15	\$3.70	8,657
16	\$3.82	13,890
17	\$3.83	5,002
605	\$3.84	892
606	\$3.98	4,259
622	\$4.30	315
9	\$4.36	11,495
616	\$4.36	576
601	\$4.39	948
18	\$4.49	8,650
98X	\$4.58	7,134
623	\$4.62	583
636	\$4.65	843
7	\$4.74	6,410
608	\$4.78	299
35	\$4.95	10,598
19	\$5.40	3,705
1 (1M)	\$5.48	8,706
6	\$5.52	9,843
91X	\$5.52	1,510
95X	\$5.55	3,407
96X	\$5.63	11,197
21	\$5.96	14,147

92X	\$6.24	4,377
625	\$6.28	582
28	\$6.51	8,030
36	\$8.42	8,112
93X	\$8.84	5,261
635	\$9.06	344
626	\$10.39	741
603	\$10.53	551
97X	\$11.16	3,676
25	\$11.96	2,945
3	\$12.29	3,555
609	\$12.43	176
610	\$14.15	257
2	\$20.65	1,304
Weekend		
310	\$1.75	1,849
314	\$2.16	2,076
304	\$2.40	3,033
320	\$3.28	1,357
316	\$4.07	2,304
311	\$4.36	1,723
315	\$6.39	1,007
306	\$7.11	2,421
321	\$7.17	670
301	\$9.50	1,025

Cost per Passenger < \$5



Cost per Passenger < \$10

