

**Quantitative Analysis
Capacity Projects**

Measures	Calc. Methods	1		2		3		4		5		6		7		8		9		10		3, 5a, 9b		9d		9e		3, 5a, 6, 9e			
		Base Case	Claus/Garner/Faith Home	Finch Rd. East ext.	Finch Rd Feeder Rte	Hatch Rd Lanes	Hatch Rd/SR99	Santa Fe Improvements	Codoni / Washington	D St w/out	D St with	Tuol/B St/Morton	Group 01		D St w/out & 4-In Xway to Mitchell		D St w/out & 6-In Xway to Claus		Group 02												
Time Saved																															
1. Improved travel times	Vehicle hours of travel for focused area trips - entire model	VHT	VHT	VHT	VHT	VHT	VHT	VHT	VHT	VHT	VHT	VHT	VHT	VHT	VHT	VHT	VHT	VHT	VHT	VHT	VHT	VHT	VHT	VHT	VHT	VHT	VHT	VHT	VHT	VHT	
	All trips	35,224	31,367 -3,857	35,014 -210	34,947 -277	35,072 -152	35,237 13	34,565 -659	34,009 -1,215	35,143 -81	35,048 -176	34,781 -443	30,881 -4,343	34,373 -851	33,163 -2,061	30,380 -4,844															
	Truck Trips	7,711	6,918 -793	7,682 -29	7,640 -71	7,684 -27	7,711 0	7,575 -136	7,431 -280	7,682 -29	7,673 -38	7,610 -101	6,816 -895	7,497 -214	7,218 -493	6,678 -1,033															
	Auto Trips	27,532	24,449 -3,083	27,333 -199	27,307 -225	27,388 -144	27,526 -6	26,990 -542	26,579 -953	27,461 -71	27,375 -157	27,171 -361	24,065 -3,467	26,876 -656	25,945 -1,587	23,702 -3,830															
2. Improved door to door reliability	Cong VHT minus FreeFlow VHT for trucks and autos for focused area trips - entire model	VHT Diff	VHT Diff	VHT Diff	VHT Diff	VHT Diff	VHT Diff	VHT Diff	VHT Diff	VHT Diff	VHT Diff	VHT Diff	VHT Diff	VHT Diff	VHT Diff	VHT Diff	VHT Diff	VHT Diff	VHT Diff	VHT Diff	VHT Diff	VHT Diff	VHT Diff	VHT Diff	VHT Diff	VHT Diff	VHT Diff	VHT Diff	VHT Diff	VHT Diff	
Trucks	All Truck Routes	1,475	880 -595	1,457 -18	1,382 -93	1,451 -24	1,475 0	1,355 -120	1,158 -317	1,461 -14	1,491 16	1,410 -65	861 -614	1,487 12	1,382 -93	920 -555															
	4 Mitchell Road (north)	21	26 5	23 2	26 5	21 0	21 0	21 0	18 -3	19 -2	22 1	21 0	26 5	26 5	29 8																
	2 Mitchell Road (south)	462	49 -413	443 -19	416 -46	470 8	457 -5	422 -40	270 -192	463 1	435 -27	412 -50	61 -401	343 -119	285 -177	51 -411															
	3 Hatch Road	26	29 3	27 1	25 -1	13 -13	25 -1	27 1	24 -2	26 0	22 -4	20 -6	15 -11	16 -10	8 -18																
	5 Yosemite (SR 132)	78	61 -17	76 -2	104 26	75 -3	80 2	65 -13	69 -9	73 -5	125 47	100 22	74 -4	107 29	83 5																
	6 D St	15	6 -9	14 -1	6 -9	15 0	15 0	11 -4	10 -5	11 -4	26 11	2 -13	15 0	35 20	25 10																
	11 G & H Streets	6	4 -2	6 0	7 1	5 -1	6 0	5 -1	5 -1	2 -4	1 -5	3 -3	1 -5	1 -5	1 -5																
	12 Ninth n/o D	0	0 0	0 0	1 1	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	3 3	3 3																
	9 Ninth s/o D	2	2 0	2 0	2 0	2 0	2 0	2 0	2 0	0 -2	0 -2	1 -1	0 -2	8 6	7 5																
	14 Tuolumne	18	5 -13	16 -2	9 -9	16 -2	20 2	16 -2	14 -4	10 -8	6 -12	21 3	1 -17	6 -12	4 -14																
	15 Ninth s/o Tuolumne	5	2 -3	5 0	3 -2	5 0	5 0	4 -1	3 -2	4 -1	3 -2	4 -1	1 -4	14 9	6 1																
	8 Kiernan Ave.	1	1 0	1 0	1 0	1 0	1 0	1 0	1 0	1 0	1 0	1 0	1 0	1 0	1 0																
Autos	All Truck Routes	5,232	3,013 -2,219	5,149 -83	4,795 -437	5,141 -91	5,231 -1	4,769 -463	4,023 -1,209	5,191 -41	5,274 42	5,019 -213	2,894 -2,338	5,230 -2	4,940 -292	3,057 -2,175															
	4 Mitchell Road (north)	66	86 20	71 5	92 26	65 -1	65 -1	65 -1	56 -10	59 -7	65 -1	63 -3	86 20	82 16	100 34																
	2 Mitchell Road (south)	1,772	169 -1,603	1,672 -100	1,525 -247	1,810 38	1,759 -13	1,610 -162	965 -807	1,785 13	1,705 -67	1,623 -149	195 -1,577	1,355 -417	1,122 -650	159 -1,613															
	3 Hatch Road	105	120 15	110 5	95 -10	52 -53	1,000 895	111 6	97 -8	105 0	96 -9	90 -15	65 -40	71 -34	48 -57	37 -68															
	5 Yosemite (SR 132)	237	186 -51	229 -8	315 78	226 -11	243 6	196 -41	210 -27	219 -18	367 130	5 -232	218 -19	306 69	258 21	241 4															
	6 D St	40	16 -24	37 -3	16 -24	39 -1	40 0	30 -10	28 -12	29 -11	64 24	3 -37	38 -2	91 51	77 37	64 24															
	11 G & H Streets	14	11 -3	14 0	18 4	14 0	14 0	14 0	13 -1	5 -9	3 -11	8 -6	2 -12	4 -10	1 -13																
	12 Ninth n/o D	1	1 0	1 0	2 1	1 0	1 0	1 0	1 0	0 -1	0 -1	1 0	0 -1	8 7	8 7																
	9 Ninth s/o D	4	4 0	2 -2	4 0	4 0	5 1	5 1	5 1	0 -4	0 -4	3 -1	0 -4	24 20	23 19	18 14															
	14 Tuolumne	49	15 -34	16 -33	27 -22	42 -7	54 5	43 -6	37 -12	26 -23	14 -35	50 1	4 -45	14 -35	8 -41																
	15 Ninth s/o Tuolumne	16	5 -11	5 -11	10 -6	16 0	15 -1	12 -4	10 -6	12 -4	10 -6	14 -2	5 -11	34 18	14 -2																
	8 Kiernan Ave.	4	2 -2	1 -3	4 0	4 0	4 0	3 -1	3 -1	4 0	4 0	3 -1	2 -2	3 -1	2 -2																
3. Reduced Delay	LOS and V/C	V/C LOS	V/C LOS	V/C LOS	V/C LOS	V/C LOS	V/C LOS	V/C LOS	V/C LOS	V/C LOS	V/C LOS	V/C LOS	V/C LOS	V/C LOS	V/C LOS	V/C LOS	V/C LOS	V/C LOS	V/C LOS	V/C LOS	V/C LOS	V/C LOS	V/C LOS	V/C LOS	V/C LOS	V/C LOS	V/C LOS	V/C LOS	V/C LOS	V/C LOS	
V/C & LOS	Kiernan e/o SR99	0.79 C	0.77 C	0.79 C	0.77 C	0.79 C	0.79 C	0.77 C	0.77 C	0.78 C	0.79 C	0.78 C	0.77 C	0.77 C	0.76 C																
	G w/o Ninth	1.14 F	1.16 F	1.15 F	1.21 F	1.13 F	1.14 F	1.10 F	1.12 F	0.91 E	0.89 D	1.18 F	0.89 D	0.92 E	0.80 C	0.91 E															
	Ninth s/o G	1.08 F	1.04 F	1.06 F	1.08 F	1.05 F	1.08 F	1.08 F	1.09 F	1.15 F	1.17 F	1.00 E	0.98 E	1.48 F	1.33 F	1.33 F															
	Yosemite e/o D	1.04 F	0.95 E	1.03 F	1.06 F	1.03 F	1.04 F	1.00 E	0.99 E	1.03 F	1.13 F	0.60 A	1.05 F	1.27 F	1.11 F	1.18 F															
	Yosemite e/o Morton	1.24 F	1.08 F	1.23 F	1.29 F	1.22 F	1.24 F	1.18 F	1.17 F	1.24 F	1.33 F	1.41 F	1.15 F	1.27 F	1.11 F	1.18 F															
	Yosemite w/o Mitchell	1.01 F	1.08 F	1.01 F	1.10 F	0.99 E	1.01 F	0.96 E	1.04 F	0.98 E	1.14 F	1.06 F	1.03 F	1.12 F	1.05 F	1.11 F															
	Mitchell s/o Yosemite	1.03 F	1.02 F	1.03 F	1.06 F	1.02 F	1.03 F	1.03 F	1.00 E	1.01 F	1.03 F	1.02 F	1.00 E	1.08 F	1.10 F	1.08 F															
	Tuolumne e/o SR99	0.76 C	0.75 C	0.76 C	1.27 F	0.77 C	0.77 C	0.75 C	0.77 C	0.82 D	0.53 A	0.87 D	0.60 A	0.45 A	0.44 A	0.40 A															
	Ninth s/o Tuolumne	1.32 F	1.08 F	1.30 F	1.20 F	1.30 F	1.30 F	1.23 F	1.23 F	1.25 F	1.26 F	1.35 F	1.12 F	1.44 F	1.55 F	1.29 F															
	D e/o Ninth	0.90 D	0.68 B	0.88 D	0.63 B	0.90 D	0.90 D	0.83 D	0.85 D	1.02 F	1.32 F	0.58 A	1.08 F	1.38 F	1.20 F	1.25 F															
	H w/o Ninth	1.22 F	1.17 F	1.21 F	1.34 F	1.21 F	1.21 F	1.23 F	1.20 F	1.13 F	0.92 E	1.08 F	0.84 D	1.10 F	1.08 F	0.86 D															
	Hatch w/o Mitchell	1.07 F	1.06 F	1.09 F	0.97 E	0.86 D	1.06 F	1.10 F	1.00 E	1.09 F	1.08 F	1.05 F	0.84 D	1.01 F	0.94 E	0.77 C															
	Mitchell n/o Hatch	1.94 F	1.26 F	1.94 F	2.06 F	1.96 F	1.94 F	1.91 F	1.74 F	1.95 F	1.94 F	1.91 F	1.31 F	1.83 F	1.73 F	1.23 F															
	Mitchell s/o Hatch	1.16 F	1.02 F	1.16 F	1.16 F	1.16 F	1.16 F	1.15 F	1.10 F	1.16 F	1.15 F	1.17 F	1.03 F	1.20 F	1.16 F	1.04 F															
Vehicle Miles Traveled (VMT)																															
1. Reduced Truck Travel	Truck VMT on truck routes in overall study area	Truck VMT	Truck VMT	Truck VMT	Truck VMT	Truck VMT	Truck VMT	Truck VMT	Truck VMT	Truck VMT	Truck VMT	Truck VMT	Truck VMT	Truck VMT	Truck VMT	Truck VMT	Truck VMT	Truck VMT	Truck VMT	Truck VMT	Truck VMT	Truck VMT	Truck VMT	Truck VMT	Truck VMT	Truck VMT	Truck VMT	Truck VMT	Truck VMT	Truck VMT	
	Truck Routes	423,665	408,561 -15,104	422,856 -809	418,188 -5,477	426,241 2,576	423,558 -107	424,084 419	418,095 -5,570	423,014 -651	423,348 -317	417,462 -6,203	412,774 -10,891	425,086 1,421	434,162 10,497	416,441 -7,224															
	All roadways	623,447	620,910 -2,537	622,605 -842	621,461 -1,986	625,283 1,836	623,278 -169	623,752 305	620,058 -3,389	622,262 -1,185	622,609 -838	619,875 -3,572	621,638 -1,809	620,647 -2,800	621,636 -1,811	619,477 -3,970															
2. Traffic Safety Impacts	Accident rate of new road compared to old road																														
3. Improved Air Quality	VMT (all vehicles) on all roadways within the overall study area	All Vehs VMT	All Vehs VMT	All Vehs VMT	All Vehs VMT	All Vehs VMT	All Vehs VMT	All Vehs VMT	All Vehs VMT	All Vehs VMT	All Vehs VMT	All Vehs VMT	All Vehs VMT	All Vehs VMT	All Vehs VMT	All Vehs VMT	All Vehs VMT	All Vehs VMT	All Vehs VMT	All Vehs VMT	All Vehs VMT	All Vehs VMT	All Vehs VMT	All Vehs VMT	All Vehs VMT	All Vehs VMT	All Vehs VMT	All Vehs VMT	All Vehs VMT	All Vehs VMT	
	All roadways	7,802,085	7,788,154 -13,931	7,797,301 -4,784	7,787,588 -14,497	7,821,445 19,360	7,799,865 -2,220	7,806,484 4,399	7,784,521 -17,564	7,787,327 -14,758	7,795,885 -6,200	7,788,348 -13,737	7,800,442 -1,643	7,783,162 -18,923	7,800,525 -1,560	7,790,780 -11,305															

