1. Housing + Transportation Affordability:
Review of T-2035 Equity Analysis Results

- Low-income households and communities of concern burdened relative to non-low-income households/non-communities of concern.
- Both the Plan and the Land Use Alternative analyzed reduced the affordability disparity for low-income households (Figures 1-2 and 1-3) and communities of concern (Figures 1-4 and 1-5) in the forecast year
- The Land Use Alternative provided greater affordability benefit to low-income households and communities of concern than the Project (Fig. 1-2 through Fig. 1-5).
- Assumptions held housing costs as a % of income constant (ABAG is updating approach with housing cost forecasts for Plan Bay Area).
- Communities of concern relates to definitions used in the T-2035 Equity Analysis, which was for communities at either 70% minority OR 30% low-income.
- Source for all data is T-2035 Equity Analysis Report, Appendix E

Table 1-1:
H+T Affordability by T-2035 Alternative:
Housing and Transportation Costs as a % of Income by Income Group

Income Group	2006	No Project	Project	HM/CPE + Land Use*
Low (<$40K)	77.0%	74.9%	75.0%	74.1%
Moderately Low ($40-$75K)	52.8%	53.3%	53.2%	52.1%
Moderately High ($75K-$125K)	43.0%	44.5%	44.4%	44.4%
High (>$125K)	28.0%	28.0%	28.0%	27.7%
Regional Average	*36.5%*	*34.7%*	*34.7%*	*34.2%*

** HM/CPE + Land Use = Heavy Maintenance/Climate Protection Emphasis plus Land Use Strategies*

Figure 1-1:
H+T Affordability by T-2035 Alternative: Housing and Transportation Costs as a % of Income for Low Income Households by Community Type

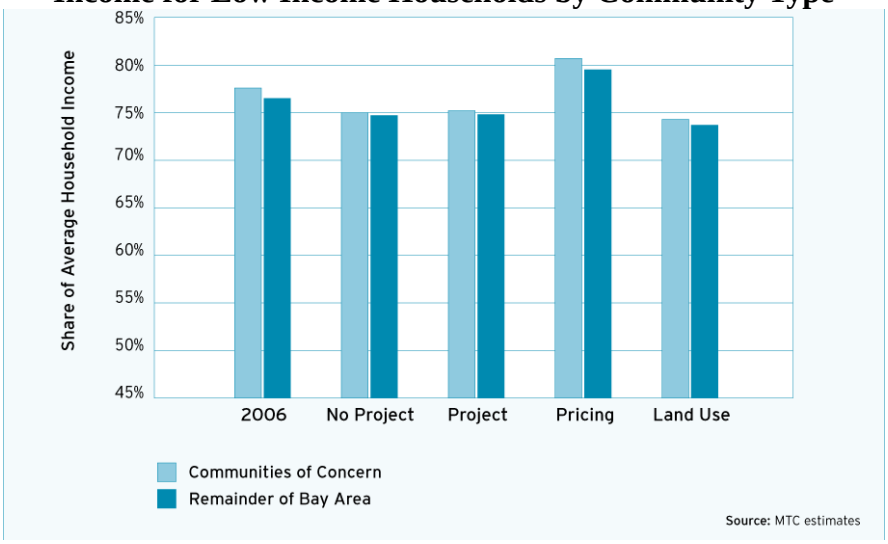


Figure 1-2:
Comparison of T-2035 Alternatives:
Absolute Change By Income Group

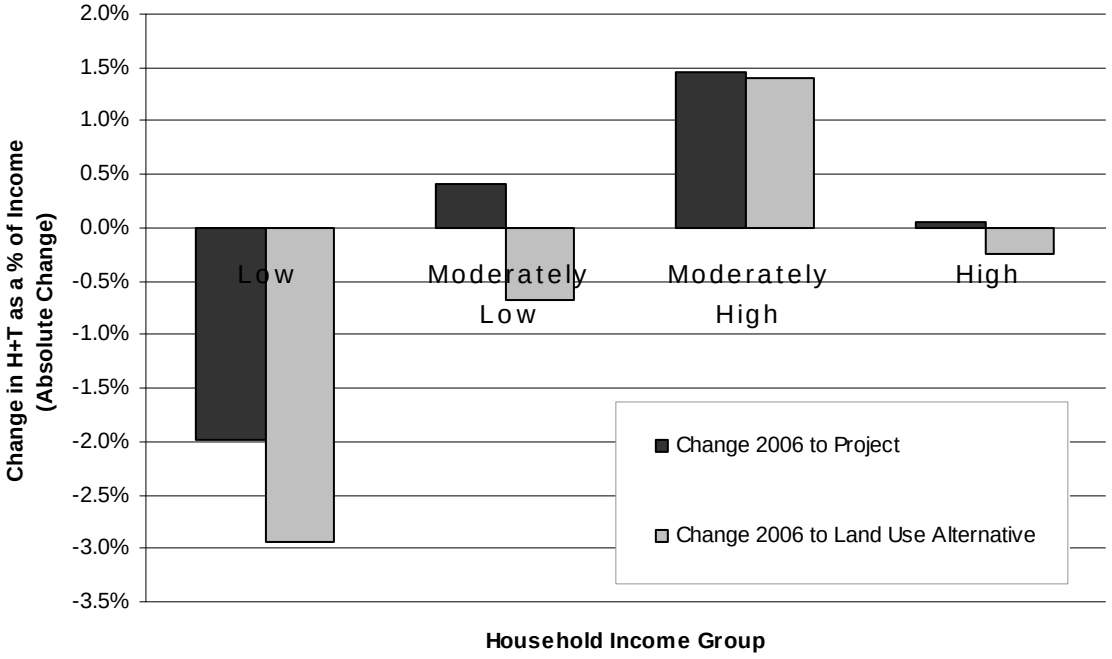


Figure 1-3:
Comparison of T-2035 Alternatives:
Relative/Percentage Change by Income Group

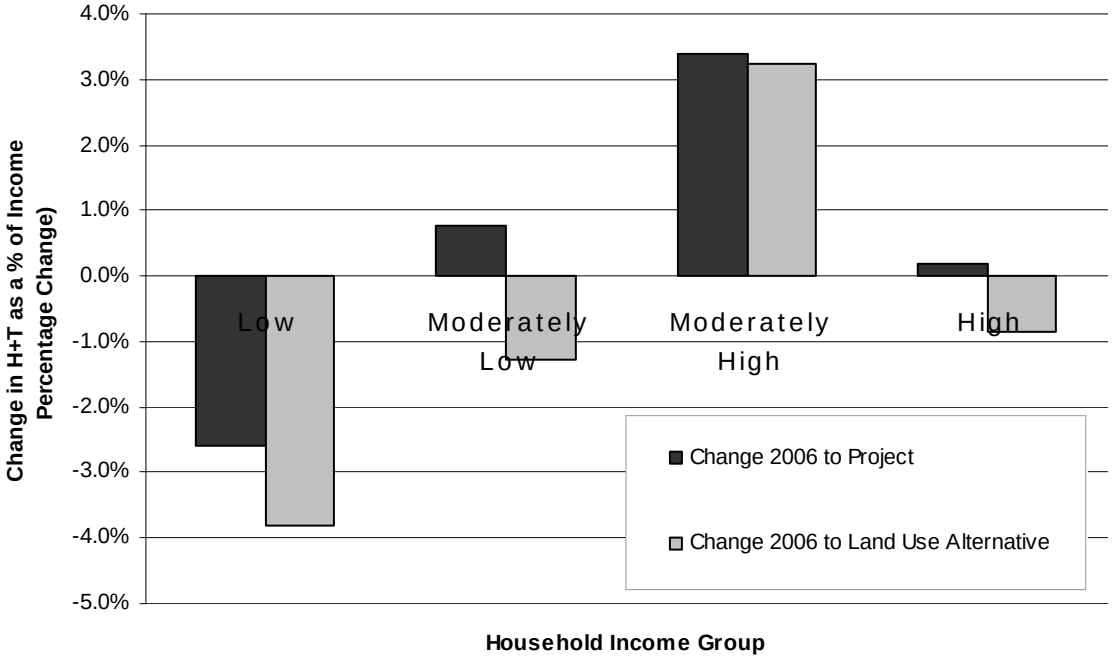


Figure 1-4:
Comparison of T-2035 Alternatives:
Absolute Change for Low Income Households By Community Type

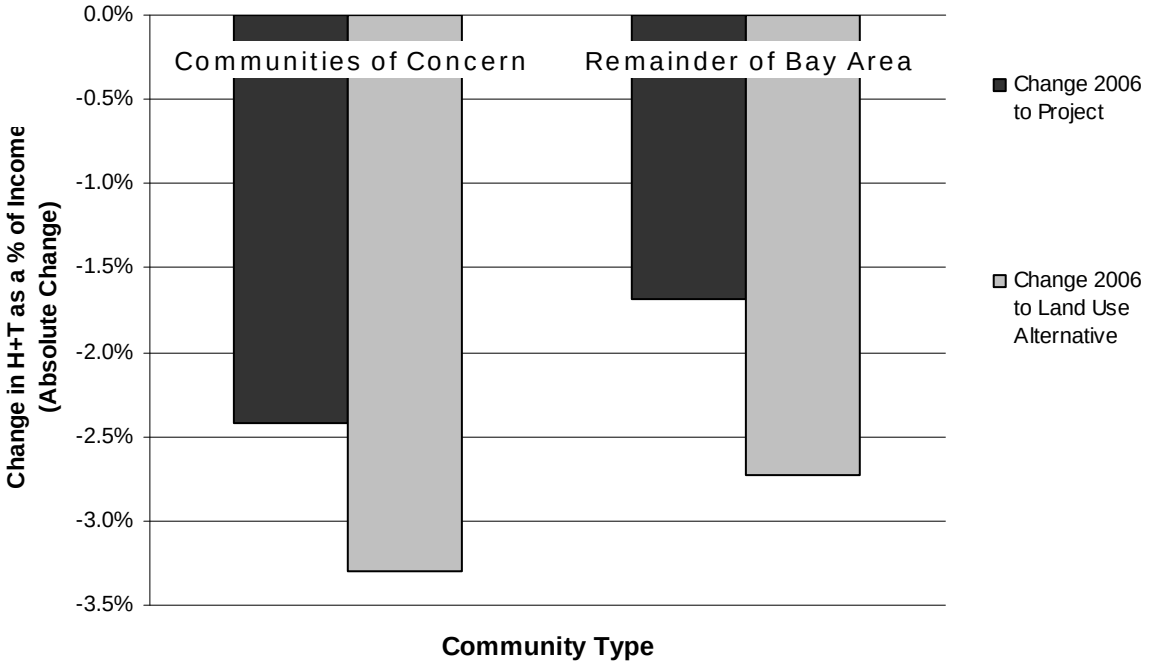
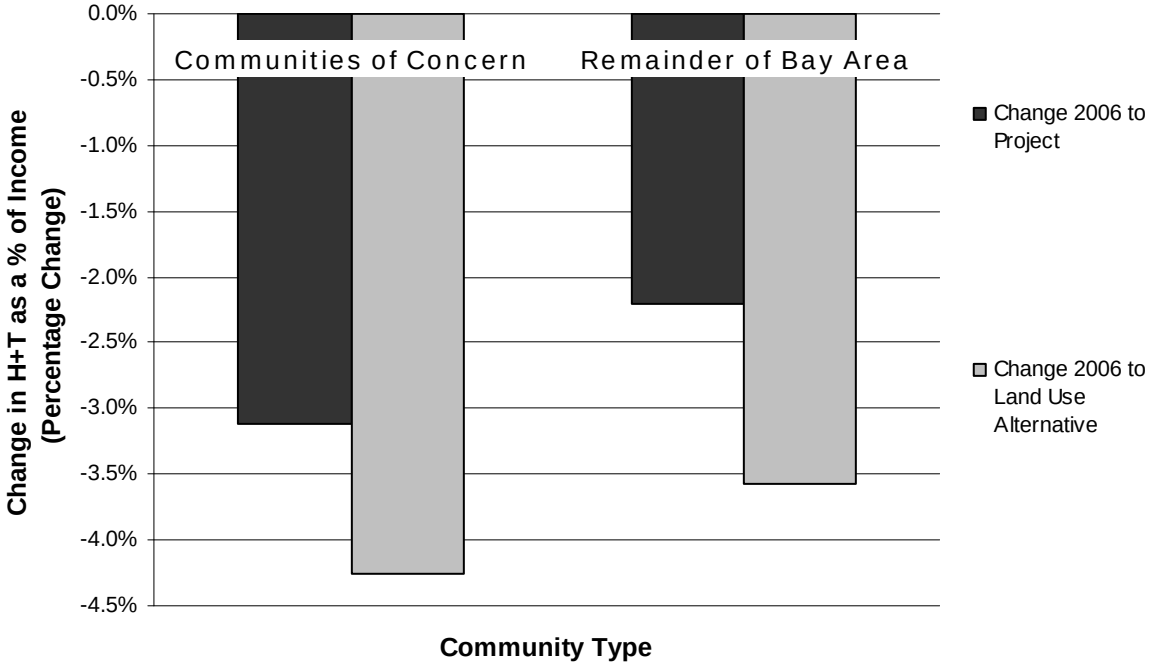


Figure 1-5:
Comparison of T-2035 Alternatives:
Relative Change for Low Income Households By Community Type



2. Jobs-Housing Fit

Analysis of Current Conditions based on Place Geography (Cities with more than 60,000 residents.)

- Based on the 2006-2008 Census Transportation Planning Package, and 2008 affordability categories and individual county mean incomes, ABAG calculated the number and percent of households in each income category based on their location of work for 57 places.
- The state office of Housing and Community Development (HCD) posts annual income limits for income categories based on percent of Area Median Income. Income limits vary by County. ABAG calculated the maximum monthly housing cost for each group based on 30% of their income.
- The 2007-2009 American Community Survey (ACS) table of Monthly Housing Costs shows the number of households paying this amount or less in monthly housing costs. Proportion adjustments were made since ACS categories do not have an exact fit with income limit calculations.
- Results are only available for the number of workers for the <50% and <80% categories. At 120%, all the Bay Area households are earning above the Census' maximum range category for housing costs ($2000 and above).
- The number of Worker Households is divided by the number of households in each place that pay 30% or less of their income for housing for that income category to produce a Fit ratio.

Table 2-1:
Fit Ratio Summary

Total Places	57
Fit Ratio < 1 for 50% - 80% AMI	32
Fit Ratio < 1 for Both Categories	9

Table 2-2: Place – Based Calculation

Place	Monthly housing cost Maximum (HCD, 2008 Income Limits)			Households Paying Max. Cost or Below (2007-2009 ACS)			Number of Worker Households in Income Category (2008)		Fit for Income Category	
	<50%	<80%	<120%	<50%	<80%	<120%	<50%	<80%	Fit for <50%	Fit for <80%
Benicia	$943	$1,508	$2,262	2159	1974	N/A	1,490	1,600	1.45	1.23
Fairfield	$943	$1,508	$2,262	8084	5719		5,190	7,125	1.56	0.80
Suisun City	$943	$1,508	$2,262	1438	1613		465	625	3.09	2.58
Vacaville	$943	$1,508	$2,262	7564	6034		2,570	3,935	2.94	1.53
Vallejo	$943	$1,508	$2,262	12783	8023		4,300	4,810	2.97	1.67
Petaluma	$973	$1,556	$2,334	5086	3366		3,151	3,649	1.61	0.92
Rohnert Park	$973	$1,556	$2,334	4531	4255		2,257	1,778	2.01	2.39
Santa Rosa	$973	$1,556	$2,334	19760	13258		13,364	12,701	1.48	1.04
Napa	$995	$1,592	$2,388	8722	5996		5125	4400	1.70	1.36
Alameda	$1,076	$1,722	$2,583	7459	6611		4210	3738	1.77	1.77
Antioch	$1,076	$1,722	$2,583	7697	4611		3365	3223	2.29	1.43
Berkeley	$1,076	$1,722	$2,583	12484	9089		13480	11823	0.93	0.77
Brentwood	$1,076	$1,722	$2,583	2525	1167		1710	1650	1.48	0.71
Castro Valley	$1,076	$1,722	$2,583	5697	3626		2010	2005	2.83	1.81
Concord	$1,076	$1,722	$2,583	12360	9489		9685	9805	1.28	0.97
Danville	$1,076	$1,722	$2,583	1674	876		1085	2335	1.54	0.38
Dublin	$1,076	$1,722	$2,583	1151	1647		1715	2493	0.67	0.66
Fremont	$1,076	$1,722	$2,583	11133	11987		9480	13933	1.17	0.86
Hayward	$1,076	$1,722	$2,583	11803	12348		10725	13490	1.10	0.92
Lafayette	$1,076	$1,722	$2,583	1787	1063		1935	1768	0.92	0.60
Livermore	$1,076	$1,722	$2,583	5208	4766		4135	5728	1.26	0.83

Place	Monthly housing cost Maximum (HCD, 2008 Income Limits)			Households Paying Max. Cost or Below (2007-2009 ACS)			Number of Worker Households in Income Category (2008)		Fit for Income Category	
	<50%	<80%	<120%	<50%	<80%	<120%	<50%	<80%	Fit for <50%	Fit for <80%
Martinez	$1,076	$1,722	$2,583	3607	2570		2745	2510	1.31	1.02
Oakland	$1,076	$1,722	$2,583	60513	35674		32750	33195	1.85	1.07
Oakley	$1,076	$1,722	$2,583	1870	943		860	528	2.17	1.79
Pittsburg	$1,076	$1,722	$2,583	5640	4548		2990	2543	1.89	1.79
Pleasant Hill	$1,076	$1,722	$2,583	2800	2679		2580	2520	1.09	1.06
Pleasanton	$1,076	$1,722	$2,583	3081	3256		4595	6575	0.67	0.50
Richmond	$1,076	$1,722	$2,583	11661	7241		6390	6975	1.82	1.04
San Leandro	$1,076	$1,722	$2,583	9347	6377		6610	6493	1.41	0.98
San Pablo	$1,076	$1,722	$2,583	3510	2311		1235	1708	2.84	1.35
San Ramon	$1,076	$1,722	$2,583	1459	2579		3260	4575	0.45	0.56
Union City	$1,076	$1,722	$2,583	4094	3046		3095	3668	1.32	0.83
Walnut Creek	$1,076	$1,722	$2,583	8538	6389		7635	8278	1.12	0.77
Cupertino	$1,326	$2,122	$3,183	4393	2982		3745	4128	1.17	0.72
Gilroy	$1,326	$2,122	$3,183	5933	1855		5750	3946	1.03	0.47
Los Altos	$1,326	$2,122	$3,183	2911	747		2360	1805	1.23	0.41
Los Gatos	$1,326	$2,122	$3,183	3660	1350		3745	2722	0.98	0.50
Milpitas	$1,326	$2,122	$3,183	5734	2974		5175	7327	1.11	0.41
Morgan Hill	$1,326	$2,122	$3,183	4950	1291		2930	3143	1.69	0.41
Mountain View	$1,326	$2,122	$3,183	13226	5586		7,840	8,730	1.69	0.64
Palo Alto	$1,326	$2,122	$3,183	8512	3094		11,100	10,706	0.77	0.29
San Jose	$1,326	$2,122	$3,183	126018	42247		74,815	70,086	1.68	0.60
Santa Clara	$1,326	$2,122	$3,183	19088	7888		13,565	15,784	1.41	0.50
Sunnyvale	$1,326	$2,122	$3,183	22000	9317		10,775	12,527	2.04	0.74
San Rafael	$1,414	$1,762	$3,382	10491	3958		11870	17490	0.88	0.23
Belmont	$1,414	$2,262	$3,393	3639	1510		1580	1910	2.30	0.79

Place	Monthly housing cost Maximum (HCD, 2008 Income Limits)			Households Paying Max. Cost or Below (2007-2009 ACS)			Number of Worker Households in Income Category (2008)		Fit for Income Category	
	<50%	<80%	<120%	<50%	<80%	<120%	<50%	<80%	Fit for <50%	Fit for <80%
Burlingame	$1,414	$2,262	$3,393	5263	1292		4385	8840	1.20	0.15
Daly City	$1,414	$2,262	$3,393	13468	5255		3190	7765	4.22	0.68
East Palo Alto	$1,414	$2,262	$3,393	4602	1259		1015	1755	4.53	0.72
Foster City	$1,414	$2,262	$3,393	2455	2201		1865	6845	1.32	0.32
Menlo Park	$1,414	$2,262	$3,393	3589	1972		4500	11375	0.80	0.17
Millbrae	$1,414	$2,262	$3,393	3463	1096		1600	2390	2.16	0.46
San Bruno	$1,414	$2,262	$3,393	6516	2142		2065	5405	3.16	0.40
San Carlos	$1,414	$2,262	$3,393	3567	1280		3155	6580	1.13	0.19
San Francisco	$1,414	$2,262	$3,393	156682	49795		119350	120283	1.31	0.41
San Mateo	$1,414	$2,262	$3,393	15065	5794		8695	18815	1.73	0.31
South San Francisco	$1,414	$2,262	$3,393	9179	3130		7415	17985	1.24	0.17
Pacifica	$1,414	$2,262	$3,393	4991	2412		1450	2525	3.44	0.96

3. Displacement

Estimate of Over-Burdened Renters Combined with Areas Susceptible to Gentrification (2009)

- Challenge is to distinguish low-income movers by choice from displaced due to changes in market
- Over-Burdened Renters are paying more than 50% of their income on Housing[1]
- CCI used the 2005 Freeman definition of Gentrification, modified slightly for the Bay Area: a central city neighborhood with housing price appreciation above the regional average, increase in educational attainment above the regional average, and household income at the 40th percentile of regional household income (roughly 80% of median income) in the starting year (as the process begins).[2]
- Additional Over-Burdened Renter Overlay focuses on Displacement potential

Table 3-1:
Bay Area neighborhoods most susceptible to Future gentrification (CCI, 2009)

County	Tract	Susceptibility Index	Neighborhood/City	System
Alameda	4013	18	Telegraph/23rd/Art Murmur	BART
Alameda	4021	17	West Oakland	BART
Alameda	4035	17	Broadway/Auto Row	BART
Alameda	4234	17	South Berkeley	BART
Alameda	4235	17	South Berkeley	BART
San Francisco	106	17	North Beach/ Telegraph Hill	Cable Car, Central Subway, Street Car
Alameda	4030	16	Downtown/ Chinatown (Oakland)	Ferry
Alameda	4034	16	Lakeside (Oakland)	BART
Alameda	4037	16	Adams Point (Oakland)	BART
Alameda	4060	16	East Peralta (Oakland)	BART
Alameda	4224	16	Downtown Berkeley	BART
Alameda	4251	16	Emeryville	Amtrak
San Francisco	107	16	North Beach	Cable Car, Street Car
San Francisco	155	16	Japantown	Cable Car
San Francisco	159	16	Western Addition	Cable Car
San Francisco	163	16	Hayes Valley (West)	MUNI Metro, Street Car
Solano	2509	16	Downtown Vallejo	Ferry
Sonoma	1530.03	16	West Santa Rosa	SMART

[1] On Average, Bay Area residents spend 48% of their income on Housing. (ABAG, *A Place to Call Home: Housing in the San Francisco Bay Area*, 2006, p.2.)

[2] Freeman's definition also includes a measure of building age (percent of housing units built in the last twenty years), since gentrifiers are often attracted by older, architecturally significant housing stock. However, this variable does not work well in the Bay Area, where gentrifying neighborhoods have seen much new construction.

Table 3-2:
Mean factor levels in gentrifying and non-gentrifying neighborhoods.

Variable type	Variable	Average by neighborhood type		
		Non-gentrifying	Gentrifying	
Transportation	% of workers taking transit	8.7%	25.9%	***
	% of dwelling units with three or more cars available	22.3%	8.3%	***
Amenities	Recreational facilities per 1,000 residents	0.006	0.004	
	Youth facilities per 1,000 residents	0.010	0.032	***
	Public space per 1,000 residents	0.025	0.055	***
	Small parks per 1,000 residents	0.189	0.300	***
Demographic	% non-family households	31.7%	44.0%	***
	% non-Hispanic white	63.1%	28.9%	***
	% married couples w/ children	28.5%	16.7%	***
Housing	% of dwelling units in buildings with 5+ units	20.4%	37.7%	***
	% of dwelling units in buildings with 3-4 units	5.9%	12.0%	***
	% renter-occupied	38.3%	63.7%	***
	Median gross rent	$742	$516	***
	Public housing units	57	146	***
Income	Income diversity	0.73	0.74	
	% of renters paying > 35% of income	31.6%	38.6%	***
	% of owners paying > 35% of income	21.7%	21.2%	
Location	Distance to San Jose (miles)	0.566	0.784	***
	Distance to San Francisco (miles)	0.399	0.176	***

Table 3-3:
Transit-accessible census tracts that gentrified from 1990-2000.

County	Tract	Neighborhood/City	System
Alameda	4004	Fairview Park (Oakland)	BART
Alameda	4005	Santa Fe (Oakland)	BART
Alameda	4008	Bushrod (Oakland)	Amtrak
Alameda	4009	Gaskill/ Golden Gate (Oakland)	Amtrak
Alameda	4011	Temescal (Oakland)	BART
Alameda	4012	Temescal (Oakland)	BART
Alameda	4014	Hoover-Foster (Oakland)	BART
Alameda	4018	Prescott (Oakland)	BART
Alameda	4019	South Prescott (Oakland)	BART
Alameda	4022	Prescott (Oakland)	BART
Alameda	4023	Oak Center/ Ralph Bunche (Oakland)	BART
Alameda	4025	Acorn (Oakland)	BART
Alameda	4026	Acorn (Oakland)	BART
Alameda	4027	Oak Center/ Ralph Bunche (Oakland)	BART
Alameda	4028	San Pablo Gateway (Oakland)	BART
Alameda	4029	Downtown Oakland	BART
Alameda	4032	Produce and Waterfront (Oakland)	Amtrak, BART, Ferry
Alameda	4033	Chinatown/ Civic Center (Oakland)	Amtrak, BART
Alameda	4053	Merritt (Oakland)	BART
Alameda	4061	Fruitvale/ Kennedy (Oakland)	BART
Alameda	4222	West Berkeley	BART
Alameda	4223	West Berkeley	BART
Alameda	4231	West Berkeley	BART
Alameda	4232	West Berkeley	Amtrak
Alameda	4240.01	South Berkeley	BART
Alameda	4274	Alameda Gate Ferry	Amtrak, Ferry
Alameda	4323	North San Leandro	BART
Alameda	4332	Floresta Gardens (San Leandro)	BART
San Francisco	111	Nob Hill (SF)	Cable Car
San Francisco	112	Nob Hill (SF)	Cable Car
San Francisco	113	Nob Hill (SF)	Cable Car, MUNI Metro,
San Francisco	115	Financial District (SF)	BART, Cable Car, Ferry, MUNI Metro, Street Car
San Francisco	118	Chinatown (San Francisco)	BART, Cable Car, MUNI Metro, Street Car

San Francisco	120	Union Square (SF)	Cable Car
San Francisco	121	Nob Hill (SF)	BART, Cable Car, MUNI Metro, Street Car
San Francisco	123	Downtown (SF)	BART, Cable Car, MUNI Metro, Street Car
San Francisco	124	Tenderloin (SF)	BART, Cable Car, MUNI Metro, Street Car
San Francisco	125	Tenderloin (SF)	BART, Cable Car, MUNI Metro, Street Car
San Francisco	164	Alamo Square (SF)	MUNI Metro
San Francisco	167	Duboce Park (SF)	MUNI Metro, Street Car
San Francisco	168	Hayes Valley (SF)	BART, MUNI Metro, Street Car
San Francisco	169	Duboce Triangle (SF)	MUNI Metro, Street Car
San Francisco	176.01	SoMa (SF)	BART, Cable Car, MUNI Metro, Street Car
San Francisco	177	Inner Mission/SoMa (SF)	BART, MUNI Metro, Street Car
San Francisco	178	SoMa (SF)	BART, Cable Car, MUNI Metro, Street Car
San Francisco	180	SoMa (SF)	CalTrain, Ferry, MUNI Metro
San Francisco	201	Inner Mission (SF)	BART, MUNI Metro, Street Car
San Francisco	207	Inner Mission (SF)	BART, MUNI Metro, Street Car
San Francisco	208	Inner Mission (SF)	BART, MUNI Metro
San Francisco	209	Outer Mission (SF)	BART
San Francisco	210	Outer Mission (SF)	BART
San Francisco	228.01	Inner Mission (SF)	BART
San Francisco	228.03	Inner Mission (SF)	BART
San Francisco	229.01	Outer Mission (SF)	BART
San Francisco	229.02	Outer Mission (SF)	BART
San Francisco	232	Bayview (SF)	CalTrain
San Francisco	233	Bayview (SF)	CalTrain
San Francisco	234	Bayview (SF)	CalTrain
San Francisco	254.01	Bernal Heights (SF)	MUNI Metro
San Francisco	254.03	Bernal Heights (SF)	BART, MUNI Metro
San Francisco	257	Portola (SF)	CalTrain
San Francisco	258	Portola/ Visitacion Valley (SF)	CalTrain
San Francisco	264.01	Visitacion Valley (SF)	CalTrain
San Francisco	264.02	Visitacion Valley (SF)	CalTrain
San Francisco	264.03	Visitacion Valley (SF)	CalTrain
San Francisco	302.02	Inner Sunset (SF)	MUNI Metro
San Francisco	603	Golden Gate Park (SF)	MUNI Metro
Santa Clara	5001	Hyde Park/ Jackson-Taylor/ East Northside (San Jose)	VTA
Santa Clara	5002	Ryland (San Jose)	VTA

Santa Clara	5003	St. Leo's/ Autumn-Montgomery (San Jose)	ACE, Amtrak, CalTrain, VTA
Santa Clara	5008	Lakehouse/ Park-Lorraine/ Auzerais-Josefa (San Jose)	ACE, Amtrak, CalTrain, VTA
Santa Clara	5009.01	North Campus/ South Campus/ Paseo (San Jose)	VTA
Santa Clara	5010	Horace Mann/ Hensley/ West Northside (San Jose)	VTA
Santa Clara	5011	Hensley/ West Northside/ Jackson-Taylor (San Jose)	VTA
Santa Clara	5017	Washington-Guadalupe/ Market-Almaden (San Jose)	VTA
Santa Clara	5046.02	Alviso (San Jose)/ North Sunnyvale/ North Mountain View	VTA
Santa Clara	5051	Rosemary Gardens (San Jose)	ACE, CalTrain, VTA

4. Vehicle Emissions Density

Review of T-2035 Equity Analysis Results

- T-2035 measured density of mobile-source air toxics emissions (diesel particulates, benzene, butadiene) most associated with health hazards due to localized exposure.
- As with H+T measure, communities of concern are relatively burdened relative to non-communities of concern.
- Both the T-2035 Plan and the Land Use Alternative reduced burden on communities of concern relative to the forecast year
- There was a greater absolute reduction for communities of concern (# change) compared to remainder of region than relative difference – percentage reduction was very similar between communities of concern and remainder of region.
- Land Use Alternative performed worse than Project (which did not include additional land use strategies), but both were still an improvement over base year due to changes in technology, fleet composition, etc.
- Communities of concern relates to definitions used in the T-2035 Equity Analysis, which was for communities at either 70% minority OR 30% low-income.
- Source for all data is T-2035 Equity Analysis Report.

Table 4-1:
Mobile Source Air Toxics Emissions Density by T-2035 Alternative by Community Type

Mobile Source Air Toxics Emissions Density
Diesel Particulates, Benzene, and Butadiene: Kg per average weekday per square mile

	2006	No Project	Project	Pricing	Land Use
Communities of Concern	5.92	1.29	1.26	1.24	1.29
Remainder of Bay Area	2.26	0.48	0.46	0.47	0.47
Total Region	2.94	0.64	0.61	0.61	0.63

Source: MTC estimates

Figure 4-1:
Comparison of T-2035 Alternatives:
Absolute Change in Emissions Density By Community Type

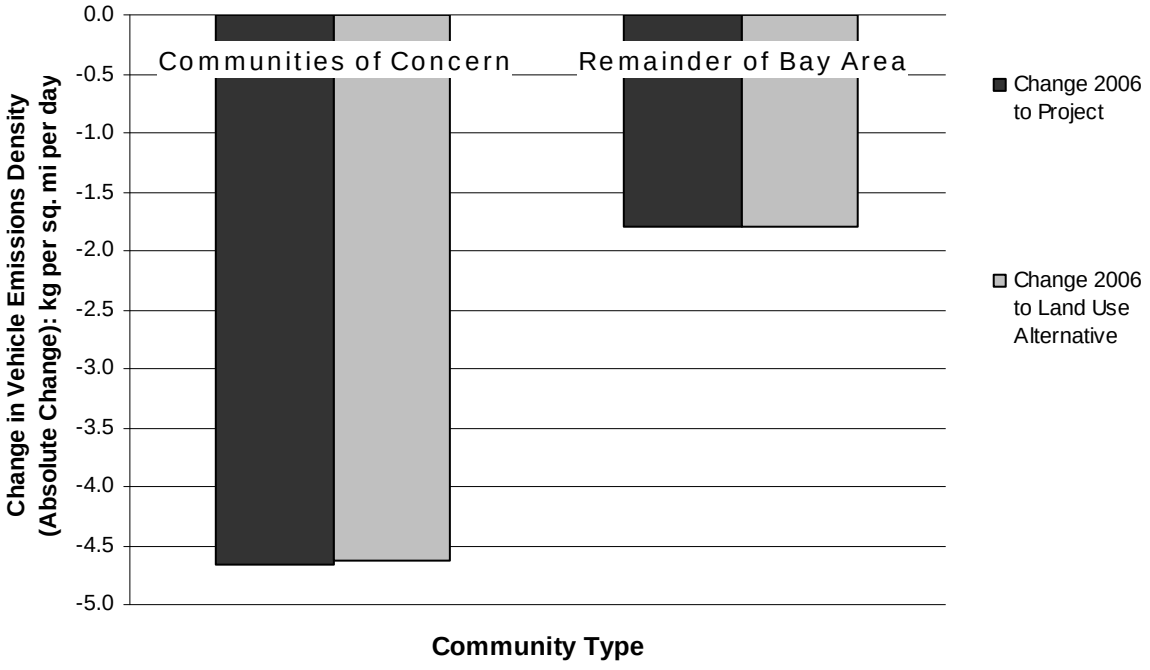
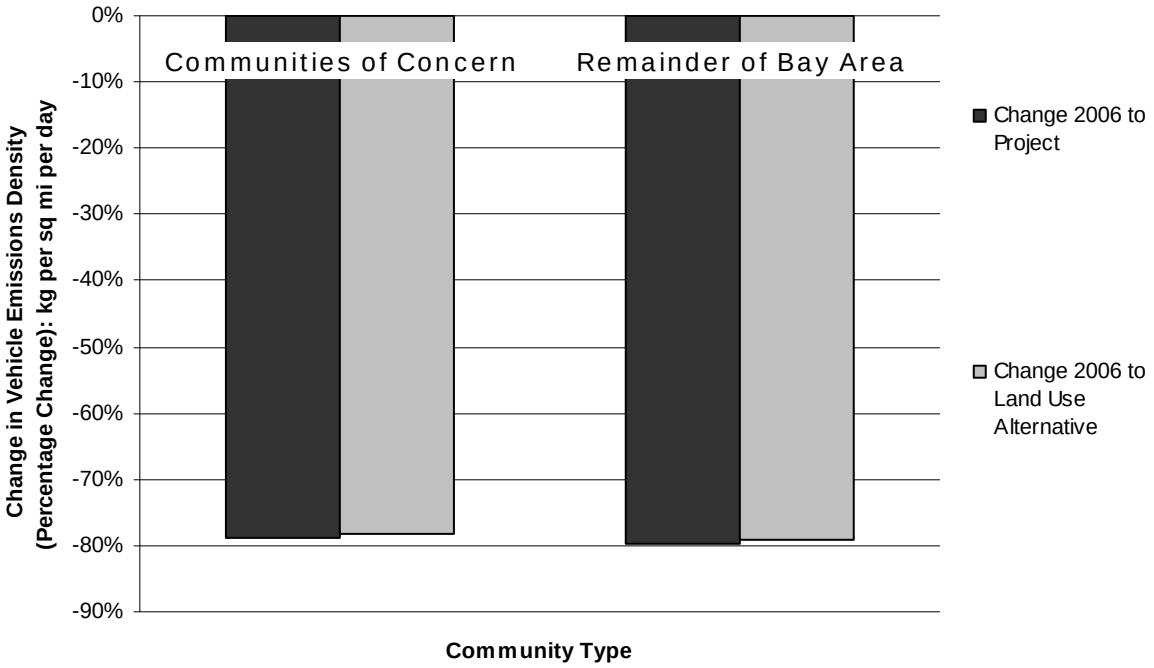


Figure 4-2:
Comparison of T-2035 Alternatives:
Relative Change in Emissions Density By Community Type



5. Travel Time

Review of Plan Bay Area Initial Vision Scenario Analysis Results: Commute and Non-Commute Travel Time

- Low-income households generally have shorter travel times relative to non-low-income households for both commute and non-commute trips (Tables 5-1 and 5-2).
- Non-commute trips are shorter than commute trips for all income groups (Tables 5-1 and 5-2) (but are more numerous).
- Under both the "Current Regional Plans" and Initial Vision Scenarios, everyone's travel time increases relative to the base year (Figures 5-1 through 5-4).
- Low-income travelers' travel times increase slightly more than higher-income travelers', but commute trips are still shorter than high-income travelers' overall.
- Though not an equity performance measure, trips by mode by income group are also provided for informational purposes (Table 5-3).

Table 5-1:
Commute Travel Time:
Average Travel Time per Work or School Trip by Income Group

	Base Year	Current Regional Plans	Initial Vision Scenario
Low Income	19.1	20.0	20.5
Not Low Income	20.4	21.0	21.6

Table 5-2:
Non-commute Travel Time:
Average Travel Time per non-Work or School Trip by Income Group

	Base Year	Current Regional Plans	Initial Vision Scenario
Low Income	12.6	13.0	13.2
Not Low Income	12.8	13.0	13.2

Table 5-3:
Average Travel Time per Trip by Mode and Income Group

		Base Year	Current Regional Plans	Initial Vision Scenario	2005 to CRP		2005 to IVS	
					#	%	#	%
Auto	Low Income	12.0	11.9	11.8	-0.1	-1%	-0.2	-2%
	Not Low Income	14.6	14.3	14.4	-0.3	-2%	-0.2	-1%
Non-motorized	Low Income	17.9	17.9	17.9	0.0	0%	0.0	0%
	Not Low Income	17.9	17.9	17.8	0.0	0%	-0.1	0%
Transit	Low Income	40.5	40.3	40.2	-0.3	-1%	-0.4	-1%
	Not Low Income	42.4	44.4	44.6	2.0	5%	2.2	5%

Figure 5-1:
Absolute Change in Commute Travel Time:
Average Travel Time per Work or School Trip by Income Group

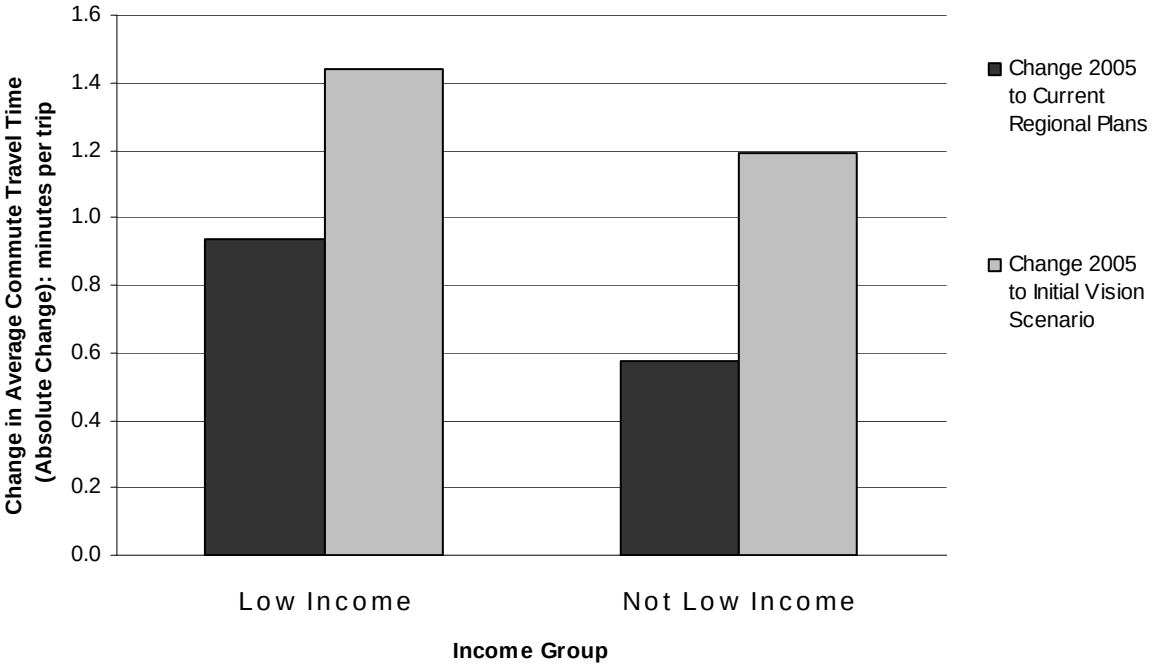


Figure 5-2:
Relative Change in Commute Travel Time:
Average Travel Time per Work or School Trip by Income Group

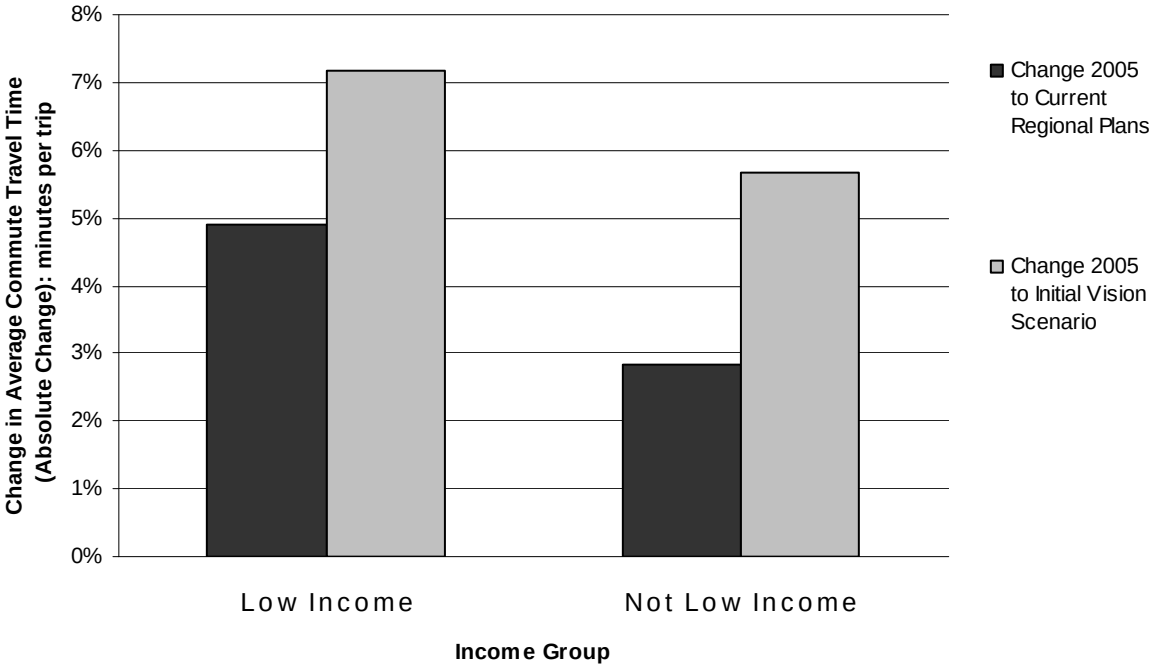


Figure 5-3:

Absolute Change in Non-Commute Travel Time:
Average Travel Time per Non-Work or School Trip by Income Group

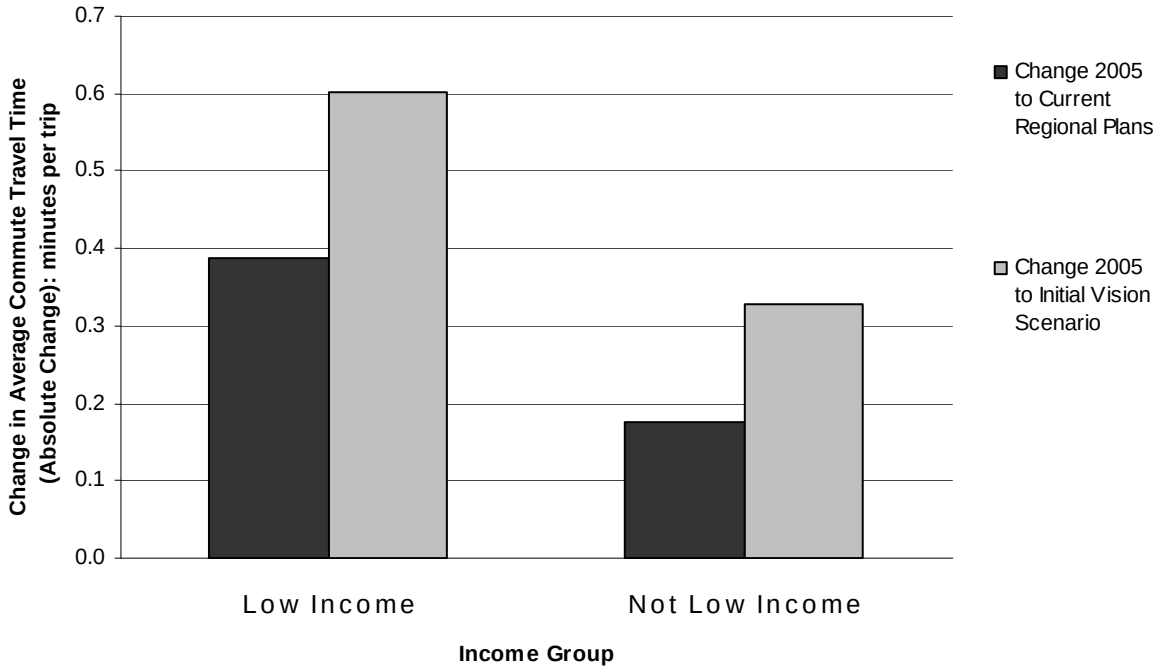
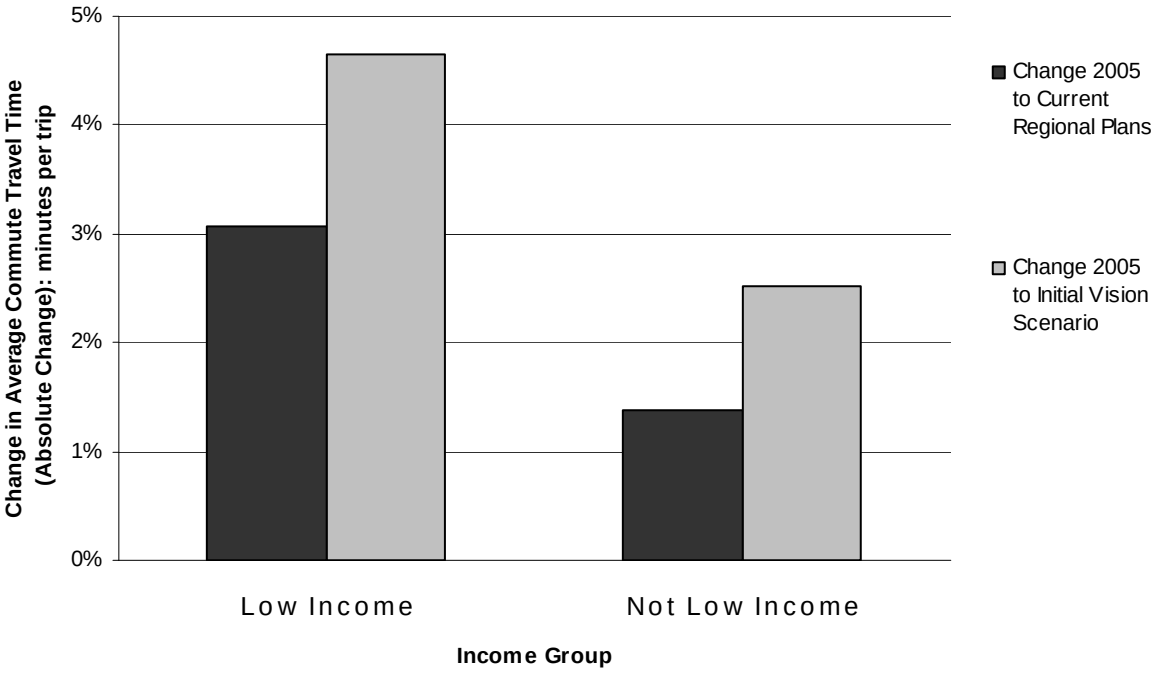



Figure 5-4:
Relative Change in Non-Commute Travel Time:
Average Travel Time per Non-Work or School Trip by Income Group