

Appendix E  
**Alternatives Data**

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Table E-1: Performance Measures for Alternatives Considered in Detail in this SER

	Base Year 2016	Proposed Amendment				Alternative 1			Alternative 2			Alternative 3			Alternative 4			Alternative 5						
		Plan Network Horizon Years				No Project (The Approved Plan)			2019 Transportation Network with New Value Pricing and User Fee Policies			All Growth in Mobility Hubs and More Progressive Value Pricing and User Fee Policies			Progressive Pricing & No Regional RUC			All Growth in Mobility Hubs, Progressive Pricing, & No Regional RUC						
		2025	2035	2050	2050	2025	2035	2050	2025	2035	2050	2025	2035	2050	2025	2035	2050	2025	2035	2050				
Total Households	1241147	1345519	1455207	1502460	1345519	1455207	1502460	1345519	1455207	1502460	1345519	1455207	1502460	1345519	1455207	1502460	1345519	1455207	1502460	1345519	1455207	1502460		
Total Households within Mobility Hubs	561198	654290	761656	804165	561198	654290	761656	561198	654290	761656	561198	654290	761656	561198	654290	761656	561198	654290	761656	561198	654290	761656		
% Households within Mobility Hubs	45%	49%	52%	53%	49%	49%	50%	49%	49%	50%	49%	49%	50%	49%	49%	50%	49%	49%	50%	49%	49%	50%		
Total Population	3309509	3470849	3620349	3746077	3470849	3620349	3746077	3470849	3620349	3746077	3470849	3620349	3746077	3470849	3620349	3746077	3470849	3620349	3746077	3470849	3620349	3746077		
Total Population within Mobility Hubs	1453913	1658456	1875802	1988731	1453913	1658456	1875802	1453913	1658456	1875802	1453913	1658456	1875802	1453913	1658456	1875802	1453913	1658456	1875802	1453913	1658456	1875802		
% Population within Mobility Hubs	44%	48%	52%	53%	49%	49%	50%	49%	49%	50%	49%	49%	50%	49%	49%	50%	49%	49%	50%	49%	49%	50%		
Total Employment	1646419	1762701	1922412	2087208	1646419	1762701	1922412	1646419	1762701	1922412	1646419	1762701	1922412	1646419	1762701	1922412	1646419	1762701	1922412	1646419	1762701	1922412		
Total Employment within Mobility Hubs	1113785	1212961	1346465	1484616	1113785	1212961	1346465	1113785	1212961	1346465	1113785	1212961	1346465	1113785	1212961	1346465	1113785	1212961	1346465	1113785	1212961	1346465		
% Employment within Mobility Hubs	68%	69%	70%	71%	69%	70%	71%	68%	68%	69%	69%	70%	71%	69%	70%	71%	69%	70%	71%	69%	70%	71%		
<b>SM-1 Mode share</b>																								
Work Trips (peak period)	Bike & walk	3.4%	5.6%	6.4%	8.1%	5.6%	6.5%	8.2%	3.9%	4.5%	5.0%	6.1%	6.7%	8.3%	6.4%	6.8%	8.6%	6.5%	6.8%	8.7%	6.5%	6.8%	8.7%	
	Carpool	13.4%	15.8%	16.1%	15.8%	15.8%	15.0%	16.0%	12.9%	12.4%	12.4%	12.9%	16.0%	16.8%	18.0%	18.0%	18.3%	18.3%	17.1%	18.1%	18.3%	17.1%	18.1%	
	Drive alone	79.5%	72.2%	66.9%	62.7%	72.2%	66.6%	62.4%	78.1%	76.6%	75.3%	69.8%	62.0%	57.3%	68.0%	60.4%	54.9%	67.6%	60.3%	54.6%	67.6%	60.3%	54.6%	
	Other (TNC, MicroMobility, Taxi, School bus)	0.3%	0.5%	0.5%	0.6%	0.5%	0.5%	0.6%	0.3%	0.4%	0.4%	0.5%	0.6%	0.7%	0.6%	0.6%	0.7%	0.6%	0.6%	0.8%	0.6%	0.6%	0.8%	
	Transit	3.4%	5.9%	11.1%	12.5%	5.9%	11.3%	12.8%	4.7%	6.1%	7.0%	6.4%	14.8%	16.8%	7.0%	15.2%	17.7%	7.0%	15.2%	17.8%	7.0%	15.2%	17.8%	
	Bike & walk	3.7%	6.0%	6.9%	8.6%	6.0%	7.0%	8.7%	4.3%	4.9%	5.3%	6.6%	7.1%	8.8%	6.9%	7.3%	9.2%	7.0%	7.3%	9.3%	7.0%	7.3%	9.3%	
	Carpool	13.0%	15.4%	14.7%	15.7%	15.4%	14.6%	15.6%	12.5%	12.0%	11.9%	16.7%	15.5%	16.5%	17.5%	16.4%	17.6%	17.8%	16.6%	17.8%	17.8%	16.6%	17.8%	
	Drive alone	79.6%	72.2%	66.8%	62.5%	72.2%	66.4%	62.1%	78.2%	76.7%	75.4%	69.7%	61.7%	56.9%	67.9%	60.2%	54.6%	67.6%	60.1%	54.2%	67.6%	60.1%	54.2%	
	Other (TNC, MicroMobility, Taxi, School bus)	0.3%	0.5%	0.5%	0.6%	0.5%	0.5%	0.6%	0.3%	0.4%	0.4%	0.6%	0.7%	0.7%	0.6%	0.6%	0.8%	0.6%	0.6%	0.8%	0.6%	0.6%	0.8%	
	Transit	3.4%	5.9%	11.1%	12.6%	5.9%	11.4%	12.9%	4.7%	6.1%	7.0%	6.5%	15.0%	17.0%	7.0%	15.4%	17.9%	7.0%	15.3%	17.9%	7.0%	15.3%	17.9%	
Work Trips (all day)	Bike & walk	7.8%	9.8%	11.7%	13.4%	9.8%	11.8%	13.5%	8.9%	10.0%	10.5%	10.2%	12.0%	14.0%	10.5%	12.4%	14.4%	10.5%	12.2%	14.5%	10.5%	12.2%	14.5%	
	Carpool	44.2%	43.5%	40.6%	40.5%	43.5%	40.5%	42.3%	39.8%	39.2%	39.2%	44.1%	40.9%	40.5%	44.4%	41.2%	40.9%	44.6%	41.4%	40.9%	44.6%	41.4%	40.9%	
	Drive alone	44.7%	42.2%	41.1%	38.9%	42.2%	40.9%	38.9%	44.9%	45.8%	45.5%	41.0%	38.9%	36.5%	40.2%	38.0%	35.3%	40.0%	38.0%	35.2%	40.0%	38.0%	35.2%	
	Other (TNC, MicroMobility, Taxi, School bus)	1.7%	2.1%	2.1%	2.2%	2.1%	2.1%	2.3%	1.8%	1.7%	1.7%	2.1%	2.2%	2.4%	2.2%	2.2%	2.5%	2.2%	2.2%	2.5%	2.2%	2.2%	2.5%	
	Transit	1.6%	2.4%	4.5%	5.0%	2.4%	4.7%	5.1%	2.1%	2.7%	3.0%	2.6%	6.1%	6.7%	2.8%	6.2%	6.9%	2.8%	6.1%	6.9%	2.8%	6.1%	6.9%	
	<b>SM-2 Number/percent of people within 0.5 miles of a commuter rail, light rail, or next gen Rapid (Tier 1/Tier 2/Tier 3) transit stop</b>																							
	Commuter Rail (Tier 1)	Number	15,196	29,601	119,876	262,471	29,601	119,876	262,471	22,736	43,377	45,734	33,125	113,330	260,018	29,601	119,876	262,471	33,125	113,330	260,018	29,601	119,876	260,018
		Percent	0.5%	0.9%	3.4%	7.1%	0.9%	3.4%	7.1%	0.7%	1.2%	1.2%	1.0%	3.2%	7.0%	0.9%	3.4%	7.1%	1.0%	3.2%	7.0%	0.9%	3.4%	7.0%
	Light Rail (Tier 2)	Number	141,814	232,122	322,632	463,122	232,122	322,632	463,122	261,700	460,289	638,737	226,859	310,533	464,347	232,122	322,632	463,122	226,859	310,533	464,347	232,122	322,632	463,122
		Percent	4.3%	6.8%	9.0%	12.5%	6.8%	9.0%	12.5%	7.6%	12.9%	17.3%	6.0%	8.7%	12.6%	6.8%	9.0%	12.5%	6.6%	8.7%	12.6%	6.8%	9.0%	12.6%
Next Gen Rapid (Tier 3)	Number	187,571	486,067	1,089,142	1,199,095	486,067	1,089,142	1,199,095	517,300	819,933	1,051,562	483,719	1,078,822	1,209,232	486,067	1,089,142	1,199,095	483,719	1,078,822	1,209,232	486,067	1,089,142	1,199,095	
	Percent	5.7%	14.2%	30.5%	32.4%	14.2%	30.5%	32.4%	15.1%	22.9%	28.4%	14.1%	30.2%	32.7%	14.2%	30.5%	32.4%	14.1%	30.2%	32.7%	14.2%	30.5%	32.7%	
access to any of the tiers (1-3)	Number	297,954	602,446	1,173,585	1,293,654	602,446	1,173,585	1,293,654	639,284	946,384	1,193,168	592,613	1,161,098	1,308,740	602,446	1,173,585	1,293,654	592,613	1,161,098	1,308,740	602,446	1,173,585	1,293,654	
	Percent	9.1%	17.6%	32.8%	35.0%	17.6%	32.8%	35.0%	18.7%	26.5%	32.3%	17.3%	32.5%	35.4%	17.6%	32.8%	35.0%	17.3%	32.5%	35.4%	17.6%	32.8%	35.4%	
<b>SM-3 Number/percent of jobs within 0.5 miles of a commuter rail, light rail, or next gen Rapid (Tier 1/Tier 2/Tier 3) transit stop</b>																								
Commuter Rail (Tier 1)	Number	34,972	57,816	135,518	232,588	57,816	135,518	232,588	38,696	74,643	78,683	55,314	129,811	227,974	57,816	135,518	232,588	55,314	129,811	227,974	57,816	135,518	232,588	
	Percent	2.1%	3.3%	7.1%	11.1%	3.3%	7.1%	11.1%	2.2%	3.9%	3.8%	3.1%	10.9%	10.9%	3.3%	7.1%	11.1%	3.1%	10.9%	10.9%	3.3%	7.1%	11.1%	
Light Rail (Tier 2)	Number	199,041	247,376	289,270	370,838	247,376	289,270	370,838	273,170	378,472	506,613	247,397	291,287	379,723	247,376	289,270	370,838	247,397	291,287	379,723	247,376	289,270	370,838	
	Percent	12.1%	14.0%	15.0%	17.8%	14.0%	15.0%	17.8%	15.3%	19.6%	24.2%	14.0%	15.2%	18.2%	14.0%	15.0%	17.8%	14.0%	15.2%	18.2%	14.0%	15.0%	17.8%	
Next Gen Rapid (Tier 3)	Number	213,610	391,999	814,628	923,202	391,999	814,628	923,202	415,312	642,914	852,370	389,834	815,746	928,996	391,999	814,628	923,202	389,834	815,746	928,996	391,999	814,628	923,202	
	Percent	13.0%	22.2%	42.4%	44.2%	22.2%	42.4%	44.2%	23.2%	33.2%	40.7%	22.1%	42.5%	44.5%	22.2%	42.4%	44.2%	22.1%	42.5%	44.5%	22.2%	42.4%	44.5%	
access to any of the tiers (1-3)	Number	358,797	520,228	887,095	1,007,181	520,228	887,095	1,007,181	547,523	755,429	969,397	518,650	887,476	1,011,774	520,228	887,095	1,007,181	518,650	887,476	1,011,774	520,228	887,095	1,007,181	
	Percent	21.8%	29.5%	46.1%	48.3%	29.5%	46.1%	48.3%	30.6%	39.0%	46.3%	29.4%	46.2%	48.5%	29.5%	46.1%	48.3%	29.4%	46.2%	48.5%	29.5%	46.1%	48.3%	
<b>SM-4 Number/percent of people within 0.25 miles of a bike facility (class I and II, cycletrack or bike boulevard)</b>																								
	Number	2,119,378	2,511,682	2,747,020	3,015,415	2,511,682	2,747,020	3,015,415	2,253,982	2,468,292	2,607,657	2,510,699	2,737,649	3,017,279	2,511,682	2,747,020	3,015,415	2,510,699	2,737,649	3,017,279	2,511,682	2,747,020	3,017,279	
	Percent	64.9%	73.4%	76.9%	81.5%	73.4%	76.9%	81.5%	65.8%	69.1%	70.5%	73.3%	76.6%	81.6%	73.4%	76.9%	81.5%	73.3%	76.6%	81.6%	73.4%	76.9%	81.6%	
<b>SM-5 Daily transit boardings</b>																								
Region	Commuter Rail (Tier 1)	3,818	8,893	58,220	191,708	8,893	59,906	196,793	8,372	10,167	9,898	9,941	95,068	302,517	10,465	100,041	315,848	10,836	98,356	314,175	10,465	100,041	315,848	

Table E-2: SB 375 GHG Reductions for Alternatives Considered in Detail in this SEIR

	Proposed Amendment		Alternative 1- No Build		Alternative 2		Alternative 3		Alternative 4		Alternative 5	
	2035	2050	2035	2050	2035	2050	2035	2050	2035	2050	2035	2050
<b>Database</b>												
Population	3,620,349	3,746,077	3,620,349	3,746,077	3,620,349	3,746,077	3,620,349	3,746,077	3,620,349	3,746,077	3,620,349	3,746,077
SB 375 VMT	81,418,476	83,534,235	80,166,669	82,425,843	86,984,709	91,449,541	77,789,947	79,762,537	78,582,233	80,296,989	78,697,179	80,101,780
SB 375 VMT / Person	22.5	22.3	22.1	22.0	24.0	24.4	21.5	21.3	21.7	21.4	21.7	21.4
External to External VMT	983,813	1,097,144	983,292	1,095,697	981,395	1,097,946	982,383	1,094,889	983,974	1,093,346	984,095	1,093,078
External to External VMT Reduction	1.2%	1.3%	1.2%	1.3%	1.1%	1.2%	1.3%	1.4%	1.3%	1.4%	1.3%	1.4%
SB 375 Emissions (tons)	39,235	40,144	38,691	39,643	42,619	44,886	37,506	38,323	37,754	38,343	37,813	38,254
SB 375 Emissions without E-E VMT / Person (lbs)	21.41	21.15	21.11	20.88	23.28	23.68	20.46	20.18	20.60	20.19	20.63	20.15
Per Capita Reduction for 2005	17.6%	18.6%	18.8%	19.7%	10.5%	8.9%	21.3%	22.4%	20.8%	22.3%	20.7%	22.5%
<b>Off-Model Calculators VMT Reduction</b>												
Vanpool	339,251	382,471	339,415	380,166	329,954	369,014	337,903	380,044	356,033	423,362	357,846	420,847
Carshare	178,275	N/A	178,275	N/A	168,523	N/A	176,272	N/A	178,275	N/A	176,272	N/A
Carpool	12,056	11,861	11,750	11,615	13,844	14,521	10,977	10,771	11,049	10,727	11,030	10,675
TDM Ordinance	377,634	598,800	371,436	589,125	436,804	720,561	337,631	530,182	331,427	508,212	330,743	499,834
<b>Total VMT reduction</b>	907,216	993,132	900,876	980,906	949,125	1,104,096	862,783	920,997	876,784	942,301	875,891	931,356
SB 375 VMT / Person Reduction	0.25	0.27	0.25	0.26	0.26	0.29	0.24	0.25	0.24	0.25	0.24	0.25
<b>Off-Model Calculators - Daily Total GHG Reduction (tons)</b>												
Vanpool	157.7	176.8	158.0	175.9	156.0	174.4	157.1	175.6	165.0	194.4	165.8	193.3
Carshare	82.5	N/A	N/A	82.6	79.3	N/A	81.6	N/A	82.2	N/A	81.3	N/A
Carpool	5.8	5.7	5.6	5.5	6.7	7.1	5.3	5.1	5.3	5.1	5.3	5.1
TDM Ordinance	179.1	282.4	176.5	278.1	206.5	340.8	160.3	250.1	156.7	238.1	156.4	234.3
EV Charging Program	1003.0	826.0	1006.1	832.3	1000.0	777.0	1028.0	846.0	1021.0	844.0	1020.0	845.0
SB 375 Emissions Total Reduction (tons)	1428.0	1290.8	1346.2	1374.5	1448.5	1299.3	1432.2	1276.8	1430.2	1281.6	1428.8	1277.6
SB 375 Emissions Reduction/ Person (lbs)	0.79	0.69	0.74	0.73	0.80	0.69	0.79	0.68	0.79	0.68	0.79	0.68
Off-Model GHG Reduction per capita	3.03%	2.65%	2.86%	2.82%	3.08%	2.67%	3.04%	2.62%	3.04%	2.63%	3.04%	2.62%
Per Capita Reduction for 2005 with Off-Model Calc	<b>20.7%</b>	<b>21.3%</b>	<b>21.7%</b>	<b>22.5%</b>	<b>13.5%</b>	<b>11.6%</b>	<b>24.4%</b>	<b>25.0%</b>	<b>23.8%</b>	<b>25.0%</b>	<b>23.7%</b>	<b>25.1%</b>
ARB Adjustment for EMFAC 2007 - 2014	-1.7%	-1.6%	-1.7%	-1.6%	-1.7%	-1.6%	-1.7%	-1.6%	-1.7%	-1.6%	-1.7%	-1.6%
<b>Final Per Capita Reduction for 2005</b>	<b>19.0%</b>	<b>19.7%</b>	<b>20.0%</b>	<b>20.9%</b>	<b>11.8%</b>	<b>10.0%</b>	<b>22.7%</b>	<b>23.4%</b>	<b>22.1%</b>	<b>23.4%</b>	<b>22.0%</b>	<b>23.5%</b>

Note: \*The "Per Capita Reduction of 2005" does not include induced demand.

Table E-3: EMFAC 2017 Onroad Output Summary for Alternatives Considered in Detail in this SEIR

Scenario	Annual CO2 Total	Annual PM 2.5 Total	Annual PM 10 Total	Annual Gasoline	Annual Diesel	Summer ROG Total	Summer NOx Total	Winter CO Total
	Tons/Day	Tons/Day	Tons/Day	Thousands Gallons/Day	Thousands Gallons/Day	Tons/Day	Tons/Day	Tons/Day
2016	38,515.84	2.42	5.14	3,656.17	411.28	22.18	37.41	185.24
Proposed Amendment-2025	30,265.79	2.03	4.8	2,754.51	422.88	11.96	15.53	98.99
Proposed Amendment-2035	25,465.18	2.02	4.88	2,239.68	429.36	8.19	11.92	82.65
Proposed Amendment-2050	24,813.66	2.08	5.04	2,155.65	441.58	6.64	11.84	79.07
Alternative 1 No Build-2025	30,265.79	2.03	4.8	2,754.51	422.88	11.96	15.53	98.99
Alternative 1 No Build-2035	25,181.43	2	4.81	2,209.05	429.58	8.08	11.88	81.67
Alternative 1 No Build-2050	24,578.33	2.05	4.99	2,129.29	442.60	6.56	11.82	78.28
Alternative 2-2025	31,152.00	2.08	4.91	2,847.42	424.10	12.34	15.8	101.6
Alternative 2-2035	27,206.95	2.15	5.18	2,415.97	436.49	8.81	12.46	86.49
Alternative 2-2050	27,113.08	2.25	5.46	2,385.10	455.32	7.33	12.47	85.12
Alternative 3-2025	29,943.81	2.01	4.75	2,720.61	422.36	11.81	15.45	97.77
Alternative 3-2035	24,571.96	1.95	4.69	2,145.47	428.14	7.84	11.74	79.57
Alternative 3-2050	23,953.74	2	4.86	2,063.01	442.09	6.35	11.71	76.16
Alternative 4-2025	29,728.65	2	4.71	2,696.80	422.99	11.7	15.41	96.95
Alternative 4-2035	24,720.64	1.96	4.73	2,160.43	429.00	7.9	11.82	80.32
Alternative 4-2050	23,951.78	2.01	4.88	2,065.82	439.58	6.37	11.72	76.67
Alternative 5-2025	29,661.70	1.99	4.7	2,690.96	421.88	11.68	15.37	96.76
Alternative 5-2035	24,726.12	1.96	4.74	2,163.50	426.86	7.91	11.76	80.38
Alternative 5-2050	23,900.86	2	4.87	2,061.37	438.72	6.36	11.69	76.5