Cost Data Entry Page

				Fiscal Year																																	
Program Element	Total Cost of Element	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
1: White Oak Bayou Path: Alabonson Rd/Antoine Dr Link	$976,240		$488,120	$488,120																															
2: White Oak Bayou Path: 11th Street/Heights Bike Trail/Stude Park Links	$6,649,010		$3,324,505	$3,324,505																															
3: White Oak Bayou Path: Connections to Residential Neighborhoods & Buffalo Bayou Path	$2,818,024		$1,409,012	$1,409,012																															
4: Buffalo Bayou Path: Smith St/Travis St Link	$5,116,238		$2,558,119	$2,558,119																															
5: East Downtown: Transit/Residential/ Commercial Connections	$10,932,034		$5,466,017	$5,466,017																															
6: Brays Bayou Path: Ardmore Rd/Old Spanish Trail Link	$3,398,335		$1,699,168	$1,699,168																															
O&M - Annual →	$502,471				$502,471	$512,521	$522,771	$533,226	$543,891	$554,769	$565,864	$577,181	$588,725	$600,500	$612,510	$624,760	$637,255	$650,000	$663,000	$676,260	$689,785	$703,581	$717,653	$732,006	$746,646	$761,579	$776,810	$792,346	$808,193	$824,357	$840,844	$857,661
Program Total Costs By Year		$0	$14,944,941	$14,944,941	$502,471	$512,521	$522,771	$533,226	$543,891	$554,769	$565,864	$577,181	$588,725	$600,500	$612,510	$624,760	$637,255	$650,000	$663,000	$676,260	$689,785	$703,581	$717,653	$732,006	$746,646	$761,579	$776,810	$792,346	$808,193	$824,357	$840,844	$857,661
Capital Cost - For Tie		$0	$14,944,941	$14,944,941																															
O& M Cost for TIE					$502,471	$512,521	$522,771	$533,226	$543,891	$554,769	$565,864	$577,181	$588,725	$600,500	$612,510	$624,760	$637,255	$650,000	$663,000	$676,260	$689,785	$703,581	$717,653	$732,006	$746,646	$761,579	$776,810	$792,346	$808,193	$824,357	$840,844	$857,661
Program Grand Total Cost	$48,507,045																																		
Inflation	2%																																		

Cost Breakdown 7% Discount Rate																																										
	Fiscal Year																																										
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Undiscounted Flows																																										
Capital Cost	$0	$14,944,941	$14,944,941	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0											
O&M Cost	$0	$0	$0	$502,471	$512,521	$522,771	$533,226	$543,891	$554,769	$565,864	$577,181	$588,725	$600,500	$612,510	$624,760	$637,255	$650,000	$663,000	$676,260	$689,785	$703,581	$717,653	$732,006	$746,646	$761,579	$776,810	$792,346	$808,193	$824,357	$840,844	$857,661											
Discount Factors																																										
Discount Rate	7.0%																																									
Base Year	2011																																									
Year Index	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30											
Discount Factor	1.0000	0.9346	0.8734	0.8163	0.7629	0.7130	0.6663	0.6227	0.5820	0.5439	0.5083	0.4751	0.4440	0.4150	0.3878	0.3624	0.3387	0.3166	0.2959	0.2765	0.2584	0.2415	0.2257	0.2109	0.1971	0.1842	0.1722	0.1609	0.1504	0.1406	0.1314										
Discounted Flows																																									
Costs	$0	$13,967,234	$13,053,490	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0											
Benefits	$0	$0	$0	$410,166	$390,999	$372,728	$355,311	$338,708	$322,880	$307,793	$293,410	$279,699	$266,629	$254,170	$242,293	$230,971	$220,177	$209,889	$200,081	$190,731	$181,819	$173,322	$165,223	$157,503	$150,143	$143,127	$136,438	$130,063	$123,985	$118,191	$112,668											
	NPV	NPV Summed																																								
Capital Cost - NPV	$27,020,724	-$27,020,724																																									
O&M Cost NPV	$6,479,118	-$6,479,118																																									

Costs (3%)

Cost Breakdown 3% Discount Rate																																									
	Fiscal Year																																									
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Undiscounted Flows																																									
Capital Cost	$0	$14,944,941	$14,944,941	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0										
O&M Cost	$0	$0	$0	$502,471	$512,521	$522,771	$533,226	$543,891	$554,769	$565,864	$577,181	$588,725	$600,500	$612,510	$624,760	$637,255	$650,000	$663,000	$676,260	$689,785	$703,581	$717,653	$732,006	$746,646	$761,579	$776,810	$792,346	$808,193	$824,357	$840,844	$857,661										
Discount Factors																																								
Discount Rate	3.0%																																								
Base Year	2011																																								
Year Index	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30										
Discount Factor	1.0000	0.9709	0.9426	0.9151	0.8885	0.8626	0.8375	0.8131	0.7894	0.7664	0.7441	0.7224	0.7014	0.6810	0.6611	0.6419	0.6232	0.6050	0.5874	0.5703	0.5537	0.5375	0.5219	0.5067	0.4919	0.4776	0.4637	0.4502	0.4371	0.4243	0.4120										
Discounted Flows																																								
Costs	$0	$14,509,651	$14,087,040	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0										
Benefits	$0	$0	$0	$459,832	$455,368	$450,947	$446,569	$442,233	$437,940	$433,688	$429,477	$425,307	$421,178	$417,089	$413,040	$409,030	$405,059	$401,126	$397,231	$393,375	$389,556	$385,774	$382,028	$378,319	$374,646	$371,009	$367,407	$363,840	$360,307	$356,809	$353,345										
	NPV	NPV Summed																																							
Capital Cost - NPV	$28,596,691	-$28,596,691																																								
O&M Cost NPV	$11,321,528	-$11,321,528																																								

Table ## - Monetization Factors & Sources				
Factor	Annual Reduction	Monetization Factors		Source
Sustainability				
CO	17.89	N/A	N/A	No Widely Accepted Excepted Monetization
CO_2	0.00	$21	$/Metric Ton	Social Cost of Carbon For Regulatory Impact Analysis Under Executive Order 12866 February 2010), page 39, Table A "Annual SCC Values 2010-2050 (in 2007 dollars)
VOC Reduction	1.93	$1,700	$/Metric Ton	*Corporate Average Fuel Economy for MY2011 Passengers Cars and Light Trucks* (March 2009), page VIII-60, Table VIII-5 " Economic Values for Benefits Computations (2007$)
NOX Reduction	0.67	$4,000	$/Metric Ton	*Corporate Average Fuel Economy for MY2011 Passengers Cars and Light Trucks* (March 2009), page VIII-60, Table VIII-5 " Economic Values for Benefits Computations (2007$)
PM Reduction	Not Measured	$168,000	$/Metric Ton	*Corporate Average Fuel Economy for MY2011 Passengers Cars and Light Trucks* (March 2009), page VIII-60, Table VIII-5 " Economic Values for Benefits Computations (2007$)
SOx Reduction	Not Measured	$16,000	$/Metric Ton	*Corporate Average Fuel Economy for MY2011 Passengers Cars and Light Trucks* (March 2009), page VIII-60, Table VIII-5 " Economic Values for Benefits Computations (2007$)
Fuel Cost Savings (VMT/23.5MPG)	52,699	$3.50	$/Gallon	U.S. Energy Information Administration - http://www.eia.gov/oog/info/gdu/gasdiesel.asp & 2010 CAFÉ Standards
Auto Cost (Annual VMT)	1,238,432	$0.15	Per Mile	American Automobile Association Vehicle Cost Estimates (AAA, 2006)
Livability				
Total New Annual Boardings	119,080	N/A	N/A	No Monetization
Total New Transit System Linked Trips	238,160	N/A	N/A	No Monetization
Travel Time Savings	Not Measured	$18.00	$/Hour	*The Value of Travel Time Savings: Department Guidance for Conducting Economic Evaluations, Revision 2 (Average Local Bus)*
Increased Fare Recovery (Annual)	297,700	$1.25	$/Rider	See Increased Transit Ridership
Bike - Recreation	$95,333,914	See Text		Highway Research Program (NCHRP) Report 552 '*Guidelines for Analysis of Investments in Bicycle Facilities*" which incorporates a web site Cost-Benefit Analysis of Bicycle Facilities
Bike - Mobility	$737,857	See Text		Highway Research Program (NCHRP) Report 552 '*Guidelines for Analysis of Investments in Bicycle Facilities*" which incorporates a web site Cost-Benefit Analysis of Bicycle Facilities
Bike - Health	$3,366,617	See Text		Highway Research Program (NCHRP) Report 552 '*Guidelines for Analysis of Investments in Bicycle Facilities*" which incorporates a web site Cost-Benefit Analysis of Bicycle Facilities
Bike - Auto Use	$86,961	See Text		Highway Research Program (NCHRP) Report 552 '*Guidelines for Analysis of Investments in Bicycle Facilities*" which incorporates a web site Cost-Benefit Analysis of Bicycle Facilities
Safety				
Accident Reduction (VMT)	$1,238,432	See Text		Treatment of Value of Preventing Fatalities and Injuries in Preparing Economic Analyses – 2011 Revision
Economic Competitiveness				
Job Creation Opportunity	0.00	$92,000	1.00	Executive Office of the President, Council of Economic Advisers, "Estimates of Job Creation from the American Recovery and Reinvestment Act of 2009," Washington, D.C., May 11, 2009. Pg. 7
State of Good Repair				
Replacing Infrastructure Savings	0.00	N/A	N/A	

Benefits Data Entry Page

Benefit Sources	Annual Reduction Total	Monetization Factors		Confidence Factor	Fiscal Year 2011	###	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Sustainability																																	
CO_2	0.00	$21	$/Metric Ton	100%																													
VOC Reduction	1.93	$1,700	$/Metric Ton	100%			$3,366	$3,454	$3,544	$3,636	$3,730	$3,827	$3,927	$4,029	$4,134	$4,241	$4,351	$4,465	$4,581	$4,700	$4,822	$4,947	$5,076	$5,208	$5,343	$5,482	$5,625	$5,771	$5,921	$6,075	$6,233	$6,395	$6,561	$6,732	$6,907
NOX Reduction	0.67	$4,000	$/Metric Ton	100%			$2,750	$2,821	$2,895	$2,970	$3,047	$3,126	$3,207	$3,291	$3,376	$3,464	$3,554	$3,647	$3,742	$3,839	$3,939	$4,041	$4,146	$4,254	$4,365	$4,478	$4,594	$4,714	$4,836	$4,962	$5,091	$5,224	$5,359	$5,499	$5,642
PM Reduction	Not Measured	$168,000	$/Metric Ton	100%																													
SOx Reduction	Not Measured	$16,000	$/Metric Ton	100%																													
Fuel Cost Savings (VMT/23.5MPG)	52,699	$3.50	$/Gallon	100%			$189,243	$194,163	$199,212	$204,391	$209,705	$215,158	$220,752	$226,491	$232,380	$238,422	$244,621	$250,981	$257,506	$264,202	$271,071	$278,119	$285,350	$292,769	$300,381	$308,191	$316,204	$324,425	$332,860	$341,514	$350,394	$359,504	$368,851	$378,441	$388,281
Auto Cost (Annual VMT)	1,238,432	$0.15	Per Mile	100%			$190,595	$195,550	$200,634	$205,851	$211,203	$216,694	$222,328	$228,109	$234,040	$240,125	$246,368	$252,774	$259,346	$266,089	$273,007	$280,105	$287,388	$294,860	$302,526	$310,392	$318,462	$326,742	$335,238	$343,954	$352,897	$362,072	$371,486	$381,144	$391,054
Livability																																	
Total New Annual Boardings	119,080	N/A		N/A																													
Total New Transit System Linked Trips	238,160	N/A		N/A																													
Travel Time Savings	Not Measured	$18.00	$/Hour	100%																													
Increased Fare Recovery (Annual)	$ 297,700	$1.25	$/Rider	100%			$381,800	$391,727	$401,912	$412,362	$423,083	$434,083	$445,369	$456,949	$468,830	$481,019	$493,526	$506,357	$519,523	$533,030	$546,889	$561,108	$575,697	$590,665	$606,022	$621,779	$637,945	$654,532	$671,550	$689,010	$706,924	$725,304	$744,162	$763,510	$783,362
Bike - Recreation	$ 95,333,914		See Text	100%			$ 95,333,914	$97,812,596	$100,355,723	$102,964,972	$105,642,061	$108,388,755	$111,206,863	$114,098,241	$117,064,795	$120,108,480	$123,231,300	$126,435,314	$129,722,632	$133,095,421	$136,555,902	$140,106,355	$143,749,120	$147,486,598	$151,321,249	$155,255,602	$159,292,247	$163,433,846	$167,683,126	$172,042,887	$176,516,002	$181,105,418	$185,814,159	$190,645,327	$195,602,106
Bike - Mobility	$ 737,857		See Text	100%			$ 737,857	$757,041	$776,724	$796,919	$817,639	$838,898	$860,709	$883,087	$906,048	$929,605	$953,775	$978,573	$1,004,016	$1,030,120	$1,056,903	$1,084,383	$1,112,577	$1,141,504	$1,171,183	$1,201,634	$1,232,876	$1,264,931	$1,297,819	$1,331,562	$1,366,183	$1,401,704	$1,438,148	$1,475,540	$1,513,904
Bike - Health	$ 3,366,617		See Text	100%			$ 3,366,617	$3,454,149	$3,543,957	$3,636,100	$3,730,638	$3,827,635	$3,927,153	$4,029,259	$4,134,020	$4,241,505	$4,351,784	$4,464,930	$4,581,018	$4,700,125	$4,822,329	$4,947,709	$5,076,349	$5,208,334	$5,343,751	$5,482,688	$5,625,238	$5,771,495	$5,921,553	$6,075,514	$6,233,477	$6,395,548	$6,561,832	$6,732,439	$6,907,483
Bike - Auto Use	$ 86,961		See Text	100%			$ 86,961	$89,222	$91,542	$93,922	$96,364	$98,869	$101,440	$104,077	$106,783	$109,560	$112,408	$115,331	$118,329	$121,406	$124,563	$127,801	$131,124	$134,533	$138,031	$141,620	$145,302	$149,080	$152,956	$156,933	$161,013	$165,199	$169,495	$173,901	$178,423
Safety																																	
Accident Reduction (VMT)	1,238,432		See Text	100%			1,238,432	$1,270,631	$1,303,668	$1,337,563	$1,372,340	$1,408,020	$1,444,629	$1,482,189	$1,520,726	$1,560,265	$1,600,832	$1,642,454	$1,685,157	$1,728,972	$1,773,925	$1,820,047	$1,867,368	$1,915,920	$1,965,734	$2,016,843	$2,069,281	$2,123,082	$2,178,282	$2,234,917	$2,293,025	$2,352,644	$2,413,813	$2,476,572	$2,540,963
Economic Competitiveness																																	
Job Creation Opportunity		$92,000	1	100%																													
State of Good Repair																																	
Replacing Infrastructure Savings																																	
Total Benefits Per Year					$0	$0	$101,531,535	$104,171,355	$106,879,810	$109,658,685	$112,509,811	$115,435,066	$118,436,378	$121,515,723	$124,675,132	$127,916,686	$131,242,520	$134,654,825	$138,155,851	$141,747,903	$145,433,348	$149,214,615	$153,094,195	$157,074,644	$161,158,585	$165,348,708	$169,647,775	$174,058,617	$178,584,141	$183,227,328	$187,991,239	$192,879,011	$197,893,865	$203,039,106	$208,318,123
Benefits Claimed for Analysis					$0	$0	$101,531,535	$104,171,355	$106,879,810	$109,658,685	$112,509,811	$115,435,066	$118,436,378	$121,515,723	$124,675,132	$127,916,686	$131,242,520	$134,654,825	$138,155,851	$141,747,903	$145,433,348	$149,214,615	$153,094,195	$157,074,644	$161,158,585	$165,348,708	$169,647,775	$174,058,617	$178,584,141	$183,227,328	$187,991,239	$192,879,011	$197,893,865	$203,039,106	$208,318,123
Annual Increase	1.026																																
Program Grand Total Benefit	$4,315,494,579																																

INSTRUCTIONS FOR THIS PAGE:

2. Enter the sources of benefits you expect in Column A, as shown
(if you need more than four categories of benefits, feel free to insert extra rows - paid version only)

4. Total Benefits by year, adjusted for your level of confidence, is shown on Row 15, and Grand Total on Row 17
As with our costs, these are un-discounted so far (that is, not converted to equivalent year dollars).

Benefits Breakdown 7% Discount Rate

	Fiscal Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Sustainability																																										
CO2		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0										
VOC Reduction		$0	$0	$3,366	$3,454	$3,544	$3,636	$3,730	$3,827	$3,927	$4,029	$4,134	$4,241	$4,351	$4,465	$4,581	$4,700	$4,822	$4,947	$5,076	$5,208	$5,343	$5,482	$5,625	$5,771	$5,921	$6,075	$6,233	$6,395	$6,561	$6,732	$6,907										
NOX Reduction		$0	$0	$2,750	$2,821	$2,895	$2,970	$3,047	$3,126	$3,207	$3,291	$3,376	$3,464	$3,554	$3,647	$3,742	$3,839	$3,939	$4,041	$4,146	$4,254	$4,365	$4,478	$4,594	$4,714	$4,836	$4,962	$5,091	$5,224	$5,359	$5,499	$5,642										
PM Reduction		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0										
SOx Reduction		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0										
Fuel Cost Savings (VMT/23.9M		$0	$0	$189,243	$194,163	$199,212	$204,391	$209,705	$215,158	$220,752	$226,491	$232,380	$238,422	$244,621	$250,981	$257,506	$264,202	$271,071	$278,119	$285,350	$292,769	$300,381	$308,191	$316,204	$324,425	$332,860	$341,514	$350,394	$359,504	$368,851	$378,441	$388,281										
Auto Cost (Annual VMT)		$0	$0	$190,595	$195,560	$200,634	$205,851	$211,203	$216,694	$222,328	$228,109	$234,040	$240,125	$246,368	$252,774	$259,346	$266,089	$273,007	$280,105	$287,388	$294,860	$302,526	$310,392	$318,462	$326,742	$335,238	$343,954	$352,897	$362,072	$371,486	$381,144	$391,054										
Livability																																										
Total New Annual Boardings		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0										
Total New Transit System Links		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0										
Travel Time Savings		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0										
Increased Fare Recovery (Annu		$0	$0	$381,900	$391,727	$401,912	$412,362	$423,083	$434,083	$445,369	$456,949	$468,830	$481,019	$493,526	$506,362	$519,523	$533,030	$546,889	$561,106	$575,697	$590,665	$606,022	$621,779	$637,945	$654,532	$671,550	$689,010	$706,924	$725,304	$744,162	$763,510	$783,362										
Bike - Recreation		$0	$0	$95,333,914	$97,812,596	$100,355,723	$102,964,972	$105,642,061	$108,388,755	$111,206,863	$114,098,241	$117,064,795	$120,108,480	$123,231,300	$126,435,314	$129,722,632	$133,095,421	$136,555,902	$140,106,355	$143,749,120	$147,486,598	$151,321,249	$155,255,602	$159,292,247	$163,433,846	$167,683,126	$172,042,887	$176,516,002	$181,105,418	$185,814,159	$190,645,327	$195,602,106										
Bike - Mobility		$0	$0	$737,857	$757,041	$776,724	$796,919	$817,639	$838,898	$860,709	$883,087	$906,048	$929,605	$953,775	$978,573	$1,004,016	$1,030,120	$1,056,903	$1,084,383	$1,112,577	$1,141,504	$1,171,183	$1,201,634	$1,232,876	$1,264,931	$1,297,819	$1,331,562	$1,366,183	$1,401,704	$1,438,148	$1,475,540	$1,513,904										
Bike - Health		$0	$0	$3,366,617	$3,454,149	$3,543,957	$3,636,100	$3,730,638	$3,827,635	$3,927,153	$4,029,259	$4,134,020	$4,241,505	$4,351,784	$4,464,930	$4,581,018	$4,700,125	$4,822,328	$4,947,709	$5,076,349	$5,208,334	$5,343,751	$5,482,688	$5,625,238	$5,771,495	$5,921,553	$6,075,514	$6,233,477	$6,395,548	$6,561,832	$6,732,439	$6,907,483										
Bike - Auto Use		$0	$0	$86,961	$89,222	$91,542	$93,922	$96,364	$98,869	$101,440	$104,077	$106,783	$109,560	$112,408	$115,331	$118,329	$121,406	$124,563	$127,801	$131,124	$134,533	$138,031	$141,620	$145,302	$149,080	$152,956	$156,933	$161,013	$165,199	$169,495	$173,901	$178,423										
Safety																																										
Accident Reduction (VMT)		$0	$0	$1,238,432	$1,270,631	$1,303,668	$1,337,563	$1,372,340	$1,408,020	$1,444,629	$1,482,189	$1,520,726	$1,560,265	$1,600,832	$1,642,454	$1,685,157	$1,728,972	$1,773,925	$1,820,047	$1,867,368	$1,915,920	$1,965,734	$2,016,843	$2,069,281	$2,123,082	$2,178,282	$2,234,917	$2,293,025	$2,352,644	$2,413,813	$2,476,572	$2,540,963										
Economic Competitiveness																																										
Job Creation Opportunity		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0										
State of Good Repair																																										
N/A		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0										
Discount Factors																																										
Discount Rate	7.0%																																									
Base Year	2011																																									
Year Index	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30										
Discount Factor	1.0000	0.9346	0.8734	0.8163	0.7629	0.7130	0.6663	0.6227	0.5820	0.5439	0.5083	0.4751	0.4440	0.4150	0.3878	0.3624	0.3387	0.3166	0.2959	0.2765	0.2584	0.2415	0.2257	0.2109	0.1971	0.1842	0.1722	0.1609	0.1504	0.1406	0.1314										
Discounted Flows																																										
Sustainability																																										
CO2		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0										
VOC Reduction		$0	$0	$2,940	$2,819	$2,703	$2,592	$2,486	$2,383	$2,285	$2,191	$2,101	$2,015	$1,932	$1,853	$1,776	$1,703	$1,633	$1,566	$1,502	$1,440	$1,381	$1,324	$1,270	$1,217	$1,167	$1,119	$1,073	$1,029	$987	$946	$907										
NOX Reduction		$0	$0	$2,402	$2,303	$2,208	$2,117	$2,030	$1,947	$1,867	$1,790	$1,716	$1,646	$1,578	$1,513	$1,451	$1,391	$1,334	$1,279	$1,227	$1,176	$1,128	$1,081	$1,037	$994	$953	$914	$877	$841	$806	$773	$741										
PM Reduction		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0										
SOx Reduction		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0										
Fuel Cost Savings (VMT/23.9M		$0	$0	$165,292	$158,495	$151,978	$145,728	$139,735	$133,989	$128,479	$123,196	$118,130	$113,272	$108,615	$104,148	$99,865	$95,759	$91,821	$88,045	$84,425	$80,953	$77,624	$74,432	$71,371	$68,436	$65,622	$62,924	$60,336	$57,855	$55,476	$53,195	$51,007										
Auto Cost (Annual VMT)		$0	$0	$166,473	$169,627	$153,063	$146,769	$140,734	$134,946	$129,397	$124,076	$118,974	$114,082	$109,390	$104,892	$100,579	$96,443	$92,477	$88,674	$85,028	$81,531	$78,179	$74,964	$71,881	$68,925	$66,091	$63,373	$60,767	$58,268	$55,872	$53,575	$51,372										
Livability																																										
Total New Annual Boardings		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0										
Total New Transit System Links		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0										
Travel Time Savings		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0										
Increased Fare Recovery (Annu		$0	$0	$333,479	$319,766	$306,617	$294,008	$281,918	$270,325	$259,209	$248,550	$238,329	$228,529	$219,131	$210,120	$201,480	$193,195	$185,250	$177,632	$170,328	$163,324	$156,608	$150,168	$143,993	$138,071	$132,394	$126,950	$121,729	$116,723	$111,924	$107,321	$102,908										
Bike - Recreation		$0	$0	$83,268,333	$79,844,214	$76,560,901	$73,412,602	$70,393,766	$67,499,069	$64,723,406	$62,061,883	$59,509,806	$57,062,674	$54,716,171	$52,466,160	$50,308,673	$48,239,906	$46,256,208	$44,354,064	$42,530,178	$40,781,273	$39,104,286	$37,496,260	$35,954,357	$34,475,860	$33,058,161	$31,698,760	$30,395,260	$29,145,361	$27,946,861	$26,797,644	$25,695,685										
Bike - Mobility		$0	$0	$644,473	$617,971	$592,559	$568,192	$544,827	$522,423	$500,941	$480,341	$460,589	$441,649	$423,487	$406,073	$389,375	$373,363	$358,010	$343,288	$329,171	$315,635	$302,656	$290,210	$278,276	$266,833	$255,861	$245,339	$235,251	$225,577	$216,301	$207,406	$198,877										
Bike - Health		$0	$0	$2,940,534	$2,819,615	$2,703,668	$2,592,489	$2,485,882	$2,383,659	$2,285,639	$2,191,650	$2,101,526	$2,015,108	$1,932,244	$1,852,787	$1,776,598	$1,703,542	$1,633,489	$1,566,318	$1,501,909	$1,440,148	$1,380,927	$1,324,141	$1,269,690	$1,217,479	$1,167,414	$1,119,408	$1,073,377	$1,029,238	$986,914	$946,331	$907,416										
Bike - Auto Use		$0	$0	$75,955	$72,832	$69,837	$66,965	$64,211	$61,571	$59,039	$56,611	$54,283	$52,051	$49,911	$47,858	$45,890	$44,003	$42,194	$40,459	$38,795	$37,200	$35,670	$34,203	$32,797	$31,448	$30,155	$28,915	$27,726	$26,586	$25,492	$24,444	$23,439										
Safety																																										
Accident Reduction (VMT)		$0	$0	$1,081,694	$1,037,214	$994,562	$953,664	$914,448	$876,844	$840,787	$806,213	$773,060	$741,271	$710,789	$681,560	$653,533	$626,659	$600,890	$576,180	$552,487	$529,768	$507,983	$487,094	$467,064	$447,858	$429,441	$411,782	$394,849	$378,612	$363,043	$348,114	$333,799										
Economic Competitiveness																																										
Job Creation Opportunity		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0										
State of Good Repair		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0										
N/A																																										

	NPV	NPV- SUM
CO2	$0	$0
VOC Reduction	$60,344	-$60,344
NOX Reduction	$41,123	-$41,123
PM Reduction	$0	$0
SOx Reduction	$0	$0
Fuel Cost Savings (VMT/23.9M	$2,830,296	-$2,830,296
Auto Cost (Annual VMT)	$2,850,422	-$2,850,422
Livability		
Total New Annual Boardings	$0	$0
Total New Transit System Links	$0	$0
Travel Time Savings	$0	$0
Increased Fare Recovery (Annu	$5,709,979	-$5,709,979
Bike - Recreation	$1,425,757,804	-$1,425,757,804
Bike - Mobility	$11,034,954	-$11,034,954
Bike - Health	$50,349,139	-$50,349,139
Bike - Auto Use	$1,300,537	-$1,300,537
Safety		
Accident Reduction (VMT)	$18,521,259	-$18,521,259
Economic Competitiveness		
Job Creation Opportunity	$0	$0
State of Good Repair		
N/A	$0	$0

Benifits (3%)

Benifits Breakdown 3% Discount Rate

	Fiscal Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Sustainability																																										
CO2		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0										
VOC Reduction		$0	$0	$3,366	$3,454	$3,544	$3,636	$3,730	$3,827	$3,927	$4,029	$4,134	$4,241	$4,351	$4,465	$4,581	$4,700	$4,822	$4,947	$5,076	$5,208	$5,343	$5,482	$5,625	$5,771	$5,921	$6,075	$6,233	$6,395	$6,561	$6,732	$6,907										
NOX Reduction		$0	$0	$2,750	$2,821	$2,895	$2,970	$3,047	$3,126	$3,207	$3,291	$3,376	$3,464	$3,554	$3,647	$3,742	$3,839	$3,939	$4,041	$4,146	$4,254	$4,365	$4,478	$4,594	$4,714	$4,836	$4,962	$5,091	$5,224	$5,359	$5,499	$5,642										
PM Reduction		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0										
SOx Reduction		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0										
Fuel Cost Savings (VMT/23 SMPG)		$0	$0	$189,243	$194,163	$199,212	$204,391	$209,705	$215,158	$220,752	$226,491	$232,380	$238,422	$244,621	$250,981	$257,506	$264,202	$271,071	$278,119	$285,350	$292,769	$300,381	$308,191	$316,204	$324,425	$332,860	$341,514	$350,394	$359,504	$368,851	$378,441	$388,281										
Auto Cost (Annual VMT)		$0	$0	$190,595	$195,550	$200,634	$205,851	$211,203	$216,694	$222,328	$228,109	$234,040	$240,125	$246,368	$252,774	$259,346	$266,089	$273,007	$280,105	$287,388	$294,860	$302,526	$310,392	$318,462	$326,742	$335,238	$343,954	$352,897	$362,072	$371,486	$381,144	$391,054										
Livability																																										
Total New Annual Boardings		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0										
Total New Transit System Linked Trips		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0										
Travel Time Savings		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0										
Increased Fare Recovery (Annual)		$0	$0	$381,800	$391,727	$401,912	$412,362	$423,083	$434,083	$445,369	$456,949	$468,830	$481,019	$493,526	$506,357	$519,523	$533,030	$546,889	$561,108	$575,697	$590,665	$606,022	$621,779	$637,945	$654,532	$671,550	$689,010	$706,924	$725,304	$744,162	$763,510	$783,362										
Bike - Recreation		$0	$0	$95,333,914	$97,812,596	$100,355,723	$102,964,972	$105,642,061	$108,388,755	$111,206,863	$114,098,241	$117,064,795	$120,108,480	$123,231,300	$126,435,314	$129,722,632	$133,095,421	$136,555,902	$140,106,355	$143,749,120	$147,486,598	$151,321,249	$155,255,602	$159,292,247	$163,433,846	$167,683,126	$172,042,887	$176,516,002	$181,105,418	$185,814,159	$190,645,327	$195,602,106										
Bike - Mobility		$0	$0	$737,857	$757,041	$776,724	$796,919	$817,639	$838,898	$860,709	$883,087	$906,048	$929,605	$953,775	$978,573	$1,004,016	$1,030,120	$1,056,903	$1,084,383	$1,112,577	$1,141,504	$1,171,183	$1,201,634	$1,232,876	$1,264,931	$1,297,819	$1,331,562	$1,366,183	$1,401,704	$1,438,148	$1,475,540	$1,513,904										
Bike - Health		$0	$0	$3,366,617	$3,454,149	$3,543,957	$3,636,100	$3,730,638	$3,827,635	$3,927,153	$4,029,259	$4,134,020	$4,241,505	$4,351,784	$4,464,930	$4,581,018	$4,700,125	$4,822,329	$4,947,709	$5,076,349	$5,208,334	$5,343,751	$5,482,688	$5,625,238	$5,771,495	$5,921,553	$6,075,514	$6,233,477	$6,395,548	$6,561,832	$6,732,439	$6,907,483										
Bike - Auto Use		$0	$0	$86,961	$89,222	$91,542	$93,922	$96,364	$98,869	$101,440	$104,077	$106,783	$109,560	$112,408	$115,331	$118,329	$121,406	$124,563	$127,801	$131,124	$134,533	$138,031	$141,620	$145,302	$149,080	$152,956	$156,933	$161,013	$165,199	$169,495	$173,901	$178,423										
Safety																																										
Accident Reduction (VMT)		$0	$0	$1,238,432	$1,270,631	$1,303,668	$1,337,563	$1,372,340	$1,408,020	$1,444,629	$1,482,189	$1,520,726	$1,560,265	$1,600,832	$1,642,454	$1,685,157	$1,728,972	$1,773,925	$1,820,047	$1,867,368	$1,915,920	$1,965,734	$2,016,843	$2,069,281	$2,123,082	$2,178,282	$2,234,917	$2,293,025	$2,352,644	$2,413,813	$2,476,572	$2,540,963										
Economic Competitiveness																																										
Job Creation Opportunity		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0										
State of Good Repair																																										
N/A		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0										
Discount Factors																																										
Discount Rate	3.0%																																									
Base Year	2011																																									
Year Index	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30										
Discount Factor	1.0000	0.9709	0.9426	0.9151	0.8885	0.8626	0.8375	0.8131	0.7894	0.7664	0.7441	0.7224	0.7014	0.6810	0.6611	0.6419	0.6232	0.6050	0.5874	0.5703	0.5537	0.5375	0.5219	0.5067	0.4919	0.4776	0.4637	0.4502	0.4371	0.4243	0.4120										
Discounted Flows																																										
Sustainability																																										
CO2		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0										
VOC Reduction		$0	$0	$3,173	$3,161	$3,148	$3,136	$3,124	$3,112	$3,100	$3,088	$3,076	$3,064	$3,052	$3,040	$3,028	$3,017	$3,005	$2,993	$2,982	$2,970	$2,958	$2,947	$2,935	$2,924	$2,913	$2,901	$2,890	$2,879	$2,868	$2,857	$2,846										
NOX Reduction		$0	$0	$2,592	$2,582	$2,572	$2,562	$2,552	$2,542	$2,532	$2,522	$2,512	$2,503	$2,493	$2,483	$2,474	$2,464	$2,454	$2,445	$2,435	$2,426	$2,417	$2,407	$2,398	$2,388	$2,379	$2,370	$2,361	$2,352	$2,342	$2,333	$2,324										
PM Reduction		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0										
SOx Reduction		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0										
Fuel Cost Savings (VMT/23 SMPG)		$0	$0	$178,380	$177,687	$176,997	$176,309	$175,625	$174,943	$174,263	$173,587	$172,912	$172,241	$171,572	$170,906	$170,242	$169,581	$168,922	$168,266	$167,613	$166,962	$166,314	$165,668	$165,024	$164,383	$163,745	$163,109	$162,476	$161,845	$161,216	$160,590	$159,967										
Auto Cost (Annual VMT)		$0	$0	$179,654	$178,956	$178,261	$177,569	$176,879	$176,192	$175,508	$174,827	$174,148	$173,471	$172,798	$172,127	$171,458	$170,792	$170,129	$169,468	$168,810	$168,155	$167,502	$166,851	$166,203	$165,558	$164,915	$164,274	$163,636	$163,001	$162,368	$161,737	$161,109										
Livability																																										
Total New Annual Boardings		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0										
Total New Transit System Linked Trips		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0										
Travel Time Savings		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0										
Increased Fare Recovery (Annual)		$0	$0	$359,883	$358,486	$357,094	$355,707	$354,325	$352,949	$351,579	$350,213	$348,853	$347,499	$346,149	$344,805	$343,466	$342,132	$340,803	$339,480	$338,161	$336,848	$335,540	$334,237	$332,939	$331,646	$330,358	$329,075	$327,797	$326,524	$325,256	$323,993	$322,735										
Bike - Recreation		$0	$0	$89,861,357	$89,512,381	$89,164,760	$88,818,489	$88,473,563	$88,129,977	$87,787,724	$87,446,801	$87,107,202	$86,768,921	$86,431,955	$86,096,297	$85,761,942	$85,428,886	$85,097,123	$84,766,649	$84,437,458	$84,109,546	$83,782,907	$83,457,536	$83,133,429	$82,810,581	$82,488,987	$82,168,641	$81,849,539	$81,531,677	$81,215,049	$80,899,651	$80,585,478										
Bike - Mobility		$0	$0	$695,501	$692,830	$690,110	$687,429	$684,760	$682,101	$679,452	$676,813	$674,185	$671,566	$668,958	$666,361	$663,773	$661,195	$658,627	$656,069	$653,522	$650,984	$648,456	$645,937	$643,429	$640,930	$638,441	$635,962	$633,492	$631,032	$628,581	$626,140	$623,708										
Bike - Health		$0	$0	$3,173,359	$3,161,036	$3,148,760	$3,136,532	$3,124,351	$3,112,218	$3,100,131	$3,088,092	$3,076,099	$3,064,153	$3,052,254	$3,040,400	$3,028,593	$3,016,831	$3,005,115	$2,993,445	$2,981,820	$2,970,240	$2,958,705	$2,947,215	$2,935,770	$2,924,369	$2,913,012	$2,901,699	$2,890,430	$2,879,206	$2,868,024	$2,856,886	$2,845,791										
Bike - Auto Use		$0	$0	$81,969	$81,651	$81,334	$81,018	$80,703	$80,390	$80,078	$79,767	$79,457	$79,148	$78,841	$78,535	$78,230	$77,926	$77,623	$77,322	$77,022	$76,722	$76,424	$76,126	$75,832	$75,538	$75,244	$74,952	$74,661	$74,371	$74,082	$73,794	$73,508										
Safety																																										
Accident Reduction (VMT)		$0	$0	$1,167,341	$1,162,808	$1,158,292	$1,153,794	$1,149,313	$1,144,849	$1,140,403	$1,135,975	$1,131,563	$1,127,169	$1,122,791	$1,118,431	$1,114,088	$1,109,761	$1,105,451	$1,101,158	$1,096,882	$1,092,622	$1,088,379	$1,084,152	$1,079,942	$1,075,748	$1,071,570	$1,067,409	$1,063,264	$1,059,135	$1,055,021	$1,050,924	$1,046,843										
Economic Competitiveness																																										
Job Creation Opportunity		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0										
State of Good Repair		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0										
N/A																																										

	NPV	NPV- SUM
Sustainability		
CO2	$0	$0
VOC Reduction	$87,186	-$87,186
NOX Reduction	$71,216	-$71,216
PM Reduction	$0	$0
SOx Reduction	$0	$0
Fuel Cost Savings (VMT/23 SMPG)	$4,901,345	-$4,901,345
Auto Cost (Annual VMT)	$4,936,355	-$4,936,355
Livability		
Total New Annual Boardings	$0	$0
Total New Transit System Linked Trips	$0	$0
Travel Time Savings	$0	$0
Increased Fare Recovery (Annual)	$9,888,531	-$9,888,531
Bike - Recreation	$2,469,124,507	-$2,469,124,507
Bike - Mobility	$19,110,312	-$19,110,312
Bike - Health	$87,194,538	-$87,194,538
Bike - Auto Use	$2,252,268	-$2,252,268
Safety		
Accident Reduction (VMT)	$32,075,079	-$32,075,079
Economic Competitiveness		
Job Creation Opportunity	$0	$0
State of Good Repair		
N/A	$0	$0

Table 1 American Automobile Association Vehicle Cost Estimates (AAA, 2006)

	Small Sedan	Medium Sedan	Large Sedan		SUV	Minivan	Average
Gas & oil	$ 0.08	$ 0.10	$ 0.11		$ 0.14	$ 0.11	$ 0.11
Maintenance	$ 0.05	$ 0.05	$ 0.05		$ 0.06	$ 0.05	$ 0.05
Tires	$ 0.01	$ 0.01	$ 0.01		$ 0.01	$ 0.01	$ 0.01
Operating costs/mile	**$ 0.13**	**$ 0.16**	**$ 0.17**		**$ 0.20**	**$ 0.17**	$ 0.17
Insurance	$892	$902	$982		$918	$843	$ 907.40
License & registration	$397	$551	$658		$683	$612	$ 580.20
Depreciation	$2,503	$3,449	$4,224		$4,254	$4,043	$ 3,694.60
Financing	$511	$739	$899		$935	$830	$ 782.80
Ownership costs/year	**$4,303**	**$5,642**	**$6,763**		**$6,790**	**$6,328**	$ 5,965.20
Total for 15,000 annual miles	***$6,253***	***$7,967***	***$9,283***		***$9,805***	***$8,878***	$ 8,437.20
Average cost per mile	***41.7***	***53.1***	***61.9***		***65.4***	***59.2***	$ 56.26

recommended Hourly Values of Travel Time Savings
(2009 U.S. $ per person-hour)

Category	Surface Modes* (except High-Speed Rail)	Air and High-Speed Rail Travel
Local Travel		
Personal		
	$12.00	Local Bus - BRT - Light Rail
Business		
	$22.90	Local Bus - BRT - Light Rail
All Purposes **		
	$12.50	Local Bus - BRT - Light Rail
Intercity Travel		
Personal		
	$16.70	Local Bus - BRT - Light Rail
	$31.90	Air - High Speed Rail
Business		
	$22.90	Local Bus - BRT - Light Rail
	$62.60	Air - High Speed Rail
All Purposes **		
	$18.00	Local Bus - BRT - Light Rail
	$44.30	Air - High Speed Rail
Truck Drivers		
	$23.70	
Bus Drivers		
	$23.60	
Transit Rail Operators		
	$38.90	
Locomotive Engineers		
	$33.00	
Airline Pilots and Engineers		
	$73.30	

Table ## - Value of Injuries			
AIS Level	Severity	Fraction of VSL	Unit Value $2011
AIS 1	Minor	0.003	$ 18,600
AIS 2	Moderate	0.047	$ 291,400
AIS 3	Serious	0.105	$ 651,000
AIS 4	Severe	0.266	$ 1,649,200
AIS 5	Critical	0.593	$ 3,676,600
AIS 6	Fatal	1	$ 6,200,000

Table ## - Total VMT Per Accidents			
STATEWIDE	AIS Code	2010 Accidents	Accident Rate Per VMT
Fatal Crashes	6	2,746	85,718,135
Fatalities	5	3,023	77,863,712
Serious Injury Crashes	4	59,660	3,945,391
Serious Injuries	4	82,685	2,846,732
Other Injury Crashes	2	80,766	2,914,370
Other Injuries	2	132,908	1,771,015
Non-Injury Crashes	1	232,073	1,014,258
Unknown Severity Crashes	N/A	12,932	18,201,516
Total Crashes	N/A	388,177	606,378

Table ## - Total Projected Reduced Accidents			
STATEWIDE	AIS Code	Accidents Reduced by Projects	Reduced Annual Accidents (1.5% in VMT Reduction)
Fatal Crashes	6	0.014	$ 89,576
Fatalities	5	0.016	$ 98,612
Serious Injury Crashes	4	0.314	$ 517,673
Serious Injuries	3	0.435	$ 283,209
Other Injury Crashes	2	0.425	$ 123,827
Other Injuries	2	0.699	$ 203,770
Non-Injury Crashes	1	1.221	$ 22,711
Unknown Severity Crashes	N/A	0.068	$ -
Total Crashes	N/A	2.042	$ -
			$ 1,339,378

2010 Accidetns
2,746
3,023
59,660
82,685
80,766
132,908
232,073
12,932
388,177

	Fatal Crashes	Fatalities	Serious Injury Crashes	Serious Injuries	Other Injury Crashes	Other Injur	Non-Injury	Unknown S	Total Crashes
STATEWIDE	2,746	3,023	59,660	82,685	80,766	132,908	232,073	12,932	388,177
Harris County	335	361	8,035	11,196	14,201	23,577	42,550	2,300	67,421

State	Total VMT (millions)	Estimated Population	VMT per capita	Total VMT	Estimated Population	VMT per capita
Texas	223,418	22,062,119	10,127	235,382,000,000	24,326,974	9,676

New VMT	235,380,761,568
VMT Reduced	1,238,432
	1,238,432
Percent Reduced	0.00053%

Total Capital	29,186,878		
Per Job	$ 92,000		
Jobs Created	317.25		
Diect & Indirect	203.04	64%	
Induced	114.21	36%	

		Design/Engineering	Environmental	Construction
		15%	5%	80%
Project 1	$976,240	$146,436	$48,812	$829,804
Project 2	$6,649,010	$997,352	$332,451	$5,319,208
Project 3	$2,818,024	$422,704	$140,901	$2,395,320
Project 4	$5,116,238	$767,436	$255,812	$4,092,990
Project 5	$10,932,034	$1,639,805	$546,602	$9,292,229
Project 6	$3,398,335	$509,750	$169,917	$2,718,668
	$29,889,881			

Year	**2011**	**2012**	**2012**	**2012**	**2012**	**2013**	**2013**	**2013**	**2013**	**2014**	**2014**	**2014**	**2014**
Quarter	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
Direct & IndirectJobs Per	11.46	11.46	10.79	22.16	22.16	26.77	34.03	34.03	21.10	13.98			
Induced Jobs Per Quarter	6.44	6.44	6.07	12.47	12.47	15.06	19.14	19.14	11.87	7.86			
Project #1	D	D	C	C	C								
Project #2	D	D	D	E	E	E	C	C	C	C			
Project #3	D	D	D	C	C	C							
Project #4	D	D	E	E	E	C	C	C	C				
Project #5	D	D	D	C	C	C	C	C					
Project #6	D	D	D	E	E	E	C	C	C	C			
Legend													
Design/Engineering	D												
Environmental	E												
Construction	C												

Year	**2011**	**2012**	**2012**	**2012**	**2012**	**2013**	**2013**	**2013**	**2013**	**2014**
Quarter	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**
Direct & IndirectJobs Per Quarter										
Induced Jobs Per Quarter										
Project #1	$73,218	$73,218	$276,601	$276,601	$276,601					
Project #2	$332,451	$332,451	$332,451	$110,816.83	$110,816.83	$110,816.83	$1,329,802	$1,329,802	$1,329,802	$1,329,802
Project #3	$140,901	$140,901	$140,901	$798,440	$798,440	$798,440				
Project #4	$383,718	$383,718	$85,270.63	$85,270.63	$85,270.63	$1,023,248	$1,023,248	$1,023,248	$1,023,248	
Project #5	$546,602	$546,602	$546,602	$1,858,445.78	$1,858,445.78	$1,858,445.78	$1,858,445.78	$1,858,445.78		
Project #6	$169,917	$169,917	$169,917	$56,638.92	$56,638.92	$56,638.92	$679,667	$679,667	$679,667	$679,667
	$1,646,806	$1,646,806	$1,551,742	$3,186,214	$3,186,214	$3,847,589	$4,891,162	$4,891,162	$3,032,717	$2,009,469

Cost Benefit Analysis Template

Results Calculation Page (7% Discount)

	Fiscal Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Undiscounted Flows																																
Costs		$0	-$14,944,941	-$14,944,941	-$502,471	-$512,521	-$522,771	-$533,226	-$543,891	-$554,769	-$565,864	-$577,181	-$588,725	-$600,500	-$612,510	-$624,760	-$637,255	-$650,000	-$663,000	-$676,260	-$689,785	-$703,581	-$717,653	-$732,006	-$746,646	-$761,579	-$776,810	-$792,346	-$808,193	-$824,357	-$840,844	-$857,661
Benefits		$0	$0	$101,531,535	$104,171,355	$106,879,810	$109,658,685	$112,509,811	$115,435,066	$118,436,378	$121,515,723	$124,675,132	$127,916,686	$131,242,520	$134,654,825	$138,155,851	$141,747,903	$145,433,348	$149,214,615	$153,094,195	$157,074,644	$161,158,585	$165,348,708	$169,647,775	$174,058,617	$178,584,141	$183,227,328	$187,991,139	$192,879,011	$197,893,865	$203,039,106	$208,318,123
Net Benefit		$0	-$14,944,941	$86,586,594	$103,668,884	$106,367,289	$109,135,914	$111,976,584	$114,891,175	$117,881,609	$120,949,859	$124,097,951	$127,327,961	$130,642,020	$134,042,316	$137,531,091	$141,110,648	$144,783,348	$148,551,615	$152,417,935	$156,384,859	$160,455,004	$164,631,056	$168,915,769	$173,311,971	$177,822,562	$182,450,518	$187,198,793	$192,070,818	$197,069,508	$202,198,262	$207,460,462
Discount Factors																																
Discount Rate	7.0%																															
Base Year	2011																															
Year Index	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Discount Factor	1.0000	0.9346	0.8734	0.8163	0.7629	0.7130	0.6663	0.6227	0.5820	0.5439	0.5083	0.4751	0.4440	0.4150	0.3878	0.3624	0.3387	0.3166	0.2959	0.2765	0.2584	0.2415	0.2257	0.2109	0.1971	0.1842	0.1722	0.1609	0.1504	0.1406	0.1314	
Discounted Flows																																
Costs		$0	-$13,967,234	-$13,053,490	-$410,166	-$390,999	-$372,728	-$355,311	-$338,708	-$322,880	-$307,793	-$293,410	-$279,699	-$266,629	-$254,170	-$242,293	-$230,971	-$220,177	-$209,889	-$200,081	-$190,731	-$181,819	-$173,322	-$165,223	-$157,503	-$150,143	-$143,127	-$136,438	-$130,063	-$123,985	-$118,191	-$112,668
Benefits		$0	$0	$88,681,575	$85,034,856	$81,538,095	$78,185,127	$74,970,938	$71,887,158	$68,931,050	$66,098,502	$63,378,515	$60,772,296	$58,273,246	$55,876,965	$53,579,221	$51,376,963	$49,263,307	$47,237,526	$45,296,048	$43,432,448	$41,646,441	$39,933,877	$38,291,736	$36,717,121	$35,207,260	$33,759,485	$32,371,244	$31,040,090	$29,763,675	$28,539,748	$27,366,151
Net		$0	-$13,967,234	$75,628,085	$84,624,690	$81,147,096	$77,812,398	$74,614,726	$71,548,450	$68,608,170	$65,798,710	$63,085,105	$60,492,597	$58,006,616	$55,622,795	$53,336,928	$51,144,993	$49,043,129	$47,027,637	$45,094,967	$43,241,717	$41,464,622	$39,760,554	$38,126,513	$36,559,620	$35,057,117	$33,616,358	$32,234,806	$30,910,027	$29,639,690	$28,421,557	$27,253,483
Cumulative		$0	-$13,967,234	$61,660,851	$146,285,540	$227,432,636	$305,245,035	$379,859,761	$451,408,211	$520,016,380	$585,805,090	$648,890,195	$709,382,792	$767,389,412	$823,012,207	$876,349,135	$927,494,128	$976,537,257	$1,023,564,894	$1,068,659,861	$1,111,901,578	$1,153,366,200	$1,193,126,755	$1,231,253,267	$1,267,812,888	$1,302,870,005	$1,336,486,363	$1,368,721,168	$1,399,631,195	$1,429,270,885	$1,457,692,442	$1,484,945,925

Net Present Value	$1,484,945,925
Internal Rate of Return	55.0%
Total Discounted Cost	$33,499,842
Total Discounted Benefit	$1,518,445,767
Ratio	45.3595301

Cost Benefit Analysis Template

Results Calculation Page (3% Discount)

Fiscal Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Undiscounted Flows										
Costs	$0	-$14.944.941	-$14.944.941	-$502.471	-$512.521	-$522.771	-$533.226	-$543.891	-$554.769	-$565.864
Benefits	$0	$0	$101.531.535	$104.171.355	$106.879.810	$109.658.685	$112.509.811	$115.435.066	$118.436.378	$121.515.723
Net Benefit	$0	-$14.944.941	$86.586.594	$103.668.884	$106.367.289	$109.135.914	$111.976.584	$114.891.175	$117.881.609	$120.949.859
Discount Factors										
Discount Rate	3.0%									
Base Year	2011									
Year Index	0	1	2	3	4	5	6	7	8	9
Discount Factor	1.0000	0.9709	0.9426	0.9151	0.8885	0.8626	0.8375	0.8131	0.7894	0.7664
Discounted Flows										
Costs	$0	-$14.509.651	-$14.087.040	-$459.832	-$455.368	-$450.947	-$446.569	-$442.233	-$437.940	-$433.688
Benefits	$0	$0	$95.703.209	$95.331.546	$94.961.327	$94.592.545	$94.225.195	$93.859.272	$93.494.770	$93.131.684
Net	$0	-$14.509.651	$81.616.170	$94.871.714	$94.505.959	$94.141.598	$93.778.627	$93.417.039	$93.056.831	$92.697.996
Cumulative	$0	-$14.509.651	$67.106.519	$161.978.233	$256.484.192	$350.625.790	$444.404.417	$537.821.456	$630.878.286	$723.576.282
Net Present Value	$2.589.723.117									
Internal Rate of Return	576%									
Total Discounted Cost	$39.918.219									
Total Discounted Benefit	$2.629.641.336									
Ratio	65.87571768									

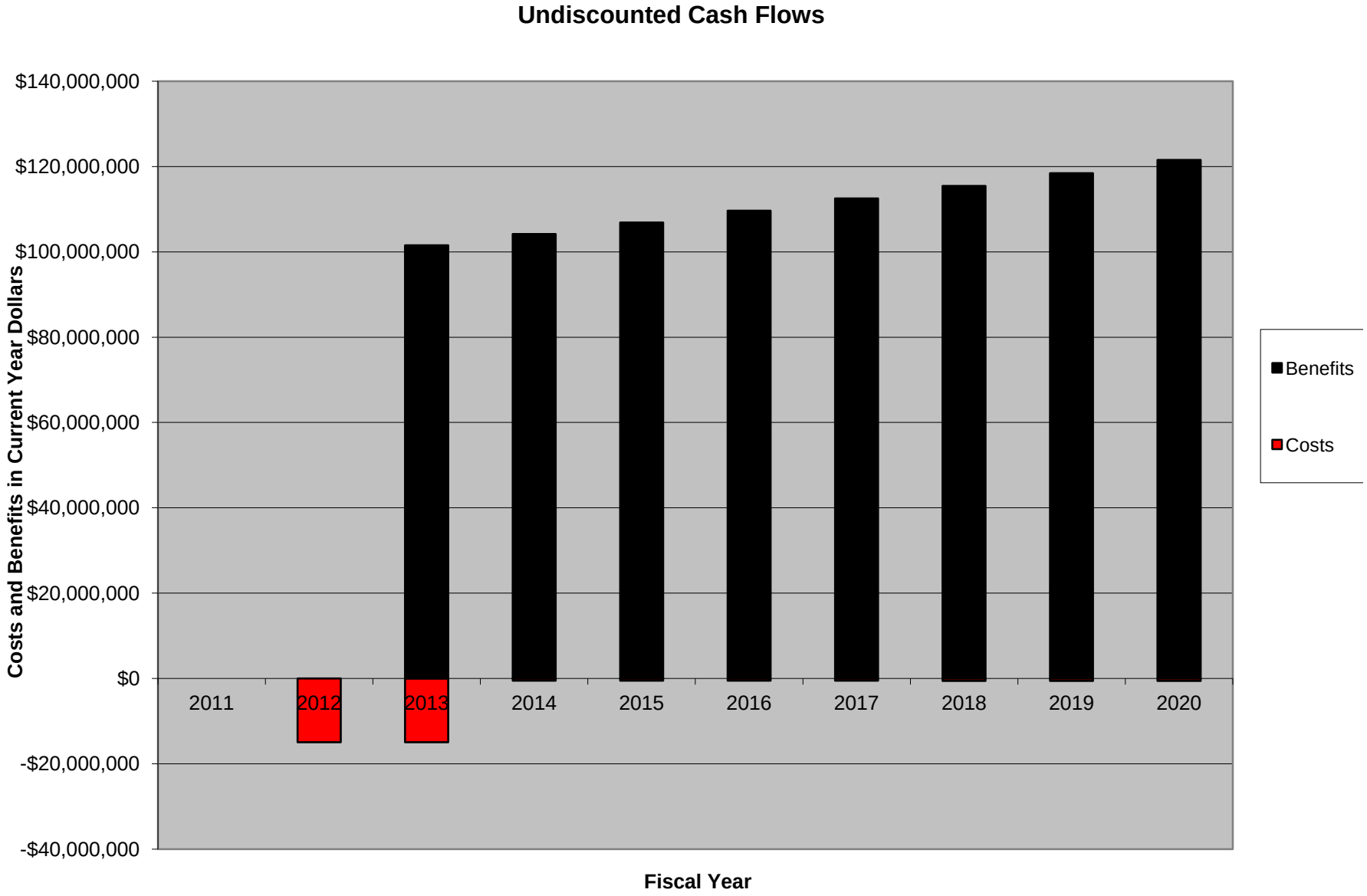
Fiscal Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Undiscounted Flows											
Costs	-$577.181	-$588.725	-$600.500	-$612.510	-$624.760	-$637.255	-$650.000	-$663.000	-$676.260	-$689.785	-$703.581
Benefits	$124.675.132	$127.916.686	$131.242.520	$134.654.825	$138.155.851	$141.747.903	$145.433.348	$149.214.615	$153.094.195	$157.074.644	$161.158.585
Net Benefit	$124.097.951	$127.327.961	$130.642.020	$134.042.316	$137.531.091	$141.110.648	$144.783.348	$148.551.615	$152.417.935	$156.384.859	$160.455.004
Discount Factors											
Discount Rate											
Base Year											
Year Index	10	11	12	13	14	15	16	17	18	19	20
Discount Factor	0.7441	0.7224	0.7014	0.6810	0.6611	0.6419	0.6232	0.6050	0.5874	0.5703	0.5537
Discounted Flows											
Costs	-$429.477	-$425.307	-$421.178	-$417.089	-$413.040	-$409.030	-$405.059	-$401.126	-$397.231	-$393.375	-$389.556
Benefits	$92.770.007	$92.409.735	$92.050.863	$91.693.384	$91.337.293	$90.982.585	$90.629.254	$90.277.296	$89.926.705	$89.577.475	$89.229.601
Net	$92.340.530	$91.984.428	$91.629.684	$91.276.294	$90.924.253	$90.573.555	$90.224.196	$89.876.170	$89.529.473	$89.184.100	$88.840.045
Cumulative	$815.916.813	$907.901.240	$999.530.925	$1.090.807.219	$1.181.731.472	$1.272.305.027	$1.362.529.223	$1.452.405.394	$1.541.934.867	$1.631.118.967	$1.719.959.012

Fiscal Year	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Undiscounted Flows										
Costs	-$717.653	-$732.006	-$746.646	-$761.579	-$776.810	-$792.346	-$808.193	-$824.357	-$840.844	-$857.661
Benefits	$165.348.708	$169.647.775	$174.058.617	$178.584.141	$183.227.328	$187.991.239	$192.879.011	$197.893.865	$203.039.106	$208.318.123
Net Benefit	$164.631.056	$168.915.769	$173.311.971	$177.822.562	$182.450.518	$187.198.893	$192.070.818	$197.069.508	$202.198.262	$207.460.462
Discount Factors										
Discount Rate										
Base Year										
Year Index	21	22	23	24	25	26	27	28	29	30
Discount Factor	0.5375	0.5219	0.5067	0.4919	0.4776	0.4637	0.4502	0.4371	0.4243	0.4120
Discounted Flows										
Costs	-$385.774	-$382.028	-$378.319	-$374.646	-$371.009	-$367.407	-$363.840	-$360.307	-$356.809	-$353.345
Benefits	$88.883.078	$88.537.901	$88.194.065	$87.851.564	$87.510.393	$87.170.546	$86.832.020	$86.494.808	$86.158.906	$85.824.308
Net	$88.497.305	$88.155.873	$87.815.746	$87.476.917	$87.139.384	$86.803.139	$86.468.180	$86.134.501	$85.802.097	$85.470.963
Cumulative	$1.808.456.317	$1.896.612.190	$1.984.427.936	$2.071.904.853	$2.159.044.237	$2.245.847.376	$2.332.315.556	$2.418.450.057	$2.504.252.154	$2.589.723.117

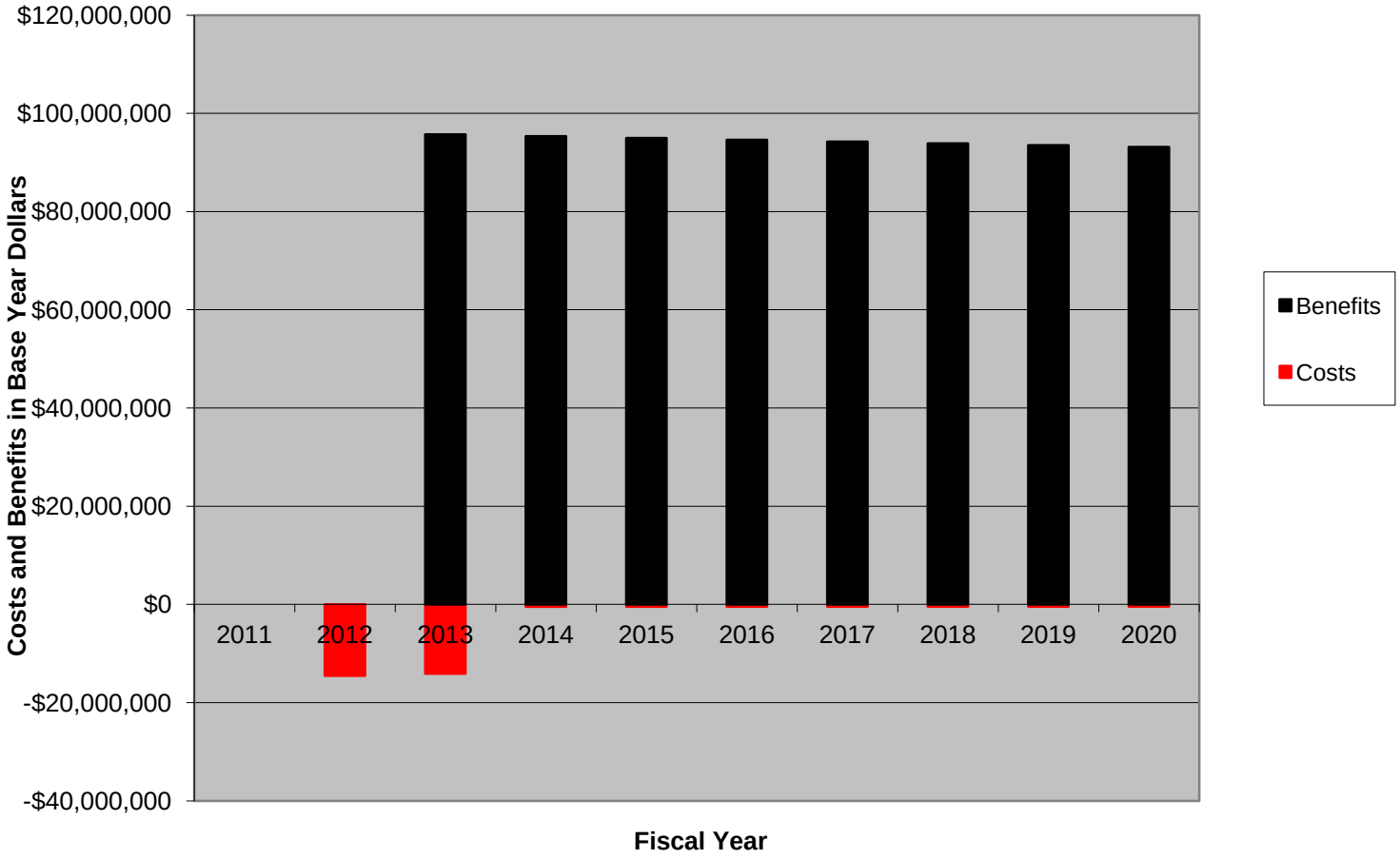
Fiscal Year	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051

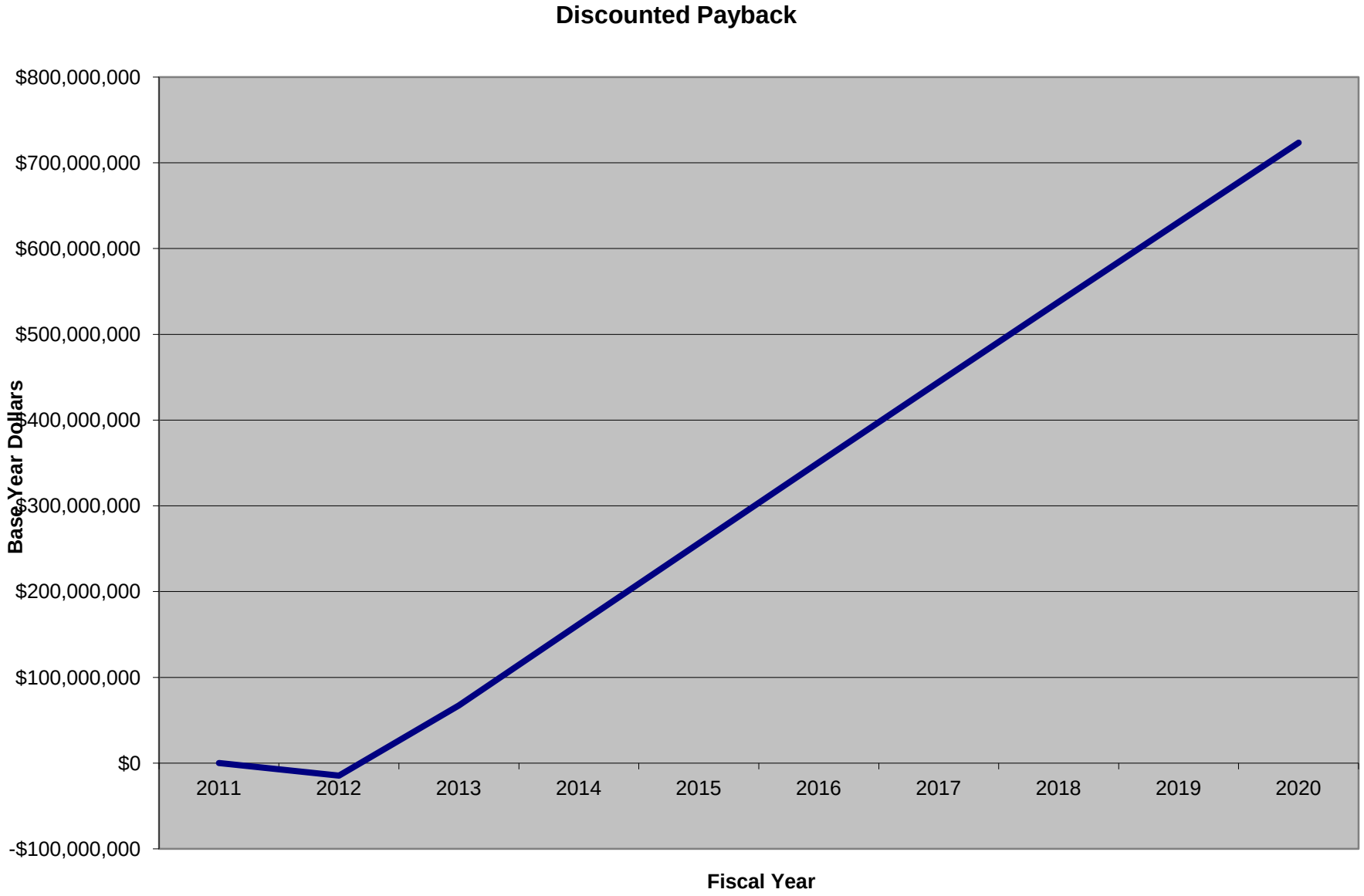
Table ## - Benefit-Cost Summary		
Benefit(s)	Discounted Values (7% Real Discount Rate)	Discounted Values (3% Real Discount Rate)
State of Good Repair		
Replacing Infrastructure Savings	$0	$0
Economic Competitiveness		
Job Creation Opportunity	$0	$0
Livability		
Bike - Recreation	$1,425,757,804	$2,469,124,507
Bike - Mobility	$11,034,954	$19,110,312
Bike - Health	$50,349,139	$87,194,538
Bike - Auto Use	$1,300,537	$2,252,268
Total New Annual Boardings	$0	$0
Total New Transit System Linked Trips	$0	$0
Travel Time Savings	$0	$0
Increased Fare Recovery (Annual)	$5,709,979	$9,888,531
Sustainability		
CO2	$0	$0
VOC Reduction	$50,344	$87,186
NOX Reduction	$41,123	$71,216
PM Reduction	$0	$0
SOx Reduction	$0	$0
Fuel Cost Savings (VMT/23.5MPG)	$2,830,206	$4,901,345
Auto Cost (Annual VMT)	$2,850,422	$4,936,355
Safety		
Accident Reduction (VMT)	$18,521,259	$32,075,079
Total Benefits ($)	**$1,518,445,767**	**$2,629,641,336**
Construction Costs	$27,020,724	$28,596,691
Total O&M Costs	$6,479,118	$11,321,528
Total Costs ($)	**$33,499,842**	**$39,918,219**
B/C Ratio	**45.3**	**65.9**
NPV	$1,484,945,925	$2,589,723,117
Economic Rate of Return (Nominal)	551%	576%

Criteria	Benefit(s)	Description	Qualitative	Quantified	Monetized
State of Good Repair	Replacing Infrastructure Savings	Extending life cycle of existing infrastructure	X		
Economic Competitiveness	Job Creation Opportunity	Projects the number of Short-Term and Long-Term Employment	X	X	
	Improved Business Climates	Describes how project will enhance the business climate for	X		
Livability	Tranist Livability	Targets the six key elements of the	X		
	Context Sensitivity	Ensures the comfort and safety of all users of a particular corridor,	X		
	Transportation Linkage	Project will interface with other	X		
	Transit Needs Index	Identifies areas that have high	X		
	Bike - Recreation	Estimation of new bicycle user for recreation and commuting.	X	X	X
	Bike - Mobility				
	Bike - Health				
	Bike - Auto Use				
	Pedestrian-Transit Access	Estimates increases in transit usage	X	X	
	Mixed-Use Development	Estimates the decrease in automobile uses from mixed-use development	X	X	
	New Annual Boardings	Increase in transit boardings		X	
	Total New Transit System Linked Trips	Increases in linked transit trips (does not count transfers)		X	
	Increased Fare Recovery (Annual)	Increases in fare box revenue from new ridership		X	X
	Travel Time Savings	Door-to-door trip time savings			
Sustainability	CO	Reductions in harmful air pollutants and green house gasses due to auto use reduction		X	
	CO2				
	VOC Reduction			X	X
	NOX Reduction			X	X
	PM Reduction				
	SOx Reduction				
	Fuel Cost Savings	Reductions in fuel consumption		X	X
	Auto Cost	Reduction in average auto cost due to reductions in automobile uses.		X	X
Safety	Accident Reduction	Reductions in property losses, injuries and fatalities due to reductions in automobile uses.			X
	Crime Prevention Through Environmental Design	Design infrastructure to reduce fear and incidences of crime	X		


Undiscounted Cash Flows
$140,000,000
$120,000,000
$100,000,000
$80,000,000
$60,000,000
$40,000,000
$20,000,000
$0
-$20,000,000
-$40,000,000
Costs and Benefits in Current Year Dollars
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
Fiscal Year
Benefits
Costs

Discounted Cash Flow




Discounted Payback
$800,000,000
$700,000,000
$600,000,000
$500,000,000
$400,000,000
$300,000,000
$200,000,000
$100,000,000
$0
-$100,000,000
Base Year Dollars
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
Fiscal Year