



**Analysis of Recently Constructed Interstate Highway Long-Run Average Construction and Rebuilding Costs relative to Fuel Taxes and Fees Collected for Use of System**

Year	Interstate Total VMT (Millions)		Miles per Gallon Gasoline	Gallon Diesel	Federal Fee per Gallon		HVUT, Trailer & Truck tire fees (estimated) prorated to VMT	At 90%-10% Split Interstate Federal Capital Expenditure (Millions)	Interstate Federal Maintenance Expenditure (Millions)	Resulting Federal user fees for each year based on VMT, Federal tax, and MPG	Resulting Federal user capital repayment for each year based on VMT, Federal tax, MPG, and Fee Test Ratio	Inflation Factor	Capital Cost in 2012 Dollars	AAA Corporate Bond Rate	1-Yr Treasury Rate	NPV AAA Corporate Bond Rate	NPV 1-YR Treasury + 1% Rate	NPV Investor WACC Rate	
	Rural	Urban			Est.	Gasoline													Diesel
2005			22.9	5.9	\$0.183	\$0.243	\$0.032			\$0	\$0	1.0000	\$0	2005 5.23%	2005 3.62%	0.0161	\$0	\$0	\$0
2006			22.5	5.9	\$0.183	\$0.243	\$0.032	\$0.006		\$0	\$6,000	1.0000	\$6,000	2006 5.59%	2006 4.94%	0.0065	\$0	\$0	\$0
2007			22.9	6.0	\$0.183	\$0.243	\$0.032	0.783		\$0	\$783,000	1.0000	\$783,000	2007 5.56%	2007 4.53%	0.0103	\$6,334	\$6,332	\$6,477
2008			23.7	6.0	\$0.183	\$0.243	\$0.032	6.683		\$0	\$6,683,000	1.0000	\$6,683,000	2008 5.63%	2008 1.83%	0.038	\$833,773	\$811,670	\$844,030
2009			24.7	6.1	\$0.183	\$0.243	\$0.032	14.116		\$0	\$14,116,000	1.0000	\$14,116,000	2009 5.31%	2009 0.47%	0.0484	\$7,915,914	\$7,604,842	\$7,991,749
2010			25.7	6.2	\$0.183	\$0.243	\$0.032	66.755		\$0	\$66,755,000	1.0000	\$66,755,000	2010 4.94%	2010 0.32%	0.0462	\$23,120,290	\$22,007,557	\$23,410,337
2011			26.7	6.3	\$0.183	\$0.243	\$0.032	24.577		\$0	\$24,577,000	1.0000	\$24,577,000	2011 4.64%	2011 0.17%	0.0447	\$94,045,504	\$89,801,079	\$95,261,482
2012			26.7	6.4	\$0.183	\$0.243	\$0.032	34.023		\$0	\$34,023,000	1.0000	\$34,023,000	2012 3.64%	2012 0.17%	0.0347	\$122,940,363	\$115,716,302	\$125,892,722
2013			26.7	6.5	\$0.183	\$0.243	\$0.032	101.622		\$0	\$101,622,000	1.0000	\$101,622,000	2013 4.27%	2013 0.13%	0.0414	\$163,665,698	\$151,431,356	\$168,573,559
2014			26.7	6.7	\$0.183	\$0.243	\$0.032	140.696		\$0	\$140,696,000	1.0000	\$140,696,000	2014 4.25%	2014 0.11%	0.0414	\$276,562,426	\$255,862,248	\$284,769,908
2015			26.7	6.7	\$0.183	\$0.243	\$0.032	88.898		\$0	\$88,898,000	1.0000	\$88,898,000	2015 4.19%	2015 0.30%	0.0389	\$434,741,554	\$401,713,506	\$448,585,725
2016			26.7	6.7	\$0.183	\$0.243	\$0.032	63.343		\$0	\$63,343,000	1.0000	\$63,343,000	2016 3.50%	2016 0.60%	0.029	\$541,966,938	\$498,461,290	\$565,110,389
2017			26.7	6.7	\$0.183	\$0.243	\$0.032	54.091		\$0	\$54,091,000	1.0000	\$54,091,000	2017 3.68%	2017 1.17%	0.0251	\$627,585,344	\$573,995,443	\$662,867,496
2018	104	13	26.7	6.7	\$0.183	\$0.243	\$0.032	36.451		\$24,870,601	\$11,580,399	1.0000	\$36,451,000	2018 3.96%	2018 2.25%	0.0171	\$708,670,727	\$648,499,252	\$760,520,894
2019	111	13	26.7	6.7	\$0.183	\$0.243	\$0.032			\$26,362,837	\$26,362,837	1.0000	\$0	2019 4.00%	2019 2.00%	0.02	\$749,061,171	\$679,882,041	\$818,427,371
2020	117	14	26.7	6.7	\$0.183	\$0.243	\$0.032			\$27,855,073	\$27,855,073	1.0000	\$0	2020 4.00%	2020 2.00%	0.02	\$751,606,268	\$673,124,780	\$839,588,406
2021	123	15	26.7	6.7	\$0.183	\$0.243	\$0.032			\$29,347,309	\$29,347,309	1.0000	\$0	2021 4.00%	2021 2.00%	0.02	\$752,701,243	\$664,627,799	\$860,437,333
2022	129	16	26.7	6.7	\$0.183	\$0.243	\$0.032			\$30,839,545	\$30,839,545	1.0000	\$0	2022 4.00%	2022 2.00%	0.02	\$752,288,091	\$654,388,904	\$880,955,426
2023	136	16	26.7	6.7	\$0.183	\$0.243	\$0.032			\$32,331,781	\$32,331,781	1.0000	\$0	2023 4.00%	2023 2.00%	0.02	\$750,306,488	\$642,204,340	\$901,122,834
2024	142	17	26.7	6.7	\$0.183	\$0.243	\$0.032			\$33,824,017	\$33,824,017	1.0000	\$0	2024 4.00%	2024 2.00%	0.02	\$746,693,695	\$628,168,736	\$920,918,516
2025	148	18	26.7	6.7	\$0.183	\$0.243	\$0.032			\$35,316,253	\$35,316,253	1.0000	\$0	2025 4.00%	2025 2.00%	0.02	\$741,384,465	\$612,175,060	\$940,320,169
2026	154	19	26.7	6.7	\$0.183	\$0.243	\$0.032			\$36,808,489	\$36,808,489	1.0000	\$0	2026 4.00%	2026 2.00%	0.02	\$734,310,940	\$594,164,571	\$959,304,151
2027	161	19	26.7	6.7	\$0.183	\$0.243	\$0.032			\$38,300,725	\$38,300,725	1.0000	\$0	2027 4.00%	2027 2.00%	0.02	\$725,402,549	\$574,076,765	\$977,845,401
2028	167	20	26.7	6.7	\$0.183	\$0.243	\$0.032			\$39,792,961	\$39,792,961	1.0000	\$0	2028 4.00%	2028 2.00%	0.02	\$714,585,897	\$551,849,320	\$995,917,356
2029	171	21	26.7	6.7	\$0.183	\$0.243	\$0.032			\$40,787,785	\$40,787,785	1.0000	\$0	2029 4.00%	2029 2.00%	0.02	\$701,784,653	\$527,418,050	\$1,013,491,859
2030	175	21	26.7	6.7	\$0.183	\$0.243	\$0.032		7.600	\$41,807,480	\$34,207,480	1.0000	\$7,600,000	2030 4.00%	2030 2.00%	0.02	\$687,436,742	\$501,229,173	\$1,031,066,318
2031	180	22	26.7	6.7	\$0.183	\$0.243	\$0.032		7.600	\$42,852,667	\$35,252,667	1.0000	\$7,600,000	2031 4.00%	2031 2.00%	0.02	\$679,358,433	\$481,032,343	\$1,056,670,368
2032	184	22	26.7	6.7	\$0.183	\$0.243	\$0.032		7.600	\$43,923,984	\$36,323,984	1.0000	\$7,600,000	2032 4.00%	2032 2.00%	0.02	\$669,869,997	\$459,153,067	\$1,082,702,763
2033	189	23	26.7	6.7	\$0.183	\$0.243	\$0.032			\$45,022,083	\$45,022,083	1.0000	\$0	2033 4.00%	2033 2.00%	0.02	\$658,887,854	\$435,513,956	\$1,109,161,506
2034	194	23	26.7	6.7	\$0.183	\$0.243	\$0.032			\$46,147,635	\$46,147,635	1.0000	\$0	2034 4.00%	2034 2.00%	0.02	\$638,420,401	\$402,206,629	\$1,127,987,789
2035	199	24	26.7	6.7	\$0.183	\$0.243	\$0.032			\$47,301,326	\$47,301,326	1.0000	\$0	2035 4.00%	2035 2.00%	0.02	\$615,963,677	\$366,740,763	\$1,146,750,562
2036	204	24	26.7	6.7	\$0.183	\$0.243	\$0.032			\$48,483,859	\$48,483,859	1.0000	\$0	2036 4.00%	2036 2.00%	0.02	\$591,408,844	\$329,022,620	\$1,165,416,190
2037	209	25	26.7	6.7	\$0.183	\$0.243	\$0.032			\$49,695,956	\$49,695,956	1.0000	\$0	2037 4.00%	2037 2.00%	0.02	\$564,641,984	\$288,954,923	\$1,183,948,271
2038	214	26	26.7	6.7	\$0.183	\$0.243	\$0.032			\$50,938,355	\$50,938,355	1.0000	\$0	2038 4.00%	2038 2.00%	0.02	\$535,543,870	\$246,436,737	\$1,202,307,454
2039	219	26	26.7	6.7	\$0.183	\$0.243	\$0.032			\$52,211,814	\$52,211,814	1.0000	\$0	2039 4.00%	2039 2.00%	0.02	\$503,989,736	\$201,363,333	\$1,220,451,245
2040	225	27	26.7	6.7	\$0.183	\$0.243	\$0.032			\$53,517,109	\$53,517,109	1.0000	\$0	2040 4.00%	2040 2.00%	0.02	\$469,849,039	\$153,626,065	\$1,238,333,798
2041	230	28	26.7	6.7	\$0.183	\$0.243	\$0.032			\$54,855,037	\$54,855,037	1.0000	\$0	2041 4.00%	2041 2.00%	0.02	\$432,985,207	\$103,112,225	\$1,255,905,690
2042	236	28	26.7	6.7	\$0.183	\$0.243	\$0.032		11.440	\$56,226,413	\$44,786,413	1.0000	\$11,440,000	2042 4.00%	2042 2.00%	0.02	\$393,255,377	\$49,704,904	\$1,273,113,693
2043	242	29	26.7	6.7	\$0.183	\$0.243	\$0.032		11.440	\$57,632,073	\$46,192,073	1.0000	\$11,440,000	2043 4.00%	2043 2.00%	0.02	\$362,407,723	\$5,066,046	\$1,302,026,917
2044	248	30	26.7	6.7	\$0.183	\$0.243	\$0.032		11.440	\$59,072,875	\$47,632,875	1.0000	\$11,440,000	2044 4.00%	2044 2.00%	0.02	\$328,864,276	\$42,359,807	\$1,331,184,935
2045	254	30	26.7	6.7	\$0.183	\$0.243	\$0.032			\$60,549,697	\$60,549,697	1.0000	\$0	2045 4.00%	2045 2.00%	0.02	\$292,480,658	\$92,692,463	\$1,360,565,183
2046	261	31	26.7	6.7	\$0.183	\$0.243	\$0.032			\$62,063,439	\$62,063,439	1.0000	\$0	2046 4.00%	2046 2.00%	0.02	\$241,208,200	\$157,839,424	\$1,378,016,416
2047	267	32	26.7	6.7	\$0.183	\$0.243	\$0.032			\$63,615,025	\$63,615,025	1.0000	\$0	2047 4.00%	2047 2.00%	0.02	\$186,310,551	\$226,499,949	\$1,394,910,156
2048	274	33	26.7	6.7	\$0.183	\$0.243	\$0.032			\$65,205,401	\$65,205,401	1.0000	\$0	2048 4.00%	2048 2.00%	0.02	\$127,603,347	\$298,818,423	\$1,411,172,839
2049	281	34	26.7	6.7	\$0.183	\$0.243	\$0.032			\$66,835,536	\$66,835,536	1.0000	\$0	2049 4.00%	2049 2.00%	0.02	\$64,893,864	\$374,944,538	\$1,426,725,484
2050	288	35	26.7	6.7	\$0.183	\$0.243	\$0.032			\$68,506,424	\$68,506,424	1.0000	\$0	2050 4.00%	2050 2.00%	0.02	\$2,019,338	\$455,033,476	\$1,441,483,346
Total	6,434	772			\$0.007	\$0.036		\$632					\$689,164,000						

Constructed Route Miles	28.6	\$/Total VMT	\$0.000	\$0.063	\$0.200
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\$2012 per Constructed Route Mile	\$24,096,643	Deficit per Route Mile	\$70,606	\$15,910,261	\$50,401,516
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Test Ratio for Fees = 16.75

Truck (N-1) Prorate	Additional funds per VMT to make up capital deficit - add to existing fuel fees			
Total Cost Ratio	Total Cost Ratio			
Automobile	100%	\$0.000	\$0.052	\$0.165
Class 8 Truck	400%	\$0.001	\$0.208	\$0.659
Computed Cost Responsibility per Class at VMT				
Automobile	65%			
Class 8 Truck	35%			