Model Parameter Values Used in Analyses

All Monetized Estimates are in Constant Dollars of 2019

PARAMETER NAME	VALUE USED IN CALCULATIONS	RECOMMENDED VALUE	UNIT OF MEASUREMENT	REFERENCES & COMMENTS
OPTIONS FOR ANALYSIS				
First Year of Analysis	2021	2021	year	Present year (Discounting base)
Base Year for all Monetization Assumptions	2019	2019	year	US DOT Benefit-Cost Analysis Guidance for Discretionary Grant Programs, February 2021
Real Discount Rate	7.0%	7.0%	% per year	US DOT Benefit-Cost Analysis Guidance for Discretionary Grant Programs, February 2021
Real Discount Rate implicit in Social Cost of Carbon	3.0%	3.0%	% per year	ibid
Annualization Factor	300	300	days	Assumption
UNIT CONVERSIONS				
Kilograms per Short U.S. Ton	907.19	907.185	kg	n/a
Kilograms per Metric Ton	1,000	1,000	kg	n/a
VALUATION OF TRAVEL TIME SAVING				
Value of Time Estimates				
Personal Travel, all modes except Bike/Ped	$16.5	$16.5	$ per person-hour	US DOT Benefit-Cost Analysis Guidance for Discretionary Grant Programs, February 2021
Business Travel, all modes except Bike/Ped	$27.9	$27.9	$ per person-hour	ibid
All Purposes	$17.9	$17.9	$ per person-hour	ibid
		17.8		
Personal vs. Business Travel				
Share of Personal Travel in Total Travel	88.2%	88.2%	percent of total	US DOT Benefit-Cost Analysis Guidance for Discretionary Grant Programs, February 2021
Share of Business Travel in Total Travel	11.8%	11.8%	percent of total	ibid
Hourly Earnings of Vehicle Operators				
Truck Drivers	$30.8	$30.8	$ per person-hour	US DOT Benefit-Cost Analysis Guidance for Discretionary Grant Programs, February 2021
Year of Value of Time Estimates	2019	2019	year	n/a
Annual Growth in Real Value of Time	0.00%	0.00%	% per year	US DOT Guidance, September 2017
Average Daily Vehicle Occupancy				
Auto	1.67	1.67	persons per vehicle	US DOT Benefit-Cost Analysis Guidance for Discretionary Grant Programs, February 2021
Trucks	1.00	1.00	persons per vehicle	ibid
VEHICLE OPERATING COSTS				
Automobiles	$0.43	$0.43	$ per mile	US DOT Benefit-Cost Analysis Guidance for Discretionary Grant Programs, February 2021
Trucks	$0.93	$0.93	$ per mile	ibid
ACCIDENT COSTS				
Average Injury Cost by Severity Level				
MAIS 1 - Minor injury	$32,700	$32,700	$ per injury	US DOT, Guidance on Treatment of the Economic Value of a Statistical Life in U.S. Department of Transportation Analyses (2016); as in the US DOT Benefit-Cost Analysis Guidance for Discretionary Grant Programs, February 2021; MAIS = Maximum Abbreviated Injury Scale
MAIS 2 - Moderate injury	$512,300	$512,300	$ per injury	
MAIS 3 - Serious injury	$1,144,500	$1,144,500	$ per injury	
MAIS 4 - Severe injury	$2,899,400	$2,899,400	$ per injury	
MAIS 5 - Critical injury	$6,463,700	$6,463,700	$ per injury	
MAIS 6 - Fatality	$10,900,000	$10,900,000	$ per fatality	
O - No Injury	$3,700	$3,700	$ per injury	US DOT, Guidance on Treatment of the Economic Value of a Statistical Life in U.S. Department of Transportation Analyses (2016); as in the US DOT Benefit-Cost Analysis Guidance for Discretionary Grant Programs, February 2021; KABCO Scale
C - Possible Injury	$72,500	$72,500	$ per injury	
B - Non-incapacitating	$142,000	$142,000	$ per injury	
A - Incapacitating	$521,300	$521,300	$ per injury	
K - Killed	$10,900,000	$10,900,000	$ per fatality	
U - Injured (Severity Unknown)	$197,600	$197,600	$ per injury	
Average Cost of a Property Damage Only (PDO) Accident	$4,500	$4,500	$ per damaged vehicle	US DOT Benefit-Cost Analysis Guidance for Discretionary Grant Programs, February 2021
Year of Accident Cost Estimates	2019	2019	year	n/a
Annual Growth in Real Injury Costs	0.00%	0.00%	% per year	US DOT Guidance, September 2017
EMISSION COSTS				
Nitrogen Oxides (NOx)	Time-dependent	Time-dependent	$ per metric ton	US DOT Benefit-Cost Analysis Guidance for Discretionary Grant Programs, February 2021
Particulate Matter (PM)	Time-dependent	Time-dependent	$ per metric ton	ibid
Sulfur Dioxide (SO2)	Time-dependent	Time-dependent	$ per metric ton	ibid
Carbon Dioxide (CO2)	Time-dependent	Time-dependent	$ per metric ton	ibid