Appendix: Strategy Evaluation Methodology

This appendix documents the methodology used to evaluate the GHG emissions reduction impact of each strategy.

The Projected scenario from the wedge analysis, which includes existing state and federal actions related to fuel efficiency and electrification, was assumed to be the starting point for scenario evaluation. As a result, the absolute quantity of GHG emissions eliminated decreases as horizon years extend further into the future as it is assumed that vehicles are more fuel efficient, fueled by cleaner energy sources, and EVs comprise a larger share of the vehicle fleet. A summary of the total VMT and GHG emissions reduction from the analyzed strategies is shown in **Table 20** and **Table 21** in the report.

The following assumptions are consistent across all VMT reduction calculations for all strategies:

Universal Assumptions:

- Population will increase by 1.2% annually based on City-provided population projections that estimate Bainbridge Island residential population will grow from 24,556 in 2021 to 28,660 by 2036.
- Total VMT increases in line with population growth.
- The cost of owning and operating a vehicle in 2019 was $0.62 per mile. Future costs assume an annual inflation rate of 1.4% based on observed data between 2009 and 2019.[1]
- All VMT reductions are calculated based on observed daily trip rates and are annualized to determine GHG emissions reductions by horizon year.
- The travel market analysis provides the basis for how residents, employees, and visitors contribute to existing VMT on Bainbridge Island. As described in the travel market summary, trips in each travel market are split into the following categories:
    - Internal-Internal (II): trips that start and end on Bainbridge Island
    - External-Internal (XI): trips that start elsewhere and end on Bainbridge Island
    - Internal-External (IX): trips that start on Bainbridge Island and end elsewhere

Emissions factors from the PSREA analysis were applied to VMT to translate future VMT reductions into GHG emissions reductions. These emissions factors, and assumptions around EV adoption rates are shown in **Table 24** below. All subsequent sections use the PSREA assumptions regarding aggressive EV adoption rates.

[1] BTS, Per-Mile Costs of Owning and Operating a Vehicle (Current Dollars), https://www.bts.dot.gov/content/mile-costs-owning-and-operating-automobile

Table 1: Emissions Factors and Assumed EV Adoption Rates

	Gasoline		Diesel		EV	
	Share of VMT	gCO_2/gal	Share of VMT	gCO_2/gal	Share of VMT	gCO_2e/kW
2014	99%	8,780	1%	10,210	0%	530
2018	97%	8,780	1%	10,210	2%	530
2021	96%	8,400	1%	9,770	3%	350
2025	93%	7,650	1%	8,900	6%	160
2030	79%	6,720	1%	7,810	20%	0
2035	59%	6,430	1%	7,480	40%	0
2040	40%	6,150	0%	7,150	60%	0
2045	15%	6,150	0%	7,150	85%	0

Sources: PRSEA, Fehr & Peers, 2023

The methodology used to calculate the VMT reduction from each strategy is described below.

STP Strategies

As noted above, the shift in mode share from implementing all infrastructure improvements in the STP could result in a 6% decrease in On-Island (II) VMT as compared to a scenario where no projects are constructed. To determine the VMT impact of STP strategies in future horizon years, it was assumed that 25% of projects would be constructed by 2025, 75% by 2030, and 100% by 2035.

The expected VMT reduction is shown in **Table 25**.

Table 2: Daily VMT Reduction from STP Strategies

	2021	2025	2030	2035	2040	2045
Bainbridge Population	24,560	25,730	27,190	28,660	30,210	31,830
On-Island Daily II VMT	60,160	63,030	66,620	70,210	74,000	77,990
Total II VMT reduction	0%	-1.5%	-4.6%	-6.1%	-6.1%	-6.1%
Daily VMT reduction	**0**	**960**	**3,050**	**4,280**	**4,510**	**4,760**

Source: Fehr & Peers, 2023

Enhanced Transit

The 2042 Long Range Transit Plan (LRTP) for Kitsap Transit plans for three new transit lines to serve Bainbridge Island, including a Bainbridge Intra-Island line, a circulator in Downton Winslow, and a new Bainbridge-Poulsbo-Viking line by 2040. The LRTP also plans to expand existing on-demand service on Bainbridge Island; this service is also referenced in the Sustainable Transportation Plan's planned programs. Planned service changes are shown in **Table 26** below.

Table 3: 2042 LRTP Service Overview and Forecast Ridership Demand

Line	New Vehicles	Annual Revenue Hours	Riders per Revenue Hour[1]	Annual Incremental Trips	Scaling Factor[2]	New Daily Transit Trips
Bainbridge Intra-Island	4	23,400	9.5	222,300	0.50	370
Winslow Circulator	1	6,500	9.5	61,750	0.25	50
Bainbridge-Poulsbo-Viking	6	34,900	9.5	331,550	1	1,110
BI Ride (On Demand)	2	3,100	2.6	8,060	1	30

Source: Fehr & Peers, 2023, Kitsap Transit 2022-2042 LRTP, Kitsap Transit 2022 -2042 LRTP Existing Conditions analysis

1. Based on 2022 Kitsap Transit averages as reported in the 2022 3rd Quarter Performance Report.
2. Scaling factor based on population within service area.

It was assumed that the Bainbridge Intra-Island line would begin service in 2025, and that 100% of new service would be effective by 2030. About 50% of the estimated daily incremental transit trips would be shifted from II/XI/IX vehicle trips, resulting in the VMT reduction shown in **Table 27**.

Table 4: Daily VMT Reduction from New Transit Service

	2025	2030	2035	2040	2045
Daily trips using new transit service	370	1,560	1,640	1,730	1,830
Daily VMT generated by new transit service	130	370	370	370	370
Passenger VMT reduced by new transit service	-610	-2,580	-2,720	-2,870	-3,030

Source: Fehr & Peers, 2023

Land Use

There is also the potential for the City of Bainbridge Island to reduce VMT through land use policies that reduce the need for lengthy vehicle trips. Two strategies are considered in this analysis: workforce housing strategies that would allocate housing for a subset of people who currently commute to Bainbridge Island, as well as strategies to reduce the number of retail/shopping trips made by Bainbridge Island residents to destinations such as Poulsbo and Silverdale on the Kitsap County Peninsula.

Workforce Housing

The City of Bainbridge Island plans to accommodate more than 440 units of muti-family housing on the island by 2036.[2] This strategy assumes that 50% of units would be dedicated to affordable and/or workforce housing, which could be made available to households earning up to 120% of AMI. This could reduce VMT from employees who drive from neighboring jurisdictions to work on Bainbridge Island by providing affordable housing near their jobs.

[2] Bainbridge Island 2016 Comprehensive Plan, Housing Element

Data from the Longitudinal Employment-Household Dynamics (LEHD) program estimates that approximately 4,000 people employed on Bainbridge Island in 2021 live in another jurisdiction.[3] StreetLight data indicate that this group generates around 6,400 daily trips, and that the average on-island trip length is 6 miles. The analysis assumed a 1.2% annual growth rate in the number of people employed on Bainbridge who live elsewhere, in line with population growth. Based on these inputs, it is expected that in 2030, workforce housing could eliminate 360 daily vehicle trips and reduce daily VMT by 2,140 as shown in **Table 28**. This strategy could eliminate 400 daily trips by 2045 and reduce daily VMT by 2,380.

Table 5: Daily VMT Reduction from Workforce Housing

	2021	2025	2030	2035	2040	2045
Off-Island Employees	3,930	4,120	4,360	4,590	4,840	5,100
Daily IX/XI Off-Island Employee Vehicle Trips	6,400	6,710	7.090	7.470	7.880	8.300
Cumulative Number of New MF Units for Workforce Housing	0	0	210	220	230	240
On-Island Trip Length	6	6	6	6	6	6
Daily Trips Eliminated	**0**	**0**	**340**	**360**	**380**	**400**
Daily VMT reduction	**0**	**0**	**-2,040**	**-2,140**	**-2,260**	**-2,380**

Source: Fehr & Peers, 2023

Retail Trips

Since retail on Bainbridge Island is limited, many residents travel off-island to shop. Shifting existing retail trips to ecommerce has the potential to reduce VMT by reducing the number of off-island personal vehicle trips without restricting residents access to daily essentials and other goods. Home shopping and deliveries have increased steadily over the past ten years and experienced a significant increase during the first two years of the Covid-19 pandemic. Levels in 2022 were still well above 2019 levels and will likely continue to increase.

While the City cannot directly shift retail trips to ecommerce, the City can take steps to develop adequate infrastructure for deliveries, such as loading zones or consolidated delivery locations. Policy changes to facilitate the development of commercial establishments on Bainbridge Island could also help reduce off-island shopping trips.

[3] Seattle residents were excluded from this total since it was assumed that the majority of these workers would commute by ferry instead of private automobile.

As shown in **Table 29**, assuming that 25% of all existing off-island non-work resident trips are retail trips and that the average on-island retail trip length is 5 miles, shifting one third of all retail trips to ecommerce could eliminate 840 daily vehicle trips by 2045 and reduce daily VMT by 4,210.[4]

Table 6: Daily VMT Reduction from Shift to Ecommerce

	2021	2025	2030	2035	2040	2045
2021 Bainbridge Residents	24,560	25,730	27,190	28,660	30,210	31,830
Daily IX/XI Non-Work Resident Trips	8,110	8,500	8,980	9,470	9,980	10,510
Daily IX/XI Non-Work Retail Trips	2,030	2,120	2,250	2,370	2,490	2,630
IX/XI Non-Work Resident trip length	5	5	5	5	5	5
Percent of IX/XI retail trips shifted to ecommerce	0%	10%	20%	25%	30%	32%
Daily Trips Eliminated	**0**	**210**	**450**	**590**	**750**	**840**
Daily VMT reduction	**0**	**-1,060**	**-2,250**	**-2,960**	**-3,740**	**-4,210**

Source: Fehr & Peers, 2023

Travel Demand Management (Telework)

The unanticipated shift to remote work from the Covid-19 pandemic is expected to reduce employee trips and associated VMT below 2014 baseline conditions, and therefore is considered a substantial piece of the City's VMT reduction strategies.

The 2019 and 2021 StreetLight datasets were used to estimate the number of employee trips with and without telework, respectively, and both datasets were scaled to future years by the expected rate of population growth. For IX/XI trips, trips were further broken down into trips to Seattle via ferry, and north to Kitsap County via SR 305.

The total expected trip and VMT reduction for each travel market (II, XI, IX) are shown in **Table 30** and **Table 31**, and the total trip reduction is shown in **Table 32.** In 2021, telework resulted in a total daily on-island VMT reduction of 19,070 and is expected to result in an on-island daily VMT reduction of 24,720 by 2045. StreetLight data indicated that the largest reduction in on-island employee VMT was from a reduction in on-island trips (a substantial portion of these vehicle trips are to/from the ferry terminal), followed by VMT from trips to/from Seattle, and finally, trips to/from Kitsap County.

[4] The analysis did not consider the potential impact of increased delivery on net VMT. However, research suggests that VMT is reduced by 95% for every retail trip substituted with a delivery. From the Chicago Metropolitan Agency for Planning, Assessing the E-Commerce Effect: Parcel Delivery vs. Household Shopping, February 2020. https://www.cmap.illinois.gov/documents/10180/1109463/Argonne_Stinson_Ecommerce_2020_02_24.pdf/15898068-e3a5-91b1-4df0-3e27dd741e2b

Table 7: Daily VMT Reduction from Telework (II Trips)

	2019	2021	2025	2030	2035	2040	2045
Bainbridge Residents	24,490	24,560	25,730	27,190	28,660	30,210	31,830
Daily employee trips w/o telework	10,900	10,930	11,460	12,110	12,760	13,450	14,170
Daily employee trips w/ telework	0	6,700	7,020	7,420	7,820	8,240	8,680
Trip length (miles)	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Daily trips eliminated	**0**	**4,230**	**4,440**	**4,690**	**4,940**	**5,210**	**5,490**
Daily VMT reduction	**0**	**-19,070**	**-19,980**	**-21,120**	**-22,260**	**-23,460**	**-24,720**

Source: Fehr & Peers, 2023

Table 8: Daily VMT Reduction from Telework (XI & XI Trips)

	2019	2021	2025	2030	2035	2040	2045
Bainbridge Residents	24,490	24,560	25,730	27,190	28,660	30,210	31,830
Daily employee trips w/o telework	9,740	9,760	10,240	10,820	11,400	12,020	12,660
Daily employee trips w/ telework	0	9,440	9,880	10,460	11,020	11,620	12,240
Share of trips to Seattle	68%	68%	68%	68%	68%	68%	68%
Trip length to Ferry Terminal (miles)	4	4	4	4	4	4	4
Share of trips to Kitsap County	32%	32%	32%	32%	32%	32%	32%
Trip length to Kitsap County (miles)	6	6	6	6	6	6	6
Daily trips eliminated	**0**	**320**	**340**	**360**	**380**	**400**	**420**
Daily VMT reduction	**0**	**-1,520**	**-1,600**	**-1,680**	**-1,780**	**-1,880**	**-1,980**

Source: Fehr & Peers, 2023

Table 9: Daily VMT Reduction from Telework across all Travel Markets

	2019	2021	2025	2030	2035	2040	2045
Daily trips eliminated	0	4,570	4,780	5,060	5,330	5,620	5,920
Total change in VMT	0	-20,590	-21,580	-22,810	-24,040	-25,330	-26,700

Source: Fehr & Peers, 2023

Pricing Parking

Pricing parking could also reduce vehicle trips by increasing the cost of driving. Within the City, priced parking strategies would likely be most effective in Winslow as there are many attractions and activity centers, but limited parking supply.

In 2018, the City developed a downtown parking inventory as part of the Downtown Parking Strategy. The inventory found that there are 387 on-street parking spaces in Downtown Winslow that are utilized for

1,264 unique daily vehicle trips.[5] From this, it was assumed that 1,264 vehicle trips represents the maximum number of trips that can park on-street on any given day, and represents the number of trips that would pay for parking if the City chose to price on-street parking. The analysis assumes that the City would begin pricing parking in 2030.

Table 35 shows the total potential impact that pricing parking in Winslow could have on daily trips and VMT. At a flat rate of $2 per hour adjusted for inflation in future years, priced parking has the potential to eliminate over 700 vehicle trips and 2,900 VMT per day in 2045. The number of trips to Winslow was determined using StreetLight data and consists of resident trips, shown in **Table 33** and visitor trips, shown in **Table 34**. Trips are scaled to future horizon years by population growth. Resident trips are more impacted by parking fees because resident trips are shorter and therefore lower cost. As a result, the additional cost of parking is a higher share of the total trip cost and more effectively disincentivizes vehicle trips.

Table 10: Daily VMT Reduction from Pricing Parking (On-Island Trips)

	2030	2035	2040	2045
Daily Trips to Winslow	2,500	2,635	2,777	2,926
Percent of trips parked on street	0.36	0.34	0.33	0.31
Number of trips parked on street	900	900	900	900
Per-mile cost of automobile ownership	$0.72	$0.77	$0.82	$0.88
Trip distance to Winslow (miles)	3.8	3.8	3.8	3.8
Average trip cost w/o priced parking	$2.73	$2.93	$3.13	$3.36
Cost of parking (2 hours)	$4.00	$4.30	$4.60	$4.90
Average trip cost/ priced parking	$6.73	$7.23	$7.73	$8.26
Elasticity				
Percent change in trip cost	146%	146%	146%	146%
Price elasticity of vehicle trips[1]	-0.5	-0.5	-0.5	-0.5
Percent change in vehicle trips	-73%	-73%	-73%	-73%
Daily trips eliminated	**660**	**660**	**660**	**660**
Daily VMT reduction	**-2,520**	**-2,520**	**-2,520**	**-2,520**

Source: Fehr & Peers, 2023

Notes

1. Based on research from Traveler Response to Transportation System Changes Handbook (TRPC Report 95, 2004); Transit Price Elasticities and Cross-Elasticities (Victoria Transport Policy Institute, 2021) indicating price elasticity of demand for park and ride facilities ranges from -0.2 to -0.5. It was assumed that II trips would be more elastic since Bainbridge Island residents may have more choice for mode of travel to Downtown Winslow.

[5] Bainbridge Island, Downtown Parking Strategy Strategies Report 2018, https://www.bainbridgewa.gov/DocumentCenter/View/11294/BI-Downtown-Parking-Strategy-Report-2018

Table 11: Daily VMT Reduction from Pricing Parking (Trips with an Off-Island Origin or Destination)

	2030	2035	2040	2045
Daily Trips to Winslow	1000	1050	1110	1170
Percent of trips parked on street	0.36	0.34	0.33	0.31
Number of trips parked on street	360	360	360	360
Per-mile cost of automobile ownership	$0.72	$0.77	$0.82	$0.88
Trip distance to Winslow (miles)	6.5	6.5	6.5	6.5
Average trip cost w/o priced parking	$4.67	$5.01	$5.36	$5.74
Cost of parking	$4.00	$4.30	$4.60	$4.90
Average trip cost w/ priced parking	$8.67	$9.31	$9.96	$10.64
Elasticity				
Percent change in trip cost	86%	86%	86%	86%
Price elasticity of vehicle trips[1]	-0.2	-0.2	-0.2	-0.2
Percent change in vehicle trips	-17%	-17%	-17%	-17%
Daily trips eliminated	**60**	**60**	**60**	**60**
Daily VMT reduction	**-400**	**-400**	**-400**	**-400**

Source: Fehr & Peers, 2023

1. Based on research from Traveler Response to Transportation System Changes Handbook (TRPC Report 95, 2004); Transit Price Elasticities and Cross-Elasticities (Victoria Transport Policy Institute, 2021) indicating price elasticity of demand for park and ride facilities ranges from -0.2 to -0.5. It was assumed that IX/XI trips would be less elastic since visitors could have few options other than paying for parking once they have arrived in Downtown Winslow.

Table 12: Daily VMT Reduction from Pricing Parking across all Travel Markets

	2030	2035	2040	2045
Daily trips eliminated	720	720	720	720
Daily VMT reduction	-2,920	-2,920	-2,920	-2,920

Source: Fehr & Peers, 2023

E-Bike Subsidies/Incentives

The City can also reduce VMT by subsidizing non-auto modes to promote their use. Cities such as Denver, Colorado have developed programs to subsidize up to $1,200 of an e-bike purchase to encourage residents to shift trips to non-auto modes. The average rebate per e-bike purchase is approximately $1,000 and the size of the rebate varies by household income, with lower-income households eligible for a $1,200 rebate as compared to $400 for other households. The rebate size also varies by type of bike purchased, and higher rebate amounts are available for cargo e-bike purchases.

As shown in **Table 36**, a $3M investment in e-bike subsidies between 2025 and 2045 could subsidize approximately 3,000 e-bike purchases on Bainbridge Island.

Table 13: Daily E-Bike Subsidy Cost between 2025 and 2045

	2025	2030	2035	2040	2045	Cumulative
Average Subsidy Size	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
Program Cost	$200,000	$400,000	$800,000	$800,000	$800,000	$3,00,000
Households with a subsidy	200	400	800	800	800	3000
Cost/VMT Eliminated	**$390**	**$130**	**$111**	**$71**	**$52**	**$390**

Source: Fehr & Peers, 2023

At this scale and as shown in **Table 37**, by 2045 an e-bike rebate program could eliminate 4,640 daily vehicles trips and 15,390 daily VMT. The analysis assumes that 15% of On-Island (II) vehicle trips could be shifted to e-bikes in 2025 and that 30% of vehicle trips are substituted by e-bikes by 2030 as bike facilities are improved through construction of STP projects. Recent research analyzing the impacts of similar rebate programs in Colorado and California indicate that recipients of e-bike subsidies replaced about 1.5 – 2.7 VMT per day with an e-bike. [6,7]

Table 14: Daily VMT Reduction from E-Bike Subsidies

	2021	2025	2030	2035	2040	2045
Bainbridge households	10,870	11,390	12,040	12,690	13,370	14,090
Daily On-Island (II) resident vehicle trips	56,090	58,770	62,120	65,460	68,990	72,710
Average trip length (miles)	3.3	3.3	3.3	3.3	3.3	3.3
Daily trips/household	5.2	5.2	5.2	5.2	5.2	5.2
Households with a subsidy	0	200	600	1,400	2,200	3,000
Percent of vehicle trips substituted by e-bike	10%	15%	30%	30%	30%	30%
Daily Trips Eliminated	**0**	**160**	**930**	**2,170**	**3,410**	**4,640**
Daily VMT Reduction	**0**	**-510**	**-3,080**	**-7,180**	**-11,280**	**-15,390**

Source: Fehr & Peers, 2023

Carsharing

Carsharing may reduce VMT by offering people alternatives to personal vehicle ownership, and deploying electric vehicles in the program could further reduce GHG emissions by shifting VMT to a less carbon intensive fuel source. The degree to which personal vehicle ownership might be reduced by a carsharing program was not quantified as part of this study since existing research into this area is limited, however the potential of carsharing programs to reduce personal vehicle ownership should not be discounted.

[6] https://www.denvergov.org/Government/Agencies-Departments-Offices/Agencies-Departments-Offices-Directory/Climate-Action-Sustainability-Resiliency/News-Events/News/2023/Denver-E-Bike-and-E-Cargo-Bike-Rebate-Returns-January-31

[7] https://escholarship.org/uc/item/5kb4b8jx

As shown in **Table 38**, by deploying 20 electric vehicles in Downtown Winslow, the City could shift 600 VMT from conventional vehicles to electric vehicles by 2045, reducing daily GHG emissions by 0.02 $MTCO_2e$. The analysis assumes that carsharing vehicles would be used to complete two round trips per day, and that each round trip is 15 miles.[8] The analysis assumes that the number of vehicles deployed would increase from 5 in 2025 to 20 in 2045. Baseline improvements in emissions factors as noted in **Table 24** are assumed in this analysis; as a result the volume of $MTCO_2e$ reduced decreases over time.

Table 15: Daily VMT Electrified through Carsharing Program

	2021	2025	2030	2035	2040	2045
Number of EV car share vehicles	0	5	10	20	20	20
Daily roundtrips/car share vehicle	2	2	2	2	2	2
Average round trip length (miles)	15	15	15	15	15	15
Daily VMT Shifted to EVs	**0**	**150**	**300**	**600**	**600**	**600**
Total change in $MTCO_2e$	**0.00**	**-0.05**	**-0.07**	**-0.09**	**-0.06**	**-0.02**

Source: Fehr & Peers, 2023

The estimated investment that would be required to launch and manage an electric car sharing program is shown in **Table** 39**.** The program is expected to cost approximately $1.3M in total between 2025 and 2045, assuming an initial vehicle cost of $40,000, a useful life of 15 years, and an operating/maintenance cost of $0.15 per trip. On a cost per VMT eliminated basis, and electric vehicle car share program is less cost effective than an e-bike subsidy.

Table 16: EV Carshare Cost between 2025 and 2045

	2025	2030	2035	2040	2045	Cumulative
Number of EV car share vehicles	5	10	20	20	20	20
Estimated subsidy	$207,650	$215,300	$430,600	$230,600	$230,600	$1,314,750
Approximate Cost per VMT shifted	**$1,380**	**$720**	**$720**	**$380**	**$380**	**$580**

Source: Fehr & Peers, 2023

Results

Potential daily VMT reductions from the selected strategies are shown in **Table 40** and the corresponding GHG emissions reductions are shown in **Table 41**. As noted above, the total amount of GHG emissions reduced decreases as in later horizon years based on more widespread use of cleaner fuels and electrification.

[8] It was assumed that most people renting car share vehicles would travel off-island; therefore, the analysis assumes a maximum on-island trip length of 15 miles.

Table 17: Daily VMT Reduction from GHG Emissions Reduction Strategies

Strategy	2014	2021	2025	2030	2035	2040	2045
STP Strategies	0	0	-960	-3,050	-4,280	-4,510	-4,760
Enhanced Transit	0	0	-480	-2,210	-2,350	-2,500	-2,650
Land Use – Workforce Housing	0	0	0	-2,040	-2,140	-2,260	-2,380
Land Use – Retail Trips	0	0	-1,060	-2,250	-2,960	-3,740	-4,210
TDM (Telework)	0	-20,590	-21,580	-22,810	-24,040	-25,330	-26,700
Parking Pricing	0	0	0	-2,900	-2,920	-2,920	-2,910
Car Share*	0	0	0	0	0	0	0
E-Bike Subsidies	0	0	-510	-3,080	-7,180	-11,280	-15,390
Total Daily VMT Reduction	**0**	**-20,590**	**-24,590**	**-38,340**	**-45,870**	**-52,540**	**-60,000**
Projected VMT	**222,040**	**273,330**	**279,160**	**284,140**	**298,250**	**312,790**	**327,300**
Percent VMT Reduction	**0%**	**-8%**	**-9%**	**-14%**	**-15%**	**-17%**	**-18%**

Source: Fehr & Peers, 2023
*Limited evidence to support that VMT is reduced through car share, therefore while electric car share can reduce GHG, it is less evident that electric car share can reduce VMT.

Table 18: Daily GHG Reduction GHG Emission Reduction Strategies ($MTCO_2e$)

Strategy	2014	2021	2025	2030	2035	2040	2045
STP Strategies	0.00	0.00	-0.30	-0.67	-0.64	-0.36	-0.16
Enhanced Transit	0.00	0.00	-0.15	-0.48	-0.35	-0.20	-0.09
Land Use – Workforce Housing	0.00	0.00	0.00	-0.47	-0.32	-0.18	-0.08
Land Use – Retail Trips	0.00	0.00	-0.33	-0.49	-0.44	-0.30	-0.14
TDM (Telework)	0.00	-7.46	-6.62	-4.99	-3.60	-2.02	-0.88
Parking Pricing	0.00	0.00	0.00	-0.63	-0.44	-0.23	-0.10
Car Share*	0.00	0.00	-0.05	-0.07	-0.09	-0.05	-0.02
E-Bike Subsidies	0.00	0.00	-0.16	-0.67	-1.08	-0.90	-0.50
Total	**0.00**	**-7.46**	**-7.60**	**-8.47**	**-6.96**	**-4.25**	**-1.96**
Baseline GHG (2014)	**99.92**	**-**	**-**	**-**	**-**	**-**	**-**
Percent Reduction from 2014 GHG	**0%**	**-7%**	**-8%**	**-8%**	**-7%**	**-4%**	**-2%**

Source: Fehr & Peers, 2023
Note: Uses the Projected EV adoption scenario