

Seattle Department of Transportation

# SEATTLE COMMUTE TRIP REDUCTION PROGRAM

## 2019/2020 Performance Update



**Seattle**  
Department of  
Transportation

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# 1. INTRODUCTION

Seattle experienced tremendous growth over the past decade. Since 2010, the City has added more than 150,000 new residents, nearly 160,000 new jobs, and seen more than 65,000 new housing units constructed<sup>1</sup>. Amid this growth, Seattle has continued progressing towards a more sustainable transportation system—emissions from passenger vehicles decreased 4.3% from 2008 to 2018<sup>2</sup>. The Commute Trip Reduction (CTR) program has been an essential tool for mitigating the transportation impacts of the City’s growth while also supporting continued economic development through enhanced worker attraction, retention, and productivity. The Seattle Department of Transportation (SDOT) works closely with private sector partners to encourage and incentivize sustainable travel choices over single-occupancy vehicle (SOV) trips.

## CTR STRATEGIC PLAN 2019 – 2023 OVERVIEW

SDOT’s 2019-2023 Commute Trip Reduction Strategic Plan (referred to as the Strategic Plan throughout this document) guides the program’s reform, investment, and ongoing improvement over the next program cycle and beyond. The Strategic Plan confirmed two core metrics for the CTR program: drive-alone rate (DAR) and vehicle miles traveled (VMT) per employee. The core program goals were set by the City in alignment with state [CTR law](#) and TDM [board](#) guidance.

SDOT’s citywide DAR target is 25% by 2035/2036, which aligns with goals from both the Move Seattle Plan and Seattle 2035 Comprehensive Plan. The citywide VMT per employee target is 3.5 by 2035/2036. The Strategic Plan also includes interim targets for 2019/2020 and 2023/2024 (see Table 1).

**TABLE 1. TARGETS FOR CTR CORE PROGRAM GOALS**

Horizon Biennium	DAR Target	VMT per Employee Target
2019/2020	30.6%	4.3
2023/2024	28.8%	4.0
2035/2036	25.0%	3.5

In addition to setting citywide targets, SDOT also sets network level targets for its core program goals to more accurately reflect differences in the availability of multimodal transportation options, land use, and other factors across the City (see Table 2 for full list of targets by network). The Strategic Plan revamped SDOT’s network areas, changing from eight to 11 networks, in order to better reflect land use trends and changes.

<sup>1</sup>City of Seattle (2021). Citywide Growth Dashboard. <https://seattlecitygis.maps.arcgis.com/apps/opsdashboard/index.html#/846486cbbad44b5f8349dfc8ffa1dac5>

<sup>2</sup>City of Seattle (2021). Understanding Our Emissions. [www.seattle.gov/environment/climate-change/climate-planning/performance-monitoring#data](http://www.seattle.gov/environment/climate-change/climate-planning/performance-monitoring#data)

**TABLE 2. DAR TARGETS BY NETWORK**

Network	2019/2020	2023/2024	2035/2036
Belltown & Denny Triangle	20.0%	18.0%	14.1%
Capitol Hill, Pike/Pine, & First Hill	42.9%	41.6%	38.9%
Commercial Core	15.6%	15.2%	14.4%
East Seattle	48.7%	47.6%	45.3%
Elliott Corridor/Interbay	52.0%	49.1%	42.4%
Fremont/Green Lake	47.5%	46.2%	43.5%
Northgate	65.5%	59.4%	53.4%
Pioneer Square & Chinatown/International District	21.4%	20.4%	18.1%
South Lake Union & Uptown	26.8%	24.5%	19.7%
South Seattle	63.5%	60.4%	53.4%
U District	30.4%	29.2%	26.6%

**TABLE 3. VMT PER EMPLOYEE TARGETS BY NETWORK**

Network	2019/2020	2023/2024	2035/2036
Belltown & Denny Triangle	3.6	3.3	2.8
Capitol Hill, Pike/Pine, & First Hill	6.4	6.1	5.4
Commercial Core	2.6	2.4	2.1
East Seattle	8.0	7.8	6.8
Elliott Corridor/Interbay	8.6	8.1	7.0
Fremont/Green Lake	4.3	4.1	3.5
Northgate	6.3	6.0	5.2
Pioneer Square & Chinatown/International District	3.3	3.2	2.8
South Lake Union & Uptown	3.2	2.9	2.4
South Seattle	9.8	9.3	8.0
U District	3.7	3.6	3.3

In addition to the core program goals, SDOT also identified a number of additional program benchmarks in the Strategic Plan to better track the program’s performance over time. The program benchmarks are organized into six categories:

1. Commute outcomes,
2. Climate outcomes,
3. Program reach,
4. Cross-program integration,
5. Programming impact, and
6. Cost effectiveness.

**This assessment seeks to provide a snapshot of current performance in these categories.**

### **DATA AND DATA CHALLENGES**

Two primary data sources are used to track both the core program goals and benchmarks: CTR Commuter Survey results and CTR Program Reports. The CTR Survey is administered to employees at affected sites every two years to gather information on commuting patterns and behaviors. All survey data analyzed in this report

was collected in 2019 prior to the COVID-19 pandemic. CTR Program Reports are submitted by employee transportation coordinators (ETCs) at CTR sites and detail the strategies being implemented at each site to reduce SOV trips. 2020 CTR Program Reports referred to in this document were submitted primarily between August and November 2020.

This report also uses the U.S. Census Bureau (2019, American Community Survey 5-Year Estimate), along with the Puget Sound Regional Council's (PSRC) 2019 Household Travel Survey. While the PSRC data provides a good comparison at the citywide scale, it is not a reliable comparison source at the network-level. Data from the Household Travel Survey is weighted to provide a regionally representative sample, so, when looking at smaller geographies, certain trips within the dataset may be overweighted. The unweighted sample sizes at the network level are too small for analysis purposes.

## CTR AND THE EFFECTS OF THE COVID-19 PANDEMIC

The COVID-19 pandemic, subsequent stay-at-home orders issued by cities and states, and the unprecedented shift towards telecommuting impacted travel patterns across the U.S in 2020. In Seattle, a large share of workers switched to working from home—in September 2020, the Census Bureau's Household Pulse Survey estimated that 47.8% of all Seattle workers were working remotely. Data from the CTR Program Reports indicate that an average of 68.2% of employees at CTR sites were working away from their worksites. According to the Puget Sound Area Return to Work Survey conducted by Commute Seattle in April and May 2021, one-third of work sites surveyed do not anticipate 100% of employees ever returning on site<sup>3</sup>.

The shift in travel patterns and working models caused by the pandemic could have a range of impacts—both positive and negative—on the CTR program. On the positive side, if workers who previously drove to the office shift to telecommuting (either full- or part-time) this could lead to a decrease in DAR, VMT, and greenhouse gas (GHG) emissions. The Puget Sound Area Return to Work Survey indicated, though, that worksites expect an increase in SOV commuting and reduced transit usage. If workers who previously commuted by a non-driving means switch to a hybrid work model where they work from home 2-3 days per week but choose to drive into the office when they do commute, this could have negative impacts for the program's core goals.

A shift towards permanent remote work or hybrid work models could also impact the CTR program's reach. Seattle's Municipal Code defines a CTR affected employee as "a full-time employee who begins his or her regular work day at an affected employer's worksite between six (6:00) a.m. and nine (9:00) a.m. (inclusive) on two (2) or more weekdays for at least twelve continuous months, who is not an independent contractor, and who is scheduled to be employed on a continuous basis for fifty-two weeks for an average of at least thirty-five hours per week."<sup>4</sup> If a significant portion of employees no longer report to a work site at least two days per week, it could lead to a reduction in the number of sites required to participate in the program. Current guidance from the Washington Department of Transportation (WSDOT) indicates that employees who telework (even full-time) should be categorized as CTR-affected employees; however, it is possible that future state CTR legislation could change this policy.

<sup>3</sup>Commute Seattle (2021). Puget Sound Area Return to Work Survey.

<sup>4</sup>City of Seattle (2021). Seattle, Washington Municipal Code, Chapter 25.02 – Commute Trip Reduction. [https://library.municode.com/wa/seattle/codes/municipal\\_code?nodeId=TIT25ENPRHIPR\\_CH25.02COTRRE](https://library.municode.com/wa/seattle/codes/municipal_code?nodeId=TIT25ENPRHIPR_CH25.02COTRRE)

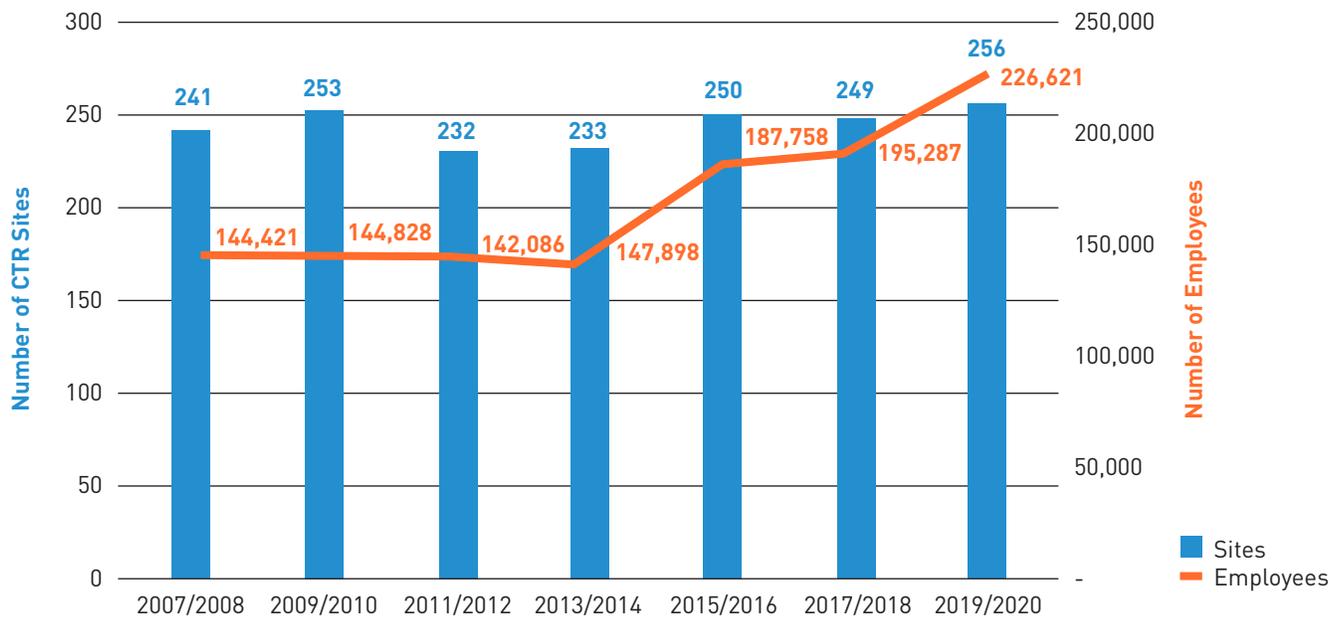
## 2. PROGRAM GROWTH

### CTR SITES AND EMPLOYEES

The size of the CTR program (based on the number of employees covered by the program) has grown at an even higher rate than citywide jobs. Since 2010, the number of jobs in Seattle increased by 34%, while the total number of employees at CTR sites increased by 57%, reaching an estimated 226,621 in 2019/2020. In 2019/2020, 82.2% (186,243 employees) of the total employees at CTR sites were considered CTR affected<sup>5</sup>.

The growth in CTR employees has particularly accelerated over the last three survey cycles, most notably with rapid growth in the South Lake Union & Uptown network, which added more than 46,000 additional employees at CTR sites from 2013/2014 to 2019/2020. The number of sites covered by the program has also increased, though less dramatically than the number of employees.

FIGURE 1. NUMBER OF SITES AND TOTAL EMPLOYEES (CTR SURVEY DATA)



<sup>5</sup>Again, Seattle's Municipal Code defines a CTR affected employee as "a full-time employee who begins his or her regular work day at an affected employer's worksite between six (6:00) a.m. and nine (9:00) a.m. (inclusive) on two (2) or more weekdays for at least twelve continuous months, who is not an independent contractor, and who is scheduled to be employed on a continuous basis for fifty-two weeks for an average of at least thirty-five hours per week.

# 3. PROGRAM PERFORMANCE

## CORE PROGRAM GOALS

The City saw significant progress on both core program goals during the 2019/2020 survey cycle.

### Drive Alone Rate (DAR)

Citywide DAR fell from 31.5% in 2017/2018 to 28.4%, a nearly 10% decrease in surveyed drive alone trips. The City achieved the 2019/2020 DAR target of 30.6% and even surpassed the 2023/2024 DAR target of 28.8%. Additionally, eight out of 11 networks met their 2019/2020 DAR target.

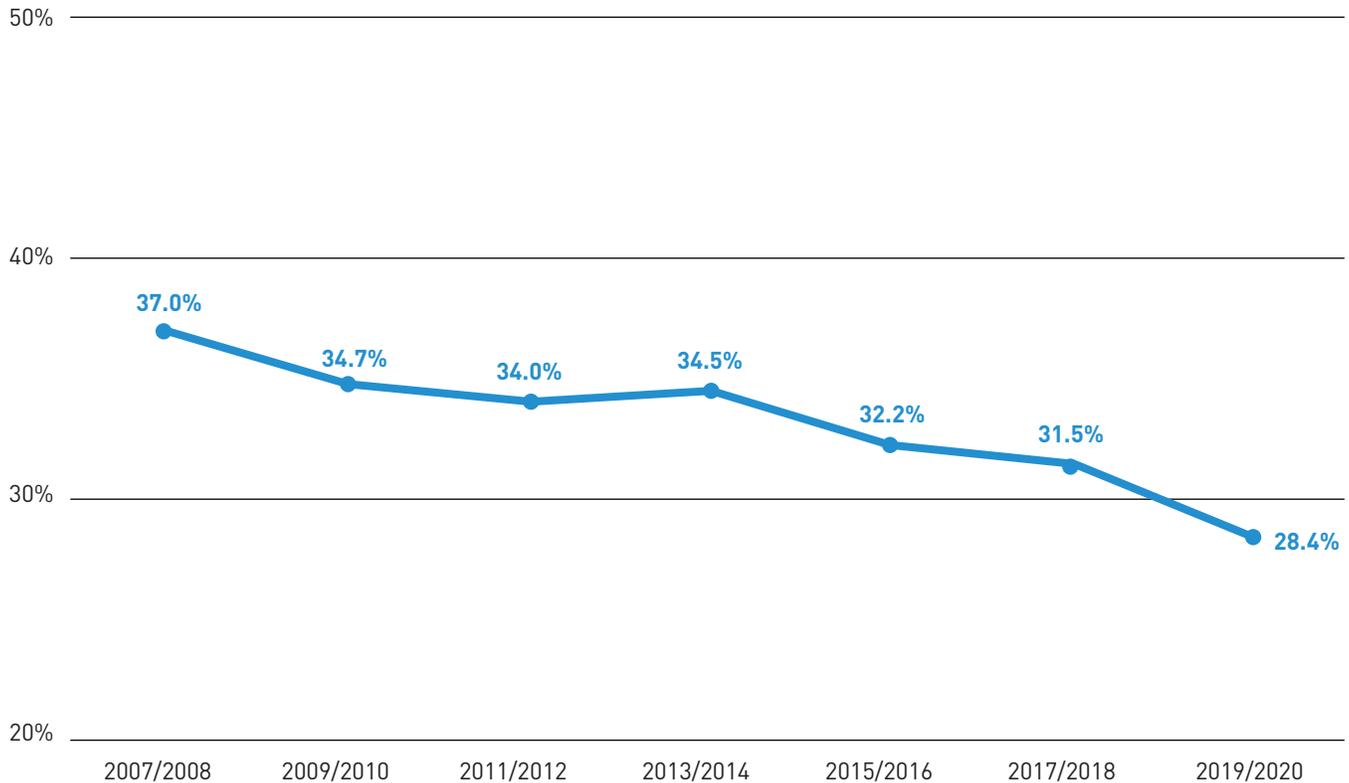
### VMT per Employee

Citywide, VMT per employee fell from 4.5 in 2017/2018 to 3.9 in 2019/2020, a 12.2% drop. The City achieved the 2019/2020 target of 4.3 VMT per employee, and also surpassed the 2023/2024 target of 4.0. Seven networks met their 2019/2020 target for VMT per employee, and the four networks that did not meet their target were all either only 0.1 or 0.2 above their target.

TABLE 4. 2019/2020 PERFORMANCE ON CORE PROGRAM GOALS

Network	DAR Target	DAR	Met Target?	VMT/ Employee Target	VMT/ Employee	Met Target?
Citywide	30.6%	28.4%	YES	4.3	3.9	YES
Belltown & Denny Triangle	20.0%	18.0%	YES	3.6	2.9	YES
Capitol Hill, Pike/Pine, & First Hill	42.9%	34.9%	YES	6.4	4.7	YES
Commercial Core	15.6%	16.0%	NO	2.6	2.6	YES
East Seattle	48.7%	43.1%	YES	8.0	4.2	YES
Elliott Corridor/Interbay	52.0%	34.1%	YES	8.6	5.3	YES
Fremont/Green Lake	47.5%	43.8%	YES	4.3	4.4	NO
Northgate	65.5%	70.8%	NO	6.3	6.4	NO
Pioneer Square & Chinatown/ International District	21.4%	19.7%	YES	3.3	3.1	YES
South Lake Union & Uptown	26.8%	25.6%	YES	3.2	3.3	NO
South Seattle	63.5%	62.1%	YES	9.8	9.1	YES
U District	30.4%	33.1%	NO	3.7	3.9	NO

FIGURE 2. CITYWIDE DAR BY SURVEY CYCLE



## HISTORICAL TRENDS FOR CORE PROGRAM GOALS

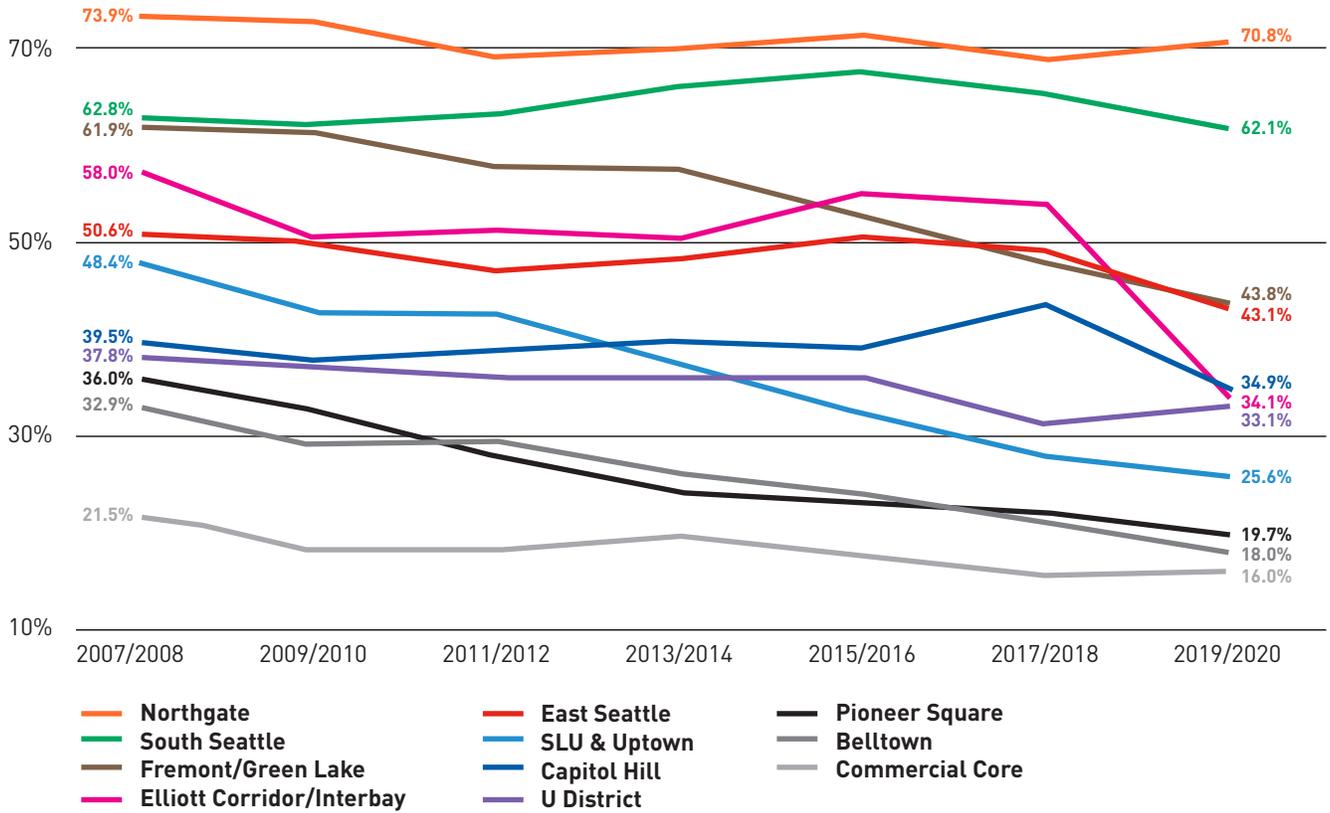
Since 2007/2008, the program's DAR has decreased by nearly a quarter (-23.2%) from 37.0% to 28.4%. From 2017/2018 to 2019/2020, DAR fell by 3.1 percentage points, the largest decrease between any two cycles. Eight out of 11 network areas experienced a decrease in DAR from 2017/2018 to 2019/2020. The three networks that saw DAR increase were the Commercial Core (from 15.7% to 16.0%), Northgate (from 69.0% to 70.8%), and the U District (from 31.0% to 33.1%). The latter two networks have a very small number of sites who have an outsized influence based on their individual performance.

Since 2007/2008 DAR has decreased in every network area, with an average decrease of 11.1 percentage points. South Seattle has experienced the smallest decrease, with DAR falling 0.7 percentage points since 2007/2008 (from 62.8%

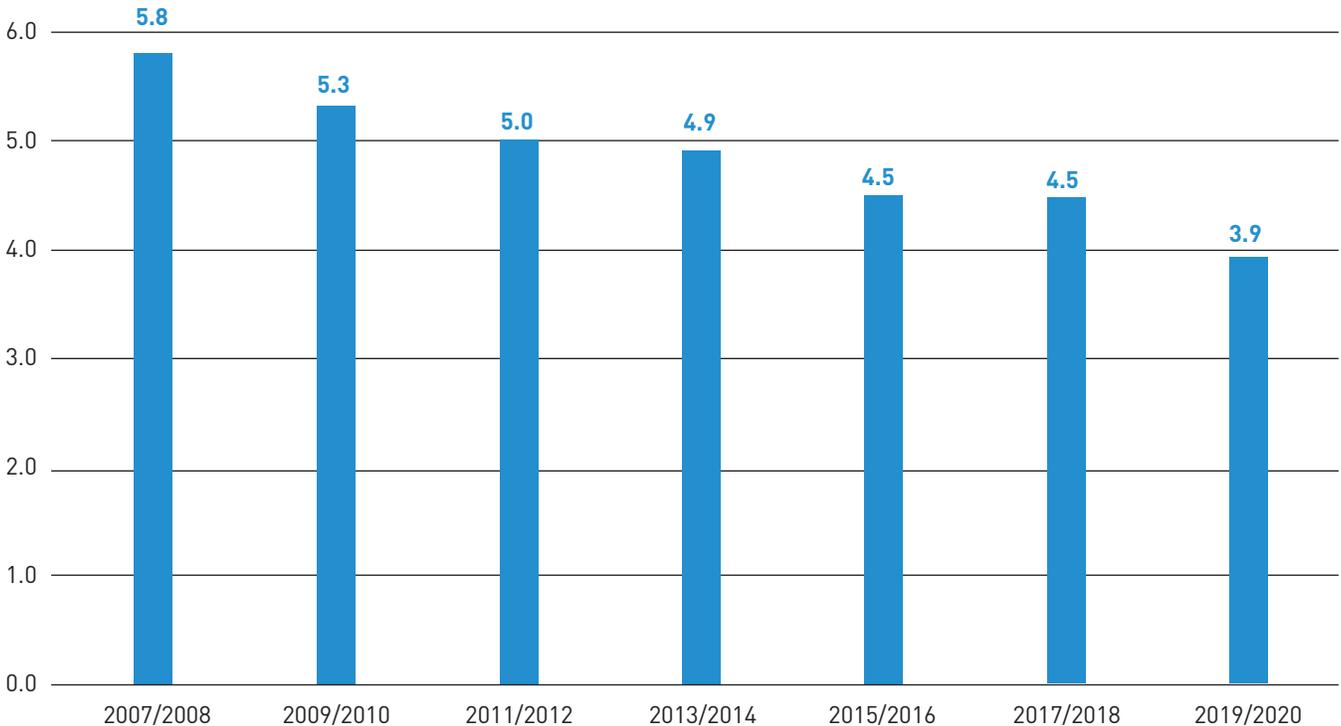
to 62.1%). Elliot Corridor/Interbay has seen the greatest decrease, with DAR falling 23.9 percentage points (from 58.0% to 34.1%). The vast majority of the decrease in Elliot Corridor/Interbay occurred during the last survey cycle, when DAR fell 19.5 percentage points. South Lake Union & Uptown also experienced a very significant drop in DAR since 2007/2008, falling 22.8 percentage points (from 48.4% to 25.6%). Large shifts in DAR are typically seen if a new site is included in the survey data, or a low performing site leaves the program.

VMT per employee at CTR sites has fallen even more significantly than DAR since 2007/2008. Over that time period, VMT per employee has decreased by nearly one-third (falling 32.3%) from 5.8 to 3.9. From just 2017/2018 to 2019/2020 VMT per employee decreased 12.2%, the largest drop between any two survey cycles.

**FIGURE 3. HISTORICAL DAR BY NETWORK**



**FIGURE 4. VMT PER EMPLOYEE BY SURVEY CYCLE**



Every network has experienced a drop in VMT per employee since 2007/2008. In Belltown & Denny Triangle and South Lake Union & Uptown, VMT per employee has decreased by nearly half since 2007/2008 (falling by 49.0% in Belltown & Denny Triangle and 49.6% in South Lake Union & Uptown). VMT per employee also fell by 30% or more in Elliot Corridor/Interbay (-36.6%), the U District (-32.8%), Fremont/Greenlake (-32.6%), and the Commercial Core (-31.4%). The smallest decreases were in South Seattle (-9.5%), East Seattle (-8.3%), and Capitol Hill, Pike/Pine, and First Hill (-4.7%).

The reduction in VMT per employee relates directly to DAR decreasing; and driving trips have become both less prevalent as well as shorter. In 2007/2008, the average distance of driving trips for CTR employees was 15.8 miles. In 2019/2020, the average driving trip distance fell to 13.9 miles, a nearly 12% reduction.

While VMT has been decreasing on a per-employee basis, absolute VMT has increased in every survey cycle since 2011/2012. While the CTR program continues to make progress shifting trips away from driving alone (and driving trips are also getting shorter), the number of employees within the program has grown so significantly that the total amount of driving is still increasing.

FIGURE 5. HISTORICAL VMT PER EMPLOYEE BY NETWORK

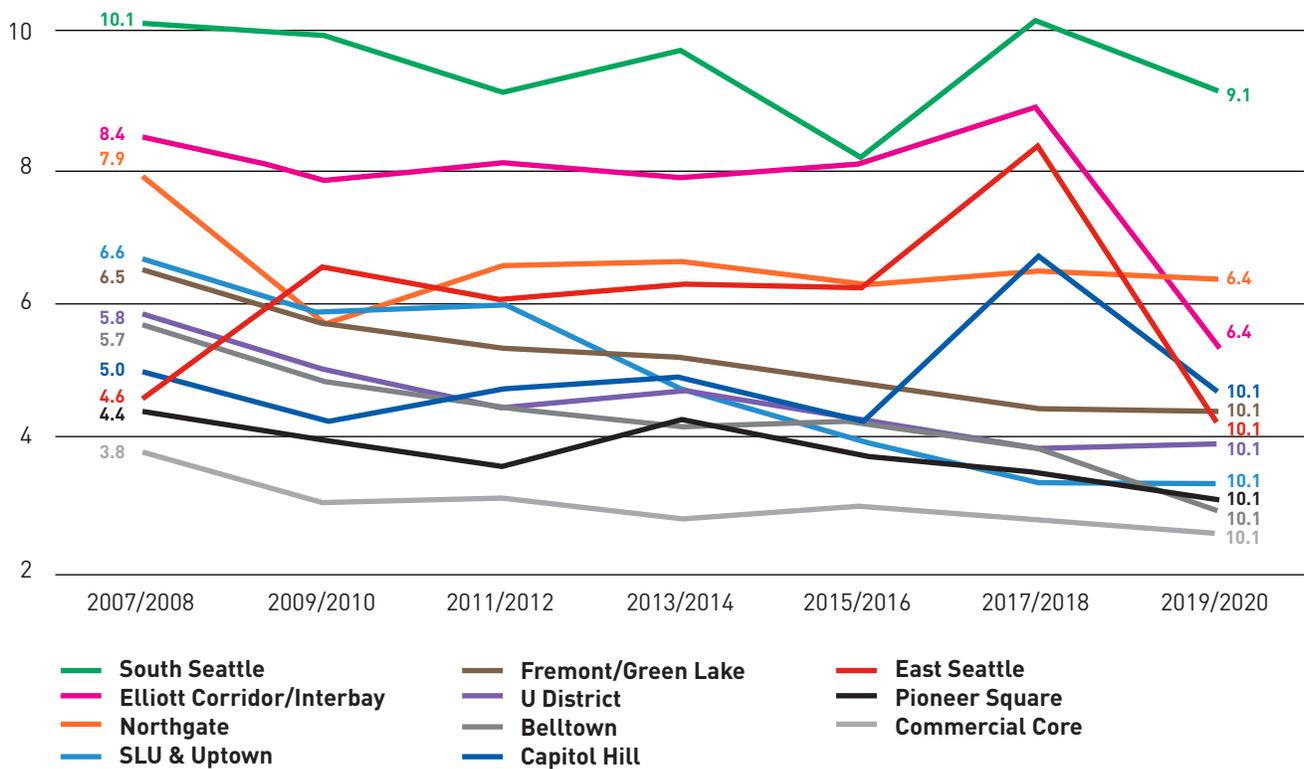


FIGURE 6. AVERAGE DRIVING TRIP DISTANCE BY SURVEY CYCLE

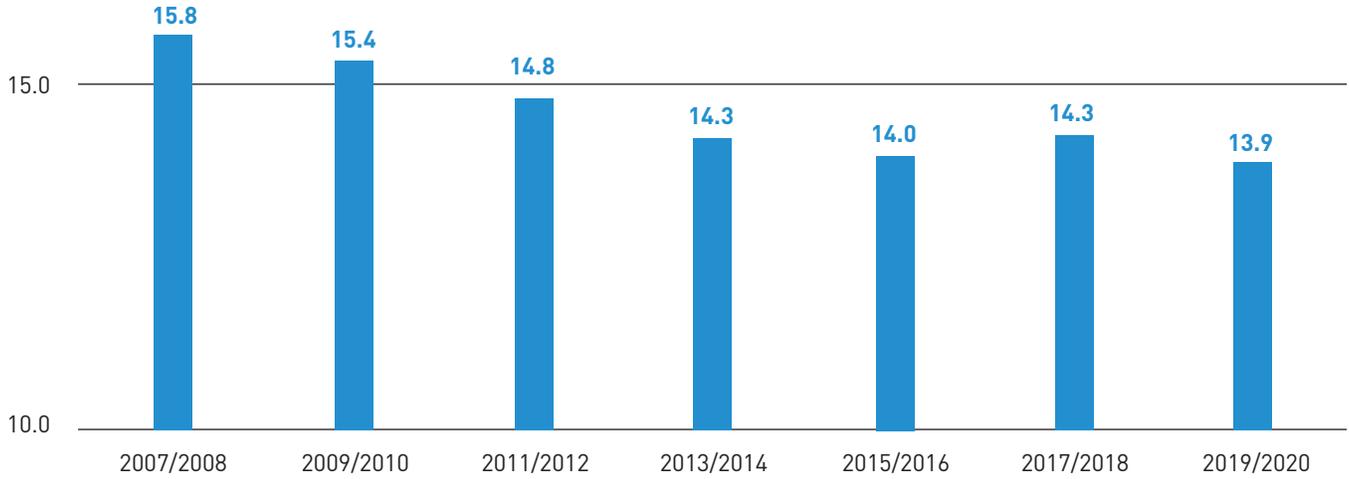
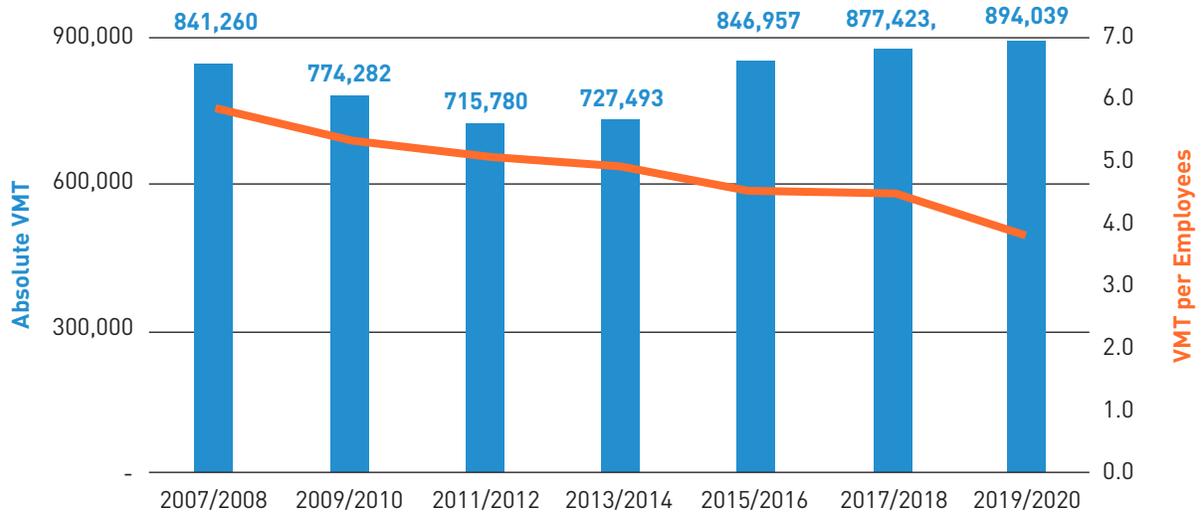


FIGURE 7. ABSOLUTE VMT BY SURVEY CYCLE



**TABLE 5. CENTER CITY FULL MARKET DAR (2019)**

Network	2019/2020 DAR Target	2019 DAR	Met Target?
Center City	24.5%	26.4%	<b>NO</b>
Belltown & Denny Triangle	25.4%	25.2%	<b>YES</b>
Capitol Hill, Pike/Pine, & First Hill	35.1%	37.5%	<b>NO</b>
Commercial Core	15.4%	20.1%	<b>NO</b>
Pioneer Sq. & Chinatown/Int. District	29.1%	26.9%	<b>YES</b>
South Lake Union & Uptown	31.6%	33.9%	<b>NO</b>

## CENTER CITY FULL MARKET ANALYSIS

Beginning with the Strategic Plan, SDOT established “full market” DAR targets for all center city employees, regardless of employer size or CTR status. These targets can be tracked using data from the Center City Mode Split Survey, which is conducted every two years to understand commute behavior of the full cross section of employees downtown.

According to the [2019 Center City Mode Split Survey](#), the DAR for all Center City employees was 26.4%, which did not meet the target of 24.5%. Both Belltown & Denny Triangle (DAR of 25.2% vs. DAR target of 25.4%) and Pioneer Square & Chinatown/International District (DAR of 26.9% vs. DAR target of 29.1%) met their full market DAR targets. Neither Capitol Hill, Pike/Pine, & First Hill; the Commercial Core; nor South Lake Union & Uptown met their full market DAR targets.

## PROGRAM BENCHMARKS

### Commute Outcomes

The Commute Outcomes benchmarks aim to measure to what degree Seattle and the CTR program are meeting their commute trip reduction goals.

### MODE SPLIT

Table 6 shows the citywide mode split according to the 2019/2020 CTR survey data. Across the City, more than half of all CTR employees walk, bike, or take transit to reach their jobs (50.3%).

The share of CTR employees who walk, bike, or take transit is highest in Pioneer Square & Chinatown/International District (67.8%); the Commercial Core (65.5%); and Belltown & Denny Triangle (63.2%). In Northgate only 12.2% of employees walk, bike, or take transit, and in South Seattle only 21.7% use these modes. The highest share of employees carpooling is in East Seattle (16.8%) and South Lake Union & Uptown (16.2%).

**TABLE 6. CITYWIDE MODE SPLIT, 2019/2020**

Network	Drive Alone	Carpool	Transit	Bicycle	Walk	Tele-commute	Other
Citywide	28.4%	10.9%	38.0%	3.5%	8.8%	6.4%	4.1%
Belltown & Denny Triangle	18.0%	7.8%	54.8%	2.4%	6.0%	9.0%	2.0%
Capitol Hill, Pike/ Pine, & First Hill	34.9%	10.1%	43.1%	1.7%	6.3%	1.7%	2.2%
Commercial Core	16.0%	7.2%	57.9%	2.2%	5.4%	8.9%	2.4%
East Seattle	43.1%	16.8%	24.3%	2.2%	5.4%	2.9%	5.2%
Elliott Corridor/ Interbay	34.1%	12.3%	35.5%	3.4%	4.9%	8.2%	1.7%
Fremont/Green Lake	43.8%	7.3%	20.1%	9.9%	10.1%	6.3%	2.5%
Northgate	70.8%	11.8%	8.2%	1.4%	2.6%	4.1%	1.1%
Pioneer Square & Chinatown/ International District	19.7%	5.0%	62.1%	3.0%	2.7%	5.4%	2.2%
South Lake Union & Uptown	25.6%	16.2%	26.9%	4.2%	16.5%	5.5%	5.0%
South Seattle	62.1%	10.2%	18.9%	1.7%	1.1%	3.6%	2.5%
U District	33.1%	6.7%	35.1%	6.0%	4.3%	6.2%	8.7%

**CTR VS. NON-CTR MODE SPLIT**

Employees at CTR sites drive less and use more multimodal transportation options than the average Seattle worker. According to the latest data from the U.S. Census Bureau (2019, American Community Survey 5-Year Estimate), 46.5% of all workers who live in Seattle (but may work outside the City) drive alone for their commutes. Using data from the Puget Sound Regional Council’s (PSRC) 2019 Household Travel Survey provides a more direct comparison to the CTR program, as commute mode can be analyzed for all jobs within Seattle (regardless of where the worker may live). According to the PSRC data, 56.5% of all workers in Seattle drive alone to get to work.

**HISTORICAL TRENDS FOR MODE SPLIT**

**Drive Alone Rate**

As DAR among CTR employees has fallen since 2007/2008 employees have increased their use of other transportation options.

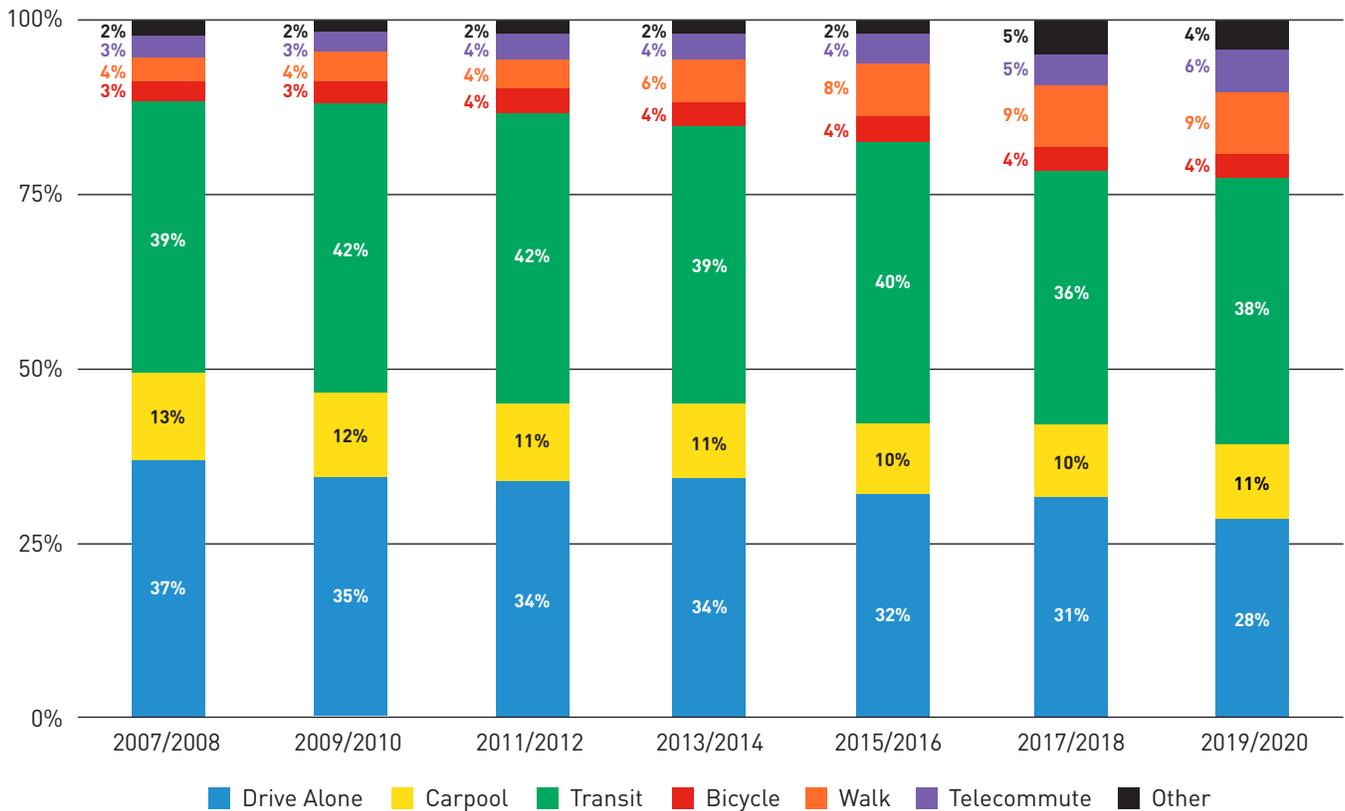
**Walking/rolling**

Most notably, the share of employees who walk to work has more than doubled from 3.6% in 2007/2008 to 8.8% in 2019/2020.

**Telecommuting**

The share of workers telecommuting has also more than doubled, growing from 3.0% in 2007/2008 to 6.4% in 2019/2020. This trend is likely to drastically accelerate in future cycles due to the COVID-19 pandemic and anticipated growth of telecommuting and hybrid work schedules.

**FIGURE 8. MODE SPLIT BY SURVEY CYCLE**



**Cycling**

Bicycling has also grown with 3.5% of CTR employees biking to work in 2019/2020 vs. 2.7% in 2007/2008.

**Transit**

The share of workers using transit peaked in 2009/2010 at 41.6%; however, the total number of weekly transit trips CTR employees make has risen significantly. CTR employees made more than twice as many weekly transit trips in 2019/2020 [366,484] as they did in 2007/2008 (181,864).

**Carpooling/ridesharing**

A smaller share of CTR employees carpooled in 2019/2020 compared to 2007/2008, although this number has risen from over the past two survey cycles since a low point in 2015/2016. It is also worth noting that the share of CTR employees reporting Other as their mode of transportation has increased significantly (from 2.2% in 2007/2008 to 4.1% in 2019/2020). According to sample analysis provided by WSDOT for 2017/2018, the largest modes within the Other category are likely employer shuttles and transportation network companies (e.g., Uber and Lyft). Both these modes will be included as choices in future survey iterations, providing more granular and important data for SDOT.

## Climate Outcomes

The CTR program helps reduce transportation-related greenhouse gas (GHG) emissions<sup>6</sup> by encouraging and supporting more sustainable alternatives to driving alone. Tracking GHG emissions is a new metric for SDOT that was recommended in the Strategic Plan and aligns with the City’s focus on reducing transportation emissions.

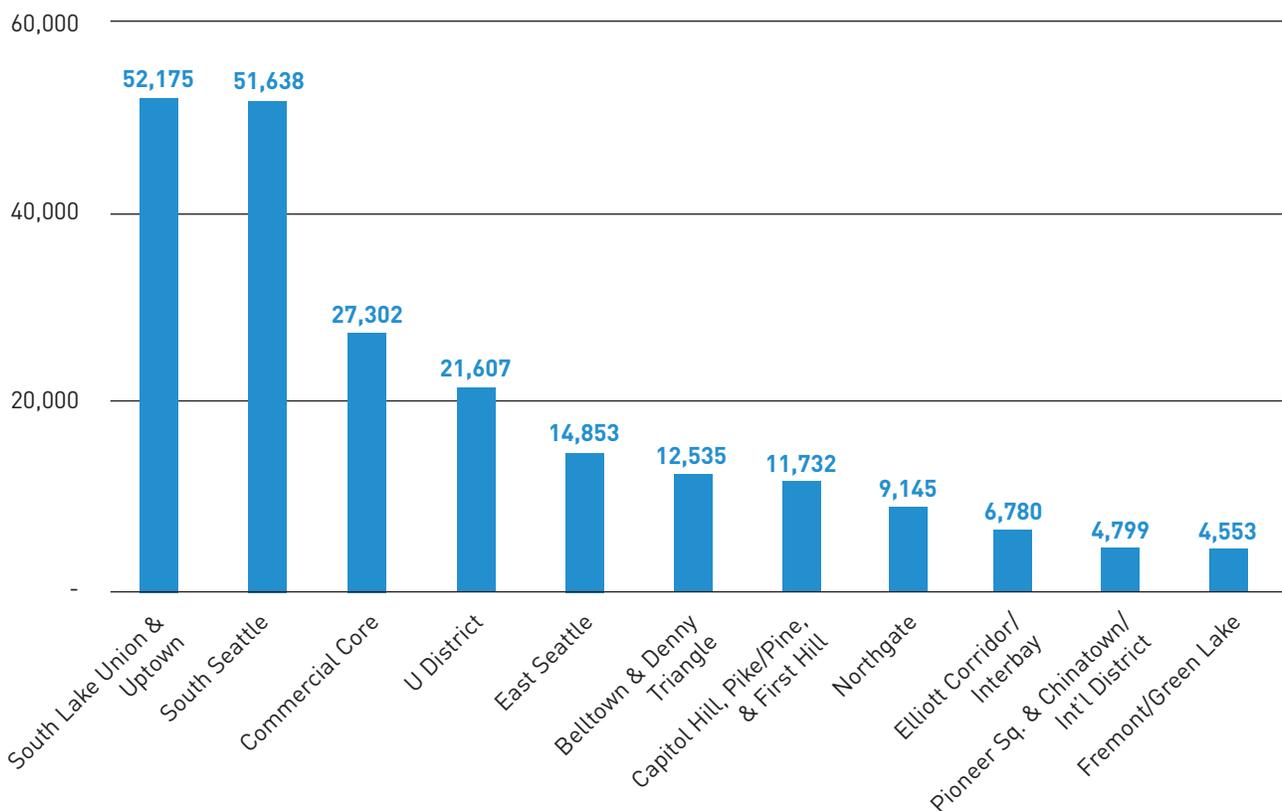
### GHG EMISSIONS (ABSOLUTE AND PER EMPLOYEE)

CTR employees emitted an estimated annual total of 217,119 metric tons (MT) of greenhouse gasses (carbon dioxide equivalent, CO<sub>2</sub>e) for the 2019/2020 survey cycle. This equates to 0.96 MTCO<sub>2</sub>e per CTR employee per year. The following charts break this down on an absolute basis and per employee, by network.

### HISTORICAL TRENDS FOR GHG EMISSIONS

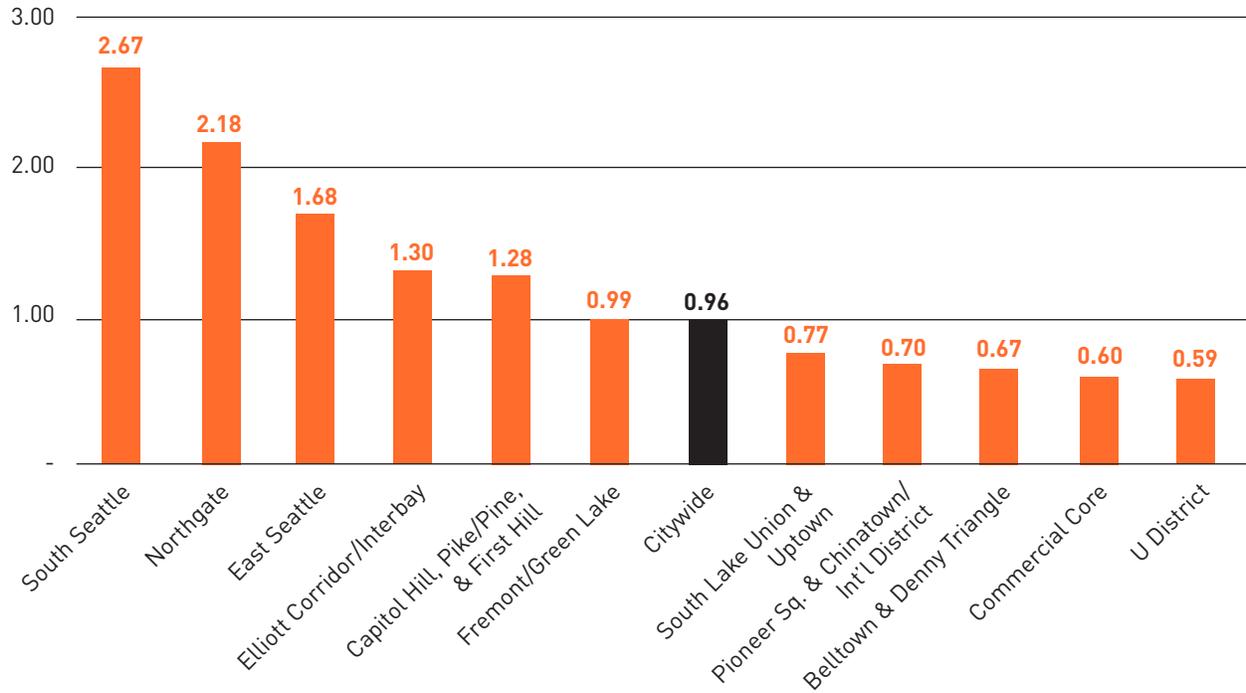
Greenhouse gas emissions generated by CTR employees commuting to work are directly related to VMT, and, thus, the same pattern seen regarding VMT of significant progress on a per employee basis but continued absolute growth holds for GHG. GHG emissions per employee have fallen 32.8% since 2007/2008 from 1.43 MTCO<sub>2</sub>e per employee per year to 0.96; however, absolute emissions have grown from 206,020 MTCO<sub>2</sub>e in 2007/2008 to 217,119 MTCO<sub>2</sub>e in 2019/2020—a 5.4% increase. The percentage increase in absolute GHG from 2007/2008 to 2019/2020 is slightly lower than the percentage increase in absolute VMT (6.3%) because of improvements in fuel efficiency and lower emissions per mile driven.

FIGURE 9. ABSOLUTE GHG EMISSIONS BY NETWORK (MTCO<sub>2</sub>E/ YEAR)

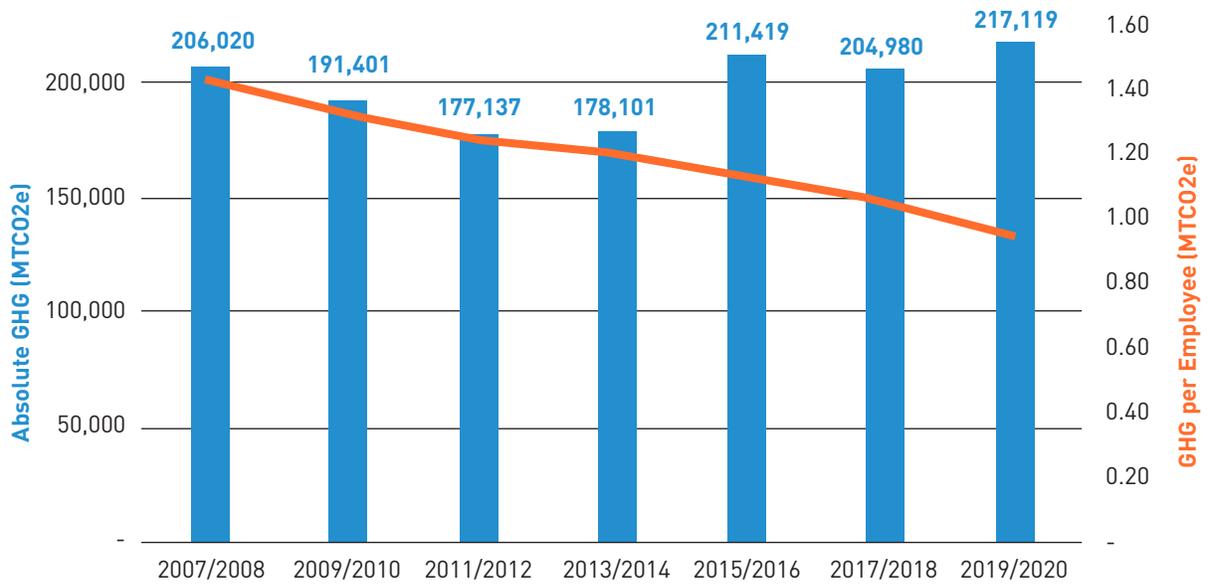


<sup>6</sup>GHG emissions are estimated using a multistep process developed by WSDOT, which converts total VMT from CTR employees into metric tons of carbon dioxide equivalent emissions (MTCO<sub>2</sub>e).

**FIGURE 10. PER EMPLOYEE GHG EMISSIONS (MTCO2E/YEAR)**



**FIGURE 11. GHG EMISSIONS (ABSOLUTE AND PER EMPLOYEE) BY SURVEY CYCLE**



## Program Reach

Program Reach is used as a metric to analyze to what degree the CTR program is growing, and to what extent CTR sites are captured by the CTR program.

### CTR EMPLOYEE AND SITE INFORMATION

The reach of the CTR program grew substantially in 2019/2020. The number of employees covered by the program increased greatly in 2019/2020—growing 16% from 2017/2018. According to CTR survey data, 226,621 total employees work at CTR sites, 82.2% of whom (186,243) are CTR-affected.

In recent years, SDOT has emphasized reaching out to smaller employers (particularly in the Center City) and engaging more voluntary sites in the CTR program. In 2019/2020, there were 20 voluntary sites participating in the program, according to Commute Seattle. 2,410 people are employed at these voluntary sites.

Regarding capture rate of CTR surveyed employees to all Seattle employees, we are currently seeing a rate of 33.7% citywide. This uses census bureau data to compare total jobs in Seattle (617,867 in 2018) to number of CTR jobs (207,994). This is an imperfect measurement but provides an estimate of how the CTR population compares in scale to the citywide worker population. Regarding the capture rate of CTR-eligible sites, data is not currently available. The Strategic Plan highlights site identification as a key challenge for the CTR program; however, there is not a consistent, reliable, and readily available data source that SDOT can access to assess this metric.

## Cross-Program Integration

This benchmark is utilized to capture the extent of the CTR program integration with other local trip reduction programs. Furthermore, this benchmark is used to inform staff how the CTR program supports other trip reduction efforts with TMPs and in the Center City.

### COMBINATION SITES, EMPLOYEES, AND TRIPS

Nearly two-thirds (64%) of all the sites participating in the CTR program are also affected by Transportation Management Program (TMP) requirements. TMPs are imposed as part of the permitting process, to mitigate the traffic and/or parking impacts of large buildings (as opposed to the CTR program, which focuses on employers). 75% of all employees working at CTR sites are employed at a combination site, and employees at combination CTR/TMP sites make nearly 675,000 commute trips each week—70% of all the trips made by CTR employees.

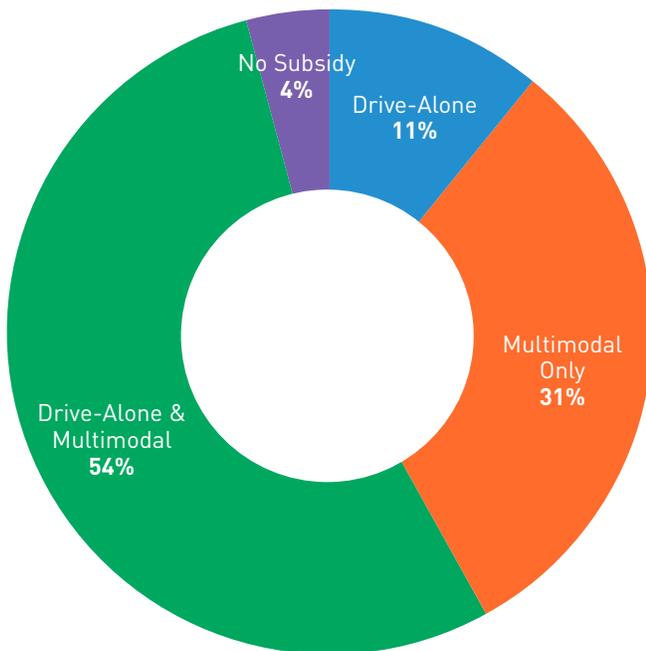
## Programming Impact

The programming impact benchmark informs the extent of CTR programs. Program satisfaction, and elements providing the most impact are amongst the other key information obtained through this benchmark. Furthermore, it acts as a tool to help staff understand services offered by their employer and help correlate their implementation to DAR and VMT trends. The CTR program utilizes several different tools for encouraging sustainable transportation behavior, and the Programming Impact benchmarks are designed to track the implementation of those different tools and strategies. Using the 2020 Program Reports, questions on different transportation options employers offered were assessed within several categories.

## DRIVE-ALONE AND MULTIMODAL SUBSIDIES

In examining the types of subsidies offered at CTR sites, a site was considered to offer a drive-alone subsidy if it offered free parking, a parking subsidy or reimbursement, or a general transportation subsidy. A site was considered to offer a multimodal subsidy if it offered a subsidized ORCA pass, vanpool subsidy, carpool subsidy, active transportation subsidy, or a parking cash out option.

FIGURE 12. TRANSPORTATION SUBSIDIES AT CTR SITES



85% of CTR sites (209 sites) offer a multimodal subsidy compared to 65% of sites (159 sites) that offer a drive-alone subsidy (primarily free parking). Nearly one-third of all sites (31%) only offer a multimodal subsidy, while 11% of sites only offer a drive-alone subsidy. Only a small share of sites (4%) offers no transportation subsidy.

At CTR sites that only offer a multimodal subsidy, the average DAR is 26.5%. At CTR sites that offer both a drive-alone and multimodal subsidy, the average DAR is 35.3%. And at CTR sites that offer only a drive-alone subsidy, the average DAR is 36.8%. These findings indicate that eliminating subsidies for employees who drive-alone may be a critical strategy to reduce the DAR at CTR sites, as opposed to just offering multimodal subsidies in addition to drive-alone subsidies.

Nearly all sites offer alternative work schedules (96% of sites and 99% of employees). A large portion of sites also offer employees transit passes (75% of sites and 87% of employees), offer shared mobility services or incentives (64% of sites and 83% of employees), and have some kind of parking management program (83% of sites and 94% of employees). 73% of CTR sites allow employees to set aside a portion of pre-tax income for certain transportation purposes, but these sites only cover 59% of all CTR employees. After analyzing individual site responses, this difference is likely a result of reporting error. Several large employers (Amazon, University of Washington) responded that they do not offer pre-tax benefits, possibly because they fully subsidize these options for employees.

**TABLE 7. DETAILED BREAKDOWN OF TRANSPORTATION OFFERINGS FOR CTR SITES**

Network	Pre-Tax Benefits % sites / employees	Transit Passes % sites / employees	Bike/Ped Incentives % sites / employees	Shared Mobility % sites / employees	Ride-matching % sites / employees	Alt. Work Schedules % sites / employees	Parking Mgmt. % sites / employees
Citywide	73% / 59%	75% / 87%	22% / 25%	64% / 83%	56% / 80%	96% / 99%	83% / 94%

### PROGRAM CONSULTATIONS

From July 2020 to June 2021, SDOT and Commute Seattle engaged in 229 program consultations with ETCs at CTR sites. Commute Seattle consulted with 75% of affected sites and an average of 15 companies per month. They also reported an average feedback score of 4.9 out of 5, reflecting ETC program satisfaction. This compares to 157 consultations the previous year. Commute Seattle also tracks primary theme for consultations, such as subsidy inquiry, parking management concern, site change/ relocation, etc.

No data set was available regarding employee program satisfaction; this is a strategy requiring additional data collection and will be assessed for feasibility at a future date.

### Cost Effectiveness

The Cost Effectiveness benchmarks track program investment, both at the state- and employer-level, over time.

### SDOT CTR FUNDING PER EMPLOYEE

SDOT's CTR funding from the state has remained flat at \$897,500 for about a decade. If employment continues to grow at CTR sites, DAR continues to decrease (meaning the number of non-SOV employees increases), and state funding remains flat, the amount of funding available per non-SOV employee will continue to rapidly erode. Since 2007/2008, funding per non-SOV employee has fallen by 44%. Just from 2017/2018 to 2019/2020, funding per non-SOV employee fell 18%.

### EMPLOYER MOBILITY INVESTMENTS AT CTR SITES

According to data reported by employee transportation coordinators (ETCs) in the 2020 Program Reports, CTR employers invested a total of \$90,850,469 into their individual CTR programs (including ETC staff time, materials, financial incentives and subsidies, facilities, and other costs). It should also be noted that only 168 out of a total of 245 program reports included details on program costs. This equates to an average investment of \$540,776 into the program (only including the 168 sites that responded to this question). The level of investment, though, varies drastically across sites, with a minimum self-reported investment of \$50 to a maximum of \$12,762,499. Program reports capture this information in order to recognize the private sector's commitment and investment in the CTR program, and emphasize the public-private partnership that has helped make the CTR program a success.

# 4. FUTURE CTR GOALS AND TARGETS

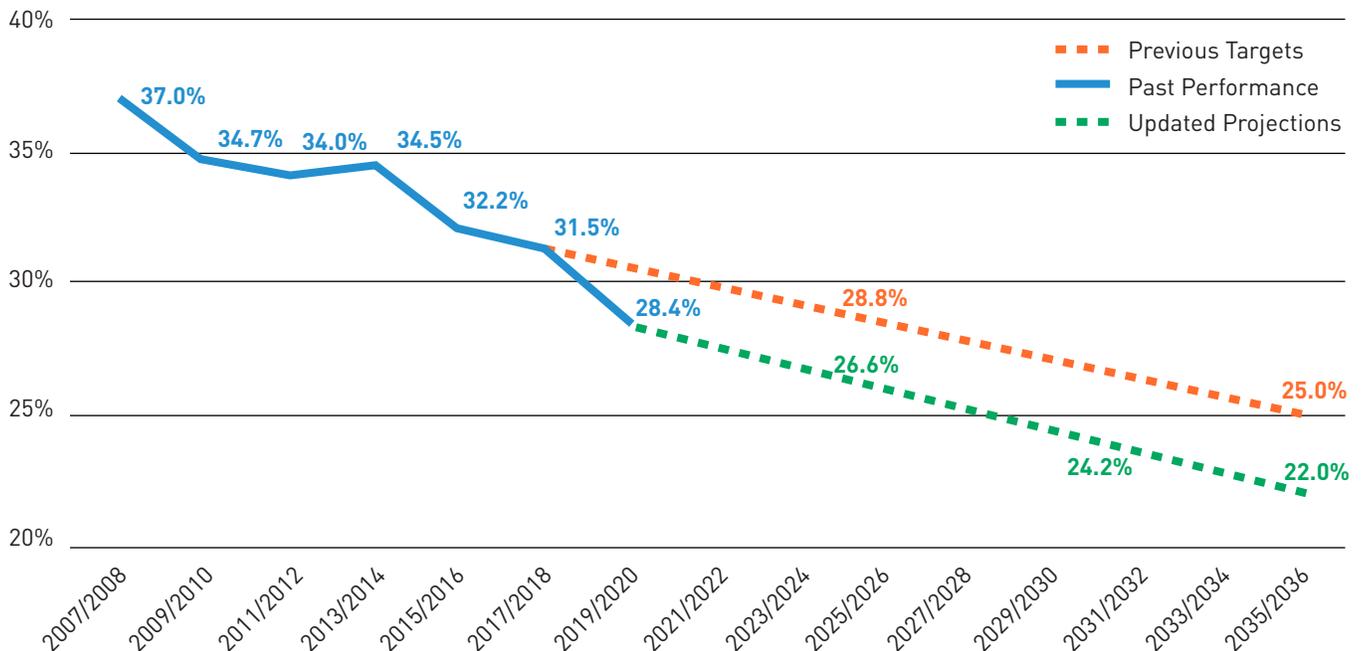
As part of the Strategic Plan, future targets were set for the CTR program’s two core goals: DAR and VMT per employee. DAR targets were set based on analysis of past CTR survey data and a 2035 future DAR target of 25%, which is identified as the citywide commute trip goal by the 2015 Move Seattle Plan and as the citywide all trips goal by the Seattle 2035 Comprehensive Plan. In order to calculate the DAR target for interim years, a constant annual rate of reduction (2.87%) was used. To assess potential updates to the CTR targets, two approaches were selected:

1. *Strategic Plan Methodology with 2019/2020 Data*—Follow the same methods used in the Strategic Plan to develop targets updated with the 2019/2020 data, and
2. *Climate-Focused Methodology*—Develop targets using the SDOT Climate Calculator and to align with 2030 climate and emissions goals.

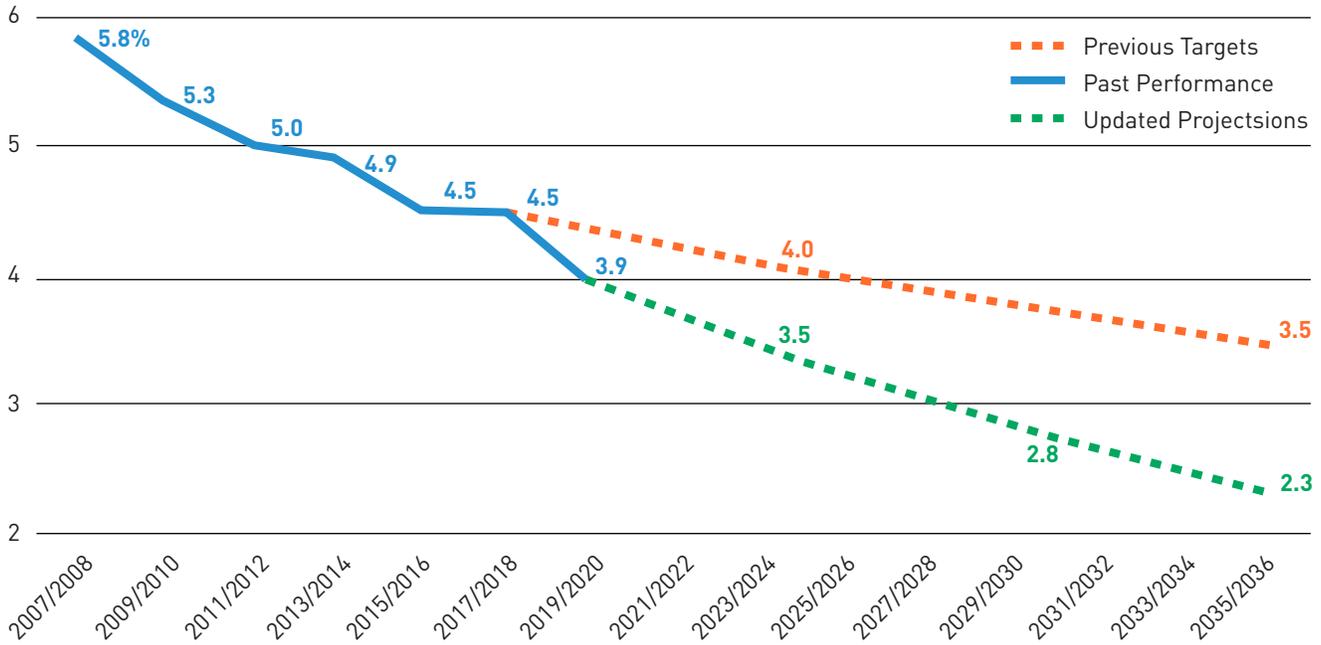
## STRATEGIC PLAN TARGETS UPDATED WITH 2019/2020 DATA

Considering the significant drop in DAR from 2017/2018 to 2019/2020, the previous constant annual rate of reduction of 2.87% was recalculated incorporating the 2019/2020 data. From 2007/2008 through 2019/2020 DAR decreased at a constant annual rate of reduction of 3.11% per survey cycle. Assuming this rate of reduction continues into the future, the CTR program is projected to meet (and surpass) its previous targets. The previous DAR target for 2023/2024 was 28.8% and the updated projected DAR for 2023/2024 is 26.6%. Looking out to 2035/2036, the previous DAR target was 25.0% and the updated projected DAR is 22.0%.

FIGURE 13. HISTORICAL AND PROJECTED DAR



**FIGURE 14. HISTORICAL AND PROJECTED VMT PER EMPLOYEE**



**TABLE 8. PREVIOUS CTR PROGRAM TARGETS AND UPDATED PROJECTIONS**

Survey Cycle	Previous DAR Targets	2019/2020 Performance and Updated DAR Projections	Previous VMT per Employee Targets	2019/2020 Performance and Updated VMT per Employee Projections
2019/2020	30.6%	28.4%	4.3	3.9
2023/2024	28.8%	26.6%	4.0	3.5
2035/2036	25.0%	22.0%	3.5	2.3

As discussed in Section 3, VMT per employee has been decreasing at a greater rate than DAR, because the average driving commute is getting shorter. From 2007/2008 through 2019/2020 VMT per employee decreased at a constant annual rate of reduction of 6.5% per survey cycle. Using this rate of reduction to project future VMT per employee figures, the CTR program is projected to meet (and surpass) its previous targets (see Figure 14). The previous VMT per employee target

for 2023/2024 was 4.0 and the updated projected VMT per employee figure for 2023/2024 is 3.5. Looking out to 2035/2036, the previous VMT per employee target was 3.5 and the updated projected VMT per employee figure is 2.3.

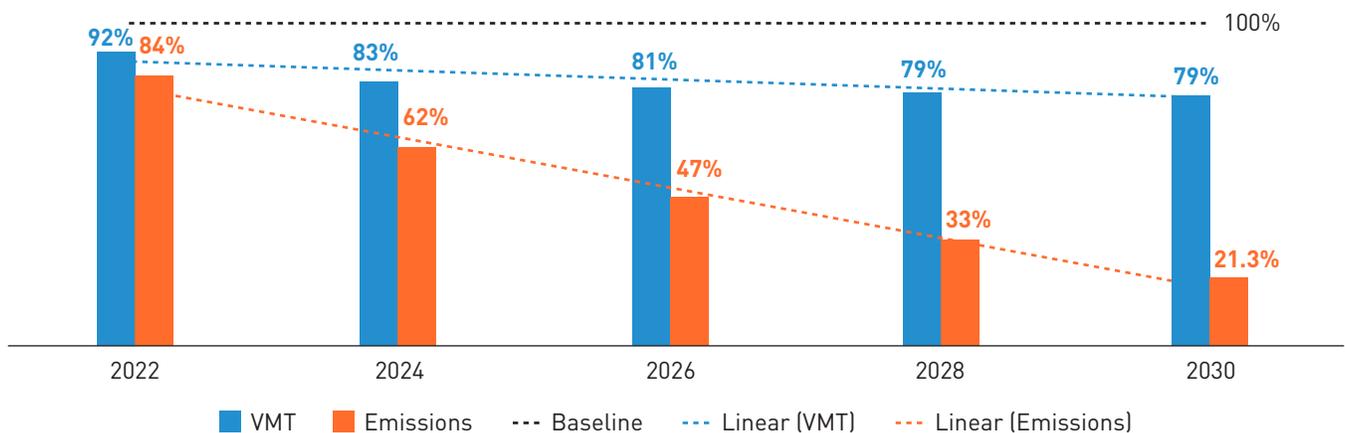
The projected DAR and VMT per employee figures for 2023/2024 and 2035/2036, incorporating the 2019/2020 data, are listed above in Table 8.

## CLIMATE-FOCUSED METHODOLOGY

Seattle’s Climate Action Plan aims to reduce transportation emissions 83% by 2030 (from a 2008 baseline)<sup>7</sup>. To help estimate current and future transportation emissions and test the impact of different strategies, in 2020 SDOT began development of a Climate Calculator prototype tool. The Climate Calculator uses data from PSRC’s 2019 Household Travel Survey to establish a baseline VMT estimate for all trips to, from, and within Seattle. The Calculator also incorporates estimates of potential impact for a wide range of transportation strategies (including the CTR program), which are derived using a mix of Seattle-specific data, peer city data, and information from peer-reviewed literature. For each strategy within the model, there is a “standard” and “aggressive” pathway. For the standard pathway, future targets are based off stated program goals and feedback from program managers. For the aggressive pathway, future targets are based off the performance of leading cities in North America and internationally and/or aim to double the outcomes projected in the outcomes projected in the standard pathway.

According to Seattle’s Office of Sustainability & Environment, transportation emissions in Seattle fell 4.3% from 2008 to 2018, so, in order to meet the City’s goal of an 83% reduction by 2030, transportation emissions need to be reduced an additional 78.7% from 2019 to 2030<sup>8</sup>. Using the Climate Calculator, a range of DAR inputs in 2030 were tested to identify the maximum DAR in 2030 that would result in a 78.7% reduction in overall transportation emissions from 2019 to 2030. Using the outputs of the Climate Calculator, the CTR program would need to achieve a DAR of 25.25% citywide in 2030 to help achieve Seattle’s goal of an 83% reduction in transportation emissions. Based on the updated projections of future CTR DAR (assuming the future rate of reduction matches past performance), Seattle is currently projected to reach a CTR DAR of 24.2% in 2030 (see Figure 15), meaning it would exceed the 25.25% DAR needed to reach the City’s transportation emissions goal according to the Climate Calculator.

**FIGURE 15. ESTIMATED VMT AND EMISSIONS (AS A % OF 2019 BASELINE) WITH ALL STRATEGIES IMPLEMENTED UNDER AGGRESSIVE PATHWAY AND A DAR OF 25.25% FOR CTR PROGRAM**



<sup>7</sup>City of Seattle (2018). Seattle Climate Action Plan. [http://greenspace.seattle.gov/wp-content/uploads/2018/04/SeaClimateAction\\_April2018.pdf](http://greenspace.seattle.gov/wp-content/uploads/2018/04/SeaClimateAction_April2018.pdf)

<sup>8</sup>City of Seattle (2021). Understanding Our Emissions. [www.seattle.gov/environment/climate-change/climate-planning/performance-monitoring#data](http://www.seattle.gov/environment/climate-change/climate-planning/performance-monitoring#data)

## 5. CONCLUSION AND LOOK-AHEAD

Seattle's CTR Program has continued to make progress on core goals and many benchmarks, exceeding the 2020 targets for both DAR and VMT per employee and surpassing the 2023/2024 targets on both core program goals. Seattle is on track to outperform future DAR and VMT targets if past performance continues.

Given the City's performance trajectory, SDOT may reevaluate existing targets for both core program goals; more aggressive targets based on current trends would also better align with Seattle's goal to reduce transportation emissions 83% by 2030.

Concurrently with this study, SDOT refined a Climate Calculator designed to test a range of strategies and inputs to gauge the impacts on VMT and GHG emissions. The CTR program past performance and potential future trends figured prominently within these strategies. Using the Calculator, the user can enter DAR targets for 2024 and 2030 and then view the VMT and emissions reductions for 2022, 2024, 2026, 2028, and 2030, as well as the estimated number of daily car trips diverted in 2030. The user can also adjust the expected rate of job growth at CTR sites. Several other strategies within the Calculator are closely related to the CTR program, including strategies for TMPs, increased remote/hybrid work, and elimination of employer parking subsidies. Thus the Calculator helps convey a range of impacts related to the suite of levers utilized in the CTR program that shift trips away from SOVs and thus positively impact climate outcomes.

While the CTR program is currently meeting benchmarks that are rate-based or normalized by the number of employees on an absolute basis,

employees at CTR sites are generating more VMT and GHG emissions in aggregate due to continued employment growth. This highlights the additional work to be done ahead relating to the City's climate goals. The City is certainly better off if these new jobs are located at sites participating in the CTR program—CTR employees have significantly lower DAR compared to the average Seattle resident and worker—but it means the program will be challenged to further reduce SOV trips as well as to potentially expand its influence over a wider array of trips, employee type, or business sizes.

The CTR program also faces significant uncertainty as Seattle begins to emerge and recover from the impacts of the COVID-19 pandemic. Will employment drop at CTR sites? How many employees will continue working from home or adopt hybrid working models? The answers to these questions will have significant impacts, including the reach of the CTR program, commute travel patterns, the quality and reliability of CTR Survey data, and more. When SDOT undertakes development of the next CTR Strategic plan, this context as well as past performance and success in implementing the actions outlined in the 2019-2023 plan will all shape next steps.

Over the past decade, the CTR program has played an integral role in Seattle's progress creating a more sustainable transportation system and encouraging multimodal travel options even as the City experienced rapid population and employment growth. In order for the City to progress towards its 2030 climate goals, the CTR program will need to continue to shift more employees from driving alone to more sustainable travel options over the next decade.

# GLOSSARY OF TERMS

**Alternate Plan:** In 2013, Seattle was one of four Washington Jurisdictions to create a pilot plan geared toward expanding CTR beyond commute trips to large employers and using flexibility in setting and meeting targets based on local context.

**Center City:** Seattle's Center City district include the following 10 neighborhoods: Belltown, Capitol Hill, Chinatown-International District, Commercial Core, Denny Triangle, First Hill, Pike Pine, Pioneer Square, South Lake Union, and Uptown, Seattle's 2013-2017 CTR Alternate Plan expanded CTR programming and data gathering to employers with less than 100 employees located in Center City.

**Commute Seattle:** Transportation Management Association for Downtown, providing commute support to downtown businesses. Since 2013, SDOT has contracted with Commute Seattle to assist with implementation of the CTR program across Seattle, particularly its employer facing components.

**CTR Employees, CTR- affected Employees:** Individuals who work full-time at a CTR site and report to work between 6:00 a.m. and 9:00 a.m. on weekdays.

**CTR Networks:** A geographically defined region within the City of Seattle that contains one or more CTR sites. Seattle's 2013-2017 Alternate plan designated eight networks. The 2019-23 CTR Strategic Plan modifies network boundaries and increases the number of networks to 11.

**CTR Site, CTR-affected Site:** An employment site with 100 or more full-time employees whose workdays start between 6 a.m. and 9 a.m. on weekdays, and located in a Washington county with more than 150,000 residents.

**Drive Alone Rate (DAR):** The percent of trips that are drive-alone trips.

**Transportation Management Program (TMP):** A TMP is a Master Use Permit (MUP) requirement, comprised of a DAR/SOV commute goal and program elements that apply for the life of an individual building or group of buildings. As of January 2016, there are 193 TMP sites, within which 124 tenants are also enrolled in the city's CTR program.

**Single-Occupant Vehicle (SOV):** Vehicle occupied by one person.

**Vehicle Miles Travelled (VMT):** The sum of miles traveled (e.g. by a vehicle or a commuter).



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