# Results of the 2020-2021 Campus Travel Survey

June 2021

A Research Report from the National Center for Sustainable Transportation

Ryan G. Miller, University of California, Davis



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## Results of the 2020-21 Campus Travel Survey

Institute of Transportation Studies and Transportation Services University of California, Davis

Prepared by Ryan G. Miller Institute of Transportation Studies

June 2021

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## **EXECUTIVE SUMMARY**

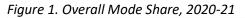
The UC Davis Campus Travel Survey is an annual survey led by Transportation Services (TS) – formerly known as Transportation and Parking Services (TAPS) – and the National Center for Sustainable Transportation, part of the Institute of Transportation Studies at UC Davis. It collects a rich set of data about travel to the UC Davis campus, demographics, and attitudes toward travel.

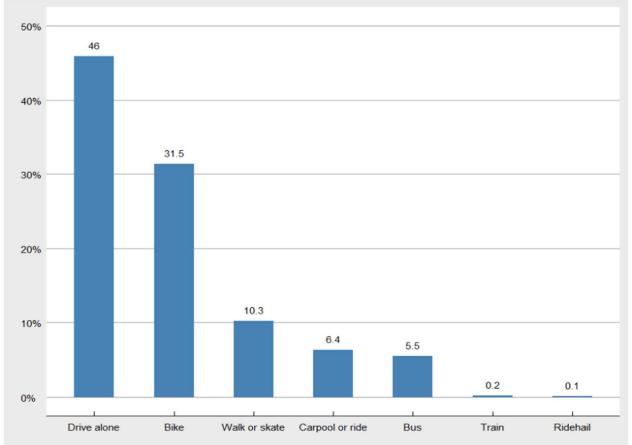
The 2020-2021 survey collected data from 3,291 people affiliated with UC Davis about their travel to campus during a single week in October 2020. It used a stratified random sampling method with the intent to gather a representative sample of the campus population. About 18 percent of those invited responded to this year's survey. For the statistics presented throughout this report, we weight the responses by campus role (freshman, sophomore, junior, senior, Master's, PhD, faculty, and staff) and gender so that the proportion of respondents in each group reflects their representation in the campus population.

## **Main Findings**

#### **Overall Mode Share**

Travel to the UC Davis campus was highly impacted by the COVID-19 pandemic in the 2020-2021 school year. On an average weekday, only about 35 percent of the campus community who reported that they regularly visited campus actually traveled physically to campus. Among these, 46 percent drove alone, 31.5 percent biked, 10.3 percent walked or skated, 6.4 percent carpooled or got a ride, 5.5 percent bussed, and less than one percent took a train or used a ridehailing service (see Figure 1). These figures represent the percent of people using each means of transportation as their primary mode (that is, for the greatest share of their distance) from wherever they live to their campus destination on an average weekday.





Because some people use different travel modes on different days, the total number of people who bicycle or ride transit, for instance, is substantially larger than the number using each mode on any given day. In particular, about 64 percent reported biking as their primary means at least once during the week. Similarly, about 85 percent drove alone, 20 percent rode the bus, 25 percent walked or skated, 19 percent carpooled or got a ride, and less than one percent took Amtrak or used a ride-hailing service. See Figure 2 on the following page.

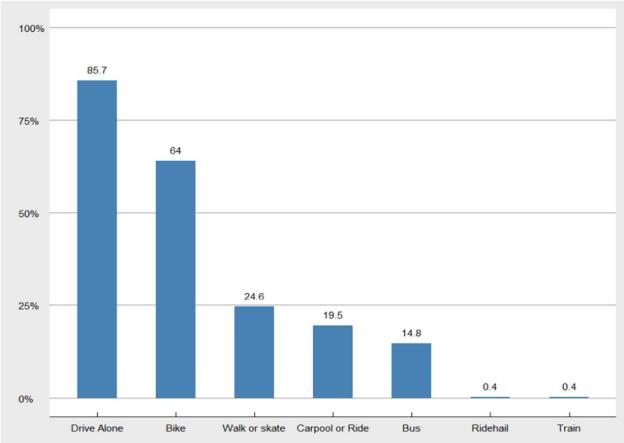


Figure 2. Used mode at least once during reference week, 2020-21

#### Change in Mode Share, 2019-20 to 2020-21

One of the main purposes of the Campus Travel Survey is to collect comparable data each year in order to assess trends over time. The questions and calculations used to estimate mode share in this year's survey are identical to those used in the 2019-20 survey. In addition, the results of each year are weighted by role and gender to correct for differences in response rates between subsets of the population over time. Table ES-1 shows the change in mode share between the 2019-20 and 2020-21 surveys.

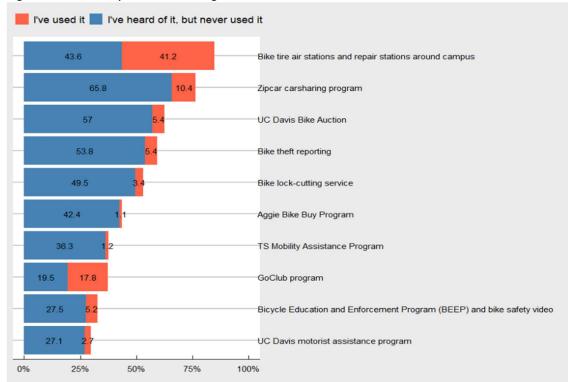
	Physically	Of those who physically traveled to campus						
Survey Years	Travelled	Bike	Walk or Skate	Drive Alone	Carpool or Ride	Bus	Train	Ridehail
2019-20, Overall	85.3%	34.4%	9.6%	31.3%	5.4%	17.9%	0.93%	0.41%
2020-21, Overall	33.4%	31.5%	10.3%	46.0%	6.4%	5.5%	0.24%	0.13%
Difference	-51.9%	-2.9%	+0.7%	+14.7%	-1.0%	-12.4%	-0.69%	-0.28%

#### Table ES- 1. Percentage Point Change in Mode Share on an Average Weekday

Data are weighted for both years by campus role and gender.

#### Familiarity with TS Programs

Several services that promote bicycling are well-known and highly utilized across the campus population. The bike tire air stations on campus are the best known and most highly used transportation service, with more than 41 percent of respondents having used them (Figure 3).



#### Figure 3. Familiarity with TAPS Programs

#### Bicycling Aptitude

We asked all respondents to rate their ability to ride a bike, specifying that we were interested in "whether you know how to ride a bike, regardless of whether it is practical or desirable for you to do so as a means of transportation to campus." Figure 4 shows responses to this question broken down by men and women; Figure 5 shows results to this question by campus role (undergraduates, graduate students, staff, and faculty).

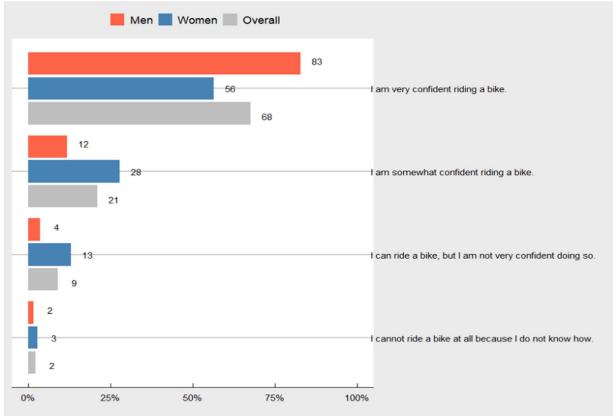


Figure 4. Bicycling Aptitude of Men and Women

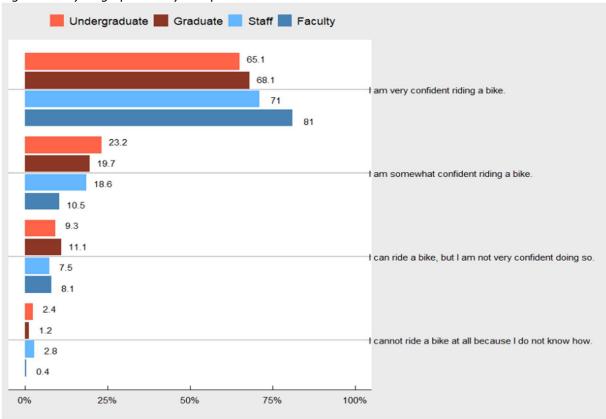


Figure 5. Bicycling Aptitude by Campus Role

## BACKGROUND

In 2003 the University of California adopted the *UC Policy on Sustainable Practices*, which charges UC campuses with the task of measuring and promoting sustainable commuting. System-wide targets for assessing the sustainability of transportation systems include annual estimation and reporting of Average Vehicle Ridership (AVR) and carbon dioxide equivalent emissions (CO<sub>2</sub>e) for each UC campus. The *UC Policy on Sustainable Practices* also lists mechanisms for reducing commute emissions, including the construction of on-campus housing and expansion of Transportation Demand Management (TDM) programs.

In addition to the sustainable transportation goals of the University of California, many universities and colleges around the world face additional reasons to promote alternatives to driving. Some concerns include high costs of expanding parking facilities, air pollution, and traffic congestion. It is essential that campus planners and travel demand managers have current and accurate information about commuting at their institutions so that they may implement targeted transportation policies, evaluate the effectiveness of current services, share best practices with other institutions, and track commuting behavior over time.

## About the Campus Travel Survey

The UC Davis Campus Travel Survey is a joint effort by Transportation Services (TS) on campus and the National Center for Sustainable Transportation, part of the Institute of Transportation Studies at UC Davis. Since 2007 the survey has been administered each fall by a graduate student at the Institute of Transportation Studies. The main purpose of the survey is to collect annual data on how the UC Davis community travels to campus, including mode choice, vehicle occupancy, distances traveled, and carbon emissions.

Over the past ten years, the travel survey results have been used to assess awareness and utilization of campus transportation services and estimate demand for new services designed to promote sustainable commuting at UC Davis. Data from the campus travel survey have also provided researchers with valuable insights about the effects of attitudes and perceptions of mobility options on commute mode choice. This year's survey is the thirteenth administration of the campus travel survey.

#### Survey Development & Administration

The content of the 2020-2021 survey was based on the previous year's survey, retaining key questions relating to mode choice and residential location, among others. An ongoing attempt to refine question wording has meant that some variables are not directly comparable across years. See "Appendix A: Survey instrument, 2020-21 Campus Travel Survey" for a full copy of the survey instrument. See "Appendix B: Changes from the 2019-20 survey instrument" for a summary of changes from the previous year.

The online survey was prepared and hosted using the Qualtrics Survey website (www.qualtrics.com). Staff at Transportation Services as well as faculty and students affiliated with the Institute of Transportation Studies provided feedback on survey content and assisted with pre-testing of the online survey.

The 2020-21 survey was administered online in October and November 2020, distributed by email to a stratified random sample of 21,290 students, faculty, and staff (out of an estimated total population of 53,886). See Table B-1 for a summary of the random sample stratified by campus role.

## Sample & Response

As in previous years, the goal of the sampling procedure was to draw a sufficiently large sample for reliable statistical estimates within the following groups: freshmen, sophomores, juniors, seniors, Master's/professional students, PhD students, faculty, and staff. We used standard statistical techniques to determine the minimum sample size needed for estimates with a +/- 5% margin of error, based on the assumed response rate for each of the groups.

A stratified random sample was drawn from ostensibly complete lists of UC Davis email addresses maintained at two different departments within the university. The sampling of student and employee email addresses was conducted by the Budget and Institutional Analysis (BIA) office. Student email addresses were screened based on students' class level and departmental affiliation, including all academic and professional students except medical students, who are not based on the Davis campus. Employees were screened to exclude those affiliated with the UC Davis Medical Center or field stations, those without salary, faculty at UC Davis Extension, temporary employees, and employees without email addresses. BIA staff compiled a spreadsheet containing only email addresses and role groups of those individuals selected for inclusion in the sample.

Each person in the selected sample received an initial email inviting them to take the survey. Those individuals who had not completed the survey one week later were sent a reminder email. Those individuals who had not completed the survey after the second week were sent an additional reminder email the following week. See "Appendix C: Text of the recruitment emails" for copies of these recruitment emails.

Offering a chance to win a desirable prize is thought to increase overall response to a survey. This year, Transportation Services provided incentives in the form of forty \$50 Visa gift cards and two grand prizes of Amazon Fire tablets to participants of the survey. Entry into this drawing was mentioned in the initial and follow-up recruitment emails, as well as on the welcome page of the online survey. On the final page of the survey, respondents were asked to indicate whether it would be okay to contact them again (1) with questions about their survey or (2) if they win the drawing, or if instead they preferred not to be contacted.

A total of 5,230 respondents started the survey (responding to the question about their role on campus), representing over 24 percent of those invited. Of those who began the survey, 86 percent (3,291 respondents) completed the survey through the set of questions that asked respondents about their campus role and gender identity, and 43 percent (2,261 respondents) reported campus travel (and their mode choice) on each day of the reference week. Table B-1 shows response rates for this year's survey compared to the previous year, broken down by the total number of responses and the portion of responses which reported campus travel during the COVID-19 pandemic.

Table B-2 shows the number of valid responses at three key points in the survey: those who answered questions about campus role and gender identity (used in weighting and expansion), those who reported campus travel (less than half the survey universe this year as a result of the COVID-19 pandemic), and those reporting travel whose residential locations were successfully geocoded in addition to meeting the previous criteria.

Role	Assumed population	Number invited	Total responses	Responses Reporting Campus Travel*	Target response rate	Response Rate (Total)	Response Rate (Reporting Campus Travel)	2019-20 Actual Response Rate
Student	37,593	17,052	3,291	1,476	12.6%	19.3%	8.7%	17.3%
Undergraduate	30,810	12,630	2,323	934	11.6%	18.4%	7.4%	16.8%
Freshman	6,567	1,650	673	205	22.0%	40.8%	12.4%	27.2%
Sophomore	5 <i>,</i> 443	3,590	574	243	10.0%	16.0%	6.8%	14.8%
Junior	8,388	3,680	613	287	10.0%	16.7%	7.8%	15.2%
Senior	10,412	3,710	463	199	10.0%	12.5%	5.4%	15.0%
Graduate	6,783	4,422	968	542	15.6%	21.9%	12.3%	18.8%
Master's	2,662	2,662	387	162	12.6%	14.5%	6.1%	15.8%
PhD	4,121	1,760	581	380	20.0%	33.0%	21.6%	24.7%
Employee	16,293	4,238	1,215	785	16.5%	28.7%	18.5%	21.5%
Faculty	2,152	2,038	407	267	16.0%	20.0%	13.1%	20.7%
Staff	14,141	2,200	808	518	17.0%	36.7%	23.5%	22.0%
Overall	53,886	21,290	4,506	2,261	2,849	21.2%	10.6%	18.1%
Overall %	100.0%	39.5%	21.2%	10.6%	13.4%	21.2%	10.6%	18.1%

Table B- 1. Response Rates for 2020-21 versus 2019-20

\*The survey administration period coincided with the COVID-19 pandemic and remote campus operations during the Fall 2020 academic quarter. Because such a large percentage of the campus community did not report physical travel to campus during this time, this table breaks down response rates between all responses, and those responses reporting campus travel (and therefore included in all subsequent travel and mode related questions).

			Target	Role and Gender	Valid Mode*	Geocoded
Role	Population	Invited	(5% margin of error)	(Provided role and gender)	(weighted for bulk of analysis)	(weighted for CO2 emissions, VMT)
Student	37,593	17,052	2,149	3,572	1,476	1,430
Undergraduate	30,810	12,630	1,461	2,419	934	904
Freshman	6,567	1,650	363	711	205	203
Sophomore	5,443	3,590	359	570	243	235
Junior	8,388	3,680	368	650	287	275
Senior	10,412	3,710	371	488	199	191
Graduate	6,783	4,422	688	1,153	542	526
Master's	2,662	2,662	336	523	162	155
PhD	4,121	1,760	352	630	380	371
Employee	16,293	4,238	700	1,565	785	749
Faculty	2,152	2,038	326	558	267	256
Staff	14,141	2,200	374	1,007	518	493
Overall	53,886	21,290	2,849	5,137	2,261	2,179
Overall percent	100.0%	39.5%	13.4%	24.1%	8.4%	100.0%

Table B- 2. Number of Valid Responses by Role

\*Due to the COVID-19 pandemic and associated remote instruction, most survey respondents did not report campus travel during the reference week. If survey respondents did not report any campus travel during the reference week, they took a shorter version of the survey that did not ask questions about travel mode or distances. To allow for comparison to other years' travel surveys, this report focuses largely on responses that did report travel and an associated mode, though this number is much lower than in a typical year.

### Weighting Responses by Role and Gender

For the purposes of analysis, we assume that respondents are roughly similar to the rest of the population within their role group (freshmen, sophomores, etc.) with respect to socio-demographics or other attributes that may matter for transportation choices. For this reason, we weight the sample by role group. In particular, as described above, we assign respondents to one of eight role groups based on their responses to questions *Q2* through *Q8*. These eight roles are: freshmen, sophomores, juniors, seniors (includes fifth-years and post-baccalaureate), Master's students (and professional students such as law, business, and Ed.D.), PhD students, faculty, or staff (including Post-docs).

All results presented in this report are weighted to be representative of the campus population by these role groups. That is, we apply a weight factor to each case in a given role group so that the group's proportion in the sample is the same as their proportion in the overall projected population. As in previous surveys, the sample is disproportionately comprised of women. In addition to weighting by role in the university, we correct for these differences in response rates among men and women in each role group so that the share of men and women in the weighted sample is equal to the share of men and women in each role among men and women in each role group in the population.

Table B-3 and Table B-4 show the differences in gender distribution between the unweighted and weighed results.

Role	Men	Women	Unweighted Sample	Projected Population
Undergraduate	26.1%	73.9%	934	30,810
Graduate	33.8%	66.2%	542	6,783
Faculty	51.7%	48.3%	267	2,152
Staff	35.9%	64.1%	518	14,141

Table B- 3. Unweighted Gender Distribution of Respondents ReportingReported Campus Travel

Men	Women	Weighted	Projecte
Campus Travel			
Table B- 4. Weighted Gender	r Distribution of Re	spondents Rep	orting

	Men	Women	Weighted Sample	Projected Population
Undergraduate	39.4%	60.6%	1,293	30,810
Graduate	45.6%	54.3%	285	6,783
Faculty	59.5%	40.8%	90	2,152
Staff	45.8%	54.2%	593	14,141

## **Confidence Intervals**

Table B-5 shows the margin of error of findings for each role group, to the extent that the proportions and figures estimated in the report differ by role group. For statistics about the population as a whole, we are 95 percent confident that our estimates are within 1.5 percent of their true value. These expectations are particularly important for mode share estimates, given that some year-to-year changes are significant, while others are not.

For example, when we report later that 34.4 percent of the campus population bikes to campus, our margin of error indicates that – to the extent to which the survey results are unbiased – the true share of persons that bike to campus is between 32.9 and 35.9 percent.

It is important to note that for this 2020 survey year, estimates may be subject to additional error to the extent that survey respondents who reported travel to campus during the reference week might differ from survey respondents who worked or learned entirely remotely during the reference week, but who would otherwise travel to campus if not for the COVID-19 pandemic.

Role	Sample Size (Reporting Campus Travel)	Population Size	Margin of Error
Student	1,476	37,593	2.50%
Undergraduate	934	30,810	3.16%
Freshman	205	6,567	6.74%
Sophomore	243	5,443	6.14%
Junior	287	8,388	5.68%
Senior	199	10,412	6.88%
Graduate	542	6,783	4.04%
Master's	162	2,662	7.46%
PhD	380	4,121	4.79%
Employee	785	16,293	3.41%
Faculty	267	2,152	5.61%
Staff	518	14,141	4.23%
Overall	2,261	53,886	2.02%

#### Table B- 5. Margins of Error, by Role Group

## **FINDINGS**

This section summarizes key results from the survey. Data presented in this section are weighted by role and gender, as described above. When "unweighted sample" size is reported it reflects the number of actual respondents in this category; "weighted sample" size reflects the number that would be in each category if the distribution of roles and genders in the sample matched the distribution in the population (so the total number in the weighted sample equals the number in the unweighted sample, but numbers within subgroups may change). "Projected population" size is a projection of the weighted proportions to the full campus population, calculated by multiplying each response by an expansion factor based on role and gender.

Many statistics are presented by role group (freshmen, sophomores, juniors, seniors, Master's students, PhD students, faculty, or staff). Where applicable, some are broken down by students (including freshmen through PhD students), undergraduates (freshmen through senior students), graduate students (Master's and PhD students), employees (faculty and staff), within Davis (those living on campus or elsewhere in Davis among all role groups), and outside Davis (those living outside of Davis among all role groups).

### **Physical Travel to Campus**

Table 1 shows the share of each role group who traveled to campus on each day of the reference week. For those living on campus, "travel to campus" on a given day means the respondent indicated traveling to a campus destination for school or work. Overall, among those who reported travel to campus during the reference week, only about 35 percent of respondents visited campus on any given weekday. Rates differed substantially across role groups, with undergraduates and master's students visiting campus at lower rates than PhD students, faculty, and staff. Interestingly, while visitation is lowest on Friday, the extent of this Friday drop-off is far less pronounced than in traditional years.

It is important to remember that this question was only asked to respondents who reported at least some physical travel to campus during the reference week, so the project population numbers are overestimates of how many people truly visited campus. Table 3 shows the percentage of respondents who did not report any campus travel at all during the reference week.

	Share	physically t	raveling to	campus by w	eekday	Waightad Samala	Projected
Role	Monday	Tuesday	Wed.	Thursday	Friday	Weighted Sample	Population*
Student	29.6%	30.7%	31.0%	33.0%	30.9%	1,577	37,593
Undergraduate	28.8%	29.7%	30.5%	32.5%	29.9%	1,293	30,810
Freshman	35.0%	35.7%	34.1%	36.5%	38.2%	276	6,567
Sophomore	27.7%	23.8%	25.9%	28.1%	28.0%	228	5,443
Junior	30.1%	30.8%	31.0%	31.5%	30.8%	352	8,388
Senior	24.5%	28.2%	30.2%	33.0%	25.0%	437	10,412
Graduate	33.4%	35.0%	33.1%	35.5%	35.1%	285	6,783
Master's	21.3%	25.2%	21.6%	28.2%	27.1%	112	2,662
PhD	41.2%	41.3%	40.6%	40.2%	40.2%	173	4,121
Employee	46.8%	46.8%	46.1%	47.0%	43.0%	684	16,293
Faculty	36.7%	41.0%	39.0%	40.7%	36.9%	90	2,152
Staff	48.3%	47.7%	47.2%	48.0%	44.0%	593	14,141
Overall	34.8%	35.6%	35.5%	37.3%	34.5%	2,261	53,886
Weighted							
Sample	787	804	804	842	781	2,261	NA
Projected							
Population*	18,764	19,167	19,151	20,078	18,613	NA	53 <i>,</i> 886

Table 1 Chara Dhusicall	, Travalling to Campu	hullookdau (Amona	These Travelling to Compus)
Table 1. Share Physicall	y Travening to Campu	s by weekaay (Among	Those Travelling to Campus)

\* Results are based on responses to questions Q37 and Q38. This question was only displayed to respondents who reported travel during the reference week. Projected population numbers should be interpreted as the number of people who would travel to campus each day if the entire campus community reported travel during the reference week. Data are weighted by role and gender.

In addition to trends by day of the week, there are substantial differences in the frequency of physical travel to campus among those living in different locations (Table 2). Overall, those living on campus and those living outside Davis traveled to campus at higher-than-average rates (34.9 percent and 36.8 percent, respectively). Within the context of the COVID-19 pandemic, it is likely that on-campus residents, particularly undergraduate students, travelled to campus to access dining and other essential services. Travel rates among those living outside of Davis appear to be driven largely by staff, faculty, and PhD students, who may have been involved in essential work or research activities requiring physical presence during the pandemic (Table 3).

Role	Overall	On Campus	West Village	Off Campus in Davis	Outside Davis	Weighted Sample	Projected Population*
Student	29.0%	34.1%	32.7%	28.7%	16.8%	1,523	37,593
Undergraduate	28.3%	35.0%	33.3%	27.2%	10.4%	1,248	30,810
Freshman	29.4%	37.5%	13.3%	18.3%	2.6%	266	6,567
Sophomore	26.0%	42.9%	29.0%	23.9%	13.7%	221	5,443
Junior	29.4%	28.4%	41.0%	27.2%	9.4%	340	8,388
Senior	27.8%	20.2%	28.5%	29.8%	15.4%	422	10,412
Graduate	32.4%	26.2%	17.2%	34.1%	31.4%	275	6,783
Master's	20.9%	16.1%	13.1%	20.5%	25.6%	108	2,662
PhD	39.9%	30.0%	31.2%	42.3%	37.0%	167	4,121
Employee	44.5%	82.5%	0.0%	44.0%	44.4%	660	16,293
Faculty	38.5%	89.3%	0.0%	36.0%	42.0%	87	2,152
Staff	45.5%	80.1%	0.0%	46.4%	44.6%	573	14,141
Overall	33.7%	34.9%	32.7%	32.1%	36.8%	2,183	53,886
Weighted							
Sample	736	105	53	382	196	2,183	NA
Projected							
Population*	18,166	2,603	1,297	9,422	4,845	NA	53,886

Table 2. Physical Travel to Campus by Residential Location

\*Results are based on responses to questions Q27 (residential location) and Q38 (days traveled to campus). Data are weighted by role and gender.

Role	Sample with Valid Roles	Sample Reporting Campus Travel	Share away from campus all week
Student	3,572	1,476	58.7%
Undergraduate	2,419	934	61.4%
Freshman	711	205	71.2%
Sophomore	570	243	57.4%
Junior	650	287	55.8%
Senior	488	199	59.2%
Graduate	1,153	542	53.0%
Master's	523	162	69.0%
PhD	630	380	39.7%
Employee	1,565	785	49.8%
Faculty	558	267	52.2%
Staff	1,007	518	48.6%
Overall	5,137	2,261	56.0%

Table 3. Share Not Travelling to Campus During Reference Week

## Mode Share for Primary Means of Transportation

For physical trips to campus, mode choice was determined by responses to the statement, "Please select how you got to your first campus destination each day. (If you used more than one means, select whatever you did for most of the distance)" (*Q51*). Thus, modes identified are those used for most of the trip, and only on the way to campus at the beginning of the day. Throughout this report, we refer to answers to this question as a respondent's "primary" mode, meaning how they traveled for most of their trip to campus.

For each respondent, we calculate the share of days out of the five-day week that a given mode was used as a primary mode. (For instance, if someone biked one day of five days traveled to campus, their bike share for the week would be 20 percent.) The overall mode share represents the average shares across all respondents, which is equivalent to the share of all people using each mode on an average weekday. For the purpose of validating the method we use to calculate mode share, we also asked respondents about the mode they "usually" use to travel to campus.

We asked respondents to report their residential location as the place from which they usually travel to campus. In some cases, respondents may travel to campus from another location (e.g. a family member's residence), resulting in seemingly impossible or at least improbable primary mode choices. For example, someone may report living on campus but traveling by train to campus. Since there are very few cases in which these improbable modes appear, results are reported as is, and discretion should be used in interpreting these cases.

Tables 4 through 10 show the overall mode share among those physically traveling to campus on a given weekday. Table 4 shows mode share among the entire sample. While the 2020-21 Campus Travel Survey is bound to be highly idiosyncratic due to the COVID-19 pandemic, mode share data highlights the robustness of the bicycle as a travel mode, even during the public health crisis. While the rate of respondents driving alone predictably increased over prior years, the rate of bicycling did not fall as dramatically as the rate of public transit use. Perhaps as a result of similar pandemic-related behavior changes, the share of respondents walking or skating to their campus destinations actually increased relative to 2019.

Tables 5 through 10 show mode share by residential location, as outlined below. The results suggest that mode splits vary substantially by neighborhood.

- Table 5 shows the mode share among those who live within Davis. This category includes students and employees who live on campus, off campus in Davis, and in the West Village apartments.
- Table 6 shows the mode share among those who live on campus, defined as the area south
  of Russell Boulevard, west of A St., north of I-80, and east of Highway 113. Bicycling and
  walking understandably predominate among the students who live on campus (only a few
  employees reported living on campus).

- Table 7 shows the mode shares among those living in the West Village apartments. While sample sizes in this neighborhood have been very low in recent years, 2020 saw another phase of apartment construction come on-line in West Village. However, the impact of the pandemic still means that sample sizes from the neighborhood are low, so role-specific mode shares should be interpreted with some degree of caution. However, the overall mode share estimates for West Village are consistent with expectations for travel distances greater than "on campus" locations but generally less than "off campus in Davis" locations.
- Table 8 shows the mode share results for those living off-campus in Davis (excluding West Village). Among those living off-campus in Davis, undergraduate students and staff are less likely to bike than graduate students and faculty. Bus ridership fell precipitously as a result of the COVID-19 pandemic, but biking remained the most popular travel option about driving alone.
- Table 9 shows the mode share for students and employees who live outside Davis (an estimated 13,162 people). Driving alone to campus was extremely popular during 2020, with nearly 92 percent of respondents driving and less than one percent travelling via bus or train. In 2019, only about 80 percent of respondents who lived outside of Davis drove alone to campus.
- Table 10 shows the mode share for those living off-campus in Davis (excluding West Village) by their neighborhood in Davis. To determine neighborhood, we asked respondents who lived off-campus in Davis to identify which part of Davis they lived in by using a series of maps as references. See "Figure 6. Neighborhoods in Davis" and "Appendix A: Survey instrument, 2020-21 Campus Travel Survey."

			Of the	se who phys	ically travelle	ed to camp	ous			
Role	Physically Travelled	Bike	Walk or Skate	Drive Alone	Carpool or Ride	Bus	Train	Ridehail	Weighted Sample	Projected Population
Student	28.6%	42.6%	15.9%	24.7%	8.3%	8.5%	0.00%	0.09%	1,577	37,593
Undergraduate	27.9%	42.5%	18.2%	20.5%	8.7%	10.1%	0.00%	0.06%	1,293	30,810
Freshman	29.3%	40.0%	45.8%	8.2%	4.4%	1.4%	0.00%	0.27%	276	6,567
Sophomore	25.6%	39.8%	20.7%	12.0%	12.9%	14.6%	0.00%	0.00%	228	5,443
Junior	29.1%	46.9%	8.9%	18.0%	9.9%	16.3%	0.00%	0.00%	352	8,388
Senior	27.1%	41.6%	6.3%	35.2%	8.5%	8.3%	0.00%	0.00%	437	10,412
Graduate	32.2%	43.1%	6.6%	41.0%	6.6%	2.4%	0.00%	0.22%	285	6,783
Master's	21.6%	39.4%	7.2%	48.8%	2.7%	1.8%	0.00%	0.00%	112	2,662
PhD	39.1%	44.5%	6.4%	38.2%	8.0%	2.6%	0.00%	0.30%	173	4,121
Employee	44.3%	14.8%	1.9%	77.8%	3.6%	1.1%	0.61%	0.19%	684	16,293
Faculty	37.8%	36.0%	6.3%	51.7%	4.5%	1.3%	0.23%	0.00%	90	2,152
Staff	45.2%	12.2%	1.4%	81.1%	3.4%	1.1%	0.65%	0.22%	593	14,141
Overall	33.4%	31.5%	10.3%	46.0%	6.4%	5.5%	0.24%	0.13%	2,261	53,886
Weighted sample	754	237	78	347	48	42	2	1	2,261	NA
Projected										
population	17,977	5,657	1,848	8,262	1,148	995	44	24	NA	53,886

Table 4. Sharing Using Each Mode on an Average Weekday, by Role Group (Entire Sample)

			Of	those who p	hysically trav	elled to camp	ous			
Role	Physically Travelled	Bike	Walk or Skate	Drive Alone	Carpool or Ride	Bus	Train	Ridehail	Weighted Sample	Projected Population
Student	30.3%	45.4%	16.7%	21.3%	7.9%	8.6%	0.00%	0.10%	1,376	33,963
Undergraduate	29.9%	44.1%	18.7%	19.0%	8.3%	9.9%	0.00%	0.06%	1,146	28,287
Freshman	32.2%	40.7%	46.5%	6.7%	4.5%	1.4%	0.00%	0.28%	241	5,954
Sophomore	27.2%	41.1%	21.8%	9.6%	11.9%	15.5%	0.00%	0.00%	201	4,954
Junior	31.1%	48.8%	8.7%	17.1%	9.6%	15.8%	0.00%	0.00%	314	7,745
Senior	28.8%	43.7%	6.6%	33.6%	8.1%	8.0%	0.00%	0.00%	390	9,634
Graduate	32.7%	51.5%	7.8%	31.7%	6.2%	2.5%	0.00%	0.27%	230	5,676
Master's	19.7%	53.4%	9.6%	31.9%	2.4%	2.6%	0.00%	0.00%	86	2,118
PhD	40.4%	50.9%	7.2%	31.6%	7.3%	2.5%	0.00%	0.35%	144	3,558
Employee	44.7%	35.8%	3.8%	54.1%	3.4%	2.4%	0.00%	0.48%	274	6,761
Faculty	37.2%	46.0%	8.7%	38.4%	5.7%	1.2%	0.00%	0.00%	63	1,555
Staff	47.0%	33.4%	2.6%	57.8%	2.9%	2.7%	0.00%	0.59%	211	5,206
Overall	32.7%	43.2%	13.8%	28.7%	6.9%	7.2%	0.00%	0.19%	1,650	40,724
Weighted Sample	540	233	74	155	37	39	0	1	1,650	NA
Projected										
Population	13,322	5,758	1,835	3,826	920	957	0	25	NA	40,724

Table 5. Share Usina Ead	ch Mode on an Averaae	Weekdav, res	pondents living within Davis	

			Of	those who p	hysically trave	elled to cam	ous			
Role	Physically Travelled	Bike	Walk or Skate	Drive Alone	Carpool or Ride	Bus	Train	Ridehail	Weighted Sample	Projected Population
Student	34.1%	41.4%	48.7%	4.8%	3.4%	1.5%	0.00%	0.28%	297	7,320
Undergraduate	35.0%	40.1%	50.7%	4.4%	3.2%	1.3%	0.00%	0.23%	266	6,573
Freshman	37.5%	38.4%	52.0%	3.8%	3.8%	1.6%	0.00%	0.32%	181	4,458
Sophomore	42.9%	30.5%	65.5%	1.3%	1.3%	1.3%	0.00%	0.00%	28	703
Junior	28.4%	39.6%	32.4%	24.4%	3.6%	0.0%	0.00%	0.00%	20	491
Senior	20.2%	71.7%	28.3%	0.0%	0.0%	0.0%	0.00%	0.00%	37	921
Graduate	26.2%	56.8%	24.6%	8.4%	5.9%	3.4%	0.00%	0.89%	30	747
Master's	16.1%	47.5%	43.0%	0.0%	9.5%	0.0%	0.00%	0.00%	8	204
PhD	30.0%	58.7%	20.9%	10.0%	5.2%	4.1%	0.00%	1.07%	22	543
Employee	82.5%	13.7%	52.9%	33.4%	0.0%	0.0%	0.00%	0.00%	5	133
Faculty	89.3%	47.7%	52.3%	0.0%	0.0%	0.0%	0.00%	0.00%	1	35
Staff	80.1%	0.0%	53.1%	46.9%	0.0%	0.0%	0.00%	0.00%	4	97
Overall	34.9%	40.3%	48.8%	6.0%	3.3%	1.4%	0.00%	0.27%	302	7,452
Weighted Sample	105	42	51	6	3	2	0	0	302	NA
Projected										
Population	2,603	1,048	1,271	155	85	37	0	7	NA	7,452

Table 6. Share Using Each Mode on an Average Weekday, respondents living on-campus

			Of	those who p	hysically trav	elled to camp	ous			
Role	Physically Travelled	Bike	Walk or Skate	Drive Alone	Carpool or Ride	Bus	Train	Ridehail	Weighted Sample	Projected Population
Student	32.7%	63.0%	6.8%	11.9%	6.9%	11.4%	0.00%	0.00%	161	3,966
Undergraduate	33.3%	63.0%	6.4%	12.1%	7.0%	11.5%	0.00%	0.00%	155	3,818
Freshman	13.3%	49.9%	21.6%	14.3%	14.3%	0.0%	0.00%	0.00%	23	561
Sophomore	29.0%	45.0%	10.4%	10.4%	16.0%	18.2%	0.00%	0.00%	21	528
Junior	41.0%	66.9%	1.6%	11.6%	6.2%	13.6%	0.00%	0.00%	86	2,121
Senior	28.5%	64.7%	20.1%	15.2%	0.0%	0.0%	0.00%	0.00%	25	608
Graduate	17.2%	62.1%	31.0%	0.0%	0.0%	6.9%	0.00%	0.00%	6	148
Master's	13.1%	47.3%	52.7%	0.0%	0.0%	0.0%	0.00%	0.00%	5	114
PhD	31.2%	83.3%	0.0%	0.0%	0.0%	16.7%	0.00%	0.00%	1	34
Employee	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%	0.00%	0	0
Faculty	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%	0.00%	0	0
Staff	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%	0.00%	0	0
Overall	32.7%	63.0%	6.8%	11.9%	6.9%	11.4%	0.00%	0.00%	161	3,966
Weighted Sample	53	33	4	6	4	6	0	0	161	NA
Projected										
Population	1,297	817	89	154	89	148	0	0	NA	3,966

Table 7. Share Using Each Mode on an Average Weekday, respondents living in West Village

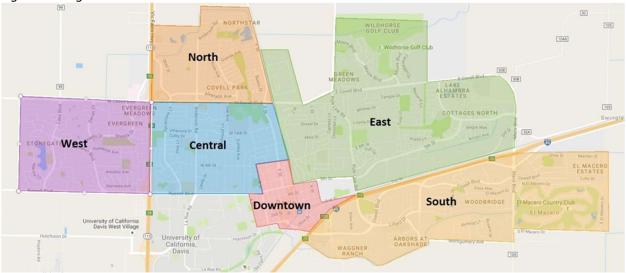
	Physically		Of	those who p	hysically trav	elled to camp	ous		— Weighted	Projected
Role	Travelled	Bike	Walk or Skate	Drive Alone	Carpool or Ride	Bus	Train	Ridehail	Sample	Population
Student	28.7%	43.4%	6.4%	29.5%	9.9%	10.7%	0.00%	0.05%	919	22,678
Undergraduate	27.2%	41.0%	6.8%	27.6%	11.1%	13.5%	0.00%	0.00%	725	17,896
Freshman	18.3%	59.4%	3.1%	31.2%	6.2%	0.0%	0.00%	0.00%	38	935
Sophomore	23.9%	44.1%	9.0%	12.3%	14.7%	19.9%	0.00%	0.00%	151	3,723
Junior	27.2%	38.5%	10.7%	19.7%	12.3%	18.7%	0.00%	0.00%	208	5,134
Senior	29.8%	40.0%	4.0%	37.5%	9.3%	9.2%	0.00%	0.00%	328	8,104
Graduate	34.1%	50.7%	5.4%	35.0%	6.4%	2.4%	0.00%	0.20%	194	4,782
Master's	20.5%	54.1%	4.9%	36.1%	1.9%	3.0%	0.00%	0.00%	73	1,800
PhD	42.3%	49.7%	5.5%	34.7%	7.7%	2.2%	0.00%	0.26%	121	2,982
Employee	44.0%	36.7%	1.9%	54.9%	3.5%	2.5%	0.00%	0.50%	269	6,628
Faculty	36.0%	45.9%	6.2%	40.6%	6.0%	1.3%	0.00%	0.00%	62	1,520
Staff	46.4%	34.5%	0.9%	58.2%	3.0%	2.8%	0.00%	0.61%	207	5,108
Overall	32.1%	41.3%	5.0%	37.3%	7.9%	8.2%	0.00%	0.19%	1,187	29,306
Weighted Sample Projected	382	158	19	142	30	31	0	1	1,187	NA
Population	9,422	3,894	475	3,517	746	772	0	18	NA	29,306

Table 8. Share Using Each Mode on an Average Weekday, respondents living off-campus within Davis

	Physically		Of	those who p	hysically trave	elled to cam	pus		Weighted	Projected
Role	Physically Travelled	Bike	Walk or Skate	Drive Alone	Carpool or Ride	Bus	Train	Ridehail	Sample	Projected
Student	16.8%	2.1%	0.7%	80.7%	15.5%	1.1%	0.00%	0.00%	147	3,630
Undergraduate	10.4%	4.8%	1.5%	70.2%	23.5%	0.0%	0.00%	0.00%	102	2,523
Freshman	2.6%	0.0%	0.0%	100.0%	0.0%	0.0%	0.00%	0.00%	25	613
Sophomore	13.7%	19.0%	6.0%	35.8%	39.3%	0.0%	0.00%	0.00%	20	489
Junior	9.4%	0.0%	0.0%	83.4%	16.6%	0.0%	0.00%	0.00%	26	643
Senior	15.4%	0.0%	0.0%	78.7%	21.3%	0.0%	0.00%	0.00%	32	778
Graduate	31.4%	0.0%	0.0%	88.7%	9.4%	1.9%	0.00%	0.00%	45	1,107
Master's	25.6%	0.0%	0.0%	95.5%	4.5%	0.0%	0.00%	0.00%	22	544
PhD	37.0%	0.0%	0.0%	84.2%	12.8%	3.1%	0.00%	0.00%	23	563
Employee	44.4%	0.8%	0.7%	93.3%	3.9%	0.3%	1.08%	0.00%	386	9,532
Faculty	42.0%	13.1%	0.7%	82.6%	1.3%	1.5%	0.75%	0.00%	24	597
Staff	44.6%	0.0%	0.7%	93.9%	4.0%	0.2%	1.10%	0.00%	362	8,935
Overall	36.8%	0.9%	0.7%	91.7%	5.3%	0.4%	0.95%	0.00%	533	13,162
Weighted Sample	196	2	1	180	10	1	2	0	533	NA
Projected Population	4,845	46	35	4,442	259	18	46	0	NA	13,162

Table 9. Share Using	Each Mode on an A	Averaae Weekdav.	respondents livin	a outside Davis





	Physically		Of	those who	physically trave	lled to camp	ous		Weighted	Projected
Neighborhood	Physically Travelled	Bike	Walk or Skate	Drive Alone	Carpool or Ride	Bus	Train	Ridehail	Sample	Projected
North	27.7%	36.5%	2.1%	39.6%	9.3%	12.4%	0.00%	0.00%	233	5,744
South	29.3%	23.5%	2.7%	51.0%	8.1%	14.7%	0.00%	0.00%	149	3,686
East	36.9%	44.5%	1.0%	40.7%	7.7%	5.1%	0.00%	0.96%	204	5,032
West	33.0%	37.8%	1.8%	44.5%	7.5%	8.4%	0.00%	0.00%	227	5,595
Central	29.6%	52.3%	11.0%	19.1%	9.5%	8.1%	0.00%	0.00%	239	5,907
Downtown	40.3%	49.6%	13.3%	31.6%	5.1%	0.4%	0.00%	0.00%	97	2,400
Overall	32.1%	41.3%	5.0%	37.3%	7.9%	8.2%	0.00%	0.19%	1,187	29,306
Weighted sample	382	158	19	142	30	31	0	1	1,187	NA
Projected population	9,422	3,894	475	3,517	746	772	0	18	NA	29,306

Table 10. Share Using Each Mode on an Average Weekday, by Neighborhood in Davis

#### Comparison of 2020-21 Mode Share with 2019-20

One of the main purposes of the Campus Travel Survey is to collect comparable data each year in order to assess trends over time. The questions and calculations used to estimate mode share in this year's survey are nearly identical to those used in previous year's survey. In addition, the results of each year shown in this analysis are weighted by role and gender to correct for differences in response rates between subsets of the population over time.

Table 11 shows mode share estimates for 2019-20 and 2020-21. Data for both years are weighted by role and gender. This year experienced a markedly different mode share relative to the 2019-2020 survey year; largely as a result of the ongoing COVID-19 pandemic and associated campus closures.

	Physically		0	f those who	physically trave	eled to can	npus		- Weighted	Projected
Role	Travelled	Bike	Walk or Skate	Drive Alone	Carpool or Ride	Bus	Train	Ridehail	Sample	Population
2020-21										
Student	28.6%	42.6%	15.9%	24.7%	8.3%	8.5%	0.00%	0.09%	1,577	37,593
Undergraduate	27.9%	42.5%	18.2%	20.5%	8.7%	10.1%	0.00%	0.06%	1,293	30,810
Graduate	32.2%	43.1%	6.6%	41.0%	6.6%	2.4%	0.00%	0.22%	285	6,783
Employee	44.3%	14.8%	1.9%	77.8%	3.6%	1.1%	0.61%	0.19%	684	16,293
Outside Davis	36.8%	0.9%	0.7%	91.7%	5.3%	0.4%	0.95%	0.00%	533	13,162
Within Davis	32.7%	43.2%	13.8%	28.7%	6.9%	7.2%	0.00%	0.19%	1,650	40,724
Overall	33.4%	31.5%	10.3%	46.0%	6.4%	5.5%	0.24%	0.13%	2,261	53,886
					2019-20					
Student	87.4%	40.6%	12.5%	18.1%	4.4%	23.5%	0.41%	0.52%	2,164	38,071
Undergraduate	87.8%	38.7%	13.6%	16.3%	3.7%	27.0%	0.15%	0.53%	1,767	31,085
Graduate	85.7%	49.6%	7.1%	26.6%	7.2%	7.5%	1.60%	0.47%	397	6,986
Employee	80.3%	18.7%	2.4%	64.6%	8.1%	3.8%	2.25%	0.13%	934	16,426
Outside Davis	79.9%	1.2%	2.0%	79.3%	8.6%	5.0%	3.65%	0.21%	773	14,069
Within Davis	87.9%	45.3%	12.0%	15.5%	4.5%	22.1%	0.07%	0.48%	2,223	40,428
Overall	85.3%	34.4%	9.6%	31.3%	5.4%	17.9%	0.93%	0.41%	3,098	54,497

#### Table 11. Comparison of Mode Shares, 2019-20 to 2018-19, Entire Sample

Results are based on responses to question Q38 (whether they traveled to campus each day) and Q51 (travel mode each day). Data are weighted by role and gender.

#### Mode Access

We asked all respondents whether they have a driver's license (Q15), as well as what modes they have available to them for commuting to campus (Q18). Table 12 shows the share of respondents who have a driver's license, can drive alone, or can bicycle to campus for their commute.

	Driver's License	Access to a Car	Access to a Bike	Weighted Sample	Projected Population
Student	82.4%	57.8%	78.4%	1,523	37,593
Undergraduate	81.2%	54.3%	78.7%	1,248	30,810
Freshman	67.9%	36.2%	80.5%	266	6,567
Sophomore	72.0%	41.2%	84.0%	221	5,443
Junior	88.5%	61.5%	79.3%	340	8,388
Senior	88.5%	66.8%	74.3%	422	10,412
Graduate	87.9%	73.6%	77.2%	275	6,783
Master's	87.9%	71.4%	76.8%	108	2,662
PhD	87.9%	75.0%	77.5%	167	4,121
Employee	97.3%	93.8%	47.7%	660	16,293
Faculty	99.1%	93.8%	76.0%	87	2,152
Staff	97.0%	93.8%	43.4%	573	14,141
Outside Davis	97.7%	95.7%	27.5%	533	13,162
Within Davis	83.4%	59.9%	82.6%	1,650	40,724
Overall	86.9%	68.7%	69.1%	2,183	53,886
Weighted sample	1,897	1,499	1,509	2,183	NA
Projected population	46,821	37,003	37,246	NA	53,886

#### Table 12. Driver's License, Car, and Bicycle Access

Results are based on responses to question Q15 (driver's licensure) and Q18 (available modes to get to campus). Car access reflects those respondents who indicated that they have the option to drive alone to campus. Data are weighted by role and gender.

#### Potential for Bicycling

We include a question to assess the potential mode share of biking. In *Q18*, we asked respondents to "select all options that are available to you for getting to campus, whether or not you use them on a regular basis." Answers to this question might be used as a proxy for the highest potential share of each mode, since those who do not consider a particular mode as viable will be very unlikely to choose it.

Table 13 shows the differences between the share of respondents who consider biking to campus an option and the share that actually bikes to campus on an average weekday. About 85 percent of respondents living within 1 mile from the center of campus consider bicycling an option, compared to about 67 percent of respondents who live 3 to 5 miles from the center of campus (i.e. living in off-campus Davis), with a steep drop in the perceived availability, and corresponding mode share, of bicycling for respondents living beyond 5 miles.

Residence	Share Biking on an Average Weekday*	Share Who Consider Biking an Option
Within 1 mile	27.0%	84.1%
1 to 2.9 miles	25.8%	84.1%
3 to 4.9 miles	13.9%	81.1%
5 to 9.9 miles	1.1%	35.6%
10 to 19.9 miles	0.6%	25.7%
20 miles or more	0.5%	21.9%
Overall	18.7%	68.7%

## Table 13. Potential for Bicycling

Results are based on responses to question Q18 (available modes to get to campus) and Q51 (daily travel). Data are weighted by role and gender for the 2,183 responses that were successfully geocoded and had mode choice data in Q51 (daily travel). Note that the COVID-19 pandemic lead to lower shares of commuters on all weekdays.

# Carpoolers, Ridesharers, and Drivers

We ask those who indicate carpooling (multiple people in a vehicle arriving on campus together) or getting a ride to campus (rideshare, where the driver continues on to another destination after drop-off) how many other people were in the vehicle. These data enable us to accurately account for carpooling and ridesharing in our estimation of vehicle-miles traveled from person-miles traveled. The average vehicle occupancies for carpools and rides are shown in Table 14.

Among those who carpooled at any point during the reference week, the average number of passengers was 3, including the driver. Most people dropped off on campus were the sole passenger with an average of 1.1 passengers dropped off per ride to campus, excluding the driver.

Tuble 14. Meruge											
	Average Occ those who ca got a ride at	arpooled or	Weightee	d Sample	Projected Population						
Role	Carpool	Ride	Weighted Weighted Carpoolers Riders		Projected Carpoolers	Projected Riders					
Undergraduate	3.12	1.14	98	86	2,424	2,116					
Graduate	2.85	1.11	20	9	493	226					
Faculty	3.00	1.21	2	3	52	68					
Staff	3.15	1.00	20	14	487	353					
Outside Davis	3.10	0.00	24	17	582	424					
Within Davis	3.08	1.15	116	95	2,873	2,338					
Overall	3.08	1.12	140	112	3,455	2,762					

#### Table 14. Average Carpool Size

Vehicle occupancy is based on responses to Q60 (number of people in your carpool) and Q54 (number of people dropped off). Data are weighted by role and gender.

### Number of Vehicles on Campus

Estimates of the number of people driving alone, carpooling, and getting a ride can be combined with average vehicle occupancy findings to estimate the total number of vehicles arriving on campus. We estimate the total number of vehicles as the number of people driving alone, plus fractional vehicles counted in proportion to vehicle occupancy. That is, if a respondent reports arriving in a four-person carpool, we count this as 0.25 vehicles arriving on campus on behalf of that respondent. We weight and expand the sample to project the total number of vehicles for the entire campus population, using the expansion factors shown in Table 15.

Tuble 13. Trojected Venicles Arriving on an Average Weekday, by Occupancy & Note											
	Projected	d number of vehic	les on an average	weekday							
Role	Drive Alone	Carpool	Ride	Total	Projected Population						
Student	2,683	169	390	3,243	37,593						
Undergraduate	1,787	138	332	2,257	30,810						
Freshman	144	17	27	188	6,567						
Sophomore	153	33	83	270	5,443						
Junior	461	51	84	596	8,388						
Senior	1,028	38	138	1,204	10,412						
Graduate	896	32	58	986	6,783						
Master's	266	2	9	278	2,662						
PhD	630	30	49	709	4,121						
Employee	5,585	58	86	5,729	16,293						
Faculty	430	6	18	454	2,152						
Staff	5,156	52	68	5,276	14,141						
Outside Davis	4,442	59	77	4,578	13,162						
Within Davis	3,826	169	400	4,395	40,724						
Overall	8,268	228	477	8,972	53,886						

## Table 15. Projected Vehicles Arriving on an Average Weekday, by Occupancy & Role

Vehicle occupancy is based on responses to Q60 (number of people in your carpool) and Q54 (number of people dropped off). Data are weighted by role and gender.

### Average Vehicle Ridership

Average vehicle ridership (AVR) is a statistic calculated at each UC campus that represents the ratio of the number of people arriving on campus to the number of personal vehicles brought to campus. We use a formula developed by the South Coast Air Quality Management District, intended to count weekday arrivals of employees from off-campus (only) and make adjustments for employees who telecommute, who adopt a compressed work week schedule, or who use a zero-emission vehicle to commute to campus (see "Appendix D: Calculation of Average Vehicle Ridership (AVR)" for details on the calculation of AVR). If everyone drove alone to campus, the campus AVR would be equal to one. Values greater than one indicate more carpooling, bus, or train use, or the use of active modes of transportation.

Among those traveling from off-campus, AVR is estimated to be 1.85 campus-wide, and 1.31 among non-student employees (Table 17). This means that for every car coming to campus, there are an estimated 1.85 off-campus people coming to campus. While this ratio was already trending downward before the pandemic, this year's numbers reflect sharp increases in driving alone.

Table 16 and Table 17 shows the AVR estimates over the last ten years. Because the method for estimating campus population, used in calculating weights, was modified for the 2015-16 and subsequent analyses, comparisons with earlier years may not be valid.

				C	only Off-Cam	pus Residen	ts				
Role	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16*	2016-17*	2017-18*	2018-19*	2019-20*	2020-21*
Student	4.49	5.29	6.05	5.59	5.66	5.16	3.99	4.08	3.71	4.12	2.85
Undergraduate	5.38	6.42	7.23	6.44	6.33	5.9	4.31	4.46	4.13	4.37	3.16
Freshman	3.26	3.66	5.06	2.31	4.24	2.73	2.52	2.09	1.88	2.08	3.41
Sophomore	8.37	15.93	17.51	10.93	10.64	11.14	6.97	9.7	7.09	8.00	4.52
Junior	5.59	6.24	7.85	6.59	6.64	6.23	4.02	4.06	4.25	4.62	4.40
Senior	4.57	5.26	5.62	5.85	5.31	4.75	3.92	3.85	3.44	3.52	2.30
Graduate	2.79	3.14	3.55	3.57	3.99	3.44	3.11	3.11	2.75	3.43	2.16
Master's	2.73	3.34	3.15	2.76	3.04	3.11	3.07	2.81	2.49	3.30	1.92
PhD	2.82	3.03	3.84	4.32	4.78	3.77	3.13	3.43	2.95	3.53	2.27
Employee	1.75	1.78	1.7	1.75	1.61	1.83	1.55	1.6	1.63	1.59	1.31
Faculty	2.24	2.76	3.06	3.24	2.81	2.77	2.27	2.76	2.80	2.60	1.95
Staff	1.66	1.65	1.52	1.54	1.49	1.74	1.48	1.49	1.53	1.49	1.25
Non-Student and											
Student	NA	2.45	2.51	2.58	2.57	2.61	2.25	2.32	2.16	2.21	1.63
Employees											
Outside Davis	1.34	1.39	1.34	1.3	1.27	1.25	1.25	1.26	1.26	1.31	1.10
Within Davis	4.99	5.98	6.24	6.53	7.25	5.85	4.79	4.93	4.29	4.66	2.66
Overall	3	3.26	3.34	3.3	3.23	3.27	2.7	2.76	2.52	2.66	1.85

Table 16. Average Vehicle Ridershi	ь (AVR) 2010-11 throu	ah 2020-21, Off-Campus Only

**Bold** indicates the official AVR statistic reported by UC campuses. \*Based on new method for estimating campus population. See "Appendix D: Calculation of Average Vehicle Ridership" for details on AVR calculations.

				All (O	n- and Off-C	Campus Resid	lents)				
Role	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16*	2016-17*	2017-18*	2018-19*	2019-20*	2020-21*
Student	5.53	6.41	7.25	6.74	6.93	6.46	5.08	5.34	4.38	5.05	3.49
Undergraduate	6.72	8.01	8.77	7.96	7.92	7.61	5.71	6.09	4.98	5.55	4.01
Freshman	32.75	34.61	33.67	15.45	31.58	33.12	27.93	21.35	14.89	21.10	11.12
Sophomore	9.11	16.54	18.88	11.86	11.94	11.83	7.37	10.81	7.33	8.83	5.57
Junior	6.23	6.88	8.3	7.41	7.2	6.66	4.42	4.87	4.56	5.06	4.34
Senior	4.79	5.68	5.96	6.14	5.67	5.04	4.11	4.21	3.51	3.63	2.46
Graduate	3.18	3.45	4.03	3.88	4.4	3.77	3.29	3.42	2.96	3.66	2.31
Master's	2.94	3.57	3.43	2.92	3.35	3.34	3.2	3.1	2.68	3.46	2.01
PhD	3.33	3.39	4.47	4.75	5.28	4.18	3.36	3.77	3.17	3.81	2.44
Employee	1.75	1.8	1.7	1.75	1.61	1.83	1.55	1.61	1.62	1.59	1.32
Faculty	2.24	2.78	3.06	3.24	2.81	2.78	2.28	2.76	2.79	2.63	2.02
Staff	1.67	1.67	1.52	1.55	1.49	1.74	1.48	1.51	1.53	1.50	1.26
Non-Student and Student Employees	NA	2.59	2.64	2.69	2.7	2.72	2.35	2.49	2.22	2.29	1.68
Outside Davis	1.34	1.39	1.34	1.3	1.27	1.25	1.25	1.26	1.26	1.31	1.10
Within Davis	6.04	7.14	7.36	7.74	8.75	7.12	6.01	4.93	4.29	4.66	3.14
Overall	3.51	3.78	3.82	3.8	3.77	3.86	3.22	3.39	2.82	3.08	2.10

Table 17. Average Vehicle Ridershi	b (AVR	) 2009-10 through 2020-	21. On- and Off-Campus

\*Based on new method for estimating campus population. See "Appendix D: Calculation of Average Vehicle Ridership" for details on AVR calculations.

## Vehicle Types

If respondents commuted to campus by vehicle during the reference week, we asked them what kind of vehicle they used. The sampled and projected vehicles by role and fuel type (internal combustion, hybrid, all-electric, et cetera) are shown in Table 18.

Role	All- Electric	Biofuel	Compressed Natural Gas (CNG)	Conventional Hybrid	Gas or Diesel	Hydrogen Fuel Cell	Plug-in Hybrid Electric	Total
Student	5	0	3	40	423	3	9	483
Undergraduate	4	0	3	25	327	3	7	369
Freshman	1	0	0	2	53	0	1	58
Sophomore	1	0	0	4	47	3	1	56
Junior	2	0	1	9	90	0	4	105
Senior	0	0	2	10	137	0	2	151
Graduate	1	0	1	15	96	0	2	114
Master's	0	0	0	3	34	0	1	38
PhD	1	0	1	11	62	0	1	76
Employee	13	1	0	30	349	0	17	409
Faculty	3	0	0	5	30	0	4	42
Staff	10	1	0	25	318	0	13	368
Overall	30	3	1	160	1,401	0	27	1,622
Weighted sample Projected	417	23	81	1,678	18,385	61	623	21,268
population	5	0	3	40	423	3	9	483

Table 18. Type of Vehicle Used During Reference Week

Results are based on responses to Q55 (type of vehicle used last week). Data are weighted by role and gender.

## Parking Permits

Whether or not they reported having a car, we asked all respondents whether they currently have a UC Davis parking permit, and if so, which type (Q25).

13 percent of respondents reported having an annual parking permit and 6.6 percent reported having a monthly or quarterly permit (Table 19). We also asked respondents whether they use daily parking permits (either purchased or received through the GoClub program) or an in-vehicle EasyPark Personal Parking Meter (now replaced by ParkMobile). About 56.6 percent of the population, or a projected 19,829 people, used a daily permit.

Role	Monthly	Either Annual or Monthly/Quarterly Permit		Annual or Multi-Year Permit		Monthly or Quarterly Permit		Daily or GoClub Daily Permit		ark Meter	Projected – population
	Share of Sample	Projected Population	Share of Sample	Projected Population	Share of Sample	Projected Population	Share of Sample	Projected Population	Share of Sample	Projected Population	population
Student	8.1%	2,940	1.8%	661	6.3%	2,279	60.6%	22,054	1.3%	488	36,374
Undergraduate	6.7%	1,991	1.5%	456	5.2%	1,535	60.1%	17,914	1.4%	428	29,794
Freshman	7.3%	474	0.4%	26	6.9%	448	47.6%	3,086	0.0%	0	6,488
Sophomore	3.4%	177	0.0%	0	3.4%	177	59.0%	3,101	0.0%	0	5,256
Junior	8.4%	673	2.3%	180	6.1%	492	63.2%	5,066	1.2%	97	8,010
Senior	6.7%	668	2.5%	250	4.2%	418	66.3%	6,661	3.3%	331	10,041
Graduate	14.4%	949	3.1%	204	11.3%	744	62.9%	4,139	0.9%	60	6,580
Master's	11.1%	284	1.9%	49	9.2%	235	64.8%	1,651	0.7%	19	2,550
PhD	16.5%	665	3.9%	156	12.6%	509	61.7%	2,488	1.0%	41	4,030
Employee	46.3%	7,201	39.0%	6,069	7.3%	1,132	47.2%	7,338	0.7%	104	15,558
Faculty	38.8%	814	35.0%	734	3.8%	80	51.8%	1,088	2.7%	57	2,100
Staff	47.5%	6,387	39.6%	5,335	7.8%	1,052	46.4%	6,250	0.3%	46	13,458
Outside Davis	46.6%	5,872	37.0%	4,658	9.6%	1,214	49.4%	6,219	0.7%	94	12,596
Within Davis	10.9%	4,269	5.3%	2,072	5.6%	2,197	58.9%	23,172	1.3%	498	39,335
Overall	19.5%	10,141	13.0%	6,730	6.6%	3,411	56.6%	29,391	1.1%	592	51,931

## Table 19. Share of People with a Parking Permit

Results are based on responses to Q25 (UC Davis parking permit). Data are weighted by role and gender.

# Transit Ridership

If respondents indicated that they rode transit at any point on their way to campus any day during the prior week, we asked them to indicate which transit service(s) they used ("Check all that apply"). Table 20 shows the share of bus users who used each service at least once during the reference week.

Of the 112 respondents who indicated riding the bus in the past week, the overwhelming majority reported using Unitrans at least once, followed distantly by Yolobus, SacRT and the Berkeley-Davis Shuttle. As noted elsewhere in this report, transit ridership was down regionally due to the COVID-19 pandemic.

Three respondents reported that they used the train to access campus during the reference week; all three respondents used Amtrak's Capitol Corridor train.

	0	f those ridi						
Role	Unitrans	Yolobus	UCD/UCDMC Shuttle	Sacramento Regional Transit	UCD/UC Berkeley Shuttle	Weighted Sample	Projected Population	
Undergraduate	94.1%	5.0%	0.0%	0.0%	0.8%	98	2,347	
Graduate	91.9%	0.0%	0.0%	8.1%	0.0%	6	149	
Faculty	100.0%	0.0%	0.0%	0.0%	0.0%	1	25	
Staff	100.0%	0.0%	0.0%	0.0%	0.0%	6	139	
Overall	94.3%	4.6%	0.0%	0.4%	0.7%	112	2,660	

#### Table 20. Share Using Specific Bus Services at least once during the Reference Week

Results are based on responses to Q61 (bus or shuttle used last week). Data are weighted by role and gender.

# **Origins & Destinations**

## **Residential Location**

Travel behavior varies substantially by residential location so each year we ask respondents about their residential location, defined as the place of residence from which they regularly travel to campus. The four broad categories included are: the on campus area, the West Village apartments, off-campus elsewhere in Davis, and outside of Davis (*Q27*).

The results suggest that, of those who reported travel to campus during the reference week, 13.6 percent live on campus, 7.1 percent live in West Village, 54.3 percent live off-campus in Davis, and above 25 percent live outside of Davis (Table 21). Individuals who indicated that they live outside of Davis are most likely to live in the nearby cities of Sacramento, Woodland, Vacaville, West Sacramento, Dixon, Elk Grove, and Winters, as well as in the Bay Area (Berkeley, Oakland, San Francisco). An additional number of respondents had relocated due to the COVID-19 pandemic as of the survey period.

	On Campus	West Village	Off-Campus in Davis	Outside Davis	Weighted Sample	Projected Population
Student	19.1%	10.1%	60.7%	10.1%	1,577	37,593
Undergraduate	20.9%	11.9%	58.5%	8.7%	1,293	30,810
Freshman	67.1%	8.4%	14.9%	9.6%	276	6,567
Sophomore	12.5%	9.4%	69.5%	8.7%	228	5,443
Junior	5.6%	24.0%	62.5%	7.9%	352	8,388
Senior	8.6%	5.6%	77.0%	8.8%	437	10,412
Graduate	10.7%	2.1%	70.7%	16.4%	285	6,783
Master's	7.3%	4.1%	67.9%	20.6%	112	2,662
PhD	12.9%	0.8%	72.6%	13.7%	173	4,121
Employee	0.8%	0.0%	39.7%	59.5%	684	16,293
Faculty	1.6%	0.0%	70.8%	27.6%	90	2,152
Staff	0.7%	0.0%	35.0%	64.4%	593	14,141
Overall	13.6%	7.1%	54.3%	25.1%	2,261	53,886
Weighted Sample	306	160	1,228	566	2,261	NA
Projected Population	7,303	3,809	29,274	13,500	NA	53 <i>,</i> 886

#### Table 21. Residential Location by Role Group (for Respondents who Traveled to Campus)

Results are based on responses to Q27 (where do you live now?). Data are weighted by role and gender.

### Distance to Campus

For the purpose of estimating vehicle miles traveled and carbon dioxide emissions from travel to campus, respondents were asked more detailed information about where they live, including the set of cross-streets nearest where they live (Q29) and their city or unincorporated county, if outside of Davis (Q30). This information was geocoded using the Google API, enabling a variety of spatial analyses (see "Appendix E: Geocoding and network distances" for details on the methodology).

We used the geocoded addresses to estimate the distance that respondents travel (along a shortesttime route) to get to campus (in particular, to the Silo) on a daily basis. Table 22 summarizes distances traveled by role group, showing that employees tend to live farther from campus than students. The median distance traveled among students is 1.65 miles, versus 2.82 miles among faculty and nearly 12 miles among staff (Table 22).

		Of those g	eocoded, dist	ance from can	npus (miles)		
	Geocoded	Mean	Median	Minimum	Maximum	Weighted Sample	Projected Population
Student	96.9%	6.04	1.79	0.50	451.25	1,523	37,593
Undergraduate	96.8%	5.94	1.57	0.50	447.84	1,248	30,810
Freshman	99.0%	8.40	0.77	0.55	447.84	266	6,567
Sophomore	96.7%	8.63	1.87	0.67	444.05	221	5,443
Junior	95.8%	3.93	1.79	0.50	110.77	340	8,388
Senior	96.0%	4.61	1.90	0.54	99.79	422	10,412
Graduate	97.0%	6.47	2.02	0.63	451.25	275	6,783
Master's	95.7%	7.13	1.90	0.72	78.77	108	2,662
PhD	97.6%	6.05	2.13	0.63	451.25	167	4,121
Employee	95.9%	14.09	8.94	0.52	156.47	660	16,293
Faculty	97.4%	8.70	2.85	0.52	108.37	87	2,152
Staff	95.2%	14.91	10.95	0.77	156.47	573	14,141
Outside Davis	94.3%	28.80	18.03	1.14	451.25	533	13,162
Within Davis	97.3%	1.90	1.79	0.50	108.37	1,650	40,724
Overall	96.6%	8.47	2.21	0.50	451.25	2,183	53,886
Weighted							
Sample	2,108	NA	NA	NA	NA	NA	NA

#### Table 22. Average Distance from Residence to Campus, by Role Group

Distances are calculated as the shortest time network distance between respondents' geocoded cross streets given in Q29 (intersection nearest to your residence) and a point on campus near the Silo. Data are weighted by role and gender for the 2,996 cases that were successfully geocoded and had mode choice data in Q51 (daily travel).

#### Destination on Campus

We asked employees and graduate students the location of their office, lab, or department. This was in part to screen out those whose offices or labs were outside of Davis, who are excluded from the sample for this study. The summary of these results are in Table 23.

Role	Main Campus	West Campus (west of SR 113)	South Campus (south of I-80)	Off- Campus but in Davis	Weighted Sample	Projected Population
Graduate	84.5%	6.4%	3.8%	5.3%	281	6,783
Master's	82.4%	4.0%	4.0%	9.6%	111	2,662
PhD	85.9%	8.0%	3.7%	2.4%	170	4,121
Employee	80.4%	7.8%	4.3%	7.5%	684	16,293
Faculty	78.5%	8.5%	4.7%	8.3%	593	14,141
Staff	93.2%	3.0%	1.9%	1.9%	90	2,152
Overall	81.6%	7.4%	4.2%	6.9%	1,929	22,982
Weighted Sample Projected	1,574	142	80	132	1,929	NA
Population	18,754	957	1,696	1,575	NA	22,982

#### Table 23. Destinations on Campus, by Role Group

# Vehicle Miles Traveled & Greenhouse Gas Emissions

For estimates of the number of miles traveled to and from campus, we rely on the calculated distances between respondents' geocoded home locations and a centroid on campus, located at the Silo. We assume respondents take the fastest path to and from campus on the days they report having traveled to campus. This method likely underestimates the true number of miles traveled to and from campus because it does not take into account side trips that respondents might make on the way to or from campus (e.g. stopping at the store, picking up children, or visiting friends), diversions from the shortest time path for a more pleasant or less congested route, or trips away from campus during the middle of the day (e.g. going to lunch or to an off-site meeting).

### Vehicle Miles Traveled

We estimate the number of miles traveled to and from campus each day as the doubled network distance between respondents' geocoded home locations and the Silo on campus (as described in "Appendix E: Geocoding and network distances"), multiplied by the percent of weekdays a respondent traveled to campus. Thus, if a person lives 10 miles from campus and traveled to campus all five days, her average daily miles traveled would be 20 miles; by contrast, if she traveled to campus only one day, her average daily miles traveled would be 4 miles. We then attribute miles traveled to each mode based on the share of weekdays a respondent used each mode. Thus, if a respondent biked one day and drove four, we count 20 percent of her miles as bike miles and 80 percent as driving miles. Summed across all respondents, this figure represents the number of miles traveled by each mode on an average weekday.

### Annual VMT & Campus Closure due to COVID-19

We calculate the annual VMT estimate with the assumption that the UC Davis campus was open for the entire academic year (summer and three 10-week quarters: fall, winter, and spring). This was not the case during the 2020-21 academic year; because of the COVID-19 pandemic and fluctuating levels of campus closure, travel likely varied throughout the school year. This caveat should be kept in mind when interpreting annual VMT estimates.

### Annual VMT & PMT

To estimate the number of miles traveled annually, we first assume that respondents travel the same number of days per week and using the same modes as in the reference week for the entire 36 weeks of a normal three-quarter academic year. To estimate summer travel, we rely on responses to questions *Q64* and *Q65* about the number of weeks and average number of days per week traveled to campus during the summer, assuming respondents used the same modes as during the survey reference week throughout the summer. For example, annual miles biked = (distance from campus × 2) × (share of days biked during reference week) × [(36 weeks × 5 days/week) + (weeks traveled to campus during the summer × days/week traveled during summer)]. In order to estimate the daily miles traveled by each person on an average day we calculate a weighted average of summer and academic-year travel.

VMT is the miles traveled for each vehicle. Since different vehicles traveling to campus have varying occupancy (i.e. car vs bus vs train), person-miles traveled (PMT) accounts for both vehicles used and occupancy per mile. To estimate PMT for any travel in a personal vehicle or public transit vehicle (including driving alone, carpooling, getting a ride, riding a bus, and riding a train), we assume that each vehicle-mile traveled contributes a fractional person-mile equivalent of one divided by vehicle occupancy. We assume that travel by walking, biking, or skating contributes no PMT. Vehicle occupancy for carpooling and getting a ride varies for each respondent, as reported in questions Q60 and Q54 for those carpooling/vanpooling or getting a ride, respectively. If a respondent lives 10 miles from campus and traveled in a 3-person carpool all five weekdays, her average daily PMT would be (10 miles  $\times$  2) / 3 = 6.67 miles. Vehicle occupancy for those driving alone and for those who got a ride and were the only person dropped off on campus by the person giving them a ride is assumed to be one.

In addition to PMT for personal vehicles, we estimate PMT for buses and trains for the purpose of calculating the carbon dioxide equivalent emissions generated from commuting to campus (see next section). For bus and train occupancy, we assume average occupancy for all trips on those modes. We estimated average bus occupancy based on annual ridership data from Unitrans, since 91% of all bus riders use Unitrans. According to Unitrans' figures from FY 2018-19, Unitrans had an average of about 10 passengers per mile.<sup>1</sup> Thus, for someone who lives 10 miles from campus and traveled by bus all five weekdays, average bus PMT per day is (10 miles  $\times 2$ ) / 10  $\approx$  2 person-miles.

We estimate train occupancy based on annual ridership data from Amtrak's Capitol Corridor, since they provide nearly all of train rides to campus. According to figures in the Capitol Corridor Annual Business Plan, the Capitol Corridor had an average of 102 passengers per train mile in FY 2018-19.<sup>2</sup> If a respondent lives 100 miles from campus and traveled by train all five days, her average train PMT per day is estimated to be (100 miles × 2) / 102 = 1.96 person-miles.

Our estimates for person-miles traveled, by mode and role, are shown in Table 24 and Table 25.

<sup>&</sup>lt;sup>1</sup> Unitrans General Manager's Report, Fiscal Year 2018-19.

<sup>&</sup>lt;sup>2</sup> Capitol Corridor Joint Powers Authority. Capitol Corridor Intercity Passenger Rail Service Business Plan Update FY 2020-21 – FY 2021-22, Appendix C.

	Da	ily	Annua	ally	Share	Share of	Projected
Mode	Total PMT	PMT per Person	Total PMT	PMT per Person	of Total PMT	Population	Population
No travel	0	0.0	0	0.0	0.0%	66.3%	35,720
No vehicle (bike, walk, or skate)	0	0.0	0	0.0	0.0%	14.2%	7,674
Personal vehicles	222,709	23.6	50,167,355	5,310.5	99.8%	17.5%	9,447
Drive alone	217,232	26.3	49,058,942	5 <i>,</i> 933.5	97.3%	15.4%	8,268
Carpool or ride	5,477	4.6	1,108,413	940.3	2.5%	2.2%	1,179
Bus	483	0.5	95,874	98.4	0.2%	1.8%	975
Train	33	0.7	7,964	173.9	0.0%	0.1%	46
Total	223,225	4.1	50,271,194	933.3	100.0%	100.0%	53,861

Table 24. Person-Miles-Traveled	(PMT) Daily and	Annually, by Mode
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PMT are calculated as described in the text and annual estimates assume that campus operated for the entire academic year. Due to the COVID-19 pandemic, the campus operated remotely for the entirety of spring quarter. Mode groups are estimated using each means of transportation on a typical weekday, based on responses to questions Q38 (days traveled to campus) and Q51 (daily travel by mode). Data are weighted by role and gender for the 2,996 cases that were successfully geocoded and had mode choice data in Q51 (daily travel).

	C	Daily	Annu	ally	Share of	Share of	Projected
Role	Total PMT	PMT per person	Total PMT	PMT per person	total PMT	Population	Population
39,899	1.1	8,068,518	215	17.9%	69.8%	37,593	39,899
24,080	0.8	4,691,484	152	10.8%	57.2%	30,810	24,080
1,258	0.2	229,083	35	0.6%	12.2%	6,567	1,258
6,481	1.2	1,225,344	225	2.9%	10.1%	5,443	6,481
4,693	0.6	951,472	113	2.1%	15.6%	8,388	4,693
11,648	1.1	2,285,585	220	5.2%	19.3%	10,412	11,648
15,819	2.3	3,377,033	498	7.1%	12.6%	6,783	15,819
7,365	2.8	1,542,508	579	3.3%	4.9%	2,662	7,365
8,454	2.1	1,834,525	445	3.8%	7.6%	4,121	8,454
183,432	11.3	42,226,919	2,592	82.1%	30.2%	16,293	183,432
8,788	4.1	1,920,001	892	3.9%	4.0%	2,152	8,788
174,644	12.4	40,306,918	2,850	78.2%	26.2%	14,141	174,644
199,166	15.1	44,981,938	3,417	89.2%	24.4%	13,162	199,166
24,164	0.6	5,313,499	130	10.8%	75.6%	40,724	24,164
334	0.0	68,533	9	0.1%	13.8%	7,452	334
512	0.1	95,856	24	0.2%	7.4%	3,966	512
23,319	0.8	5,149,110	176	10.4%	54.4%	29,306	23,319
223,331	4.1	50,295,437	933	100.0%	100.0%	53,886	223,331

Table 25. Person-Miles-Traveled (PMT), Daily and Annually, by Role Group

PMT are calculated as described in the text and annual estimates assume that campus operated for the entire academic year. Due to the COVID-19 pandemic, the campus operated remotely for the entirety of spring quarter. Data are weighted by role and gender for the 2,996 cases that were successfully geocoded and had mode choice data in Q51 (daily travel by mode).

#### Greenhouse Gas Emissions

We estimate the amount of greenhouse gases produced by campus travelers by assuming that each travel mode generates a certain quantity of carbon dioxide-equivalent ( $CO_2e$ ) emissions per person-mile traveled, and multiplying this quantity by our estimate of miles traveled by each mode on an average weekday. In particular, we assume driving alone generates 1.1 pounds-equivalent of  $CO_2e$  per vehicle-mile (regardless of vehicle type), and that carpooling (getting a ride, riding a bus, and riding a train) produce some fractional amount of the emissions produced for the entire vehicle, adjusted for the total number of passengers in the vehicle.

For carpooling and getting rides, we adjust vehicle occupancies based on those reported by the respondents themselves. For transit, we assume average occupancies apply for all respondents. For Unitrans (about 92% of bus use for the entire campus), we use emissions estimates specific to the Unitrans fuel mix and passenger occupancy. For other bus services and Amtrak we estimate emissions based on national travel fuel use and emissions averages. See Appendix I for the calculation of average weekday pounds of greenhouse gas emissions by mode.

Using these assumptions, we estimate the greenhouse gas emissions generated by travel to campus. These estimates are summarized in Table 26 through Table 29.

	F	ounds-equiv	valent of CO	2e generate	d on an ave	rage weekda	ıy	Average	Share of	Share of	Projected
Role	Drive Alone	Carpool	Ride	Bus	Train	Ridehail	Total	lbs per Person	Total CO2e	Population	-
Student	35,412	374	3,483	1,875	0	32	41,177	1.10	18.3%	69.8%	37,593
Undergraduate	20,373	241	2,991	1,614	0	8	25,227	0.82	11.2%	57.2%	30,810
Freshman	1,184	21	34	21	0	8	1,268	0.19	0.6%	12.2%	6,567
Sophomore	4,452	83	1,829	401	0	0	6,764	1.24	3.0%	10.1%	5,443
Junior	4,113	78	327	704	0	0	5,223	0.62	2.3%	15.6%	8,388
Senior	10,624	59	802	487	0	0	11,972	1.15	5.3%	19.3%	10,412
Graduate	15,039	133	492	261	0	24	15,950	2.35	7.1%	12.6%	6,783
Master's	7 <i>,</i> 059	13	248	31	0	0	7,351	2.76	3.3%	4.9%	2,662
PhD	7,981	120	244	230	0	24	8,599	2.09	3.8%	7.6%	4,121
Employee	180,689	592	999	508	1,216	72	184,077	11.30	81.7%	30.2%	16,293
Faculty	8,652	7	59	133	102	0	8,953	4.16	4.0%	4.0%	2,152
Staff	172,037	584	940	376	1,114	72	175,124	12.38	77.7%	26.2%	14,141
Outside Davis	194,198	712	3,118	432	1,216	0	199,677	15.17	88.6%	24.4%	13,162
Within Davis	21,904	254	1,364	1,951	0	105	25,577	0.63	11.4%	75.6%	40,724
On Campus	238	18	59	28	0	11	354	0.05	0.2%	13.8%	7,452
West Village	407	22	40	195	0	0	665	0.17	0.3%	7.4%	3,966
Off Campus	21,258	214	1,265	1,728	0	94	24,559	0.84	10.9%	54.4%	29,306
Overall	216,101	966	4,483	2,383	1,216	105	225,254	4.18	100.0%	100.0%	53,886

Table 26. Daily Pounds of CO2e Emitted, by Mode and Role

Data are weighted by role and gender for the 2,996 responses that were successfully geocoded.

			Annual T	ons of CO2e	Emissions			Average	Share of	Share of	Projected Population
Role	Drive Alone	Carpool	Ride	Bus	Train	Ridehail	Total	Tons per Person	Total CO2e	Population	
Student	4,016	42	395	213	0	4	4,669	0.12	18.3%	69.8%	37,593
Undergraduate	2,310	27	339	183	0	1	2,861	0.09	11.2%	57.2%	30,810
Freshman	134	2	4	2	0	1	144	0.02	0.6%	12.2%	6,567
Sophomore	505	9	207	46	0	0	767	0.14	3.0%	10.1%	5,443
Junior	466	9	37	80	0	0	592	0.07	2.3%	15.6%	8,388
Senior	1,205	7	91	55	0	0	1,358	0.13	5.3%	19.3%	10,412
Graduate	1,705	15	56	30	0	3	1,809	0.27	7.1%	12.6%	6,783
Master's	800	2	28	4	0	0	834	0.31	3.3%	4.9%	2,662
PhD	905	14	28	26	0	3	975	0.24	3.8%	7.6%	4,121
Employee	20,490	67	113	58	138	8	20,874	1.28	81.7%	30.2%	16,293
Faculty	981	1	7	15	12	0	1,015	0.47	4.0%	4.0%	2,152
Staff	19,509	66	107	43	126	8	19,859	1.40	77.7%	26.2%	14,141
Outside Davis	22,022	81	354	49	138	0	22,643	1.72	88.6%	24.4%	13,162
Within Davis	2,484	29	155	221	0	12	2,900	0.07	11.4%	75.6%	40,724
On Campus	27	2	7	3	0	1	40	0.01	0.2%	13.8%	7,452
West Village	46	2	5	22	0	0	75	0.02	0.3%	7.4%	3,966
Off Campus	2,411	24	143	196	0	11	2,785	0.10	10.9%	54.4%	29,306
Overall	24,506	110	508	270	138	12	25,543	0.47	100.0%	100.0%	53,886

## Table 27. Annual Tons of CO2e Emitted, by Mode and Role

Data are weighted by role and gender for the 2,996 responses that were successfully geocoded. Annual estimates assume that campus operated for the entire academic year. Due to the COVID-19 pandemic, the campus operated remotely for the entirety of spring quarter.

	Pour	nd-equivalen	t of CO₂e em	O₂e emissions generated on an average weekday			Average	Share of	Shara of	Projected	
Role	Drive Alone	Carpool	Ride	Bus	Train	Ridehail	Total	lbs per total person CO2e		Share of Population	Population
Student	35,412	374	3,483	325	0	32	39,627	1.05	17.7%	69.8%	37,593
Undergraduate	20,373	241	2,991	171	0	8	23,784	0.77	10.6%	57.2%	30,810
Freshman	1,184	21	34	6	0	8	1,253	0.19	0.6%	12.2%	6,567
Sophomore	4,452	83	1,829	51	0	0	6,414	1.18	2.9%	10.1%	5,443
Junior	4,113	78	327	56	0	0	4,574	0.55	2.0%	15.6%	8,388
Senior	10,624	59	802	58	0	0	11,543	1.11	5.2%	19.3%	10,412
Graduate	15,039	133	492	154	0	24	15,843	2.34	7.1%	12.6%	6,783
Master's	7,059	13	248	0	0	0	7,320	2.75	3.3%	4.9%	2,662
PhD	7,981	120	244	154	0	24	8,523	2.07	3.8%	7.6%	4,121
Employee	180,689	592	999	317	1,216	72	183,885	11.29	82.3%	30.2%	16,293
Faculty	8,652	7	59	129	102	0	8,949	4.16	4.0%	4.0%	2,152
Staff	172,037	584	940	188	1,114	72	174,936	12.37	78.3%	26.2%	14,141
Outside Davis	194,198	712	3,118	432	1,216	0	199,677	15.17	89.3%	24.4%	13,162
Within Davis	21,904	254	1,364	209	0	105	23,836	0.59	10.7%	75.6%	40,724
On Campus	238	18	59	6	0	11	332	0.04	0.1%	13.8%	7,452
West Village	407	22	40	43	0	0	513	0.13	0.2%	7.4%	3,966
Off Campus	21,258	214	1,265	161	0	94	22,991	0.78	10.3%	54.4%	29,306
Overall	216,101	966	4,483	642	1,216	105	223,513	4.15	100.0%	100.0%	53,886

Table 28. Daily Pounds of CO2e Emitted, by Mode and Role (not including Unitrans)

Data are weighted by role and gender for the 2,996 responses that were successfully geocoded.

			Annual T	ons of CO2e	Emissions			Average	er Total	Share of	Projected
Role	Drive Alone	Carpool	Ride	Bus	Train	Ridehail	Total	Tons per Person		Population	Population
Student	4,016	42	395	37	0	4	4,494	0.12	17.7%	69.8%	37,593
Undergraduate	2,310	27	339	19	0	1	2,697	0.09	10.6%	57.2%	30,810
Freshman	134	2	4	1	0	1	142	0.02	0.6%	12.2%	6,567
Sophomore	505	9	207	6	0	0	727	0.13	2.9%	10.1%	5,443
Junior	466	9	37	6	0	0	519	0.06	2.0%	15.6%	8,388
Senior	1,205	7	91	7	0	0	1,309	0.13	5.2%	19.3%	10,412
Graduate	1,705	15	56	17	0	3	1,797	0.26	7.1%	12.6%	6,783
Master's	800	2	28	0	0	0	830	0.31	3.3%	4.9%	2,662
PhD	905	14	28	17	0	3	967	0.23	3.8%	7.6%	4,121
Employee	20,490	67	113	36	138	8	20,852	1.28	82.3%	30.2%	16,293
Faculty	981	1	7	15	12	0	1,015	0.47	4.0%	4.0%	2,152
Staff	19,509	66	107	21	126	8	19,837	1.40	78.3%	26.2%	14,141
Outside Davis	22,022	81	354	49	138	0	22,643	1.72	89.3%	24.4%	13,162
Within Davis	2,484	29	155	24	0	12	2,703	0.07	10.7%	75.6%	40,724
On Campus	27	2	7	1	0	1	38	0.01	0.1%	13.8%	7,452
West Village	46	2	5	5	0	0	58	0.01	0.2%	7.4%	3,966
Off Campus	2,411	24	143	18	0	11	2,607	0.09	10.3%	54.4%	29,306
Overall	24,506	110	508	73	138	12	25,346	0.47	100.0%	100.0%	53,886

Table 29. Annual Tons of CO2e Emitted, by Mode and Role (not Including Unitrans)

Data are weighted by role and gender for the 2,996 responses that were successfully geocoded. Annual estimates assume that campus operated for the entire academic year. Due to the COVID-19 pandemic, the campus operated remotely for the entirety of spring quarter.

# Awareness of TS Programs

We presented respondents with a list of campus transportation services and asked them to indicate their familiarity with them. Table 30 summarizes the responses for each service, and Table 31 compares responses for the past six years for those services that appeared on each of the surveys.

Program	I've used it	I've heard of it, but never used it	I've never heard of it
GoClub program	17.8%	19.5%	62.7%
Aggie Bike Buy Program	1.1%	42.4%	56.4%
Bike tire air stations and repair stations around campus	41.2%	43.6%	15.2%
Bicycle Education and Enforcement Program (BEEP) and bike safety video	5.2%	27.5%	67.3%
Zipcar carsharing program	10.4%	65.8%	23.7%
UC Davis motorist assistance program	2.7%	27.1%	70.2%
Bike lock-cutting service	3.4%	49.5%	47.1%
Bike theft reporting	5.4%	53.8%	40.8%
UC Davis Bike Auction	5.4%	57.0%	37.6%
TS Mobility Assistance Program	1.2%	36.3%	62.5%
TS bicycle licensing program	23.5%	33.7%	42.8%

## Table 30. Awareness of Transportation Programs & Services

Results are based on responses to Q66 (familiarity with TAPS programs). Data are weighted by role and gender.

Dreament	Change 2019-		Percent wl	ho have heard of i	it or used it	
Program	20 to 2020-21	2019-20	2018-19	2017-18	2016-17	2015-16
TS motorist assistance program	11.1%	37.5%	26.4%	25.0%	32.0%	32.0%
Zipcar carsharing program	0.0%	76.3%	76.2%	73.0%	74.0%	77.0%
Bike lock-cutting service	-13.8%	52.9%	66.7%	65.0%	65.0%	69.0%
GoClub program	7.9%	37.3%	29.4%	29.0%	34.0%	37.0%
UC Davis Bike Auction	-4.2%	62.4%	66.6%	65.0%	68.0%	76.0%
Bicycle Education and Enforcement Program (BEEP) and bike safety video	3.3%	32.7%	29.4%	31.0%	32.0%	35.0%
UC Davis Mobility Assistance Program	-14.9%	37.5%	52.4%	51.0%	52.0%	56.0%
Aggie Bike Buy Program	3.4%	43.6%	40.2%	39.0%	43.0%	44.0%
Bike tire air stations and repair stations				83.0%	87.0%	88.0%
around campus	-0.8%	84.8%	85.6%	05.070	07.070	55.070
TS bicycle licensing program	-13.7%	57.2%	70.9%	71.0%	74.0%	76.0%

## Table 31. Awareness of Transportation Programs & Services, 2015 through 2020-21

Results are based on responses to Q66 (familiarity with TS programs). See previous CTS reports for previous years' data. Data are weighted by role and gender.

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# APPENDICES

# Appendix A: Survey Instrument, 2020-21 Campus Travel Survey

Below is the full text of the survey instrument, shown without the formatting that appeared for online survey-takers. Notes about the conditional display of questions based on respondents' prior answers are shown in gray and blue (e.g. "Skip to Q12 if..." and "Display This Question if..."). Responses that allow for only a single selection are shown as circles; responses that allow for multiple selections are shown as squares. No questions required responses for respondents to proceed. As in past surveys, we updated the dates of the reference week after one and two weeks.

# 2020-21 UC Davis Campus Travel Survey

Start of Block: Welcome Page

Q1 Welcome to the 2020-21 Campus Travel Survey! This annual survey is intended for everyone who is affiliated with UC Davis, including those who regularly travel to campus as well as those who are working or studying remotely. The results of this survey provide campus planners with valuable information about how people get to campus and their experiences with various transportation programs. UC Davis graduate students also use the data from this survey in their research. Your response is important to us! Participating in this research survey takes about 10-15 minutes to complete. Doing so is voluntary and we assure you that all responses are confidential and the results will only be published in the aggregate, without connection to any individual. You must be at least 18 years old to complete this survey. We're going to ask you questions in the following areas:

Your role at UC Davis Your travel to and from campus Your experience working or studying remotely Your housing and experience with housing affordability Your experience with campus transportation programs and infrastructure Some background information about you

To reward you for your time and input, you will be entered into a drawing for forty \$50 Amazon gift cards and grand prizes of two Amazon Fire tablets. If you are unable to complete the survey but would like to be included in the drawing, please email us at travelsurvey@ucdavis.edu to be entered.

Thanks for participating! **Ryan G. Miller**, PhD Student, Geography Graduate Group (rgmiller@ucdavis.edu) **Susan Handy**, Professor, Institute of Transportation Studies (slhandy@ucdavis.edu)

End of Block: Welcome Page

Start of Block: Section 1 - Role

Q2 What is your primary role at UC Davis? If you are a student who is also employed by the university, please select your student role.

Undergraduate student (including Post-baccalaureate) (1)

Graduate student (2)

J Faculty (3)

Staff (4)

Visiting scholar (5)

O Post doc (6)

Faculty emeritus (9)

I'm no longer affiliated with UC Davis (8)

) Other: (10) \_\_\_\_\_\_

Skip To: Q12 If What is your primary role at UC Davis? = I'm no longer affiliated with UC Davis
Display This Question: If What is your primary role at UC Davis? = Faculty
ij what is your primary role at OC Davis? – Facalty
Q3 What is your current faculty status?
C Ladder rank (senate) (1)
Non-ladder rank (federation) (2)
O Unsure (3)
Display This Question:
If What is your current faculty status? = Ladder rank (senate)
Q243 Do you have tenure?
<b>Yes (1)</b>
O No (4)
Display This Question:
If What is your primary role at UC Davis? = Undergraduate student (including Post-baccalaureate)

Q4 What year are you?

Freshman (1)
Sophomore (2)
Junior (3)
Senior (4)
Fifth-year senior (5)
Post-baccalaureate (6)
Visiting / exchange student (7)
Other: (8)

Or What year are you? = Senior

Or What year are you? = Fifth-year senior

Or What year are you? = Post-baccalaureate

Q5 Did you transfer to UC Davis from a college, university, or community college?

O Yes (1)

O No (2)

Display This Question:

If What is your primary role at UC Davis? = Graduate student

O Master's (1)
O PhD (2)
O Law (3)
О мва (4)
Veterinary (5)
O Ed.D. or CANDEL (6)
Other: (7)
Display This Question:
If What is your primary role at UC Davis? = Visiting scholar
Q7 What is your campus role?
Freshman (1)
O Sophomore (2)
Junior (3)
Senior (4)
O Master's student (5)
O PhD student (6)
O Post doc (7)
Faculty (8)
Other: (9)

	Question:

If What is your primary role at UC Davis? = Undergraduate student (including Post-baccalaureate) Or What is your primary role at UC Davis? = Graduate student

#### Q8 As a student, are you also a paid employee of UC Davis?

O Yes (1)

🔾 No (2)

#### Display This Question:

If What is your primary role at UC Davis? = Graduate student Or What is your primary role at UC Davis? = Faculty Or What is your primary role at UC Davis? = Staff Or What is your primary role at UC Davis? = Visiting scholar Or What is your primary role at UC Davis? = Post doc Or What is your primary role at UC Davis? = Faculty emeritus Or What is your primary role at UC Davis? = Faculty emeritus Or What is your primary role at UC Davis? = Faculty emeritus Or What is your primary role at UC Davis? = Other:

Or Or What is your primary role at UC Davis? Other: Is Not Empty

Q9 Where is your office, lab, or department? (That is, wherever you usually spend your time, or would spend your time when COVID-19 is no longer a threat, when you travel to work or school at UC Davis)

 $\bigcirc$  Main Campus area (this is most people) (1)

On the Davis campus, in the West Campus area (west of SR 113) (2)

 $\bigcirc$  On the Davis campus, in the South Campus area (south of I-80) (3)

 $\bigcirc$  Technically off-campus, but within the City of Davis (4)

Outside of Davis (5)

Display This Question:

If Where is your office, lab, or department? (That is, wherever you usually spend your time, or woul... = Outside of Davis

Q10 Where outside of Davis is your office, lab, or department?

Skip To: Q11 If If Where outside of Davis is y... Is Displayed, Then Skip To Thank you for taking this shortened v...

Display This Question:

If Where is your office, lab, or department? (That is, wherever you usually spend your time, or woul... = Outside of Davis

Q11 Thank you for taking this shortened version of the Campus Travel Survey. Since your office or department is outside of UC Davis, we do not need any further information from you at this time.

Skip To: End of Survey If Thank you for taking this shortened version of the Campus Travel Survey. Since your office or dep... Is Displayed

Display This Auestion:

If What is your primary role at UC Davis? = I'm no longer affiliated with UC Davis

Q12 Thank you for taking this shortened version of the Campus Travel Survey. Since you are no longer affiliated with UC Davis, we do not need any further information from you at this time.

Skip To: End of Survey If Thank you for taking this shortened version of the Campus Travel Survey. Since you are no longer... Is Displayed Display This Question:

Q244 Were you enrolled or working at UC Davis during the 2019–2020 academic year?

○ Yes (1)

No (4)

Page Break

Q245 Have you been traveling to campus since the beginning of Fall Quarter 2020?

O Not at all (1)
Yes, occasionally (less than once per week) (2)
Yes, regularly (at least once per week) (3)
End of Block: Section 1 - Role
Start of Block: Section 2a - General Background Information
Q13 Before we ask you more about your travel to campus, we have a few questions about you.
Q15 Do you currently have a driver's license?
Yes, a California driver's license (1)
Yes, a non-California (but from the United States) driver's license (2)
Yes, a driver's license issued by another country (3)
O No (4)
Page Break

Q16 Do you have any physical or other per	sonal conditions that prevent or limit you from

	Yes (1)	No (2)
Walking (1)	0	$\bigcirc$
Bicycling (2)	$\bigcirc$	$\bigcirc$
Driving (3)	$\bigcirc$	$\bigcirc$
Using public transit (4)	0	$\bigcirc$
Page Break Q17 With which gender do you most ider Woman (2) Man (7) Non-binary (6) Not listed: (3) Prefer not to say (8)		
Page Break		

#### Display This Question:

If Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, occasionally (less than once per week) Or Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, regularly (at least once per week)

#### Q18

We are interested in your available means of transportation.

Select all options that are available to you for getting to campus, whether or not you use them on a regular basis. Include options you would only use for part of the way.

	Walk (or wheelchair) (1)
	Bike (3)
	Electric-assist bike (e-bike) (23)
	Skate, skateboard, or scooter (2)
	Electric-assist scooter or skateboard (e-scooter or e-skateboard) (24)
	Drive alone in a car (or other vehicle) (6)
	Carpool and/or vanpool with others going to campus (7)
	Get dropped off by a friend or family (the driver continues on elsewhere) (8)
	Lyft, Uber, or other ride-hailing service (14)
	Motorcycle or Vespa-like scooter (5)
	Bus and/or shuttle(9)
	Train and/or light rail (10)
	Other: (22)
Page Break	

Display This Question:
If We are interested in your available means of transportation. Select all options that are availabl = Bike
Or We are interested in your available means of transportation. Select all options that are availabl = Electric-assist bike (e-bike)
Q319 You indicated that you have access to a bike and/or an e-bike. Have you purchased a new bike following the start of the COVID-19 pandemic?
○ Yes (1)
O NO (4)
Display This Question: If We are interested in your available means of transportation. Select all options that are availabl = Skate, skateboard, or scooter
Q21 What kind of skates, skateboard, or scooter is available to you? Select all that apply.
Rollers skates or rollerblades (1)
Skateboard (2)
Scooter (4)
Display This Question:
If We are interested in your available means of transportation. Select all options that are availabl = Carpool and/or vanpool with others going to campus
Q22 Do you have access to a carpool, vanpool, or both?
Carpool (1)
Vanpool (2)
Display This Question:
If We are interested in your available means of transportation. Select all options that are availabl = Bus and/or shuttle

Q23 Which bus or shuttle is available to you? Select all that apply.

	Unitrans (1)
	Yolobus (2)
	Sacramento Regional Transit (4)
	UCD/UCDMC Intercampus Shuttle (Causeway Connection) (3)
	UC Berkeley/Davis Shuttle(5)
	Other: (6)
Display This Q	uestion:
lf We ar	e interested in your available means of transportation. Select all options that are availabl = Train and/or light rail
Q24 Which t	rain or light rail is available to you? Select all that apply.

	Amtrak/Capitol Corridor (1)
	BART (2)
	Sacramento Regional Transit (3)
Page Break	

Display This Question:

If We are interested in your available means of transportation. Select all options that are availabl... = Drive alone in a car (or other vehicle) Or We are interested in your available means of transportation. Select all options that are availabl... = Carpool and/or vanpool with others going to campus

Or We are interested in your available means of transportation. Select all options that are availabl... = Motorcycle or Vespa-like scooter

#### Q25 Do you currently have a UC Davis parking permit?

No - I don't have one (1)
Yes - Annual (or multi-year) permit (2)
Yes - Monthly or quarterly permit (3)
Yes - Complimentary GoClub parking permit (5)
Yes - EasyPark Personal in-vehicle parking meter (6)

Display This Question:

If We are interested in your available means of transportation. Select all options that are availabl... = Bus and/or shuttle

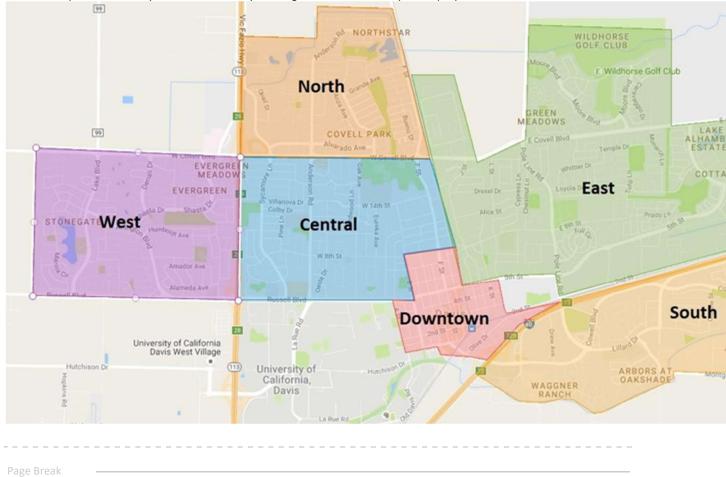
Or We are interested in your available means of transportation. Select all options that are availabl... = Train and/or light rail

Q26 Do you currently have a multi-ride transit pass?

Display This Choice:
If What is your primary role at UC Davis? = Undergraduate student (including Post-baccalaureate)
Yes - with my student ID card (4)
Yes - Monthly ticket (1)
Yes - Multi-ride ticket (e.g. 10-rides) (2)
O Yes - Other: (5)
O No (3)
End of Block: Section 2a - General Background Information
Start of Block: Section 2b – Background Information about Residence
Q27 Where do you live now?
On the UC Davis main campus & nbsp(includes Cuarto and the area east of SR 113, south of Russell Blvd, west of A St, and north of I-80) (1)
On-campus&nbspin the West Village apartments (2)
City of Davis (off-campus) (3)
Outside of Davis (4)

Display This Question:

If Where do you live now? = <strong>City of Davis</strong>&nbsp(off-campus)



Q236 Which part of Davis do you live in? Click on your neighborhood on the map to drop a point.

Display This Question:
If Where do you live now? = <strong>Outside of Davis</strong>
Q309 Where outside of Davis are you living?
O Elsewhere in California (1)
O In another state (outside of California) (2)
Outside the United States (3)
Display This Question:
If Where outside of Davis are you living? = Elsewhere in California
Or Where outside of Davis are you living? = In another state (outside of California)
*
Q30 What is the ZIP code where you currently live (outside of Davis)?
Display This Question:
If Where outside of Davis are you living? = Outside the United States
Q322 Where are you living outside the US?
O City: (4)
O Country: (5)
Display This Question:
If Where do you live now? = <strong>City of Davis</strong> (off-campus)
Or Where outside of Davis are you living? = Elsewhere in California
And If
Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, occasionally (less than once per week)
Or Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, regularly (at least once per week)

## Q29

# What intersection is nearest to your residence?

(Please answer for where you live when you are traveling to campus on a regular basis. This information will only be used to

calculate the approximate distance you travel to campus and to help plan facility needs around campus. It will be kept confidential and will not be used in any other way.)

O Street #1: (1)\_\_\_\_\_

O Street #2: (2)\_\_\_\_\_

Display This Question: If Were you enrolled or working at UC Davis during the 2019–2020 academic year? = Yes Q246 Are you now living somewhere different than you were before the campus closed because of COVID-19? (I.e. Are you living somewhere different than you were in March of this year?) Yes (1) No (2)

Page Break

If Are you now living somewhere different than you were before the campus closed because of COVID-19... = Yes

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Q247 What was the ZIP code of the residence you lived in **before** the campus closed because of COVID-19?

Display This Question:
If What is your primary role at UC Davis? = Undergraduate student (including Post-baccalaureate)
Or What is your primary role at UC Davis? = Graduate student
Or What is your primary role at UC Davis? = Faculty
Or What is your primary role at UC Davis? = Visiting scholar
Or What is your primary role at UC Davis? = Faculty emeritus
And If
Are you now living somewhere different than you were before the campus closed because of COVID-19 = Yes
Q248 Was your move related to the shift to remote work/instruction due to COVID-19?
Yes, entirely (1)
Yes, partially (2)
O Not at all (3)
Display This Question:
If What is your primary role at UC Davis? = Staff
Or What is your primary role at UC Davis? = Post doc
Or What is your primary role at UC Davis? = Other:
Or Or What is your primary role at UC Davis? Other: Is Not Empty

# And If

Are you now living somewhere different than you were before the campus closed because of COVID-19... = Yes

Q249 Was your move related to the shift to remote campus operations due to COVID-19?

O Yes, entirely (1)

• Yes, partially (2)

Not at all (3)

End of Block: Section 2b – Background Information about Residence

Start of Block: Section 3 - Travel to campus - Days traveled last week

Display This Question:

If Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, occasionally (less than once per week) Or Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, regularly (at least once per week)

Q36 Consider your activities during the last week, from Monday (November 9) through Sunday (November 15).

If you use a day planner or Google Calendar, it might be useful to look at the last week's activities as you complete this section. Your best guess is also okay!

#### Display This Question:

If Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, occasionally (less than once per week) Or Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, regularly (at least once per week)

### Q37

Did you go somewhere on campus any day last week (November 9 - 15) for school or work?

If you live on campus, but went to other campus locations for school or work, please count those trips. If you went to a UC Davis office or lab that is technically off-campus, but within the City of Davis, please count that as well.

Yes, I traveled to campus destinations for school or work last week (1)

 $\bigcirc$  No, I did not travel to campus destinations for school or work last week (2)

### Display This Question:

If Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, occasionally (less than once per week)

Or Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, regularly (at least once per week)

#### And If

Did you go somewhere on campus any day last week (November 9 - 15) for school or work? If you I... = Yes, I traveled to campus destinations for school or work last week

Q38 On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Davis office or lab that is technically off-campus, but within the city of Davis, please count that as well.

	Monday (1)
	Tuesday (2)
	Wednesday (3)
	Thursday (4)
	Friday (5)
	Saturday (6)
	Sunday (7)
Display This Question	

If Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, occasionally (less than once per week) And Did you go somewhere on campus any day last week (November 9 - 15) for school or work? If you I... = No, I did not travel to campu destinations for school or work last week

Q251 How frequently have you traveled to campus since the beginning of fall quarter?

1 time (1)
2 times (2)
3 times (3)
4 times (4)
5 or more (5)

ſ

## Display This Question:

If Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, regularly (at least once per week)

And Did you go somewhere on campus any day last week (November 9 - 15) for school or work? If you I... = No, I did not travel to campus estinations for school or work last week

	Monday (1)
	Tuesday (2)
	Wednesday (3)
	Thursday (4)
	Friday (5)
	Saturday (6)
	Sunday (7)
Page Break	

Q252 On which days do you typically travel to campus (check all that apply)?

If Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, occasionally (less than once per week) Or Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, regularly (at least once per week)

Q253 What have been the main purposes of your travel to campus? Select all that apply.

	Work-related activity (1)
	School-related activity (2)
	Social activity (e.g. visiting friends) (3)
	Medical-related activity (e.g. appointment at Student Health) (4)
	Exercise or recreation (e.g. walk, jog.) (5)
	Accessing the internet (6)
	Errands on campus (7)
	Dropping off, picking up, or accompanying a person (8)
	Other (9)
Page Break	

Display This Question:
If What have been the main purposes of your travel to campus? Select all that apply. = Work-related activity
Q254 Which of the following best describes why you have traveled to campus for work?
$\bigcirc$ I have been required to come to campus because of my job duties (1)
I have felt a need to come to campus because of conditions at home (2)
Thave felt a need to come to campus because of conditions at nome (2)
$\bigcirc$ I have chosen to come to campus even though I haven't needed to (3)
Page Break

If Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, occasionally (less than once per week) Or Have you been traveling to campus since the beginning of Fall Quarter 2020? = Not at all

Q255 Have you been working or learning remotely (e.g. working, studying, "attending" remote lectures or meetings) while away from campus?

Yes, I have been working/learning remotely (1)
No, I have been on personal or professional leave (e.g. sickness, sabbatical, travel) (2)
Other (3)
End of Block: Section 3 - Travel to campus - Days traveled last week
Start of Block: Section 4 - Travel to Campus - Days not traveled last week
Display This Question:
If Did you go somewhere on campus any day last week (November 9 - 15) for school or work? If you l = No, I did not travel to campus destinations for school or work last week
And Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, regularly (at least once per week)
Q39 What was the main reason you did not go to campus destinations last week for school or work?
Vacation, sickness, or personal leave (2)
Work or school-related travel (e.g. meeting, conference, field work) (3)
O Telecommuting (working from home or another remote location) (4)
O Temporary appointment elsewhere (internship, visiting scholar, teaching appointment, exchange program, etc.) (5)
Other: (6)

#### If What is your primary role at UC Davis? = Faculty

And And On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Davis office or lab that is technically off-campus, but within the city of Davis, please count th... q://QID24/SelectedChoicesCount Is Greater Than or Equal to 1

And And On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Davis office or lab that is technically off-campus, but within the city of Davis, please count th... q://QID24/SelectedChoicesCount Is Less Than or Equal to 4

Or If

What is your primary role at UC Davis? = Staff

And And On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Davis office or lab that is technically off-campus, but within the city of Davis, please count th... q://QID24/SelectedChoicesCount Is Greater Than or Equal to 1

And And On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Davis office or lab that is technically off-campus, but within the city of Davis, please count th... q://QID24/SelectedChoicesCount Is Less Than or Equal to 4

Or If

What is your primary role at UC Davis? = Visiting scholar

And And On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Davis office or lab that is technically off-campus, but within the city of Davis, please count th... q://QID24/SelectedChoicesCount Is Greater Than or Equal to 1

And And On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Davis office or lab that is technically off-campus, but within the city of Davis, please count th... q://QID24/SelectedChoicesCount Is Less Than or Equal to 4

Dr If

What is your primary role at UC Davis? = Post doc

And And On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Davis office or lab that is technically off-campus, but within the city of Davis, please count th... q://QID24/SelectedChoicesCount Is Greater Than or Equal to 1

And And On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Davis office or lab that is technically off-campus, but within the city of Davis, please count th... q://QID24/SelectedChoicesCount Is Less Than or Equal to 4

Or If

What is your primary role at UC Davis? = Graduate student

And And On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Davis office or lab that is technically off-campus, but within the city of Davis, please count th... q://QID24/SelectedChoicesCount Is Greater Than or Equal to 1

And And On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Davis office or lab that is technically off-campus, but within the city of Davis, please count th... q://QID24/SelectedChoicesCount Is Less Than or Equal to 4

Dr If

What is your primary role at UC Davis? = Faculty emeritus

And And On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Davis office or lab that is technically off-campus, but within the city of Davis, please count th... q://QID24/SelectedChoicesCount Is Greater Than or Equal to 1

And And On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Davis office or lab that is technically off-campus, but within the city of Davis, please count th... q://QID24/SelectedChoicesCount Is Less Than or Equal to 4

And If

Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, regularly (at least once per week)

#### Q40

You mentioned that you did not travel to campus on the following days last week.

What was the main reason you did not travel to campus? Please answer for each day individually.

Display This Choice:

If Welcome to the 2020-21 Campus Travel Survey! This annual survey is intended for everyone who is... Is Displayed Display This Answer:

If Welcome to the 2020-21 Campus Travel Survey! This annual survey is intended for everyone who is... Is Displayed Display This Answer:

If Welcome to the 2020-21 Campus Travel Survey! This annual survey is intended for everyone who is... Is Displayed Display This Answer:

If Welcome to the 2020-21 Campus Travel Survey! This annual survey is intended for everyone who is... Is Displayed Display This Answer:

If Welcome to the 2020-21 Campus Travel Survey! This annual survey is intended for everyone who is... Is Displayed Display This Answer:

If Welcome to the 2020-21 Campus Travel Survey! This annual survey is intended for everyone who is... Is Displayed Display This Choice:

If On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Dav... != Monday Display This Choice:

If Welcome to the 2020-21 Campus Travel Survey! This annual survey is intended for everyone who is... Is Displayed Display This Choice:

If On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Dav... != Tuesday Display This Choice:

If Welcome to the 2020-21 Campus Travel Survey! This annual survey is intended for everyone who is... Is Displayed Display This Choice:

If On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Dav... != Wednesday isplay This Choice:

If Welcome to the 2020-21 Campus Travel Survey! This annual survey is intended for everyone who is... Is Displayed

If On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Dav... != Thursday Display This Choice:

If Welcome to the 2020-21 Campus Travel Survey! This annual survey is intended for everyone who is... Is Displayed Display This Choice:

If On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Dav... != Friday isplay This Choice:

If Welcome to the 2020-21 Campus Travel Survey! This annual survey is intended for everyone who is... Is Displayed

	Display This Answer: If Welcom e to the 2020-21 Campus Travel Survey! This annual survey is intende d for everyon e who is Is Displaye d	Display This Answer: If Welcom e to the 2020-21 Campus Travel Survey! This survey! (e.g. meetin survey is intende d for everyon e who is Is Displaye d	Display This Answer: If Welcom e to the 2020-21 Campus Travel Survey! This sched uled uled day off (8) everyon e who is Is Displaye d Wedne	Display This Answer: If Welcom e to the 2020-21 Campus Travel Survey! This survey! ess, annual survey is intende d for everyon e who is Is Displaye d	2020-21 as Campus Travel CO Survey! CO This S annual V survey V is ( intende d for SC	ay off s part of a ompre ssed er work (11 week (11 (e.g. ) 9/80 hedul ) (10)
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Display This Choice: If Welcome to the 2020-21 Campus Travel Survey! T his annual survey is intended for everyone who is... Is Displayed



Telecom muting (working from home or another remote location) (1) This This Choice: If On which days last week (November 9 - 15) did you go somewher e on campus? If you went to a UC Dav... != Monday

Display

Monday (7)

Display This Choice: If Welcome to the 2020-21 Campus Travel Survey! T his annual survey is intended for everyone who is... Is Displayed

Work or schoolrelated travel (e.g. meeting, conferenc e, field work) (2)



This Choice: If On which days last week (November 9 - 15) did you go somewher e on campus? If you went to a UC Dav... != Tuesday

Display

Tuesday (8)

Display This Choice: If Welcome to the 2020-21 Campus Travel Survey! T his annual survey is intended for everyone who is... Is Displayed

Regularly schedule d day off (3)



This This Choice: If On which days last week (November 9 - 15) did you go somewher e on campus? If you went

Display

Wednesd ay (9)

Dav... != Wednesda

Display This Choice: If Welcome to the 2020-21 Campus Travel Survey! T his annual survey is intended for everyone who is... Is Displayed

Vacation, sickness, or personal leave (4)



This This Choice: If On which days last week (November 9 - 15) did you go somewher e on campus? If you went to a UC Dav... != Thursday

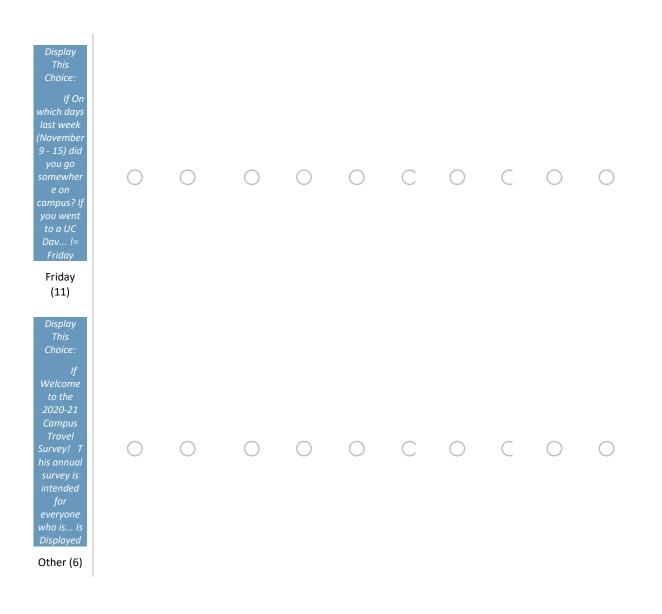
Display

Thursday (10)

Display This Choice: If Welcome to the 2020-21 Campus Travel Survey! T his annual survey is intended for everyone who is... Is Displayed

Day off as part of a compress ed work week (i.e. 4/40, 9/80, or 3/36 schedule) (5)





End of Block: Section 4 - Travel to Campus - Days not traveled last week

Start of Block: Section 5 - Travel to Campus - Usual travel to campus

Page Break

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Display This Question:
If Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, occasionally (less than once per week)
Or Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, regularly (at least once per week)
Carry Forward All Choices - Entered Text from "We are interested in your available means of transportation.Select all options that are available o you for getting to campus, whether or not you use them on a regular basis. Include options you would only use for part of the way."

Q44 What means of transportation do you **usually use to get to campus**? (If you usually use more than one mode of transportation, please select the one you usually use for **most of the distance**).

Walk (or wheelchair) (1)

🔾 Bike (2)

- Electric-assist bike (e-bike) (3)
- Skate, skateboard, or scooter (4)

Electric-assist scooter or skateboard (e-scooter or e-skateboard) (5)

- $\bigcirc$  Drive alone in a car (or other vehicle) (6)
- Carpool and/or vanpool with others going to campus (7)
- $\bigcirc$  Get dropped off by a friend or family (the driver continues on elsewhere) (8)
- Lyft, Uber, or other ride-hailing service (9)
- Motorcycle or Vespa-like scooter (10)
- Bus and/or shuttle (11)
- Train and/or light rail (12)
- Other: (13)

### Display This Question:

If If What means of transportation do you usually use to get to campus? (If you usually use more than o... Bus and/or shuttle Is Selected Carry Forward Selected Choices - Entered Text from "Which bus or shuttle is available to you? Select all that apply."

 $X \rightarrow$ 

Q45 Which bus do you usually use to get to campus?

Unitrans (1)
Yolobus (2)
Sacramento Regional Transit (3)
UCD/UCDMC Intercampus Shuttle (Causeway Connection) (4)
UC Berkeley/Davis Shuttle (5)
Other: (6)

If What is your primary role at UC Davis? = Staff

And Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, occasionally (less than once per week)

Or Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, regularly (at least once per week)

Q48 When do you typically arrive on campus?

▼ Before 7:00 am (2) ... Noon or later (13)

Display This Question:

If Were you enrolled or working at UC Davis during the 2019–2020 academic year? = Yes

Carry Forward All Choices - Displayed & Hidden from "What means of transportation do you usually use to get to campus? (If you usually use more than one mode of transportation, please select the one you usually use for most of the distance)."

 $X \rightarrow$ 

Q256 You indicated that you were affiliated with campus during the 2019–2020 school year.

What means of transportation did you usually use to get to campus <u>before it closed due to COVID-19</u>? (If you usually used more than one mode of transportation, please select the one you usually used for most of the distance).

Walk (or wheelchair) (1)
O Bike (2)
C Electric-assist bike (e-bike) (3)
Skate, skateboard, or scooter (4)
C Electric-assist scooter or skateboard (e-scooter or e-skateboard) (5)
O Drive alone in a car (or other vehicle) (6)
Carpool and/or vanpool with others going to campus (7)
$\bigcirc$ Get dropped off by a friend or family (the driver continues on elsewhere) (8)
O Lyft, Uber, or other ride-hailing service (9)
O Motorcycle or Vespa-like scooter (10)
O Bus and/or shuttle (11)
○ Train and/or light rail (12)
Other: (13)

Page Break

Carry Forward All Choices - Displayed & Hidden from "You indicated that you were affiliated with campus during the 2019–2020 school year. What means of transportation did you usually use to get to campus before it closed due to COVID-19? (If you usually used more than one mode of transportation, please select the one you usually used for most of the distance). "

 $X \rightarrow$ 

Q257 What means of transportation do you anticipate using to get to campus <u>after COVID-19 is no longer a threat</u>? (If you anticipate using more than one mode of transportation, please select the one you would use for most of the distance).

Walk (or wheelchair) (1)

🔾 Bike (2)

- Electric-assist bike (e-bike) (3)
- Skate, skateboard, or scooter (4)

Electric-assist scooter or skateboard (e-scooter or e-skateboard) (5)

 $\bigcirc$  Drive alone in a car (or other vehicle) (6)

Carpool and/or vanpool with others going to campus (7)

 $\bigcirc$  Get dropped off by a friend or family (the driver continues on elsewhere) (8)

Lyft, Uber, or other ride-hailing service (9)

Motorcycle or Vespa-like scooter (10)

Bus and/or shuttle (11)

Train and/or light rail (12)

) Other: (13)

Page Break

Displo	ay This Question:
	If Have you been traveling to campus since the beginning of Fall Quarter 2020? = Not at all
	Or Have you been traveling to campus since the beginning of Fall Quarter 2020? = Yes, occasionally (less than once per week)
And Ij	f
	What is your primary role at UC Davis? = Faculty
	Or What is your primary role at UC Davis? = Staff
	Or What is your primary role at UC Davis? = Visiting scholar
	Or What is your primary role at UC Davis? = Post doc
	Or What is your primary role at UC Davis? = Faculty emeritus
	Or What is your primary role at UC Davis 2 - Other

Q318 How much money do you estimate you are saving per week by not traveling to campus regularly? Please respond in dollars.

○ \$ (4)\_\_\_\_\_

End of Block: Section 5 - Travel to Campus - Usual travel to campus

Start of Block: Section 6 - Travel to Campus - Modes used last week

Display This Question:

If If On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Davis office or lab that is technically off-campus, but within the city of Davis, please count th... q://QID24/SelectedChoicesCount Is Greater Than or Equal to 1

Q49 Consider how you traveled to campus last week.

Display This Question:

If If On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Davis office or lab that is technically off-campus, but within the city of Davis, please count th... q://QID24/SelectedChoicesCount Is Greater Than or Equal to 1

Carry Forward Displayed Choices from "We are interested in your available means of transportation. Select all options that are available to you for getting to campus, whether or not you use them on a regular basis. Include options you would only use for part of the way."

 $X \rightarrow$ 

Q50 First think back to the entire week (Monday, November 2 - Sunday, November 8). Please tell us *all* the different means of transportation you used at some point on your way to school or work, from the moment you left home to when you arrived

at your first destination on campus – even if it was just for part of the way – on any day that week. Select **all** that apply.

Walk (or wheelchair) (1)
Bike (2)
Electric-assist bike (e-bike) (3)
Skate, skateboard, or scooter (4)
Electric-assist scooter or skateboard (e-scooter or e-skateboard) (5)
Drive alone in a car (or other vehicle) (6)
Carpool and/or vanpool with others going to campus (7)
Get dropped off by a friend or family (the driver continues on elsewhere) (8)
Lyft, Uber, or other ride-hailing service (9)
Motorcycle or Vespa-like scooter (10)
Bus and/or shuttle (11)
Train and/or light rail (12)
Other: (13)

#### Display This Question:

If If On which days last week (November 9 - 15) did you go somewhere on campus? & nbsp; If you went to a UC Davis office or lab that is technically off-campus, but within the city of Davis, please count th... q://QID24/SelectedChoicesCount Is Greater Than or Equal to 1

Carry Forward Selected Choices - Entered Text from "First think back to the entire week (Monday, November 2 - Sunday, November 8). Please tell us all the different means of transportation you used at some point on your way to school or work, from the moment you left home to when you arrived at your first destination on campus – even if it was just for part of the way – on any day that week. Select all that apply. "

X→

Q51 Next, consider each day specifically. Please select how you got to your first campus destination each day. (If you used more than one mode of transportation, select whatever you did for most of the distance.)

## Display This Choice:

If On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Dav... = Monday

Display This Choice:

If On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Dav... = Tuesday

Display This Choice:

If On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Dav... = Wednesday

Display This Choice:

If On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Dav... = Thursday

Display This Choice

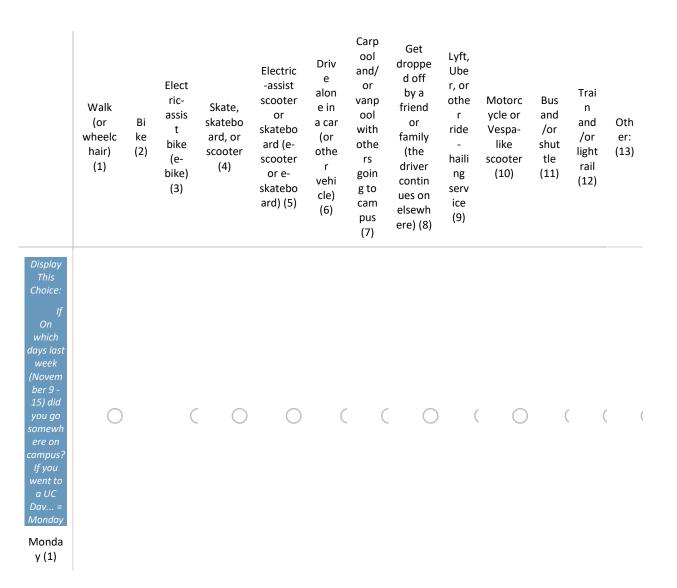
If On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Dav... = Friday

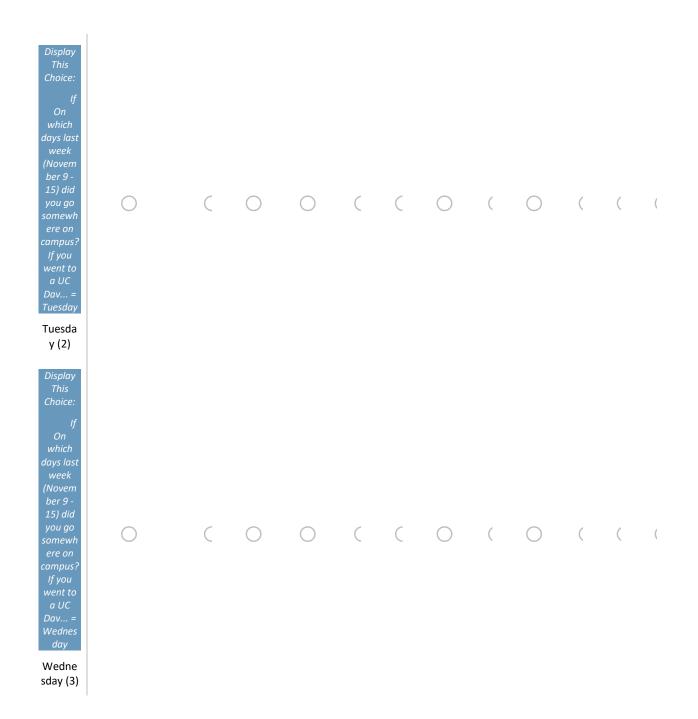
Display This Choice:

If On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Dav... = Saturday

Display This Choice:

If On which days last week (November 9 - 15) did you go somewhere on campus? If you went to a UC Dav... = Sunday

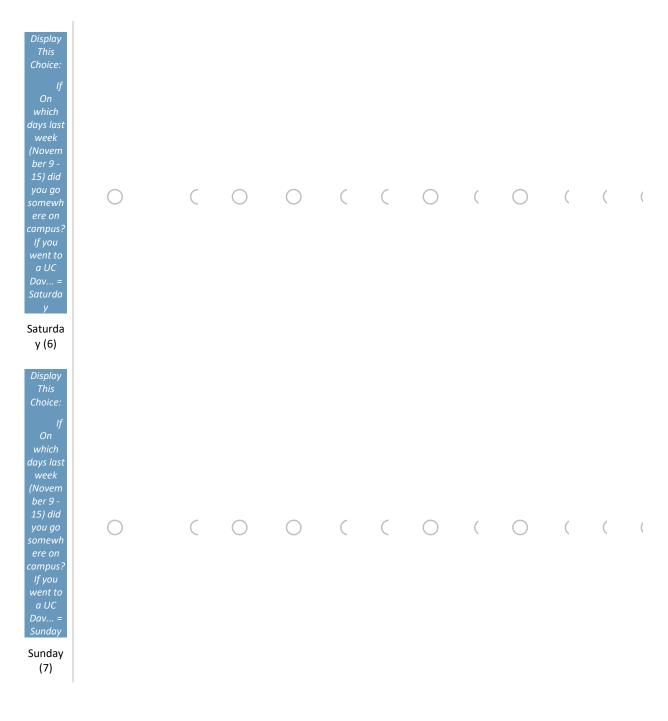








Friday (5)



End of Block: Section 6 - Travel to Campus - Modes used last week

Start of Block: Section 8 - Travel to campus - More details about mode last week

Display This Question:
If If First think back to the entire week (Monday, November 2 - Sunday, November 8).   Please tell us all the different means of transportation you used at some point on your way to scho Skate, skateboard, or scooter Is Selected
Or Next, consider each day specifically. Please select how you got to your first campus destination [ Skate, skateboard, or scooter] (Count) > 0
And If
If What kind of skates, skateboard, or scooter is available to you? Select all that apply. q://QID374/SelectedChoicesCount Is Greater Than 1
Carry Forward Selected Choices from "What kind of skates, skateboard, or scooter is available to you? Select all that apply."
$X \rightarrow$

# Q53 What kind of skates, skateboard, or scooter did you use last week?

Rollers skates or rollerblades (1)
Skateboard (2)
Scooter (3)

### Display This Question:

If If First think back to the entire week (Monday, November 2 - Sunday, November 8). Please tell us all the different means of transportation you used at some point on your way to scho... Get dropped off by a friend or family (the driver continues on elsewhere) Is Selected

Or Next, consider each day specifically. Please select how you got to your first campus destination... [ Get dropped off by a friend or family (the driver continues on elsewhere)] (Count) > 0

Q54 During the times when you got dropped off by a friend or family **last week**, how many people did your driver usually drop off?

1 (just you) (1)
 2 people (2)

3 people (3)

4 people (4)

5 people (5)

6 people (6)

7 people (7)

8 people (8)

9 people (9)

10 people (10)

) 11 or more people (11)

#### Display This Question:

If If First think back to the entire week (Monday, November 2 - Sunday, November 8). & nbsp; Please tell us all the different means of transportation you used at some point on your way to scho... Drive alone in a car (or other vehicle) Is Selected

Or Or First think back to the entire week (Monday, November 2 - Sunday, November 8). Please tell us all the different means of transportation you used at some point on your way to scho... Carpool and/or vanpool with others going to campus Is Selected

Or Or First think back to the entire week (Monday, November 2 - Sunday, November 8). Please tell us all the different means of transportation you used at some point on your way to scho... Get dropped off by a friend or family (the driver continues on elsewhere) Is Selected

Or Or First think back to the entire week (Monday, November 2 - Sunday, November 8). & nbsp; Please tell us&nbs means of transportation you used at some point on your way to scho... Motorcycle or Vespa-like scooter Is Selected Q55 Which type of vehicle did you use to get to campus last week?

Gasoline or diesel vehicle (1)
O Conventional hybrid vehicle (does not plug into the electricity grid) (2)
O Plug-in hybrid electric vehicle (3)
O All-electric vehicle (4)
O CNG fueled vehicle (5)
Biofuel vehicle (6)
O Hydrogen fuel cell vehicle (7)
Page Break

Display This Question:	
If If First think back to the entire week (Monday, November 2 - Sunday, November 8).   Please tell us all the diff	erent
means of transportation you used at some point on your way to scho Drive alone in a car (or other vehicle) Is Selected	
Or Or First think back to the entire week (Monday, November 2 - Sunday, November 8).   Please tell us all the d means of transportation you used at some point on your way to scho… Carpool and/or vanpool with others going to campus Is Selected	ifferent
Or Or First think back to the entire week (Monday, November 2 - Sunday, November 8). & nbsp; Please tell us all the d means of transportation you used at some point on your way to scho Motorcycle or Vespa-like scooter Is Selected	ifferent
Or Or What means of transportation do you usually use to get to campus? (If you usually use more than o Drive alone in a car (or vehicle) Is Selected	other
Or Or What means of transportation do you usually use to get to campus? (If you usually use more than o Carpool and/or vanpool others going to campus Is Selected	l with
Or Or What means of transportation do you usually use to get to campus? (If you usually use more than o Motorcycle or Vespa-lik scooter Is Selected	
OF7 When you drive to Davis for school or work, do you yourly park on compute or off compute)	
Q57 When you drive to Davis for school or work, do you <b>usually</b> park on-campus or off-campus?	
On-campus (1)	
Off-campus (2)	
Display This Question: If When you drive to Davis for school or work, do you usually park on-campus or off-campus? = Off-campus	
Q58 How do you <b>usually</b> get from your parked car to campus?	
Walk (or wheelchair) (8)	
O Personal bike (9)	
Bike share (e.g. JUMP) (10)	
O Skate, skateboard, or scooter (11)	
Get dropped off by a friend or family (12)	
O Bus or shuttle (13)	
O Lyft, Uber, or other ride hailing service (14)	
Other: (15)	

Display This Question:
If If First think back to the entire week (Monday, November 2 - Sunday, November 8).   Please tell us all the different means of transportation you used at some point on your way to scho Carpool and/or vanpool with others going to campus Is Selected
Or Next, consider each day specifically. Please select how you got to your first campus destination [ Carpool and/or vanpool with others going to campus] (Count) > 0
Q59 You mentioned that you carpooled or vanpooled last week. Which was it?
Carpool (1)
Vanpool (2)
Display This Question:
If If First think back to the entire week (Monday, November 2 - Sunday, November 8).   Please tell us all the different means of transportation you used at some point on your way to scho Carpool and/or vanpool with others going to campus Is Selected
Or Next, consider each day specifically. Please select how you got to your first campus destination [ Carpool and/or vanpool with others going to campus] (Count) > 0

Q60 During the times when you carpooled or vanpooled last week, about how many people were in your carpool or vanpool (including yourself)?

O 2 (you plus one other person) (1)
O 3 people (2)
O 4 people (3)
O 5 people (4)
O 6 people (5)
O 7 people (6)
O 8 people (7)
O 9 people (8)
○ 10 people (9)
11 people (10)
O 12 or more people (11)

Display This Question:
If If First think back to the entire week (Monday, November 2 - Sunday, November 8).   Please tell us all the different means of transportation you used at some point on your way to scho Bus and/or shuttle Is Selected
Or Next, consider each day specifically. Please select how you got to your first campus destination = Bus and/or shuttle
Carry Forward All Choices - Entered Text from "Which bus or shuttle is available to you? Select all that apply."
$X \rightarrow$
Q61 Which bus or shuttle did you use on your way to campus last week? If you used more than one, please select the service used for the greater distance of your trip.
O Unitrans (1)
O Yolobus (2)
Sacramento Regional Transit (3)
O UCD/UCDMC Intercampus Shuttle (Causeway Connection) (4)

O UC Berkeley/Davis Shuttle (5)

Other: (6)

Page Break -----

Display This Question:
If If First think back to the entire week (Monday, November 2 - Sunday, November 8).   Please tell us all the different means of transportation you used at some point on your way to scho… Train and/or light rail Is Selected
Or Next, consider each day specifically. Please select how you got to your first campus destination [Train and/or light rail] (Count) > 0
Carry Forward Displayed Choices from "Which train or light rail is available to you? Select all that apply."
$X \rightarrow$

Q62 Which train or light rail did you use on your way to campus last week? If you used more than one, please select the service you used for the greater portion of your trip.

O Amtrak	/Capitol Corr	idor (1)							
◯ bart (	2)								
O Sacram	ento Regiona	al Transit (	3)						
Page Break									 

End of Block: Section 8 - Travel to campus - More details about mode last week

Start of Block: Section 7 - Travel to campus - in the summer

Q63 Now consider this past summer, from June 22 – September 25, 2020.

Q64 How much time did you spend at UC Davis over the summer? We're interested in the number of weeks you spent last summer traveling to and from campus destinations on a regular basis. Please estimate how many weeks you were on campus at least once a week during this period.

If you went to a UC Davis office or lab that is technically off-campus, but within the city of Davis, please count that as well. (Note: There were a total of 12 weeks in the academic summer.)

- None (15)
  1 week (14)
  2 weeks (13)
  3 weeks (12)
  4 weeks (11)
  5 weeks (10)
  - $\bigcirc$  6 weeks (equivalent to just ONE summer session, I or II) (9)
- 🔾 7 weeks (8)
- 8 weeks (7)
- 9 weeks (6)
- 10 weeks (5)
- 11 weeks (4)
- 12 weeks (3)
- 13 weeks (2)

All summer / 14 weeks (June 22 - September 25) (1)

```
Skip To: End of Block If How much time did you spend at UC Davis over the summer? We're interested in the number of weeks... = None
```

Q65 During the weeks you were on campus over the summer, how many days per week were you typically on campus?

1 day per week (1)

- 2 days per week (2)
- O 3 days per week (3)
- 4 days per week (4)
- 5 days per week (5)
- O 6 days per week (6)
- O 7 days per week (7)

Carry Forward All Choices - Displayed & Hidden from "We are interested in your available means of transportation.Select all options that are available to you for getting to campus, whether or not you use them on a regular basis. Include options you would only use for part of the way."

X→

Q310 What means of transportation did you usually use to get to campus <u>over summer (June 22 – September 25, 2020)</u>? (If you usually used more than one mode of transportation, please select the one you usually used for most of the distance).

Walk (or wheelchair) (1)
O Bike (2)
Electric-assist bike (e-bike) (3)
Skate, skateboard, or scooter (4)
Electric-assist scooter or skateboard (e-scooter or e-skateboard) (5)
O Drive alone in a car (or other vehicle) (6)
Carpool and/or vanpool with others going to campus (7)
$\bigcirc$ Get dropped off by a friend or family (the driver continues on elsewhere) (8)
<ul> <li>Lyft, Uber, or other ride-hailing service (9)</li> </ul>
O Motorcycle or Vespa-like scooter (10)
O Bus and/or shuttle (11)
Train and/or light rail (12)
Other: (13)
End of Block: Section 7 - Travel to campus - in the summer

Start of Block: Section 9 - Campus transportation programs

	I've used it (1)	l've heard of it, but never used it (2)	I've never heard of it (3)
GoClub program (1)	$\bigcirc$	0	$\bigcirc$
Aggie Bike Buy Program (2)	$\bigcirc$	$\bigcirc$	$\bigcirc$
Bike tire air stations and repair stations around campus (3)	$\bigcirc$	$\bigcirc$	$\bigcirc$
Bicycle Education and Enforcement Program (BEEP) and bike safety video (4)	$\bigcirc$	$\bigcirc$	$\bigcirc$
Zipcar carsharing program (5)	$\bigcirc$	$\bigcirc$	$\bigcirc$
UC Davis motorist assistance program (8)	$\bigcirc$	$\bigcirc$	$\bigcirc$
Transportation Services (TS) bike lock-cutting service (9)	$\bigcirc$	$\bigcirc$	$\bigcirc$
UC Davis bicycle theft reporting system (14)	$\bigcirc$	$\bigcirc$	$\bigcirc$
UC Davis Bike Auction (10)	$\bigcirc$	$\bigcirc$	$\bigcirc$
Transportation Services (TS) Mobility Assistance Program (11)	$\bigcirc$	$\bigcirc$	$\bigcirc$
Transportation Services (TS) bicycle licensing program (12)	$\bigcirc$	$\bigcirc$	$\bigcirc$

## Q66 Are you familiar with any of these campus programs? Note that Transportation and Parking Services (TAPS) is now known as Transportation Services (TS)

End of Block: Section 9 - Campus transportation programs

Start of Block: Add On - Commute Satisfaction/Attitudes & TNCs

#### Q92 Thanks for staying with us!

Q93 We'd like to ask about your opinions with respect to transportation. There are no right or wrong answers; we want only your true opinions.

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
Travel time is generally wasted time. (Q53_1)	0	$\bigcirc$	0	$\bigcirc$	0
I like riding a bike. (Q53_2)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Climate change concerns affect the choices I make about my daily travel. (Q53_3)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
l like driving. (Q53_5)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I have been riding my bicycle more as a result of the COVID-19 pandemic. (Q93_37)	0	$\bigcirc$	0	$\bigcirc$	0
I like using public transit. (Q53_11)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I already bicycle as often as I can. (Q53_14)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
l try to limit my driving as much as possible. (Q53_15)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I am more dependent on driving as a result of the COVID-19 pandemic. (Q93_36)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	0
Getting around is easier than ever with my smartphone. (Q53_17)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$

## To what extent do you agree or disagree with the following statements?

Page Break

Q97 How would you **rate your ability** to ride a bike? In particular, we are interested in **whether you know how to ride a bike**, regardless of whether it is practical or desirable for you to do so as a means of transportation to campus.

$\bigcirc$ I cannot ride a bike at all because I do not know how (1)
I can ride a bike, but I am not very confident doing so (2)
I am somewhat confident riding a bike (3)
I am very confident riding a bike (4)
Q339 In general, how comfortable would you be riding a bike on a <b>four-lane street (two lanes in either direction) without a bicycle lane</b> , in daylight and good weather?
O Uncomfortable and I wouldn't ride on it (1)

O Uncomfortable but I would ride on it (2)

O Comfortable (3)

\_\_\_\_\_

Page Break

End of Block: Add On - Commute Satisfaction/Attitudes & TNCs

Start of Block: Add On - Housing Section - Shortened

#### Q264

The next set of questions will help the university get a better sense of housing affordability for UC Davis students and employees. We'll ask you about your residence and living expenses.

Your responses are entirely confidential.

Display This Question:
If Where do you live now? = <strong>City of Davis</strong> (off-campus)
Or Where do you live now? = <strong>Outside of Davis</strong>
$X^{\rightarrow}$
Q272 Do you live alone or with other people?
O Alone (1)
O With other people (2)
Display This Question:
If Do you live alone or with other people? = With other people
Q274 How many <b>other people</b> live in your residence? Don't count yourself.
▼ 1 (1) 10 or more (10)

Display This Question:

If Do you live alone or with other people? = With other people

Q278 Of the other people who live in your residence, how many are...

	Number of People (1)
Your partner or spouse (6)	
Your children (3)	
Your parents or guardians (8)	
Other relatives (e.g. siblings, cousins) (2)	
Page Break	•

Display This Question:
If Where do you live now? = <strong>City of Davis</strong> (off-campus)
Or Where do you live now? = <strong>Outside of Davis</strong>
Q68 What type of place is your current residence? Please pick the option that best describes your unit.
O Building with 4 or fewer units or apartments (2)
O Building with 5 or more units or apartments (3)
$\bigcirc$ Duplex (two units, side-by-side or two stories, with separate front doors) (4)
Accessory dwelling unit (smaller unit behind, attached to, or within a main house, but which also has its own sleeping, cooking, and bathroom facilities. Also called a "granny" or "in-law" unit) (8)
O House (stand-alone unit usually intended for a single family) (5)
O Mobile home or trailer (6)
Other: (7)
Display This Question:
If Where do you live now? = <strong>City of Davis</strong> (off-campus)
Or Where do you live now? = <strong>Outside of Davis</strong>
Q340 How long have you lived at your current residence?
C Less than a year (1)
O Between 1 and 2 years (2)
Between 2 and 4 years (3)
O Between 4 and 10 years (4)
O Between 10 and 20 years (5)
O More than 20 years (6)

Display This Question:
If Where do you live now? = <strong>City of Davis</strong> (off-campus)
Or Where do you live now? = <strong>Outside of Davis</strong>
Q77 Do you rent or own your residence?
O Rent (1)
Own (with or without a mortgage) (2)
Other arrangement where I don't personally pay (e.g. live with friends or family) (4)
Other: (3)
Page Break

Display This Question:

If Do you rent or own your residence? = Own (with or without a mortgage)

And What type of place is your current residence? Please pick the option that best describes your unit. = House (stand-alone unit usually intended for a single family)

Q339 Have you considered building an accessory dwelling unit on your property? Accessory dwelling units are smaller units behind, attached to, or inside a main house. They're also called "granny," "secondary" or "in-law" units.

No, I have never considered building one (1)
Yes, I have considered building one in the past (3)
Yes, I am currently considering building one (4)
Yes, I already have one on my property or am in the process of building one (2)

Display This Question:	
	live now? = <strong>City of Davis</strong> (off-campus)
	u live now? = <strong>Outside of Davis</strong>
$[\mathcal{X}]$	
Q310 In the last 12 i	months, did you do any of the following? Select all that apply.
	Did not pay the full amount of rent or mortgage (1)
	Did not pay the full amount of utilities (2)
	Moved 2 or more times (3)
	Doubled up in a bedroom (without a lease agreement for the room) (4)
	Moved in with other people due to financial problems (5)
	Skipped meals to pay for living expenses (7)
	None of these happened to me (9)
Display This Question:	

Or Where do you live now? = <strong>City of Davis</strong>&nbsp(off-campus)

	Kicked out of residence by family or housemates (1)
	Legally evicted (2)
	Stayed in a shelter (3)
	Stayed in an auto, campus building, or another public building (4)
	Did not know where I was going to sleep for one or more nights (5)
	Stayed temporarily with a friend or acquaintance while looking for housing ("couch surfed") (6)
	Did not have a home (7)
	Slept outside (non-recreationally) (9)
	Evacuated from my home due to wildfires (11)
	None of these happened to me (10)
Page Break	

Q312 Within the last 12 months, did any of the following happen to you? Select all that apply.

End of Block: Add On - Housing Section - Shortened

Start of Block: Add On - General Remote Work Questions

Q311 Next we'd like to ask you some questions about remote work and instruction related to the ongoing COVID-19 pandemic and partial campus closure.

Display This Question: If What is your primary role at UC Davis? = Undergraduate student (including Post-baccalaureate) Or What is your primary role at UC Davis? = Graduate student

Q258 After COVID-19 is no longer a threat, do you expect to be able to attend classes or otherwise complete your degree requirements remotely, at least some of the time?

O Yes (1)

O No (3)

#### Display This Question:

If What is your primary role at UC Davis? = Faculty

Or What is your primary role at UC Davis? = Stafj

Or What is your primary role at UC Davis? = Visiting scholar

Or What is your primary role at UC Davis? = Post doe

Or What is your primary role at UC Davis? = Faculty emeritus

Or What is your primary role at UC Davis? = Other:

Or Or What is your primary role at UC Davis? Other: Is Not Empty

Q259 After COVID-19 is no longer a threat, do you expect to be able to work remotely, at least some of the time?

O Yes (1)

🔾 No (3)

#### Display This Question:

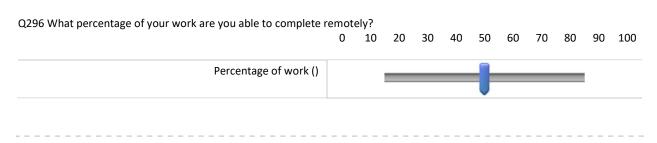
If What is your primary role at UC Davis? = Undergraduate student (including Post-baccalaureate) Or What is your primary role at UC Davis? = Graduate student Q260 After COVID-19 is no longer a threat, are you interested in continuing to attend classes remotely?

	Not at all (1)
	Some of the time (2)
	O All of the time (3)
Dicol	ay This Question:
Displi	If What is your primary role at UC Davis? = Faculty
	Or What is your primary role at UC Davis? = Staff
	Or What is your primary role at UC Davis? = Visiting scholar
	Or What is your primary role at UC Davis? = Post doc
	Or What is your primary role at UC Davis? = Faculty emeritus
	Or What is your primary role at UC Davis? = Other:
	Or Or What is your primary role at UC Davis? Other: Is Not Empty
Q26	1 After COVID-19 is no longer a threat, are you <b>interested</b> in continuing to work remotely?
	O Some of the time (2)
	All of the time (3)
Displ	ay This Question:
Displi	If Were you enrolled or working at UC Davis during the 2019–2020 academic year? = Yes
Q26	2 How has your productivity changed since the beginning of the COVID-19 pandemic?
	O Decreased significantly (1)
	O Decreased somewhat (2)
	Stayed about the same (3)
	O Increased somewhat (4)
	O Increased significantly (5)

 $\bigcirc$  Increased in some ways and decreased in others (6)

End of Block: Add On - General Remote Work Questions

Start of Block: Add On - Remote Work Questions for Staff/Faculty



### Q297 How many days per week would you prefer to work remotely when COVID-19 is no longer a threat?

0 (1)
1 (2)
2 (3)
3 (4)
4 (5)
5 (6)

118

Display This Question:

If What is your primary role at UC Davis? = Staff

Q298 What kind of work tasks would you prefer to do on campus (select all that apply)?

	Planning out work tasks with others (1)
	Working in teams (2)
	Individual work (3)
	Communicating with staff/students, etc. (4)
	Other: (5)
Page Break	

	Not at all important (14)	Slightly important (15)	Somewhat important (16)	Very important (17)
Quiet / comfortable workspace (4)	0	0	0	$\bigcirc$
Adequate Internet connection (5)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$
Sufficient computer hardware (6)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$
Software (programs on your computer) (7)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$
Webcam / visual accessories (8)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$
Microphone / audio accessories (9)	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
A consistent work schedule (11)	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Other (12)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$
Page Break				

## Carry Forward All Choices - Displayed & Hidden from "Which of the following are important to your success in working remotely?"

	Don't have (9)	Have, but not adequate (4)	Have, but minimally adequate (5)	Have, and somewhat adequate (6)	Have, and adequate (7)
Quiet / comfortable workspace (x4)	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Adequate Internet connection (x5)	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Sufficient computer hardware (x6)	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Software (programs on your computer) (x7)	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	0
Webcam / visual accessories (x8)	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Microphone / udio accessories (x9)	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
consistent work schedule (x11)	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Other (x12)	$\bigcirc$	$\bigcirc$	$\bigcirc$	0	0

## Q301 Do you have the following at home, and how adequate are they for your remote work needs?

Page Break

X→

) Somewhat satisfied (31)	Very satisfied (32)
$\bigcirc$	$\bigcirc$
0	0
0	$\bigcirc$
$\bigcirc$	$\bigcirc$
$\bigcirc$	$\bigcirc$
0	0 0

## Q303 How satisfied are you with the following aspects of your remote work situation?

Q304 Are you responsible for providing care to children or other dependents in your home?

<b>Ves (1)</b>											
O No (3)											
Display This Question:											
If Are you responsible for providing care to children or other depende	ents i	n your	home	? = Yes	5						
Q305 What percentage of your work time do you have to access to	o chi 0	ldcaro 10	e prov 20	ided   30	oy sor 40	neone 50	e othe 60	r than 70	yourse 80	elf? 90	100



Q306 We'd like to ask about your opinions with respect to working remotely. There are no right or wrong answers; we want only your true opinions.

	Strongly disagree (31)	Somewhat disagree (32)	Neutral (33)	Somewhat agree (34)	Strongly agree (35)
Working from home has saved me a lot of time during my day (1)	0	0	0	0	$\bigcirc$
My work life and personal life feel more blended together (2)	0	0	0	$\bigcirc$	$\bigcirc$
I feel more comfortable working from home than in an office (3)	0	$\bigcirc$	$\bigcirc$	0	$\bigcirc$
Working from home has given me more time to focus on my health (4)	0	0	$\bigcirc$	$\bigcirc$	$\bigcirc$
I feel more connected with my family because I am working from home (5)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	0
While working from home, my daily routine has changed for the better (6)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	0
I feel disconnected from co-workers since working remotely (7)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
The quality of my work has increased since working from home (8)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Working from home has made me feel more isolated and lonely (9)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$

I'm finding it harder to concentrate at home compared to in the office. (10)	0	0	$\bigcirc$	0	$\bigcirc$
Page Break					

Q317 How much of your own money have you spent on items to enable you to work remotely in the 7+ months since the campus closure due to COVID-19? Please respond in dollars.

○ \$ (4)	 	 	 	 	 		 	 										
	 	 	 	 	 	_	 	_	 	_	 	 						
Page Break				 	 		 		 		 	 						

Q307 Is there anything else you'd like to share with us regarding your experiences working remotely?

End of Block: Add On - Remote Work Questions for Staff/Faculty

Start of Block: Add On - Remote Learning and Lease Questions for Students

Display This Question.

If Do you rent or own your residence? = Rent

Or Do you rent or own your residence? = Other arrangement where I don't personally pay (e.g. live with friends or family)

Or Do you rent or own your residence? = Other

Q290 Did you sign a contract or lease agreement for a residence near campus for the 2020-2021 school year?

O Yes (1)

 $\bigcirc$  No, but my pre-existing lease agreement for a residence near campus rolled over into the 2020-2021 school year (2)

No, my name was never on a contract or lease agreement for a residence near campus for the 2020-2021 school year
 (4)

Page Break

Display This Question:

- --

If Did you sign a contract or lease agreement for a residence near campus for the 2020-2021 school year = Yes

Or Did you sign a contract or lease agreement for a residence near campus for the 2020-2021 school year = No, but my pre-existing lease agreement for a residence near campus rolled over into the 2020-2021 school year

Q291 What is the current situation regarding the lease on your residence near campus?

O Living in my residence near campus (1)
O Used a lease break option written into my lease/contract (2)
O Negotiated a release from my lease/contract (3)
O Found a sub-let to pay all of the rent (4)
O Found a sub-let to pay a portion of the rent (5)
$\bigcirc$ Still paying rent but not living in or sub-letting the residence (6)
$\bigcirc$ Not paying rent and not living in or sub-letting the residence (8)
ge Break

#### Display This Question:

If What is the current situation regarding the lease on your residence near campus? = Found a sub-let to pay all of the rent

Or What is the current situation regarding the lease on your residence near campus? = Found a sub-let to pay a portion of the rent

Or What is the current situation regarding the lease on your residence near campus? = Still paying rent but not living in or sub-letting the idence

Or What is the current situation regarding the lease on your residence near campus? = Not paying rent and not living in or sub-letting the sidence

#### Q292 Do you anticipate returning to your residence near campus?

• Yes, during fall 2020 (1)

Yes, during winter 2021 (2)

Yes, during spring 2021 (3)

Yes, during a future schoolyear (4)

) Not at all (5)

) Not sure (6)

#### Display This Question:

If Did you sign a contract or lease agreement for a residence near campus for the 2020-2021 school year = No, my name was never on a contract or lease agreement for a residence near campus for the 2020-2021 school year

Or If

- Do you anticipate returning to your residence near campus? = Yes, during fall 2020
- Or Do you anticipate returning to your residence near campus? = Yes, during fall 2020
- Or Do you anticipate returning to your residence near campus? = Yes, during winter 2021
- Or Do you anticipate returning to your residence near campus? = Yes, during spring 2021
- Or Do you anticipate returning to your residence near campus? = Yes, during a future schoolyear

Or Do you anticipate returning to your residence near campus? = Not sure

	Not at all important (1)	Somewhat important (2)	Very important (3)
Availability of in-person instruction (1)	0	0	$\bigcirc$
COVID-19 rates in Davis (2)	0	$\bigcirc$	$\bigcirc$
Proximity to friends or family (4)	0	$\bigcirc$	$\bigcirc$
Flexibility to rent month-to- month (3)	0	$\bigcirc$	$\bigcirc$
Housing availability (7)	0	$\bigcirc$	$\bigcirc$
Housing cost (8)	0	$\bigcirc$	$\bigcirc$
Other financial concerns (5)	0	$\bigcirc$	$\bigcirc$
Other: (9)	0	$\bigcirc$	$\bigcirc$

# Q341 How important are the following factors in thinking about the possibility of living near campus?

	Not at all important (1)	Slightly important (2)	, Somewhat important (3)	Very important (4)
Quiet / comfortable workspace (1)	0	0	0	0
Sufficient internet connection (2)	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Sufficient computer hardware (3)	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Software (programs on your computer) (4)	$\bigcirc$	$\bigcirc$	0	$\bigcirc$
Webcam / visual accessories (5)	$\bigcirc$	$\bigcirc$	0	$\bigcirc$
Microphone / audio accessories (6)	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
A consistent school schedule (8)	$\bigcirc$	$\bigcirc$	0	$\bigcirc$
Other (9)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$
Page Break				

# Q293 Which of the following are important to your success in learning remotely?

#### Carry Forward All Choices - Displayed & Hidden from "Which of the following are important to your success in learning remotely?"

Have, but Have, and Have, but not Have, and Don't have (1) minimally somewhat adequate (2) adequate (5) adequate (3) adequate (4) Quiet / comfortable  $\bigcirc$  $\bigcirc$  $\bigcap$  $\bigcirc$ workspace (x1) Sufficient internet connection (x2) Sufficient computer  $\square$ hardware (x3) Software (programs on your computer) (x4) Webcam / visual accessories (x5) Microphone / audio accessories (x6) A consistent school schedule (x8) Other (x9)

Q294 Do you have the following at home, and how adequate are they for your remote work needs?

Page Break

	Very unsatisfied (1)	Somewhat unsatisfied (2)	Neutral (3)	Somewhat satisfied (4)	Very satisfied (5)
Physical workspace (1)	0	0	$\bigcirc$	$\bigcirc$	0
Interaction with classmates / peers (2)	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Interaction with instructors (3)	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Interaction with campus staff (4)	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	0
School/life balance (5)	0	0	$\bigcirc$	$\bigcirc$	0
Page Break —					

## Q295 How satisfied are you with the following aspects of your remote learning situation?

Q323 Are you responsible for providing care to children or other dependents in your home?

Yes (1)											
$\sim$											
O No (3)											
Display This Question: If Are you responsible for providing care to children or other depe.	ndents	in you	ır home	e? = Ye:							
Q324 What percentage of your class and studying time do you yourself?											
	0	10	20	30	40	50	60	70	80	90	100
% of class/studying time with access to childcare ()											
Q308 Is there anything else you'd like to share with us regarding	g your	expe	rience	s learı	ning re	emote	ly?				
·····											
End of Block: Add On - Remote Learning and Lease Questions	for Stu	Ident	S								
Start of Block: Add On - Remote Work Questions for Student E	mploy	yees									
Q336 Earlier in the survey, you indicated that you work for UC I specifically about your campus-related employment, not your e					g a sti	udent.	The r	ext fe	w que	estion	s are
pecifically about your campus-related employment, not your e	xperie		15 a sti	uem.							
			•• •••		<b>-</b>						
Q599 What percentage of your employment duties are you able	0	10	të rën 20	30	? 40	50	60	70	80	90	100
Percentage of work ()											

	Not at all important (14)	Slightly important (15)	Somewhat important (16)	Very important (17)
Quiet / Comfortable workspace (4)	0	0	0	0
Adequate Internet connection (5)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$
Sufficient computer hardware (6)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$
Software (programs on your computer) (7)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$
Webcam / visual accessories (8)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$
Microphone / audio accessories (9)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$
A consistent work schedule (11)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$
Other (12)	0	$\bigcirc$	$\bigcirc$	0
Page Break				

Q602 Earlier in the survey, you indicated the importance of the following to your success in learning remotely. Thinking about your role as a student employee, which of the following are important to your success in **working** remotely?

Physical workspace (4) Interaction with colleagues (5) Interaction with supervisors/managers (6)	0	0	0
colleagues (5) Interaction with supervisors/managers	$\bigcirc$	$\bigcirc$	
supervisors/managers		$\bigcirc$	$\bigcirc$
	$\bigcirc$	$\bigcirc$	$\bigcirc$
Interaction with employees/supervisees (7)	$\bigcirc$	$\bigcirc$	$\bigcirc$
Work/life balance (8)	$\bigcirc$	$\bigcirc$	$\bigcirc$

## Q605 How satisfied are you with the following aspects of your remote work situation?

Q608 We'd like to ask about your opinions with respect to working remotely. There are no right or wrong answers; we want only your true opinions.

	Strongly disagree (31)	Somewhat disagree (32)	Neutral (33)	Somewhat agree (34)	Strongly agree (35)
Working from home has saved me a lot of time during my day (1)	0	0	0	0	0
My work life and personal life feel more blended together (2)	0	$\bigcirc$	0	$\bigcirc$	0
I feel more comfortable working from home than in an office (3)	0	0	$\bigcirc$	0	$\bigcirc$
Working from home has given me more time to focus on my health (4)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I feel more connected with my family because I am working from home (5)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
While working from home, my daily routine has changed for the better (6)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I feel disconnected from co-workers since working remotely (7)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
The quality of my work has increased since working from home (8)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Working from home has made me feel more isolated and lonely (9)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	0

I'm finding it harder to concentrate at home compared to in the office. (10)	$\bigcirc$	$\bigcirc$	0	$\bigcirc$	$\bigcirc$
Page Break —					

Q604 How much of your own money have you spent on items to enable you to work remotely in the 7+ months since the campus closure due to COVID-19? Please respond in dollars.

○ \$ (4)	 	 	 	 					
Page Break									 

Q609 Is there anything else you'd like to share with us regarding your experiences working remotely?

End of Block: Add On - Remote Work Questions for Student Employees
Start of Block: Section 13 - Demographics
Q117 We're almost finished – just a few more questions about yourself. We use this information to help understand travel choices and how the people taking the survey represent the UC Davis community as a whole. Your answers are confidential and will not be used for any other purpose.
Image:
Q118 In what year were you born?
▼ 1919 (1) 2005 (102)
Q14 Where were you born?
O In California (1)
Outside of California, but in the United States (2)
Outside the United States, in: (3)
Display This Question:
If What is your primary role at UC Davis? = Undergraduate student (including Post-baccalaureate)
And We are interested in your available means of transportation. Select all options that are availabl = Drive alone in a car (or other vehicle)
Or If
Or If What is your primary role at UC Davis? = Graduate student

Q120 Earlier, you indicated that you have access to a car. Do you receive financial support from family or other individuals for driving-related expenses such as gas, insurance, and vehicle maintenance?

No - None at all (1)	
Yes - For some things (2)	
Yes - For most things (3)	
Yes - For everything (4)	
Display This Question:	
If What is your primary role at UC Davis? = Staff	
Q119 What is your highest level of education completed?	
O No formal education (1)	
Grade school or junior high school (2)	
O High school diploma or equivalent (3)	
Associates degree or technical school certificate (4)	
O Four-year bachelor's degree (5)	
Graduate degree(s) (6)	

	American Indian or Alaska Native (1)
	Asian (2)
	Black or African American (3)
	Hispanic, Latino, or Spanish origin (4)
	Middle Easterner or North African (5)
	Native Hawaiian or other Pacific Islander (6)
	White (8)
	A race, ethnicity, or origin that is not listed (7)
	Prefer not to answer (10)
End of Block: Secti	on 13 - Demographics
Start of Block: Sec	tion 14 - Prize Opt-In

Q321 Which categories describe you? Select all that apply.

Q121 Please let us know if we may contact you in the future for the following purposes. We will only contact you for the purposes you've approved below.

Q123 As mentioned at the start of the survey, we are offering a chance to win forty \$50 Amazon gift cards and grand prizes of two Amazon Fire tablets for survey respondents who wish to enter our drawing. We would need your name and email address in order to participate in the drawing. Would you like to enter your name in our drawing?

$\bigcirc$	Yes	(1)
$\bigcirc$	No	(2)

 $\frown$ 

diff may we contact you should we have any questions regarding your survey responses.
<b>Yes (2)</b>
O No (1)
Q320 May we contact you in the future about other campus-related or transportation-related surveys?
<b>Yes (1)</b>
O No (2)
Display This Question:
If As mentioned at the start of the survey, we are offering a chance to win forty \$50 Amazon gift ca = Yes
Or May we contact you should we have any questions regarding your survey responses? = Yes
Q125 Please provide the following contact information. This information will ONLY be used for the purposes you specified.
O Name (1)
O Your UC Davis email address (2)
Q126 Optional: Is there anything else you would like to tell us about transportation at UC Davis? We welcome any additional comments in the space below.

\_

Q124 May we contact you should we have any questions regarding your survey responses?

### Appendix B: Changes from the 2019-20 survey instrument

The following sections have been added, omitted, reduced, or altered:

- 1. Housing and housing security (shortened from 2019-2020)
- 2. Bike security and theft (omitted)
- 3. Accessory dwelling units (added three short questions)
- 4. Remote work questions (added for everyone working remotely)
- 5. Future lease questions (asked to students who had relocated due to COVID)

The reference week was scheduled for a similar week as the previous year's survey, and we sent participants two reminders via email: one and two weeks after the initial invitation, respectively.

### Appendix C: Text of the recruitment emails

Initial recruitment email: From: UCD Travel Survey <travelsurvey@ucdavis.edu> To: <...@ucdavis.edu> Subject: 2020-21 Campus Travel Survey

Dear UC Davis Student/Employee,

You are invited to participate in the 2020-2021 UC Davis Campus Travel Survey. This annual survey provides campus planners with valuable feedback on how people get to campus and their experiences with various transportation programs. It is intended for everyone who is affiliated with UC Davis for school or work, even if you are not regularly traveling to campus due to the ongoing COVID-19 pandemic.

Your feedback helps improve the campus!

UC Davis Transportation Services (TS) and graduate students from the Institute of Transportation Studies have used the results from this survey to: Identify trends in the way that people get to campus from year to year Prioritize bike infrastructure improvements on campus Estimate UCD's greenhouse gas emissions Better understand the factors that encourage biking in our community Develop new TS programs to serve the campus community

Participating in this research survey takes 10-15 minutes to complete. Doing so is voluntary, and we assure you that all responses are confidential and the results will only be published in the aggregate, without connection to any individual. You must be at least 18 years old to complete this survey.

We're going to ask you questions in the following areas: Your role at UC Davis Your travel to and from campus Your experience with campus transportation programs and infrastructure Some background information about you Your housing and experience with housing affordability Your experience working/studying remotely due to the COVID-19 pandemic

In appreciation for your time, we're offering anyone who completes the survey entry into a drawing for forty \$50 Amazon gift cards and two grand prizes of Amazon Fire tablets!

To start the survey, click on the link below: \${l://SurveyLink?d=Take%20the%20survey}

Thanks for your participation in this year's survey!

Sincerely, Mary Croughan Provost and Executive Vice Chancellor

Follow the link to opt out of future emails: \${I://OptOutLink?d=Click here to unsubscribe} Reminder recruitment email: From: UCD Travel Survey <travelsurvey@ucdavis.edu> To: <...@ucdavis.edu> Subject: Final Chance to Provide Feedback: 2020-21 Campus Travel Survey

Dear UC Davis Student/Employee,

Two weeks ago, we invited you to take the 2020-2021 Campus Travel Survey. If you finished the survey over the last two weeks, thank you so much! Your responses have been recorded, and you can disregard the rest of this message.

If not, we encourage you to complete the survey today! We are especially in need of responses from upper-level students, as your response rates (particularly for 4th years and above) have not yet matched those of first-years and sophomores! Your participation helps us ensure that we have feedback from a representative cross-section of the UC Davis campus community, and remember, this survey is intended for everyone, even if you are living away from Davis due to the COVID-19 pandemic.

Participating in this research survey takes 10-15 minutes to complete. Doing so is voluntary, and we assure you that all responses are confidential and the results will only be published in the aggregate, without connection to any individual. You must be at least 18 years old to complete this survey.

We're going to ask you questions in the following areas: Your role at UC Davis Your travel to and from campus Your experience with campus transportation programs and infrastructure Some background information about you Your housing and experience with housing affordability Your experience working/studying remotely due to the COVID-19 pandemic

In appreciation for your time, we're offering anyone who completes the survey entry into a drawing for forty \$50 Amazon gift cards and two grand prizes of Amazon Fire tablets!

To start the survey, click on the link below: \${I://SurveyLink?d=Take%20the%20survey}

Thanks for your participation in this year's survey!

Sincerely, The 2020-2021 Campus Travel Survey Team

Follow the link to opt out of future emails: \${I://OptOutLink?d=Click here to unsubscribe}

## Appendix D: Calculation of Average Vehicle Ridership (AVR)

AVR (average vehicle ridership) is a ratio of the number of person-arrivals to private-vehicle-arrivals. If everyone drove alone to campus, the campus AVR would be equal to one. AVR values greater than 1.0 indicate more carpooling and/or use of active modes of transportation.

To compare AVR statistics on the Davis campus with other UC campuses, we calculate AVR using a standard formula developed by the South Coast Air Quality Management District (AQMD) in "Rule 2202 – On Road Motor Vehicle Mitigation Options."<sup>3</sup> We attempt to adhere to the AQMD formula, although our overall survey methodology deviates to some extent from that prescribed by the AQMD.<sup>4</sup> The AQMD formula excludes weekend travel (considering Monday through Friday only) and excludes on-campus residents (considering travel among off-campus residents only). It includes adjustments for vehicle occupancy and the use of zero-emission vehicles (ZEV).

In particular, we use the following formula:

$$AVR = \frac{Total weekly arrivals}{weekly vehicle arrivals} = \frac{arrivals by all modes + employee telecommuting days + CWW days}{drive alone arrivals + fractional carpool arrivals}$$

with:

Arrivals by all modes = a count of all respondents arriving by bus, driving, carpooling, getting a ride, walking, biking, skating, and riding transit on Monday, plus the same for Tuesday, Wednesday, etc. through Friday (using Q51 – daily travel).

*Employee telecommuting days* = a count of respondents telecommuting on Monday, plus those doing so on Tuesday, etc. through Friday. These are based on responses to questions *Q37*, *Q39*, and *Q40* for any respondents who traveled some days and telecommuted other days. But for respondents who indicated <u>no</u> travel during any of the five days of the reference week (in *Q37*) and then indicated the reason for no travel was telecommuting (in *Q39*), we assume the respondent telecommuted all five days of the reference week.

*Employee CWW days* = a count of respondents reporting that they did not travel on Monday because they had a CWW (compressed work week) day off, plus those who did so for Tuesday, Wednesday, etc. through Friday (using responses to questions *Q37* and *Q40*).

*Drive-alone arrivals* = a count of respondents arriving by driving alone on Monday, plus those doing so on Tuesday, Wednesday, etc. through Friday (using responses to *Q51*). As an adjustment for the use of ZEV vehicles, we exclude from the count any arrivals by a respondent who has indicated using an all-electric or fuel cell vehicle for their travel during the reference week (in question *Q55*).

*Fractional carpool arrivals* = A count of the fractions of vehicle-arrivals accounted for those arriving in carpools (or getting rides) for each day Monday through Friday. In particular, for each day a respondent carpools (or gets a ride, using Q51) we add to the arrival count a fraction equal to one divided by the

<sup>&</sup>lt;sup>3</sup> As of July 2017, this rule is available online (http://www.aqmd.gov/docs/default-source/rule-book/reg-xxii/rule-2202.pdf?sfvrsn=4 ).

<sup>&</sup>lt;sup>4</sup> For instance, the AQMD specifies that response to the survey must be 90 percent response rate, whereas we rely on surveying only a sample and weighting the responses.

total number of people in the carpool (using *Q60*) or the number of passengers dropped off by the driver (using *Q54*). We exclude from the count any arrivals by a respondent who has indicated using an all-electric or hydrogen vehicle (in question *Q55*).

In all cases, the estimated number of arrivals for the entire campus community is a projection. In particular, we weight (and expand) the sample responses by role and gender based on the valid responses to question *Q51*.

We calculate AVR both excluding and including on-campus residents, and by each role group. The AQMD and most other UC campuses exclude on-campus residents and most only calculate AVR for employees rather than for students. The inclusion of student employees can greatly change AVR statistics, though to a different extent at different campuses. We include a question about whether student respondents are also paid employees of UC Davis (question *Q8*) to allow us to estimate AVR including student employees.

### Appendix E: Geocoding and network distances

We used the ESRI Streetmap USA dataset to do all of the geocoding and network route assignments. It is based on the TIGER/Line 2000 streets dataset produced by the U.S. Census Bureau, and has been enhanced by ESRI and Tele Atlas. If the exact street was not available, then we geocoded the point to the nearest pre-existing road. In all cases, the differences were minor and expected to be negligible.

#### Geocoding residential locations

We used address information to geocode points to the ESRI Streetmap USA dataset. First, we used the statistical computing language, R, to filter out empty records and to divide the data into separate tables for each subcategory (On Campus, West Village, Off Campus in Davis, and Outside Davis), and concatenate the street names into a single field. This allowed us to input the data into an appropriate address locator that would be able to automatically geocode as many addresses as possible.

Inputting the data directly into an address locator resulted in successful matching of nearly all addresses. Because there was the potential for a small percentage of addresses to be matched incorrectly by the address locator, we also manually verified that the match address was the same as the input address. We geocoded unmatched addresses by manually placing points in the correct locations, or by modifying the input addresses so that they matched correctly using an automatic address locator.

#### Network distance

The network route assignments were created using the ArcGIS Network Analyst extension and the ESRI Streetmap USA dataset (the same dataset used to geocode the residential locations). For those living off campus in Davis (excluding West Village) and outside Davis, distances were calculated from the geocoded residential location points to a point located on the UC Davis campus at the corner of Hutchison Drive and California Avenue, near the Silo. The network route assignments were calculated by optimizing for the fastest travel times (based on assumptions about the expected speed of travel on each facility type), which was deemed to produce more realistic routes than optimizing for distance, because it produces routes that favor major roads and highways where possible.

We assign an average distance from campus destinations for all on-campus respondents equal to the mean calculated network distance for on-campus respondents. This distance is equal to 0.77 miles and reflects our best estimate of the average distance from residential locations within the "on campus" area to campus destinations. For the respondents living in the West Village apartments, we assumed that distance from campus is equal to the calculated network distance from the center of the West Village complex to the Silo (traveling along Hutchison Drive). This distance is equal to 1.3 miles and reflects our best estimate of the average distance from residential locations in West Village to campus destinations.

#### Comparability with results from previous surveys

We used the same procedures to geocode and calculate network distances as were used in the Campus Travel Surveys from 2008-09 through 2017-18, so results from this survey should be comparable with these surveys. Because the 07-08 survey employed a different method both to collect data on the respondents' residential locations (allowing respondents to click on a map versus typing cross streets into a text field); to geocode points; and to calculate network distances, the estimated distances and calculations based on them (miles traveled and emissions) are not comparable to later survey years.

### Appendix F: Imputation of Valid Responses

To make the most out of the available data, the following process was used to impute missing data to question *Q51*, the primary mode used to get to campus for each day of the reference week:

- 1. Missing answers were only coded for days on which the respondent indicated traveling to campus (*Q38*) but did not indicate a primary mode.
- 2. In cases where all answers were missing for Q50 (all modes used to get to campus) and Q51 (modes used each day), the answer to Q44 about "usual mode" was imputed for each day traveled in Q38.
- 3. In cases where only one answer was given for *Q50* (all modes used to get to campus), missing answers to *Q51* (modes used each day) were recoded as this answer.
- 4. In the cases where usual mode was listed and only some answers to *Q51* (modes used each day) were missing, the missing modes were imputed so that the "usual" mode made up the majority and the "secondary" mode made up the minority of days traveled.

# Appendix G: Sampling Plan

	2020	-21	Percent Invited							
Role	Assumed Population	Number Invited	2020- 21	2019- 20	2018- 19	2017- 18	2016- 17	2015- 16		
Student	37,593	17,052	45.4%	36%	41%	45%	60%	63%		
Undergraduate	30,810	12,630	41.0%	34%	37%	40%	57%	59%		
Freshman	6,567	1,650	25.1%	26%	42%	43%	81%	58%		
Sophomore	5,443	3,590	66.0%	62%	52%	50%	64%	77%		
Junior	8,388	3,680	43.9%	26%	27%	33%	50%	48%		
Senior	10,412	3,710	35.6%	29%	33%	34%	50%	59%		
Graduate	6,783	4,422	65.2%	46%	60%	69%	77%	80%		
Master's	2,662	2,662	100.0%	76%	100%	93%	100%	100%		
PhD	4,121	1,760	42.7%	25%	33%	45%	58%	63%		
Employee	16,293	4,238	26.0%	21%	16%	28%	30%	61%		
Faculty	2,152	2,038	94.7%	53%	46%	118%	100%	100%		
Staff	14,141	2,200	15.6%	16%	11%	12%	19%	48%		
Overall percent	NA	_	39.5%	31%	33%	41%	53%	62%		
Overall number	53886	21290	NA	-	17,888	19,796	24,029	27,429		

Table G-1. Sampling Plan for 2015-16 through 2020-21, Percent Invited

Table G- 2. Sampling Plan for 2015-16 through 2020-21, Response Rates

		2020-21		Actual Response Rate							
Role	Assumed Populati on	Number Invited	Target Response	2020- 21	2019- 20	2018- 19	2017- 18	2016- 17	2015- 16		
Student	37,593	17,052	13%	19%	17%	22%	19%	15%	10%		
Undergraduate	30,810	12,630	12%	18%	17%	20%	18%	14%	9%		
Freshman	6,567	1,650	22%	41%	27%	28%	18%	14%	11%		
Sophomore	5,443	3,590	10%	16%	15%	15%	18%	15%	10%		
Junior	8,388	3,680	10%	17%	15%	22%	21%	16%	10%		
Senior	10,412	3,710	10%	12%	15%	17%	15%	12%	6%		
Graduate	6,783	4,422	16%	22%	19%	27%	21%	18%	14%		
Master's	2,662	2,662	13%	15%	16%	21%	16%	13%	10%		
PhD	4,121	1,760	20%	33%	25%	38%	31%	25%	16%		
Employee	16,293	4,238	17%	29%	22%	25%	33%	33%	12%		
Faculty	2,152	2,038	16%	20%	21%	31%	38%	31%	13%		
Staff	14,141	2,200	17%	37%	22%	22%	28%	35%	11%		
<b>Overall percent</b>	100%	100%	13%	21%	18%	22%	20%	17%	10%		
Overall number	53,886	21,290	-	4,506	3,098	4,014	3,748	4,132	2,834		

### Appendix H: Weighting by Role and Gender

The appropriate weight factor is a ratio of the population share to the sample share for each role group. That is, with *N* total population, *n* in the sample, and *N<sub>i</sub>* in role and gender group *i* in the population (for instance, female freshmen), and *n<sub>i</sub>* of that group *i* in the sample, we apply the weight factor  $W_i = (N_i/N) / (n_i/n)$  to all cases in group *i*. Applying the weight factors alters the apparent distribution of respondents by role and gender, but the overall sample size is unchanged. In instances where we would like to expand the sample to a projection of the full population, we weight each case by an *expansion* factor  $E_{i}$ , equal to  $(N_i / n_i)$ . Applying the expansion factors alters both the distribution of respondents by role, and inflates the sample to the size of the population.

Although the number of valid responses varies from question to question (that is, n and  $n_i$ ), we use the same set of weight factors for most variables, based on the distribution of roles among the n = 2,261 valid responses to question *Q51*, the main question relating to mode choice on each day during the travel week. For variables relying on geocoding of respondents' residential location, we generated a separate set of weight factors, based on the 2,179 cases successfully geocoded (by cross streets and zip code given in questions Q29 and Q30; see "Appendix E: Geocoding and network distances"). Both sets of weights are shown in Table H1.

			Factors by Role, Gender, and Mode <sup>a</sup>				Factors by Role, Gender, Mode, and Geocoding <sup>b</sup>					
Role	Gender	Populatio n (N)	Valid Responses (n)	Weight Factor (Ni/N)/(ni/n )	Expansion Factor (Ni/ni)	Weighted Sample Size	Valid Responses (n)	Weight Factor (Ni/N)/(ni/ n)	Expansion Factor (Ni/ni)	Weighted Sample Size		
Freshman	Woman	4,255	161	1.109	26.429	179	160	1.077	26.594	172		
Flesiillall	Man	2,312	44	2.205	52.545	97	43	2.178	53.767	94		
Conhomoro	Woman	3,386	175	0.812	19.349	142	170	0.807	19.918	137		
Sophomore	Man	2,057	68	1.269	30.250	86	65	1.282	31.646	83		
I	Woman	4,974	205	1.018	24.263	209	198	1.018	25.121	202		
Junior	Man	3,414	82	1.747	41.634	143	77	1.796	44.338	138		
Conier	Woman	6,049	149	1.703	40.597	254	142	1.726	42.599	245		
Senior	Man	4,363	50	3.661	87.260	183	49	3.607	89.041	177		
Mastaria	Woman	1,499	101	0.623	14.842	63	96	0.633	15.615	61		
Master's	Man	1,163	61	0.800	19.066	49	59	0.799	19.712	47		
	Woman	2,188	258	0.356	8.481	92	251	0.353	8.717	89		
PhD	Man	1,933	122	0.665	15.844	81	120	0.653	16.108	78		
Fo cultur	Woman	876	129	0.285	6.791	37	124	0.286	7.065	35		
Faculty	Man	1,276	138	0.388	9.246	54	136	0.380	9.382	52		
Staff	Woman	7,664	332	0.969	23.084	322	316	0.983	24.253	310		
SLATT	Man	6,477	186	1.461	34.823	272	177	1.482	36.593	262		
Overall	-	53,886	2,261	0	23.833	2,261	2,183	0	24.684	2,183		

<sup>a</sup> Based on valid responses to Q2 (campus role), Q17 (gender). <sup>b</sup> Based on valid responses to Q2 (campus role), Q17 (gender), and successful geocoding of residential location (from questions Q29 and Q30).