

Results of the 2021-2022 Campus Travel Survey

July 2022

A Research Report from the National Center
for Sustainable Transportation

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National Center
for Sustainable
Transportation



UC DAVIS
Institute of Transportation Studies

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

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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.

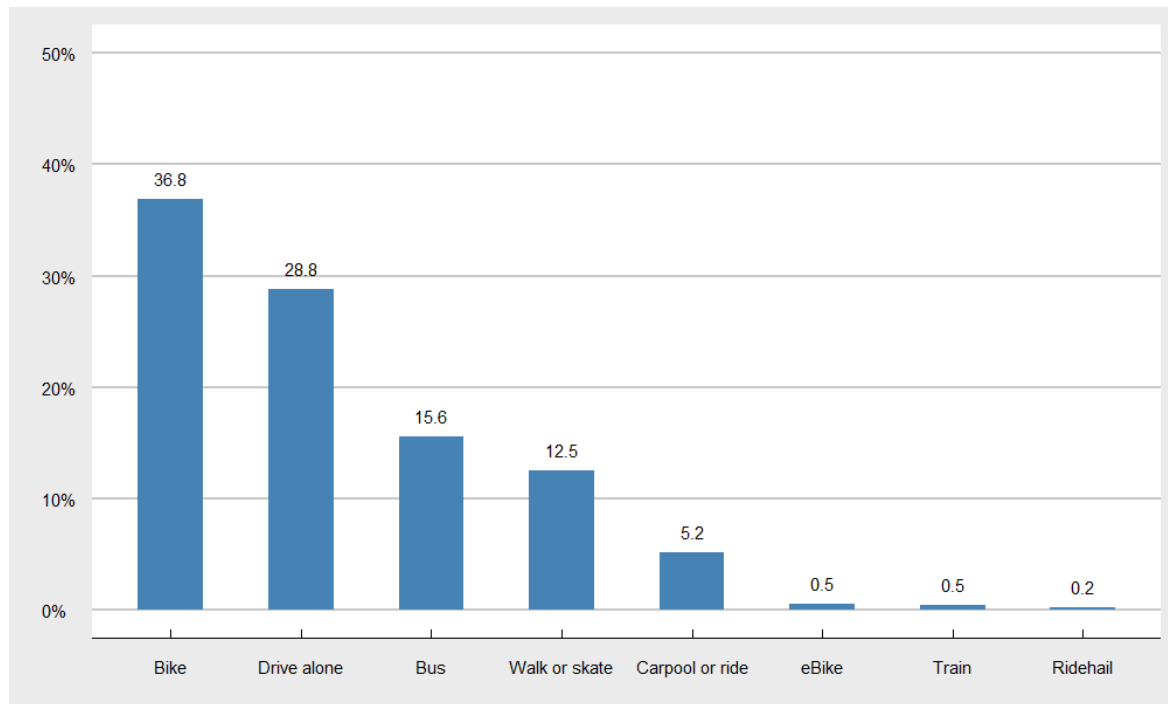
The 2021–22 survey collected data from 4,265 people affiliated with UC Davis about their travel to campus during a single week in October 2021. It used a stratified random sampling method with the intent to gather a representative sample of the campus population. About 21 percent of those invited responded 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 proportion in the campus population.

Main Findings

Overall Mode Share

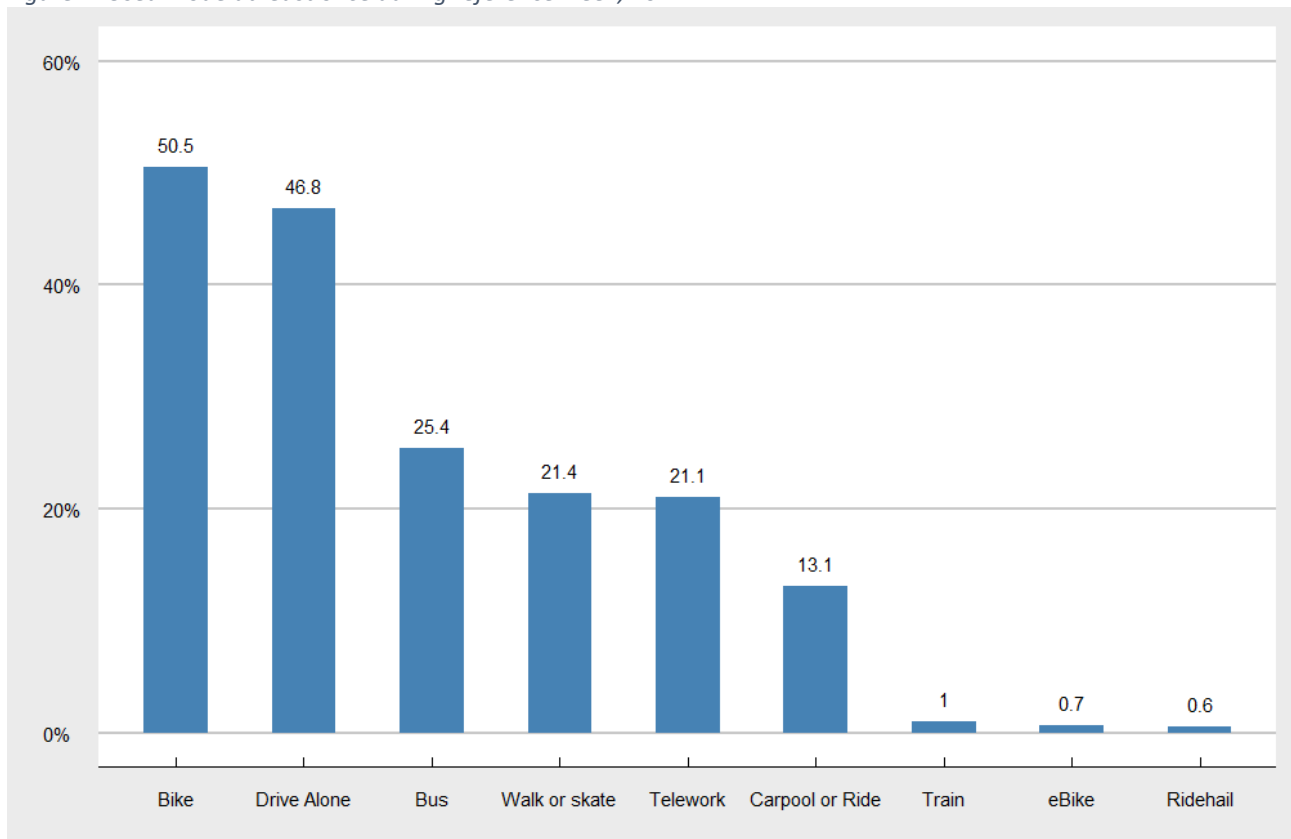
Physical travel to UC Davis campus increased in the year 2021-22 as the campus resumed in-person operations. However, the proportion of people who physically traveled to campus on any given day remained lower than before the pandemic. On an average weekday, about 74 percent of people physically traveled to campus (approximately 36,300 people, including those living on campus). Among these, 37 percent biked to get there, 29 percent drove alone, nearly 16 percent rode the bus, 13 percent walked or skated, 5 percent carpooled or got a ride, 0.5 percent rode the train, 0.5 percent rode an electric-assist bike (eBike) and 0.2 percent used ridehailing services (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.

Figure 1. Overall Mode Share, 2021-22



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 51 percent reported biking as their primary means at least once during the week. Similarly, about 47 percent drove alone, 25 percent rode the bus, 21 percent walked or skated, 13 percent carpoolled or got a ride, 1 percent rode the train, and less than 1 percent rode an eBike or used a ride-hailing service. About 21 percent teleworked at least one day in the reference week. See Figure 2.

Figure 2. Used mode at least once during reference week, 2021-22



Change in Mode Share, 2020-21 to 2021-22

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 2020-21 survey. Table ES-1 shows the change in mode share between the 2020-21 and 2021-22 surveys.

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

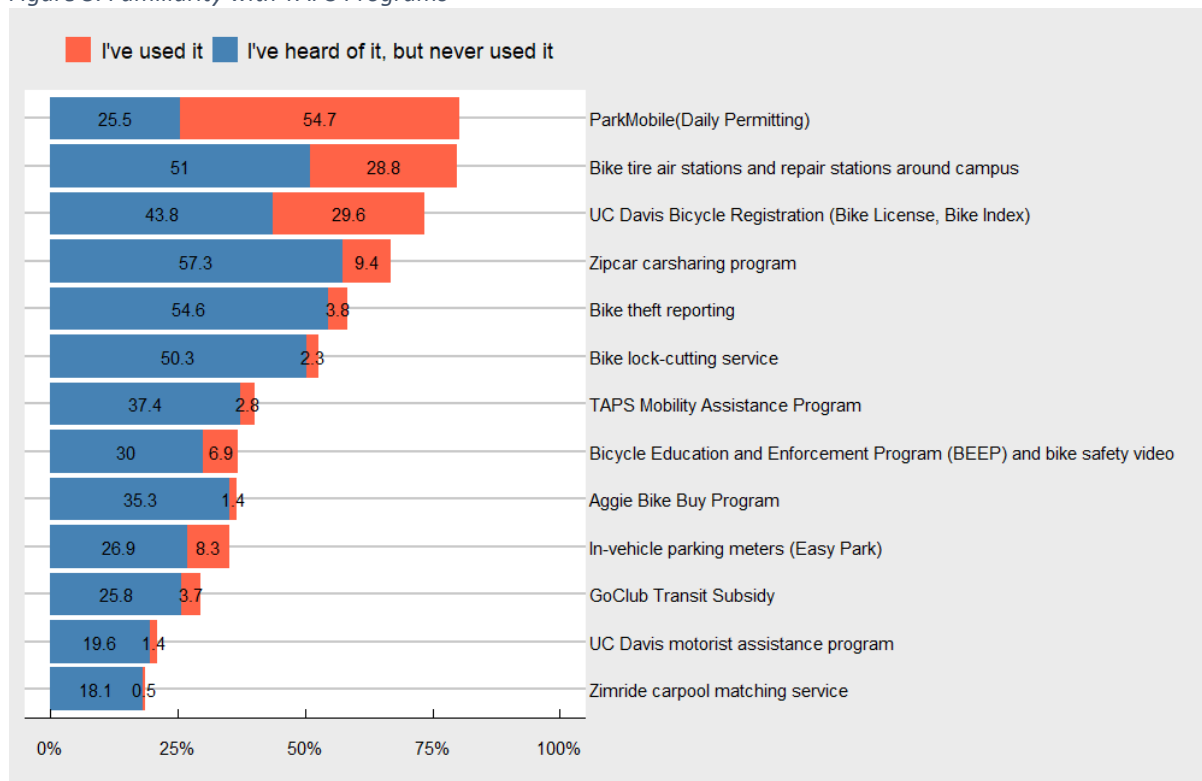
Survey Years	Physically Travelled	Of those who physically traveled to campus						
		Bike	Walk or Skate	Drive Alone	Carpool or Ride	Bus	Train	Ridehail
2020-21, Overall	33.4%	31.5%	10.3%	46.0%	6.4%	5.5%	0.24%	0.13%
2021-22, Overall	73.9%	36.8%	12.5%	28.8%	5.2%	15.6%	0.50%	0.20%
Difference	40.5%	5.3%	2.2%	-17.2%	-1.2%	10.1%	0.26%	0.07%

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

Familiarity with TAPS 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 after the ParkMobile service, with nearly 29 percent of respondents having used them (Figure 3).

Figure 3. Familiarity with TAPS Programs



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 (CO₂e) 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 have 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 survey was based on the previous year's survey. Key questions relating to mode choice and residential location, among others, were retained. An ongoing attempt to refine question wording has meant that some variables are not directly comparable across years. See "Appendix A: Survey instrument, 2021-22 Campus Travel Survey" for a full copy of the survey instrument. See "Appendix B: Changes from the 2020-21 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 2021-22 survey was administered online in October and November 2021, distributed by email to a stratified random sample of 20,169 students, faculty, and staff (out of an estimated total population of 49,159). 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 gift cards to participants of the survey. Entry into this drawing was mentioned in the initial and follow-up recruitment emails, as well as on the first welcome page of the online survey. On the final page of the survey, respondents were asked to indicate whether it would be okay for us 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 5,126 respondents at least started the survey (responding to the question about their role on campus), representing 25 percent of those invited. Of those who began the survey, 83 percent (4,265 respondents) completed the survey through the set of questions that asked respondents about 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.

Table B-2 shows the number of valid responses at three key points in the survey: those who answered the first question about role at the university, those who gave valid responses to questions about primary mode and gender, and those whose residential locations were successfully geocoded in addition to meeting the previous criteria.

Table B- 1. Response Rates for 2021-22 versus 2020-21

Role	Assumed Population	Number Invited	Actual Responses	Target Response Rate	2021-22 Actual Response Rate	2020-21 Actual Response Rate
Student	38,591	17,375	3,426	12.4%	19.7%	19.3%
Undergraduate	31,262	12,642	2,208	11.6%	17.5%	18.4%
Freshman	6,909	1,011	425	36.0%	42.0%	40.8%
Sophomore	5,625	3,273	588	11.0%	18.0%	16.0%
Junior	8,015	3,058	555	12.0%	18.1%	16.7%
Senior	10,713	5,300	640	7.0%	12.1%	12.5%
Graduate	7,329	4,733	1,218	14.7%	25.7%	21.9%
Master's	3,732	3,490	586	10.0%	16.8%	14.5%
PhD	3,597	1,243	632	28.0%	50.8%	33.0%
Employee	10,568	2,794	839	24.4%	30.0%	28.7%
Faculty	1,641	1,641	409	19.0%	24.9%	20.0%
Staff	8,927	1,153	430	32.0%	37.3%	36.7%
Overall	49,159	20,169	4,265	2,840	21.1%	21.2%
Overall Percent	100.0%	41.0%	21.1%	14.1%	21.1%	21.2%

Table B- 2. Number of Valid Responses by Role

Role	Population	Invited	Target	Valid role	Mode and Gender	Geocoded
Student	38,591	17,375	2,159	4,053	3,426	3,369
Undergraduate	31,262	12,642	1,462	2,576	2,208	2,173
Freshman	6,909	1,011	364	485	425	421
Sophomore	5,625	3,273	360	685	588	579
Junior	8,015	3,058	367	650	555	546
Senior	10,713	5,300	371	756	640	627
Graduate	7,329	4,733	697	1,477	1,218	1,196
Master's	3,732	3,490	349	740	586	577
PhD	3,597	1,243	348	737	632	619
Employee	10,568	2,794	681	988	839	809
Faculty	1,641	1,641	312	454	409	394
Staff	8,927	1,153	369	534	430	415
Overall	49,159	20,169	2,840	5,041	4,265	4,178
Overall percent	100.0%	41.0%	14.1%	25.0%	20.7%	100.0%

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 (and 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 group in the population.

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

Table B- 3. Unweighted Gender Distribution of Respondents

Role	Men	Women	Unweighted Sample	Projected Population
Undergraduate	28.3%	71.7%	2,208	31,262
Graduate	34.2%	65.8%	1,218	7,329
Faculty	48.9%	51.1%	409	1,641
Staff	30.5%	69.5%	430	8,927

Table B- 4. Weighted Gender Distribution of Respondents

	Men	Women	Weighted Sample	Projected Population
Undergraduate	39.7%	60.4%	2,711	31,262
Graduate	45.1%	54.9%	636	7,329
Faculty	57.2%	43.0%	142	1,641
Staff	42.4%	57.6%	775	8,927

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 36.8 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 35.3 and 38.3 percent.

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

Role	Sample Size	Population Size	Margin of Error
Student	3,426	38,591	1.60%
Undergraduate	2,208	31,262	2.01%
Freshman	425	6,909	4.61%
Sophomore	588	5,625	3.82%
Junior	555	8,015	4.01%
Senior	640	10,713	3.76%
Graduate	1,218	7,329	2.56%
Master's	586	3,732	3.72%
PhD	632	3,597	3.54%
Employee	839	10,568	3.25%
Faculty	409	1,641	4.20%
Staff	430	8,927	4.61%
Overall	4,265	49,159	1.43%

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, about 80 percent of university affiliates physically traveled to campus on each day Monday through Thursday, with a low of 71 percent traveling to campus on Friday. Freshmen and sophomores traveled to campus most often, while staff traveled the least.

Table 1. Share Physically Travelling to Campus by Weekday

Role	Share physically traveling to campus by weekday						Weighted Sample	Projected Population
	Monday	Tuesday	Wed.	Thursday	Friday	No Days		
Student	83.8%	84.9%	86.4%	84.0%	75.9%	5.4%	3,348	38,591
Undergraduate	85.4%	85.6%	87.6%	84.9%	77.9%	5.1%	2,712	31,262
Freshman	87.3%	86.1%	87.1%	85.7%	85.8%	8.4%	599	6,909
Sophomore	88.1%	86.9%	89.5%	84.9%	83.0%	5.3%	488	5,625
Junior	85.7%	86.3%	88.6%	84.6%	75.5%	3.8%	695	8,015
Senior	82.7%	84.1%	86.2%	84.6%	72.0%	3.8%	929	10,713
Graduate	76.8%	82.1%	81.2%	80.3%	67.5%	6.6%	636	7,329
Master's	80.0%	83.9%	82.9%	82.2%	62.3%	6.1%	324	3,732
PhD	73.4%	80.2%	79.4%	78.3%	73.0%	7.0%	312	3,597
Employee	61.9%	66.3%	63.9%	61.5%	53.2%	10.4%	917	10,568
Faculty	65.3%	67.9%	66.7%	66.6%	54.8%	7.0%	142	1,641
Staff	61.2%	66.0%	63.4%	60.6%	52.9%	11.0%	775	8,927
Overall	79.1%	80.9%	81.5%	79.2%	71.1%	6.5%	4,265	49,159
Weighted Sample	3,373	3,451	3,478	3,377	3,030	275	4,265	NA
Projected Population	38,876	39,781	40,088	38,925	34,929	3,172	NA	49,159

Results are based on responses to questions Q37 and Q38. 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 in Davis traveled to campus more often than those living outside Davis (79 percent versus 60 percent). Still, the overall share of people traveling to campus remained lower than the pre-pandemic level.

Table 2. Physical Travel to Campus by Residential Location

Role	Overall	On Campus	West Village	Off Campus in Davis	Outside Davis	Weighted Sample	Projected Population
Student	78.8%	78.3%	78.3%	81.7%	67.8%	3,280	38,591
Undergraduate	79.5%	78.7%	78.6%	82.3%	70.1%	2,657	31,262
Freshman	78.6%	78.1%	81.9%	84.8%	81.7%	587	6,909
Sophomore	82.2%	77.3%	79.6%	85.5%	78.7%	478	5,625
Junior	81.3%	83.7%	82.5%	83.0%	69.9%	681	8,015
Senior	77.3%	82.1%	71.7%	80.5%	66.0%	910	10,713
Graduate	75.8%	73.9%	69.3%	80.1%	62.1%	623	7,329
Master's	75.1%	75.2%	67.9%	79.7%	60.2%	317	3,732
PhD	76.7%	72.8%	85.0%	80.4%	64.1%	306	3,597
Employee	60.5%	89.8%	0.0%	69.5%	54.8%	898	10,568
Faculty	63.7%	53.3%	0.0%	69.8%	53.6%	139	1,641
Staff	59.9%	100.0%	0.0%	69.4%	54.9%	759	8,927
Overall	74.9%	78.4%	78.3%	79.7%	60.2%	4,178	49,159
Weighted Sample	3,129	555	373	1,629	572	4,178	NA
Projected Population	36,812	6,530	4,391	19,166	6,725	NA	49,159

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

Overall, 6 percent of the sample did not physically travel to campus on any day during the reference week. These respondents were asked to give the reason they were away all week (Table 3). Employees were more likely to be away all week than students, with working from home (telecommuting) and vacation, sickness, or personal leave being the most common reasons given for being away.

Employees (but not students) who were away from campus just some of the days during the week were also asked to give the reason they did not travel to campus for each weekday they were away (Table 4). Nearly 41 percent of employees did not travel to campus on an average weekday (Table 4). The most common reasons for being away from campus are working from home (telecommuting) and vacation, sickness, or personal leave.

Table 3. Share Away from Campus All Week and Reasons Given, by Role

Role	Share Away All Week	Of those away all week						Weighted Sample	Projected Population
		Didn't Say	Study Abroad or Sabbatical	Telecommuting (working from home or remotely)	Temporary Appointment Elsewhere	Vacation, Sickness, or Personal Leave	Work- or School-Related Travel or Field Work		
Student	5.0%	61.0%	3.0%	13.0%	4.0%	13.0%	7.0%	180	2,073
Undergraduate	5.0%	70.0%	3.0%	6.0%	3.0%	11.0%	7.0%	138	1,593
Freshman	8.0%	87.0%	2.0%	2.0%	0.0%	6.0%	2.0%	50	582
Sophomore	5.0%	59.0%	3.0%	3.0%	3.0%	18.0%	15.0%	26	300
Junior	4.0%	69.0%	4.0%	4.0%	10.0%	12.0%	0.0%	27	307
Senior	4.0%	53.0%	4.0%	16.0%	4.0%	11.0%	13.0%	35	403
Graduate	7.0%	31.0%	1.0%	36.0%	5.0%	19.0%	8.0%	42	481
Master's	6.0%	33.0%	0.0%	44.0%	6.0%	12.0%	5.0%	20	228
PhD	7.0%	29.0%	2.0%	29.0%	5.0%	25.0%	10.0%	22	253
Employee	10.0%	21.0%	1.0%	62.0%	0.0%	13.0%	3.0%	95	1,099
Faculty	7.0%	18.0%	6.0%	67.0%	0.0%	3.0%	6.0%	10	116
Staff	11.0%	22.0%	0.0%	61.0%	0.0%	15.0%	3.0%	85	983
Overall	6.0%	47.0%	2.0%	30.0%	3.0%	13.0%	6.0%	275	3,172
Weighted Sample	275	129	5	82	7	36	16	275	NA
Projected Population	3,172	1,492	59	949	79	410	183	NA	3,172

Results are based on responses to question Q39 (main reason for not traveling to campus). Data are weighted by role and gender.

Table 4. Share of employees not traveling to campus on an average weekday, and reason

Role	Share Away from Campus on an Average Weekday	Of those not travelling to campus						Weighted Sample	Projected Population
		Telecommuting (working from home or remotely)	Work- or School-Related Activities Elsewhere	Regularly Scheduled Day Off	Vacation, Sickness, or Personal Leave	Day Off as Part of a Compressed Work Week	Other		
Employee	40.6%	85.5%	1.4%	2.2%	6.0%	1.0%	3.8%	917	10,568
Faculty	37.8%	86.3%	1.8%	5.7%	2.4%	0.3%	3.6%	142	1,641
Staff	41.1%	85.6%	1.5%	2.7%	5.6%	1.0%	3.8%	775	8,927
Weighted Sample	372	318	5	8	22	4	14	4,265	NA
Projected Population	4,286	3,665	62	95	258	45	162	NA	49,159

Results are based on responses to question Q40 (reason for not traveling to campus by day) and on responses to Q39 for those away from campus all week. Data are weighted by role and gender.

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 5 through 11 show the overall mode share among those physically traveling to campus on a given weekday. Table 5 shows mode share among the entire sample. Tables 6 through 11 show mode share by residential location, as outlined below. The results suggest that mode splits vary substantially by neighborhood.

- Table 6 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 7 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 8 shows the mode shares among those living in the West Village apartments. Because the sample sizes in most role groups are very low, 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 9 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. Undergraduate students have high bus

ridership rates (29 percent), whereas graduate students and employees in Davis who do not bike are more likely to commute by car.

- Table 10 shows the mode share for students and employees who live outside Davis (an estimated 11,177 people). Among those traveling from outside Davis, about 85 percent commute by car, 7 percent carpool or get a ride, and 2.7 percent ride the bus.
- Table 11 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 4. Neighborhoods in Davis” and “Appendix A: Survey instrument, 2021-22 Campus Travel Survey”.

Table 5. Sharing Using Each Mode on an Average Weekday, by Role Group (Entire Sample)

Role	Physically Travelled	Of those who physically travelled to campus								Weighted Sample	Projected Population
		Bike	eBike	Walk or Skate	Drive Alone	Carpool or Ride	Bus	Train	Ridehail		
Student	77.8%	40.5%	0.5%	14.6%	20.5%	5.0%	18.4%	0.20%	0.20%	3,348	38,591
Undergraduate	78.6%	41.0%	0.6%	15.8%	16.8%	4.5%	21.1%	0.10%	0.20%	2,712	31,262
Freshman	78.1%	55.4%	1.3%	32.4%	4.4%	1.0%	4.9%	0.10%	0.40%	599	6,909
Sophomore	81.1%	45.5%	0.7%	9.9%	12.1%	4.6%	26.9%	0.00%	0.20%	488	5,625
Junior	80.3%	39.2%	0.3%	9.1%	19.2%	5.9%	26.1%	0.20%	0.10%	695	8,015
Senior	76.3%	30.2%	0.2%	13.3%	25.8%	5.6%	24.6%	0.10%	0.10%	929	10,713
Graduate	74.5%	38.7%	0.2%	9.3%	37.2%	7.2%	6.2%	0.70%	0.30%	636	7,329
Master's	74.2%	39.6%	0.1%	8.9%	36.8%	5.9%	7.7%	0.50%	0.50%	324	3,732
PhD	74.9%	37.7%	0.4%	9.7%	37.7%	8.6%	4.7%	1.00%	0.20%	312	3,597
Employee	59.4%	19.2%	0.5%	2.5%	68.0%	6.1%	2.1%	1.60%	0.00%	917	10,568
Faculty	62.2%	37.3%	1.8%	4.0%	46.7%	5.3%	1.3%	3.50%	0.00%	142	1,641
Staff	58.9%	15.7%	0.2%	2.2%	72.1%	6.3%	2.3%	1.20%	0.00%	775	8,927
Overall	73.9%	36.8%	0.5%	12.5%	28.8%	5.2%	15.6%	0.5%	0.2%	4,265	49,159
Weighted sample	3,150	1,161	16	394	906	163	491	14	6	4,265	NA
Projected population	36,312	13,380	180	4,536	10,442	1,882	5,661	166	64	NA	49,159

Results are based on responses to question Q38 (whether they traveled to campus each day) and Q51 (travel mode each day). We calculate all mode split percentages as follows: first we calculate the percent of five weekdays that an individual used a particular mode and then take the average over all respondents. Data are weighted by role and gender.

Table 6. Share Using Each Mode on an Average Weekday, respondents living within Davis

Role	Physically Travelled	Of those who physically travelled to campus								Weighted Sample	Projected Population
		Bike	eBike	Walk or Skate	Drive Alone	Carpool or Ride	Bus	Train	Ridehail		
Student	80.3%	45.1%	0.5%	15.7%	13.7%	4.5%	20.2%	0.04%	0.21%	2,886	33,961
Undergraduate	80.6%	45.0%	0.6%	16.7%	10.5%	3.9%	23.0%	0.05%	0.20%	2,380	27,999
Freshman	78.5%	58.2%	1.4%	33.2%	1.1%	1.0%	4.6%	0.16%	0.42%	559	6,582
Sophomore	82.4%	48.7%	0.8%	9.4%	8.2%	3.9%	28.6%	0.00%	0.25%	448	5,272
Junior	82.9%	43.6%	0.3%	9.8%	12.0%	4.9%	29.2%	0.04%	0.13%	597	7,021
Senior	79.3%	34.5%	0.2%	14.9%	17.4%	5.2%	27.8%	0.00%	0.08%	775	9,124
Graduate	79.0%	45.7%	0.2%	10.8%	28.7%	7.3%	6.9%	0.00%	0.25%	507	5,962
Master's	78.5%	46.9%	0.1%	10.2%	27.7%	6.1%	8.6%	0.00%	0.39%	257	3,027
PhD	79.5%	44.6%	0.4%	11.5%	29.8%	8.5%	5.1%	0.00%	0.11%	249	2,935
Employee	69.9%	43.1%	1.1%	4.7%	41.5%	7.2%	2.4%	0.04%	0.00%	342	4,021
Faculty	69.6%	54.3%	2.6%	5.0%	31.9%	5.5%	0.6%	0.14%	0.00%	88	1,031
Staff	70.0%	39.2%	0.6%	4.6%	44.8%	7.8%	3.0%	0.00%	0.00%	254	2,990
Overall	79.2%	44.9%	0.6%	14.7%	16.3%	4.8%	18.6%	0.04%	0.19%	3,228	37,982
Weighted Sample	2,557	1,149	15	375	416	122	474	1	5	3,228	NA
Projected Population	30,088	13,518	179	4,418	4,891	1,432	5,580	12	58	NA	37,982

Results are based on responses to question Q38 (whether they traveled to campus each day), Q51 (travel mode each day), and Q27 (residential location). We calculate all mode split percentages as follows: first we calculate the percent of five weekdays that an individual used a particular mode and then take the average over all respondents. Data are weighted by role and gender.

Table 7. Share Using Each Mode on an Average Weekday, respondents living on-campus

Role	Physically Travelled	Of those who physically travelled to campus								Weighted Sample	Projected Population
		Bike	eBike	Walk or Skate	Drive Alone	Carpool or Ride	Bus	Train	Ridehail		
Student	78.3%	56.5%	0.7%	35.6%	1.8%	1.2%	3.9%	0.13%	0.08%	702	8,265
Undergraduate	78.7%	56.8%	0.8%	36.1%	1.3%	0.9%	3.9%	0.14%	0.09%	644	7,574
Freshman	78.1%	59.5%	1.0%	35.1%	0.3%	0.8%	3.0%	0.17%	0.11%	522	6,137
Sophomore	77.3%	57.7%	0.0%	28.4%	3.5%	1.0%	9.4%	0.00%	0.00%	35	415
Junior	83.7%	59.0%	0.0%	31.6%	0.8%	0.8%	7.7%	0.00%	0.00%	32	376
Senior	82.1%	31.2%	0.0%	51.8%	8.7%	1.6%	6.6%	0.00%	0.00%	55	646
Graduate	73.9%	52.5%	0.2%	30.8%	7.7%	4.8%	4.1%	0.00%	0.00%	59	691
Master's	75.2%	55.6%	0.5%	25.6%	5.7%	8.1%	4.4%	0.00%	0.00%	27	313
PhD	72.8%	49.8%	0.0%	35.1%	9.4%	1.9%	3.8%	0.00%	0.00%	32	378
Employee	89.8%	30.6%	0.0%	54.5%	14.8%	0.0%	0.0%	0.00%	0.00%	6	68
Faculty	53.3%	12.5%	0.0%	62.5%	25.0%	0.0%	0.0%	0.00%	0.00%	1	15
Staff	100.0%	33.3%	0.0%	53.3%	13.3%	0.0%	0.0%	0.00%	0.00%	5	53
Overall	78.4%	56.3%	0.7%	35.8%	1.9%	1.2%	3.9%	0.13%	0.08%	708	8,333
Weighted Sample	555	312	4	199	11	7	21	1	0	708	NA
Projected Population	6,530	3,673	48	2,339	125	79	252	8	5	NA	8,333

Results are based on responses to question Q38 (whether they traveled to campus each day), Q51 (travel mode each day), and Q27 (residential location). We calculate all mode split percentages as follows: first we calculate the percent of five weekdays that an individual used a particular mode and then take the average over all respondents. Data are weighted by role and gender.

Table 8. Share Using Each Mode on an Average Weekday, respondents living in West Village

Role	Physically Travelled	Of those who physically travelled to campus								Weighted Sample	Projected Population
		Bike	eBike	Walk or Skate	Drive Alone	Carpool or Ride	Bus	Train	Ridehail		
Student	78.3%	48.1%	0.7%	10.5%	6.8%	2.5%	31.3%	0.06%	0.12%	477	5,607
Undergraduate	78.6%	48.3%	0.7%	10.3%	6.2%	2.3%	32.0%	0.06%	0.13%	460	5,408
Freshman	81.9%	52.5%	0.0%	12.7%	3.2%	0.0%	31.7%	0.00%	0.00%	9	105
Sophomore	79.6%	56.3%	1.7%	7.1%	3.4%	2.8%	28.6%	0.00%	0.00%	187	2,201
Junior	82.5%	47.4%	0.0%	10.6%	5.2%	1.8%	34.6%	0.18%	0.18%	151	1,771
Senior	71.7%	34.4%	0.0%	15.2%	13.1%	2.7%	34.3%	0.00%	0.31%	113	1,330
Graduate	69.3%	41.3%	0.0%	17.3%	23.9%	7.3%	10.2%	0.00%	0.00%	17	199
Master's	67.9%	42.0%	0.0%	17.9%	23.3%	8.2%	8.6%	0.00%	0.00%	15	182
PhD	85.0%	35.3%	0.0%	11.8%	29.4%	0.0%	23.5%	0.00%	0.00%	1	17
Employee	0.0%	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%	0.0%	0.00%	0.00%	0	0
Staff	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%	0.00%	0	0
Overall	78.3%	48.1%	0.7%	10.5%	6.8%	2.5%	31.3%	0.06%	0.12%	477	5,607
Weighted Sample	373	179	3	39	25	9	117	0	0	477	NA
Projected Population	4,391	2,110	30	460	297	110	1,375	3	5	NA	5,607

Results are based on responses to question Q38 (whether they traveled to campus each day), Q51 (travel mode each day), and Q27 (residential location). We calculate all mode split percentages as follows: first we calculate the percent of five weekdays that an individual used a particular mode and then take the average over all respondents. Data are weighted by role and gender.

Table 9. Share Using Each Mode on an Average Weekday, respondents living off-campus within Davis

Role	Physically Travelled	Of those who physically travelled to campus								Weighted Sample	Projected Population
		Bike	eBike	Walk or Skate	Drive Alone	Carpool or Ride	Bus	Train	Ridehail		
Student	81.7%	39.9%	0.4%	9.3%	20.2%	6.3%	23.7%	0.00%	0.29%	1,707	20,089
Undergraduate	82.3%	38.2%	0.5%	9.6%	16.4%	5.9%	29.1%	0.00%	0.28%	1,276	15,018
Freshman	84.8%	38.4%	8.1%	6.7%	13.2%	4.7%	23.2%	0.00%	5.66%	29	340
Sophomore	85.5%	41.6%	0.2%	8.5%	12.6%	5.2%	31.4%	0.00%	0.48%	226	2,655
Junior	83.0%	41.0%	0.5%	7.8%	15.3%	6.3%	28.9%	0.00%	0.13%	414	4,875
Senior	80.5%	34.8%	0.2%	11.5%	18.9%	6.0%	28.6%	0.00%	0.05%	607	7,147
Graduate	80.1%	45.0%	0.2%	8.1%	31.5%	7.6%	7.2%	0.00%	0.29%	431	5,071
Master's	79.7%	46.2%	0.0%	7.9%	30.6%	5.8%	9.1%	0.00%	0.46%	215	2,532
PhD	80.4%	44.0%	0.5%	8.3%	32.5%	9.4%	5.2%	0.00%	0.13%	216	2,539
Employee	69.5%	43.3%	1.2%	3.6%	42.1%	7.4%	2.4%	0.04%	0.00%	336	3,953
Faculty	69.8%	54.7%	2.6%	4.4%	32.0%	5.6%	0.6%	0.14%	0.00%	86	1,016
Staff	69.4%	39.3%	0.6%	3.3%	45.6%	8.0%	3.1%	0.00%	0.00%	250	2,937
Overall	79.7%	40.4%	0.5%	8.4%	23.3%	6.5%	20.6%	0.01%	0.25%	2,043	24,042
Weighted Sample	1,629	657	9	138	380	106	336	0	4	2,043	NA
Projected Population	19,166	7,734	100	1,619	4,469	1,243	3,953	1	47	NA	24,042

Results are based on responses to question Q38 (whether they traveled to campus each day), Q51 (travel mode each day), and Q27 (residential location). We calculate all mode split percentages as follows: first we calculate the percent of five weekdays that an individual used a particular mode and then take the average over all respondents. Data are weighted by role and gender.

Table 10. Share Using Each Mode on an Average Weekday, respondents living outside Davis

Role	Physically Travelled	Of those who physically travelled to campus								Weighted Sample	Projected Population
		Bike	eBike	Walk or Skate	Drive Alone	Carpool or Ride	Bus	Train	Ridehail		
Student	67.8%	1.1%	0.0%	4.1%	80.1%	9.4%	3.5%	1.55%	0.23%	393	4,630
Undergraduate	70.1%	1.4%	0.0%	5.2%	78.7%	10.3%	3.8%	0.59%	0.00%	277	3,263
Freshman	81.7%	0.0%	0.0%	18.4%	69.1%	0.0%	12.5%	0.00%	0.00%	28	327
Sophomore	78.7%	0.0%	0.0%	10.7%	74.1%	14.6%	0.6%	0.00%	0.00%	30	353
Junior	69.9%	3.0%	0.0%	3.0%	76.9%	15.0%	1.1%	1.11%	0.00%	84	994
Senior	66.0%	1.1%	0.0%	1.9%	83.6%	8.6%	4.2%	0.56%	0.00%	135	1,589
Graduate	62.1%	0.3%	0.1%	1.1%	83.9%	6.9%	2.6%	4.14%	0.84%	116	1,367
Master's	60.2%	0.3%	0.3%	2.2%	87.1%	4.6%	3.0%	1.69%	0.84%	60	705
PhD	64.1%	0.4%	0.0%	0.0%	80.6%	9.3%	2.3%	6.60%	0.83%	56	662
Employee	54.8%	1.2%	0.0%	0.8%	88.5%	5.5%	2.0%	2.01%	0.00%	556	6,547
Faculty	53.6%	2.4%	0.3%	2.0%	77.2%	4.7%	3.1%	10.31%	0.00%	52	610
Staff	54.9%	1.1%	0.0%	0.7%	89.6%	5.5%	1.9%	1.18%	0.00%	505	5,937
Overall	60.2%	1.2%	0.0%	2.3%	84.6%	7.3%	2.7%	1.80%	0.11%	950	11,177
Weighted Sample	572	7	0	13	483	42	15	10	1	950	NA
Projected Population	6,725	79	2	157	5,688	489	181	121	7	NA	11,177

Results are based on responses to question Q38 (whether they traveled to campus each day), Q51 (travel mode each day), and Q27 (residential location). We calculate all mode split percentages as follows: first we calculate the percent of five weekdays that an individual used a particular mode and then take the average over all respondents. Data are weighted by role and gender.

Figure 4. Neighborhoods in Davis

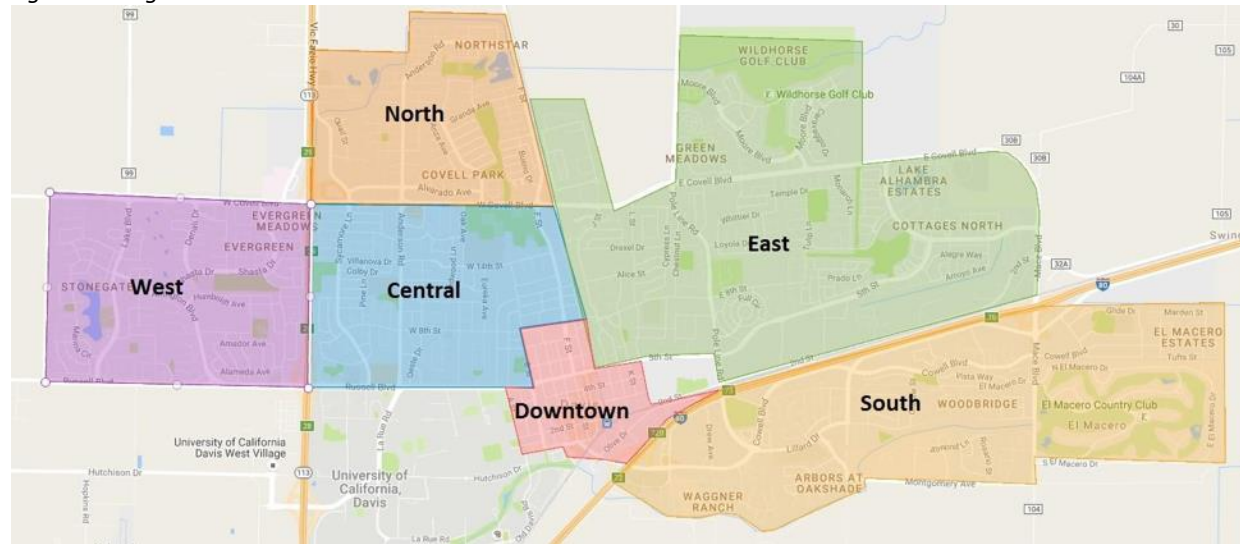


Table 11. Share Using Each Mode on an Average Weekday, by Neighborhood in Davis

Neighborhood	Physically Travelled	Of those who physically travelled to campus								Weighted Sample	Projected Population
		Bike	eBike	Walk or Skate	Drive Alone	Carpool or Ride	Bus	Train	Ridehail		
North	83.2%	35.1%	0.4%	4.4%	20.9%	7.3%	31.9%	0.00%	0.15%	376	4,427
South	76.1%	30.3%	1.4%	4.0%	29.2%	9.9%	25.1%	0.00%	0.10%	289	3,396
East	75.6%	37.4%	0.5%	7.3%	31.4%	6.4%	16.5%	0.00%	0.45%	405	4,765
West	80.0%	36.7%	0.0%	2.8%	28.3%	6.4%	25.3%	0.00%	0.49%	391	4,597
Central	81.9%	53.8%	0.7%	12.9%	15.8%	5.8%	10.8%	0.03%	0.13%	395	4,648
Downtown	82.4%	50.4%	0.1%	27.3%	9.5%	1.8%	10.8%	0.00%	0.00%	187	2,205
Overall	79.7%	40.4%	0.5%	8.4%	23.3%	6.5%	20.6%	0.01%	0.25%	2,043	24,042
Weighted sample	1,629	657	9	138	380	106	336	0	4	2,043	NA
Projected population	19,166	7,734	100	1,619	4,469	1,243	3,953	1	47	NA	24,042

Results are based on responses to question Q38 (whether they traveled to campus each day), Q51 (travel mode each day), and Q27 (residential location). We calculate all mode split percentages as follows: first we calculate the percent of five weekdays that an individual used a particular mode and then take the average over all respondents. Data are weighted by role and gender.

Comparison of 2021-22 Mode Share with 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 nearly identical to those used in previous year's survey.

Table 12 shows mode share estimates for 2020-21 and 2021-22. Data for both years are weighted by role and gender. As the campus reopened this year after a year of remote teaching owing to Covid-19 restrictions, the mode share changed substantially as compared to the 2020-21 survey year. Most notably, driving-alone was far more common during 2020-21 for all role groups than it had previously been but in 2021-22 returned to levels comparable to before the pandemic. Bus use during 2020-21 was limited owing to a reduction in bus service and remote teaching.

Table 12. Comparison of Mode Shares, 2021-22 to 2020-21, Entire Sample

Role	Physically Travelled	Of those who physically traveled to campus								Weighted Sample	Projected Population
		Bike	eBike	Walk or Skate	Drive Alone	Carpool or Ride	Bus	Train	Ridehail		
2021-22											
Student	78.8%	40.6%	0.5%	14.5%	20.5%	5.0%	18.5%	0.20%	0.21%	3,280	38,591
Undergraduate	79.5%	41.0%	0.5%	15.7%	16.8%	4.5%	21.2%	0.10%	0.19%	2,657	31,262
Graduate	75.8%	38.8%	0.2%	9.3%	37.2%	7.2%	6.3%	0.63%	0.34%	623	7,329
Employee	60.5%	19.6%	0.5%	2.5%	67.8%	6.2%	2.2%	1.15%	0.00%	898	10,568
Outside Davis	60.2%	1.2%	0.0%	2.3%	84.6%	7.3%	2.7%	1.80%	0.11%	950	11,177
Within Davis	79.2%	44.9%	0.6%	14.7%	16.3%	4.8%	18.5%	0.04%	0.19%	3,228	37,982
Overall	74.9%	36.9%	0.5%	12.4%	28.7%	5.2%	15.7%	0.36%	0.18%	4,178	49,159
2020-21											
Student	28.6%	42.6%	NA	15.9%	24.7%	8.3%	8.5%	0.00%	0.09%	1,577	37,593
Undergraduate	27.9%	42.5%	NA	18.2%	20.5%	8.7%	10.1%	0.00%	0.06%	1,293	30,810
Graduate	32.2%	43.1%	NA	6.6%	41.0%	6.6%	2.4%	0.00%	0.22%	285	6,783
Employee	44.3%	14.8%	NA	1.9%	77.8%	3.6%	1.1%	0.61%	0.19%	684	16,293
Outside Davis	36.8%	0.9%	NA	0.7%	91.7%	5.3%	0.4%	0.95%	0.00%	533	13,162
Within Davis	32.7%	43.2%	NA	13.8%	28.7%	6.9%	7.2%	0.00%	0.19%	1,650	40,724
Overall	33.4%	31.5%	NA	10.3%	46.0%	6.4%	5.5%	0.24%	0.13%	2,261	53,886

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 13 shows the share of respondents who have a driver's license, can drive alone, or can bicycle to campus for their commute.

Table 13. Driver's License, Car, and Bicycle Access

	Driver's License	Access to a Car	Access to a Bike	Weighted Sample	Projected Population
Student	78.7%	51.6%	71.0%	3,280	38,591
Undergraduate	77.6%	46.7%	71.4%	2,657	31,262
Freshman	62.2%	14.0%	79.3%	587	6,909
Sophomore	71.2%	37.0%	79.9%	478	5,625
Junior	82.3%	56.3%	69.8%	681	8,015
Senior	87.3%	65.8%	62.9%	910	10,713
Graduate	83.3%	72.4%	69.6%	623	7,329
Master's	82.2%	72.6%	65.9%	317	3,732
PhD	84.5%	72.2%	73.4%	306	3,597
Employee	96.9%	94.3%	45.3%	898	10,568
Faculty	97.7%	92.3%	67.6%	139	1,641
Staff	96.7%	94.6%	41.2%	759	8,927
Outside Davis	96.7%	95.4%	22.4%	950	11,177
Within Davis	78.4%	50.6%	78.2%	3,228	37,982
Overall	82.6%	60.8%	65.5%	4,178	49,159
Weighted sample	3,450	2,539	2,736	4,178	NA
Projected population	40,596	29,879	32,189	NA	49,159

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 14 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 80 percent of respondents living within 1 mile from the center of campus consider bicycling an option. Contrary to the past years, an increase is observed in the share of respondents who live 3 to 5 miles from the center of campus (i.e. living in off-campus Davis) and still consider biking to campus as an option. There is a steep drop in the perceived availability, and corresponding mode share, of bicycling for respondents living beyond 5 miles.

Table 14. Potential for Bicycling

Residence	Share Biking on an Average Weekday	Share Who Consider Biking an Option
Within 1 mile	46.4%	79.5%
1 to 2.9 miles	38.4%	78.3%
3 to 4.9 miles	19.2%	78.8%
5 to 9.9 miles	0.4%	24.2%
10 to 19.9 miles	0.5%	28.2%
20 miles or more	0.5%	17.6%
Overall	31.0%	66.5%

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 4,178 responses that were successfully geocoded and had mode choice data in Q51 (daily travel).

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 the 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 15.

Among those who carpooled at any point during the reference week, the average number of passengers was 2.4, including the driver. Most people dropped off on campus were the sole passenger with an average of 1.3 passengers dropped off per ride to campus, excluding the driver.

Table 15. Average Carpool Size

Role	Average Occupancy for those who carpooled or got a ride at least once		Weighted Sample		Projected Population	
	Carpool	Ride	Weighted Carpoolers	Weighted Riders	Projected Carpoolers	Projected Riders
Undergraduate	2.48	1.31	310	200	3,644	2,355
Graduate	2.29	1.14	73	46	857	545
Faculty	2.11	1.10	8	8	92	97
Staff	2.13	1.16	49	51	575	594
Outside Davis	2.05	1.13	77	47	903	553
Within Davis	2.41	1.24	331	219	3,894	2,577
Overall	2.40	1.25	439	305	5,169	3,590

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 16.

Table 16. Projected Vehicles Arriving on an Average Weekday, by Occupancy & Role

Role	Projected number of vehicles on an average weekday				Projected Population
	Drive Alone	Carpool	Ride	Total	
Student	6,239	406	530	7,175	38,591
Undergraduate	4,173	289	404	4,866	31,262
Freshman	242	7	30	279	6,909
Sophomore	563	58	71	692	5,625
Junior	1,233	112	120	1,466	8,015
Senior	2,135	118	183	2,436	10,713
Graduate	2,065	121	127	2,313	7,329
Master's	1,029	40	74	1,144	3,732
PhD	1,036	80	53	1,169	3,597
Employee	4,340	102	183	4,625	10,568
Faculty	482	13	27	522	1,641
Staff	3,858	88	156	4,103	8,927
Outside Davis	5,688	161	159	6,007	11,177
Within Davis	4,766	348	515	5,629	29,649
Overall	10,579	503	713	11,795	49,159

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 making 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 3.06 campus-wide, and 2.16 among non-student employees only (Table 17). This means that for every car coming to campus, there are an estimated 3.06 off-campus people coming to campus or telecommuting. This ratio is higher than it was in 2020-21.

Table 17 and Table 18 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.

Table 17. Average Vehicle Ridership (AVR) 2012-13 through 2021-22, Off-Campus Only

Role	Only Off-Campus Residents									
	2012-13	2013-14	2014-15	2015-16*	2016-17*	2017-18*	2018-19*	2019-20*	2020-21*	2021-22*
Student	6.05	5.59	5.66	5.16	3.99	4.08	3.71	4.12	2.85	3.64
Undergraduate	7.23	6.44	6.33	5.9	4.31	4.46	4.13	4.37	3.16	4.06
Freshman	5.06	2.31	4.24	2.73	2.52	2.09	1.88	2.08	3.41	2.72
Sophomore	17.51	10.93	10.64	11.14	6.97	9.7	7.09	8.00	4.52	6.46
Junior	7.85	6.59	6.64	6.23	4.02	4.06	4.25	4.62	4.40	4.26
Senior	5.62	5.85	5.31	4.75	3.92	3.85	3.44	3.52	2.30	3.38
Graduate	3.55	3.57	3.99	3.44	3.11	3.11	2.75	3.43	2.16	2.75
Master's	3.15	2.76	3.04	3.11	3.07	2.81	2.49	3.30	1.92	2.86
PhD	3.84	4.32	4.78	3.77	3.13	3.43	2.95	3.53	2.27	2.64
Employee	1.7	1.75	1.61	1.83	1.55	1.6	1.63	1.59	1.31	2.16
Faculty	3.06	3.24	2.81	2.77	2.27	2.76	2.80	2.60	1.95	3.25
Staff	1.52	1.54	1.49	1.74	1.48	1.49	1.53	1.49	1.25	2.03
Non-Student and Student Employees	2.51	2.58	2.57	2.61	2.25	2.32	2.16	2.21	1.63	2.64
Outside Davis	1.34	1.3	1.27	1.25	1.25	1.26	1.26	1.31	1.10	1.64
Within Davis	6.24	6.53	7.25	5.85	4.79	4.93	4.29	4.66	2.66	4.55
Overall	3.34	3.3	3.23	3.27	2.7	2.76	2.52	2.66	1.85	3.06

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.

Table 18. Average Vehicle Ridership (AVR) 2012-13 through 2021-22, On- and Off-Campus

Role	All (On- and Off-Campus Residents)									
	2012-13	2013-14	2014-15	2015-16*	2016-17*	2017-18*	2018-19*	2019-20*	2020-21*	2021-22*
Student	7.25	6.74	6.93	6.46	5.08	5.34	4.38	5.05	3.49	4.49
Undergraduate	8.77	7.96	7.92	7.61	5.71	6.09	4.98	5.55	4.01	5.22
Freshman	33.67	15.45	31.58	33.12	27.93	21.35	14.89	21.10	11.12	20.06
Sophomore	18.88	11.86	11.94	11.83	7.37	10.81	7.33	8.83	5.57	6.81
Junior	8.3	7.41	7.2	6.66	4.42	4.87	4.56	5.06	4.34	4.46
Senior	5.96	6.14	5.67	5.04	4.11	4.21	3.51	3.63	2.46	3.53
Graduate	4.03	3.88	4.4	3.77	3.29	3.42	2.96	3.66	2.31	2.95
Master's	3.43	2.92	3.35	3.34	3.2	3.1	2.68	3.46	2.01	3.04
PhD	4.47	4.75	5.28	4.18	3.36	3.77	3.17	3.81	2.44	2.87
Employee	1.7	1.75	1.61	1.83	1.55	1.61	1.62	1.59	1.32	2.17
Faculty	3.06	3.24	2.81	2.78	2.28	2.76	2.79	2.63	2.02	3.26
Staff	1.52	1.55	1.49	1.74	1.48	1.51	1.53	1.50	1.26	2.04
Non-Student and Student Employees	2.64	2.69	2.7	2.72	2.35	2.49	2.22	2.29	1.68	2.77
Outside Davis	1.34	1.3	1.27	1.25	1.25	1.26	1.26	1.31	1.1	1.64
Within Davis	7.36	7.74	8.75	7.12	6.01	4.93	4.29	4.66	3.14	4.55
Overall	3.82	3.8	3.77	3.86	3.22	3.39	2.82	3.08	2.1	3.60

*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 19.

Table 19. Type of Vehicle Used During Reference Week

Role	All-Electric	Biofuel	Compressed Natural Gas (CNG)	Conventional Hybrid	Gas or Diesel	Hydrogen Fuel Cell	Plug-in Hybrid Electric	Total
Student	33	1	2	152	1,180	0	33	1,400
Undergraduate	25	0	1	114	882	0	21	1,042
Freshman	7	0	0	14	69	0	2	92
Sophomore	5	0	0	16	145	0	3	169
Junior	5	0	0	40	276	0	3	324
Senior	8	0	1	44	392	0	13	457
Graduate	8	1	1	38	298	0	12	357
Master's	6	1	1	18	148	0	5	178
PhD	2	0	0	20	150	0	7	180
Employee	26	1	3	71	553	0	22	676
Faculty	8	0	0	14	62	0	4	88
Staff	18	1	3	56	492	0	18	588
Overall	59	2	4	222	1,733	0	55	2,076
Weighted sample	59	2	4	222	1,733	0	55	2,076
Projected population	682	23	50	2,562	19,973	0	637	23,927

Results are based on responses to Q55 (type of vehicle used last week). 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 and Table 21 show the share of bus and train users who used each service at least once during the reference week.

Of the 799 respondents who indicated riding the bus in the past week, most reported using Unitrans at least once, followed distantly by use of the YoloBus and Causeway Connection (UCD/UCDMC shuttle).

Of the 32 respondents who indicated riding the train to campus in the past week, almost all reported using Amtrak at least once.

Table 20. Share Using Specific Bus Services at Least Once during the Reference Week

Role	Of those riding the bus to campus at least once					Weighted Sample	Projected Population
	Unitrans	YoloBus	Causeway Connection (UCD/UCDMC Shuttle)	Sacramento Regional Transit	UC Berkeley /Davis Shuttle		
Undergraduate	89.4%	8.8%	1.3%	0.1%	0.3%	718	8,271
Graduate	84.9%	10.2%	3.7%	1.2%	0.0%	55	639
Faculty	25.9%	0.0%	61.1%	0.0%	13.0%	3	31
Staff	57.2%	0.0%	42.8%	0.0%	0.0%	23	264
Overall	88.1%	8.7%	2.7%	0.2%	0.4%	799	9,206

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

Table 21. Share Using Specific Train Services at Least Once during the Reference Week

Role	Of those riding the train to campus at least once			Weighted Sample	Projected Population
	Amtrak	BART	Sacramento Regional Transit		
Undergraduate	100.0%	0.0%	0.0%	7	80
Graduate	100.0%	0.0%	0.0%	7	85
Faculty	90.7%	4.7%	4.7%	8	96
Staff	100.0%	0.0%	0.0%	9	109
Overall	97.7%	1.1%	1.1%	32	370

Results are based on responses to Q62 (train 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 17 percent live on campus (an estimated 8,333 people), 11.4 percent live in West Village (5,607 people), 48.9 percent live off-campus in Davis (24,042 people), and nearly 23 percent live outside of Davis (11,177 people) (Table 22). 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).

Table 22. Residential Location by Role Group

	On Campus	West Village	Off-Campus in Davis	Outside Davis	Weighted Sample	Projected Population
Student	21.4%	14.5%	52.1%	12.0%	3,280	38,591
Undergraduate	24.2%	17.3%	48.0%	10.4%	2,657	31,262
Freshman	88.8%	1.5%	4.9%	4.7%	587	6,909
Sophomore	7.4%	39.1%	47.2%	6.3%	478	5,625
Junior	4.7%	22.1%	60.8%	12.4%	681	8,015
Senior	6.0%	12.4%	66.7%	14.8%	910	10,713
Graduate	9.4%	2.7%	69.2%	18.7%	623	7,329
Master's	8.4%	4.9%	67.8%	18.9%	317	3,732
PhD	10.5%	0.5%	70.6%	18.4%	306	3,597
Employee	0.6%	0.0%	37.4%	62.0%	898	10,568
Faculty	0.9%	0.0%	61.9%	37.2%	139	1,641
Staff	0.6%	0.0%	32.9%	66.5%	759	8,927
Overall	17.0%	11.4%	48.9%	22.7%	4,178	49,159
Weighted Sample	708	477	2,043	950	4,178	NA
Projected Population	8,333	5,607	24,042	11,177	NA	49,159

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 in ArcGIS, 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 shortest-time route) to get to campus (in particular, to the Silo) on a daily basis. Table 23 summarizes distances traveled by role group, showing that employees tend to live farther from campus than students. The median distance traveled among students is 1.58 miles, versus 2.94 miles among faculty and 12 miles among staff (Table 23).

Table 23. Average Distance from Residence to Campus, by Role Group

	<i>Of those geocoded, distance from campus (miles)</i>					Weighted Sample	Projected Population
	Geocoded	Mean	Median	Minimum	Maximum		
Student	98.3%	5.01	1.58	0.48	360.95	3,280	38,591
Undergraduate	98.4%	4.39	1.33	0.48	243.74	2,657	31,262
Freshman	99.1%	1.95	0.77	0.77	72.65	587	6,909
Sophomore	98.5%	2.91	1.33	0.56	61.47	478	5,625
Junior	98.4%	5.63	1.70	0.71	243.74	681	8,015
Senior	98.0%	5.80	1.88	0.48	102.70	910	10,713
Graduate	98.2%	7.66	2.03	0.49	360.95	623	7,329
Master's	98.5%	8.47	1.96	0.49	360.95	317	3,732
PhD	97.9%	6.82	2.12	0.59	108.64	306	3,597
Employee	96.4%	15.11	9.01	0.64	425.56	898	10,568
Faculty	96.3%	12.92	2.94	0.71	82.76	139	1,641
Staff	96.5%	15.52	12.05	0.64	425.56	759	8,927
Outside Davis	95.5%	26.06	18.54	1.87	425.56	950	11,177
Within Davis	98.3%	1.86	1.77	0.48	49.33	2,520	29,649
Overall	98.0%	7.18	1.87	0.48	425.56	4,178	49,159
Weighted Sample	4,093	NA	NA	NA	NA	NA	NA

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 4,178 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 24.

Table 24. Destination on Campus, among Employees and Graduate Students

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	85.2%	7.9%	3.8%	3.2%	636	7,329
Master's	85.6%	6.5%	4.8%	3.0%	324	3,732
PhD	84.7%	9.2%	2.8%	3.4%	312	3,597
Employee	79.6%	5.6%	4.0%	10.9%	917	10,568
Faculty	95.4%	2.5%	0.7%	1.5%	142	1,641
Staff	76.7%	6.2%	4.6%	12.6%	775	8,927
Overall	81.8%	6.5%	3.9%	7.8%	1,553	17,897
Weighted Sample	1,253	100	60	119	1,553	NA
Projected Population	14,447	1,150	690	1,372	NA	17,897

Results are based on responses to Q9 (office, lab, department location). Data are weighted by role and gender.

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 2021-22 academic year; because of the COVID-19 pandemic the campus closed for daily operations and operated remotely at the beginning of the winter quarter. 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.

Vehicle-miles traveled (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 $(10 \text{ miles} \times 2) / 3 = 6.67 \text{ miles}$. 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 88% of all bus riders use Unitrans. According to Unitrans' figures from 2019, Unitrans had an average of about 8.77 passengers per mile.¹ Thus, for someone who lives 10 miles from campus and traveled by bus all five weekdays, average bus PMT per day is $(10 \text{ miles} \times 2) / 8.77 \approx 2.28 \text{ person-miles}$.

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 2018-19.² 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 $(100 \text{ miles} \times 2) / 102 = 1.96 \text{ person-miles}$.

Our estimates for person-miles traveled, by mode and role, are shown in Table 25 and Table 26.

¹ Estimates received from Unitrans' Office for the year 2019.

² Capitol Corridor Joint Powers Authority. Capitol Corridor Intercity Passenger Rail Service Business Plan Update FY 2020-21 – FY 2021-22, Appendix C.

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

Mode	Daily		Annually		Share of Total PMT	Share of Population	Projected Population
	Total PMT	PMT per Person	Total PMT	PMT per Person			
No travel	0	0.0	0	0.0	0.0%	25.1%	12,347
No vehicle (bike, walk, or skate)	0	0.0	0	0.0	0.0%	37.4%	18,353
Personal vehicles	3,10,017	24.8	6,22,38,475	4,979.0	99.0%	25.5%	12,500
Drive alone	2,90,458	27.5	5,84,34,064	5,523.8	92.7%	21.5%	10,579
Carpool or ride	19,559	10.2	38,04,411	1,979.7	6.2%	3.9%	1,922
Bus	3,113	0.5	5,90,020	102.4	1.0%	11.7%	5,761
Train	122	0.9	22,975	173.2	0.0%	0.3%	133
Total	3,13,252	6.4	6,28,51,471	1,280.2	100.0%	100.0%	49,094

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 4,178 cases that were successfully geocoded and had mode choice data in Q51 (daily travel).

Table 26. Person-Miles-Traveled (PMT), Daily and Annually, by Role Group

Role	Daily		Annually		Share of total PMT	Share of Population	Projected Population
	Total PMT	PMT per person	Total PMT	PMT per person			
Student	161,696	4.2	3,01,45,516	781	51.5%	78.5%	38,591
Undergraduate	118,168	3.8	2,16,37,669	692	37.6%	63.6%	31,262
Freshman	8,105	1.2	14,64,696	212	2.6%	14.1%	6,909
Sophomore	13,287	2.4	24,34,031	433	4.2%	11.4%	5,625
Junior	42,173	5.3	76,95,998	960	13.4%	16.3%	8,015
Senior	54,603	5.1	1,00,42,943	937	17.4%	21.8%	10,713
Graduate	43,527	5.9	85,07,847	1,161	13.9%	14.9%	7,329
Master's	24,038	6.4	45,43,587	1,217	7.7%	7.6%	3,732
PhD	19,490	5.4	39,64,260	1,102	6.2%	7.3%	3,597
Employee	152,216	14.4	3,28,29,186	3,106	48.5%	21.5%	10,568
Faculty	13,941	8.5	27,61,819	1,683	4.4%	3.3%	1,641
Staff	138,275	15.5	3,00,67,367	3,368	44.0%	18.2%	8,927
Outside Davis	286,745	25.7	5,74,84,362	5,143	91.3%	22.7%	11,177
Within Davis	27,167	0.7	54,90,340	145	8.7%	77.3%	37,982
On Campus	318	0.0	63,370	8	0.1%	17.0%	8,333
West Village	1,391	0.2	2,63,629	47	0.4%	11.4%	5,607
Off Campus	25,459	1.1	51,63,341	215	8.1%	48.9%	24,042
Overall	313,912	6.4	6,29,74,702	1,281	100.0%	100.0%	49,159

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 part of the winter quarter. Data are weighted by role and gender for the 4,178 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 (CO₂e) 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 CO₂e 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 88% 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 27 through Table 30.

Table 27. Daily Pounds of CO₂e Emitted, by Mode and Role

Role	Pounds-equivalent of CO ₂ e generated on an average weekday							Average lbs per Person	Share of Total CO ₂ e	Share of Population	Projected Population
	Drive Alone	Carpool	Ride	Bus	Train	Ridehail	Total				
Student	1,34,394	6,045	6,910	13,855	2,439	614	1,64,257	4.26	53.0%	78.5%	38,591
Undergraduate	96,867	4,691	5,974	12,657	831	143	1,21,162	3.88	39.1%	63.6%	31,262
Freshman	7,252	17	61	1,038	5	49	8,422	1.22	2.7%	14.1%	6,909
Sophomore	10,574	975	334	2,325	0	47	14,254	2.53	4.6%	11.4%	5,625
Junior	32,761	2,209	3,582	3,478	576	30	42,636	5.32	13.8%	16.3%	8,015
Senior	46,280	1,490	1,997	5,816	250	17	55,850	5.21	18.0%	21.8%	10,713
Graduate	37,528	1,353	936	1,198	1,608	472	43,094	5.88	13.9%	14.9%	7,329
Master's	20,870	563	435	769	357	374	23,368	6.26	7.5%	7.6%	3,732
PhD	16,658	790	501	428	1,251	97	19,726	5.48	6.4%	7.3%	3,597
Employee	1,36,143	2,853	2,410	1,985	2,052	0	1,45,443	13.76	47.0%	21.5%	10,568
Faculty	12,392	172	337	315	1,431	0	14,647	8.93	4.7%	3.3%	1,641
Staff	1,23,750	2,680	2,074	1,670	621	0	1,30,795	14.65	42.2%	18.2%	8,927
Outside Davis	2,50,855	7,367	7,568	4,829	4,483	441	2,75,542	24.65	89.0%	22.7%	11,177
Within Davis	19,682	1,530	1,753	11,011	8	174	34,157	0.90	11.0%	77.3%	37,982
On Campus	179	24	44	211	5	8	470	0.06	0.2%	17.0%	8,333
West Village	736	92	65	1,910	2	14	2,819	0.50	0.9%	11.4%	5,607
Off Campus	18,767	1,415	1,644	8,890	1	152	30,868	1.28	10.0%	48.9%	24,042
Overall	2,70,537	8,897	9,320	15,839	4,491	614	3,09,699	6.30	100.0%	100.0%	49,159

Data are weighted by role and gender for the 4,178 responses that were successfully geocoded.

Table 28. Annual Tons of CO₂e Emitted, by Mode and Role

Role	Annual Tons of CO ₂ e Emissions							Average Tons per Person	Share of Total CO ₂ e	Share of Population	Projected Population
	Drive Alone	Carpool	Ride	Bus	Train	Ridehail	Total				
Student	15,240	685	784	1,571	277	70	18,626	0.48	53.0%	78.5%	38,591
Undergraduate	10,985	532	677	1,435	94	16	13,740	0.44	39.1%	63.6%	31,262
Freshman	822	2	7	118	1	6	955	0.14	2.7%	14.1%	6,909
Sophomore	1,199	111	38	264	0	5	1,616	0.29	4.6%	11.4%	5,625
Junior	3,715	250	406	394	65	3	4,835	0.60	13.8%	16.3%	8,015
Senior	5,248	169	226	660	28	2	6,333	0.59	18.0%	21.8%	10,713
Graduate	4,256	153	106	136	182	53	4,887	0.67	13.9%	14.9%	7,329
Master's	2,367	64	49	87	40	42	2,650	0.71	7.5%	7.6%	3,732
PhD	1,889	90	57	49	142	11	2,237	0.62	6.4%	7.3%	3,597
Employee	15,438	324	273	225	233	0	16,493	1.56	47.0%	21.5%	10,568
Faculty	1,405	20	38	36	162	0	1,661	1.01	4.7%	3.3%	1,641
Staff	14,033	304	235	189	70	0	14,832	1.66	42.2%	18.2%	8,927
Outside Davis	28,446	835	858	548	508	50	31,246	2.80	89.0%	22.7%	11,177
Within Davis	2,232	174	199	1,249	1	20	3,873	0.10	11.0%	77.3%	37,982
On Campus	20	3	5	24	1	1	53	0.01	0.2%	17.0%	8,333
West Village	83	10	7	217	0	2	320	0.06	0.9%	11.4%	5,607
Off Campus	2,128	160	186	1,008	0	17	3,500	0.15	10.0%	48.9%	24,042
Overall	30,678	1,009	1,057	1,796	509	70	35,119	0.71	100.0%	100.0%	49,159

Data are weighted by role and gender for the 4,178 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 part of the winter quarter.

Table 29. Daily Pounds of CO₂e Emitted, by Mode and Role (not including Unitrans)

Role	Pound-equivalent of CO ₂ e emissions generated on an average weekday							Average lbs per person	Share of total CO ₂ e	Share of Population	Projected Population
	Drive Alone	Carpool	Ride	Bus	Train	Ridehail	Total				
Student	1,34,394	6,045	6,910	4,336	2,439	614	1,54,738	4.01	51.6%	78.5%	38,591
Undergraduate	96,867	4,691	5,974	3,771	831	143	1,12,277	3.59	37.5%	63.6%	31,262
Freshman	7,252	17	61	749	5	49	8,133	1.18	2.7%	14.1%	6,909
Sophomore	10,574	975	334	485	0	47	12,415	2.21	4.1%	11.4%	5,625
Junior	32,761	2,209	3,582	436	576	30	39,594	4.94	13.2%	16.3%	8,015
Senior	46,280	1,490	1,997	2,101	250	17	52,134	4.87	17.4%	21.8%	10,713
Graduate	37,528	1,353	936	564	1,608	472	42,461	5.79	14.2%	14.9%	7,329
Master's	20,870	563	435	341	357	374	22,940	6.15	7.7%	7.6%	3,732
PhD	16,658	790	501	223	1,251	97	19,520	5.43	6.5%	7.3%	3,597
Employee	1,36,143	2,853	2,410	1,530	2,052	0	1,44,988	13.72	48.4%	21.5%	10,568
Faculty	12,392	172	337	306	1,431	0	14,639	8.92	4.9%	3.3%	1,641
Staff	1,23,750	2,680	2,074	1,223	621	0	1,30,349	14.60	43.5%	18.2%	8,927
Outside Davis	2,50,855	7,367	7,568	4,459	4,483	441	2,75,173	24.62	91.8%	22.7%	11,177
Within Davis	19,682	1,530	1,753	1,406	8	174	24,552	0.65	8.2%	77.3%	37,982
On Campus	179	24	44	32	5	8	291	0.03	0.1%	17.0%	8,333
West Village	736	92	65	12	2	14	921	0.16	0.3%	11.4%	5,607
Off Campus	18,767	1,415	1,644	1,362	1	152	23,340	0.97	7.8%	48.9%	24,042
Overall	2,70,537	8,897	9,320	5,865	4,491	614	2,99,725	6.10	100.0%	100.0%	49,159

Data are weighted by role and gender for the 4,178 responses that were successfully geocoded.

Table 30. Annual Tons of CO₂e Emitted, by Mode and Role (not Including Unitrans)

Role	Annual Tons of CO ₂ e Emissions							Average Tons per Person	Share of Total CO ₂ e	Share of Population	Projected Population
	Drive Alone	Carpool	Ride	Bus	Train	Ridehail	Total				
Student	15,240	685	784	492	277	70	17,547	0.45	51.6%	78.5%	38,591
Undergraduate	10,985	532	677	428	94	16	12,732	0.41	37.5%	63.6%	31,262
Freshman	822	2	7	85	1	6	922	0.13	2.7%	14.1%	6,909
Sophomore	1,199	111	38	55	0	5	1,408	0.25	4.1%	11.4%	5,625
Junior	3,715	250	406	49	65	3	4,490	0.56	13.2%	16.3%	8,015
Senior	5,248	169	226	238	28	2	5,912	0.55	17.4%	21.8%	10,713
Graduate	4,256	153	106	64	182	53	4,815	0.66	14.2%	14.9%	7,329
Master's	2,367	64	49	39	40	42	2,601	0.70	7.7%	7.6%	3,732
PhD	1,889	90	57	25	142	11	2,214	0.62	6.5%	7.3%	3,597
Employee	15,438	324	273	173	233	0	16,441	1.56	48.4%	21.5%	10,568
Faculty	1,405	20	38	35	162	0	1,660	1.01	4.9%	3.3%	1,641
Staff	14,033	304	235	139	70	0	14,781	1.66	43.5%	18.2%	8,927
Outside Davis	28,446	835	858	506	508	50	31,204	2.79	91.8%	22.7%	11,177
Within Davis	2,232	174	199	159	1	20	2,784	0.07	8.2%	77.3%	37,982
On Campus	20	3	5	4	1	1	33	0.00	0.1%	17.0%	8,333
West Village	83	10	7	1	0	2	104	0.02	0.3%	11.4%	5,607
Off Campus	2,128	160	186	154	0	17	2,647	0.11	7.8%	48.9%	24,042
Overall	30,678	1,009	1,057	665	509	70	33,988	0.69	100.0%	100.0%	49,159

Data are weighted by role and gender for the 4,178 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 part of the winter quarter.

Awareness of TAPS Programs

We presented respondents with a list of campus transportation services and asked them to indicate their familiarity with them. Table 31 summarizes the responses for each service, and Table 32 compares responses for the past six years for those services that appeared on each of the surveys.

Table 31. Awareness of Transportation Programs & Services

Program	I've used it	I've heard of it, but never used it	I've never heard of it
Aggie Bike Buy Program	1.4%	35.3%	63.4%
GoClub Transit Subsidy	3.7%	25.8%	70.5%
Bike tire air stations and repair stations around campus	28.8%	51.0%	20.2%
Bicycle Education and Enforcement Program (BEEP) and bike safety video	6.9%	30.0%	63.1%
Zipcar carsharing program	9.4%	57.3%	33.3%
Zimride carpool matching service	0.5%	18.1%	81.4%
In-vehicle parking meters (Easy Park)	8.3%	26.9%	64.8%
UC Davis motorist assistance program	1.4%	19.6%	79.0%
Bike lock-cutting service	2.3%	50.3%	47.4%
Bike theft reporting	3.8%	54.6%	41.6%
ParkMobile(Daily Permitting)	54.7%	25.5%	19.8%
TAPS Mobility Assistance Program	2.8%	37.4%	59.8%
UC Davis Bicycle Registration (Bike License, Bike Index)	29.6%	43.8%	26.6%

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

Table 32. Awareness of Transportation Programs & Services, 2016 through 2021-22

Program	Change 2020-21 to 2021-22	Percent who have heard of it or used it					
		2021-22	2020-21	2019-20	2018-19	2017-18	2016-17
Aggie Bike Buy Program	-7%	37%	44%	40%	39%	43%	44%
GoClub Transit Subsidy	-8%	29%	37%	27%	27%	NA	NA
Bike tire air stations and repair stations around campus	-5%	80%	85%	86%	83%	87%	88%
Bicycle Education and Enforcement Program (BEEP) and bike safety video	4%	37%	33%	29%	31%	32%	35%
Zipcar carsharing program	-10%	67%	76%	76%	73%	74%	77%
Zimride carpool matching service	NA	19%	NA	27%	25%	28%	27%
In-vehicle parking meters (Easy Park)	NA	35%	NA	40%	40%	47%	45%
UC Davis motorist assistance program	-9%	21%	30%	26%	25%	32%	32%
Bike lock-cutting service	-0.3%	53%	53%	67%	65%	65%	69%
Bike theft reporting	-0.8%	58%	59%	58%	NA	NA	NA
ParkMobile(Daily Permitting)	NA	80%	NA	NA	NA	NA	NA
TAPS Mobility Assistance Program	3%	40%	38%	26%	25%	32%	32%
UC Davis Bicycle Registration (Bike License, Bike Index)	16%	73%	57%	71%	71%	74%	76%

Results are based on responses to Q66 (familiarity with TAPS 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, 2021-22 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.

2021-22 Campus Travel Survey

Start of Block: Welcome Page

Q1 Welcome to the 2021-22 Campus Travel Survey!

This annual survey is intended for everyone who regularly travels to UC Davis for school or work. 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 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 housing and experience with housing affordability
- Your experience with campus transportation programs and infrastructure
- Your well-being in relation to your commute
- 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. 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!

Aakansha Jain, PhD Student, Institute of Transportation Studies (akjain@ucdavis.edu)

Ryan 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)
- ☐ Faculty (3)
- ☐ Staff (4)
- ☐ Visiting scholar (5)
- ☐ 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

Q3 What is your current faculty status?

- ☐ Ladder rank (senate) (1)
- ☐ Non-ladder rank (federation) (2)
- ☐ Unsure (3)

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) _____

Display This Question:

If What year are you? = Sophomore
Or What year are you? = Junior
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?

- ☐ Yes (1)
- ☐ No (2)

Display This Question:

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

Q6 What type of graduate program are you in?

- ☐ Master's (1)
- ☐ PhD (2)
- ☐ Law (3)
- ☐ MBA (4)
- ☐ Veterinary (5)
- ☐ 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)
 - ☐ Sophomore (2)
 - ☐ Junior (3)
 - ☐ Senior (4)
 - ☐ Master's student (5)
 - ☐ PhD student (6)
 - ☐ Post doc (7)
 - ☐ Faculty (8)
 - ☐ Other: (9) _____
-

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*

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

- ☐ Yes (1)
- ☐ No (2)

Display This Question:

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

Q9 Where is your office, lab, or department?

- ☐ Main Campus area (this is most people) (1)
- ☐ On the Davis campus, in the West Campus area (west of SR 113) (2)
- ☐ On the Davis campus, in the South Campus area (south of I-80) (3)
- ☐ 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? = 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? = 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 Question:

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

End of Block: Section 1 - Role

Start of Block: Section 2a - General Background Information

Q13 Next, we have a few questions about you.

Q14 Where were you born?

- ☐ In California (1)
 - ☐ Outside of California, but in the United States (2)
 - ☐ Outside the United States, in: (3) _____
-

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)
- ☐ No (4)

Page Break

Q16 Do you have any physical or other personal conditions that prevent or limit you from...

	Yes (1)	No (2)
Walking (1)	<input type="radio"/>	<input type="radio"/>
Bicycling (2)	<input type="radio"/>	<input type="radio"/>
Driving (3)	<input type="radio"/>	<input type="radio"/>
Using public transit (4)	<input type="radio"/>	<input type="radio"/>

Page Break

Q17 With which gender do you most identify?

- ☐ Woman (2)
- ☐ Man (7)
- ☐ Non-binary (6)
- ☐ Please specify: (3) _____
- ☐ Prefer not to say (8)

Page Break

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)
- ☐ Electric-assist bike (e-bike) (23)
- ☐ Bike (3)
- ☐ Skate, skateboard, or scooter (2)
- ☐ 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... = Skate, skateboard, or scooter

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... = 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

Q19 You mentioned that you have these modes available...

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)

Q20 What kind of bike is available to you? Select all that apply.

☐ Bike that I own (1)

☐ Bike that I borrow or rent (e.g. Joe Bike) (4)

☐ Bike share (e.g. Lime) (3)

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)
- ☐ Electric skateboard (3)
- ☐ E-scooter (stand up electric scooter) (5)
- ☐ Kick scooter (non-electric) (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)
- ☐ UC Berkeley/Davis Shuttle (5)
- ☐ Causeway Connection (UCD/UCDMC Intercampus Shuttle) (7)
- ☐ Other: (6) _____

Display This Question:

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

Q24 Which train 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 available... = Bus and/or shuttle

Or We are interested in your available means of transportation. Select all options that are available... = 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)
- ☐ Yes - Other: (5) _____
- ☐ No (3)

End of Block: Section 2a - General Background Information

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

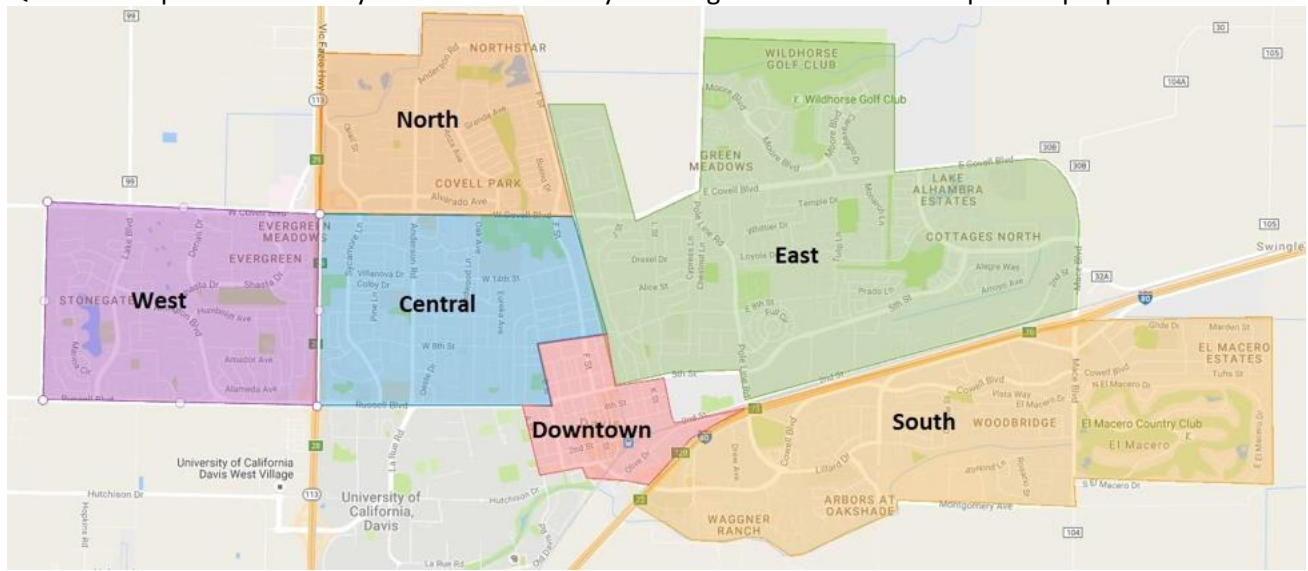
Q27 Where do you live now?

- ☐ On the UC Davis main campus (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 in the West Village apartments (2)
- ☐ Off-campus elsewhere in the city of Davis (3)
- ☐ Outside of Davis (4)

Display This Question:

If Where do you live now? = Off-campus elsewhere in the city of Davis

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



Page Break

Display This Question:

If Where do you live now? = Off-campus elsewhere in the city of Davis

Or Where do you live now? = Outside of Davis

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.)

☐ Street #1: (1) _____

☐ Street #2: (2) _____

Display This Question:

If Where do you live now? = Outside of Davis

Q30 In what city (or unincorporated county) do you live?

☐ Dixon (4)

☐ Elk Grove (5)

☐ Sacramento (2)

☐ Vacaville (3)

☐ West Sacramento (6)

☐ Winters (7)

☐ Woodland (1)

☐ Other city: (8) _____

☐ Unincorporated county: (10) _____

Page Break

Display This Question:

If Where do you live now? = Off-campus elsewhere in the city of Davis

Or Where do you live now? = On-campus in the West Village apartments

Or Where do you live now? = On the UC Davis main campus (includes Cuarto and the area east of SR 113, south of Russell Blvd, west of A St, and north of I-80)

Q31 Do you regularly (at least once per week) spend the night at a second residence that is **outside of Davis** from which you sometimes commute to campus? (E.g. Home of partner/spouse, family's home, second home)

☐ Yes (1)

☐ No (2)

Display This Question:

If Do you regularly (at least once per week) spend the night at a second residence that is outside o... = Yes

Q32 Where is this secondary residence?

☐ City or nearest city: (1) _____

Display This Question:

If Where do you live now? = Outside of Davis

Q33 Do you regularly (at least once per week) stay at a second residence from which you sometimes commute to campus? (E.g. Home of partner/spouse, apartment near work or school, second home)

☐ Yes (1)

☐ No (2)

Display This Question:

If Do you regularly (at least once per week) stay at a second residence from which you sometimes com... = Yes

Q34 Where is this secondary residence?

- ☐ In Davis (1)
- ☐ Outside of Davis, in (city): (6) _____

Display This Question:

If Do you regularly (at least once per week) stay at a second residence from which you sometimes com... = Yes

Or Do you regularly (at least once per week) spend the night at a second residence that is outside o... = Yes

Q35 About how many days per week do you typically commute to campus from the secondary residence?

▼1 (1) ... 7 (7)

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

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

Q36 Consider your activities during the last week, from Monday (November 1) through Sunday (November 7).

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!

Q37

Did you go somewhere on campus any day last week (November 1 – 7) 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)
- ☐ No, I did not travel to campus destinations for school or work last week (2)
-

Display This Question:

If Did you go somewhere on campus any day last week (November 1 – 7) for school or work? If you li... = Yes, I traveled to campus destinations for school or work last week

Q38 On which days last week (November 1 – 7) 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)

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 1 – 7) for school or work? If you li... = No, I did not travel to campus destinations for school or work last week

Q39 What was the main reason you did not go to campus destinations last week for school or work?

- ☐ Study abroad or sabbatical (1)
 - ☐ Vacation, sickness, or personal leave (2)
 - ☐ Work or school-related travel (e.g. meeting, conference, field work) (3)
 - ☐ Telecommuting (working from home or another remote location) (4)
 - ☐ Temporary appointment elsewhere (internship, visiting scholar, teaching appointment, exchange program, etc.) (5)
 - ☐ Other: (6) _____
-

Display This Question:

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

And And On which days last week (November 1 – 7) 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 tha...

q://QID24/SelectedChoicesCount Is Greater Than or Equal to 1

And And On which days last week (November 1 – 7) 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 tha...

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 1 – 7) 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 tha...

q://QID24/SelectedChoicesCount Is Greater Than or Equal to 1

And And On which days last week (November 1 – 7) 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 tha...

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 1 – 7) 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 tha...

q://QID24/SelectedChoicesCount Is Greater Than or Equal to 1

And And On which days last week (November 1 – 7) 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 tha...

q://QID24/SelectedChoicesCount Is Less Than or Equal to 4

Or If

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

And And On which days last week (November 1 – 7) 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 tha...

q://QID24/SelectedChoicesCount Is Greater Than or Equal to 1

And And On which days last week (November 1 – 7) 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 tha...

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 1 – 7) 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 tha...

q://QID24/SelectedChoicesCount Is Greater Than or Equal to 1

And And On which days last week (November 1 – 7) 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 tha...

q://QID24/SelectedChoicesCount Is Less Than or Equal to 4

Or If

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

And And On which days last week (November 1 – 7) 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 tha...
q://QID24/SelectedChoicesCount Is Greater Than or Equal to 1

And And On which days last week (November 1 – 7) 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 tha...
q://QID24/SelectedChoicesCount Is Less Than or Equal to 4

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 2021-22 Campus Travel Survey! This annual survey is intended for everyone who re... Is Displayed

Display This Answer:

If Welcome to the 2021-22 Campus Travel Survey! This annual survey is intended for everyone who re... Is Displayed

Display This Answer:

If Welcome to the 2021-22 Campus Travel Survey! This annual survey is intended for everyone who re... Is Displayed

Display This Answer:

If Welcome to the 2021-22 Campus Travel Survey! This annual survey is intended for everyone who re... Is Displayed

Display This Answer:

If Welcome to the 2021-22 Campus Travel Survey! This annual survey is intended for everyone who re... Is Displayed

Display This Answer:

If Welcome to the 2021-22 Campus Travel Survey! This annual survey is intended for everyone who re... Is Displayed

Display This Choice:

If On which days last week (November 1 – 7) did you go somewhere on campus? If you went to a UC Davi... != Monday

Display This Choice:

If Welcome to the 2021-22 Campus Travel Survey! This annual survey is intended for everyone who re... Is Displayed

Display This Choice:

If On which days last week (November 1 – 7) did you go somewhere on campus? If you went to a UC Davi... != Tuesday

Display This Choice:

If Welcome to the 2021-22 Campus Travel Survey! This annual survey is intended for everyone who re... Is Displayed

Display This Choice:

If On which days last week (November 1 – 7) did you go somewhere on campus? If you went to a UC Davi... != Wednesday

Display This Choice:

If Welcome to the 2021-22 Campus Travel Survey! This annual survey is intended for everyone who re... Is Displayed

Display This Choice:

If On which days last week (November 1 – 7) did you go somewhere on campus? If you went to a UC Davi... != Thursday

Display This Choice:

If Welcome to the 2021-22 Campus Travel Survey! This annual survey is intended for everyone who re... Is Displayed

Display This Choice:

If On which days last week (November 1 – 7) did you go somewhere on campus? If you went to a UC Davi... != Friday

Display This Choice:

If Welcome to the 2021-22 Campus Travel Survey! This annual survey is intended for everyone who re... Is Displayed

	Q1 Is Displayed Monday (1)	Telecommuting (working from home or another remote location) (6)	Q1 Is Displayed Tuesday (2)	Work or school-related travel (e.g. meeting, conference, field work) (7)	Q1 Is Displayed Wednesday (3)	Regularly scheduled day off (8)	Q1 Is Displayed Thursday (4)	Vacation, sickness, or personal leave (9)	Q1 Is Displayed Friday (5)	Day off as part of a compressed work week (e.g. 9/80 schedule) (10)	Other (11)
Q1 Is Displayed Telecommuting (working from home or another remote location) (1)	C	O	C	O	C	O	C	O	C	O	O
Q38 != Monday Monday (7)	C	O	C	O	C	O	C	O	C	O	O
Q1 Is Displayed Work or school-related travel (e.g. meeting, conference, field work) (2)	C	O	C	O	C	O	C	O	C	O	O
Q38 != Tuesday Tuesday (8)	C	O	C	O	C	O	C	O	C	O	O
Q1 Is Displayed Regularly scheduled day off (3)	C	O	C	O	C	O	C	O	C	O	O
Q38 != Wednesday Wednesday (9)	C	O	C	O	C	O	C	O	C	O	O

<p><i>Q1 Is Displayed</i></p> <p>Vacation, sickness, or personal leave (4)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><i>Q38 != Thursday</i></p> <p>Thursday (10)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><i>Q1 Is Displayed</i></p> <p>Day off as part of a compressed work week (i.e. 4/40, 9/80, or 3/36 schedule) (5)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><i>Q38 != Friday</i></p> <p>Friday (11)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><i>Q1 Is Displayed</i></p> <p>Other (6)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Display This Question:

If Did you go somewhere on campus any day last week (November 1 – 7) for school or work? If you li... = No, I did not travel to campus destinations for school or work last week

Q41 Do you expect to resume regular travel to campus for school or work this academic year?

☐ Yes (1)

☐ No (2)

Skip To: Q42 If Do you expect to resume regular travel to campus for school or work this academic year? = No

Display This Question:

If Do you expect to resume regular travel to campus for school or work this academic year? = No

Q42 Thank you for taking this shortened version of the Campus Travel Survey. Since you do not intend to resume regular travel to campus, 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 do not intend... Is Displayed

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

Q43 When you are regularly traveling to campus, about how many days per week do you **typically** travel to campus for school or work?

- ☐ Less than once a week (1)
- ☐ 1 day per week (2)
- ☐ 2 days per week (3)
- ☐ 3 days per week (4)
- ☐ 4 days per week (5)
- ☐ 5 days per week (6)
- ☐ 6 days per week (7)
- ☐ 7 days per week (8)

Page Break

Carry Forward All Choices - Entered Text 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."



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

Display This Question:

If 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). 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."



Q45 Which bus do you **usually use to get to campus**? (If you used more than one, please select the service used for the greater distance of your trip.).

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

Q46 What means of transportation do you usually use to **get around campus**?

- ☐ Walk (or wheelchair) (1)
 - ☐ Electric-assist bike (e-bike) (15)
 - ☐ Bike (3)
 - ☐ Skate, skateboard, or scooter (2)
 - ☐ Drive alone in a car (or other vehicle) (6)
 - ☐ Carpool (7)
 - ☐ Get a dropped off by a friend or family (8)
 - ☐ Lyft, Uber, or other ride-hailing service (12)
 - ☐ Motorcycle or Vespa-like scooter (5)
 - ☐ Bus or shuttle (9)
 - ☐ Other: (10) _____
-

Display This Question:

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

Q48 When do you typically arrive on campus?

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

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 1 – 7) 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 tha...
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 1 – 7) 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 tha...
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."



Q50 First think back to the entire week (Monday, November 1 - Sunday, November 7). 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)
- ☐ Electric-assist bike (e-bike) (2)
- ☐ Bike (3)
- ☐ Skate, skateboard, or scooter (4)
- ☐ Drive alone in a car (or other vehicle) (5)
- ☐ Carpool and/or vanpool with others going to campus (6)
- ☐ Get dropped off by a friend or family (the driver continues on elsewhere) (7)
- ☐ Lyft, Uber, or other ride-hailing service (8)
- ☐ Motorcycle or Vespa-like scooter (9)
- ☐ Bus and/or shuttle (10)
- ☐ Train and/or light rail (11)
- ☐ Other: (12) _____

Display This Question:

*If If On which days last week (November 1 – 7) 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 tha...
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 1 - Sunday, November 7). 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. "



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 1 – 7) did you go somewhere on campus? If you went to a UC Davi... = Monday

Display This Choice:

If On which days last week (November 1 – 7) did you go somewhere on campus? If you went to a UC Davi... = Tuesday

Display This Choice:

If On which days last week (November 1 – 7) did you go somewhere on campus? If you went to a UC Davi... = Wednesday

Display This Choice:

If On which days last week (November 1 – 7) did you go somewhere on campus? If you went to a UC Davi... = Thursday

Display This Choice:

If On which days last week (November 1 – 7) did you go somewhere on campus? If you went to a UC Davi... = Friday

Display This Choice:

If On which days last week (November 1 – 7) did you go somewhere on campus? If you went to a UC Davi... = Saturday

Display This Choice:

If On which days last week (November 1 – 7) did you go somewhere on campus? If you went to a UC Davi... = Sunday

	Walk (or wheelchair) (1)	Electric- assist bike (e-bike) (2)	Bike (3)	Skate, skateboard, or scooter (4)	Drive alone in a car (or other vehicle) (5)	Carpool and/or vanpool with others going to campus (6)	Get dropped off by a friend or family (the driver continues on elsewhere) (7)	Lyft, Uber, or other ride- hailing service (8)	Motor cycle or Vespa- like scooter (9)	Bus and/ or shuttle (10)	Train and/ or light rail (11)	Other : (12)
Q38 = Monday												
Monday (1)	C	C		O	O	O	O	O	O	C	C	
Q38 = Tuesday												
Tuesday (2)	C	C		O	O	O	O	O	O	C	C	
Q38 = Wednesday												
Wednesday (3)	C	C		O	O	O	O	O	O	C	C	
Q38 = Thursday												
Thursday (4)	C	C		O	O	O	O	O	O	C	C	
Q38 = Friday												
Friday (5)	C	C		O	O	O	O	O	O	C	C	
Q38 = Saturday												
Saturday (6)	C	C		O	O	O	O	O	O	C	C	
Q38 = Sunday												
Sunday (7)	C	C		O	O	O	O	O	O	C	C	

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 First think back to the entire week (Monday, November 1 - Sunday, November 7). Please tell us all the different means of transportation you used at some point on your way to scho... Bike Is Selected

Or Next, consider each day specifically. Please select how you got to your first campus destination... [Bike] (Count) > 0

Or Or First think back to the entire week (Monday, November 1 - Sunday, November 7). Please tell us all the different means of transportation you used at some point on your way to scho... Electric-assist bike (e-bike) Is Selected

Or Next, consider each day specifically. Please select how you got to your first campus destination... [Electric-assist bike (e-bike)] (Count) > 0

And If

If What kind of bike is available to you? Select all that apply. q://QID375/SelectedChoicesCount Is Greater Than 1

Carry Forward Selected Choices from "What kind of bike is available to you? Select all that apply."



Q52 What kind of bike did you use **last week**?

☐

Bike that I own (1)

☐

Bike that I borrow or rent (e.g. Joe Bike) (2)

☐

Bike share (e.g. Lime) (3)

Display This Question:

If If First think back to the entire week (Monday, November 1 - Sunday, November 7). 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."



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

- ☐ Rollers skates or rollerblades (1)
- ☐ Skateboard (2)
- ☐ Electric skateboard (3)
- ☐ E-scooter (stand up electric scooter) (4)
- ☐ Kick scooter (non-electric) (5)

Display This Question:

If If First think back to the entire week (Monday, November 1 - Sunday, November 7). 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 1 - Sunday, November 7). 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 1 - Sunday, November 7). 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 1 - Sunday, November 7). 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 1 - Sunday, November 7). Please tell us all the different 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)
- ☐ Conventional hybrid vehicle (does not plug into the electricity grid) (2)
- ☐ Plug-in hybrid electric vehicle (3)
- ☐ All-electric vehicle (4)
- ☐ CNG fueled vehicle (5)
- ☐ Biofuel vehicle (6)
- ☐ Hydrogen fuel cell vehicle (7)

Page Break

Display This Question:

If First think back to the entire week (Monday, November 1 - Sunday, November 7). Please tell us all the different means of transportation you used at some point on your way to school. Drive alone in a car (or other vehicle) Is Selected

Or First think back to the entire week (Monday, November 1 - Sunday, November 7). Please tell us all the different means of transportation you used at some point on your way to school. Carpool and/or vanpool with others going to campus Is Selected

Or First think back to the entire week (Monday, November 1 - Sunday, November 7). Please tell us all the different means of transportation you used at some point on your way to school. Motorcycle or Vespa-like scooter Is Selected

Or What means of transportation do you usually use to get to campus? (If you usually use more than one) Drive alone in a car (or other vehicle) Is Selected

Or What means of transportation do you usually use to get to campus? (If you usually use more than one) Carpool and/or vanpool with others going to campus Is Selected

Or What means of transportation do you usually use to get to campus? (If you usually use more than one) Motorcycle or Vespa-like scooter Is Selected

Q57 When you drive to Davis for school or work, do you **usually** 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 **usually** get from your parked car to campus?

- ☐ Walk (or wheelchair) (8)
- ☐ Personal bike (9)
- ☐ Bike share (10)
- ☐ Skate, skateboard, or scooter (11)
- ☐ Get dropped off by a friend or family (12)
- ☐ Bus or shuttle (13)
- ☐ Lyft, Uber, or other ride hailing service (14)
- ☐ Other: (15) _____

Display This Question:

If If First think back to the entire week (Monday, November 1 - Sunday, November 7). 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 1 - Sunday, November 7). 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)?

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

Display This Question:

If If First think back to the entire week (Monday, November 1 - Sunday, November 7). 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."



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.

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

Page Break

Display This Question:

If If First think back to the entire week (Monday, November 1 - Sunday, November 7). 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."



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.

- ☐ Amtrak/Capitol Corridor (1)
- ☐ BART (2)
- ☐ Sacramento Regional Transit (3)

Display This Question:

If If First think back to the entire week (Monday, November 1 - Sunday, November 7). 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 Or First think back to the entire week (Monday, November 1 - Sunday, November 7). 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

Q301 Which travel mode did you use to get **from your residence** to the bus stop or train station?

- ☐ Walk (or wheelchair) (1)
- ☐ Electric-assist bike (e-bike) (3)
- ☐ Bike (2)
- ☐ Skate, skateboard, or scooter (4)
- ☐ Drive alone in a car (or other vehicle) (5)
- ☐ Get dropped off by a friend or family member (the driver continues on elsewhere) (7)
- ☐ Lyft, Uber, or other ridehailing service (8)
- ☐ Motorcycle or Vespa-like scooter (9)
- ☐ Other (write-in) (10) _____

Display This Question:

If If First think back to the entire week (Monday, November 1 - Sunday, November 7). 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 Or First think back to the entire week (Monday, November 1 - Sunday, November 7). 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

Q303 Which travel mode did you use to get from the bus stop of train station ***to your usual destination on campus?***

- ☐ Walk (or wheelchair) (1)
- ☐ Electric-assist bike (e-bike) (3)
- ☐ Bike (2)
- ☐ Skate, skateboard, or scooter (4)
- ☐ Drive alone in a car (or other vehicle) (5)
- ☐ Get dropped off by a friend or family member (the driver continues on elsewhere) (7)
- ☐ Lyft, Uber, or other ridehailing service (8)
- ☐ Motorcycle or Vespa-like scooter (9)
- ☐ Other (write-in) (10) _____

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 21 - September 21, 2021.

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 14 weeks in the academic summer.)

- ☐ None (15)
- ☐ All summer / 14 weeks (June 25 - September 14) (1)
- ☐ 13 weeks (2)
- ☐ 12 weeks (3)
- ☐ 11 weeks (4)
- ☐ 10 weeks (5)
- ☐ 9 weeks (6)
- ☐ 8 weeks (7)
- ☐ 7 weeks (8)
- ☐ 6 weeks (equivalent to just ONE summer session, I or II) (9)
- ☐ 5 weeks (10)
- ☐ 4 weeks (11)
- ☐ 3 weeks (12)
- ☐ 2 weeks (13)
- ☐ 1 week (14)

Display This Question:

If How much time did you spend at UC Davis over the summer? We're interested in the number of weeks... != None

Q65 During this summer, how many days per week were you typically on campus?

- ☐ 1 day per week (1)
- ☐ 2 days per week (2)
- ☐ 3 days per week (3)
- ☐ 4 days per week (4)
- ☐ 5 days per week (5)
- ☐ 6 days per week (6)
- ☐ 7 days per week (7)

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

Start of Block: Section 9 - Campus transportation programs

Q66 Are you familiar with any of these campus programs?

	I've used it (1)	I've heard of it, but never used it (2)	I've never heard of it (3)
Aggie Bike Buy Program (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Transit Pass Subsidies (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bike tire air stations and repair stations around campus (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bicycle Education and Enforcement Program (BEEP) and bike safety video (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Zipcar carsharing program (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Zimride carpool matching service (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In-vehicle parking meters (Easy Park) (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
UC Davis motorist assistance program (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TAPS bike lock-cutting service (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
UC Davis bicycle theft reporting system (14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ParkMobile (Daily Permitting) (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TAPS Mobility Assistance Program (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
UC Davis Bicycle Registration (Bike License, Bike Index) (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Section 9 - Campus transportation programs

Start of Block: Section 10 - Housing and Hazards

Q67

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

Your responses are entirely confidential.

Display This Question:

If Where do you live now? = Off-campus elsewhere in the city of Davis

Or Where do you live now? = Outside of Davis

Q68 What type of place is your current residence? Please pick the option that best describes your unit.

- ☐ Building with 4 or fewer units or apartments (2)
- ☐ Building with 5 or more units or apartments (3)
- ☐ 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)
- ☐ House (stand-alone unit usually intended for a single family) (5)
- ☐ Mobile home or trailer (6)
- ☐ Other: (7) _____

Q69

How many bedrooms are in your residence?

▼Studio (1) ... 6 or more (7)

Q70 Are there any spaces in your residence that weren't built as bedrooms (with walls and door) but are used as sleeping areas for residents? (e.g. living room, converted garage)

- ☐ Yes (1)
- ☐ No (2)
- ☐ Not sure (4)



Q71 Do you live alone or with other people?

- ☐ Alone (1)
- ☐ With other people (2)

Display This Question:

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

Q72 How many **other people** 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

Q73 Of the other people who live in your residence, how many are enrolled as UC Davis students?

▼0 (12) ... 10 or more (11)

Display This Question:

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

Q74

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

	Number of People (1)
Your partner or spouse (6)	
Your children (3)	
Other immediate relatives (e.g. parents, siblings) (2)	

Display This Question:

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

Q75 With how many people do you share your **bedroom**?

▼0 (11) ... 6 or more (10)

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Q87 How satisfied are you with your current residence and its location?

	Very Unsatisfied (1)	Somewhat Unsatisfied (2)	Neutral (5)	Somewhat Satisfied (6)	Very Satisfied (7)
Characteristics of the residence itself (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Location of your residence within your neighborhood (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Characteristics of the neighborhood itself (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Location of your city in the region (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page Break

Display This Question:

If What year are you? != Freshman

Q76 How long have you lived at your current residence?

- ☐ Less than a year (1)
- ☐ Between 1 and 2 years (2)
- ☐ Between 2 and 4 years (3)
- ☐ Between 4 and 10 years (5)
- ☐ Between 10 and 20 years (6)
- ☐ More than 20 years (7)

Display This Question:

If Where do you live now? = Off-campus elsewhere in the city of Davis

Or Where do you live now? = Outside of Davis

Q77 Do you rent or own your residence?

- ☐ Rent (1)
- ☐ Own (with or without a mortgage) (2)
- ☐ Other arrangement (e.g. live with friends or family) (4)
- ☐ Other: (3) _____

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Q82 Do any of the following apply to you? Select all that apply.

☐ I am married or in a domestic partnership. (1)

☐ I have children or other dependents. (2)

☐ I am a veteran. (3)

☐ I am emancipated from my parents or legal guardians. (5)

Page Break

Q83 If an unexpected \$400 expense came up, how would you pay for it?

- ☐ I wouldn't be able to (1)
- ☐ I'd pay with money in my checking or savings account (2)
- ☐ I'd borrow from family or friends and pay them back (4)
- ☐ Family or friends would pay it for me (6)
- ☐ I'd pay with a credit card and repay later (7)
- ☐ Other: (8) _____

Display This Question:

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

Q84 Are you a Pell Grant recipient?

- ☐ Yes (1)
- ☐ No (2)

Page Break

Display This Question:

If Where do you live now? = Outside of Davis

Q85 You mentioned that you live outside of Davis. Would you prefer to live in Davis?

☐ Yes (1)

☐ Maybe (4)

☐ No (2)

Display This Question:

If Where do you live now? = Outside of Davis



Q86 Which factors influenced your decision to live outside of Davis? Select all that apply.

- ☐ Cost of housing (1)
- ☐ Commute time for another person in my household (3)
- ☐ Public transportation access (4)
- ☐ Availability of housing (14)
- ☐ Housing options or choice (5)
- ☐ Proximity to family or friends (19)
- ☐ Proximity to shops, restaurants, services, etc. (7)
- ☐ Variety or quality of shops, restaurants, services, etc. (16)
- ☐ Safe neighborhoods (20)
- ☐ School choice (9)
- ☐ Proximity to parks or nature (10)
- ☐ Walkable or bikeable neighborhoods (11)
- ☐ Ease of driving places (12)
- ☐ Quiet neighborhoods (13)

Display This Question:

If Where do you live now? = Outside of Davis

Carry Forward Selected Choices from "Which factors influenced your decision to live outside of Davis? Select all that apply."



Q259 Of all the factors that influenced your decision to live outside of Davis, please rank the importance of each:

	Not at all important (6)	Slightly important (7)	Moderately important (8)	Very important (9)	Extremely important (10)
Cost of housing (x1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Commute time for another person in my household (x3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Public transportation access (x4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability of housing (x14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Housing options or choice (x5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Proximity to family or friends (x19)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Proximity to shops, restaurants, services, etc. (x7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Variety or quality of shops, restaurants, services, etc. (x16)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Safe neighborhoods (x20)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
School choice (x9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Proximity to parks or nature (x10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Walkable or bikeable neighborhoods (x11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Ease of driving
places (x12)



Quiet
neighborhoods
(x13)



Page Break

Display This Question:

If How long have you lived at your current residence? = Less than a year

Or How long have you lived at your current residence? = Between 1 and 2 years

Or How long have you lived at your current residence? = Between 2 and 4 years

Q88 Pick the option that best describes your most recent search for a place to live.

- ☐ I had lots of good options to choose from. (1)
- ☐ I had a couple of good options to choose from. (6)
- ☐ Good options were hard to find. (2)



Q89 Within the last 12 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)
- ☐ Moved because of raised rent or mortgage (10)
- ☐ Regularly skipped meals to pay for living expenses (7)
- ☒ None of these happened to me (9)



Q90 Within the last 12 months, did any of the following happen to you? Select all that apply.

- ☐ 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)
 - ☒ None of these happened to me (10)
-



Q91 Do you experience any of the following as problems or deficiencies in your current housing? Select all that apply.

- ☐ Expensive rent/mortgage (1)
- ☐ No in-unit kitchen (2)
- ☐ No in-unit washer and dryer (3)
- ☐ Difficult to find parking (4)
- ☐ Unaddressed pest issues (e.g. mold, bugs) (5)
- ☐ Unaddressed maintenance issues (e.g. broken heat, plumbing, electrical) (6)
- ☐ Poor treatment by landlord/leasing company (7)
- ☐ Poor lease terms (8)
- ☐ Neighborhood concerns (e.g. noise, crime, safety) (9)
- ☐ Safety concerns with structure (10)
- ☐ Overcrowding or sharing bedrooms (11)
- ☐ Too far from campus (12)
- ☐ Too far from amenities (e.g. shopping, entertainment) (13)
- ☐ No pets allowed (14)
- ☐ Overly restrictive rules (15)
- ☐ Poor access to transit (16)
- ☐ Too far from public schools (17)
- ☐ Too far from parks and green spaces (18)
- ☐ Could not choose my housemates/roommates (19)

☐ Conflict with housemates/roommates (20)

☒ Experience none of these (22)

Page Break

Q260 Is your residence located in a floodplain?

- ☐ Yes (1)
- ☐ No (2)
- ☐ I don't know (3)

Display This Question:

If Is your residence located in a floodplain? = Yes

Q263 What type of floodplain is your residence located in?

- ☐ FEMA-designated 100-year floodplain (1)
- ☐ FEMA-designated 500-year floodplain (2)
- ☐ Floodplain area that is designated as levee-protected (5)
- ☐ I don't know (6)

Display This Question:

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

Q264 Do you currently purchase a flood insurance policy for your residence through the National Flood Insurance Program?

- ☐ Yes (1)
 - ☐ No (2)
 - ☐ I don't know (3)
-

Q262 How vulnerable do you feel your residence is to the following hazards:

	Not at all vulnerable (1)	Slightly vulnerable (2)	Moderately vulnerable (3)	Very vulnerable (4)	Extremely vulnerable (5)
Flooding (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wildfires (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Earthquakes (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Extreme heat events (14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (write-in; optional) (15)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Section 10 - Housing and Hazards

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.

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

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
Traveling to campus stresses me out. (Q53_19)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Travel time is generally wasted time. (Q53_1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like riding a bike. (Q53_2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Concerns about climate change affect the choices I make about my daily travel. (Q53_3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel safe traveling to campus (Q93_36)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like driving. (Q53_5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I need a car to do many of the things I like to do. (Q53_6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My schedule makes it hard or impossible for me to use public transit. (Q53_8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel safe biking on campus. (Q53_10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My commute is expensive. (Q53_35)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like using public transit. (Q53_11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I often need to use my own vehicle to travel to different sites during the day.
(Q53_12)

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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I already bicycle as often as I can. (Q53_14)

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

I try to limit my driving as much as possible.
(Q53_15)

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

I often miss out on social or leisure activities because I don't have a way to get there.
(Q93_37)

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

Getting around is easier than ever with my smartphone.
(Q53_17)

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

I need to dress professionally for my job.
(Q53_18)

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

Page Break

Display This Question:

If If Which bus do you usually use to get to campus? (If you used more than one, please select the service used for the greater distance of your trip.). Unitrans Is Selected

And If

We'd like to ask about your opinions with respect to transportation. There are no right or wrong... = Traveling to campus stresses me out. [Strongly agree]

Or We'd like to ask about your opinions with respect to transportation. There are no right or wrong... = Traveling to campus stresses me out. [Somewhat agree]



Q94 What do you find most stressful about using Unitrans to get to campus?

- ☐ Uncertainty about my bus picking me up on time (1)
- ☐ Uncertainty about my bus arriving to campus on time (2)
- ☐ How full the bus will be when it gets to my stop (3)
- ☐ Harassment while riding the bus (4)
- ☐ Lack of knowledge about bus schedules or routes (7)
- ☐ Paying the fare / Showing my pass (9)
- ☐ Other: (6) _____

Display This Question:

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

And If

If Which bus do you usually use to get to campus? (If you used more than one, please select the service used for the greater distance of your trip.). Unitrans Is Selected



Q95 When deciding whether to use Unitrans, what is the relative importance of the following factors? Your answers will sum to 100%.

- _____ My bus picking me up at its scheduled time (1)
- _____ My bus arriving to campus on time (5)
- _____ Having enough space on the bus when it gets to my stop (2)
- _____ Not being harassed on the bus (3)
- _____ Buses running frequently enough that I don't have to know the schedule (4)
- _____ Bus stops near my home and where I need to go (7)
- _____ Convenience of paying the fare (9)
- _____ Being able to sit down on the bus (10)
- _____ Ability to work on the bus (11)
- _____ Other: (8)

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.

- ☐ 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)
-

Q98 In general, how comfortable would you be riding a bike on a **four-lane street (two lanes in either direction) without a bicycle lane**, in daylight and good weather?

- ☐ Uncomfortable and I wouldn't ride on it (1)
 - ☐ Uncomfortable but I would ride on it (2)
 - ☐ Comfortable (3)
-

Page Break

Start of Block: Add on- Life satisfaction, well-being and travel experiences

Q246 In this part of the survey we would like to understand if travel and commute experiences have any impact on people's life satisfaction and overall well-being. We will ask about your commute and also a bit about your well-being and life experiences in general. Your responses are entirely confidential.

Q247 From an overall perspective how satisfied are you with your life?

- ☐ Extremely dissatisfied (1)
 - ☐ Somewhat dissatisfied (2)
 - ☐ Neither satisfied nor dissatisfied (3)
 - ☐ Somewhat satisfied (4)
 - ☐ Extremely satisfied (5)
-

Q249 How satisfied are you with your current financial situation?

- ☐ Extremely dissatisfied (1)
 - ☐ Somewhat dissatisfied (2)
 - ☐ Neither satisfied nor dissatisfied (3)
 - ☐ Somewhat satisfied (4)
 - ☐ Extremely satisfied (5)
-

Q251 How satisfied are you with your physical health?

- ☐ Extremely dissatisfied (1)
 - ☐ Somewhat dissatisfied (2)
 - ☐ Neither satisfied nor dissatisfied (3)
 - ☐ Somewhat satisfied (4)
 - ☐ Extremely satisfied (5)
-

Q253 How satisfied are you with your mental health?

- ☐ Extremely dissatisfied (1)
 - ☐ Somewhat dissatisfied (2)
 - ☐ Neither satisfied nor dissatisfied (3)
 - ☐ Somewhat satisfied (4)
 - ☐ Extremely satisfied (5)
-

Page Break

Q255 We would now like to know more about your travel experiences.

Q257 How happy are you with your usual mode of travel to campus?

- ☐ Extremely unhappy (1)
 - ☐ Somewhat unhappy (2)
 - ☐ Neither happy nor unhappy (3)
 - ☐ Somewhat happy (4)
 - ☐ Extremely happy (5)
-

Q259

Which of the following modes do you regularly use for your **non-commute trips**? Check all that apply.
(Non-commute trips are the trips undertaken for purposes other than work or study).

- ☐ Walk (or wheelchair) (1)
 - ☐ Electric-assist bike (e-bike) (23)
 - ☐ Bike (3)
 - ☐ Skate, skateboard, or scooter (2)
 - ☐ Drive alone in a car (or other vehicle) (6)
 - ☐ Carpool and/or vanpool (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) _____
-

Q261 How happy are you with your usual mode of travel for non-commute trips?

- ☐ Extremely unhappy (1)
 - ☐ Somewhat unhappy (2)
 - ☐ Neither happy nor unhappy (3)
 - ☐ Somewhat happy (4)
 - ☐ Extremely happy (5)
-

Q263 How important is it for you to feel happy when you travel to campus and other destinations?

- ☐ Not at all important (1)
 - ☐ Slightly important (2)
 - ☐ Moderately important (3)
 - ☐ Very important (4)
 - ☐ Extremely important (5)
-

Q267 For each of the following items, please rate your experience during your commute trip to campus on a scale of -3 to 3 as indicated:

	-3	-2	-1	0	1	2	3	
--	----	----	----	---	---	---	---	--

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
Very stressed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very calm
Very bored	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very enthusiastic
Works very poorly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Works very well
Very tired	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very alert
Fed up	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Engaged
Very worried	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very confident
Worst trip I can think of	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Best trip I can think of
Time pressed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Relaxed

Q269 Overall how satisfied are you with your commute trip to campus?

- ☐ Extremely dissatisfied (1)
- ☐ Somewhat dissatisfied (2)
- ☐ Neither satisfied nor dissatisfied (3)
- ☐ Somewhat satisfied (4)
- ☐ Extremely satisfied (5)

End of Block: Add on- Life satisfaction, well-being and travel experiences

Start of Block: Add On - E-bike Questions - Owners

Q108 We're interested in your electric bike!

Q109 Select all the reasons that you bought your electric bike.

☐

To travel farther (1)

☐

To travel faster (4)

☐

To more easily carry cargo or people (2)

☐

To sweat less (5)

☐

Because it's fun (3)

☐

Other: (6) _____

Q110 If you didn't have an electric bike, how would you get to campus on the days you normally ride your e-bike?

- ☐ Walk (1)
- ☐ Skate or skateboard (2)
- ☐ Bike (3)
- ☐ Motorcycle or Scooter (4)
- ☐ Drive alone in a car (or other vehicle) (5)
- ☐ Carpool or vanpool with others going to campus (either as driver or passenger) (6)
- ☐ Get a ride (the driver continues to elsewhere) (7)
- ☐ Bus (8)
- ☐ Train or light rail (9)
- ☐ Taxi Services (10)
- ☐ Uber or Lyft services (11)
- ☐ Other: (12) _____

End of Block: Add On - E-bike Questions - Owners

Start of Block: Add On - E-bike Questions - Familiarity

Q111 Do you know what an electric assist bicycle is? They are also known as "e-bikes".

- ☐ Yes (1)
 - ☐ No (2)
-

Q112 Have you ever ridden an e-bike?

☐ Yes (1)

☐ No (2)

Q113 Have you ever thought about riding an e-bike to campus?

☐ Yes (1)

☐ No (2)

End of Block: Add On - E-bike Questions - Familiarity

Start of Block: Add On - E-Scooters & E-Skateboards

Display This Question:

If If What kind of skates, skateboard, or scooter did you use last week? Electric skateboard Is Selected

Or Or What kind of skates, skateboard, or scooter did you use last week? E-scooter (stand up electric scooter) Is Selected

Or What kind of skates, skateboard, or scooter is available to you? Select all that apply. = Electric skateboard

Or What kind of skates, skateboard, or scooter is available to you? Select all that apply. = E-scooter (stand up electric scooter)

Q114 We're interested in your electric skateboard or e-scooter!

Display This Question:

If If What kind of skates, skateboard, or scooter did you use last week? Electric skateboard Is Selected

Or Or What kind of skates, skateboard, or scooter did you use last week? E-scooter (stand up electric scooter) Is Selected

Or What kind of skates, skateboard, or scooter is available to you? Select all that apply. = Electric skateboard

Or What kind of skates, skateboard, or scooter is available to you? Select all that apply. = E-scooter (stand up electric scooter)



Q115 Select all the reasons you bought your electric skateboard or e-scooter.

- ☐ To travel faster (1)
- ☐ For convenience (10)
- ☐ Because it's fun (2)
- ☐ To sweat less (3)
- ☐ Because it's cool (13)
- ☐ I can keep it with me (11)
- ☐ Other: (9) _____

Display This Question:

If If What kind of skates, skateboard, or scooter did you use last week? Electric skateboard Is Selected

Or Or What kind of skates, skateboard, or scooter did you use last week? E-scooter (stand up electric scooter) Is Selected

Or What kind of skates, skateboard, or scooter is available to you? Select all that apply. = Electric skateboard

Or What kind of skates, skateboard, or scooter is available to you? Select all that apply. = E-scooter (stand up electric scooter)

Q116 If you didn't have an electric skateboard or electric scooter, how would you get to and around campus?

- ☐ Walk (1)
- ☐ Bike (2)
- ☐ Non-electric skateboard (3)
- ☐ Non-electric scooter (4)
- ☐ Drive alone (5)
- ☐ Carpool (6)
- ☐ Motorcycle or Vespa-like scooter (7)
- ☐ Bus (8)
- ☐ Other: (9) _____

End of Block: Add On - E-Scooters & E-Skateboards

Start of Block: Section X E-scooter Experiment

Q539 Next we will ask you some questions about stand-up electric scooters (e-scooters).

Q540 Have you ever ridden an e-scooter?

- ☐ Yes (1)
 - ☐ No (2)
-

Display This Question:

If Have you ever ridden an e-scooter? = Yes

Q541 Do you own an e-scooter?

☐ Yes (1)

☐ No (2)

Q542 Have you ever had any of the following experiences? Select all that apply.

☐ I have collided with a pedestrian while riding an e-scooter. (4)

☐ I have nearly collided with a pedestrian while riding an e-scooter (10)

☐ An e-scooter collided with me when I was walking (11)

☐ An e-scooter almost collided with me when I was walking (12)

☒ None of the above (13)

Page Break

Display This Question:

If Have you ever ridden an e-scooter? = Yes

Q543 How comfortable are you riding an e-scooter near pedestrians?

- ☐ Not comfortable (1)
 - ☐ Somewhat comfortable (3)
 - ☐ Very comfortable (4)
-

Q544 How comfortable are you walking where other people are riding e-scooters?

- ☐ Not comfortable (1)
 - ☐ Somewhat comfortable (2)
 - ☐ Very comfortable (3)
-

Q545 How comfortable are you with people riding e-scooters on the UC Davis campus currently?

- ☐ Not comfortable (1)
 - ☐ Somewhat comfortable (2)
 - ☐ Very comfortable (3)
-

Q546 How would you feel about having shared e-scooters (e.g. Lime, Bird) in Davis and on UC Davis campus?

- ☐ I like the idea and I'd probably use them (1)
- ☐ I like the idea but I probably wouldn't use them (2)
- ☐ I'm not sure how I feel (3)
- ☐ I don't like the idea but I would use it myself (4)
- ☐ I don't like the idea and I wouldn't use it (5)

Page Break

Q307 Would you like to help researchers better understand e-scooter and pedestrian interactions and watch three e-scooter video clips? It's pretty fun and only takes about 30 seconds.

- ☐ Yes (1)
- ☐ No, skip the e-scooter videos (2)

Display This Question:

If Would you like to help researchers better understand e-scooter and pedestrian interactions and wa... = Yes

Q547 Next we will describe and show brief video clips of three interactions between an e-scooter rider (from their perspective) and bicyclists and pedestrians in a street with no cars. The videos are from Lund, Sweden but think about how this would feel on a shared path in Davis. Even if you've never ridden an e-scooter, after each video, please rate your opinion about how comfortable the interactions seem to you.

End of Block: Section X E-scooter Experiment

Start of Block: B1

Q548 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Q549 This video shows an e-scooter rider passing two bicyclists traveling in the opposite direction.

Q305

How comfortable were the interactions between the e-scooter rider and the bicyclists and pedestrians?

- ☐ Very uncomfortable (6)
- ☐ Somewhat uncomfortable (7)
- ☐ Neither comfortable nor uncomfortable (8)
- ☐ Somewhat comfortable (9)
- ☐ Very comfortable (10)

End of Block: B1

Start of Block: B2

Q551 Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

Q552 This video shows an e-scooter rider passing a bicyclist traveling in the same direction.

Q553

How comfortable were the interactions between the e-scooter rider and the bicyclists and pedestrians?

- ☐ Very uncomfortable (1)
- ☐ Somewhat uncomfortable (3)
- ☐ Neither comfortable nor uncomfortable (6)
- ☐ Somewhat comfortable (7)
- ☐ Very comfortable (8)

End of Block: B2

Start of Block: B3

Q554 Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

Q555 This video shows an e-scooter rider passing bicyclists and pedestrians traveling in the opposite direction.

Q556

How comfortable were the interactions between the e-scooter rider and the bicyclists and pedestrians?

- ☐ Very uncomfortable (1)
- ☐ Somewhat uncomfortable (2)
- ☐ Neither comfortable nor uncomfortable (3)
- ☐ Somewhat comfortable (6)
- ☐ Very comfortable (7)

End of Block: B3

Start of Block: B4

Q557 Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

Q558 This video shows an e-scooter rider passing pedestrians traveling in the same and opposite direction.

Q559

How comfortable were the interactions between the e-scooter rider and the bicyclists and pedestrians?

- ☐ Very uncomfortable (1)
- ☐ Somewhat uncomfortable (2)
- ☐ Neither comfortable nor uncomfortable (3)
- ☐ Somewhat comfortable (6)
- ☐ Very comfortable (7)

End of Block: B4

Start of Block: B5

Q560 Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

Q561 This video shows an e-scooter rider passing a bicyclist and pedestrians traveling in the same direction.

Q562

How comfortable were the interactions between the e-scooter rider and the bicyclists and pedestrians?

- ☐ Very uncomfortable (1)
- ☐ Somewhat uncomfortable (2)
- ☐ Neither comfortable nor uncomfortable (6)
- ☐ Somewhat comfortable (7)
- ☐ Very comfortable (8)

End of Block: B5

Start of Block: B6

Q563 Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

Q564 This video shows an e-scooter rider passing pedestrians traveling in the opposite direction.

Q565

How comfortable were the interactions between the e-scooter rider and the bicyclists and pedestrians?

- ☐ Very uncomfortable (1)
- ☐ Somewhat uncomfortable (6)
- ☐ Neither comfortable nor uncomfortable (7)
- ☐ Somewhat comfortable (8)
- ☐ Very comfortable (9)

End of Block: B6

Start of Block: B7

Q566 Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

Q567 This video shows an e-scooter rider passing a bicyclist traveling in the opposite direction and a bicyclist traveling in the same direction.

Q568

How comfortable were the interactions between the e-scooter rider and the bicyclists and pedestrians?

- ☐ Very uncomfortable (1)
- ☐ Somewhat uncomfortable (6)
- ☐ Neither comfortable nor uncomfortable (7)
- ☐ Somewhat comfortable (8)
- ☐ Very comfortable (9)

End of Block: B7

Start of Block: B8

Q569 Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

Q570 This video shows an e-scooter rider passing pedestrians traveling in the opposite direction and a bicyclist traveling in the opposite direction.

Q571

How comfortable were the interactions between the e-scooter rider and the bicyclists and pedestrians?

- ☐ Very uncomfortable (1)
- ☐ Somewhat uncomfortable (6)
- ☐ Neither comfortable nor uncomfortable (7)
- ☐ Somewhat comfortable (8)
- ☐ Very comfortable (9)

End of Block: B8

Start of Block: B9

Q572 Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

Q573 This video shows an e-scooter rider passing pedestrians traveling in the same and opposite direction.

Q574

How comfortable were the interactions between the e-scooter rider and the bicyclists and pedestrians?

- ☐ Very uncomfortable (1)
- ☐ Somewhat uncomfortable (6)
- ☐ Neither comfortable nor uncomfortable (7)
- ☐ Somewhat comfortable (8)
- ☐ Very comfortable (9)

End of Block: B9

Start of Block: Section 13 - Demographics

Q117 A couple more questions about yourself. We use this information to help understand travel choices and how the people taking the survey might represent the UC Davis community as a whole. Your answers are confidential and will not be used for any other purposes.

Q118 In what year were you born?

▼1919 (1) ... 2003 (85)

Display This Question:

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

Q119 What is your highest level of education completed?

- ☐ No formal education (1)
 - ☐ Grade school or junior high school (2)
 - ☐ High school diploma or equivalent (3)
 - ☐ Associates degree or technical school certificate (4)
 - ☐ Four-year bachelor's degree (5)
 - ☐ Graduate degree(s) (6)
-

Q243 Which categories describe you? Select all that apply.

- ☐ 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)
-

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

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

And We are interested in your available means of transportation. Select all options that are availabl... = Drive alone in a car (or other vehicle)

Q120 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)

End of Block: Section 13 - Demographics

Start of Block: Section 14 - Prize Opt-In

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.

Q240 Would you be interested in participating in a UC Davis-led survey about natural hazards and housing choice?

- ☐ Yes (1)
- ☐ No (3)

Q123 As mentioned at the start of the survey, we are offering a chance to win forty \$50 Amazon gift cards 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?

☐ Yes (1)

☐ No (2)

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

☐ Yes (2)

☐ No (1)

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.

☐ Name (1) _____

☐ 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.

End of Block: Section 14 - Prize Opt-In

Appendix B: Changes from the 2020-21 survey instrument

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

1. Residence relocation due to COVID-19 pandemic (omitted)
2. UC Davis parking permit (omitted)
3. Familiarity with Transportation Services (TS) programs (altered)
4. Remote work questions (omitted)
5. Housing and housing security (modified from 2019-20, since the section was shortened in 2020-21 survey)
6. Housing and Hazards (added)
7. Life satisfaction, well-being and travel experiences (added)
8. E-Scooters & E-Skateboards (added)

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: 2021-2022 UC Davis Campus Travel Survey

Dear UC Davis Student/Faculty/Staff,

You have been selected to participate in the 2021-2022 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.

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 experiences and opinions about emerging transportation options

In appreciation for your time, we're offering anyone who completes the survey entry into a drawing for **forty \$50 Amazon gift cards!**

To start the survey, click on the link below:

[Take the survey](#)

Thanks for your participation in this year's survey!

Sincerely,

Dr. Susan Handy, Professor

Aakansha Jain, PhD Student

Ryan Miller, PhD Student

UC Davis Institute of Transportation Studies

Reminder recruitment email:

From: UCD Travel Survey <travelsurvey@ucdavis.edu>

To: <...@ucdavis.edu>

Subject: 2021-2022 UC Davis Campus Travel Survey

Dear UC Davis Student/Faculty/Staff,

Last week we invited you to take the 2021-2022 Campus Travel Survey. We encourage you to complete the survey today. This annual survey provides valuable data about the travel preferences of the entire UC Davis community. Every response matters.

To start the survey, click on the link below:

[Take the survey](https://ucdavis.co1.qualtrics.com/jfe/form/SV_71iORD7ko0B5ISG?Q_DL=KXDWXYtM3cGBTt_71iORD7ko0B5ISG_MLRP_726eq0onYzugBVQ&Q_CHL=email)

Or copy and paste the URL below into your internet browser:

https://ucdavis.co1.qualtrics.com/jfe/form/SV_71iORD7ko0B5ISG?Q_DL=KXDWXYtM3cGBTt_71iORD7ko0B5ISG_MLRP_726eq0onYzugBVQ&Q_CHL=email

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.

In appreciation for your time, we're offering anyone who completes the survey entry into a drawing for **forty \$50 Amazon gift cards!**

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

Thanks for your participation in this year's survey!

Sincerely,

Dr. Susan Handy, Professor

Aakansha Jain, PhD Student

Ryan Miller, PhD Student

UC Davis Institute of Transportation Studies

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.”³ We attempt to adhere to the AQMD formula, although our overall survey methodology deviates to some extent from that prescribed by the AQMD.⁴ 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:

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

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 no 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

³ 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>).

⁴ 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

Table G- 1. Sampling Plan for 2017-18 through 2021-22, Percent Invited

Role	2021-22		Percent Invited				
	Assumed Population	Number Invited	2021-22	2020-21	2019-20	2018-19	2017-18
Student	38,591	17,375	45%	45%	36%	41%	45%
Undergraduate	31,262	12,642	40%	41%	34%	37%	40%
Freshman	6,909	1,011	15%	25%	26%	42%	43%
Sophomore	5,625	3,273	58%	66%	62%	52%	50%
Junior	8,015	3,058	38%	44%	26%	27%	33%
Senior	10,713	5,300	49%	36%	29%	33%	34%
Graduate	7,329	4,733	65%	65%	46%	60%	69%
Master's	3,732	3,490	94%	100%	76%	100%	93%
PhD	3,597	1,243	35%	43%	25%	33%	45%
Employee	10,568	2,794	26%	26%	21%	16%	28%
Faculty	1,641	1,641	100%	95%	53%	46%	118%
Staff	8,927	1,153	13%	16%	16%	11%	12%
Overall percent	100%	–	41%	40%	31%	33%	41%
Overall number	49,159	20,169	–	21,290	17,095	17,888	19,796

Table G- 2. Sampling Plan for 2017-18 through 2021-22, Response Rates

Role	2021-22			Actual Response Rate				
	Assumed Population	Number Invited	Target Response	2021-22	2020-21	2019-20	2018-19	2017-18
Student	38,591	17,375	12%	20%	19%	17%	22%	19%
Undergraduate	31,262	12,642	12%	17%	18%	17%	20%	18%
Freshman	6,909	1,011	36%	42%	41%	27%	28%	18%
Sophomore	5,625	3,273	11%	18%	16%	15%	15%	18%
Junior	8,015	3,058	12%	18%	17%	15%	22%	21%
Senior	10,713	5,300	7%	12%	12%	15%	17%	15%
Graduate	7,329	4,733	15%	26%	22%	19%	27%	21%
Master's	3,732	3,490	10%	17%	15%	16%	21%	16%
PhD	3,597	1,243	28%	51%	33%	25%	38%	31%
Employee	10,568	2,794	24%	30%	29%	22%	25%	33%
Faculty	1,641	1,641	19%	25%	20%	21%	31%	38%
Staff	8,927	1,153	32%	37%	37%	22%	22%	28%
Overall percent	100%	41%	14%	21%	21%	18%	22%	20%
Overall number	49,159	20,169	2,840	4,265	4,506	3,098	4,014	3,748

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_i in role and gender group i in the population (for instance, female freshmen), and n_i 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 $n = 3,098$ 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 4,178 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.

Table H- 1. Weight Factors, applied by Role, Gender, Mode, and Geocoding

Role	Gender	Population (N)	Factors by Role, Gender, and Mode ^a				Factors by Role, Gender, Mode, and Geocoding ^b			
			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	4,083	303	1.169	13.475	354	300	1.157	13.610	347
	Man	2,826	122	2.010	23.164	245	121	1.985	23.355	240
Sophomore	Woman	3,504	444	0.685	7.892	304	439	0.678	7.982	298
	Man	2,121	144	1.278	14.729	184	140	1.288	15.150	180
Junior	Woman	4,865	387	1.091	12.571	422	380	1.088	12.803	413
	Man	3,150	168	1.627	18.750	273	166	1.613	18.976	268
Senior	Woman	6,406	449	1.238	14.267	556	440	1.237	14.559	544
	Man	4,307	191	1.956	22.550	374	187	1.957	23.032	366
Master's	Woman	2,221	377	0.511	5.891	193	372	0.507	5.970	189
	Man	1,511	209	0.627	7.230	131	205	0.626	7.371	128
PhD	Woman	1,802	424	0.369	4.250	156	418	0.366	4.311	153
	Man	1,795	208	0.749	8.630	156	201	0.759	8.930	153
Faculty	Woman	704	209	0.292	3.368	61	204	0.293	3.451	60
	Man	937	200	0.406	4.685	81	190	0.419	4.932	80
Staff	Woman	5,142	299	1.492	17.197	446	291	1.502	17.670	437
	Man	3,785	131	2.507	28.893	328	124	2.594	30.524	322
Overall	–	49,159	4,265	0	11.526	4,265	4,178	0	11.766	4,178

^a Based on valid responses to Q2 (campus role), Q17 (gender).

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