CalPoly 2015 Transportation Survey Report

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CalPoly 2015 Transportation & Parking Survey Report

William Riggs
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INTRODUCTION

During the 2015-2016 academic year City & Regional Planning faculty conducted a campus-wide transportation and parking survey as part of work on the campus Climate Action Plan. The survey which occurred in the spring of 2015 and represented spring 2015 commutes, and was issued to a sample of full and part-time CalPoly faculty, staff, students and auxiliaries with assistance from Facilities Services and the Vice President for Administration and Finance. The parking analysis conducted primarily during early 2016 validated those survey results.

The survey received a total of 3,961 responses, 17% of the entire campus population of roughly 23,000. Unsurprisingly, the majority of respondents were students, totaling 68.6%, while the rest were made up of faculty, staff, and visitors. Results are significant at the 99% Confidence Interval with a margin of error of ± 1.68%.

![CalPoly Transportation Modes 2015](image)

*Figure 1: Modal Split for Entire Campus*

On average survey respondents traveled roughly 17 vehicle miles traveled (VMT) to campus of those reporting to drive alone or in a carpool to campus. The average VMT was calculated based on the distance of stated residential address data to campus from the CalPoly Travel Survey. The distances representing the closest intersection to each respondent’s residence. This was geocoded and the network distance calculated using the ArcGIS network distance from a campus centroid; in this case Kennedy Library. The distances were then averaged.
Figure 2: Geocoded Responses by Closest Intersection
Figure 3: Network Distance Calculations
I: SURVEY SUMMARY

KEY POINTS & HIGHLIGHTS

General
- Most common ‘Other Modes’ were skateboard and motorcycle.
- Most did not use more than one mode of travel in a week (e.g. not multi-modal).
- Most arrive between 7:30am and 8:30am and depart between 4:30pm and 5:30pm, Monday through Thursday; 18% do not come to campus on Fridays due to compressed work weeks and over 70% do not come to campus on the weekends.
- 37% use telework options at least once a week.
- 71% of respondents are interested in telework opportunities.
- Most respondents walk or bicycle around campus once they have arrived.
- Many of those who walk, bike, or take transit to work also exercise moderately or vigorously at least 45 minutes per day.
- While most respondents do not fly within California for CalPoly-related purposes, those who do average less than 10 times per year.
- Most respondents do not fly domestically or internationally for CalPoly-related purposes each year, while those who do average less than 10 times per year.
- The male to female ratio of respondents was 45:55.
- 71% have never been married and 25% currently married, making up the majority of respondents.
- Over three quarters of respondents identify as White, followed by 10% Asian, 10% other (often interracial).
- Only 14% of respondents are of Hispanic or Latino origin.
- All colleges of the University were represented in the survey, with the most respondents from the College of Engineering (24.5%).
- Other respondents that are not affiliated with a college include those working in the library, administration, facilities, and ITS.
- Over one third of those who responded have been studying at CalPoly for 3-4 years.
- Of those respondents employed by CalPoly, 19% have been employed for one year or less.
- The mode of the estimated household income of respondents was between $50,000 and $74,999.
- Over half of the respondents live in households two people or less.
- About 85% of respondents do not with children under the age of 18 at least 50% of the time.
- About 16% of respondents live in university-owned housing.
- Half of the respondents spend $500 to $999 per month on housing costs (excluding utilities, taxes, and insurance).
Driver and Vehicle Characteristics

- The predominant type of vehicle coming to campus is a 4-door sedan.
- 66% have a model newer than 2005.
- Roughly 10% drive a hybrid or electric vehicle.
- 90% of drivers use campus structures or lots for parking, while others use off-campus street and lot parking.
- Most common “Other” parking space was designated vanpool parking.
- About 87% of all respondents have a campus parking permit.
- Campus parking structures were all utilized, with the Grand Avenue and Facilities parking garages being the most common on campus parking areas.
- Respondents were equally split on whether they frequently have to drive around looking for spaces. Of those who frequently look, most spend less than 20 minutes looking.

Table 1. Mode Split by Cohort Relative to Population Size

<table>
<thead>
<tr>
<th></th>
<th>Student</th>
<th>Faculty</th>
<th>Staff / Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bicycle</td>
<td>18%</td>
<td>16%</td>
<td>5%</td>
<td>15%</td>
</tr>
<tr>
<td>Drive Alone</td>
<td>24%</td>
<td>68%</td>
<td>68%</td>
<td>38%</td>
</tr>
<tr>
<td>Carpool / Vanpool</td>
<td>5%</td>
<td>8%</td>
<td>19%</td>
<td>8%</td>
</tr>
<tr>
<td>Public Transit (Bus)</td>
<td>10%</td>
<td>5%</td>
<td>4%</td>
<td>8%</td>
</tr>
<tr>
<td>Walk</td>
<td>41%</td>
<td>3%</td>
<td>1%</td>
<td>29%</td>
</tr>
<tr>
<td>Other</td>
<td>1%</td>
<td>1%</td>
<td>2%</td>
<td>2%</td>
</tr>
</tbody>
</table>

Of those who bike to campus, 14% do so at least five day per week (table 2). Those who bicycle, drive alone, and walk, most use these respective modes at least five days per week. This is unlike those who vanpool or use public transit, with the majority of these commuters using these transportation modes only one day per week or less. For a large number of students, this modal choice, is largely dictated by how far one lives from campus. Tables 2 and 3 illustrate how, on average, students and staff live further from campus than faculty staff. While some may find this trend for students counterintuitive since many do in-fact live close to campus, in actuality the second largest share of both students and staff live greater than 10 miles from campus, as illustrated by Table 3. This parabolic relationship over geography is worth consideration in campus housing transportation policies.

Table 2. Average Distance to Campus

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean Distance (mi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>2426</td>
<td>17.36145146</td>
</tr>
<tr>
<td>Student</td>
<td>1632</td>
<td>18.62698192</td>
</tr>
<tr>
<td>Faculty - Staff</td>
<td>665</td>
<td>16.09775848</td>
</tr>
<tr>
<td>Faculty</td>
<td>229</td>
<td>12.10932211</td>
</tr>
<tr>
<td>Staff</td>
<td>436</td>
<td>18.19260235</td>
</tr>
</tbody>
</table>
Table 3. Distance by Cohort

<table>
<thead>
<tr>
<th></th>
<th>Less than 1.5 Mile</th>
<th>1.5 to 5 Mile</th>
<th>5 to 10 Mile</th>
<th>Great than 10 Mile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student</td>
<td>Count</td>
<td>357</td>
<td>805</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>% within User Type</td>
<td>21.9%</td>
<td>49.3%</td>
<td>1.0%</td>
</tr>
<tr>
<td></td>
<td>% within Distance Cohorts</td>
<td>69.5%</td>
<td>71.9%</td>
<td>68.0%</td>
</tr>
<tr>
<td></td>
<td>% of Total</td>
<td>15.5%</td>
<td>35.0%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Faculty</td>
<td>Count</td>
<td>63</td>
<td>105</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>% within User Type</td>
<td>27.5%</td>
<td>45.9%</td>
<td>0.9%</td>
</tr>
<tr>
<td></td>
<td>% within Distance Cohorts</td>
<td>12.3%</td>
<td>9.4%</td>
<td>8.0%</td>
</tr>
<tr>
<td></td>
<td>% of Total</td>
<td>2.7%</td>
<td>4.6%</td>
<td>0.1%</td>
</tr>
<tr>
<td>Staff / Other</td>
<td>Count</td>
<td>94</td>
<td>209</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>% within User Type</td>
<td>21.6%</td>
<td>47.9%</td>
<td>1.4%</td>
</tr>
<tr>
<td></td>
<td>% within Distance Cohorts</td>
<td>18.3%</td>
<td>18.7%</td>
<td>24.0%</td>
</tr>
<tr>
<td></td>
<td>% of Total</td>
<td>4.1%</td>
<td>9.1%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>514</td>
<td>1119</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>% within User Type</td>
<td>22.4%</td>
<td>48.7%</td>
<td>1.1%</td>
</tr>
<tr>
<td></td>
<td>% within Distance Cohorts</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td></td>
<td>% of Total</td>
<td>22.4%</td>
<td>48.7%</td>
<td>1.1%</td>
</tr>
</tbody>
</table>
Table 4. Travel mode by days of the week

<table>
<thead>
<tr>
<th>Mode</th>
<th>Never Use this mode</th>
<th>Less than once per week</th>
<th>1-2 days per week</th>
<th>3-4 days per week</th>
<th>5+ days per week</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bicycle</td>
<td>63.4 % 2,099</td>
<td>10.1 % 334</td>
<td>6.2 % 204</td>
<td>6.4 % 213</td>
<td>14.0 % 463</td>
<td>3313</td>
</tr>
<tr>
<td>Drive Alone</td>
<td>31.2 % 1,132</td>
<td>16.5 % 597</td>
<td>11.4 % 414</td>
<td>13.1 % 475</td>
<td>27.7 % 1,005</td>
<td>3623</td>
</tr>
<tr>
<td>Carpool / Vanpool</td>
<td>56.7 % 1,838</td>
<td>21.2 % 688</td>
<td>12.6 % 409</td>
<td>4.9 % 159</td>
<td>4.5 % 145</td>
<td>3239</td>
</tr>
<tr>
<td>Public Transit</td>
<td>64.9 % 2,066</td>
<td>15.6 % 496</td>
<td>7.3 % 231</td>
<td>6.4 % 204</td>
<td>5.8 % 186</td>
<td>3183</td>
</tr>
<tr>
<td>Walk</td>
<td>41.1 % 1,333</td>
<td>12.5 % 405</td>
<td>7.0 % 227</td>
<td>5.9 % 193</td>
<td>33.5 % 1,088</td>
<td>3246</td>
</tr>
<tr>
<td>Other</td>
<td>91.6 % 2,500</td>
<td>4.4 % 119</td>
<td>1.5 % 40</td>
<td>0.7 % 20</td>
<td>1.8 % 50</td>
<td>2729</td>
</tr>
</tbody>
</table>

Telework

The majority of those who tend to telecommute often referred to occasionally telecommuting, or telecommuting as needed, and some may not have fully understood the question.
Travel Around Campus
Once people complete their commute, over 95% of respondents walk or bike to get around campus. Those who selected “Other” included a combination of modes, and using designated staff vehicles such as golf carts and electric trucks.

Parking Location
When asked where individuals parked, 90% of those who drive to campus indicated that they park in campus structures and lots, and only 1.6% pay for parking through meters or off-street parking. It is unclear whether those using residential parking permits are purchasing them to commute. Those who responded with “Other” often referred to parking in vanpool-designated spaces, or being dropped off.

Table 5

<table>
<thead>
<tr>
<th>Value</th>
<th>Percent</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>On street (city), meter</td>
<td>0.8%</td>
<td>14</td>
</tr>
<tr>
<td>On street (city), in residential parking zone, with</td>
<td>0.8%</td>
<td>14</td>
</tr>
<tr>
<td>residential parking permit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>On street (city), in residential parking zone, without</td>
<td>1.3%</td>
<td>23</td>
</tr>
<tr>
<td>residential parking permit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>On street (city), not in residential parking zone</td>
<td>1.6%</td>
<td>28</td>
</tr>
<tr>
<td>Campus structure or lot</td>
<td>90.0%</td>
<td>1,547</td>
</tr>
<tr>
<td>Off street (city or private), free</td>
<td>1.9%</td>
<td>33</td>
</tr>
<tr>
<td>Off street (city or private), paid</td>
<td>0.6%</td>
<td>10</td>
</tr>
<tr>
<td>Designated disabled parking spot (on or off campus)</td>
<td>0.6%</td>
<td>11</td>
</tr>
<tr>
<td>Other</td>
<td>2.3%</td>
<td>39</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>1,719</td>
</tr>
</tbody>
</table>

Only 10% of those who responded did not have a parking permit. Faculty and staff parking permits accounted for over half of all permits. Those who responded “Other” included those purchasing daily, weekly, or monthly permits, or vanpool permits.
Parking Lot Information from Survey

All of the lots on campus are used, with the most popular choices being Grand Avenue Parking Structure and Facilities. Respondents who chose “Other” referred to motorcycle and vanpool parking, or gave general directions without citing a specific lot.

Table 6

<table>
<thead>
<tr>
<th>Value</th>
<th>Percent</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA, I don’t have a campus permit</td>
<td>5.2%</td>
<td>89</td>
</tr>
<tr>
<td>A1-Administration</td>
<td>1.2%</td>
<td>20</td>
</tr>
<tr>
<td>C1-Children’s Center</td>
<td>1.6%</td>
<td>27</td>
</tr>
<tr>
<td>C2-Children’s Center</td>
<td>4.7%</td>
<td>81</td>
</tr>
<tr>
<td>C3-Stadium</td>
<td>2.3%</td>
<td>40</td>
</tr>
<tr>
<td>C4-Business</td>
<td>2.6%</td>
<td>44</td>
</tr>
<tr>
<td>C6-Dining Complex</td>
<td>0.1%</td>
<td>2</td>
</tr>
<tr>
<td>C7-Engineering</td>
<td>6.0%</td>
<td>103</td>
</tr>
<tr>
<td>G1-Grand Avenue</td>
<td>6.7%</td>
<td>114</td>
</tr>
<tr>
<td>GS-Grand Avenue Parking Structure</td>
<td>21.6%</td>
<td>370</td>
</tr>
<tr>
<td>H01-Warehouse</td>
<td>1.0%</td>
<td>17</td>
</tr>
<tr>
<td>H01-Crops Unit</td>
<td>1.0%</td>
<td>17</td>
</tr>
<tr>
<td>H02-Campus Market</td>
<td>6.8%</td>
<td>116</td>
</tr>
<tr>
<td>H04-Facilities</td>
<td>10.0%</td>
<td>172</td>
</tr>
<tr>
<td>H10-Library</td>
<td>2.5%</td>
<td>42</td>
</tr>
<tr>
<td>H11-Agriculture Building</td>
<td>2.3%</td>
<td>40</td>
</tr>
<tr>
<td>H12-Via Carta</td>
<td>7.0%</td>
<td>119</td>
</tr>
<tr>
<td>H13-Research Development</td>
<td>0.4%</td>
<td>6</td>
</tr>
<tr>
<td>H14-Via Carta</td>
<td>2.0%</td>
<td>34</td>
</tr>
<tr>
<td>H15-Sports Complex</td>
<td>1.5%</td>
<td>26</td>
</tr>
<tr>
<td>H16-Beef Unit</td>
<td>4.7%</td>
<td>80</td>
</tr>
<tr>
<td>R1-University Housing</td>
<td>1.7%</td>
<td>29</td>
</tr>
<tr>
<td>R2-Grand Avenue</td>
<td>1.5%</td>
<td>25</td>
</tr>
<tr>
<td>R3-Village Drive Parking Structure</td>
<td>0.5%</td>
<td>8</td>
</tr>
<tr>
<td>R4-Canyon Circle Parking Structure</td>
<td>1.1%</td>
<td>19</td>
</tr>
<tr>
<td>Other</td>
<td>4.3%</td>
<td>73</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>1,713</td>
</tr>
</tbody>
</table>
Type of Car
Over half of those who drive a car, the majority drive 4-door sedans, with SUVs being the second most popular choice.

About 8% of respondents drive hybrid cars, with only 1.1% driving hybrid electric, plug-in electric, or electric vehicles.

Table 7

<table>
<thead>
<tr>
<th>Value</th>
<th>Percent</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>90.3%</td>
<td>1,546</td>
</tr>
<tr>
<td>Yes, hybrid</td>
<td>8.1%</td>
<td>138</td>
</tr>
<tr>
<td>Yes, hybrid electric / plug-in hybrid</td>
<td>0.5%</td>
<td>8</td>
</tr>
<tr>
<td>Yes, electric</td>
<td>0.6%</td>
<td>11</td>
</tr>
<tr>
<td>Other, please specify</td>
<td>0.6%</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>1,713</td>
</tr>
</tbody>
</table>
II: PARKING SURVEY

2015 Parking Counts and Bike, Ped, Auto Volumes

During fall of 2015 parking counts and traffic volumes were collected over a 3-day period to better understand travel patterns, space occupancy across the campus. Of particular interest is the share of travel at each intersection, and the tendency to engage in circling behavior.

The geocoded raw data is available via the document link below:
https://docs.google.com/spreadsheets/d/14Xtj1MGkuG3sAMeAX-fu9-U0NQSNtzIwPp8gg9Odskys/edit?usp=sharing
Bicycle and Pedestrian Data

**Foothill and California Avenue**

The intersection of Foothill Boulevard and California Avenue observed the highest number of pedestrians, vehicles, and buses in the evening. Both the number of vehicles and buses increased throughout the day. Bicyclists used the intersection most frequently in the morning, but did not fluctuate much throughout the day, staying around 300 bicyclists per time. There is a significant jump in number of vehicles between morning and evening by about 2,000.
The intersection of Highland Drive and University Drive witnessed a similar number of all modes for both midday and evening.
Highland and California

The intersection Highland Drive and California Avenue witnessed the largest number of pedestrians at midday (around 225 for the two-hour period), and the largest number of bicyclists in the morning. Both vehicle and bus averages were highest in the evening, up slightly from the morning for both modes.
Hathway and Slack

Highland and Slack had the most volume in the PM, averaging 200 pedestrian trips per hour (400 total) and 60 bike trips from the neighborhoods to the South of campus. This represented 67% of total traffic volume compared to the auto traffic.
The intersection of Village Drive and South Perimeter Road saw the highest numbers of pedestrians, vehicles, and buses in the morning. Bicyclists most frequently used the intersection midday. All of the modes did not vary drastically throughout the day. Especially during the morning and midday, pedestrian trips matched the number of auto-trips.
The intersection of Slack Street and Grand Avenue witnessed the largest number of pedestrians and buses in the evening. Vehicles consistently used the intersection throughout the day, averaging about 1,500 vehicles for each time period. Bicyclists the intersection most frequently during the morning and evening.

**Police Parking Data**

Cal Poly has a number of parking lots on campus for various users. The likes of students, visitors and faculty all frequent campus for various durations of time and activities. For planning purposes it is useful to determine which lots reach capacity by time and day. Parking data provided and recorded by the University Police Department allows planners to make decisions about the future by analyzing current conditions. Data is derived by recording parking space occupancy at 10:00 am and 2:00 pm during the second week of every quarter. Counts were not recorded at all lots on campus, instead, parking enforcement recorded data for only lots deemed by the police department to be most frequented.

While helpful, data collected by the University Police Department does not provide the level of accuracy needed for a thorough analysis to make projections about the future. Consequently, it is difficult to accurately apply any findings from the specific lots to the entire campus. In many instances the data taken by parking enforcement officers was not carefully recorded.
Specifically, the number of cars occupying lots exceeded the amount of parking spaces in lots in some instances. The inaccuracy of the data ultimately renders it useless, which degrades the validity of any reports that might reference this dataset. Another note users of the data may want to consider is concerns consistency issues regarding the specific lots recorded. Year to year, the police department did not collect data for the same lots which skews trends.

Figure 7

Trends in the data did show that the average by day and time resulted in the highest occupancies of lots on Fridays when compared to all other weekdays. The 2 PM time slot for both the Grand Structure and North Quadrant parking areas both proved the most frequented on Fridays with an average occupancy of 20% and 48% respectively.

Visitor Parking Data

Visitor parking data on the campus of Cal Poly San Luis Obispo was collected from the years 2011 to 2015, with only half of final year calculated due to time constraints. Three categories were analyzed when reviewing the data, Total Revenue, Total Number of Parking Tickets Purchased, and Total Number of Tickets Purchased during each years Peak Hour. Data for all three categories exhibited a significant increase from 2011-2012, while all other yearly totals experienced moderate increases. As far as type of ticket purchased by visitors of the campus, All Day General Passes are most commonly purchased.

The number of parking tickets purchased on the campus between 2011 and 2014 experienced an increase of 248% from 30,731 to 106,797 tickets purchased.
Over the four-year period, revenue increased by 279% from $30,672 to $106,797. Additionally, revenue was highest via parking tickets purchased during the hour of 1:00, pm four out of five years.

The hour that proved to be the peak hour turned out to be between 7:00 pm and 8:00 pm. From 2011 to 2014 the yearly total of tickets purchased by visitors of the campus during peak hour rose 194% from 4,431 to 13,021 tickets.
Constraints for the data mainly surround the fact the data is cataloged by year instead of by month. The data might be more useful if it were to be cataloged by month, possibly displaying which months drivers visited purchased tickets the most. Additionally, data provided for the year 2015 is virtually incomparable due to only half the data believe available. It might also be helpful to know how much each type of parking ticket cost along with whether or not prices increased. The data also appears to be entered manually instead of via the equations that can be used within excel. Due to this, I don’t believe the data is entirely accurate as I have some found discrepancies regarding column/row totals.

Each dataset displays various types of tickets that can be purchased while some have duplicate names and no explanation as to what the subsequent number in parentheses refers to. For instance, the All Day General Pass has many rows displaying the type of ticket but doesn’t follow the same trend as the rest of the data. As displayed below, the number of All Day General Passes actually declined between 2013-2014.
Summary

In sum some key trends can be derived from the parking survey and from general pass data.

1. Permit parking on campus tends to fill up by 9am (at latest) and then experience very little turnover.
2. At the same time there is ample general permit demand, as the bulk of purchases tend to occur during the peak hours and events.

These two factors seem to indicate policy opportunities to reframe parking services for both permit holders and parking permit holders. Specifically this might include a combination of policies such as:

- Considering time of day or location based peak pricing and invest in related technology (gps, sensor, RFID or mobile);
- Unbundling monthly permits to allow for daily or hourly payment vs. monthly permits (gps, sensor, RFID or mobile) not to exceed maximum allowable;
- Using a climate impact change on top of permit to account for the full cost of providing parking spaces (Tudela-Rivadeneyra, Shirgaokar, Deakin, & Riggs, 2015).

At the same time, consistent with literature (Benson, Cooper, & Knott, 2008; Hamilton, 2008; Riggs, 2015; Riggs & Kuo, 2015) exploring rough social and financial TDM strategies would behoove the campus in parallel—developing a comprehensive program to incentive active commuting. Strategies might include:

- Social Market Norms
  - A social application that allows for group connections
  - A commute club where campus travelers and entitled to a free cup of coffee or juice when they travel via walking or biking
- A free monthly gym membership to allow for shower before work and support a holistic healthy lifestyle/workplace.
- Bike Voucher Programs

- Financial Market Norms
  - Money back or “cash-out” for taking an alternative mode of transportation to work, as an offset to the fact that they did not use the campus parking resource.
  - Hybridized cash-out program where commuters are entered into a daily raffle for a prize of cash or goods. Literature shows that this can have an equal effect as cash-outs since, as long as individual are engaged, they believe they have a chance at winning (Ariely, 2008; Heyman & Ariely, 2004).
  - A points-based or competition (number of steps or miles traveled) based system where you can earn small rewards or wager points for larger rewards. A variation of this approach has been very successful as a part of the Stanford CAPRI program (Green, 2007).
III: CALPOLY TRAVEL SURVEY QUESTIONS

CAMPUS AFFILIATION

POSSIBLY PROVIDED WITH SEED DATA

1. What is your campus affiliation? If you have more than one, choose the one you most strongly identify with.

   **Student**
   
   - Undergraduate
   - Graduate

   **Nonstudent**
   
   - Professor/Associate Professor
   - Assistant Professor
   - Adjunct / Lecturer
   - Other Faculty/Academic (includes Emeriti)
   - Executive / Staff
   - Staff
   - Corporation Employee
   - Visiting Scholar
   - Other, please specify

TRAVEL TO CAMPUS

2. Thinking about your commute as a whole, how did you usually travel during the spring of 2015. Just so you know, we call this your ‘primary mode.’

   Bicycle
   Drive Alone
   Drive or Ride with Others (Carpool / Vanpool)
   Public Transit (Bus)
   Walk
   Other: please specify

3. Some people get to campus the same way each day, others travel in different ways by day. Please tell us more specifically how you got to campus on average during the spring of 2015. Choose all that apply
4. Some people use a different mode to return home from campus than they use to get to campus. Please tell us how you usually returned home from campus during the spring of 2015?
   - Bike
   - Drive Alone
   - Drive or Ride with Others (Carpool / Vanpool)
   - Public Transit (Bus)
   - Walk
   - Other: Specify

5. What time do you usually first ARRIVE on campus? Select one option for each day of the week.

<table>
<thead>
<tr>
<th>Day</th>
<th>Do not usually come to work</th>
<th>Before 7:30 am</th>
<th>7:30 - 8:29 am</th>
<th>8:30 - 9:29 am</th>
<th>9:30 - 10:29 am</th>
<th>10:30 am - 12:59 pm</th>
<th>1:00 - 3:29 pm</th>
<th>3:30 - 4:29 pm</th>
<th>4:30 - 5:29 pm</th>
<th>5:30 pm or later</th>
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</table>

6. What time do you usually first DEPART on campus? Select one option for each day of the week.

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<tr>
<th>Day</th>
<th>Do not usually come to work</th>
<th>Before 7:30</th>
<th>7:30 - 8:29</th>
<th>8:30 - 9:29</th>
<th>9:30 - 10:29</th>
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</table>
7. On the days when you do not come to campus, do you telework?
   • Yes / No
   • Other, please specify

8. If the campus were to more formally consider a telework opportunities would you be interested?
   • Yes / No

**DRIVING & CARPOOLING**

9. You indicated that you drive at some times to campus. Where do you typically park?
   • On street, meter
   • On street, in residential parking zone, with residential parking permit
   • On street, in residential parking zone, without residential parking permit
   • On street, not in residential parking zone
   • Campus structure or lot
   • Off street, free
   • Designated disabled parking spot (on or off campus)
   • Other, please specify
10. Do you have a campus parking permit?
   - Yes, Faculty/Staff permit
   - Yes, Student permit
   - No permit
   - Yes, Other type of permit, please specify

ONLY TO THOSE WITH CAMPUS PARKING PERMIT
11. On average, in which Cal poly lot do you usually park? Check all that apply. (Parking Map Available Here: Link)

12. Do you frequently have to drive around looking for parking or go to more than one parking lot to find parking?
   - No
   - Yes
     - How long does this search typically take (in minutes)?

13. What type of car do you drive?
   - 4-door sedan
   - 2-door coupe
   - Van/wagon
   - Sports car
   - Sports utility
   - Pickup truck

14. What is the Model year?
   - Year dropdown

15. Is your car a hybrid or electric vehicle?
   - No
   - Yes, hybrid
   - Yes, hybrid electric / plug-in hybrid
   - Yes, electric
   - Other, please specify

RANDOMLY SELECTED DRIVERS UP TO N=100
16. Will you agree to turn in your parking pass and not drive for a week some time in the next year? In exchange we will give you a $5 Amazon gift card.
   - Agree
   - Do not agree
RANDOMLY SELECTED DRIVERS UP TO N=100
17. Will you agree to turn in your parking pass and not drive for a week some time in the next year? If you agree, we will give you a free cup of coffee.
   • Agree
   • Do not agree

RANDOMLY SELECTED DRIVERS UP TO N=100
18. Will you agree to turn in your parking pass and not drive for a week some time in the next year? If you agree, we will give you a free cup of coffee (~value $2).
   • Agree
   • Do not agree

RANDOMLY SELECTED DRIVERS UP TO N=100
19. Will you agree to help us make the campus a more green environment and reduce campus commute emissions by turning in your parking pass and not driving for a week some time in the next year?
   • Agree
   • Do not agree

MULTIMODAL
20. Once you have completed your commute, how do you get around on-campus for class, meetings, study, work, etc.?
   • Bicycle
   • Drive Alone
   • Drive or Ride with Others (Carpool / Vanpool)
   • Public Transit (Bus)
   • Walk
   • Other, please specify

21. On the days that you walk, bike or take transit to work how many minutes per day do you engage in other forms of moderate or vigorous exercise (estimate in whole numbers)? Examples of moderate exercise are walking briskly, playing tennis or bicycling. Examples of vigorous exercise are race walking or running, lap swimming or strenuous hiking.
   • Minutes
   • Not applicable, I don’t walk or bike to work

22. How many minutes do you do vigorous exercise on an average day?
   • Minutes
   • Not applicable, I do not engage in vigorous exercise
AIR TRAVEL

23. How often do you fly for CalPoly-related purposes?
   • # In-state
   • # Domestic
   • # International

ABOUT YOU / BACKGROUND

24. Please provide us with your local address so we understand how far you live from campus. Enter the closest cross street / closest intersection, the city and zip code. Keep in mind that if your permanent address is not the same as your local address, that you should provide your local address.

25. What is your sex?
   • Male
   • Female

26. In what year were you born?
   • Year

27. What is your marital status?
   • Never married
   • Married
   • Divorced
   • Widowed

28. Ethnicity
   • Hispanic or Latino
   • Not Hispanic or Latino

29. Race: Please specify your race
   • American Indian or Alaska Native
   • Asian
   • Black or African American
   • Native Hawaiian or Other Pacific Islander
   • White

30. What is your height in feet and inches?

31. What is your weight in pounds?
STUDENT BACKGROUND

32. What is your year of study?
• 1 year or less
• 1-2 years
• 3-4 years
• 4-5 years
• 5 or more years

33. What is your primary college or school (choose only one)?
• College of Agriculture, Food and Environmental Sciences
• College of Architecture and Environmental Design
• Orfalea College of Business
• College of Engineering
• College of Liberal Arts
• College of Science and Mathematics

34. What type of housing do you live in?
• Own a house or condominium by you or someone in this household with a mortgage or loan?
• Own a house or condominium by you or someone in this household free and clear (without a mortgage or loan)?
• Rent a private (non-campus affiliated) apartment or condominium
• Rent a private (non-campus affiliated) house or duplex
• Rent a room in a shared household / private home
• University-owned residence hall
• University-owned apartment
• Fraternity or sorority
• Live rent free with parents or relatives
• Live rent free in a unit owned by parents or relatives
• Other, please specify:

FACULTY / STAFF BACKGROUND

35. What is your primary college or school (choose only one)?
• College of Agriculture, Food and Environmental Sciences
• College of Architecture and Environmental Design
• Orfalea College of Business
• College of Engineering
• College of Liberal Arts
• College of Science and Mathematics
36. How many years have you been employed at Cal Poly? Please include full-time and part-time appointments, but do not count student positions.

- 1 or less
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
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- 25
- 26
- 27
- 28
- 29
- 30
- 31
- 32
- 33
- 34
- 35
- 36
- 37
- 38
- 39
- 40 or more
- Prefer not to answer
37. What is your estimated annual household income, from all sources?
   • Less than $25,000
   • $25,000 - $49,999
   • $50,000 - $74,999
   • $75,000 - $99,999
   • $100,000 - $124,999
   • $125,000 - $149,999
   • $150,000 - $199,999
   • $200,000 or more
   • Prefer not to answer

38. How many people (including yourself) make up your household?
   • 1
   • 2
   • 3
   • 4
   • 5 or more

39. What type of housing do you live in?
   • Own a house or condominium by you or someone in this household with a mortgage or loan
   • Own a house or condominium by you or someone in this household free and clear (without a mortgage or loan)
   • Rent a private (non-campus affiliated) apartment or condominium
   • Rent a private (non-campus affiliated) house or duplex
   • Rent a room in a shared household / private home
   • Other, please specify:

40. How many children under the age of 18 live with you at least 50% of the time?
   • 0
   • 1
   • 2
   • 3
   • 4 or more
41. Not including utilities, taxes or insurance, how much is your monthly housing cost (mortgage payment or rent)?
   • Less than $500
   • $500 to $999
   • $1000 to $1499
   • $1500 to $1999
   • $2000 to $2499
   • $2500 to $2999
   • $3000 to $3499
   • $3500 to $3999
   • $4000 to $4499
   • $4500 to $4999
   • More than $5000

COMMENTS / FEEDBACK

42. Do we have your permission to follow up with you if we have any questions about your responses?
   Yes / No

43. Is there anything else you would like to say about transportation or housing at Cal Poly or are there suggestions you have to help us improve our surveys in the future
REFERENCES


http://doi.org/10.1016/j.tra.2015.05.012


http://doi.org/10.1016/j.cstp.2015.01.004