

November 20, 2016  
Amit Kothari  
ITE Western District Technical Committee Chair  
AmitOneKothari@gmail.com



Re: ITE Western District 2017 Student Data Collection Proposal

Dear Evaluation Committee,

The Institute of Transportation Engineers at UC Berkeley (Cal ITE) is pleased to submit the attached proposal for the ITE Western District 2017 Student Data Collection Project. We recognize the need for technical data on new land types, so we have chosen a recently opened downtown housing complex in downtown Berkeley that sees a variety of modes. We find this project a perfect opportunity to contribute back to the Institute, as our organization greatly benefits from Western ITE's support and guidance.

This project is a fantastic opportunity to provide members with hands-on transportation experience. UC Berkeley has a fantastic transportation engineering program, but the overwhelming majority of opportunities and resources go toward the graduate program. Moreover, UC Berkeley only offers two undergraduate transportation engineering courses. We highlight this to outline the importance of Cal ITE in exposing undergraduates to transportation. This data collection project would be an excellent opportunity for Cal ITE to gain experience in trip counts, trip generation, and technical report writing.

When preparing this proposal, we were pleased with the amount of interest expressed among members. We already have about 13 people interested in participating in this project, which is significant considering we have around 20 active members. While Cal ITE is smaller than some of the other chapters in the Western District, we have undergone significant growth within the past few years. We recently hosted our first AutoCAD workshop at Arup's SF office. Last month, we held a social with the UC Berkeley transportation engineering graduate student group, connecting undergraduate and graduate students. We have also increased Cal ITE's numbers at the Student Leadership Summit and the Western District Annual Meeting. At this January's Student Leadership Summit, we will have over 10 members present, which is over a threefold increase as compared to previous years. Funds from the project would be used to subsidize attendance at conferences, subsidize transportation costs for field trips, and host more general meetings with transportation professionals.

We plan on using the data collection project as a major aspect of next semester's activities. Conducting this data collection project would allow Cal ITE to contribute to ITE Western District and also provide us with a platform to continue to grow. We thank you for your consideration and your continued support of our chapter. Please feel free to contact me or any other Cal ITE officer or mentor with any questions or concerns.

Sincerely,

Adrian Diaz de Rivera  
Cal ITE Officer, Past-President

## 1. Data Collection Proposal Scope

The proposed data collection will provide trip generation and parking occupancy rates for the recently opened Varsity Berkeley apartments at 2024 Durant Ave. in Berkeley, CA. Varsity Berkeley is a 6-story downtown housing complex consisting of 78 1-, 2-, and 3-bedroom dwelling units as well as an underground garage providing 36 parking spaces for residents. The garage additionally hosts space for City CarShare, electric car charging, and bicycle parking. The development has 3 entrances: a pedestrian entrance and a 2-way driveway into the underground garage on Durant Avenue as well as an additional pedestrian entrance on Channing Way. The development is located in the middle of downtown Berkeley, 2 blocks away from the UC Berkeley campus, the Downtown Berkeley BART station, and over a dozen AC Transit, Bear Transit, and shuttle bus routes. The development's location in a high-density, mixed-use neighborhood and its close proximity to transit and major employment and education centers provides a high proportion of transit, walking, and bicycling trips. Cal ITE has submitted a written proposal to the apartment manager of the Varsity Berkeley development for his personal review. Upon formal approval, we will meet with him to discuss final details of the data collection. Initial discussions with him have been positive.

Cal ITE will perform physical counts of trucks, bicycles, pedestrians, passengers in vehicles, and total motor vehicles entering and exiting the property. Pending approval of the apartment manager, Cal ITE will conduct a survey asking pedestrians whether they are planning to take transit or are walking to their destination. If approval is not received for a passive or active survey of pedestrians, the mode choice of pedestrians will be determined visually. The mode of travel used for other trips will be recorded visually. Cal ITE will additionally track parking occupancy of the Varsity's garage throughout the day. Once during the day, the apartment manager has agreed to accompany an observer into the secure garage to obtain the vehicle and bicycle parking occupancy. Parking levels throughout the day will be obtained from this baseline using the observed driveway entries and exits.

Data collection will take place one weekday a week over three weeks (three days of data will be collected in total). The chosen day will always be either a Tuesday, Wednesday, or Thursday and will not be in a week with a legal holiday. In the event of inclement weather or other unexpected events affecting travel patterns, data collection will be rescheduled. Data collection of both trip generation and parking occupancy will be conducted continuously for a 12 hour period from 7AM to 7PM on each weekday. The data will be broken down into 15 minute intervals by mode according to the ITE Trip Generation and Parking Occupancy Data Forms.



Varsity Berkeley site plan and vicinity.

## 2. Mentoring

Ms. Kimberly Leung, PE, Associate Engineer at the San Francisco Municipal Transportation Agency, will act as our professional mentor for this project. Ms. Leung is an active member of ITE, having previously served as president of the San Francisco Bay chapter of ITE. She currently serves as SF Bay ITE's liaison with Cal ITE. Ms. Leung will actively provide professional and logistical support for this project including assisting with communications with the apartment management and reviewing all deliverables. Professor Michael Cassidy, a faculty member in the Department of Civil and Environmental Engineering at UC Berkeley, is the faculty advisor for Cal ITE.

## 3. Schedule

The following is the proposed schedule of the project:

|   |   |
|---|---|
| Cal ITE Collects Data*  | January 24, 31, 2017;<br>February 7, 2017 |
| Cal ITE submits Draft Abstract, Summary Table, and Data Forms               | February 26, 2017                         |
| Western ITE Technical Committee Completes Review of Draft Abstract and Data | March 19, 2017                            |
| Cal ITE submits Final Abstract , Summary Table, and Data Forms              | April 2, 2017                             |
| Data Uploaded to ITE's online data submittal portal                         | April 16, 2017                            |
| District Payment to Student Chapters  | April 30, 2017                            |

\*The week of February 12 will be reserved in case of contingencies related to Data Collection

## 4. Level of Effort

Data collection will require 2 observers on site for 12 hours over 3 days. This amounts to 72 person-hours. Additionally, Cal ITE expects to spend about 6 person-hours on planning and coordination as well as 4 person-hours analyzing the data and compiling deliverables for a total of 82 person-hours. There are currently not many opportunities for undergraduates at UC Berkeley to get involved in transportation. For example, there are only 2 transportation engineering classes offered regularly. Therefore, volunteers for collecting data will be pulled from the officers and general membership of Cal ITE in an effort to provide real-world transportation experience to members. Volunteers will be educated on the necessity of collecting this data and how it helps ITE.

## 5. Project Management

Funds from the Data Collection Project would be used to subsidize attendance for volunteers at conferences such as the Western District Annual meeting, subsidize transportation costs for field trips, and host more general meetings and workshops with transportation professionals. Please contact any of the individuals listed below if you have any further questions.

| Student Coordinator  | Professional Mentor   | Faculty Advisor  |
|--|---|--|
| Adrian Diaz de Rivera<br>Cal ITE<br>Room 66T International House<br>2229 Piedmont Ave. Berkeley,<br>CA<br>(650)219-2996<br>adriandr@berkeley.edu | Kimberly Leung, P.E.<br>SFMTA<br>1 South Van Ness Ave., 7th Floor<br>San Francisco, CA 94103<br>(415)701-4653<br>kimberly.leung@sfmta.com | Prof. Michael Cassidy<br>UC Berkeley Dept. of Civil and<br>Environmental Engineering<br>416C McLaughlin Hall<br>(510)642-7702<br>cassidy@ce.berkeley.edu |

## 6. Agreement to Hold Harmless

*The UC Berkeley student chapter of the Institute of Transportation Engineers holds harmless and indemnifies the ITE Western District from any and all liability associated with the conduct and completion of this proposal, data collection and associated activity.*