Summer 2023 Sustainability Scholars Program Internship Opportunity

The UBC Sustainability Initiative (USI) is pleased to offer current UBC graduate students the opportunity to work on funded sustainability internship projects. Successful candidates work under the mentorship of a partner organization, and are immersed in real world learning where they can apply their research skills and contribute to advancing sustainability across the region.

- Visit the Sustainability Scholars Program website to learn how the program works and to apply.
- Be sure to review the application guide on the Apply page to confirm your eligibility before applying.

Applications close at midnight on Sunday January 29, 2023.

Project title: Understanding passenger behaviour at bus stops to measure effectiveness of bus bulbs and inform future design

Project Background & Overview:
To decrease greenhouse gas emissions, the Climate Emergency Action Plan targets two thirds of all trips in Vancouver to be by active transportation and transit by 2030. Meeting this objective will require a broad range of initiatives to enable and encourage a shift to sustainable modes of transportation.

For public transit in particular, buses will continue to play a key role in sustainably moving people throughout the region. With limited space, changes to the street that prioritize buses and other higher-capacity modes of transportation over personal vehicles will help achieve our goals.

Project description
While some tools to improve transit service—such as scheduling and bus stop locations—are within TransLink's control, other tools—like changes to the roadway, intersections, and areas surrounding bus stops—are the responsibility of municipalities.

In recent years, the City of Vancouver has delivered projects to help make transit more reliable and attractive. One of which is the installation of temporary bus bulbs on Main St, Robson, and W 4th Ave. These are essentially extensions of the sidewalk into the street at bus stops and are the key piece of infrastructure at the centre of this Sustainability Scholars project.

From an operational perspective, bus bulbs eliminate the need for buses to merge out of and back into traffic at bus stops. They also make it easier for bus operators to pull up closer to the curb, which in turn makes it easier for people to get on and off the bus.

Bus bulbs also benefit passengers by providing additional space at the bus stop. However, while the operational benefits are generally understood and easily articulated, there is a gap in our understanding of how passengers utilize this additional space. An enhanced understanding will help us make better decisions on where to locate future interim bulbs and inform how we transition them to permanent sidewalk extensions.

Project scope

The Scholar's work will consist of the following key research tasks:

1. **Conduct background research on the methodology that other cities use to evaluate the benefit of bus bulbs to passengers**
   - Explore 3-5 examples from other cities of bus bulb projects or other projects with similar qualities (sidewalk expansions, plazas, etc.) and identify evaluation methods.
   - Review existing research on bus stop amenities and pedestrian behaviour
   - Connect with and interview staff from other jurisdictions as required
2. **Develop methodology to evaluate bus bulbs in the City of Vancouver**
   - Select a subset of locations to be explored in detail by completing a high-level review of existing bus bulbs in Vancouver, site-specific conditions and existing video footage. The selected locations should include at least one permanent bus bulb location.
   - Articulate key characteristics of selected locations (i.e., presence of adjacent curbside patios, constrained space, sidewalk width)
   - Draft methodology to be tested at selected locations, exploring the following suggested questions:
     - Where do passengers choose to wait for the bus and do bus bulbs free up space on the sidewalk?
     - What factors impact pedestrian behaviour (e.g., weather, time of day, demographics)
     - How do people interact with bus bulbs?
     - How do bus bulbs change perceptions of public transit?
   - Prepare info sheet with project background and staff contacts to have handy during site visits
   - Staff will support to the scholar to determine if an ethics review is required
3. **Test methodology at selected bus bulb locations and analyze results**
   - Methodology be confirmed in Task #2, but will likely include site visits to observe behaviours and survey passengers
   - Analyze existing video footage based on developed methodology
4. **Summarize findings and finalize recommendations**
   - Recommend a methodology that the City can use at future bus bulb locations
   - Recommend modifications to the design and spatial layout of the bus stop to improve how people use the bus bulb and adjacent sidewalk
   - Optional: recommend locations in Vancouver that could be good candidates for future bus bulbs

Findings and recommendations will help inform the design and placement of future temporary and permanent bus bulbs. Bus bulbs, combined with other transit priority measures, will help encourage the use of public transit and achieve our sustainable mode share goals from the Climate Emergency Action Plan.

Deliverables

- A final report containing a summary of the work completed and recommendations.
- A final report for the online public-facing Scholars Project Library.
- An in-person (or virtual) final presentation to the Transportation Division and other key stakeholders
- A copy of the slide deck used in the final presentation
- If applicable, working files for any analysis, note on observations from site visits, and/or other working files used in the research.

Time Commitment

- This project will take 250 hours to complete
- This project must be completed between May 1 to August 15, 2023
- The Scholar is to complete hours between 9 am and 5 pm, Monday to Friday, approximately 17 to 20 hours per week.
- The Scholar will have the opportunity to attend regular team meetings to get project input from the broader team and gain exposure to work within the branch.

Required/preferred Skills and Background

☒ Excellent research and writing skills
☒ Demonstrated interest in sustainability and transportation
☒ Familiarity with research methodologies
☒ Experience with survey planning/design and techniques
☒ Strong analytical skills including familiarity with statistics
☒ Familiarity with studying human behaviour and social interactions
☒ Ability to work independently
☒ Comfortable interacting with strangers to conduct public/in person surveys
☒ Experience using public transit and knowledge of transit planning is an asset, but not required

Applications close **midnight Sunday January 29, 2023**
Apply here: Click here to apply
Contact Karen Taylor at sustainability.scholars@ubc.ca if you have questions

Useful Resources

We are holding a special **resume preparation workshop for prospective Scholars** on January 23, 2023. Click here for details and to register.

Below are some links to useful resources to help you with your resume and cover letter (there are many more online). Some of these resources also provide information on preparing for your interview.

https://students.ubc.ca/career/career-resources/resumes-cover-letters-curricula-vitae

https://www.grad.ubc.ca/current-students/graduate-pathways-success

https://www.grad.ubc.ca/cover-letter-cv-resume-templates-ubc-career-services