

Interview Top Line Report

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Goals & Context

The purpose of this research is to gain insight on commuters' behaviors and feelings while riding the Light Rail at night time to improve their safety. Our field studies allowed us to identify their behaviors and the environment of the Light Rail, but they did not address the reasons behind these behaviors. Through interviews, we hoped to uncover the intentions behind these behaviors and highlight personal experiences that showcase various pain points related to commuting at night time.

We interviewed 12 people ranging from those who ride the Light Rail daily to those who have ridden it occasionally in the last 2 months. Some of these participants use the Light Rail to commute to school, for going out, or to get to work. Each team member conducted and coded three 30-minute, semi-structured interviews over Zoom with individuals who met our participant profiles, where we used questions from our Interview Plan (see Appendix 1). Then, we conducted a thematic analysis, synthesizing our results into actionable design recommendations. Our interviews will help us discover the feelings, pain points, and experiences of commuters to better inform how we might address our design question, "How can we help Light Rail system users feel safe when commuting at night time?" However, it is important to note that our sample size ($n = 12$) may not be entirely representative of the views held by a majority of Light Rail commuters. Despite this limitation, we have based our interview questions on previous field observations, and we hope to further validate our findings in future survey studies.

Results & Recommendations

The following section contains our top 3 results and recommendations, listed in order of highest to lowest priority.

Increasing security personnel increases access to immediate help and provides additional deterrents for bad actors

After conducting our field observations, we reported that the number of security officers patrolling each station was insufficient and recommended that more be added. However, without speaking to riders, it was difficult to assess if increasing the number of officers would also increase rider safety or feeling of safety. Our interview participants revealed that the

main reasons they considered safety personnel to be beneficial were because they could provide immediate help and also provided a deterrent against bad actors.

During a few of the interviews, participants mentioned that having immediate access to security personnel would be useful because they would be able to quickly respond to potential safety issues. Participant K2 noted that "it would be nice to have [security personnel] nearby, because I know when dangerous things happen, you don't really have a lot of time... [to] wait for help." Another finding regarding security personnel was that they could possibly act as deterrents for bad actors. A2 says, "[people] are less likely to do anything bad because they know there's going to be consequences [from security]." Taken together, K2 & A2's feedback provide strong validation for one of our recommendations from our field observations regarding increasing security presence at Light Rail stations. The interviews also allowed us to provide specific reasoning for why additional security guards would be beneficial.

Interestingly, there were 2 participants that separately recommended the same alternative solution to having additional security personnel. Participants K2 and A1 both mentioned that introducing emergency call stations could provide the same benefits of security personnel without significantly altering staffing levels. A1 said, "I know a lot of college campuses have these little help kiosks and that can either inform police or can connect them to [a] cell phone carrier if they don't have their cell phone with them, so maybe installing a similar system at the station could be beneficial." and R1 suggested adding "the ones that [are] on campus like emergency buttons." Emergency call stations would allow Light Rail riders to communicate immediately with security personnel without having to physically find them.



Figure 1: Emergency call box at Coliseum Station (California)

Informational resources keep riders feel safer by raising their awareness

Following our field studies, our observations at each station uncovered the use of infographics, maps, and other informational resources that are placed near the platforms. Our group wanted to dive deeper into these resources to gauge whether they are helpful to commuters, and how they might feel about implementing different informational resources to communicate safety information to riders.

Our interviews focused on how commuters felt about having more informational resources related to safety and how to report situations in which they feel uncomfortable. According to several participants, resources that inform commuters about safety keep them aware of their surroundings without having to rely on others or take excessive action to protect themselves. In one interview, F1 states, "I personally read the posters. And I think it's great to just have stuff that out, so people know that in the event that something does happen there's something that they can do, and they don't have to like wait to call on somebody." Similarly, R1 shared similar sentiments stating, "to portray like or just to provide the information [of oh] here's the resources in case if there's any suspicious activities or if something were to happen contact this number or reach out to anyone." In addition to safety resources, some riders thought it was important to utilize signage to communicate train outages or closures. F3 states, "Those signs are important because they will notify you if, like some platforms are closed or some service delays are occurring."

Overall, many participants stated that the additional signage and information at the stations could increase their awareness and make them feel more comfortable reporting situations that otherwise feel unsafe. From this finding, our group believes that additional signage relating to how to report suspicious activities as well as information about train closures and delays can keep commuters feeling safer on their commute. As one participant put it, "if you look super confused you're vulnerable" (F2), and ensuring that commuters know where and who to report information as well as what is going on in the trains is vital to their safety experience. Moving forward, our group will learn more about different forms of resources, such as auditory resources, visual signage, etc. as seen in Figures 2 and 3.

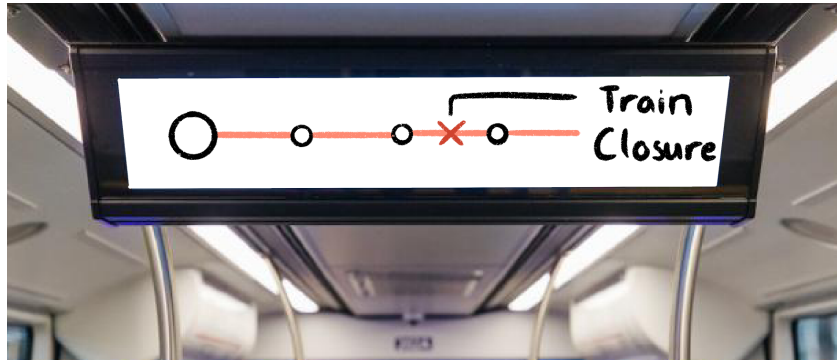


Figure 3. Design Recommendation applied to Light Rail train monitors



Figure 4. Design Recommendation applied to electronic posters at the stations

Stations feel unsafe because they are dirty or in bad condition

Throughout our field observations, we noted that from the built environment, the layout of the stations was a contributing factor in the unsafe environment. However, our interviews validated findings of the unkempt nature of the Light Rail system contributing to feeling unsafe at the Light Rail, as commuters constantly noted the poor conditions of the stations and trains.

Throughout the interviews, commuters noted the dirty conditions of the Light Rail station when they entered the area. When asked about when they felt unsafe while taking the Light Rail, R2 responded saying they "feel unsafe on the light rail sometimes you'll walk in and you'll just see the places of mess in the back seats like cereal or some random food on the floor." Similarly, K1 said that they "wish they would just upkeep the stations better and the

trains better because they're nasty and I feel like they're always trashed and gross." Based on these responses we found that the cleanliness of the station contributed to a commuter's perception of a safe light rail experience at night.

Given this finding, we recommend that a more regulated system for cleaning the Light Rail needs to be implemented. Based on our findings within our field observations where we observed workers clean the trash off the once in a while and others throwing trash, we can implement a regulated system to clean the stations more frequently to help maintain clean stations. In addition, we find that this system should pay extra detail to cleaning the Light Rail trains at the station at the end of each line, (Northgate and Angle Lake) where trains are idle for a longer period of time, allowing more time to clean the trains. This change would allow for more regulated maintenance and cleaning of the Light Rail stations and trains. This shift in the environmental feel of the Light Rail stations and trains can contribute to how commuters perceive the Light Rail stations, and if they feel safe commuting throughout the night.

Prioritization

1. Increasing security personnel increases access to immediate help and provides additional deterrents for bad actors
2. Informational resources keep riders feel safer by raising their awareness
3. Stations feel unsafe because they are dirty or in bad condition

Our first priority was increasing access to immediate help because it addresses commuters' highest concerns in wanting a way to contact safety personnel more easily while waiting for the Light Rail. Our second priority, regarding informational resources, was significant because it would be very feasible to implement updates to existing monitors and create new posters to help inform commuters. The last finding regarding dirty and bad conditions at the stations was ranked last because it is the most resource and labor-intensive solution of the three, requiring a new cleaning system and additional workers to upkeep each station.

Next Steps

Following the results of our Interview Study, we hope to validate our findings through a comprehensive Survey Study in addition to gaining specific data. Our group wants to define the best way to incorporate security personnel around the Light Rail stations to maximize commuters' safety, learning more about how many officers are needed, where commuters believe they should go, and how emergency call boxes can help assist security personnel. We would also like to learn more about what types of signage would be most effective for commuters in keeping them safe and aware of their surroundings. Utilizing these surveys would be a great way to learn more about what information commuters think would be relevant for additional signage. Overall, we hope to use these surveys as a method for validating our findings from our interviews and field observations.

Reflection

In our next field research study, we would like to interview commuters that commute also during the day to compare their experiences with those who commute at night to see if they have any shared insight to further strengthen our findings while also finding out what concerns they would have if they were commuting at night. One thing that surprised us about the interviews was in comparison to prior user interviews we've conducted in the past, we found that it was much easier to build rapport with those we interviewed. Additionally and unsurprisingly, many participants gave conflicting feedback; however, with each interview, we found it easier to create follow-up questions to understand the true intentions of our participants.

Appendix 1: Interview Questions

1. How often do you ride the Light Rail at night (past 8pm)?

Rationale

This question will allow participants to begin thinking about their experiences riding the Light Rail during our period of interest. Additionally, this will allow us to determine the amount of experience the participant has riding the Light Rail.

Follow-Up Questions

- a. Why do you use the Light Rail to commute?
- b. Why do you commute at night?

2. Tell me about the last time you took the Light Rail at night, from your experience getting to the station to riding the train.

Rationale

This question allows the participant to recall their thoughts and feelings about riding the Light Rail at night. Participants may respond with any frustrations, fears, or worries they may have had while they were commuting at night time. In addition, we hope to understand how their safety experience may vary at the station versus on the Light Rail train.

Follow-Up Questions

- a. Was there any time in your experience that you felt unsafe? Why or why not?
- b. I heard you mentioned that you typically sit on this part of the Light Rail, can you elaborate more on why you sit there?

3. What objects, if any, do you bring any objects with you while riding the Light Rail?

Rationale

This question will help us further explore one of the areas of interest that we focused on during our field observations. We noticed that a large portion of riders brought items with them, but we could not determine the purpose or reasoning behind bringing them onto the Light Rail.

Follow-Up Questions

- a. If you bring objects with you, do you use any of them for safety or your protection?
 - i. Can you recall a time where you pulled out one of these safety objects?

4. Where do you go to wait at the Light Rail station?

Rationale

This question is intended to understand how the built environment of the Light Rail stations may contribute to the participant's safety experience. Our team hopes to uncover how certain blind spots at the stations might impact where an individual waits for the train as well as understand the intentions behind an individual's behavior while waiting at the station.

Follow-Up Questions

- a. Why do you wait in this area?
- b. What do you typically do while waiting for a train?

5. Do you see security personnel around the Light Rail? How do the security personnel at the Light Rail contribute to your safety?

Rationale

This question is intended to understand how participants perceive the security personnel at the Light Rail stations and whether they find these individuals helpful. Through this question, we hope to understand how commuters are impacted by the number of security personnel present at a station and any ways that these individuals can contribute to further safety.

Follow-Up Questions

- a. How important is it that there are security personnel close by when you are taking the Light Rail?
- b. Is there anything that security personnel can do to make the experience feel safer?
- c. Aside from security personnel, is there anything at the Light Rail that contributes to your safety?

6. What changes can be made to improve your overall safety of commuting on the Light Rail at night?

Rationale

This question is meant to have participants think back on their previous experiences on the Light Rail and their associated pain points to identify any potential design solutions they would like to implement. Answers to these questions can also supplement our team's design recommendations and inform future studies that look into potential solutions to our research questions.

Follow-Up Questions

- a. How might increased security presence contribute to your experience?
- b. How can informational resources contribute to your safety?

Appendix 2: Interview Transcripts

Alfie Aguilar Vidrio, [HCDE 313: Interview Transcripts](#)

Ryan Bautista HCDE 313: Interview Transcripts [R1](#), [R2](#), [R3](#)

Frannie Ello [HCDE 313: Interview Transcripts](#)

Katie Hancock HCDE 313: Interview Transcripts [K1](#), [K2](#), [K3](#)

Appendix 3: Coding and Thematic Analysis

MIRO Board with Coding Analysis

