Team E
II.4

Target Population:

The target population is all of the buses which stop on campus that CMU students use to commute to school.

Sampling Plan:

Here are the following steps we will find our sampling plan. Using a random number generator we will randomly select half hour intervals throughout the day to sample. During this half hour interval the investigator will record the arrival time of different buses scheduled to arrive at both the Forbes and Morewood in stop as well as the Forbes and Morewood out stop during that period. The investigator shall also record the weather and other conditions during that time period. If there is a bus that is scheduled to arrive during that time period but is running late and goes beyond the time period, the investigator will stay and wait for that bus to arrive but will not continue to observe buses that were scheduled to arrive outside of the randomly selected time period.

Our Sampling Frame:

The Sampling frame for our survey is the list of all Port Authority buses that stop at the Forbes and Morewood bus stops. Forbes and Morewood Out stop: 59U, 61A, 61B, 61C, 61D, 61F, 67, 67C, 67E, 69, 67J, 69A. Forbes and Morewood In stop: 13U, 28X, 59U, 61A, 61B, 61C, 61F, 67, 67E, 69, 67J, 69A

Nonresponse concerns:

Our study involves observations of discrete units (the buses), the buses have no ability to not respond. However, because we are observing in chunks, it is possible that a bus may be so late that it shows up outside of our observational period. If this occurs then researchers are expected to stop recording other buses and wait up to an additional 15 minutes to record the arrival time of the missing bus. Buses that do not arrive in this additional interview will be labeled as too late/did not arrive.

Our method for selecting observational units will be truly random, for this reason we believe it will the most representative way of approximating the actual population. The only useful adjustment we could make is to sample more frequently, but this is not feasible.