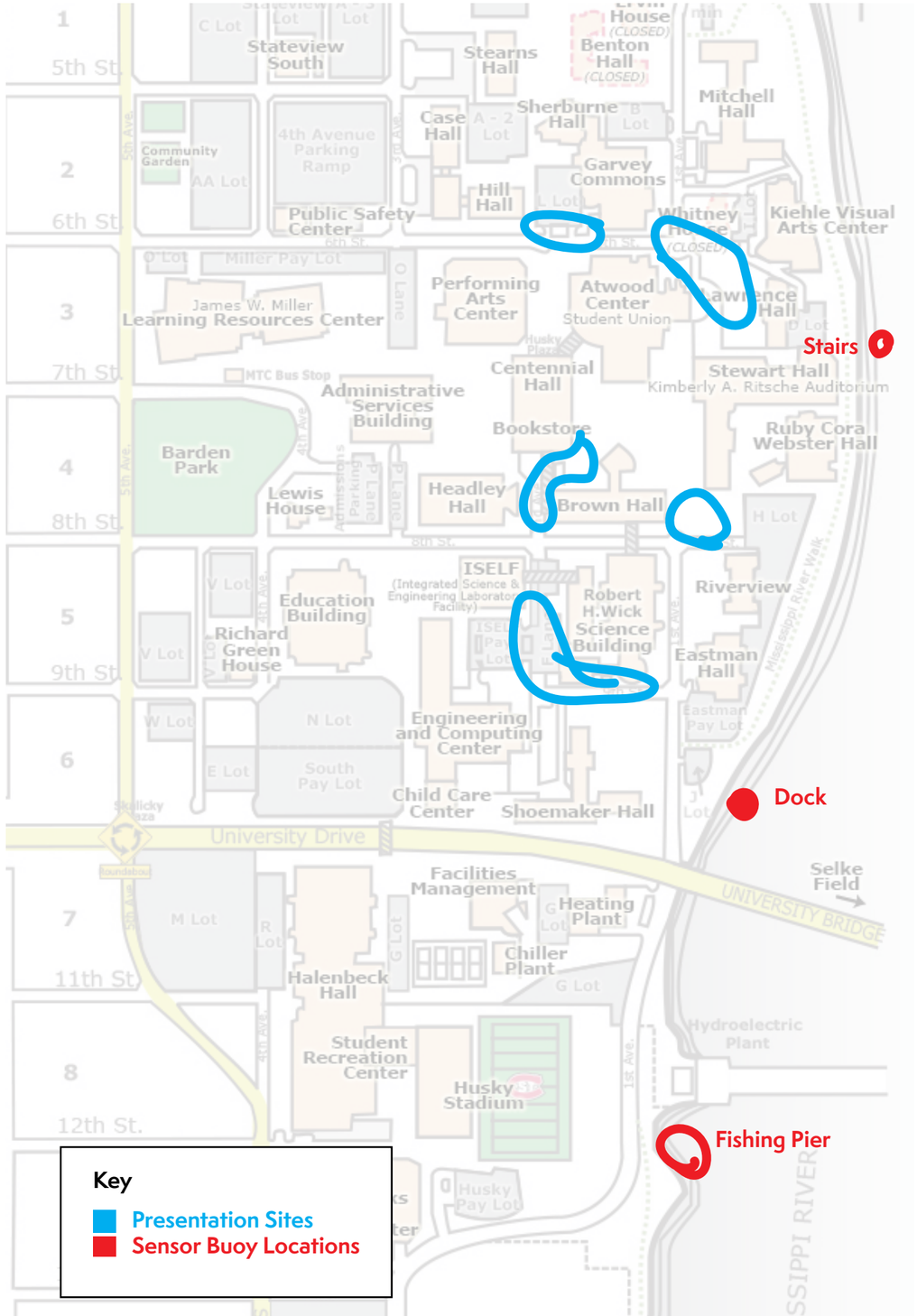

River Data Sound Installation

This data sonification installation piece takes sound and flow data from the Mississippi river and presents it in various locations on SCSU campus, effectively merging the acoustic environments of each location with that of the river. It is designed to draw attention to the poor integration between campus and the river, while making a small attempt to rectify the issue.

Buoy Setup

Sensor buoys are to be placed at various locations in the river, with power and internet connectivity supplied by nearby buildings. Each buoy will contain a GPIO-enabled single-borad computer running VCV Rack, Python, and an Icecast server. A flow meter is attached to the computer via GPIO, and a hydrophone via mic input. A Python script running onboard will gather river guage depth data from USGS as it is posted every 15 minutes, read data from the flow meter, and output both as MIDI CC data to a loopback driver. A VCV rack patch will process hydrophone sound live according to this data, and output the resulting sound to the Icecast server. Each buoy will have a different patch,to produce different sounds.

Speaker Setup

Each presentation site will comprise one or more speakers, each connected to an incoming feed from the icecast server running on one of the buoys. At presentation sites with multiple speakers, each will play a stream from a different buoy. Each site should remain set up for a long enough period that changes in sound can be observed.