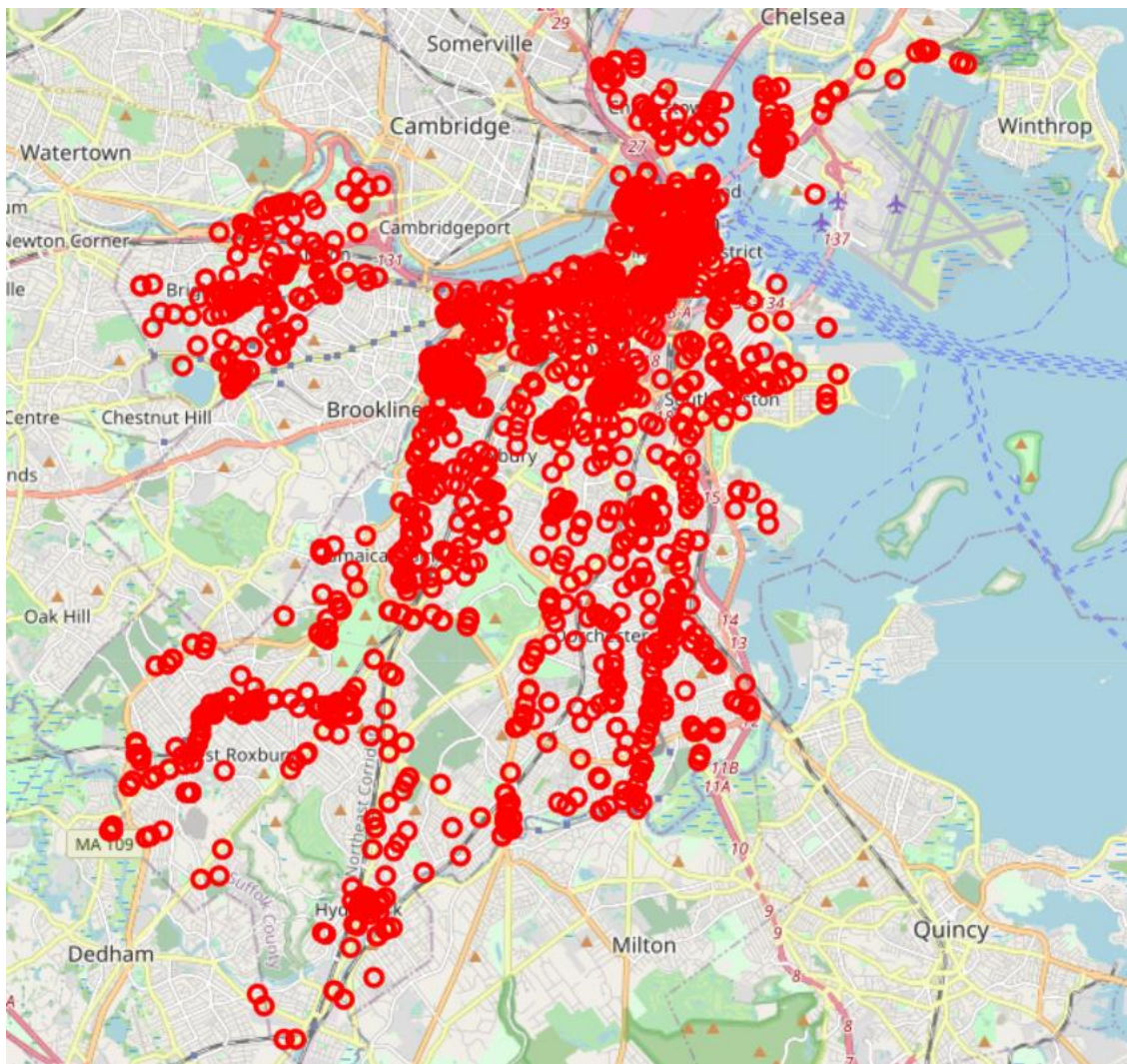We have been working on preprocessing the collected dataset. The dataset from Boston Master Business and establishments dataset are combined with Grocers dataset from MAPC.
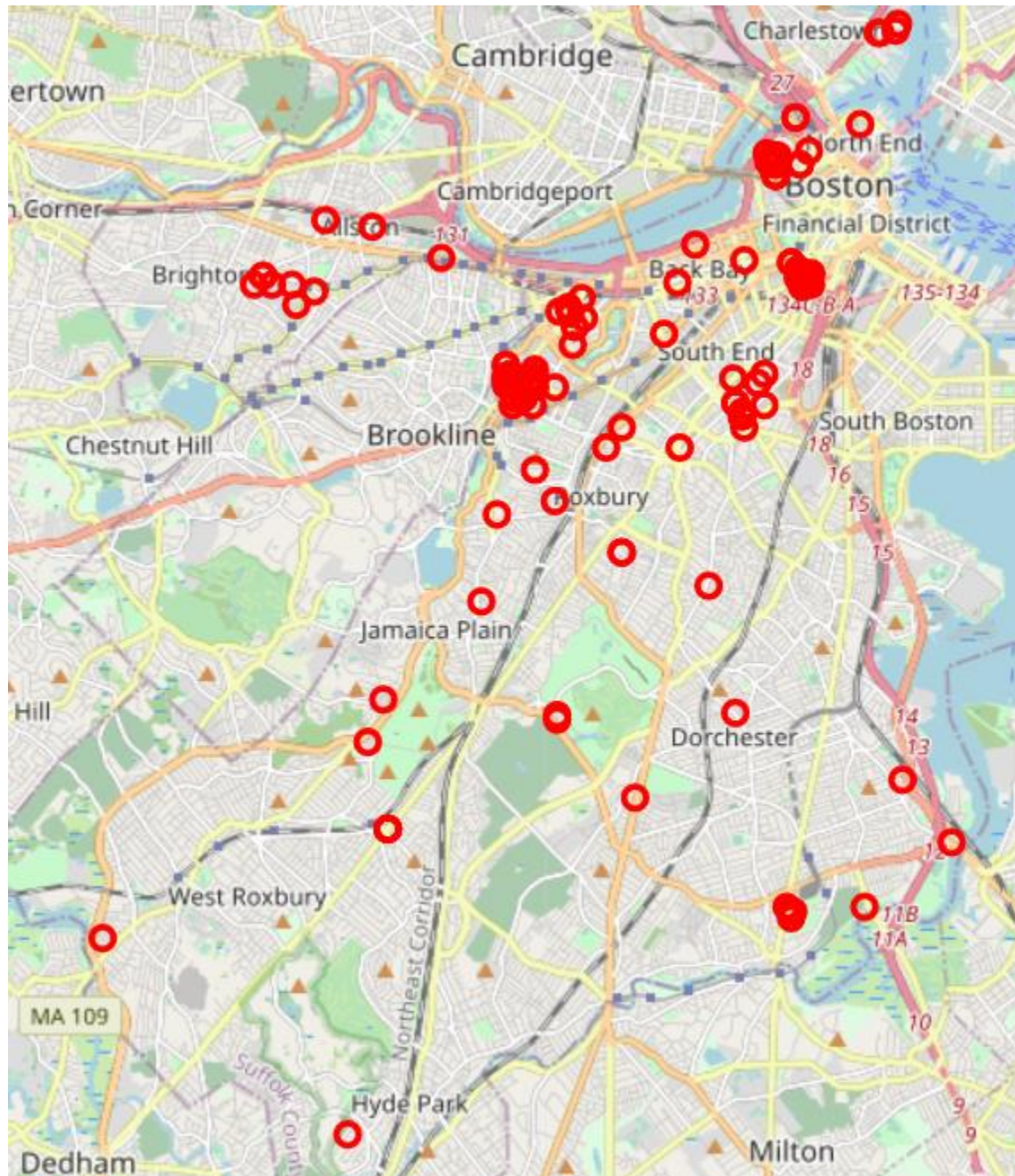
For Environmental justice demographics, since it is a map dataset, we do not plan to combine it at this step; what we plan to do is to compare it with our result in the end.

As a result, we have around 4000 entries in the combined dataset. Most of the essential services listed in the dataset are groceries and health cares, and essential services like "hospital" is relatively scarce. Therefore, we are expected to see more parcels within 15-min walking/ biking range of groceries than that of hospitals.
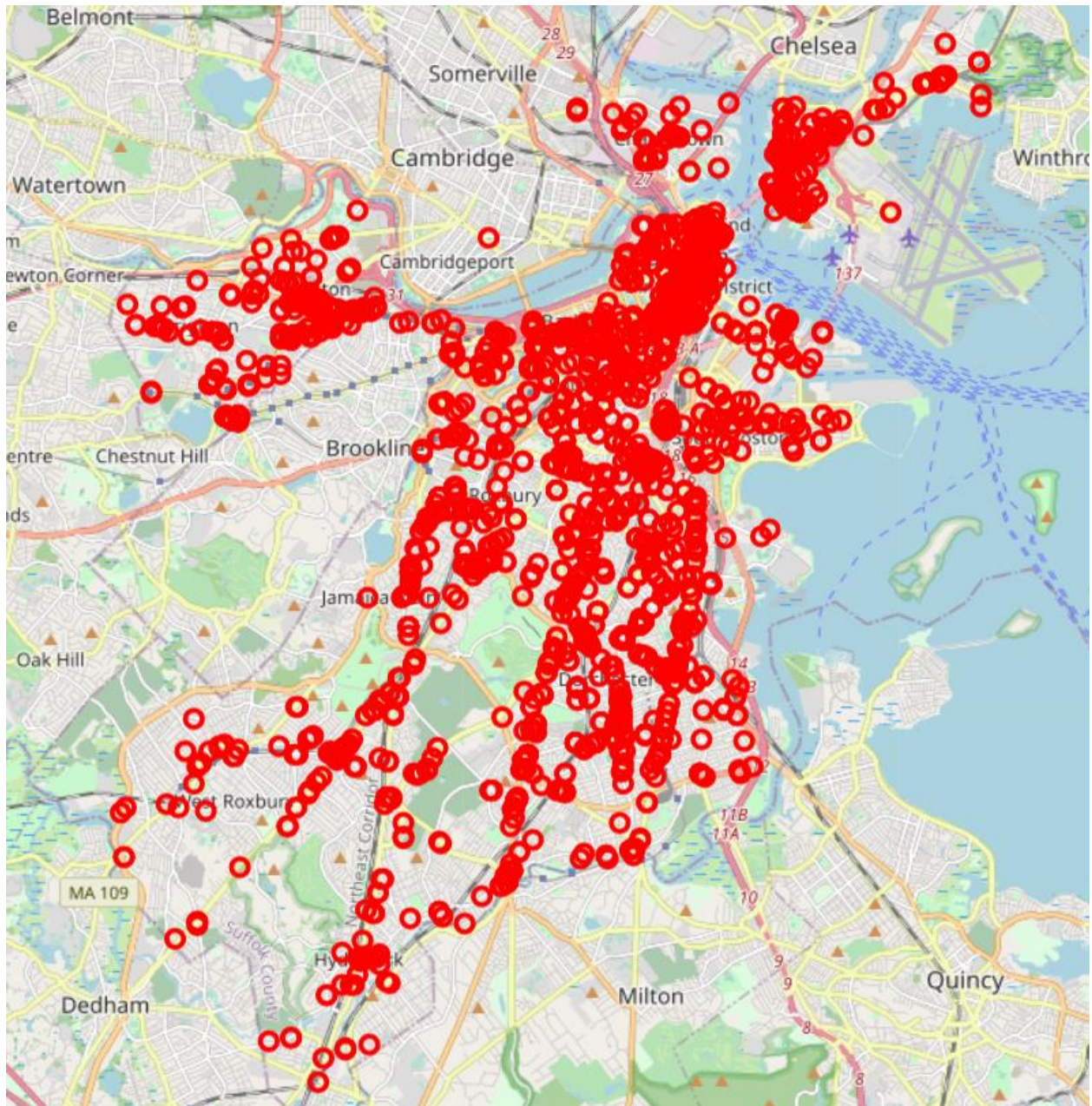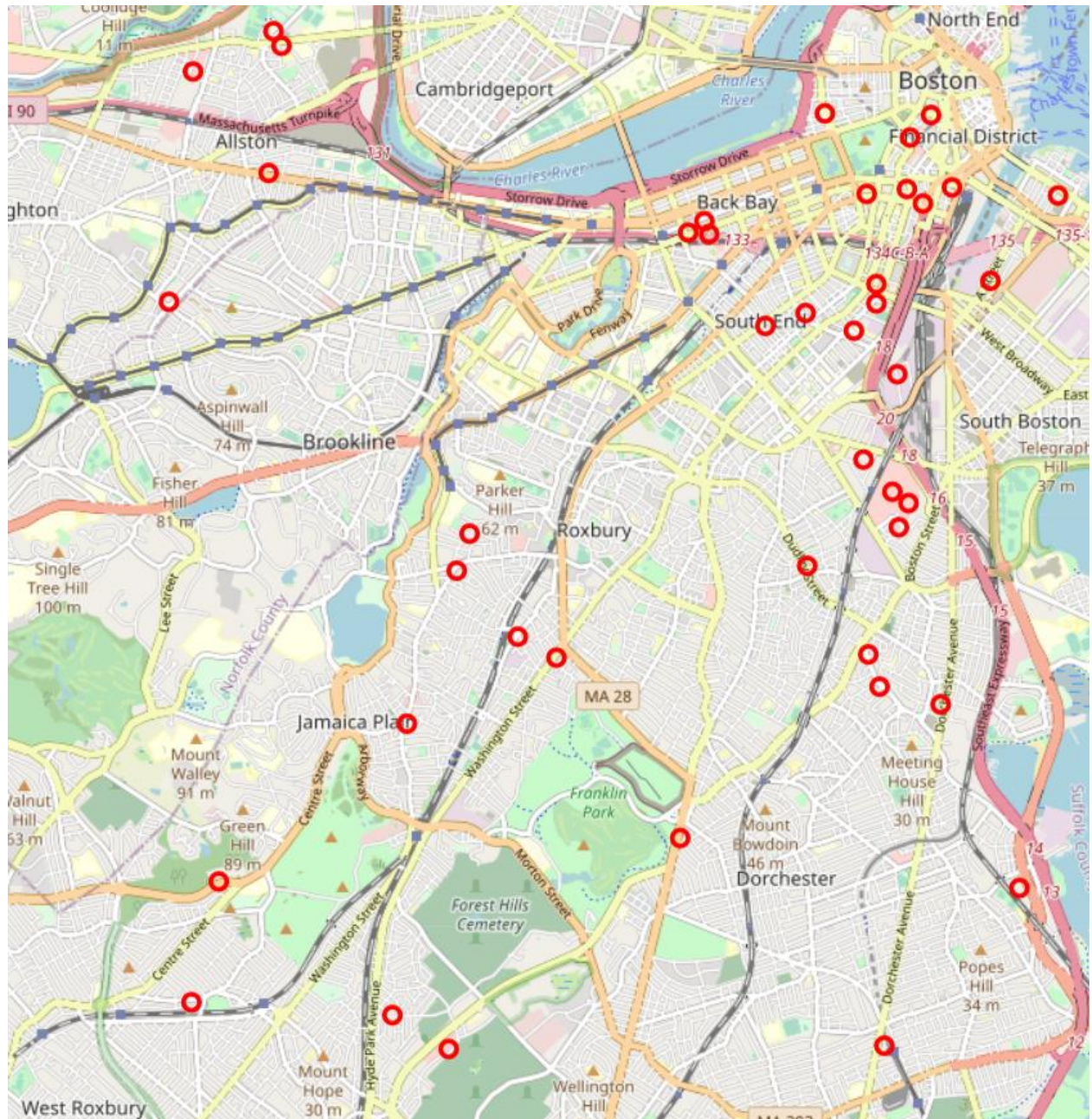
For health care on map:

For hospital:

For grocery:

For supermarket:

For park:

At this point, with regard to the key question "Which areas of the city are underserved in terms of a lack of essential amenities", we can try to give an answer as follows:

In aspect of groceries and health care (hospital not included), there should not be a city area that is underserved. However, areas including Brookline, Northeast Corndor and West Roxbury seem to have a low density of parks and some parcels in those areas may not be within a 15-min range. When it comes to hospital and supermarket, more areas (e.g., parts of Roxbury and Dorchester) in the south are clearly not covered in a 15-min range (walking or biking).

Project scope, list of limitations and potential risks of achieving project goal stay the same. Since this is a spark project, the proposal remains unchanged. Please refer to deliverable 0 for details.