ANALYZING FOOD AVAILABILITY IN CAMBRIDGE, MA
COMPARING ACCESS BETWEEN PUBLIC HOUSING RESIDENTS AND AVERAGE CAMBRIDGE RESIDENTS

INTRODUCTION
This project documents food resources available within walking distance to residents of Cambridge, MA, comparing the quantity available to residents living at public housing sites and average Cambridge residents. The results will inform the planning process of the Cambridge Food & Fitness Policy Council (CFFPC). The CFFPC is a new, city-wide committee of public health professionals, business leaders, government officials, and community residents dedicated to improving the city’s food and fitness systems.

While Cambridge appears to offer many opportunities for healthy eating and physical activity, studies from other communities have shown that these opportunities may not be as readily available to at-risk populations, such as low-income residents and people of color. Ideally, surveys of a community’s food environment will take into account both the availability as well as other measures of food resources such as quality and affordability; access to healthy food is often associated with better health outcomes for an individual. This project is a first step in documenting Cambridge residents’ access to food sources and only presents a baseline of access to all food resources. Importantly, however, this project improves on other studies that limit their results to resources within a city boundary; I have included not only the entirety of the city of Cambridge, but also food resources that are within ¼ mile from the Cambridge city boundary and therefore accessible by foot to Cambridge residents.


METHODOLOGY
Coordinate System NAD_1983_Cascadia_Housefoot_MassGIS_FPS_2001

1. Address/location data was collected for each of the food resource categories and public housing sites. Each resource was geocoded to Cambridge Address Locators or TIGER lines (depending on if they were located within Cambridge or outside of Cambridge).

2. Using the Service Area Analyst tool in ArcMap, polygons representing a walkable area ¼ mile (for visual reference only) and ½ mile along a street network were created from each public housing site (Map 3) and the center point of each census block group to represent the average Cambridge resident (Map 3).

3. Using the Intersect tool in ArcMap, food resources were grouped to each ½ mile walkable area (Maps 4 and 5). Summary statistics were calculated based on these groupings using ArcMap’s Frequency tool (Table 1).

RESULTS
The results of the analysis show that public housing residents actually have access to slightly more food resources within a half mile walk of their residences than the average Cambridge resident does. This may be because Cambridge is a small, dense city and public housing sites are relatively evenly distributed geographically.

<table>
<thead>
<tr>
<th>Table 1: Results of Analysis</th>
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<tbody>
<tr>
<td><strong>food resources within ½ mile</strong></td>
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<tr>
<td>Average #</td>
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<tr>
<td>Fewest #</td>
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<tr>
<td>Highest #</td>
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<td>Median #</td>
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Building on this initial quantification of food resources accessible in the Cambridge area, future analysis should:
- compare the different types of food resources available within each area (for example, access to grocery stores vs. access to convenience stores).
- consider the number of residents in each public housing unit to determine if access is any different for residents in multi-family units as compared to scattered units.
- rate the quality of food resources on measures of nutrition quality and affordability of available food.

The following food resources are included in Maps 4 and 5: Community Supported Agriculture pickup locations, community gardens, convenience stores, farmers’ markets, food pantries/community meal programs, grocery stores, restaurants, schools (cafeterias).

Data sources: Cambridge Economic Development Department, Cambridge GIS, Cambridge Housing Authority, company websites, Federation of Massachusetts Farmers’ Markets, MassGIS.

In collaboration with the Cambridge Food and Fitness Policy Council and the Cambridge Health Alliance

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