

**Geography of Urban Food Access: Exploring potential causes of food deserts**

By

Caitlin Cameron

B.Arch.

Cornell University  
Ithaca, New York (2005)

Submitted to the Department of Urban Studies and Planning  
in partial fulfillment of the requirements for the degree of

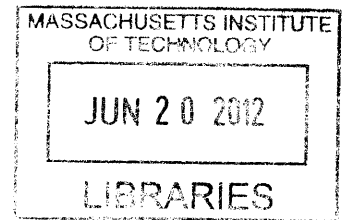
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Author \_\_\_\_\_

Department of Urban Studies and Planning  
(5/24/12)

Certified by \_\_\_\_\_

Professor Judith Layzer  
Department of Urban Studies and Planning  
Thesis Supervisor

Accepted by \_\_\_\_\_

Professor Alan Berger  
Chair, MCP Committee  
Department of Urban Studies and Planning



# **GEOGRAPHY OF URBAN FOOD ACCESS:**

**Exploring potential causes of food deserts**

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**Caitlin Cameron**

*A thesis submitted to the MIT Department of Urban Studies and Planning in partial fulfillment of the requirements for the degree of Master in City Planning.*

**Abstract:** We believe we understand food deserts, but we do not. In the last decade the phenomenon of food deserts has been often discussed, and many solutions are proposed to alleviate food access issues in American cities. However, I argue that the efficacy of these solutions is questionable until the causes of urban food deserts are better understood. Beyond the economics of retail grocery exist systemic, physical factors which contribute to the gaps in food access. Although grocery retailers have different models and consider varying factors when choosing where to locate, it is true that the built environment plays a part in whether a city is hospitable or hostile to grocery stores, especially of the types that sell healthy, fresh food.

**Key terms:** food desert, food systems planning, urban food access, grocery store, map, cartography, grocery retail, healthy food

**Thesis Advisor:** Judith Layzer, Ph.D., Associate Professor of Environmental Policy

**Thesis Reader:** Brent Ryan, Ph.D., Linde Career Development Assistant Professor of Urban Design and Public Policy

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## **CONTENTS**

|   |    |
|---|----|
| <b>INTRODUCTION</b>                                 | 7  |
| <b>DEFINING FOOD DESERT</b>                         | 9  |
| <b>DEFINING RELEVANT STORE TYPES</b>                | 10 |
| <b>METHODOLOGY</b>                                  | 14 |
| <b>CURRENT UNDERSTANDING OF FOOD DESERTS</b>        | 20 |
| <b>LOCATION FACTORS</b>                             | 29 |
| <b>CONCLUSIONS AND PLANNING IMPLICATIONS</b>        | 55 |
| <hr/>   |    |
| <b>APPENDIX A MINNEAPOLIS FOOD CODE</b>             | 68 |
| <b>APPENDIX B USDA THRIFTY FOOD PLAN</b>            | 70 |
| <b>APPENDIX C POLICIES REGARDING GROCERY RETAIL</b> | 73 |
| <b>APPENDIX D INTERVIEW QUESTIONS</b>               | 81 |
| <b>WORKS CITED</b>                                  | 82 |
| <b>INTERVIEW RESOURCES</b>                          | 83 |
| <b>IMAGE AND GIS SOURCES</b>                        | 84 |
| <b>SELECTED BIBLIOGRAPHY</b>                        | 85 |



## INTRODUCTION

*We believe we understand food deserts, but we do not.* In the last decade the phenomenon of food deserts has been often discussed, and many solutions are proposed to alleviate food access issues in American cities. However, I argue that the efficacy of these solutions is questionable until the causes of urban food deserts are better understood. Beyond the economics of retail grocery exist systemic, physical factors which contribute to the gaps in food access. Although grocery retailers have different models and consider varying factors when choosing where to locate, it is true that the built environment plays a part in whether a city is hospitable or hostile to grocery stores, especially of the types that sell healthy, fresh food.

The term “food desert” appeared in 1996 when a British Low Income Project Team defined the phenomenon as “areas of relative exclusion where people experience physical and economic barriers to accessing healthy foods.”<sup>1</sup> This statement refers, in part, to the recent shift of food retailers away from urban areas into new suburban developments. The act of defining a food desert reveals a disagreement about what causes this phenomenon – is it income, is it mobility, is it distance measured from residences, is it defined by supermarket access only? Some even argue that food deserts do not exist. Before a planning agency or a food policy council can attack this problem effectively, the problem needs to be clearly defined.

A lack of understanding around the causes of food deserts leads either to inaction or planning action that is ineffective at solving the problem. In the 2008 Food, Conservation, and Energy Act, otherwise referred to as the Farm Bill, Congress directed the United States Department of Agriculture (USDA) to conduct a one-year study to assess the extent of the problem of limited access to healthy food, identify characteristics and causes, consider the effects of limited access on local populations, and outline recommendations to address the problem.<sup>2</sup> The directive resulted in reports such as “Access to Affordable and Nutritious Food – Measuring and Understanding Food Deserts and Their Consequences: Report to Congress” or *Grocery Store Attraction Strategies: A Resource Guide for Community Activists and Local Governments*, which outline strategies for community activists and local governments for retail

1 Reisig and Hobbiss, “Food Deserts and how to tackle them,” 137.

2 Ver Ploeg, et al., “Access to Affordable and Nutritious Food,” 2.

attraction. However, the problem persists despite these studies, reports, and recommendations. *Why, with the research that has been done and the recommendations that have been made, do food deserts still exist?*

Although factors such as economics and demographics contribute to the phenomenon of food deserts, there are also physical factors that cause this lack of access to healthy food. Grocery stores choose whether or not to locate in urban areas for reasons beyond economic market failures. It is not, simply, that stores do not want to locate in certain neighborhoods, but that they are incapable of doing so because of physical, built environment factors. This argument serves to disprove the idea that stores choose not to locate in these neighborhoods (whether for demographic or economic reasons) but rather that they physically cannot locate in these neighborhoods. This can be observed by mapping the “web of shopping” in the city compared with physical features, features which stores are aware of, and some features which they may not consider in their location choices but that still contribute to where they locate.

I am interested in the spatial determinants of grocery retail location and understanding which of these can and cannot be addressed through planning action and retail attraction strategies currently in place. I propose there is room to develop strategies around location factors which cannot be addressed by the current recommendations for planning action. Physical factors have varying effects on the location of grocery stores. Understanding the needs of each type of store and promoting the appropriate store type in the appropriate location could serve as a solution to solving the problem of food access.

## RESEARCH QUESTIONS

- What are the factors in the built environment that cause or contribute to the phenomenon of food deserts?
  - o Which of these factors can be addressed through planning action, policy, and financial incentives?
  - o Are there existing conditions which cannot be overcome with current strategies?
  - o Are there areas where the physical barriers are too great ever to allow a store to locate? What are some new strategies in those cases?
- How do grocery store models and types factor into the location choices?
  - o What are the store types, in addition to supermarkets, that can provide healthy food?
  - o Why do grocery retailers locate where they do?



## DEFINING FOOD DESERT

In this thesis I am adopting a supply-side theory of food deserts. A supply-side theory of food deserts considers grocery store locations to be the most important factor for food access. When considering solutions for food deserts, this way of thinking advocates for providing physical access to stores by locating new stores where there is currently an underserved population. This is in contrast to those who believe that food deserts exist for demand-side reasons. Demand-side created food deserts are the result of a lack demand for the store; this may include a lack of economic demand, a lack of education around food choices, or a cost/benefit-induced choice about where to shop. The supply-side theory of food deserts may or may not include affordability in its considerations.

As part of a definition for food deserts, I am concerned with physical access to urban retail grocery outlets of all types which sell “healthy food,” defined as nutritious and unprocessed fruits, vegetables, meat, dairy, and whole grains which may be fresh, frozen, and/or dried, and in enough quantity and variety so as to provide for one-stop shopping for a week’s worth of groceries.

The healthy grocery store definition is based on the concepts of the Minneapolis Food Code (Appendix A) and the USDA’s Thrifty Food Plan (Appendix B). The Food Code requires grocery stores to provide at least three varieties of food in each of four staple food groups. This requirement also includes at least five varieties of perishable food in the category of vegetables and/or fruits. The federal Women, Infants, and Children (WIC) program also requires that stores carry certain categories of foods for nutritional values. My definition separates the categories of vegetables and fruits. The Thrifty Food Plan is a list of market basket items which represents a nutritious, minimal-cost diet for a week for an individual as defined by age and gender. The USDA food plans are divided into categories of Grains, Vegetables, Fruits, Milk Products, Meat and Beans, and Other Foods.

## DEFINING RELEVANT STORE TYPES

Being critical of food desert research that only includes the supermarket type, I ask the question, *Are there store types other than supermarkets that can provide healthy food and what are those types?*

This question is relevant for evaluating the existing food retail landscape but also for exploring potential solutions to the food desert problem. If there are multiple types of stores that can serve to alleviate food deserts, then why limit the study of food deserts to supermarkets only? Many studies of food deserts assume that proximity to grocery stores or supermarkets is a good proxy for healthy food access.<sup>1</sup> One of my criticisms of the USDA definition of food deserts is the over-simplification with which “grocery store” is defined. From personal experience I know there is an array of retail grocery types which can satisfy the need for healthy food access.

The definition of healthy food is critical to begin the typology study of grocery retail. In the typology study in Figure 1 I categorize healthy store type according to services provided, size, parking, location, ownership, and products being offered. In those instances where gaps in food service are caused by physical limitations, understanding the spectrum of grocery retail types may afford more, precise, and contextual solutions. The variable conditions of an urban context require a range of retail solutions from supermarket to green grocer to farmers market. Each defined type is included in the mapping process.

With a working definition in mind, I investigated which store types provide this quality and quantity of food in an urban context. Brian Shorter, the Managing Director of Sullivan Hayes Brokerage, gave me an introduction to the standard grocery retail types:

- Mainline stores, such as Safeway and Kroger, 50,000 – 125,000 sf
- Walmart Neighborhood Model, 30,000 – 65,000 sf
- Specialty Grocery, such as Whole Foods and Sunflower, 26,000 – 70,000 sf
- Discount Grocery, such as Save-A-Lot and Aldi, 13,000 – 15,000 sf
- Ethnic Grocery, includes Korean, Chinese, Hispanic, etc., 1,500 – 50,000 sf

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1 Bitler and Haider, “An Economic View of Food Deserts,” 161.

Store type appears to be regional to some degree. For example, in Baltimore, there are 6 public markets which are indoor market halls and have been established since the late 18th and early 19th centuries. Although that type existed in many American and European cities historically, it is rare to find public markets still in existence and operating. The most comparable example in Boston is the Quincy Market and Faneuil Hall which still exist but no longer serve as grocery retail. Another example of store regionalism is the green grocer. In San Francisco, small grocery stores with an emphasis on produce but which also carry other grocery staples proliferate in the immigrant-heavy neighborhoods. These stores, often with open storefronts or produce bins located outside, are usually independent stores owned and operated by Asian, Eastern European, or Hispanic entrepreneurs. I have not discovered this type in the Boston or Baltimore area. I therefore took into account all store types, including those that are regional.

For the purpose of this study, I generated five categories of stores which I feel meet my definition of “healthy food” grocery retail:

1. Supercenter
2. Supermarket
3. Budget Grocer
4. Ethnic Grocer
5. Specialty Food Store

I am not including in this study those stores such as Bodegas, Convenience Stores, Corner Stores, or other retailers that sell food items but do not provide all categories of fresh foods enumerated above in quantities sufficient for an individual to conduct his/her weekly grocery shopping.

TYPOLOGY STUDY



■ Superstore

SIZE: 140,000sf - 180,000sf

# PRODUCTS: 45,000

FULL SERVICE: Yes

FREE-STANDING: Yes

EXAMPLES: Costco, Super Walmart, Target, Meijer



● Supermarket

SIZE: 45,000sf - 70,000sf

# PRODUCTS: 45,000

FULL SERVICE: Yes

FREE-STANDING: Varies

EXAMPLES: Safeway, Kroger, Foodmaster, Whole Foods, Shaw's, Wegman's



▲ Budget

SIZE: 12,000sf - 20,000sf

# PRODUCTS: 1,500 - 1,800

FULL SERVICE: No

FREE-STANDING: Yes

EXAMPLES: Aldi's, Trader Joe's



● Ethnic

SIZE: 20,000sf - 40,000sf

# PRODUCTS: 45,000

FULL SERVICE: Yes

FREE-STANDING: Varies

EXAMPLES: New Mei Wah, Super 88, Cinco De Mayo, Hi-Lo, Ranch 99



● Specialty

SIZE: 1,500sf - 3,000sf

# PRODUCTS: 100 - 500

FULL SERVICE: No

FREE-STANDING: No

EXAMPLES: Savenor's, Fish Markets, Green Grocers

FIGURE 1



## METHODOLOGY

I began my research with a literature review of articles and books describing and attempting to explain food deserts. The purpose in reviewing the existing literature was to ascertain to what extent the causes of food deserts are currently understood and talked about. Publications on this subject tend to be journalistic, trade and professional publications, or academic journals. Books on this subject tend to discuss the food system as a whole and focus on the social and equity issues with that system. The topic of food deserts is covered from several angles, including economic, social justice and equity, demographic, retail and business, logistical and distribution, planning practice, and measurement and definition.

Reports like the 2008 PolicyLink document *Grocery Store Attraction Strategies* base actionable recommendations on typical needs of grocery retail and are intended for planning professionals and activists to apply practically. However, this document uses reports and studies which are now ten years old. Rather than speculate on how grocery stores choose to locate or rely on old research and literature sources, I interviewed stores directly about their location choices. My intention was to see whether these interviews do or do not reinforce what I found in the literature review. By talking to the retailers directly, I sought to demystify the barriers that are preventing them from choosing urban locations and, when they do locate in the city, which factors are most important. I formulated interview questions (Appendix D) geared towards those location factors having spatial and physical characteristics. I believed that this category of factors had been underrepresented in the literature about food deserts and required further investigation in a direct and pointed way. I hypothesized that the following might be considerations: major roads, rail lines, proximity to distribution centers, parcel size, parking allotment, land use, zoning, proximity to competitors, proximity to transit, and proximity to geographic and natural features such as water bodies and topography.

In the interview process I represented each type of store included in my study and spoke with those responsible for or at least involved with choosing store locations. Further conversations with ethnic stores and small specialty stores would be beneficial for fleshing out this information. The cities represented in the interviews include Boston, Baltimore, Chicago, and San Francisco. All interviews were

conducted on the phone and were not recorded.

After gaining insight about location factors directly from stores, and paying attention to common factors, I decided to test the validity of these location factors through a mapping process. The factors gathered through the interviews varied depending on the store model and type; the limits of time and resources meant I was only able to interview 10 stores. Therefore, I found mapping to be an effective way to examine whether these factors could be universal and to possibly discover larger trends in the locations and spatial relationships of the stores. Developing the “web of shopping” allowed me to observe whether the stated location factors were indeed present in the mapped locations and to confirm how potent each factor was for determining store locations. Additionally, the mapping of stores showed me where potential food deserts may be and an opportunity to understand how the physical built environment contributes to those gaps.

Boston and Baltimore are the two cities chosen to study. In the case of Baltimore, I am primarily limited to the Baltimore City border. In the case of Boston, I included Charlestown, Brookline, Cambridge, East Boston, and Somerville in addition to Boston proper. Although the Charles River divides Boston from Charlestown, Cambridge, East Boston, and Somerville, these neighborhoods and cities are all generally considered to be a part of the greater Boston area. It is, however, questionable as to whether a Cambridge resident would travel across the river in order to use a grocery store. City borders could be considered an arbitrary boundary for this study; however, the availability of data is a real limit.

These two cities were chosen because they are of similar geographic and population size; they are both on the East Coast and sit on similar-type water bodies with similar topography. Both cities also have a similar historical age. It is important to try to compare “apples to apples” as much as possible when only considering two cities together. Although much can be learned simply by mapping one city, having a comparison is valuable in making certain trends and patterns more discernible. When the same patterns exist in both cities, it is possible to say there is some universality in how stores choose to locate. When there are differences between the two cities, it generates more questions.

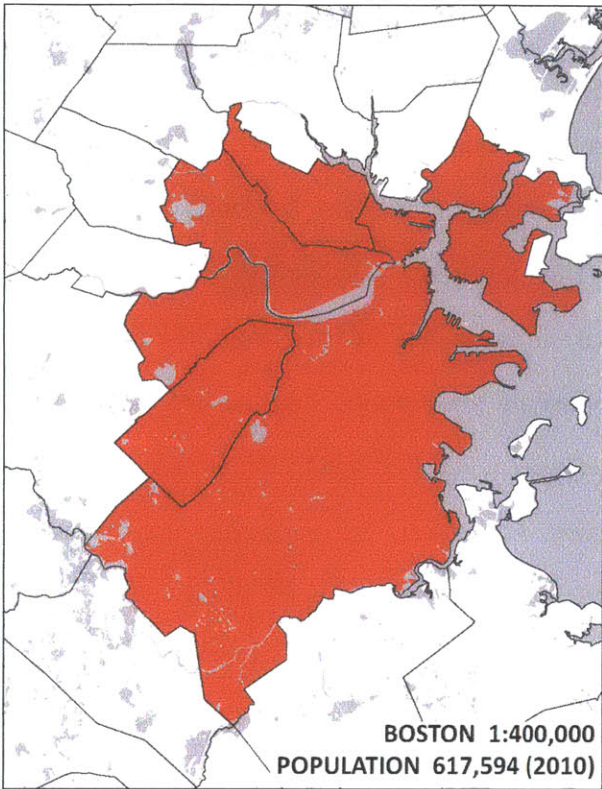


FIGURE 2

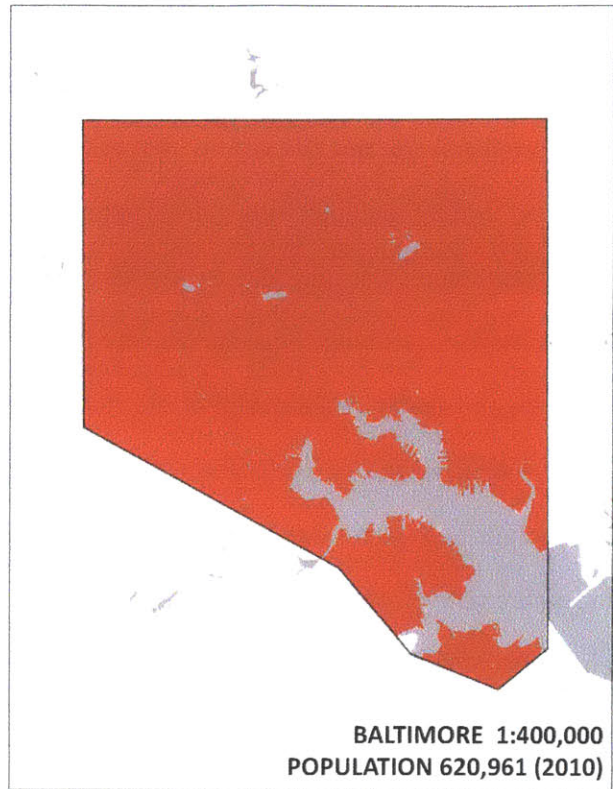


FIGURE 3

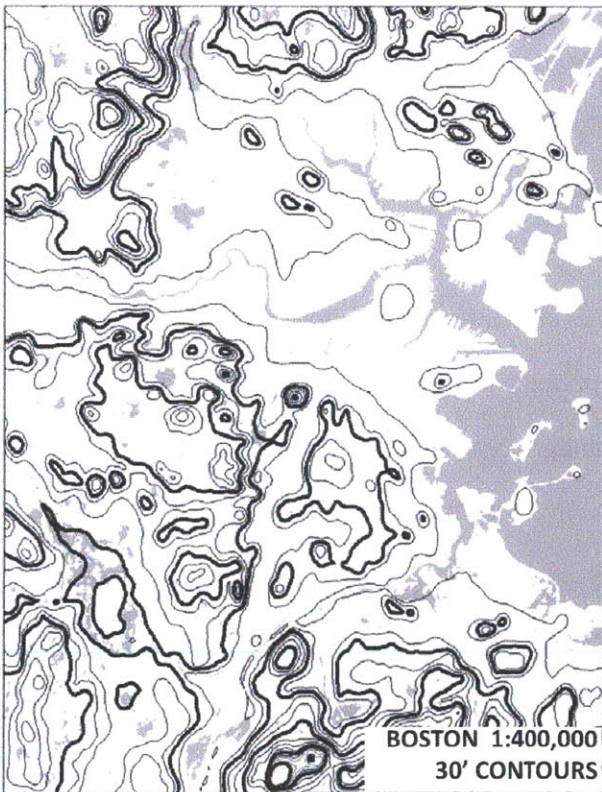


FIGURE 4

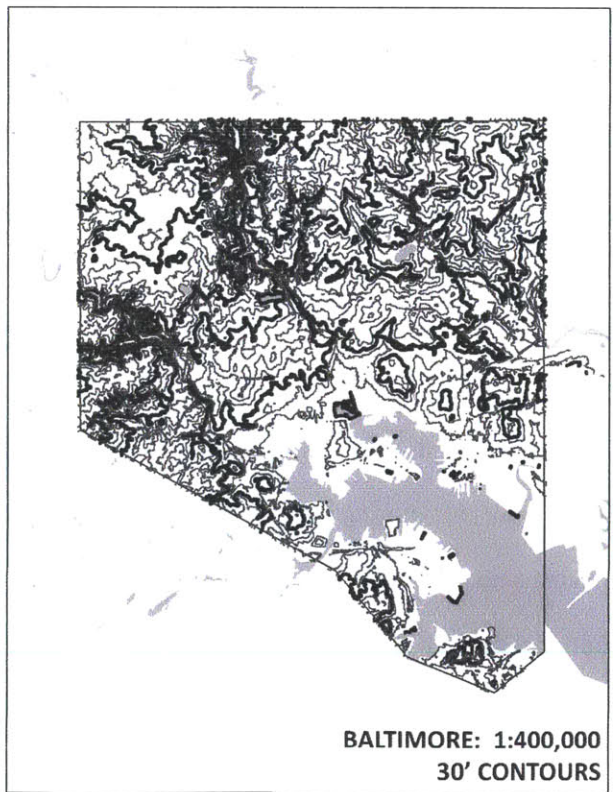


FIGURE 5



Using the background information from Brian Shorter and the store types identified for the purposes of this study, I generated a preliminary dataset of grocery stores using ReferenceUSA for Boston and Baltimore. That database categorizes stores according to the North American Industry Classification System (NAICS) from the U.S. Census Bureau. However, I found many of these tags to be inaccurate and not useful categorizations for this study. In order to generate a comprehensive list for each city, I spent time researching the stores on the list through simple internet searches and using Google Maps images, consulted websites for large store brands to confirm store locations, and used my own familiarity with stores in the Boston area to understand on the ground what types of stores exist and meet the needs of my definition. Because of this methodology, there is a possibility that the final dataset for stores has a margin of error, meaning there may be some missing stores.

In addition to categorizing my data by store type, I also added a level of information about ownership. For example, independent versus corporate supermarket stores can vary a great deal in their location strategies. The resulting data can be found in the table included. From the data we see that Boston has more stores overall but that Baltimore has more budget and supermarkets and especially more independent supermarkets. Boston has more ethnic and specialty stores than Baltimore. Baltimore has a large number of public, indoor markets which act as year-round food halls.

|                       | <b>BOSTON</b> | <b>BALTIMORE</b> |
|-----------------------|---------------|------------------|
| <b>Supercenter</b>    | <b>3</b>      | <b>6</b>         |
| <b>Supermarket</b>    | <b>52</b>     | <b>66</b>        |
| Chain                 | 35            | 32               |
| Independent           | 17            | 34               |
| <b>Budget</b>         | <b>12</b>     | <b>18</b>        |
| <b>Ethnic</b>         | <b>36</b>     | <b>12</b>        |
| Asian                 | 14            | 2                |
| Caribbean             | 3             | 2                |
| European              | 6             | 3                |
| Hispanic              | 8             | 1                |
| Other                 | 5             | 4                |
| <b>Specialty</b>      | <b>47</b>     | <b>9</b>         |
| Meat                  | 23            | 4                |
| Gourmet               | 11            | 1                |
| Green Grocer          | 12            | 2                |
| Natural               | 1             | 2                |
| <b>Farmers Market</b> | <b>36</b>     | <b>34</b>        |
| Indoor                | 3             | 8                |
| Outdoor               | 33            | 26               |
| <b>Total</b>          | <b>186</b>    | <b>145</b>       |

FIGURE 6

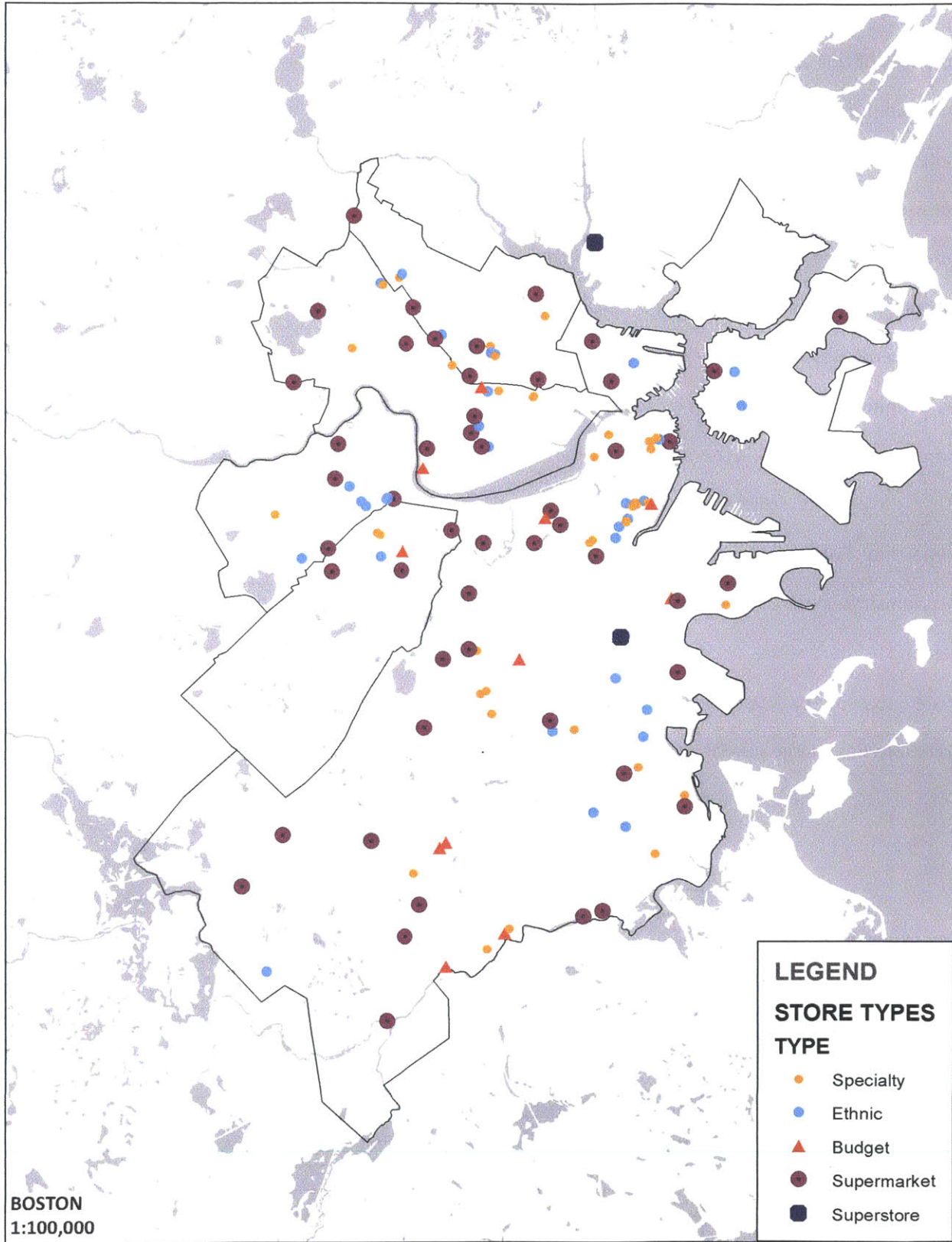


FIGURE 7

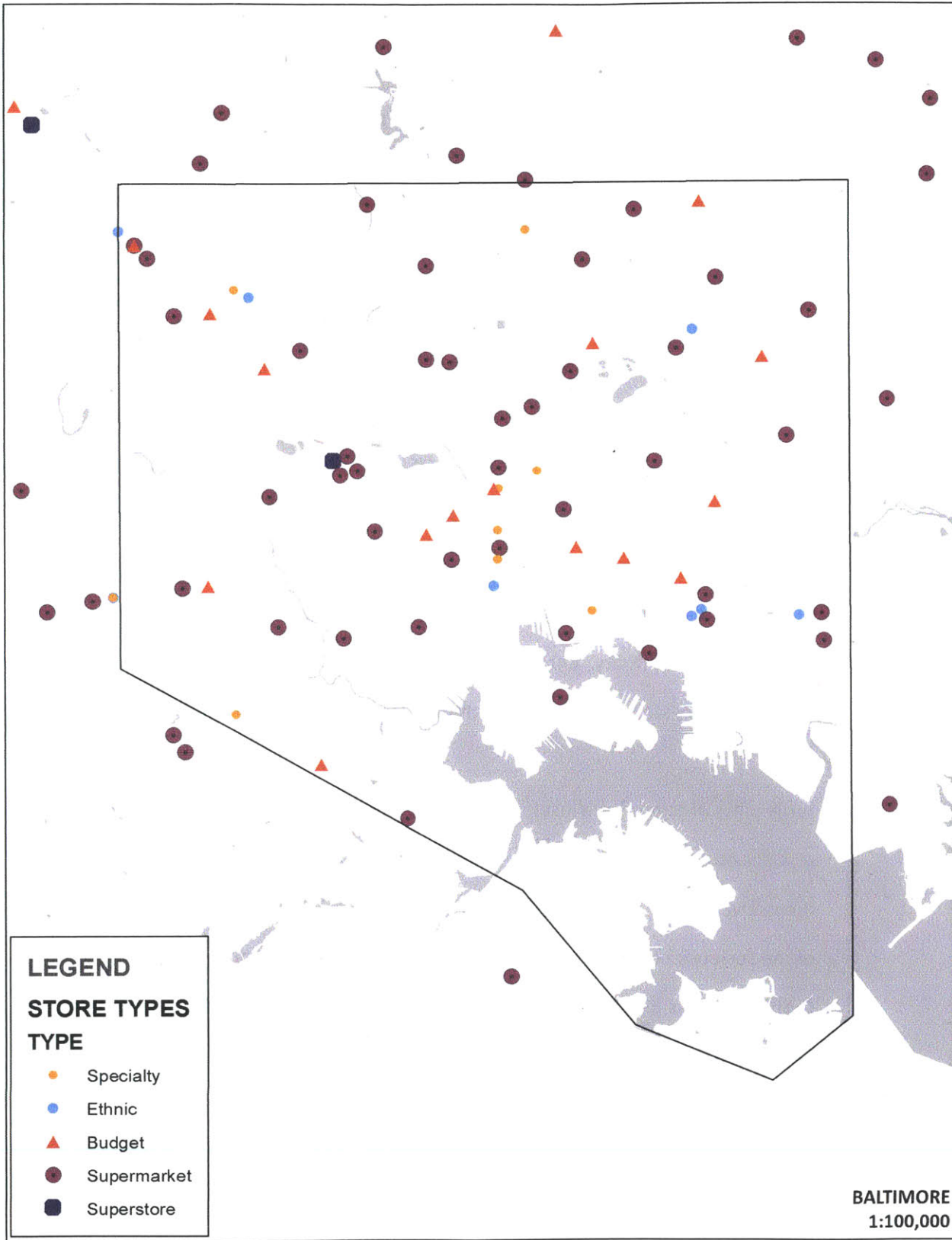


FIGURE 8

## CURRENT UNDERSTANDING OF FOOD DESERTS

The majority of literature on the subject of food deserts is intended to convince policy-makers that food access is a serious issue and needs addressing in the United States. Reports are either concerned with measuring food deserts to determine where they are, what they are, and where attention is needed, or it is concerned with showing the implications of food deserts, such as health issues like obesity and diabetes. In the cases where the causes of food deserts are discussed, the topic is an economic, demographic, or historical account of how the grocery industry has changed in the last fifty years. Literature specifically examining the causes of food deserts, however, is more sparse. As Bitler and Haider point out in *An Economic View of Food Deserts in the United States*, “almost no progress has been made in either the local area or the national studies on identifying why food deserts exist.”<sup>1</sup>

Food deserts are a geographic and spatial phenomenon. These are areas in the city where grocery stores are lacking. I am interested in the urban design and physical planning implications of food access and how the externalities of the efficient food system manifest themselves in the lack of retail grocery for certain parts of the city. Christopher Alexander, in the book *A Pattern Language*, begins to observe this trend of grocery stores in the urban context and suggests how stores are making their location choices:

Large parts of towns have insufficient services. New shops which could provide these services often locate near the other shops and major centers, instead of locating themselves where they are needed. In an ideal town, where the shops are seen as part of the society's necessities and not merely as a way of making profit for the shopping chains, the shops would be much more widely and more homogeneously distributed than they are today.<sup>2</sup>

As with any complex urban problem, there are several factors at play in the case of food deserts. The most common causes that appear include economic factors for the stores, socio-economic factors for the customers, changes in the food retail industry, geography and mobility, crime and safety concerns, and demographic patterns.

1 Bitler and Haider, “An Economic View of Food Deserts,” 155.

2 Alexander, et al., *A Pattern Language*, 105.

## ECONOMIC FACTORS

The USDA report *Access to Affordable and Nutritious Food: Measuring and Understanding Food Deserts and Their Consequences* was commissioned as part of the 2008 so-called Farm Bill as an official report to Congress to help determine policy around this issue. As the report explains, “understanding the market conditions that contribute to differences in access to food is critical to the design of policy interventions that may be effective in reducing access limitations.”<sup>1</sup> In it the authors identify characteristics and causes of food deserts. It should be noted that this report only included large grocery stores and supermarkets. From the supply side of this issue, the authors theorize that higher costs to develop stores in underserved areas may explain variation across urban areas where foods are offered and what stores offer them.

The report includes a section, “The Economics of Supermarket and Grocery Store Location,” which details the findings around both consumer behavior and supplier choices when it comes to grocery store locations. They explain that food is considered to be a “normal good” which, in economic terms means that demand for food increases as income increases. Given this basic economic principle, it is to be expected that high-income areas have relatively more food stores than low-income areas.<sup>2</sup> Winne asserts that “supermarkets primarily base their location decisions on the revenue projections and number of targeted customers they can reach within the trade area. . . In some economically distressed areas, chains would be reluctant to open a store [because] the anticipated sales volume just wouldn’t be enough to support a full-size supermarket.”<sup>3</sup>

Ver Ploeg emphasizes that supply, and therefore grocery store location, is driven by the costs of input goods. This concept is reinforced in *An Economic View of Food Deserts in the United States* by Marianne Bitler and Steven J. Haider published in 2010, “The most basic determinants of supply are the input costs to running a retail food outlet, which include labor, land, equipment, transportation, stocking, inventory, and wholesale product costs.”<sup>4</sup> Ver Ploeg connects land prices and zoning requirements with fixed costs, “In dense urban areas, land prices may be higher and zoning requirements of local

1 Ver Ploeg, Michele et al. “Access to Affordable and Nutritious Food,” v.

2 Ver Ploeg, Michele et al. “Access to Affordable and Nutritious Food,” 83.

3 Winne, Closing the Food Gap, 86.

4 Bitler and Haider, “An Economic View of Food Deserts,” 157.

governments may be more cumbersome and costly . . . [c]onsequently, it is likely that the fixed costs in urban areas are greater.”<sup>1</sup> Mark Winne in *Closing the Food Gap* found that industry spokespersons claimed operating expenses of inner-city supermarkets are higher than those of non-inner-city stores.<sup>2</sup> The economists, admittedly, cannot explain why low-income areas, which are likely to have lower land prices and lower wage rates, would be food deserts because the fixed costs for land are lower in these areas. As Bitler and Haider argue, “High land and labor costs are unlikely to be important determinants of food deserts because the poor often live in areas with low wage, high unemployment, and low land prices. . . . It remains an open question why larger retailers who had access to capital would not open a store in low-income areas.”<sup>3</sup>

In addition to fixed costs, economies of scale, scope, and agglomeration factor into supply-side location choices.<sup>4</sup> With economies of scale, the cost of operating the store decreases proportionately as the size of the store increases and the number of stores. When the costs decrease as store size increases, the larger store size allows for a broader scope of products being offered and can effectively offer lower prices at the same time.<sup>5</sup> Economically it may be easier for larger stores to survive and thrive for the reasons listed here. Neither the USDA report or Bitler and Haider can explain why larger stores do not locate in low-income areas: “Even if small-scale grocers are unable to secure low wholesale product prices because they do not make bulk purchases, it would remain an open question why large-scale retailers who purchase in bulk would not locate in low-income areas.”<sup>6</sup> Alexander seems to believe that agglomeration is a key factor as he observes in the section “Web of Shopping” from *A Pattern Language*, “Shops rarely place themselves in those positions which best serve the people’s needs, and also guarantee their own stability.”<sup>7</sup> We find that the economic, agglomeration theories of Hotelling’s Problem, when applied to retail grocery outlets, lead to an impact on the physical distribution of stores throughout a city.

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1 Ver Ploeg, Michele et al. “Access to Affordable and Nutritious Food,” 84.

2 Winne, *Closing the Food Gap*, 87.

3 Bitler and Haider, “An Economic View of Food Deserts,” 157.

4 Bitler and Haider, “An Economic View of Food Deserts,” 157.

5 Ver Ploeg, Michele et al. “Access to Affordable and Nutritious Food,” 85.

6 Bitler and Haider, “An Economic View of Food Deserts,” 157.

7 Alexander, et al., *A Pattern Language*, 104

## STORE SIZE, DISTRIBUTION, AND CHANGES IN THE FOOD RETAIL INDUSTRY

Grocery retail has gone through several major changes in the past century. In the section “Retail Concentration, Food Deserts, and Food-Disadvantaged Communities in Rural America” from *Remaking the North American Food System*, the authors state that the creation of food deserts has occurred gradually over the second half of the twentieth century.<sup>1</sup> First there was the rise of the chain grocery store over independent stores. Next, there was the evolution of the grocery store into the supermarket. And finally, now, there is the rise of the supercenter with larger store formats and more product offerings.<sup>2</sup> As the report explains, “The impetus for the shift from a large number of widely dispersed small-scale local grocers to a concentration of supermarkets and supercenters located in a limited geographic area has been fueled by the globalization of food production and distribution.”<sup>3</sup> Statistically, large grocery stores serve the majority of the population. Almost 90% of all grocery and food for off-premises consumption can be accounted for at supermarket and supercenter types.<sup>4</sup> However, the number of supermarkets and grocery stores has generally declined, creating an increasing concentration of retail.<sup>5</sup>

Two of these changes can be attributed, in large part, to the growing use and affordability of cars and the infrastructure and housing that resulted. The movement of residences and businesses to suburban areas and away from urban centers created these store typologies.<sup>6</sup> In other words, some of these typologies, especially the supercenter, were never intended for urban contexts. As the 2008 PolicyLink report points out:

National and regional grocery retailers have historically been very formulaic in their approach to new store development. These formulas are largely based on auto-centric suburbs that have large parcels of land available. Because grocery retailers operate on very slim profit margins . . . there is little financial room to experiment with approaches

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1 Blanchard and Matthews, “Retail Concentration,” 202.

2 Ver Ploeg, Michele et al. “Access to Affordable and Nutritious Food,” 87.

3 Blanchard and Matthews, “Retail Concentration,” 202.

4 Blanchard and Matthews, “Retail Concentration,” 202.

5 Blanchard and Matthews, “Retail Concentration,” 204.

6 Ver Ploeg, Michele et al. “Access to Affordable and Nutritious Food,” 87.

that diverge from the successful “suburban” models.<sup>1</sup>

Winne, in conversations with industry spokespersons, found that stores have moved to “cookie-cutter, one-size-fits-all approach[es] to new store development. For efficiency’s sake, they need to build larger stores that all look alike and are configured in the same way.”<sup>2</sup> This would imply that “oddball-size” stores using existing urban infrastructure, and possibly with small loading docks which do not accommodate modern, 18-wheeler trucks, are at a disadvantage and “do not fit the plans for corporate expansion.”<sup>3</sup> “There is one other factor responsible for the city’s modest revival in urban food retailing. It’s the wholesale distribution network, without which no retail food store could survive. As supermarket chains get larger, increase the number of stores, and consolidate the number of chain store corporations, they are able to demand ever greater concessions from their wholesale suppliers. . . . There is simply no place in this system for a single, inner-city grocery store of 15,000 square feet.”<sup>4</sup> Clearly, densely built urban areas do not have the many parcels which accommodate the larger store models with large parking lots and turning radii ample for supply trucks.<sup>5</sup> Winne uses these reasons to explain why new stores are rarely built in cities.

## GEOGRAPHY AND MOBILITY

Geographic distance is at the center of debate when it comes to measuring food deserts. However, spatial relationships are not discussed in a context of food desert causes. The most relevant geographic factor that appears is the question of mobility and geographic distance of customers to the store. Because food deserts are characterized by people who cannot get physical access to a store, transportation for consumers factors greatly into what is considered a food desert.

According to Blanchard and Matthews, studies find that the vast majority of food pantry users do not own vehicles.<sup>6</sup> However, Bitler and Haider feel that “for urban areas, the relevant geographic area is likely to be smaller, and access to public transportation is likely to be much more important.”<sup>7</sup> This

1 PolicyLink, Grocery Store Attraction Strategies, 13-14.

2 Winne, Closing the Food Gap, 87.

3 Winne, Closing the Food Gap, 87.

4 Winne, Closing the Food Gap, 96.

5 Winne, Closing the Food Gap, 88.

6 Blanchard and Matthews, “Retail Concentration,” 204.

7 Bitler and Haider, “An Economic View of Food Deserts,” 165.



is in conflict with the Dai article which believes that “residents who are transit-dependent are a largely nonspatial issue because of their age, medical condition, or lack of economic means, but they also tend to have to travel for a longer time to access food sources which affects their spatial access.”<sup>1</sup> Bitler and Haider explain, “As discussed previously, economic models of spatial competition generally do not require the definition of specific geographic markets, but instead directly incorporate transportation costs that effectively make faraway products undesirable to a consumer.”<sup>2</sup> In other words, economically, the consumer is not concerned with the geographic distance to a store but rather the cost of transportation to the store and/or the cost of time to get to the store.

In one study by Bellinger and Wang, all measures of general retail activity density and per capita access showed insignificant relationships to the radial distance from the city center.<sup>3</sup> This indicates that characteristics associated with the urban core – such as smaller parcel sizes, higher density, and more historic infrastructure have insignificant impact on the density of retail distribution in the city.

## CRIME AND SAFETY CONCERNS

Crime and the perception of crime are sometimes cited as having location impacts on stores. In one example drawn from Winne’s book, an entrepreneur opened a store in the food desert of Hartford, Connecticut. This neighborhood was notorious for failed businesses, including food stores, crime, and low-income residents with housing projects nearby. Security was an issue when the store first opened, but after an established time, theft disappeared in the store. However, some food distributors refuse to deliver to this location because of the reputation that the neighborhood is unsafe.<sup>4</sup> It is currently unclear to what extent this factor has been studied or measured.

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1 Dai and Wang, “Geographic disparities,” 659.  
2 Bitler and Haider, “An Economic View of Food Deserts,” 165.  
3 Bellinger and Wang, “Poverty, Place, or Race,” 268.  
4 Winne, Closing the Food Gap, 95.

## DEMOGRAPHIC AND SOCIO-ECONOMIC FACTORS

The perception persists among supermarket companies that it is not profitable to create supermarkets in poor neighborhoods.<sup>1</sup> In a study by Bellinger and Wang, the key demand-related variables for food retail are income, population density, and transportation costs.<sup>2</sup> While it is true that median income and population density are considered when generating a market study for a store, it is not clear how much these factors are weighted and whether this is the case for all stores.<sup>3</sup> “Grocery store chains demonstrate little interest in poor, urban communities because the demographics do not meet the industry’s ideal and because, as noted, the big grocers are looking for big sites.”<sup>4</sup>

Bellinger and Wang actually dispute the notion that income is causal for food deserts. They found no evidence of a retail gap in low-income neighborhoods.<sup>5</sup> However, they did find that there was a systematic retail gap in ethnically defined groups. This was especially true of African-American neighborhoods which also showed more but significantly smaller grocery stores in these neighborhoods.<sup>6</sup>

The Discount or Budget store type has emerged to appeal to bargain and low-income shoppers. This type is based on demographics rather than physical location. These stores are typically smaller than the average supermarket and compromise quality of service and experience, as well as providing more limited product offerings in order to have lower prices.<sup>7</sup>

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- 1 Shigley and Freeman, “When Access Is the Issue,” 30.
  - 2 Bellinger and Wang, “Poverty, Place, or Race,” 255.
  - 3 Winne, *Closing the Food Gap*, 86.
  - 4 Shigley and Freeman, “When Access Is the Issue,” 26.
  - 5 Bellinger and Wang, “Poverty, Place, or Race,” 268.
  - 6 Bellinger and Wang, “Poverty, Place, or Race,” 268.
  - 7 Ver Ploeg, Michele et al. “Access to Affordable and Nutritious Food,” 87.

## SUMMARY

The USDA report summarizes its findings around why large grocery stores and supermarkets may be lacking in parts of the city:<sup>1</sup>

- Zoning and regulatory approval processes
- The need to secure land sites large enough for stores
- Environmental remediation and/or demolition of current structures
- Higher construction and operating costs in urban areas
- Lower access, visibility, or traffic flow and less space for parking in urban areas relative to suburban areas
- Local politics, where officials and groups may have competing goals for development

## CURRENT STRATEGIES

Based on the research reviewed above and the general consensus around the causes of food deserts such as economic factors, demographics, and market competition, there are common strategies in place for retail attraction. I categorize policy for food deserts into four groups (Appendix C): formal support, financial incentives, land use and zoning, and permitting.

**Formal Support** – Politically, it may be important for a municipality to outwardly show support for welcoming grocery businesses into communities. Additionally, a show of support may convince a store to remain in an area or to locate in an area that it is unsure about. Recently, formal support has been shown in the commitment of a city, such as Detroit or Denver, to the health and well-being of its citizens.

**Financial Incentives** – In 2010 the Obama Administration proposed a \$400 million initiative for Healthy Food Financing to, in part, promote healthy food retailers to move to underserved urban and rural communities in direct response to the prevalence of food deserts.<sup>2</sup>

In some cases, a city will assist a project that it sees as beneficial with a financial contribution to the project. This is also true if the store locates in a neighborhood or zone where the city is trying to

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1 Ver Ploeg, Michele et al. "Access to Affordable and Nutritious Food," 88.

2 Bitler and Haider, "An Economic View of Food Deserts," 154.

promote development. San Jose Redevelopment Agency paid for the elevators in one Safeway project because the store was in a redevelopment zone.<sup>1</sup> Bi-Rite Market chose a new location which lies in a California Enterprise Zone – this is a program which provides tax incentives to businesses that employ a certain number of local residents. SuperValu worked with a city in Illinois to renegotiate the tax rebate level and a waiver of permits and fees.

Land Use and Zoning – Sometimes zoning or land use laws are hostile to grocery retail. In some cases, zoning does not allow uses such as farmers markets. Some cities are having to remove more restrictive land use measures in order to enable more grocery stores.

Permitting – Creating new, more efficient, or expedited permitting processes are a way for a city to address current lacks in grocery retail. The Green Cart Program in New York City is one example of this kind of policy. Formula Retail Laws are an example of a type of ordinance which could be considered an incentive for local, smaller, independent businesses. However, the limitations on formula brands also serve as a deterrent for larger retail corporations because these laws restrict the number of stores allowed within the city.

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1 Natalie Mattei, interview 2/29/12

## LOCATION FACTORS

In conducting interviews with grocery retail proprietors I was interested to discover whether the location factors mentioned were the same as those discussed in the literature review. Because my aim was to fill the gaps of knowledge on spatial determinants, I focused mainly on those location factors which have physical implications but also included questions about target demographics and real estate economics. Location factors vary depending on the kind of store.<sup>1</sup> The individual needs of each store may vary – there is no one parcel or building size or location that will work for every store. It is a fallacy to assume that all stores locate based on the same factors or that they prioritize these factors in the same way. Even among the same store category there are differences. This fact became increasingly evident with each interview I conducted. The responses I received were more fine-grained and detailed than expressed in the consulted literature.

I will begin by discussing those factors which relate to causes mentioned in both the literature and the interviews.

## AVAILABILITY OF REAL ESTATE (ECONOMIC AND PHYSICAL FACTORS)

What was established quite early in the interview process is that there is a distinction between new construction and using existing real estate. It was rare in the literature that this distinction was made or considered. This fact has geographic as well as economic implications for how stores locate. It is true that the costs associated with grocery retail are the biggest barrier for grocery retailers. Possible cost-inhibiting factors include high rents, the cost of security staff if the area has a high crime level, and high cost of renovation or construction of full-service grocery retail space (due to the multiple areas of the store required to meet health code and be serviced with electricity and water). Because the grocery store type can be expensive to build, the suburban model is more attractive. And it is true that new stores that get built now tend to be in suburban areas.<sup>2</sup> Store models that can afford to build from the ground up do so where land is less expensive and where there are fewer restrictions. The economic factors of fixed costs mentioned by Bitler and Haider support this finding.

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1 Brian Shorter, interview 2/8/12

2 Brian Shorter, interview 2/8/12

Urban real estate availability is based on affordability as well as appropriate space. Based on a store's parcel and building size needs, parking needs, rent level, searching for locations is limited by existing building stock. Additional limitations include building shells with the right zoning and property for sale of the right size in a location/neighborhood where they want to locate. Almost every store cited finding an appropriate space as their biggest issue. Urban environments are not as easy for groceries as "suburban" environments, where there is more space for larger facilities and parking. For these reasons it became apparent that urban store brands do not open locations as often as a more suburban model. In the case of a small, localized business such as Foodmaster Inc., they only open a new store if a location becomes available that meets their budget and size requirements.<sup>1</sup> Safeway said there are many examples of locations where they would like to be in the city but cannot find the right real estate for sale/lease.<sup>2</sup> The economic model of Save-A-Lot, which is part of a large corporation, does not allow for ground-up construction because of the costs. This means they may not be able to locate in a certain neighborhood.<sup>3</sup> This is especially significant because this store brand is targeted towards urban low-income demographics.

Urban real estate is more expensive and often more dimensionally restrictive than a greenfield suburban site. Reasonable rent is the primary issue, and this is especially true for a smaller company with fewer stores. Urban rents also increase over time – in the past, urban rents were low but now these locations are gaining value.<sup>4</sup> Small independent businesses such as Harvest Co-op are being driven out of the city due to ever-increasing rents and limited real estate.

Part of the consideration for existing real estate is the previous use. If using an existing building, if the previous use was not a grocery store, then the costs will be higher to renovate.<sup>5</sup> As an example, a location in Brighton did not work for Foodmaster because the previous use was not a grocery store so the costs and rent would be too high, while the amount of parking available at the site was too low.<sup>6</sup> Harvest's Cambridge store location was formerly a grocery store which makes the prospect more

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1 Richard Hinds, interview 2/23/12  
2 Natalie Mattei, interview 2/29/12  
3 David Hene, interview 2/13/12  
4 Christina Lively, interview 3/9/12  
5 Richard Hinds, interview 2/23/12  
6 Richard Hinds, interview 2/23/12

affordable. Alternatively, Harvest's Jamaica Plain location is a former house that has been expanded – not ideal conditions.<sup>1</sup>

Size requirements vary considerably depending on the store type and model. Urban stores, in general, need to be more flexible in their requirements. This was seen when Whole Foods bought Wild Oats and acquired building stock that did not fit their previous model. Whole Foods is now more creative with the store size and design in order to get a good price on real estate.<sup>2</sup> This is reflected in the large range of store sizes the brand has - 25,000-50,000 sf.<sup>3</sup> Large stores like Save-A-Lot require a parcel size of about an acre which can be difficult to find. Size is the second most important issue for Harvest; they have two stores – one in Jamaica Plain that is 4,000 square feet and one in Cambridge that is 15,000 square feet.<sup>4</sup>

We see that the economics and physical limitations of real estate are major contributors to supply-side food deserts.

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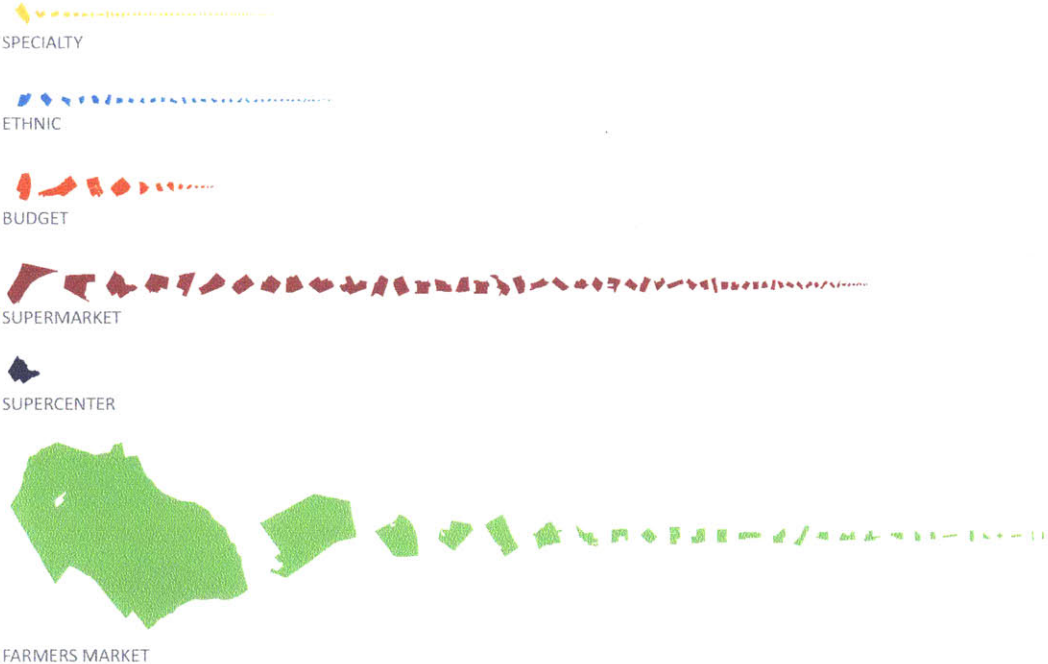
1 Christina Lively, interview 3/9/12

2 Brian Shorter, interview 2/8/12

3 "Real Estate Development," [wholefoodsmarket.com](http://wholefoodsmarket.com), accessed 2/17/12

4 Christina Lively, interview 3/9/12

PARCELS - BOSTON



PARCELS - BALTIMORE

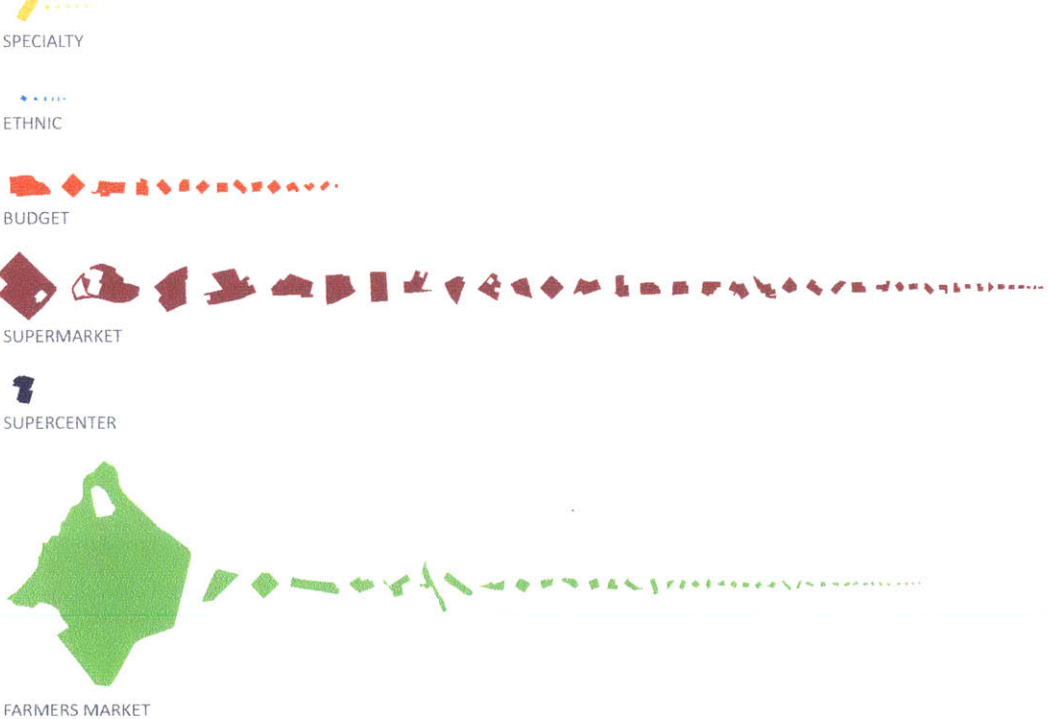


FIGURE 9



## PARCELS

Parcel size is a less significant indicator than I originally anticipated. Most stores, especially in the urban context, cannot afford to build from the ground up. Therefore, considerations such as parcel size and parcel assembly are less critical. Existing building stock becomes the limiting factor, and the parcel size is more of a by-product of the building footprint needed for the store and the parking. Not surprisingly, the Supermarket type has the largest average parcel size, although I was surprised to see the variance of parcel sizes and shapes for this type; this is especially the case in Baltimore. The other types have far less variability when it comes to parcel size. Boston, too, has smaller parcels on average for each type than Baltimore. Supercenters, Supermarkets, and Budget stores have the largest building footprints of all the types, thus necessitating a larger average parcel size. These types also typically offer more parking than the other types. As mentioned in the interview with Natalie Mattei of Safeway, contemporary stores provide fewer parking spaces per square foot of store than in the past. Stores want a parcel size that firstly has the appropriate building for their model, but that also has a specific ratio of parking so as to be convenient to the customer but also not waste valuable real estate on often-vacant parking spots.

The most significant aspect of parcel size for our purposes is to consider whether the areas where there are gaps in food service have different physical characteristics. As we can see, in the Brookline area where there is a significant lack of stores compared to residential areas, there are smaller parcels. This lends towards the argument for smaller store types.

## PARKING

Parking and ease of access are carefully considered aspects of the customer experience for most stores and also bear importance for the cost of the land needed narrowing the suitability of real estate. Parking was of primary concern to supermarket stores types like Foodmaster, Safeway, and Mars Foods. On the other hand, for Harvest Co-op, which has only two stores, parking is not a deal-breaking issue, as seen by the less than perfect conditions at their Cambridge store.<sup>1</sup>

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1 Christina Lively, interview 3/9/12

Additionally, each city has a different parking requirement or regulation. Supermarkets such as Mars and Foodmaster continue to hold onto the belief that shoppers, even in urban areas, demand ample parking. Mars Foods chooses to provide 20% over the required amount of parking.<sup>1</sup> Most Foodmaster stores are characterized by large parking lots, and the store management believes most people need to drive to shop at the store.<sup>2</sup>

Because the cost of land in urban areas tends to be high, it is important to find the right ratio of store footprint to parking. Historically, the rule of thumb has been to create 5 spaces per 1,000 sf of store; this number is often less in urban areas. Safeway likes to keep a ratio of 2.5 to 5 spots per 1,000 sf; 5 spots is now considered too heavy for reasons of environmental awareness, and again, because land costs are too high to have empty parking spaces.<sup>3</sup> Safeway's store on Church and Market in San Francisco, a public market site before becoming a supermarket, was built in the 1940s with a 1995 remodel and expansion. This location is the busiest store in the city and has 149 parking spaces. This is compared with the 200 spaces they would need to provide in a suburban location.<sup>4</sup>

Again, parking requirement, like real estate, are tied to economics and available land in the city. The biggest challenge for a store model that requires parking is to find such a large site near a residential area.

## DISTRIBUTION CENTERS AND SUPPLY CHAINS

Although the literature cited changes and innovations in distribution as having a large effect on the shift of grocery stores to larger formats, this topic was rarely brought up. Distribution Center locations are not critical location factors for most stores. The modern technology and operations of distribution fleets accommodate stores of all types quite easily. Multiple store proprietors said that a store must be within a one-day turnaround as an adequate distance. This is in contrast with the historical condition of stores relying on rail and water infrastructure for food supply. Although in the past public markets were placed within immediate proximity of rail and shipping depots, the shift to trucking

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1 Rich Snyder, interview 3/26/12  
2 Richard Hinds, interview 2/23/12  
3 Natalie Mattei, interview 2/29/12  
4 Natalie Mattei, interview 2/29/12

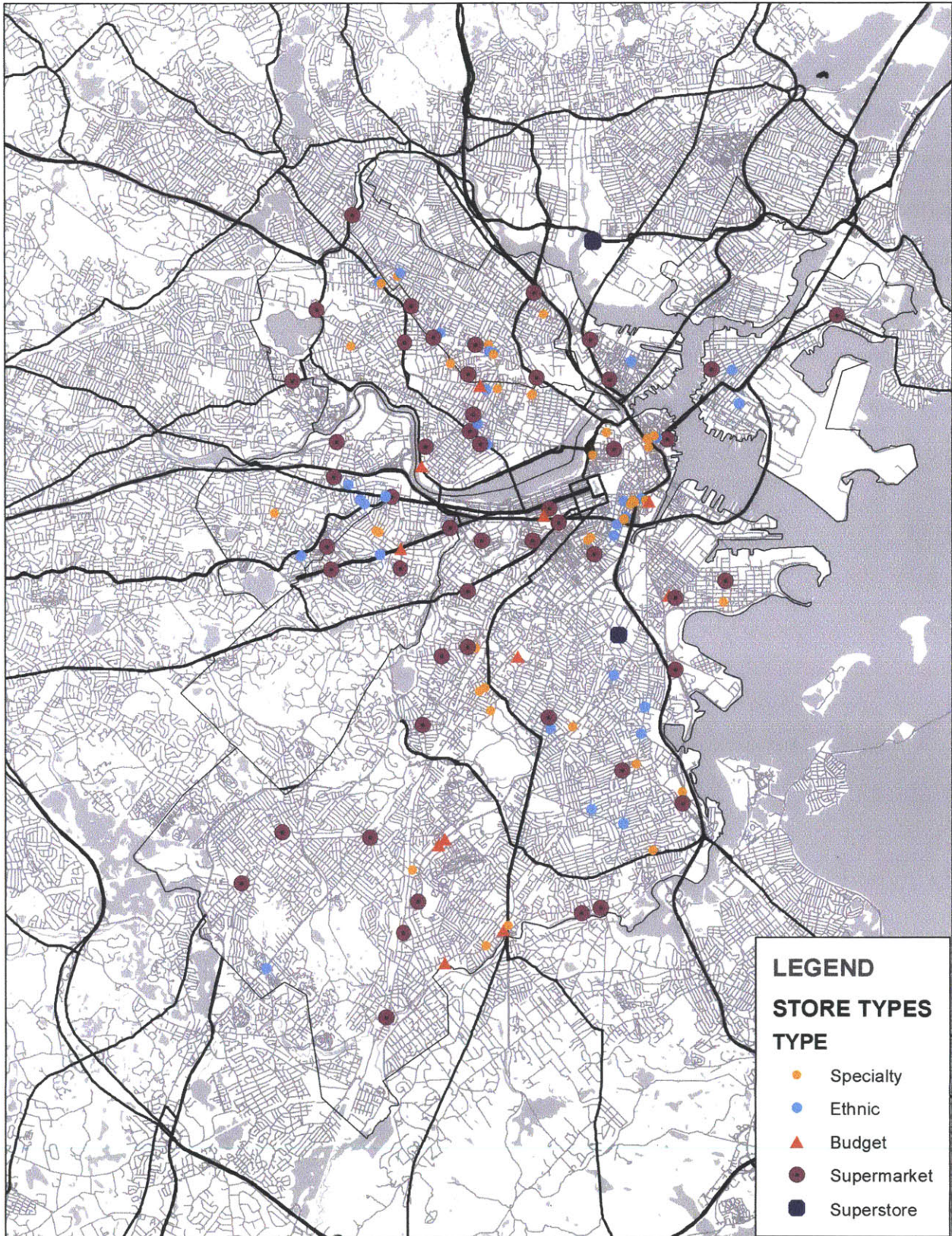
has made that kind of location factor obsolete.

For example, Foodmaster Inc., with its 11 stores in Massachusetts and New Hampshire, uses a distribution company based in Keene, New Hampshire. The trucks that deliver to them are loaded only with their product.<sup>1</sup> Safeway has distribution in Tracy (next to a Costco) which serves 280 stores in Northern California, Nevada and Hawaii. This particular distribution center delivers as far as Reno and Eureka as its furthest distances.<sup>2</sup>

Of the stores that I spoke with, there was one exception, Mars Food in Baltimore, that placed distribution high on its priority of location factors. The company has a distribution center in Baltimore City and will only look at locations in central Maryland for this reason. This choice is based on the cost and administration for trucking licenses when crossing state borders.

1 Richard Hinds, interview 2/23/12

2 Natalie Mattei, interview 2/29/12



**BOSTON - MAJOR ROADS**  
**1:100,000**

## ROADS

Roads may be the single most important physical factor for grocery retail locations. Every store interviewed cited the importance of being directly on a major road. Roads provide many things to the store – access for supply trucks, visibility to potential customers, and access to customers. In both Boston and Baltimore, stores, especially of the supermarket type, are located on major arterials. A major arterial does not necessarily mean a highway or freeway, but a large thoroughfare and usually a more commercial corridor. The road system in Baltimore is radial in pattern and when the stores are plotted against the road system, we see that their locations are most influenced by the pattern of this physical factor. The commercial zones follow these major arterials as they radiate out from the center of the city with residential zones falling in between. In the detail of this map one can see that stores may be a couple of blocks away from the largest roads, especially in the case of store types other than Supermarket.

One further trend I discovered when comparing store locations to the road system is that stores almost never locate on one-way roads. In cities like Baltimore and Boston, one-way roads tend to be smaller streets. However, this trend can also be attributed to the desire for vehicular access to the store to be easy for customers and supply trucks. One-way roads provide less visibility because they automatically preclude cars going only in one direction. A customer has to maneuver in a more tedious way to know how to enter the store. For these reasons, it is clearly understandable why stores would avoid this type of road. The implication is, therefore, the more one-way roads in a city, the fewer real estate options a grocery retailer has.

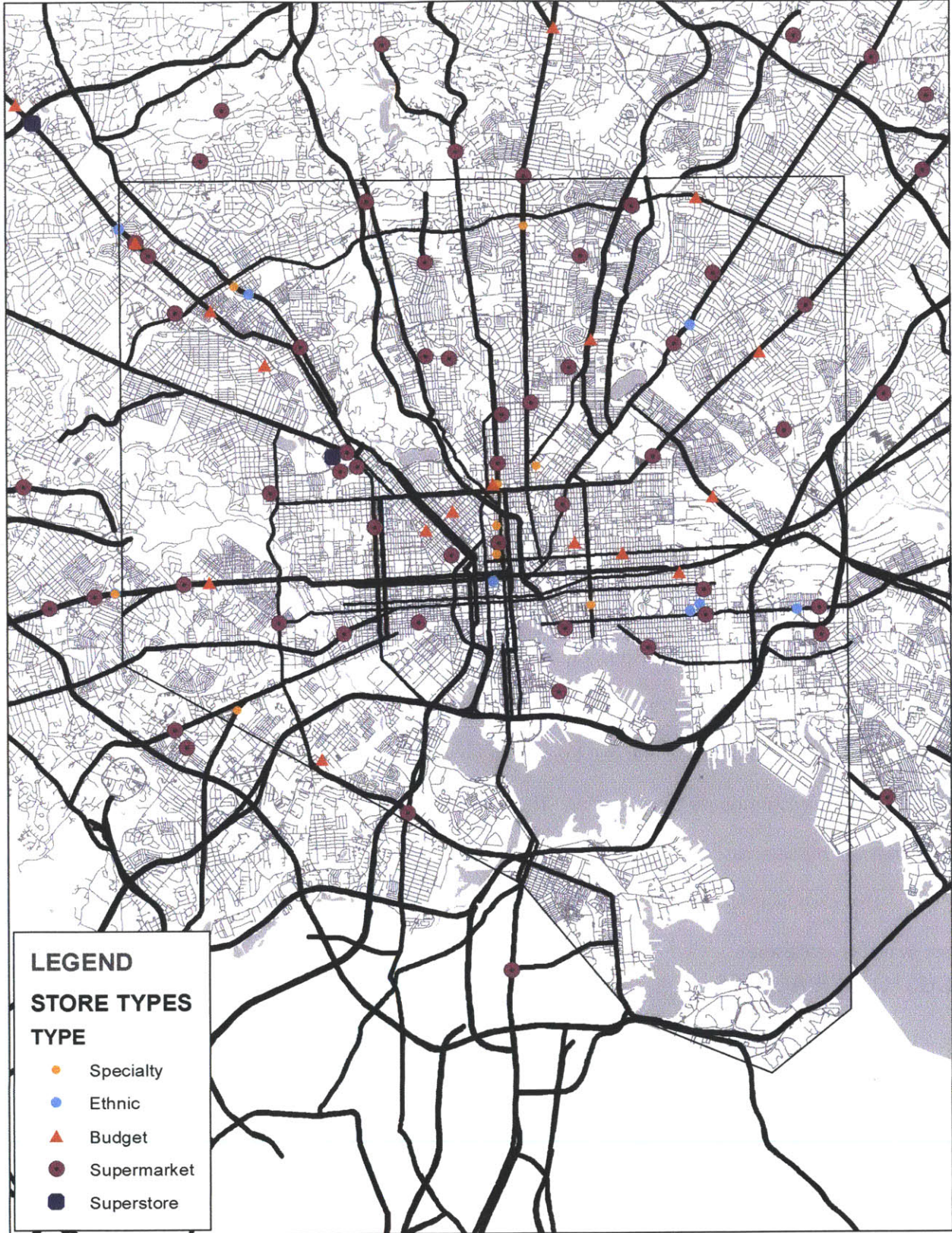
The type of store does seem to correlate with the road types. The larger retail types such as Supercenters and Supermarkets prefer to be on the largest roads – highways, boulevards. Smaller store types such as Specialty and Ethnic stores tend to be on smaller commercial corridors. This can be for several reasons. Larger stores have more products and have larger, more frequent deliveries. For these frequent and large trucks, the major roads are most convenient. Additionally, real estate suitable for these larger stores tends to be in more commercial parts of the city. These store types can be more difficult to integrate into the urban fabric. Specialty stores tend to occupy smaller store fronts which are

also on quieter commercial corridors and also tend to be in closer proximity to residential neighborhoods because of the compatibility of real estate types.

Clearly the placement, directionality, and relationships of roads are not something that can be easily changed. The combination of roads, zoning, and appropriate real estate factors greatly limit the locations suitable for retail grocery in an urban setting.



**BOSTON - ONE-WAY ROADS**  
NTS



BALTIMORE - MAJOR ROADS  
1:100,000

## LOADING ACCESS AND MANEUVERABILITY

Access for store supply is as important as customer access. Balancing these two factors – supply and customer access – has always been a consideration for stores and markets. Because the current grocery retail system relies on trucking, the store must be able to accommodate truck traffic as well as the customer car traffic. Truck delivery is key – if a store cannot get that aspect of a site to work then the location will not work.<sup>1</sup> An average supply truck is 65 feet long and most stores require at least one loading dock and ample space for truck maneuvering (determined by engineering modeling programs). Deliveries happen 7 days a week for a fresh product. Twenty years ago, there would have been fewer deliveries and the store would keep product in a basement space for longer periods. Because of this differing, previous delivery schedule, older buildings may be more difficult to make feasible for storage and truck access needs.<sup>2</sup>

Timing of delivery is a critical part of a store's business model but also impacts the surrounding uses. Therefore, city approvals dictate when deliveries can happen. Residential areas can restrict deliveries at night for nuisance reasons, but this is the ideal time for deliveries to happen for the store. Otherwise, trucks have to be in the streets during peak traffic hours and can contribute to congestion.<sup>3</sup> Some stores, such as Bi-Rite and Harvest Co-op, are on very small, very urban sites and do not have parking lots to accommodate truck loading. The consequence is that trucks park on the street and deliveries are made across the sidewalk.

This particular factor is the result of both major road access and the size and characteristics of the available real estate.

## CUSTOMER ACCESS

Being located in a high traffic area (foot and/or vehicle) is also a component of providing good customer access.<sup>4</sup>

1 Natalie Mattei, interview 2/29/12

2 Natalie Mattei, interview 2/29/12

3 Natalie Mattei, interview 2/29/12

4 "Real Estate Development," [wholefoodsmarket.com](http://wholefoodsmarket.com), accessed 2/17/12



## VISIBILITY

This factor is briefly mentioned in the USDA report. Stores almost universally require excellent visibility, directly off the street.<sup>1</sup> Generally this involves being near high traffic arterials and at a lighted intersection.<sup>2</sup> Components of good visibility include a free-standing sign and having the store not hidden by other buildings or setbacks. Visibility serves to create a better customer experience and places the store in the minds of the residents and passers-by.

## CAR ACCESS

Good access for vehicles includes any factor that provides ease of access for customers driving to the location.<sup>3</sup> Real Estate and Marketing managers are conscientious about how easy and visible the entrances and exits are to get in and out of the store and consider turn lanes and ease of access from roadways when selecting locations.<sup>4</sup> The car traffic flow is impacted if the driveway is too small or if there are too few driveways. A bottleneck, again, creates an inconvenient and undesirable experience for customers.<sup>5</sup>

## PEDESTRIAN ACCESS

When in an urban context, it is understood that a certain number of customers will be accessing the store as pedestrians. This accounts for, in part, the desire to be in close proximity of residential neighborhoods. For example, Foodmaster explicitly considers how many roads the customer has to cross to get to the store.<sup>6</sup> Safeway also cited good pedestrian and bike connections as a consideration for customer access.

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1 "Real Estate Development," wholefoodsmarket.com, accessed 2/17/12

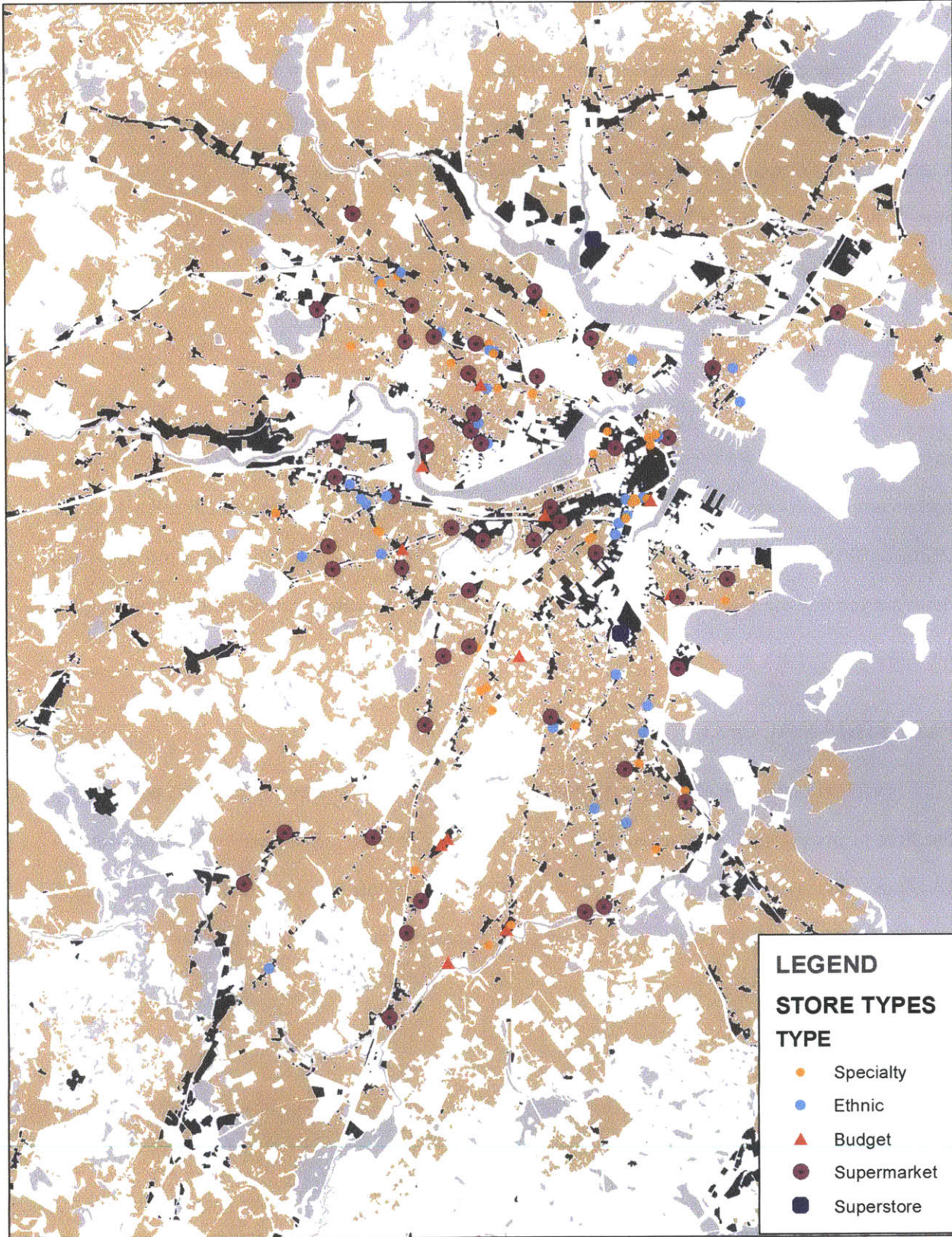
2 "Real Estate Development," wholefoodsmarket.com, accessed 2/17/12

3 Richard Hinds, interview 2/23/12

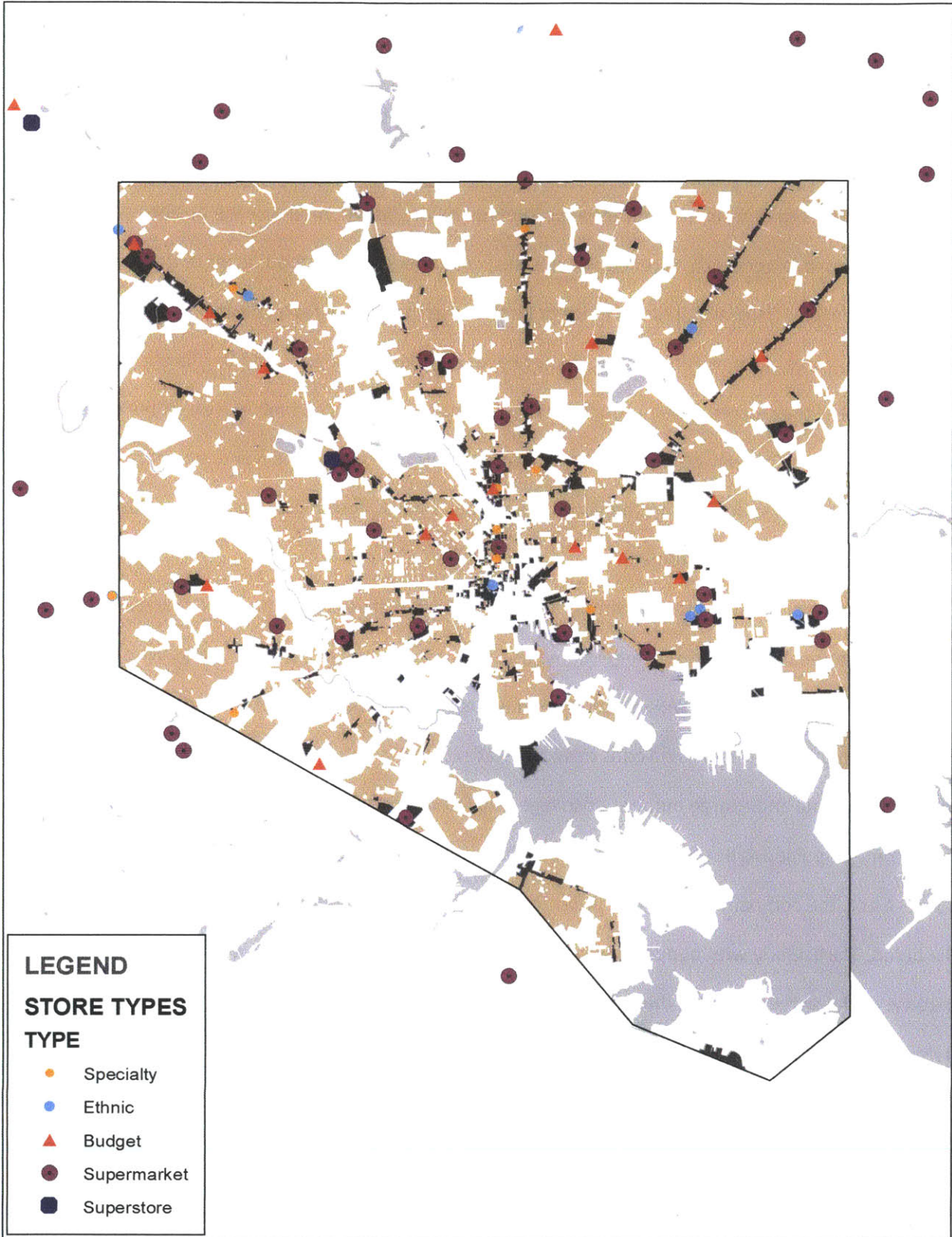
4 "Real Estate Development," wholefoodsmarket.com, accessed 2/17/12

5 Natalie Mattei, interview 2/29/12

6 Richard Hinds, interview 2/23/12



**BOSTON - LAND USE (RESIDENTIAL AND COMMERCIAL)**  
**1:100,000**



BALTIMORE - LAND USE (RESIDENTIAL AND COMMERCIAL)  
1:100,000

## ADJACENCIES

### PROXIMITY TO CUSTOMER DEMOGRAPHIC

Overwhelmingly there is a popular perception among planners and in the literature about food deserts that demographics are a limiting factor for grocery stores. It is true that most companies rely on market studies to determine whether a location meets the budget model of the business. This will include economic factors such as rent and expenses, customer base and food dollar in the area, and unique challenges.<sup>1</sup> However, I found it not to be the case that demographics was a primary location factor. Some stores, such as Foodmaster, do not have target demographics, and this factor does not influence where they locate. The product offering is consistent across all their eleven stores regardless of neighborhood.<sup>2</sup> Safeway also has no target demographic but caters to “anyone who eats.”<sup>3</sup> Whether that location is rural, suburban or urban is not important – it just determines the type and design of the store based on the type of customers.<sup>4</sup>

If a store brand has a target demographic, which is not always the case, then this demographic often has locational implications. Target demographics can vary greatly. Stores such as Whole Foods and Trader Joe’s value people with a high level of education and above the national median household income. On their website, Whole Foods explicitly states that it is only interested in locations within reach of 200,000 people and a large number of college-educated residents.<sup>5</sup> Budget grocers tend to look for low-income populations but also a large concentration of the same ethnicity or culture. For locating a Save-A-Lot, the company can only consider those neighborhoods where the demographic meets the brand. Particularly with budget stores, city officials or the community may not want a store brand because of the perception that the store creates.<sup>6</sup> This was a challenge mentioned by SuperValu when trying to locate budget stores in urban areas.

Stores will look to locate in areas where there will be a large percentage of the same demographic because if the majority of customers are similar then choosing the product offering is more

- 1 Richard Hinds, interview 2/23/12
- 2 Richard Hinds, interview 2/23/12
- 3 Natalie Mattei, interview 2/29/12
- 4 David Hene, interview 2/13/12
- 5 “Real Estate Development,” [wholefoodsmarket.com](http://wholefoodsmarket.com), accessed 2/17/12
- 6 David Hene, interview 2/13/12

manageable.<sup>1</sup> Urban areas are a dense market and an urban setting means that customers make more stops and shop “smarter.” The store becomes a meeting point. This is especially true of smaller stores, stores in close proximity to residential areas, and for stores that do not have parking lots.<sup>2</sup>

In the case of a cooperative model, the overarching question is “how can we best serve our members?”<sup>3</sup> Proximity to members is a driving factor in choosing locations. If there is a potential site where there are not a lot of existing members, then the co-op will have a member drive to help finance the project and gauge interest.<sup>4</sup> Co-ops can occur across demographical ranges, but tend to do best in areas where people are highly educated. While they welcome people to join as members, a customer does not need to be a member to shop at Harvest.

## COMPLEMENTARY BUSINESSES

As mentioned in the economic literature, being in a commercial area creates an agglomeration effect where shoppers come to accomplish several shopping tasks at the same time. Stores like to be where there are other commercial uses that will generate traffic for them. When asked which types of businesses a store might want to locate next to, shopping behavior and parking needs drove the answer. Because parking space is so valuable in an urban setting, stores do not want to be near uses that have a lingering parking expectation. This would include restaurants and bars, gyms, and movie theaters. Complementary businesses are other errand-type uses such as banks, dry cleaners, and pharmacies. Specifically, Mars Foods prefer locations that are not stand-alone buildings but that are in shopping centers near other stores that provide neighborhood services.<sup>5</sup> For Whole Foods, however, stand-alone is preferred but they would consider complementary uses.<sup>6</sup>

There are also store types that are called “Category Killers” because they offer products or services that do not help the sales of the grocery store. These stores include pet stores, tobacco depots, pharmacies, and beverage stores.

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1 David Hene, interview 2/13/12

2 Kirsten Bourne, interview 3/29/12

3 Christina Lively, interview 3/9/12

4 Christina Lively, interview 3/9/12

5 Rick Snyder, interview 3/26/12

6 “Real Estate Development,” [wholefoodsmarket.com](http://wholefoodsmarket.com), accessed 2/17/12

## COMPETITION

Although the economic concepts of competition are clear, proximity of competitors is not easily measured. Some companies rely on a market study to determine the level of competition in the area, but this is based on the number of potential customers rather than a physical distance.<sup>1</sup> Often new stores don't locate in urban areas because there are already older, existing stores covering that market.<sup>2</sup> There does not seem to be a standard or rule when it comes to distance from competitors. In interviews with store proprietors, no one could name a physical distance that was preferred. Admittedly, it is difficult to measure this factor because of varying contexts and barriers. When looking at the maps there were no strong patterns or trends in this regard. Some stores were as close as a couple of blocks; some had several miles distance.

Foodmaster Inc., as a predominantly urban store type, considers any and all types of grocery retail as competition. This includes independent and chain stores (Shaw's, BJ's, Denila's, Stop & Shop, Roch Brothers). A store could be as close as a mile to another store but if the market study shows that there is big enough customer base for both stores, then they will locate there.<sup>3</sup> Safeway considers any grocery retailer to be competition (especially stores like Walmart).

In some cases, competition is considered beneficial – the agglomeration effect. As long as a comparable store is not in the same development or complex, being in the same neighborhoods can create healthy competition.<sup>4</sup> Safeway does not mind being near a Whole Foods or Trader Joe's because they consider it to be a cross-shopping scenario.<sup>5</sup> Specialty grocers will sometimes prefer to locate near a Main Line store and serve as a supplemental store. There is a recognition that customers often shop at multiple stores for different product needs.<sup>6</sup>

The question of competition is less relevant for a cooperative model because this type of store does not locate new stores often and has less political and financial clout than large, corporate stores.<sup>7</sup>

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- 1 Richard Hinds, interview 2/23/12
  - 2 Brian Shorter, interview 2/8/12
  - 3 Richard Hinds, interview 2/23/12
  - 4 Rick Snyder, interview 3/26/12
  - 5 Natalie Mattei, interview 2/29/12
  - 6 Brian Shorter, interview 2/8/12
  - 7 Christina Lively, interview 3/9/12

If, for example, there is a Whole Foods or similar “health food” market, then that means there is a market for that kind of customer, but it also means there is competition for the same kind of product.<sup>1</sup>

## OTHER LAND USES - PARKS

Bi-Rite Market, which has been in its current location since 1940 in the Mission District of San Francisco, is near Dolores Park. Although a full service grocery store, the small, independent nature of the store as well as this very urban location has informed the business model. The store cannot change its location and so, it has adapted its practices and model according to the nature of its location. The proximity to the park creates a lot of pedestrian foot traffic past and into the store. The lack of a parking lot also means that employees as well as customers tend to arrive on foot or bicycle. All of these factors which other stores might consider a detriment, Bi-Rite has made part of their philosophy for the store. This is evident in the factors they considered when choosing the location for their second store, due to open in late 2012. Again, the location was chosen to have a similar building footprint (3,000 sf), located near a park, in a dense residential and mixed-use neighborhood, no parking lots, and a lot of foot traffic.<sup>2</sup>

## ZONING/NEIGHBORHOOD CHARACTERISTICS

Zoning and land use dictate where commercial activity can happen. Some literature, such as the USDA report mentioned zoning as a potential barrier to store location. Although the store itself must be in a zoning district that allows for commercial use, stores expressed overwhelmingly a preference for proximity to residential areas. Foodmaster was specific enough to say their stores are 1/10th of a mile to residential areas.<sup>3</sup>

When a brand relies on existing building stock, zoning changes are not applicable. However, in the case of larger brands that do build from the ground up, I was interested in how zoning affects location choice. Safeway will consider a rezoning process, but it takes longer and adds time to the process.<sup>4</sup> Safeway has an urban store near Ocean Beach with 100,000 people in the market area and

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1 Christina Lively, interview 3/9/12  
2 Kirsten Bourne, interview 3/29/12  
3 Richard Hinds, interview 2/23/12  
4 Natalie Mattei, interview 2/29/12

surrounded by residential use. The store has existed in this location for a long time and would like to undergo renovations. The parcel is going to be changed to mixed-use to allow for residential above the new store with much community input to develop the new store (to help correct for “nuisances” such as graffiti, delivery noises, and loitering, to improve ocean views, and to solicit social views on the project impact).<sup>1</sup> In another example, the Milton community approached Harvest to locate on land that a synagogue was selling. However, the necessary zoning changes didn’t go through, so the store never located there.<sup>2</sup>

I find, when I consider land use and zoning in Boston and Baltimore, that the ratio of commercial to residential uses are significant. If, as we now know, stores prefer to be close to as many residents as possible, then the ratio of zoned commercial land needs to be adequate to accommodate the number of stores required to service the amount of residential land that is zoned. When we consider Baltimore, for example, we see that the amount of residential land is in much greater proportion to the amount of commercial land. This is not the case in Boston. It is possible that in this way, zoning is having an indirect effect on the number of stores able to locate in relation to the number of people who are potential customers. From the information gathered in the interview process we know that stores almost ubiquitously locate in close proximity to residential neighborhoods. Grocery stores’ access is most often associated with residential access (as opposed to access from work-related land uses such as office, commercial, industrial, etc.). When the map of the half-mile radius is overlaid with the residential land use, true gaps emerge. We see that in some cases, areas of the city without stores are due to a lack of residential neighborhoods--such as in East Boston near the airport. In Boston, there are a few areas that may be of concern where a significant density of residential land is without retail grocery service. Baltimore is less densely covered by retail grocery service, and the map subsequently reveals more residential areas of concern than in Boston. The maps reveal that the areas that lack service are residential areas far away from zoned commercial areas.

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1 Natalie Mattei, interview 2/29/12

2 Christina Lively, interview 3/9/12



## CRIME AND DISINVESTMENT

High crime rates were cited by several stores as being a significant deterrent in choosing a store location. This factor was mentioned by a few sources in the literature review, but I found that it is a bigger deterrent and location factor than most realize. A location in a high crime area is not feasible for multiple reasons. The first consideration is the cost associated with hiring full-time security staff and the potential higher insurance rates. Safety was a second consideration. This concern applies to the safety of the staff, the merchandise, and also the customers. There is a general assumption that neighborhoods with high crime have less foot traffic at night, thus affecting the sales volume potential for the store. Foodmaster found that a location in Dorchester, while otherwise appropriate for their model, was challenging because it would require 24-hour security personnel, thus making operation expenses too high. In the case of Safeway the Hunters Point and West Oakland neighborhoods have approached the company to locate stores there. Safeway has determined they cannot do so because of the high crime levels (too high for their threshold) which causes concerns for employees' safety and customers' sense of security while using the store at night. Essentially, crime or the perception of crime creates less business potential, especially in the evening.<sup>1</sup>

Stores are usually unwilling to invest in an area if there is clear disinvestment or at least lack of investment in the community. During his tenure at SuperValu, David Hene only encountered one community for a possible store location that was not feasible and that was Gary, IN, where there was too much depression and not enough investment in the area.<sup>2</sup>

## BROWNFIELDS AND SITE CONTAMINATION

The USDA report mentions in its summary that environmental remediation is a location factor. This particular factor was only mentioned by one store interviewed, however. Brownfields and site contamination are very common in urban areas and can provide a challenge both in process time and cost. Safeway spent \$500,000 to clean up a site in Santa Cruz, for example. This would certainly be a

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1 Natalie Mattei, interview 2/29/12

2 David Hene, interview 2/13/12

deterrent for most stores and would exclude smaller businesses without the capital.<sup>1</sup> However, this type of issue is only relevant to those stores that are building from the ground up; soil remediation is only needed when the ground is disturbed.

## FACTORS OF LITTLE SIGNIFICANCE TO RETAILERS

The factors listed below were not mentioned by retailers as having significance on their location choices.

### GEOGRAPHY

Natural geographic features were not discussed in either the literature or in the interviews. In considering the maps of each city I observed that geography, especially topography, influenced the placement of rail infrastructure, and then subsequently zoning districts and residential land use. In addition to the urban design implications of the geographic factors that I observed in the mapping process, market studies are confounded by geography. I saw an example of this in New Orleans. To create a marketing study many companies use software that generates concentric circles of census data around the potential market area. When a potential site is near a body of water, for example, the numbers are confounded by the lack of residents in the part of the market area that overlap with the natural features of the city. In order to combat this problem, more creativity needs to be employed when considering the true market area for a site. It is true that most people will not cross a body of water to do their grocery shopping. However, in the case of stores like Trader Joe's and Whole Foods that are on sites along the Charles River in Cambridge, these kinds of sites are well connected to the city by major roads along the waterfront and can attract a significant portion of the demographic.

### RAIL LINES

Since food distribution has shifted from rail to primarily trucking, the location of rail lines is not very significant for grocery retailers. No store cited proximity to rail lines as a locational factor.

Additionally, roads, especially major roads such as highways and freeways, are often located

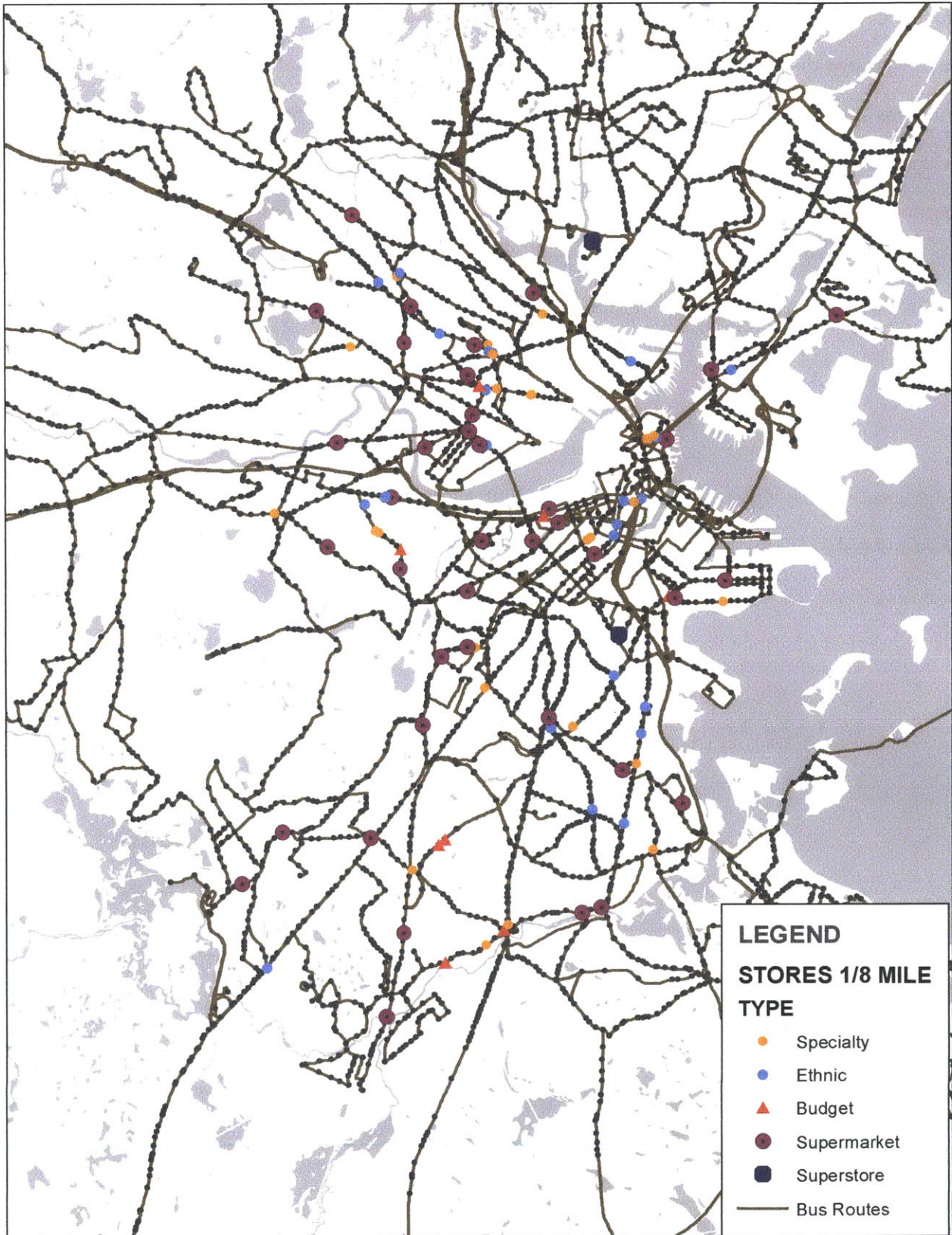
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1 Natalie Mattei, interview 2/29/12

along the same paths as these precedent rail lines. The result is that many stores appear near rail lines but are located there more often because of a nearby road, rather than for the proximity to the rail line. Rail yards and the accompanying industrial and warehouse sectors often exist on the waterfront as evidenced by the maps for both cities. This, again, may have a residual, rather than direct, impact on the location of stores. Residential uses are not compatible with industrial uses and are located further away from the waterfront as a result. Therefore, though it may seem that stores are avoiding the geographic water, they are more likely simply locating closer to residential land which is removed from the water bodies.

## **PUBLIC TRANSIT**

Despite Bitler and Haider's supposition that public transit is important in urban areas, not a single grocery store I interviewed considered public transit to be very important to choosing a location. Most stores do not consider proximity to public transit and, if they do, then the priority of this kind of proximity is low. Essentially, if a store is close to a stop then it is considered a benefit; however, a store will not choose a location based on this criterion. For example, Save-A-Lot does not place high priority



BOSTON - STORES WITHIN 1/8 MILE OF BUS STOP  
 1:100,000

on public transit and will not reject or accept a property based on this factor. As Natalie Mattei from Safeway points out, locating near public transit stops is only useful if people use the system, meaning proximity to public transit is not a sound location factor if not many people travel by it. Bi-Rite Market in San Francisco, a city where public transit is used, did not consider proximity to transit when choosing their new location.<sup>1</sup> This is surprising because both stores are in dense, urban areas with little or no access to parking. Proximity to T-stops and public transit is important if parking is going to be limited.<sup>2</sup> For Harvest, being near T-stops is preferable but also a challenge because rents tend to be higher in those locations.<sup>3</sup> It should be noted that bus routes are very often on major roads so even if a store does not intentionally locate near a bus route, they will probably be in proximity to one by default of seeking out a major road.

Boston has 43% of its stores near a T-stop (65 stores out of 150). The majority of those stores are Supermarket, Specialty, and Ethnic stores. Despite this high number, no store interviewed mentioned proximity to public transit as a location factor. Baltimore has 9% of its stores near a subway or light rail stop (10 stores out of 111). The drastic difference between Boston and Baltimore can be attributed to two things. Looking at the maps one can see that the network in Boston is more extensive with more stops. The use of the subway also differs between the two cities. In Baltimore, the subway and light rail systems are primarily used for commuting.

In a city like Boston with an extensive bus system, it is not surprising to find that many stores--75%--are within an eighth of a mile of a bus stop. Mobility is an often-cited food access issue. Planners must consider grocery retail options for those without cars. If a person cannot walk to a store, then bus or subway is the next best option. If carrying groceries, a customer will want a convenient bus route and bus stops close to the store as well as his or her home. Some cities have created bus routes specifically to link these two uses in order to make affordable, healthy groceries more accessible to more people.

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1 Kirsten Bourne, interview 3/29/12  
2 Christina Lively, interview 3/9/12  
3 Christina Lively, interview 3/9/12

## CAUSES

Given the factors described in the literature and from the interviews above the next logical question is whether these factors create or exacerbate food deserts. If we look at those areas with gaps in service we see that there are several factors at play. Which factors seem most likely to be affecting the situation? Though it may be true that the location of rail lines does not directly affect grocery retail locations, we can see through the mapping process that rail lines do have urban design impacts. When mapped with the natural topography we understand that rail lines were sited according to flat, level land coming into the city. The location of this transportation mode has left a legacy on the zoning and land use decisions for each city, and thus affecting the urban design of each place. This can be observed when the location of the rail lines is compared with the residential land uses. Parcel in these food deserts also tend to be residential heavy of a smaller size.

## CONCLUSIONS AND PLANNING IMPLICATIONS

### THE ROLE OF CITIES in addressing food access

In addition to the negative health implications associated with food deserts, there is a question of equity. All people, regardless of their race, age, culture and ethnicity, income, or gender are entitled to food access. Combating food deserts is not only about calories, however, but about choice. It is inequitable to dictate what people can eat. Food deserts effectively do this by denying access to food or by denying access to a variety of foods, including healthy options. Grocery stores are part of a competitive industry and must consider the economics of their business. Location choices, though dependent on having a large enough economic market to support the store, are not based on community need directly. Stores rarely hold themselves responsible for providing equitable food access – they are first and foremost a business. Therefore, it falls to city agencies and planners to fill any gaps and correct for market failures.

It was rare in the interviews I conducted to find examples of municipalities and city planners who worked directly with a store to find a location. Large companies have internal departments and staff focused on finding new locations or they work with brokers, but smaller businesses do not have the same resources. Non-traditional store types such as Harvest Co-op generally find their locations without assistance of the city. Most of these store types are not offered any incentives, though the city may be responsive to requests for advice on location issues. To quote Christina Lively of Harvest, “It would be great if cities could do more to support local and small business. Cities are being taken over by big box multi-national stores, and it is difficult for small, independent businesses to survive in this environment with corporations that have more money.”<sup>1</sup> Cities and planning agencies should consider how they can extend their services to food stores as arguments gain traction for the place of food systems in planning.

American municipalities typically have limited resources, but they also find themselves increasingly called upon and involved with food equity and access issues. It has been the experience of SuperValu that a city’s sophistication limits how much incentive and help they can provide; often SuperValu has had to approach the city and educate them about the advantages and ways to help the

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1 Christina Lively, interview 3/9/12

store locate in the community. This indicates a need for education and resources around this task. Currently, cities confront the topic of grocery retail when they are losing tax dollars to stores in other, neighboring municipalities.<sup>1</sup> These should not be the only circumstances under which the city gets involved – the government has a responsibility to correct for the externalities around food access and help stores locate where they are most needed. This can be a standard service provided by planning agencies.

I propose that there are efficient and effective ways of promoting grocery retail which do not require excessive, additional resources. Although it is true that more affluent and progressive cities tend to be more helpful and proactive about providing incentives,<sup>2</sup> incentives are not the only option available to the city. And as we have seen, financial assistance is not useful in those cases where food deserts are caused by built environment conditions. In fact, this issue poses an opportunity for cities to examine their administrative processes and efficiency. For example, if the permit process is cumbersome and requires help to get through in a timely manner this creates a burden not only for the store but also for city staff.<sup>3</sup> In Los Angeles, California, the city streamlined its processes for supermarkets specifically so that applications are only reviewed by two departments rather than the dozen it would usually require.<sup>4</sup> This tactic expedites the process for the store as well as saving staff time and energy. Design review adds another element to the process which can be time- or cost-prohibitive for a store. The more specific and detailed the requirements around aesthetics and design review, the more cumbersome for both the applicant and staff. Larger companies with more money and staff have the resources and the capital to navigate this process and generally know how to get through the process faster. Smaller businesses encounter these processes as a burden and have little or no experience with city processes and policies. Another avenue for cities could be to moderate fees – some cities, such as San Francisco have very high fees which make it harder for small stores and businesses to locate in the city.

During the interview process it came to light that there are factors which determine whether a city is easy to work with. These include ease of access to staff, licensing requirements (how often and

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1 Brian Shorter, interview 2/8/12

2 David Hene, interview 2/13/12

3 David Hene, interview 2/13/12

4 Shigley and Freeman, "When Access Is the Issue,"30.



how strict), whether training classes are required of store employees, and the strictness of inspectors.<sup>1</sup> Each of these factors can be modified without additional resources and may, in fact, reduce resources spent. What may be required is staff which are trained and have expertise in food systems and the economic, administrative, and design needs associated with this sector of the built environment. If a city can overcome the two hurdles I have mentioned – adopting food systems as a legitimate planning concern and adapting staff and processes to effectively address these issues – then they will more easily be able to use strategies targeted towards the food desert problem without excessive demands on resources.

## STRATEGIES

The findings of this study have immediate relevance for at least three important areas of policy and planning action:

### **1. Attraction strategies for stores using existing real estate as opposed to ground-up construction.**

Many current policies and planning tools that exist to address the lack of healthy food retail are geared towards new construction. One of the greatest lessons learned from this exercise is that most urban stores are not new construction. In fact, any grocery store model that is not in an inexpensive, greenfield suburban area will most likely not include new construction. One of the few circumstances where these current retail attraction strategies will be effective is in those cases where grocery stores work with developers that are building new urban construction. There appears to be a disconnect in this case between planning action and the causes of food deserts. Instead, I propose that cities and counties consider how to make existing buildings more affordable and available to grocery retailers. Cities need to observe, whether through mapping or other means, where the gaps are in grocery retail and subsequently, whether there are factors such as zoning or real estate that are impacting this condition. Only then can a planner or city official determine the best attraction strategy appropriate to the specific neighborhood of need. If a neighborhood is made up of primarily small parcels, with small neighborhood retail, then attraction strategies should be around specialty store types rather than large

1 Richard Hinds, interview 2/23/12

supermarket types, for example.

Currently, there are financial incentive programs as a gap financing strategy for grocery stores which locate in underserved areas. This kind of support will always be beneficial to grocery stores as a low profit margin industry. However, even the most generous of financial packages and gap funding will not serve to remediate a food desert if the cause of the retail gap is based on available real estate, limited primary road access and loading capabilities, or lack of sufficient visibility. If a city, county, or state is fortunate to have financial incentive programs for grocery stores, then careful consideration should be given to how best to apply that funding using the current real estate stock.

## **2. Enabling other types of healthy grocery retail to fill the gaps.**

In the two cities considered, there are examples of food deserts where little can be done to improve or address the built environment barriers. In some instances it may be that the right store type has not been courted to the area of need. However, where the physical environment is inhospitable to stores of the type I have included in this study, there is a need to find or develop and use other grocery retail types to provide healthy food in quantity. These types should be employed strategically and encouraged to locate in those food deserts that cannot accommodate a typical store type. As pointed out by Richard Sexton in the article "Grocery Retailers' Dominant Role in Evolving World Food Markets," given the heterogeneity among consumers in terms of demand and shopping habits, considerable opportunity exists for product differentiation and exploitation of market niches.<sup>1</sup>

The first "innovation" of sorts is smaller stores. Market research done by stores themselves point to the trend that customers are demanding smaller stores closer to home.<sup>2</sup> Walmart and Whole Foods are developing prototypes for smaller store footprints intended for urban environments. The NYC Food Retail Expansion to Support Health (FRESH) program targets small, independent grocery stores of 6,000 to 15,000 square feet.<sup>3</sup> Increased attention around smaller store models, which are usually independent and small chains rather than large corporations, can be a strategy for those areas with

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1 Sexton, *Grocery Retailers' Dominant Role*, 3.

2 Strauss, "Rona, other retailers thinking outside the big-box," 1.

3 Shigley and Freeman, "When Access Is the Issue," 30.

smaller parcels and building footprints.

In the last ten years there has been growth in the convenience store sector for food sales. I maintain the necessity of small, corner stores that provide for small conveniences and one-off needs. The healthy corner store movement increases the availability of healthy and fresh products in these kinds of locations. However, I cannot advocate for corner stores, healthy or not, as a replacement for a full-service grocery store.

In conjunction with promoting small store types, there is a need to encourage new, innovative models for stores. There are examples in the U.S. of hybrid models that try to tackle those aspects of grocery retail currently lacking, especially in food deserts. Cooperatives are an established version of an alternative model. Cooperatives are usually born out of dissatisfaction with local food service and cater to the needs and demands of members. In Oakland, California People's Grocery is developing a grocery store called the People's Community Market. The store is designed as a temporary site so that the brand can establish itself in the neighborhood and build profits before moving into a brick and mortar space. The store is a grocery store "lite" sitting on a vacant lot which used to be a gas station. In order to be cost-effective, rather than build a kitchen space the store will make prepared foods off-site at a commercial kitchen. The back-of-house components of the store such as storage, offices, break room, and restrooms will be housed in shipping containers which provide inexpensive and quick structure. The neighborhood has participated in charrettes and community processes to finalize the communal aspects of the store such as the outdoor spaces and the material selection. Having the community buy-in is crucial for cultivating a customer base for these less traditional store types. Other, similar models are developing in Indianapolis and Baltimore.

Farmers markets are a growing strategy to combat food deserts. Farmers markets tend to locate near commercial areas, rather than residential areas for traditional stores.<sup>1</sup> They are also flexible, meaning a farmers market can exist in varying sizes and on varying kinds of parcels. They locate in parking lots, parks, plazas, wide sidewalks, and in transit hubs. The primary considerations for locating this grocery type are parking for the customers and vendors, safety for pedestrians accessing and using

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1 Jen Obadia, interview, 3/9/12

the market, and visibility of and traffic by the site. Ideally, a market will want access to restrooms, running water, and electricity, but these are secondary concerns.<sup>1</sup> Because of this flexibility, farmers markets are a good candidate for filling the gaps left in the retail food web of shopping. We see in the maps of Boston and Baltimore that this is already the case.

Sometimes, zoning codes need to be updated to allow for farmers markets. For example, in Fresno, California “Farmers Market” was not defined in the zoning code, meaning it was a forbidden use. The city wrote a new definition into the zoning ordinance to make farmers markets an allowable use in all non-residential and single-family residential zones.<sup>2</sup> Another limitation, of course, is seasonality and weather. Although in four season climates indoor farmers markets do occur, the spaces available for this option are more limited. New, for-profit models are gaining traction. These are similar to the market halls found in Baltimore and are a larger scale than the traditional farmers market. This type, though offering a more full-service experience to consumers is also more demanding in terms of real estate needs and may not be a solution to the food desert issue.

Mobile Markets are vehicles – often city buses or delivery trucks – that have been converted into grocery stores on wheels. Because this vendor type is mobile, there is the highly beneficial capacity to reach places that otherwise lack access and cannot accommodate a brick and mortar store.<sup>3</sup> Another type of mobile market is the produce cart. New York City has a green cart program which standardizes the requirements for the carts and locates fresh produce, usually fruit, around the city. The city limits the number of permits and also keeps track of where in the city the permits are issued in order to maintain control over the distribution of the fresh food access around the five boroughs. This example is not, however, a complete solution to the food desert issue as it can be seasonal (carts typically do not go out in the winter months), and provides only one or two categories of healthy foods.

Even if a city is not prepared to launch a program like New York’s, an important step could be to make sure mobile vending is allowed in the city and that a permit process is in place for it. This would require coordination among several agencies, but would typically fall under the same process as that

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1 Jen Obadia, interview, 3/9/12

2 Shigley and Freeman, “When Access Is the Issue,” 28.

3 Tester, “An Analysis of Public Health Policy,” 2038.

for food trucks or street food vending. The city would also need to decide whether it wants to dictate in any way where the mobile vendors can operate. In the case of addressing food deserts, the city may identify neighborhoods of need and limit the mobile market permits to these areas. However, care must be taken not to become too dictatorial so that the vendors can discover where there markets are. Local businesses, especially restaurants and other retail grocers, may be wary of the competition created by a mobile market. The city may want to give a competitive edge to vendors that sell healthier products. Allowable locations should consider these location criteria.

Some research should be conducted to ensure the necessary infrastructure is in place to support a system of mobile vendors. As with food trucks that serve prepared foods, some cities require a mobile food vending business operate from a commissary. If the city lacks sufficient commissary capacity, this may create an unforeseen barrier to those interested in starting a mobile vending business.

One of the barriers that came to light when I interviewed Dara Cooper from Fresh Moves Mobile Market in Chicago is that Food Financing Incentive programs currently do not apply to these kinds of markets, making them difficult to finance. Mobile markets focus on produce as their primary product offering. Produce is a very low-profit category and a store does not make much money from selling it; this is true in any retail grocery situation. A mobile market is limited in its display and storage capacity and therefore has little room for more stable, staple items to make more money for the operation. Additionally, the gas required to run the store can be a burden as gas prices rise and fluctuate. One of the earliest examples of a mobile market – the People’s Grocery in Oakland, California – had to stop operations not because they did not attract customers but because the cost of insurance, gas, and parking the vehicle was excessive compared with the income of the truck. Therefore, financial assistance and incentives are critical to making this model financially feasible. One strategy is for the city to waive permit fees for mobile markets that meet certain healthy food criteria.

One final, small-scale strategy is the concept of Community Supported Agriculture (CSA) pick-up locations. A CSA is a farm which solicits subscribers before the growing season to buy shares in the farm produce. At an agreed-upon interval, shares are delivered to the subscribers, often in urban locations. Harvest allows their locations to be CSA pick-up locations. While some might view CSAs as competition

and question that decision, Harvest feels this move fosters the mission of the co-op and also allows for the CSA members to shop at their store for other goods not provided for by the CSA while there are already there at the location. It is important to them to support a local system and provide a different model for people who care about local systems and community benefits. This generates good will.<sup>1</sup> Usually, however, farm shares are located at a subscriber's house. This can be inconvenient both for the resident as well as those picking up their share. Locations for this type of food access have minimal needs but would ideally provide short-term parking for both supply and customers and a way to secure the shares for the pick-up. Clearly the infrastructural demands for this outlet are minimal compared with a grocery store. Therefore, it would be feasible to find locations for delivery and pick-up in those neighborhoods underserved by retail grocery.

### **3. Review and revision of policies affecting a store's physical limitations.**

There are policies which affect grocery store operations that may have once been valuable but now require attention and possibly even repeal. Although the demand for food is universal and remains constant through time, the practices of food retail have changed and evolved a great deal over the last fifty or sixty years. Again, changing policy can be an effective strategy while taking only limited resources. Looking to other cities as precedents will also guide staff about the way to proceed with the policies applicable to grocery retail.

Restrictive land use covenants, which a store may have placed on its property, do not allow a grocery store to locate in a former grocery store building. This type of action is employed by grocery and drug stores to prevent competition from moving in and to maintain a certain level of control over the market. However, this is especially burdensome for grocers because locating in former grocery spaces is the most economical and cost-effective solution when locating in urban areas. One relatively easy way to help future grocery retailers is to remove the possibility of a grocery business using this kind of practice. This is especially crucial based on the consensus among grocery stores interviewed that lack of appropriate and available real estate is the most hindering of location factors.

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1 Christina Lively, interview 3/9/12

Formula Retail restrictions, though useful for enabling small, independent grocery stores, also limit the ability of larger, wealthier grocery companies to locate in urban areas. It is not clear whether this kind of restriction contributes to or prevents food deserts. In my interview with David Hene of SuperValu, which is a large corporation, it was clear that one of their brands – Save-A-Lot – is a budget grocery type that seeks out low-income, urban areas to locate. A formula retail restriction, such as exists in San Francisco, would prevent or at least hinder this store, which has a business model geared towards areas of high need, from locating in the city. If a city is concerned with promoting small, independent grocery stores, then formula retail restrictions are beneficial. If, however, the city has available real estate for a larger store, it would behoove them to remove or reconsider such a restriction.

Many cities, Boston included, do not allow the use of sidewalks for display of merchandise. This is a burden on smaller store types with limited display areas within the store. The Richmond District in San Francisco serves as an example of how this simple allowance makes a big impact not only for increasing the store's display capacity but also the ability to entice customers into the store. This simple, cost effective measure of policy can have a significant impact. The spatial implications, of course, are most constrained by sidewalk widths. Older cities like Boston often have narrow sidewalks and a store may not be able to take advantage of such an allowance. However, we see in Chinatown examples of sidewalk displays and even pop-up stalls similar to farmers market stalls on the main streets.

Parking and loading restrictions for delivery are put into place to prevent noise and traffic nuisances on neighboring residential uses. Generally, the city will restrict the hours that a store can accept deliveries from trucks. Stores, however, prefer to get their deliveries early in the morning or overnight while traffic is low and the store is closed or less busy. This is in direct conflict with proximal residential uses and could be considered as much a land use and zoning issue as policy issue, and may not be feasible in some neighborhoods. Some stores interviewed, such as Harvest and Bi-Rite, have loading areas directly on the street. In cases such as these, it is important for the city to not place restrictions that make delivery unduly difficult for store types which are already at a disadvantage for occupying an urban area. Supply is equally as important to choosing a store location as the retail space itself. If the loading conditions cannot work, then the property cannot be used for grocery.

Parking minimums are in place for many urban land uses; however, the city, in setting this number, can have influence over the amount of parking that is deemed appropriate for the urban context. As revealed in my interview with Natalie Mattei from Safeway, parking demands of urban stores have shifted in recent years. Whereas in suburban areas driving to the store is a necessity, the ratio of parking spaces to retail area has diminished in urban areas. To reflect this trend, cities could amend or even eliminate parking minimums in the zoning codes specifically for retail grocery. One example of this is the NYC Food Retail Expansion to Support Health (FRESH) program which reduces parking requirements for storefront operations.<sup>1</sup> Conversely, the Minneapolis Food Code creates a specified amount of parking required for any establishment calling itself a “Grocery Store” although the required number is low. There is a balance to be maintained – stores are concerned with making the customer experience convenient and positive which includes making sure there is ample parking, however, there are few parcels in cities which have the capacity for suburban-style parking minimums. Changing this minimum could potentially make more real estate available and affordable for urban grocery stores.

Though not common, there do exist healthy food policies that incorporate grocery codes and healthy food retail standardization. Minneapolis is an example of a city with a “Food Code.” There is feasibility to the standardization or limitation of what may be considered a healthy food outlet. For example, for a store to be able to use the name “supermarket” or “grocery store,” certain conditions may be put in place. In the case of Minneapolis, conditions include a minimum size and parking as well as some regulation about the amount and kind of food provided.

## FURTHER CONSIDERATIONS

### MOBILITY

It is clear that the current grocery retail system is geared towards car ownership. Those without cars, either for financial reasons or personal choice, are restricted in their grocery options based on where they can afford to live. Small, Specialty, and Alternative store types can differentiate themselves by building their model on attracting people within walking or biking distance as Bi-Rite has done.

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<sup>1</sup> If public transit is substantive and well-used in a city or region, then an assessment of how  
Shigley and Freeman, “When Access Is the Issue,” 30.



this transit system is meeting residents' grocery needs may be useful. There are examples from places like New Hartford, Connecticut, where transit lines were created to connect underserved residential neighborhoods with grocery retail in a more direct and efficient way. This is especially relevant for those residential neighborhoods where available real estate is limited and the likelihood of a store locating in proximity to that neighborhood is low. If the store cannot be brought to the neighborhood, then then residents can be brought to the stores.

## ZONING

Zoning is a potential barrier in a handful of situations. For companies that can afford to build ground-up stores, zoning can have an impact on where to locate and the ease of the process. However, in the case of existing real estate zoning is less powerful. Zoning may be effective in encouraging commercial development surrounding a potential grocery site to make it more attractive to a grocery store. Density incentives are often used to encourage developers to attract a grocery retail tenant.<sup>1</sup> Many of the stores that I spoke with do not like to be stand alone, but rather, prefer the agglomeration effect of being located near other errand-type stores (banks, dry cleaners, florists).

Zoning codes often encourage designs for grocery stores that are more appropriate for suburban settings than urban ones. Large-scale lots that provide for a building footprint of 50,000 square feet and an accompanying parking lot are not common in cities and yet, the zoning code promotes this model of building through parking requirements and minimum parcel sizes.<sup>2</sup> Cities need zoning that permits small grocery stores and alternate models.<sup>3</sup>

Generally, stores (as opposed to farmers and public markets) want to be near residential neighborhoods. Therefore, if the city is engaged in site identification it should focus on commercial or mixed-use districts adjacent to or within 1/10th of a mile of a residential neighborhood. In some cases, it may be advantageous for a city to make the process of rezoning or acquiring a conditional use permit expedited for grocery retail types. A text amendment to the zoning code to allow for these types can also preemptively address this barrier and make more properties available to this commercial use.

1 Shigley and Freeman, "When Access Is the Issue," 30.

2 Shigley and Freeman, "When Access Is the Issue," 31.

3 Shigley and Freeman, "When Access Is the Issue," 28.

Comprehensive and local land-use plans should consider grocery retail in a more informed manner. It is not out of the realm of reason that zoning codes could be changed to allow stores to exist in zones or land uses other than commercial. To quote the USDA report to Congress, “If high development costs serve as a barrier to entry for supermarkets in some areas with low access, then subsidy programs or restructured zoning policies may be effective solutions.”<sup>1</sup> The New York City FRESH program involves a zoning change where grocery stores up to 30,000 square feet are allowed by-right in light manufacturing districts, for example.<sup>2</sup> General Plans can also influence the number of grocery stores (or general commercial activity) by requiring a conditional permit and by providing ample commercial zones or allowing for easy rezoning.

## CONCLUSION

This thesis points towards some of the physical factors affecting grocery retail locations and acting, effectively, as causes of food deserts. The current strategies for addressing food deserts do not consider these location factors. In many cases, these barriers appear insurmountable with standard planning tools. While none of the outlined strategies are new, the arguments for their applicability are. Based on the conclusion that there are certain urban areas which are affected by barriers which cannot be removed through planning action, the suggestion is that solutions be selected and applied with a more thorough understanding and context for why stores are not locating in areas of need. The aim is to discover why the gap in service is occurring and sometimes the answer is not economic or demographic but rather physical and systemic.

It is my intention with this paper to give guidance and direction to planners and other advocates for healthy, urban food systems in how to use targeted food desert strategies. Creativity and innovation, along with a better vision of the city, are needed to change the urban food landscape.

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1 Ver Ploeg, Michele et al. “Access to Affordable and Nutritious Food,” v.

2 Shigley and Freeman, “When Access Is the Issue,” 30.



2007-Or-\_\_\_\_  
AN ORDINANCE  
of the  
CITY OF  
MINNEAPOLIS  
By: Samuels

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**Amending Title 10, Chapter 203, of the Minneapolis Code of Ordinances relating to the Food Code: Grocery Stores and Specialty Food Stores.**

The City Council of the City of Minneapolis do ordain as follows:

That Section 203.10 of the above-entitled ordinance be amended to read as follows:

**203.10. Definitions.** As used in this chapter, the following words and phrases shall mean:

*Accessory food items.* Non-staple food items, such as coffee, tea, cocoa, carbonated and uncarbonated drinks, candy, condiments, and spices.

*Grocery store.* A retail establishment that sells such products as staple foods, accessory food items, and household goods.

*Specialty food store.* A retail establishment that sells only specialized types or classes of staple foods and accessory foods, including, but not limited to, such establishments as import food stores and co-ops. Such an establishment may not sell tobacco products, unless such products are in keeping with the specialized nature of the store.

*Staple foods.* Those food items intended for home preparation and consumption, including meat, poultry, fish, bread, and breadstuffs, cereals, vegetables, fruits, fruit and vegetable juices, and dairy products. (96-Or-005, § 1, 2-9-96)

*Perishable foods.* Those items that are fresh, un-refrigerated or refrigerated staple food items that will spoil or suffer significant deterioration in quality within two to three weeks.

That Section 203.20 of the above-entitled ordinance be amended to read as follows:

**203.20 (a)** Grocery and specialty foods stores are both subject to the requirements of chapter 188. A grocery store that does not possess a grocery license as of the effective date of this ordinance must meet the following requirements:

- (a) The grocery store shall provide and maintain a minimum sales floor area of two thousand (2,000) square feet, or a free-standing building originally constructed as a grocery convenience store shall have a minimum of two thousand (2,000) square feet, calculated by using external dimensions.
- (b) The grocery store shall provide and maintain a minimum of four (4) adjoining off-street parking spaces, notwithstanding the provisions of chapter 531.

(c) All grocery stores licensed under this chapter must offer for sale food for home preparation and consumption, on a continuous basis, at least three varieties of qualifying, non-expired or spoiled, food in each of the following four staple food groups, with at least five varieties of perishable food in the first category and at least two varieties of perishable food in all subsequent categories:

1. Vegetables and/or fruits
2. Meat, poultry, fish and/or vegetable proteins
3. Bread and/or cereal
4. Dairy products and/or substitutes

**203.30. Exemptions.** The following are exempt from the requirements of sections 203.20 (a) and 203.20 (b): and 203.20 (c):

- (a) Specialty food stores.
- (b) Filling stations, licensed under chapter 287 of this code, and having not more than 300 sq. ft. of retail sales floor area.
- (c) Grocery stores located in the central commercial district, as defined in section 360.10.

**Table 1. Food categories and examples of foods in each category, Thrifty Food Plan, 2006**

| <b>Food category</b>   | <b>Examples of foods</b>  |
|--|---|
| <b>Grains</b>  |   |
| Breads, yeast and quick—whole grain (n = 38)                           | Whole wheat, multigrain, or pumpernickel breads, rolls, bagels, scones, English muffins, biscuit tortillas, and pancakes—all with 50% or more of ounce equivalents <sup>1</sup> from whole grain                          |
| Breads, yeast and quick—non-whole grain (n = 271)                      | White, French, potato, bran, or rye breads and rolls; muffins, English muffins, bagels, waffles, corn tortillas, taco shells, cornbread, and pancakes—all with less than 50% of ounce equivalents from whole grain        |
| Breakfast cereal—whole grain, regular calories <sup>2</sup> (n = 74)   | Cooked cereals (e.g., oatmeal and bulgur) with sugars, fat, and whole milk or 2% milk added; sweetened ready-to-eat cereals (e.g., frosted wheats and granola)—all with 50% or more of ounce equivalents from whole grain |
| Breakfast cereal—whole grain, low calories <sup>2</sup> (n = 54)       | Cooked cereals (e.g., oatmeal, bulgur, and buckwheat groats) without added sugars or fat; nonsweetened ready-to-eat cereals (e.g., shredded wheat and muesli)—all with 50% or more of ounce equivalents from whole grain  |
| Breakfast cereal—non-whole grain (n = 214)                             | Cooked cereal (e.g., cream of wheat, grits, and oat bran); sweetened or nonsweetened ready-to-eat cereals (e.g., frosted cornflakes and puffed rice)—all with less than 50% of ounce equivalents from whole grain         |
| Rice and pasta—whole grain (n = 15)                                    | Brown rice, wild rice, whole wheat pasta (e.g., macaroni, spaghetti, and noodles)—all with 50% or more of ounce equivalents from whole grain  |
| Rice and pasta—non-whole grain (n = 48)                                | Long or short white rice, sweet rice, rice noodles and pasta (e.g., macaroni, spaghetti, and noodles)—all with less than 50% of ounce equivalents from whole grain  |
| Cakes, pies, and other sweet bakery products—whole grain (n = 20)      | Oatmeal cookies, granola cookies, whole wheat doughnuts, granola bars, and graham crackers—all with 50% or more of ounce equivalents from whole grain   |
| Cakes, pies, and other sweet bakery products—non-whole grain (n = 425) | Pies, cookies, pastries, doughnuts, shortbread; all cakes (e.g., white, yellow, shortcake, sponge, pound, and angel food); croissants; and sweet rolls—all with less than 50% of ounce equivalents from whole grain       |
| Grain-based snacks—whole grain (n = 30)                                | Popcorn, salty snacks, crackers, multigrain pretzels, and puffed wheat cakes—all with 50% or more of ounce equivalents from whole grain   |
| Grain-based snacks—non-whole grain (n = 58)                            | Crackers (e.g., soda, oyster, cheese, and rice); hard or soft pretzels; and salty snacks (e.g., tortilla chips)—all with less than 50% of ounce equivalents from whole grain  |
| Grain mixtures—regular fat (n = 229)                                   | Foods such as tacos, burritos, enchiladas, pizzas, egg rolls, and pasta and rice with meat where grain is major ingredient and containing 6% or more fat by weight  |
| Grain mixtures—lowfat (n = 140)  | Foods such as rice and pasta with vegetables and/or beans, noodle or rice soups with vegetables and/or meat, and garden rolls where grain is major ingredient and containing less than 6% fat by weight                   |
| <b>Vegetables and fruits</b>   |   |
| Potato products—regular fat (n = 34)                                   | French-fried potatoes, potato chips, hash browns, potato puffs, potato patty; and potato salads and mashed potatoes with added fat, eggs, or cheese   |
| Potato products—lowfat (n = 60)  | Boiled, baked, scalloped, mashed, and stuffed potatoes; and potato salad, German style  |
| Dark-green vegetables—added fat (n = 34)                               | All dark-green vegetables such as broccoli, spinach, chard, collard greens, mustard greens, and kale—with or without fat added  |
| Dark-green vegetables—no added fat (n = 21)                            |   |
| Orange vegetables—added fat (n = 28)                                   | All orange vegetables such as carrots, pumpkin, winter squash, and sweet potatoes—with or without fat added   |
| Orange vegetables—no added fat (n = 28)                                |   |
| Tomatoes—added fat (n = 32)  | Tomato, tomato sauce, tomato puree, tomato paste, tomato soup, and tomato juice—with or without fat added   |
| Tomatoes—no added fat (n = 37)   |   |
| Other vegetables—added fat (n = 136)                                   | All other vegetables such as green beans, beets, cabbage, cauliflower, corn, eggplant, green pea, iceberg lettuce, bell pepper, snow peas, turnip, and Brussels sprouts—with or without fat added                         |
| Other vegetables—no added fat (n = 163)                                |   |
| Mixed vegetables—added fat (n = 101)                                   | Foods such as stuffed vegetables, creamed peas and carrots, batter-dipped fried vegetables, and vegetable stir-fry where vegetables are the primary ingredient—with or without fat added                                  |
| Mixed vegetables—no added fat (n = 43)                                 |   |

<sup>1</sup>The following each counts as 1 ounce-equivalent (1 serving) of grains: 1/2 cup cooked rice, pasta, or cooked cereal; 1 ounce dry pasta or rice; 1 slice bread; 1 small muffin (1 oz); 1 cup ready-to-eat cereal flakes.

<sup>2</sup>In this context, “calories” refers to total calories from discretionary solid fat and added sugars in the product. Discretionary solid fat in cereals is the that is solid at room temperature and is added to the cereals during processing or at the table.

Note: n refers to number of food codes in the food category.

**Table 1. Food categories and examples of foods in each category, Thrifty Food Plan, 2006 (cont'd)**

| <b>Food category</b>   | <b>Examples of foods</b>  |
|--|---|
| Citrus fruits, melons, and berries (n = 62)  | Oranges, grapefruits, limes, lemons, and tangelos; melons (e.g., watermelon, cantaloupe, and honeydew); berries (e.g., strawberries, blueberries, cranberries, raspberries, and blackberries)   |
| Citrus fruit, melon, and berry juices (n = 38)   | 100% fruit juices made from citrus fruits, melons, and berries  |
| Fruits other than citrus fruits, melons, and berries (n = 185)                             | Fruits such as bananas, apples, cherries, peaches, pears, grapes, plums, papayas, and apricots  |
| Fruit juices other than citrus, melon, and berry (n = 70)                                  | 100% fruit juices made from fruits other than citrus fruits, melons, and berries  |
| <b>Milk products</b>   |   |
| Milk and milk-based foods—regular fat (n = 56)   | All fluid, evaporated, condensed, and dry whole milk; regular yogurt; all fluid creams; cream substitutes; cream cheese; and dips   |
| Milk and milk-based foods—lower fat (n = 38)   | All fluid, evaporated, and dry reduced-fat and skim milks; buttermilk; and lowfat or nonfat yogurts   |
| Cheese (n = 98)  | Natural, processed, and imitation cheeses; cottage cheese; cheese spreads; cheese dips; and cheese soups  |
| Milk-based drinks and desserts—regular fat (n = 125)                                       | Milk-based drinks (e.g., malted milk, hot chocolate, eggnogs, cocoa, infant formulas, and meal-replacement drinks) with fat equivalent to that of whole milk; dairy desserts (e.g., ice cream, frozen yogurt, ice milk, custard, and puddings) having more than 6% fat by weight              |
| Milk-based drinks and desserts—lower fat (n = 136)   | Milk-based drinks made with reduced-fat or skim milk and dairy desserts having 6% or less fat by weight   |
| <b>Meat and beans</b>  |   |
| Red meats—regular discretionary solid fat, <sup>3</sup> regular cost <sup>4</sup> (n = 59) | Beef (e.g., battered and fried steak, barbecued short ribs, and pot roast), pork (e.g., fresh ham, loin, and spare ribs), lamb (e.g., roast), game meats, and jerky—all with more than the median amount of discretionary solid fat   |
| Red meats—regular discretionary solid fat, low cost <sup>4</sup> (n = 61)                  | Pork (e.g., skin, ground, chop, roast, cutlet, and bacon), beef (e.g., brisket, short ribs, neck bones, regular ground beef, and corned beef), lamb (e.g., ground or chop), and organ meats—all with more than the median amount of discretionary solid fat                                   |
| Red meats—low discretionary solid fat, regular cost (n = 62)                               | Lean beef (e.g., steak, veal, and oxtail), lean only pork (e.g., roast, steak, fresh ham, and loin), lamb (e.g., ribs and loin chop), and game meats—all with the median amount of discretionary solid fat or less  |
| Red meats—low discretionary solid fat, low cost (n = 74)                                   | Lean pork (e.g., lean spare ribs and smoked or cured roast), lean only beef (e.g., brisket), lamb (e.g., shoulder chop), and game meats—all with the median amount of discretionary solid fat or less   |
| Poultry—regular discretionary solid fat, regular cost (n = 50)                             | Coated and fried poultry (e.g., breast, leg, thigh, and drumstick) purchased without skin—all with more than the median amount of discretionary solid fat   |
| Poultry—regular discretionary solid fat, low cost (n = 42)                                 | Coated and fried dark meat (e.g., wing, thigh, and drumstick) purchased with skin; nuggets; and organ meats of chicken, turkey, and game birds purchased with skin—all with more than the median amount of discretionary solid fat  |
| Poultry—low discretionary solid fat, regular cost (n = 54)                                 | Roasted or broiled poultry (e.g., breast, thigh, and drumstick) purchased without skin—all with the median amount of discretionary solid fat or less  |
| Poultry—low discretionary solid fat, low cost (n = 156)                                    | Smoked or roasted white and dark meat mixture or dark meat (e.g., thigh and drumstick) purchased with skin (but skin not consumed); turkey and game birds purchased with skin (but skin not consumed); and canned chicken soups—all with the median amount of discretionary solid fat or less |

<sup>3</sup>Discretionary solid fat in meats is the fat that is solid at room temperature and is the excess fat from (1) the meat and beans group (including meats, poultry, fish, eggs, nuts, and seeds) beyond amounts that would be consumed if only the lowest fat forms were eaten and (2) solid fats added to these foods in preparation or at the table.

<sup>4</sup>The top 66.66 percent of foods were placed in the regular-cost category; the bottom 33.33 percent of foods, in terms of cost, were placed in the lowest cost category.

Note: n refers to number of food codes in the food category.

**Table 1. Food categories and examples of foods in each category, Thrifty Food Plan, 2006 (cont'd)**

| <b>Food category</b>   | <b>Examples of foods</b>   |
|--|--|
| Fish—regular discretionary solid fat, regular cost (n = 60)                | Fish, pan-fried or baked with solid fat (e.g., fresh tuna, swordfish, trout, salmon, ocean perch, and porgy) and battered and fried shellfish (e.g., scallops, oyster, shrimp, and crab)—all with more than the median amount of discretionary solid fat |
| Fish—regular discretionary solid fat, low cost (n = 54)                    | Fish sticks or other fried and battered fish (e.g., mullet, smelt, haddock, herring, and catfish)—all with more than the median amount of discretionary solid fat  |
| Fish—low discretionary solid fat, regular cost (n = 37)                    | Broiled, steamed, or smoked fresh fish (e.g., tuna, salmon) and fresh shellfish (e.g., crab and clams)—all with the median amount of discretionary solid fat or less   |
| Fish—low discretionary solid fat, low cost (n = 54)                        | Canned fish (e.g., tuna, sardines, and herring), canned shellfish (e.g., shrimp), and canned seafood-based soups and chowders—all with the median amount of discretionary solid fat or less  |
| Lunch meats, sausages, and bacon—regular fat (n = 55)                      | Sausages, salami, frankfurters, bologna, sliced ham, bacon, and pastrami   |
| Lunch meats, sausages, and bacon—lowfat (n = 41)                           | Sausages, salami, frankfurters, bologna, sliced ham, bacon, and pastrami containing 25% less fat than regular fat form   |
| Eggs and egg mixtures (n = 69)   | Fresh, frozen, and dried eggs; egg substitutes; meringues; and egg mixtures  |
| Meat, poultry, and fish mixtures—regular discretionary solid fat (n = 345) | Meat, poultry, and fish with grains or vegetables with more than the median amount of discretionary solid fat  |
| Meat, poultry, and fish mixtures—low discretionary solid fat (n = 355)     | Meat, poultry, and fish with grains or vegetables with the median amount of discretionary solid fat or less  |
| Dry beans, peas, lentil dishes, and mixtures (n = 113)                     | Black, red, pinto, lima, white, mung, and kidney beans and all types of peas—all with or without other foods; soybean products (e.g., miso, tofu, and soybean-based meat substitutes)  |
| Nuts and seeds (n = 74)  | Nuts, peanut butter and other nut butters, nut mixtures, carob, and seeds (e.g., sunflower, sesame, and pumpkin)   |
| <b>Other foods</b>   |  |
| Fats, oils, salad dressings, sauces, and condiments (n = 188)              | Butter, margarine, vegetable oils (e.g., corn, olive, and sunflower), butter blends, salad oils, lard, shortenings, all salad dressings, mayonnaise, pickles, relishes, salsa, soy sauce, catsup, tomato paste, and gravies and sauces                   |
| Coffee and tea (n = 81)  | Instant, ground, and fluid coffees and teas with or without caffeine and with or without sugar or sweeteners   |
| Fruit drinks, soft drinks, and ades—regular calorie (n = 89)               | Fruit drinks, cola- and pepper-type soft drinks, ginger ale, root beer, fruit punches, ades (e.g., lemonades and limeades), and other sodas containing sugar   |
| Fruit drinks, soft drinks, and ades—low calorie (n = 35)                   | Sugar-free or low-sugar drinks such as cola- and pepper-type soft drinks, ginger ale, root beer, fruit-flavored drinks, fruit punches, ades, and other sodas   |
| Sugars and sweets (n = 215)  | All types of sugars, sweeteners, and syrups (e.g., honey, jams, jellies, marmalades, preserves, icings, gelatin desserts, marshmallow, and fudge); all types of candies and chocolates; and chewing gum  |

Note: n refers to number of food codes in the food category.



## APPENDIX C: POLICIES REGARDING GROCERY RETAIL IN AMERICAN CITIES

### Policy Type: Formal Support

#### 1) Resolution urging Albertson's Inc. not to close<sup>1</sup>

City: San Francisco (6/27/06)

Policy Tool: Resolution

Implemented by: Board of Supervisors

Synopsis: Pledges city cooperation with grocery stores to find appropriate solutions/alternatives to closing in order to continue meeting needs of community residents

- Formally recognizes a lack of neighborhood grocery stores and the impacts a store-closing would have on the community
- Formally recognizes that the vacant building would cause blight

#### 2) Promoting Health and Wellness<sup>2</sup>

City: Denver (8/6/08)

Policy Tool: Memorandum of Understanding

Implemented by: Office of the Mayor, Metro Denver Health and Wellness Coalition

Synopsis: City formally commits to implementing at least 6 strategies to support healthy eating and active living

- Adopting policies that ensure residents of all income levels have access to grocery stores, farmers markets, corner stores and other sources of fresh, healthy foods
- Encourages stronger partnerships between transportation, planning, and public health officials
- Supports land-use decisions that positively impact residents' access to healthy food and physical activity opportunities
- Support the provision and consumption of locally grown food
- Focus on food stamp and assistance programs to help lower income and vulnerable populations
- Draft letters and resolutions that support healthy eating and active living legislation at state and federal levels

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<sup>1</sup> ENACT Local Policy Database, accessed 12/12/11, <http://eatbettermovemore.org/sa/policies/>

<sup>2</sup> ENACT Local Policy Database, accessed 12/12/11, <http://eatbettermovemore.org/sa/policies/>

### **3) Creating a Food Secure Detroit<sup>3</sup>**

City: Detroit (1/1/08)

Policy Tool: Policy

Implemented by: City Council

Synopsis: Recognizes the current problems in the food system including a lack of fresh food retail and hunger

- Calls for action in 8 areas, including
  - Access to Quality Food
  - Urban Agriculture
  - Economic Injustice within the Food System
- Actions needed:
  - Increase the number of culturally appropriate food outlets
  - Perform research on the type and location of food establishments and the extent to which these stores fulfill neighborhood needs
  - Create mechanisms with store operators to ensure that stores comply with food safety codes
  - Ensure that food stores carry a variety of fresh foods and food items for persons with special needs and chronic conditions
  - Review bus stops and put in place bus lines that give people direct access to grocery stores without the need of a transfer. Assess the need for “grocery routes” which reflect actual shopping needs
  - Make locally grown and organic foods accessible throughout the city by supporting increased production within neighborhoods

### **4) Sit-Down Restaurants/ Grocery Stores/ South Los Angeles<sup>4</sup>**

City: Los Angeles (6/23/06)

Policy Tool: Motion

Implemented by: City Council

Synopsis: Commissions a report on possible financial and planning incentives the city could provide in order to attract more grocery stores and sit-down restaurants to underserved areas of the city

- Recognizes the lack of healthy food options in South Los Angeles
- Directs the Community Redevelopment Agency, Community Development Department, the Department of Water and Power and the Chief Legislative Analyst to report to the Housing, Community and Economic Development Committee within 60 days on possible financial and planning incentive the city could provide in order to attract more grocery stores and sit-down restaurants to underserved areas of the city, such as South Los Angeles

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<sup>3</sup> ENACT Local Policy Database, accessed 12/12/11, <http://eatbettermovemore.org/sa/policies/>

<sup>4</sup> ENACT Local Policy Database, accessed 12/12/11, <http://eatbettermovemore.org/sa/policies/>

## Policy Type: Financial Incentives

### 1) Fresh Food Financing Initiative<sup>5</sup>

State (date enacted): Pennsylvania (2004)

Policy Tool: Financial Incentive

Implemented by: the Food Trust, the Redevelopment Fund, the Urban Affairs Coalition

Synopsis: Grant and Loan program to encourage supermarket development in underserved neighborhoods throughout the state

- Public-Private Partnership
- Initially \$10 million in 2004, since grown to \$120 million (leveraged with private funds)
- 88 Fresh Food Retail Projects; 5,000 jobs
- 1<sup>st</sup> state to launch this kind of program; serves as model for other programs
- Additional Initiatives in Philadelphia include Green Supermarkets Initiative, Infill Philadelphia: Food Access, Corner Store Initiative<sup>6</sup>

Eligible Activities: land acquisition, equipment purchase, infrastructure

### 2) Illinois Fresh Food Fund<sup>7</sup>

State (date enacted): Illinois (2005)

Policy Tool: Financial Incentive

Implemented by: the Food Trust, State of Illinois, Community Development Financial Institution

Synopsis: Designed to stimulate supermarket development in underserved areas across the state and to attract significant private investment and create jobs through the use of financial tools

- Public-Private Partnership
- \$10 million dedicated from the Capital Bill to create the Fund
- State funds will be leveraged from private funds
- 3<sup>rd</sup> state to launch this kind of program

Eligible Activities: land acquisition, equipment purchase, green roofs, site clean-up, infrastructure

### 3) Healthy Food Retail Act<sup>8</sup>

State (date enacted): Louisiana (7/09)

Policy Tool: Financial Incentive

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<sup>5</sup> The Food Trust, accessed 12/9/11, <http://www.thefoodtrust.org/php/programs/>

<sup>6</sup> The Reinvestment Fund, accessed 12/9/11, [http://www.trfund.com/resource/downloads/Fresh\\_Food\\_Financing\\_Initiative\\_Comprehensive.pdf](http://www.trfund.com/resource/downloads/Fresh_Food_Financing_Initiative_Comprehensive.pdf)

<sup>7</sup> The Food Trust, accessed 12/9/11, <http://www.thefoodtrust.org/php/programs/>

<sup>8</sup> Act No. 252, accessed 12/10/11, <http://www.scribd.com/doc/47132488/SB-299-SB299-Act-252-Louisiana-Legislature-via-MyGov365-com>

Implemented by: Department of Agriculture and Forestry

Synopsis: To provide for a financing program to stimulate investment in healthy food retail outlets in underserved areas of Louisiana

- Public-Private Partnership
- Includes new or existing grocery stores, farmers markets, food cooperatives, mobile markets and delivery projects, distribution projects
- Grants, loans or a combination

Eligible Activities: construction, renovation, expansion, infrastructure upgrades, site acquisition and preparation, equipment and furnishings, workforce training, security, predevelopment costs (market studies, appraisals)

#### **4) Fresh Food Retailer Initiative<sup>9</sup>**

City (date enacted): New Orleans (3/11)

Policy Tool: Financial Incentive

Implemented by: the Food Trust, the City of New Orleans, Hope Enterprise Corporation

Synopsis: Citywide program to encourage supermarket and grocery store development in low-income, underserved communities.

- Forgivable and interest-bearing loans
- \$14 million – City provides \$7 million in D-CDBG funds; 1:1 matching from Hope Enterprise
- Amount awarded per store may not exceed \$1,000,000; forgivable loan amount may not exceed \$500,000

Eligible Activities: predevelopment, site assembly and improvement, construction and rehabilitation, equipment, staff training, security, inventory and working capital

#### **5) New Jersey Food Access Initiative<sup>10</sup>**

State (date enacted): New Jersey (2/11)

Policy Tool: Financial Incentive

Implemented by: New Jersey Economic Development Authority, the Reinvestment Fund

Synopsis: Designed to meet financing needs of supermarket operators that want to locate in underserved areas of New Jersey in order to increase the number of stores in the state.

- \$7 million state allocation to create the initiative
- 9 priority cities

Eligible Activities: predevelopment, acquisition, construction and rehabilitation, equipment purchase, leasehold improvement

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<sup>9</sup> Hope Enterprise Corporation, accessed 12/04/11, <http://www.hope-ec.org>

<sup>10</sup> The Reinvestment Fund, accessed 12/10/11, [http://www.trfund.com/financing/Healthy\\_food/Healthy\\_Food\\_Retail.html](http://www.trfund.com/financing/Healthy_food/Healthy_Food_Retail.html)

## **6) Healthy Food / Healthy Communities Initiative<sup>11</sup>**

State (date enacted): New York (2009)

Policy Tool: Financial Incentive

Implemented by: the Food Trust, the Reinvestment Fund, Low Income Investment Fund

Synopsis: Encourages supermarket development in underserved areas

- Public-Private Partnership
- \$10 million provided by state, \$30 million total
- Grants and Loans to supermarkets who invest in key areas

Eligible Activities: real estate acquisition, construction or rehabilitation, leasehold improvements, equipment and infrastructure

## **7) FRESH Program<sup>12</sup>**

City (date enacted): New York City (12/09)

Policy Tool: Financial Incentive

Implemented by: the Food Trust, the City of New York

Synopsis: Targeted Tax Incentives and Zoning enhancements available to supermarkets investing in underserved neighborhoods

- Provides tax incentives to healthy food retailers
- Creates incentives in the zoning code for real estate developments that incorporate healthy food
- Creates a single point of access for supermarket operators to interface with city government

### **Policy Type: Land Use and Zoning**

#### **1) Limit Restrictive Land Use Covenants<sup>13</sup>**

City (date enacted): Chicago (9/14/05)

Policy Tool: Substitute Ordinance

Implemented by: Department of Planning & Development

Synopsis: Limits the ability of grocers and drugstores to use land use covenants that prevent other grocers and drugstores from occupying the parcel once vacated

- Seeks to ban applications of restrictive land use covenants that would limit neighborhood access to fresh fruits and vegetables

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<sup>11</sup> The Food Trust, accessed 12/9/11, <http://www.thefoodtrust.org/php/programs/>

<sup>12</sup> The Food Trust, accessed 12/9/11, <http://www.thefoodtrust.org/php/programs/>

<sup>13</sup> ENACT Local Policy Database, accessed 12/12/11, <http://eatbettermovemore.org/sa/policies/>

- Severely limits the ability of supermarkets and drugstores to use restrictive land use covenants that would prevent similar businesses from occupying the same parcels of land/building.
- Aims to prevent blight caused by vacant retail parcels designed for grocery and drug stores
- Allows a general grocery store to replace a previous grocery store without going through a longer planning process
- Chicago is believed to have the first ordinance of this kind

## **2) Replacement of a General Grocery Store with the Same Use is Not Formula Retail<sup>14</sup>**

City (date enacted): San Francisco (5/4/07)

Policy Tool: Ordinance, Amendment to Planning Code

Implemented by: Board of Supervisors

Synopsis: Amends a Formula Business Ordinance that was previously passed which limits where formula businesses (i.e. fast food and retail chains) can open and operate to exclude general grocery stores.

- Allows a general grocery to replace another grocery store without going through a longer planning process
- Without the amendment, store openings may take up to 12 months

## **3) Farmers Markets Amendment<sup>15</sup>**

City: Fresno (6/17/08)

Policy Tool: Policy

Implemented by: City Council

Synopsis: This policy removes zoning barriers in some zone districts for farmers markets

- Allows farmers markets to be permitted in any district except where expressly prohibited
- Adds “farmers market” to the list of permissible uses in an R-1 district
- Mandates that 75% or more of the retail space available be composed of agricultural products in order to be defined as a “farmers market”

## **4) Zoning for Farmers Market Ordinance<sup>16</sup>**

City: Modesto (8/19/10)

Policy Tool: Ordinance

Implemented by: City Council

Synopsis: Amends zoning ordinance to add and permit the establishment of a farmers market at Kaiser Medical Facility in Modesto

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<sup>14</sup> ENACT Local Policy Database, accessed 12/12/11, <http://eatbettermovemore.org/sa/policies/>

<sup>15</sup> ENACT Local Policy Database, accessed 12/12/11, <http://eatbettermovemore.org/sa/policies/>

<sup>16</sup> ENACT Local Policy Database, accessed 12/12/11, <http://eatbettermovemore.org/sa/policies/>

- Supports the establishment of a Farmers Market in the P-D Zone of Modesto
- Requires copies of this ordinance to be published in at least three prominent and distinct locations in the City and in *The Modesto Bee*

## 5) Park Code Amendment to Allow Farmers Markets<sup>17</sup>

City: San Francisco (2/6/07)

Policy Tool: Ordinance

Implemented by: Board of Supervisors

Synopsis: This policy removes restrictions on park property for farmers markets; requires markets to accept payment in form of government food assistance

- Requires Farmers Markets to accept payment in the form of federal, state or local food assistance (SNAP, WIC, etc)
- Authorizes Farmers Markets to locate on city property through Recreation and Park Commission
- Requires the Agricultural Commissioner to conduct a needs assessment of neighborhoods' ability to support Farmers Markets

### Policy Type: Permitting

#### 1) Food Code<sup>18</sup>

City: Minneapolis (9/30/08)

Policy Tool: Ordinance

Implemented by: City Council

Synopsis: Requires new grocery stores to provide a variety of fresh and healthy products

- Requires that three out of four categories of food are sold in grocery stores, including
  - Vegetables and fruits
  - Meat, poultry, fish and/or vegetable proteins
  - Bread and/or cereal
  - Dairy products and/or substitutes
- Requires that there must be at least 5 varieties of fruits and vegetables and at least 2 varieties in each of the other categories of food sold
- Provides a specific definition for grocery store and other associated terms
- Lays out store size and parking requirements
- Includes procedure to exempt stores from these provisions

#### 2) Amendment to Expand the Number of "Green Carts"<sup>19</sup>

City: New York (2/27/08)

<sup>17</sup> ENACT Local Policy Database, accessed 12/12/11, <http://eatbettermovemore.org/sa/policies/>

<sup>18</sup> ENACT Local Policy Database, accessed 12/12/11, <http://eatbettermovemore.org/sa/policies/>

<sup>19</sup> ENACT Local Policy Database, accessed 12/12/11, <http://eatbettermovemore.org/sa/policies/>

Policy Tool: Permitting

Implemented by: City Council

Synopsis: Increases number of permits issued for food carts that sell fresh produce (green carts) in neighborhoods that report low fruit and vegetable consumption

- Formally recognizes that access to fresh produce affects fruit and vegetable consumption
- Establishes 1500 vendor permits for fresh fruit and vegetable carts in areas where fruit and vegetable consumption is low
- Prohibits green carts from selling items other than fresh fruit and vegetables
- Allows green carts to operate only in those designated neighborhoods with most need
- Provides a plan for implementation, inspections, and enforcement

### 3) Formula Business Restrictions<sup>20</sup>

City: San Francisco (2004)

Policy Tool: Permitting

Implemented by: Planning Commission

Synopsis: Throughout most of the city, including all Neighborhood Commercial Districts, formula retail stores and restaurants are considered conditional uses. "Formula Retail" is defined as an establishment that shares common features, such as a standardized array of merchandise, trademark, architecture, or décor with at least 11 other establishments in the U.S. This means they must be approved by the Planning Commission on a case-by-case basis and must consider the following:

- Existing concentration of formula retail businesses within the neighborhood
- Whether similar goods or services are already available within the area
- The compatibility of the proposed businesses with the character of the neighborhood
- Retail vacancy rates in the area
- Balance of neighborhood-serving versus city-wide or regional-serving businesses

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<sup>20</sup> Formula Business Restrictions, accessed 12/12/11, <http://www.newrules.org/retail/rules/formula-business-restrictions/formula-business-restrictions-san-francisco-ca>



## APPENDIX D: GROCERY RETAILER INTERVIEW QUESTIONS

### 1) Store Typology

How would you classify/categorize your store?

Size

Region

Ownership (owned, licensed, franchised, affiliated)

Target demographic

Price-points

Full service, natural, specialty, etc.

Does this classification affect where you locate your stores? How?

### 2) Location Factors

What are the factors that you consider when choosing where to locate a store? (examples: parcel size, demographics, proximity to similar store, zoning)

- Financial factors
- Physical factors
- Demographic factors

Which of these factors are most important? Which of these factors are more flexible?

*Do you currently have any stores in an urban area? If so, which cities and how many? If you do not have any stores in an urban area, why not?*

How do you make the decision to locate in an urban area?

Are there some cities or neighborhoods that you considered locating in and decided not to? Why did you make this decision?

What would incentivize you to locate in an urban area moving forward?

### 3) Grocery retail incentives in municipality

Did you work with city staff or agencies to locate your stores? How did they engage you or assist you?

*Are there any policies or initiatives currently in place in your municipality to encourage retail grocery? What are those policies or initiatives?*

Have you taken advantage of any such incentive program? Or have you benefitted from it in some way? Why or why not?

What could a city or county do to make it easier to locate in an urban neighborhood?

### 4) Misc.

*SNAP – Do you accept SNAP in all your stores? Why or why not?*

*WIC – Do you participate in WIC? Why or why not?*

*Do you find there is more demand for SNAP and/or WIC in urban stores?*

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**Bi-Rite Market, San Francisco, CA**

Kirsten Bourne, Marketing Director

**Boston Collaborative for Food & Fitness, Boston, MA**

Jen Obadia, Farmers Market Coordinator

**Foodmaster Inc., Boston, MA**

Richard Hinds, Vice President of Finance

**Fresh Moves, Chicago, IL**

Dara Cooper, Senior Project Coordinator

**Harvest Cooperative, Boston, MA**

Christina Lively, President, Board of Directors

**Lotte Market, Cambridge, MA**

Anonymous Employee

**Mars Supermarket, Baltimore, MD**

Rick Snyder, Director of Store Development

**Safeway Inc., San Francisco, CA**

Natalie Mattei, Real Estate Manager

**Sullivan Hayes Brokerage, Denver, CO**

Brian Shorter, Managing Director

**Supervalu, Itasca, IL**

David Hene, Senior Real Estate Manager

## **IMAGE AND MAP SOURCES**

Page 12: Figure 1 – all images Caitlin Cameron

Page 32: Figure 9 – Caitlin Cameron

### **BOSTON GIS SOURCES:**

City of Boston Assessing Department/Boston Redevelopment Authority (2010)

City of Brookline GIS (2006)

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