

**Pacific Food Center:
Expanding Tacoma's Food Bank System**

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Abstract

Pacific Food Center:
Expanding Tacoma's Food Bank System

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This thesis proposes the design of a downtown food center complex as the next logical development of the food bank system of the City of Tacoma, Washington. The first part of the thesis examines the complex character of Tacoma's emergency food system through a study of the city's food bank types and locations. Based on research, the thesis proposes the adaptation and expansion of an existing, but currently largely unused, historical brewery complex as the new Pacific Food Center as a way to build and sustain community through food. Addressing a wide range of needs for a broad clientele, the Center integrates a food bank market, long-term support and counseling, and educational opportunities with classroom and test kitchen spaces. Developed with the recognition that everyone eats, this thesis presents a design centered on food to connect local farmers, community members and individuals in need. The Pacific Food Center brings people together into communal spaces, creating opportunities for shared experience and growth.

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Pacific Food Center

Expanding Tacoma's Food Bank System



Acknowledgments

Thank you Gundula and Jeffrey for your support and guidance throughout this process. I really enjoyed working with you both.

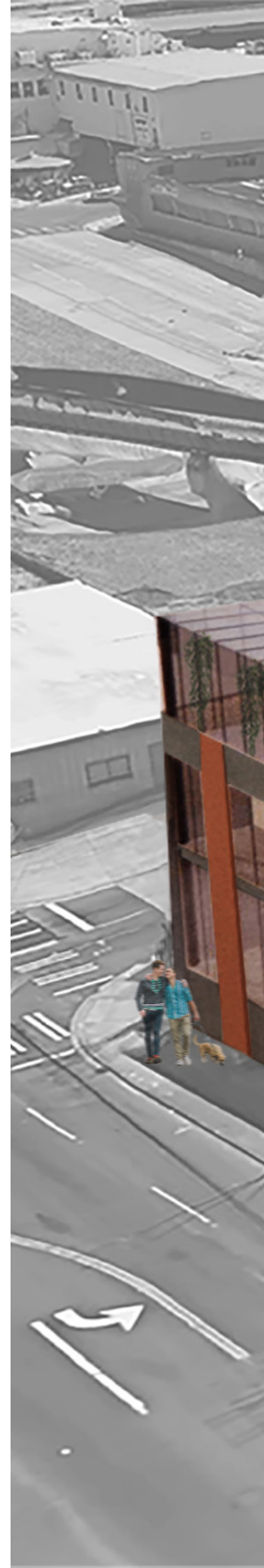
Thank you to my family for your patience and unwavering belief in me. I could not have done this without you.



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FIGURE 1 - View of Pacific Food Center from 25th Street.





Preface

I visited a food bank for the first time in third grade. We spent the day packing food and preparing hot meals. At the time, it seemed like a place where everyone knew each other and could come for events and classes. I had no idea just how important Key Peninsula Community Services is for the local community.

Years later, after graduating from high school, I returned to the food bank as a volunteer for the summer. I met some of the most amazing people who volunteered their time and energy to help those in need. I had the opportunity to talk to clients and learn much more about this vital place. For people living on the Key Peninsula, just across the Puget Sound from Tacoma, this center is more than just a food bank. It offers all that it has for events, dances, computer classes and even exercise classes. Everyday this center serves as a space for all. It is places like these, the staff and volunteers who work there, and the people they serve, that inspired this thesis.

I would like to dedicate this thesis to the managers, operators and volunteers in food banks and pantries. You have my utmost respect for all the work you do and the challenges you face in providing food, service and dignity to those in need.



Pacific Food Center

Expanding Tacoma's Food Bank System

1.0

Introduction



PACIFIC FOOD CENTER
tacoma, wa

1.0 - Introduction

This thesis presents the design of the Pacific Food Center that brings together and expands upon the existing food bank system in Tacoma, Washington. The design presented here is based on a detailed study of the food bank system with a variety of types of food facilities across the city as well as a review of precedents from elsewhere.

It is a startling fact that 1 in 9 households in the United States experiences food insecurity and hunger. Food insecurity in families with children is considerably higher, and has only worsened during the COVID-19 pandemic (2020-2021). This thesis presents a design for a food center that educates, empowers and unites the local community through the shared experience of food.



1.1 - Community Efforts

Across the City of Tacoma, food banks, community gardens and pantries at the local level provide immediate support to those in need. Some of these facilities, such as St Leo Food Connection, have a history dating back many years; others, such as Key Peninsula Bischoff Food Bank, have existed for less than a decade. While most are established in a specific location, one provider, Nourish Pierce County operates a mobile food bank service. Some are oriented to specific client-groups with dietary restrictions and pets.

In this thesis, the design of a food center for Tacoma is based on an understanding of the existing food system, both the variety of its providers and the range of services they provide. Thus, the first part of the thesis is a documentation and analysis of the existing food bank network across Tacoma.¹ The analysis of the established network provides a basis for a proposal of how it might be strengthened through the implementation of a center providing long-term support, advocacy and educational opportunities. Such a center could support all members of the community in need with the scaffolding and encouragement to grow and become empowered in the face of the many challenges they encounter.



FIGURE 5 - Community Food Pantries, Pierce County. (Left).

FIGURE 6 - Food is Free, Tacoma Nonprofit. (Center).

FIGURE 7 - Giving Garden Program, Tacoma. (Right).



1.2 - Guiding Thoughts

The central idea of this thesis, working with and strengthening the local emergency food system in Tacoma, served as a guiding principle through both the research into the existing network and the development of the proposed Pacific Food Center design.

This thesis document is divided into research and design phases. Within each of these two major divisions a variety of investigations were undertaken and methods applied. After the existing system was documented and analyzed, it was possible to consider case studies drawn from outside Tacoma. While these helped in considering a range of program types, the specific programs proposed were based on needs identified in Tacoma in the research phase. Thus, the site selection and analysis, and the building design phases, were very focused on addressing the specific needs and possibilities of Tacoma.

How can the design continue the food bank practice of providing holistic, *human centered* programs that move beyond delivering emergency support?

2.0

Research

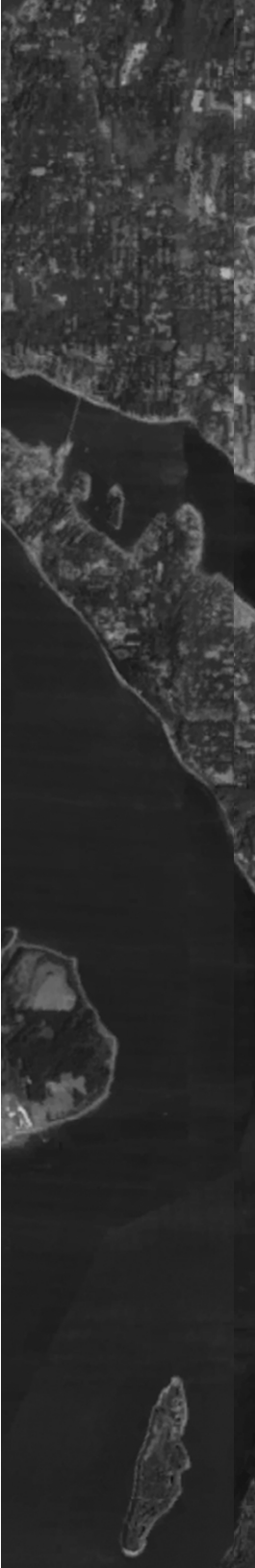


PACIFIC FOOD CENTER
tacoma, wa

2.0 - Research

The initial research and analysis of Tacoma and its food insecurity addressed two primary datasets. First, research into the available statistical information provided an understanding of the level of need in the city and county.² This provided a basis to consider the level of food insecurity and need that the present food bank network is trying to address. Second, the food bank network was analyzed both as a whole and as a collection of individual facilities. Documenting the individual food banks proved complex; techniques included mapping, site visits, interviews and other data gathering. This documentation then provided a basis for analysis to uncover the roles that food banks play in delivering emergency solutions. Food banks evolved from the idea of providing temporary support, but for many, a lack of long-term support programs, leads to greater reliance on food banks. This research phase sought to consider these questions:

How is the existing food bank network addressing need in the City of Tacoma? Beyond addressing immediate needs for food, are these facilities having a broader impact on their clients' lives? How well are these institutions, often based in vernacular, disused spaces, able to respond to the needs of the homeless and food insecure communities?





2.1 - Methods

This thesis employed several methods both in research and in design. The research methods include the gathering of statistical information, calculations, site visits, interviews and the implementation of incremental program schemes. Program development provided a “bridge” from the research to the design phase. Site selection was focused within downtown Tacoma, based on an understanding, developed from the research phase, of the spatial distribution of the city’s most visited food banks. The design was driven by research, with the aim of providing spaces specific to the needs identified in Tacoma.

One challenge of this thesis was the surprising lack of research outside the realm of social sciences dedicated to the study of food banks. Social science research has mainly examined food bank use patterns and political, economic and social influencers over time in specific locations across Vancouver, Germany, and Italy.³



2.1 - Methods

What is lacking in available research, however, is study of food banks within their built and urban environmental context and the specific characteristics of these networks in context. This may be due to a variety of political and social reasons with one being that food banks are often considered temporary, rather than long-term facilities. As the histories of many of the food banks studied illustrate, this is far from the truth. Many have become permanent facilities that may provide support to their patrons spanning over many decades.

The methods used in the thesis shifted as the focus of the work progressed. Initially, the work was primarily data gathering and analysis, along with mapping. Following the documentation and analysis of food insecurity and needs in Tacoma, the investigation moved to include site visits, an analysis of Tacoma’s food bank types and documentation of food bank characteristics. A final matrix for both Tacoma and Pierce County food bank networks provided a basis for making comparisons and uncovering a variety of additional information.

FIGURE 11 - FISH Food Bank Volunteer. (Left).

FIGURE 12 - Nourish Mobile Food Bank Volunteer, Pierce County. (Right).



2.2 - Tacoma Context

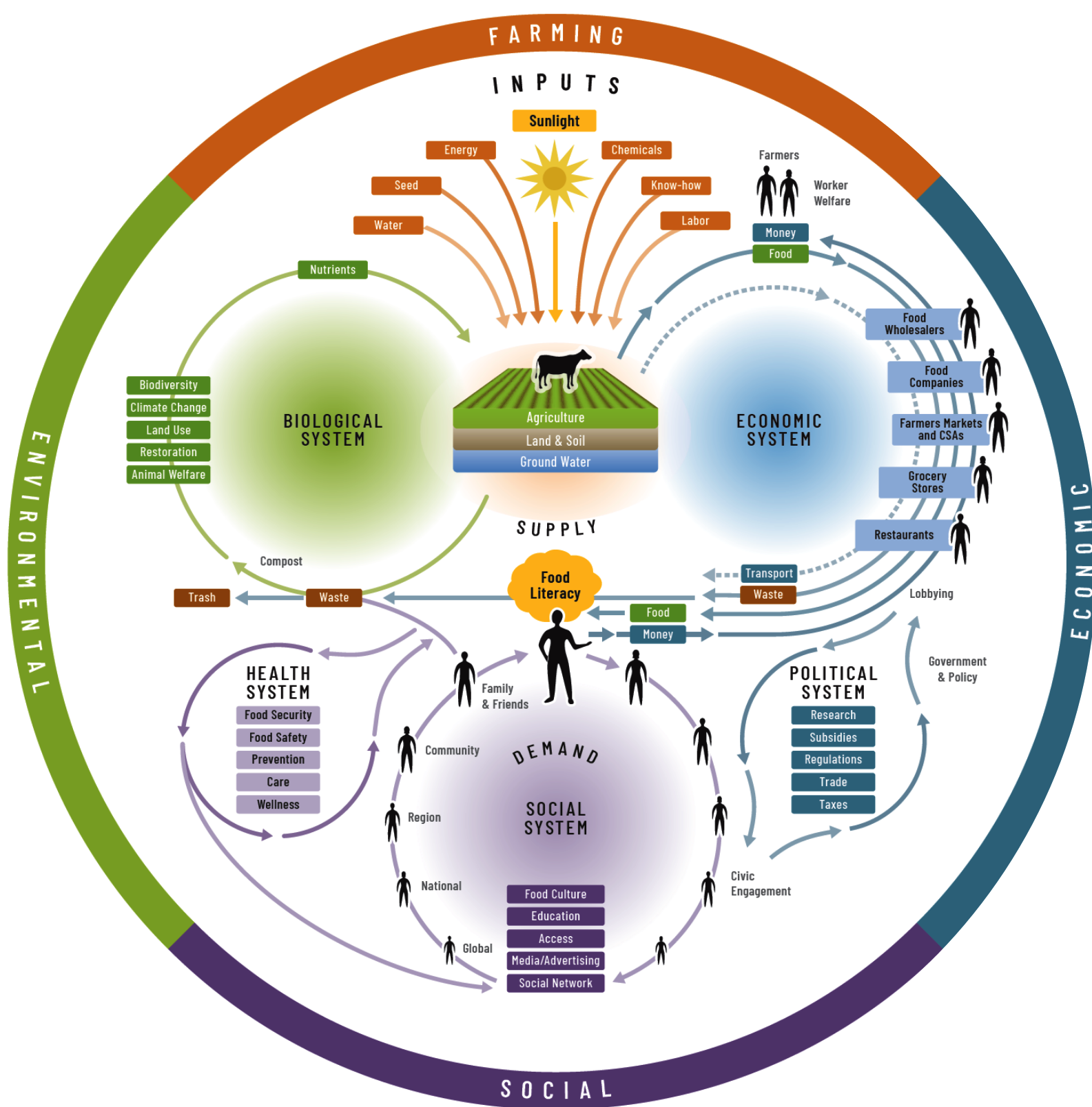
Originally named the City of Destiny in the late nineteenth century, Tacoma is a city known for its resilience and grit.⁴ Located in Pierce County, with a population of just over 220,000, the city is experiencing a rapid transition, with multiple redevelopment projects, particularly in the downtown area. In 2018, the average household income in Tacoma was \$58,617. (In the same year, the average income in Seattle was \$93,481.) Homeownership rates across the city are approximately 13% lower than the national average.⁵ The level of need throughout the city, and surrounding county has only risen in the last 18 months due to Covid-19. According to the 2020 “Homeless Point-In-Time Count” study, nearly 1,900 individuals were reported to be living in Pierce County without a home.⁶ This study is not exhaustive but rather based on a count taken on a single day. It works to highlight the magnitude and characteristics of homelessness across the county. Many of the individuals reported in this single-day study attribute the cause of their homelessness to unemployment, lack of affordable housing or domestic violence. Of the 1,897 individuals recorded, 7% reported being in households with children and 6% were unaccompanied youths or young adults.

FIGURE 13 - Tacoma Brewery District. (Top).
FIGURE 14 - Hilltop Neighborhood, Tacoma. (Center).
FIGURE 15 - University of Washington Tacoma. (Bottom).
FIGURE 16 - Tacoma Neighborhood Map.



2.3 - Food Systems: Defining the Scope

Food systems are very complex, with different layers, stakeholders and areas of focus. Areas of research regarding food systems may range from urban agriculture, issues of equity, sustainability within urban food supply chains and their resilience regarding food insecurity and the threat of climate change.⁷ In the research on food systems and food banks, the main concept was understanding the place of people at the heart of the complex system. (Figure 17). The diagram highlights the environmental, political, social and economic factors that shape the food system both on a local and global scale. The individual factors must be seen together and understood as an interconnected whole. When one part of the system is disrupted, the impacts can spread across the system, and food insecurity can increase. The proposed Food Center will promote integrated understanding and practice through educational programs to show the value of their food within this greater system, connecting the various stakeholders (as listed in Figure 17), including wholesalers, farmers, restaurants, and consumers.



2.4 - Food Insecurity

Feeding America defines “food insecurity” as a lack of consistent access to enough food for every person in a household to live a healthy life.⁸

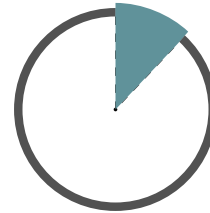
Most of the data regarding Tacoma’s food bank system has been collected at the county level. Each year, based on United States Census statistics, the national organization, Feeding America, conducts county level studies of food insecurity across the United States. In their “Map the Meal Gap” study, they not only determined the number of individuals experiencing food insecurity in Pierce County, but also the number of children experiencing similar insecurity across the county (as shown in Figure 18, reflecting their 2018 study). These figures indicate the need in Pierce County as well as the complexity of income eligibility for federal food assistance programs like SNAP (the largest federal Supplemental Nutrition Assistance Program).

Individuals



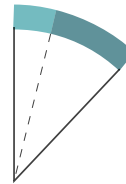
101,140

Individuals experienced Food Insecurity in 2018 in Pierce County



11.8%

Food Insecurity Rate in Pierce County



33% Above SNAP & other nutrition programs threshold of 200% poverty

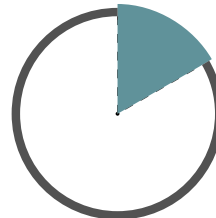
67% Below SNAP & other nutrition programs threshold 200% poverty

Children



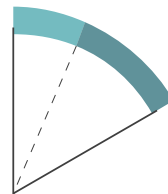
34,830

Children experienced Food Insecurity in 2018 in Pierce County



17.1%

Food Insecurity Rate in Pierce County (Child)

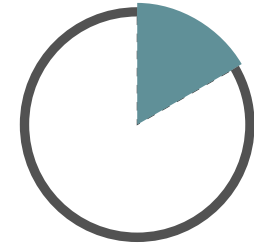


43% Ineligible for federal nutrition programs (incomes above 185% of poverty)

58% Income-eligible for federal nutrition programs (incomes at or below 185% of poverty)

2.5 - Calculating Tacoma's Need

Considering Tacoma specifically, the poverty rate, according to the Census Bureau, across the city was 15.9% in 2018.⁹ In 1989 the State of Michigan developed a formula to determine the average number of pounds of food necessary to feed a single person on an annual basis. This number was analyzed and confirmed in 2000 by Dr. John Cook of the Boston University Medical School. Cook determined an average need of 234 pounds of food per year per person; this is called “Cook’s Constant.”¹⁰ Applying Cook’s constant to the number of individuals living at or below the poverty level in Tacoma, resulted in an estimate of the overall need for supplemental food across the city as 7.65 million pounds for 2018. The child need may be calculated as just over 970,000 pounds. Although this number is a broad estimate, these calculations have been widely used across the food bank community at the national level as a way to identify a benchmark for food aid storage. Studies across the United States have been conducted regarding food bank storage capacity have generally concluded that additional space, particularly cold storage space, would not only allow food banks to offer more food but, more importantly, it would enable them to offer healthier food options.¹¹



15.9% Poverty Rate (2018)

32,700 out of 206,000 people

32,700 people in Tacoma struggle with hunger- of those 4,151 are children.

Food insecurity rate = 15.9%

*Adapted from U.S. Census Bureau

Overall need = $32,700 \times 234 \text{ lbs.} = 7,651,800$ pounds of food (2018)

Child need = $4,151 \times 234 \text{ lbs.} = 971,334$ pounds of food (2018)

Need = (Number of people living at or below poverty line) x (234 lbs. of food aid per year)

3.0

Analysis:

Tacoma Food Banks



PACIFIC FOOD CENTER
tacoma, wa

3.0 - Analysis: Tacoma Food Bank Network

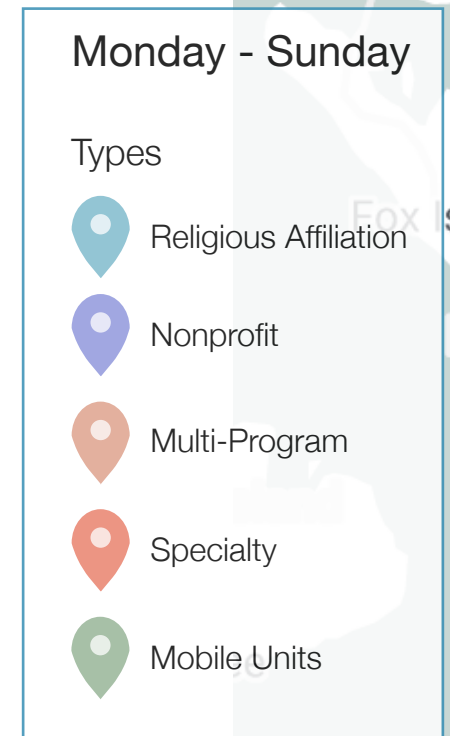
Tacoma's food banks and pantries (as shown in Figure 20), were documented and analyzed through publications, online information and site visits.¹² The Emergency Food Network serves Pierce County by connecting and coordinating storage across 80 food banks. Both the Map the Meal Gap study as well as the food bank database from the Emergency Food Network served as primary sources when conducting further site visits and analyzing Tacoma's food bank network.¹³ Although available online information provides a general introduction to each facility and the services they provide, the information is often incomplete or not comparable among different food banks. Site visits were required to obtain more information and to observe and document client access, circulation, programs, spatial requirements, and urban context. Although many of the food banks visited operate out of religious or civic institutions, over time most have taken on lives of their own, expanding to respond to increasing need. The first phase of the research provided insight into generalized local food insecurity rates and needed storage capacity. The next phase used these findings as a baseline to evaluate the existing food bank network in the city. This phase sought to determine what is working well, what is working poorly, and what long-term programs or elements are missing.

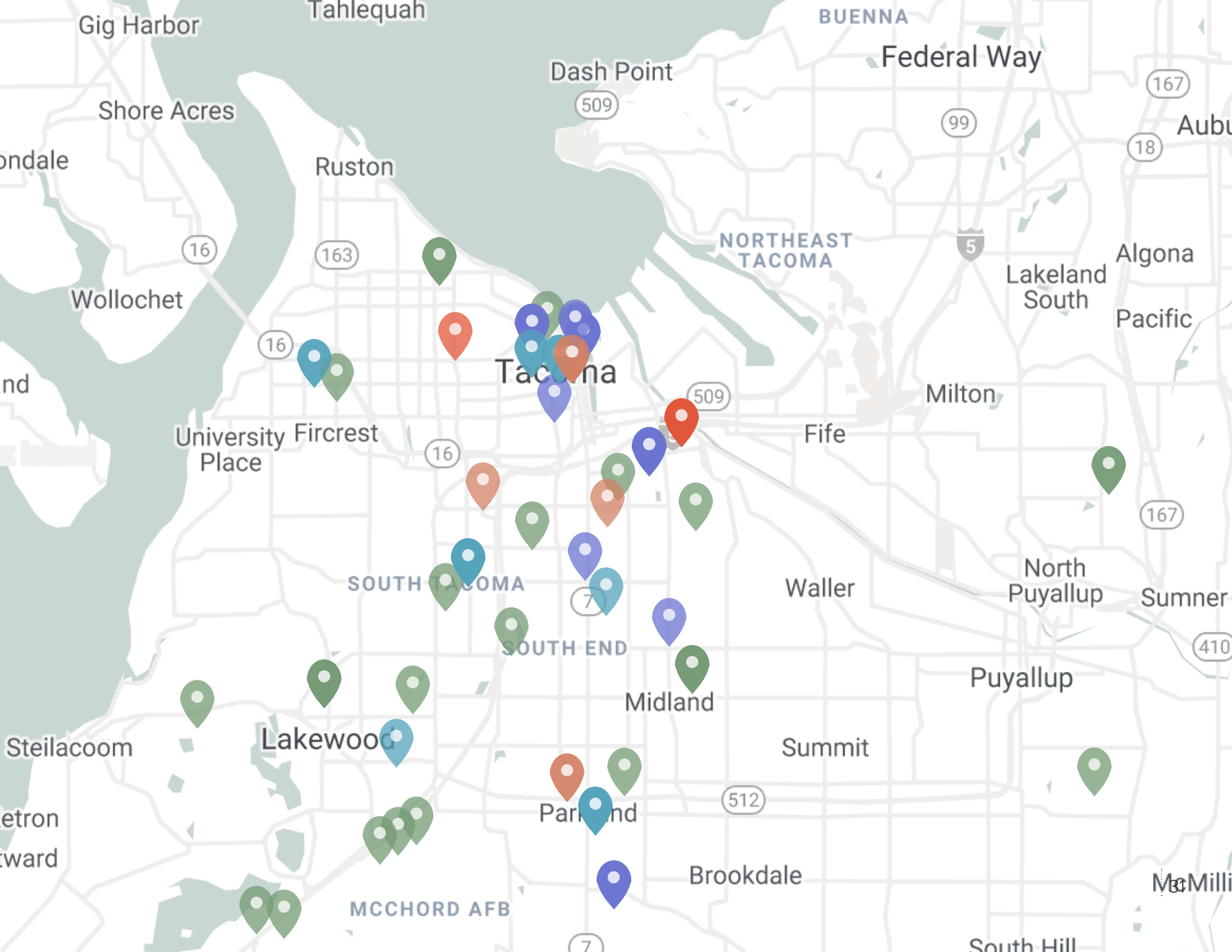




3.1 - Identifying Typologies

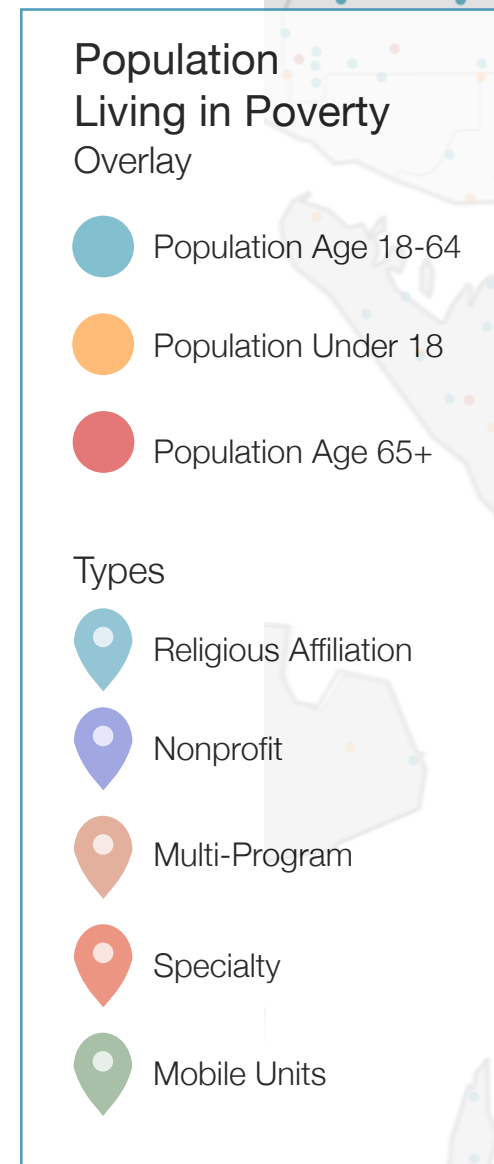
Food banks in Tacoma may be categorized in a variety of ways including: where they are located, the organization or nonprofit operating the facility, days and hours of operation, scale of operation, specialty services they provide and the restrictions posed on clients regarding the number of visits either weekly or monthly. In general, food banks are typically organized as legal, not-for-profit entities; even those that were initiated by religious institutions (oftentimes still housed in religious institutions) now operate as non-profits. The scales at which the food banks operate varies widely from serving 700 individuals annually to serving 131,000 individuals annually. Some may have strict operating procedures that allow clients to visit a limited number of times per month, while others allow clients to come as often as necessary. Tacoma’s food bank network also must be understood in its spatial dimension. Maps of Tacoma’s food banks based on affiliation and operations are shown in Figures 21 to 22. The system also includes 23 mobile units operating by the Nourish Pierce County food bank network. Although these are physically mobile units, they offer food at specific locations at scheduled operating times, so they have been mapped as well. The mobile locations were initially analyzed separately and then were on the final composite map. (Figure 21).

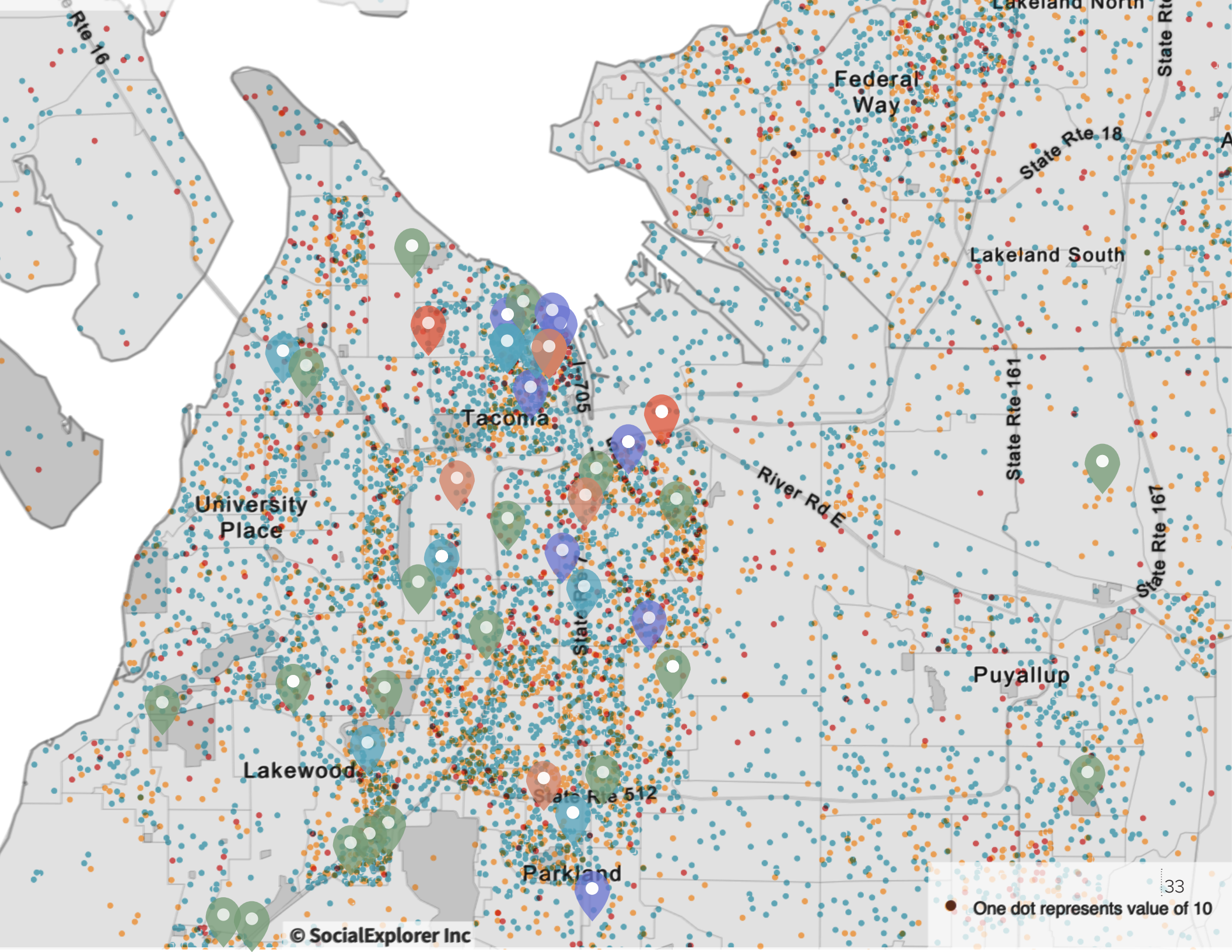




3.2 - Applying Typologies

Once the food bank locations were identified, it was possible to overlay them on a map showing the population in various age groups living at or below the poverty line. As site studies and statistical research highlight, the most vulnerable populations in the city are those living in the south and east. The map (Figure 22) overlays food banks and pantries across the city with all age groups living at or below the poverty level.¹⁴





3.3 - Site Visit Diagramming

From the more than 80 food banks within the Emergency Food Network across Pierce County, fourteen were selected for in-person visits and analysis. Those selected are found across the city and represent a sample of distribution sizes ranging from small church donations to large-scale non-profit institutions. Each was diagrammed to illustrate building type, circulation and major delivery and entry routes.

Among the most visited food banks were those that offered multiple programs in addition to immediate food assistance, such as job training. These additional programs within the food bank system extend the traditional idea of emergency food support to offer programs like school backpack and lunch programs, providing hot meals on site, offering options for clients with specialty dietary requirements and offering counseling services.



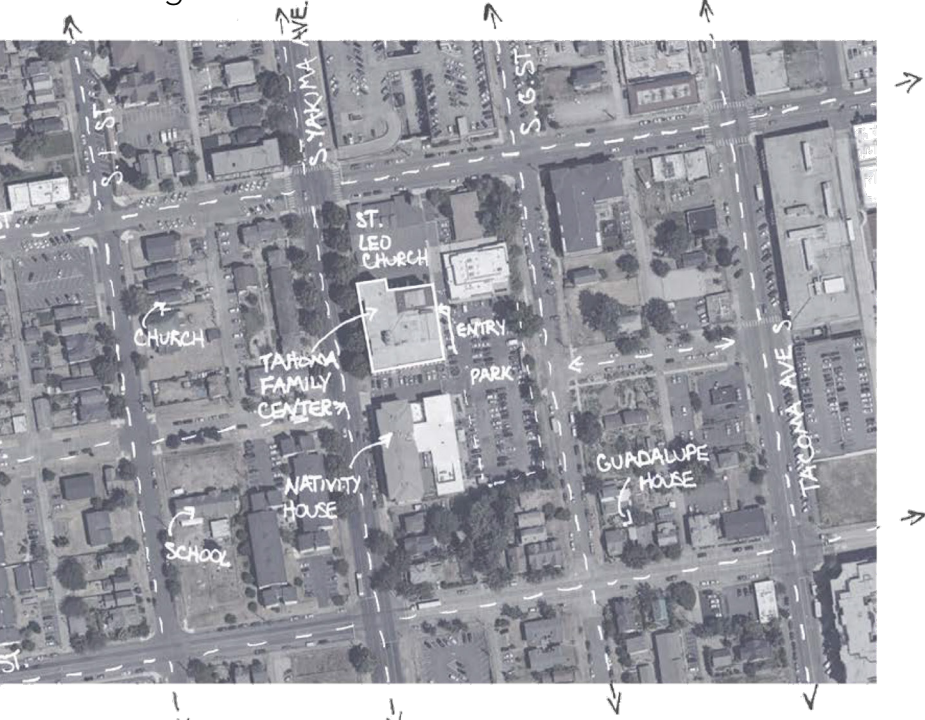
FIGURE 23 - Food Bank Site Visit Diagramming.



Joe's Cooking Pot - Eastside Tacoma



Empowerment Center - South Tacoma



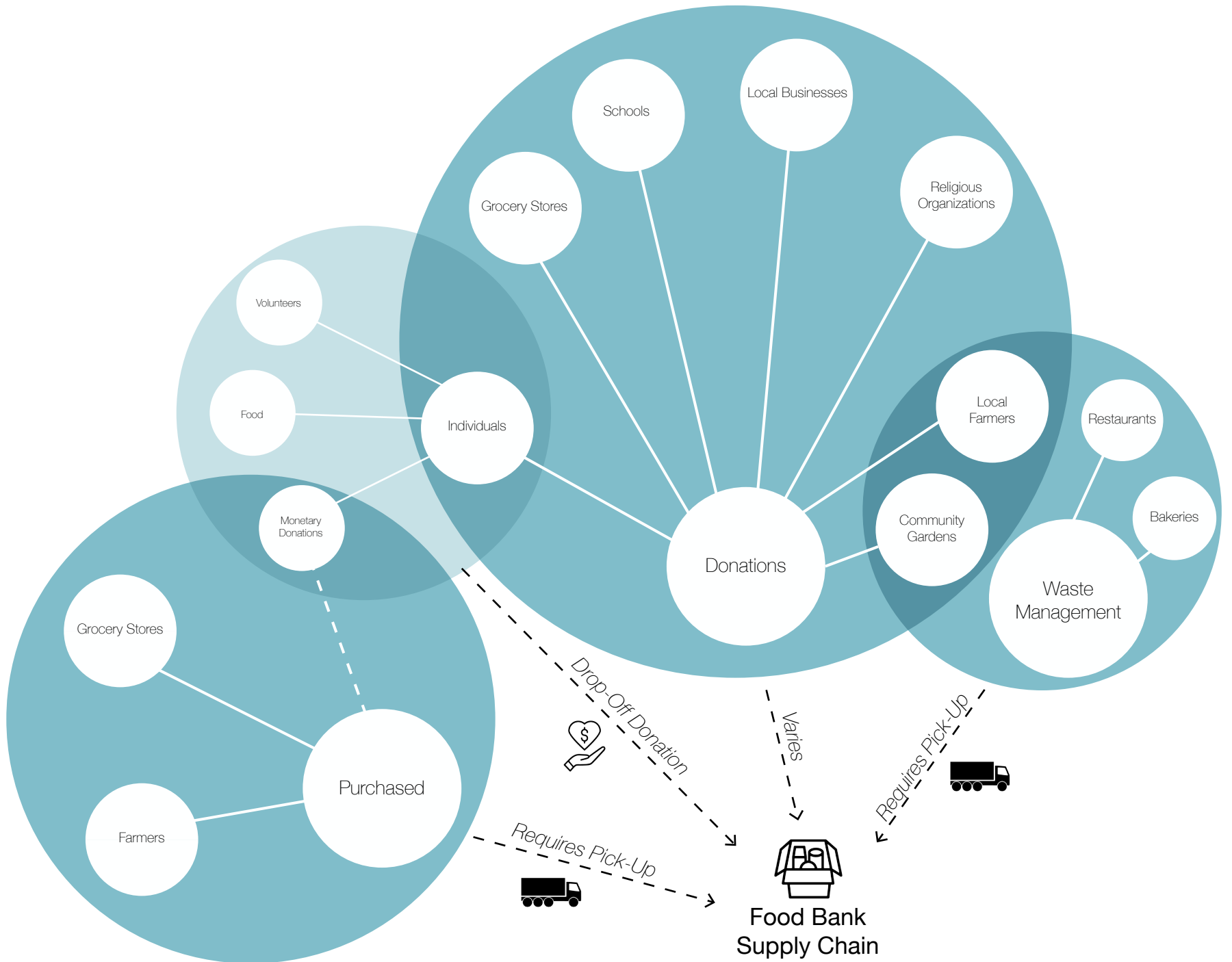
Joe's Food Connection - Downtown



Visitation Food Bank - South Tacoma

3.4 - Food Sources

In addition to client circulation, building type, and distribution, understanding where the food comes from is also important. In reality, the sources of the food distributed to food bank patrons change dramatically based on economic and social conditions. For example, in the past year with the rise of COVID-19, the number of food bank users has dramatically increased while the donations from various sources like grocery stores and individual donors have decreased or shifted due to economic hardship or supply chain disruption.¹⁵ Relationships between food banks and grocery stores are key in guaranteeing more regular deliveries. The greatest amount of food comes from direct donations. However, it is the food that can be purchased because food banks receive financial donations and federal assistance that enables food banks to offer a range of healthy food options. While this does depend on the scale of operation, many food banks across Tacoma are left to seek funding and donations on their own.



3.5 - Tacoma Network Matrix

In addition to mapping, the information gathered was organized in a matrix to compare the different facilities in the overall network including their various operating procedures, distribution quantities, and community affiliations.

The Tacoma Food Bank Network (Table 1) matrix allows comparison of the number of individuals served or the numbers of meals served. While each food bank seems to monitor its impact in a different way, the matrix allows comparison of available data across the entire system.

Tacoma
Network

Name	Type	Number of Individuals Served (Annually)	Number of Families Served (Annually)	Number of Meals Served (Annually)	Pounds of Food Given (Annually)
St Leo Food Connection*	Food Bank	131,000 (2017)		1.6 million (2017)	1.4 million (2017)
Food Connection Springbrook Mobile	Mobile Distribution	14,000 (2017)	125-140 (2017)		
Food Connection Springbrook Mobile	Mobile Distribution	—	—	—	—
Food Connection Springbrook Mobile	Mobile Distribution	—	—	—	—
Eloise's Cooking Pot Food Bank*	Food Bank	116,838 (2017)		2.4 million (2017)	2 million (2017)
CARE Food Bank*	Food Pantry	15,000 (2015)	4,000 (2015)		
B.A.S.H. (Bikers Against Statewide Hunger)	Food Bank		6,350		420,000
New Jerusalem Food Bank*	Food Pantry	12,000 (2020)			384,000 (2020)
My Sister's Pantry*	Food Pantry		350+ (monthly w/ individuals)		125,000
The Blessings Food Pantry	Food Pantry				104,000 (2017)
Trinity Lutheran Church Food Pantry	Food Pantry		4,500 (2017)		87,922 (2017)
Pierce County AIDS Foundation Food Pantry	Food Pantry	724 (2017)			24,000 (2017)
Prince of Peace Food Bank	Food Bank		1,800 (2019)		
Allen AME Food Bank*	Food Pantry	—	—	—	—
Bounty Food Bank	Food Bank	—	—	—	—
Calvary Baptist Church	Food Pantry	—	—	—	—
Food Distribution Center - Salvation Army*	Distribution Center	—	—	—	—
Parkway Community Services	Food Bank	—	—	—	—
Preganancy Aid of Tacoma	Food Bank	—	—	—	—

3.6 - Pierce County Matrix

Although Tacoma’s food banks can be considered as a group, considering how they are part of the larger network within the greater Pierce County system provides a broader basis for a more complex analysis. (Table 2).

No food bank or pantry operates in isolation. Due to the varying hours of operation and strict rules of some of the food banks, many clients may visit multiple food banks across the city and county every week. To address food insecurity across the county, a high level of integration and coordination is necessary. The inconsistent statistics reported across the system and a lack of a singular metric of measuring individual food bank success suggests a lack of coordination among these facilities.

Pierce County
Network

Name	Type	Number of Individuals Served (Annually)	Number of Families Served (Annually)	Number of Meals Served (Annually)	Pounds of Food Given
Puyallup Food Bank	Food Bank	50,000		1 million	10 tons (weekly); 520 tons annually
Bonney Lake Food Bank	Food Bank	38,592 (2019)			740,126 (2016)
Key Peninsula Bischoff FISH	Food Pantry	24,000	5,400		420,000
Famillies Unlimited Network*	Food Bank	19,368 (2016)	4,871 (2016)		408,238 (2016)
Eatonville Family Agency	Food Bank	12,000 (half population Eatonville)			342,845 (2016)
All Saints Community Services	Delivery Service		800 (2019)		100,000 (2019)
Food Backpacks 4 Kids	Nonprofit	6,000 (children)			96,000 (2020)
Bread of Life Ministries-Lakewood	Food Bank	20,800			
Orting Food Bank	Food Bank	18,000	450; 5,400		
Fife Milton Edgewood Food Bank	Food Bank	12,000			
Sumner Food Bank	Food Bank	10,000 (2019)			
Gig Harbor Peninsula FISH	Food Bank	10,000 (2019)	4,200 (2019)		
Harvest House	Food Bank		100 (each week)		2,600 (per person)
Key Peninsula Community Services	Food Bank	8,000 (2017)	3,000 (2017)		
St Andrews Emmanuel	Food Pantry	7,200 (2017)			
Life Center Rainier	Food Bank		2,600 (2019)		
Hope Center	Food Bank	3,120			
Tillicum/American Lake Gardens Community Center	Food Bank	20-30 requests a day			
Spanaway Food Bank	Food Pantry		300-350 (monthly, 2017)		

3.7 - Distribution Models

The layouts of each of the fourteen food banks and pantries studied in detail show that each is distinct, and each is often shaped by the structure in which it is housed. Nonetheless, comparative analysis indicates there are two fundamental methods by which food bank patrons obtain their food.¹⁶

The *standard food box* method means that each patron regardless of need, receives a similar box of food. This is the oldest method of distributing food. It is more efficient because it allows for more standardization. However, this method has been shown to lead to more food waste. It also treats individual patrons as if they are identical, in a sense dehumanizing them.

The *client choice model* allows the individual patron to choose their own food options, typically in a grocery store layout. Though this method may appear less efficient, it leads to far less food waste. It also promotes greater dignity as it treats each client as an individual, recognizing their capacity to make their own choices.



FIGURE 25 - Standard Food Box Method. (Top).

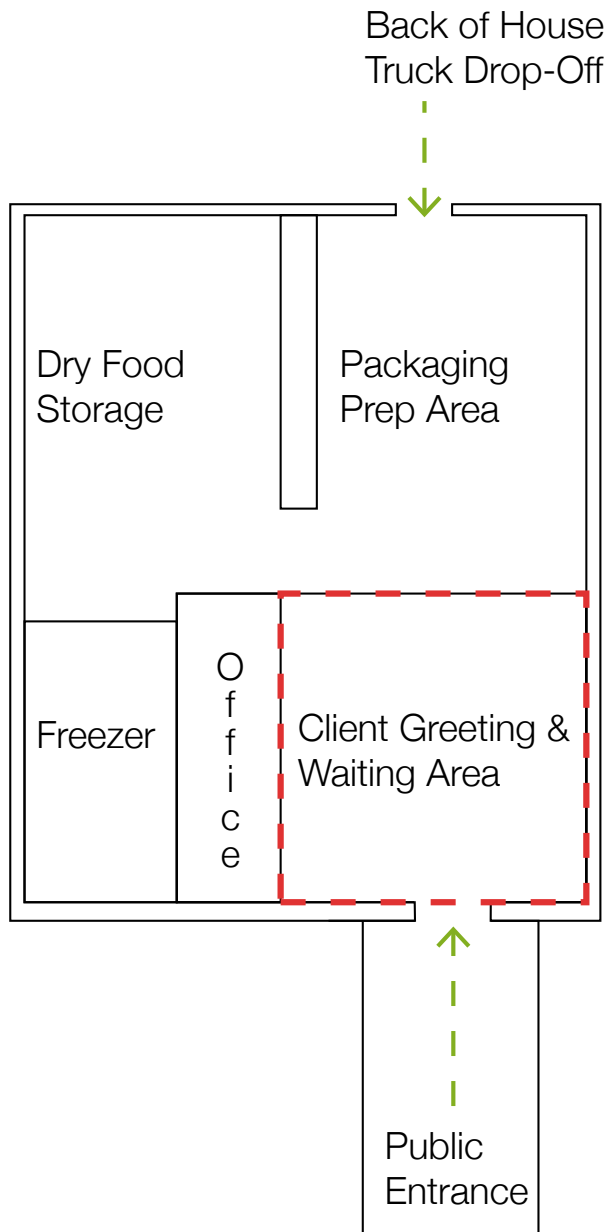
FIGURE 26 - Client Choice Model. (Center).

FIGURE 27 - Standardized Food Box Layout Diagram. (Left).

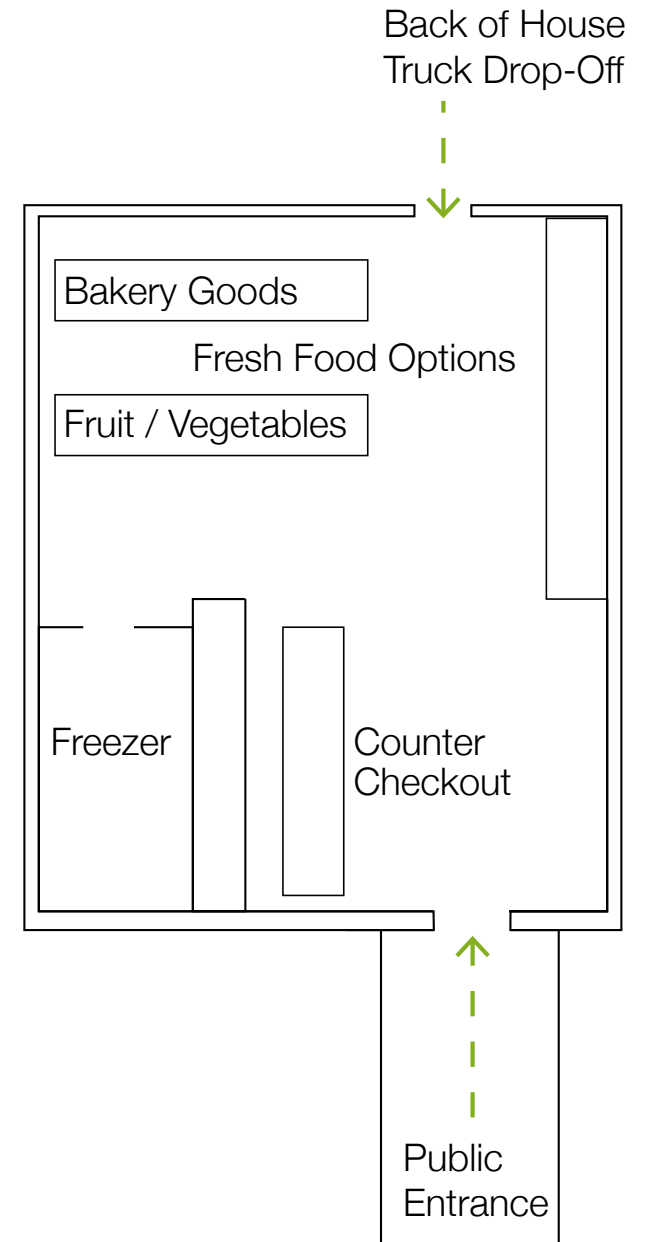
FIGURE 28 - Client Choice Layout Diagram (Right).



Food Bank Distribution Models Standardized Food Box



Food Bank Distribution Models Client Choice



3.8 - Research Conclusions

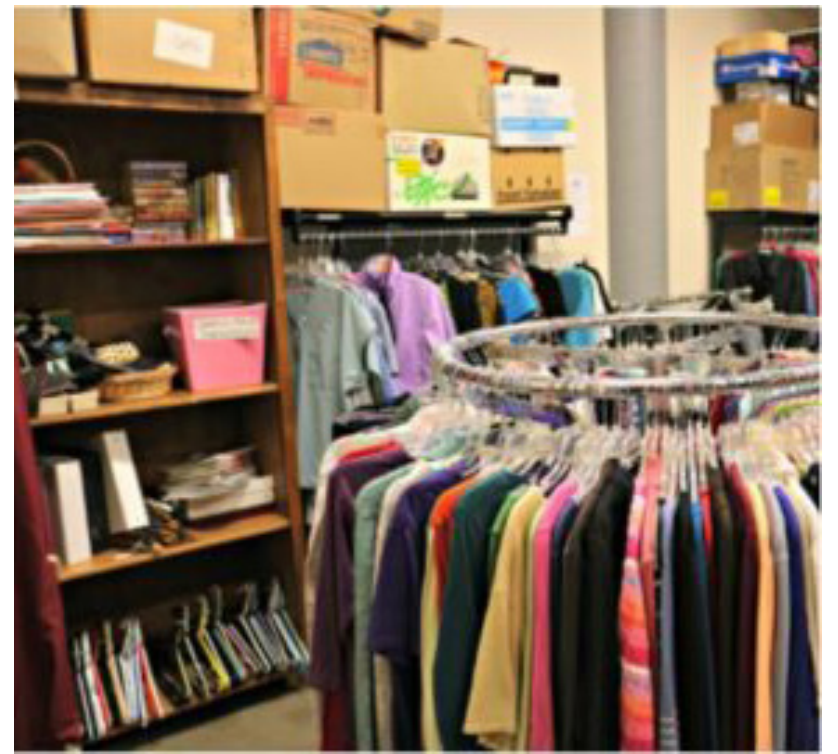
Overall, the research carried out for this thesis found that the food bank system in Tacoma displays a high level of complexity. Due to the fact that the system seems to have grown incrementally, each independent food facility has developed with a structure, an operating method, and on a level of service that is a specific response to the particular neighborhood or to the specific need the food bank was created to address. Some areas are being well served by large facilities such as St Leo Food Connection, which has one of the largest clientele, to which it responds with a large capacity and multiple programs like the children's backpack program, summer meals, and nutrition classes. Many smaller food banks, such as My Sister's Pantry, serve a much smaller population, but are just as essential in addressing the widespread need. The mobile units of Nourish Pierce County fill in the gaps where individual facilities are not available, such as in the more suburban areas of the county. It is apparent that a central food center with ample storage and support could play a significant role in providing coordination, more long-term support for all, and a centralized headquarters to better assist the existing food banks in emergency cases.

FIGURE 29 - Fresh Food Options. (Top Left).

FIGURE 30 - Farm to Food Pantry, Washington State. (Top Right).

FIGURE 31 - My Sister's Pantry Food Drive. (Bottom Left).

FIGURE 32 - My Sister's Pantry Clothing Drive. (Bottom Right).



4.0

Case Study Analysis



PACIFIC FOOD CENTER
tacoma, wa

4.0 - Case Study Analysis

Notable examples of food bank and related facilities elsewhere in North America and the world helped to develop a broader understanding of the types of additional services that might be considered by a new Tacoma food center. The goal of this examination was to enlarge the set of possibilities for what a food center in Tacoma might offer. Tacoma food banks currently address food insecurity in a variety of ways, but as a system they could use strengthening in their ability to address the need, especially needs beyond immediate food assistance, across the city. The consideration of examples from elsewhere, assisted in identifying long-term programs that are not found in Tacoma in 2021.

For each of the following examples, information such as operation size and impact, services and names of organizers are provided for further comparison. In addition to long-term program and advocacy, each of the three case studies look to strengthen their existing food system by working to connect various stakeholders within the local system.



FIGURE 33 - The Stop Complex Diagram. (Top).

FIGURE 34 - The Redd Urban Context. (Middle).

FIGURE 35 - Refettorio Gastromotiva Neighborhood Context. (Bottom).



4.1 - The Stop Community Food Centre

The Stop began in the 1980s as a food bank in Toronto, Ontario, but has grown incrementally into a food campus that strives to provide vulnerable members of the community with healthy food options and long-term support. In 2018, The Stop served over 52,000 healthy meals and produced over 2,000 pounds of fresh produce in their community gardens.¹⁷ The Stop has evolved through decades of service to address a broader array of needs, introducing a market space as well as flexible meeting rooms for pre- and post-natal programs, nutrition classes and financial support classes. A key feature, in addition to its successful programs, is the adaptive reuse of existing historical infrastructure. The complex includes three primary buildings that have been incrementally expanded over several decades. The Tacoma food center proposed in this thesis draws upon the exemplary program assistance, integration into its surrounding context, and ability to adapt to changing community needs.

Organization: The Stop Community Food Centre

Founder: Nick Saul

Location: Toronto, Ontario, Canada

Established: Food bank (1982); Expanded (1999); Green Barn (2009)

Mission: Nutritious, sustainable, and culturally appropriate food is a human right for all.¹⁷

Total Size: Unknown; Complex features three locations:
- 1884 Davenport Road (approx. 7,500 sq. ft.)
- Green Barn (approx. 3,000 sq. ft.)
- Wychwood Open Door (approx. 8,000 sq. ft.)

Sources of Funding: Toronto Foundation, Governmental Assistance, Events, and Donors

Programs:

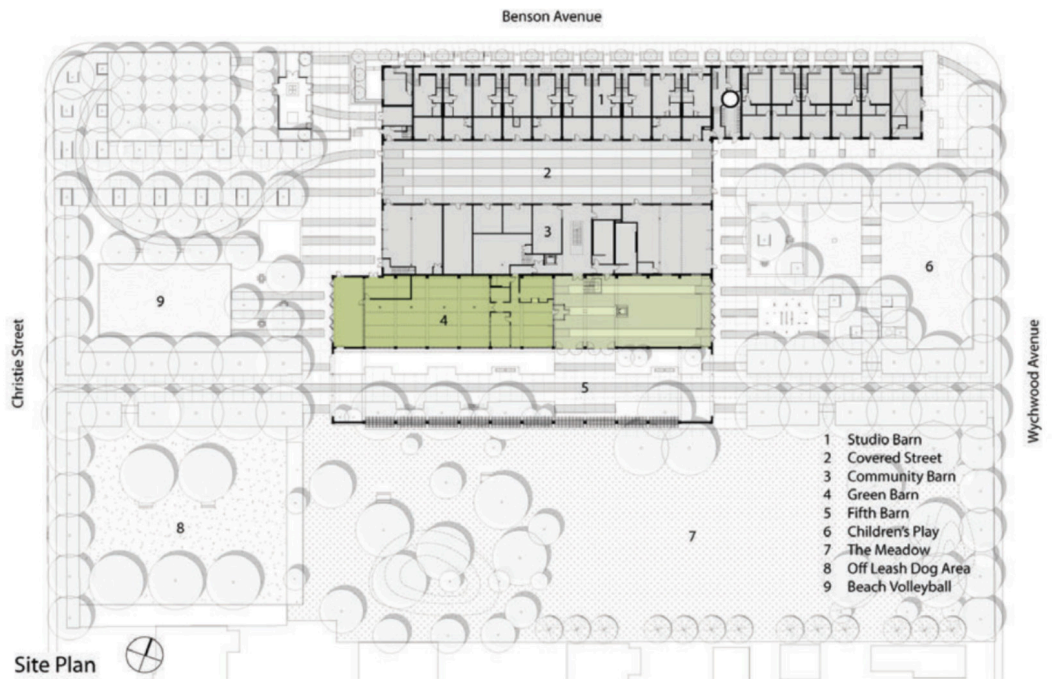
- Drop-In Meals
- Food Bank
- Community Kitchen
- Community Action Program
- Financial Empowerment
- Urban Greenhouse
- Community Gardens
- Farmers Market
- Pre- and Post- Natal
- Nutrition Classes

FIGURE 36 - The Stop Farmer's Market. (Top Left).

FIGURE 37 - Community Gathering Space. (Top Right).

FIGURE 38 - Greenhouse and Gathering Spaces. (Bottom Left).

FIGURE 39 - Overall site plan and context (Bottom Right).



4.2 - The Redd

Located in Portland's Industrial District, The Redd on Salmon Street is a food hub funded by EcoTrust, (a Portland-based non-profit), donations and local grants.¹⁸ Its mission is to provide support to connect local farms and food businesses while remaining small and still making a profit. The Redd is intended to refocus Portland's local food economy by promoting small businesses, providing event space and offering cooking classes. The complex is comprised of two reused industrial warehouses dating from 1918. Redd West houses office space and industrial storage for local businesses and farms. Redd East serves as the public event space, featuring a community kitchen, market and spaces for events. The courtyard space between the two buildings serves as a central event space for food trucks and gatherings. This case study example is a good precedent for the Tacoma food center in its commitment to localizing the food system and the design of open, flexible gathering spaces for events of all sizes.

Organization: The Redd on Salmon Street

Founder: EcoTrust

Location: Portland, Oregon, United States

Established: Original Ironworks (1918); The Redd (2019)

Mission: Scaffold a transparent food system sourced from many small and mid-sized producers in the region. ¹⁸

Total Size: 76,000 sq. ft.

- Redd East
- Redd West

Sources of Funding: EcoTrust, General Electric Renewable Development Fund, Events, Donors

Programs:

- Community Kitchen
- Office Space for local food businesses and small farms
- Market
- Food Storage
- Event and Gathering Space

FIGURE 40 - The Redd East Plaza Exterior. (Top Left).

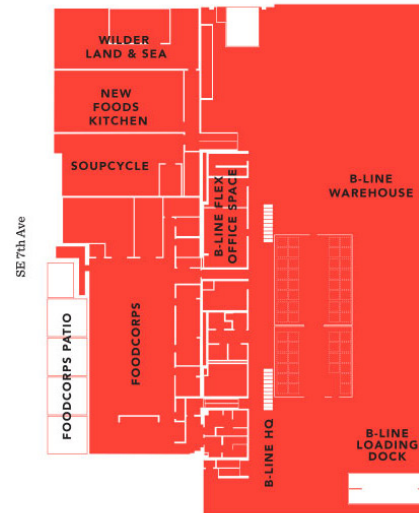
FIGURE 41 - Main Hall and Event Space. (Top Right).

FIGURE 42 - Community Test Kitchen Space. (Bottom Left).

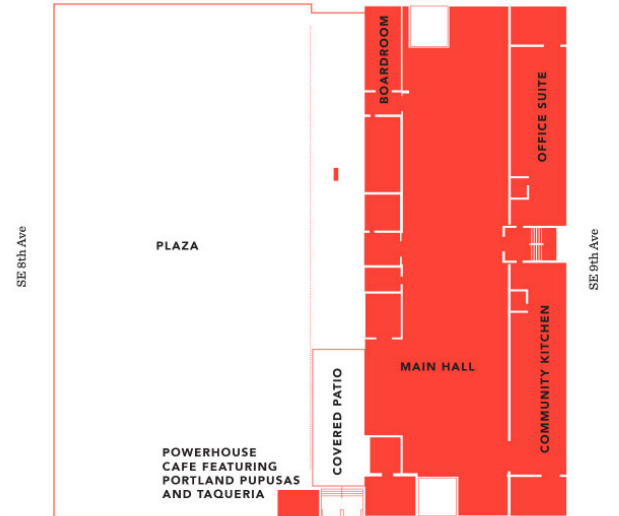
FIGURE 43 - Overall site plan and programming. (Bottom Right).



Redd West



Redd East



4.3 - Refettorio Gastromotiva

Inspired by chef Massimo Bottura's initiative Food for Soul, the Refettorio Gastromotiva, in Rio de Janeiro, Brazil is a cooking school and restaurant space that strives to eliminate food waste from local restaurants and businesses, using the leftover restaurant food for fine cuisine. The 4,500-square foot structure was constructed in just 55 days in time for the 2016 Olympics in Rio de Janeiro. During the day, the Refettorio serves meals to the local homeless community. In the evenings, the restaurant opens its doors to the surrounding plaza, inviting in all members of the community. In addition to offering a dining space, the restaurant simultaneously operates a cooking school, working with local youth programs to provide training and learning opportunities. This Refettorio is just one of several locations, across the globe, within the Food for Soul project.¹⁹ This example suggests how the Tacoma food center can combine service and training opportunities, while optimizing its limited space.

Organization: Food for Soul

Founder: Chef Massimo Bottura

Location: Rio de Janeiro, Brazil

Established: 2016

Mission: Refettorios are physical spaces designed as community hubs to inspire and empower human potential.¹⁹

Total Size: 4,500 sq. ft.

Sources of Funding: NGO Gastromotiva, Donors, Restaurant Visitors & Events

Programs:

- Kitchen - School
- Dining
- Theater Classroom for Teaching

FIGURE 44 - Exterior context and plaza. (Left).

FIGURE 45 - Main Dining Space. (Top).

FIGURE 46 - Classroom and gathering space. (Bottom).



4.4 - Case Study Conclusion

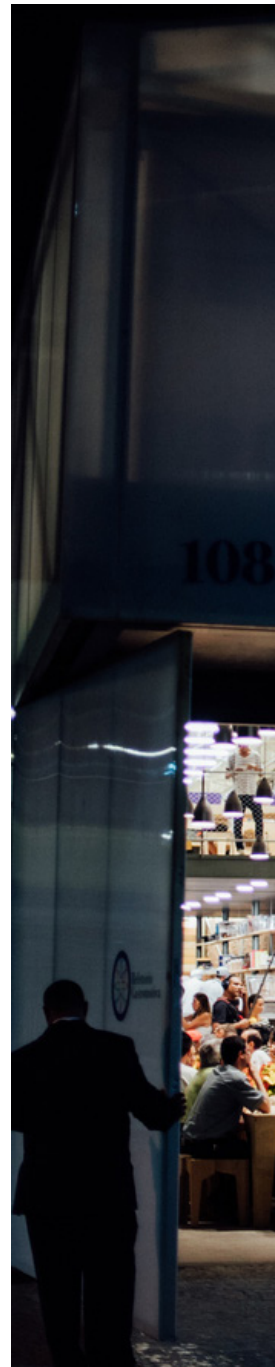
The three case study examples show more developed programs and integration into their urban settings while simultaneously enhancing their local food systems. While the scales may differ, they share a common mission of connecting all members of the community. Each looks to long-term community development by addressing humanity's shared need and right for healthy food.

Although there are many more examples of food hubs and centers, these three case studies were selected for their variety of scale, commitment to enriching the local communities, and connection to local nonprofits and businesses. All three cases were funded through local government grants and donors, and all three have been enhanced by inclusion of for-profit enterprises. All three serve as examples of what should be possible in a food center for the City of Tacoma programmed and designed to enhance the existing food bank network. These three case studies show the potential of expanded programming to serve a larger community beyond the current Tacoma food network.

FIGURE 47 - Gastromotiva Entry Space. (Left).

FIGURE 48 - The Redd East Building. (Top).

FIGURE 49 -The Stop Exterior Space and Complex. (Bottom).





5.0

Program Types

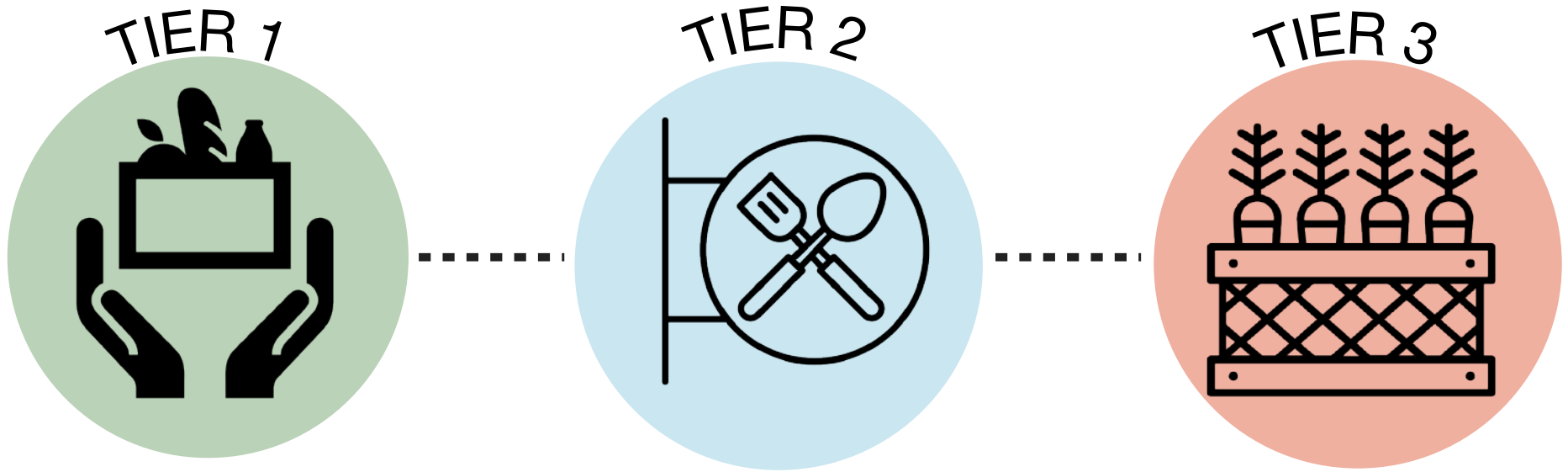


PACIFIC FOOD CENTER
tacoma, wa

5.0 - Program Types

The research addressing Tacoma’s food bank network shows that many of the studied food banks have grown individually and incrementally in response to the specific needs of the local population. What is missing from the network as a whole is broader coordination, a level of integration and a higher level of services that move beyond what each individual food bank can offer. This thesis proposes the Pacific Food Center, which is specifically aimed at addressing issues of coordination across the existing network and providing support to the food bank managers and operators as well as their clients. The Center looks to provide services that are beyond any single food bank.

The program for the proposed Center developed in three stages. Each stage (called “tier”) in the program aims to strengthen the local food system as a whole. The first stage or tier addresses the needs of the existing food bank network. The second and third stages or tiers each include all of the elements of the previous tier, with the addition of additional features. Thus, each tier can be understood as an expansion of the previous scheme. As conceived, the programs within each tier can be implemented incrementally, following the example of local food banks and pantries, working to address shifting needs over time. The first tier (small) looks to strengthen the existing food bank network; the second (medium) offers a larger facility that implements more long-term training and education opportunities; and the third (large) tier is designed to coordinate with local farmers and others to provide an even greater level of food support to the community.



5.1 - Tier 1 - Small

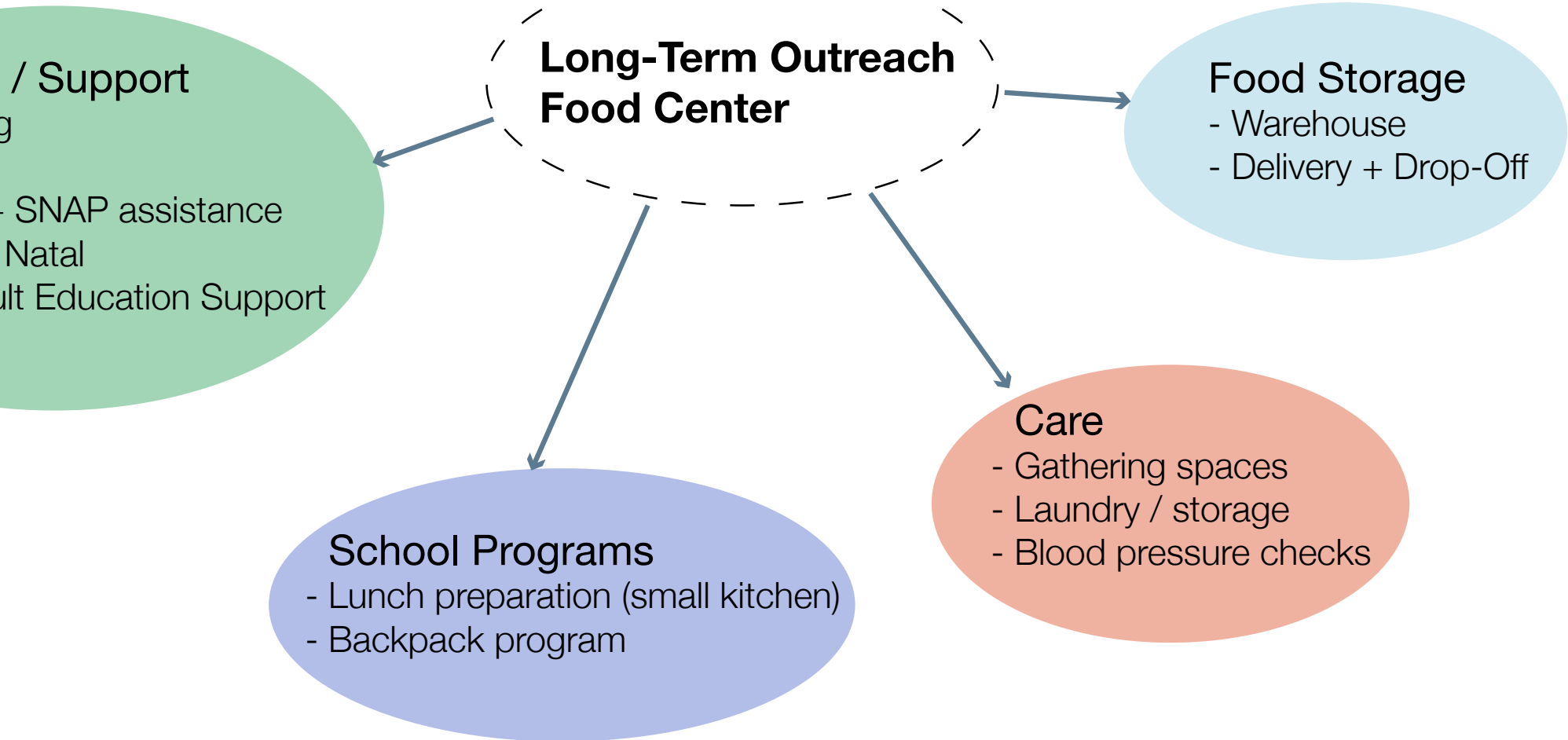
Tier 1, the smallest option, provides long-term outreach as an extension of the food bank network. Providing services and support to those in need is a key idea for this scheme, as well as offering gathering spaces for the users of the existing food banks. At this level, the Center not only provides more storage for the city’s surplus food, it also offers space for counseling, federal food assistance programs, and pre- and post- natal groups.

The Tier 1 Center also provides space for programs that may either already be offered on a small scale at a few Tacoma food banks, but that most food banks are not able to provide due to limited funding or space.



Services

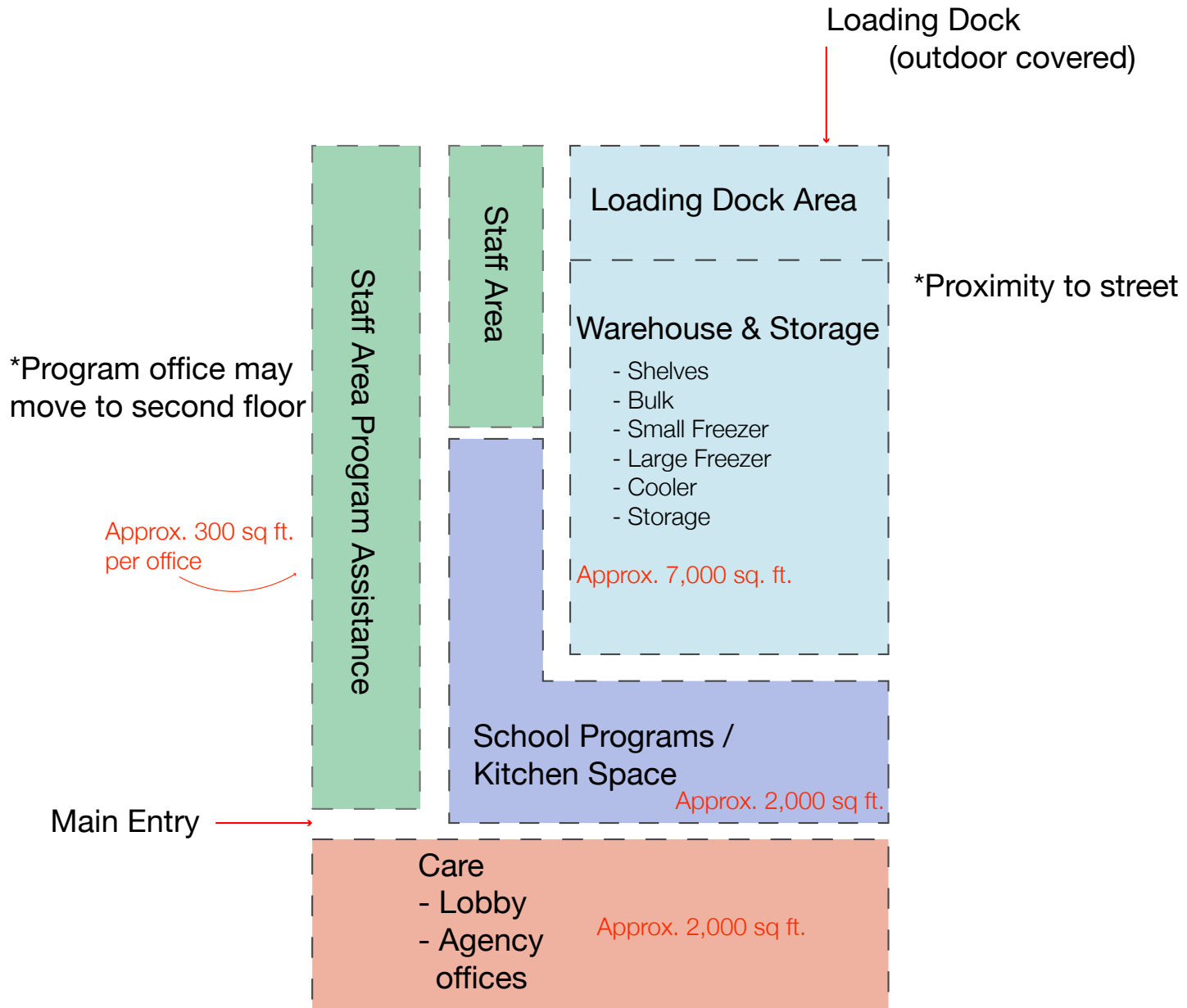
- Counseling
- Advocacy
- Program +
- Pre / Post
- GED / Adu



5.1 - Tier 1 - Small

The Tier 1 Center would provide space for a total of 12,000 square feet of program. With a reasonable net to gross ratio, the Center would have a total floor area of about 15,000 square feet. The diagram (Figure 52) shows not only the programmed areas, but also indicates entry points for staff and deliveries as well as visitors and clients. The Tier 1 program places the kitchen space at the heart; this is a key idea that is shared across all three tiers and is central to the final design. Although the program of Tier 1 offers a single commercial kitchen space, its primary purpose is providing the space to work with the existing Tacoma School District school lunch and backpack programs.

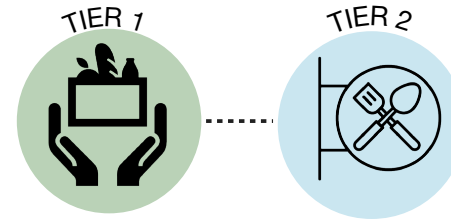




5.2 - Tier 2 - Medium

The Tier 2 program includes space for activities that can be implemented at a medium scale for community food learning and training. This Tier provides space for programs for food bank users (like Tier 1) but also includes space for long-term training and education classes, workshops and other activities.

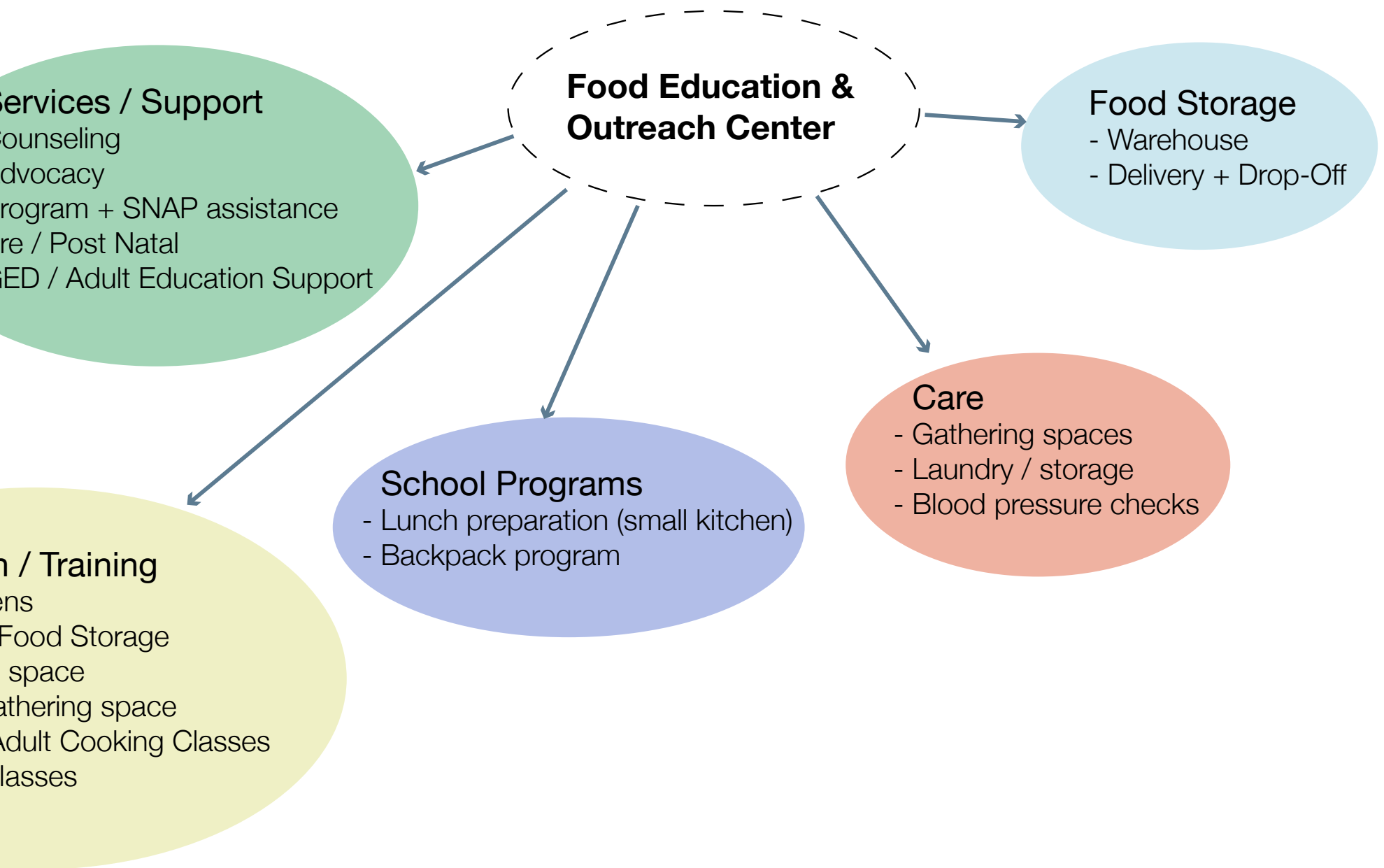
At present, Tacoma food banks typically respond to patrons within the framework of short-term assistance. The Tier 2 Center would go beyond this level of assistance by offering opportunities for long-term training and food or nutrition education. In turn these programs may allow outreach to a large part of the community in need. The Tier 2 Center offers shared kitchen spaces for local chefs and educators to train community members of all backgrounds and ages.



- S
- C
- A
- P
- P
- G

Education

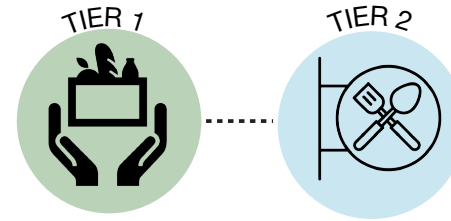
- Test Kitchen
- Additional
- Classroom
- Dining / Ga
- School & A
- Nutrition C



5.2 - Tier 2 - Medium

The Tier 2 Center would provide space for a total of 16,700 square feet of program. With a reasonable net to gross ratio, the Center would have a total floor area of about 20,000 square feet. At this scale, the Center provides more space for training with kitchens and classrooms; in turn, incorporating dining and gathering spaces to support community development, advocacy and change.

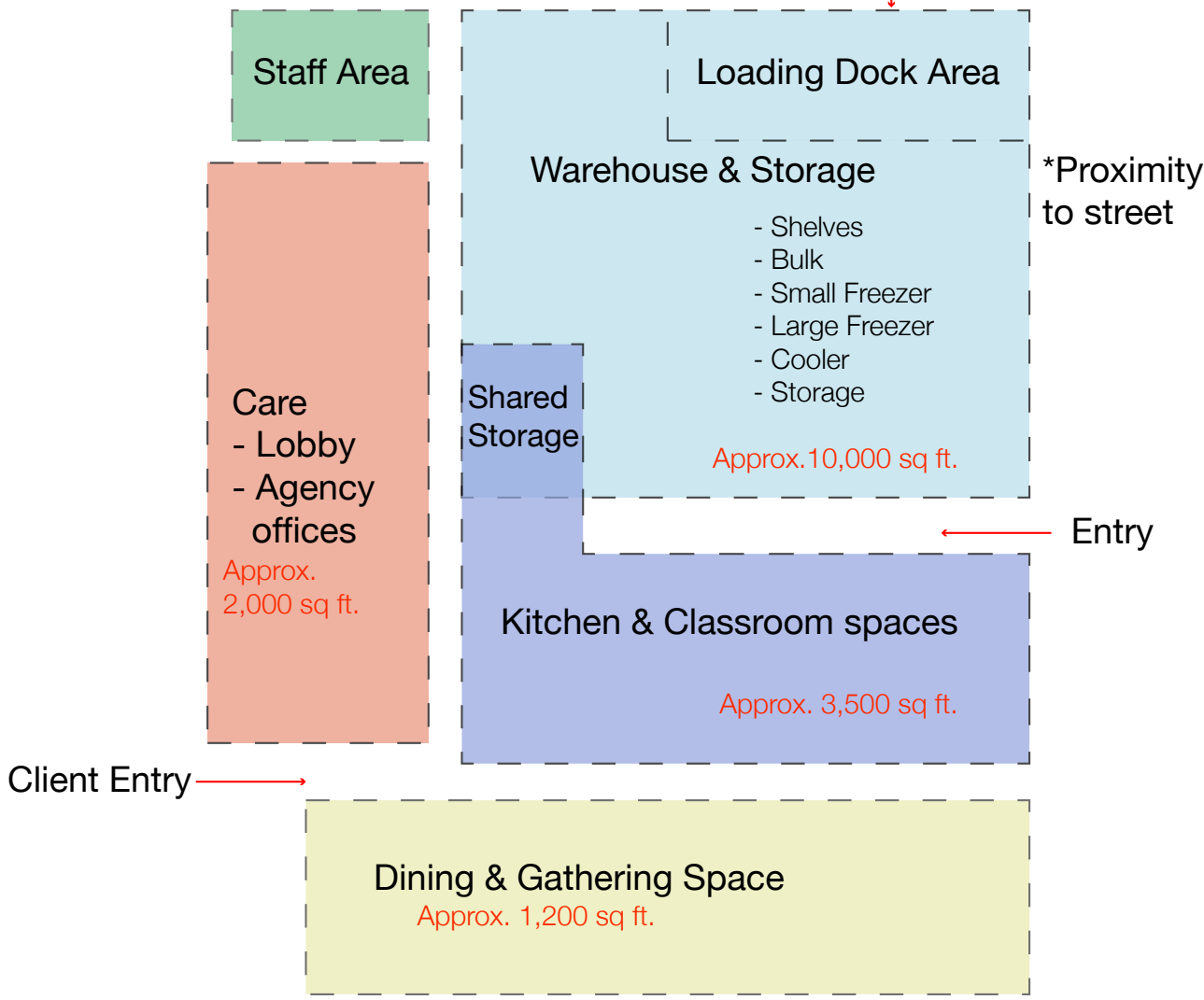
As shown in the diagram (Figure 54), the Tier 2 program requires a more complex organization with more access represented by multiple entrances that would have different levels of use depending on the different scheduled activities and operating hours. The Tier 2 Center also includes more space for storage, along with freezer and refrigeration capabilities, allowing the Center to serve local food businesses.



*Moving Staff & Assistance to Second Floor

Approx. 300 sq ft. per office

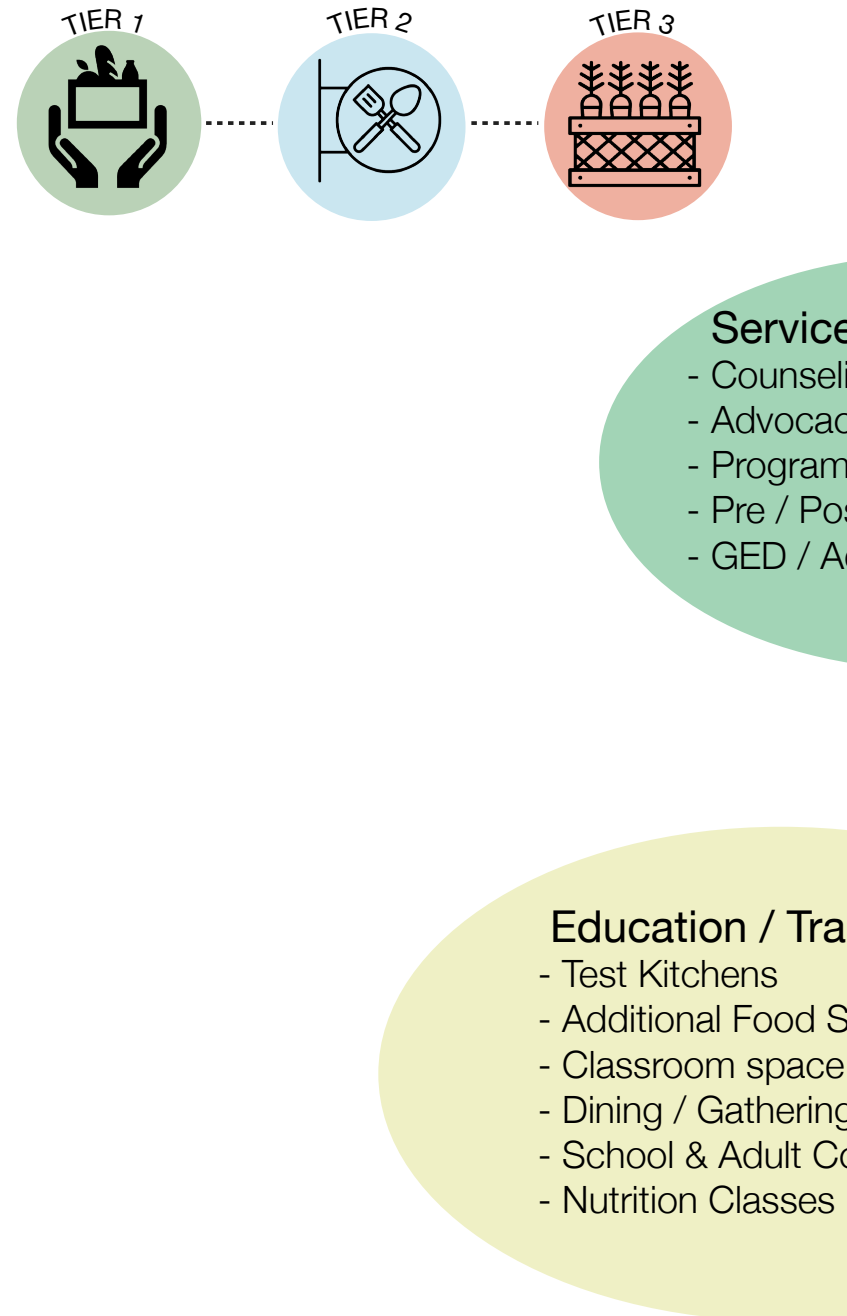
Loading Dock (outdoor covered)

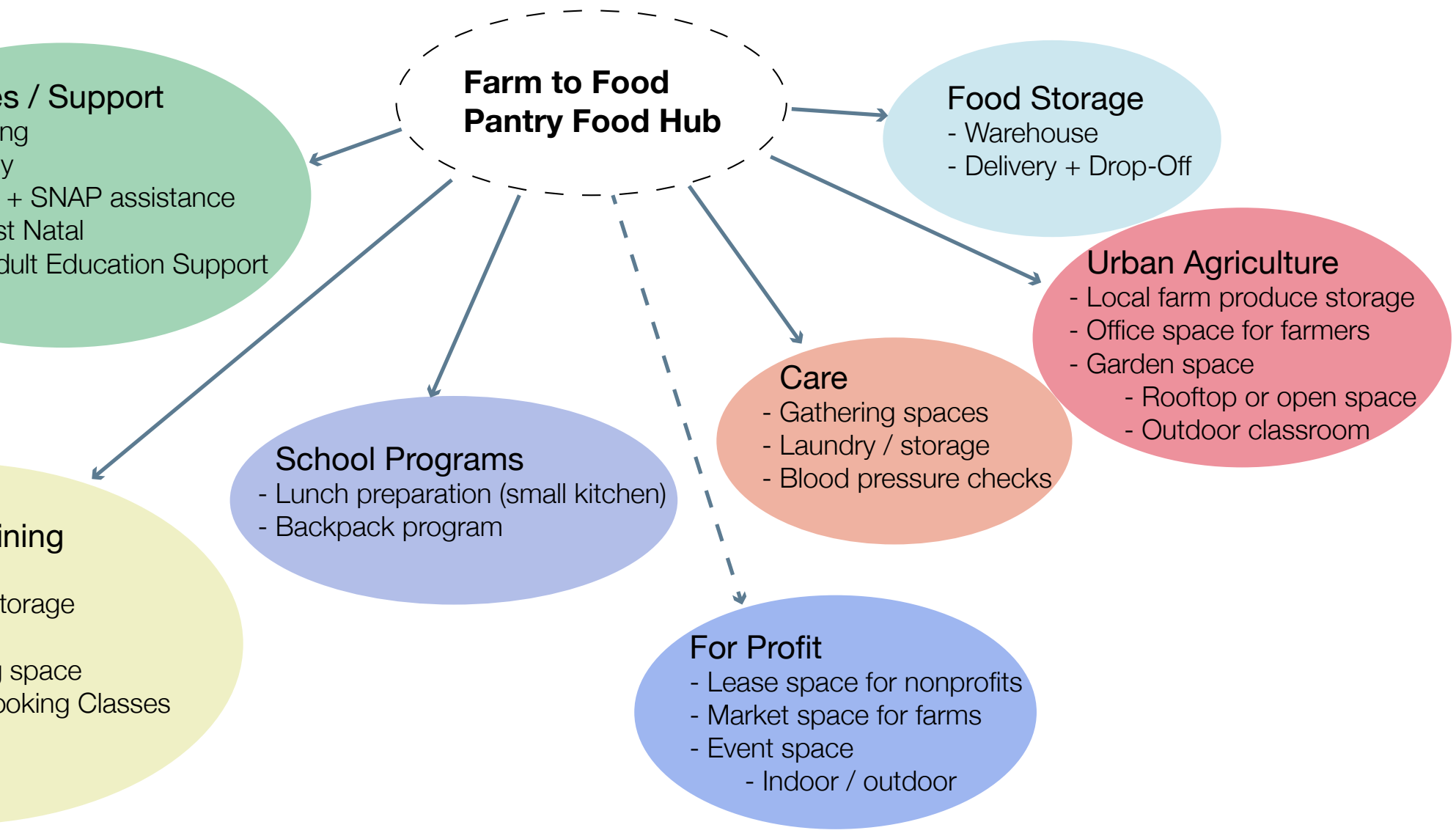


5.3 - Tier 3 - Large

The Tier 3 Center is programmed and designed to provide a Tacoma facility that meets a broad array of short-term and long-term needs. The mission of this Center is similar to the mission of Portland's The Redd, but is also intended to respond directly to Washington's Farm to Food Pantry Initiative by connecting local farmers across rural Pierce County with food pantries and consumers.²⁰ The Tier 3 Center introduces urban agriculture within the educational model by providing outdoor growing and classroom spaces for school and adult programs.

The Tier 3 Center also provides significant opportunities to establish connections to Tacoma's Farmers Market groups and to make linkages to local community gardeners and educators.

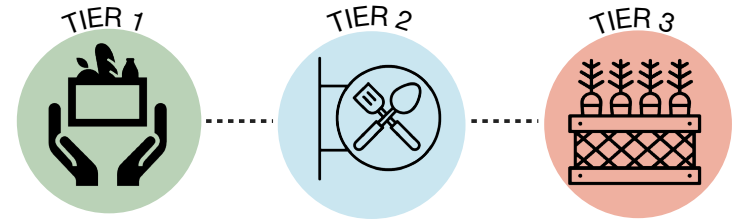




5.3 - Tier 3 - Large

The Tier 3 Center would provide space for a total of 22,000 square feet of program. With a reasonable net to gross ratio, the Center would have a total floor area of about 25,000 square feet. The Center at this level maximizes areas for food storage, advocacy and counseling, staff support, kitchen and classroom spaces and includes the potential to introduce a “market space” following the patron-choice model for food bank space.

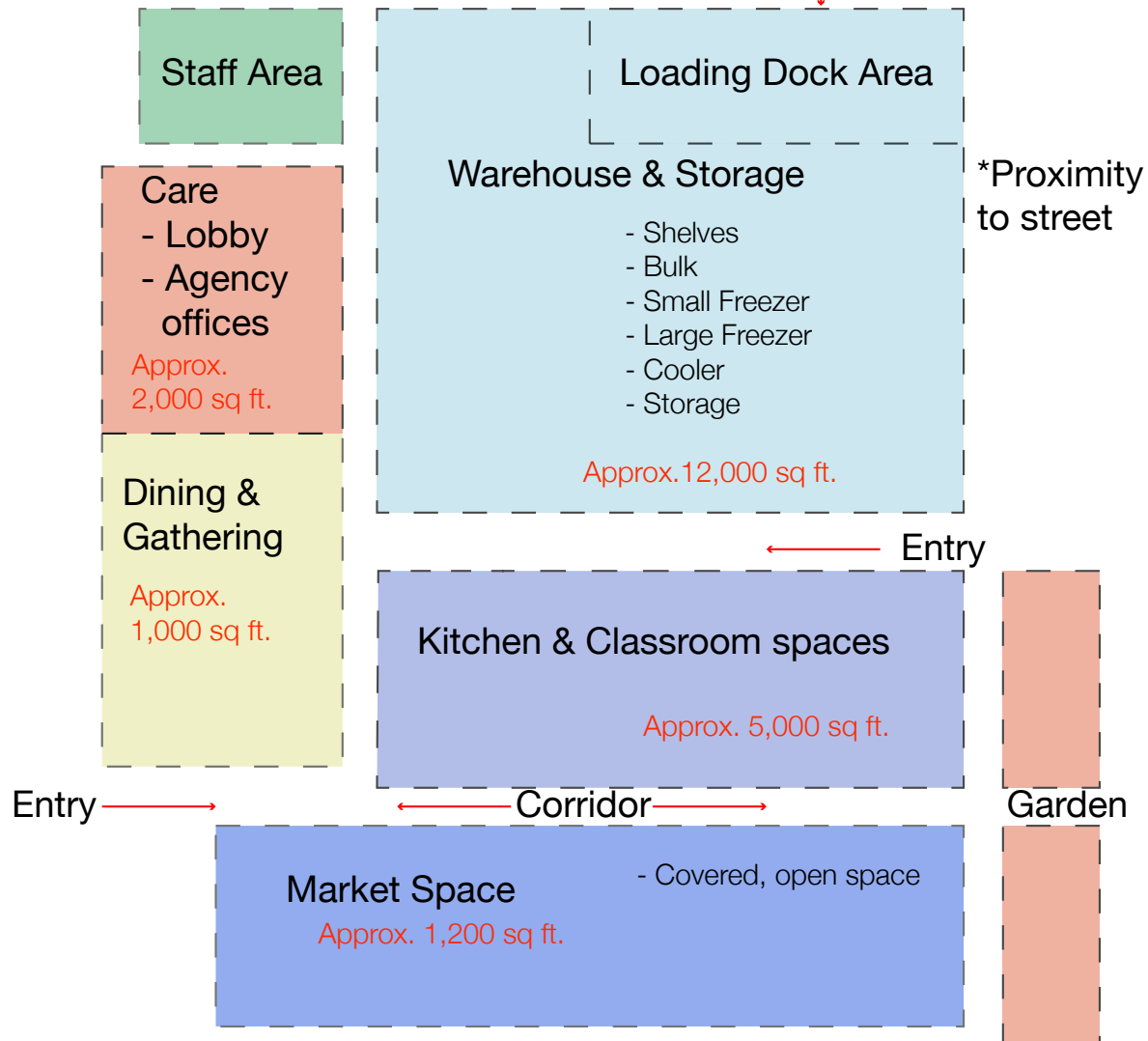
A key component of the Tier 3 Center is providing growing and garden spaces, both for education and learning as well as for growing and harvesting food that supports the Center, and in the long-term, the surrounding community.



***Moving Staff & Assistance to Second Floor**

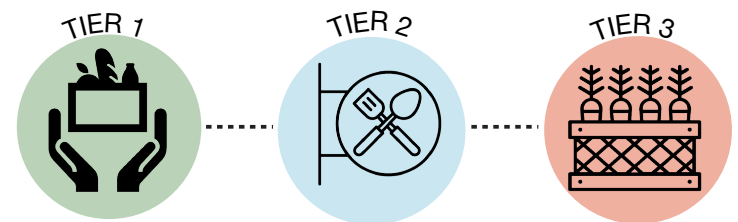
Approx. 300 sq ft.
per office

Loading Dock
(outdoor covered)



5.4 - Program Type Conclusion

The third tier, with its programmatic elements and focus on integrating the surrounding community, was selected for the final Food Center design. This large scheme also allowed for more dynamic design opportunities. Not only does Tier 3 work to provide long-term facilities for the existing food bank network, it also looks to include other community members. By providing ample warehouse and cold storage space for local restaurants, food businesses and farms, relationships between these businesses will be strengthened. Chefs within the community would have the space to train and teach workshops and cooking classes. This training could extend to those in need, providing a skill and more long-term vocational opportunities within the food industry. The third tier puts the idea of placing people at the center of the design into practice.



How can the design
incorporate all three tiers into
one, unified food center,
keeping people at the heart?

6.0

Site Selection &
Analysis

6.0 - Site Selection & Analysis

In the development of the thesis, the analysis of the Tacoma food bank network and programming a Center to bring this network together and better serve the community preceded the identification of a site. Site selection depended in part on identifying a location central to the food bank network and finding a site adequate for the proposed Tier 3 program. Given that food banks most often are established in existing underutilized buildings, finding a site with such a building was prioritized. In addition, the site required proximity to public transportation and space not just for the Center itself, but for the community gardens that were essential for the Tier 3 program.

After considering several locations across Tacoma, site selection narrowed to the southern portion of the currently underutilized historic Brewery District, several blocks south of the UW-Tacoma campus and east of the Hilltop neighborhood. Within this District, the Pacific Brewing and Malting Company complex provided the best choice for its location, scale and the opportunity for both adaptive reuse and new construction.





6.1 - Pacific Food Center Site in Context

In the next several years, with the expansion of the Link Light Rail and the redevelopment of Brewery Blocks, the District will be enlivened and offers the potential to be redeveloped as an active, mixed-use District for the city. The site features a historic two-story, post and beam supported warehouse with a six-story brewing tower dating from about 1901. Although there are later structures on the north end of the site, they were constructed after the closure of the brewery company due to Prohibition, and are not considered historically significant, and can be demolished to create space for some of the spaces of the new Center. Removal of the newer structures leaves ample space for new construction that complements the existing tower and warehouse.



6.2 - History

Tacoma's historic Brewery District dates to the late 1880s and was active until the enactment of Prohibition in 1919. Subsequently, the area declined and many of the brewery buildings were reused for other purposes. The Pacific Brewing Company buildings, designed by Carl August Darmer, were completed around 1901. After Prohibition, the Pacific Brewing Company complex was converted into a soap manufacturing and storage facility.²¹ This remained in operation for several decades. Much of the original machinery and storage containers still sit within the original brewing tower. Several attempts were made in recent decades to revitalize the historic complex, but little was achieved. Today, the six-story tower stands out as the tallest structure in the vicinity.

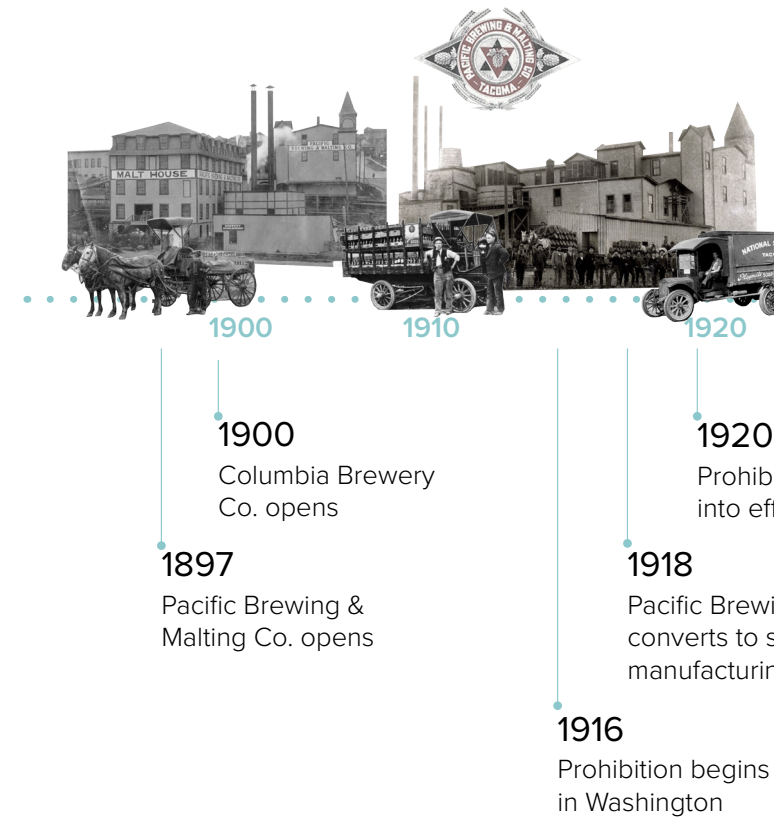
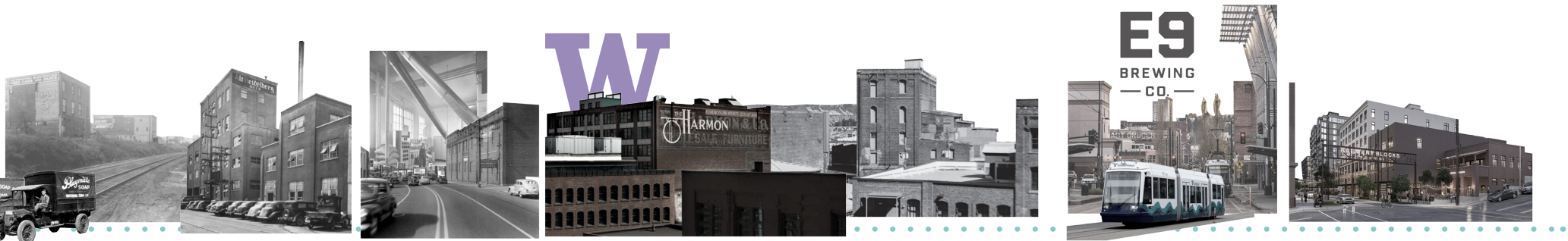


FIGURE 59 - Tacoma Brewery District Timeline.



1930

1950

1970

1990

2000

2010

2020

Prohibition goes
effect nationally

Prohibition
ends
Prohibition

1933

Prohibition is repealed;
Northwest Brewery
Co. opens

1953

Columbia Brewery
changes to
Heidelberg Brewing

1979

After 79 years in
Tacoma Heidelberg
Brewing closes

Pacific Brewing &
Malting Co.
Complex designated
national landmark

1990

University of
Washington
Tacoma opens

1997

Harmon Brewing
Co. opens

2016

E9 Brewery
opens

7 Seas Brewery
opens

2018

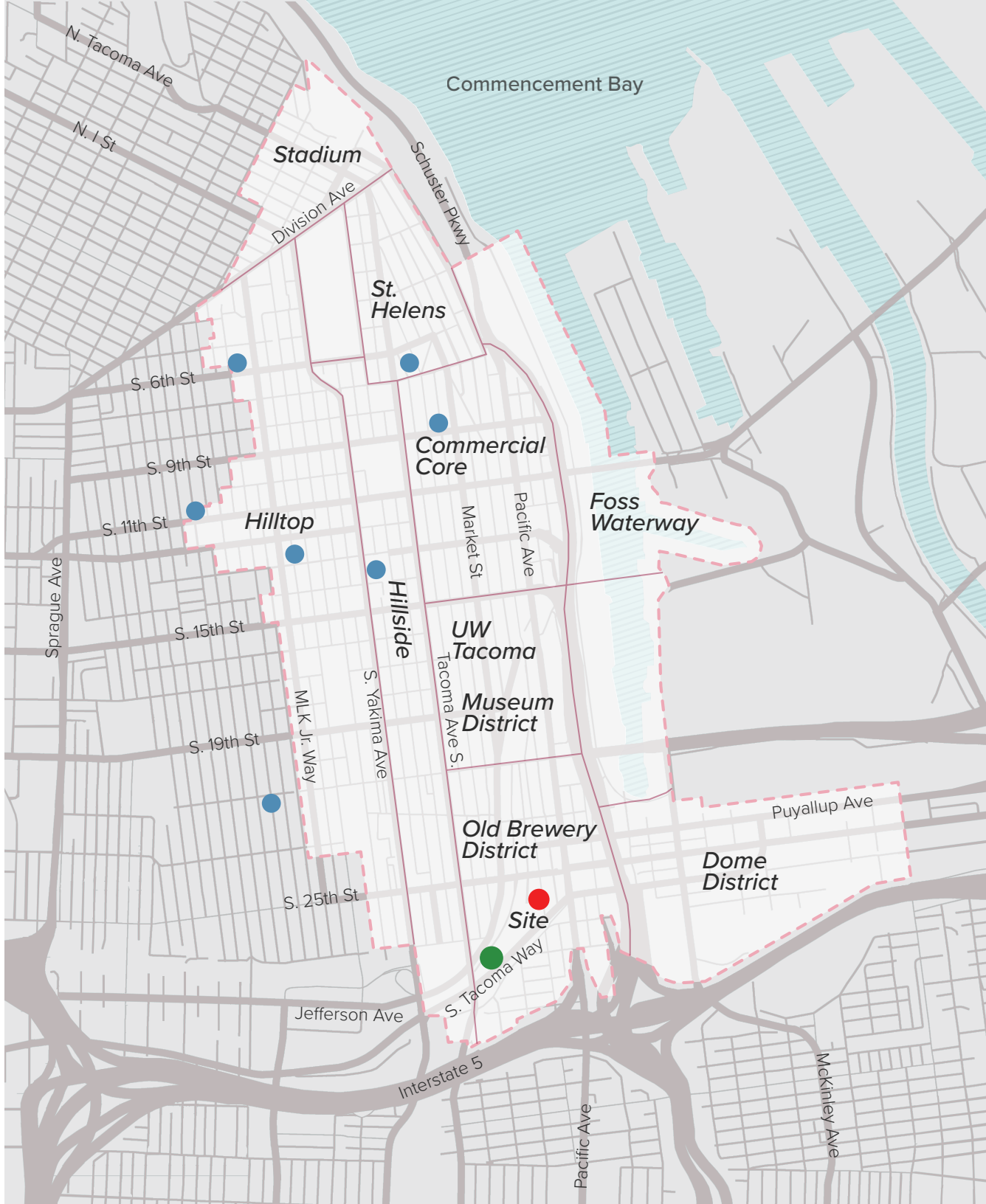
Black Fleet
Brewing opens

2020s

Brewery Block
Redevelopment

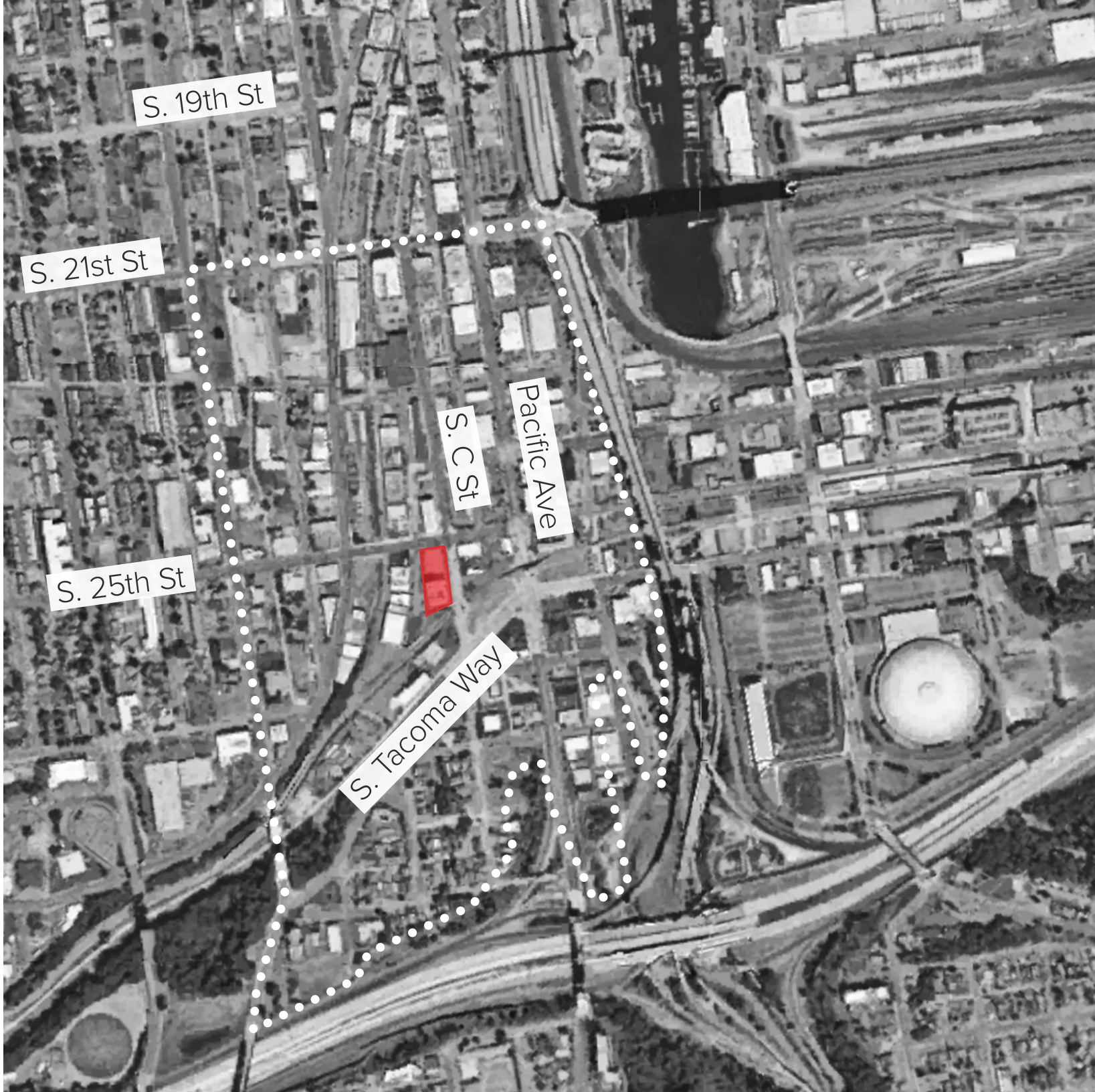
6.3 - Food Bank Proximity

The location in the south end of the historic Brewery District is preferred for its proximity to transportation, to several important food banks and to related facilities serving Tacoma's disadvantaged population. Within a few blocks of the Pacific Center site are some of the most visited food banks in Tacoma (Figure 60). On the map, the blue circles indicate the food banks and the red circle points to the Center site. Also within a short distance is the Tacoma Rescue Mission, one of the city's largest homeless shelters and advocacy organizations (green circle in Figure 61). Tacoma Rescue Mission not only provides temporary housing, they also offer job placement and referral services. In 2020, they placed 581 individuals in stable housing and assisted 498 individuals in finding a job.²² The proposed Pacific Food Center is located along the route that many Mission clients take from Tacoma's centrally located food banks to the shelter. The Center is thus ideally located for a large population in need.



6.4 - Site Context

The new Pacific Food Center will front on both C Street to the east and Holgate Street to the west. Each of these two streets has a distinct character. Holgate Street ends just south of the Pacific Food Center as it does not cross the railroad tracks. It serves as the primary access for loading and unloading. C Street is a through street that crosses the railroad tracks and provides a pedestrian and vehicular route from areas to the south (including Tacoma Rescue Mission) to the Center. Because this is a through street, the east side of the Center facing C will be more generally visible than the side facing Holgate Street. Because the site slopes down nearly one full story from Holgate to C Street, access from the C Street side is more difficult.



S. 19th St

S. 21st St

S. 25th St

S. C St

Pacific Ave

S. Tacoma Way

6.5 - Green Space Expansion

Locating the new Pacific Food Center at the southern end of the historic Brewery District adjacent to the Sounder (commuter) railroad tracks also allows it to take advantage of several nearby unused land parcels. These triangular parcels result from the curving railroad tracks cutting diagonally across the rectilinear street grid. They are unlikely sites for development, but can be utilized for the Food Center's gardening and urban agriculture programs as shown in the highlighted green spaces in Figure 62. Together they provide about 48,000 square feet of growing space; this space does not need to be cultivated all at once, but can be developed incrementally as the gardening and agricultural programs of the Pacific Food Center grow.



FIGURE 62 - Site Plan.



23RD STREET

24TH STREET

25TH STREET

26TH STREET

27TH STREET

FAWCETT AVENUE

JEFFERSON AVENUE

HOOD STREET

HOLGATE STREET

C STREET

PACIFIC AVENUE

SOUNDER TRAIN

S. TACOMA WAY

INTERSTATE 705



6.6 - Site Access

The site is situated on the southern edge of Downtown Tacoma with linkages to Southeast Tacoma, the Hilltop neighborhood to the east, and Tacoma's industrial district to the west. C Street runs parallel to Pacific Avenue, a major vehicle, bus route and Link Light Rail corridor that runs north through downtown, connecting many of Tacoma's food businesses and restaurants. 25th Street connects Tacoma's Industrial District to the Hilltop neighborhood, with the Link Light Station located on the corner of 25th Street and Pacific Avenue. Currently, the area is primarily accessed through vehicle traffic with street parking. However, pedestrian access has been planned with the Brewery Blocks project and the expansion of the Link Light Rail route to Hilltop. As noted previously, the complex sits along the route from the Tacoma Rescue Mission to the food banks downtown. Figure 63 highlights the route taken from the shelter past the site, locating C Street as a major axis point.

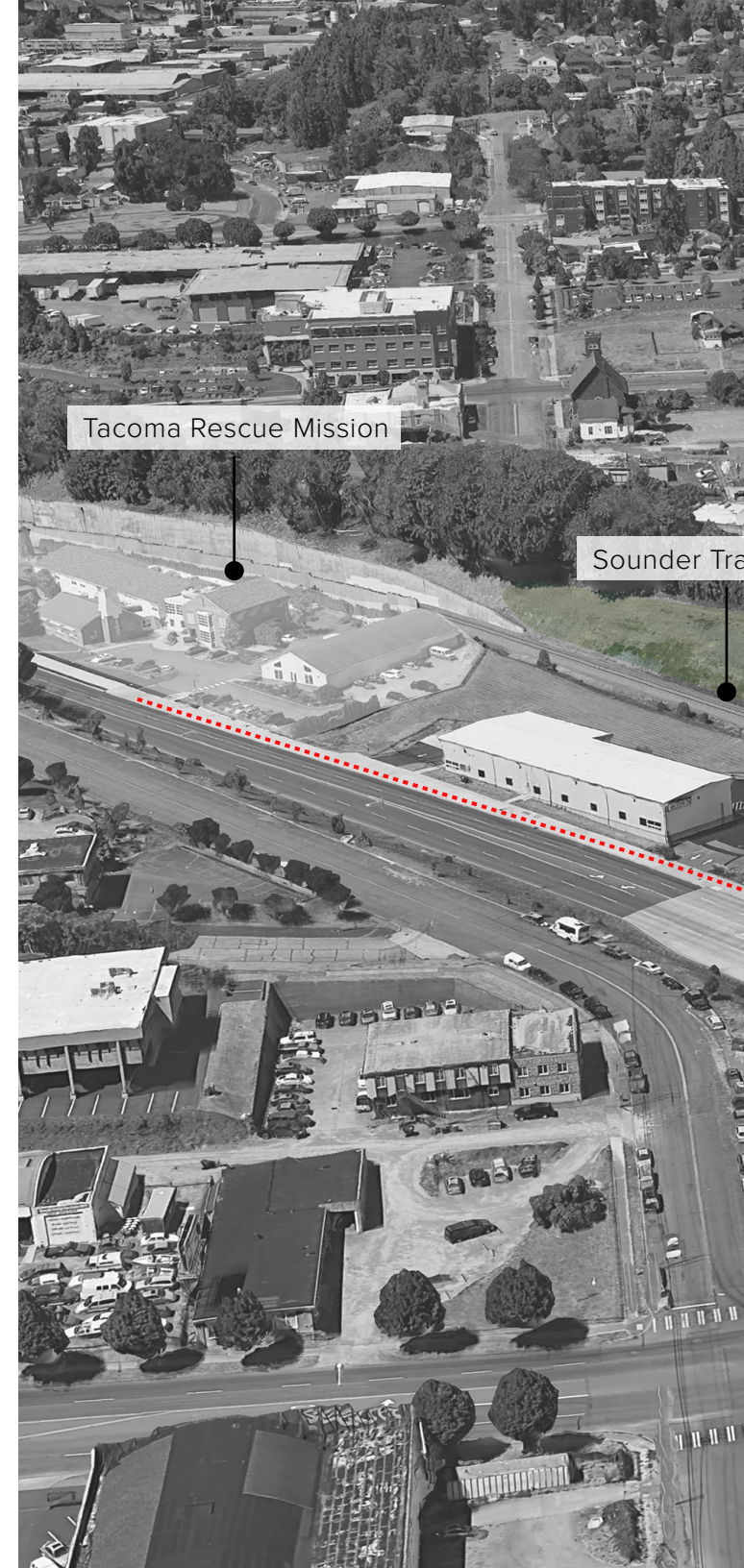


FIGURE 63 - Building Vicinity View Looking West



ain Tracks

Jefferson Ave

25th St

Hood St

Holgate St

S. C St

24th St

S. Tacoma Way

Pacific Ave

6.7 - Current Conditions

The buildings within the complex each feature distinct elements. Due to the steep nature across the site from Holgate to C Street, direct access from C Street, (as shown in Figures 64, 65 and 66) is currently limited.

It is possible that there once was access to Pacific Brewing and Malting on the C Street side. Over time, however, as the surrounding area developed, it is apparent that the C Street side saw far less use. The lowest floor of the building (the basement), which had potential C Street access, has a very low ceiling (with a clearance of about eight feet) so it is likely that this level was always used as storage or other utilitarian functions. The first floor, with access to Holgate Street, has a floor-to-ceiling height of about sixteen feet suggesting that it was the primary floor for brewing and related activities.

FIGURE 64 - C Street View of Tower and Original Brewery Materiality. (Left).

FIGURE 65 - C Street View of Warehouse. (Top Right).

FIGURE 66 - C Street View of Tower. (Bottom Right).



6.7 - Current Conditions

The west elevation facing Holgate Street faces another industrial complex across the street. Many of the buildings on the block on the opposite (west) side of Holgate were constructed incrementally as part of the original Pacific Brewing Company complex. Today, as Holgate Street dead ends, it serves for access and delivery to both the Center site and the buildings on the opposite side of the street. Loading and unloading to the Pacific Brewing building warehouse and tower that will be reused for the Food Center takes place toward the south end of Holgate Street. The existing service entrance on the south side of the warehouse utilizes a ramp from Holgate, connecting to the second floor of the warehouse.

FIGURE 67 - Holgate Street Warehouse Materiality. (Left).

FIGURE 68 - Holgate View of Tower. (Top Right).

FIGURE 69 - View of Surrounding Buildings on Holgate Street. (Bottom Right).



6.7 - Current Conditions

During a visit with the current owner, the interior of the tower was observed and documented. Some current aspects of the tower and warehouse interiors are unusual. The warehouse has a very closely spaced column grid measuring about twelve feet by twelve feet. This allows for ample structural support and immense load carrying capacity. Currently, the upper five stories of the tower feature floors that are open metal grates to allow grain used in brewing to descend through the drying process. Much of the original equipment from the brewery and soap manufacturing remains.

For this thesis, the tower and warehouse structures are adaptively reused for the Food Center while the buildings north of the tower are demolished to provide space for the Learning Center (see next chapter) with kitchen and classroom spaces.

FIGURE 70 - Fourth Floor View Inside Tower. (Left).

FIGURE 71 - Sixth Floor Interior. (Top Right).

FIGURE 72 - Sixth Floor Interior. (Bottom Right).



7.0

Pacific Food Center



PACIFIC FOOD CENTER
tacoma, wa

7.0 - Pacific Food Center: Mission

Providing the space and tools to learn, cook, eat and grow. Working incrementally to enhance the existing food bank network, forming connections between current and future community members. Creating a space that reinforces the central idea that *everyone eats*, a fundamental fact that unites us all.

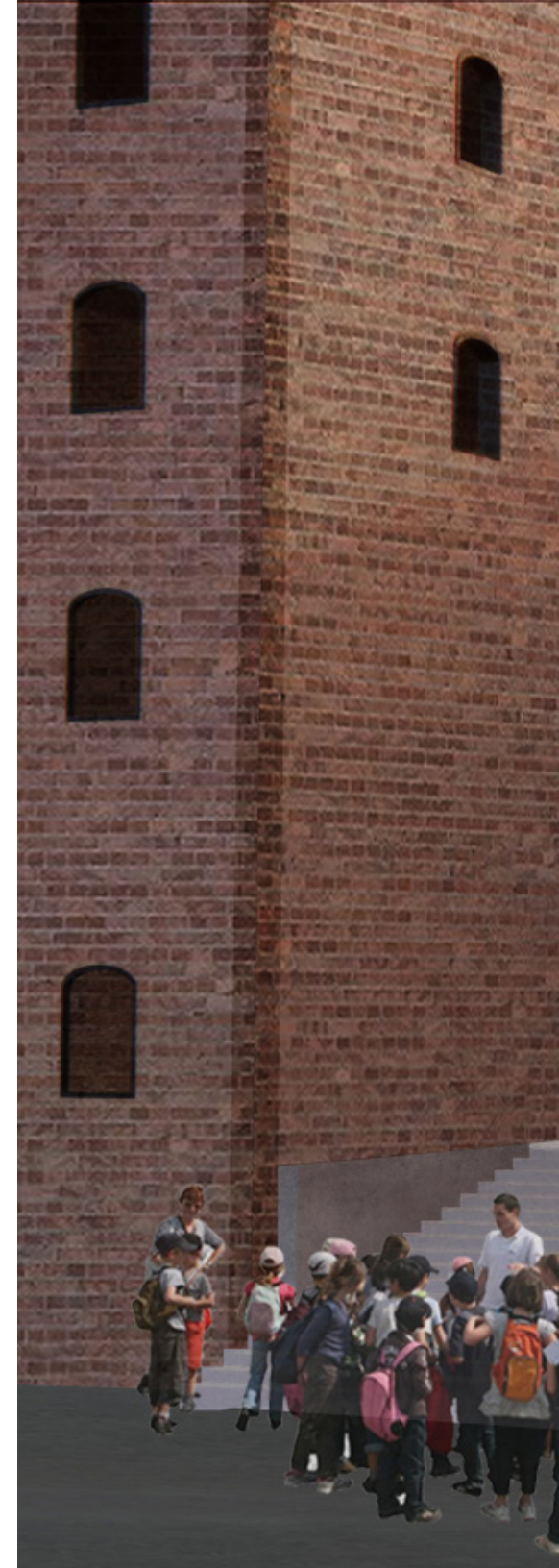
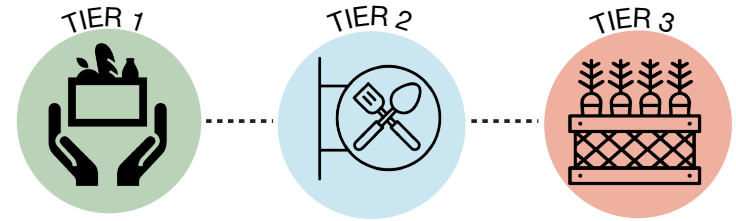


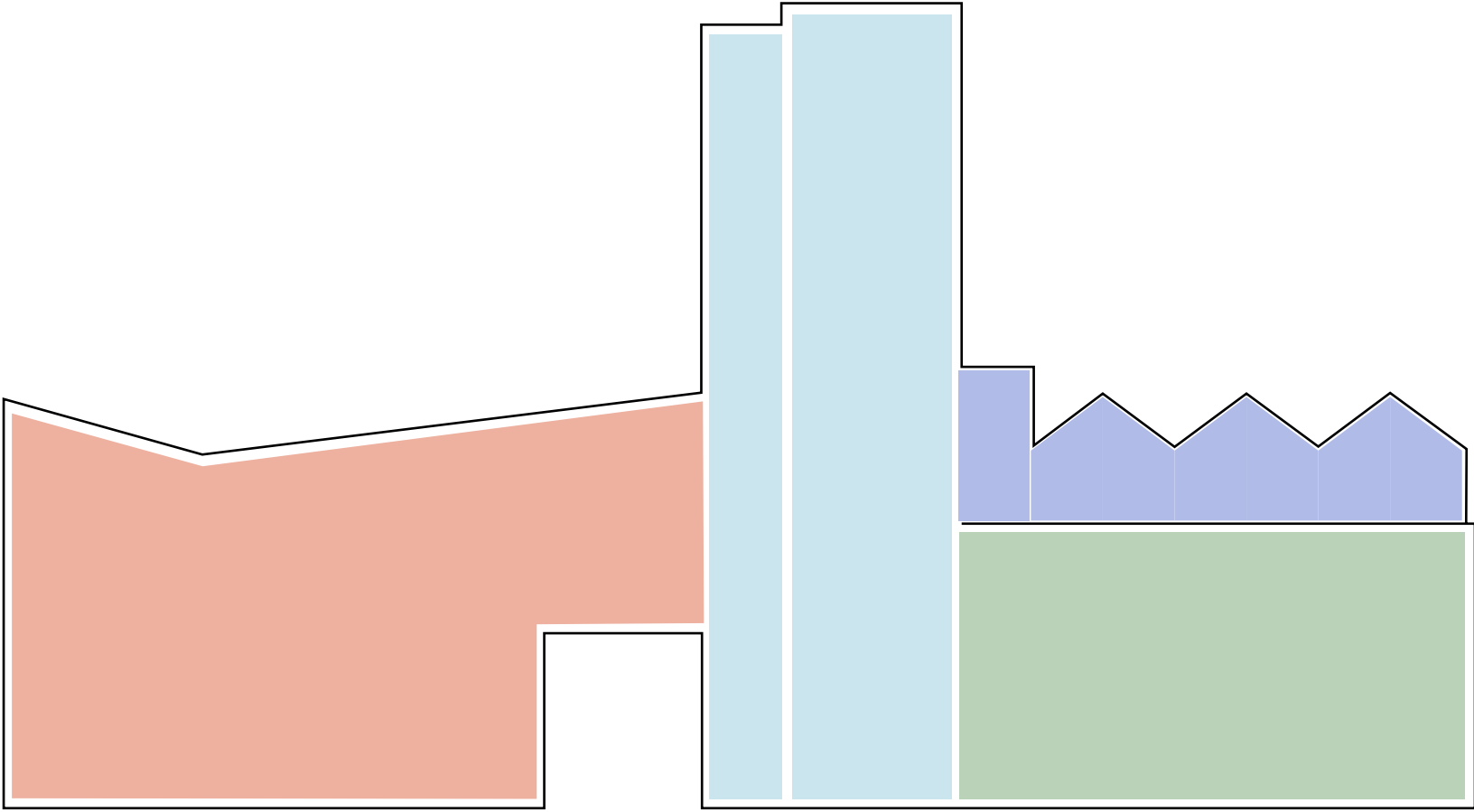
FIGURE 73- View of Community Courtyard Approach from C Street.



7.1 - Functional Concept

The Pacific Food Center’s design contains the programmatic elements featured in the Tier 3 center concept. In their original state, the Tower and warehouse operate as two distinct and separate buildings. However, for the Food Center, it is essential that these building parts work together as a singular, functional unit within the larger complex to serve the community. The Pacific Food Center complex evolved through the integration of the food bank services (Tier 1) within the existing warehouse, the advocacy and counseling offices (Tier 2) inside the tower, and the development of educational and growing spaces for local food businesses, representing Tier 3, in the new learning center. Figure 74 illustrates this functional concept. Each larger building part houses the essential programs corresponding to one of the three tiers complemented by overlapping programs that connect the core mission of each component.





TIER 3

TIER 2

TIER 1

7.2 - Program Tiers

The proximity to Tacoma Rescue Mission and the ample structural support allowed for the existing warehouse to house many of the programs featured in Tier 1. This area of the Center provides food bank users with a client-choice style market while providing generous food storage that connects to the tower and learning center addition.

The tower and learning center continue to expand the food center with Tier 2 and 3 programs, such as long-term services and spaces for support, teaching and gathering. Within the learning center, the community kitchen acts as the central meeting space and heart.

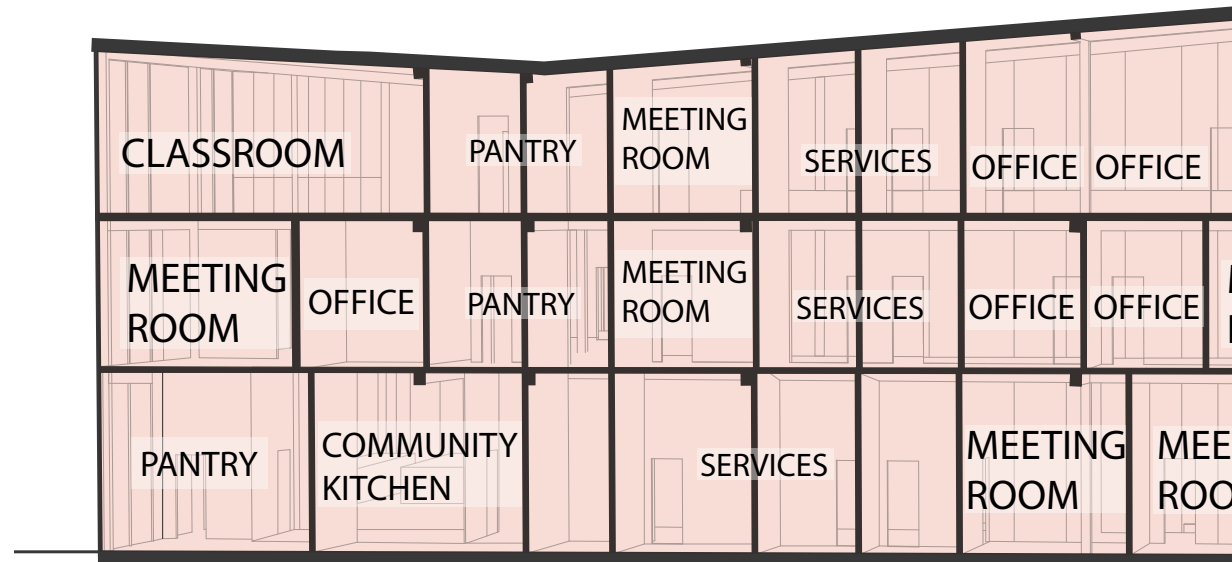
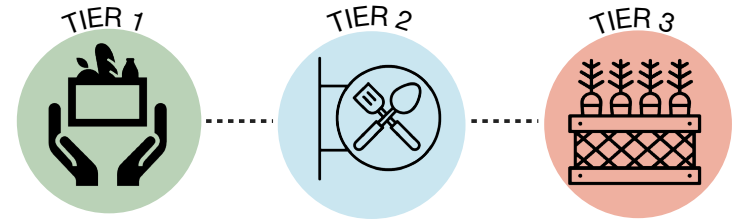
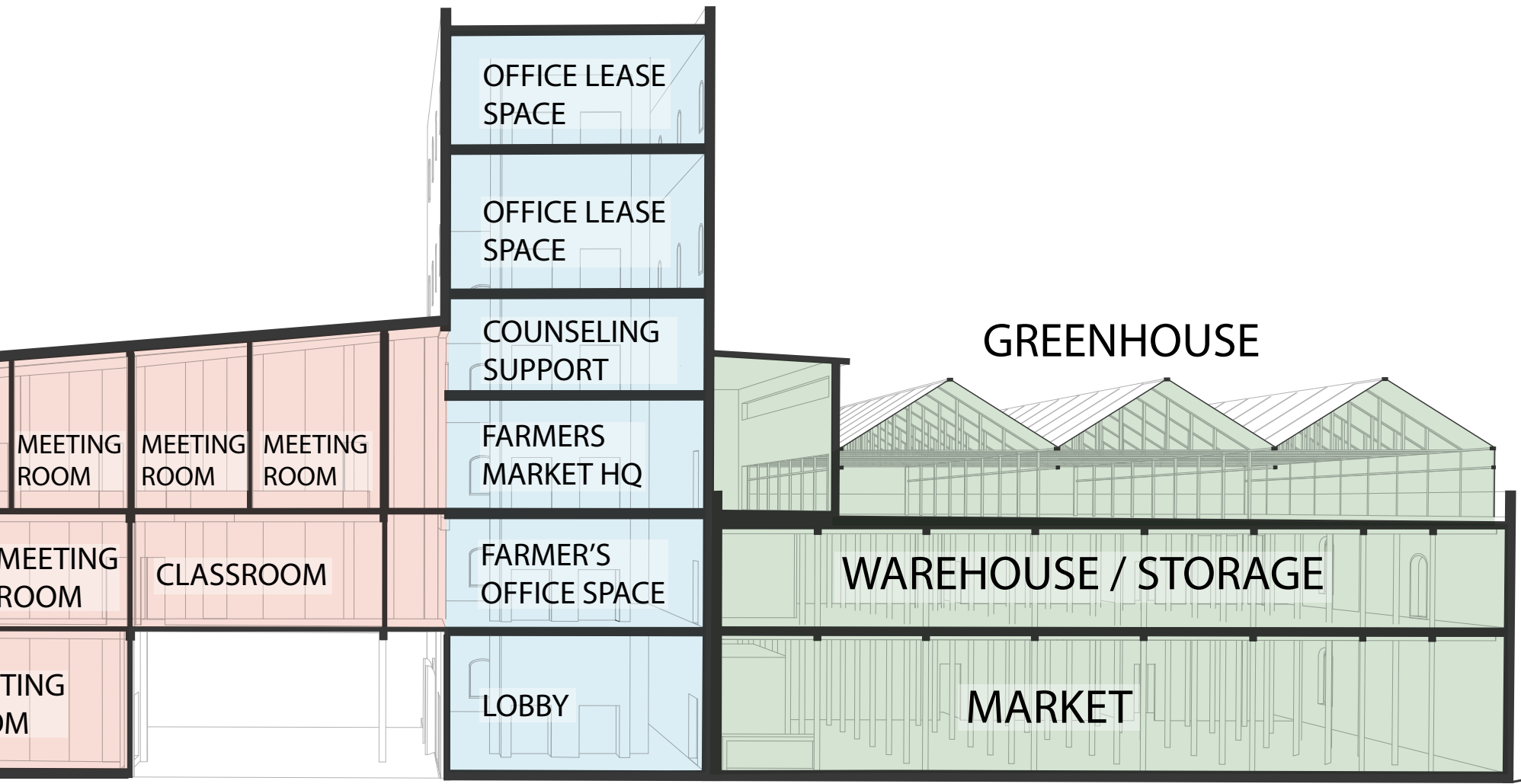


FIGURE 75 - Sectional Programmatic Diagram.



7.3 - Site Integration

The learning center sits on the northern portion of the site facing 25th Street. Within this new area of the complex, a centralized courtyard space activates and invites those entering the Center either from C Street or Holgate Street. The learning center is directly connected to the southern half of the complex by a connection bridge that enters the tower on the second floor. The bridge offers a protected space on the ground plane where the entrances are located.

While the tower represents the interior heart of the complex, the courtyard on the ground plane offers space for not only movement between the tower and learning center but also provides a flexible, outdoor event space.

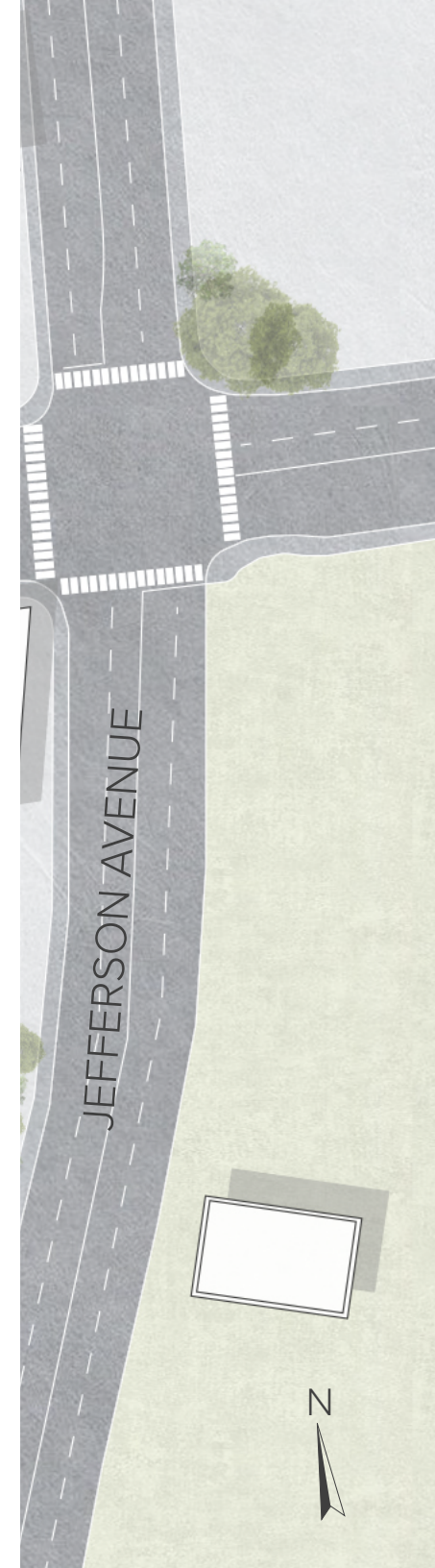


FIGURE 76 - Roof Plan and Street Context.



25TH STREET

HOOD STREET

HOLGATE STREET

C STREET

PACIFIC AVENUE

SOUNDER TRAIN

S. TACOMA WAY

7.4 - Program Integration

This section highlights the integration of new and old through the Tier program concept. (Figure 77). By linking the arm of the new learning center to the existing tower, the circulation through the Center is enhanced. While the learning center features a range of meeting spaces, classrooms and a community kitchen, the central tower allows small farms and urban growers to gather through shared office spaces. These food producers can grow, harvest, collect, store and distribute their food using the greenhouse and warehouse space in the center. In addition to office space, the tower also features spaces for more private, long-term counseling and support to those within the food bank network.





7.5 - Community Courtyard

The Pacific Food Center arranges the most public community programs of both the new learning center and food bank market in the existing building to surround the central courtyard. Visitors entering the complex from the corner of C Street and 25th Street are met by a ramp and staircase that leads them into the courtyard space. Users arriving on Holgate Street enter the center through a threshold created by the connecting bridge. The main floor of the learning center features the central community kitchen, which is surrounded by a dining space for indoor events and a theater-style classroom that descends eight feet to directly face C Street. Meeting rooms of all sizes frame the courtyard space along Holgate Street.

The tower serves as the central heart, accommodating the central entrance lobby, the primary vertical circulation and a public cafe facing the courtyard. A large, open-plan, client-choice style market serves the surrounding community as an extension of the food bank network.

Ground Floor Plan

- 1 Small Meeting Room
- 2 Pantry
- 3 Waste / Compost
- 4 Restroom
- 5 Meeting Room
- 6 Large Meeting Room
- 7 Community Room
- 8 Dining Space
- 9 Theater Lobby
- 10 Courtyard
- 11 Tower Lobby
- 12 Market Cafe
- 13 Market Reception
- 14 Market
- 15 Staff Office



FIGURE 78 - Ground Floor Plan and Entrances.

Plan - Holgate Street

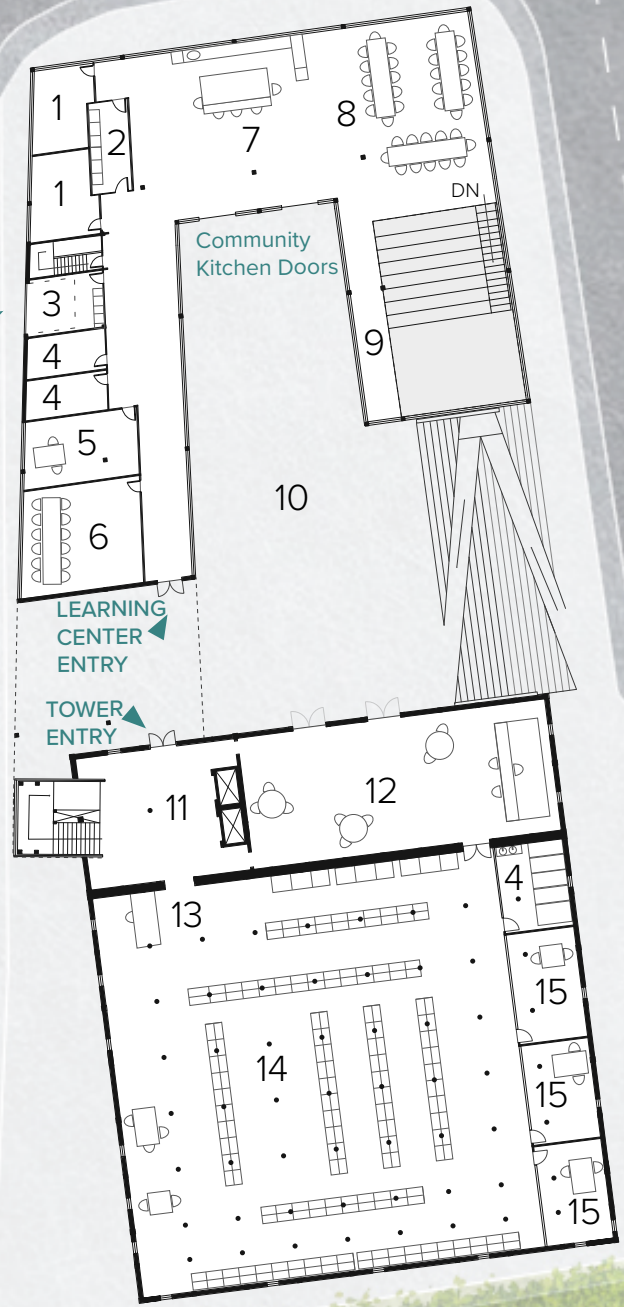
- Meeting Room
- Compost / Recycling
- Room
- Meeting Room
- Community Kitchen
- Space / Canteen
- Lookout / Walkway
- Lobby
- Reception/ Cashier

25TH STREET

HOLGATE STREET

C STREET

SOUNDER TRAIN



7.5 - Community Courtyard: Gather

All are welcome in the community kitchen. As the heart of the learning center, this central space is always full of activity. A small group passes, heading to the theater space nearby for a lecture series.

A local chef is teaching a group of students how to cook the perfect roast as the smell of their dish fills the room, making its way out to the courtyard. In the winter, the kitchen provides refuge from the rain and cold. During the summer months, the glass doors are flung open to host an outdoor night market in the courtyard.

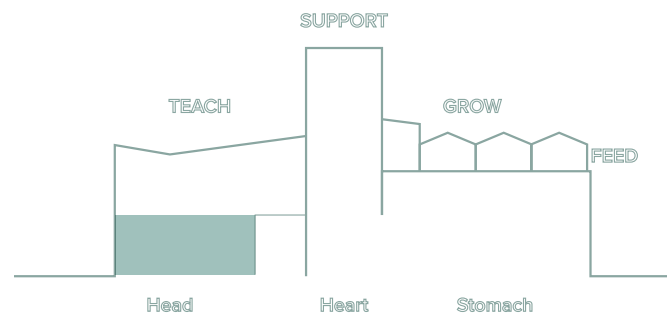


FIGURE 79 - View of Community Kitchen.





7.6 - Classrooms & Storage

The second floor features a connecting bridge that joins the learning center to the tower and warehouse. This level hosts several kitchen classrooms for nutrition and cooking classes, events, and school programs. For those visiting the center with children, childcare facilities are also available.

Within the tower, office space on this level is dedicated to local small farms across the county. Their proximity within the tower allows for direct access to the warehouse and surplus storage options. The intention of including space for local farmers is to provide the means and mentorship to connect small farms and local food businesses to strengthen the local food network.

Second Floor Plan

- | | |
|----|-------------|
| 1 | Kitchen C |
| 2 | Small Mee |
| 3 | Lockers / |
| 4 | Office |
| 5 | Restroom |
| 6 | Medium M |
| 7 | Large Me |
| 8 | Pantry |
| 9 | Childcare |
| 10 | Tower Lob |
| 11 | Local Farm |
| 12 | Warehouse |
| 13 | Warehouse |
| 14 | Staff Offic |



an

Classrooms - Nutrition
Meeting Room
Storage

Meeting Space
Meeting Room

Lobby
Teacher's Office Space
Kitchen / Food Storage
Reception
e

25TH STREET

HOLGATE STREET

C STREET

SOUNDER TRAIN



LOAD/
UNLOAD

7.6 - Classrooms & Storage: Learn

The passage from the learning center into the tower offers a unique view of the city and courtyard space below. This passage represents the link between new and old. The warm, exposed brick of the tower contrasts sharply with the cool glass and steel learning center structure.

This hallway is full of activity. Passing through, one can witness nutrition and cooking classes. Field trips bring children through the hallway. Gardeners bring their fresh produce to the kitchens and pantries for a demonstration cooking class. Throughout the day the hallway fills up and empties with visitors, serving the community.

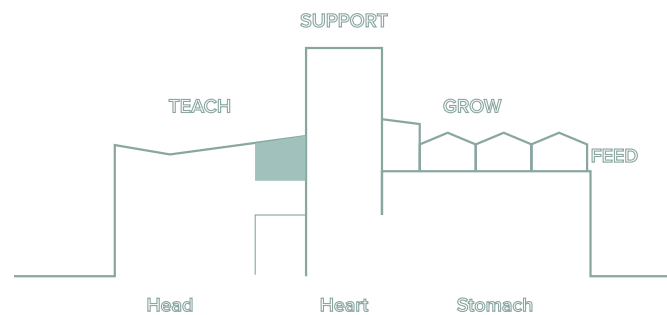
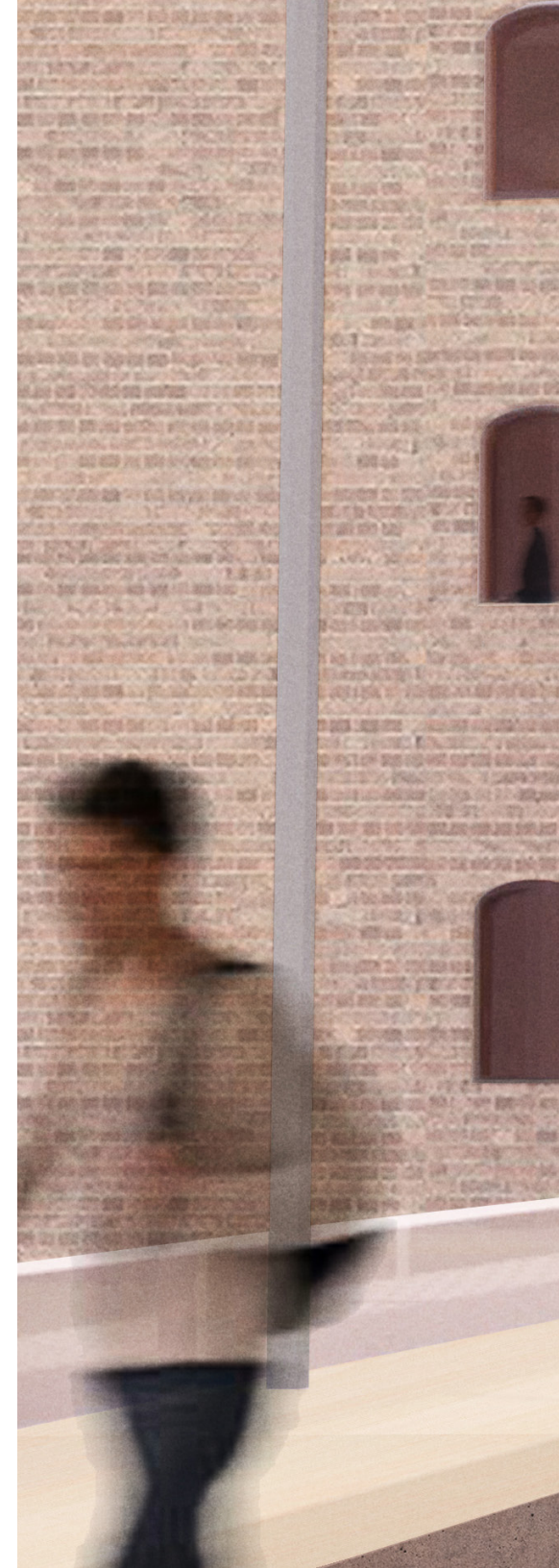


FIGURE 81 - View from Learning Center into Tower.





7.7 - Greenhouses

The third floor links two very distinct greenhouse facilities. In the north-east corner of the learning center, classrooms and meeting spaces directly face the learning greenhouse. This greenhouse offers students the opportunity to learn how to grow and harvest their own food. With this type of kitchen garden, students are able to harvest as they cook, providing a better understanding of where their food comes from.

Meeting rooms and office spaces lead the visitor into the central tower with office space dedicated for the Tacoma Farmers Market headquarters. Those working within this office have direct access to the industrial, large-scale production greenhouses. This south-facing greenhouse offers ample space to grow local fresh produce year-round to be used throughout the Center.

Third Floor Plan

- | | |
|----|-----------|
| 1 | Garden M |
| 2 | Lockers |
| 3 | Office |
| 4 | Restroom |
| 5 | Large Me |
| 6 | Small Mee |
| 7 | Meeting R |
| 8 | Tower Lob |
| 9 | Tacoma F |
| 10 | Tank Room |
| 11 | Rooftop G |
| 12 | Teaching |
| 13 | Garden K |
| 14 | Classroom |



25TH STREET

Meeting Room

Meeting Room

Meeting Room

Room

Lobby

Farmers Market HQ

Room / Gathering Space

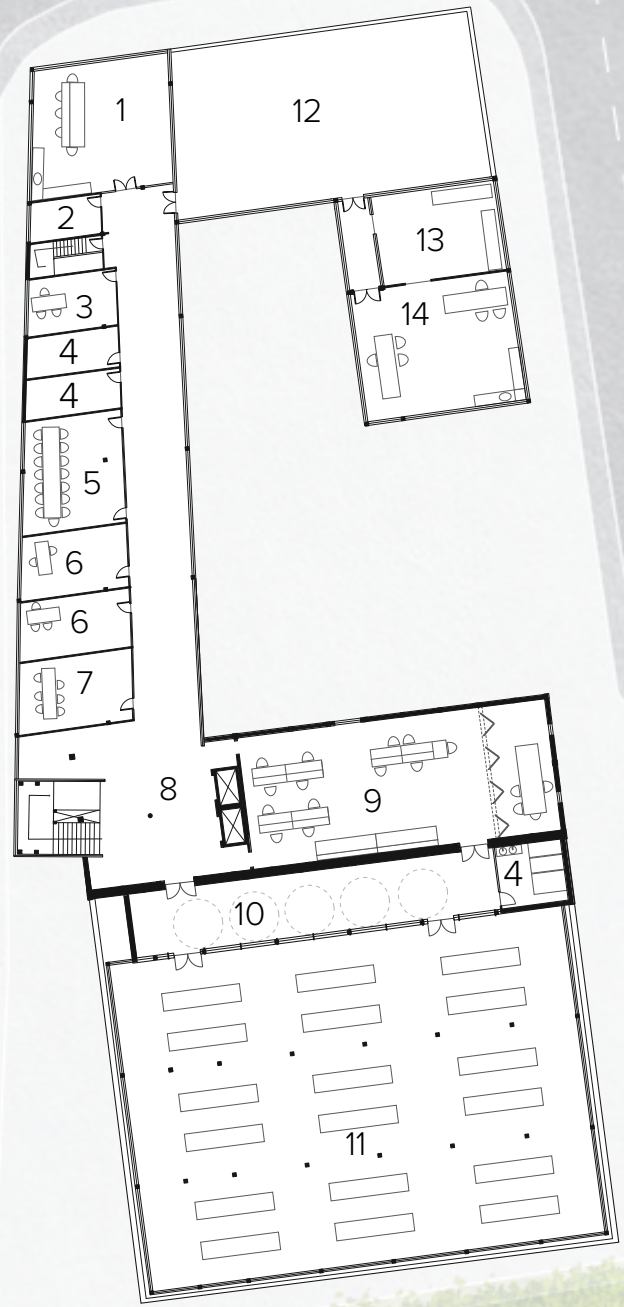
Greenhouse

Greenhouse

Kitchen

m

HOLGATE STREET



C STREET

SOUNDER TRAIN

7.7 - Greenhouse: Harvest

The lifeline of the center, all fresh produce comes from the production greenhouse. On greenhouse benches rest hundreds of seedlings, ready to be planted. A group of neighbors come to volunteer. After a long day of work, they return home with a bundle of fresh produce.

Local farmers volunteer their time in exchange for office and food storage space, allowing them to grow their businesses while giving back to their local community.

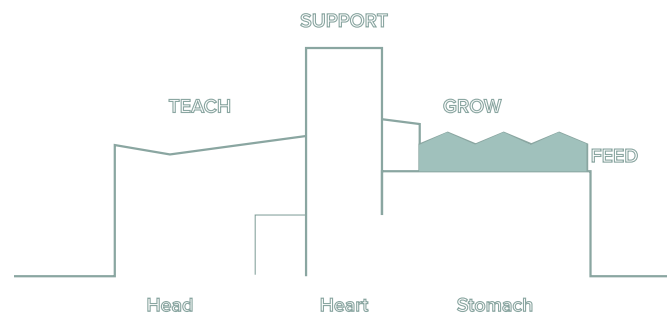


FIGURE 83 - View of South Greenhouse Space.





7.8 - Counseling & Services

The fourth floor of the tower features counseling spaces that provide private support to those in need. This integration of long-term support with immediate food assistance from the market space below allows vulnerable individuals to be taken care of, working to address all of their needs under one roof.

The remaining fifth and sixth floors of the tower will be developed as leasable office space to provide a profit within the Food Center.

Fourth Floor Plan

- | | |
|---|-------------|
| 1 | Tower Lobby |
| 2 | Food Bank |
| 3 | Restroom |

HOOD STREET

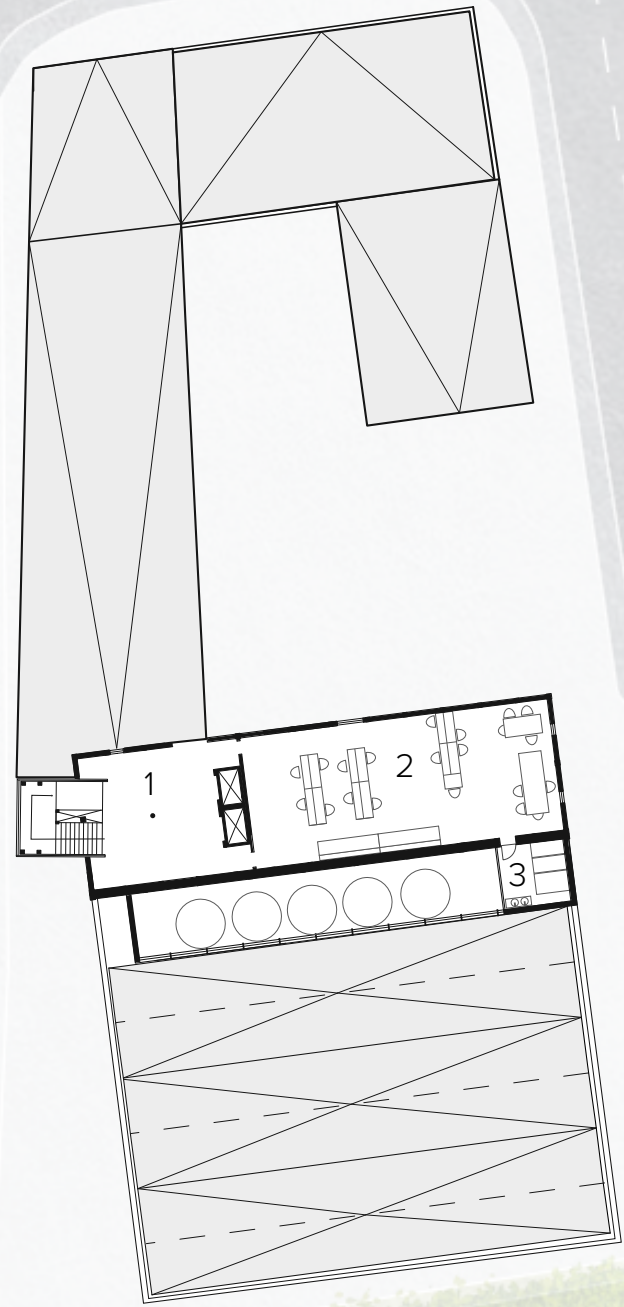


FIGURE 84 - Fourth Floor Plan.

25TH STREET

n
obby
k Counseling Office

HOLGATE STREET



C STREET

SOUNDER TRAIN

7.9 - Historic Threshold

As visitors approach the production greenhouse, they pass through the historic brewing tank room, reminding them of the tower's unique past. Featuring a row of giant steel brewing tanks, supported by exposed steel columns and beams, this room embodies the historical elements and the history of the building and Tacoma's surrounding Brewing District itself.

Including a greenhouse on the warehouse rooftop, a new chapter in the building's history is embraced, bringing the neighborhood together by providing services. With the prospect of water collection and storage, these tanks embody the continuous transition between past, present and future.

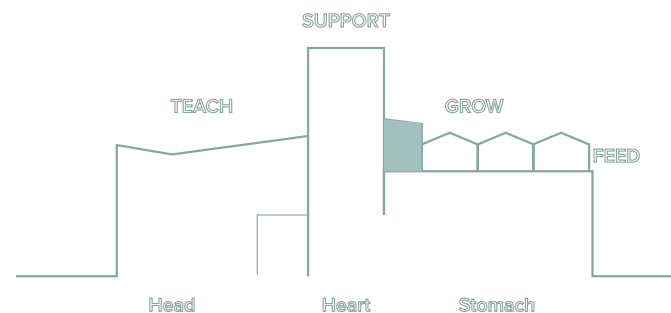


FIGURE 85 - View from Historic Tank Room into Greenhouse.



Conclusion

What began with the intention to study and expand upon Tacoma's food bank network, evolved in time into the design of the Pacific Food Center which serves a wide range of community members by providing access not only to emergency food options but also to long-term programs and support. The research to support this project began with a determination of the level of need in the City of Tacoma. With this beginning, the research documented and analyzed Tacoma's food bank network including the individual food banks and pantries, their services, and their facilities (including planning, circulation and storage capacity.) Case studies of programs in other cities, The Stop, The Redd, and the Refettorio Gastromotiva, provided an introduction to the possibilities for expansion of the existing network. As a result the proposed design addresses a wider array of community members such as local farmers, businesses, schools and urban growers.



FIGURE 86 - Exterior View from Holgate Street.



Conclusion

It is the belief that by including more members of the local community, the original intention of reducing food insecurity and providing long-term support and education programs to those in need will be all the more possible. The Pacific Food Center design provides a range of spaces (both flexible and programmed) to serve the widest range of community members. Thus, the Pacific Food Center accommodates the full Tier 3 program by adaptively reusing the existing Pacific Brewing and Malting buildings and providing a new learning Center in an addition. The Center integrates the food bank market space and associated counseling with local farmers' office spaces, classroom kitchens, and greenhouses. The design strengthens the food bank network in the city and the surrounding community in need. Fundamentally, this thesis focuses on people. While the design offers as much space as possible for programs and urban agriculture opportunities, it is the people of Tacoma who will shape the Pacific Food Center as it evolves.





Figure List

Figure 1 - View of Pacific Food Center from 25th Street.

Figure 2 - Pacific Food Center View from Holgate Street.

Figure 3 - Childhood Hunger in Tacoma.

Source: Making a Difference Foundation.

<https://themadf.org/eloises-cooking-pot/>

Figure 4 - Eloise's Cooking Pot Food Bank, Covid-19 Relief.

Source: Making a Difference Foundation.

<https://themadf.org/eloises-cooking-pot/>

Figure 5 - Community Food Pantries, Pierce County.

Source: Lakewood Beyond the Walls Project.

<https://buildingbeyondthewalls.org>

Figure 6 - Food is Free, Tacoma Nonprofit.

Source: Food is Free Tacoma

<https://foodisfree253.com>

Figure 7 - Giving Garden Program, Tacoma.

Source: Nicole Martinson, SouthSound Talk.

<http://www.southsoundtalk.com/2020/07/17/>

Figure 8 - Tacoma City Limits Map.

Figure 9 - Eloise's Cooking Pot Food Bank hot meal program.

Source: Making a Difference Foundation.

<https://themadf.org/eloises-cooking-pot/>

Figure 10 - St. Leo Food Connection, Tacoma.

Source: Food Connection

<https://foodconnection.org>

Figure 11 - FISH Food Bank Volunteer.

Source: The News Tribune

https://www.youtube.com/watch?v=VU_20VU-Jzs

Figure 12 - Nourish Mobile Food Bank Volunteer, Pierce County.

Source: Nourish Pierce County.

<https://nourishpc.org>

Figure 13 - Tacoma Brewery District.

Source: Shawna de la Rosa, South Sound Business.

<https://southsoundbiz.com/revitalization-is-brewing/>

Figure 14 - Hilltop Neighborhood, Tacoma.

Source: WikiWand.

https://www.wikiwand.com/en/Hilltop,_Tacoma,_Washington

Figure 15 - University of Washington Tacoma.

Source: UW Tacoma.

<https://www.tacoma.uw.edu/about-uw-tacoma>

Figure 16 - Tacoma Neighborhood Map

Figure 17 - Food Systems Mapping.

Source: Nourish.

<http://www.nourishlife.org>

Figure 18 - Pierce County Food Insecurity Statistic.

Adapted by author from Map the Meal Gap 2018 Study.

<https://map.feedingamerica.org/county/2018/overall/>

[washington/county/pierce](https://map.feedingamerica.org/county/2018/overall/washington/county/pierce)

Figure 19 - Tacoma's Need Calculations.

Adapted by author from Data USA and
End Hunger in America

<https://datausa.io/profile/geo/tacoma-wa/>

Figure 20 - Food Bank Location Mapping.

Figure 21 - Food Bank Typology Mapping.

Figure 22 - Food Bank Typology and Population in
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Source: Social Explorer.

Figure 23 - Food Bank Site Visit Diagrams.

Figure 24 - Food Bank Food Sources Diagram.

Adapted by author from Feeding America.

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Figure 25 - Standard Food Box Method.

Source: Feeding America

<https://www.feedingamerica.org/hunger-blog/>

Figure 26 - Client Choice Model.

Source: University District Food Bank

<https://www.udistrictfoodbank.org>

Figure 27 - Standard Food Box Layout Diagram

Figure 28 - Client Choice Layout Diagram

Figure 29 - Fresh Food Options.

Source: <http://www.foodgatherers.org/>

Figure 30 - Farm to Food Pantry Initiative.

Source: WSDA

<https://agr.wa.gov/services/food-access/>

Figure 31 - My Sister's Pantry Food Drive

<http://mysisterspantry.org>

Figure 32 - My Sister's Pantry Clothing Drive

<http://mysisterspantry.org>

Figure 33 - The Stop Complex Diagram.

Source: <https://www.thestop.org>

Figure 34 - The Redd Urban Context.

Source: <https://www.ecotrustevents.org/redd>

Figure 35 - Refettorio Gastromotiva Neighborhood Context.

Source: <https://gastromotiva.org/refettorio-gastromotiva/>

Figure 36 - The Stop Farmer's Market.

Source: <https://www.thestop.org/whats-on/>

Figure 37 - Community Gathering Space.

Source: <https://www.thestop.org/whats-on/1884-davenport/>

Figure 38 - Greenhouse and Gathering Spaces.

Source: <https://dtah.com/work/artscape-wychwood-barns>

Figure 39 - Overall Site Plan and Context.

Source: <https://dtah.com/work/artscape-wychwood-barns>

Figure 40 - The Redd East Plaza Exterior.

Source: <https://reddonsalmon.com/about/>

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Figure 41 - Main Hall and Event Space.

Source: <https://www.ecotrustedevents.org/redd>

Figure 42 - Community Test Kitchen Space.

Source: <https://www.ecotrustedevents.org/redd>

Figure 43 - Overall Site Plan and Programming Diagram

Source: <https://reddonsalmon.com/visit/>

Figure 44 - Exterior Context and Plaza.

Source: <https://www.archdaily.com/801230/refettorio-gastromotiva-metro-arquitetos>

Figure 45 - Main Dining Space.

Source: WSDA

<https://agr.wa.gov/services/food-access/>

Figure 46 - Classroom and Gathering Space.

Source: <https://www.foodforsoul.it>

Figure 47 - Gastromotiva Entry Space.

Source: <https://www.foodforsoul.it>

Figure 48 - The Redd East Building.

Source: <https://reddonsalmon.com/visit/>

Figure 49 - The Stop Exterior Space and Complex.

Source: <https://dtah.com/work/artscape-wychwood-barns>

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Figure 52 - Tier 1 Program Adjacency Diagram.

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Figure 85 - View from Historic Tank Room into Greenhouse.

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End Notes

1.0 - Intro

1. Emergency Food Network. “Food Pantries.” 2021.
<https://efoodnet.org/resources/food-banks/>

2.0 - Research

2. Data USA: Tacoma, Washington. “Housing and Poverty.” 2020.
<https://datausa.io/profile/geo/tacoma-wa#housing>
3. Black, J. L., & Seto, D. “Examining Patterns of Food Bank Use Over Twenty-Five Years in Vancouver, Canada.” Springer US, 31(5), 853–869. <https://doi.org/10.1007/s11266-018-0039-2>. 2018.
Rombach, M., Bitsch, V., Kang, E., & Ricchieri, F. “Comparing German and Italian food banks.” *British Food Journal*, 120(10), 2425–2438. 2018. <https://doi.org/10.1108/BFJ-11-2017-0626>
4. Dunkelberger, Steve. “The City of Destiny.” South Sound Talk. 2019.
<http://www.southsoundtalk.com/2015/03/19/city-of-destiny-tacoma/>
5. Data USA: Seattle, Washington. “Housing and Poverty.” 2020.
<https://datausa.io/profile/geo/seattle-wa>
6. Pierce County Human Services. “2020 Homeless Point-in-Time-Count” 2020.
<https://www.piercecountywa.gov/4719/Homeless-Point-in-Time-PIT-Count>
7. Pendergrast, T L, Smith II, Bobby J, Liebert, Jeffrey A, & Bezner Kerr, Rachel. “Introduction to the symposium: Rethinking food system transformation—food sovereignty, agroecology, food justice, community action and scholarship.” *Agriculture and Human Values*, 36(4), 819-823. 2019.
8. Feeding America. “What is Food Insecurity?” 2020.
<https://www.feedingamerica.org/hunger-in-america/food-insecurity>
9. Feeding America. “Food Insecurity in the United States” 2018.
<https://map.feedingamerica.org>
10. End Hunger in America. “Frequently Asked Questions” 2021.
<https://www.endhungerinamerica.org/publications/how-to-run-a-food-pantry/frequently-asked-questions/>

11. Currin, D. "OU student designs help Food Bank boost warehouse efficiency." Journal Record. 2004.

3.0 - Analysis: Tacoma Food Banks

12. Emergency Food Network. "Press Release" 2020.
<https://efoodnet.org/category/press-release/>
13. Emergency Food Network. "Statistics" 2020.
<https://efoodnet.org/about-us/stats/>
14. United States Census Bureau. "QuickFacts" 2020.
<https://www.census.gov/quickfacts/tacomacitywashington>
15. Hecht, Amelie et al. "Urban Food Supply Chain Resilience of Crises Threatening Food Security: A Qualitative Study." JAND Online. 2018
16. End Hunger in America. "Chapter 5: Distribution Models."
<https://www.endhungerinamerica.org/publications/how-to-run-a-food-pantry/chapter-5-distribution-models/>

4.0 - Case Study Analysis

17. The Stop. "What we do: Impact" 2020.
<https://www.thestop.org/what-we-do/impact/>
18. The Redd. "Visit" 2020.
<https://reddonsalmon.com/visit/>
The Redd. "Project: Redd on Salmon Street" EcoTrust. 2020.
<https://ecotrust.org/project/the-redd-on-salmon-street/>
19. Food for Soul. "Our Impact" 2020.
<https://www.foodforsoul.it/about-us/our-impact/>

5.0 - Program Types

20. WSDA. "Farm to Food Pantry Initiative" 2021.
<https://agr.wa.gov/services/food-access/programs-and-services/farm-to-food-pantry-initiative>

End Notes

6.0 - Site Analysis

21. Pacific Brewing and Malting Co. "History" 2020.
<https://pacificbrewingandmalting.com/#history>
22. Tacoma Rescue Mission. "What we do" 2020.
<https://www.trm.org/what-we-do/>

Bibliography

- Black, J. L., & Seto, D. "Examining Patterns of Food Bank Use Over Twenty-Five Years in Vancouver, Canada." Springer US, 31(5), 853–869. <https://doi.org/10.1007/s11266-018-0039-2>. 2018.
- Currin, D. "OU student designs help Food Bank boost warehouse efficiency." Journal Record. 2004.
- Data USA: Seattle, Washington. "Housing and Poverty." 2020.
<https://datausa.io/profile/geo/seattle-wa>
- Data USA: Tacoma, Washington. "Housing and Poverty." 2020.
<https://datausa.io/profile/geo/tacoma-wa#housing>
- Dunkelberger, Steve. "The City of Destiny." South Sound Talk. 2019.
<http://www.southsoundtalk.com/2015/03/19/city-of-destiny-tacoma/>
- Emergency Food Network. "Food Pantries." 2021.
<https://efoodnet.org/resources/food-banks/>
- Emergency Food Network. "Press Release" 2020.
<https://efoodnet.org/category/press-release/>
- Emergency Food Network. "Statistics" 2020.
<https://efoodnet.org/about-us/stats/>
- End Hunger in America. "Frequently Asked Questions" 2021.
<https://www.endhungerinamerica.org/publications/how-to-run-a-food-pantry/frequently-asked-questions/>
- End Hunger in America. "Chapter 5: Distribution Models."
<https://www.endhungerinamerica.org/publications/how-to-run-a-food-pantry/chapter-5-distribution-models/>
- Feeding America. "Food Insecurity in the United States" 2018.
<https://map.feedingamerica.org>
- Feeding America. "What is Food Insecurity?" 2020.
<https://www.feedingamerica.org/hunger-in-america/food-insecurity>
- Food for Soul. "Our Impact" 2020.
<https://www.foodforsoul.it/about-us/our-impact/>

- Gonzalez-Torre, P., & Coque, J. “How is a food bank managed? Different profiles in Spain.” *Agriculture and Human Values*, 33(1), 89–100. 2015. <https://doi.org/10.1007/s10460-015-9595-x>.
- Hecht, Amelie et al. “Urban Food Supply Chain Resilience of Crises Threatening Food Security: A Qualitative Study.” *JAND Online*. 2018
- Henne, Becky. “Client-Choice Food Pantry Model Reduces Food Waste and Improves Food Distribution. MSU. 2013. https://www.canr.msu.edu/news/client_choice_food_pantry_model_food_waste_improves_food_distribution
- Holmes, E., Black, J. L., Heckelman, A., Lear, S. A., Seto, D., Fowokan, A., & Wittman, H. “Nothing is going to change three months from now”: A mixed methods characterization of food bank use in Greater Vancouver. *Social Science & Medicine*, 200, 129–136. 2018.
- Pacific Brewing and Malting Co. “History” 2020. <https://pacificbrewingandmalting.com/#history>
- Pendergrast, T L, Smith II, Bobby J, Liebert, Jeffrey A, & Bezner Kerr, Rachel. “Introduction to the symposium: Rethinking food system transformation—food sovereignty, agroecology, food justice, community action and scholarship.” *Agriculture and Human Values*, 36(4), 819-823. 2019.
- Pierce County Human Services. “2020 Homeless Point-in-Time-Count” 2020. <https://www.piercecountywa.gov/4719/Homeless-Point-in-Time-PIT-Count>
- Rombach, M., Bitsch, V., Kang, E., & Ricchieri, F. “Comparing German and Italian food banks.” *British Food Journal*, 120(10), 2425–2438. 2018. <https://doi.org/10.1108/BFJ-11-2017-0626>
- The Redd. “Project: Redd on Salmon Street” EcoTrust. 2020. <https://ecotrust.org/project/the-redd-on-salmon-street/>
- The Redd. “Visit” 2020. <https://reddonsalmon.com/visit/>
- The Stop. “What we do: Impact” 2020. <https://www.thestop.org/what-we-do/impact/>
- Tacoma Rescue Mission. “What we do” 2020. <https://www.trm.org/what-we-do/>
- United States Census Bureau. “QuickFacts” 2020. <https://www.census.gov/quickfacts/tacomacitywashington>