

# THE FARMSTEAD

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200 OCCIDENTAL AVENUE

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Building  
Farm + Kitchen  
Food Market  
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Apartments

# INTRODUCTION

## PROJECT PARAMETERS

### Inter-generational Living:

Intergenerational living is a form of living that encourages people from different generations to live together in a mutually supportive way. The ideal is to create a sustainable model of living where people of all ages can grow together. The project parameters include designing mixed use urban housing in downtown Seattle.

### Site Location:

The site is located in the historic Pioneer Square District of downtown Seattle, Washington. Adjacent to the site on the west side sits Occidental Park, a large open plaza space that is home to weekly and monthly community events. The district is well known as an artist community and is comprised of four to six story brick buildings retrofitted to house modern day retail, offices, restaurants, and galleries. To the north of Pioneer Square are the skyscrapers of downtown, to the west is the large bay area of Puget Sound, to the south are the professional baseball and football stadiums, and to the east is the International District.



Images from Google Earth

## VISION STATEMENT:

Designing a sustainable living environment that improves the quality of life of its occupants in order to create a flourishing inter-generational community.

## 5 GUIDING PRINCIPLES: At Various Levels of Scale



Improve Quality of Life



Promote Lively Environments



Foster Supportive Relationships

## BACKGROUND: My Intergenerational Home



### Family

#### Benefits:

Supportive Relationship  
Shared Wisdom

#### Problems:

Inability to Provide Care Needed

### Grandma

#### Benefits:

Active Environment  
Supportive Relationships  
Quality Care

#### Problems:

Inability to Age in Place  
Inactive Lifestyle

My grandma lived with my family of seven for eight years before she moved into an assisted living community. She had her own apartment which was connected to our family kitchen, the most active and lively part of our home. She spent half of her time with our family and was invited to our family dinner every night. The arrangement was mutually supportive and very successful. Grandma always talked about how she loved living in our home, and we loved having her. Unfortunately, as she aged there were problems that that began to keep her from a healthy supported lifestyle.



Engage Surrounding Area



Encourage Active Lifestyles

# RESEARCH FOCUS

## ABSTRACT:

### Food for Thought:

Improving the Quality of Life for Inter-Generational Living through Design



Growing, preparing, and consuming are three facets of food that contribute to enhancing inter-generational community living. Food has the ability to operate as a tool for increasing the health of individuals, communities, cities and even regions. It can bring vitality and conviviality to urban life encouraging social exchange and interaction (Franck, 2005).

This research explores the three facets of food; growing preparing, and sharing; through literature review of concepts and ideas that contribute to the designed environment. Each study is then analyzed using psychologist Abraham Maslow's study of the hierarchy of human needs for individual generations as well as a mixed group of generations. Maslow's study identifies the necessary elements that increase human satisfaction. In an example of this study, Love and Belonging, one of Maslow's needs, can be achieved by a study shown to have improved relationships by eating dinner together every night for people of all ages. From this exploration and analysis, one can determine design elements and/or design solutions for inter-generational community living that improve the quality of life.

The significance of this research is to provide designers with a tool that can be used to promote healthy environments that strengthen community life for inter-generational living and provide opportunities for multiple generations to grow and flourish together.

## METHOD:

### Hierarchy of Human Needs

In psychologist Abraham Maslow's Theory of Human Motivation, he states that there are five categories of basic human needs. The idea is that starting with the satisfaction of the lowest level of needs (Physiological) the next category of needs emerges (Safety) until all the needs are met. He makes the claim that, "People who are satisfied in these needs are satisfied people."

1. Self Actualization - the need to become every thing that one is capable of
2. Esteem - the need for recognition, attention, importance, appreciation
3. Love & Belonging - the need for affection
4. Safety - the need for safety, order, predicablility
5. Physiological - the need to maintain homeostasis



#### Works Cited:

Franck, Karen A. Food + Architecture. Chichester, West Sussex: Wiley-Academy, 2002. Print.  
Franck, Karen A. Food + the City. Chichester: Wiley-Academy, 2005. Print.  
Maslow, A. H. "A Theory of Human Motivation." Psychological Review 50.4 (1943): 370-96. Print.

METHOD: CONTINUED

Two Questions

- 1 How can different facets of food satisfy Maslow's needs?
- 2 How can the built environment satisfy Maslow's needs?

Framework for Solution



FINDINGS:

Self-Actualization



Improvement: fulfillment and pursuing inner talent  
 Facet of Food: entrepreneurship, economics, socialization  
 Case Study: Pike Place Market, Seattle  
 Designed Environment: Food Market

Safety



Improvement: stability, freedom from fear, health  
 Facet of Food: service, nutrition, health, socialization  
 Case Study: Meals on Wheels Program  
 Designed Environment: In-House Food Delivery

Esteem



Improvement: achievement, respect for/by others, self-confidence, recognition  
 Facet of Food: socialization, preparation, education  
 Case Study: Le Cordon Bleu  
 Designed Environment: Classroom Kitchen

Physiological



Improvement: food, strength, health  
 Facet of Food: production, health  
 Case Study: The Peterson Garden Project, Chicago  
 Designed Environment: Vegetable Garden

Love/Belonging



Improvement: friendship, family  
 Facet of Food: socialization  
 Case Study: Ronald McDonald Houses of Chicago  
 Designed Environment: Community Dining

Sources:

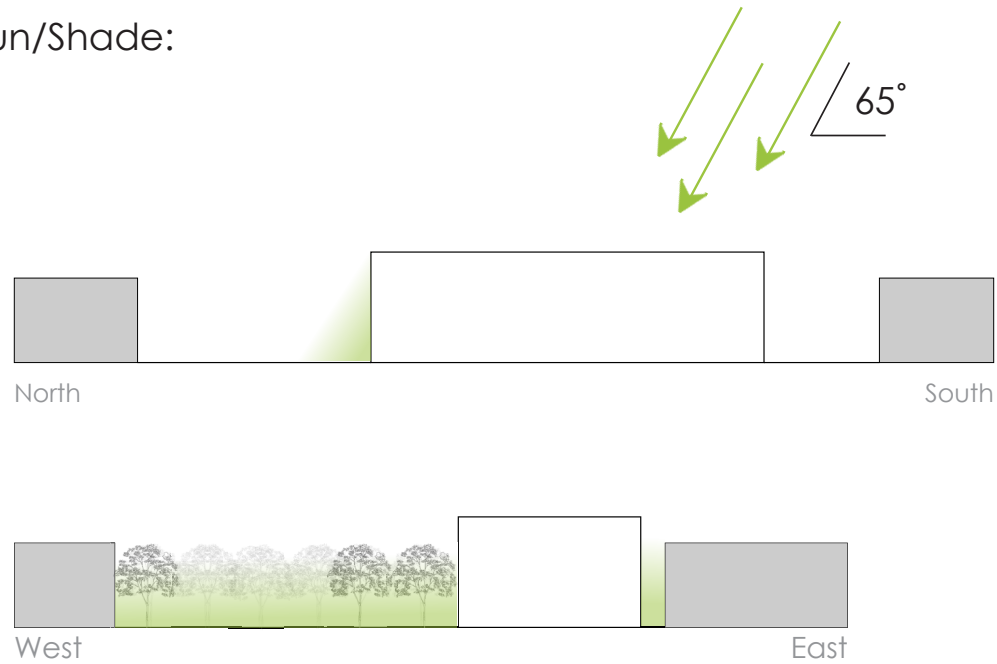
<http://www.pikeplacemarket.org/>  
<http://www.chefs.edu/Programs/Chefs-Series>  
<http://rmhccni.org/meals-lurie/>

<http://www.mowaa.org/about>  
<http://www.petersongarden.org/index.html>

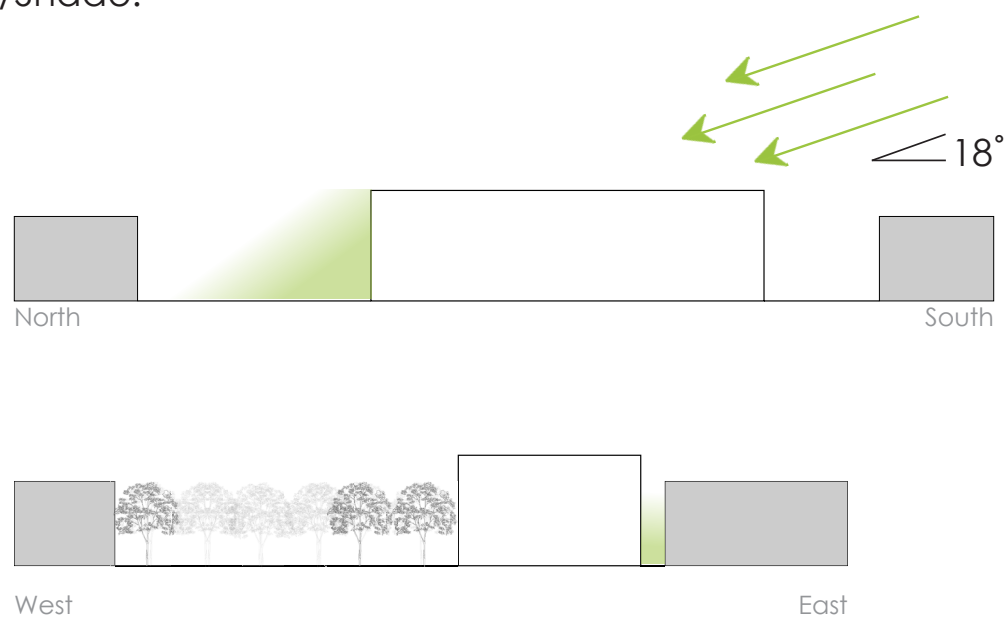
# GENERATIVE FORCES

## BIOCLIMATIC CONDITIONS:

Summer Sun/Shade:



Winter Sun/Shade:



Pacific Northwest Growable Produce:

94 Different Fruits and Vegetables

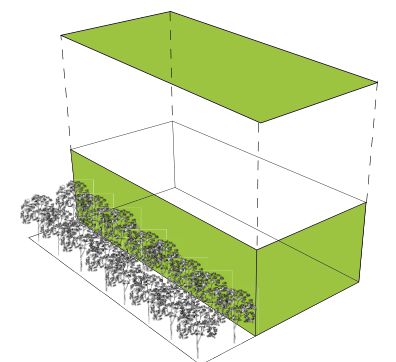
Cloud Cover:

55% Cloudy Days

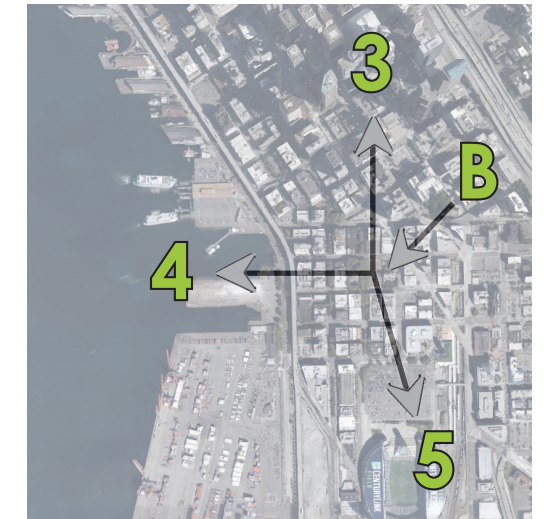
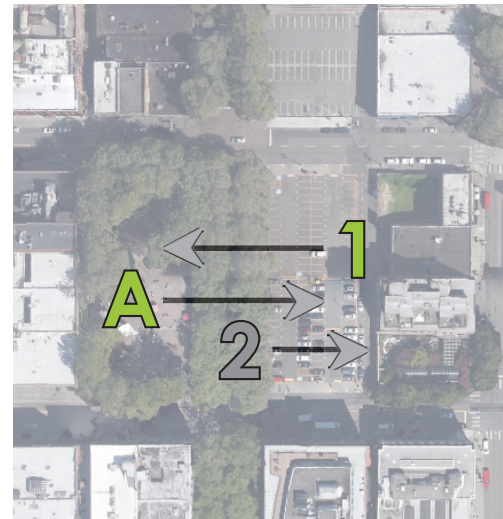
Form Generated:

Accessing Sun/Natural Light

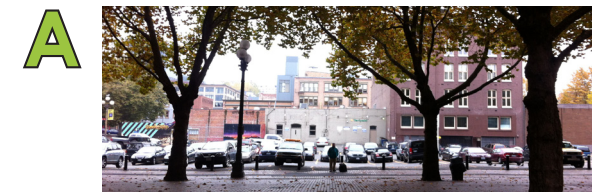
The highlighted areas show the surfaces of the building that receive the most amount of natural daylighting



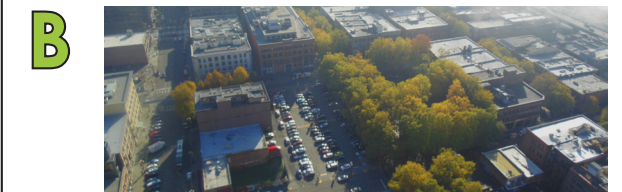
SITE CONDITIONS:



Views to Site:

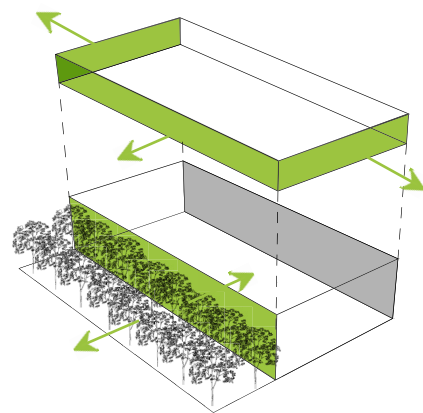


From Occidental Park



From Smith Tower

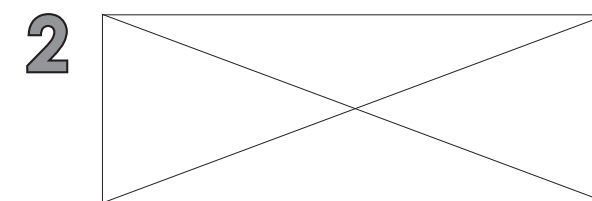
Generated Form:  
Framing Views



Views from Site:



Occidental Park



View into Alley



Downtown Seattle



Puget Sound



Stadium/Mt. Rainier



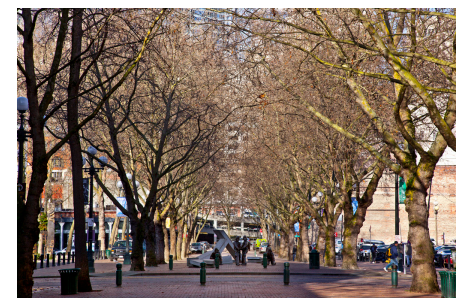
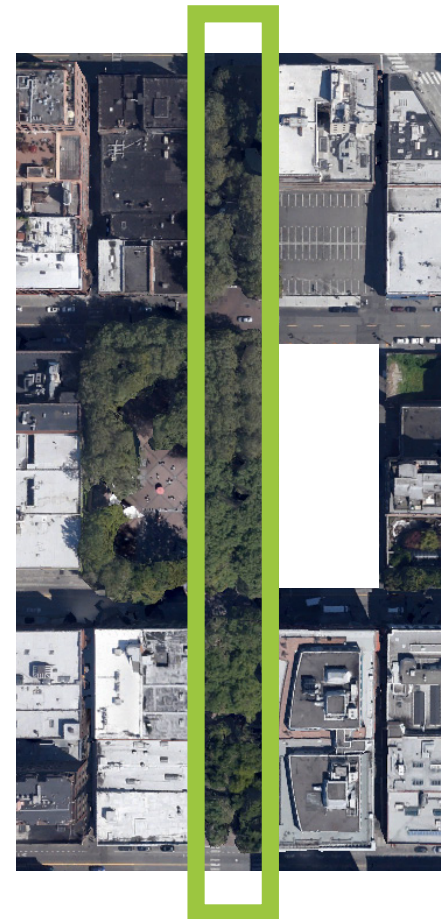
SITE CONTEXT:

Existing Amenities:



Groceries\_2 **small scale/uninviting**  
Restaurants\_30+ **established food area**  
Schools\_0 **no place for children/teens**  
Fitness Centers\_1 **only one option**  
Galleries\_15+ **artist community**  
Hotels\_2 **3 Star**

Park Defining Edge:



pedestrian view

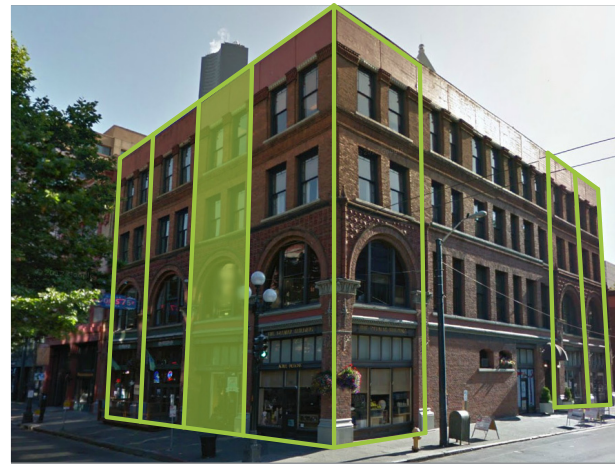
SITE CONTEXT: CONTINUED

Urban Condition: Historic District



block form

height - 60ft  
levels - 4



bay repetition

width - 16ft

PRECEDENT:

Design Concepts

1. Community Garden

Willowsford Farm  
Ashburn, Virginia

farmed land + food stand + cooking classes

2. Visiting Chef Restaurant

Gather by D'Amico  
Minneapolis, Minnesota

visiting chef + museum restaurant

3. Campus Restaurant

Cultivate  
University of Washington

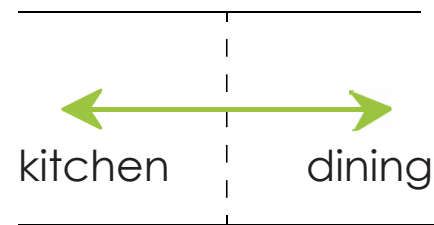
student gardens + campus restaurant

PRECEDENTS: CONTINUED

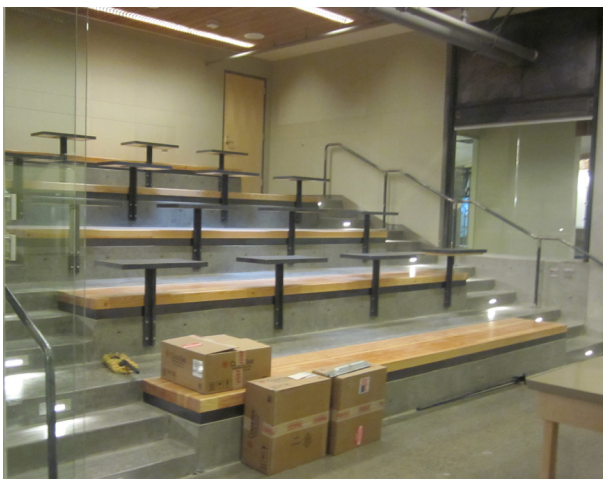
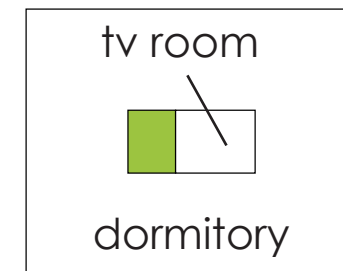
Designed Environments



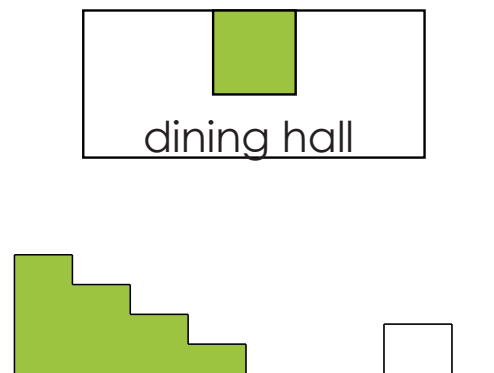
1. Chef's Kitchen Restaurant  
Bar Sajor  
Pioneer Square District, Seattle



3. Communal Kitchen  
Alder Hall Dormitory  
University of Washington



2. Classroom Kitchen  
Dormitory Dining Hall  
University of Washington



4. Multi-service Kitchen  
Seniorenresidenz Spirgarten  
Zurich, Switzerland



# BUILDING COMPONENTS

## PROGRAM/CLIENT:

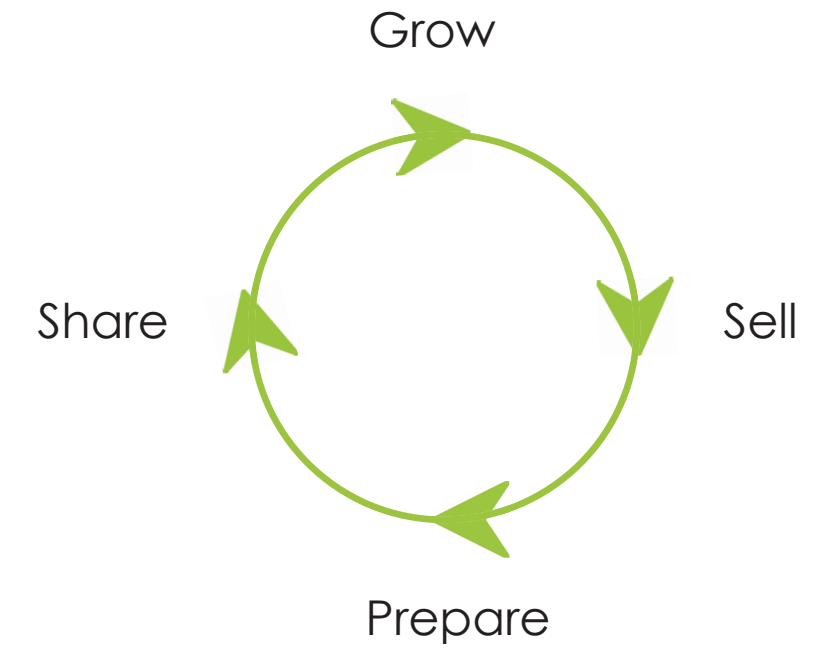
### Program from Generative Forces

The building program is formed through the compilation and simplification of the program generated by the generative forces. The program is further developed to produce a building concept.

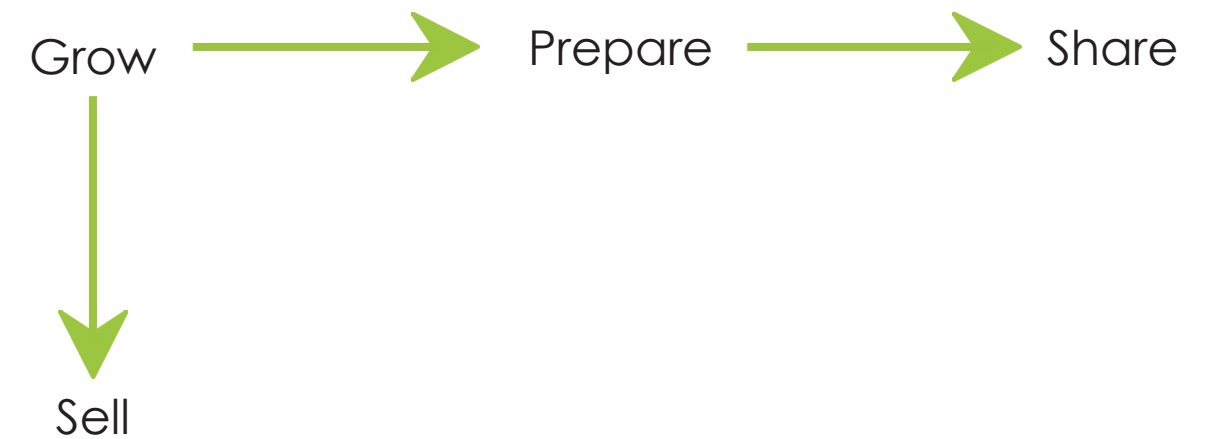
<ul style="list-style-type: none"> <li>- Student Garden Service</li> <li>- Vegetable Garden</li> </ul>	Community Vegetable Garden and Service	Grow
<ul style="list-style-type: none"> <li>- Food Market</li> <li>- Farm Stand</li> <li>- Small Grocery</li> </ul>	Farm Stand Market	Sell
<ul style="list-style-type: none"> <li>- Visiting Chef</li> <li>- Classroom Kitchen</li> </ul>	Visiting Chef Classroom	Prepare
<ul style="list-style-type: none"> <li>- Restaurant</li> <li>- Open Kitchen</li> <li>- Multi-Service Kitchen</li> <li>- In-House Food Delivery</li> </ul>	Open Multi-Service Restaurant Kitchen	
<ul style="list-style-type: none"> <li>- Community Dining</li> <li>- Communal Kitchen</li> </ul>	Building Community Food Area	Share
<ul style="list-style-type: none"> <li>- Small Fitness Center</li> </ul>	Small Fitness Center	

## Development of Concept:

1.



2.



PROGRAM/CLIENT: CONTINUED

Inter-generational Community



Babyboomers/Empty Nesters



Elderly Couples



Single Elderly/Assisted

Residents

R



Chef



Culinary Students



Farmers

Chef

C

Students

S

Farmers

F

Community Benefits:

R

S

C

F

- opportunity to downsize
- community meals
- prepared meals
- ability to age in place
- cook with chef/ garden with farmers
- farmers market

- residency program opportunity
- community meals
- garden with farmers
- farmers market

- own restaurant
- fresh/on-site ingredients
- open kitchen
- residency program

- own business
- no plant shading
- full access to sunlight
- unique opportunity within city
- business office

\* Members that live in Community

Community Support:



Grows Food for

Shares Knowledge with

Provides Meals for

Shares Community with

Provides Labor for

Gives Financial Stability to

## PROGRAM/CLIENT: CONTINUED

### Program + Client

#### Farm:

The Farm will not only house the plant beds for the growing of produce for the market and kitchen, but also offer an element of fitness for the residents. There must be ample access to sunlight with minimal amounts of shade for the growing of both fruits and vegetables.

#### Market:

The Market will use the majority of the annual produce from the farm and will be run by the farm business. This space should be easily accessible to the public, both physically and visually. There also should be a few small scale kitchenette stalls for temporary sales of cooked produce provided by local community members or volunteers.

#### Kitchen:

The Kitchen is a transformative space that acts as a restaurant, classroom, and service kitchen depending on the time of day or day of the week. This is where a portion of the fresh produce will be transformed into healthy, mouthwatering meals by the owner chef. The restaurant portion of the kitchen will be open to the public during the lunch hour offering an interactive experience for both the chefs and guests with an open kitchen design. After the lunch hour the kitchen transforms into a service kitchen, with culinary students and chefs preparing daily dinners for the building residents. Lastly the chef will have the opportunity to offer cooking classes to the public, teaching and promoting healthy ways of eating.

#### Family Rooms:

The Family Rooms are located within the residential realm to bring the residents out of their individual apartments to socialize with other members of the community. Each family room will have a dining portion and a living portion. The dining portion is important because dinner will be served by the culinary students on a nightly basis, giving the residents a daily opportunity to interact with each other as well as eat a healthy meal. The living portion should offer a relaxing place to sit down and relax as well as offer access to the outdoors.

#### Resident Apartments:

The Resident Apartments should provide flexibility in order to accommodate an aging population and should be adjacent to a Family Room. Each apartment will have a small scale kitchen to encourage community dining for the major meal of the day. Additionally, each apartment should have access to private out space.

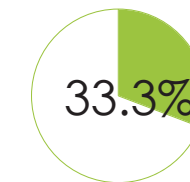
#### Student Dormitory Apartments:

The Student Dormitory Apartments will house multiple culinary students within one apartment. Each student will have their own room and bathroom with a shared kitchen. To encourage more use of the Family Room space, the Student Dormitory Apartment will not have a living room space.

### Building SF Study

Total Space: Maximum

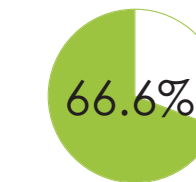
26,880sf x 6 levels =  
**161,280sf**



Public Space: Maximum Values

26,880sf x 2 levels =  
**53,760 sf**

Site:  
26,880sf



Private Space: Maximum Values

26,880sf x 4 levels = 107,520sf - 10% circulation =  
**96,768 sf**  
96,768sf / 1000sf per unit =  
**96 units (24 units per level)**  
96 units x approx. 2 residents per unit =  
**192 residents**

PROGRAM/CLIENT: CONTINUED

Analysis of Program: Farm

Location Study:



SF:

Required Plot Size: daily serving of fruits and vegetables for 1 person for 1 year = **100 sf plot**  
 Annual Servings: daily serving for 1 person x 365 days = **365 servings per person = 365 servings per plot**  
 Full Site Potential: (26,880 sf site - 10% circulation) / 100 sf plot = **240 plots = 240 servings per day**

Program Needs:

Daily Community Dinners

240 servings per day - **100 daily servings for community dinners** (approx.) = 140

Chef's Restaurant

140 daily servings leftover - **70 daily servings for restaurant** (approx.) = 70

Food Market

70 daily servings leftover = **70 daily servings for food market**

Analysis of Program: Market

Location Study:



SF:

Supermarket Data:

Wall Unit for fruits and vegetables (with two shelves):

Supermarket Size (entire store)	Small up to 4200 sf	Medium 5300 sf - 6400 sf	Large 10,100 sf - 20,000 sf
Length of Wall Units	21 ft (16ft - 26ft)	24 ft (22ft - 26ft)	<b>35 ft (30ft - 41ft)</b>

Analysis of Program: Family Room

Location Study:



SF:

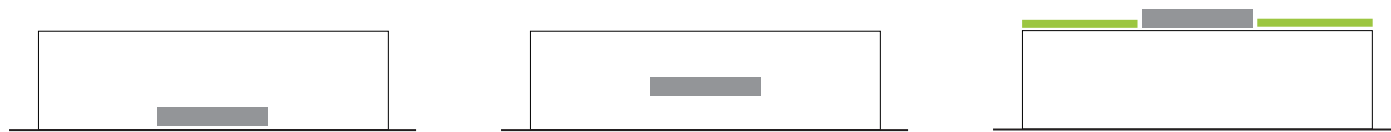
Total Space Required for Dining Room

1.4 - 1.6 m sq / place at the table = **4.5 - 5.2 ft sq / place at the table**

PROGRAM/CLIENT: CONTINUED

Analysis of Program: Kitchen

Location Study:



SF:

Analysis for a Small Restaurant (<100)

Kitchen Area	0.60 - 0.80	+	sf for cooking classes
Supplies/Waste Disposal	0.15 - 0.21		
Chilled Goods Storage	0.04 - 0.31		
Ambient Storage	0.25 - 0.31		
Dishwasher	0.10 - 0.12		
Staff Equipment	0.4 - 0.58		
<b>Total</b>	<b>1.6 - 2.1 m sq / person = 5 - 6.5 ft sq / person</b>		

Analysis of Program: Resident/Student Apartments

Location Study: Adjacent to Family Rooms



SF:

Small Kitchen

Single Counter Kitchen: Length = 1.9 + 3 + 1.9 + 1.9 + 1 = **approx. 10 ft**

Dining Area Required Space: 2.6 m sq for four diners = 8 sf per four people = **2 sf per person**

Bedroom: **2.5 clearance around bed**

Bathrooms: **ADA accessible**

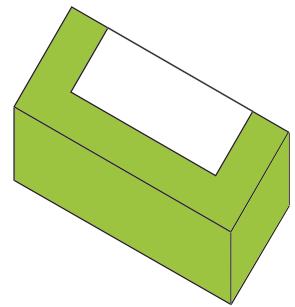
Works Cited:

Neufert, Ernst, Peter ,. Neufert, and Johannes Kister. Architects' Data. Chichester, West Sussex, UK: Wiley-Blackwell, 2012. Print.

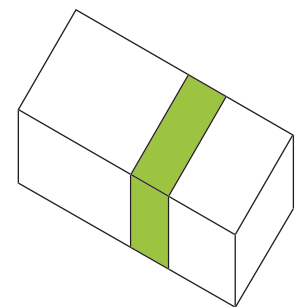


ORGANIZATION/FORM:

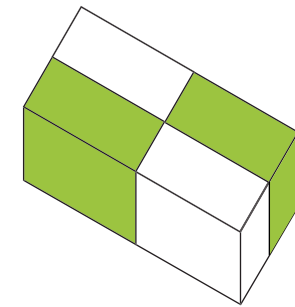
3 Schemes



the "U"

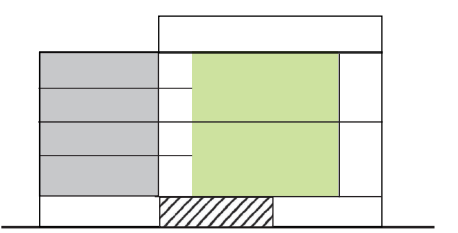
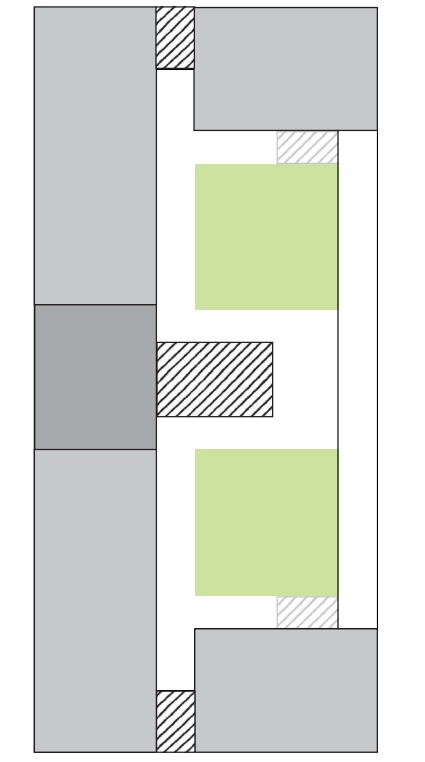
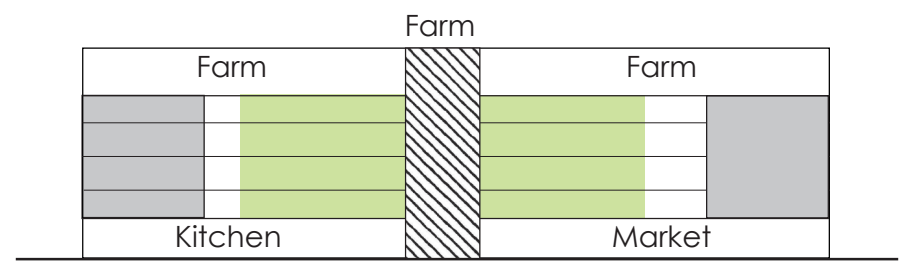
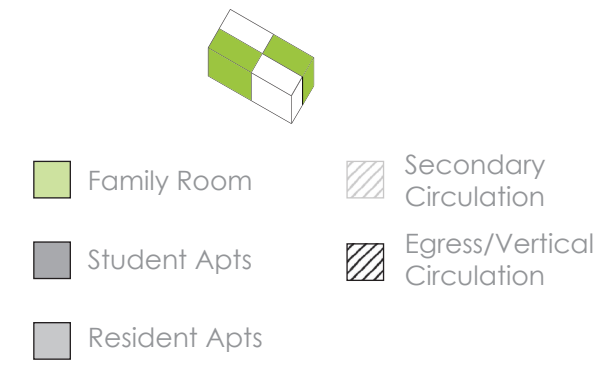


the "LINK"

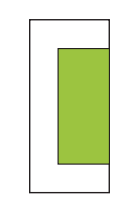


the "REVERSE"

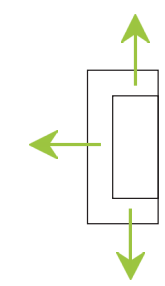
Scheme 1: the "U"



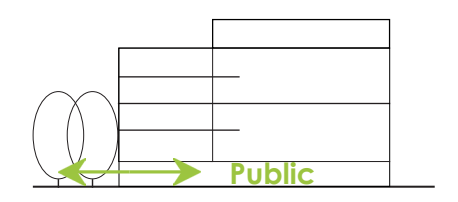
Centralized Community Space:



Units Face Away from Alley:



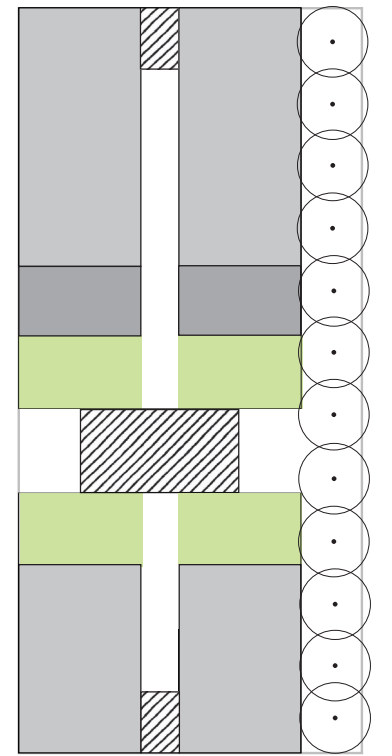
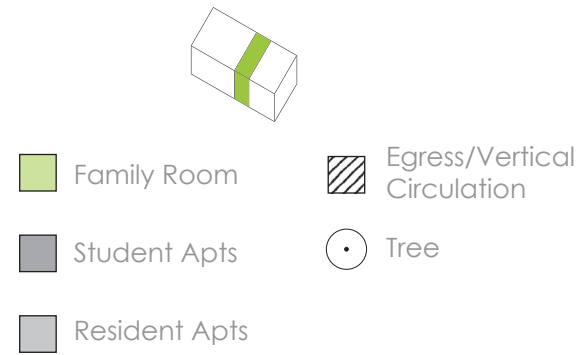
Responds to Park:



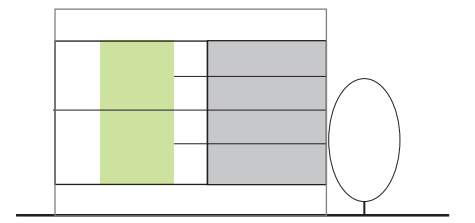
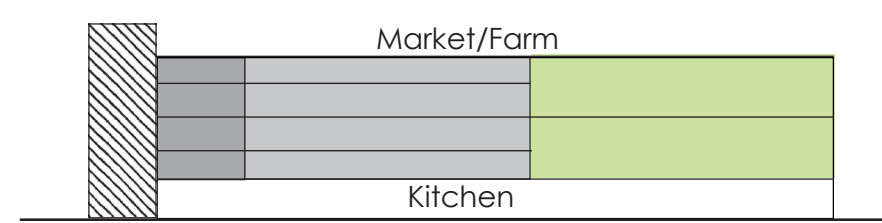
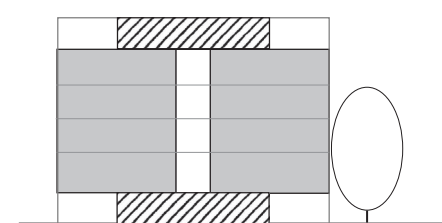
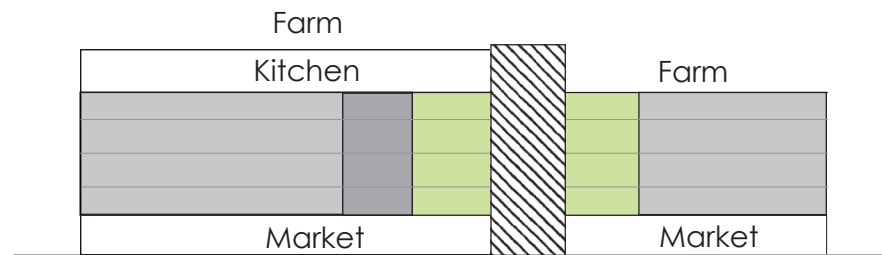
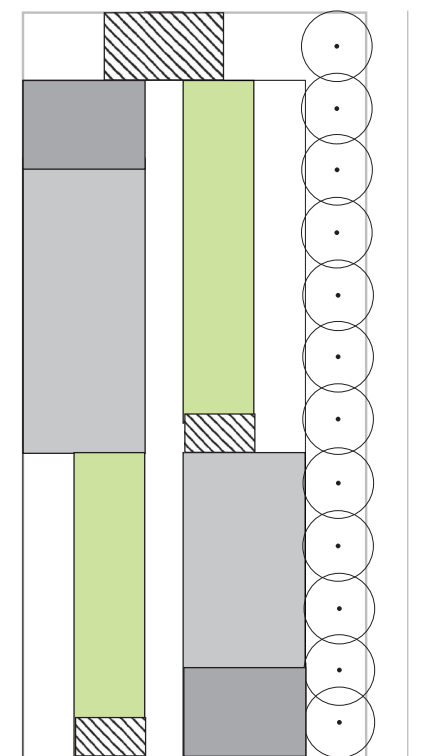
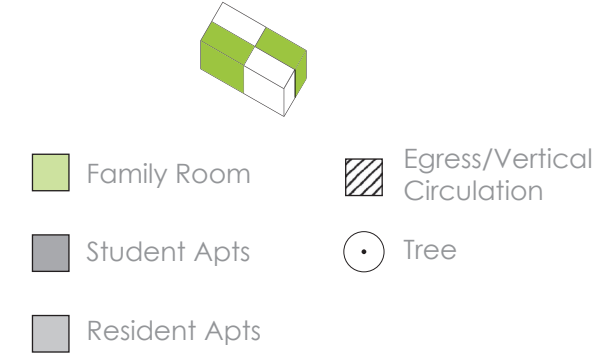
THE FARMSTEAD

# ORGANIZATION/FORM: CONTINUED

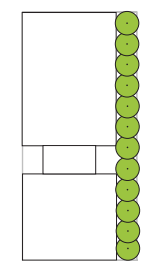
## Scheme 2: the "LINK"



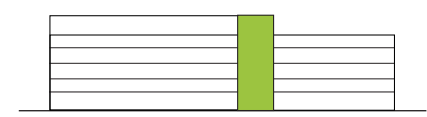
## Scheme 3: the "REVERSE"



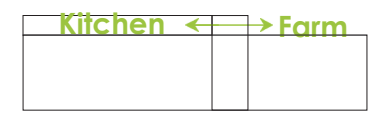
Alley View Buffer:



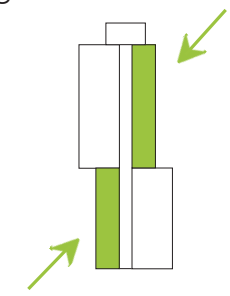
Visual/Physical Link between Produce and Market:



Kitchen Adjacent to Farm:



Engaged Corners:



Program Transparency:



Separated from Private Realm:



## CONSTRUCTION/MATERIALS:



### Mosler Lofts

---

Architect: Mithun Architects

Location: Seattle

Construction:

- concrete foundation
- steel structure

Materiality:

- brick veneer
- stone veneer
- steel
- glass

Note: LEED Silver



### Perkins+Will's Atlanta Office

---

Architect: Perkins + Will

Location: Seattle

Construction:

- concrete foundation
- cast-in-place concrete
- steel structure

Materiality:

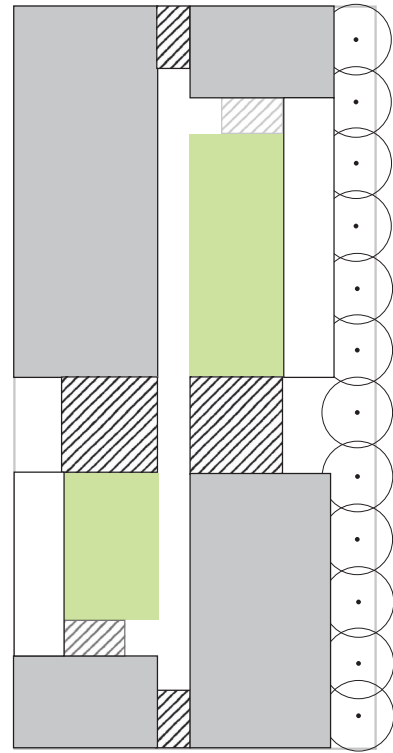
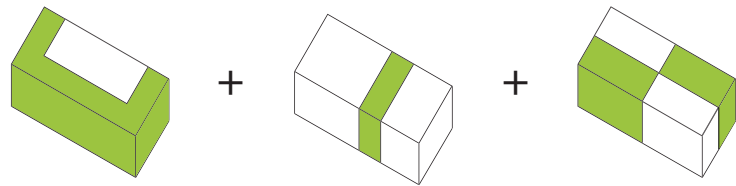
- concrete
- steel
- glass

Note: LEED Platinum

# SCHEMATIC PROPOSAL

## BUILDING

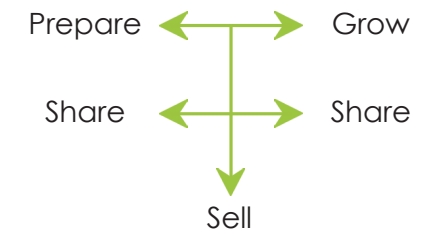
3 Schemes in 1:



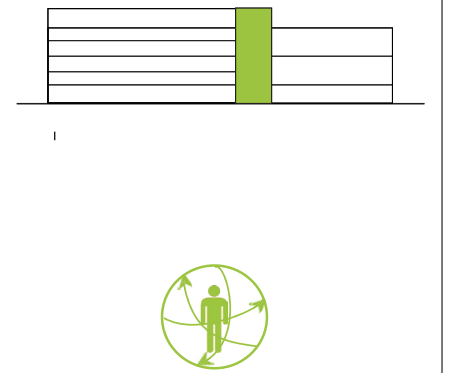
"Link" with "Reversed U":



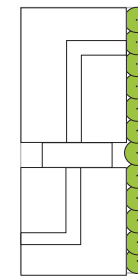
Food Concept:



Visual/Physical Link between Produce and Market:



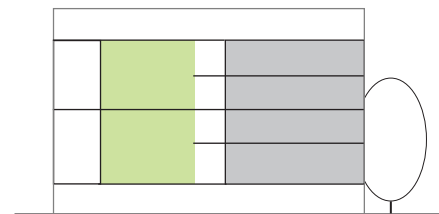
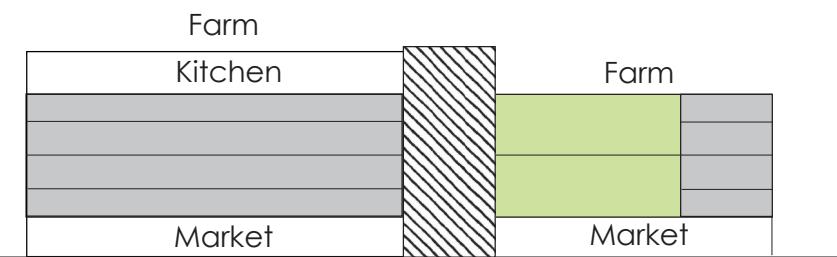
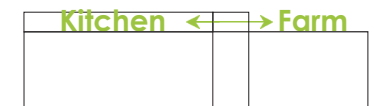
Alley View Buffer:



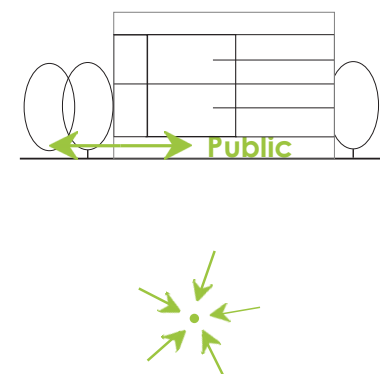
Program Transparency:



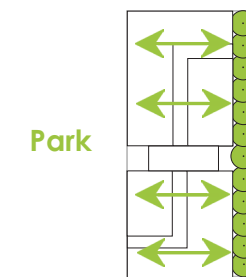
Kitchen Adjacent to Farm:



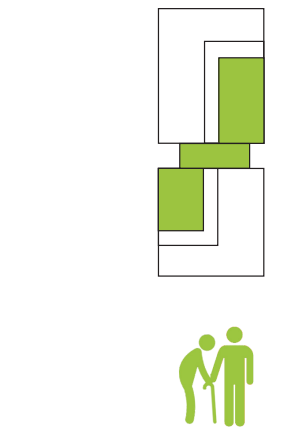
Responds to Park:



Views to Nature:

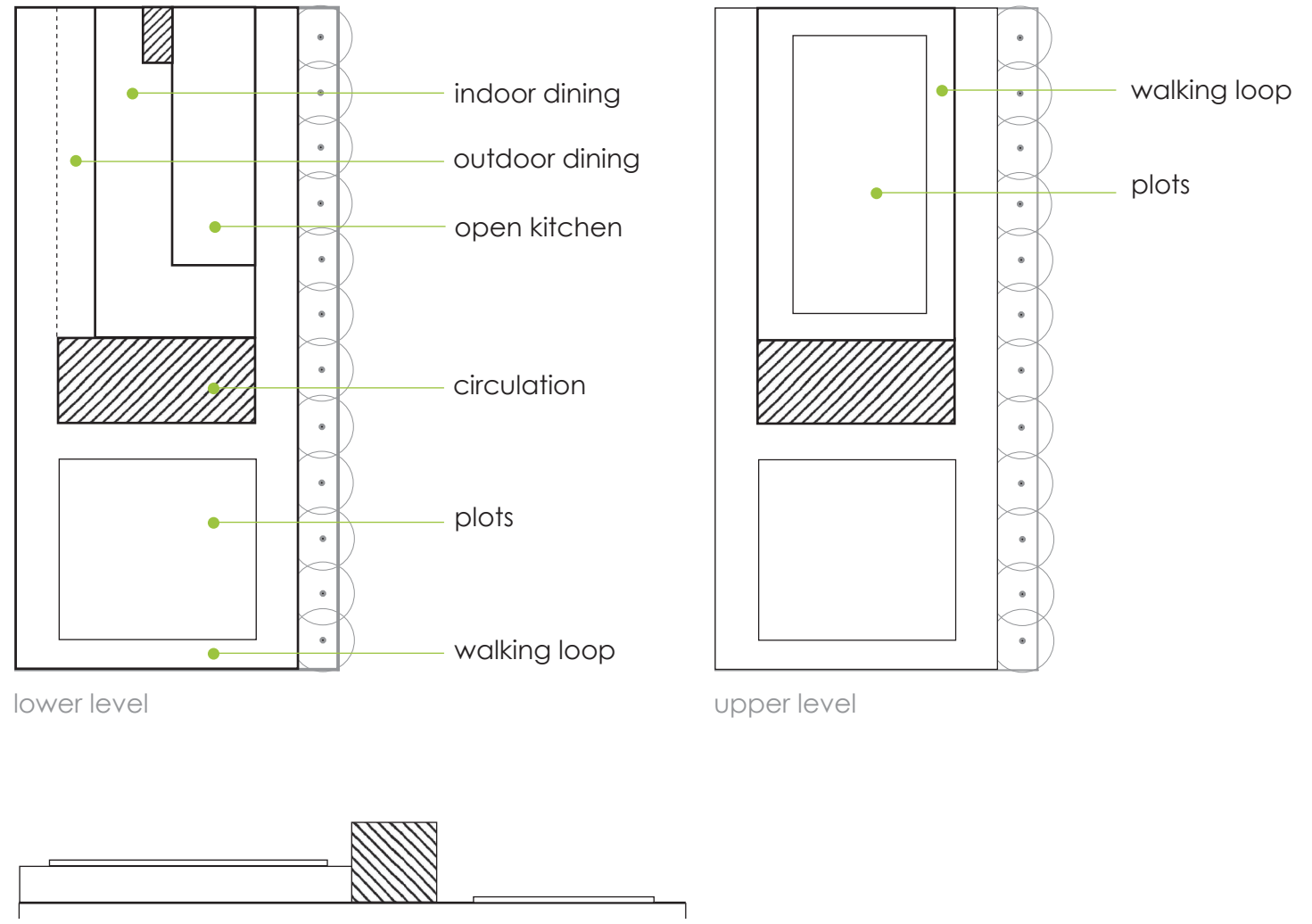


Centralized Community Space:



- Family Room
- Secondary Circulation
- Student Apts
- Egress/Vertical Circulation
- Resident Apts
- Tree

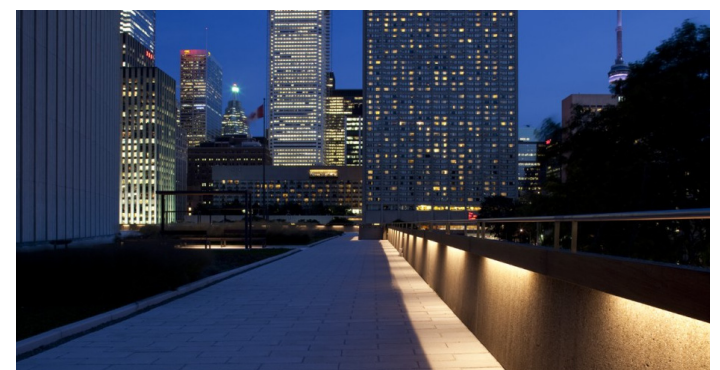
# FARM + KITCHEN



Outdoor Dining  
200 Occidental  
Mithun Architects



Rooftop Vegetable Garden  
Gary Comer Youth Center  
Hoerr Schaudt Landscape Architects

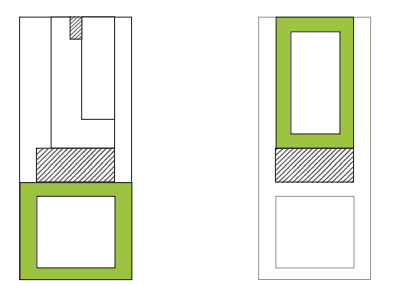


Walking Loop  
NPS Podium Roof Garden  
PLANT Architect & Perkins+Will Canada

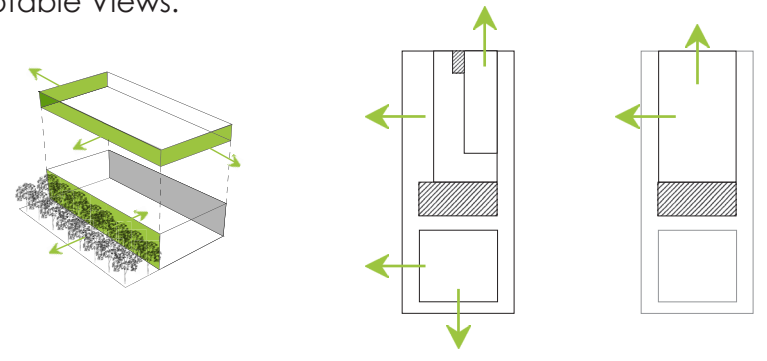


Open Kitchen  
Sailendra Restaurant - JW Marriott Hotel

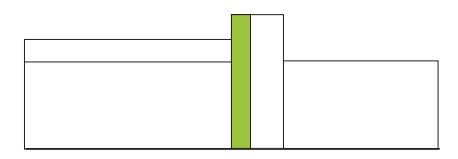
Encourage Exercise:



Notable Views:

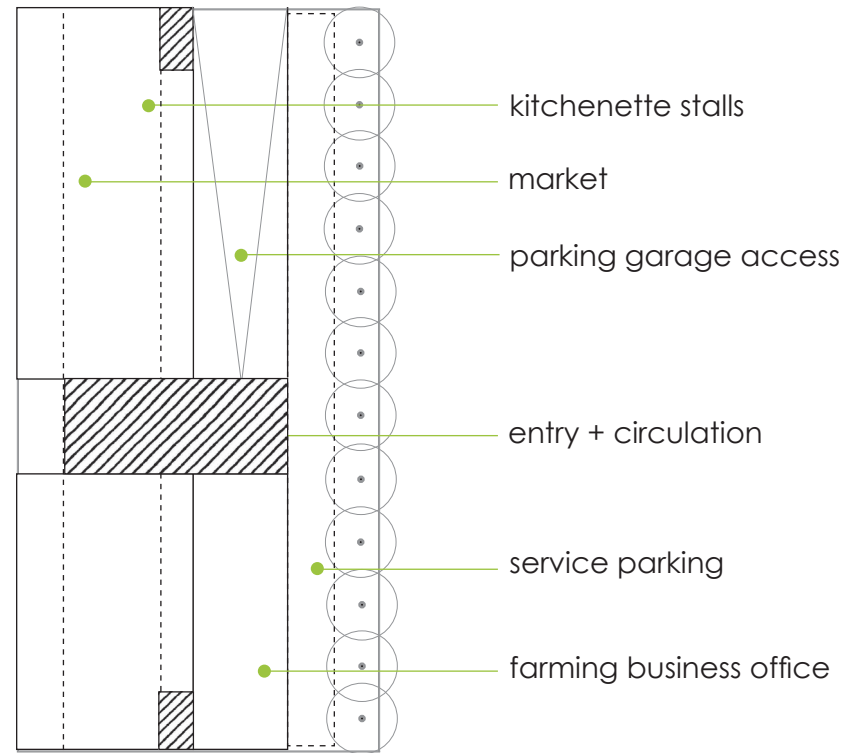


Private vs Public Circulation:



# THE FARMSTEAD

# MARKET



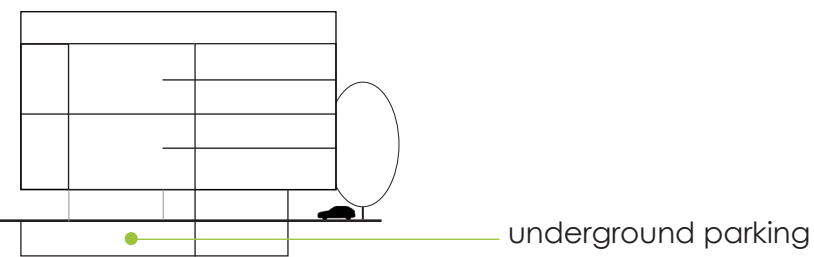
Market



Parking: Grasscrete



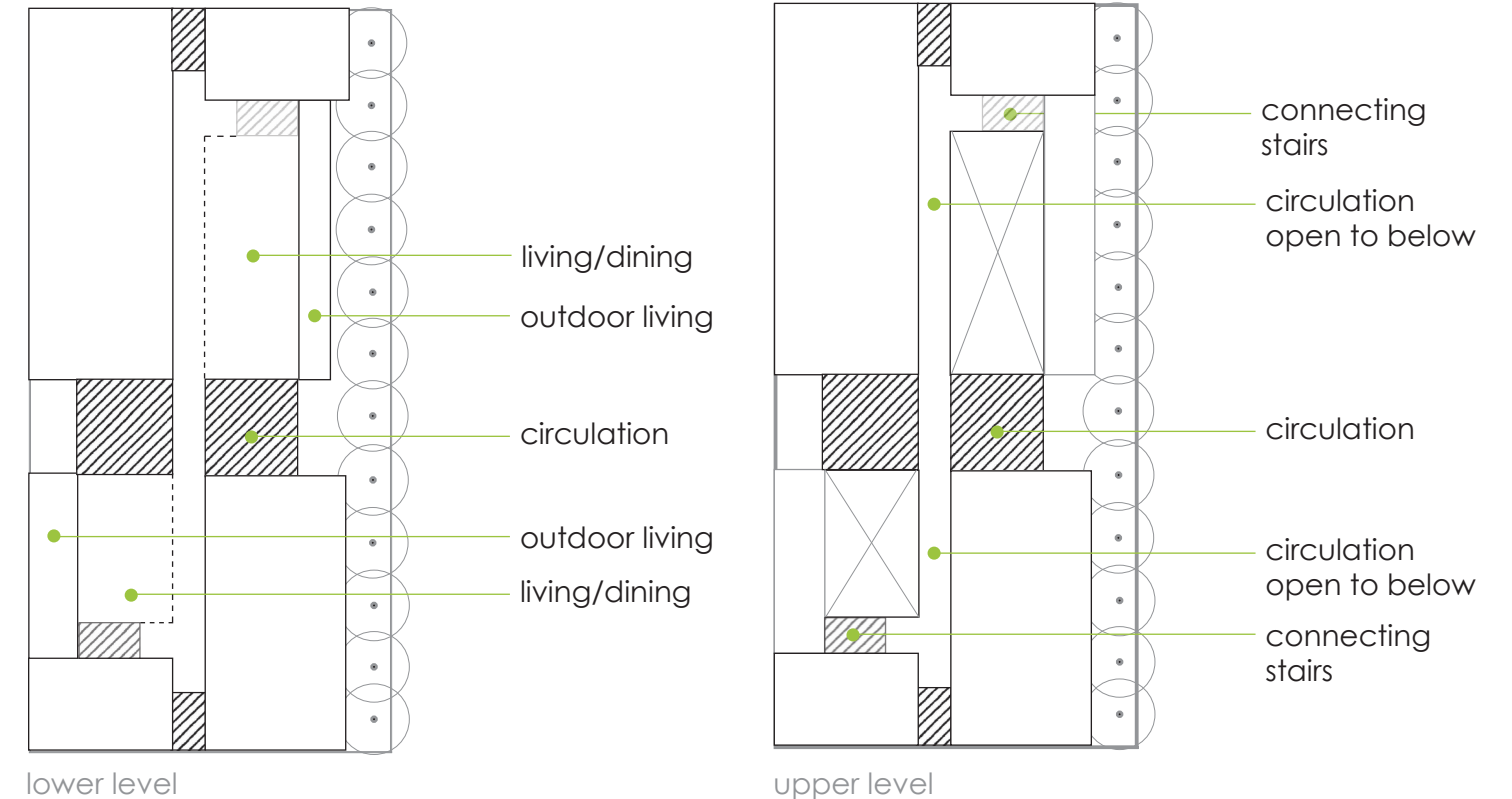
Market Kitchenette Stall:



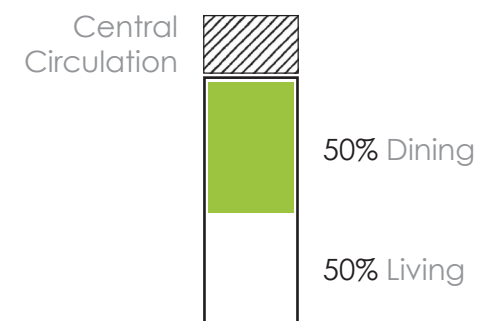
Covered Exterior Space:



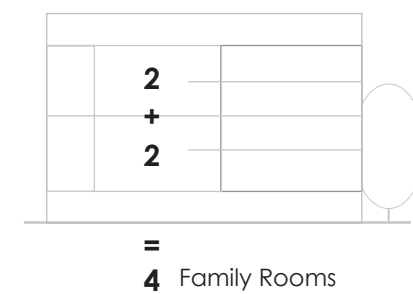
# FAMILY ROOMS



Spatial Organization:



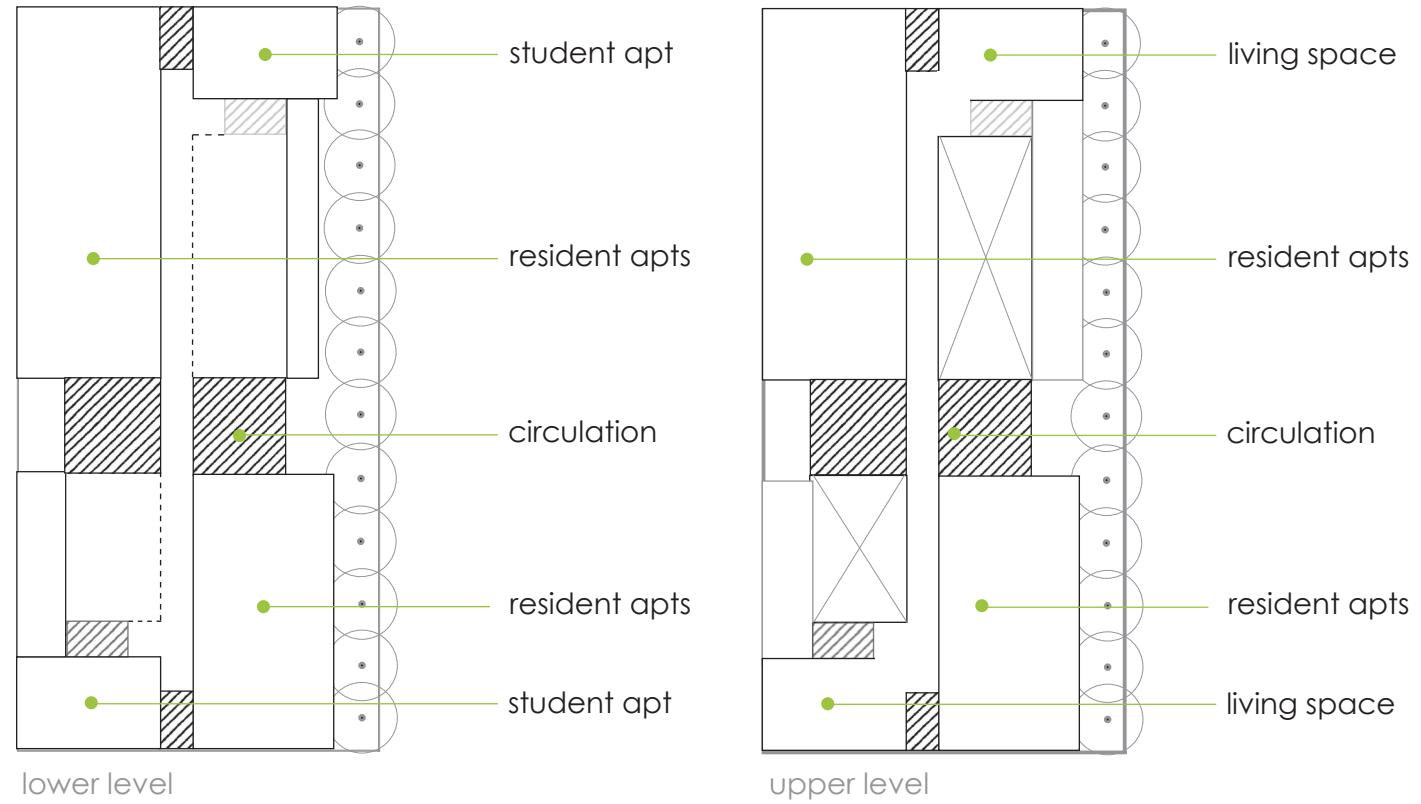
Stacked Pods:



Living/Dining:



# APARTMENTS



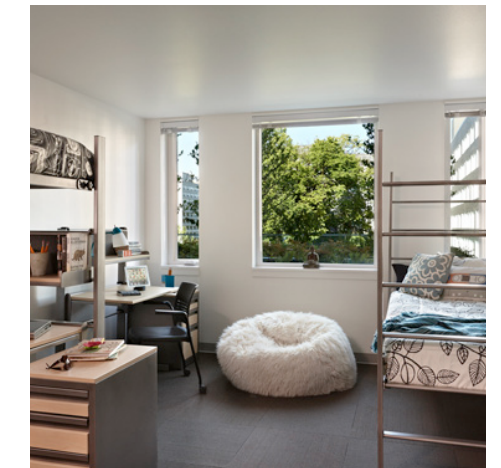
Small Kitchen:



Opens to Exterior:

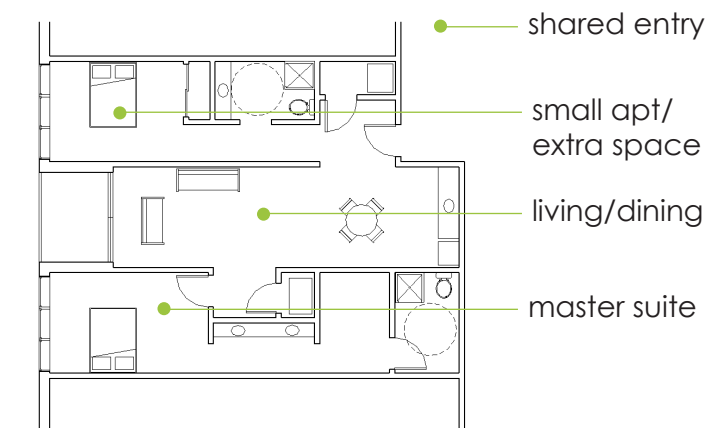


Dorm Room:



Poplar Hall, Mahlum Architects

Resident Apartment



Student Dormitory Apartment

