

Pixelated Urbanism:

A Mixed-Use Strategy for Urban Density and Neighborhood Development

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PIXELATED

def.
any of the small discrete elements
that together constitute an image

URBANISM

def.
the characteristic way of life of city
dwellers

PIXELATED URBANISM: *def.*
a complete picture of urban living on a small, dense scale, a composite of the small
pixels (programs) of everyday life

Pixelated Urbanism is a strategy for dense urban living through new forms of mixed-use buildings that connect users and programs on a small scale (pixels) to create compact, vertical environments. Pixelated Urbanism moves beyond the stratified programming preconceptions of the existing mixed-use building typology with a range of programs that share space up the building height. Flexible spaces like live-work units, and new overlapped living, socializing, and working relationships create a vibrant vertical neighborhood.

This thesis applies pixelated urbanism strategies to a master plan for a 212,000 SF site in the West Seattle Neighborhood. The plan re-knits five underused lots around the intersection of SW Fautleroy and SW Alaska back into the urban fabric, and leads the way towards the city's projections of a 30% increase in jobs and households in the area in the next fifteen years. The organizing principles of pixelated urbanism are further applied in the design of a single block of the master plan.

Problem Context: Cities in the 21st Century

The end of the 20th Century, and the beginning of the 21st, marks a pivotal time to re-evaluate the American urban environment. Our lifestyles and values are changing, becoming more hybrid in response to new technology and understandings of the world around us, and we are becoming increasingly aware of the environmental implications of the choices we make in our built environment. These changes can be read within the context of the growing urbanization of our country. (Figure 1)

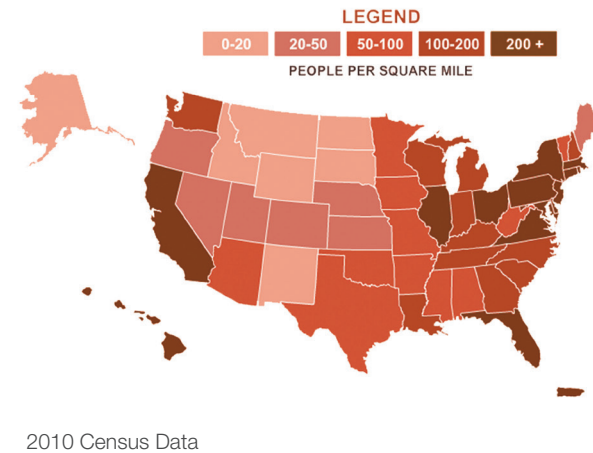
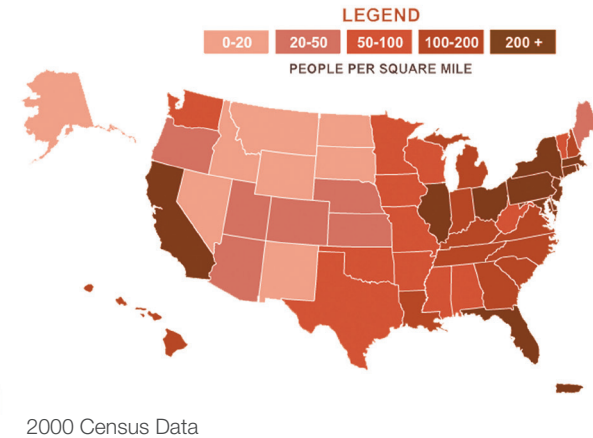


Figure 1 |
United States Density Data

Comparison of population density from the 2000 Census to the 2010 Census. The percent increase nationally over the past 10 years was 9.7%.

<http://2010.census.gov/2010census/data/>

Urban Density in America

The United States is becoming increasingly urbanized. In 2010, over 83% of Americans lived in metropolitan areas.¹ What our future cities will look like with this increased density will be dependent upon two main factors.

The first is a heightened awareness in the health of our environment. It is becoming clear that the age of suburban developments and freeway commutes is not a sustainable model. Recent studies indicate that the single-occupancy car is a major component of the carbon footprint, and if commuters located closer to work or near mass transit hubs, they could greatly decrease pollution.² To this end, planners are trending towards developments that will allow us to live more compact lives.³

The second catalyst is the advancement of new technologies and knowledge that become catalysts for changes in the built environment as they redefine our lifestyles and values. Our world view is changing, and as Nan Ellin states “the current

version of the everything-is-related-and-follows-certain-universal-laws approach incorporates the notion that information technologies have irrevocably and irreversibly reconfigured space and time.”⁴ We are moving from a singular, cataloged, divided understanding of the world to one of greater diversity and overlap. For example, we are becoming a polyculture rather than a monoculture, and economically we are adding new niche markets to the large homogenous markets that cater to a wider variety of interests.⁵ These changes define an age of greater complexity in our own lives, and consequently in the built environments that accommodate us.

Urban Density in Seattle

This thesis explores the implications of increased density in Seattle as a way to study an issue that affects the entire nation. This issue is closely tied to the city's zoning designations, which divide the city into areas in which density can grow, and areas that are already fixed.⁶ The growth areas include commercial and neighborhood commercial, mixed-use, and downtown zones. The fixed areas are primarily the residential zones that are fixed at a low density. Consequently, the city will need to become more disproportionately dense in the allowable areas.

Seattle DPD acknowledges these areas of potential future growth in the Urban Villages Comprehensive Plan, a part of the 2005 Seattle Comprehensive Plan. (Figure 2) This legislation identifies key areas of the city as “urban villages,” dense developments that create diverse, walkable, transit-oriented communities where residents can live close to their workplaces.⁷

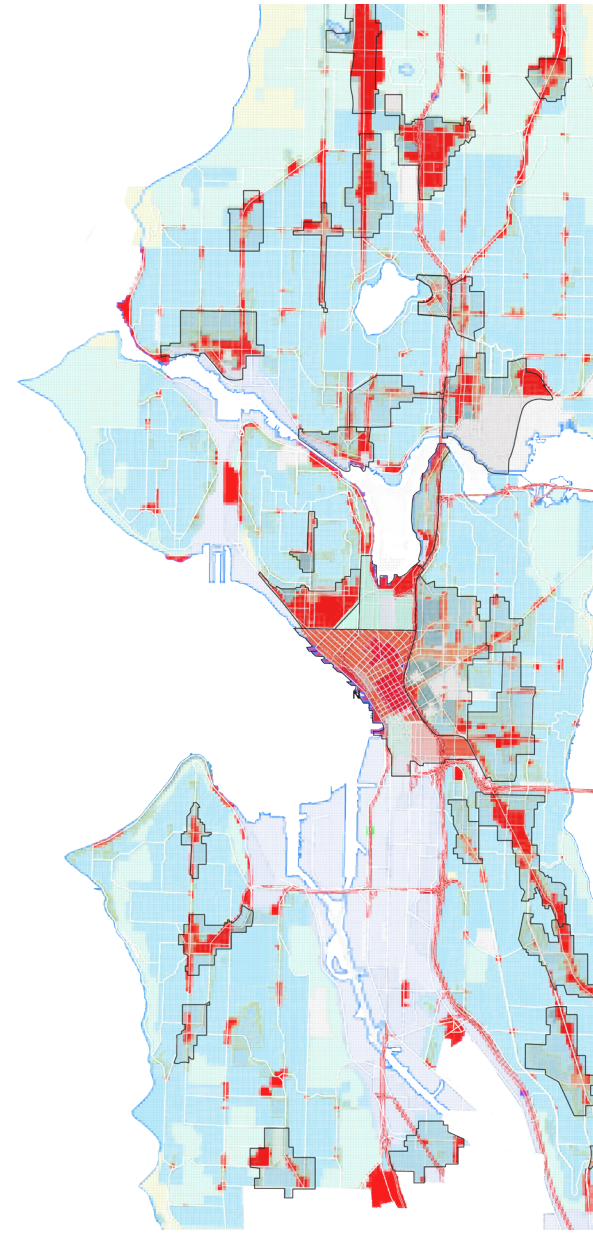


Figure 2 |
Simplified Seattle Zoning with
Urban Village Overlay

Seattle is broken down into areas that allow increased density (red), and those that do not (blue). The urban villages are located in key spots within the red zones.

Current Response to Urban Density: Mixed-Use

The current planning response to urban density is mixed-use, allowing new residents and new jobs to create balance as density grows. The mixed-use building is publicized as part of this “smart growth” alternative, a solution to suburban sprawl, urban traffic, and inner-city decay.⁸ The term “mixed-use” is a loose definition, but perhaps the most ubiquitous mixed-use form is a building with a retail ground floor and residential or office uses above. This thesis sees this form as an inflexible structure unable to respond to current or future lifestyle demands.

The main problem with the typology is the vertical stratification and separation of program, which is a product of its initial design goals. The typology developed in America in the early 1900s as an economic reaction to rising land costs in cities.⁹ The developers preferred single-use buildings, and believed that their clients also desired clear separation between parts of their lives.¹⁰ Consequently, mixed-use was designed to be as segregated as possible, in its structure, program,

user groups, and circulation.

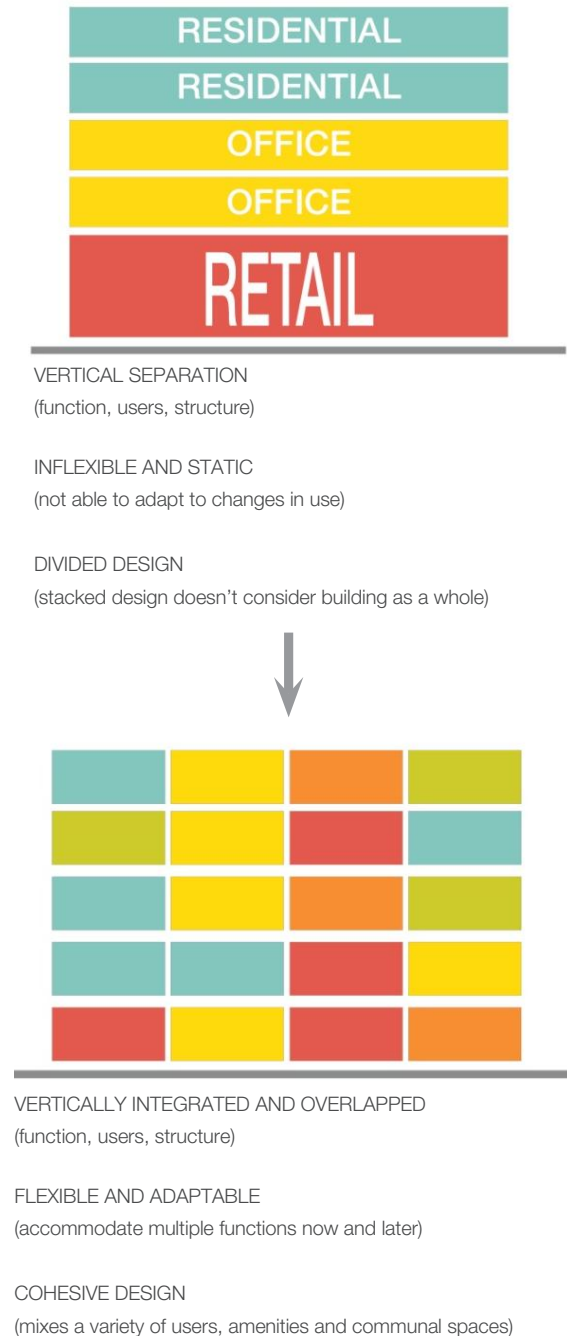
In Seattle this has developed into the typology commonly called the “five-over-one.” The first floor is concrete, with a high ceiling height to accommodate commercial space, and the upper floors are lower floor-to-floor height wood frame construction. This construction type further enhances the separation between users.

This separation creates lost opportunities as the building is not considered cohesively. It ignores potential cross-programming between different users for idea or commerce exchange, or overlaps between live and work spaces for modern lifestyles. From a long-term perspective, the typology is static. By dissociating its program types functionally and structurally, there is no flexibility in its use. For example, if the retail market disappears, it is difficult to reuse that space for a different program. As is clear from the past couple decades, markets, trends and technology can change rapidly, and our built environment needs to be adaptable to change with it.

Pixelated Urbanism is an alternative approach to traditional mixed-use buildings that learns from the shortcomings of the existing typology, and proposes a new organization and programmatic mix that better reflects today and the future's urban needs. (Figure 3) These integrated buildings can mix users and programs, and even add additional functions like community spaces, to let the buildings work like a vertical neighborhood.

Figure 3 |
Comparing Typical Mixed-use
to Integrated Mixed use

This diagram shows the transition from typical mixed use to a more flexible, integrated system. "Pixels," or small components of urbanism, are mixed together to form a dense neighborhood, the "urban pixelation," within a building.



Notes

1. Paul Mackun and Steven Wilson, "Population Distribution and Change: 2000 to 2010," 2010 Census Briefs (2011): 4, <http://www.census.gov/prod/cen2010/briefs/c2010br-01.pdf> (accessed April 20, 2011).
2. Margot Roosevelt, "Go green, live closer to work; New study says planning compact, mixed-use communities instead of suburbs would help save the planet from effects of greenhouse gases," Los Angeles Times, September 21, 2007, B.1.
3. Amanda B. Piell, "The Challenges and Rewards of Mixed-Use Facilities," *Buildings* 103 (2009): 56-60.
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5. Nan Ellin, *Integral Urbanism* (New York: Routledge 2006): 141.
6. Seattle Department of Planning and Development, *Seattle Zoning Code* (Seattle: 2009).
7. Seattle Department of Planning and Development, *Seattle's Comprehensive Plan: Toward a Sustainable Seattle* (Seattle: 2005): 1.3.
8. "A mixed-Use Ordinance to Foster Smart Growth," *Public Management* 81 (1999): A6.
9. Joseph Fenton, *Hybrid Buildings* (New York: Pamphlet Architecture 1985): 5.
10. Chris Marsh, "Mixed Use Development and the Property Market," in *Reclaiming the City*, ed. Andy Coupland (Oxford: Alden Press, 1997): 137.



Figure 4 |
Visioning image of a building as
a "vertical neighborhood"

This thesis proposes pixelated urbanism as an infill development that increases urban density while maintaining and creating neighborhood qualities. To develop as a neighborhood, the building is designed with a goal of programmatic integration, in which the different programs work together and support one another to create successful, vibrant urban space.

The strategies and organizing principles of Pixelated Urbanism are rooted in the legacy of American urban design theory, beginning with Jane Jacobs' 1960s issue of how to create urban diversity, and continuing through to contemporary Nan Ellin's ideas for urban revitalization through urban connections and hybridization. They are also forward-looking, and expand the current understanding of the public realm into the vertical dimension. Mixed-use megaprojects currently being built in other nations were used as precedents for this type of vertical urbanism.

Urban Design Strategies

Traditional Urban Design Theories

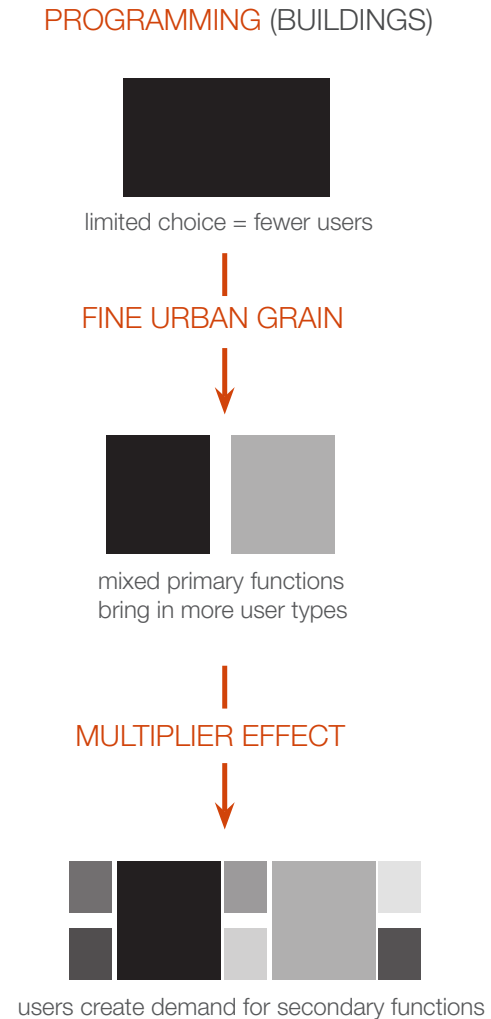
Jane Jacobs was an early advocate for mixed-use neighborhoods and her theories continue to affect current planning theory today. Her strategies focus on the interplay of finely-mixed programs and human-scaled circulation paths for richer, safer, and more vibrant urban spaces.

Her strategies associated with buildings, or programming, increase the level of urban diversity. *(Figure 5)* Mixing uses at a fine urban grain creates more choice within the same area, increases the number and types of prospective users, and creates a variety of times of use within the area, thereby strengthening street life and safety.¹

Jacob's theory on urban scaling was expanded upon by MacCormac in the 1980s, who explained the benefit of urban "transactions" as the "essential glue that holds urban life together."² MacCormac's transactions are not just commodity exchange, but include human interaction, conversation and idea exchange as well. Larger commercial businesses make their transactions at

Figure 5 |
Jacobs' Program Strategies

Jane Jacobs' strategies for programming increase urban diversity by increasing the variety of functions and users.



a global scale, via larger networks that transmit their ideas beyond the immediate surroundings. Smaller businesses are more local, and therefore have a direct positive contribution to neighborhood street success. Both of these theories affirm that an ideal mixed-use environment is one that is appropriate to the human, local scale.

The benefits of fine urban grain can be enhanced with the multiplier effect. A mixed set of primary uses, like residences or work places, will bring in users with demands for secondary uses, like shops, gathering spaces, and other amenities.³ These secondary uses need to be highly varied and intensely used to create a “multiplicity of uses, attractions, and routes” that enable the personal interactions that make up the vibrancy of a community.⁴

Jacobs’ strategies for the street grid worked to break down the urban environment into a more human scale. (Figure 6) Shorter, permeable blocks increase the number of potential pathways, giving

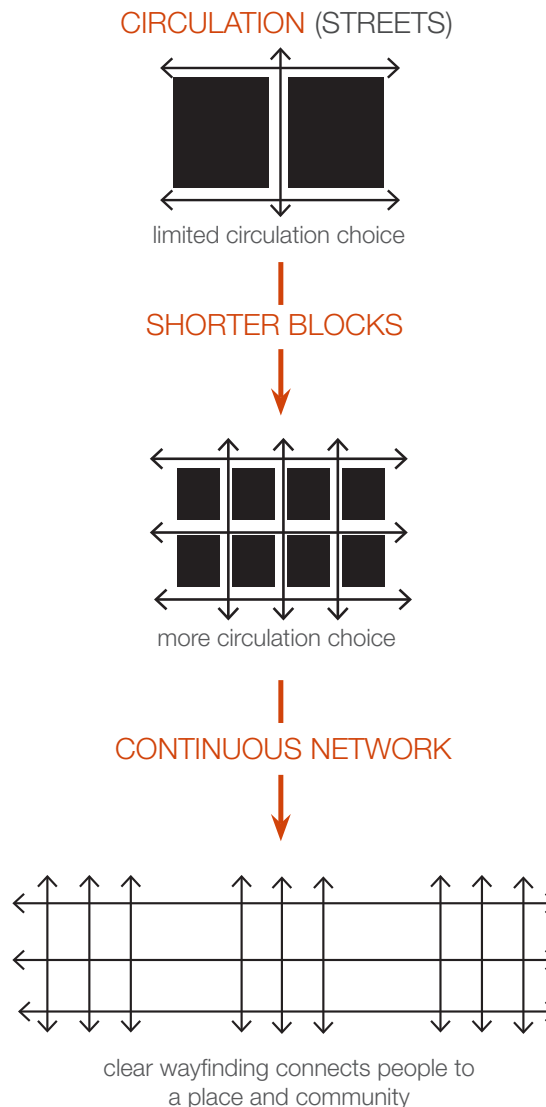


Figure 6 | Jacobs' Circulation Strategies

Jane Jacobs’ strategies for circulation break down the urban environment to a smaller scale to increase human interaction.

the pedestrian more choice in their circulation.⁵ More pathways also increase the area available for storefronts and pedestrian interaction. These pathways should extend beyond the neighborhood, and into the larger urban environment. Jacobs argued that a continuous network was most beneficial to the pedestrian ease of movement.⁶

Jacobs' theories continue to be relevant today, but this thesis adds a contemporary voice to her 1960s urban observations with her 21st Century peer, Nan Ellin.

Contemporary Urban Design Theories

Contemporary theorist Nan Ellin's strategies for successful urban spaces are tailored for today's urban context; our cities are built, with the bulk of the infrastructure already in place. The contemporary response is not how to create new great urban spaces, but how to enhance our existing cities.

Ellin calls this response "integral urbanism," strategies that "activate places by creating thresholds - places of intensity - where a range of people and activities may occur."⁷ Two of the key components of integral urbanism are particularly relevant to this thesis: hybridization, and connectivity. *(Figure 7)*

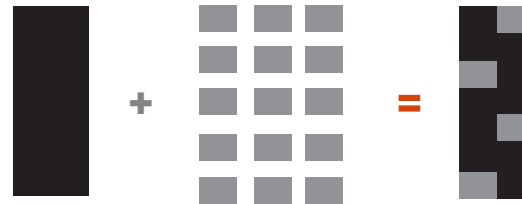
Hybridization ties into the contemporary view of our world as a much more overlapped, complex place. In the past our understanding of the world was tied to the categorization of space and ideas, which lead to changes in our built environment like zoning. Hybridization recognizes that today our society is more interconnected, and that our urban environment should reflect that by breaking down the contemporary urban barriers.⁸

This creates “convergences in space and time (of people, activities, businesses, and so forth) [that] generate new hybrids. These hybrids, in turn, allow for new convergences, and the process continues.”⁹ This defines a contemporary form of development within our cities.

Connectivity is a form of “urban acupuncture” which spot-fixes urban voids. By connecting across and restoring abandoned “in-between” spaces we can enhance the overall urban flow of our cities.¹⁰ These spaces are key locations to apply the hybridization strategies.

Both Jacobs and Ellin developed their urban strategies from an observer’s point of view. Their experiences within their respective cities, and their interactions with others drove their conclusions. Consequently, their research focused on the main public realm, the street. This thesis proposes that in today’s urban environment, as we become denser, the public realm can grow in our buildings, above the street level. For strategies on how to do this we look beyond America.

HYBRIDIZATION (ANTI-ZONING)



CONNECTIVITY (URBAN ACUPUNCTURE)

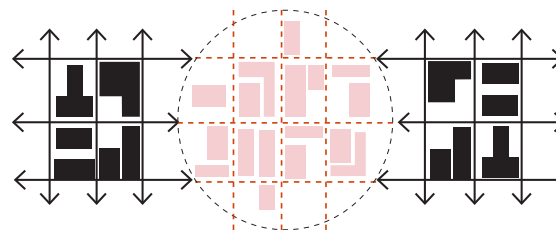


Figure 7 |
Ellin’s Revitalization Strategies

Ellin’s strategies for urban revitalization deal with breaking conventional barriers in the built environment to allow overlap, and spot-fixing abandoned areas in our cities to enhance overall urban vitality.

Case Studies: Organization + Circulation

Two key case studies drove pixelated urbanism strategies for program organization and user circulation. These case studies show examples of how mixed-use buildings can have internal and external symbiosis between their users and context to create a neighborhood, and how public space can expand above the first floor. Both of these case studies are megaprojects in social and economic environments very different than America, but key strategies can be pulled and redeveloped for a Seattle context.

DE ROTTERDAM

ARCHITECT: OMA
CONTEXT: Rotterdam
SCALE: 155,000 m²
COMPLETION: 2013

Case Study Question:

How can mixed-use buildings instigate urban revitalization?

De Rotterdam is a large-scale tower project that shows the potential of mixed-use buildings for urban revitalization through program integration. The project site, on the waterfront in Rotterdam, needs new developments to revitalize its image and create a new city center. This intervention consists of three high-rise towers combining offices, apartments, retail, congress, public programs, a hotel, and parking into a vertical, 24-hour city. (Figure 8) The project is phase one of the revitalization effort, and the buildings are self-sufficient and synergistic to operate successfully on day one, before neighbors arrive. Internally, each program benefits from the others. For example, residents use fitness, commerce, and restaurant services, and office workers can use the hotel for conferences.¹¹ (Figure 9)

This use of the multiplier effect through user overlap shows its potential as a contemporary revitalization strategy. User overlap increases probability that the building can be successful, even before future developments enter the area for support. By bringing in a variety of lifestyle necessities, the building can support its population even if its surrounding environment is yet to be developed. This strategy of designing for self-sufficiency is important for pixelated urbanism if it is to be a cornerstone of new urban developments.



(image courtesy of Hybrids II, A+T Publishers)

Figure 8 |
De Rotterdam

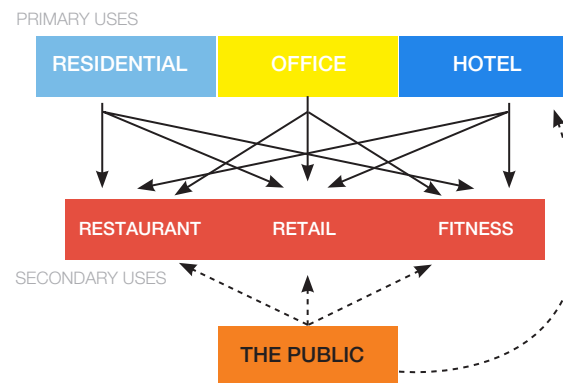


Figure 9|
Program Interdependence
(Multiplier Effect)

The building can function with or without the public because the programs create complimentary uses.

SLICED POROSITY BLOCK

ARCHITECT: Steven Holl
CONTEXT: Chengdu, China
SCALE: 310,000 m²
COMPLETION: 2011

Case Study Question:

How can the public realm extend above the first floor?

The Sliced Porosity Block is a mixed-use development in Chengdu. The block is composed of five towers on a double-layer podium, and is conceptually considered an urban city within itself. (Figures 10, 11) For this reason, there is more programmatic overlap than in a typical mixed-use building. The towers are predominantly residential, but some components of public program like retail, culture and garden space interact at upper levels. The most significant of these overlaps are a series of sky-bridges that connect and open up the towers at the seventh and eighth floors to allow more public, civic, and commercial spaces to rise above their traditionally ground-based locations.¹² (Figure 12) To help facilitate the use of these public spaces, a clear connection to the base is made with a path of retail and cultural spaces leading up to the eighth floor.

This public path strategy is scalable and adaptable to an American urban environment. While neither the circulation or program path alone would likely be a successful draw for the public, the combination of the two creates a clear connection from the street. This creates an extension of the public realm above the sidewalk.



Figure 10 |

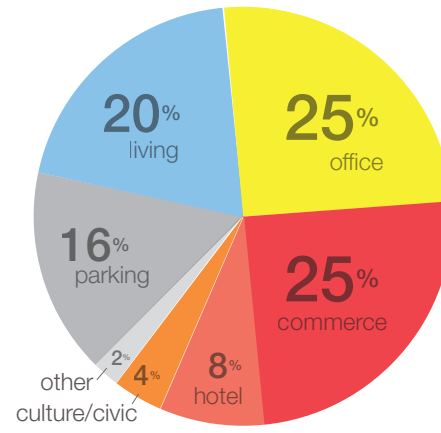


Figure 11 |

Figure 10 |
Elevation of the Sliced
Porosity Block

Note skybridges at level 8.

image from Hybrids II, A+T
Publishers

Figure 11 |
Program Breakdown

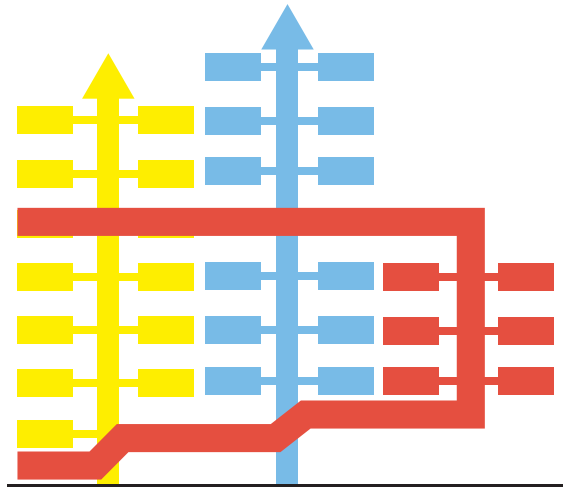


Figure 12 |

Figure 12 |
Public Circulation Path

A continuous path (moving horizontal and vertical) composed of both circulation and program provides a public path to upper levels of the building.

Conclusions and Design Considerations

Pixelated Urbanism incorporates the strategies developed from the previously discussed urban theories and brings them into the 21st century by mixing them with new organizational typologies present in foreign contemporary buildings.

Incorporating all of these design implications, a series of design guidelines can be developed to insure that the new mixed-use typology becomes a freer building diagram.

Pixelated Urbanism Design Guidelines

(1) Structurally, the building can accommodate the needs of multiple potential programs, and is adaptable to changes in use over time.

(2) Programmatically, the building is vertically and horizontally integrated with program variety. Program components are scaled to a fine grain to maximize diversity and increase user numbers.

(3) In scale, the entire building or complex is of a size large enough to accommodate this wide range of uses and provide a population large enough for viability of the structure. The site footprint is large or composed of multiple sites to insure the breakdown of the neighborhood into a human-scaled, permeable urban environment.

(4) Site selection for the development finds an underused space for an “urban acupuncture” intervention.

Notes

1. Jane Jacobs, *The Death and Life of Great American Cities* (New York: Vintage Books 1961): 152.
2. Marion Roberts and Tony Lloyd-Jones, "Mixed Uses and Urban Design," in *Reclaiming the City* ed. Andy Coupland (Oxford: Alden Press, 1997): 162.
3. Jane Jacobs, *The Death and Life of Great American Cities* (New York: Vintage Books 1961): 162-163.
4. Marion Roberts and Tony Lloyd-Jones, "Mixed Uses and Urban Design," in *Reclaiming the City* ed. Andy Coupland (Oxford: Alden Press, 1997): 153.
5. Jane Jacobs, *The Death and Life of Great American Cities* (New York: Vintage Books 1961): 178-186.
6. Jane Jacobs, *The Death and Life of Great American Cities* (New York: Vintage Books 1961): 129.
7. Nan Ellin, *Integral Urbanism* (New York: Routledge 2006): 19.
8. Nan Ellin, *Integral Urbanism* (New York: Routledge 2006): 135.
9. Nan Ellin, *Integral Urbanism* (New York: Routledge 2006): 136.
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11. Aurora Fernandez Per and Javier Mozas, *Hybrids III. Residential Mixed-Use Buildings* (Spain: Vittoria-Gasteiz, 2009).
12. Aurora Fernandez Per and Javier Mozas, *Hybrids III. Residential Mixed-Use Buildings* (Spain: Vittoria-Gasteiz, 2009).



**Figure 13 |
West Seattle Site Overview**

This thesis tests pixelated urbanism strategies in the West Seattle Urban Village, a rapidly growing neighborhood with a series of underused blocks that are currently being studied for new mixed-use developments.

CHAPTER 3 PROJECT DEFINITION

Scope

This thesis explores how a more integrated and flexible building typology can facilitate new relationships among its users and between a building and its larger neighborhood (the public), while adapting to an increased urban density. It seeks to evaluate this building organization with a mixed-use master plan intervention in a Seattle neighborhood. This larger scale shows how the buildings can work together as a system, impact a larger context, and suggests that this type of development growth can continue to expand outward. This thesis completes an initial master plan for the entire system, and then focuses on the design of a single block in greater detail.

Key principles developed from the background research are integrated into guidelines for how the buildings are programmed and organized. These guidelines are then tailored to the specific site. The project is evaluated for its ability to mix programs, increase the density of households and jobs, and positively enhance the larger urban network.

Limitations

The building will alter Seattle zoning maps to modify the zoning classifications of the site, but will follow the regulations set upon it by its modified zoning class. The goal of the project is not to change existing code, but to show how a new building type can fit within existing regulations and conditions. All other zoning and building codes will be followed in the new construction.

To keep complete fluidity in the project design, the program developed for the building will not be influenced by a real client, but will be exploratory only. Some program components are intended to be malleable and shift throughout the lifespan of the building, and this flexibility will be expressed in the program section.

Site Selection

Selection Criteria

The site selection criteria considers the site as it currently is, but also looks for potential in how the area can benefit from the integration of the new building typology. Three key qualities needed are: an underused area for urban acupuncture, a growing population, and the potential for transit integration.

Pixelated urbanism is a form of urban acupuncture as the new buildings are intended to aid in positive change through the introduction of new amenities, jobs and activity. A baseline for the revitalization efforts must be established with the existing context. Examples satisfying this criterion are underused neighborhoods, perhaps from outdated uses, or sites that have recently been re-zoned and have not yet found their new identity. Ideally, on a larger scale, the site should have a surrounding neighborhood with stronger vitality, which can be drawn into the new development.

A growing population is important to insure that there is a populous available to support the

new development, as residents or users. Pixelated urbanism is a strategy for increasing density in the urban environment, so it is important to find a location where this type of growth is needed. As noted in the previous quality condition, the site area will be underused, so census data and city planning documents are used as indicators of expected future growth.

To accommodate a growing population the site needs to have potential for transit integration. The new typology is intended to support sustainable urban lifestyles, so the connection to mass transit for new residents is necessary. This connection also ties into Jane Jacobs' continuous network circulation strategy. Fortunately, one method of determining future growth is the city planning department's future transit plans; the addition of new mass transit to an area indicates that the city sees that area having greater ridership in the future.

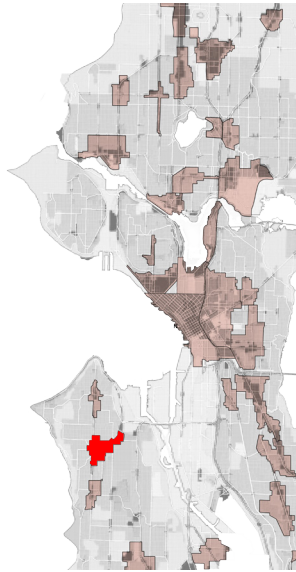


Figure 14 |
West Seattle Urban Villages
Overlay with West Seattle
Highlighted

Site: Neighborhood: West Seattle Hub Urban Village

The sites selected to test the new building typology are in the West Seattle Hub Urban Village. (Figures 14, 15) The village satisfies the criteria for current conditions, and shows clear potential for increased density and diversity in the future.

The West Seattle Urban Hub Village is an area selected by the Seattle Development and Planning Department through its Urban Village legislation in 2005.¹ The status indicates a desire for growth by the overall Seattle Vision Plan, in mixed-use employment and housing opportunities, connections to public transportation as transit-oriented developments, and increased services for the surrounding neighborhood.

The village is one of the fastest growing neighborhoods in West Seattle, with a population increase of 9% from 2000 to 2010.² Other changes are also influencing the area, including the exit of a large auto dealership business that left a series of blocks at Fauntleroy and SW Alaska empty, and potential modified zoning designations that may change the grain and scale of the neighborhood.

In response to the rapid changes in the neighborhood, a new framework plan for the future was recently developed to help the area reach its hub urban village goals. A cornerstone of these goals is to accommodate the state's projections of a nearly 30% increase in the number of households, and 28% increase in the number of jobs in the neighborhood by 2015.³ (Figure 16) Complimentary to that growth are goals of increased walkability and pedestrian amenities through pedestrian-designated streets, more accessible transit options, and green parks. These goals are addressed in the design of the master plan.

The urban village is composed of two major zones: private zones of primarily single-family residential on the neighborhood outskirts, and a central public zone composed of commercial, community and mixed-use programs. There is a programmatic void in the urban village at the intersection of Fauntleroy and SW Alaska, with a series of blocks characterized by gas stations, empty buildings and large surface parking lots.

(Figure 17) If the population continues to grow at the rate indicated by past censuses, the new residents will need to locate in these underused areas that are zoned to accommodate mixed-use growth. The start of this shift is the Link Condos project, a recently completed “five-over-one” mixed-use project.

This thesis proposes that new mixed-use developments following the strategies of pixelated urbanism will help fill the rest of the urban growth needs, and locate at the void blocks on Fauntleroy and SW Alaska. This urban acupuncture intervention will re-knit the blocks back into their more successful urban surroundings.

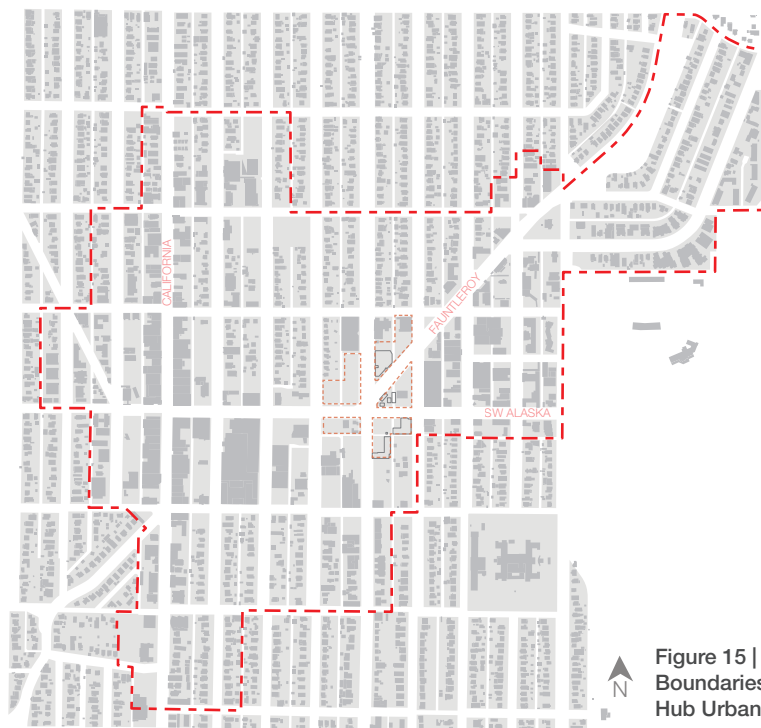


Figure 15 |
Boundaries of West Seattle Hub Urban Village

Growth Information for the W. Seattle Junction Hub Urban Village			
	2000	2010	2024 projected households comprehensive plan
households	1,981 units	2,324 units	2,980 units
employment	2,825 jobs	2,591 jobs (2009)	3,420 jobs

Housing data from the Decennial Census, U.S. Census Bureau. Employment Information from the Washington State Employment Security Division. Comprehensive Plan information from the Seattle Comprehensive Plan, 2004-2024, Urban Village Appendix A

Figure 16 |
Village Growth Projections

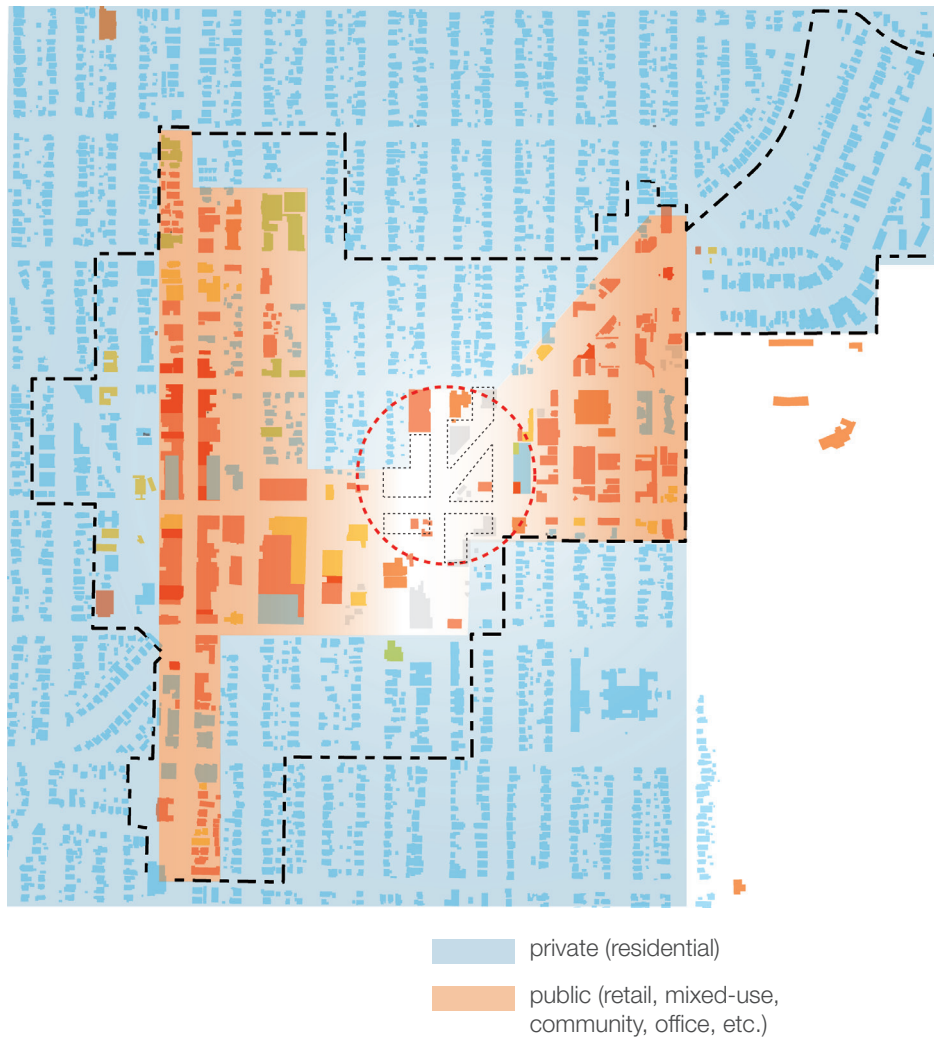


Figure 17 |
Urban Village Program

project sites are located in the program void at the intersection of Fauntleroy and SW Alaska

Site: Master Plan: Fauntleroy + SW Alaska

The five sites selected at the intersection of Fauntleroy and SW Alaska have the greatest percentage of vacant buildings and plots in the village, and have been identified by the neighborhood framework plan as opportunities for redevelopment. These urban holes are remnants of the area's past as an auto dealership and parts hub, with the Huling Family Auto Dealership as its key landmark. Today many of the single-story commercial buildings sit vacant, and large parking lots are empty. (Figure 18)

However, while their current uses are minimal, they have great potential for future development due to their larger urban network connections.

The main traffic arterial through West Seattle, Fauntleroy, runs directly through the five sites. This street is the main entrance into the neighborhood for outsiders coming from Downtown and other areas east of the site. (Figure 19)

The sites are also well connected to mass transit lines. There are currently three main bus



Figure 18 |
Locations of Five Master Plan
Sites

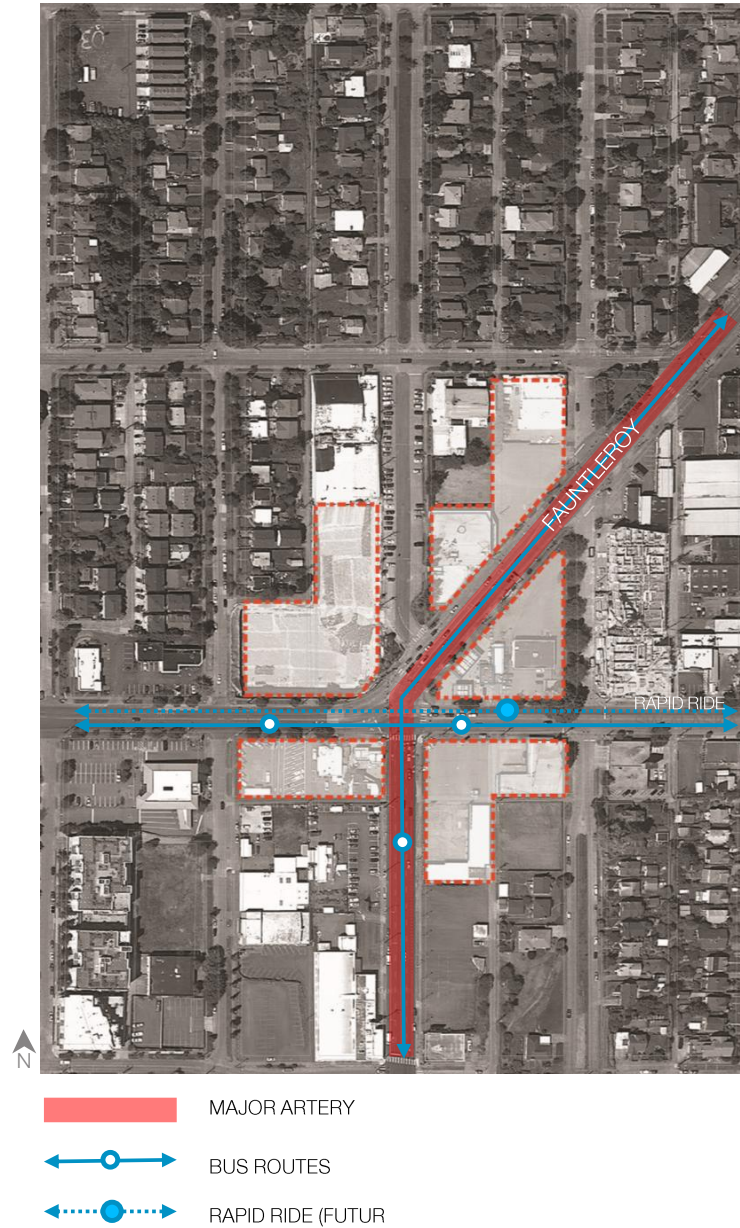


Figure 19 | Transportation Connections

stops, and soon a new RapidRide route will also have a transit stop in front of one of the blocks. The RapidRide, which will begin service in 2013, is distinct from regular metro buses because of shorter wait-times, enhanced user-friendly designs, and fewer stops, meaning faster connection times.⁴ This new route will provide a stronger connection between the site and Seattle’s downtown, and will hopefully instigate greater ridership to and from the area.

Pedestrian networks also have the potential to become stronger through the master plan intervention, and will be discussed in greater detail in the zoning consideration portion of this document.

The sites have programmatic potential to fill a missing component of the neighborhood. The current heart of the village is the stretch of California Avenue, which provides the commercial core of the neighborhood. The neighborhood doesn’t have a clear community core, but the sites selected have the beginnings of one. Within the surroundings blocks are a YMCA, and the veterans’ affairs building. The

master plan sites could add a community center to the mix, to become a complimentary community core to California's commercial core. (Figure 20)

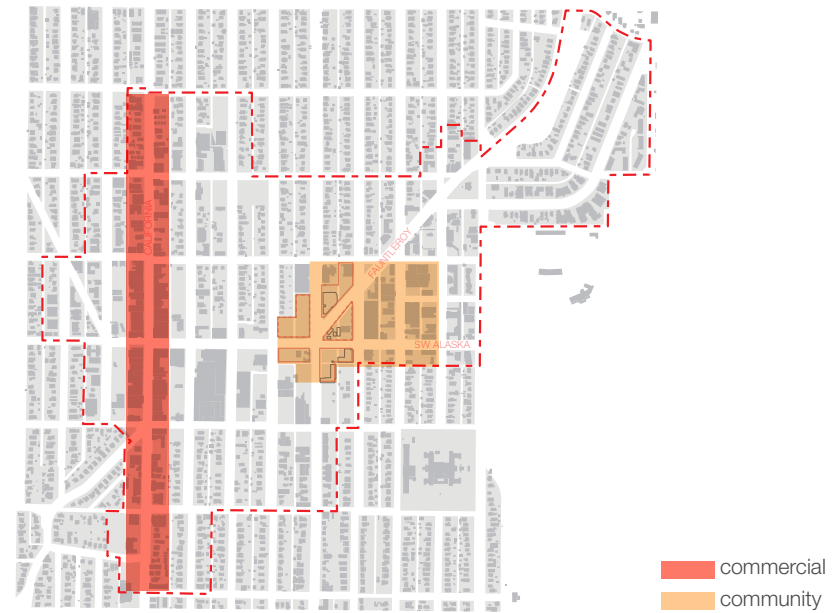


Figure 20 |
Existing Commercial and
New Community Cores

Zoning Considerations

The use zoning designations on the master plan sites will be modified slightly to accommodate goals of increased density. Overlay districts on the site, specifically pedestrian designation streets and transit station parking overlays, will also be modified to reflect neighborhood design goals.

Four of the main sites are currently zoned Commercial 1 with a max height of 65 feet and an FAR of 4.75. However, for the set of buildings to reach higher densities, this zoning designation, height limit, and FAR are challenged. The neighborhood advisory committee created a precedence for potential change with revision suggestions such as raising max heights and increasing FARs.⁵ (Figure 21) This thesis assumes that the new designation will be Neighborhood Commercial 3, with a max building height of 125'.⁶ (Figure 22) While this is much taller than the existing zoning, or the existing buildings on the site, the goal is not for every structure to reach that height, but leaves the potential for some landmark buildings.

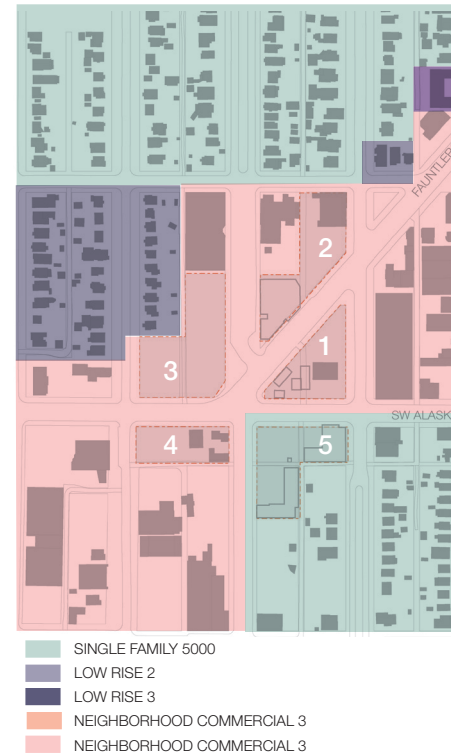


Figure 21 | Modified Zoning Map

FAR Chart

Type of Development	Height Limit				
	30'	40'	65'	85'	125'
	Maximum FAR				
Residential-only or nonresidential-only	2.25	3.00	4.25	4.50	5.00
Single use within mixed-use development	n/a	n/a	4.25	4.50	5.00
Mix of residential and nonresidential uses	2.50	3.25	4.75	6.00	6.00

Figure 22 | Commercial FAR Chart from Seattle DPD

The highlighted selection indicates changes proposed by the neighborhood advisory committee

The change from Commercial to Neighborhood Commercial indicates a stronger interest in the pedestrian environment. Parking lots cannot be located between the building and the street, and street-facing facades have transparency requirements to appeal to pedestrians. Neighborhood Commercial 3 is characterized by larger shopping and mixed-use programs that serve the immediate neighborhood as well as the larger community.⁷

The neighborhood currently has some pedestrian-designated streets, on California, and on parts of SW Alaska Street. Modified zoning can extend these designations through the site and increase neighborhood walkability. The current designation on Alaska ends at the center of the master plan. This new development has the opportunity to continue that walkability goal through the site, dispersing at Fauntleroy to extend along each major street to reconnect with the residential blocks of the village. (Figure 23) The design impact on the proposed building will be stronger restrictions on the first floor program fronting Alaska. The main

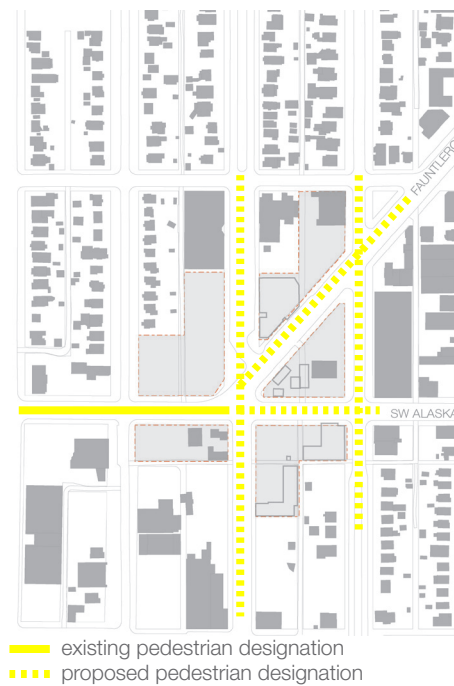


Figure 23 |
Pedestrian Environment Vision

requirement is that 80% of the façade must be pedestrian friendly, potentially incorporating retail or public uses.⁸

The second zoning overlay change will be to add a Station Area Overlay District to SW Alaska.

This overlay, currently used for Seattle Light Rail Stations, allows lowered parking requirements for sites directly connected to stations. The intent of this overlay is to prioritize public transportation in those areas. The chosen site should be considered for this overlay for the new RapidRide bus station. This also helps the design minimize private vehicle transportation.

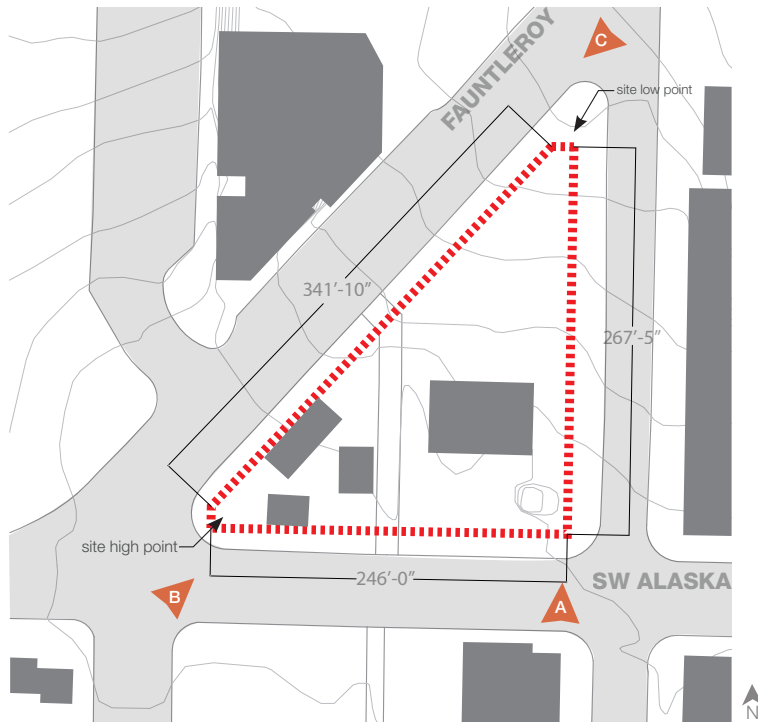
Site: Building: Fauntleroy + SW Alaska Triangle

This thesis develops the triangular block in greater detail. The block is 36,686 SF, and currently houses a single-story bicycle shop, a vacant gas station, and large parking lot. Wide streets bound the site on all sides, which gives the site great access to sunlight, and minimizes constraints from neighboring buildings. The site also has a significant slope of about twelve feet, with the high point at the south-west corner, and a low point to the north-east. *(Figure 24)*

The site has great potential for future development. The RapidRide bus stop will be located on the block along SW Alaska, making it a transit hub for both residents and visitors to the neighborhood. The bounding streets will become pedestrian-designated streets, which will increase movement through the site by neighborhood residents. Finally, the location on, and visibility to, Fauntleroy makes it a gateway building that welcomes visitors to West Seattle. All of these factors make the building a landmark, and provide the potential for the building to include a more community-focused program. To respond to this, the program will include a large community center component.



view from corner of SW Alaska and 38th Ave SW, looking north



view from corner of SW Alaska and Fauntleroy, looking north



view from corner of 38th Ave SW and Fauntleroy, looking south-west

Figure 24 |
Triangular Site Conditions

Program

All sites in the master plan will have a mix of residential, commercial, office, and community programs, but the percentage breakdown on each site will vary. The overall amount of programming on the sites attempts to push the neighborhood towards its 2024 household and job projection numbers.

The program for the triangle site is developed in greater detail, and is again composed of residential, commercial, office and community space. Key principles from the theoretical framework shape the program, by adding in a level of flexibility and overlap. This is acknowledged in both the commercial/office components as flex space, and in the residential components with live-work units.

This means that the program breakdown may shift to adapt to changing market conditions or different user needs. The building program presented in this thesis will be the first breakdown of spaces used by the building, but the intent is

that the ratios of spaces can change over time.

The building organization also affects the ratios of program components. The building's goal to expand public space up into the building allows for a more even breakdown between public and private uses. For example, there is more retail space programmed for the building than could fit on the ground floor. This allows the building to move some of those program pieces to move to upper levels.

The community program is based on an analysis of the West Seattle Hub Urban Village for programmatic "holes" that the building could fill. A mapping of the community showed that many of the main everyday services are already supplied; there are two large grocery stores, two drugstores, and a small number of preschool and elementary schools, and a high school. Holes are found in the less-structured neighborhood communal spaces. There are no community centers in the hub village, and the closest centers are east in North Delridge

Note:

This program section refers to the programming for the triangular site. The program for the larger master plan will be diagrammatic only, and explored in the design section.

and north in Hiawatha. There is a YMCA that provides exercise and activity space for adults and children, but no space for community gatherings, rentable event space, or adult education. Adding in these types of spaces will help bring the greater community into the building, and provide more users for the secondary commercial spaces.

A general building program was developed from these guidelines for the triangular block. The program focuses on what each program type means for the building users, and what the organization needs are for each program. (Figures 25, 26)

Retail/Flex (14,870 SF)

Retail space is typically a commercial showroom, but variations can include entertainment or eating establishments. Retail in the pixelated urbanism building is designed to be flexible so tenants can change. This allows potential for overlap between them and other program types, from offices, retail, or community spaces. Throughout the building, retail spaces are located for greatest public visibility, on the street on the ground level, and around the vertical circulation paths on upper levels.

Office/Flex Space (10,500 SF)

Office spaces are for businesses characterized by computer or desk-based tasks. Some of these spaces may want a public interface through front offices that necessitates greater visibility to the wider community. Other offices may be web-based or back offices that can locate further away from public areas, and can rent out community rooms for more public meetings. Like the retail/flex, these spaces are adaptable for changes in use, but are differentiated from the retail/flex in their locations further removed from the main circulation paths.

Residential (73 units - 65,700 SF)

The residential category includes a variety of unit types to build neighborhood diversity. Units range in size from studios to three-bedrooms.

A subset of the residential category is the live-work unit. This category has a variety of sizes, ranging from a smaller residential-sized unit with a user-implemented divide, to a larger unit with a workspace that fronts a major circulation path.

Community (20,850 SF)

The grounding element of the community category is a community center. The center supports the building residents as well as the larger community. Subsets of the center are a teen center similar to a Boys and Girls Club, adult education rooms, a lecture/theater, the headquarters for the West Seattle Business Community, and rentable community rooms.

Examples of activities in the community rooms include neighborhood watch meetings, community groups, and fire safety demonstrations from the firefighters at the station across the street.

The rentable community rooms also have an added role as conference rooms to be used by live-work residents in the building desiring a more public interface on an intermittent basis.

The community elements need to be located for the greatest visibility to the public to draw them into the building. In this way the community program can become a link between the public neighborhood and the private building.

	#	Area	Net Program	Comments and Design Needs
Primary Program				
Retail / Flex			14,870	needs connection to loading dock, storage locate off main circulation route if on upper floor. Provide high ceiling heights for flexibility
Office			10,500	needs connection to storage locate off main circulation route if on upper floor. Provide high ceiling heights for flexibility
Residential	73		65,700	73 units
Studio 1 Bedroom 2-3 Bedroom Live-Work				provide option for private circulation route for security, maximize access to light and air
Community Center				
Check-In / Administration			3,490	ground floor program
Teen Center			5,309	
Community Theater			2,835	ground floor program, sound control
West Seattle Junction Business Association			3,210	
Adult Learning Center			1,770	
Community Rooms	4	1059	4,236	locate with main vertical circulation route for wayfinding
Support Program				
Parking (per code)	129		28,000	per building code - 129 cars
Loading Dock				in parking garage, for retail deliveries
Trash - Recycling				locate away from ped. zone (Alaska Way)
Storage	2	900	1800	for retail and office rental
TOTALS		Total Net Area	111,920	
		Efficiency	69%	circulation, walls, etc
		Gross Area	163,070	

Figure 25 |
Building Program

from table A (Cars) section 23.54.015		Project count
B. commercial uses		
B.3 entertainment uses	for public assembly: 1 space/100 sf of asse	88.41
B.8 offices	1 space/1,000 sf	10.5
B.9 sales and services	1 space/500 sf	29.74
D. Live-Work Units	0 spaces for units less than or equal to 1,500 sf 1 space for units greater than 1,500 sf 1 space for each unit greater than 2,500 sf, plus the parking that would be required for any nonresidential activity classified as a principle use	

table B section 23.54.015 (Res) w/ Station Area Overlay		Project count
H. Multifamily residential	no minimum	
TOTAL CARS		129

table E (bicycles) section 23.54.015		Proj #	
	long-term __ short term	long-term	short-term
A. Commercial			
A.5. Offices	1/4,000sf ___ 1/40,000	2.625	0.2625
A.6. Sales and Services	1/12,000 sf ___ 1/4,000 sf	1.239166667	3.7175
D. Residential			
D.2 Multi-Family Structure	1/4 units ____ none	18.25	
TOTAL BICYCLES		22	4

Figure 26 |
Parking Program

Notes

1. Seattle DPD, "Urban Village Element," Seattle's Comprehensive Plan (2005): 1.19.
2. The United States Census shows a 9% population increase from 2000 to 2010 in the West Seattle Junction/Genessee Hill Neighborhood.
3. City of Seattle, "West Seattle Triangle Urban Design Framework, Draft," (Seattle: 2011): 7.
4. King County Transit Authority, "About RapidRide," <http://www.kingcounty.gov/transportation/kcdot/MetroTransit/RapidRide/AboutRapidRide.aspx> (accessed May 9, 2011).
5. West Seattle Triangle Advisory Group, "West Seattle Triangle Report" (2010): 4.
6. West Seattle Triangle Advisory Group, "Phase II Planning West Seattle Triangle: Alaska/Fauntleroy Subarea" (2011): 2.
7. Seattle DPD, "Seattle's Commercial Zones" (2009):1.
8. Seattle Department of Planning and Development. 2009. "Seattle Zoning Code."



Figure 27 |
North-South Building
Section of Triangular Site

The design proposal is broken into two parts: a master plan, and a building design for one of the blocks of the master plan. This breadth of scales shows how the strategies of pixelated urbanism can work at a variety of levels.

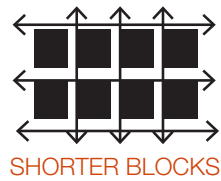


Figure 28 |
Jacobs' Shorter Blocks
Strategy

Master Plan

The master plan is built up sequentially through the urban design guidelines developed in the theoretical framework, and then tailored to fit the West Seattle context.

Circulation Organization

The master plan is organized around a series of circulation axes that break up the master plan sites into smaller blocks. (Figure 28) The locations of these axes are taken from the half-block alleys that currently exist on the site.

(Figure 29-31)

These circulation axes provide the main circulation organization within each building, between the buildings as a master plan, and beyond the sites, connecting back into the neighborhood. In this way, the circulation axes allow the master plan to become a form of urban acupuncture.



EXISTING SITES

Figure 29 |
Existing Sites

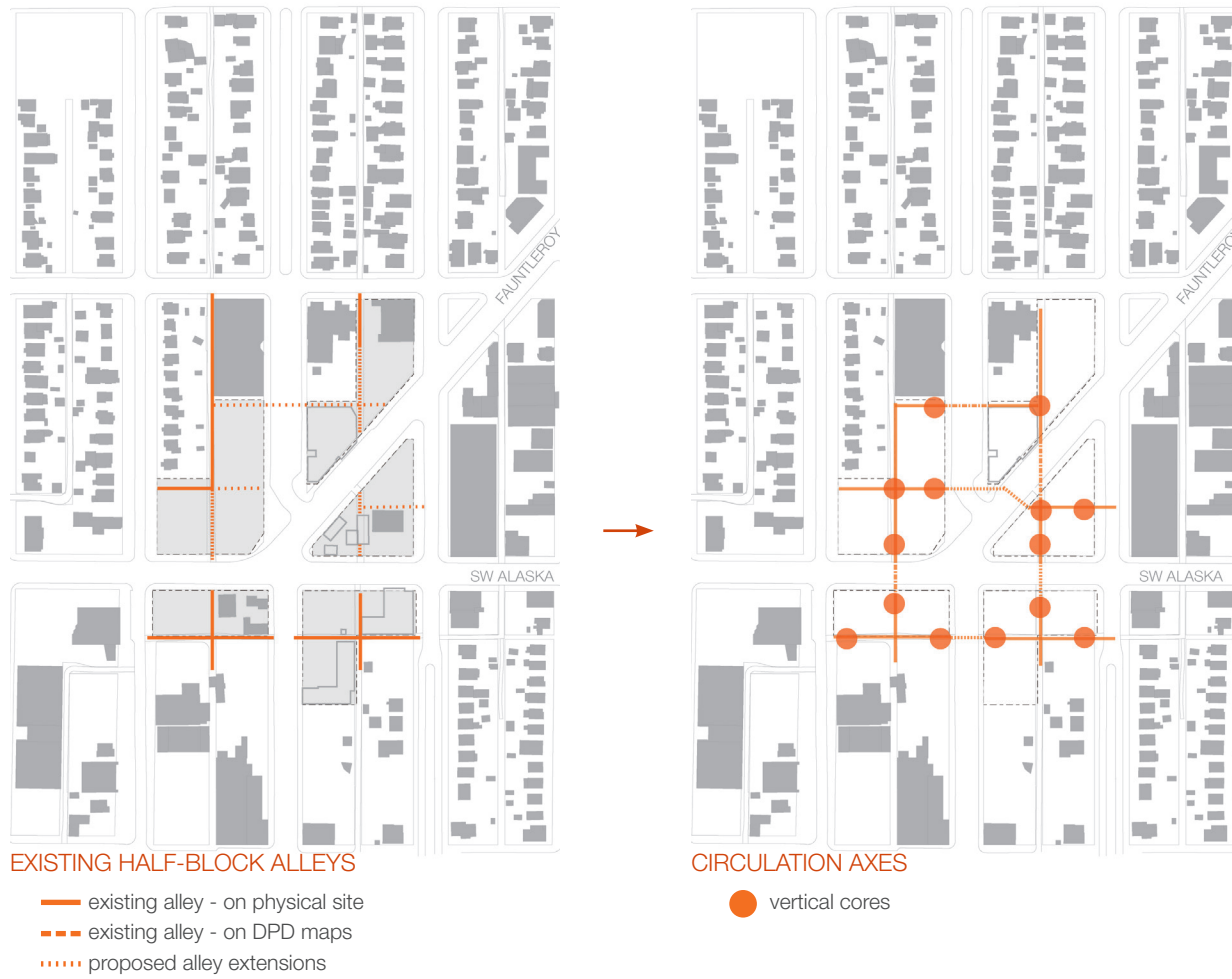


Figure 30 | Existing Half-Block Alleys

Figure 31 | Circulation Axes



This sequence of sections shows how the buildings fill the role of urban acupuncture, linking across an abandoned site to reconnect it into its surrounding context. *(Figure 32)*

The first section is shows the existing site conditions, with a large void disconnecting the residential and commercial areas of the neighborhood. *(Figure 33)*

The second section shows the insertion of two buildings of the master plan into the void, with the section cut through their shared circulation axis. The buildings create a new pedestrian path across the site. *(Figure 34)*

The third section zooms in on the intervention to show how that circulation axis becomes a part of the building. Using the site topography to its best advantage, the axis draws people in from the residential blocks north of the site on the building's second floor. The axis then brings them through the buildings on exterior walkways along a series of public spaces like retail, plazas and community rooms, over the busy street

of Fauntleroy, and back into the neighborhood at grade on SW Alaska. The end of the path at SW Alaska also conveniently leads pedestrians to the RapidRide bus route. In this way the link not only connects people across the neighborhood, but also connects them into a larger urban network. *(Figure 35)*

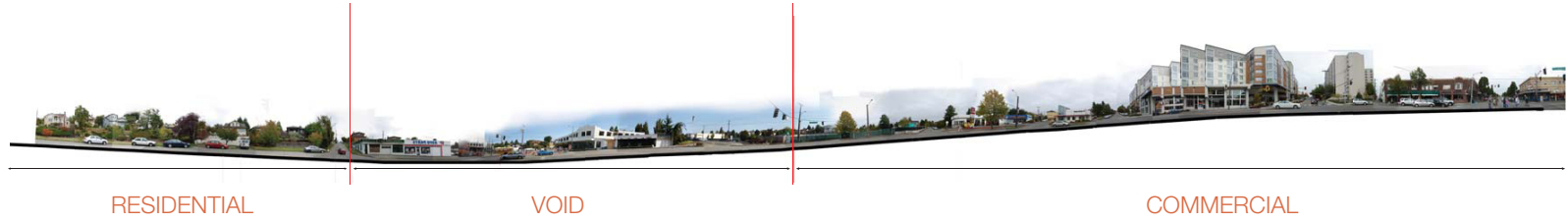


Figure 33 | Existing Site Context, with a void along Fauntleroy

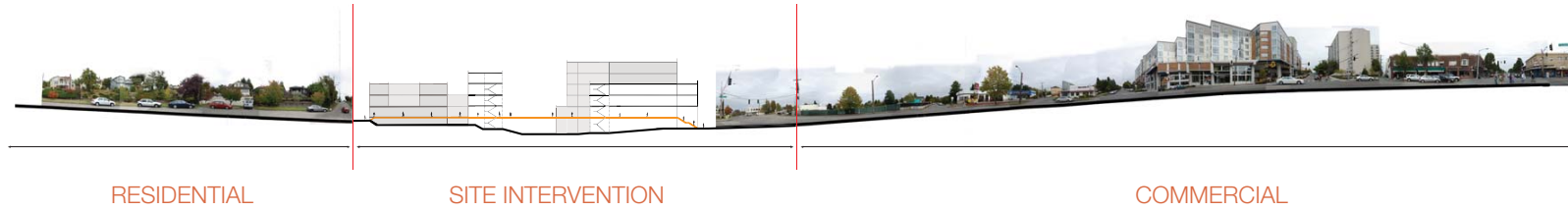


Figure 34 | Proposed Master Plan Intervention, connecting across the void



Figure 35 | Enlarged Section of Site Intervention



Figure 36 |
Program Organization

The strategy differs on ground floor versus upper floors.

Program Organization

The organization of the building programs around the circulation axes shows the dual nature of the axes. On the ground floor they are secondary, as main building programs respond to the existing street grid. On upper floors the programs respond to the circulation axes, as if they were an internal street grid. (Figure 36)

Each program type of the mixed-use building is organized within this system with a set of general rules. (Figure 37) The commercial and office spaces need pedestrian access, so they front the main street facades on the ground floors, and front the internal circulation axes on upper floors. The residential programs need privacy, so they pull back from the main street on the ground floor, and pull back from the circulation axes on upper floors. The community spaces need public visibility, so they face Fauntleroy on the ground floor. On upper floors they locate at the axes' intersections, where the most people will pass them.

The composite of these rules overlap to become the basic massing of the master plan.

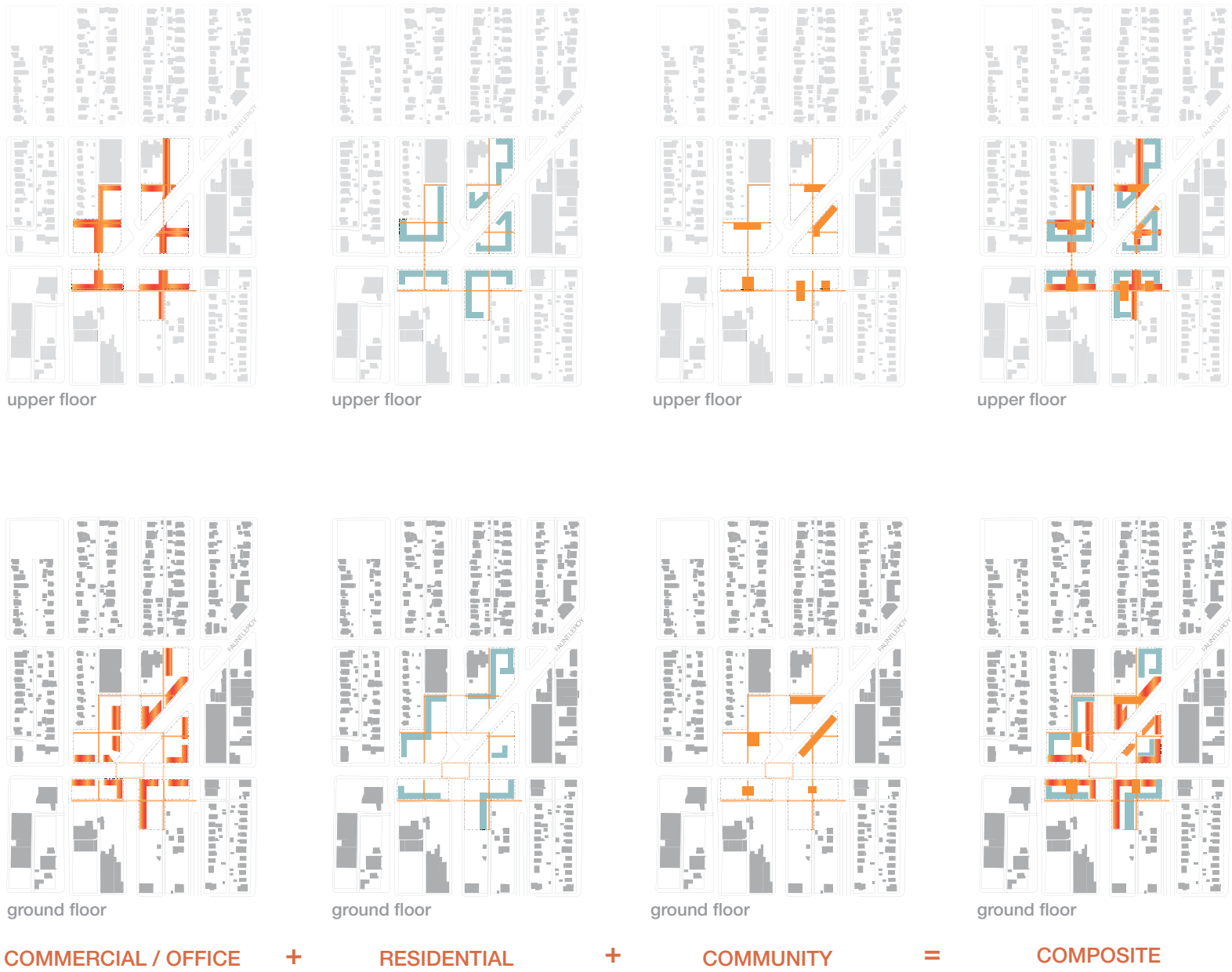


Figure 37 | Program Organization by Type

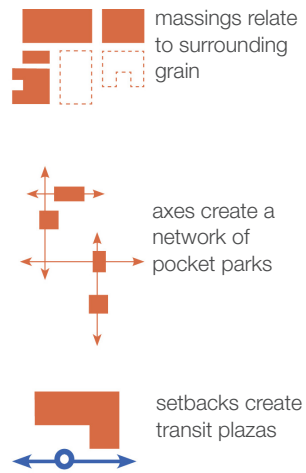


Figure 38 |
West Seattle Appropriate Strategies

The Ground Level Revisited

The ground level of the master plan is further developed with another layer of organization strategies to take the design from a strict diagram of program rules to a specific design for West Seattle.

These strategies are derived from the goals of the West Seattle Triangle Framework Plan and work towards creating a more pedestrian-friendly neighborhood. *(Figure 38)*

The first strategy breaks down the massings at the ground level to relate to the surrounding urban grain. This allows the circulation axes of the buildings to become exterior pathways between the buildings on the ground level.

The second strategy uses the axes to create a pedestrian-accessible network of urban plazas and pocket parks. This will increase the amount of public space in the neighborhood.

The third strategy relates the buildings to the larger urban network through design options that respond to mass transit. Setbacks at transit stops create more pleasant waiting areas for bus

riders and can be integrated with more public amenities like cafes or retail.

Together all of these rules create a master plan that can accommodate the future goals of pixelated urbanism, but is also contextual and can fit into the existing conditions of the neighborhood. *(Figure 39)* The set of views on the following pages show the qualities of spaces created by the master plan, and the relationships between the pedestrian environment and the buildings. *(Figures 40, 41)*



Figure 39 |
Master Plan Ground Level
(2024 projection)



Figure 40 | View from Corner of Fautleroy and 39TH

Here you can see two axes intersecting on the triangular block across the street. The first axis is at grade, in a crosswalk, and the second axis is above grade on a pedestrian bridge (which was seen in the earlier section cut). At the intersection of the two axes is a vertical core with an open stair, which provides the circulation component of the vertical public path up the building, a translation of Holl's vertical path in the Sliced Porosity Block case study. The program component of that vertical path is the stack of community rooms for the community center, which will be discussed in greater detail further on in the design section.





Figure 41 | View from SW Alaska (at Fautleroy)

Here you can see how the circulation axes connect buildings at ground level in crosswalks, and transition into the building circulation. Here the axis becomes a wide open stair to welcome the public up to the second floor of the building where there are more shops and public spaces. As the stair meets grade, it widens out and becomes a casual waiting area for commuters waiting for the RapidRide bus.



The Overall Master Plan

The complete master plan shows an increased density and diversity for the neighborhood. This rendering shows additional growth around the site, as transparent white volumes, suggesting that this new intervention will spur more development with its added population and activity.

This design section will now focus in on the building design for the triangular block, as a solution representative of the other blocks in the plan. The block north of the triangle, across Fautleroy, will also be more developed, to show the dialogue between blocks of the master plan.

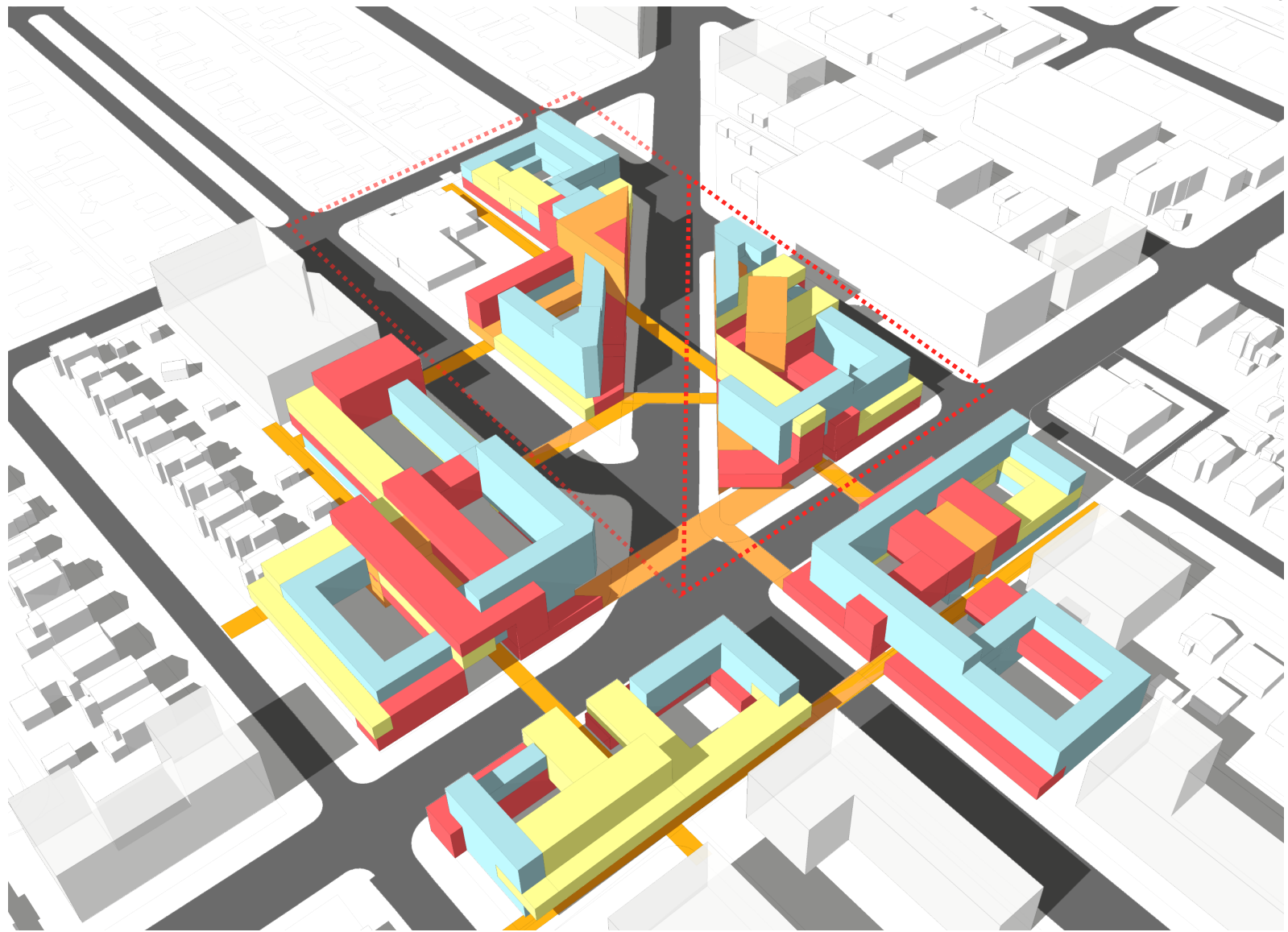


Figure 42 |
Master Plan 2024

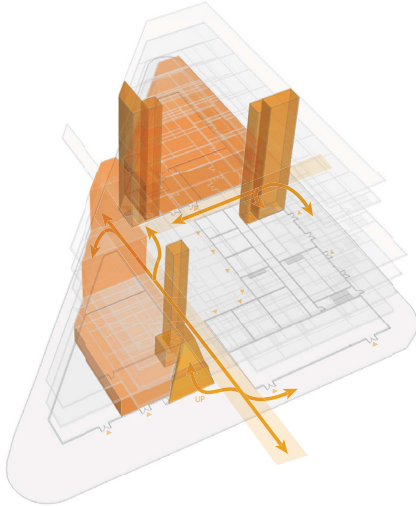
Triangular Block - Building Design

The triangular block represents the strategies of pixelated urbanism at a building scale. The building mixes program, overlaps users, is flexible and adaptable to changes over time, and brings the neighborhood up into the building to expand the public realm. The organization of the program and the circulation were key to making these goals attainable.

Program Organization

The initial organization of the program in the building is drawn from the guidelines applied to the master plan. The organization was then tailored to better fit the triangular site constraints and maneuvered in a way that would allow the public to filter up the building to use upper level programs, and that would allow for flexibility in some program uses.

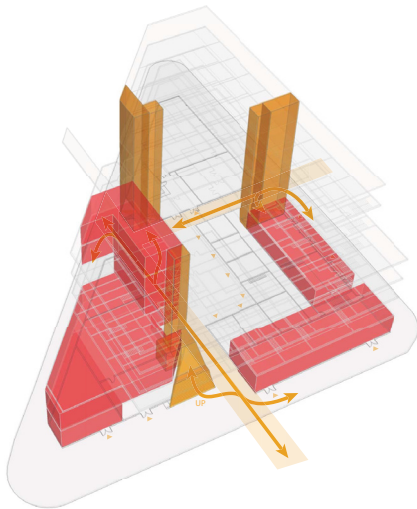
As shown in the following program diagrams, none of the program types are fixed to a single floor; all of the program pieces extend the height of the building and work together to achieve the feel of a vertical neighborhood.



Community

The community center has a strong presence on the ground floor on Fauntleroy and on the internal courtyard. The check-in for the community center is on this level, but the community rooms available for public use are stacked up the height of the building, at the intersection of the two main circulation axes. This creates a programmatic public path from the ground floor to upper floors.

Figure 43 |
Community Program



Retail / Flex

Retail wraps the ground floor on all street sides to create pedestrian interest. On upper levels retail/flex spaces front the north-south circulation axis, the most public and widely accessible space on upper levels. These flex spaces may range in actual use from retail, to office, live-work, or even expanded community space.

Figure 44 |
Retail / Flex Program

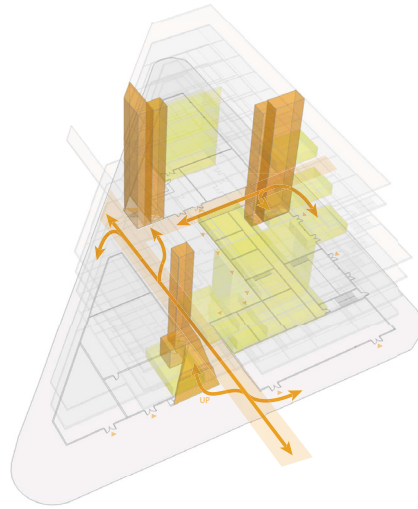


Figure 45 |
Office / Flex Program

Office / Flex

Office space is broken into two different types: open office/flex space, and office within live-work units. Office/flex space is similar in organization and parameters to retail/flex, in that it is intended to change in use over time depending on market needs. These spaces are also located closer to the main circulation axes for greater public access. Offices that are part of live-work units are located in the residential wings.

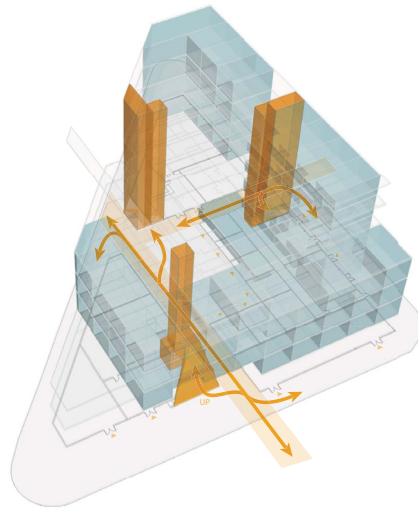


Figure 46 |
Residential Program

Residential

The residential units of the buildings are located outboard of the main circulation axes to give them a degree of privacy and security. They have two more private circulation cores, although they can also use the more public entrances as well, allowing the residents to choose the degree to which they want to interact with the public.

Composite

The mixed program interlocks around the main north-south and east-west circulation axes to create a neighborhood within which a variety of people and programs can overlap. These axes become the “main streets” of the building, where residents and visitors can meet, shop, and interact.

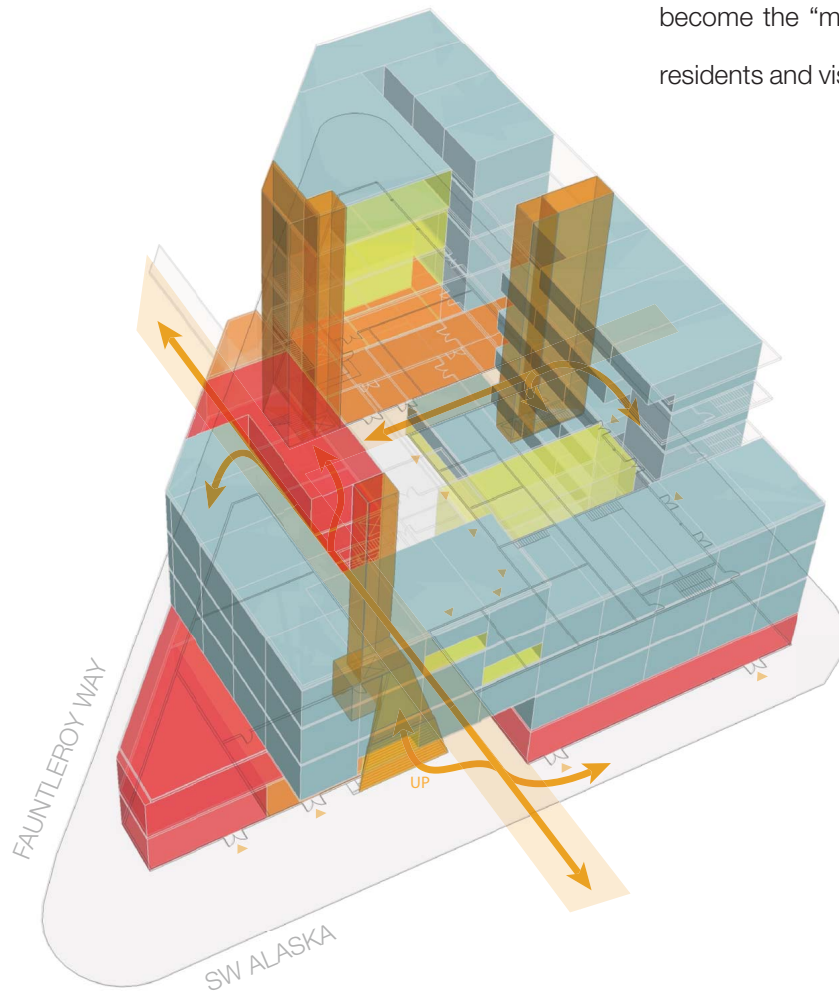
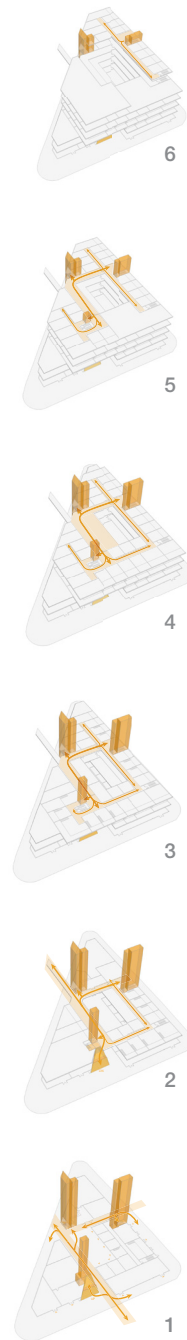


Figure 47 |
Program Composite



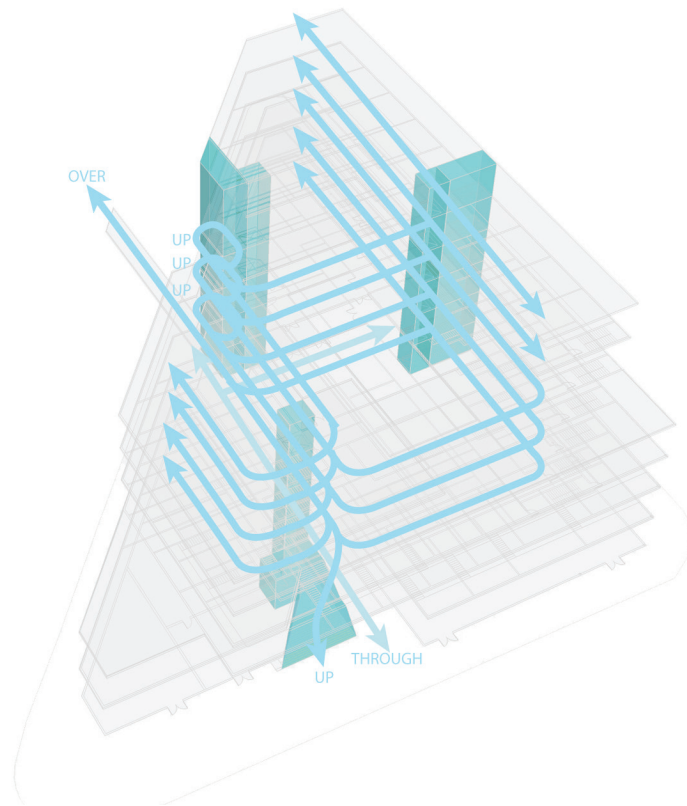
**Figure 48 |
Circulation Diagram**

The building is organized around two perpendicular primary axes and three corresponding vertical circulation cores

Circulation + Experience

The organization of the building circulation hinges on the north-south and east-west circulation axes that tie the building into the master plan and wider community. (Figure 48) While the circulation provides valuable organization and order to the program layout, it is also designed to provide a degree of uncertainty. The axes create overlaps between different users in the building to create the unique interactions of a neighborhood. This mixes residents with shopkeepers, office workers, and even passersby who are using the building's pedestrian bridge as a shortcut to the RapidRide bus stop. (Figure 49)

The main orienting factor of this circulation is the main public core at the intersection of the two axes. This core has an open stair that creates a visual link from the ground floor to upper level public spaces, like community rooms and retail. This core allows public functions to extend up into the building much further than they would in a typical mixed-use building. (Figures 50-53)

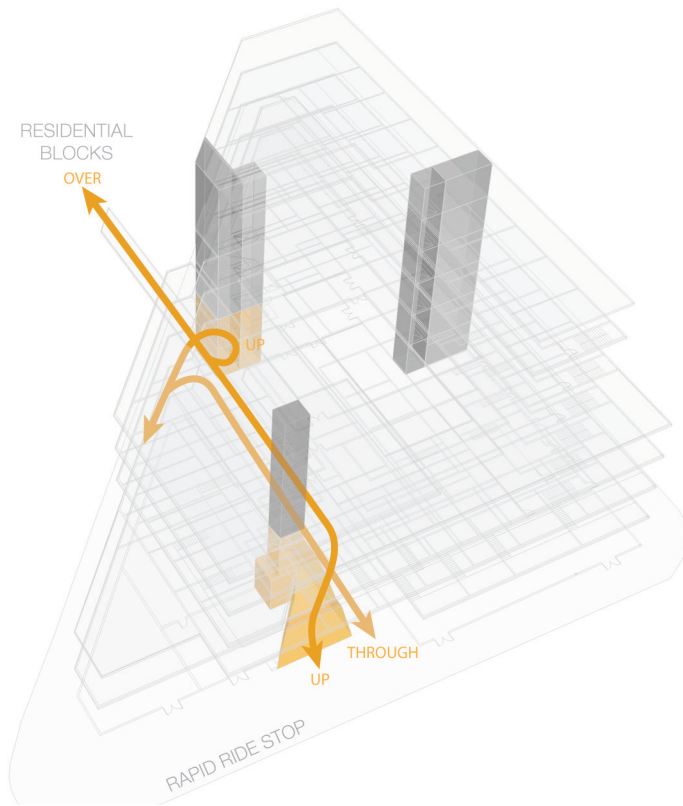


RESIDENTIAL

Residential users have full access to the building height. The east-most circulation core is secured for their private use, but for ease of movement they can choose to use the two other cores as well. This provides them with more overlap with their residential, commercial, and public neighbors.

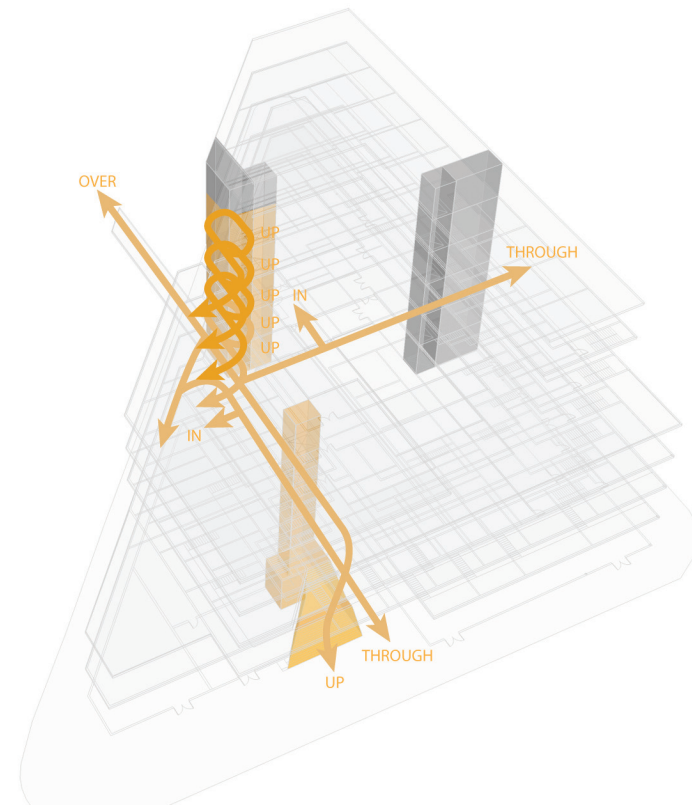
Figure 49 | User Paths

A variety of users pass through the building, mainly using the circulation axes. This creates user overlap and a neighborhood feel



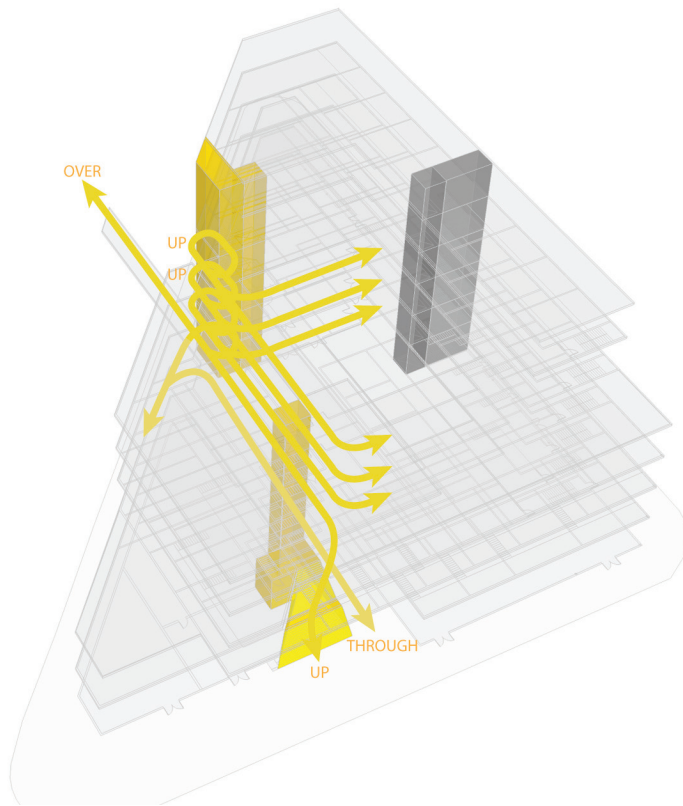
SHORTCUT

The building provides a shortcut on the first and second floors for neighborhood residents. The second floor pedestrian bridge creates an easy crossing for residents in the northern blocks over the heavy traffic of Fauntleroy, and quick access to the RapidRide bus stop on SW Alaska.



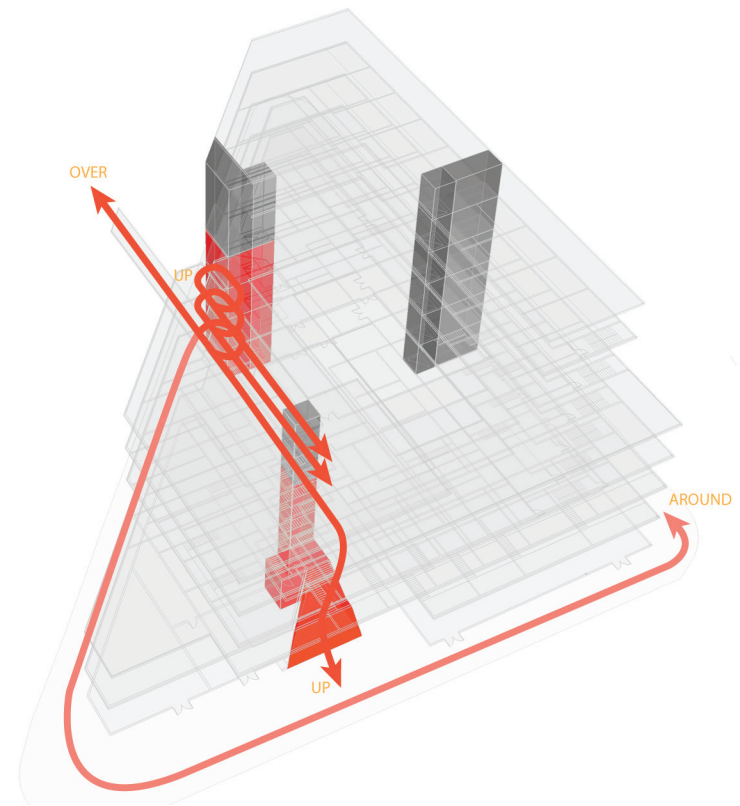
COMMUNITY

The community center activates the ground floor of the building, and maintains a strong presence on upper floors as well. This creates a link between the main public realm on the sidewalk to upper floor gathering nodes and open spaces.



OFFICE / FLEX

Office spaces throughout the building link to the two main circulation axes for access and visibility to the public. These spaces extend up to the fifth floor.



RETAIL / FLEX

Shoppers access the retail shops off the sidewalk at grade, and off the circulation axes on upper levels. The upper level axes become the “main streets” for the building neighborhood, where both residents and visitors overlap and interact.

Figure 49 |
User Paths (continued)

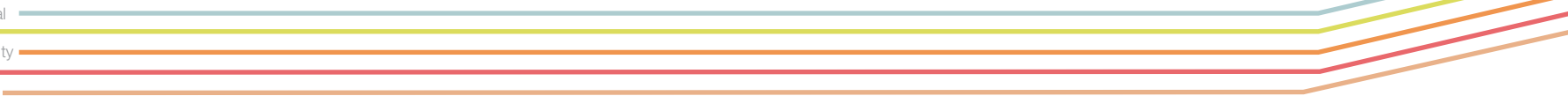


**Figure 50 |
First Floor**

This view shows the entrance off Fauntleroy into the courtyard. This is the intersection of the two main circulation axes. The public stair begins to the left, connecting people to upper level community spaces, retail, and the pedestrian bridge.

FIRST FLOOR

residential
office
community
retail
shortcut



**Figure 51 |
Second Floor**

This view shows the building entry from the pedestrian bridge over Fauntleroy. Commuters use the bridge to connect to the RapidRide stop at the end of this axis (down a stair beyond the image). Along their path are the community room (with green glass) and retail. Children and teens use the bridge for safe access to the community and teen centers.



SECOND FLOOR

This series of perspectives shows how the circulation paths of different users flow up the height of the building and intersect. The building overlap and program diversity extends much higher in this building than in a typical mixed-use.



**Figure 52 |
Third Floor**

This view shows the entrance to the third floor from the public elevator that accompanies the open stair. To the right are the community rooms. At the center are flexible offices, and beyond the courtyard is the finer grain of the residential wings.

THIRD FLOOR

residential
office
community
retail

**Figure 53 |
Upper Floors**

This view off the terraces on the residential wing shows the full height of the building and a birds-eye view of how the program overlaps create vibrancy. Flexible office spaces and the community rooms continue up to the fifth floor of the building.



UPPER FLOORS

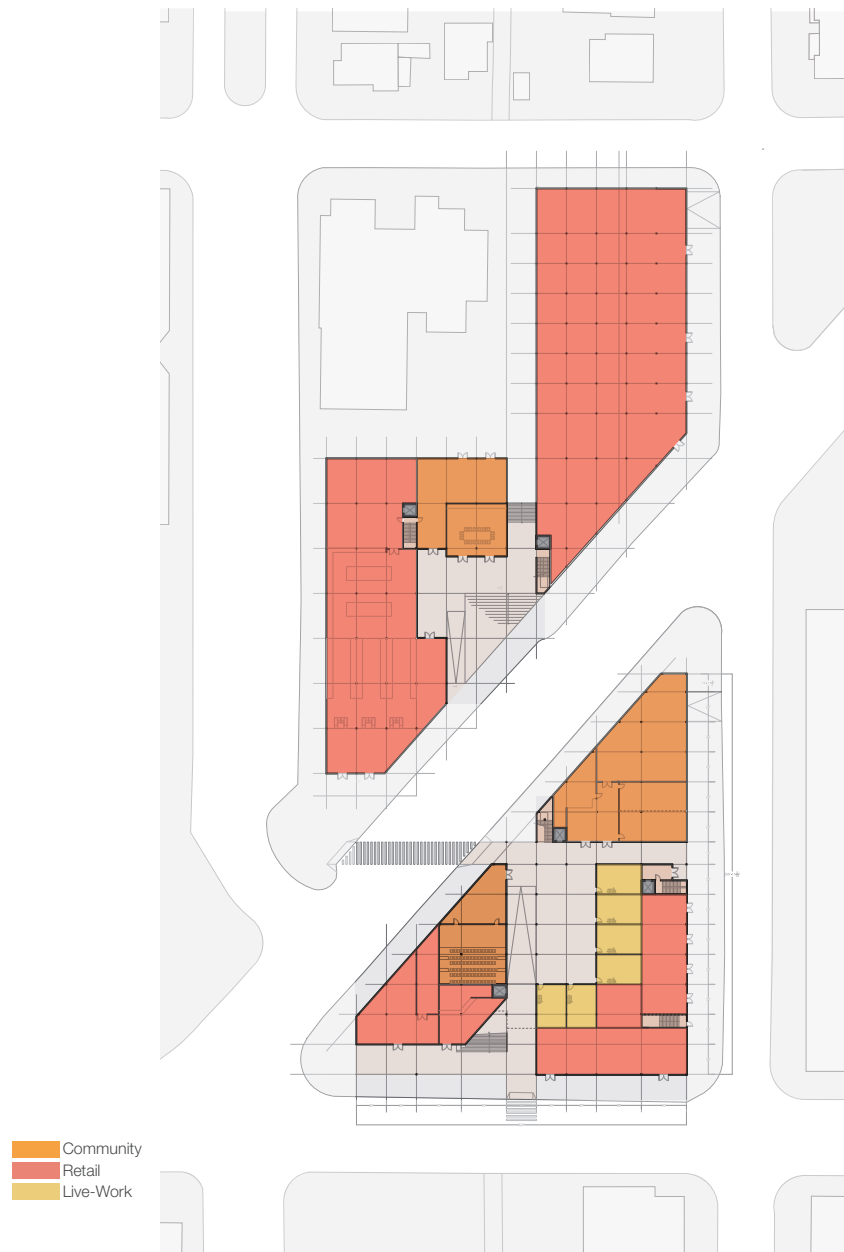


Figure 54 |
First Floor

Floor Plans

The organization of the floor plans ties together the program and circulation goals.

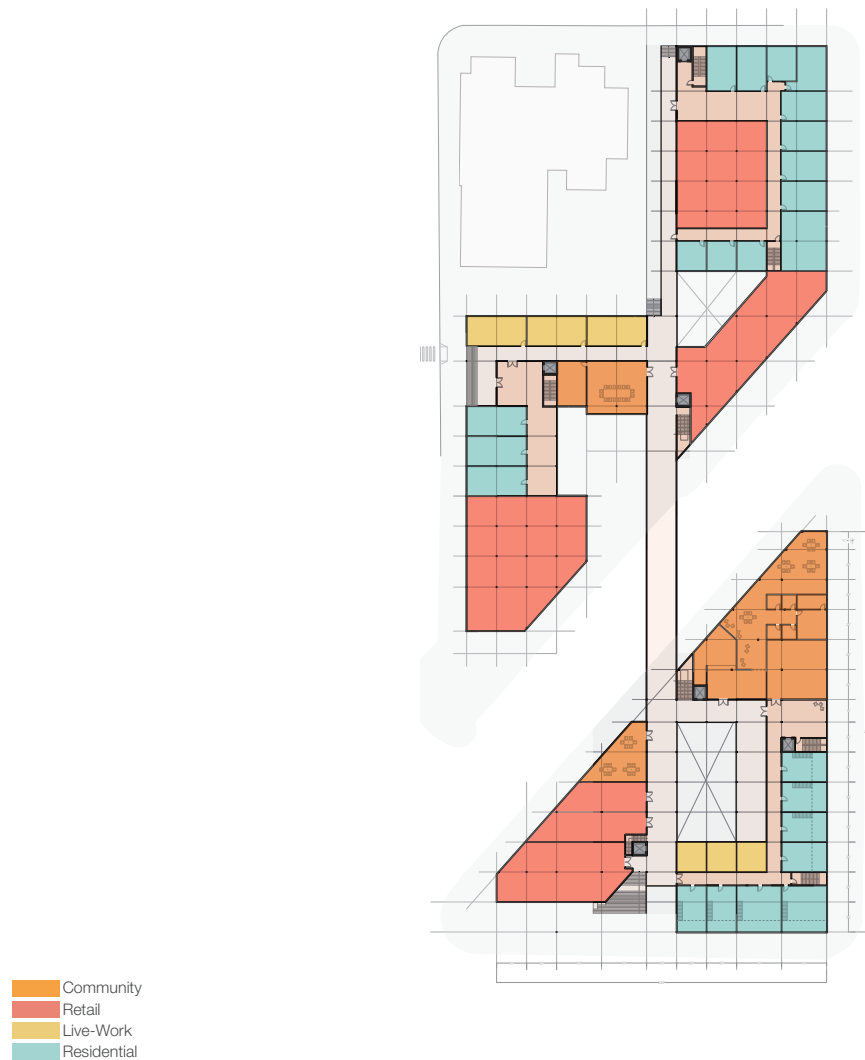
First Floor

On the first floor the axes are passageways between the buildings on the block, bringing people from all sides into the central courtyard. Off the courtyard are live-work units, the check-in for the community center, and the stand-alone lecture/theater. Anchoring the intersection of the two axes is the open stair that provides the main public path up the building. (See Figure 50) At the other end of the main north-south axis is the RapidRide bus stop, with a large landscape stair opening off the waiting area, drawing visitors up to the second level of the building.

Residents in the live-work units have a view into the public circulation, but are separated from direct interaction by a courtyard space. The courtyard also allows for the spill out of work and play space. (Figure 55)



Figure 55 |
Live-Work Loft



**Figure 56 |
Second Floor**

Second Floor

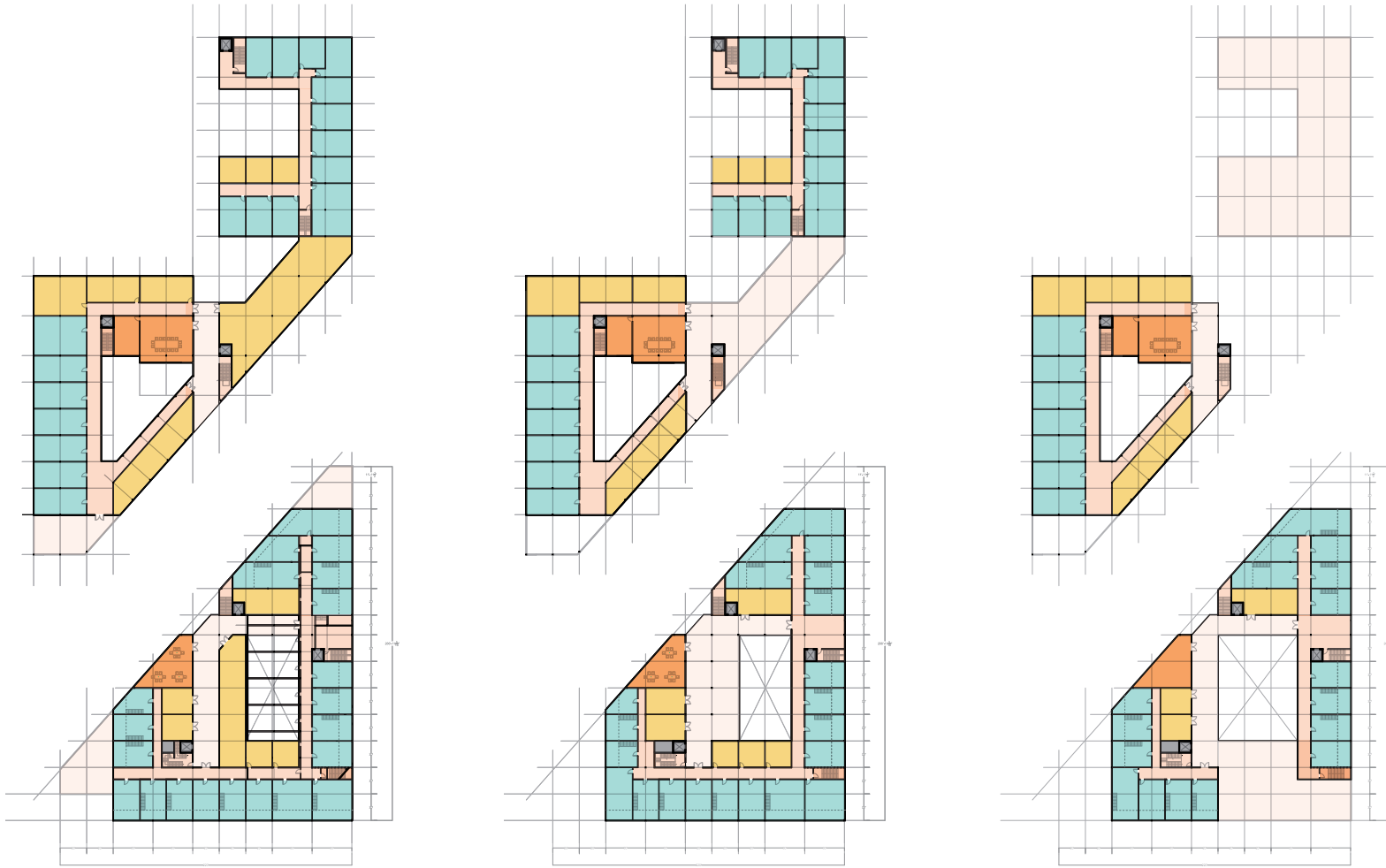
On the second floor the north-south axis extends beyond the building in a pedestrian bridge over Fauntleroy Way, connecting into the next building of the master plan, and eventual evening out at grade at the residential block beyond. This connection creates a commuter path from those residential blocks to the RapidRide bus stop on Alaska, and creates a safe connection for kids and teens to get to the community center. (See Figure 51)

The second floor has a community room anchoring the intersection of the two axes, across from the public stair. (Figure 57) This pairing is repeated on floors three through five. These two features work together to create the public path, as complimentary circulation and program elements, to draw the larger neighborhood into the building.

The housing and live-work wings are off the main axis, separated by an open courtyard. They are visibly part of the community, but physically separate for security.



Figure 57 |
Community Room



FLOOR THREE

- Community
- Retail
- Live-Work
- Residential

FLOOR FOUR

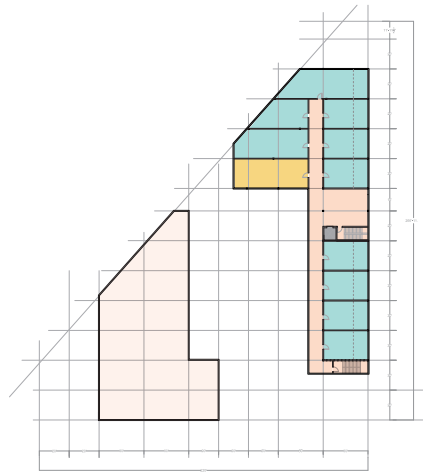
FLOOR FIVE

Figure 58 |
Third, Fourth, Fifth, and Sixth Floors

Third - Sixth Floors

On the upper floors the north-south and east-west axes continue to be the most public circulation routes, with the intersection always connected to the public stair and corresponding community room. Along the axes are the flexible retail and office spaces. These spaces are characterized by high ceiling heights to support a variety of potential programs.

While most of the floors accommodate all of the program types, the very top floors pull back for light and air, and the sixth floor is completely residential.



FLOOR SIX



Figure 59 |
East-West Cross-Section

Circulation paths are highlighted
in pink.

Structure: Building in Flexibility

The building is designed for a degree of flexibility that will allow for a variety of programs to occupy the buildings now, and for the building to continue to adapt and change with its neighborhood's needs in the future.

This goal is accomplished by beginning with a simple building structure. The building is steel construction, typically laid out on a 20 foot x 30 foot grid. The floor-to-floor is a generous 17 feet, for flexibility to accommodate taller height programs like retail. These tall height spaces are located off the main circulation axes, as the types of programs that will plug in will want greater visibility.

The buildings wings off the main axis will not need high ceilings, so a secondary half-floor is inserted to create loft-style residential and live-work units. This strategy not only doubles the living space, but also allows for a number of the units to have dual-facade access for cross ventilation and light access. *(Figure 59)*



**Figure 60 |
East-West Cross-Section**

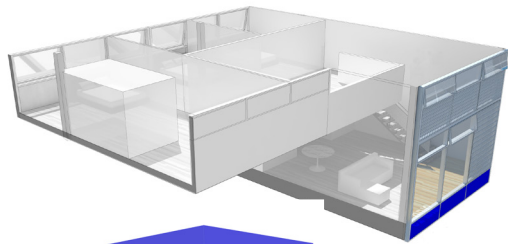
The red outline indicates the building wing where these unit types are located.

Structure: Building in Diversity

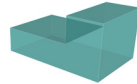
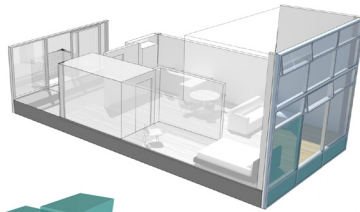
The residential wings are designed to accommodate a variety of residents from singles, couples, to larger families. (Figure 60) The simple structural bay and half-floor layout allow for a variety of unit types to plug in. (Figure 61)

The typical one-bedroom unit is a loft, with windows to both the street side and the courtyard. The live-work unit is similar to the one-bedroom, with the lower level used for work-space. There are also larger versions of this live-work unit in other wings of the building. The larger two-to-three bedroom unit expands beyond its structural bay and grafts the upper floor of the studio unit type. The studio unit is the only single-level unit type, with only a single wall to the exterior. This unit still gets daylight deep into the space with its full 17 foot height curtain wall facade.

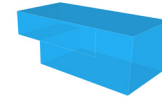
All of these unit types have curtain wall facades that are tailored to their user type with a system of colored opaque and perforated metal panels. This system provides privacy where it may be needed, and creates a sense of identity. When



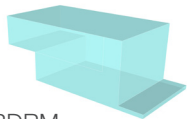
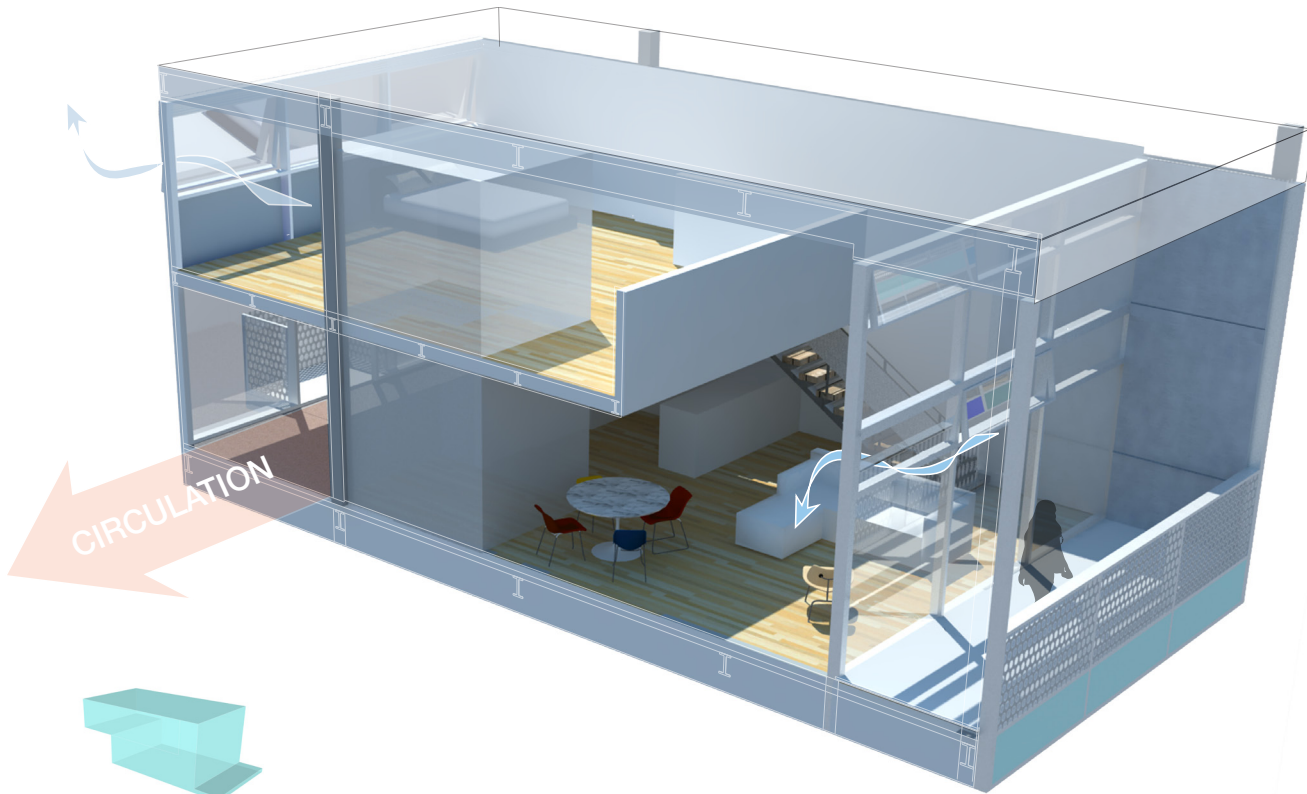
3-BDRM



STUDIO



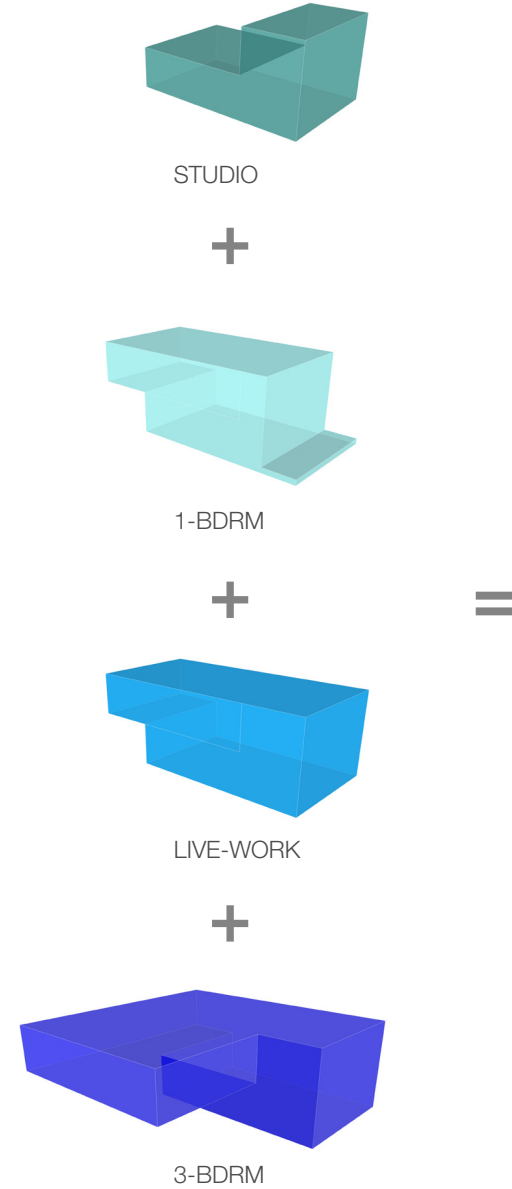
LIVE-WORK



1-BDRM

Figure 61 | Unit Types

these units come together in a building wing, they create a pixelated effect, breaking down the mass of the building, and hinting at this diversity to the public. (Figure 62)



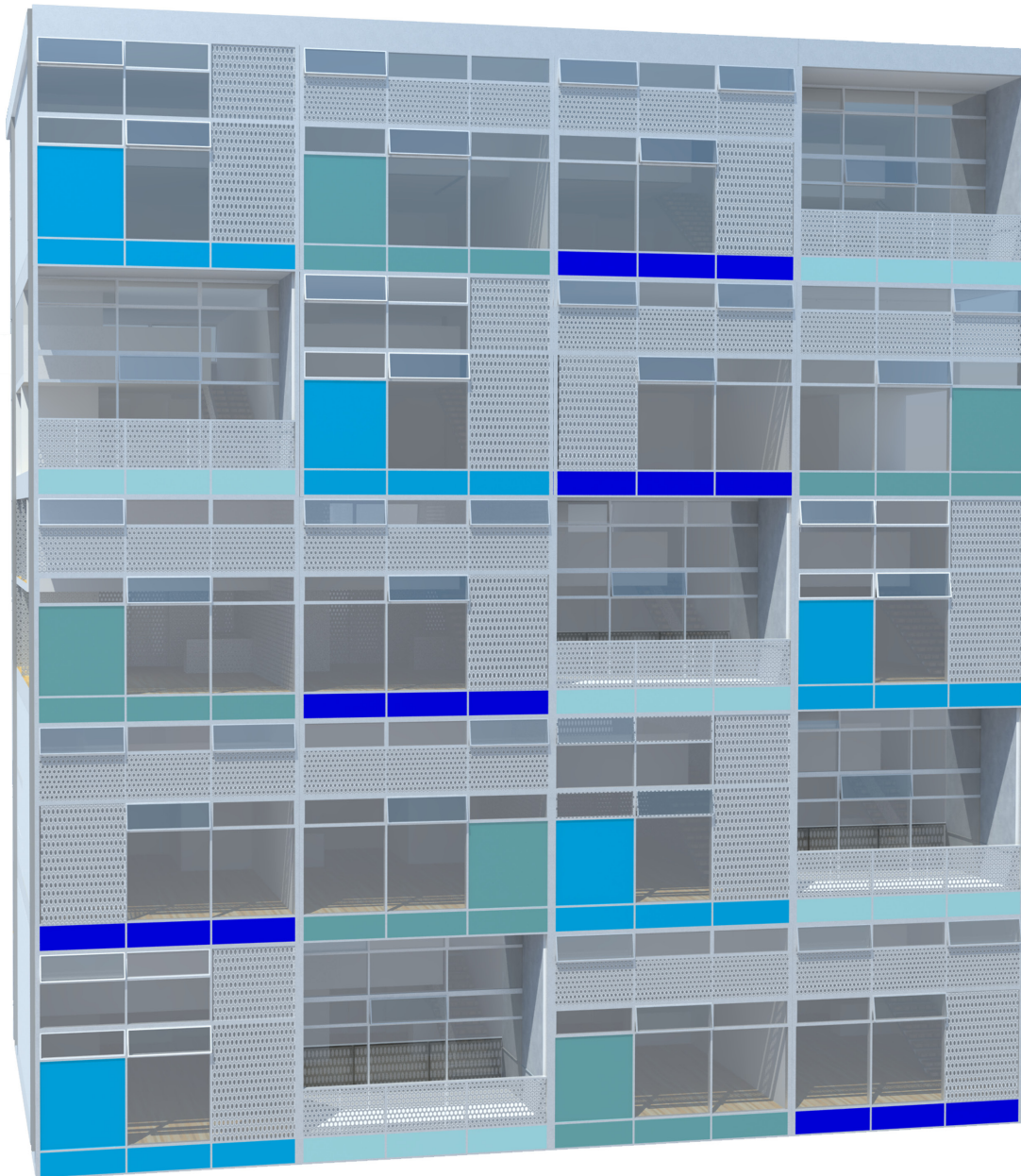


Figure 62 |
Unit Diversity as
Architectural Expression



**Figure 63 |
Future Growth**

Pixelated urbanism has the potential to expand throughout the neighborhood over time. From one building, to a master plan, to future spread, these strategies for mixing programs and users can create a more diverse, integrated community.

This thesis began as an investigation into the design potential of mixed-use buildings because contemporary examples of the typology do not take full advantage of their hybridity. The typology can do more to increase interaction between users, and become active neighborhood creators instead of passive building forms.

As the thesis developed, the typology study evolved into an urban investigation. Pixelated urbanism emerged as a commentary on our current urban environment, and an idea for our future. In relation to census trends in America of increasing urban density, the goal for mixed-use became neighborhood revitalization. Mixed-use could be the vehicle by which Americans increase their cities' densities without losing the urban design qualities we established over the years for great urban spaces. This typology is uniquely positioned to do this because even as a stand-alone building it brings new programs, users, and residents into an area. If the ratios and relationships between these

programs are balanced, a mixed-use building can be a neighborhood within itself, and can eventually influence its larger context with its positive change.

Ultimately, pixelated urbanism is a strategy for a new way of living in cities. It suggests that we can live in densely urban spaces much like we live in our neighborhoods. Instead of these areas being vertically stratified and separated by program, like our current methods of development suggest, it brings the design principles of fine-grain, diverse blocks into a vertical form. Our 20th century urban design strategies can be adapted for a 21st century environment.

The final result was a project proposal for West Seattle. The master plan was an example of how this type of urbanism fits into our city as an instigator of new development and lifestyles. While the master plan was tailored to fit the West Seattle context, its underlying principles are broad enough to adapt to other American cities.

While the idea of pixelated urbanism had always been to show how to increase urban density in areas where legislation allows growth

but it has not yet happened, the strategies for how this would work were unclear. Developing the West Seattle Master Plan illuminated new ideas and potential that were not uncovered through the research portion of this thesis.

Through the design, the connection to two main networks, a local residential network, and a broader public transportation system became integral to making the building work. The building is a mutually beneficial intersection within this larger system; the two networks bring people through the building to use new services and allow new residents to easily connect to other areas of the city, and the building provides a new hub intersection between the local and larger networks. In the thesis defense reviewers noted that many of the moves of the building were successful due to the building's specific context. Many of the building strategies focused on the internal circulation and site relationships, but they needed the external relationships of building to site to work.

The importance of the site selection is something that could be explored further. As

pixelated urbanism is seen as a translatable strategy in other areas and in other cities, the next step would be to test the building typology in other contexts (other cities, downtowns, etc.) to see what key relationship between building and site could develop.

Site also influences the role of pixelated urbanism as an incremental and ongoing approach to urban development. The initial buildings become the first step towards increased density and hybrid lifestyles, but beyond their walls they can spur more redevelopment around them by increasing interest in the area. *(Figure 63)* Through this method we can create a balanced, increased urban density, without losing the qualities of life of a vibrant American city.

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