



# ***HOUSING THE HOMELESS***



*MAPPING THE DESIGN PROCESS  
OF SERVICE-ENRICHED HOUSING  
BY BRENT STURLAUGSON*

A thesis, presented to the Department of Architecture and the Honors College of the University of Oregon in partial fulfillment of the requirements for the degree of Bachelor of Architecture, June 2008

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An Abstract of the Thesis of  
Brent Stephen Sturlaugson for the degree of Bachelor of Architecture  
In the Department of Architecture to be taken May 20, 2008  
Title: HOUSING THE HOMELESS: MAPPING THE DESIGN PROCESS OF  
SERVICE-ENRICHED HOUSING

Approved: \_\_\_\_\_  
Professor Michael Fifield

The homeless demographic fluctuates in response to economic, political, social, and environmental upsets. As the climate of uncontrollable conditions changes, so does the population of those with inadequate shelter. Responsiveness to unpredictable, tumultuous patterns is a crucial determinant for the success of a facility that seeks to alleviate homelessness; namely, a programmatic flexibility that ensures longevity. Also imperative in accommodating the homeless population is the combination of housing and service components in a codependent relationship. An inextricable bond between housing and services encourages a successful union in an unbroken chain of related facilities in a continuum of care.

The utmost respect and gratitude is owed to those who promote equality among disparate populations by implementing design that improves the lives of the less fortunate. Thank you Michael Fifield for illuminating the boundless potential of an architecture that is based on sound intentions. And for après studio gatherings. Thank you Christina Bollo for donning an unrelenting optimism that was conspicuously communicated in each correspondence. And for phò. Thank you Richard Kraus for the innumerable opportunities to seek unforeseen intellectual growth, in this country or the next. And for free printing.

# **INVESTIGATION**

## **Introduction**

006/Introduction

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**H/H**

007/Investigation 008/Intention 009/Information 011/Interpretation

## **Seattle and South Downtown**

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## **Design Development**

**D/D**

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## **Lessons Learned**

037/Lessons Learned

# ***INTENTION***

***Document a design process with  
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***Extract the contextual uniqueness  
embedded within the site***

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***Establish a continuum of care that references grafting  
as a model for the inextricability of housing and  
services in alleviating homelessness***

***C/C***

***Render a gradient of housing and services that  
responds in differing ratios to a spectrum of users  
while maintaining an identifiable sense of community***

***D/D***

***Relate the findings of an academic  
exploration in architecture***

# ***INTRODUCTION***

*"A process is the generation of a micro-history of a project, a kind of specific narrative where the entity of the project forms in a sequence." -Alejandro Zaera-Polo, Verb: Processing*

The following thesis maps the design process of housing the homeless. The proposed system of documentation delineates a stream of design consciousness with an iterative rubric of operations that suggest coherence in an otherwise oblique lineage. The rubric is comprised of four categories: investigation, intention, information, and interpretation. The investigation defines the field on a basic level. It identifies a pertinent topic that serves as the framework for proceeding operations. The intention refines the investigation and clarifies the scope. It is active in character, seeking an ideal that gives direction to the investigation with brevity and clarity through explicitly defined goals. The information offers findings that relate to the intention, serving as substantiating evidence for the following interpretation. The interpretation illustrates possible solutions to a given set of problems. It is formulated from the distillation of information, resolving a line of investigation through informed design decisions. From here, the process begins again with a related investigation creating a siphonic cycle that draws from previous iterations to inform subsequent operations. The ratio of information to interpretation changes as the process matures, shifting from a saturation of research to a density of design. The progressive discoveries are presented in a regimented format that clarifies the obscurities of the design process.



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# INFORMATION

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*"Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control." -Universal Declaration of Human Rights, Article 25*

The homeless population entered the American conscience with increasing awareness in the 1980s. Activists Robert Hayes and Mitch Snyder coined the term and presented homelessness as a pertinent topic to politicians and journalists (Jencks vi). At this point, what everyone had deliberately ignored but honestly perceived was now an actively debated phenomenon that captured the attention of the population. A multitude of responses materialized in both the political and humanitarian realms. Progressive legislation soon passed that expounded upon previous measures set forth by Section 8 in the Housing and Community Development Act of 1974 which established the benchmark at thirty percent of a household's income to qualify for affordable housing. The McKinney Homeless Assistance Act of 1986 specifically designated the homeless as those in desperate need of adequate housing, offering the first explicit legislation directed at homelessness. The evolution of this bill continues to refine the statutes through amendments that further empower the homeless with rights to basic means of shelter.

When addressing the homeless population, it is important to make clear the terms in which the discussion engages. The Department of Housing and Urban Development presents a recognizable definition as:

"an individual who lacks a fixed, regular,

and adequate nighttime residence, and an individual who has a primary nighttime residence that is, 1. a supervised publicly or privately operated shelter designed to provide temporary living accommodations (including welfare hotels, congregate shelters, and transitional housing for the mentally ill); 2. an institution that provides a temporary residence for individuals intended to be institutionalized; 3. or a public or private place not designed for, or ordinarily used as, a regular sleeping accommodation for human beings."

Critical debate about this definition purports that labeling the homeless as such limits the scope of solutions to that of reactive measures. "The ultimate failure of the official definition is that it does not help us address the larger issues of how to end homelessness for the long term. It only helps decide who should receive services at any particular time." (Burt 7). What fails to be addressed are the possibilities of eliminating the affliction at the outset. Other complications inherent in defining such a diverse case include varying levels of inclusiveness. "If the definitions are too inclusive, they become useless; the phenomenon becomes too diffuse, ultimately covering too many people...But if definitions are too specific, they focus too exclusively on homelessness at the moment" (Burt 6). The fact remains, however discriminatory the definition, that homelessness is "severe, widespread, and increasing" (Franck 251).

Both substantiated and unsubstantiated evidence shows the prevalence of homelessness on the streets of American cities. Studies conducted by the Department of Housing and Urban Development concretized the assumptions made in the 1980s which established a grossly low figure of 250,000. Other speculative numbers compensated for the misrepresented as Mitch Snyder proposed an astronomical 3,000,000 (Barak 3). Debates continue as to how the population of those that dwell within the seams of urban existence should be quantified. The National Law Center on Homelessness and Poverty estimated that 3.5 million people "are likely to experience homelessness in a given year" (NCH #2). Other agencies such as the National Alliance to End Homelessness reframed the count and reported that 0.75 million "experienced homelessness in January 2005" (NCH #2). The National Coalition for the Homeless, founded by Robert Hayes, seeks to mediate these quantifications through their continuing devotion to eradicating homelessness. While homeless counts provide a vague scale from which the problem may be assessed, empirical evidence cannot be attributed to lifestyle that lurks in the figurative shadows of American living.

Those individuals subject to homelessness come from assorted backgrounds. Among them are the "single male, deinstitutionalized mental patient, youth runaways, evicted individuals, mentally/physically disables, battered women, victims of disasters, illegal immigrants, victims of alcoholism" (Erickson xxvii). This list is in no way exhaustive, yet it serves to unveil the widespread diversity of the problem. With

claims such as "1 out of every 10 poor households is living such a precarious existence that a spell of homelessness is a strong possibility," (Burt 322) it appears that no group is insusceptible.

Homelessness stems from diverse roots, but in general, the causes emerge out of four fundamental foundations: inadequate affordable housing, rising unemployment, deinstitutionalization of mental patients, and tighter restrictions for disability benefits (Franck 251). While each factor weighs significantly into the equation, the most pressing of these is the lack of adequate housing. Various factors contribute to this shortfall, notably the fewer single resident occupancy hotels, affordable rentals, vacancy rates, and qualifying units as fair market rent under Section 8 (Huttman 158). The relative importance of each varies according to solution philosophies. Some claim that the discrepancy of housing costs compared to personal resources significantly offsets the equilibrium (Burt 322). Others pose the reduction of rental units, nearly 500,000 fewer each year, as the driving source (Franck 251). Still others attribute the loss of SROs, condominium conversions, and rent control laws as the most prevalent causes of homelessness (Huttman 159-160). Regardless of opinion, the issue persists and will continue to grow if not addressed through proactive measures.

# INTERPRETATION

# H/H

*"The buildings that we construct are a reflection of our values and our culture. At its best, architecture not only reflects but also serves society; it has a duty to provide for those with the greatest need and the fewest options. Thus architecture should do more than provide homeless people with shelter: it must sustain their hope and their dignity." -Sam Davis, Designing for the Homeless: Architecture that Works*

The interpretation of the preceding information suggests a marriage of housing and services for the eventual alleviation of homelessness. Certain proponents for reintegrating the homeless pose a stepped strategy as a viable solution method. The model begins with an immediately responsive emergency shelter. This reactive remedy accommodates those in need at the outset of inadequate shelter, as it is understood that the onslaught of homelessness can creep up on its victim with little to no indication. Whether discharged from a medical facility, released from prison, evicted from an apartment, or simply unable to afford basic accommodations, the acknowledgment of being without housing may come as a surprise. In such cases, the emergency shelter is capable of an immediate response that accommodates newly homeless individuals. While surely not providing a holistic solution to homelessness, shelters can offer "a short-term service facility in which longer-term needs can be identified" (Erickson xxviii). Often managed by non-profits, these facilities seek immediate successes in housing a vulnerable population for a brief period until a transitional living facility is secured. The next stage in the continuum of care involves transitional housing, programs that serve as the bridge between short-term and long-term solutions with greater infrastructure and capacity that grant lengthier stays and additional aid. "At the transitional shelter, the provision of health, mental health, employment,

and social-service programs are key components. The search for permanent shelter should occur once the basic needs and future services are provided or initiated" (Erickson xxviii). Lengths of stay range, but resident turnover within two years is projected. After establishing a degree of stability through transitional means it is then possible to seek permanent housing solutions, which are found to be "central to the long-term solution of homelessness" (Erickson xxix). This process seeks to reintegrate the homeless population into a suitable living arrangement through orchestrated steps, beginning with fundamental shelters, transferring to transitional living facilities, culminating at a permanent residence. "Timely intervention and the availability of suitable housing options may be the best homeless program of all" (Erickson xxvii). By establishing a tiered reintegration strategy, it is possible to find solutions that rectify the problem.

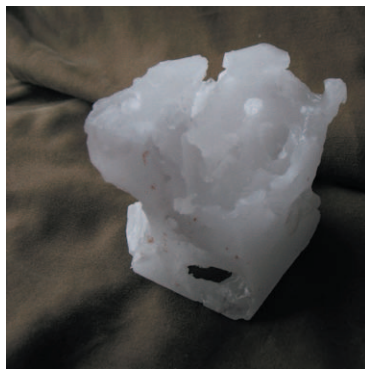
Inadequate affordable housing and insufficient service provisions occupy the crux of homelessness in America. Preventative measures that implement firm policies on service enriched affordable housing seek to "break the cycle of homelessness through the development of comprehensive and coordinated programs" (Erickson xxix). No longer are reactive programs deemed suitable; preventative infrastructure must be employed. "Paradoxically, doing more for homeless people by way of services, but falling short of providing

housing, may actually draw more people into the official category of 'homeless,' while not affecting the homeless 'problem'" (Burt 323). Singular fronts of rehabilitation are ineffective in mitigating

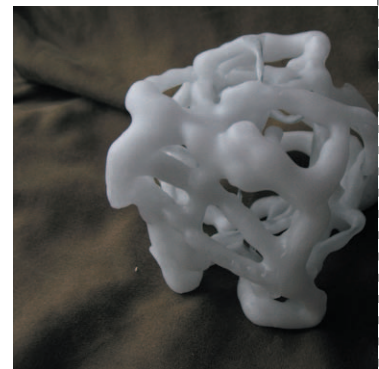
homelessness, but through a process of integrating appropriate housing strategies and relevant service components, homelessness can be eliminated.



*Control: The homeless exist as passive participants in the natural cycle of light and dark, wet and dry, hot and cold. The undesirable state pervades while the desirable state evades.*



*Domain: Life on the streets is relegated to the leftover space in the urban void, the undesigned spaces deemed unsuitable for society.*



*Path: Homelessness exhibits unique tendencies along its path. The route is undetermined and often untraceable.*

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# INFORMATION

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*"This is the story of the others, of some who tried and failed and of some who achieved success without becoming respectable, of the life that centered on the mills and on the wharves. That is Seattle from the bottom up." -Murray Morgan, Skid Road: An Informal Portrait of Seattle*

Homelessness has plagued the steep streets of Seattle for over a century. The first wave of inadequate accommodation came in middle of the nineteenth century when logging served as a major contributor to the burgeoning industrial scene. In 1852, Henry Yesler established a saw mill that responded to the rapid growth of widespread development with an expanded scale of operation. Many prospective workers flocked to the site with hopes of temporary employment, but the workforce far outweighed the workload, creating an imbalance that left many without work. Those without work were often without accommodation, and transient camps started to populate the mill grounds. Hopes of employment were often dashed, and the imbalance grew to a scale far beyond a localized workers' camp.

The mill was situated on the shore of Elliot Bay at the southern end of town. The ridge that bound the city to the east marked the beginning of the mature forest from which

the timber was harvested. The topography of Seattle was such that the logs hewn from the ridge could be slid downhill where they would arrive at Yesler's Mill on the bank of the bay. Gravity acted as the motor for movement, and in an effort to reduce inefficiencies, a path was constructed from skinned and greased logs, creating a surface that minimized friction in transporting trees. Such paths were called skid roads and were common among logging communities of the day. The term "skid road" became synonymous with the transient camps that congregated at the path's terminus and has since evolved to include the makeshift communities of homeless populations in cities across the country, often reinterpreted as "Skid Row." Seattle's skid road has undergone significant change in the years following its original use, but the homeless population somehow remained, now occupying the district south of the original skid road, Yesler Way.



Logging: Museum of History & Industry, Seattle



Skid road: Museum of History & Industry, Seattle

The land north of the mill fell within the holdings of the Boren and Denny parties, considered among many to be the founders of Seattle. Shortly after the construction of the mill, development spread southward to accommodate the growing population, often relegated to those of lower economic class who held positions in the adjacent industries. The land south of the Deadline, as it was often called, developed with a different strategy under the supervision of David Swinson "Doc" Maynard, considered among others to be the founder of Seattle. Redirecting the urban infrastructure south of Yesler Way was initially a response to the changing angle of Elliot Bay, but has since come to emphasize the economic discrepancy between the districts on either side.

Nearing the end of the nineteenth century, Seattle witnessed a disastrous event that

shook the perceived stability of a growing establishment. In 1889, an ill-fated combustion sparked a fire that consumed the majority of buildings south of the skid road. Since the demographic that resided there had few financial resources, many of the displaced families were without alternative accommodation, marking the second wave of widespread homelessness to afflict Seattle. Redevelopment commenced soon after the fire, this time with longevity in mind. Masonry construction replaced a predominantly wood building economy, establishing greater permanence in construction technique. Over the course of redevelopment, many affordable housing complexes were built in response to the need that arose post-fire. The single-room occupancy hotel took a stronghold on the housing market, drawing residents from a lower economic class to an area at the intersection of industries.



*South Downtown, 1852-2008: Yesler's Mill in relation to the proposed site*



*Skid road, 1852: Yesler's Mill in relation to the ridge of mature forest*



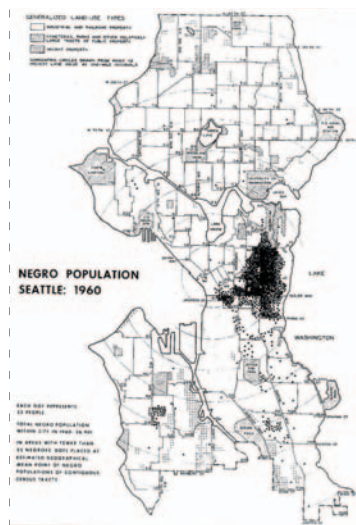
*Fire, 1889: Area consumed by the fire*



*Redevelopment, 1890: Extent of the rebuilding efforts after the fire*

The demographic of the district south of Yesler Way has changed throughout history but has retained its diversity throughout. Only select areas have undergone identity operations, leaving them economically revitalized and demographical-

ly scrutinized. The pressure of high-end development weighs heavily upon other parts of South Downtown as encroaching gentrification seeks to displace the lower class which would in turn marginalize the rich history of the International District.



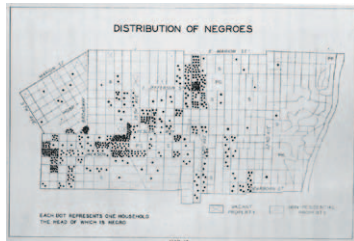
Ethnic diversity map, Seattle: Negro Population, Seattle 1960



Ethnic diversity map, Seattle: Chinese Population, Seattle 1960



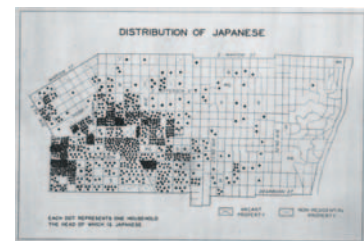
Ethnic diversity map, Seattle: Japanese Population, Seattle 1960



Ethnic diversity map, South Downtown: Distribution of Negroes



Ethnic diversity map, South Downtown: Distribution of Chinese



Ethnic diversity map, South Downtown: Distribution of Japanese

# INTERPRETATION

# S/S

*"Seattle was looking inward, rediscovering itself and its heritage. It found a new appreciation of the flavor of neighborhood life; of the city's architectural heritage which reflects the rich peculiarities of its history, and of the delights to be found in creating a community for its inhabitants rather than its industries." -Murray Morgan, Skid Road: An Informal Portrait of Seattle*

The prevalence of homelessness in Seattle has stirred the attention of planners in recent years and has correspondingly gained publicity in various documents that address the desired state of the municipality. Their interpretation of the historical trends has led to the inclusion of homelessness in planning documents. Included in the City of Seattle Comprehensive Plan are the following goals that seek to mediate homelessness: "pursue a comprehensive approach of prevention, transition and stabilization services to decrease potential homelessness; stop recurring homelessness and promote long-term self-sufficiency; encourage efforts to expand the supply of extremely low-income, permanent housing to meet the needs of those for whom the cost of housing is a chief cause of homelessness; strive to develop a continuum of housing opportunities, ranging from emergency shelters to transitional housing to permanent housing, in order to assist homeless households regain and maintain stable, permanent housing; strategically invest in emergency and transitional housing for specific homeless populations." These objectives indicate the pertinence of the

problem, concentrated in an area that has seen homelessness throughout history - South Downtown.

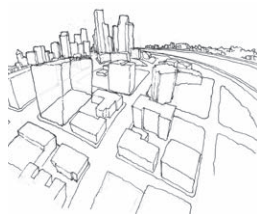
Assessment of the contextual information of South Downtown suggests the surface carpark on the northeast corner of 5th and Jackson as a potential site for the implementation of a service enriched housing facility. The nodal location along prominent public transportation routes provides ample connectivity to the rest of the city. The eccentric demography and rich history creates a vibrant culture. Some claim that Seattle's International District as the only place in the United States where Chinese, Japanese, Filipinos, African Americans, Vietnamese, Koreans and Cambodians live in immediate proximity. These factors, along with a visible presence of homelessness was substantiated upon visiting the site at which point it was confirmed that 5th and Jackson was indeed fit for a service enriched housing facility.



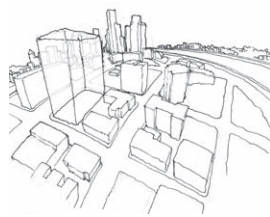
5th and Jackson: The site in South Downtown.

Within the site, the north lot is zoned IDR 150. The expanded designation of IDR 150 includes the following guidelines: “recognize and promote the area’s unique social and urban design character through the IDR designation and the regulations of the International Special Review District; maintain areas primarily for residential use; allow other uses compatible with housing, with the general intent that they reinforce and do not detract from the primary residential function of the area.” The south lot is zoned IDM 75 85: “recognize and promote the area’s unique social mix of use and urban design character through the IDM designation and the regulations of the International Special Review District’ encourage a wide range of uses, housing above the street level, and the rehabilitation of existing buildings; allow flexibility and discretion in controls, regulations, and guidelines through the IDM designation and Special Review District regulations, both for present conditions and those that may develop in the future; provide incentives for housing

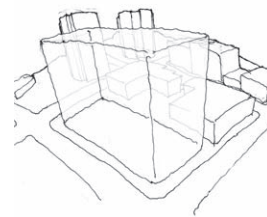
through higher height limits for residential use in appropriate areas.” Both lots are susceptible to a prospective ID 240 zoning in which height limitations would increase in areas where housing density is preferred, nearly doubling the current limitations. The expanded designation of the proposed ID 240 includes the following guidelines: “increase the capacity for housing development at the edges of the historic neighborhood cores to create a critical mass of residents that will enliven core areas; provide for a livable community by encouraging artistic activities that create a positive street presence during the evening hours; increase the maximum height limit up to 240 feet for residential-dominated development; maximum density and Land Use Code flexibility would be linked with investments in public space, public art, preservation of historic core buildings, and/or affordable workforce housing.” With this known, an interpretation of the three zones provides an appropriate rendering of potential densities.



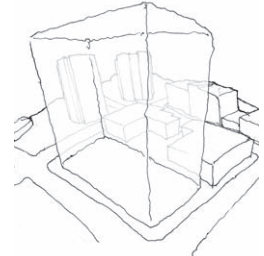
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ID 240



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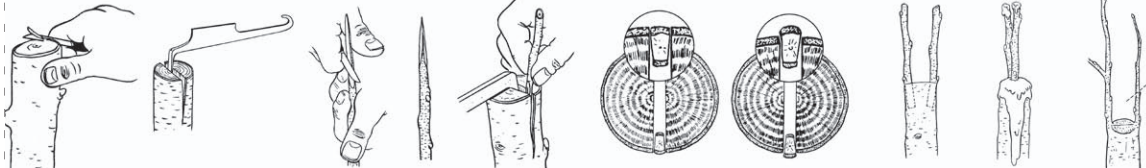
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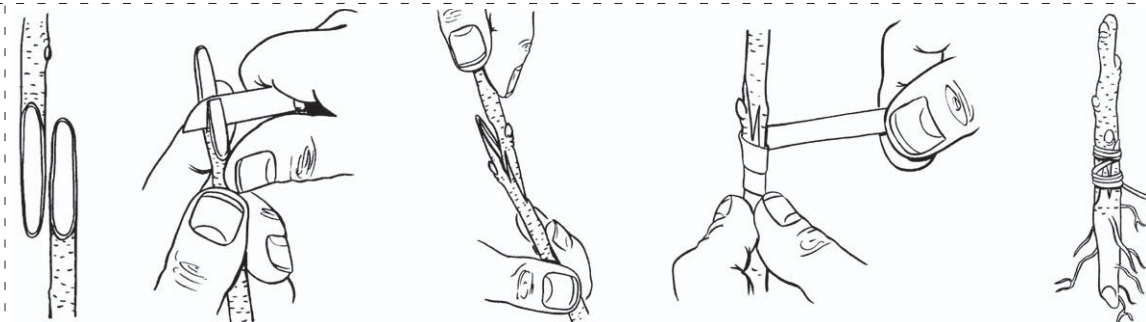
As the layers of contextual information deepen in the chronology of a design project, the level of complexity increases proportionally. At times, the progressive accumulation of stimuli resembles chaos, often reflected in the materials that clutter the physical and digital desktops of designers. Degrees of disarray are often prime environments for innovation, but at times when clutter fails to produce coherent results, various organizational strategies seek to restore order. In the pursuit of a relevant concept, metaphors are seen as reasonable means to arrive at a suitable strategy. Metaphors relate speculative ideas to observable phenomena, finding conceptual similarities that justify a proposed design solution. Within the subject of service enriched housing, the desired relationship between services and housing alludes to a natural model that

exhibits generative tendencies. The chosen metaphor employs grafting as a vehicle to pursue appropriate strategies.

Grafting is the process by which an incapable fragment becomes revitalized by a healthy host. The rootstock, capable of regenerating independently, adopts a scion, incapable of survival. Nutrient transfer within the cambium layer serves as the lifeline in a grafting procedure, succeeding only when all facets align. The translation of this phenomenon establishes a similarly codependent relationship between services and housing in a facility credited with mediating homelessness. The inextricable nature of grafting occurs in equally imperative fashion when uniting housing and service components in a continuum of care.



*Cleft graft: a. Cut stock smoothly. Trim any rough edges with a knife. b. Split stock, and open with a grafting tool. c. Make a long, smooth cut to prepare scion. d. Cut again to make a pie-shaped wedge. e. Promptly insert scion into stock after cutting. f. Cambium layers must match closely. g. A very slight slant can ensure cambial contact. University of Missouri*



*Whip graft: a. Cuts for the whip graft must be smooth and straight. b. Cut again to form the tongue. c. Push stock and scion tightly together. d. Wrap graft to keep cuts tight and to prevent drying. e. Whip and tongue with scion attached to root system. University of Missouri*

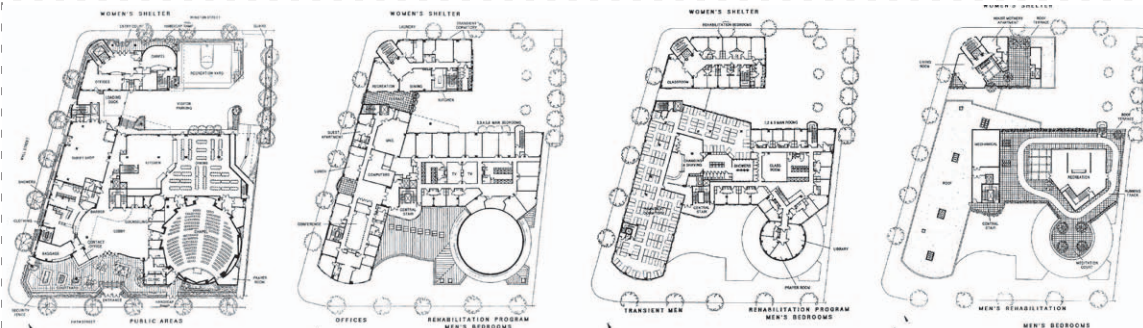


Case studies of affordable housing and homeless shelters provide the required information as to what is needed when designing housing for the homeless. Extracting the programmatic information from these examples informs the pre-design stage in formulating a responsible allocation of space in a continuum of care. The sampling of existing facilities gives an idea of appropriate housing strategies and relevant service components that function in conjunction. The housing types found in facilities that cater to the homeless range from emergency shelters to subsidized apartments that vary in degrees of permanence. At the outset of homelessness, vast quantities of basic amenities are needed, namely beds and hygiene fa-

cilities. The quality of these environments is often despairing, offering little more than is necessary for sustenance. The service components that contribute to alleviating homelessness include educational resources, psychological counseling, addiction treatment, childcare, chaplaincy, hygiene facilities, storage space, assessment center, health clinic, and information access. Volunteering at emergency shelters in the surrounding area offered glimpses of the conditions that demand attention.



*Union Rescue Mission: Precedence study in search of program definition. Sam Davis, Designing for the Homeless*



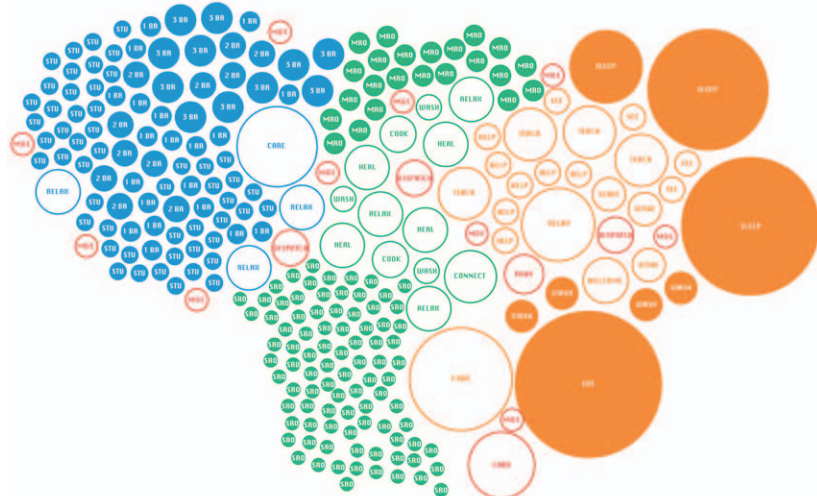
*Los Angeles Mission: Precedence study in search of program definition. Sam Davis, Designing for the Homeless*

# INTERPRETATION



The programmatic elements found in existing schemes offer renditions of a continuum of care. Diverse housing strategies are accompanied by in-house services, seeking to establish a holistic remedy. The formal arrangement of a continuum of care suggests a linear progression of an unbroken programmatic chain. The opti-

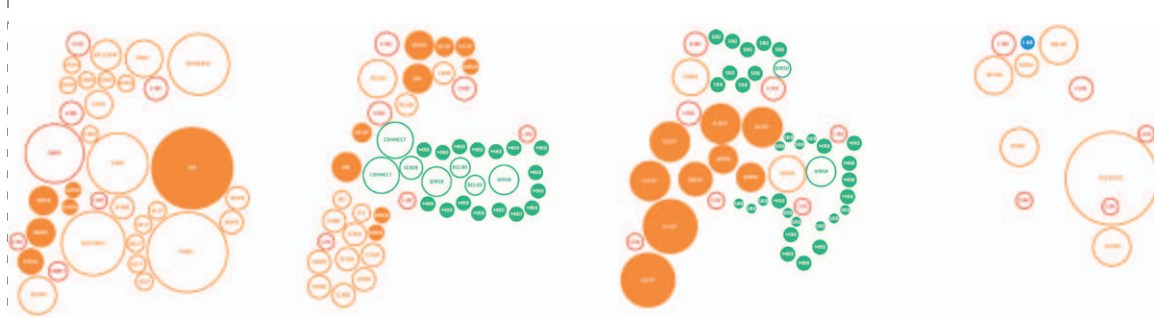
mized scheme stretches the union of service and housing along an elongated band of interrelated components. The grafting metaphor informs arrangement with the consistent alignment of housing and services, analogous to the relationship of the rootstock and the scion.



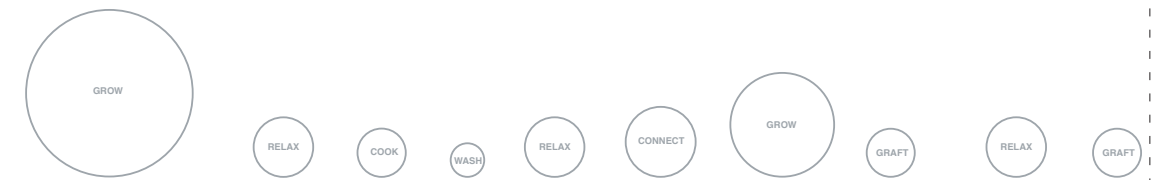
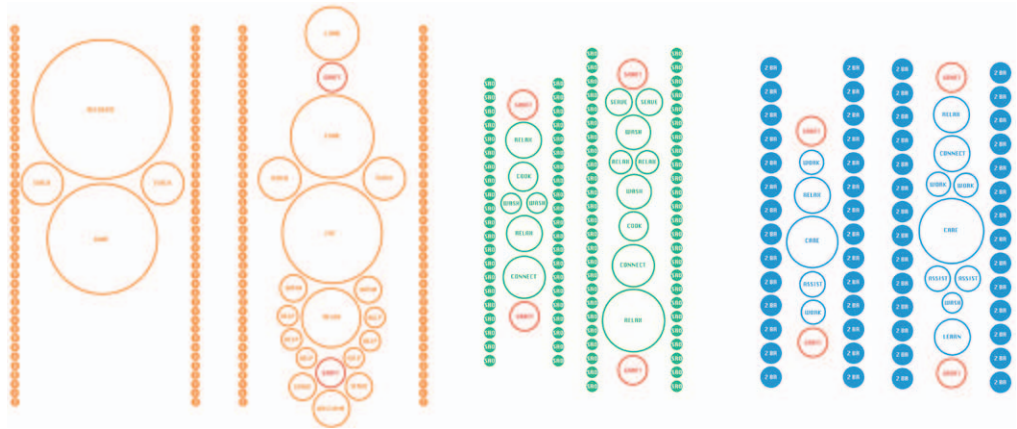
*Proposed program: Arranged by proximities*



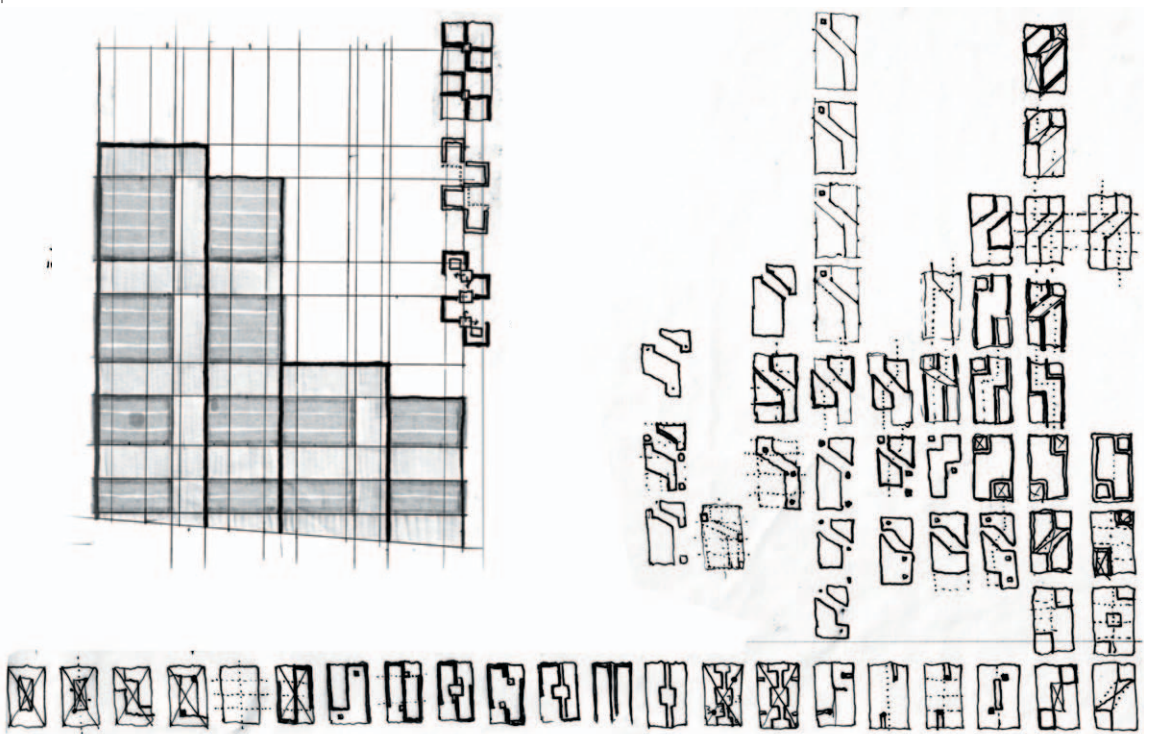
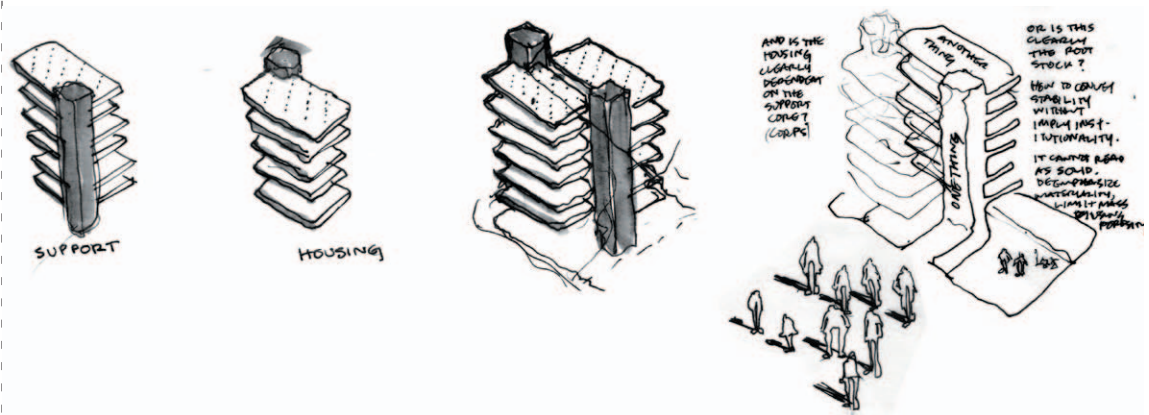
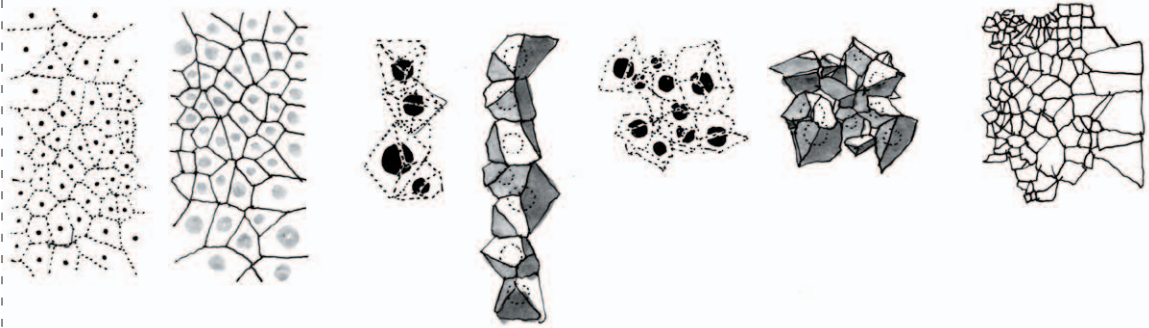
*Unity Rescue Mission: Programmatic breakdown*



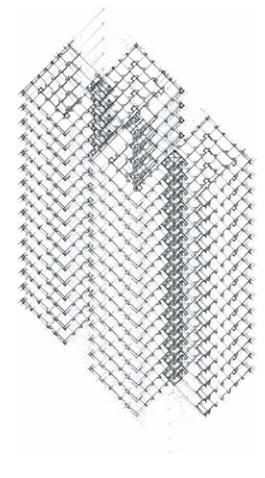
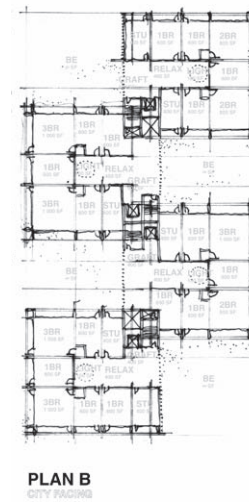
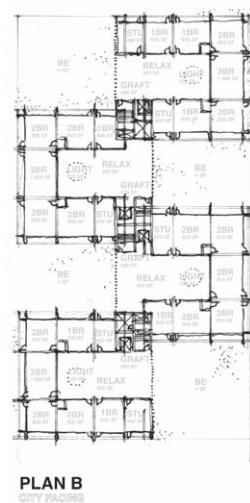
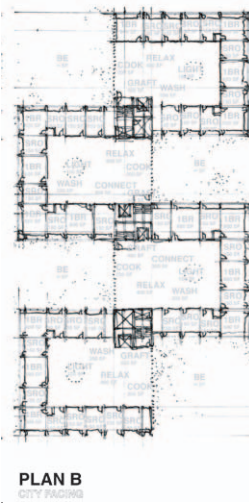
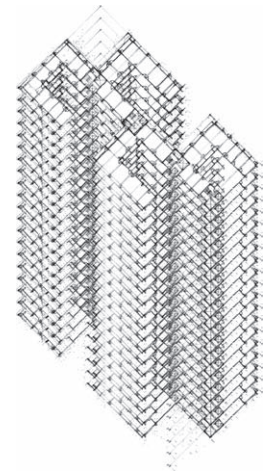
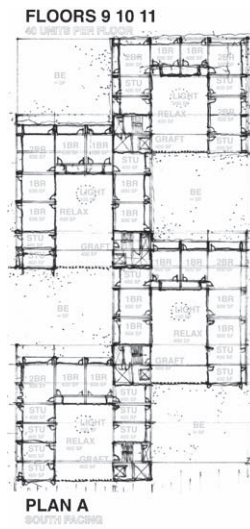
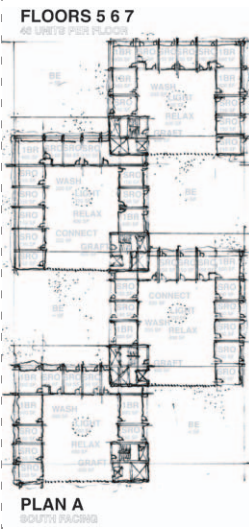
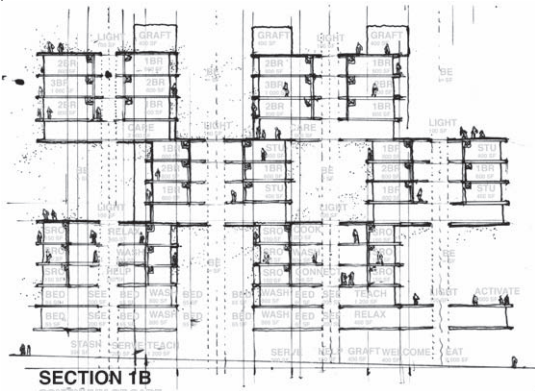
*Los Angeles Mission: Programmatic breakdown*



*Continuum of care: A continual chain of unbroken accommodation including both housing and services. Indicative of the number of units and relative space allocation.*



Process sketches exploring geometries of combining housing and services



Initial schemes that sought to translate the grafting metaphor in a continuum of care.

# **INVESTIGATION**

## *Introduction*

006/Lessons Learned

## *Housing and Homelessness*

*H/H*

007/Investigation 008/Intention 009/Information 011/Interpretation

## *Seattle and South Downtown*

*S/S*

013/Investigation 014/Intention 015/Information 018/Interpretation

## *Continuum of Care*

*C/C*

020/Investigation 021/Intention 022/Information 024/Interpretation

## **Design Development**

**D/D**

028/Investigation 029/Intention 030/Information 031/Interpretation

## *Lessons Learned*

037/Lessons Learned

# ***INTENTION***

*Document a design process with  
an iterative rubric of operations*

*Mitigate homelessness by balancing appropriate  
housing strategies and relevant service components*

*H/H*

*Extract the contextual uniqueness  
embedded within the site*

*S/S*

*Establish a continuum of care that references grafting  
as a model for the inextricability of housing and  
services in alleviating homelessness*

*C/C*

***Render a gradient of housing and services that  
responds in differing ratios to a spectrum of users  
while maintaining an identifiable sense of community***

***D/D***

*Relate the findings of an academic  
exploration in architecture*

# INFORMATION

# D/D

*"Thus, architecture is the substrate for the accidents of history rather than its embellishment." Reiser & Umemoto, Atlas of Novel Tectonics*

Included in the Livable South Downtown Plan are the following guidelines that inform local design decisions: "define building base, setback and other building bulk requirements that will encourage slim towers above the building base, maintain public view corridors, and ensure comfortable building relationships to sidewalks; require street-level commercial uses along key pedestrian-oriented commercial streets; identify street improvements to support key pedestrian connections and green streets; focus higher-density residential development between Fourth and Sixth Avenues; promote a strong pedestrian-oriented street-level environment; design street-level public spaces for pedestrians; contribute toward Downtown

affordable housing goals and public space needs; reference neighboring cultural and historic areas." The plan also points out that the neighborhood falls short of the public open space and "breathing room" open space requirements in Seattle's Comprehensive Plan. Given the concentration of undeveloped surface parking lots, the plan notes the need to define a community vision for how new infill development should be "stitched together." The bulk of information that leads to the design development has been accounted for in previous iterations in the design rubric.



# INTERPRETATION

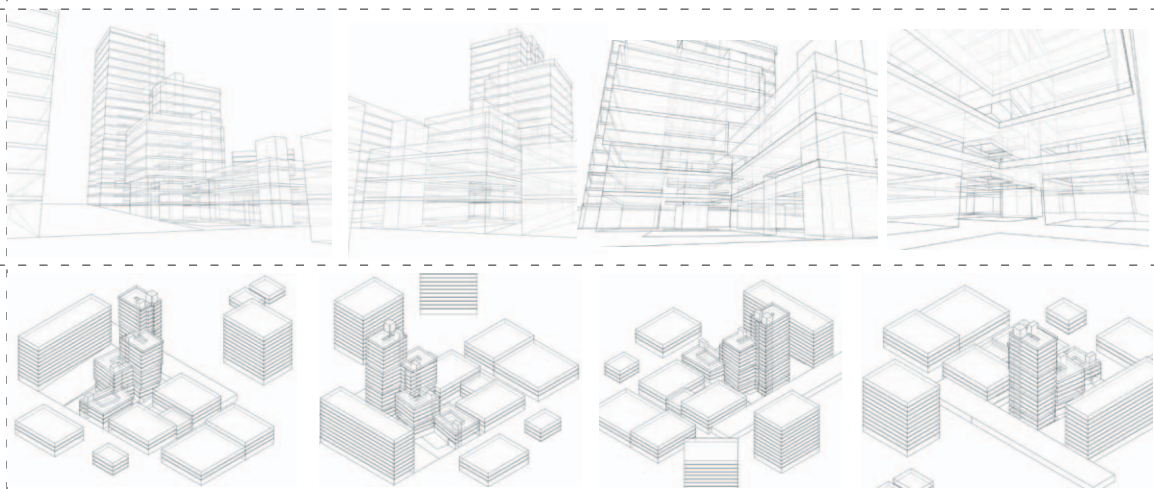
# D/D

*"Materials are not inert receptacles for a cerebral form imposed from the outside, but active participants in the genesis of form." Manuel de Landa*

The plan reflects a gradient of service to housing ratio. There can be no uniform designation of needs among the homeless population which in turn requires a range of responses. The homeless population fluctuates as a result of changing societal conditions, demanding flexibility in accommodation. An assessment center located at each entry would identify the each resident and correspondingly dispatch the individual to a zone that suits his or her particular need. A gradient of stability ranging from desperate need to relative independence allows for the accommodation of a broad spectrum of residents. Those with extensive mental or physical need would reside in the lower floors near the southern edge where the proportion of services to users is greater. Other residents seeking primarily housing, perhaps those with families, would be given a space on higher floors near the north end of the site. These residents would have controlled access at a second-

ary entry on the northeast corner of the site. Small clusters of units give a sense of community among recently homeless individuals that is central to a sense of belonging.

The support floors adhere to a similar gradient in section, the frequency of which responds to the needs of the occupants. These floors are public, serving both the residents and the community, announcing their function with transparent and accessible characteristics. This acts as the connective element, the metaphorical graft, that integrates the building within the city, the homeless into society, the housing into the market, and the services into the community. The rooftop gardens are universally accessible, bringing the social extremities together in a productive common space. It occupies the uppermost inhabitable plane as to dispel the suggested hierarchy of units that the gradient of housing types implies. Social stability and

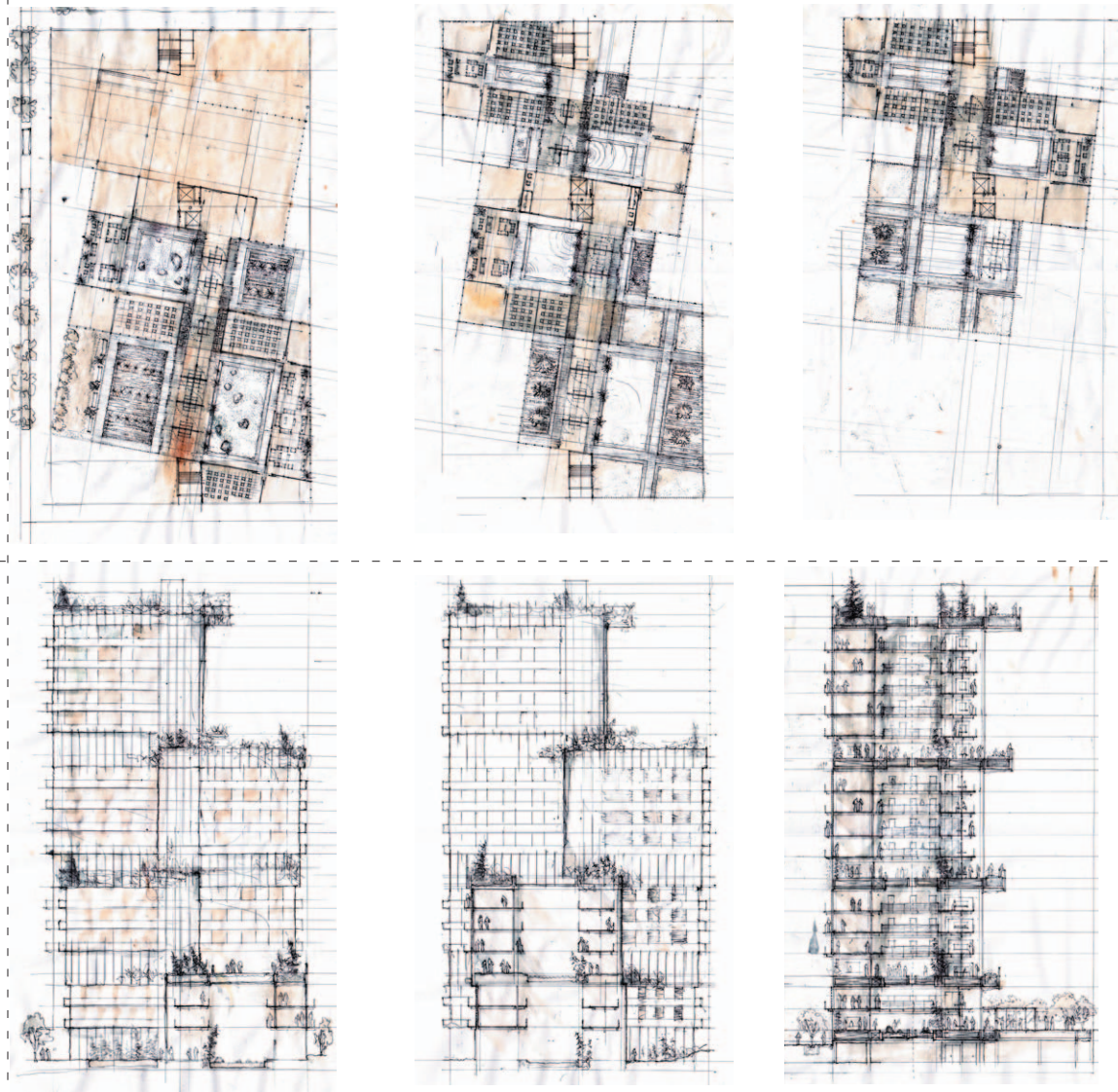


*Isometric and perspective views of the building mass with surrounding context.*

economic viability increases as the building mass moves upward and northward, but the hierarchical nature of such an arrangement is dismissed by offering public space at the uppermost floors.

The environmentally conscious building culture of the Pacific Northwest primes the facility at 5th and Jackson for responsible use of space and materials. The graduated massing cascades southward, maximizing the solar exposure that allows passive

systems to replace active ones. Daylighting of the voluminous atria reduce electric lighting to a minimum. Passive ventilation strategies alleviate the cooling load during summer months with cross-ventilated units that feed into stack-ventilated atria. Intakes at the service floor draw fresh air from the prevailing wind exposure and move it upward through the space to the exhaust points in the ceiling plane. Extensive roof planting retains stormwater on-site while acting as a green lung within

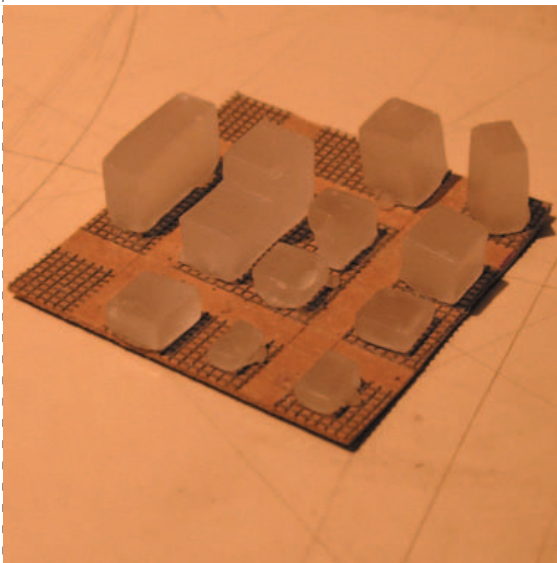


Plan and section studies, ink and watercolor

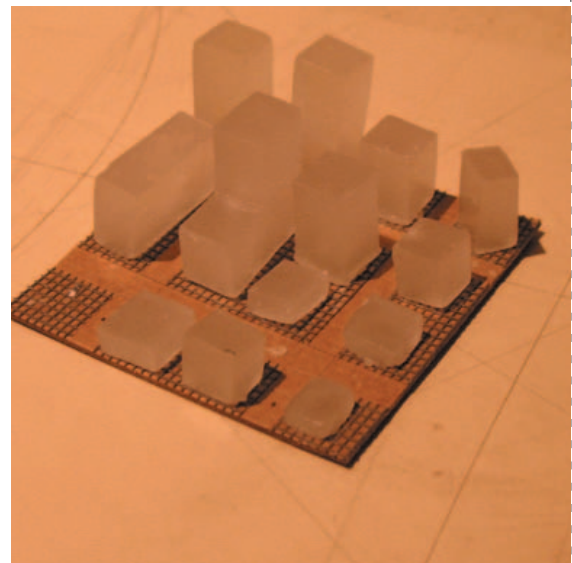
the International District. On-site food production and composting reinforces the concept of growth while serving as training grounds for revitalization of the mind and body. Street trees along each edge create an illusion of a building emerging from an oasis, posing an analogy to its social and environmental agenda.

The proposed height relies on extensive assumptions implied by the planning documents of South Downtown. A hybridized version of the three zones responds to the projected development of the surrounding context. The neighboring north and northwest parking lots anticipate development in the future with the assumption that they will adopt the proposed 240 foot height cap. The historic buildings along Jackson Street will remain, as they fall under the National Historic Register. The buildings on the northeast portion of the block may see further development, judging by their rundown state. Together, these assumptions lead to a progres-

sive dissolution of massing that responds to the encroaching height of downtown while incrementally mediating the density across the site to eventually relate to the scale of the historic street-front. The neighboring buildings are of diverse character, representing an array of architectural styles. Hardscape surfaces dominate the district, limiting the green space to sparse street trees and planters. The centralized location and adjacency to public transportation eliminates the need for on-site parking. Employees would be encouraged to use public transport, and the residents would presumably rely on the same. Circulation within the site is monitored by a series of assessment centers that are respond to queries of current and prospective residents throughout the day. Security is present, but not cognizant, keeping the institutional references to a minimum.



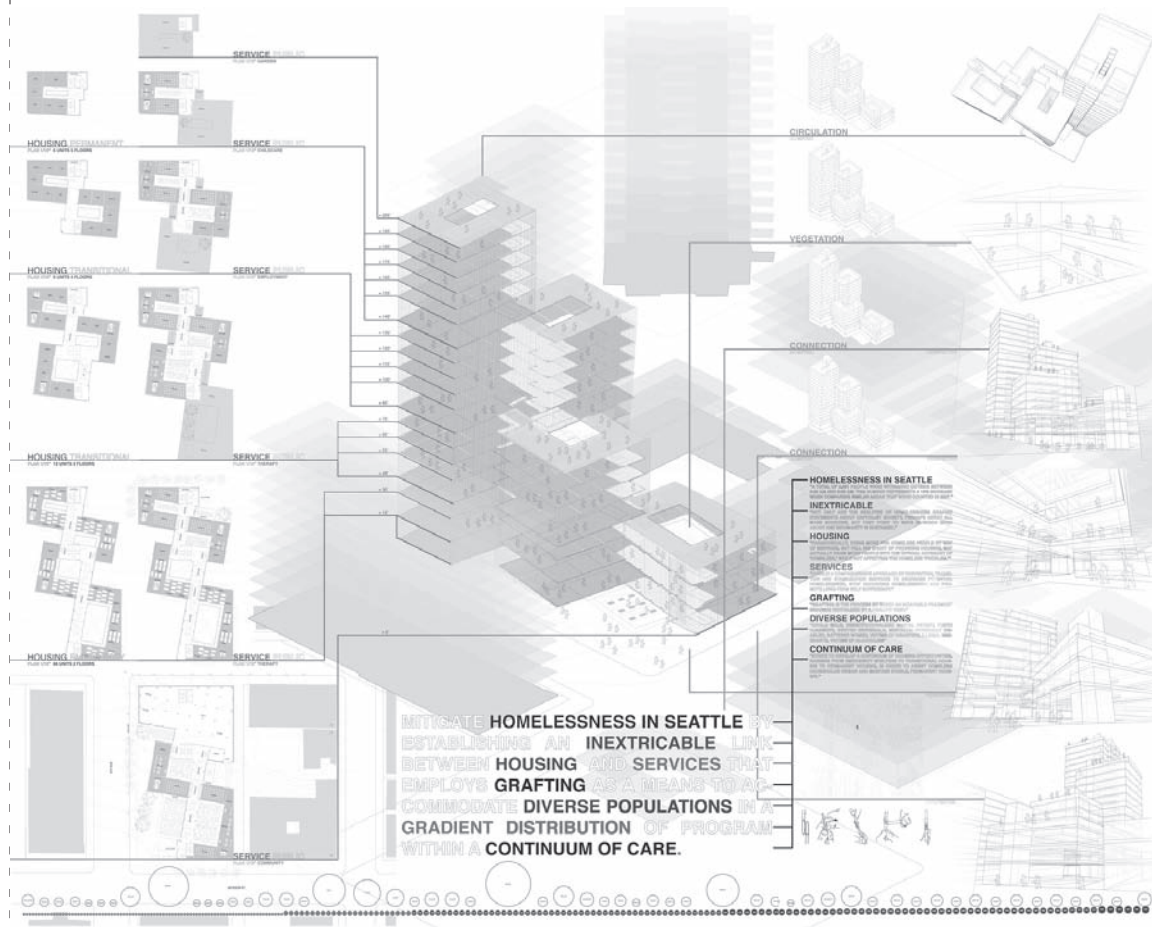
*Current zoning, IDR 150/IDM 75 85, with no assumptions*



*Adopted zoning, ID 240/ID 150, with projected development*

A hybrid structural strategy of concrete and steel reflects the difference in programmatic elements: concrete for housing, steel for service. In the concrete band of stacked units, half of the portland cement is replaced with blast-furnace slag, reducing the environmental degradation of construction. The proposed system includes a two-way slab on column system that become incrementally thicker as loads increase on lower floors. At the intermittent support floors, the columns are exposed and carried through a thick horizontal service plenum that houses mechanical services and ground fill for the plantings. The reinforced concrete slab is

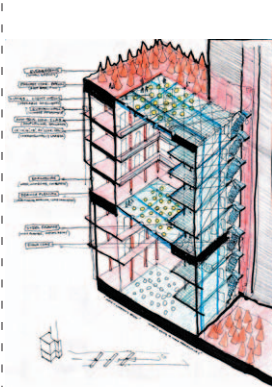
optimized at an 8 inch depth with a symmetrical span of 20 feet, between which modules of various housing types plug into. When a particular unit type is in high demand, the partitions within the frame can change to accommodate those needs. Wet walls are kept consistent as to make changes as seamless as possible, but the remaining fixtures are adaptable. Each unit has direct access to the exterior with generous glazing that leads onto a personal balcony. There is a perceivable dual aspect to the units with a symbolic "front porch" that faces the "inner street" and a back porch that has eyes on the actual street. An operable screen of calculated



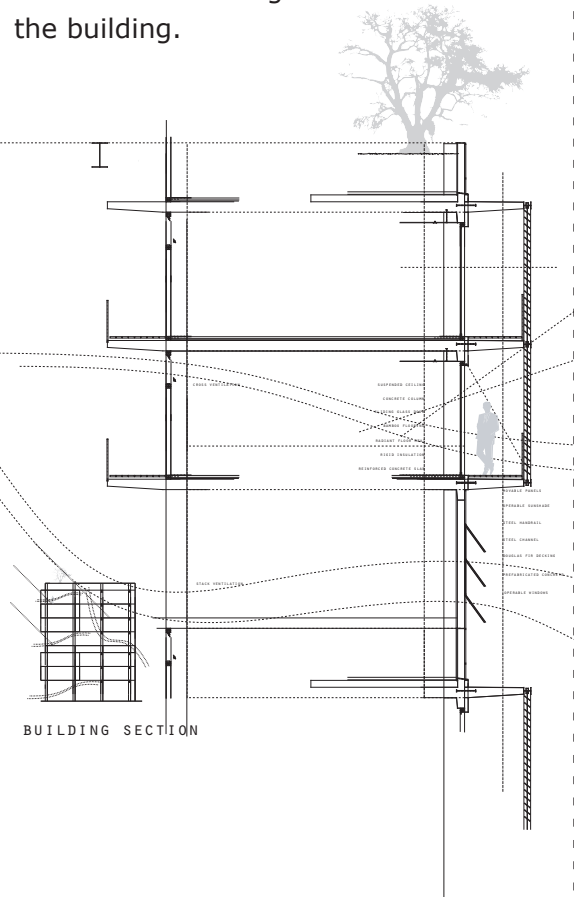
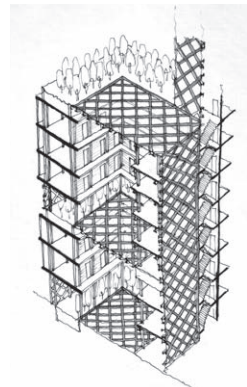
louver angles slides along the edge of the balcony to control privacy and daylight while maintaining material consistency on each elevation. Operable skins give users the opportunity for customizing that in turn creates dynamic facade compositions as users adapt their environment to suit their needs.

The steel and glass system that links the housing bands and encloses the service space renders the open environment with levity. The intermittent service floors are linked by glazed exposures composed of high-performance glass that reduces heat loss and maintains unobstructed views along the axis of the metaphorical graft. The intermittent service floors are linked by a common treatment of the vertical expanse of the atria. Early morning sunlight is channeled into the two eastward facing atria through the expansive exposures that admit low-angle light that will warm the space in the coming hours of occupancy. The similarly glazed atria that face westward benefit from a neighboring structure that blocks the late afternoon sunlight that can be potentially detrimental to passive conditioning. The translucent treatment of the atria admits maximal day-

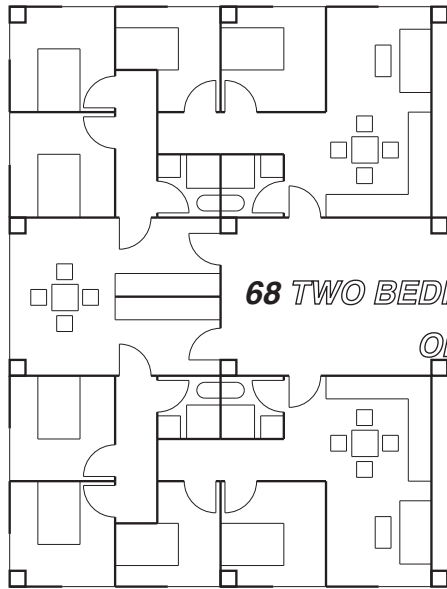
light, transferred through the intermittent service plenum with light tubes. At night, the supplementary electric lighting shines from the "front porches" along the housing band, creating a soothing atmosphere of enlivened walls that forgoes vast space lighting from above. These lights would emanate through the glazed volumes with a soft glow that warms the surrounding area. The life-cycle of the building may be adapted to accommodate similar programs but may also be renovated to house an altogether different function. The responsiveness of a building is crucial to its long-term success; over-prescription limits the scope of occupation, but a framework of adaptable space allows for variable use throughout the life-cycle of the building.



*Isometric section showing structure and materiality*

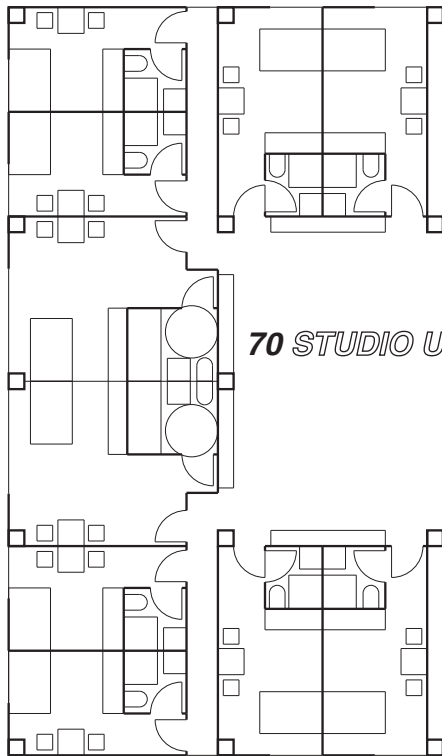
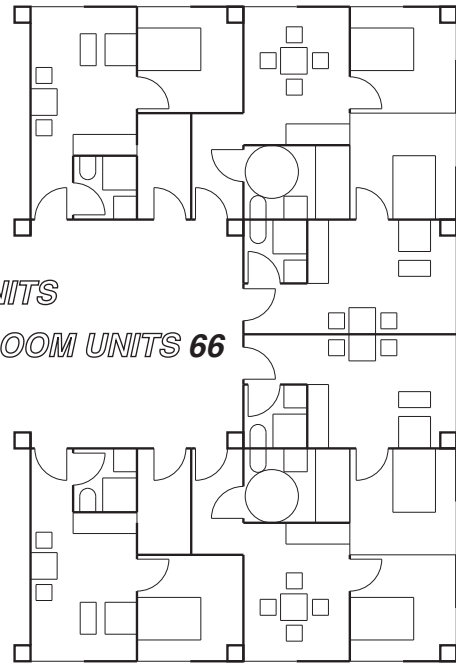


*Detailed wall section with diagrammatic building section*



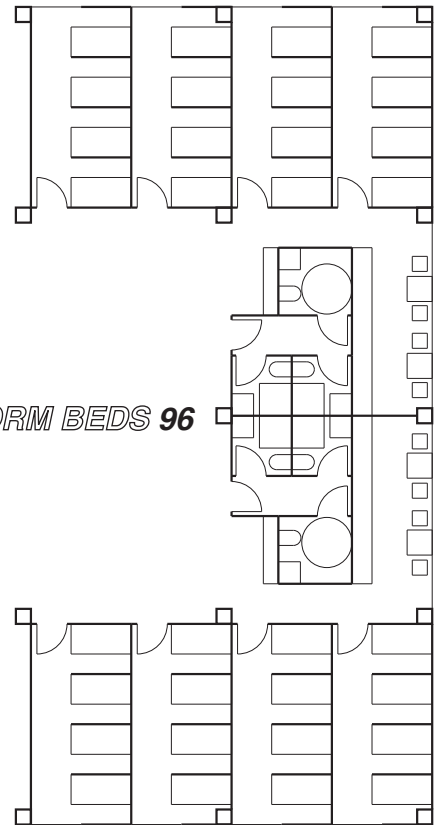
**68 TWO BEDROOM UNITS**

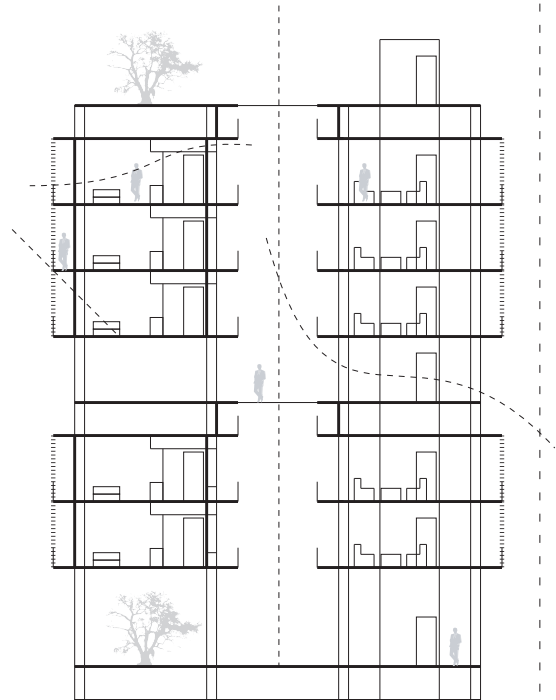
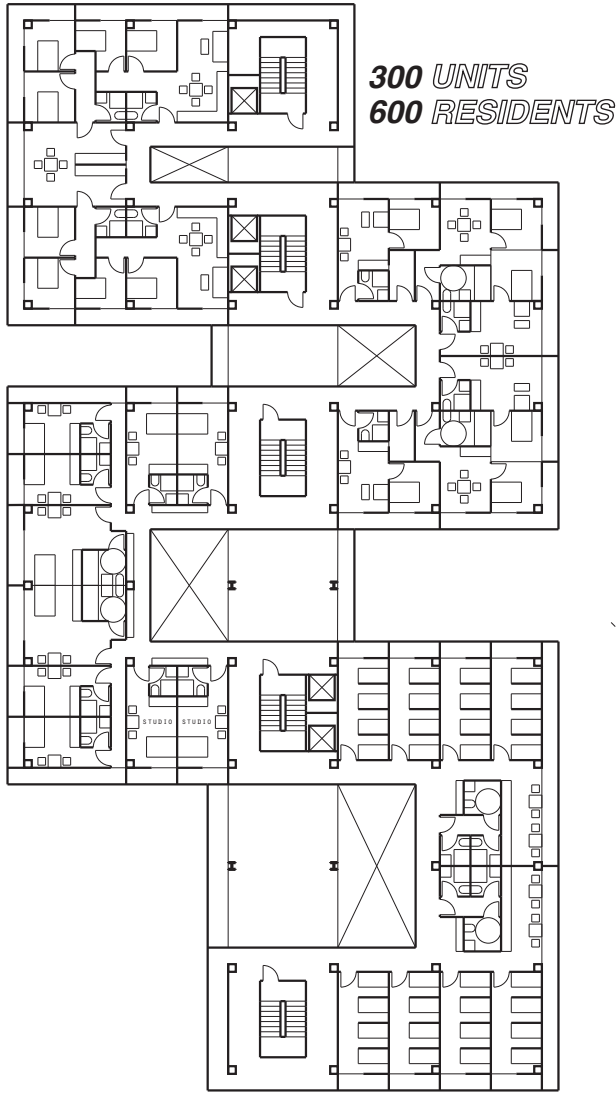
**ONE BEDROOM UNITS 66**



**70 STUDIO UNITS**

**DORM BEDS 96**





# **INVESTIGATION**

## **Introduction**

006/Introduction

## **Housing and Homelessness**

**H/H**

007/Investigation 008/Intention 009/Information 011/Interpretation

## **Seattle and South Downtown**

**S/S**

013/Investigation 014/Intention 015/Information 018/Interpretation

## **Continuum of Care**

**C/C**

020/Investigation 021/Intention 022/Information 024/Interpretation

## **Design Development**

**D/D**

028/Investigation 029/Intention 030/Information 031/Interpretation

## **Lessons Learned**

037/Lessons Learned



# ***INTENTION***

***Document a design process with  
an iterative rubric of operations***

***Mitigate homelessness by balancing appropriate  
housing strategies and relevant service components***

***H/H***

***Extract the contextual uniqueness  
embedded within the site***

***S/S***

***Establish a continuum of care that references grafting  
as a model for the inextricability of housing and  
services in alleviating homelessness***

***C/C***

***Render a gradient of housing and services that  
responds in differing ratios to a spectrum of users  
while maintaining an identifiable sense of community***

***D/D***

***Relate the findings of an academic  
exploration in architecture***

# LESSONS LEARNED

*"The middle is by no means an average; on the contrary, it is where things pick up speed. Between things does not designate a localizable relation going from one thing to the other and back again, but a perpendicular direction, a transversal movement that sweeps one and the other away, a stream without beginning or end that undermines its banks and picks up speed in the middle." Giles Deleuze and Felix Guattari, A Thousand Plateaus*

The responsibility of design begins at a project's inception. The greatest strides toward sustainability are accomplished early on, before any semblance of form materializes. Proactive social and environmental agendas have substantial effects on subsequent implementations; in this sense, architecture acts as an agent for positive social change. The optimistic naivety of academic architecture has the potential to positively influence standard procedures with uninhibited speculations that challenge the confines of current practice. The freedom with which academia operates primes it as a laboratory for investigation, a place in which postulates are nurtured. The proposed rubric encourages rigor within the design process, ordering an inordinately distributed process. Iterations of investigation, intention, information, and interpretation perform cyclic analyses at stages within the design process. Within this methodology are inevitable in-betweens and crossovers as rigorous classification often incurs variable misunderstandings, but despite the periodic misappropriations, coherence is gained through a subscription to systemization.

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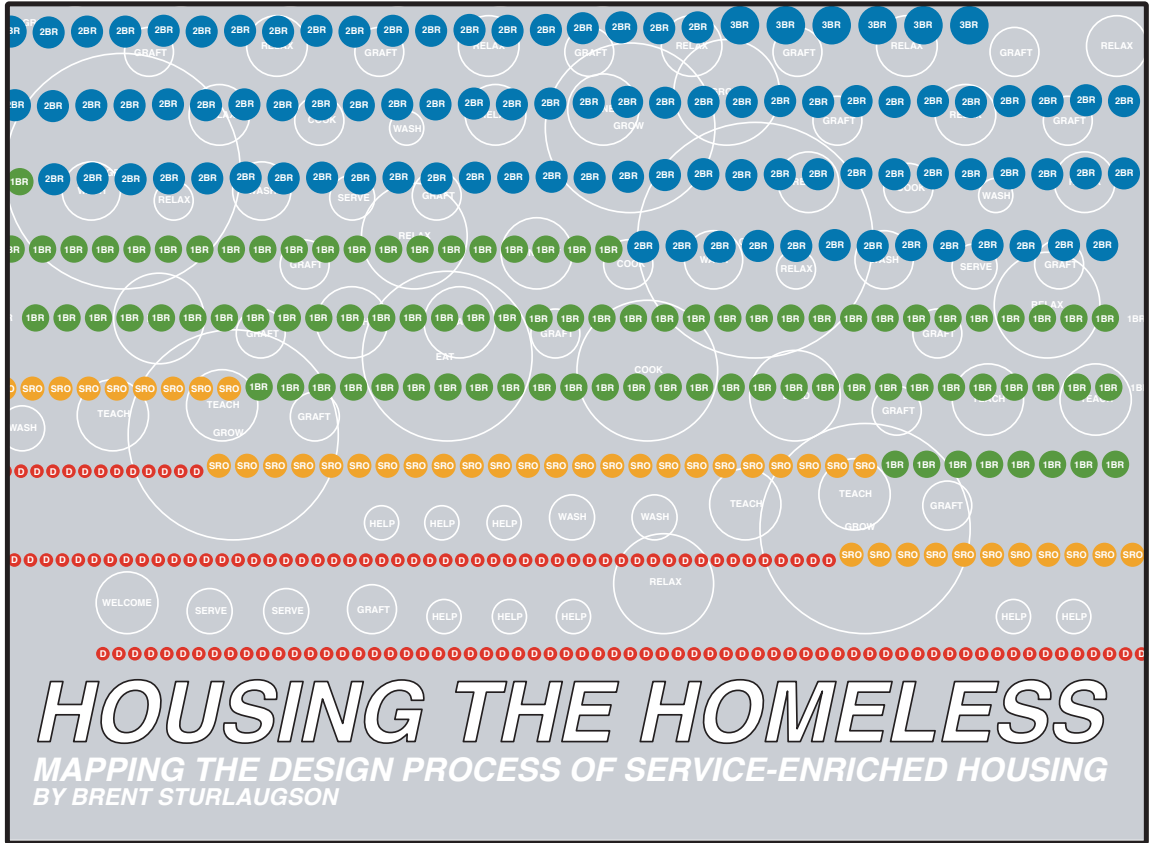
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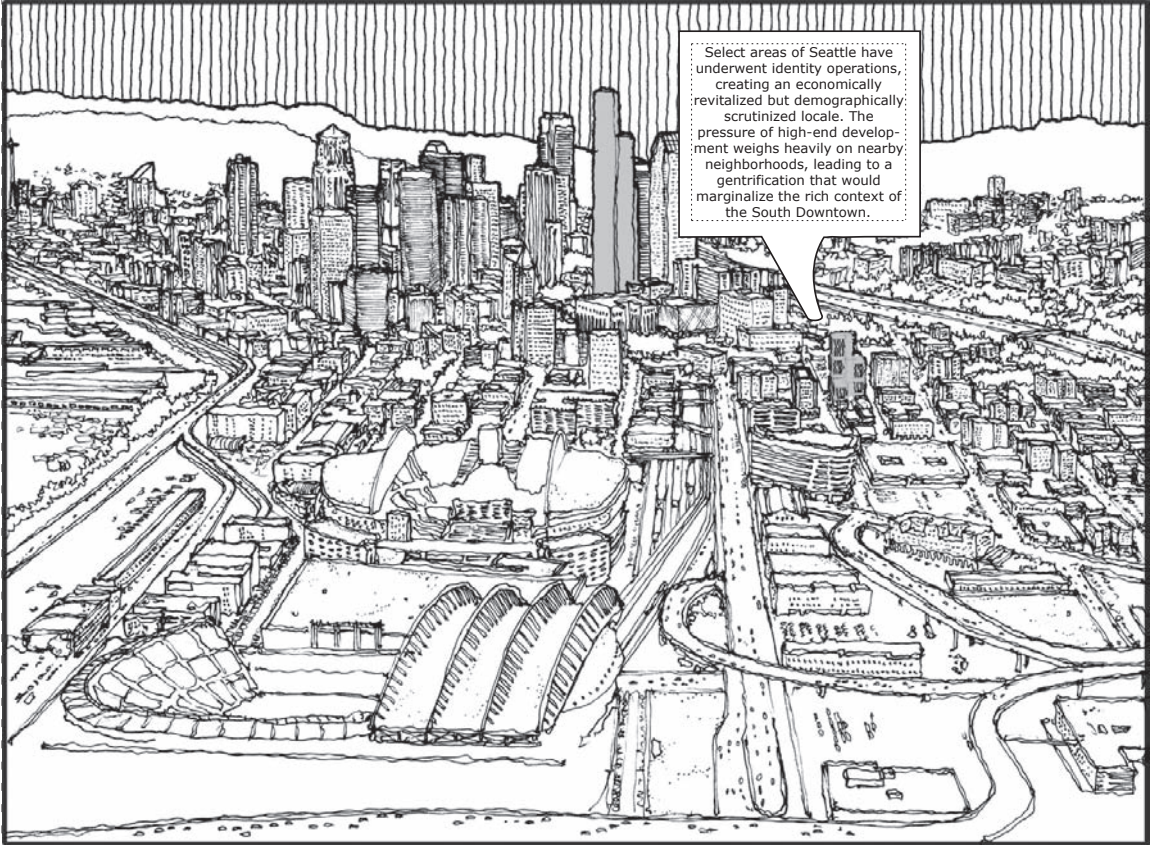
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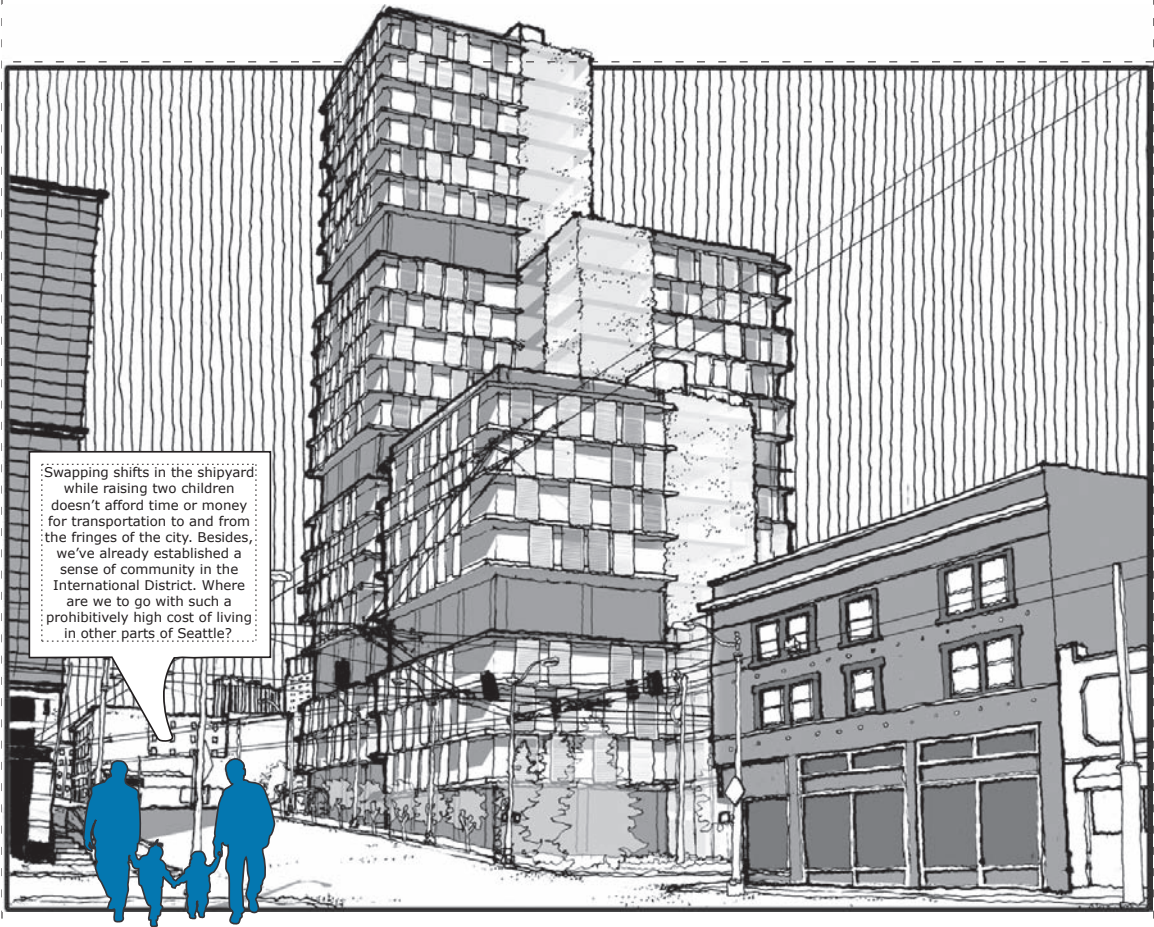
# APPENDIX



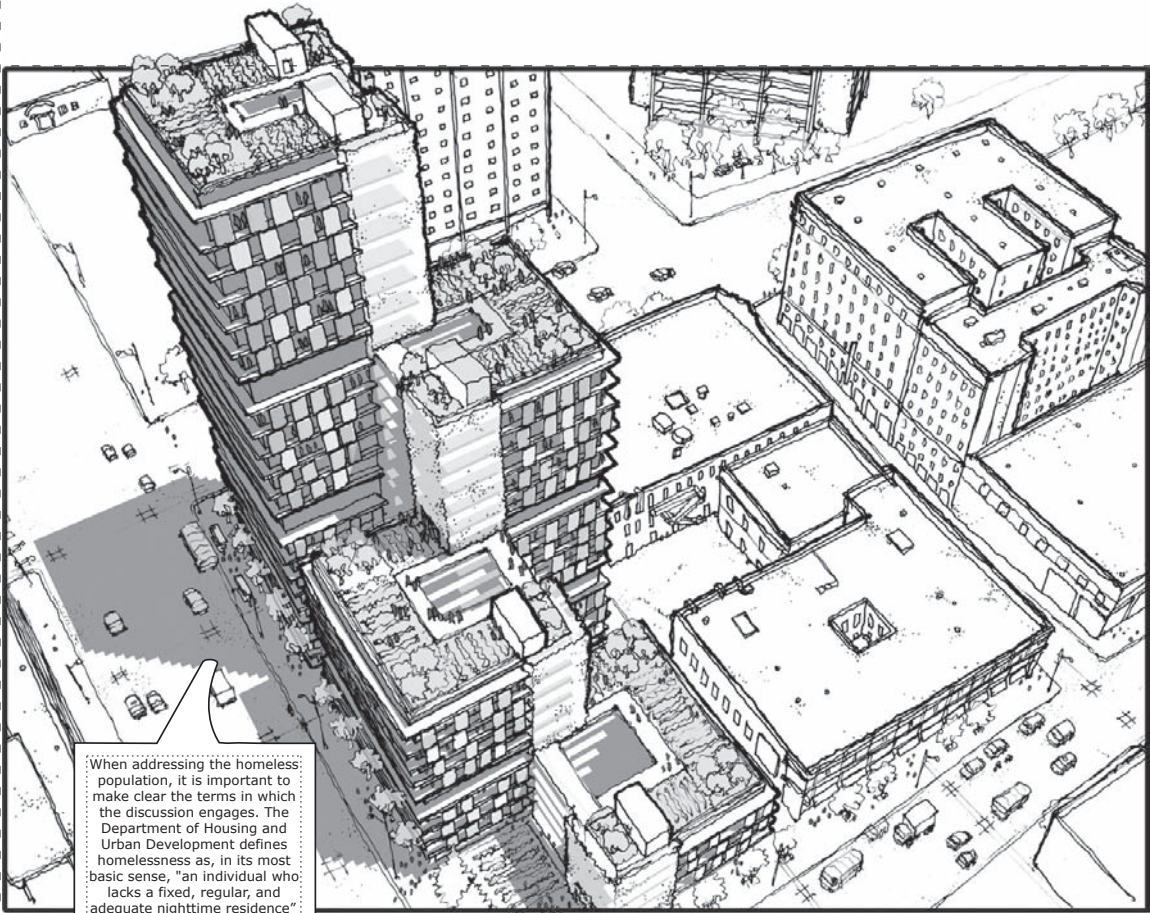




We were informed of our eviction moments before our apartment was swept from beneath us. Something about how money talks. How were our whispers supposed to be heard over their megaphones? Needless to say, we were silenced by the screams of harborfront condominiums. Now? Well, we're homeless.

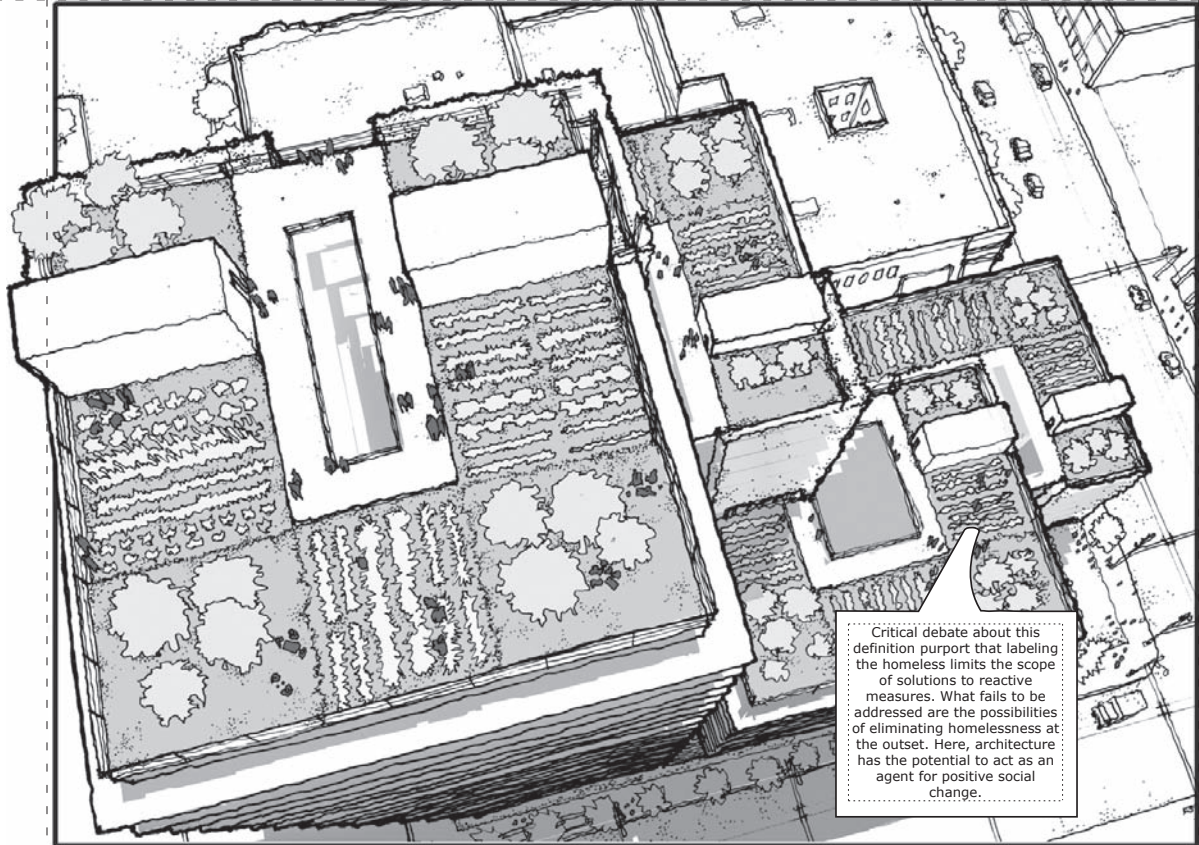


Swapping shifts in the shipyard: while raising two children doesn't afford time or money for transportation to and from the fringes of the city. Besides, we've already established a sense of community in the International District. Where are we to go with such a prohibitively high cost of living in other parts of Seattle?

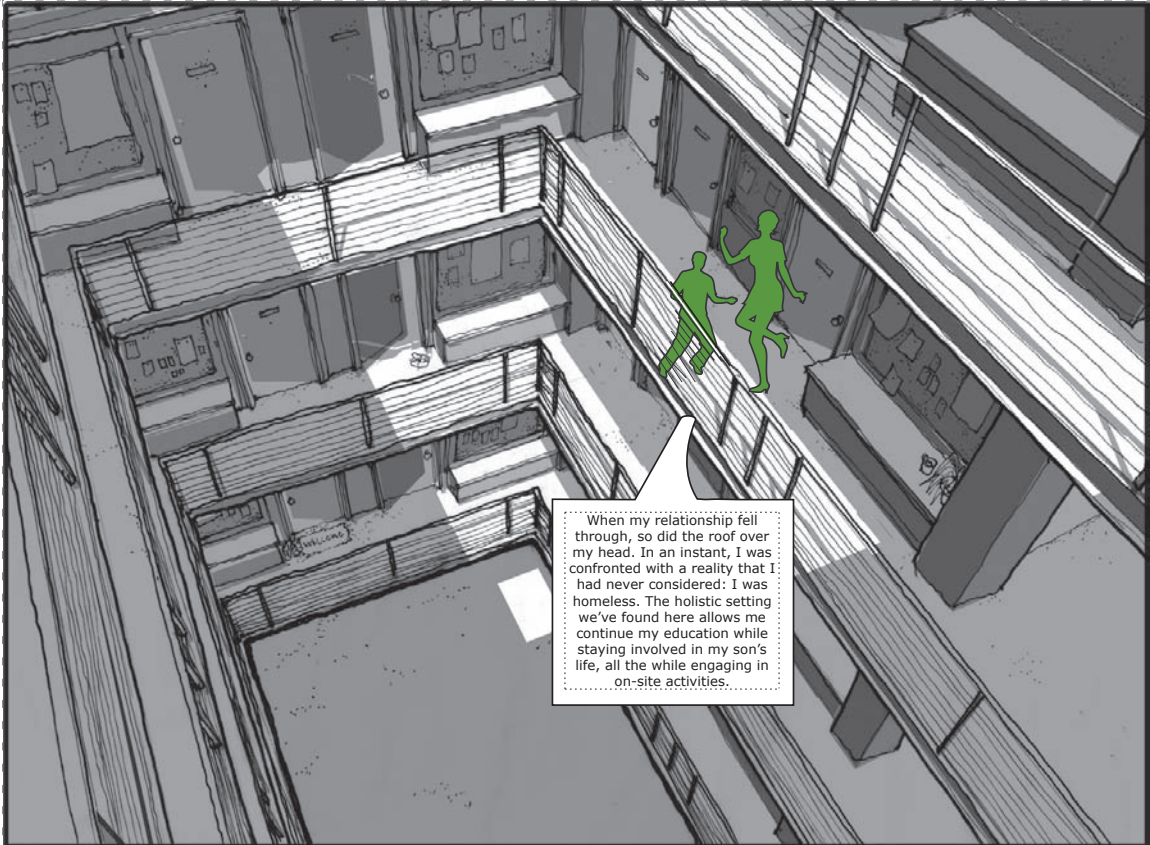


When addressing the homeless population, it is important to make clear the terms in which the discussion engages. The Department of Housing and Urban Development defines homelessness as, in its most basic sense, "an individual who lacks a fixed, regular, and adequate nighttime residence"





Critical debate about this definition purport that labeling the homeless limits the scope of solutions to reactive measures. What fails to be addressed are the possibilities of eliminating homelessness at the outset. Here, architecture has the potential to act as an agent for positive social change.

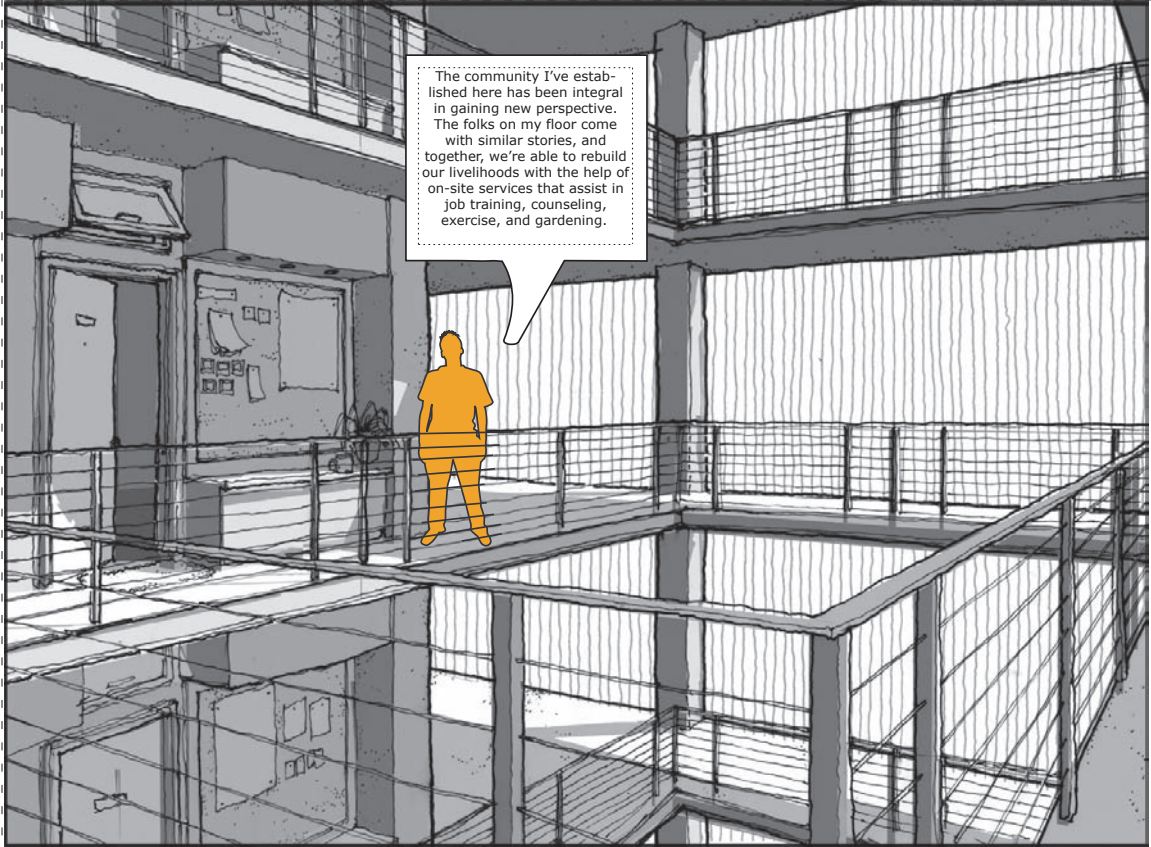




Homeless people exist as passive participants in the natural cycles of light and dark, wet and dry, hot and cold. The undesirable state pervades while the desirable state evades. Housing offers the user an opportunity to control these conditions, a fortune that is often taken for granted.



2,361 homeless people were tallied in Seattle's 2008 One Night Count. For three hours before dawn, volunteers combed the frigid, soggy streets with the aim of substantiating a phenomenon that has been deliberately ignored but undeniably perceived by the majority of the population.



The community I've established here has been integral in gaining new perspective. The folks on my floor come with similar stories, and together, we're able to rebuild our livelihoods with the help of on-site services that assist in job training, counseling, exercise, and gardening.





It's been difficult to find a place that rents to convicted felons. Prison was unimaginably confining, socially and physically, but that was expected. Unexpected was the difficulty in finding housing on the outside. It's ironic that now in the "free world" housing is so hard to find when a few days ago, it was guaranteed.



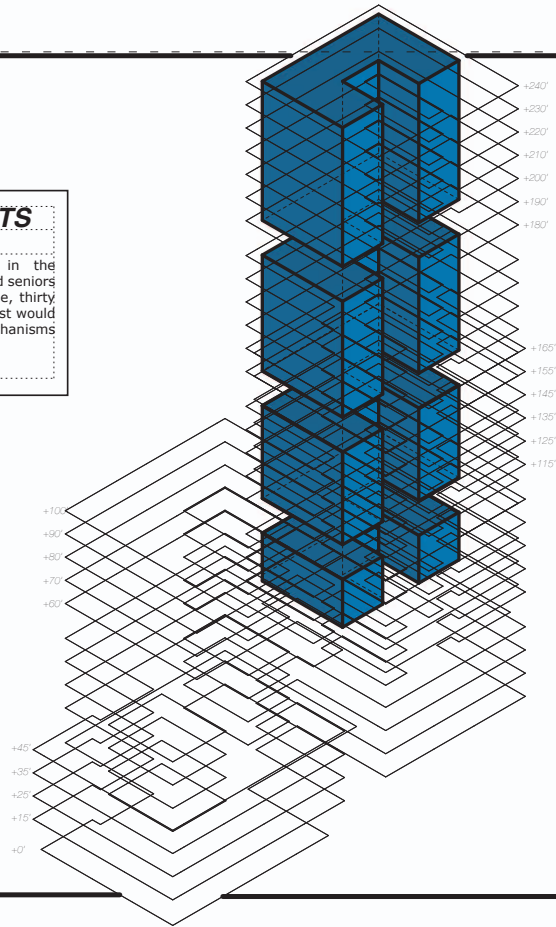
Sure, I had thought about the future, but what surprised me was the immediacy and desperation of housing needs directly following my release. With only a few dollars and no contacts, where does a guy begin?

Here.



**TWO BEDROOM APARTMENTS**  
**68 UNITS 500 SQ FT**

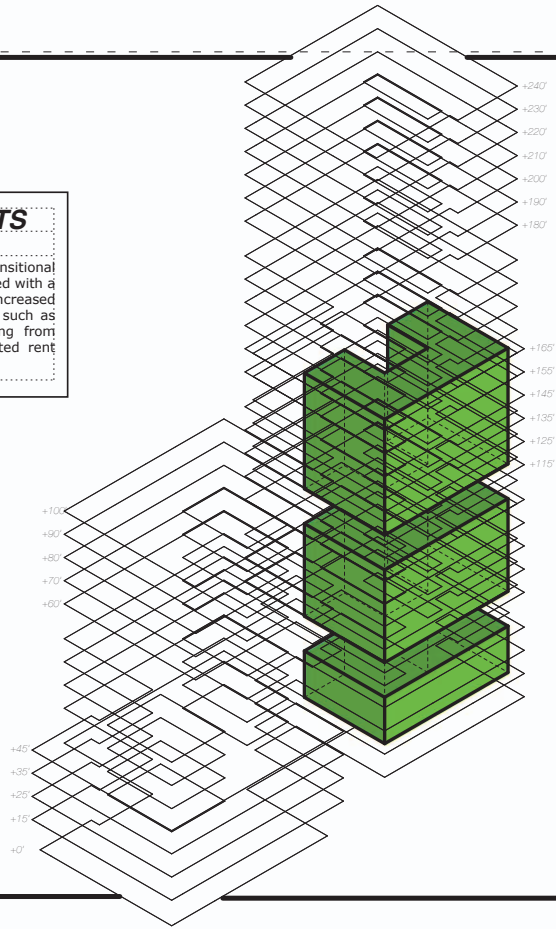
Public housing offers the greatest permanence in the continuum of care. Residents would include families and seniors that earn less than fifty percent of the median income, thirty percent of which would pay the rent. The remaining cost would be subsidized with public and private funding, with mechanisms such as housing vouchers and tax credits



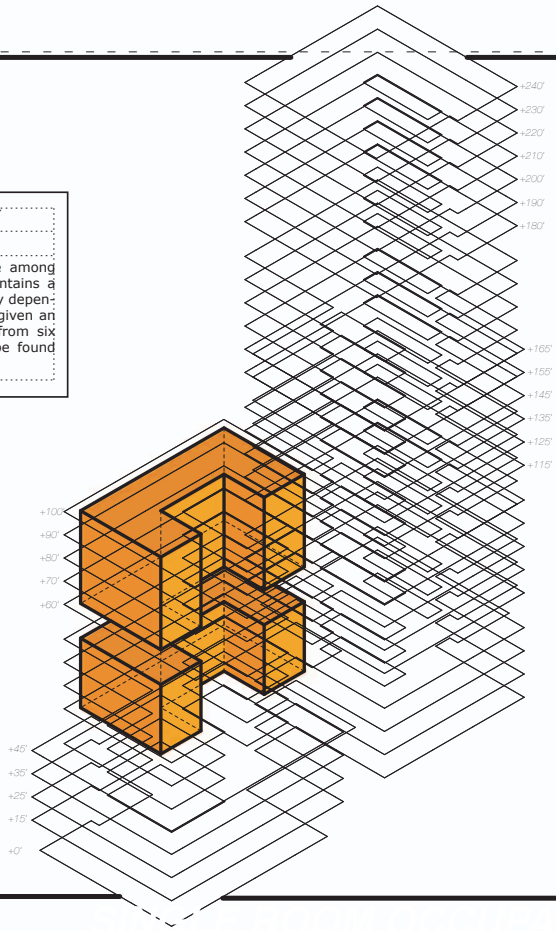
**ONE BEDROOM APARTMENTS**

**66 UNITS 300 SQ FT**

Supportive housing blurs the boundary between transitional and permanent housing. A stable residence is connected with a saturation of service components, responding to the increased need of a supportive infrastructure among residents such as single mothers or disabled veterans. Similar funding from public and private sources would alleviate the inflated rent rates in downtown.



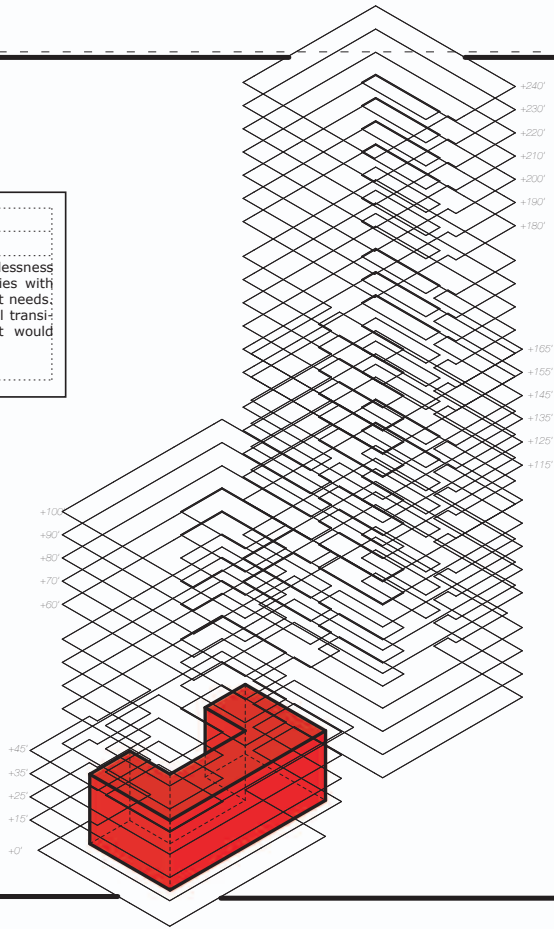
**SINGLE ROOM OCCUPANCY**  
**70 UNITS 200 SQ FT**  
Transitional housing seeks to increase independence among residents through a defined period of stay that maintains a strong connection with service components. Chemically dependent and chronically unemployed residents would be given an opportunity to gain stability during a stay ranging from six months to two years. Supplementary funds would be found largely through nonprofits.



**DORMITORY**

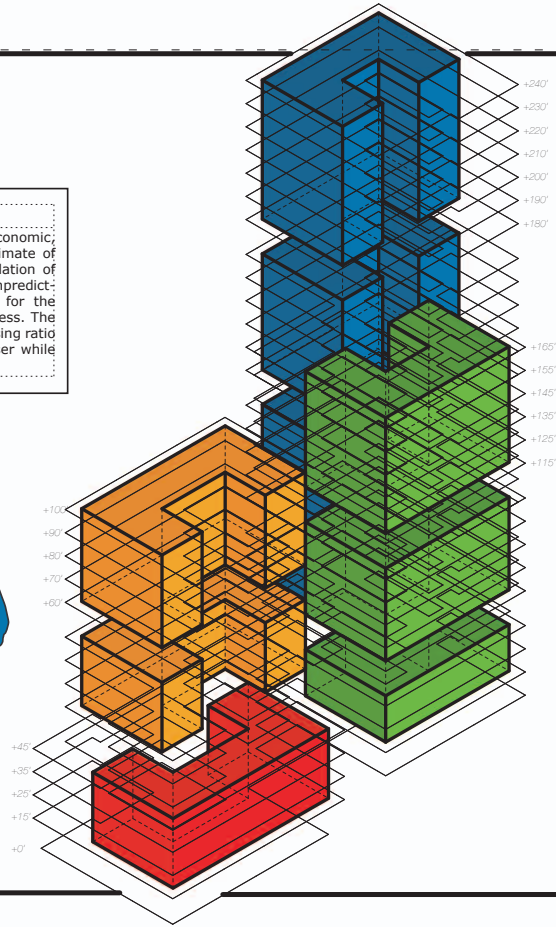
**96 BEDS 200 SQ FT**

The emergency shelter offsets the onslaught of homelessness with an optimized layout that engages the dormitories with pertinent services that cater to those with the greatest needs. Duration of stay would be limited to a few nights until transitional housing becomes available. Financial support would come from affiliated nonprofits.

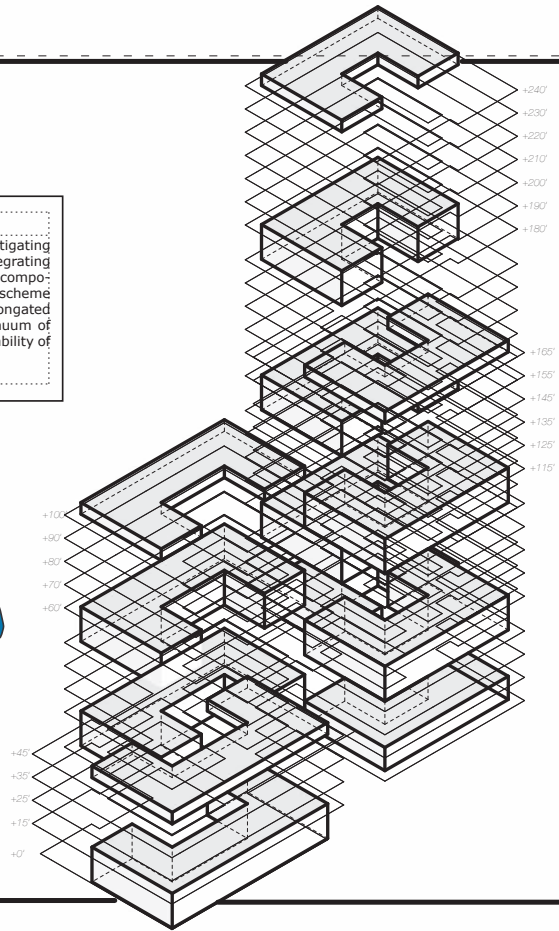


**GRADIENT OF HOUSING**

The homeless demographic fluctuates according to economic, political, social, and environmental upsets. As the climate of uncontrollable conditions changes, so does the population of those with inadequate shelter. Responsiveness to unpredictable, tumultuous patterns is a crucial determinate for the success of a facility that seeks to alleviate homelessness. The proposed strategy renders a gradient of service to housing ratio that responds to the uniqueness of each potential user while establishing a sense of community and identity.

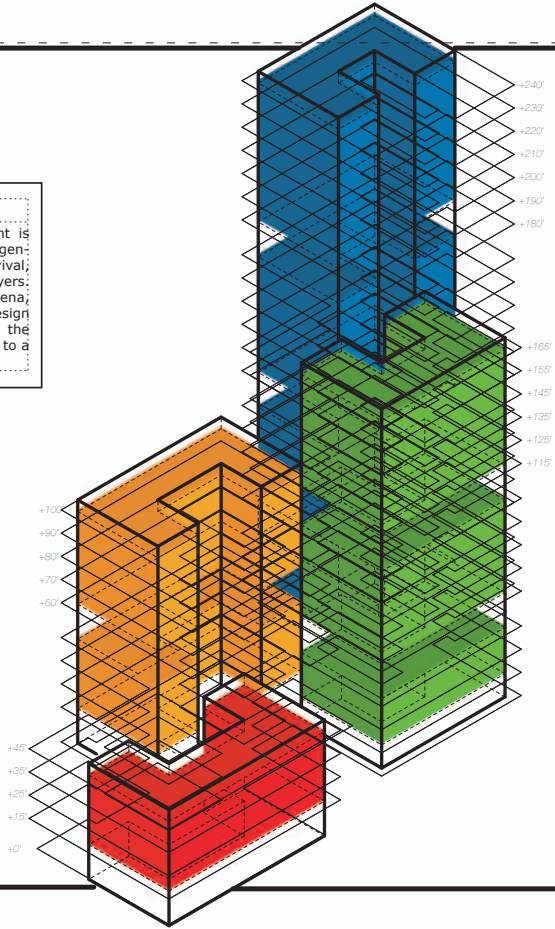


**SPECTRUM OF SERVICES**  
Singular fronts of rehabilitation are ineffective in mitigating homelessness, but through a procedural process of integrating appropriate housing strategies and relevant service components, homelessness can be eliminated. The optimized scheme stretches the union of service and housing along an elongated band of interrelated components, establishing a continuum of care that references grafting as a model for the inextricability of housing and services.



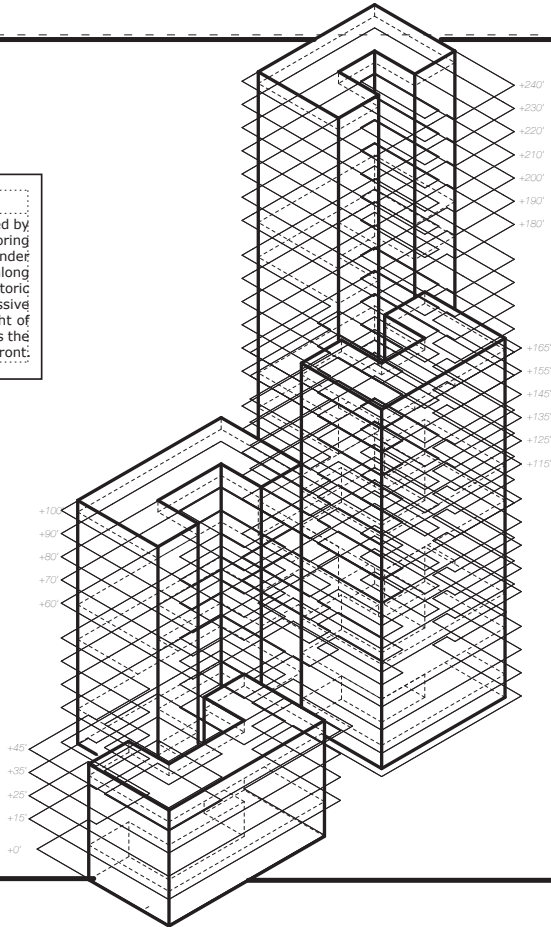
**GRAFTING**

Grafting is the process by which an incapable fragment is revitalized by a healthy host. The rootstock, capable of regenerating independently, adopts a scion, incapable of survival; and nutrient transfer commences between the cambium layers; Metaphors relate speculative ideas to observable phenomena; finding conceptual similarities that justify a proposed design solution. Within the subject of service enriched housing, the desired relationship between services and housing alludes to a natural model that exhibits generative qualities.

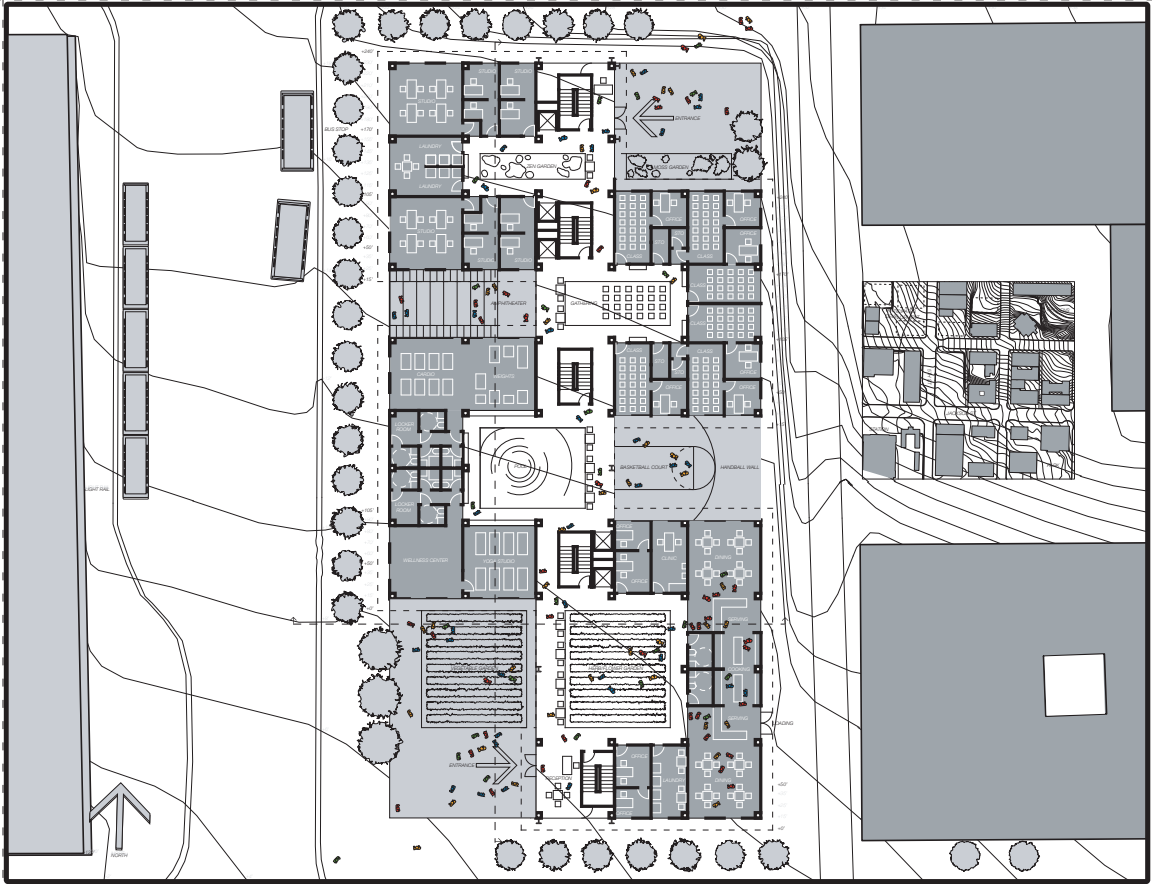


**MASSING**

The proposed height relies on extensive assumptions implied by the planning documents of South Downtown. The neighboring north and northwest parking lots anticipate development under the proposed 240 foot height restriction. The buildings along Jackson will remain, as they fall under the National Historic Register. Together, these assumptions lead to a progressive dissolution of mass that responds to the encroaching height of downtown while incrementally mediating the density across the site to eventually relate to the scale of the historic street-front.





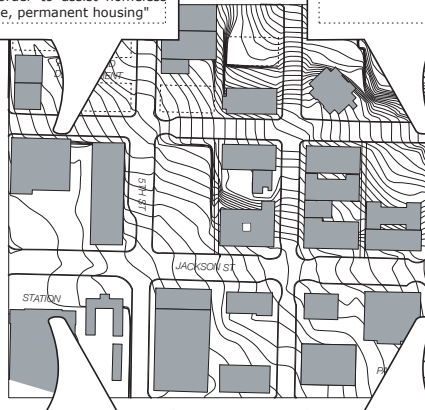


### PLANNING

The City of Seattle seeks to: "pursue a comprehensive approach of prevention, transition and stabilization services to decrease potential homelessness; encourage efforts to expand the supply of extremely low-income, permanent housing to meet the needs of those for whom the cost of housing is a chief cause of homelessness; strive to develop a continuum of housing opportunities, ranging from emergency shelters to transitional housing to permanent housing, in order to assist homeless households regain and maintain stable, permanent housing"

### INTERNATIONAL DISTRICT

The eccentric demographic and rich history of South Downtown mixes together to create a palpable culture that claims to be the only place in the United States where Chinese, Japanese, Filipinos, African Americans, Vietnamese, Koreans and Cambodians live in immediate proximity. These factors, along with a visible presence of homelessness, informed the selection of the surface carpark on the northeast corner of 5th and Jackson.

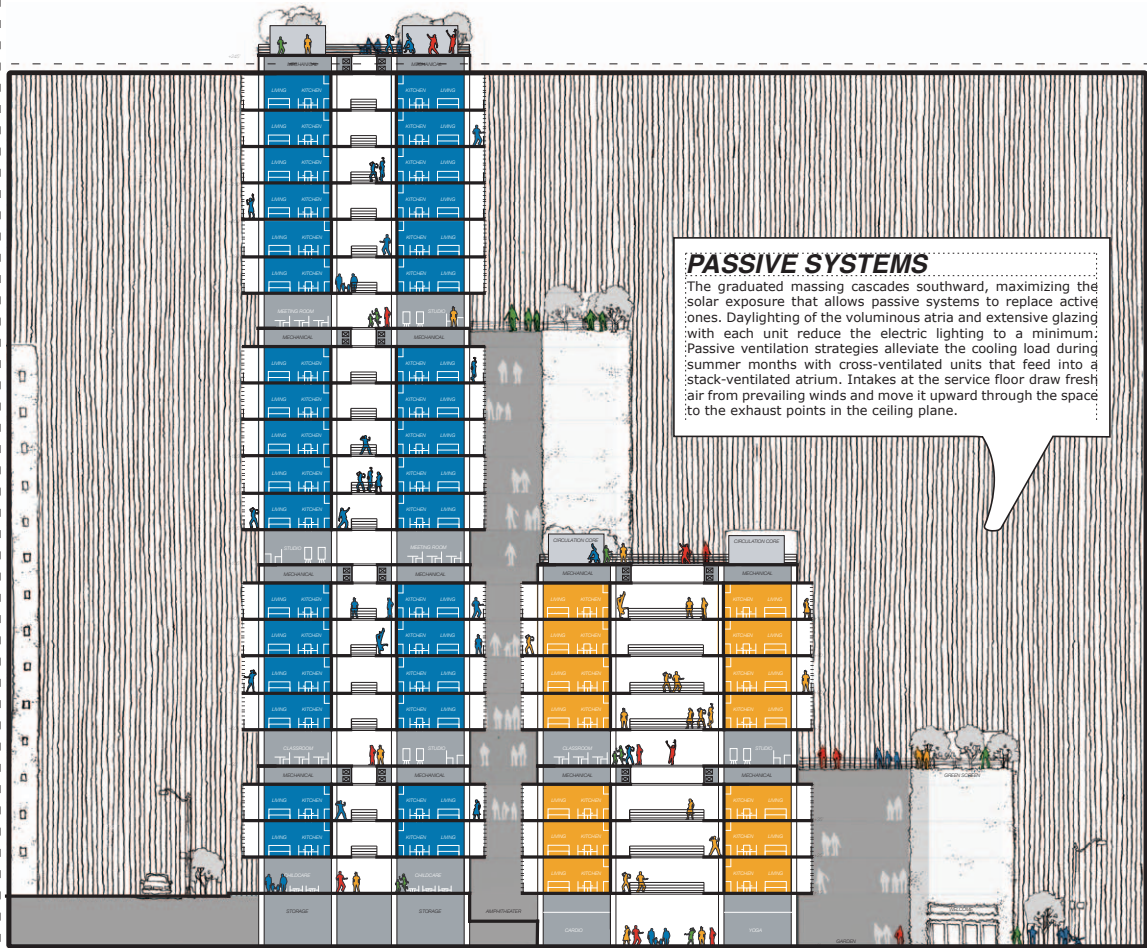


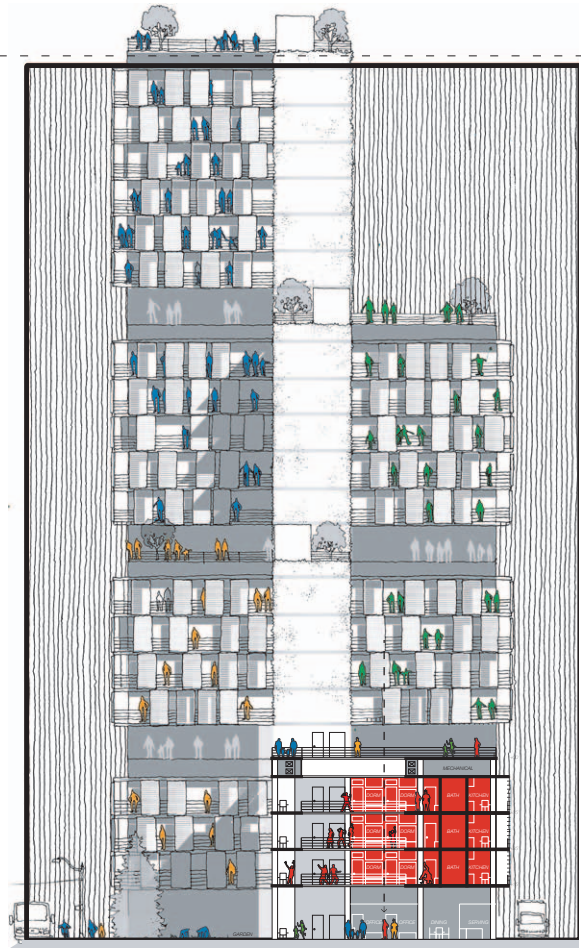
### PROGRAM

Extracting the programmatic information from case studies of affordable housing and homeless shelters informed the pre-design stage in formulating a responsible allocation of space in a continuum of care. Consultations with design professionals and homeless individuals contributed to the programmatic assignments of appropriate housing strategies and relevant service components. Various degrees of permanence distinguish the housing types while thematic variations unite the service spaces, creating a consistency throughout.

### ZONING

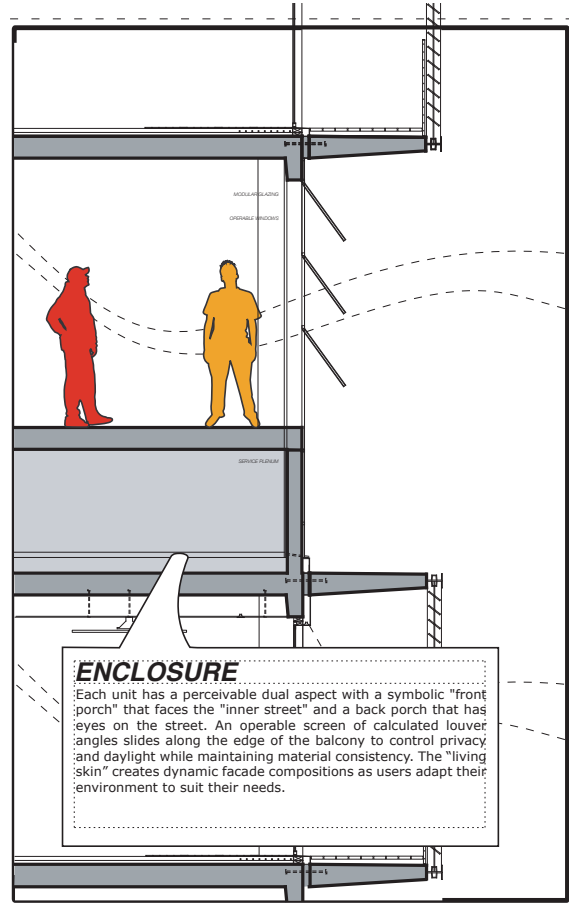
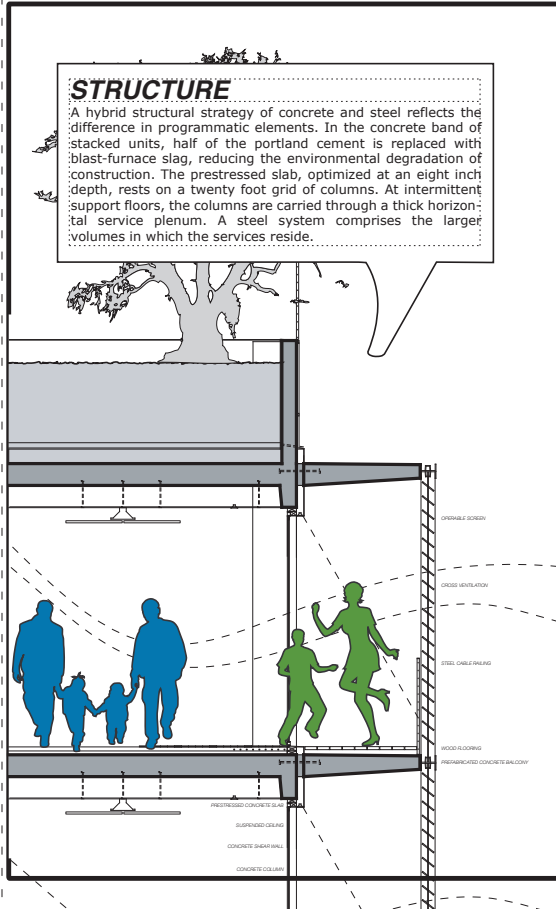
The proposed ID 240 seeks to: "increase the capacity for housing development at the edges of the historic neighborhood cores; provide for a livable community by encouraging artistic activities that create a positive street presence during the evening hours; increase the maximum height limit up to 240 feet for residential-dominated development; maximum density and Land Use Code flexibility would be linked with investments in public space, public art, preservation of historic core buildings, and/or affordable workforce housing."





**STRUCTURE**

A hybrid structural strategy of concrete and steel reflects the difference in programmatic elements. In the concrete band of stacked units, half of the portland cement is replaced with blast-furnace slag, reducing the environmental degradation of construction. The prestressed slab, optimized at an eight inch depth, rests on a twenty foot grid of columns. At intermittent support floors, the columns are carried through a thick horizontal service plenum. A steel system comprises the larger volumes in which the services reside.



**ENCLOSURE**

Each unit has a perceivable dual aspect with a symbolic "front porch" that faces the "inner street" and a back porch that has eyes on the street. An operable screen of calculated louver angles slides along the edge of the balcony to control privacy and daylight while maintaining material consistency. The "living skin" creates dynamic facade compositions as users adapt their environment to suit their needs.

