ROBUST ACCOMMODATION FOR THE HOMELESS IN P.E.I.

by

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DEDICATION

To my friends and loved ones for their continuous support, encouragement and warm words.

To my family for instilling the values of generosity, neighbours and community.

To Meme.

Thank You.

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ABSTRACT

This thesis is concerned with providing shelter for the transient and marginalized homeless population in a city. Understanding the relationships between the city, neighbourhood, shelter and shelter guest help formulate design parameters. How can architecture best negotiate an appropriate balance between function, safety and quality of space in the interior, and an appropriate integration into the neighbourhood?

Located in downtown Charlottetown, Prince Edward Island, an emergency homeless shelter, related health services and formal supports are allied with additional program components. A community garden, restaurant, artists' gallery, artists' workshops and permanent housing units serve the shelter guests while inviting neighbourhood residents into the site. By encouraging interaction between the community and shelter guests, the hybrid programming strengthens the project for both the neighbors and the support service users. These programs welcome the community to participate in the social aspects while also aiding in generating revenue for the shelter and support programs.

The architecture provides a variety of spaces and programs within the building and site to encourage active participation in events and social interaction among the shelter guests and wider community. The project ultimately aims for holistic community well-being through examining proper siting, neighbourhood context, mixed-use buildings, innovative programming and design.

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CHAPTER 1: INTRODUCTION

This thesis examines how architects can approach the multifaceted challenge of designing facilities for the homeless. The homeless population is heterogeneous and stressed by a variety of problems and pressures. For a homeless individual the need for basic shelter is immediate. The shelter, however, should serve as more than a safe and warm place to sleep; it should provide additional services and supports to shelter guests while integrating with the surrounding community. The relationships between the city, neighbourhood, shelter and shelter guest present various design criteria and conditions.

Charlottetown, Prince Edward Island is a relatively small and somewhat conservative city with a population of approximately 60,000 people. The larger of the province's two cities, Charlottetown is the provincial capital and economic centre of the island. Though modest in size, Charlottetown attracts a large population of rural island residents who seek urban employment opportunities and the proximity to formal support services. This influx results in a concentration of individuals residing in the city who are in need of formal support services (Jefferson 2002, 5).

This thesis aims to design an appropriate homeless shelter for the city of Charlottetown. The project intends to provide a high level of accommodation to the shelter guest and sustain the dignity of the support program users; the facility will also engage and enhance the surrounding neighbourhood. The architecture aims to negotiate and express a balance between programming, function, and quality of space.

> [A]ny facility that serves the homeless is located somewhere, and its immediate neighbours and the surrounding community deserve well-designed buildings that fit into the neighbourhood, that help residents integrate themselves into the community, and that alleviates the concerns of local residents that the facility and its clients will compromise their own quality of life (Davis 2004, ix).

The thesis methodology progresses through the examination of site for support, synergy and neighbourhood opportunity; the programmatic integration of basic shelter requirements with opportunities to gain skills and contribute to the mini-community; the use of local materials as a project identifier; and the formation of architecture from these premises.

Thesis Question

How can architecture engage the shelter guest, maintain the dignity of a support service user, and additionally invite and enhance the surrounding neighbourhood?

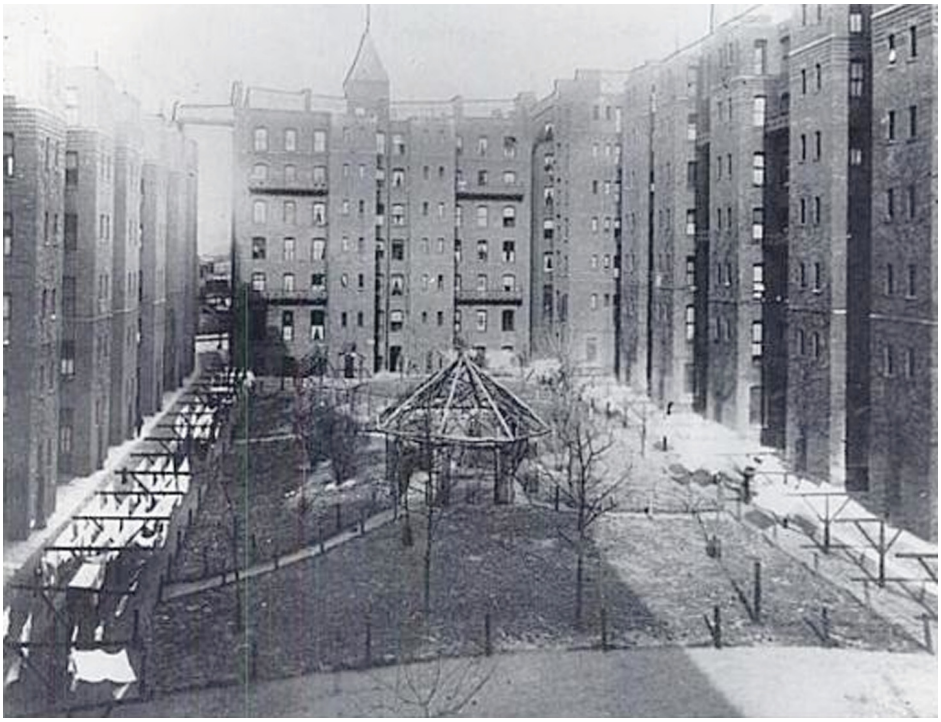
Area of study

“A homeless woman tends to a cart holding her belongings in front of a church”, Downtown East Side, Vancouver, British Columbia. Photograph by Ed Ou, from “An H.I.V. Strategy Invites Addicts In.”

The History of Homelessness

> In the quest to understand the origins of homelessness and its construction as a social problem, it is constructive to consider the historical archetypes of the vagabond, the transient and the stranger (Stone 2006, 3).

Society’s obligation to the poor can be studied through a theme of “social responsibility and interdependence that mingles throughout history with darker themes of oppression and violence” (Jencks 1994, 29). Early English almshouses built in the 10th century



The courtyard of Riverside Tenament Yard (1890), Brooklyn, New York. Photograph from *The Architecture of Affordable Housing.*

housed the elderly and needy. These developments were created by wealthy nobles as a congenial guarantee for a place in heaven. In the 17th century, employers constructed “workhouses or poorhouses” to house a varied population who could not otherwise afford permanent shelter (Jencks 1994, 29). The workhouse residents, however, would work for their rent through hard labour in subpar working conditions. In the early 19th century “poorfarms” were similarly built across North America (Mallach 2009, 267).

The North American modern housing movement appeared in the late 19th century with increasingly industrial and urban cities “confronting the implication of [their] new status” (Jencks 1994, 29.) Here, the homeless phenomenon evolved as a stereotypical population of transient single males whose degree of homelessness paralleled economic growth and decline. American soldiers returning to urban areas after the Civil War were often homeless and transient. During the Great Depression homelessness again grew rapidly. However, the post World War II economic boom brought with it great opportunity and job growth. Most individuals who were considered homeless resided in boarding houses and rudimentary hotels. Most major cities contained a skid row which provided informal gath-

ering places and a concentration of basic and inexpensive accommodation. The homeless were primarily middle-aged men isolated in the skid rows of the cities: “they were not seen as a daily affront to the general population or a widespread social problem for the simple reason that they were often not seen” (Davis 2004 17). Many skid row residents worked occasionally as labourers as many jobs in North America became urbanized. At this time, visible homelessness was rare because of the cheap shelter available in skid rows. Additionally, sleeping in public places was considered criminal until the 1960s (Mallach 2009, 267).

Following a period of deinstitutionalization in the 1950s and 1960s a large number of former mental patients lacked formal supports and began to reside in the streets. Although always present in North America, homelessness surfaced as an urgent social issue in the late 1970s and early 1980s. Individuals visibly sleeping on benches, in public places or in abandoned buildings triggered public outrage soon followed by widespread action. At this time, the median age of the homeless dropped to mid-thirties largely as a result of the introduction of crack cocaine (an alcohol addiction may take decades to match the damage a crack cocaine addiction can incur in a few years). The easy availability and low cost of the drug exponentially increased homeless counts. By the 1980s at least 5000 homeless shelters existed in the United States to serve an estimated population of twenty-five thousand people. By the year 2000 New York City alone had a homeless population of approximately twenty-five thousand (Mallach 2009, 267).

“A man who goes by the name ‘Pepper’ enters his sloping bedroom on the concrete banks of the Los Angeles River on January 18, 2006 in Los Angeles, California.” Photograph by David McNew, from “Los Angeles County Homeless Population nears 90,000.”

Incredible amounts of private and public money have been devoted to addressing the problems of the homeless but an ongoing debate still thrives on various facets of the problem. "How many homeless people there are, why they are homeless, and what policies or strategies best address their undeniable needs" (Jencks 1994, 263).

Who are the Homeless?

> Although housing needs take many different forms, arguably the most urgent and problematic are the needs of the homeless, the people without a stable or predictable roof over their heads (Jencks 1994, 263).

Homelessness, a crisis plaguing cities across the country and throughout North America, is currently defined as living on the street, staying overnight in a temporary shelter, staying in places not meant for human habitation, and moving nomadically between places of residence (couch surfing). Homeless populations are diverse and may include young adults, single adults, families (most often with a single parent), and seniors (The PEI Community Advisory Committee on Homelessness 2010, 1).

> Simply stated, to be homeless is to lack a home, in the sense of a sheltered environment to which one has a legitimate, stable claim. Any private space intended for sleeping can qualify as a home, as long as those who sleep there have a legal right to be there and can exclude strangers. The homeless have become those who have no private space of their own… As such, the homeless include all those who sleep in public places or in shelters, where they typically have no private space or assurance that they can regularly return (Jencks 1991, 264).

Tent City, Edmonton, Alberta. Photograph from "BMHC Services and Programs."

A myriad of issues contribute to homelessness. Homelessness can occur through a gradual progression or chaotic combination of low wages, loss of income, addictions, mental health, disabilities and other traumas or stresses. Homelessness or the risk of becoming homeless may or may not be a permanent condition among various individuals. The homeless are often faced with "micro-level struggles for basic survival, as well as the macro-level pressures of ostracism and regulation" (Stone 2006, 28).

> There is usually no simple reason for an individual to become homeless. Homelessness is often the final stage in a lifelong series of crisis and missed opportunities. It is an accumulation of gradual disengagement from institutions and supportive relationships. Some homeless individuals require more than an adequate income and an affordable home to be able to stabilize their lives. Individuals with issues of mental health or addictions often require transitional or supportive housing. The type and level of support required by homeless individuals varies with each individual. For some it may require meal preparation, help with housekeeping, banking, life skills, referrals, medical care, counseling, employment assistance and/or drop-in programs (Araujo 2009, 13).

For a homeless individual the need for basic shelter is immediate. However, additional support is vital in order to enable the individual to succeed in leaving and staying off of the streets. The homeless generally need participation in one or a combination of formal support programs that may include substance abuse treatment, medical treatment, nursing care, psychiatric care, financial counselling, and job training.

"A homeless man on Spring Garden Road", Halifax, Nova Scotia. Photograph by Ian Gibbons, from "Familiar Faces in Our Neighbourhood".

Formal Supports and Shelters for the Homeless

Supports

> Homelessness is a housing problem, but it is not only a housing problem. It is the compound nature of issues associated with homelessness that have fueled the intensity of the debate about how it should be addressed and that have often made it difficult for people dealing with affordable housing issues to understand how to think about homelessness and the homeless in the context of their efforts. (Jencks 1994, 263).

Although the specific backgrounds and experiences of the homeless population are individually unique; food, clothing and shelter are fundamental human needs. Shelter, however, is a pivotal and determining factor in a person's wellbeing. Without adequate housing, an individual will likely be incapable of accessing food and clothing, needed formal supports and maintaining support program treatment.

> Badly housed persons suffer inordinately from health problems. "Life-skills" counselling seems totally irrelevant in the absence of an appropriate place to apply those skills. Positive employment skills and habits are constantly eroded by the environmental stresses of bad housing. The badly housed are socially stigmatized which seriously inhibits positive community participation, especially on the part of children, and makes it difficult to access community resources. Low self-esteem is constantly reinforced by reflections of depressing and degrading conditions (Jess 1987, 53).

In the essay "Using Housing to Develop Human Resources in Rural Areas" Nova Scotian author and affordable housing advocate Cameron Royce Jess describes a set of qualities and personal development opportunities a homeless individual may be lacking. Generally acting as the first point of contact from street to home, a homeless shelter must offer programs and supports to aid a homeless individual in attaining or regaining these missing skills or personal qualities.

The first and arguably most imperative quality, argues Jess, is the influence of homelessness on mental and physical health. A house or home provides opportunities for sustained personal hygiene, warmth, security and a measure of privacy. The input and advice of health professionals can also be registered and maintained within the safe environment of adequate housing (Jess 1987, 53).

“Shelter guests collaborate to produce jewelry”, Women’s Craft Collaborative, Rosie’s Place, Boston. Photograph from “A Sanctuary for Poor and Homeless Women.”

> Homeless individuals or individuals at risk of becoming homeless have more health problems than the general population. Their situation is made worse by poor hygiene, poor nutrition and a higher risk of experiencing trauma or violence on the street. Homeless individuals are also more likely to face problems receiving health and mental health services. Traditional means of addressing health problems do not always work for homeless individuals who are at greater risk of having their identification such as their health cards being lost or stolen (Araujo 2009,13).

Access to life-skills training and employment is also largely influenced by poor housing conditions. “Adequate housing is, in all likelihood, the precondition in many cases which makes employment a viable option physically and psychologically” (Jess 1987, 54). Moreover, the stability and security of adequate housing encourages access to the counselling required to overcome poor work habits and master new job skills. Each new accomplishment positively influences an individual’s perception of their abilities and transforms self-esteem (Jess 1987, 54).

Individuals require participation in their community not just to access resources but also to contribute to the well-being of a community. Accessing a housing programme is commonly a significant initial stride in dissolving the isolation of disadvantaged persons, particularly if the housing programme provides employment, counselling and other support services. These services may influence community participation and provide immediate contact to other community agencies and professionals (Jess 1987, 54).

> Housing has a pervasive impact on all aspects of our lifes. If it is adequate, housing provides privacy and security against unwanted intrusions, both physical and emotional. It defines our community and determines our access to jobs, services, stores and networks of support. The residence is the principal focus of family and personal life, in which our personality, values and many of our social roles are defined, shaped and experienced. (Stone 2006, 38).

Shelters

The architecture of the earliest shelters inadequately reflected the diversity of the population they served. Generally design was dismissed during construction and program components were lacking. Shelters were often located in leftover structures that were originally used as large and open assemblies. The familiar saying, “warehousing the poor” can therefore be interpreted as a sad reality and weak metaphor. Guests often slept on stairs, tabletops or directly on the floor. Conditions were unsanitary and lacked privacy. These institutional, impersonal and intimidating facilities amplified the anxieties and stresses of an individual entering the shelter (Davis 2004, 23).

> In the last hundred years, homeless individuals have had shelters, beds, single room occupancy hotels (SRO’s) or the streets as options for accommodations. The experience of living in a shelter often strips the individual of dignity. Institutionalization inculcates a resistance to acceptable social behaviour. As a result, the homeless individual either avoids shelter or once entering the shelter creates psychological walls in the absence of real ones in order to achieve some personal privacy (Davis 2004, 23).

“The Contra Costa County Adult Shelter before renovation”, Contra Costa County, California. Photograph from *Designing for the Homeless: Architecture that Works.*

Sleep Space at the Fredericton Homeless Shelter, Fredericton, New Brunswick. Photograph by Charles Leblanc from *Charles' Leblanc's Other Blog.*

Early rescue missions based in skid rows aimed mainly at benefiting middle-aged men. Admission into a shelter or program was conditional upon working hard labor for the organization. Mandatory chores and lecturing aimed to control and reform behaviour. "Little thought was given to how the shelter itself, and the experience of living in a shelter, might affect the individual and his ability to return to permanent housing" (Davis 2004, 25).

Sparse shelter interiors lacked colour and were organized by mundane blocks of beds. Concurrent endless rows of 1950s public housing blocks also conveyed "unrelenting sameness and regimentation" (Davis 2004, 25). The shelters provided the bare minimum with no amenities or favours. Small gestures like privacy screens and personal storage were viewed as unnecessary and outweighed by strict budget. The dehumanizing dormitories provided little assurance to guests and resulted in short shelter stays.

> Protection from the elements is the basis of all building, but creating a sense of security and refuge is a particular purview of good architecture. These shelters did, and often continue to do, the opposite (Davis 2004, 26).

In the 1980s aging shelters could no longer handle the increasing number of shelter guests. Volunteers and administrative members increased in number to manage the ever growing facilities. Shelters developed in new buildings now designed for the specific needs of the homeless. Often these shelters were large and included a food service,

Front Facade, Union Rescue Mission, Los Angeles. Photograph from *Designing for the Homeless: Architecture that Works.*

security fleet and immense operating systems. Cleanliness, safety and security became paramount. Physical and programmatic structure defined the shelter guests' experiences. The shelters aimed to treat the individual versus assuming the homeless as an anonymous collective:

> Results- a healthy, healed, and changed individual- are the driving force of modern shelters, and although this goal was in fact that of shelters founded in the early twentieth century, the methods and the facilities themselves are a far cry from those of their predecessors (Davis 2004, 29).

Despite recent spirits of design improvement and shelter management, shelter life is continually full of challenges and personal hardships. The architect must employ every possible tool to provide a greater than expected project. A considerate and invested project will improve the quality of life, both physical and emotional, of the shelter staff and shelter guests.

A homeless person is often an isolated person. A facility that welcomes guests into a comfortable and safe facility implies a worthiness and restoration of dignity. Choice and individuality are fundamental to self esteem- the architect can provide diverse options within a singular room to offer individual user control. The balance, however, of individual control with the functional and security needs of staff must also be negotiated through innovative programming and design.

> The question whether architecture has a social function is totally irrelevant, because socially indifferent solutions simply do not exist; in other words, every intervention in people's surroundings, regardless of the architect's specific aims, has a social implication. So we are not in fact free to go ahead and design exactly what we please- everything we do has consequences for people and their relationships. There is not much an architect can do, which makes it all the more important to make sure what few opportunities there are not missed... Everything we design must be adequate for every situation that arises, in other words, it must not only be accommodating but also stimulating- and it is this fundamental and active adequacy that I would like to call 'inviting form': form with more sympathy for people (Hertzberger 1991, 174).

Homelessness in Prince Edward Island

Poverty in Prince Edward Island

> Within Atlantic Canada there are pockets of extreme despondency, both urban and rural, which epitomize the situation. It is hard to exaggerate the degree to which human degradation has occurred and continues to occur in these stricken communities. Perhaps the most obvious symptom of malaise is a real rate of unemployment and underemployment more than double the national average. Many of these disadvantaged families and persons exhibit an acute sense of alienation from the community at large, a sense that institutions do not exist for their participation and benefit. Their repertoire of skills at accessing community resources is often limited to telling their social worker what they think he/she needs to hear in order to dispense welfare benefits. The "life-skills" of many families appear to be atrophy in: traditional crafts and activities are forgotten; social and moral values are lost without being replaced; housekeeping and home maintenance activities have low priority. Housing is typically appalling: inadequate or total lack of plumbing and wiring is common; overcrowding and lack of privacy can be linked to physical and sexual abuse of women and children; such households are often the prey of landlords/ mortgages who charge what the market will bear for housing which incorporates all of the above deficiencies (Jess 1987, 52).

Prince Edward Island (PEI), the smallest and most densely populated of the Canadian provinces, is home to approximately 140,000 people. Located in the once prosperous Atlantic Canada region, Prince Edward Island is a proud yet vulnerable province. Early generations enjoyed periods of prosperity in lucrative wooden ship building and fox farming. These industries, however, collapsed and the geography of the island limits potential for new resource industry growth. Currently, a large majority of the island is used for farmland and the fisheries continue to operate. The island's natural beauty and literary history annually attract hundreds of thousands of international tourists. Year round employment, however, is rare and unstable. Education levels and average wages are lower than the

Shelter guests waiting outside the Fredericton Homeless Shelter, Fredericton, New Brunswick. Photograph by Charles Leblanc from *Charles' Leblanc's Other Blog.*

Canadian average and recent research suggests the cost of living in PEI is higher than other Canadian provinces (Flanagan 2009, 2).

Kathleen Flanagan, experienced social policy consultant and long-time resident of Prince Edward Island, describes the historical influences and evolution of social assistance programs in the province. Her report, *Poverty Reduction Policies and Programs: Prince Edward Island*, examines the current economic challenges facing Prince Edward Island residents. Flanagan distils the variety of complex social issues into ten categories: The Rural/ Urban Shift, Rural/ Urban Differences, Out-migration, Aging Population, Crisis in Agriculture, Employment, Low Wages, Cost of Living, Welfare Assistance, and Hidden Poverty- 'Living on the Edge' (Flanagan 2009, 2).

Homelessness in Charlottetown

Charlottetown, Prince Edward Island is a relatively small and somewhat conservative city with a total population of approximately 60,000 people. The larger of the province's two cities, Charlottetown is the provincial capital and economic centre of the island. Although modest in size, Charlottetown attracts a large population of rural island residents who seek urban employment opportunities and the proximity to support services. This influx results in a higher than average concentration of individuals residing in the city who are in need of formal support services (Jefferson 2002, 5).

The Upper Room Soup Kitchen, Charlottetown, P.E.I.. Photograph from the *PEI Report Card on Homelessness.*

In 2010 the PEI Community Advisory Committee on Homelessness conducted the first homelessness report card in Prince Edward Island. The aim of this first report card was to profile homelessness in PEI and to introduce a selection of organizations and programs that are working to reduce the impact of homelessness. The format of the report card is similar to and often identical to other Canadian report cards on homelessness (Halifax, Ottawa, Sudbury, Edmonton, Grande Prairie, and Vancouver). The Prince Edward Island report is an introductory profile to available island services and serves as a prologue for future studies.

In the report, gaps in services are easily identified and include the need for additional emergency shelters in Summerside and Charlottetown, province wide affordable housing for people with disabilities and a general province-wide lack of youth (aged 16-18 years) housing and support services. The report also states that in 2009 “5,500 shelter beds were used, a number that surprised some front-line service workers including Ian Scott of the Charlottetown Salvation Army (Thibodeau 2010).”

> “It’s a hidden problem,” said Scott. “Charlottetown is one of those cities that hides issues like this really easily. The people we have coming in on a day-to-day basis would indicate that the problem is larger than it looks.” Scott said the problems are getting worse. He said demand for their services is increasing substantially (Thibodeau 2010).

Although homelessness is only moderately visible in the city streets, homelessness in Prince Edward Island is often present in the survival strategy of a hidden nature. Often, individuals are forced by various social and economic circumstances to live with friends or family regardless of whether the host can afford to take them in. People may be forced into substandard living conditions with seven to eight people sharing an ill maintained one bedroom apartment (The PEI Community Advisory Committee on Homelessness 2010, 6).

> Although not included in most estimates, the homeless could also be considered to include those sometimes called the 'hidden homeless,' the individuals or families who stay with friends or relatives and whose shelter is vulnerable from day to day at the whim of legal tenants of the property or the landlord (Mallach 2009, 264).

A homeless individual is often characterized as a person who is seen "carrying bags, back-packs, garbage bags, shopping carts and/ or sleeping bags throughout the city" (Arajuo 130). Additionally, individuals holding signage, collecting bottles and requesting money are common perceptions of the homeless population. The homeless are varied and in Prince Edward Island commonly consist of the working poor who struggle to maintain part time employment amidst unstable housing conditions. In Prince Edward Island hidden homelessness is prevalent and growing.

(Left) Protesters for the "Freezing for Warmth Campaign", Charlottetown, PEI. Photograph from "Natives protest lack of homeless shelters."
(Right) "Members of the Native Council of Prince Edward Island camp on a sidewalk to raise money and awareness for a homeless women's shelter", Charlottetown. Photograph from "Homeless women's shelter needs funding."

A Room at the Chief Mary Bernard Memorial Shelter, Lennox Island, P.E.I. Photograph from the *PEI Report Card on Homelessness.*

A sleeping bag and backpack, Confederation Trail, Charlottetown. Photograph from *PEI Report Card on Homelessness.*

NIMBY (Not-In-My-Backyard)

> New York City is home to the largest concentration of liberals in the U.S. Surely this would be a place where the government would take care of the homeless, those who live on grates and under bridges. The residents of Midland Beach, Staten Island, opposed a homeless shelter. About 400 people were at a meeting on the subject. A nun, whose group, Homes for the Homeless, suggested building a shelter, made her way to the microphone. In ordinary times, a religious sister talking to New Yorkers would be treated with the utmost respect. These were not ordinary times. A police escort was necessary. By the time she got to the microphone, many in the audience were shouting at her, 'We don't want you! We don't want you!' Could this be happening in New York, with its large Catholic population? It was. Others addressed the meeting. Of the thirty-five who spoke, all but one opposed the shelter. The one who favoured it was chased from the microphone... Some say, 'Let's face it- the homeless brought it upon themselves. They drank away all their money, or drugged themselves, or didn't pay attention in school. It's all their own fault. They're adults, so they have to face the consequences of their actions.' (Inhaber 1998, 8).

The Not-In-My-Backyard (NIMBY) syndrome has become a common reaction to various types of developments or infrastructure. NIMBY describes a collective negative reaction to a proposed change in the local environment and often relates to projects with social value, such as social housing and services. This opposition has given the NIMBY syn-

Graffiti on a Proposed Homeless Shelter for Men, Brooklyn, New York. Photograph from "Levin Gives the Heisman to Homeless Shelter".

drome a reputation synonymous with social intolerance. NIMBY, however, can also arise when neighboring residents voice genuine concern over inappropriate land-use, increased noise and traffic, perceived public safety and neighbourhood physical appearance.

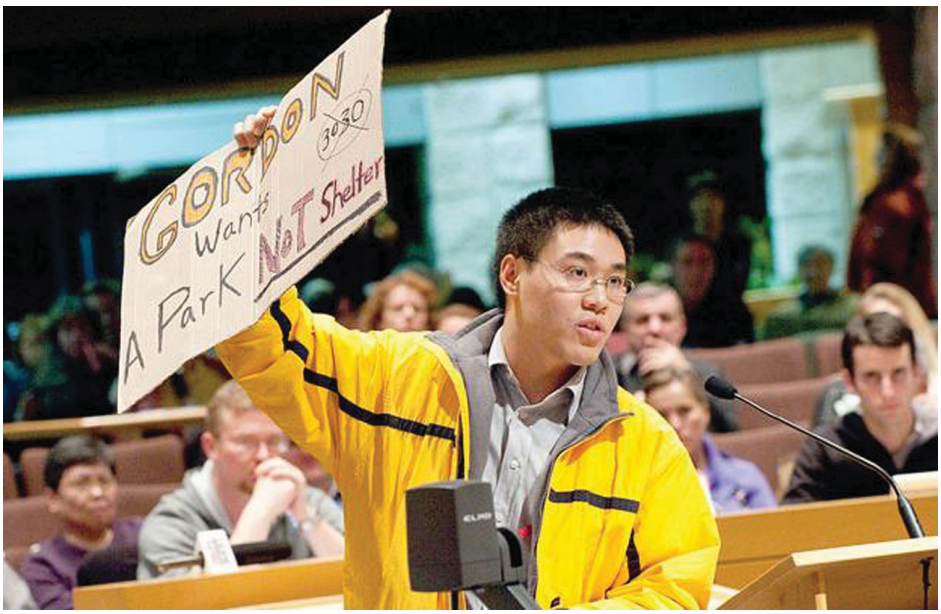
> Neighbourhood opposition to moving in low-income tenants or subsidized housing facilities is hardly new. Indeed, it has been present from the earliest days of the public housing program. In the past decade, however, opposition has grown so much more strident and widespread (and perhaps more effective) that researchers and practitioners commonly use an acronym for it: NIMBY (not in my backyard). In extreme cases, NIMBY has turned into attitudes of: NIABY (not in anybody's backyard), BANANA (build absolutely nothing anywhere near anyone) and NOPE (not on planet Earth) (Galster et. al 2003, 10-11).

A prevailing argument against housing developments are concerns over property values as a housing development can either depress or increase neighbourhood property values. If the project is ill maintained and designed insensitively within the surrounding community, negative impacts on surrounding property values may occur. On the contrary, an attractive and thoughtful development can present a neighbourhood enhancement by replacing a community eyesore such as a vacant property or parking lot. "Similarly, if the new development is a conscientious and good neighbor and provides useful services to the community, it could raise prices" (*The Impact of Supportive Housing on Surrounding Neighborhoods: Evidence from New York City* 2008, 3).

> One side sees the evils of concentrated poverty and the expanded opportunities and quality of life for residents when their assisted housing is located in low-poverty neighbourhoods. The other side sees an invasion of undesirable neighbours who will undermine their quality of life, security, and property values (Galster et. al 2003, 1).

The architect or developer must carefully outline how the project will benefit the surrounding community in addition to the prospective occupants. Potential community program additions must be explored and executed to serve the occupants well while simultaneously encouraging a wider neighbourhood to participate in activities and other building functions. This amalgamation can alleviate apprehensions that the shelter and its occupants will compromise an existing safety or quality of neighbourhood life (*NIMBY: Guidelines for Action Managing Housing Related Disputes* 1993, 6).

> Just as poorly designed urban environments are associated with social disorders such as crime, alienation, violence, and drug abuse, so carefully designed places can uplift and improve the health and well being of individuals and communities ("Dignity Village Proposal 2004").



"A neighbourhood resident shows his protest with a sign against a proposed homeless shelter", Coquitlam, British Columbia. Photograph by Gabrielle Beer, from "Coquitlam Council Approves Homeless Shelter."

However motivated, opposition to the siting of a homeless shelter is not uniform. The resistance fluctuates depending on the characteristics of the community and project in question. Tolerance of "diverse residential environments" appears higher in active urban neighbourhoods with mixed land use and residents who are educated, renters and younger in age (Galster et. al 2003, 13). Alan Mallach, respected researcher and community housing advocate summarizes:

> Housing is not a commodity. It is an all-but-permanent, all-but-immovable product that affects the lives not only of those who live in it, but those who live around it, whose experience is powerfully or subtly affected by it. How a house or housing development looks, and how well it works for those who live in it or observe it from the outside, is a matter of paramount importance, whether it is designed to accommodate the neediest or the most affluent (Mallach 2009, 53).

Mallach continues: "[t]he goal of all development is to add both economic and psychological value to the built environment" (Mallach 2009, 72).

All shelters have a relationship to the city, neighbourhood and guest. The shelter guests, staff, immediate neighbours and surrounding community equally deserve well designed buildings that successfully contribute to the life of the neighbourhood. A successful project should engage the shelter guest by balancing individual needs for privacy and control

with staff surveillance requirements. Additionally, the project should maintain the dignity of support service users through accessible facilities that are sympathetic to the comfort of its often vulnerable users. Moreover, the project should invite and enhance the surrounding neighbourhood through hybrid programming, program arrangement on site and suitable site selection.

> If the design of a facility can help the homeless feel that they have found a safe haven, they are more likely to come in and ask for help (Davis 2004, 20).

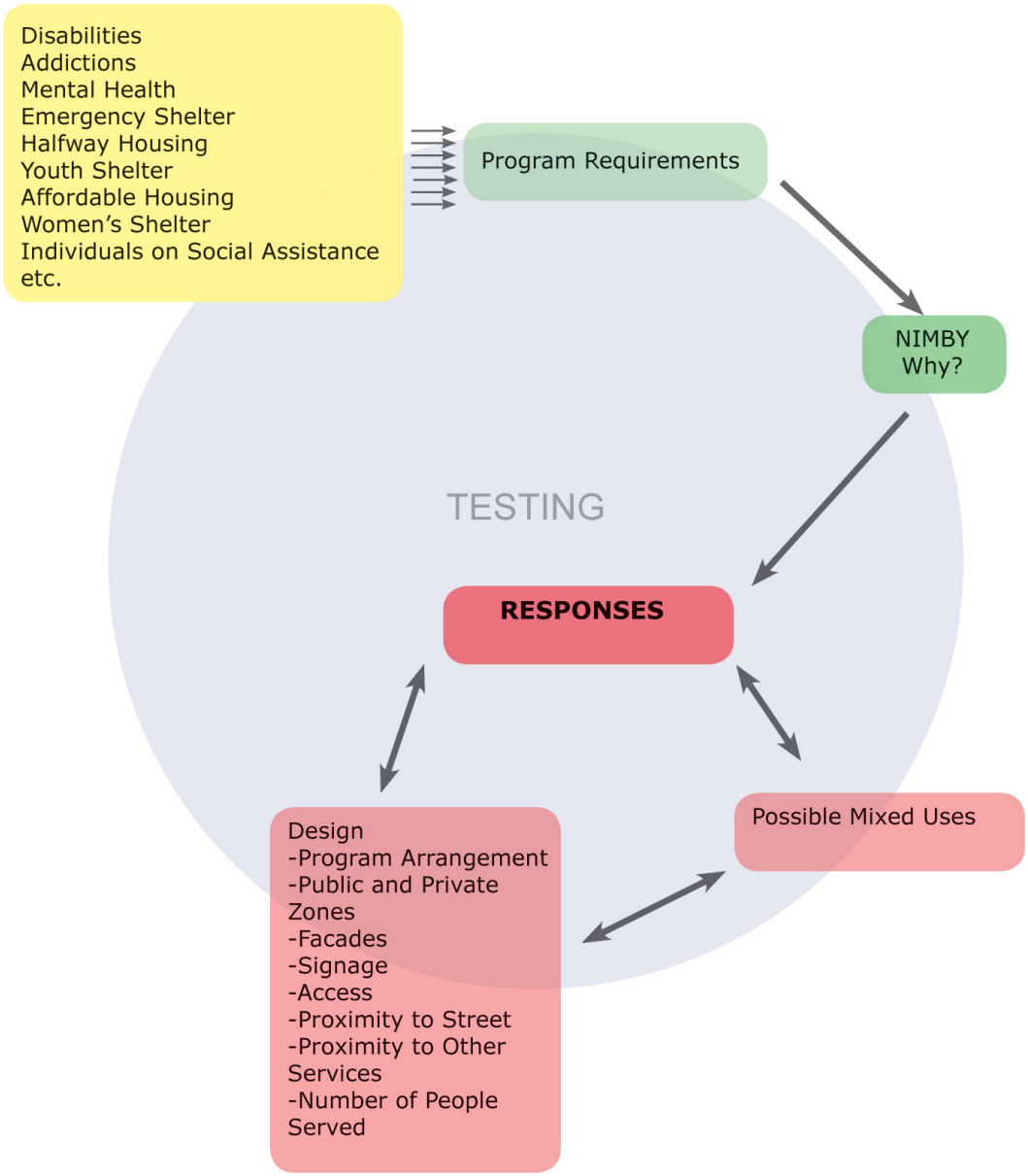


Diagram of Possible Program Driven Architectural Approach.

References

The Boyle MacAuley Health Centre

(Left) Front Entrance, Boyle MacAuley Health Centre, Edmonton, Alberta. Photograph from "BMHC Services and Programs."
(Right) Footcare Clinic, Boyle MacAuley Health Centre, Edmonton, Alberta. Photograph from "BMHC Services and Programs."

The Boyle MacAuley Health Centre (BMHC) is the only non-profit community owned health centre in the Edmonton area. Located in an inner city neighbourhood traditionally stigmatized by its ghettoization of social services, the BMHC provides essential health services to a vulnerable population that typically has difficulty accessing health services (ethnicity, poverty, homelessness, addictions, mental health issues, lack of education, social isolation and recent immigration). An extensive volunteer staff works beyond immediate health care needs to heal holistically, create healthier communities and address the underlying social issues affecting the health of their patients (BMHC Services and Programs).

Services offered at BMHC include a Medical Clinic, Dental Clinic, Footcare Clinic, Mental Health, Health Advocacy, Laboratory Testing, Chiropractic Clinic, Acupuncture, Optometry, Needle Exchange, Women's Health Clinic, Community Nurses' Station, and Pathways to Housing Edmonton (BMHC Services and Programs).

Rosie's Place

(Left) Entrance, Rosie's Place, Boston, Massachusetts. Photograph from "A Sanctuary for Poor and Homeless Women."
(Right) Overnight Accommodations, Rosie's Place, Boston, Massachusetts. Photograph from "A Sanctuary for Poor and Homeless Women."

Founded in Boston in 1974 by civil rights activist Kip Tiernan, Rosie's Place originally provided meals and emergency shelter to a previously neglected population of homeless women. Through gradual additions of an HIV/AIDS clinic, adult education classes, library, computer lab, Women's Craft Cooperative, Food Co-op, Laundry Facilities, Clothing Exchange, Childcare Facility, Wellness Centre, and jazz choir, Rosie's Place operates without city, state or federal money. The program has expanded with two additional facilities providing permanent housing to 23 women who have experienced long-term homelessness due to mental or physical illness (A Sanctuary for Poor and Homeless Women).

In their Public Policy, Rosie's Place identifies barriers to permanent shelter as lack of affordable housing, non-living wages, domestic violence, substance abuse, mental illness, and job or income loss. The facility then offers the resources to address the root cause of homelessness by providing solutions (Affordable Housing, Homelessness Prevention Initiatives, Access to Affordable Healthcare, Access to Support Services, and Reinstating Services for Immigrants) (A Sanctuary for Poor and Homeless Women).

In researching affordable housing initiatives and successful shelter programming, advocates continually note Rosie's Place as a valuable and innovative shelter model. Rosie's Place benefits its shelter guests while contributing to the larger community through program additions like the Women's Craft Cooperative, jazz choir and adult education classes.

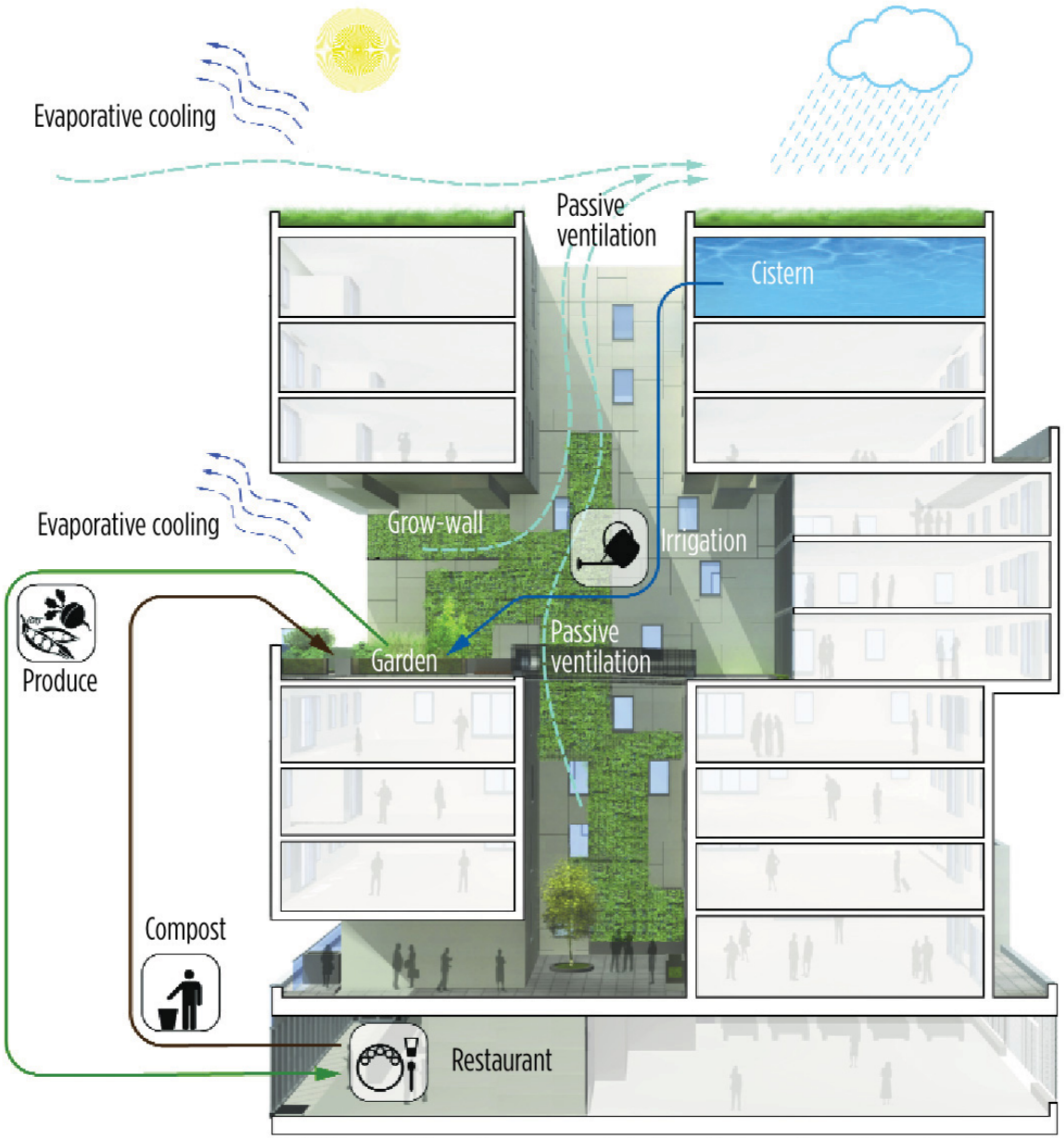
60 Richmond Co-op

(Left) Front Facade, 60 Richmond Co-op, Toronto, Ontario. Photograph from "No Mean City: 60 Richmond, by Teeple Architects."
(Right) Apartment, 60 Richmond Co-op, Toronto, Ontario. Photograph from "No Mean City: 60 Richmond, by Teeple Architects."

After the redevelopment of Toronto's Regent Park, Canada's first and largest social housing project, Toronto's Community Housing Corporation initiated the 60 Richmond project to house displaced residents. Completed in March of 2010, 60 Richmond contains 85 cooperative units; several courtyards; a training restaurant, kitchen and classrooms; a revenue generating rooftop garden and hanging gardens to serve the restaurant (Bozikovic 2010).

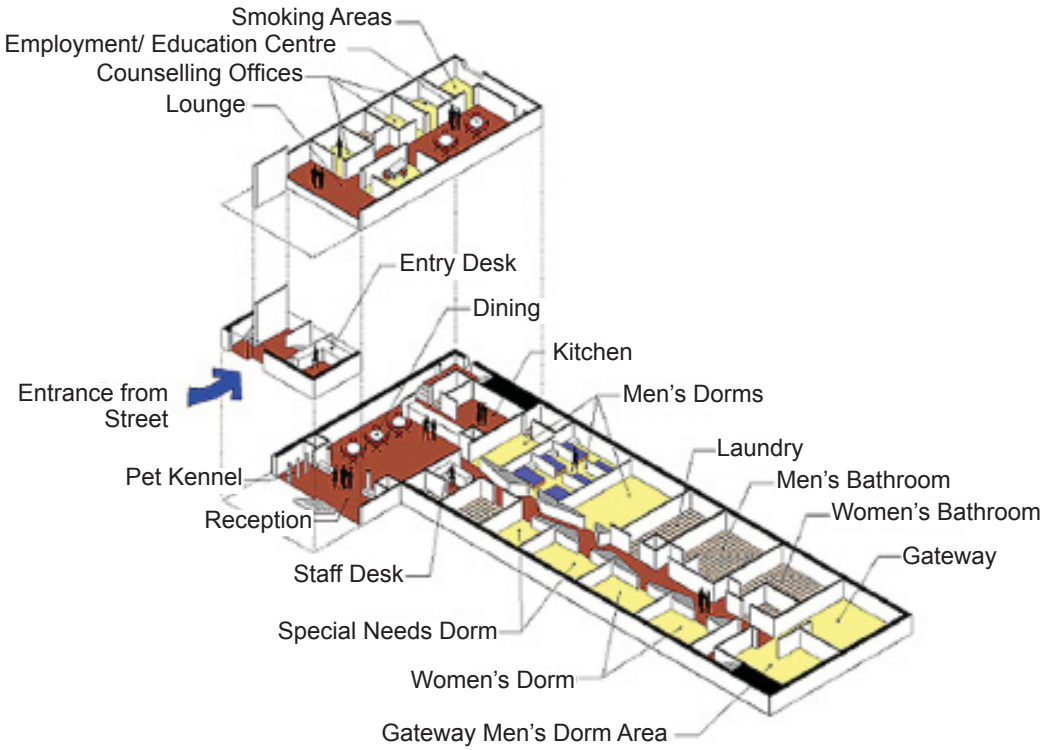
The suites are arranged in a single-loaded configuration around a central atrium, and have operable windows for natural ventilation. The atrium extends throughout the entire building allowing light and air to the living units, and creating a ventilation stack effect without the need for air conditioning (Bozikovic 2010).

Environmentally and programmatically the building successfully operates in large self supporting systems.



Building Section and System Diagram, 60 Richmond Co-op, Toronto, Ontario. Photograph from "No Mean City: 60 Richmond, by Teeple Architects."

Lark-Inn for Youth



Plans with Sleeping Area Below Street Level, Lark-Inn for Youth, San Francisco, California. Photograph from *Designing for the Homeless: Architecture that Works.*

Entrance Desk at a Drop-In Centre for Homeless Youth, Lark-Inn for Youth, San Francisco, California. Photograph from *Designing for the Homeless: Architecture that Works.*

Dormitory, Lark-Inn for Youth, San Francisco, California. Photograph from *Designing for the Homeless: Architecture that Works.*

Architect and author Sam Davis designed the Lark-Inn for Youth, a drop-in facility for homeless youth in San Francisco. The shelter exists in a former furniture store. Davis inserted a large curving wall with custom lighting to define several spaces through the narrow building. The focal wall merges into an open entrance desk with support offices. The entrance "makes users feel invited, connected, and accepted" to define a first positive step (Davis 2004, 84).

The shelter dormitory exists underground in a windowless, large space. Davis divided the large space into clusters of eight smaller dormitories with flexible furniture arrangements (ranging between six to eight beds). Changes in floor pattern and colour demarcate the entrance to each sleep space. Two of the dormitories are situated farthest from the staff desk and house the most trustworthy and self-reliant guests. Dormitories housing new and possibly unruly guests are located nearest to surveillance for overnight monitoring. These dormitory spaces contain more beds and are less comfortably furnished than the dormitory spaces housing more permanent guests (Davis 2004, 85).

CHAPTER 2: DESIGN

Siting

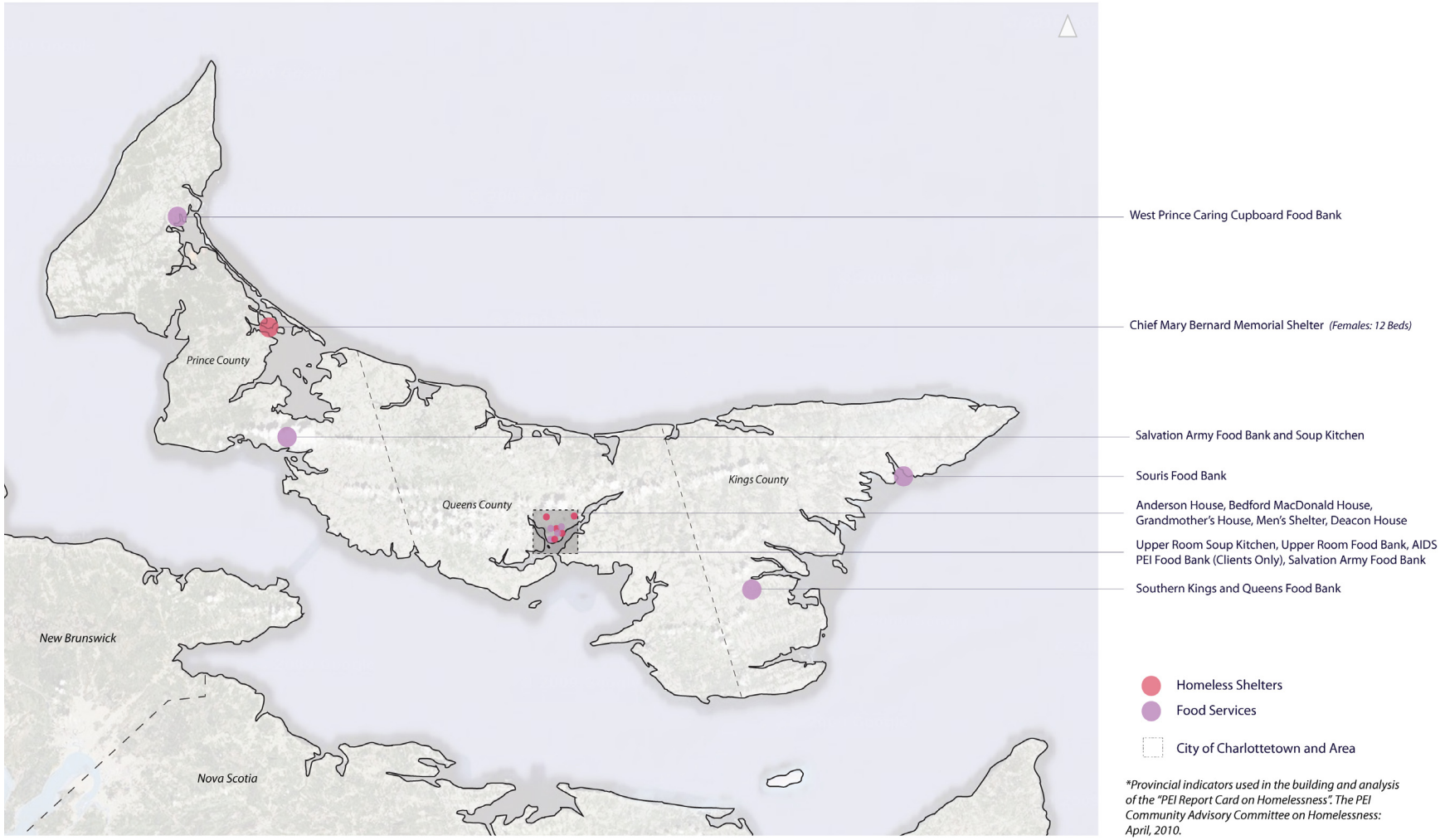
Mapping of Formal Supports

> Architects can also play a critical role in overcoming communities' reluctance to have homeless facilities built in their midst. If shelters and transitional housing are to succeed, they must be situated in residential and commercial areas, near public transportation, jobs, social services, and schools- not at the outskirts of town or at the margins of industrial zones... [T]he consensus among those who work with the homeless is that the more remote the facility, the less effective it is likely to be. The homeless generally do not have cars, and many do not or cannot drive. The farther they have to travel to obtain services, search for permanent housing, or visit friends and family, the harder their lives will be. Placing shelters and transitional housing out of the way may please homeowners and business owners, but it is a shortsighted public policy (Davis 2004, 20).

Using the *PEI Report Card on Homelessness* and other publications to map a comprehensive inventory of existing formal supports in Prince Edward Island and the Charlottetown area, voids in offered services and their placement quickly emerge.

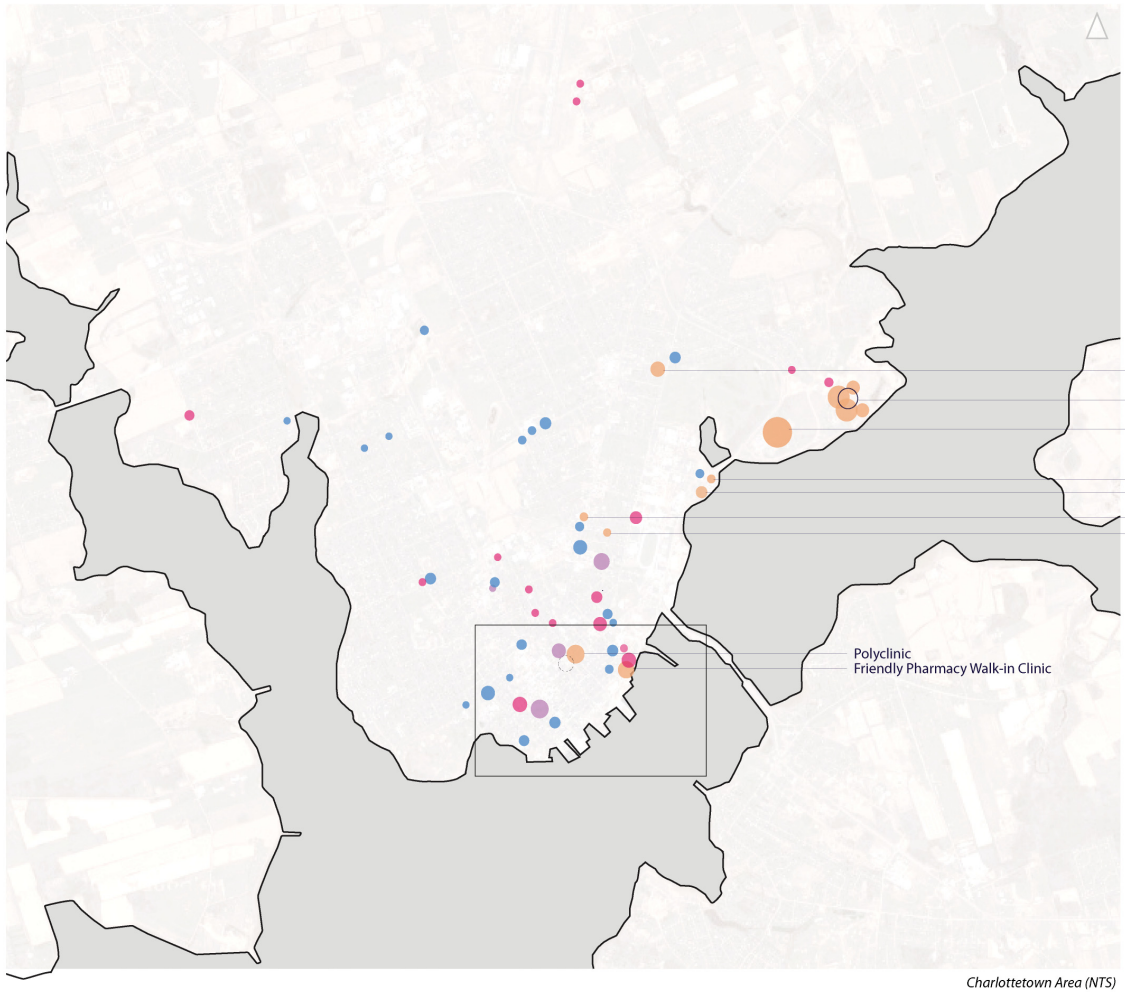
Charlottetown's downtown area is lacking emergency homeless shelters, affordable housing and health services. Additionally, the city wide shortage of food supports (food banks and soup kitchens) is alarming. An additional map of existing downtown allies (formal supports and informal supports including public parks, churches, malls and other gathering places) strengthen the argument for placing additional formal support services downtown.

Provincial Addictions Treatment Facility, Hillsborough Hospital, Charlottetown, PEI. Photograph from *Prince Edward Island Methadone Maintenance Program, Evaluation Report.*



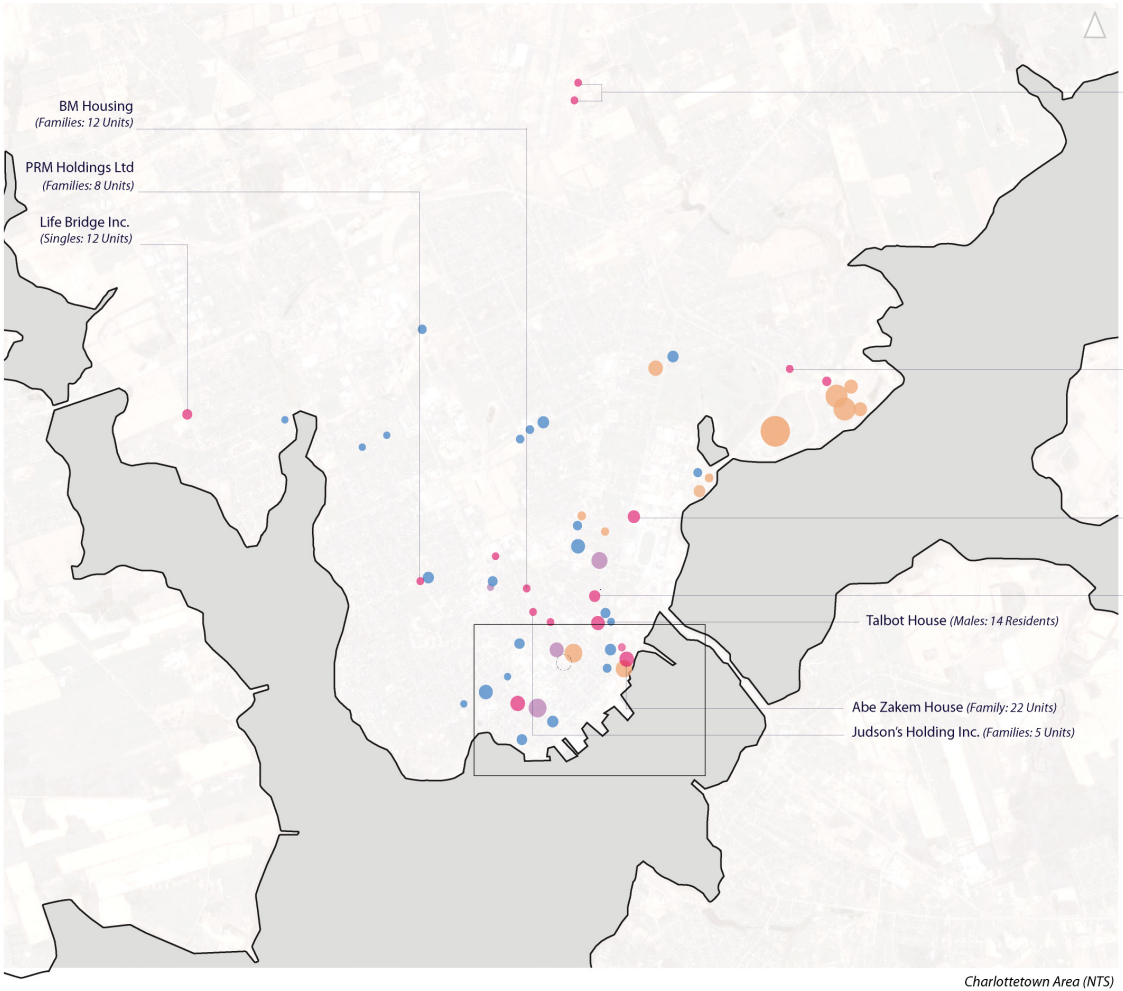
Prince Edward Island and Area (NTS)

Prince Edward Island: Formal Supports (*Provincial Homeless Indicators).

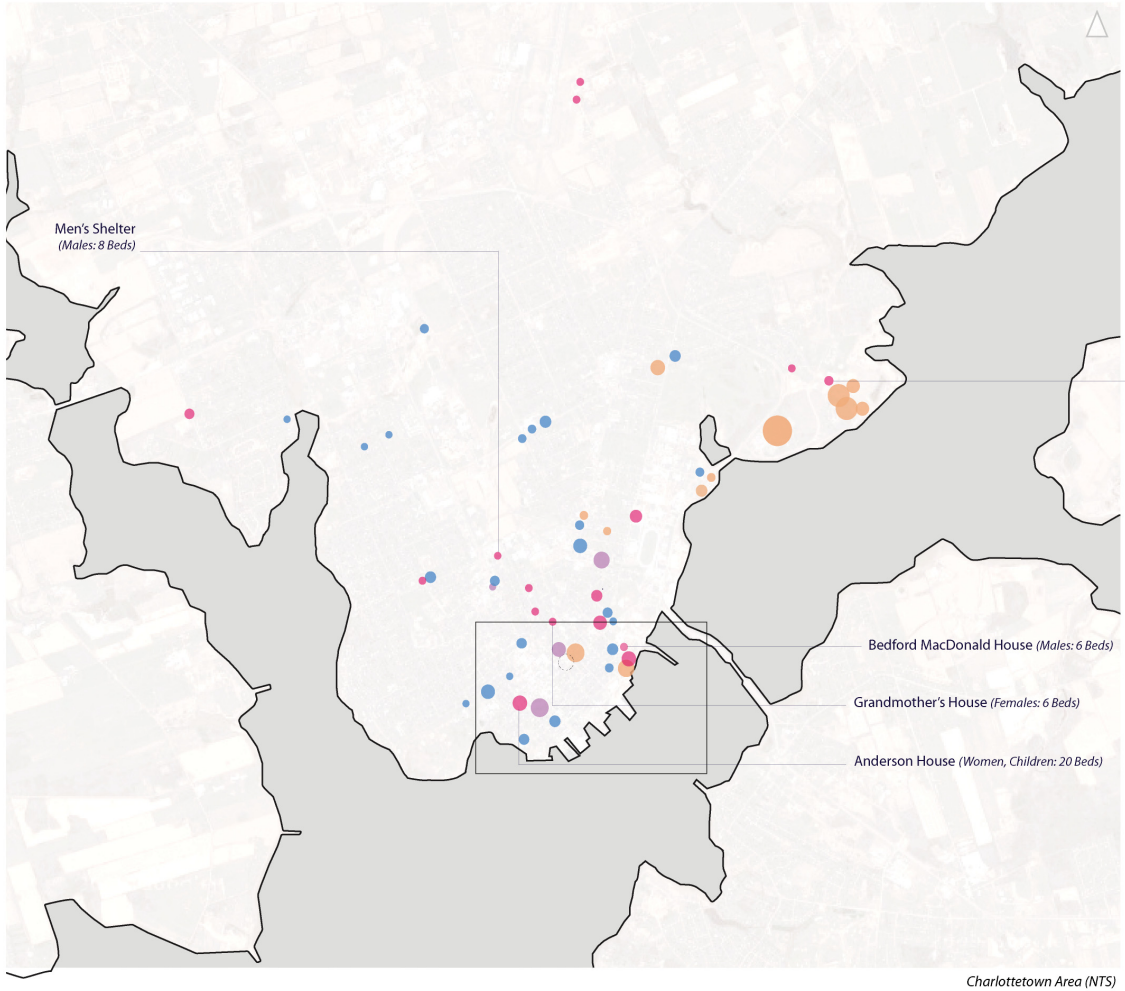


Charlottetown Area (NTS)

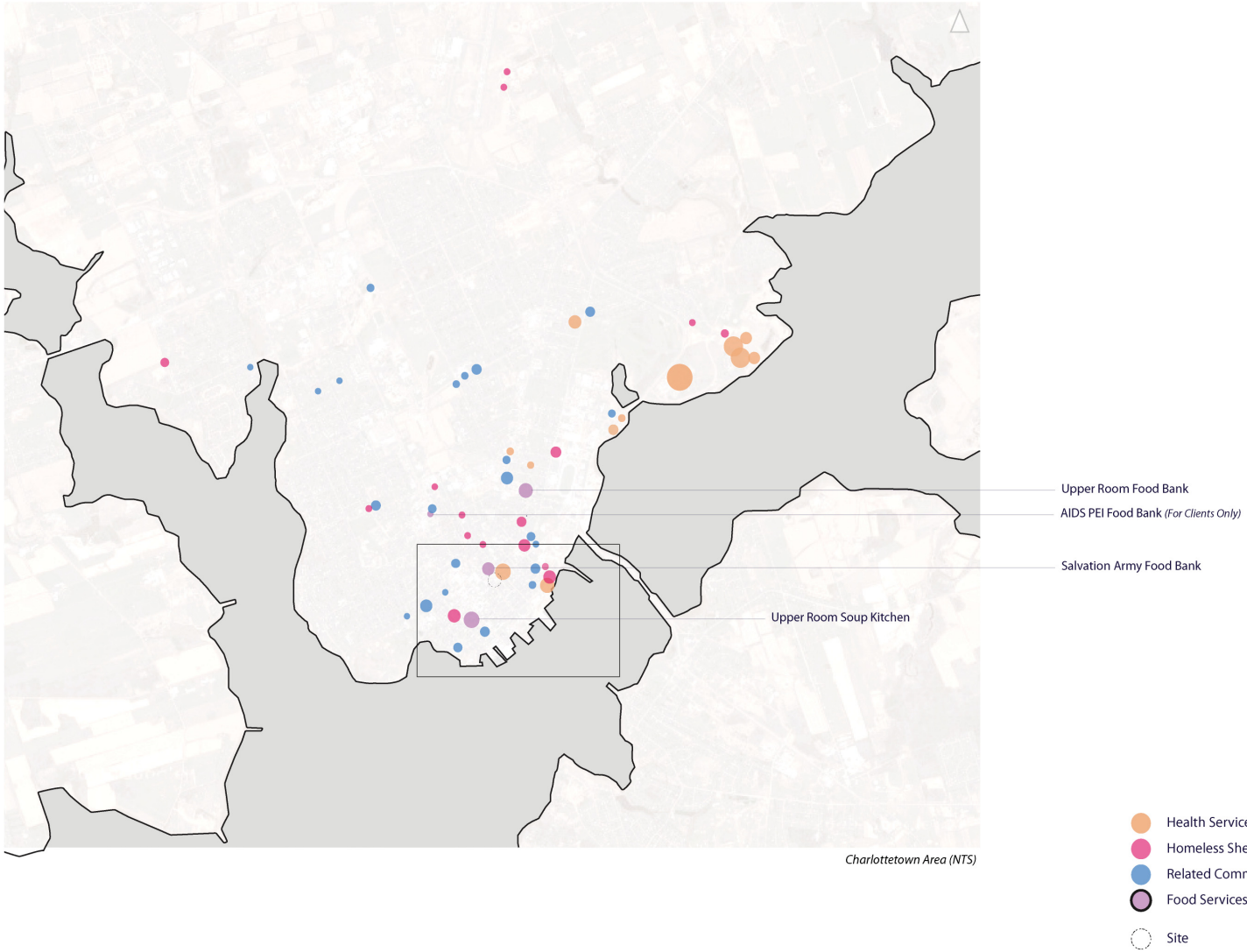
City of Charlottetown and Area Formal Support Services: Health Services.



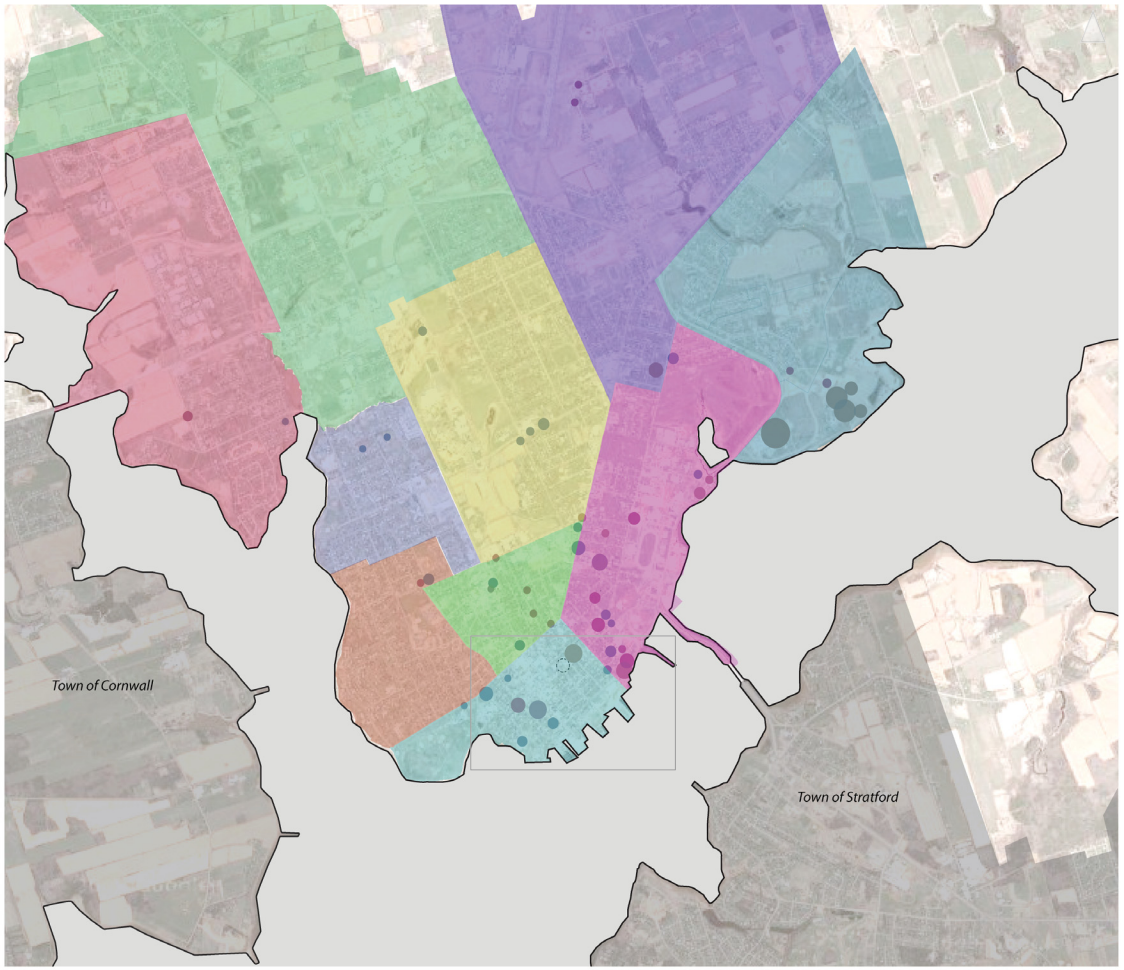
City of Charlottetown and Area Formal Support Services: Affordable Housing and Transitional Housing.



City of Charlottetown and Area Formal Support Services: Homeless Shelters.



City of Charlottetown and Area Formal Support Services: Food Services.



City of Charlottetown and Area Formal Support Services: By City Neighbourhood.

Site Within Downtown, Charlottetown (NTS)

Common Walking Routes of the Homeless, Downtown, Charlottetown. From “Google Maps.”

Downtown Charlottetown and Site, Charlottetown, PEI. From “Google Maps”.

Charlottetown’s walkable downtown neighbourhood contains a rich mixture of populations, formal supports, and amenities. The chosen site lies on the eastern edge of downtown and is bordered by historic residential blocks, animated commercial streets, public institutions and lively public park squares. An adjacent laneway additionally serves as an active pedestrian route through the downtown.

> The siting or location of the project should be placed in a neighbourhood that supports a diversity of people and activities, encouraged through the provision of housing, convivial urban platforms and communal urban utilities. Such an environment will create a non-threatening environment for a shelter guest or formal support user. It will also support a diversity of actors necessary for the sustenance of a healthy urban and social environment (Anelo 2007, 27).

Site Within Downtown Charlottetown (NTS)

Bus Transit Routes

Harvest House Ministries
Bedford MacDonald House *(Males: 6 Beds)*

Grandmother's House *(Females: 6 Beds)*

King's Square Park

First Baptist Church
Salvation Army Food Bank
Central Christian Church
Talbot House *(Males: 14 Residents)*

The United Way
Polyclinic
Hillsborough Park

Hensley Green Housing Co-op
Zion Presbyterian Church

Abe Zakem House *(Family: 22 Units)*
St. Paul's Church
People First
PEI Association of Newcomers to Canada
Confederation Court Mall

The Friendly Pharmacy
Confederation Centre of the Art and Province House Grounds
Cannaught Public Square

St. Dunstan's Basillica
Peakes Quay Harbourfront
Upper Room Soup Kitchen

Informal Places of Support

Formal Support Services

Formal and Informal Supports: Neighbourhood Allies.

Site Within the City

> The richness of urban life was in the density, diversity, and variety of land uses found in old central city neighbourhoods- these conditions produced an opportunity for community to happen, facilitating interaction and a degree of interdependency among residents (Smith 2006, 275).

The city's original downtown core, originally laid out in 1771 by surveyor Thomas Wright, is still strongly manifested in the short city blocks, narrow streets, five central city squares and appropriated carriage laneways. Unlike most other Atlantic Canadian communities, the orderly city plan does not stretch along the water in a lyrical arrangement. Charlottetown proper developed in a traditional imperial British settlement grid pattern of 500 lots which now exist as the historical downtown core of the city (Jefferson 2002, 5).

The current downtown contains numerous shops, restaurants, small businesses, college campuses, government and commercial offices. Unlike other contemporary downtowns, Charlottetown has a relatively large residential component. The downtown, nonetheless, could benefit from increased density and diversity.

(Left) Residential Street, Hensley Street, Charlottetown, Prince Edward Island.
(Right) Mixed Use Buildings, Prince Street, Charlottetown, Prince Edward Island.

Site and Surrounding Blocks (NTS), Downtown, Charlottetown, Prince Edward Island. From “Google Maps”.

Located in the eastern portion of downtown Charlottetown, the selected site currently serves as an extensive surface parking lot for a health clinic, the Polyclinic. Several nearby churches and government buildings sit prominently on large park lots. A more fluid residential scale of mixed-use buildings sit close to the street and often share a common interior block yard. Neighbouring heritage homes serve as street level offices with rental units above. An array of street level restaurants, shops, and galleries occupy most buildings.

The site spans the entire city block and is bordered by Grafton Street to the south-east, Prince Street to the south-west, Kent Street to the north-west and Hillsborough Street to the north-east. Grafton Street, Prince Street and Kent Street are lively and serve as main streets through downtown Charlottetown. Hillsborough Street is much quieter and experiences less pedestrian and vehicle traffic.

Technically classified as a city street, Clark Street is a one-way lane that bisects the block from Prince Street to Hillsborough Street. This laneway is used primarily by pedestrians short-cutting through the site from King’s Square park (one block north-east of the site) toward the downtown area.

This laneway borders the large surface parking lot serving the Polyclinic, an important health services building in Charlottetown and a program driver in this thesis. The parking lot stretches through the block along the Clark Street laneway. Extending to the highly visible corner of Grafton Street and Prince Street, an additional parking lot is interrupted by an ill maintained heritage house that houses a ground level barber shop and approximately six rental apartments above. In this thesis design, the parking is dispersed to neighbouring streets and to an existing and under utilized parking garage on Kent Street, one block north-west of the site.

(Top) Central Christian Church, Kent Street, Charlottetown, Prince Edward Island.
(Bottom) Mixed Use Buildings, Kent Street, Charlottetown, Prince Edward Island.

(Left) View of Grafton Street Main Entrance, Polyclinic, Charlottetown, PEI.
(Right) Interior Atrium, Polyclinic, Charlottetown, PEI.

View of Existing House from Prince Street Parking Lot, Looking South-East (Polyclinic at Left), Charlottetown, PEI.

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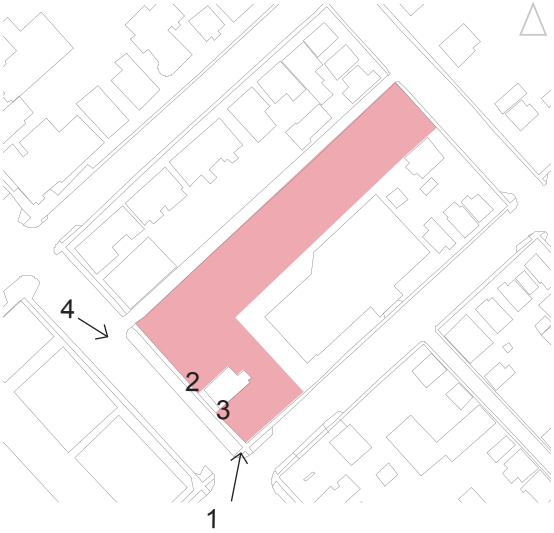

Site Views Along Prince Street with Existing House and Proposed Building Massing.

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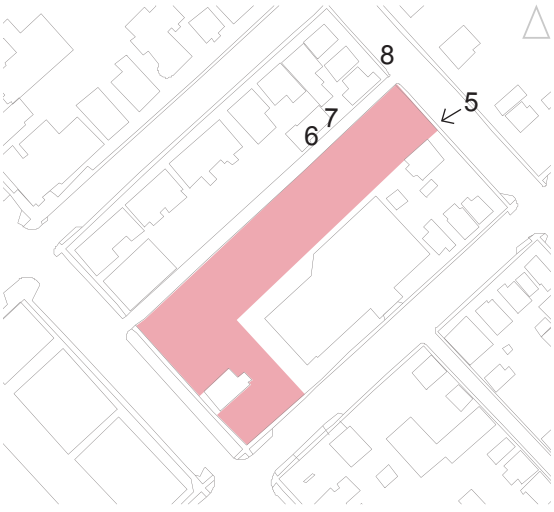

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Site Views at Hillsborough Street and Clark Street (Laneway) with Proposed Building Massing.

Programming

Program as Design Tool

> I also like to think of the process of developing an architectural program as analogous to an eye exam. In the same way that the doctor tests different lenses by asking which view is clearer, an architect tests out ideas, approaches, and qualities among those who will use the space. The needs that the building is intended to satisfy come into clearer focus with every response (Davis 2004,79).

The architectural program articulates various requirements and guides design decisions. Proper programming and placement of the various project components on the site is paramount to the success of the project. To simply infill existing support service gaps and place them insensitively on a site would receive opposition in the community. The neighbors and the shelter users would be disadvantaged and improperly served. To add additional program, however, that involves and invites the community would strengthen the project for both the neighbors and the support service users. Hybrid programs like community gardening, a restaurant, rental units and workshops with a gallery involve the community and mix social groups. The architecture should facilitate these interactions among the various groups inhabiting the building. The careful balance and places where the support services and hybrid programs overlap are interesting yet challenging to design.

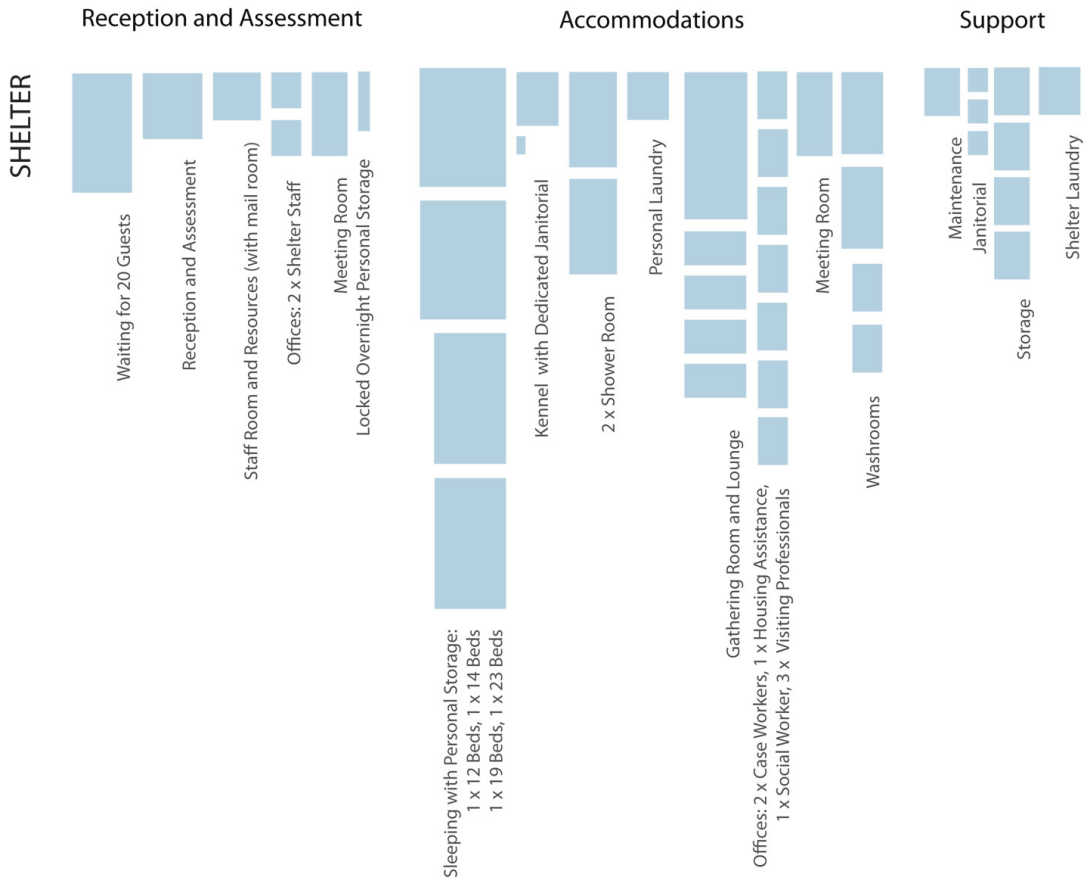
> By strategically programming a building, individuals from different demographic groups can be brought into the building, where they may then be guided by the architecture to interact in supportive environments. It is the programming of the building that works as a catalyst to begin to draw individuals together (Meyer 2009, 24).

Examining existing formulated programs is helpful but the project program should ultimately be specific to the users' needs, site and the site's surroundings. An inventory of prescribed program and standard sizes is valuable but lacks the nuances, complexities and synergies of a considered program system. The program should not only define the physical space but should anticipate the gradations of use and overlapping of activity. The program metabolism systems, for example, reinforce each other to contribute to the shelter guests while relating to the community in a positive way.

> Those who sponsor this housing, both nonprofit service providers and government entities, understand the importance of design for those who live near them. Homelessness is a multifaceted problem, requiring the design of facilities with complex programs that must inspire the inhabitants and those who work with them. These designs are what architects can contribute to the solution (Davis 2004, 55).

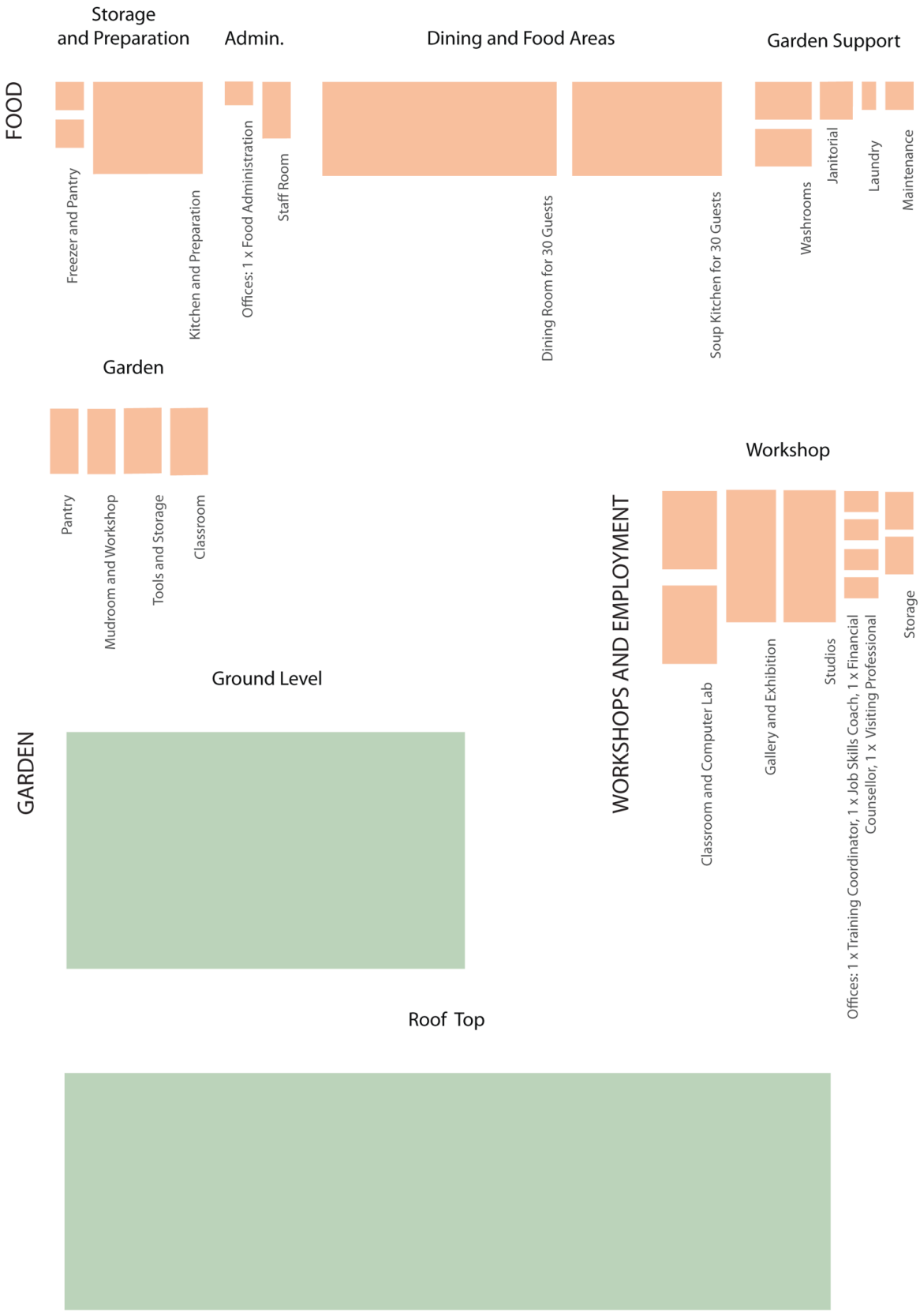
Hybrid programming affects the architecture through overlapping program and resulting thresholds of public and private uses. The architectural response or translation includes ambient qualities (levels of light, temperature and acoustics), amounts of enclosure (privacy, security, views and wall type), and the planning of formal and informal places. These criteria emerge as keys to the design process.

The project should identify and develop community strengths while also recognizing the benefits of joining populations and community groups. The project should ultimately encourage holistic community well-being through proper siting, innovative programming, mixed-use buildings, and design.



Programmatic Inventory of Shelter Services.

Programmatic Inventory of Health Services and Rental Units.



Programmatic Inventory of Food Services, Workshops and Employment, and Garden.

Program Studies

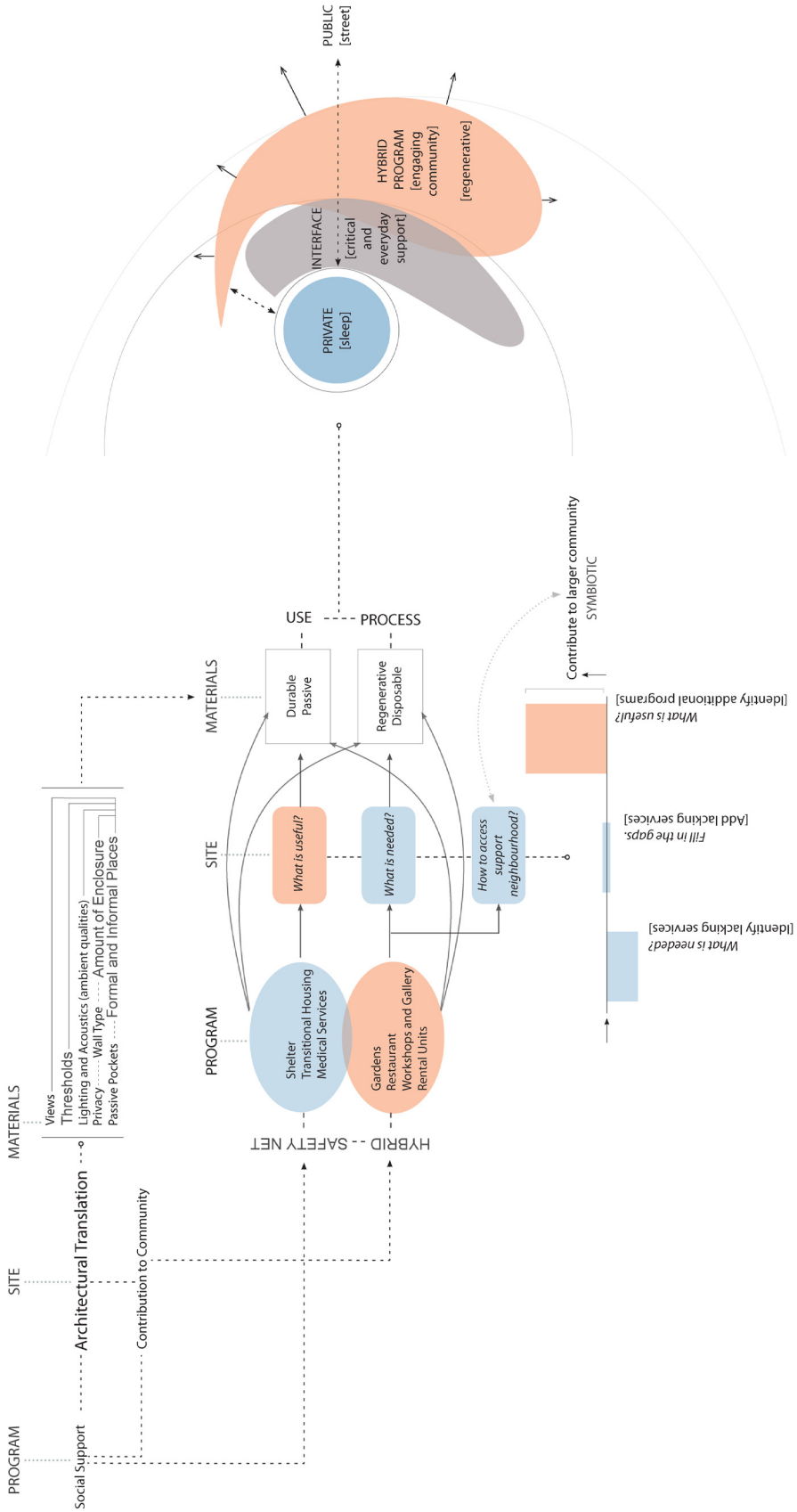
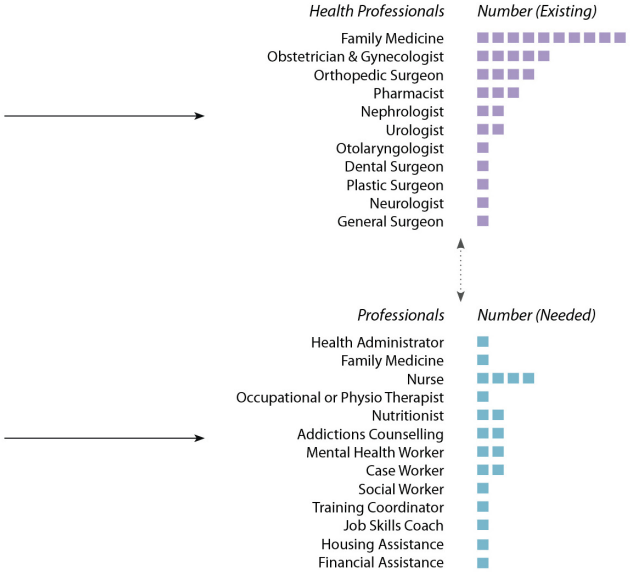


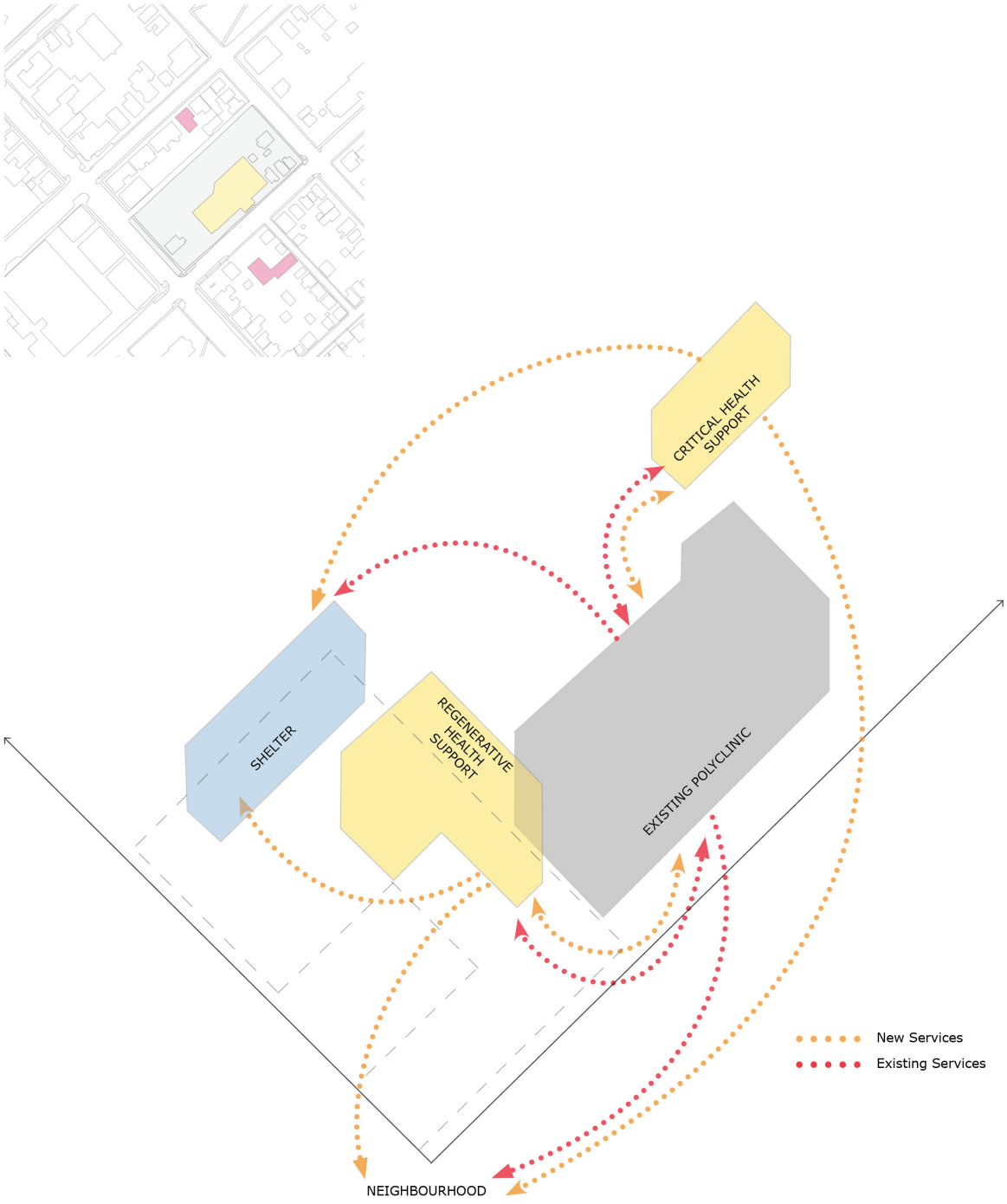
Diagram of Program, Site and Material.

Portion of Proposed Site
Grafton Street, Charlottetown, P.E.I.

The Polyclinic Professional Centre
199 Grafton Street, Charlottetown, P.E.I.

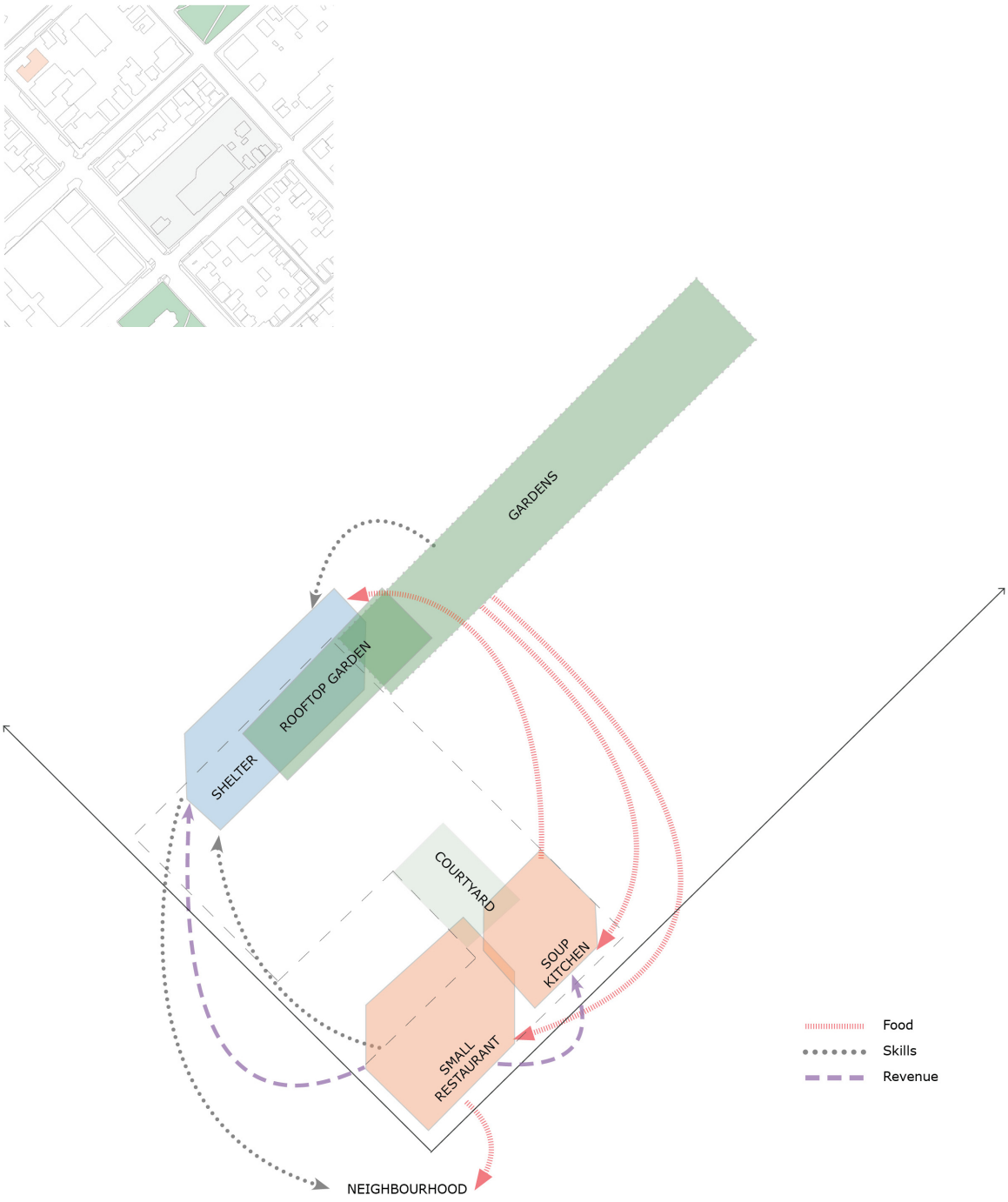


Program Metabolism: Polyclinic Health Services Inventory.



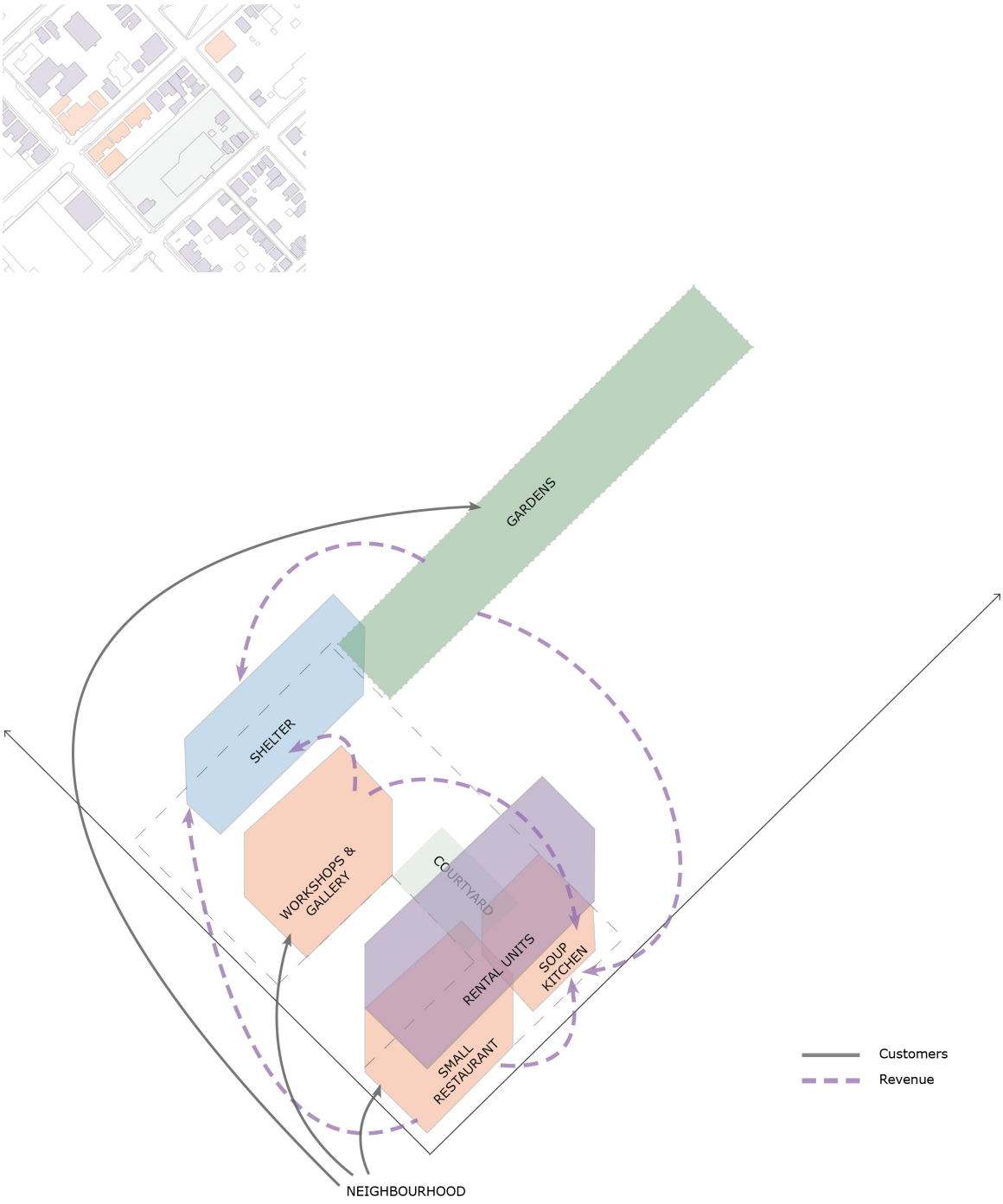
Program Metabolism, Health Services.

The existing Polyclinic provides a variety of health services to the community. After an inventory of available services and health professionals in the downtown area and at the Polyclinic, additional services have been proposed. These additional services will provide care to the adjacent homeless shelter guests and surrounding community.



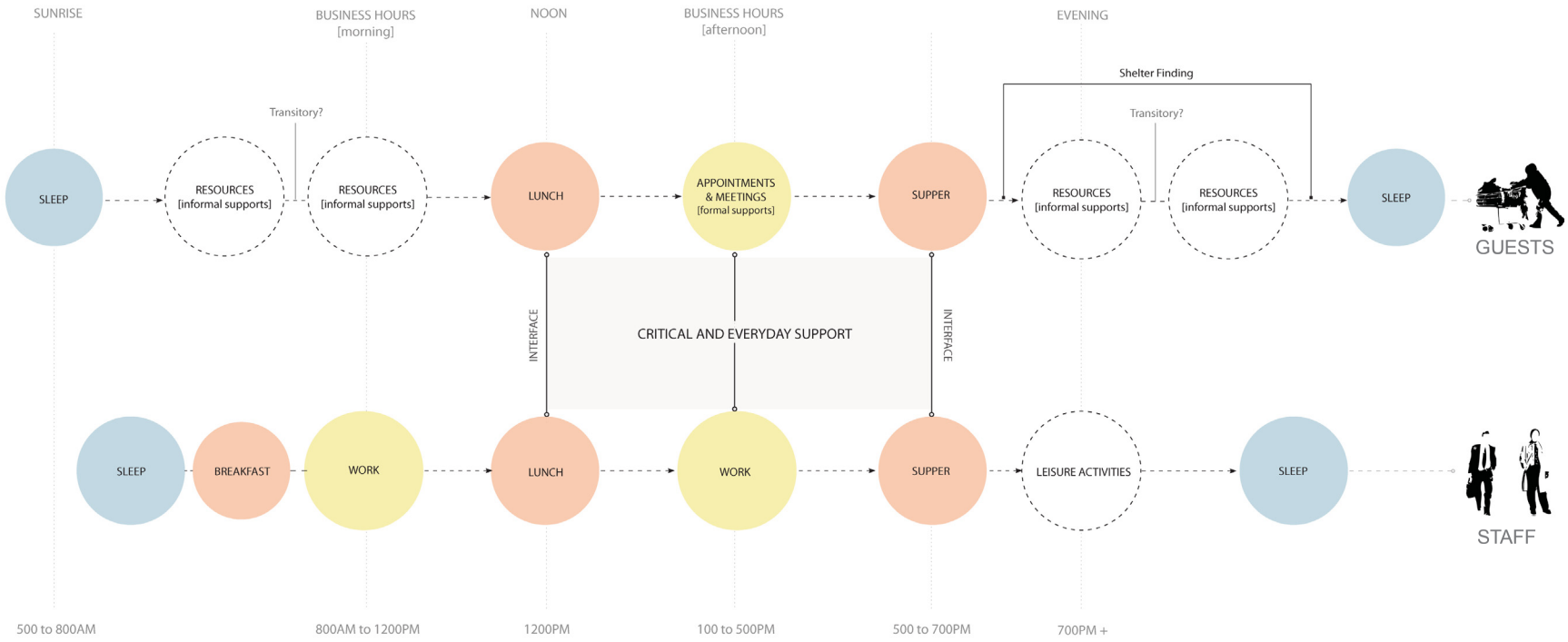
Program Metabolism, Food System.

The existing surface parking to be converted into food gardens. Shelter guests will perform maintenance and upkeep of the gardens and rooftop gardens. In turn, these food gardens will provide goods for the soup kitchen and restaurant. The soup kitchen serves meals to shelter guests while the restaurant provides a valuable job training venue for shelter guests.

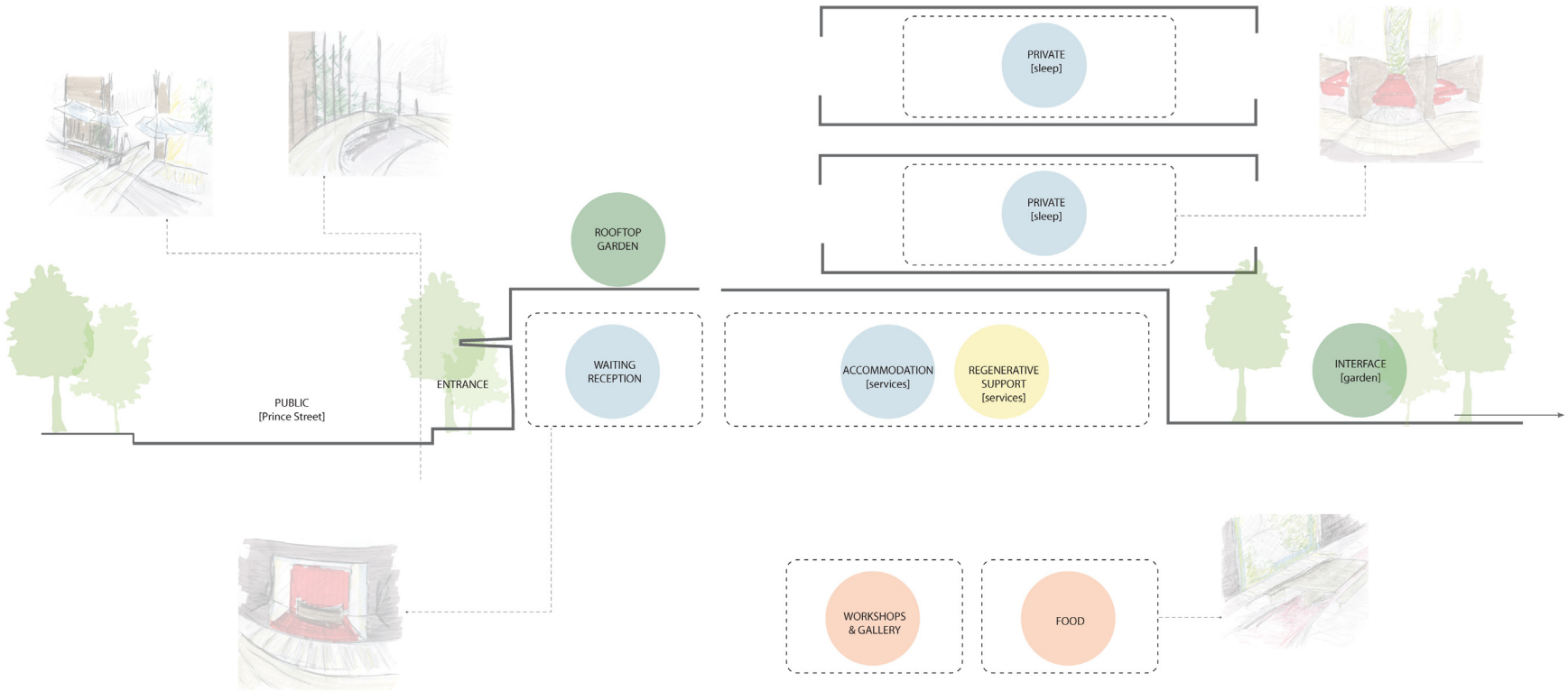


Program Metabolism, Economics System.

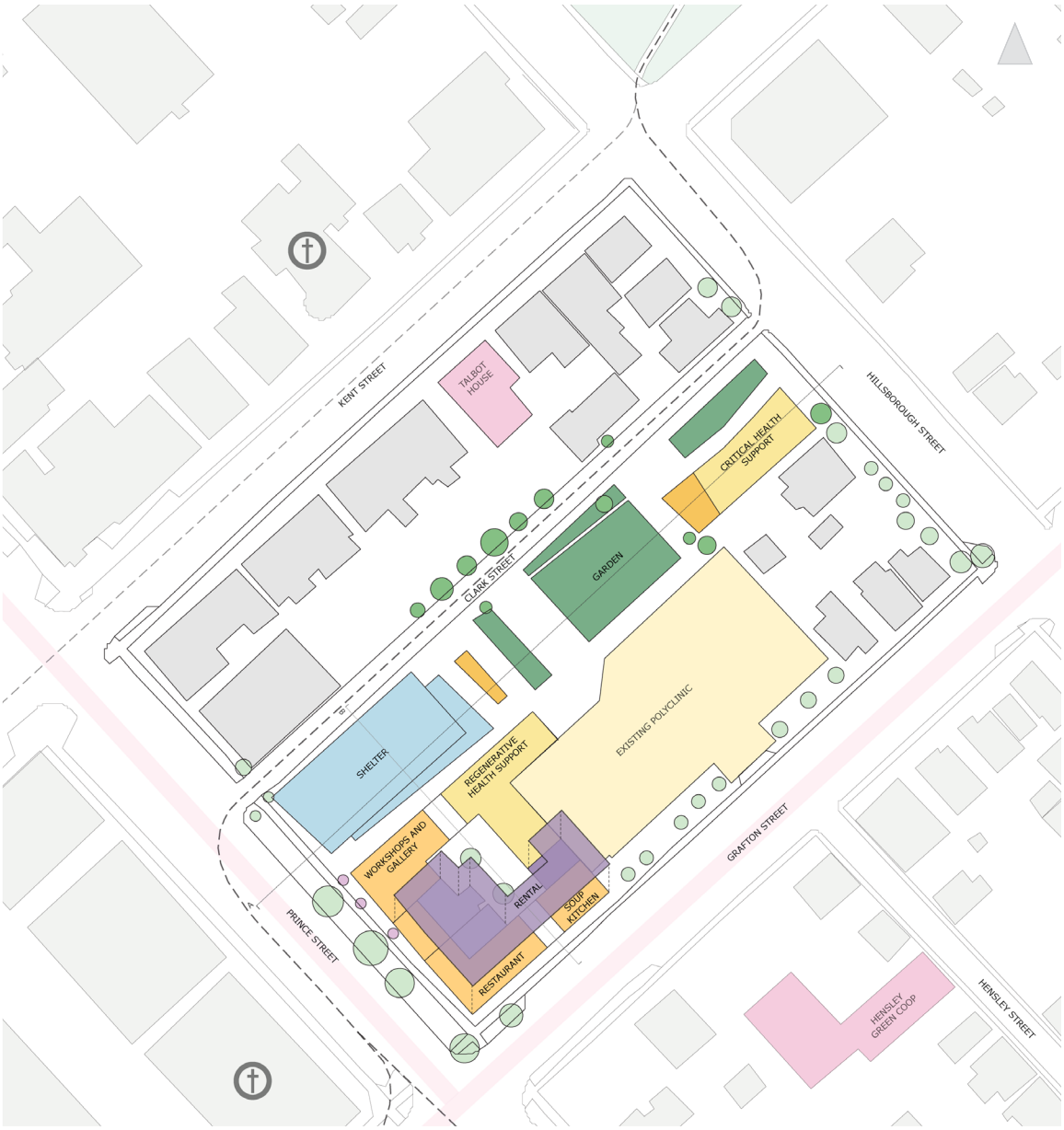
The revenue generators (restaurant, garden, rental units, workshops and gallery) work to support the shelter and shelter support functions. Additionally, these program components invite the neighbourhood and larger community into the site while contributing to the street life of the block.



Possible Daily Activity Cycle: Guests and Staff.



Programmatic Section Through Shelter with Vignette Sketches.



Programmatic Site Plan.

The program components occupy the site and are separated by shared courtyards and community gardens. The commercial restaurant faces the highly public street corner of Grafton Street and Prince Street while the gallery also faces the active Prince Street. Slightly set back from Prince Street, the shelter anticipates pedestrian flow by stretching along the Clark Street laneway. A health clinic occupies the northern end of the laneway and is separated from the shelter and Polyclinic by the community garden plots. A second health clinic lies adjacent to the existing Polyclinic while the rental units occupy a desirable, raised street corner position.

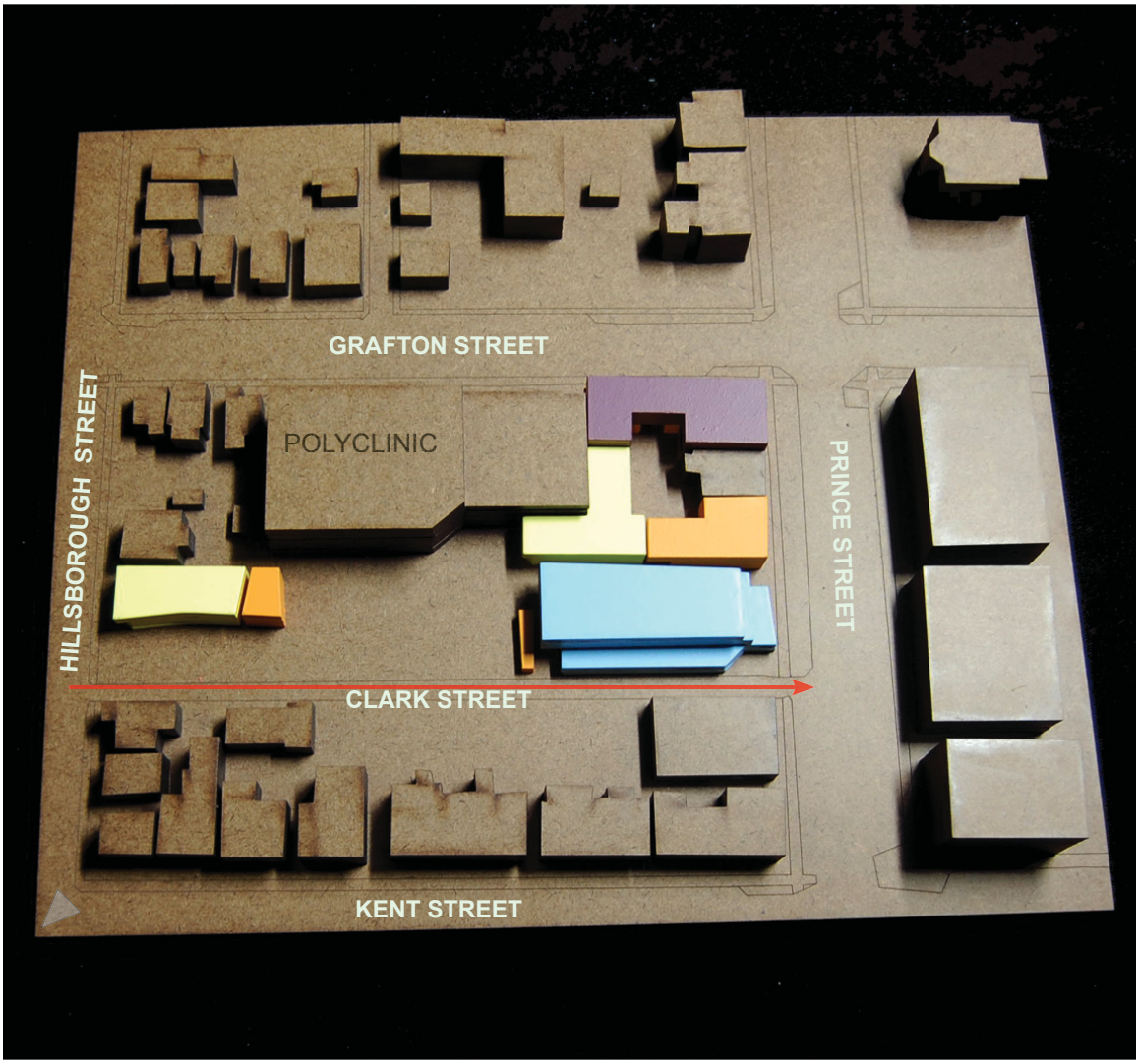
Shelter

Health Services

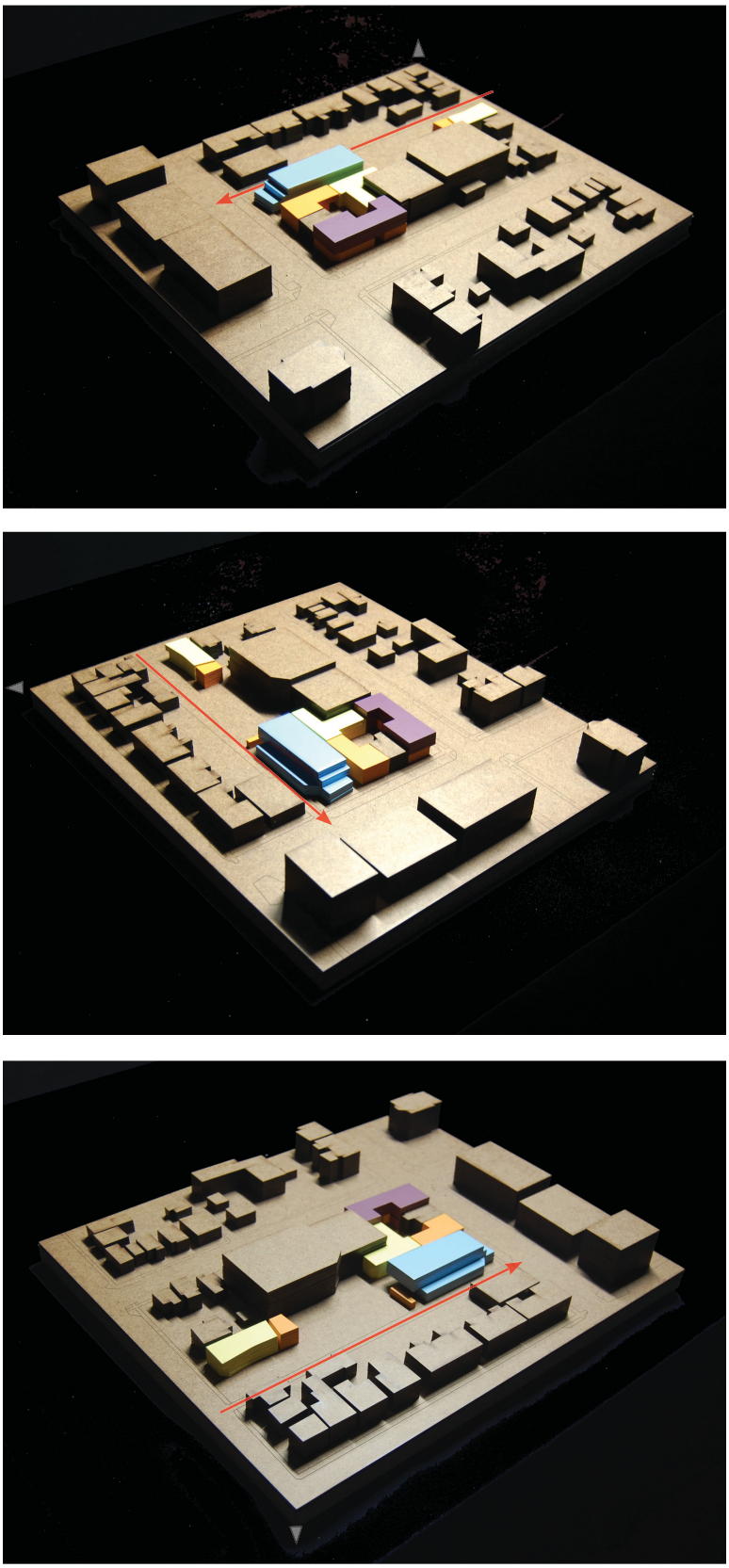
Hybrid Programming

Rental Units

Laneway



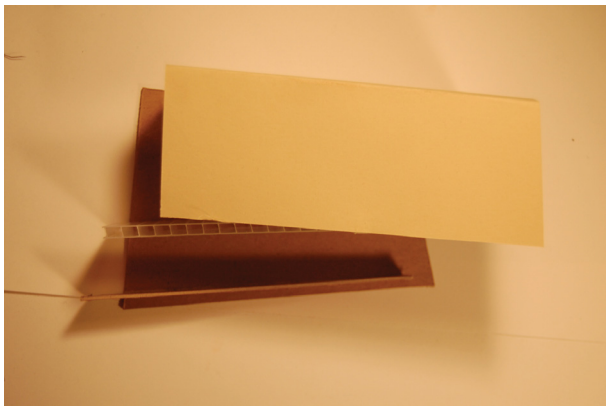
Programmatic Site Model.

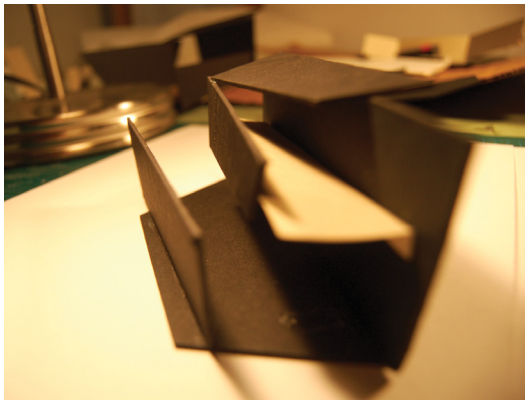


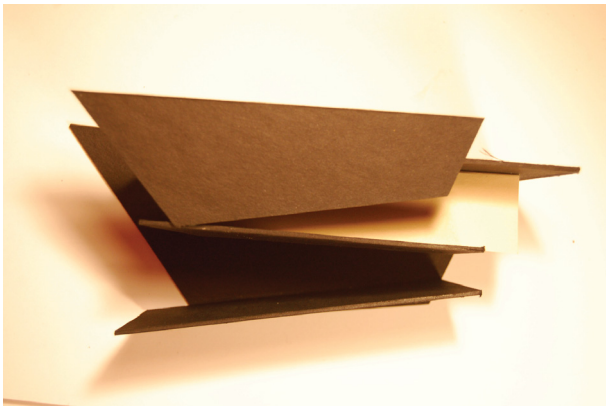
Programmatic Site Model.

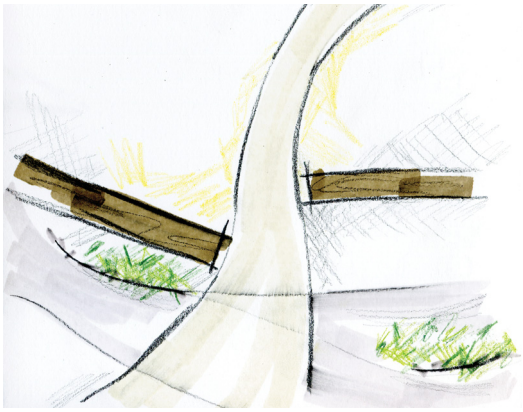
Architecture

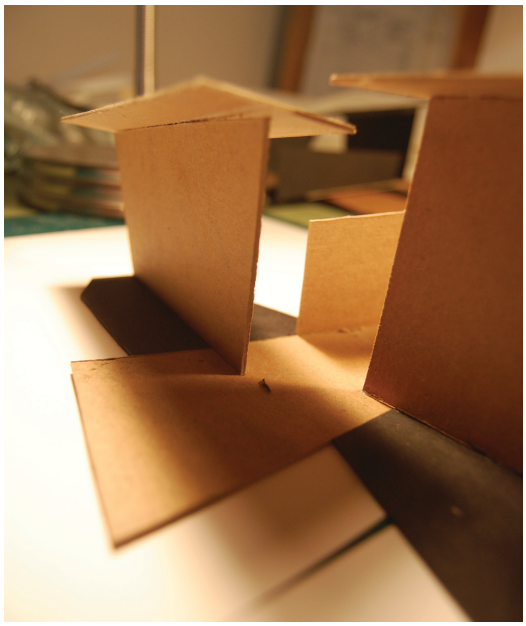
Design Studies





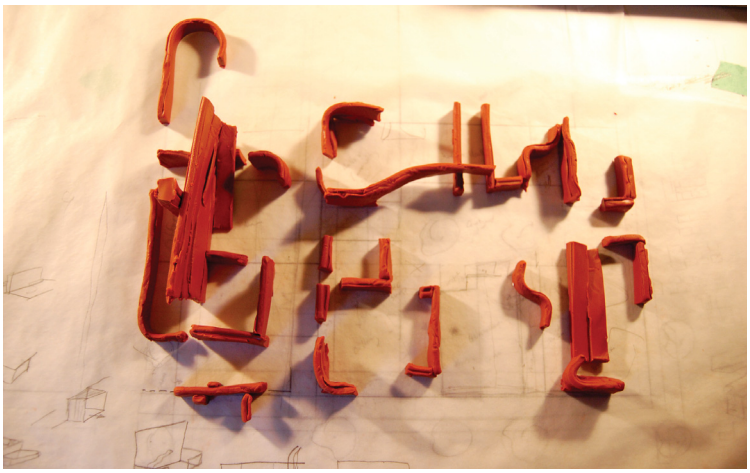




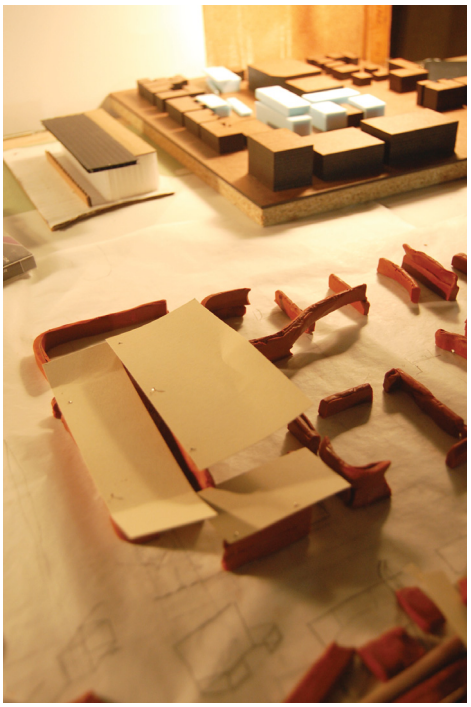


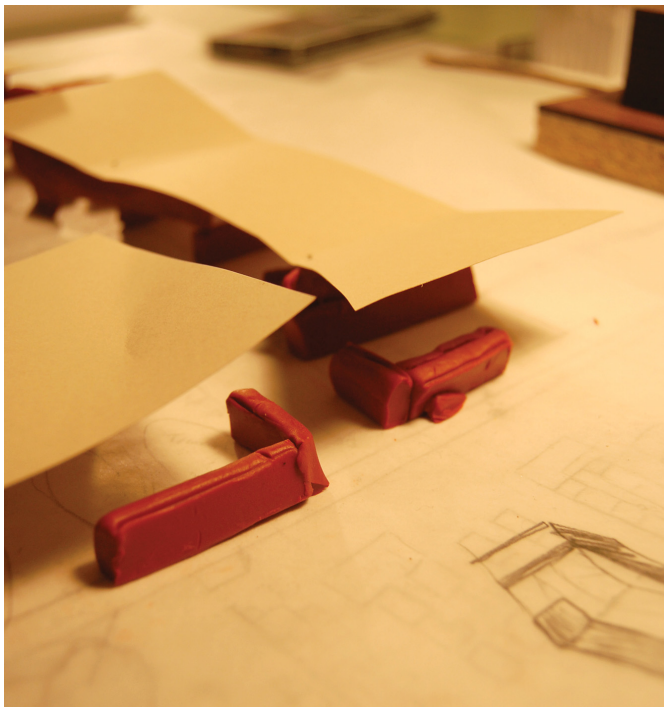
A series of small, scaleless sketch models with corresponding vignette sketches to delineate amounts of enclosure, the dynamics of a space and thresholds. Documenting model photographs show the models in typical architectural convention (plan, section, elevation) as well as studying the effects of light.

Planar Vignette Models and Vignette Sketch.



Iterations of Plasticine Models Representing Rammed Earth Mass Walls.





Iterations of Roof Plane Models on Plasticine Model.

A working model using malleable plasticine as earth walls (please see Appendix B). After laying out major walls on the site plan, added paper roof planes suggest volumes, orientations, and possible roof uses.

Design Diagrams

Ground and Roof Plane Diagram

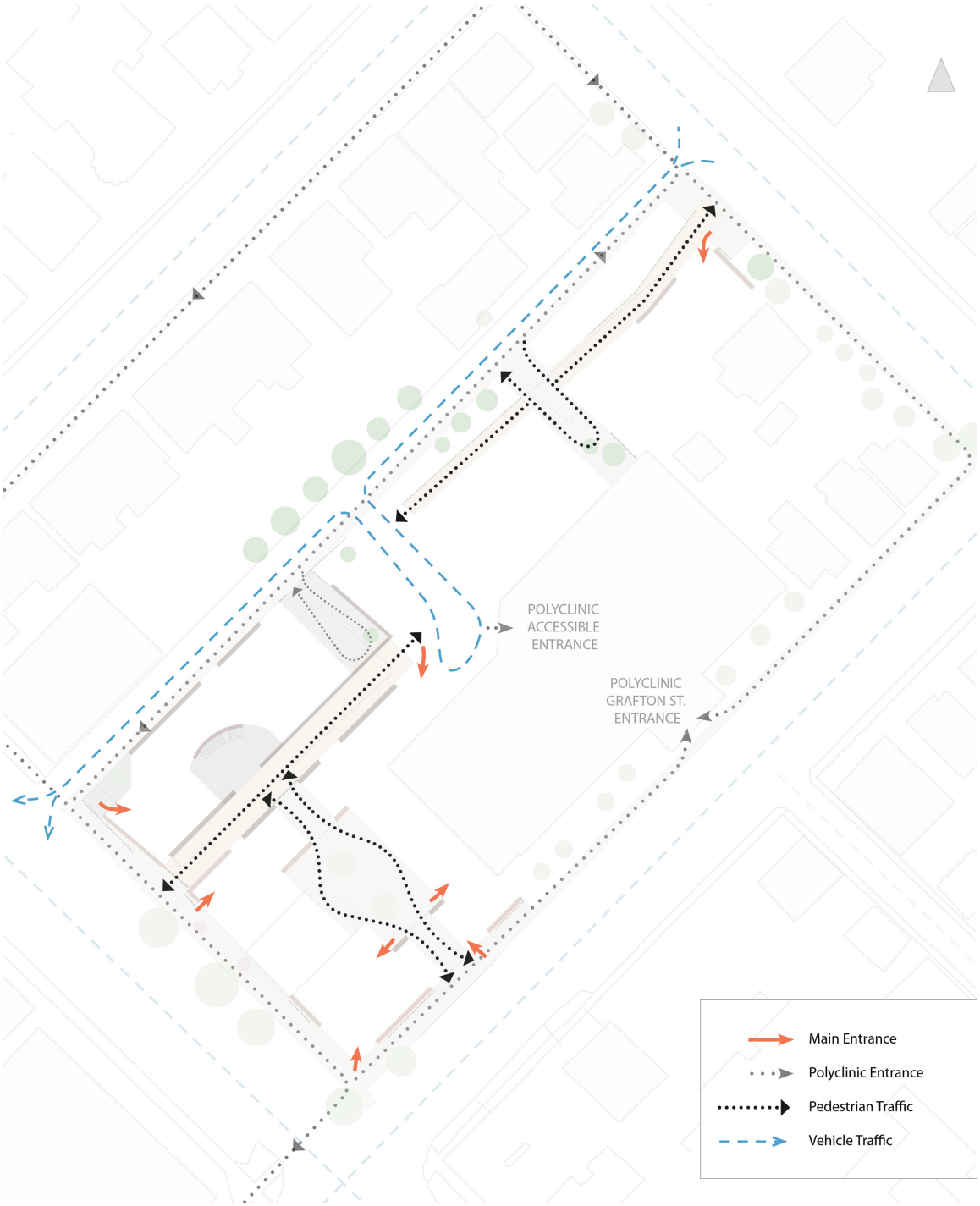
A site composition of shifting planes that harvest food and collect energy. Accessible green roofs act as social spaces elevated above street level. Other roofs and garden plots harvest food to supply the soup kitchen and restaurant. Solar and water collectors occupy the roof of the Critical Health Support Clinic and the southern corner of the site.

Earth Wall and Screening Diagram

A site composition of rammed earth walls and their screening (wooden screens to protect trombe walls from overheating in summer and wooden screens to visually conceal private activities) (please see Appendix B). Other walls support embedded furnishings such as staircases and hearth elements.

Outdoor Site Spaces

An interior courtyard within the shelter opens to an exterior courtyard shared by a health clinic addition, gallery, soup kitchen, restaurant and rental units. A sidewalk pedestrian pathway spans the site perpendicular to the courtyard arrangement. Other paths span the block and vary in amounts of enclosure and public access.



Circulation Through Site

The one-way Clark Street laneway allows vehicles to pass through the block and access the existing accessible entrance to the Polyclinic. Pedestrians also use the laneway when walking towards downtown. An added sidewalk and two site pathways run parallel to the laneway and provide access to a number of building entrances within the site.

Circulation Through Site: Shelter Guest

Shelter guests and other support service users can access a number of supports on the site. A variety of formal and informal paths through and around the site provide circulation options to individuals who generally have few other opportunities or venues to exercise choice. Various gates close during the night to secure boundaries for added site safety.

Circulation Through Site: Therapeutic Program

Various therapeutic program elements (Gardens, Gathering Places, Regenerative Health Support Clinic, Workshops and Studios, Soup Kitchen and Restaurant) nourish both the support service users and community. Here, social groups mix and the project becomes animated and rich.

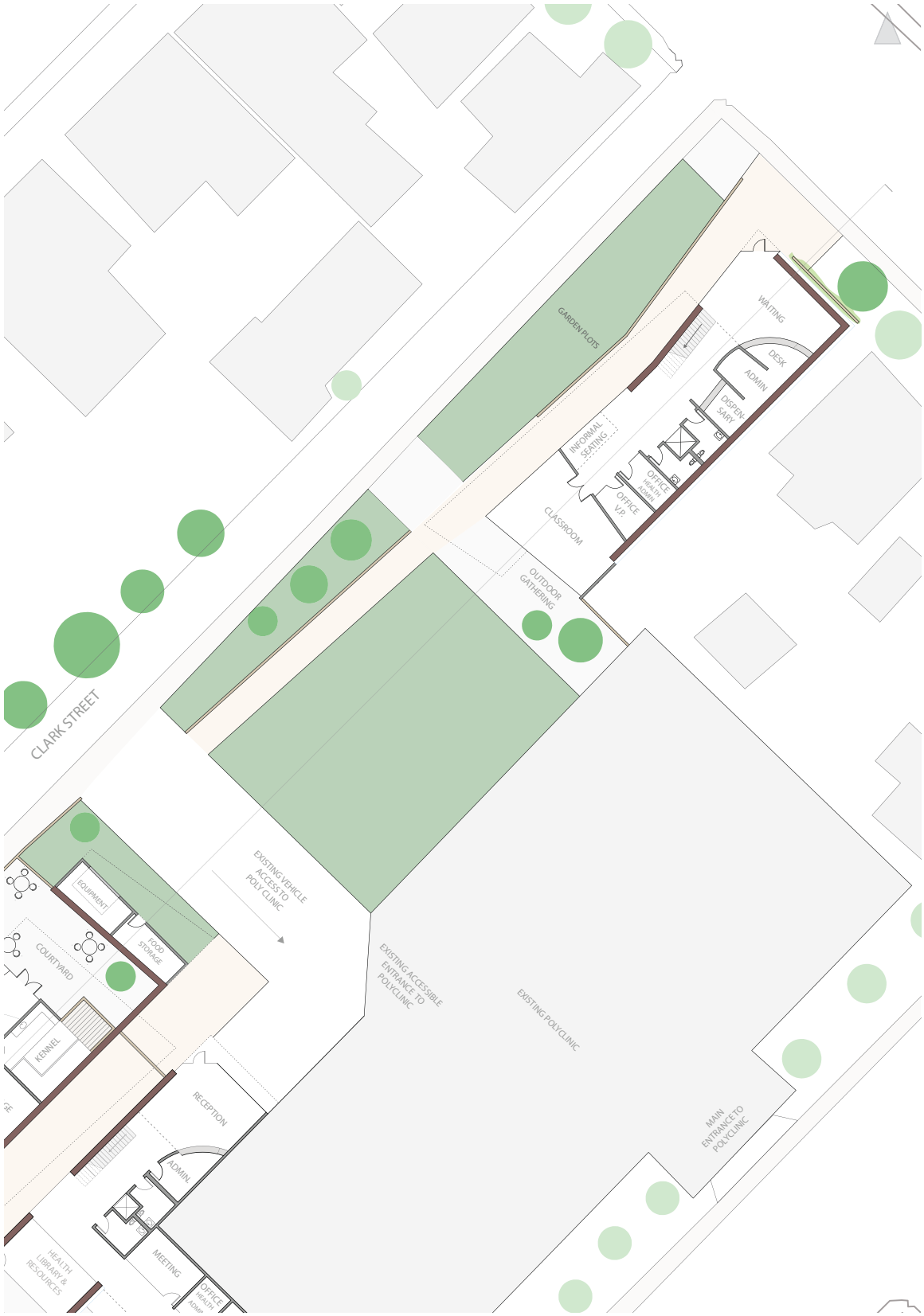
Circulation Through Site: Local Interaction

Hybrid programming (Gardens, Gallery, Restaurant and Rental Units) invite the surrounding community to participate in the life of the project. These public program components are placed at highly visible positions on the site. They utilize existing sidewalk access while creating various other paths through the site interior. Various gates close during the night to secure boundaries for added site safety.

Design

First Floor, Plan

The architectural design acts as a synthesis of extensive research, diagramming, and design exercises. The design resolution balances a variety of internal and external influences that include user requirements and comfort; community needs; gradations of public and private; safety and observation; and materiality. Here the architecture engages the shelter guest through accessible and welcoming facilities; maintains the dignity of support service users by providing an attractive facility designed to encourage and suit their requests; and invites and enhances the surrounding neighbourhood through well placed hybrid programming and considered character of place.

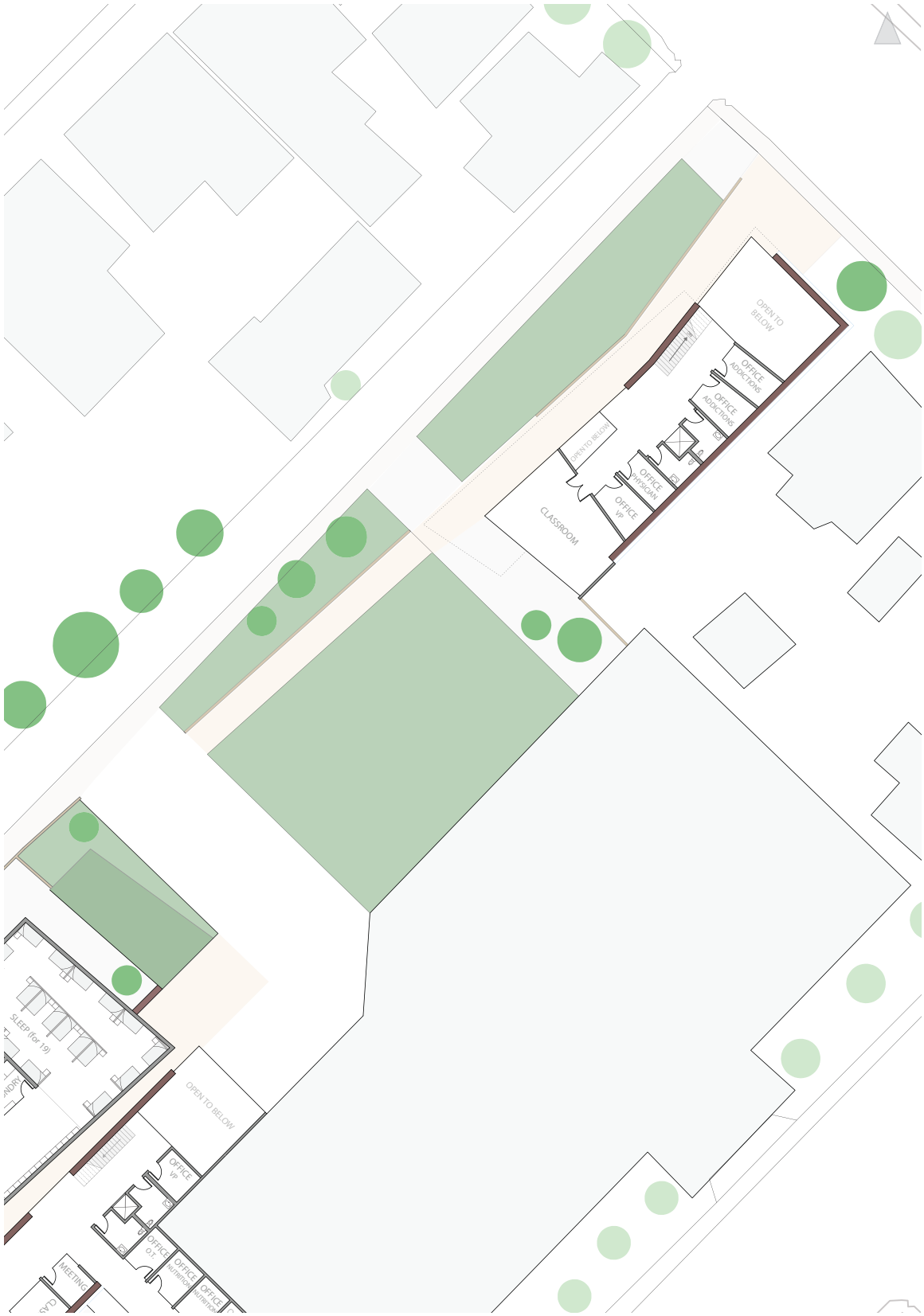


First Floor, Plan, Zoomed In to Show the Critical Health Support Clinic in Relation to the Street, the Polyclinic, the Community Garden and the Shelter.

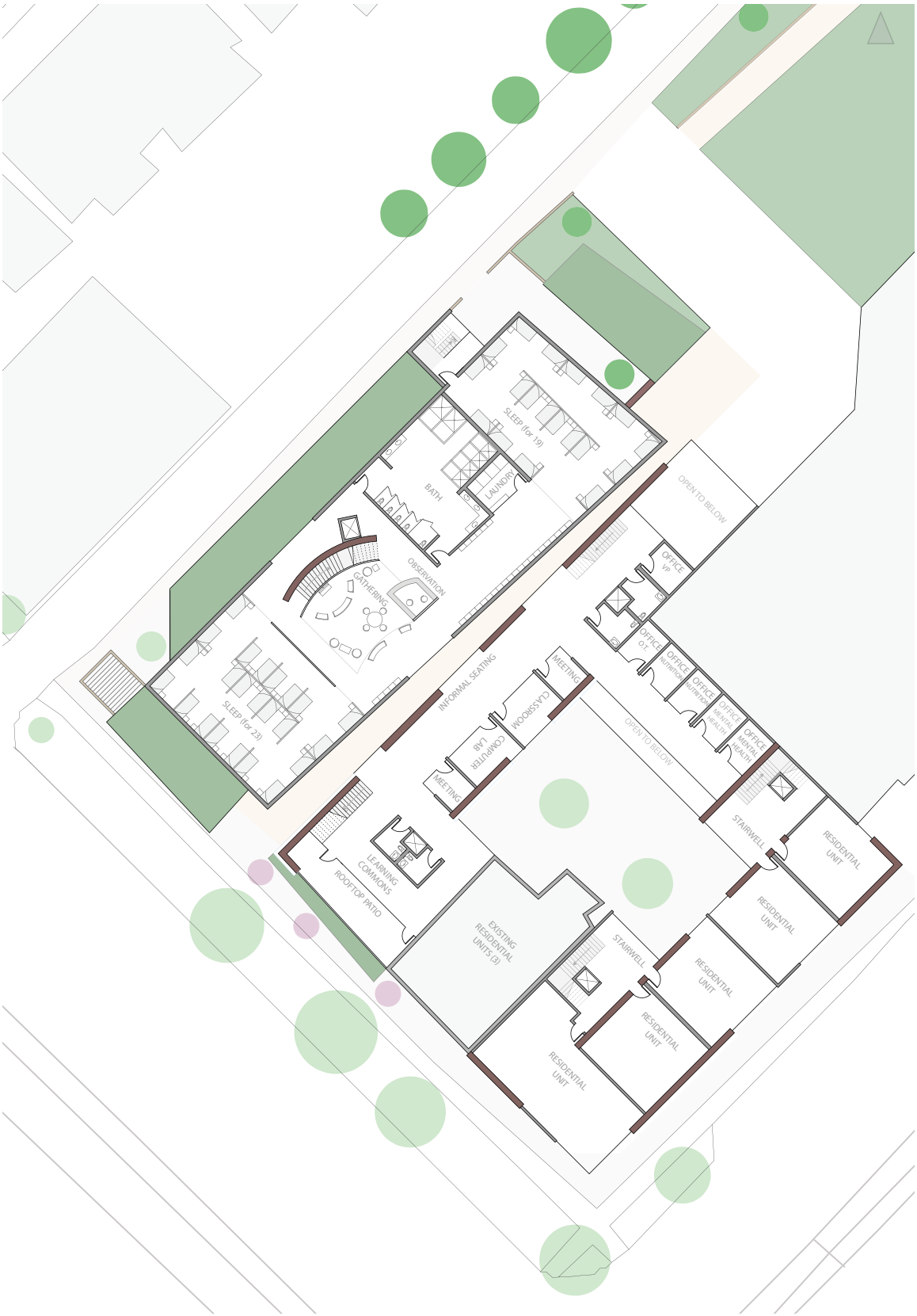
First Floor, Plan, Zoomed In to Show the Shelter, Gallery, Regenerative Health Support Clinic, Soup Kitchen and Restaurant in Relation to the Street, Courtyard, Polyclinic and Existing House.

Second Floor and Third Floor, Plan

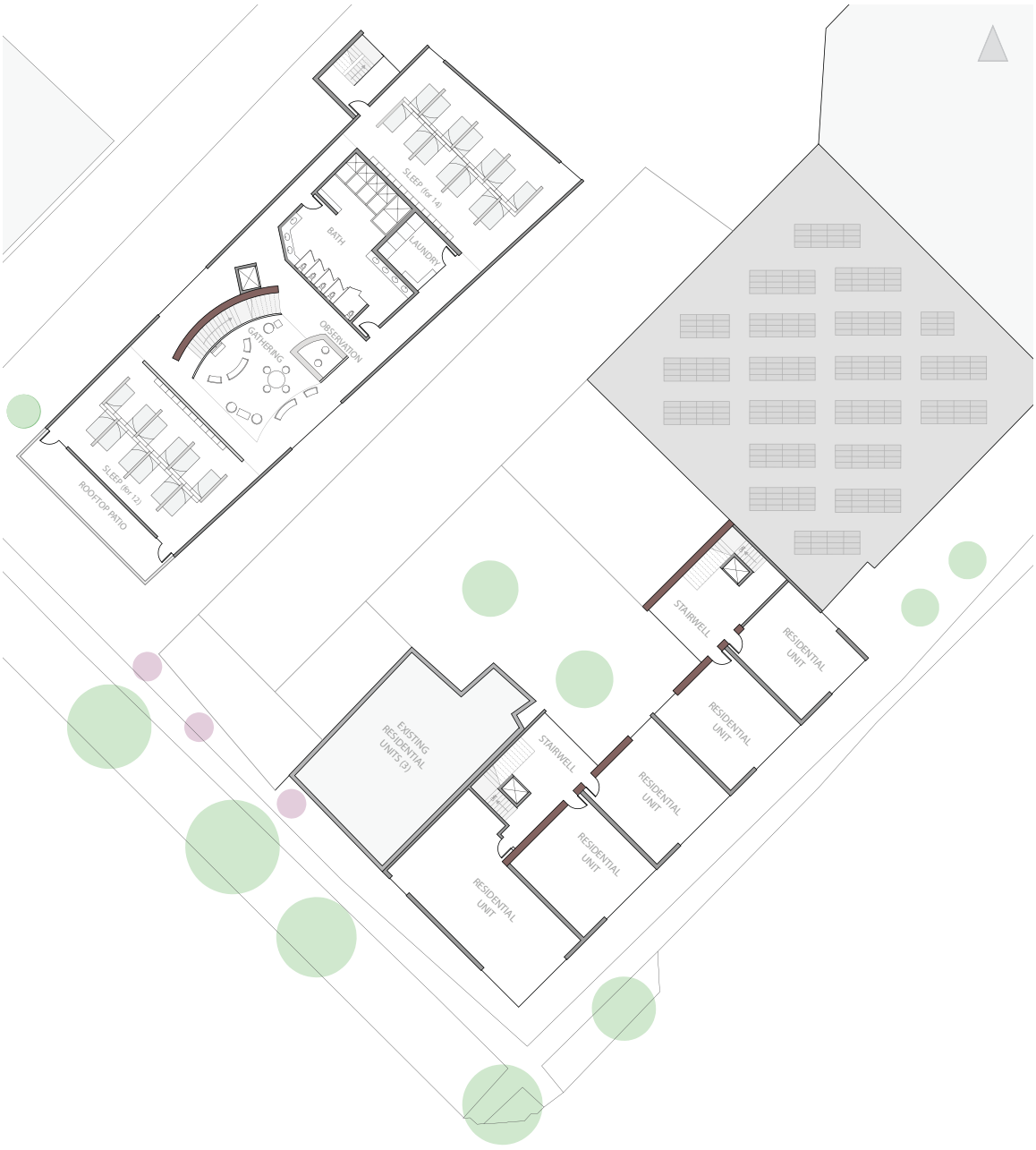
Within the shelter, the balance of individual privacy needs and staff surveillance requirements was resolved through observation points, amounts of enclosure and various furniture arrangements. The staff observation desks on the second and third floor of the shelter act as control points within the interior space and formulated the plan layout.



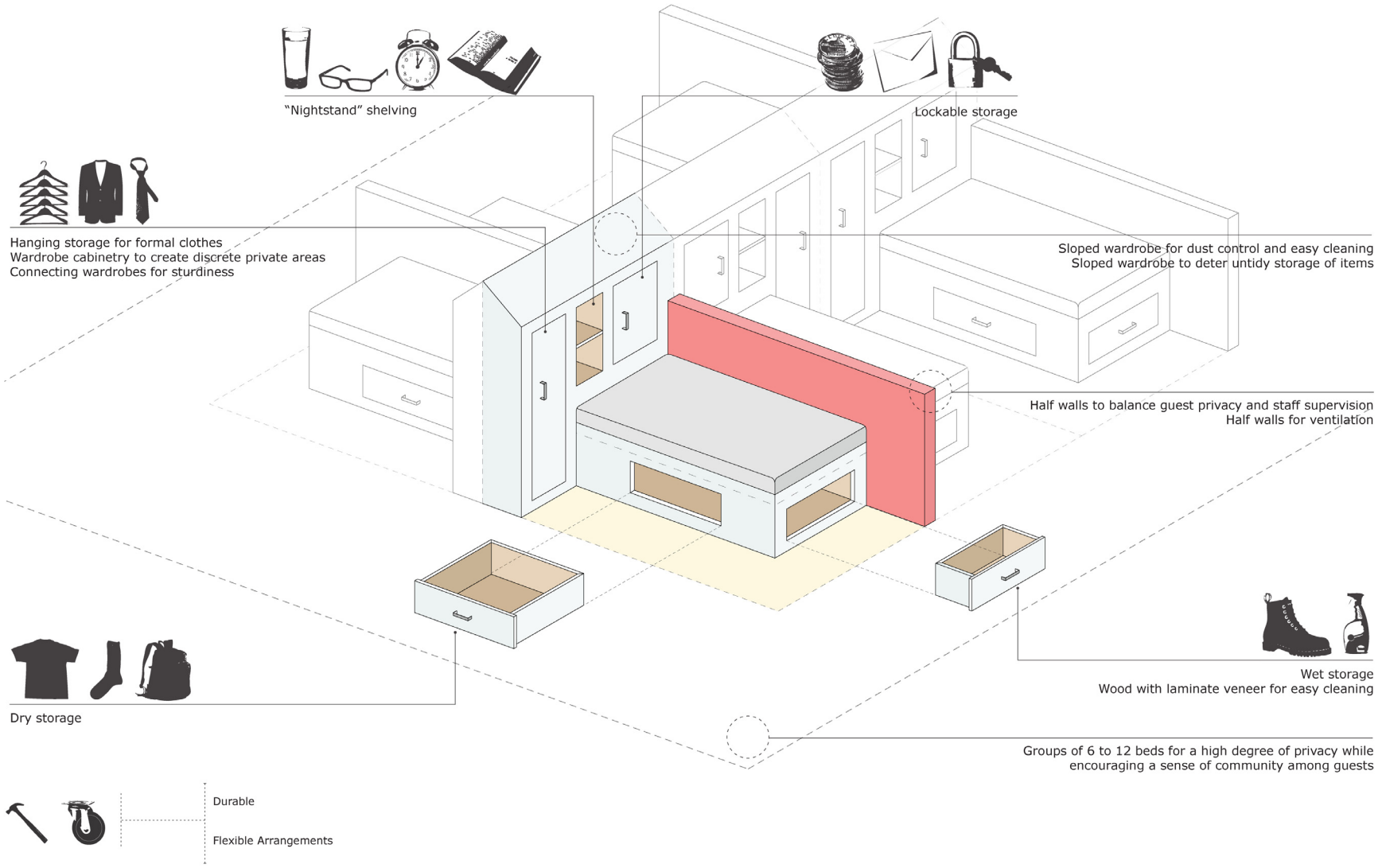
Second Floor, Plan, Zoomed In to Show the Critical Health Support Clinic in Relation to the Street, the Polyclinic, the Community Garden and the Shelter.



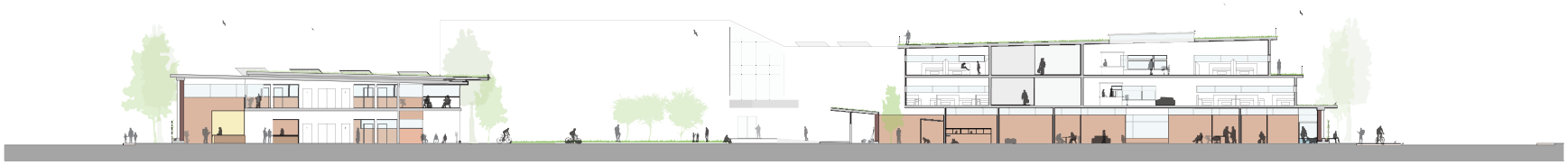
Second Floor, Plan, Zoomed In to Show the Shelter, Gallery, Regenerative Health Support Clinic, Soup Kitchen and Restaurant in Relation to the Street, Courtyard, Polyclinic and Existing House.



Third Floor, Plan, Zoomed In to Show the Shelter and Rental Units in Relation to the Street, Courtyard, Polyclinic and Existing House.

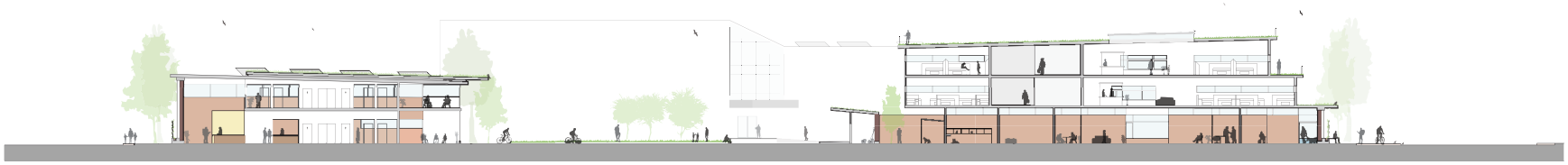


Furniture Module and Storage Requirements, Shelter Sleep Space, Third Floor

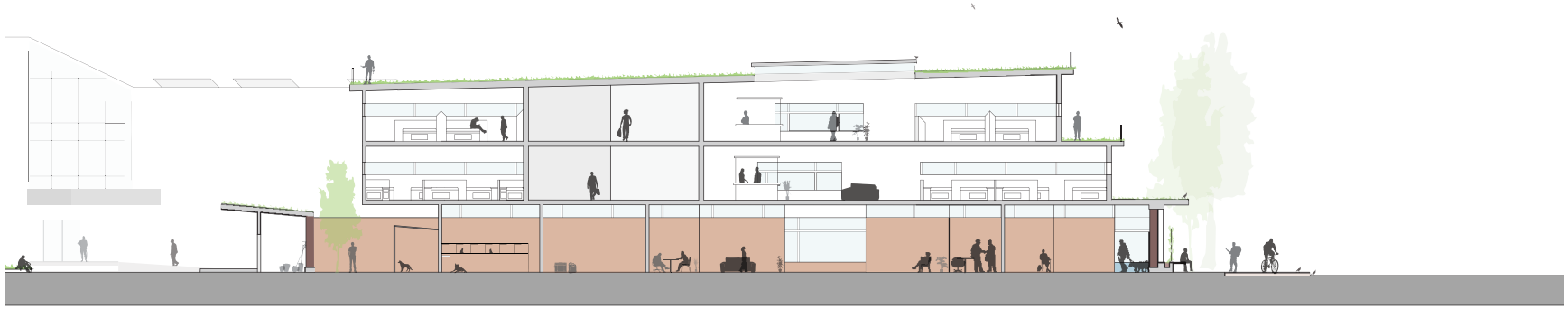


Section A Through Site, Looking South-East.

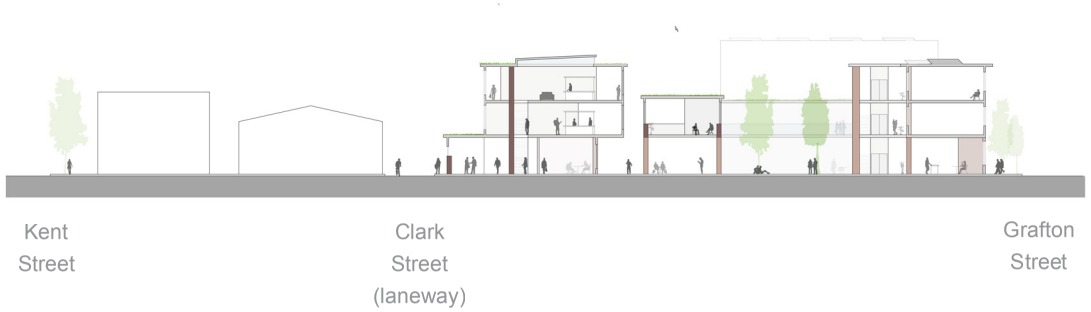
Section A, Zoomed in to Show Critical Health Support Clinic, Community Garden Plots and Polyclinic (Accessible Entrance) in Background.



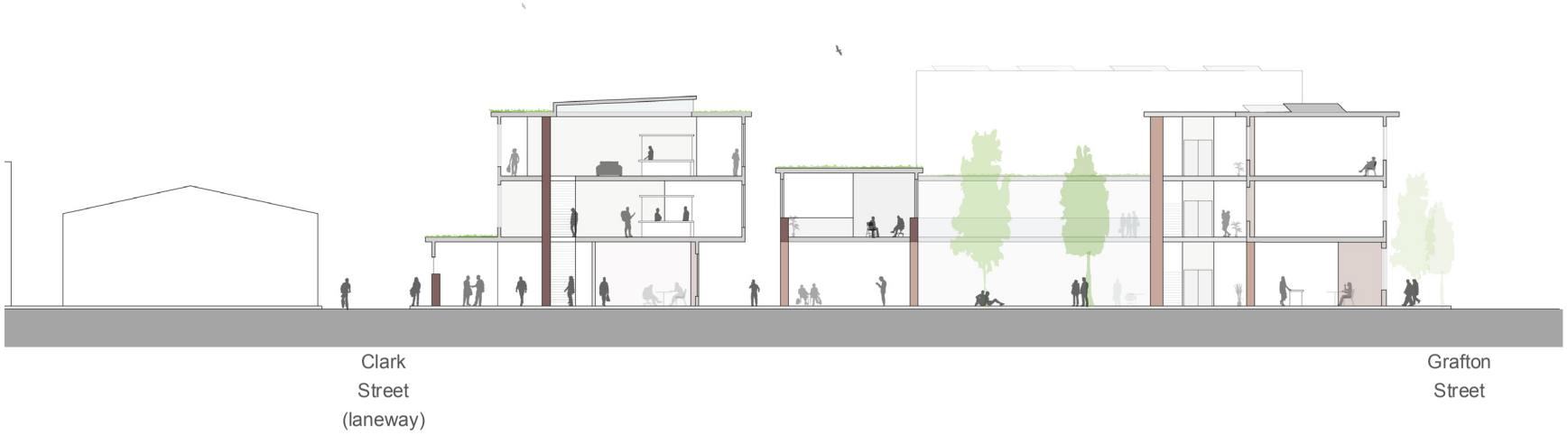
Section A Through Site, Looking South-East.



Section A, Zoomed in to Show Polyclinic (Accessible Entrance) in Background, Garden Shed and Shelter (Sleep Spaces above).

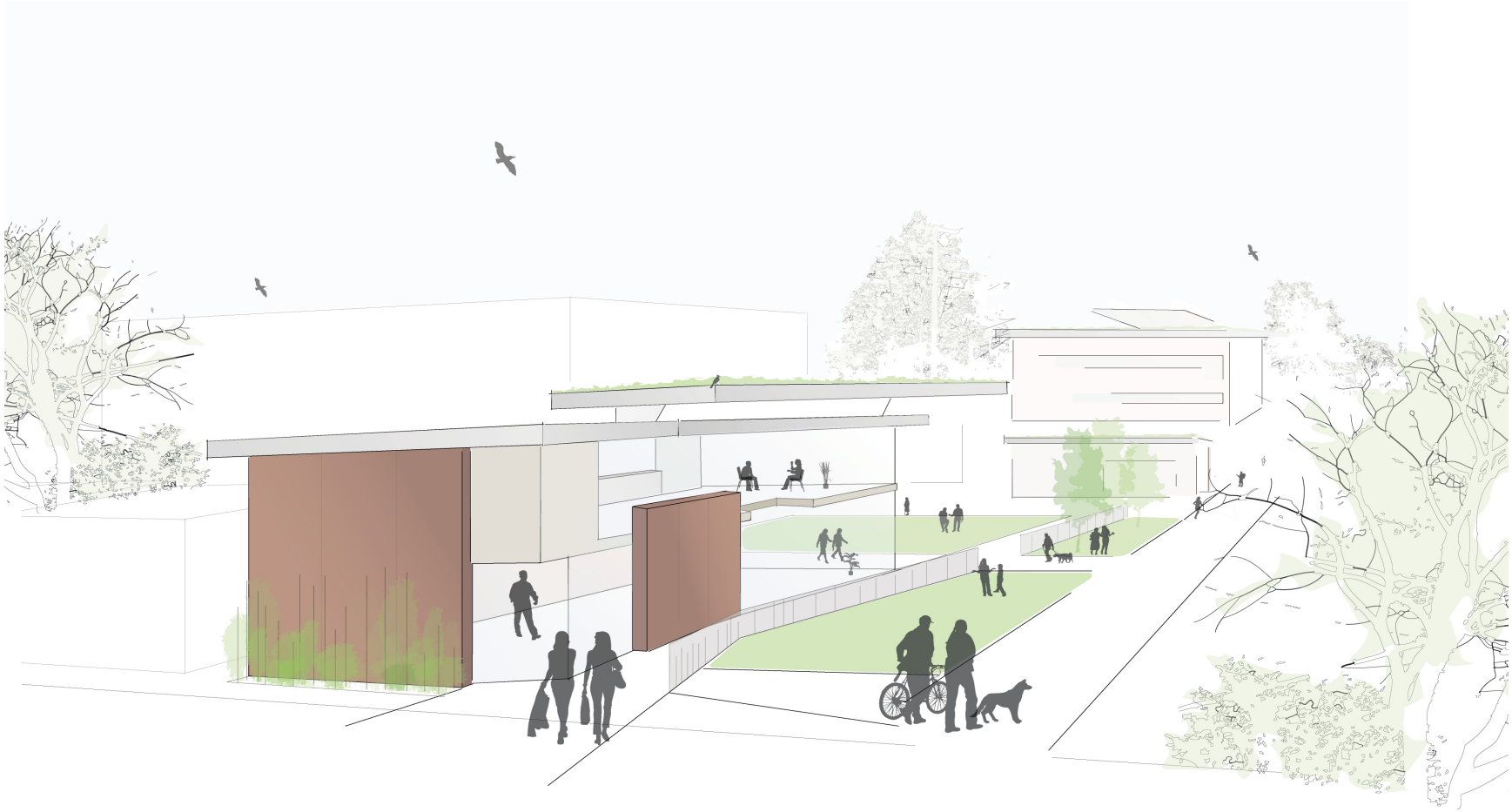


Section B Through Site, Looking North-East.



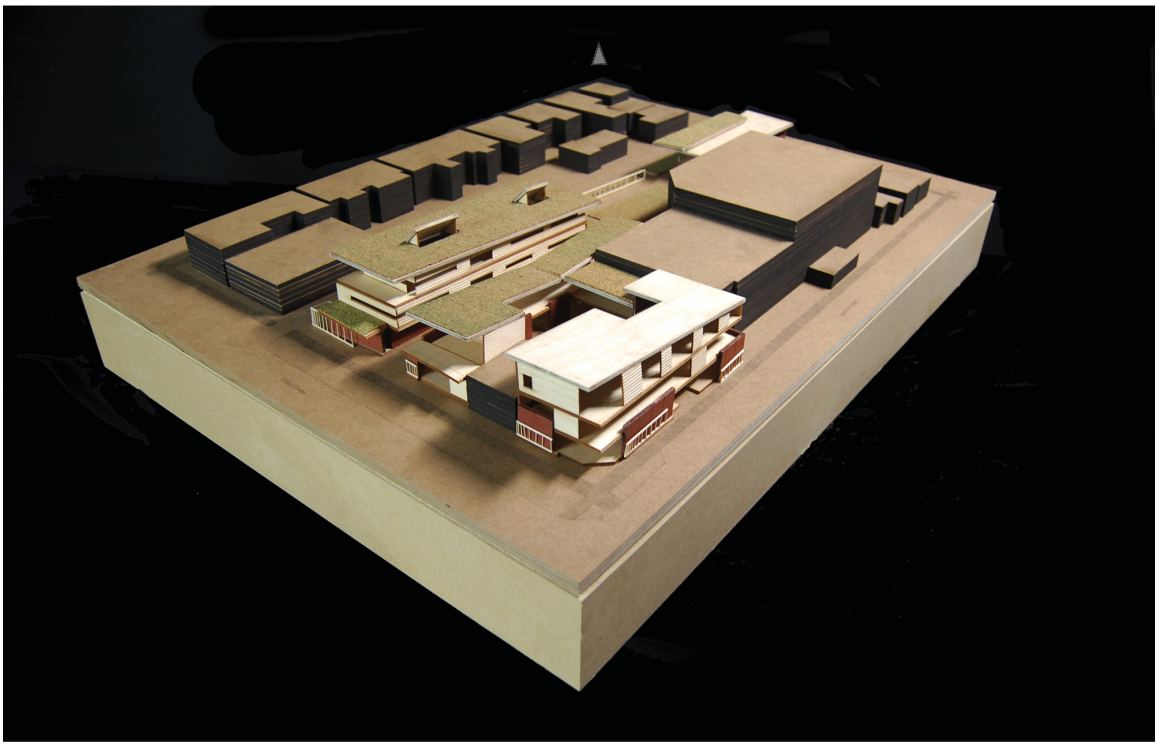
Section B, Zoomed in to Show Shelter (Sleep Spaces above), Regenerative Health Support Clinic, Courtyard, Soup Kitchen and Rental Units (above Soup Kitchen).

View at Corner of Prince Street and Grafton Street, Looking Toward Restaurant Entrance, Soup Kitchen Entrance and Rental Units (above).

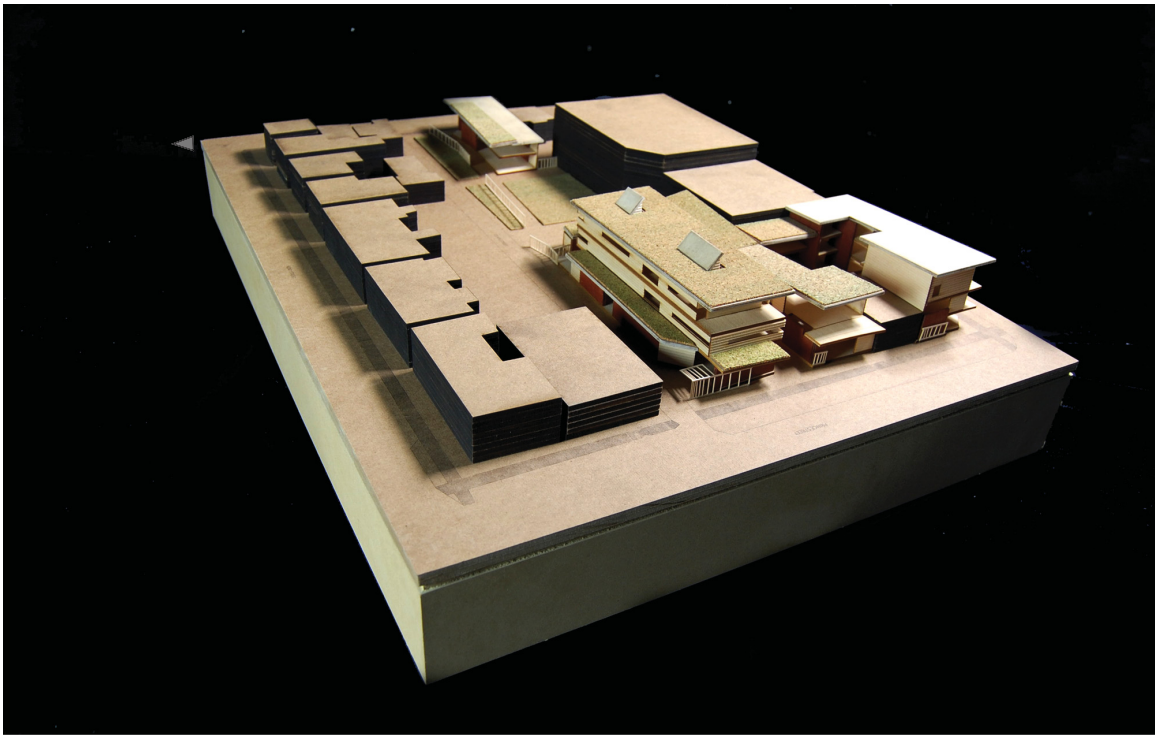


View at Corner of Hillsborough Street and Clark Street (laneway), Looking at Critical Health Support Clinic and Community Garden Plots, Along Clark Street, and Toward the Shelter.

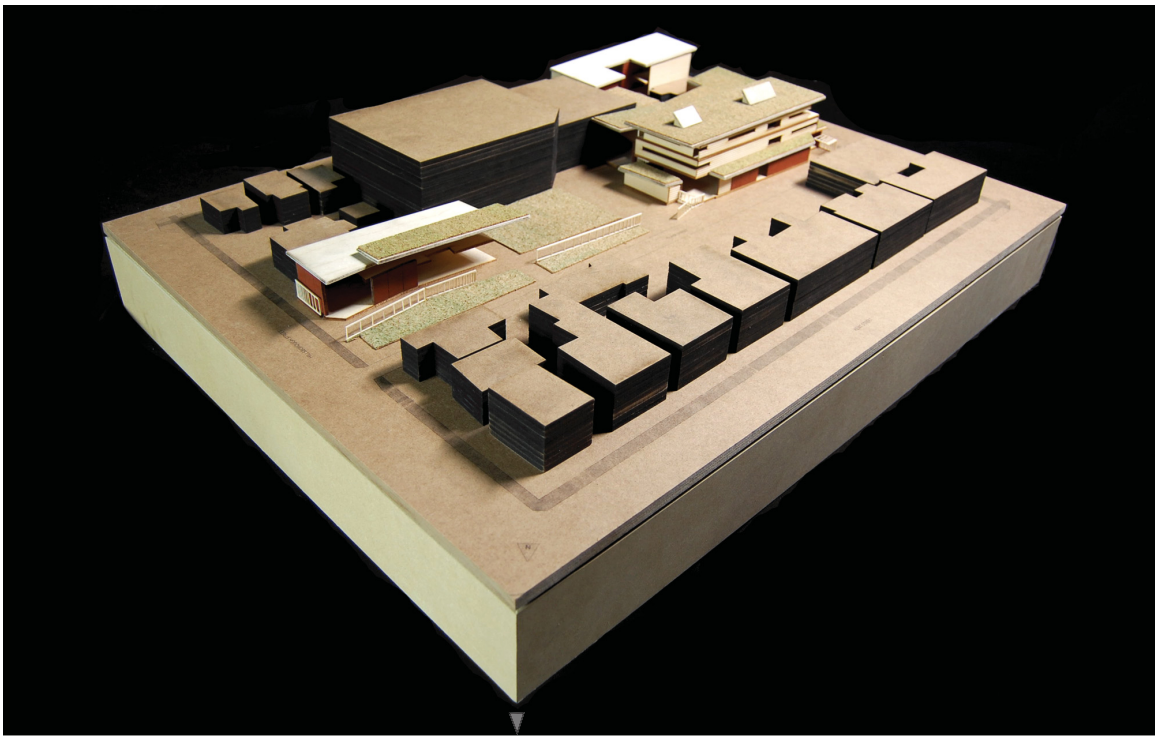
View at Corner of Prince Street and Clark Street (laneway), Looking Toward Shelter Entrance.



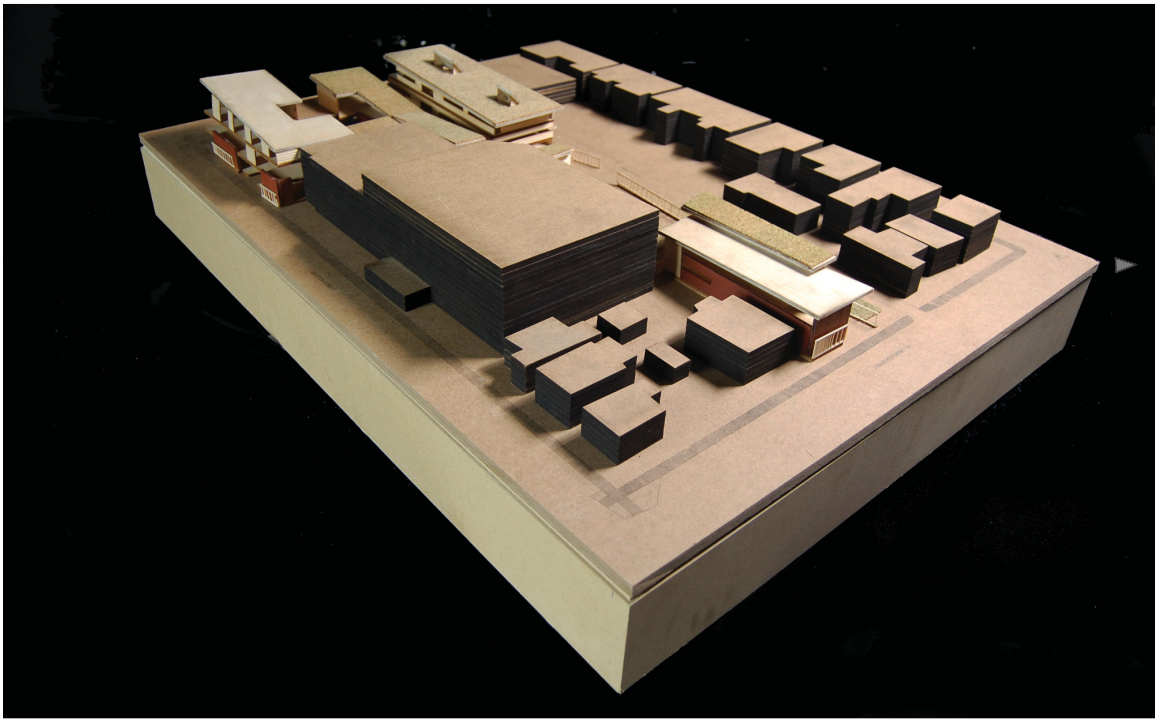
Building Model, Looking Toward the Corner of Prince Street and Grafton Street. View of Restaurant at Corner with Rental Units (Above); Shelter and Gallery (to the Left).



Building Model, Looking Toward the Corner of Kent Street and Prince Street. View of Shelter at Corner of Prince Street and Clark Street (Laneway); Critical Health Support Clinic and Garden Plots (in the Distance); Gallery and Restaurant with Rental Units (Above) (to the Right).



Building Model, Looking Toward the Corner of Hillsborough Street and Kent Street. View of Critical Health Support Clinic and Garden Plots; Rental Units and Shelter (in the Distance).



Building Model, Looking Toward the Corner of Grafton Street and Hillsborough Street. View of Soup Kitchen, Restaurant and Rental Units (Above) (to the Left); Critical Health Support Clinic and Garden Plots (to the Right).

CHAPTER 3: CONCLUSION

This thesis aimed to examine the problem of homelessness and its relationship to architecture and the city. The project aspired to engage the shelter guest by balancing individual needs for privacy and control with staff surveillance requirements. Additionally, the project aimed to maintain the dignity of its often vulnerable support service users through accessible and sympathetic facilities. Through hybrid programming, program arrangement on site and suitable site selection, the project invites and enhances the surrounding neighbourhood.

Throughout the thesis, this project considered and worked simultaneously across a variety of scales. An initial mapping of formal supports within the province narrowed the thesis focus to the city of Charlottetown. An additional mapping exercise then placed the project within an existing framework of formal supports in the city and identified an ally and program driver, the Polyclinic. This exercise and other research aided in a successful site selection for the project. Again, an accompanying layer of mapped informal supports and existing pedestrian routes strengthened the project within the context of the downtown. The hybrid programming, program distribution on site and the retention of the Clark Street laneway and its popular pedestrian use reinforced the potency of the project as a valuable resource for support service users and as a welcome addition to the downtown community. Within the buildings, the balance of individual privacy needs and staff surveillance requirements was resolved through observation points, amounts of enclosure and various furniture arrangements. The materiality, subtleties and details of rammed earth construction informed the comfort of the building inhabitants and interior atmosphere giving a strong regional and material character to the project.

In the early stages of the thesis, the initial amount of research proved challenging and often mingled between architecture, social work and other disciplines. The architecture, however, could not be truly successful without a sensitive and holistic understanding of a homeless individual and the professionals who work with them. Here, social and architectural investigations overlapped and digested into a rich project that evolved beyond a dry institution and into a fertile and animated public destination within a city.

An architect can use their knowledge and creativity to explore social issues in an effective and novel way. An architect can read beyond prescribed program requirements to consider the comfort and personal development of shelter users and staff. Additional components, efficient use of resources and program arrangement, as examples, add complexities and layers to enrich the project for the users and neighbouring community. An architect can place a project's identity within a support community and employ the resources of a larger neighbourhood.

The role of an architect shifts to facilitate a project from initial stages through construction and inhabitation. As a professional with social responsibility, an architect can also function as an additional voice in lobbying for contested or under-funded social projects within cities and municipalities. In future architectural practice I will continue this spirit of working and hope to participate in a number of socially minded projects. The principal challenges of social projects are unique and specific; their resolutions and conclusions, however, are rewarding in that they serve both the architect and society well.

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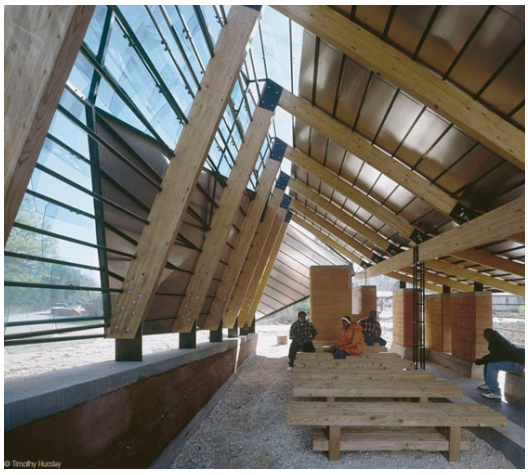
APPENDIX A: ADDITIONAL REFERENCES

Rural Studio, Various Projects

Auburn University
Various Locations, Alabama
1994-Present

(Left) Storefront, HERO Knowledge Cafe, Greensboro. Photograph from *Proceed and Be Bold: Rural Studio After Samuel Mockbee.*
(Right) Corrugated Cardboard Pod, Newburn. Photograph from *Proceed and Be Bold: Rural Studio After Samuel Mockbee.*

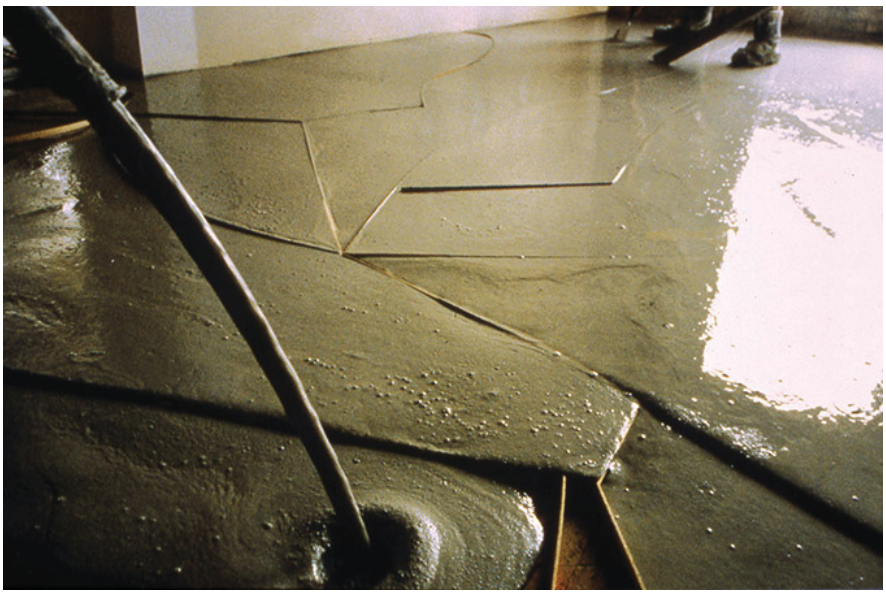


(Left) Canopy, Perry Lakes Park Pavilion, Marion. Photograph from *Proceed and Be Bold: Rural Studio After Samuel Mockbee.*
(Right) Rammed Earth at Glass Chapel, Mason's Bend. Photograph from *Proceed and Be Bold: Rural Studio After Samuel Mockbee.*

> He noticed people- really looked at them and listened, saw their needs, and tried to get everyone involved to help make a difference (Oppenheimer and Hursley, 2005, 173).

Strachan House

53 Strachan Avenue, Toronto, Ontario
Levitt Goodman Architects, 1999

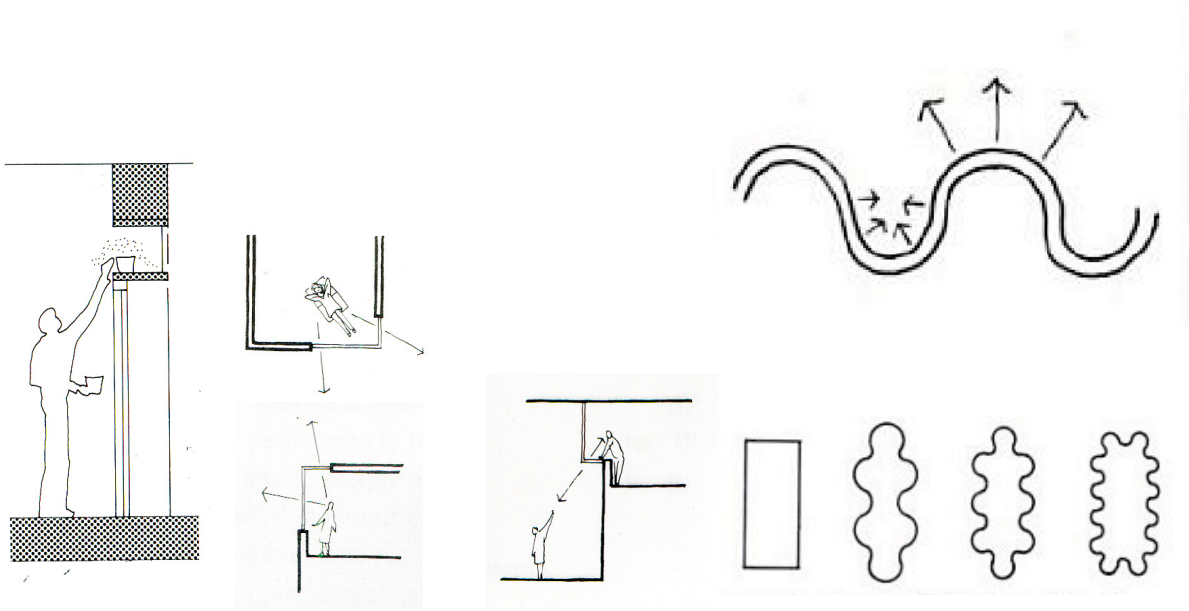


Detail and Interior Photographs, Strachan House, Toronto. Photographs from “Strachan House: Renovation of a Turn-of-the-Century Warehouse.”

And community is significantly different from communal. One of the great achievements of Strachan House, for example, is the way the architects have orchestrated public and private spaces within the building. There are beautifully subtle modulations from open spaces to close ones, from corridors to areas, from lower floors to upper floors. Residents can live in private rooms (their ‘houses’), which measure three by four meters (each with a bed and a fridge), or they can camp out in some of the open, undefined spaces provided for that purpose- a newly secure reprise of life on the streets. While the doors of the rooms are lockable, there is a window next to each door, a sort of shutter that can be opened to indicate, as Goodman puts it, ‘that the resident is available for conversation or some other engagement in the social life of the area, while maintaining his or her privacy (Dault 1999).

Lessons for Students in Architecture

Hertzberger, Herman. Rotterdam: 010 Publishers, 1991.



Various Illustrations and Diagrams. Images by Herman Hertzberger, from *Lessons for Students in Architecture.*

The concepts of 'public' and 'private' may be seen and understood in relative terms as a series of spatial qualities which, differing gradually, refer to accessibility, responsibility and supervision of specific spatial units (Hertzberger 1991, 13).

The in-between concept is the key to eliminating the sharp division between areas with different territorial claims. The point is therefore to create intermediary spaces which, although on the administrative level belonging to either the private or the public domain, are equally accessible to both sides, that is to say that it is wholly acceptable to both that the 'other' makes use of them (Hertzberger 1991, 40).

The art of architecture is not only to make beautiful things- nor is it only to make useful things, it is to do both at once- like a tailor who makes clothes that both look good and fit well... Everything we design must be adequate for every situation that arises, in other words, it must not only be accommodating but stimulating- and it is this fundamental and active adequacy that I would like to call 'inviting form': form with more sympathy for people (Hertzberger 1991, 174).

Whatever an architect does or deliberately leaves undone- the way he concerns himself with enclosing or opening- he always influences, intentionally or not, the most elementary forms of social relations. And even if social relations depend only to a limited extent on environmental factors, that is still sufficient reason to aim consciously at an organization of space that enable everyone to confront the other on an equal footing (Hertzberger 1991, 214).

Cottonland

DVD. Directed by Nance Ackerman. The National Film Board. 2006.

Glace Bay Resident and Prescription Drug Addict Thomas Ogley, Glace Bay, Cape Breton, Nova Scotia. Photograph from *Cottonland.*

Throughout this gritty and harsh film the narrator interviews several prescription drug addicts in the town of Glace Bay, Cape Breton, Nova Scotia. The personal narratives are candid, touching and honest. Ackerman successfully places the main characters within the socio-economic context of the community, the island and the province. By tracing the collapse of the coal mining industry and plunging Atlantic fishing stocks, the resulting economic crisis and depopulation of the area, the prescription drug abuse problem emerges as a non-coincidental issue and the nexus of a larger social crisis. The immediate lack of services, employment and public education is made apparent throughout the film. A small case study of the neighboring First Nations community Membertou, Cape Breton presents an empowered community working collectively toward 0% unemployment (*Cottonland* 2006).

APPENDIX B: TECHNOLOGY SEMINARS

ARCH 6212.03: Physical Principles

Site Weather Analysis

Given Yearly Wind Average

Layered Yearly Wind Average

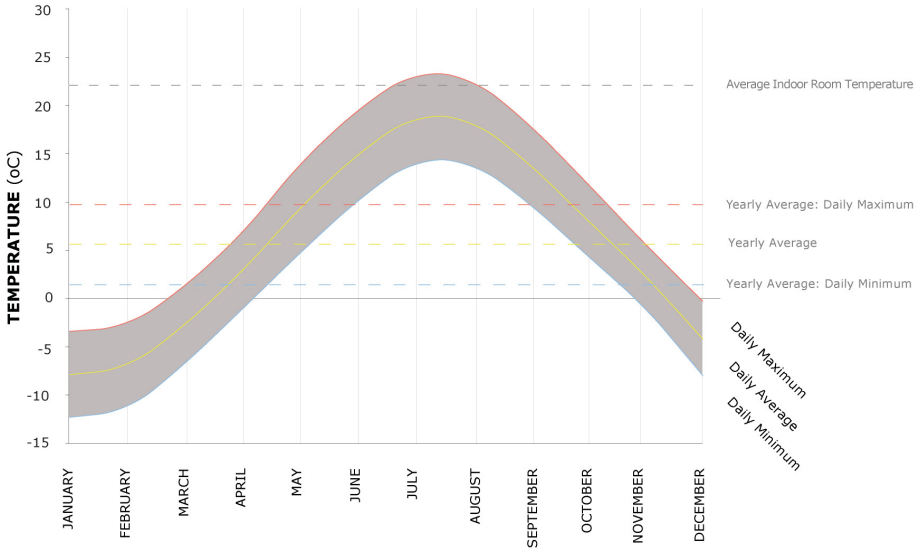
YEARLY WIND AVERAGE ON SITE *(NTS)*

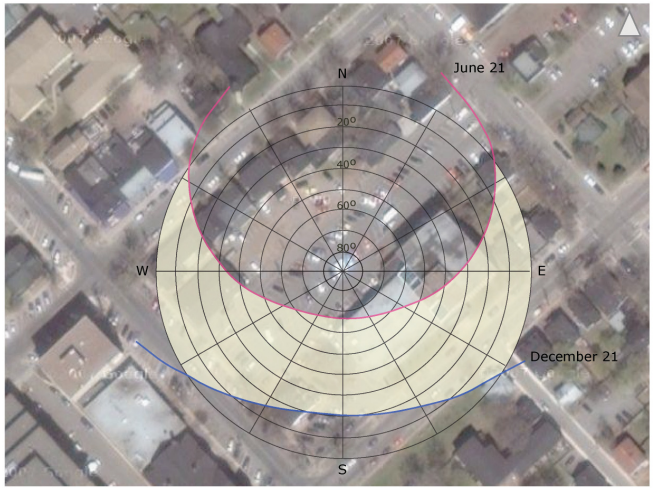
Site

Green Space

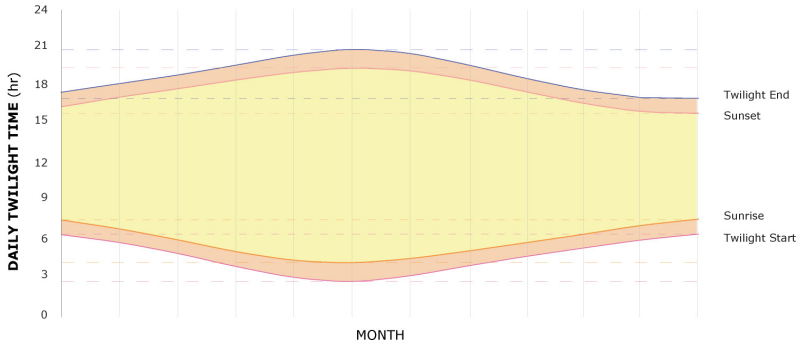
Statistics based on observations taken between 10/2008 - 8/2010 daily from 7am to 7pm local time.

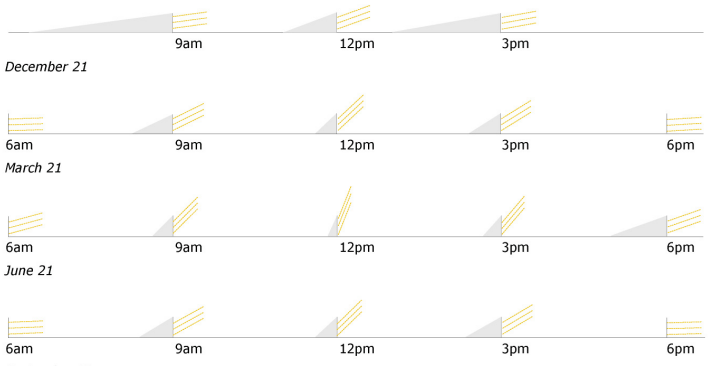
Wind Analysis, Charlottetown, PEI.





SUN PATH ON SITE *(NTS)*

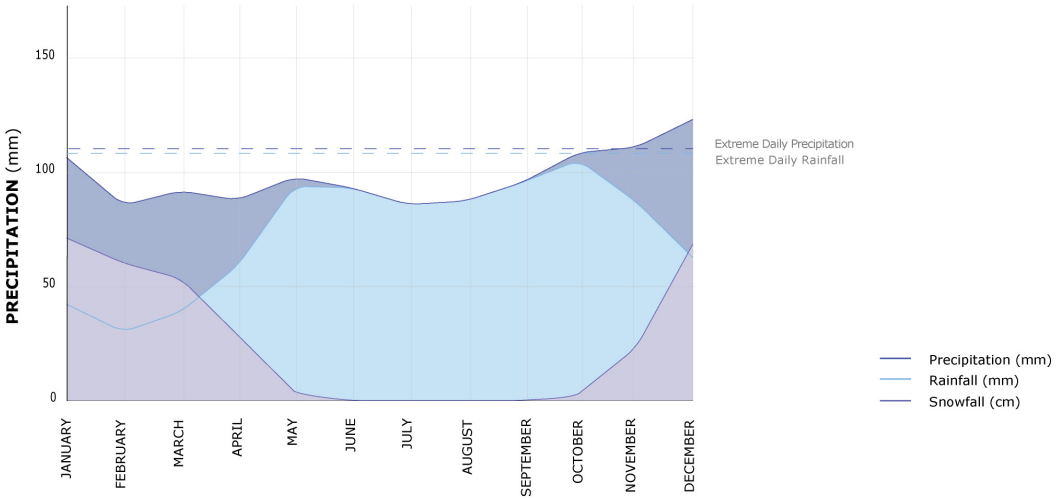


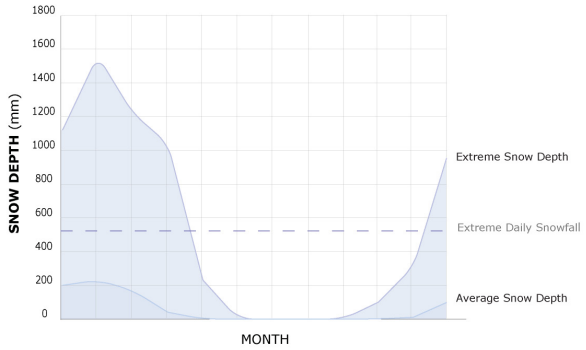


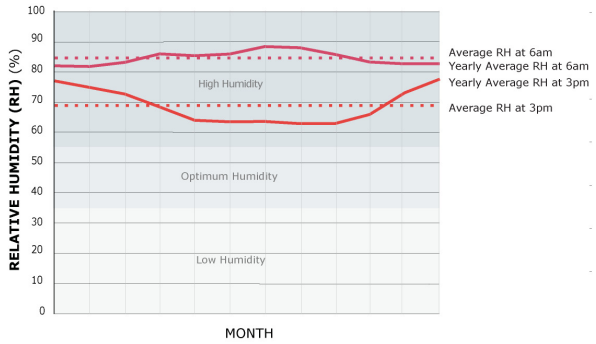
SUN ANGLES AND **SELECTED SHADOW LENGTH FACTORS**

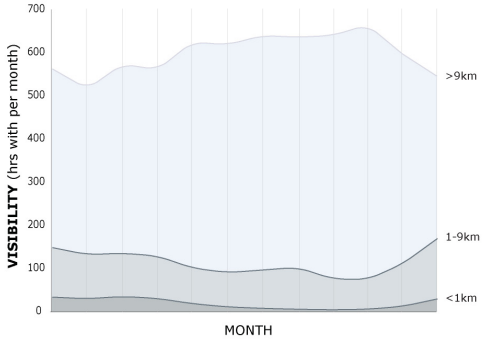
http://www.climate.weatheroffice.gc.ca/climate_normals/index_e.html
The climate normals and extremes are based on Canadian climate stations with at least 15 years of data between 1971 to 2000.

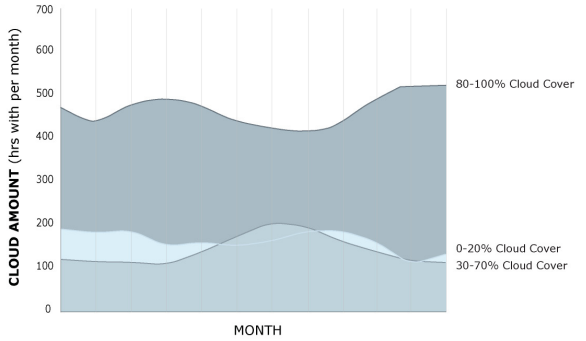
Temperature and Light Analysis, Charlottetown, PEI.





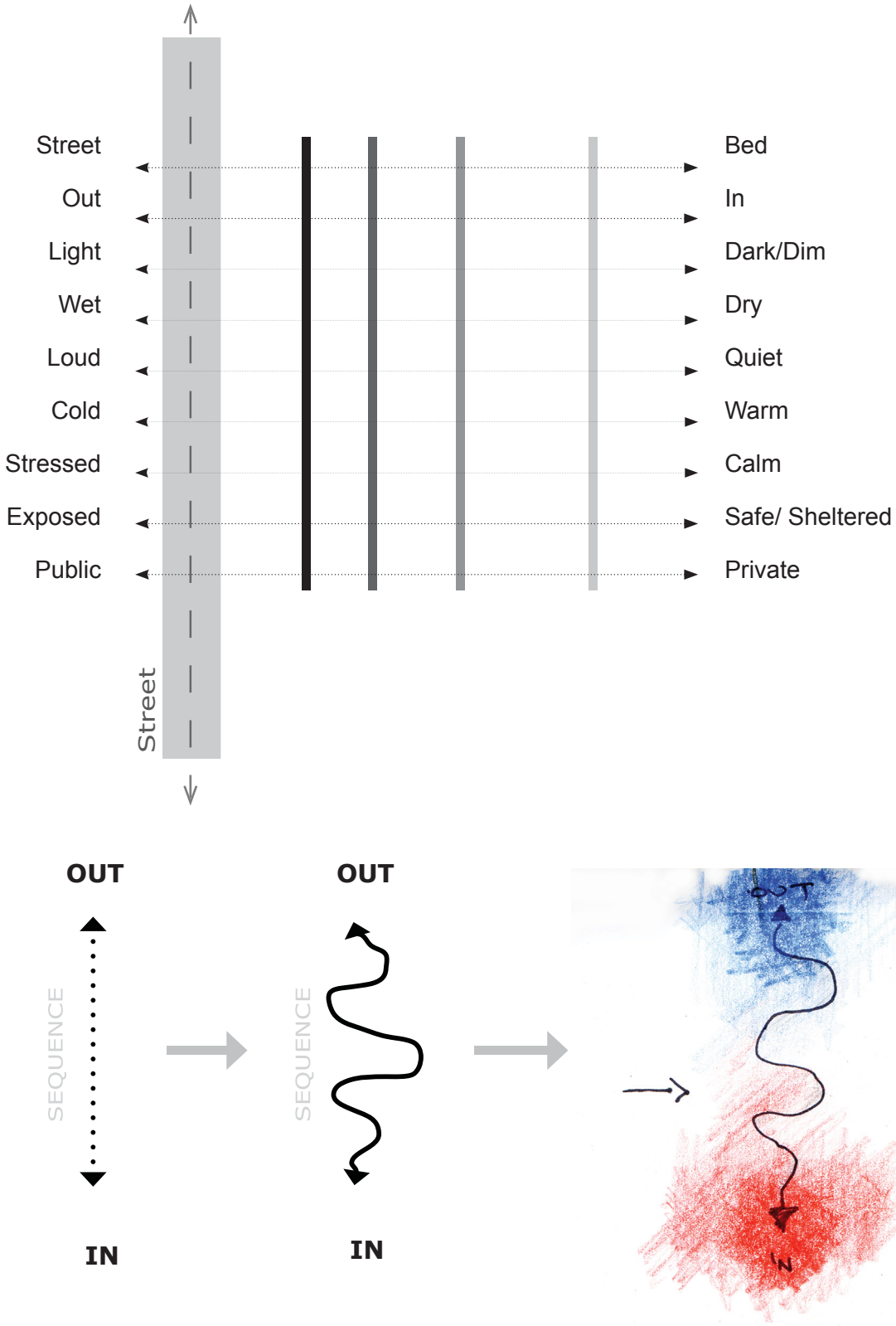




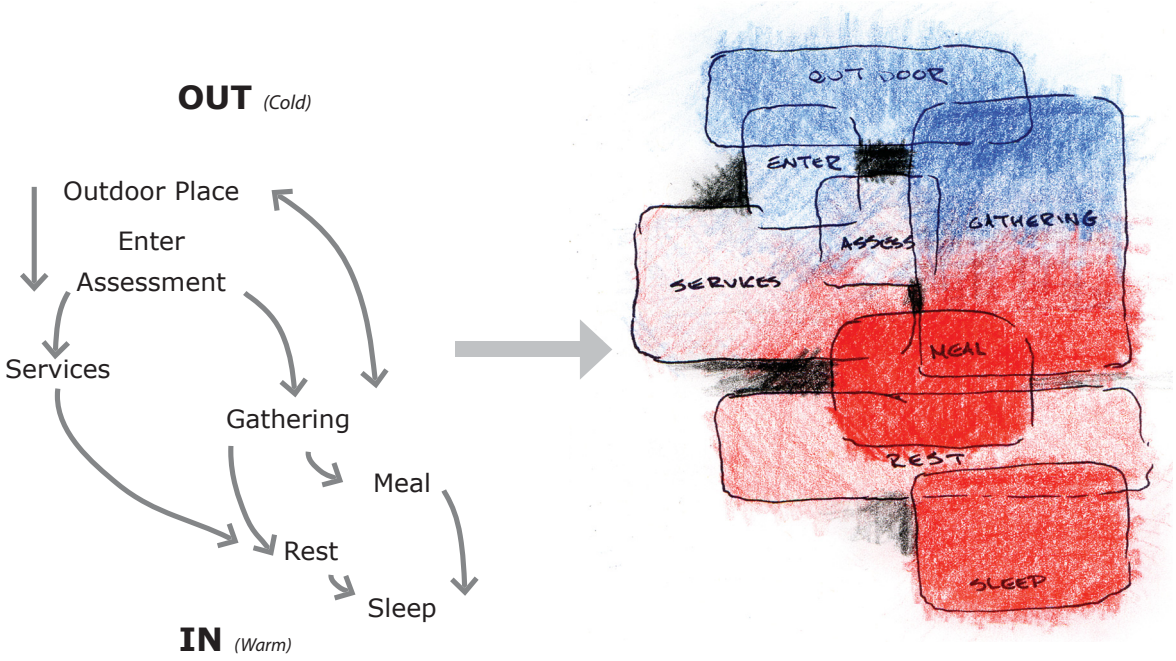


http://www.climate.weatheroffice.gc.ca/climate_normals/index_e.html
The climate normals and extremes are based on Canadian climate stations with at least 15 years of data between 1971 to 2000.

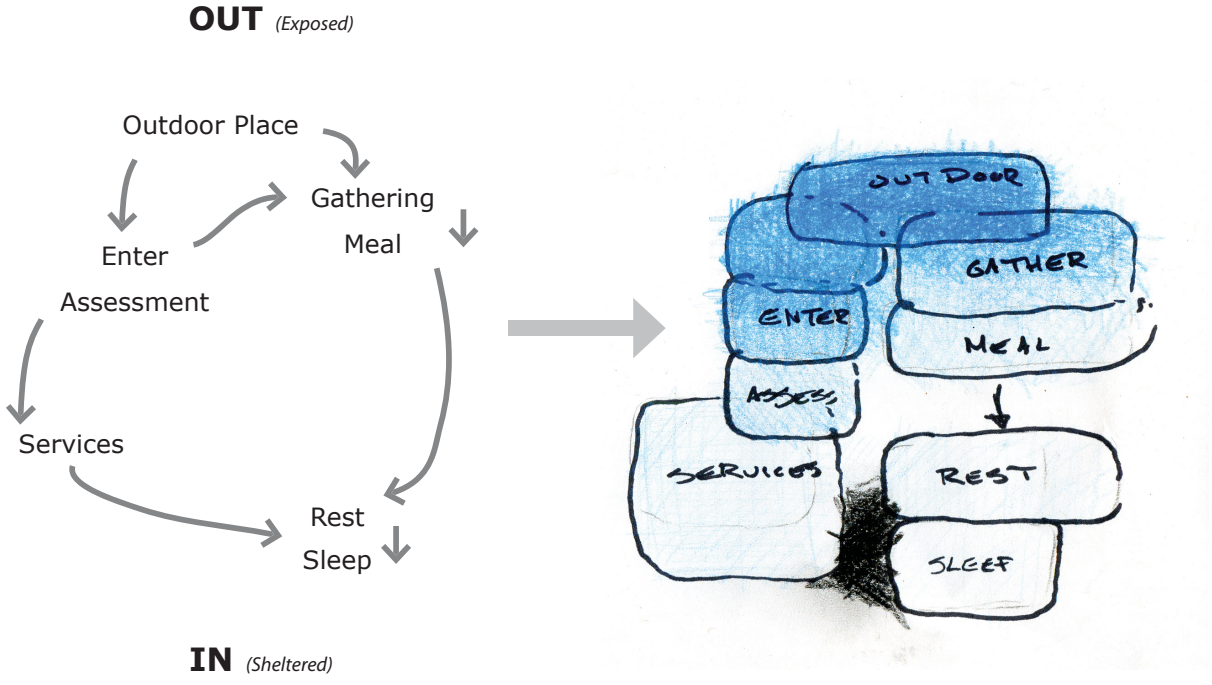
Building Metabolism Gradients



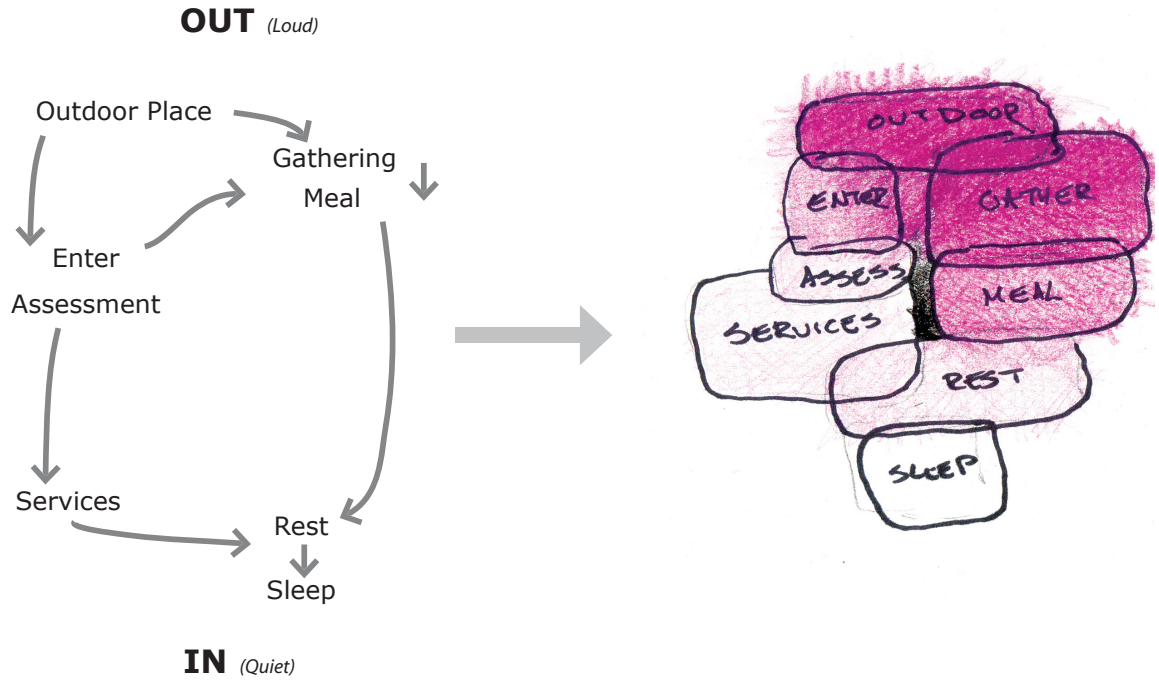
Gradient Sketches and Diagrams.



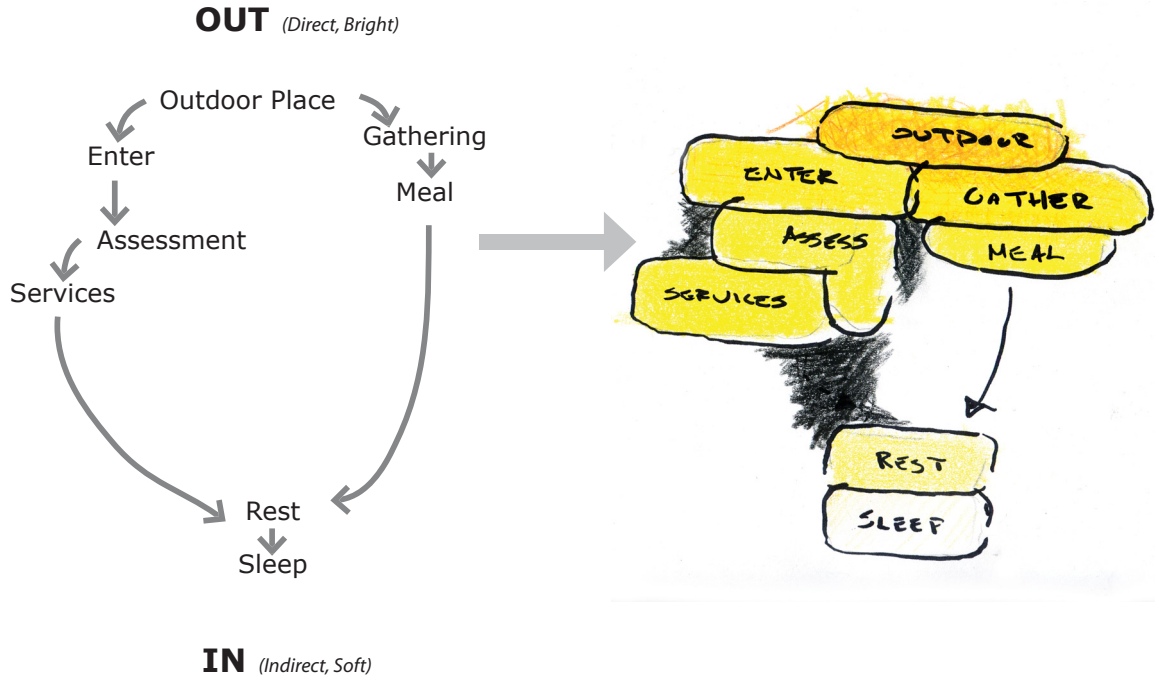
Temperature Sequence and Gradient.



Wind Sequence and Gradient.



Acoustic Sequence and Gradient.



Lighting Sequence and Gradient.

ARCH 5212.03: From Principle to Detail

Advantages of Clay

(from Minke, Gernot. *Building with Earth: Design and Technology of a Sustainable Architecture*, 2006, 12-15.)

Disadvantages:

1. Loam is not a standardized building material

Depending on the site where the loam is dug out, it will be composed of differing amounts and types of clay, silt, sand and aggregates. Its characteristics, therefore, may differ from site to site, and the preparation of the correct mix for a specific application may also differ. In order to judge its characteristics and alter these, when necessary, by applying additives, one needs to know the specific composition of the loam involved.

2. Loam mixtures shrink when drying

Due to evaporation of the water used to prepare the mixture (moisture is required to activate its binding strength and to achieve workability), shrinkage cracks will occur. The linear shrinkage ratio is usually between 3%and 12% with wet mixtures (such as those used for mortar and mud bricks), and between 0.4% and 2% with drier mixtures (used for rammed earth, compressed soil blocks). Shrinkage can be minimized by reducing the clay and the water content, by optimizing the grain size distribution, and by using additives.

3. Loam is not water-resistant

Loam must be sheltered against rain and frost, especially in its wet state. Earth walls can be protected by roof overhangs, dampproof courses, appropriate surface coatings etc.

Advantages in comparison to common industrial building materials:

1. Loam balances air humidity

Loam is able to absorb and desorb humidity faster and to a greater extent than any other building material, enabling it to balance indoor climate. Experiments at the Forschungslabor für Experimentelles Bauen (Building Research Laboratory, or BRL) at the University of Kassel, Germany, demonstrated that when the relative humidity in a room was raised suddenly from 50% to 80%, unbaked bricks were able, in a two day period to absorb 30 times more humidity than baked bricks. Even when standing in a climatic chamber at 95% humidity for six months, adobes do not become wet or lose their stability; nor do they exceed their equilibrium moisture content, which is about 5% to 7% by weight. Measurements taken in a newly built house in Germany, all of whose interior and exterior walls are from earth, over a period of eight years, showed that the relative humidity in this house was a nearly constant 50% throughout the year. It fluctuated by only 5% to 10%, thereby producing healthy living condition with reduced humidity in summer and elevated humidity in winter.

2. Loam stores heat

Like all heavy materials, loam stores heat. As a result, in climatic zones with high diurnal temperature differences, or where it becomes necessary to store solar heat gain by passive means, loam can balance indoor climate.

3. Loam saves energy and reduces environmental pollution

The preparation, transport and handling of loam on site requires only ca. 1% of the energy needed for the production, transport and handling of baked bricks or reinforced concrete. Loam, then, produces virtually no environmental pollution.

4. Loam is always reusable

Unbaked loam can be recycled an indefinite number of times over an extremely long period. Old dry loam can be reused after soaking in water, so loam never becomes a waste material that harms the environment.

5. Loam saves material and transportation costs

Clayey soil is often found on site, so that the soil excavated for foundations can then be used for earth construction. If the soil contains too little clay, then clayey soil must be added, whereas if too much clay is present, sand is added. The use of excavated soil means greatly reduced costs in comparison with other building materials. Even if this soil is transported from other construction sites, it is usually much cheaper than industrial building materials.

6. Loam is ideal for do-it-yourself construction

Provided the building process is supervised by an experienced individual, earth construction techniques can usually be executed by non-professionals. Since the processes involved are labour-intensive and require only inexpensive tools and machines, they are ideal for do-it-yourself building.

7. Loam preserves timber and other organic materials

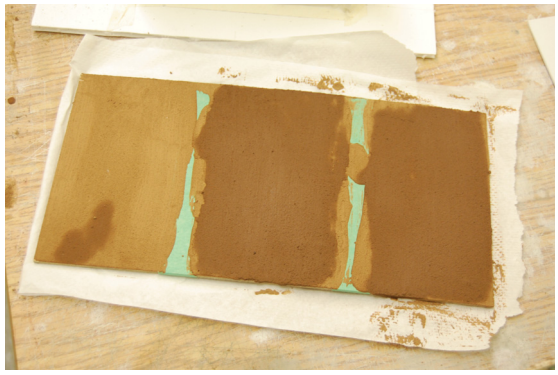
Owing to its low equilibrium moisture content of 0.4% to 6% by weight and its high capillarity, loam conserves the timber elements that remain in contact with it by keeping them dry. Normally, fungi or insects will not damage such wood, since insects need a minimum of 14% to 18% humidity to maintain life, and fungi more than 20% (Möhler 1978, p. 18). Similarly, loam can preserve small quantities of straw that are mixed into it. However, if lightweight straw loam with a density of less than 500 to 600 kg/m3 is used, then the loam may lose its preservative capacity due to the high capillarity of the straw when used in such high proportions. In such cases, the straw may rot when remaining wet over long periods.

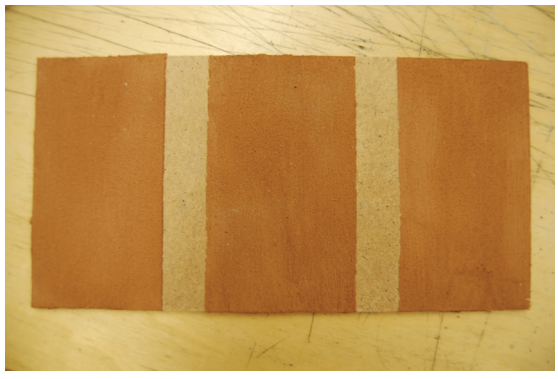
8. Loam absorbs pollutants

It is often maintained that earth walls help to clean polluted indoor air, but this has yet to be proven scientifically. It is a fact that earth walls can absorb pollutants dissolved in water. For instance, a demonstration plant exists in Ruhleben, Berlin, which uses clayey soil to remove phosphates from 600 m3 of sewage daily. The phosphates are bound by the clay minerals and extracted from the sewage. The advantage of this procedure is that since no foreign substances remain in the water, the phosphates are converted into calcium phosphate for reuse as a fertilizer.

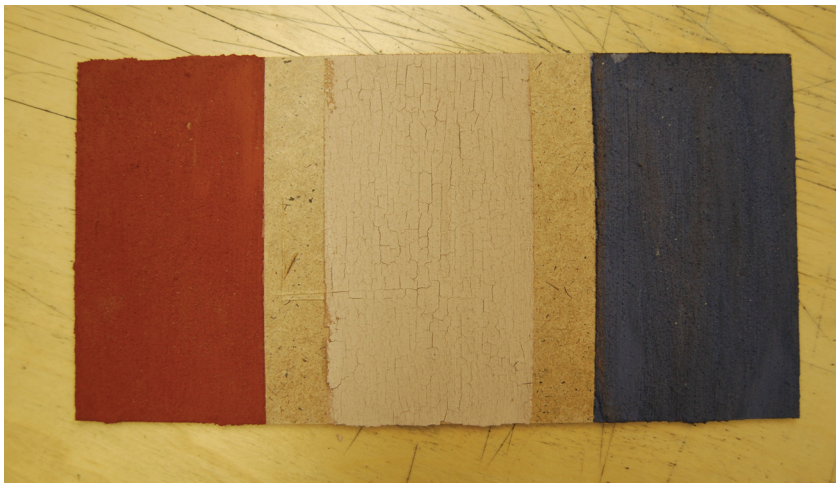
Material Experiments with P.E.I. Sand and Clay

Mixed and Applied Clay Plaster.





Mixed and Applied Clay Paints.



Mixed and Applied Clay Paints (With Added Mineral Pigments).

Mixed and Pressed Clay Brick.

Rammed Earth, First Experiment.

Rammed Earth, Second Experiment.

Design and Material Precedents

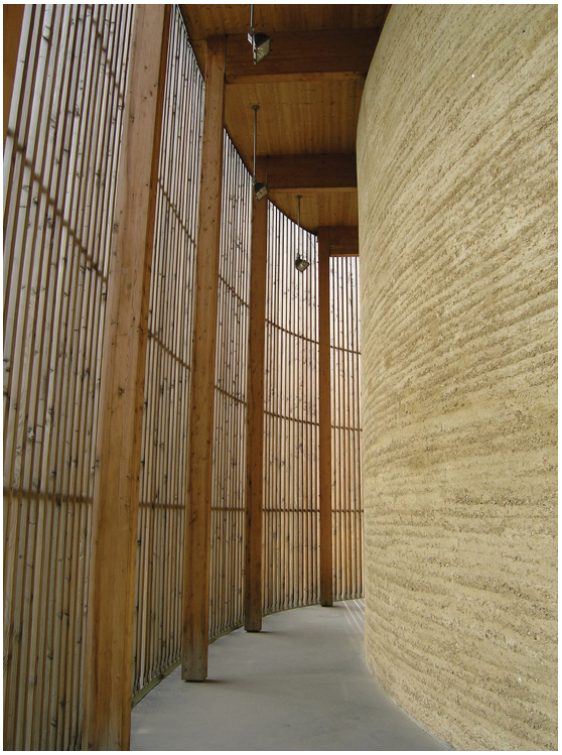
Louhans Nursery School

Louhans Chateaurenaud, Burgundy, France
Laurent Jannet
2009

Screening and Planting, Interior and Exterior Views, Louhans Nursery School, Burgandy. Photographs from “Louhans Nursery School / Arcad’26.”

Chapel of Reconciliation

Berlin, Germany
Reitermann + Sassenroth
2000



(Above) Chapel of Reconciliation, Berlin. Photograph from *Earth Construction Handbook: The Building Material Earth in Modern Architecture.*
(Left) Wood Screen and Rammed Earth Wall, Interior View, Chapel of Reconciliation, Berlin. Photograph from *Earth Construction Handbook: The Building Material Earth in Modern Architecture.*
(Right) Rammed Earth Wall, Interior View, Chapel of Reconciliation, Berlin. Photograph from *Earth Construction Handbook: The Building Material Earth in Modern Architecture.*

Rosie Joe House

Teec Nos Pos, Arizona, US
DesignBuildBLUFF, University of Utah
2004

Rammed Earth Trombe Wall, Interior and Exterior Views, Rosie Joe House, Teec Nos Pos. Photographs from “Design Build Bluff: Sustainable Homes For People Who Need Them.”

44 York Lane

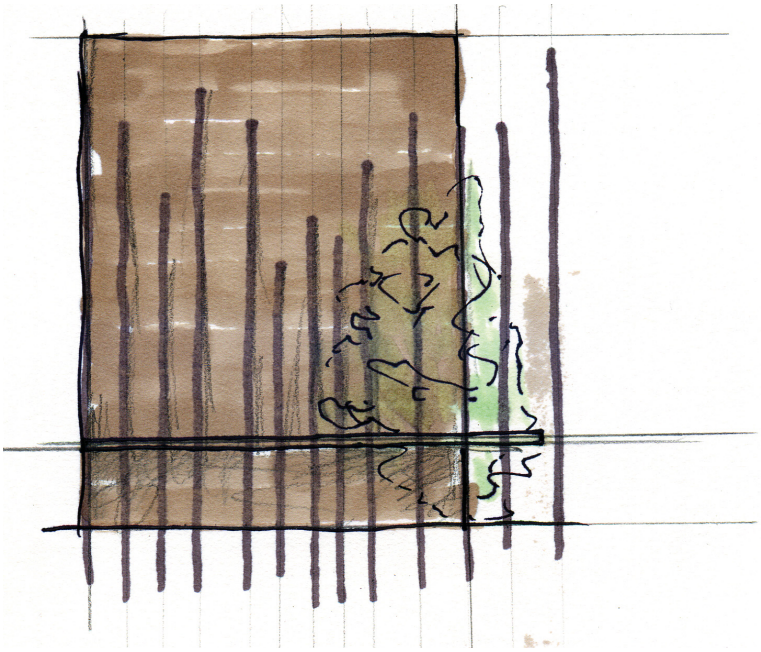
Charlottetown, Prince Edward Island, Canada
Designed by Edgar Hayes Hunter; Constructed by Robert Hyndman
1947

Rammed Earth Construction, Interior and Exterior Views, 44 York Lane, Charlottetown. Photographs from “44 York Lane.”

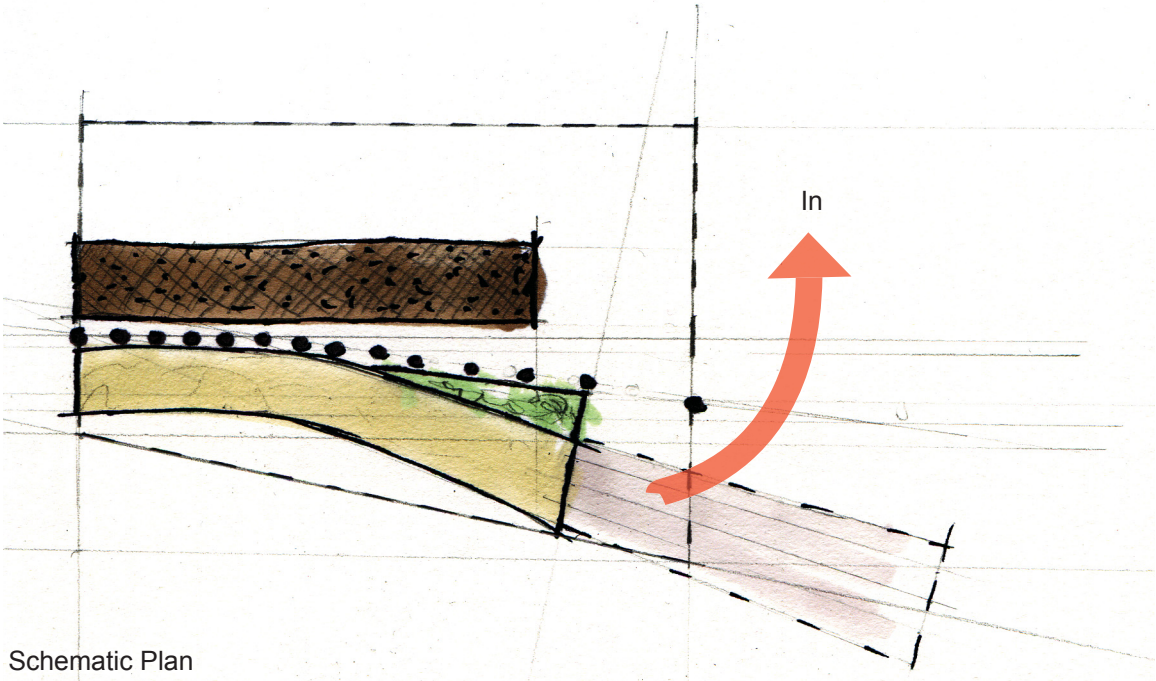
Robert Hyndman built his home in 1947 and 1948 with the help of only one hired man. They constructed the garage first to see if it would hold up to the elements. The garage was a success and soon after, Hyndman began to construct the home. The family moved in to the home in the spring and summer of 1948.

A unique home on the Island, Hyndman got the idea to build with rammed earth from a *Mechanics Illustrated* magazine article. He used earth from his property and one bag of cement to construct the walls. Because a building like it had never been constructed on Prince Edward Island before, Hyndman sent earth from the property for soil analysis to the Midwestern United States where the United States Department of Agriculture and South Dakota State College were working with rammed earth construction. The results revealed that the soil was perfect for this method of building. The design of the home was by New Hampshire architects, and husband and wife team, Margaret King Hunter and Edgar Hayes Hunter (44 York Lane).

Detail Proposal and Development



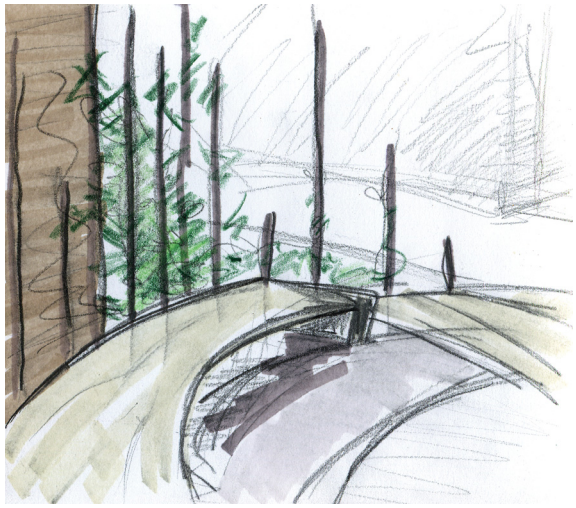
Concept Sketch of Rammed Earth Wall and Screening.

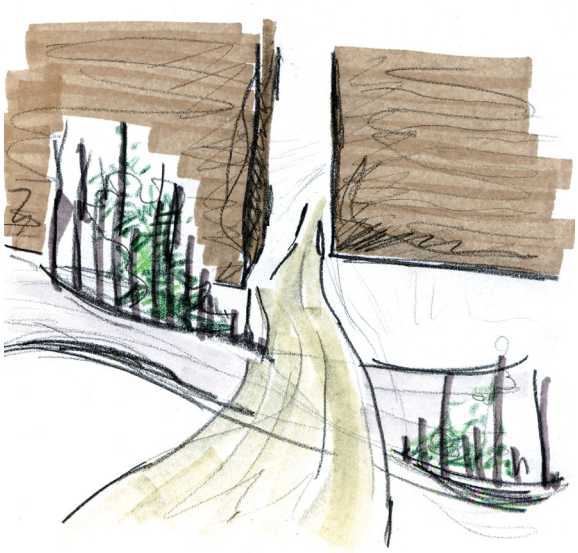
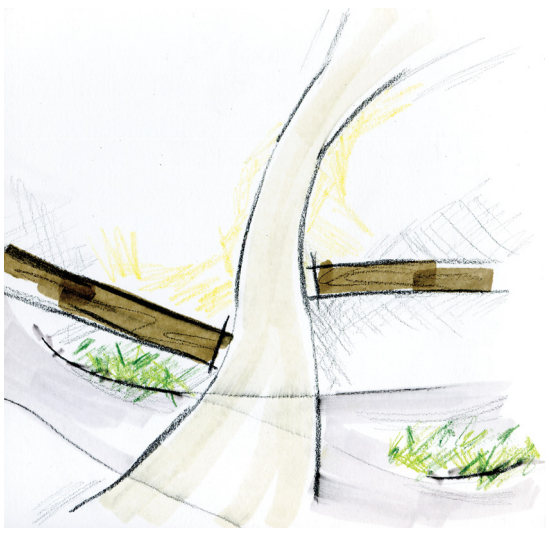
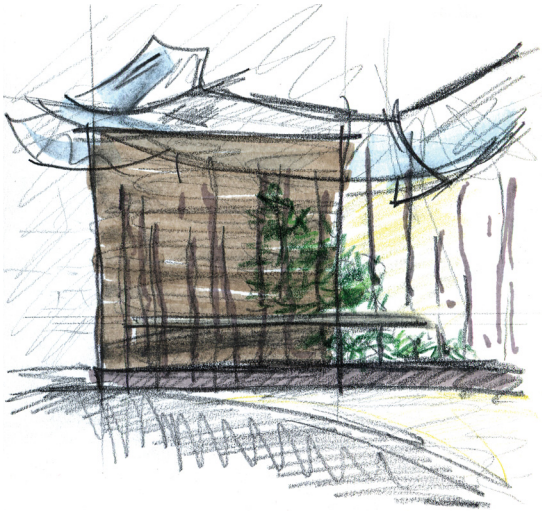


Schematic Plan

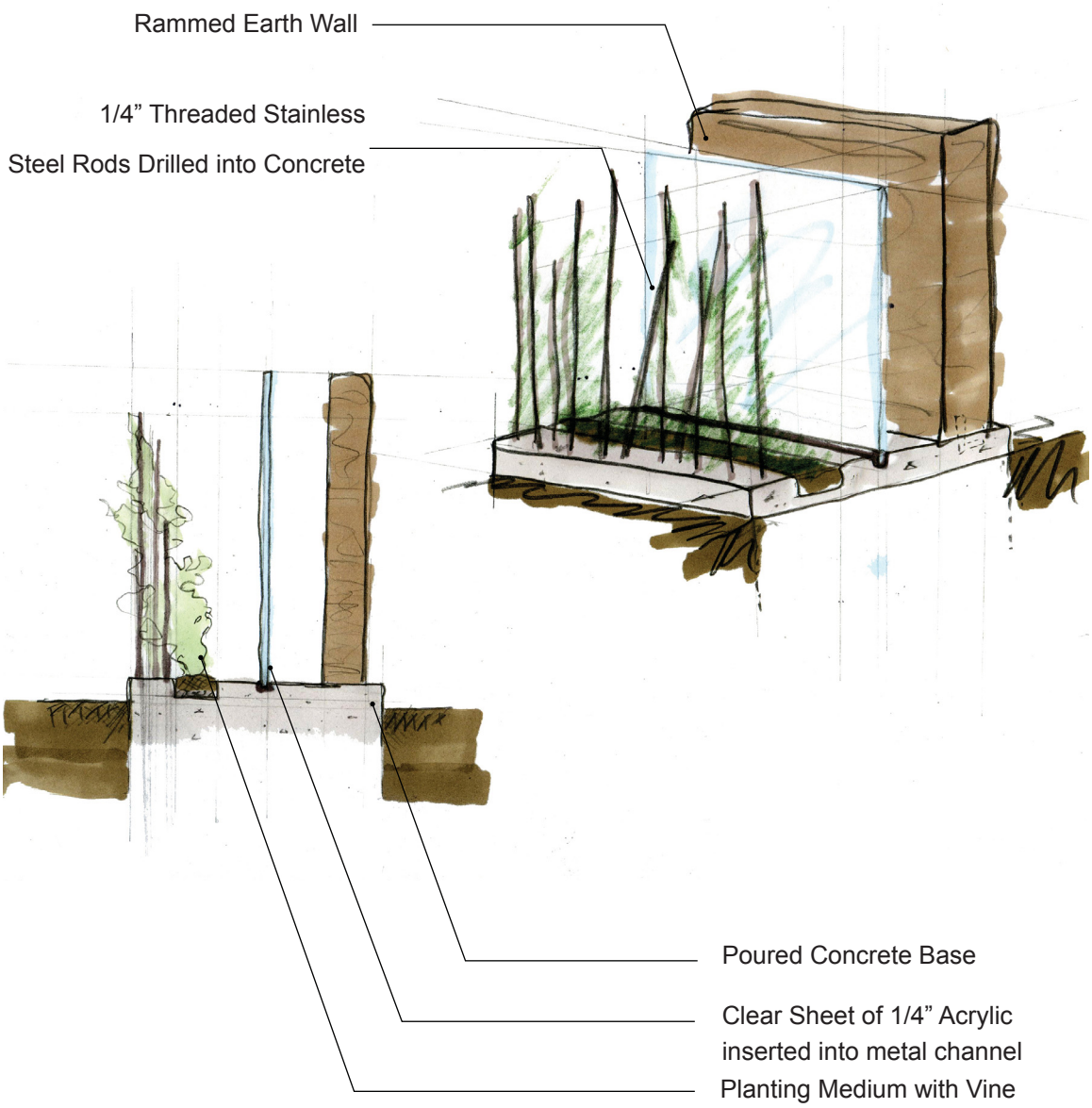
-To build a 1:5 detail model of the screening condition:

-varying visual transparency
-varying and seasonal protection of rammed earth wall




Various Vignettes and Sketches at Entrance.



Proposed Materials of Detail Model.

Rammed Earth Considerations

(from Minke, Gernot. *Building with Earth: Design and Technology of a Sustainable Architecture,* 2006, 12-15*).*

Density

The Density of soil is defined by the ratio of dry mass to volume (including pores). Rammed earthworks and soil blocks can vary in density from 1700 to 2200 kg/m3 (or more, if it contains considerable amounts of gravel or larger aggregates).

Elasticity

The dynamic modulus of elasticity of loam usually lies between 600 and 850 kg/mm2.

Thermal Insulation

The thermal insulation capacities of solid rammed earth walls using normal soil is not sufficient to provide the levels of thermal comfort required in cold climates. The U-value of a 30cm thick rammed earth wall is as much as 1.9 to 2.0 W/m2K. To achieve a U-value of 0.5 W/m2K (as necessary in colder climates), a thickness of 1.6 to 1.8m would be required. In cold climates, therefore, a thick wall of rammed earth, additional conventional insulation or trombe wall systems should be used.

Vapour

While loam in contact with water swells and weakens, under the influence of vapour it absorbs humidity but remains solid and retains its rigidity without swelling (loam can therefore balance indoor air humidity). In moderate and cold climates where indoor temperatures are often higher than outside temperatures, there are vapour pressure differences between interior and exterior, causing vapour to move from inside to outside through the walls.

Condensation

In moderate and cold climates the water vapour contained in indoor air diffuses through the walls to the exterior. If the air is cooled down in the walls and reaches the dew point, condensation occurs. This dampness reduces thermal insulation capacity and may lead to fungus growth. It is important that this humidity be transported quickly by capillary action to the surface of the walls where it can evaporate. Materials like loam with high capillary action are advantageous.

Additions of Fibres

The shrinkage ratio of loam can be reduced by the addition of fibres such as animal or human hair, fibres from coconuts, sisal, agave or bamboo, needles from needle trees and cut straw. When adding fibres, the relative clay content is reduced and a certain amount of water is absorbed into the pores of the fibres. Because the fibres increase the binding force of the mixture, moreover, the appearance of cracks is reduced.

Stabilization Against Water Erosion

In general, it is unnecessary to raise the water resistance of building elements made from earth. If, for instance, an earth wall is sheltered against rain by overhangs or shingles, and against rising humidity from the soil through the foundation (which is necessary even for brick walls), it is unnecessary to add stabilizers. But for construction exposed to rain the addition of stabilizers may be necessary. A weather resistant coat of paint is sufficient but cracks often appear on the surface. There is then a danger of swelling and rainwater penetration (which ultimately results in earth construction erosion).

Cement

Cement acts as an excellent stabilizer in soils with low clay content. Cement interferes with the binding force of the clay and therefore it is possible that the compressive strength of cement-stabilzied soil is less than that of the same soil without added cement.

Lime

If there is sufficient relative humidity, than an exchange of ions take place in the loam with lime as stabilizer. The calcium ions of the lime are exchanged with the metallic ions of the clay. As a result, stronger agglomerations of fine particles occur, hindering the penetration of water. Furthermore, the lime reacts with the carbon dioxide in the air to form limestone.

Labour Input

The labour input of traditional rammed earth walls constructed manually, including preparation and construction, is from 20 to 30 h/m3. With highly mechanized techniques and heavy pneumatic rams labour input can be reduced to as little as 2 h/m3.

Surface Treatment

A rammed earth wall requires less material and labour for surface treatment compared to walls made using other earth construction techniques. As a general rule, it is neither necessary nor advisable to plaster a rammed earth wall. If the surface is sponged with a moist trowel or damp foam brush immediately after dismantling the formwork, then a smooth surface is easily produced.

Drying

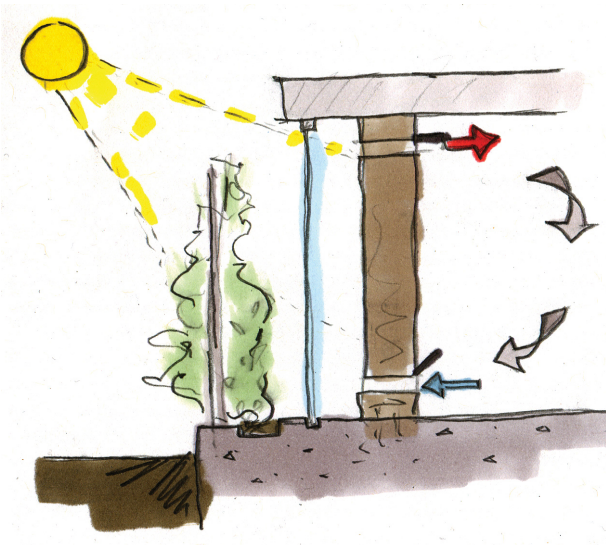
The drying process is faster than masonry or concrete. Given dry, warm weather and sufficient air movement shrinkage stops after just a few days. After three weeks the wall feels completely dry although the water content is still slightly higher than the equilibrium moisture content.

Trombe Wall Principles

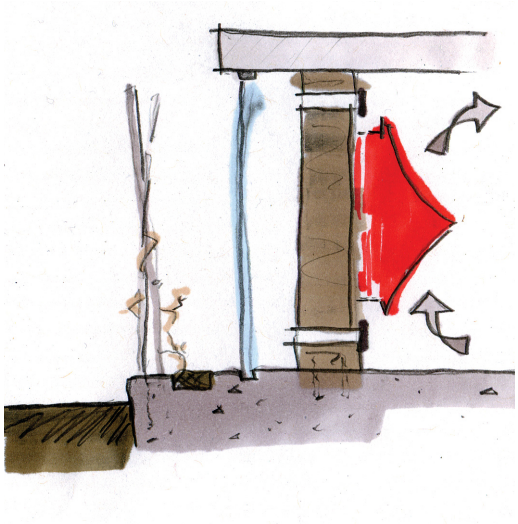
Trombe wall systems, also known as indirect gain systems, use the same principles as direct gain systems. Trombe wall systems, however, do not directly heat the occupied space. Instead, solar heat is collected by the storage mass which it then transfers to the space. Here, a rammed earth storage mass is located directly behind a large, glazed, south-west facing wall. During the day, openings in the trombe wall would allow heated air from the cavity to flow into the room and cool air from the room to flow into the cavity where it is again heated. At night, the vents would close and the heat stored in the rammed earth mass radiates into the room (Torcellini 2004).

The trombe wall systems results in rooms receiving slow, even heating for many hours after the sun sets. Additionally, this greatly reduces the need for conventional heating. Rooms heated by a trombe wall often feel more comfortable than those heated by forced air because of the large warm surface providing a radiant comfort (Torcellini 2004).

Properly sized roof overhangs shade the trombe wall during the summer when the sun is high in the sky. Shading the trombe wall can prevent the wall from getting too hot during the time of the year when the heat is not needed. Additionally, trellises and plantings shade the solar collector during the warm summer months (Torcellini 2004).



Trombe Wall Section, Day (In Summer)



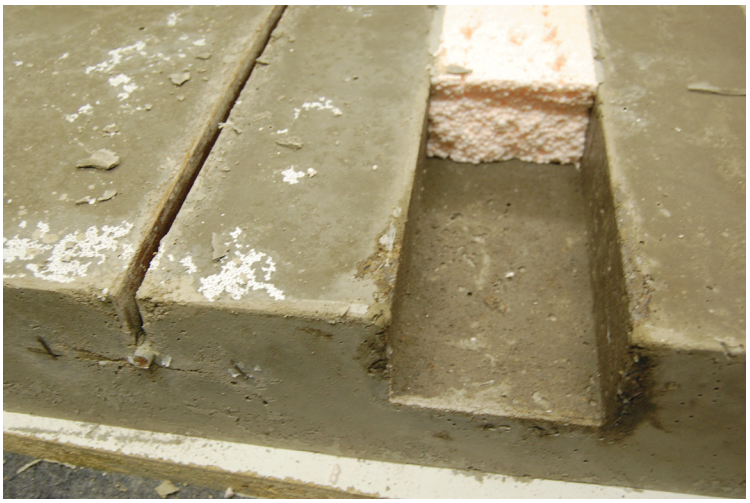
Trombe Wall Section, Night (In Winter, Full Occupancy)

Detail Construction

Form work construction using Melamine forms, styrofoam block (to be removed later), and metal bracket (to later hold an acrylic sheet). The Melamine surface is smooth so the releasing agent (Vaseline) is only needed around the styrofoam. A thin level line was incised on the inside of the form work to indicate the desired finished concrete level.

Concrete mixing with added Polypropylene fibres for tensile strength. These fibres absorb small amounts of moisture so extra water was added incrementally during the mixing.

Poured concrete in form work.



After removing the Melamine form work, the concrete base was flipped and the styrofoam easily removed.

The holes were predrilled for the 1/4” threaded rod rain screen. The holes were also predrilled for the threaded rod supports at the rammed earth wall base.

The plywood slip form work applied to the concrete base.

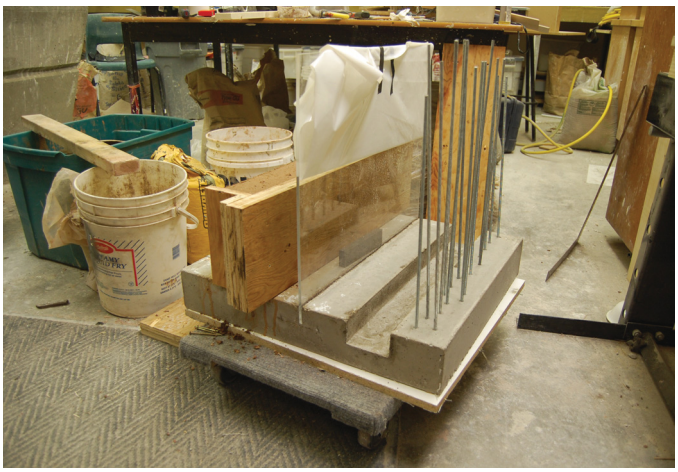
The threaded rod supports were hammered into the predrilled holes.

The earth layers were hand tamped and compacted around the threaded rod supports. The earth mixing and tamping were labour intensive.

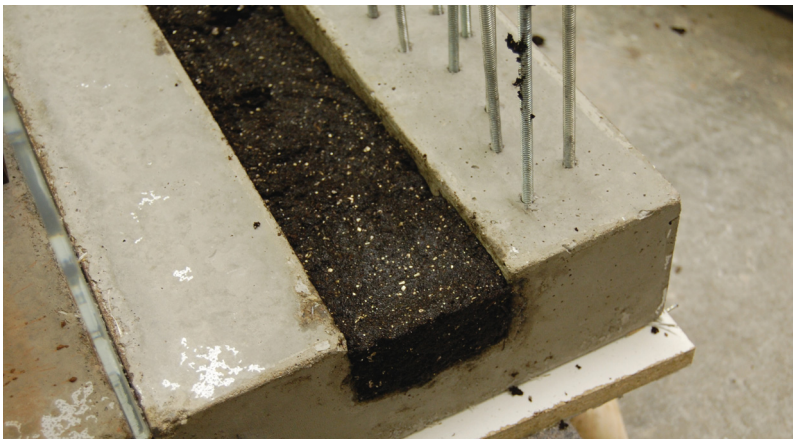
The rammed earth section is completed and left to dry.

The threaded rods (of varying heights) were easily hammered into the predrilled holes.

The acrylic was slotted in to the recessed channel. A bead of clear silicone was added to hold the sheet in place.



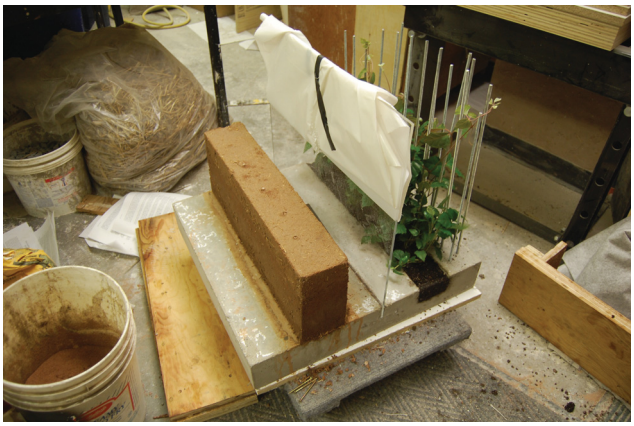
Overall photo of detail in progress.



Potting soil added to concrete recess. Special care was taken to ensure the soil was moist and malleable (and able to compact at the exposed ends).

Removal of rammed earth form work. Although stressful, the removal of the form work went well and the previously applied Vaseline stayed strong throughout the tamping and drying.

Planted vines climbing the rods. Upon initial placement, the vines were easy to plant and naturally clung to the threaded rods.



Overall views before moving the model.

The model construction provided a diverse introduction to a range of construction and modelling practices (concrete pouring, metal work, form work construction, rammed earth and planting). The physical construction of the model was an interesting and multifaceted process that presented many logistical challenges. Although physically the model is a manageable size, the density and weight of the piece can be inconvenient. The two main construction methods (concrete and rammed earth) are also labour intensive, require robust form work, material mixing, and time to cure or dry. This model could not have been constructed quickly or in individual parts. The sequence and timing of model construction is a reflection of the building construction schedule.

The quality, sequence and spacing of different material elements work well as a system. The design potential now resides in the exploration of habitable zones between the various building layers.

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