

The Architecture of Care:  
Maintenance Cycles for an Intentional Caregiving Community

by

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# TABLE OF CONTENTS

Abstract .....	iii
Acknowledgements .....	iv
Chapter 1: Introduction .....	1
Thesis Outline .....	1
Critical Position .....	4
Chapter 2: Caregiving Systems .....	8
Caregiving Facility Typologies.....	8
Village Communities + The Camphill Movement .....	10
Reprogramming Domestic Work .....	12
Maintenance Strategy 1: Programming Care .....	13
Chapter 3: Caretaking Systems .....	16
Facilities Management + Architecture .....	16
Building in Layers .....	16
Active Inhabitants .....	19
Maintenance Strategy 2: Layered Care .....	22
Maintenance Strategy 3: Zoned Care .....	22
Chapter 4: The Architecture of Care .....	23
Situating .....	23
Application of Maintenance Strategies .....	32
Programming Care .....	32
Layered Care.....	35
Zoned Care .....	39
Inhabitation.....	40
Narrative of Community Cycles.....	46
Chapter 5: Conclusion.....	51
Appendices .....	52
Appendix A: Camphill Community Case Studies.....	52
Appendix B: Field Notes from Maison Emmanuel .....	66
Bibliography .....	76



## ABSTRACT

This thesis celebrates the work of care, caregiving for a person and caretaking for a building. It argues that these two maintenance processes are worthy drivers of architectural design as they are central to the relationship of people to their built environment. This project develops a design system for an intentional caregiving community based on three maintenance strategies: programming care, layered care and zoned care. This system is tested through the design of gathering hub for a caregiving community in the Laurentian region of Quebec. The design intervention includes three central buildings, each functioning as a gathering space and a facility for domestic work in tandem. At the scale of the settlement, building and detail the proposed architecture strives for community self-reliance and building longevity as a result of user engagement in building maintenance.

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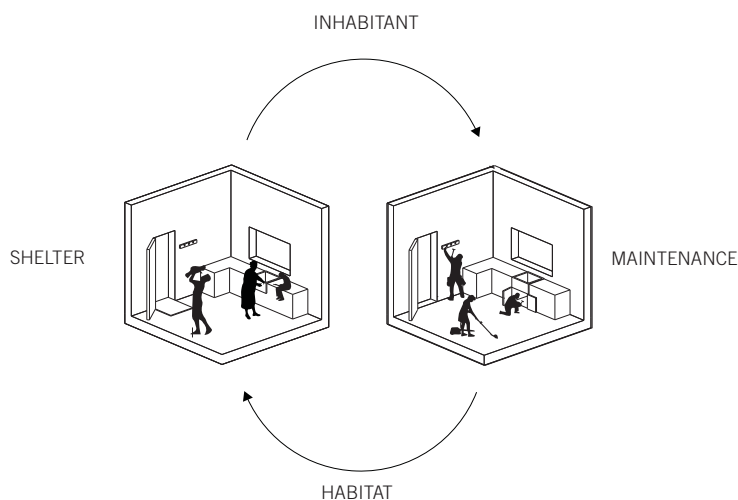
Finally, to my parents, Nora, Annie, David and Meg, thank you for your constant love and support. Thank you Siggie for your partnership.

## CHAPTER 1: INTRODUCTION

### Thesis Outline

This thesis explores how a design system focused on maintenance can encourage self-reliance of a care-giving community in the Laurentian region of Quebec. This exploration challenges our current caregiving facilities by investigating intentional communities and proposing that building maintenance can be an instrument for social and technological transformation. These claims are tested through the development of a gathering hub and associated construction system. This architecture celebrates communal gathering and domestic work in tandem.

Care for a person and care for a building are reciprocal systems. Through use and upkeep the inhabitants of a building ensure its longevity. Maintenance of both the building and the life within it is achieved through the consistent and appropriate frequency of restoration. This is in response to the many instances when the relationship between building and user becomes static rather than dynamic. Such an instance occurs when the building is not designed to comfort and delight its inhabitants, or when the users do not fully engage with the care for their buildings.



Caregiving and caretaking as a reciprocal relationship



This thesis is positioned within the architectural discourse in terms of caregiving and caretaking. Three strategies for maintenance are developed from research on these two themes. These strategies are then tested in the design development of an existing intentional caregiving community.

Chapter 2 introduces caregiving systems with particular attention to the deinstitutionalization of people with developmental disabilities. The typology of village communities is investigated through the Camphill movement and in comparison to a variety of communal living projects that divide and champion domestic work. Inspired by these project the first of three maintenance principles is introduced: Programmed Care.

Chapter 3 introduces care taking systems through theories of building as a temporal system. These theories include shearing layers as an organizer of maintenance activity and thermal delight as a compliment to building program. Principles of Layered Care and Zoned Care are defined from the relation of these theories to the social context of a village community discussed in chapter one.

Chapter 4 suggests how the three principles of building maintenance are applied to an architectural project. First the specific environmental and cultural context of an existing caregiving community are analyzed. From this analysis, site, program and a kit of parts construction system determine parameters for buildings that valorize domestic and maintenance activities. The results is a typology of building that marries these activities with social/gathering programs. This idea is illustrated through the design of a community hub for an existing caregiving community in the Laurentian region of Quebec, Maison Emmanuel.

## Critical Position

Maintenance has power over architecture.  
Architecture has little power over maintenance<sup>3</sup>

Hilary Sample's *Maintenance Architecture* introduces projects with that focus on the care of buildings, in contrast to the typical representation of architectural projects.<sup>4</sup> One of these projects is Mierle Laderman Ukeles' 1969 *Manifesto for Maintenance Art*, part of a proposal for an exhibition called *CARE*. Ukeles subverted the invisibility of maintenance by performing the care of a building as a central part of her artistic practice<sup>5</sup>. Her work was a validation of domestic and institutional maintenance. The goal of this thesis is of a similar character, it seeks to reveal and celebrate the cycles of care that fuel community life and considers how these acts can be the primary driver of architectural practice.

Acts of caregiving for people and caretaking for buildings are "invaluable and invisible".<sup>6</sup> 80% of the care for Canadians with long-term health, disability or aging needs are met through informal care and up to 80 % of the total cost of building goes to operation and maintenance.<sup>7</sup> Both caregiving and caretaking are maintenance systems that would benefit from critical architectural judgement.<sup>8</sup>



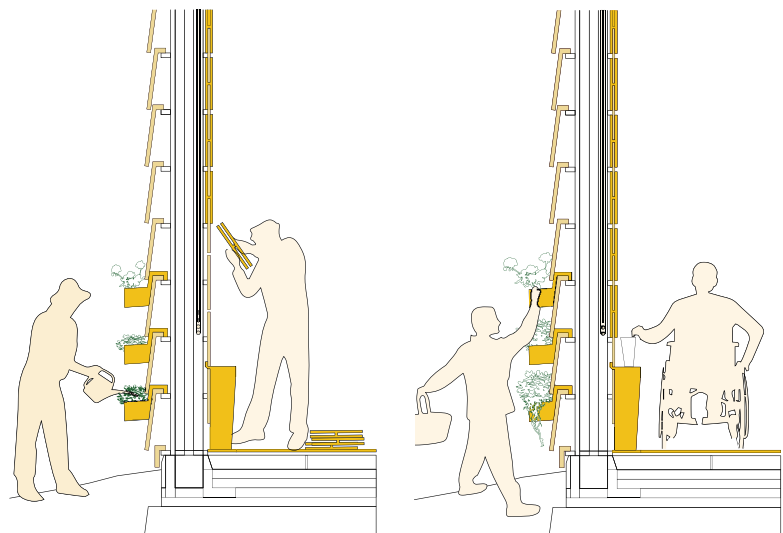
Mierle Laderman Ukeles Hartford Wash: Washing, Tracks, Maintenance: Outside, 1973, (from Ronald Feldman Gallery, 2018)

Maintenance occurs in routine cycles. The activity of changing bed sheets and sweeping up after meals are characterized as much by the objects associated with them (beds and tables) as how often they are performed (weekly and daily). The same is true of routines of maintenance for larger building components. Within the complex system of a building there are many components, each with associated care routines. The frequency of maintenance cycles depends on the intensity of use and existing condition of the entity being cared for.<sup>9</sup>

This thesis positions care as a valuable, compelling part of a building culture.<sup>10</sup> 'Care' activities include both caregiving for a person and caretaking of a building. Both instances include the roles of caregiver and care receiver, although the actor in each role may shift over time. This project argues that architecture based on care-systems in which both caregivers and care receivers are actively engaged can foster a positive reciprocal relationship.

The pursuit of a such an architecture supports a healthy building culture in the terms set forth by Howard Davis:

Conceptual Diagram of User Interaction with Routines of Building Maintenance

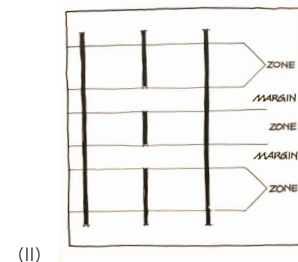
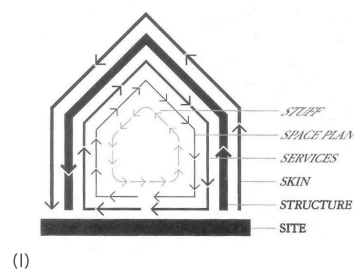


In a healthy building culture, buildings of meaning and value are being made by people who are themselves, improving their lives through making those buildings. The various parts of the culture reinforce each other and make it stronger, its customs and rules are understandable and make sense... The health of a building culture lies partly in its ability to produce artifacts of long-term human and spiritual values.<sup>11</sup>

To successfully support such a building culture requires the architecture have rules that govern a system of construction while still allowing opportunities for inhabitants to adapt and change their buildings over time. In this project the rhythms of caregiving and caretaking influence the rules of the building system.

Similar arguments about building systems comprise of fixed and flexible components have been made by many other architects, since the rise of mass housing.<sup>12</sup> In 1961, John Habraken divides architecture into Supports which are governed by the community and Detachable Units which are governed by the individual.<sup>13</sup> Building off the work of Frank Duffy, Stewart Brand famously theorized buildings in layers defined by their lifespan and associated maintenance cycle in 1991.<sup>14</sup> This project synthesizes these models by categorizing an architectural project into layers of varying life cycles and user interaction. These three categories are: armature, appliance and activity. The hardware is divided into armatures and appliances, while the software is referred to as activity. This model highlights the sites of exchange between the building and the inhabitant.

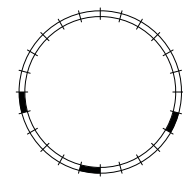
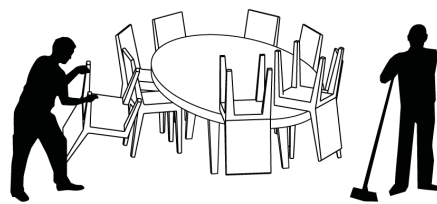
- (i) Building Layer (from Stewart Brand, How Buildings Learn)  
 (ii) Layout of Supports (from John Habraken, Variations)



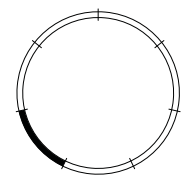
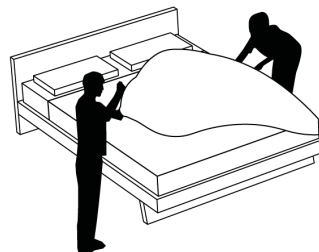


Armature, appliance and activity are applied to the development of a kit of parts construction system for an intentional caregiving community. Armature is the relatively immovable structure, for example a bed or dining table. Appliance is the moveable object associated with the armature. It is the surface the user comes in contact with, often influencing the comfort and delight of the inhabitant, for example bed linens or chairs. Lastly the activity is the human effort that acts on the appliance, for example changing bed sheets weekly or lifting chairs off the ground after each meal to sweep the floor. The proposition here is that a building can be designed to reveal itself as an object to be maintained by the inhabitant.

The typology of an intentional community is appropriate for this study because there are clear patterns of living and working within the same buildings and the active caregiving relationships already existing between inhabitants. The success of the system relies on sensitive analysis of available resources in the given community (skills, labour, material, tools).



MEALTIMES CLEAN UP 3X/DAY



CHANGING BED LINENS 1X/WEEK

Domestic Work and Associated  
Cycles in terms of Armature,  
Appliance and Activity

## CHAPTER 2: CAREGIVING SYSTEMS

### Caregiving Facility Typologies

The attitude towards domestic tasks in a given caregiving facility is influenced by facility type. The following sections will compare institutional, dispersed, clustered and village models of caregiving.

Caregiving for adults who can no longer or never could live independently takes place in a variety of facility types. This project investigates how the architecture of a caregiving facility influences the load of domestic work associated with providing support for a group of adults. The population in need of special care of particular interest to this project is people with developmental disabilities (PWDD), however the principles of caregiving and caretaking can be expanded to include those marginalized for other reasons, such as mental health and old age.

Since declining in the 1970s, institutions as the primary care facilities for PWDD have all but disappeared, in the wake of reports of neglect and abuse. As of 1990 familial homes or residential group homes are the widely accepted model for care of PWDD.<sup>15</sup> The impetus for deinstitutionalization was to promote equal opportunities for PWDD for inclusion and participation in their communities.<sup>16</sup> Residential facilities with a resemblance to familial environments were the chosen building typology as these settings provide an opportunity for normalized, intimate relationships.<sup>17</sup>

Residential facilities typically take the form of dispersed or clustered group homes, a minority in the category of clustered group homes take on the form of village community.<sup>18</sup> While the distinguishing factor between dispersed and clustered

group housing is merely the proximity of the residential facilities, a village community typically includes a variety of buildings including workshops producing goods and gathering buildings for recreation and cultural events. This project is concerned with this distribution of program as an opportunity to support efficient use of community resources while enhancing the cultural and social life of the community.

The distribution of communal programming may also have a connection to supporting the needs of the individual. Promoting situations that encourage self-determination of PWDD, meaning our individual right to make autonomous choices, has become a focus in the field of disabilities studies.<sup>19</sup> There is no significant difference in reported levels of self-determination between dispersed housing and most clustered housing models, other than an increase reported by individuals in village communities.<sup>20</sup>

Current models of care facilities are not an automatic avenue for PWDD to gain autonomy.<sup>21</sup> Simply moving to a less restrictive accommodation does not lead to enhanced self-determination, and in turn improved quality of life, in PWDD. Rather this move must be paired with meaningful support to make one's own decisions.<sup>22</sup> Such support is reflected in the built environment through increased mobility and social inclusion.<sup>23</sup>

This project acknowledges the theme of self-determination of the individual and focuses on self-reliance at the community scale, particularly in relation to the deployment of community resources towards construction and maintenance of communal buildings.

## Village Communities + The Camphill Movement

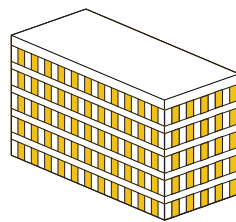
Many village communities are associated with a larger movement, such as L'Arche (begun by Jean Vanier in 1964) and the Camphill movement (begun by Karl König in 1940). Both Movements were begun with the intention to find an alternative to institutional models of care. Caregivers and the individuals they care for live alongside one and other in familial scale homes, sharing education, employment, recreation and long-term relationships.<sup>24</sup> The caregiving program of a village community is sustained by a commitment to communal living and supported by buildings that allow for a rich social exchange.

The Camphill movement was founded by a group including the Austrian pediatrician Karl König, whose work was informed by Rudolf Steiner's teachings in Anthroposophy. Their first building was an abandoned Church of Scotland Manse in Inche, Scotland.<sup>25</sup> Their goal was to build intentional communities that would support the dignity, humanity and purpose of the individuals under their care.<sup>26</sup> This movement has developed into more than 100 communities, in more than 20 countries in Europe, North America, Asia and Africa.<sup>27</sup> The majority of Camphill Communities are purpose built villages, born from the goal for cultivating a healthy community that is relatively uninhibited by prevailing economic and social constraints. Since their founding these communities have been subverting the institutional model of a caregiving facility through their social and built organization.

These communities are characterized by a specific building and material culture. The architecture of these communities shares stylistic attributes such as: built forms generated from geometries favoring open angles, attention to introducing natural daylight into indoor spaces and the use of natural materials and

soft colours in finishes.<sup>28</sup> Camphill communities run handcraft workshops such as pottery, weaving and candle making. The products of these workshops are used within the community as well as sold in community shops alongside produce and baked goods from their gardens and bakeries. Two guiding design principles which inform this culture are supporting the connection of inhabitants to nature and maintaining a robust social life for all residents.<sup>29</sup> This thesis proposes there are opportunities to integrate the self-reliance exhibited by the Camphill workshops with the design and maintenance of the buildings that house these communities.

A study of the patterns of settlement of eight other Camphill communities was conducted (Appendix A). These communities offered a convincing precedent of how the work of caregiving for a person can be integrated into communal living activities. The proposed design for Maison Emmanuel, the community selected for further investigation, applies this integration to a communal system of caretaking for a built environment.



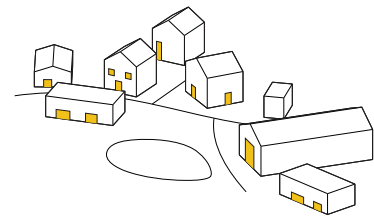
INSTITUTIONAL



DISPERSED



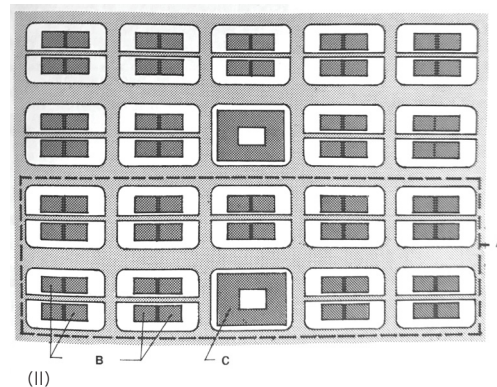
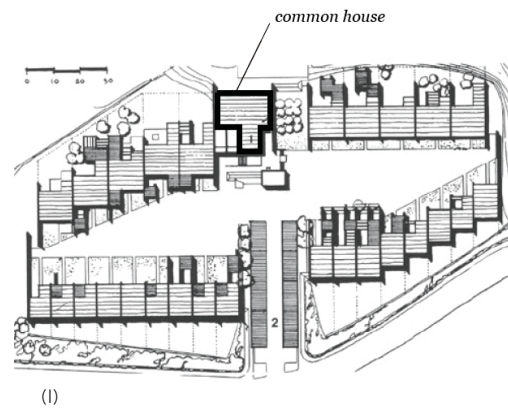
CLUSTERED



VILLAGE

## Reprogramming Domestic Work

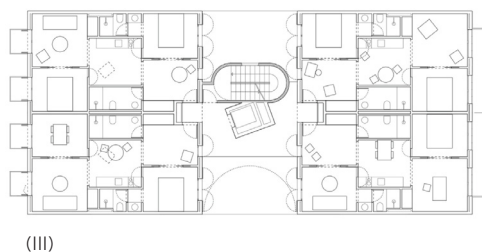
In western society caregiving is wrapped up with patterns of domestic work. These sectors have historically fallen outside our market of paid work and continues to be taken up largely by women. The patterns of performing this work are influenced by the distribution of areas and machines to perform tasks like cooking and cleaning. The goal of shifting kitchens and laundries into communal areas is the efficient deployment of resources and division of labour. This is exhibited in the Melusina Fay Pierce's 1860s concept of cooperative housekeeping,



(i) The site plan of Saettedammen, the first cohousing in Denmark. (from Kathryn McCamant and Charles Durrett, *Creating Cohousing*)

(ii) Diagrammatic plan of cooperative residential neighbourhood (A) 36 kitchenless houses (B), one housekeeping centre (C), (from Dolores Hayden, *The Grand Domestic Revolution*)

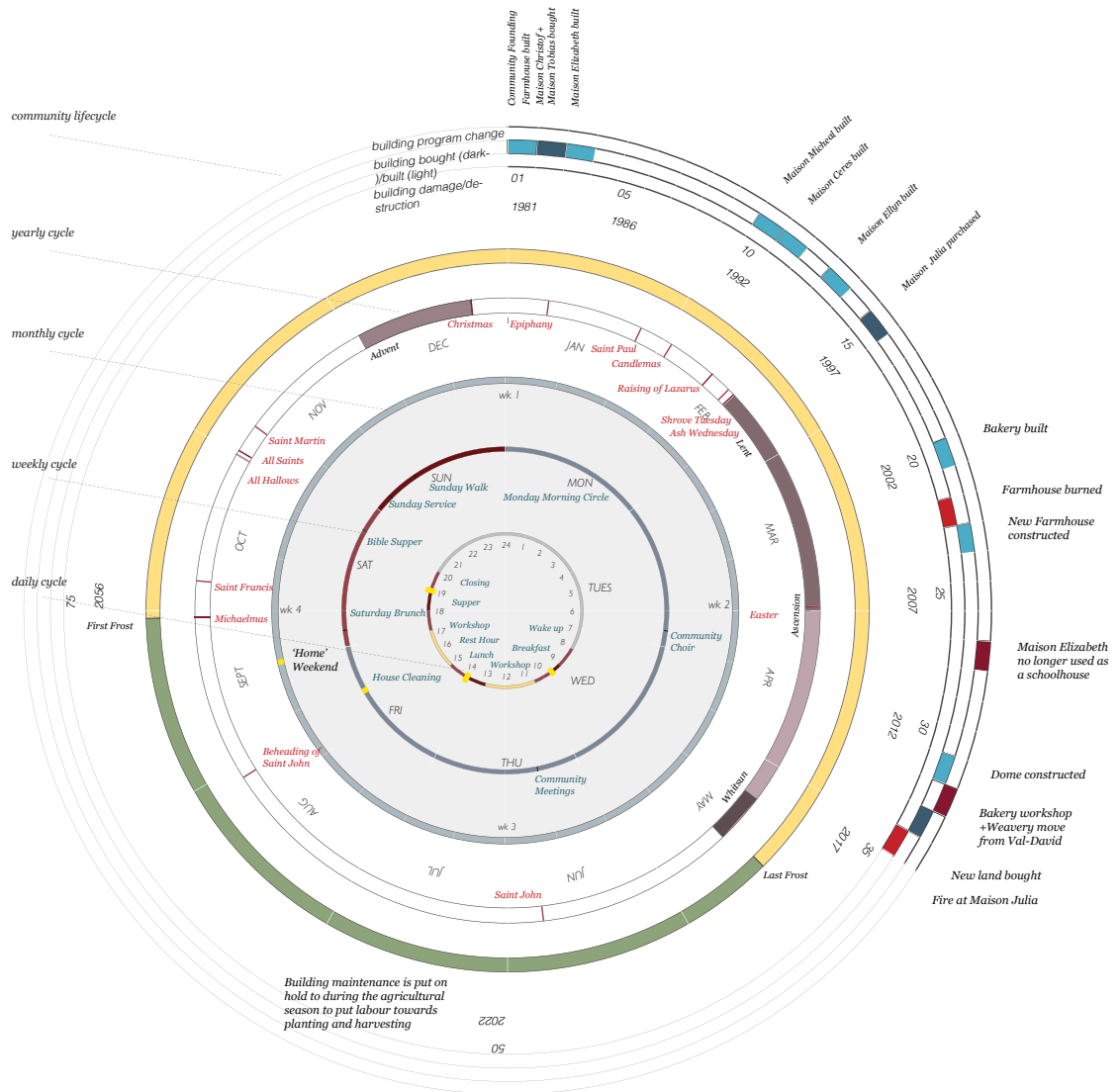
(iii) 110 Rooms, 22 Housing Block in Barcelona. (from MAIO Architects)



which proposed community plans that removed the kitchen and laundries from the private households and introduced these programs in one communal building.<sup>30</sup> With a similar goal of sharing resources for domestic work and to encourage a rich social life, the first Danish Cohousing project implemented a common house as a central driver of their community plans in 1966. In 2016 Anna Puigjaner investigated a similar subversion of typical single-family homes in her work on “The Kitchenless City” and with her firm, MAIO. In her research Puigjaner proposes that alternative forms of areas for domestic work, such as communal kitchens, are a better reflection our current social patterns.<sup>31</sup> Spanning more than 150 years, these are three examples of subverting the programmatic organization of a single family home in an effort to foster efficient division of labour and the social life of a community. This project introduces building maintenance along with activities of cooking and cleaning as domestic tasks to be reprogrammed.

### Maintenance Strategy 1: Programming Care

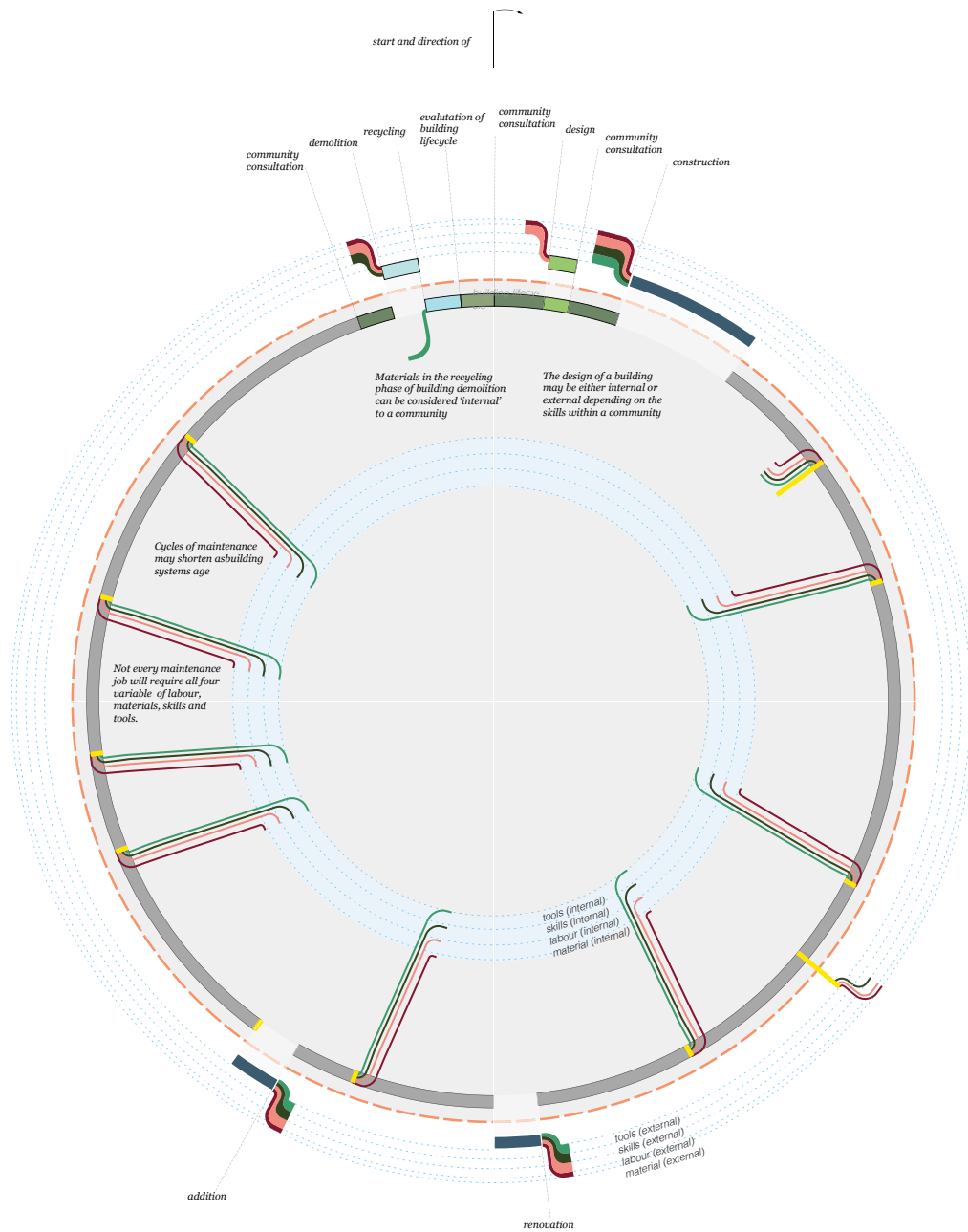
Programming Care is the reframing of maintenance as a communal activity, one which is central to patterns of living and working at the scale of the building and community settlement. This strategy proposes that maintenance work be integrated into the rhythms of communal gathering with a community system. An analysis of the specific cultural rhythms and resources of a community is required to determine opportunities to pair maintenance and communal activities.



### Cultural Cycles of an Intentional Caregiving Community

Due to the centrality of ritual and routine in intentional caregiving communities, repetition in the cycles of days, months, years etc. are pronounced. This offers inspiration to consider the cycles of building construction and maintenance with a similar attention to its repetitive nature. Understanding a building in terms of its maintenance cycles makes it impossible to isolate the role of the architect to solely the design and construction administration of a building. Instead, the architectural design of a building must anticipate the wear and subsequent repair of a building.





Building Life cycle including Maintenance in terms of Internal and External Resources

## CHAPTER 3: CARETAKING SYSTEMS

### Facilities Management + Architecture

In 1992 Frank Duffy, a pioneer in the professionalization of Facilities Management, argued the value of an architect to a construction project is understanding the needs of the user, the performance capacity of a building and the management of both over time.<sup>32</sup> His insistence of time as a key ingredient to the design process hints that the role of the architects stretches beyond the completed construction of a building into its occupancy. Duffy describes a time-based design strategy, saying:

Design should be much more fundamental: the skilled and cost-sensitive allocation of physical resources, despite uncertainty, inadequate information and shifting goals, to solve immediate as well as longer-term accommodation problems of users, clients and society at large. Design in this sense is by no means the exclusive preserve of architects but, by virtue of their training, they are in an excellent position to apply knowledge and judgement--not to mention ethics--to solving difficult and controversial problems which often have very long consequences indeed. Facilities managers will recognize here a strong echo of the development of definitions of their own sphere of responsibility--which have moved away from the diurnal and technical towards the long term and the strategic.<sup>33</sup>

If the architect is to design in terms of strategic systems it is necessary to define the parts of the system of a building and characterize them relative to each other.

### Building in Layers

John Habraken defined a building system in two parts; the supports, which are fixed at the initial construction of a building and are the domain of the community and the detachable units which are open to variation and are the domain of the individual.<sup>34</sup> This definition acknowledges the inevitable change brought to the building over time, by the inhabitant. Therefore, the parts of the building system defined by the architect, the

supports, should be informed by the context of the user. This includes their access, ability and resources to act on those supports to adapt them to suit their individual patterns of dwelling. This project positions caretaking for a building as a central ritual of dwelling and therefore organizes supports and detachable units based on the forces that wear down a building.

There are two central drivers of wear on a building: climate driven wear and user driven wear. Climate driven wear applies to the structure and envelope subsystems of a building.<sup>35</sup> These components fall in the Habraken's category of supports. As climate is specific to site the strategies to mitigate this type of wear differ depending on context. User driven wear is specific to the cultural context of a building, as well as the type and frequency of use. The user driven wear on a building is analogous to the detachable units, as Habraken defines them, and includes the engines and operable components of a building. This definition of first building subsystems, and then the layers of building assemblies, in terms how they wear can inform a strategic method of allocating resources for building maintenance.

Detailing a building envelope involves organizing layers of an assembly. The enclosure provided by this layered building envelope distinguishes outdoor from indoor, giving shelter to and supporting the program of the inhabitants. As building cultures change, so too do the number and complexity of these layers. To accommodate a desire for highly conditioned environments, contemporary building assemblies include layers to mediate air temperature and humidity. Both the materials characteristics of each layer of a building assembly and the connection between them determine their performance over time.<sup>36</sup>

In the 1990s Frank Duffy and then Stewart Brand consider a building as a composite of layers of varying life spans. For Duffy these are Shell, Services, Scenery, and Set. Brand expanded these layers to his own Site, Structure, Skin, Services, Space Plan and Stuff. Each layer is characterized function and its rate of decay.<sup>37</sup> Their proposal, that a building is only the sum of its different layers, is significant to a discussion about maintenance as it suggests that refurbishment of a building ought to occur for each layer depending on its associated life-span. Designing a building with this in mind would lead an architect to pay attention to the function of the building, and the people who will maintain it, in terms of layers that change at different frequencies. Maintenance of the layers becomes a continuous part of inhabitation, rather than an invisible process from new construction to total decay.

It is fundamental to acknowledge these different layers and recognize that a building's decay will occur at a variety of rates. However, in the realm of maintenance, this is only useful if one can clearly replace a layer with a shorter lifespan, while leaving those still intact and unscathed. Therefore, the application of Brand's theory of layered buildings to this discussion of maintenance is only useful when paired with attention how the building can communicate to the inhabitants the need for maintenance. This would require the addition of yet another 'S' to Brand's description of buildings layers: a Script. The 'Script' could be intrinsic to the building (visually, material change, separation of program, areas) or it could also be a complement to the building (in a manual in the form of a book or an application associated with a digital device). Three examples included in this design are continuous floor and ceiling finish layers<sup>38</sup>, accessible machines and active walls. Each of these methods of detailing a building allow for ease of installation

and replacement and when used continuously throughout a building complex become a didactic component of the building culture.

Achieving this strategy for refurbishment of building assemblies requires that building layers are organized so that those closest to the surface, in need of the most frequent repair, are built for ease of maintenance. The characteristics of this process must also fall within the labour, skills, tools, material resources available within a given community. Such a system extends engagement in the building culture from those within the construction industry to the inhabitants of the building.

### Active Inhabitants

This project suggests that architecture can also activate inhabitants by operating in line with their cycles of dwelling. This is apparent in the Quebecois vernacular building type called “Maison Bloc” in which the family dwelling is connected to workshop areas by way of an interstitial space, usually a summer kitchen. This is an elegant approach that organizes space not only by program but also by climate. The result is that inhabitants use the three distinct areas of their building differently depending on the season. To apply this to contemporary energy efficient models, such as Passive House, which rely on an airtight building with significant insulation, the building should not be conceived of as a singular sealed climate but rather a progression of differently conditioned spaces. This strategy allows for programs which are humid (kitchen and bathrooms) and therefore require more frequent maintenance to be isolated in a different but adjacent air tight layer of dryer areas (the living and sleeping rooms). This also allows for more thoughtful use of interstitial climate zones like winter gardens, summer kitchens and passively warmed workshops.

Expanding the palette of interior climates from only warm/dry, to warm/humid, cool/dry, and cool/humid, not only isolates areas of the building vulnerable to rot but, is an opportunity for celebration of a variety of interior experiences. Lisa Heschong's "Thermal Delight in Architecture" provides a framework for the value added to a building when climatic monotony is avoided.<sup>39</sup> Another dimension is added to the palette of thermal zones when the architecture acknowledges passage of time through the season, suggesting to the inhabitant that spaces may be occupied differently in Summer, Autumn, Winter and Spring.



Maison Bloc Typology (from Jean-Claude Dupont, *Habitation Rurale Au Québec*, 1978.)

Studies of Climate Zoned Plans



## Maintenance Strategy 2: Layered Care

Layered care suggests that building assemblies be organized in relation to the relative service cycle of each layer. With a focus on self-reliance, the details of each layer are further defined by the resources (skills, materials, labour and tools) necessary to replace/refurbish them. This project focuses on how building assemblies can be designed to allow for ease and economy of maintenance. Separating parts of the building into their respective cycles of maintenance is an effort to reduce the need to replace entire building assemblies unnecessarily. With a focus on self-reliance, this principle defines which layers are to be maintained by inhabitants and which require external resources.

## Maintenance Strategy 3: Zoned Care

Zoned Maintenance is a seasonal approach to occupancy, concerned with 'thermal delight' of inhabitants.<sup>40</sup> Based on the understanding that the wear on a building depends on the program and occupancy of a given space<sup>41</sup> this principle suggests that the organization of adjacent areas of a building be based on climate as well as function. Zoned Maintenance extends the study of isolated building assemblies to the whole building as a system and suggests that the overall longevity of a building the layout of rooms will be informed by climate, and related maintenance needs. This principle requires a specific understanding of the climatic context of a given project.



## CHAPTER 4: THE ARCHITECTURE OF CARE

### Situating

There are two central intentions of this design. First, is to introduce a building typology that marries domestic work with communal gathering to an existing community. Second, it to suggest a community based construction system to build and maintain these buildings. The specific community for this pilot project is Maison Emmanuel, who describes themselves as:

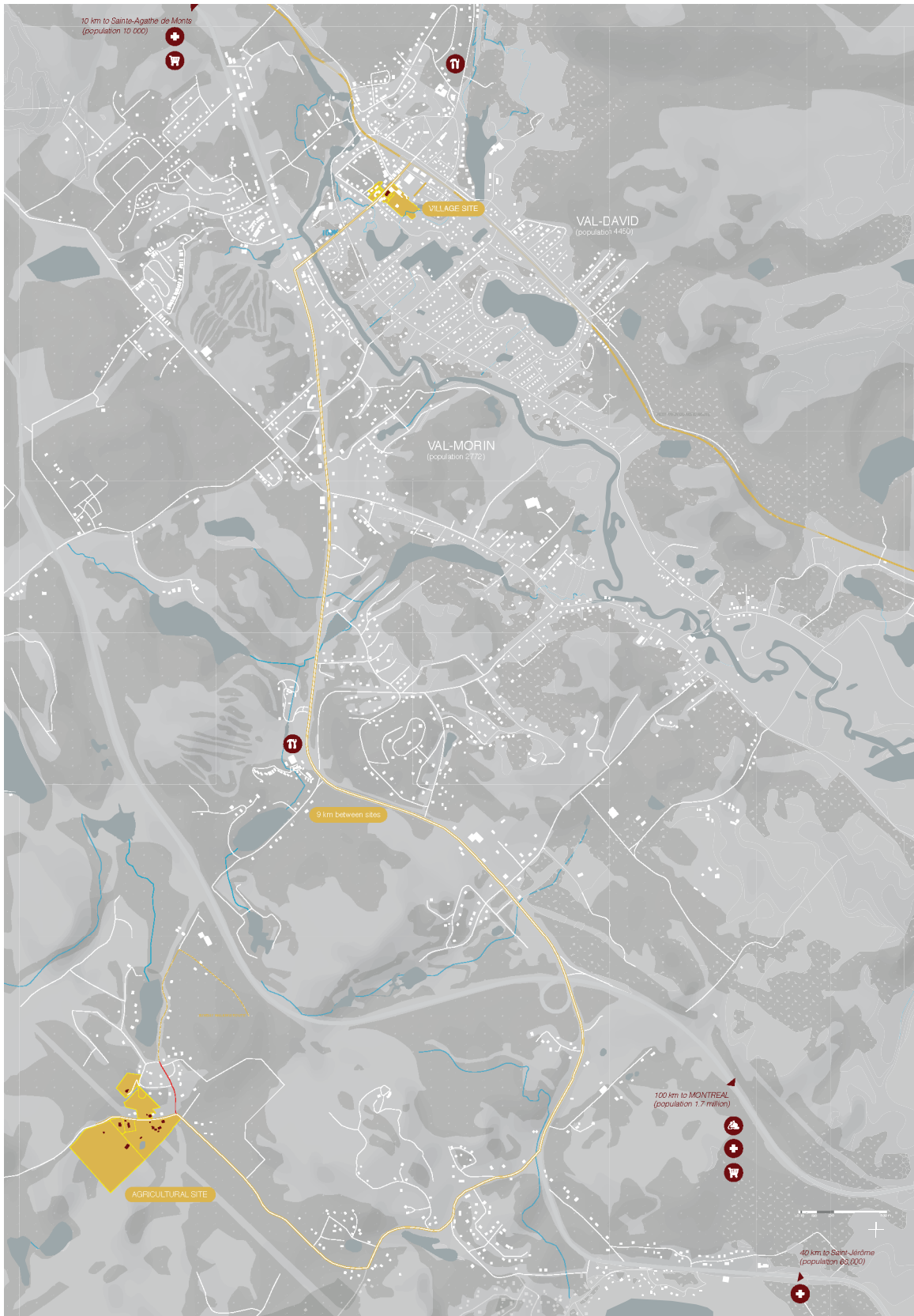
A community of people, some of whom have special needs, living together in the Laurentian hills. Located an hour north of Montreal, our community of 45 people is nestled in a valley on old farmland, in the midst of the forest. Maison Emmanuel, member of the North American Council for Anthroposophic Curative Education and Social Therapy, is inspired by the philosophy of Rudolf Steiner and modeled on the worldwide Camphill movement.<sup>42</sup>



Maison Emmanuel throughout the four distinct seasons of the Laurentian region.

Maison Emmanuel was established in 1983 about 4 km from the highway and 10 km from Val-David, Quebec (population 4450). For the past 35 years this community has continuously developed their property.<sup>43</sup> Today it amounts to 4 residential homes, a farm consisting of cows, horses, chickens and approximately 1500 m<sup>2</sup> of vegetable gardens, three workshops facilities and an office/administration building. This organization also has a satellite property on the main street of Val-David which includes a fifth residential house, a café and small retail store where products from the workshops are sold, and a pottery workshop that is run with the support of local artisans.

For many years this community has discussed the construction of a community hall that would provide them with gathering space for community meetings, religious services, drama and dance workshops and festivals to mark the passing of the seasons.<sup>44</sup> Currently these activities are taken up in a 50 m<sup>2</sup> room in the basement of one of the houses.



Map of Regional Resources showing two community properties near Val-David, QC and Val-Morin, QC (from Open Source Map)

While the community property is extensive (about 5.7 ha), providing many opportunities to spread out construction projects, this design proposal situates the new construction amongst existing workshop buildings, between a two-lane country road to the north and vegetable gardens, sloping towards a valley, to the south. The proposal flanks a pedestrian pathway that leads to three community houses to the west. This position integrates the program of gathering and the exterior maintenance of this area, such as snow-removal or clearing leaves and brush, into the existing rhythms of the community. These proposed buildings create communal open area between them, onto which the program of each can extend.

This phase of community development creates a gathering hub, separating programs associated with gathering into three main buildings and two pavilions. Between the three central buildings and the existing workshops a communal open area is created. This space becomes a continuation of a pedestrian pathway meandering between buildings and around to the gardening area, with a view over the valley. The two pavilions, a chapel up a hill with a view over the valley and a swimming change room, down the valley near the community pond, act as spokes off this gathering hub that invite inhabitants to gather in smaller groups and engage further in the landscape. The separation of the program into multiple building supports the piecemeal settlement of the community over time<sup>45</sup>, allowing for the project to be implemented with many small investments and affords the opportunity for community reflection between each phase. This project proposes the addition of 500 m<sup>2</sup> of gathering space to be added to the existing 1500 m<sup>2</sup> of this settlement.





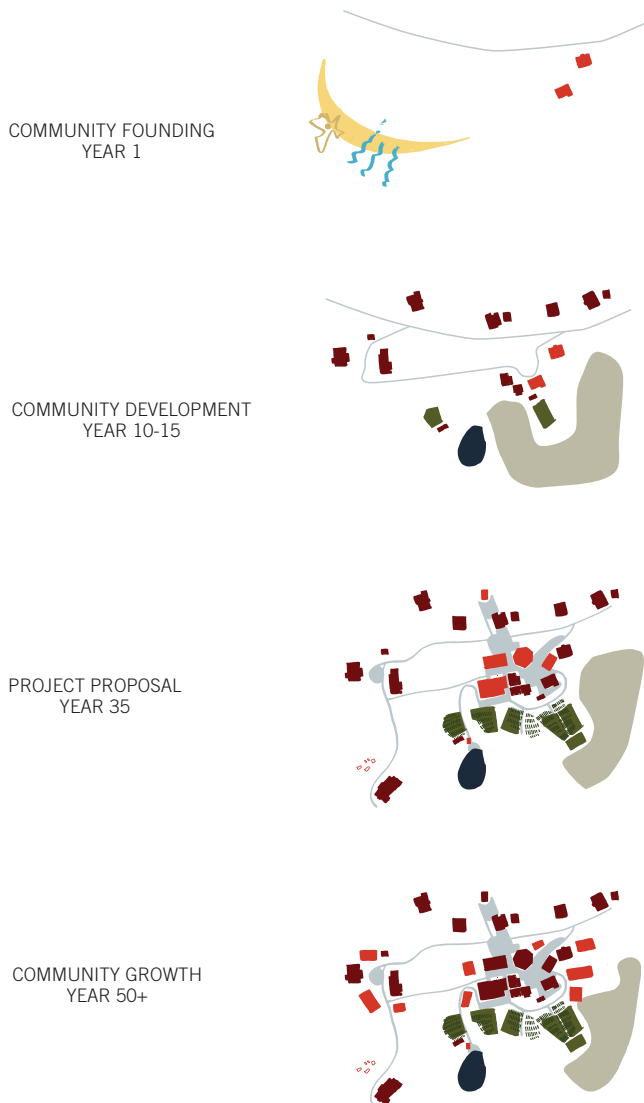
EXISTING



PROPOSED

Site model showing Existing Settlement and Proposed Gathering Hub

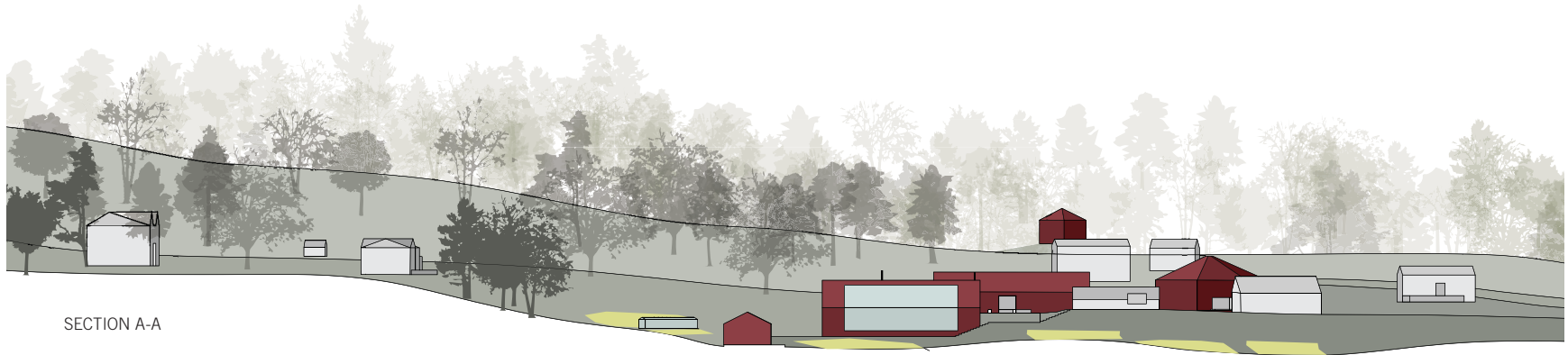
The project is an addition to the continued settling of the Maison Emmanuel property to support the self-reliance and social life of this community. To achieve these goals the elements of the existing settlement was observed. This observation included drawing gathering spaces and the circulation through them as well as documenting the resources of community workshops. The additions to this existing logic are to be in the service of developing Maison Emmanuel as a ‘village community’, therefore an analogous descriptive drawing was made of the neighbouring village of Val-David. In particular the circulation through both sites was analysed by type and speed of circulation (thoroughfare, village street, pedestrian lane).







Settlement Site plan with Gathering Hub

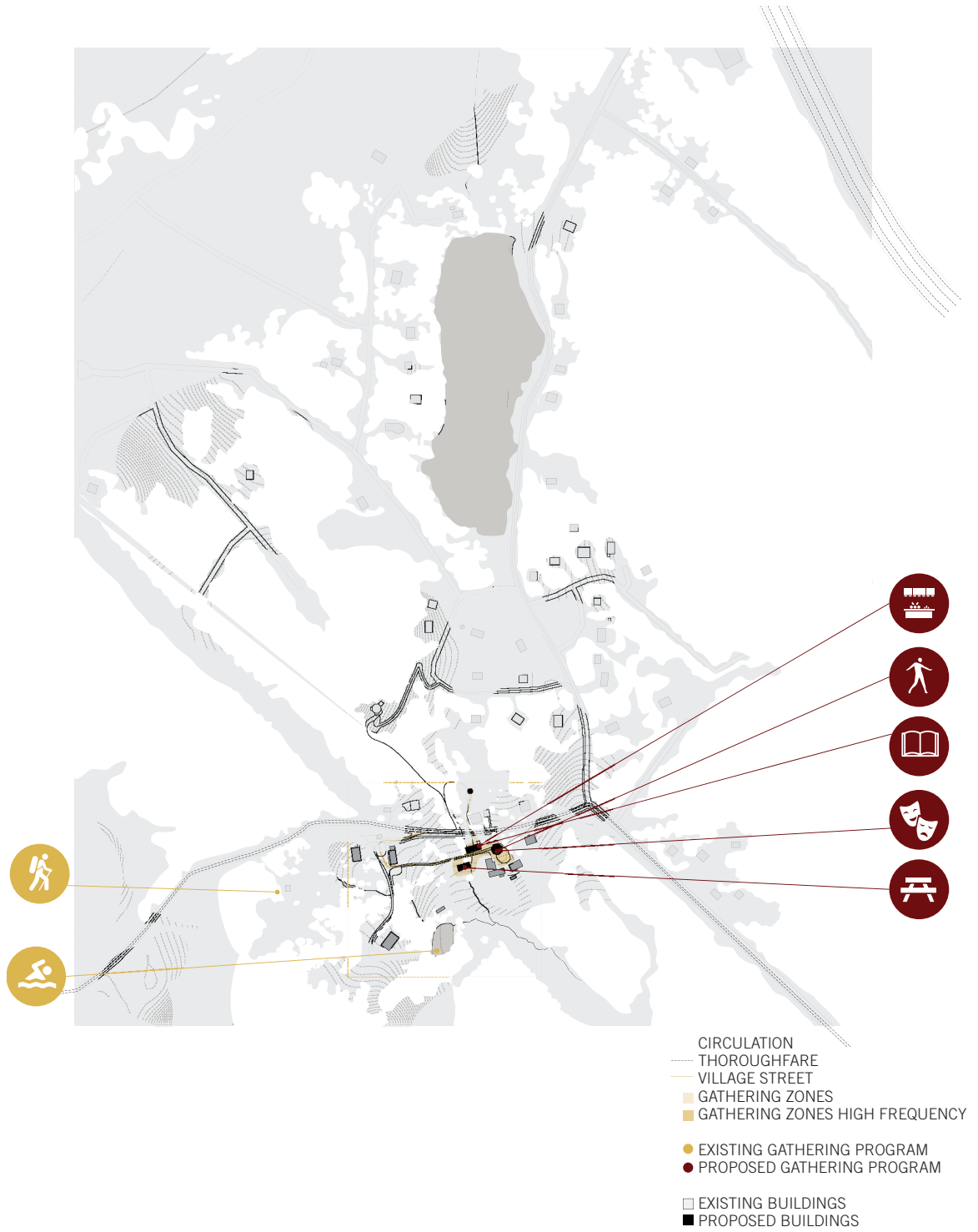


SECTION A-A



SECTION B-B

Settlement Section with Gathering Hub



Circulation Patterns with Existing and Proposed Gathering Programs at Community Site





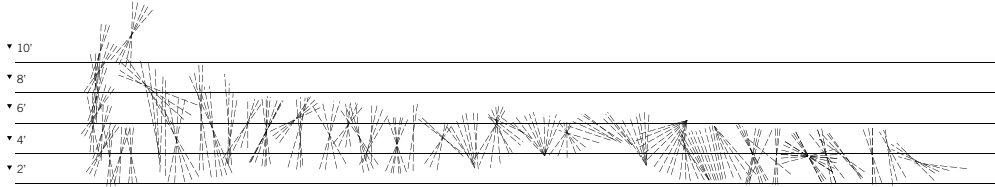
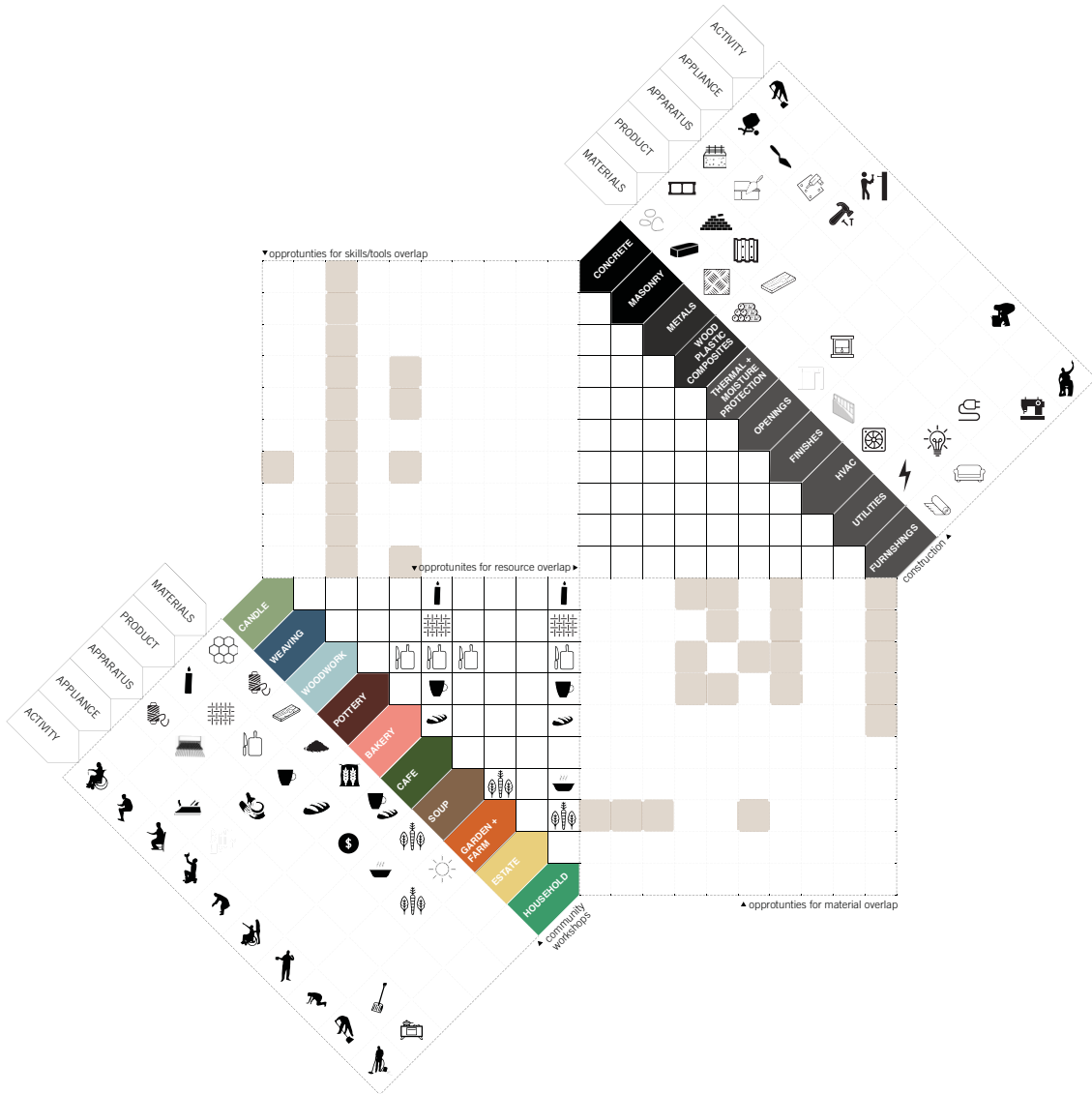
## Application of Maintenance Strategies

### Programming Care

Gathering in this proposal includes areas of cross-programming between celebratory spaces and spaces associated with domestic work. The programs of theatre, library, and communal dining are paired with laundry, maintenance workshop and kitchen respectively. This marriage of a social space with a facility for collective work is expressed architecturally by bringing areas normally regarded as service zones (kitchens, maintenance workshop, laundry) into the core of the building. These cores are designed to invite collective work rather than isolating these tasks to service rooms. This strategy is already evident in the layout of the residential kitchens at Maison Emmanuel, but is less successful in their laundry facilities and greenhouse.

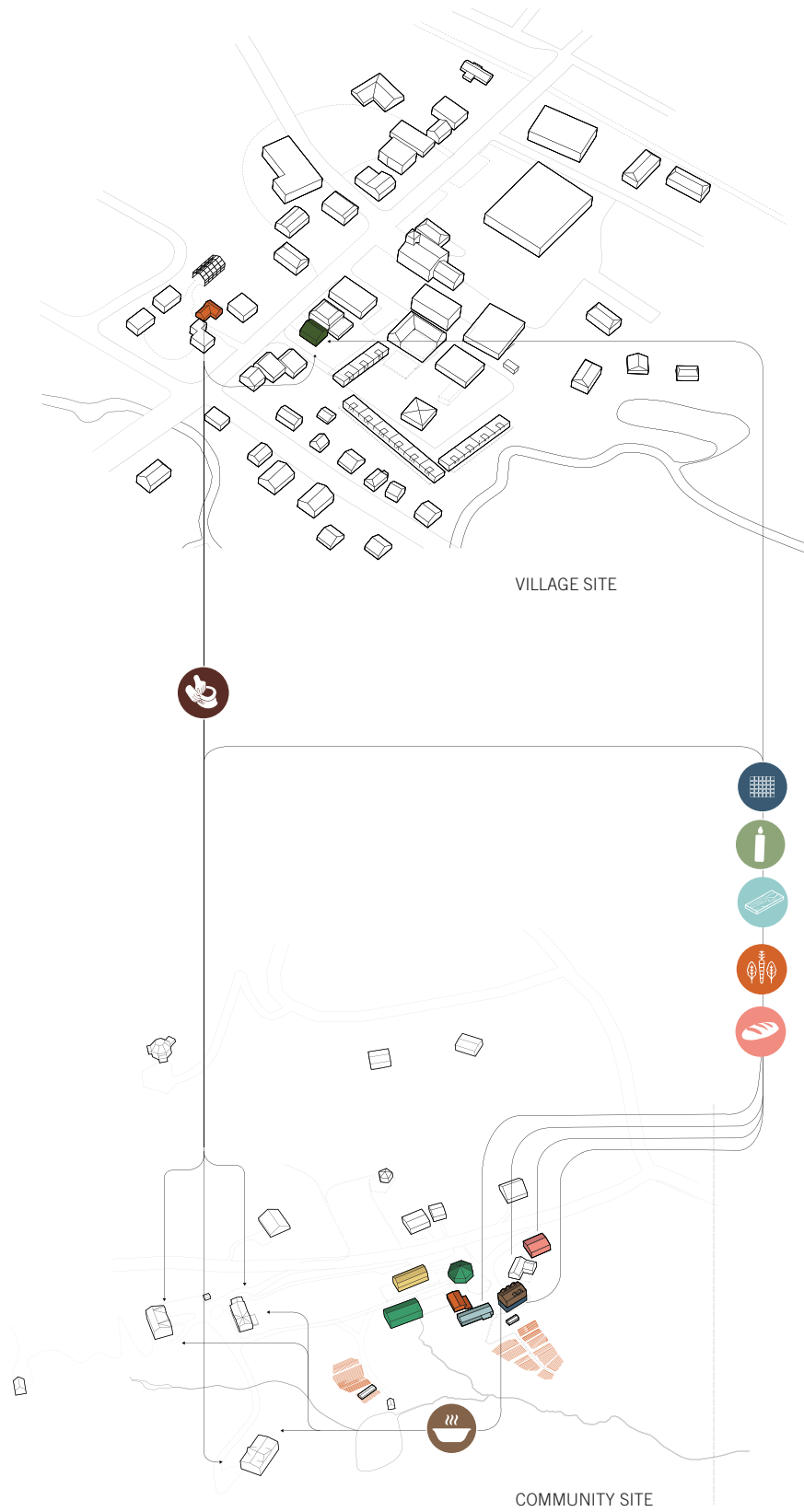
Central to the philosophy behind this community is that caregivers and those in need of care share their lives and work. The result is that much of the caregiving work is absorbed into the patterns of daily domestic life together and the social nature of the workshops. Cross-programming celebratory areas with programs of communal work serves the same purpose. These programs were selected based on an analysis of the existing workshops at Maison Emmanuel.

These workshops include bakery, woodwork, candle making, weaving, pottery and farm/garden. The resources of these workshops were analysed in relation to their application to the building maintenance process, as well as the social exchange they provide between Maison Emmanuel's two sites. The resources associated with these workshops provide parameters for the scale and material articulation of the proposed buildings.



Activity in Relation to Movement

Analysis of Community Workshop Resources in Terms of Armature, Appliance and Activity

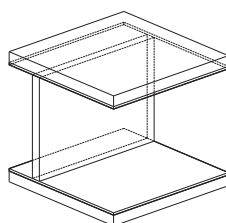


Exchange of Resources Between Community and Village Sites

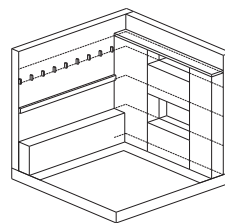
## Layered Care

The articulation of this architecture is governed by a construction system calibrated to the resources of the community. This construction system is a kit of parts allowing for piecemeal interventions on an overall building form to support continuous replacement and refurbishment. It is comprised of permanent components (structure, engines and envelope) and more flexible operable components. To encourage ease of maintenance these components are informed by the detail principles of active walls, accessible machines, and continuous layers.

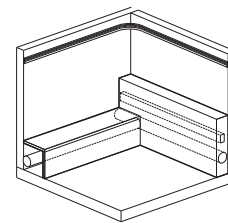
Layered Care Strategies for  
Ease of Maintenance



CONTINUOUS LAYERS

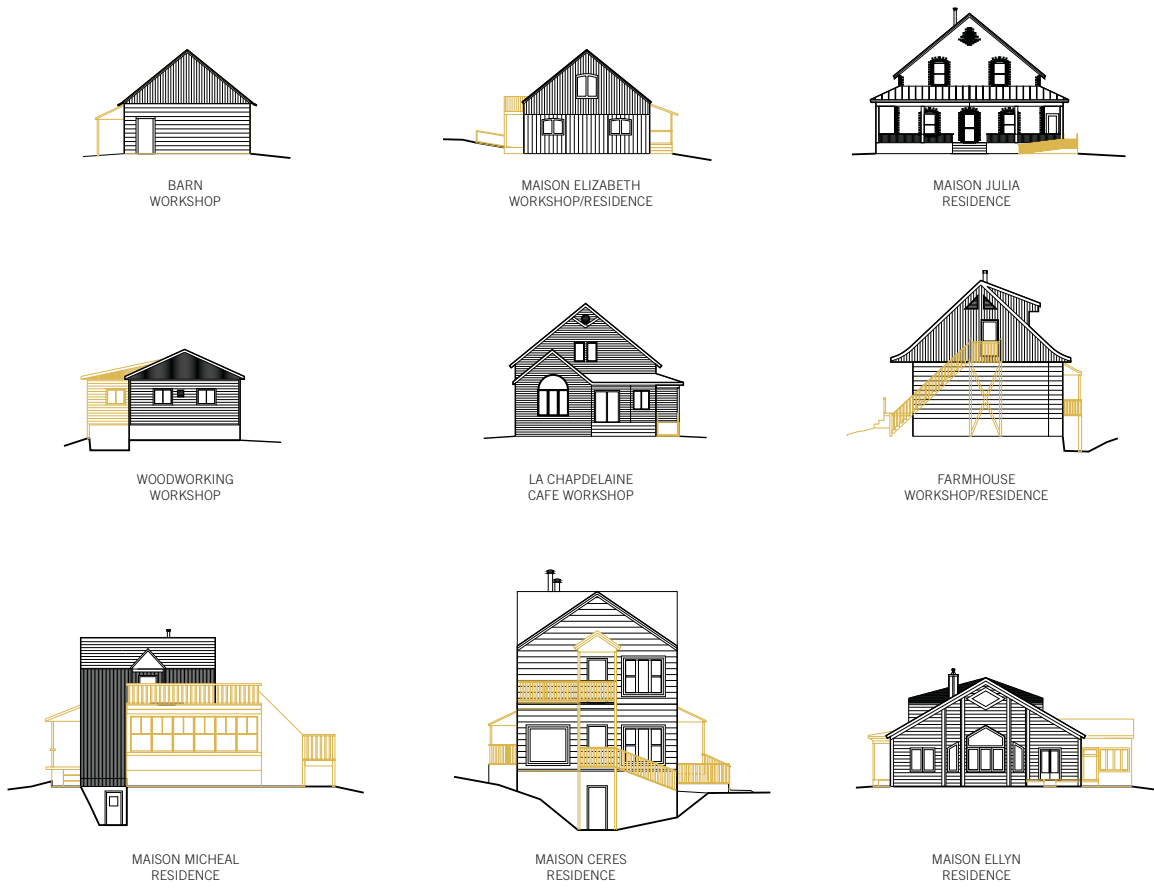


ACTIVE WALLS

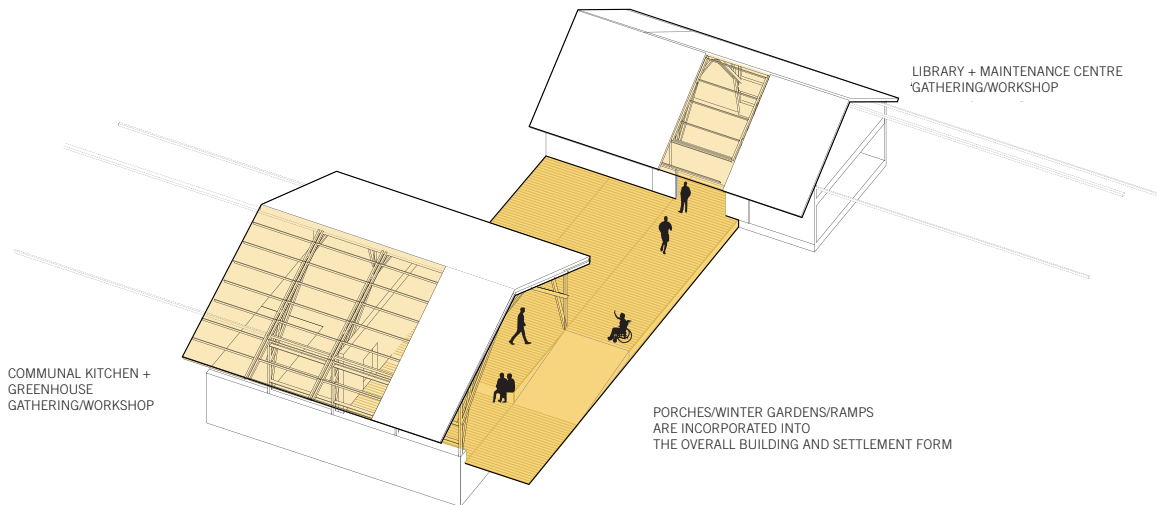


ACCESSIBLE MACHINES

A formal analysis of the existing building of the site shows the use of gabled cross section, (useful for shedding snow) and the inevitable additions and adaptations of solariums to catch the warmth of early spring sun, awning to shield the house from the heat of mid-summer and covered porches for outdoor autumn meals. The proposed kit of parts allows for such flexible conditions, within the parameters of set dimensions and components that acknowledge the 4 distinct seasons of the community context, the choreography of caregiver and care receiver and to allow for ease of replacement and refurbishment. The components of this kit are brought together in configurations to suit the rhythms of the community.

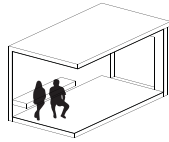


Existing community buildings demonstrating supports and detachable units

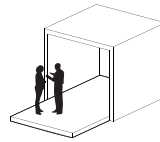


Strategy to Integrate Interstitial Spaces into Building Profile

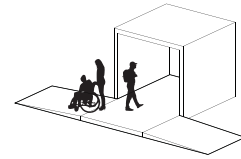
THRESHOLDS  
TRANSITIONS +/- OR BREAKS  
COMMUNAL PROGRAM,  
NEGOTIATES GRADE



VESTIBULES

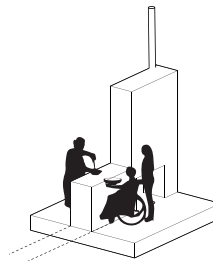


PORCHES

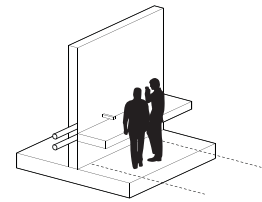


RAMPS

ENGINES  
FOCUSES PROGRAM

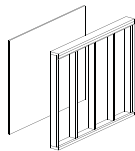


HEATING ELEMENTS

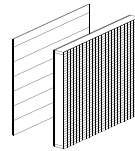


PLUMBING ELEMENTS

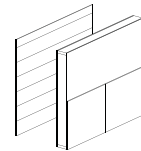
ENVELOPE  
DETERMINES  
THERMAL ZONE +  
SEASONAL  
PROGRAM AREAS



UNINSULATED,  
TRANSPARENT

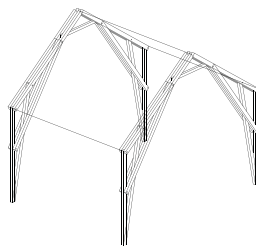


INSULATED,  
WET AREAS

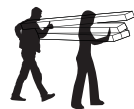
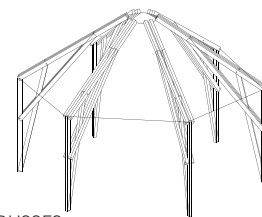


INSULATED,  
DRY AREAS

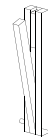
STRUCTURE  
SETS BUILDING  
DIMENSIONS



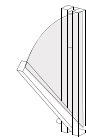
LIGHT WOOD SCISSOR TRUSSES



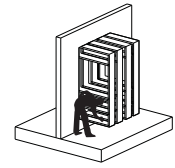
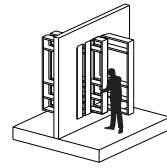
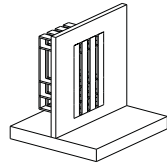
MANAGEABLE DIMENSIONS



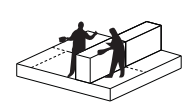
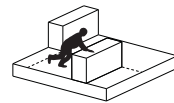
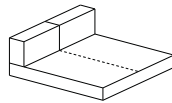
EASE OF ASSEMBLY



FLEXIBLE FORM

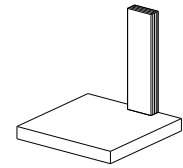
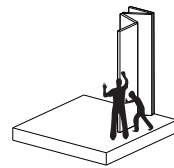
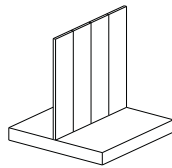


SHAKER CLOSET

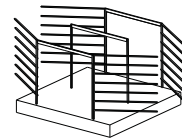
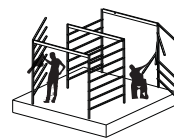
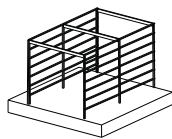


MODULAR COUNTERS

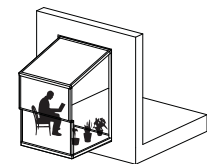
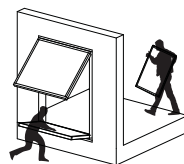
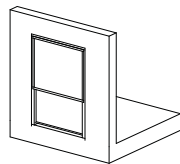
OPERABLE  
COMPONENTS  
SEASONAL OCCUPANCY  
AND USER INTERACTION



RETRACTABLE WALLS



LAUNDRY RACKS



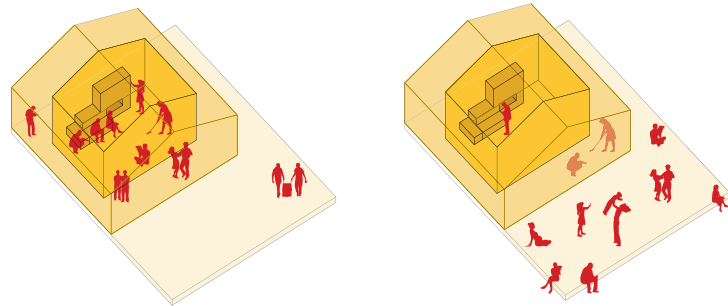
SEASONAL SOLARIUMS



## Zoned Care

The program of each building is positioned so that activity can spill from the interior to the open communal space between them. This not only changes the use of the space for community members throughout the year but also increases overall capacity of the space to host larger seasonal events. Stepped seating positioned around the theatre allows performances to occur facing into the communal open space. Opening the two barn doors of the maintenance area allows large jobs like refinishing doors and windows can be carried out on sawhorses outside. And the dining area of the communal kitchen can extend to a covered summer kitchen with an outdoor wood stove to be used year round.

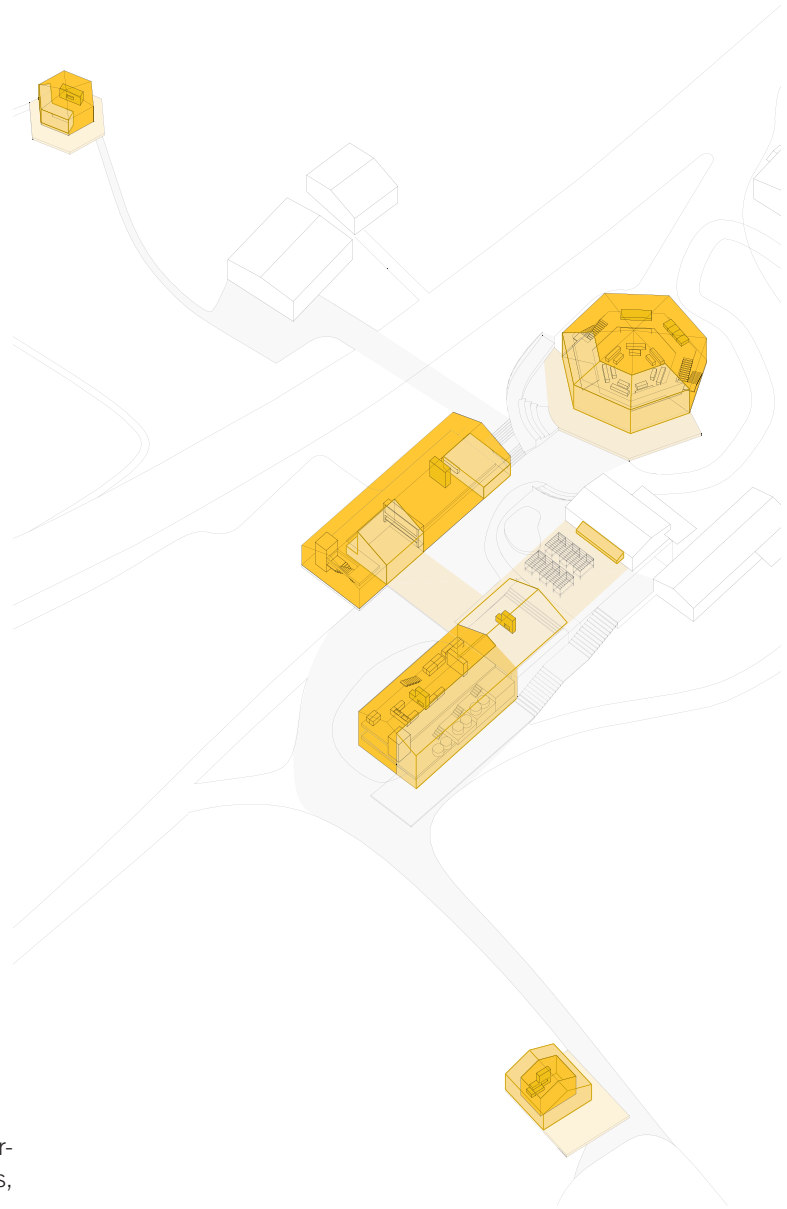
This core is the centre of a conditioned zone laid out with specific attention to the choreography of a caregiver and a person in need of care, leaving space for work to be done in tandem. These conditioned zones open onto an unconditioned gathering space oriented to passively gain warmth from the sun. As the seasons change so too do the gathering spaces. Their functions flexing in response, spilling out onto adjacent porches in the summer and fall and retreating towards the cores of the building in winter and early spring.



Thermal Zones and Seasonal Use

WINTER

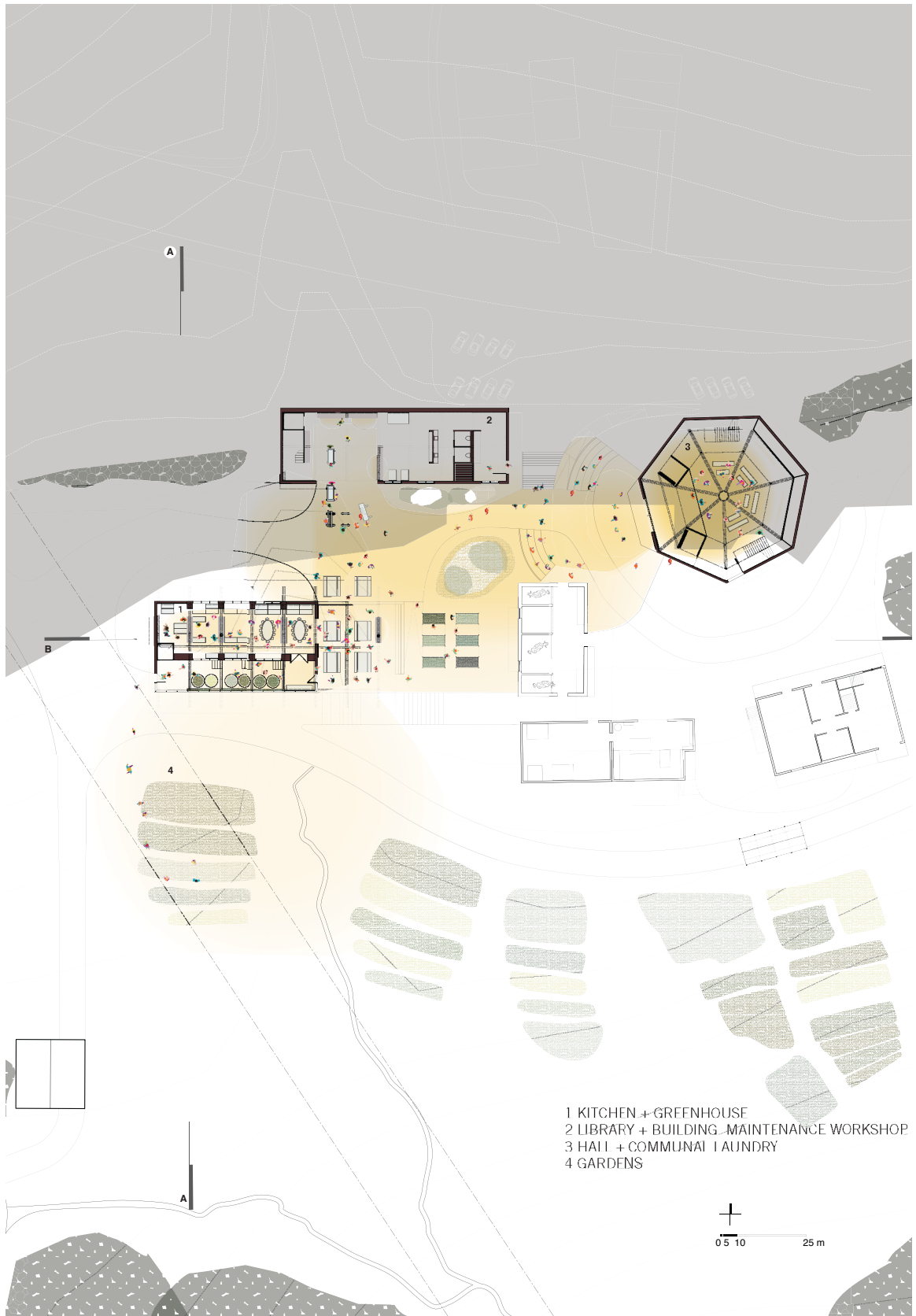
SUMMER



Gathering Hub Organized by Thermal Zones: Cores, Conditioned Areas, Interstitial Space, Porches

## Inhabitation

The rich social and cultural life of this community is perpetuated by the daily, weekly, monthly and yearly routines of collective workshops and festivals that mark the passage of time. The inhabitation of the proposed buildings can therefore be understood on these different cycles.



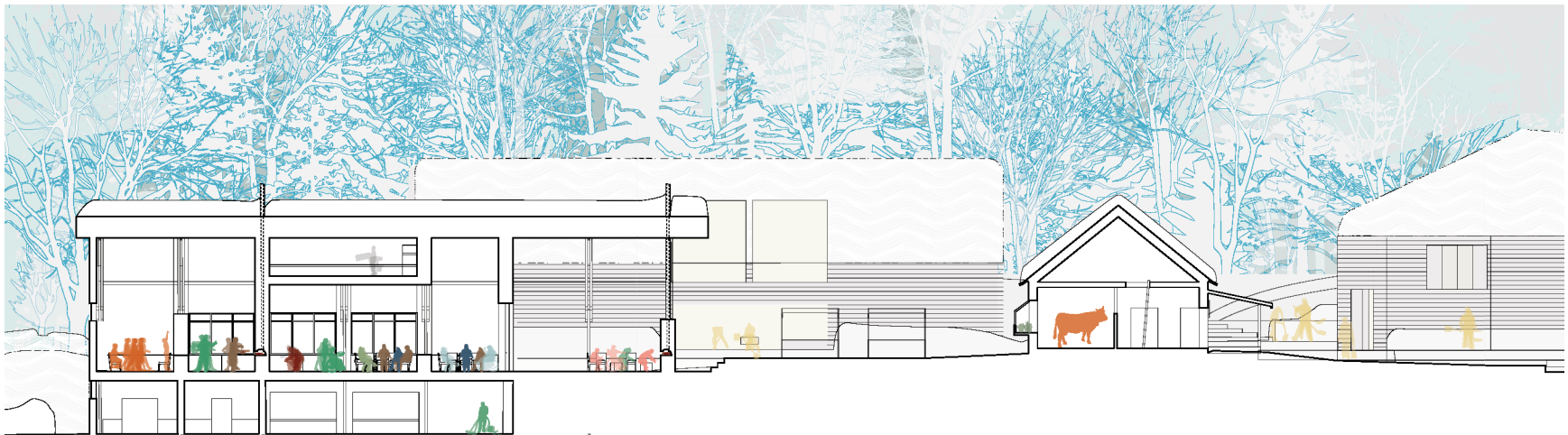
Plan of Gathering Hub and Gardens



Plan of Gathering Hub

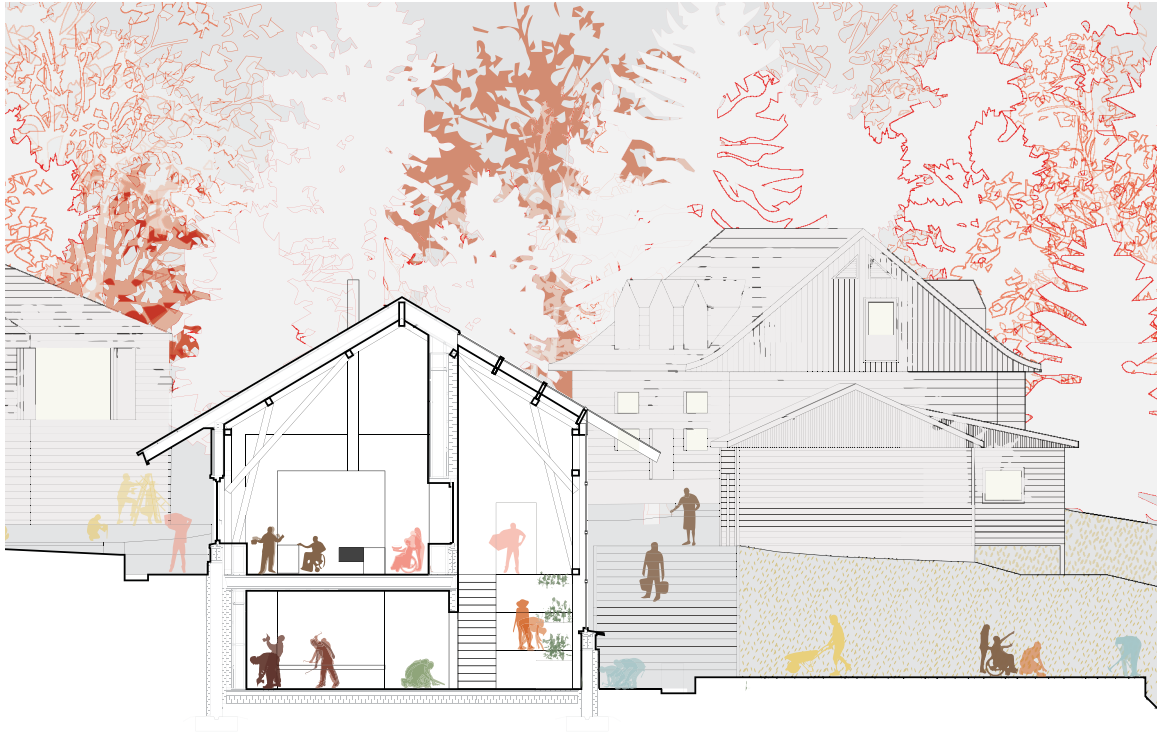


Cross Section of Communal Kitchen/Greenhouse in Fall Season

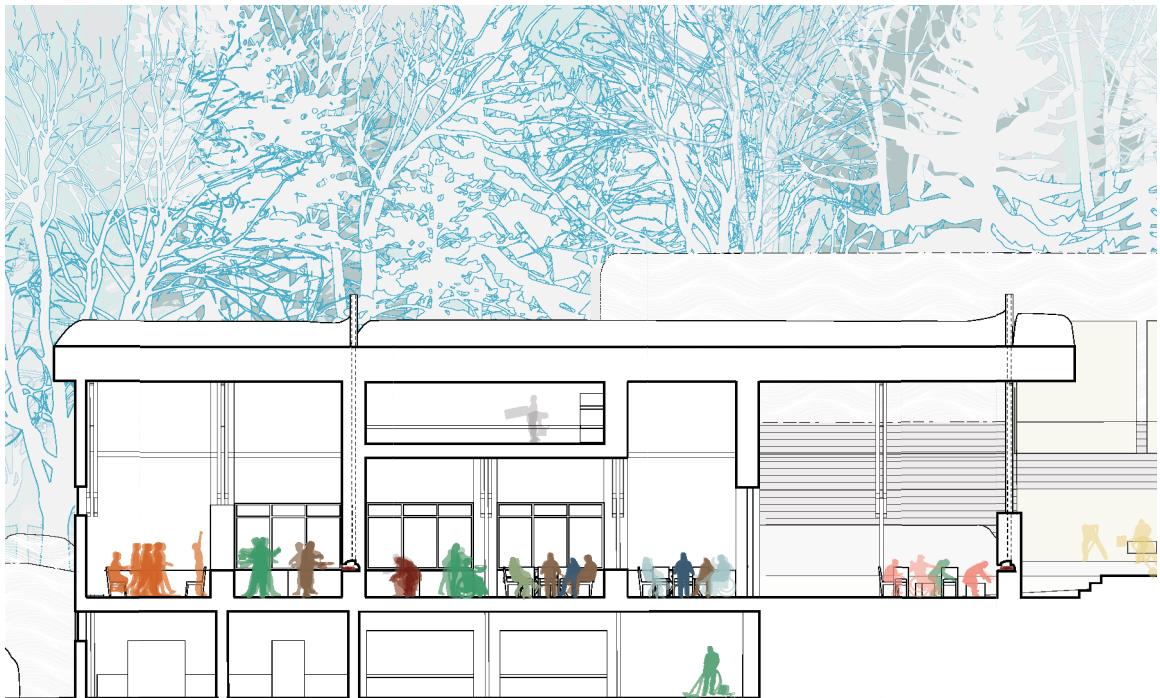


Long Section of Communal Kitchen/Greenhouse in Winter Season

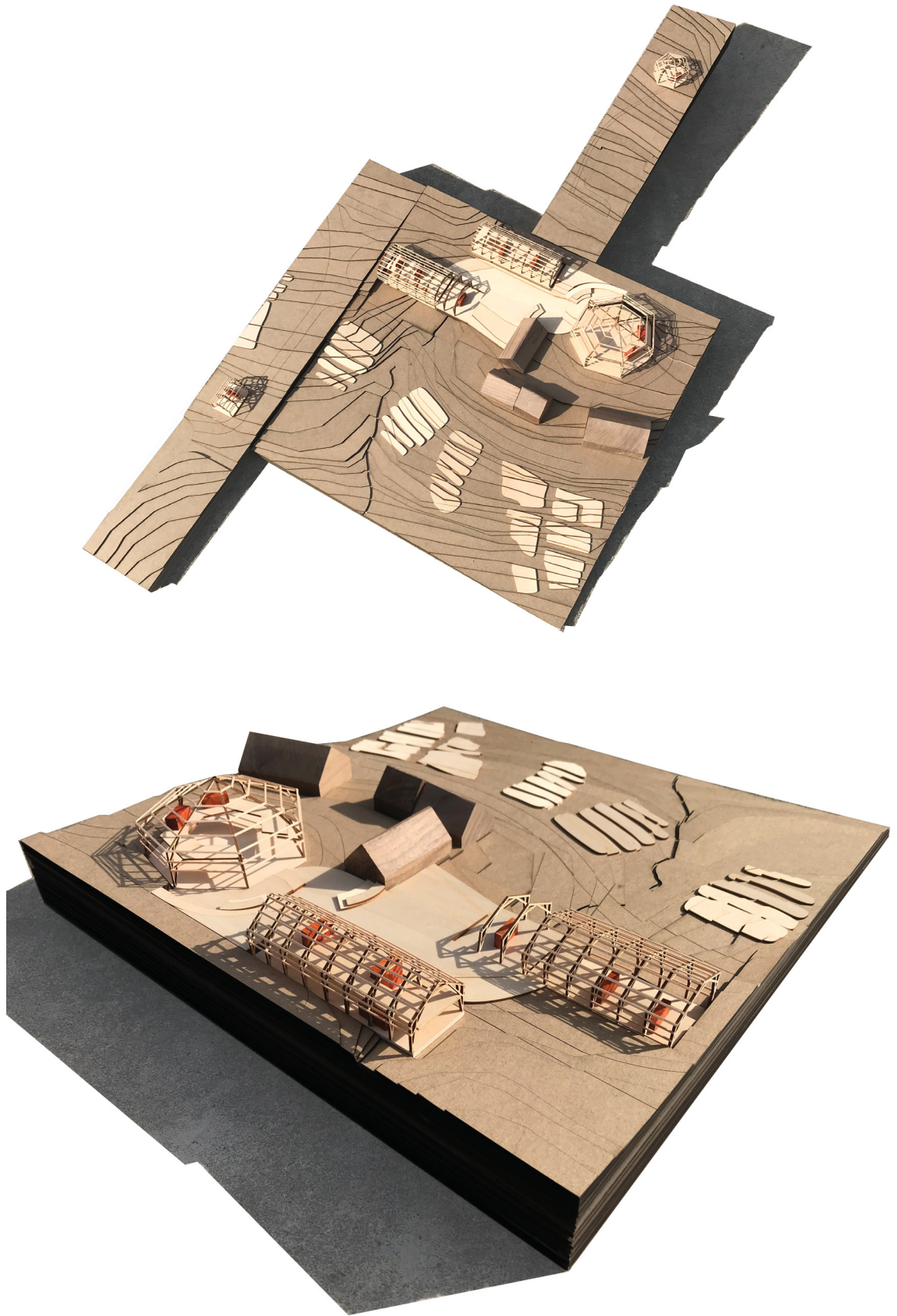




Cross Section of Communal Kitchen/Greenhouse in Fall Season



Long Section of Communal Kitchen/Greenhouse in Winter Season



Cores and Structure of Proposed Buildings

## Narrative of Community Cycles

On yearly cycle, while some community members prepare an Easter meal in the communal kitchen, others work starting to seed plants in the greenhouse. The preparation of the meal can be done in small group the entire length of the communal dining hall. Modular tables and counters, of varying heights, offer flexibility for work in small groups or pair to be done between the wood fire stove and dishwashing station.

On a weekly cycle: The meetings between caregivers and administrators take place in the second-floor library. Their organization of the finances, workshops and cultural life of the community now has a direct connection to community maintenance as the meeting table looks onto the maintenance workshop below. Built in storage shelves pass from the first to the second floor, further joining the two programs. To the other side of the library is a small café/store area, where products from community workshops can be sold. As it is adjacent to parking lot and public entrance this area welcomes the public for community events.

On a daily cycle: While community members engaged in drama, dance and seminar classes occupy the first floor of the theatre space, the choreography of laundry takes place on a gallery level that encircles the performance area. This communal laundry allows for sorting, washing, and drying on operable racks, either inside over the theatre space or out second floor window in warmer weather. The performance of fresh clothes blowing in the wind becoming a backdrop for artistic performances.

On a seasonal cycle: The program of each building is positioned so that activity can spill from the interior to open com-

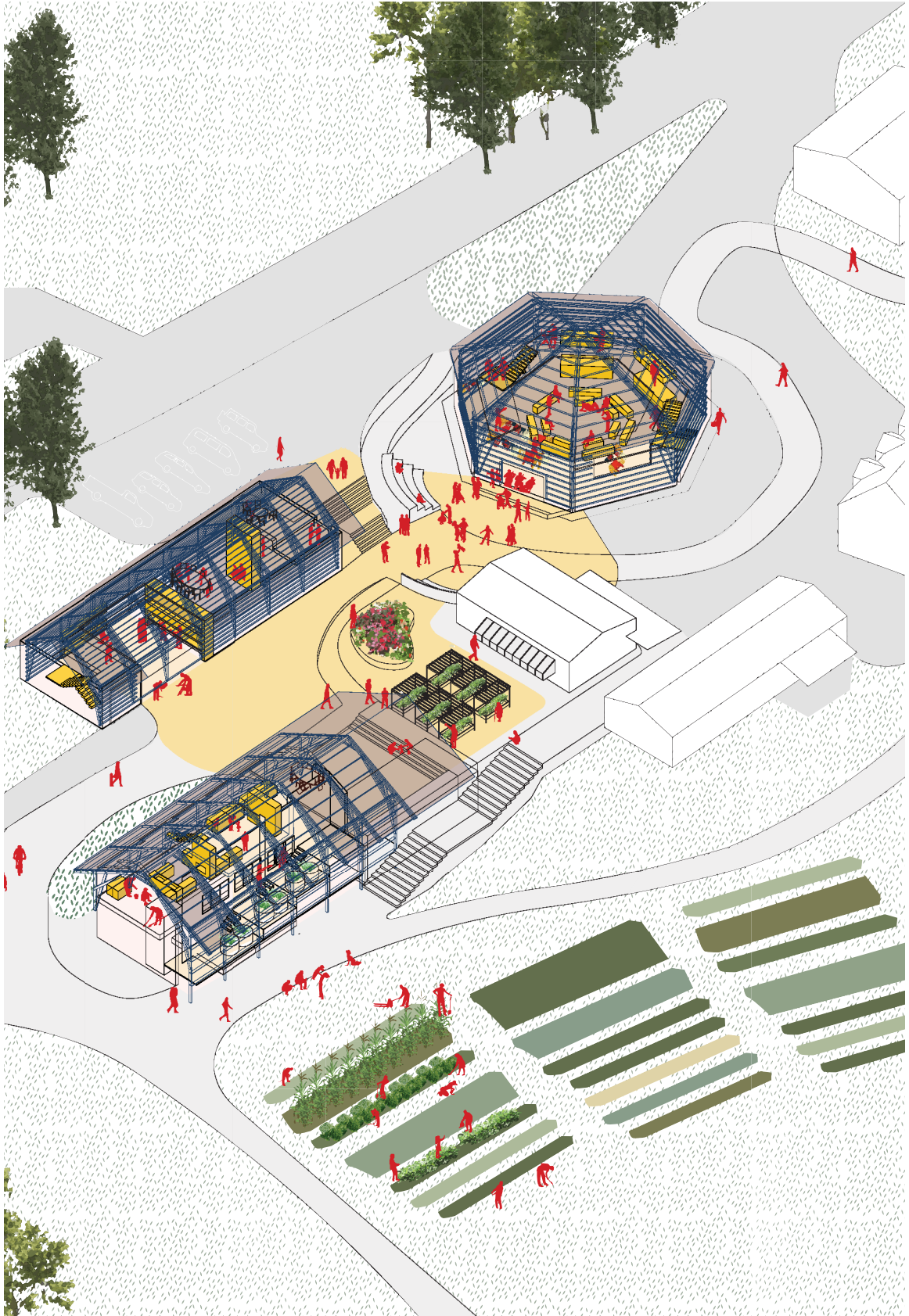


munal space between them. This not only changes the use of the space for community members throughout the year but also increases overall capacity of the space to host larger seasonal events. Stepped seating positioned around the theatre provide the opportunity for performances to occur facing into the communal open space. The two barn doors of the maintenance area allows large jobs like refinishing doors and windows to be carried out on sawhorses outside. The dining area of the communal kitchen can extend to a covered summer kitchen with an outdoor wood stove to be used year round.

At its basis this seasonal shift, like all the architectural strategies employed in this project, is operating to encourage the social life of the community by supporting their cultural rhythms. This architecture invites their active involvement in the work of caregiving and caretaking by encouraging their activities, both domestic and celebratory.



Vignettes of Arrival and  
Inhabitation at the Community



Community Gathering Hub



Interior View of Communal Laundry/Theatre



Exterior view of Community Gathering Hub

## CHAPTER 5: CONCLUSION

This thesis shows that developing a sustainable system for long term care should be approached at the scale of the settlement, building and detail. It suggests that a robust caregiving community will have a high level of self-reliance with a tendency towards communal living and working. This project positions caregiving and caretaking as central rituals of dwelling, proposing that inhabitants gain agency in a building culture when a settlement reflects their cultural life and encourages their self-reliance. Study of the cyclical nature of ritual and routine in intentional caregiving communities points to opportunities to marry instances of collective living with necessary maintenance activities. This project suggests a maintenance strategy based on principles of programmed, zoned and layered care to arrive at a building typology that champions the domestic labour of care.

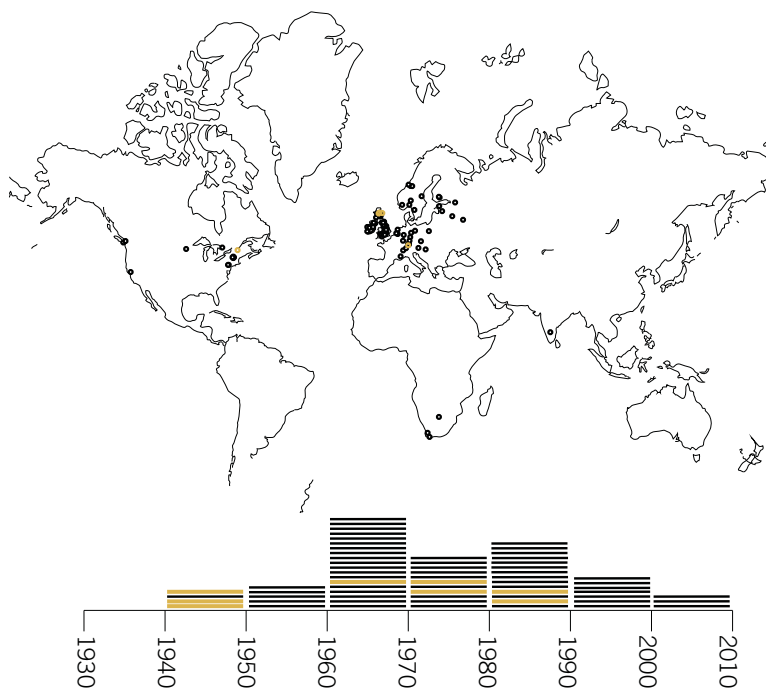
The challenge of providing caregiving to vulnerable populations exists and is increasing in Canadian society<sup>46</sup>. Acknowledging our social system of care as a technology to be improved through design opens the opportunity for architects to offer strategies to meet this challenge. This may require the architect to cast themselves in role of caregiver/caretaker by accepting a ongoing relationship to their buildings and the communities they serve throughout the entire life-cycle of building with all of its maintenance cycles.



## APPENDICES

### Appendix A: Camphill Community Case Studies

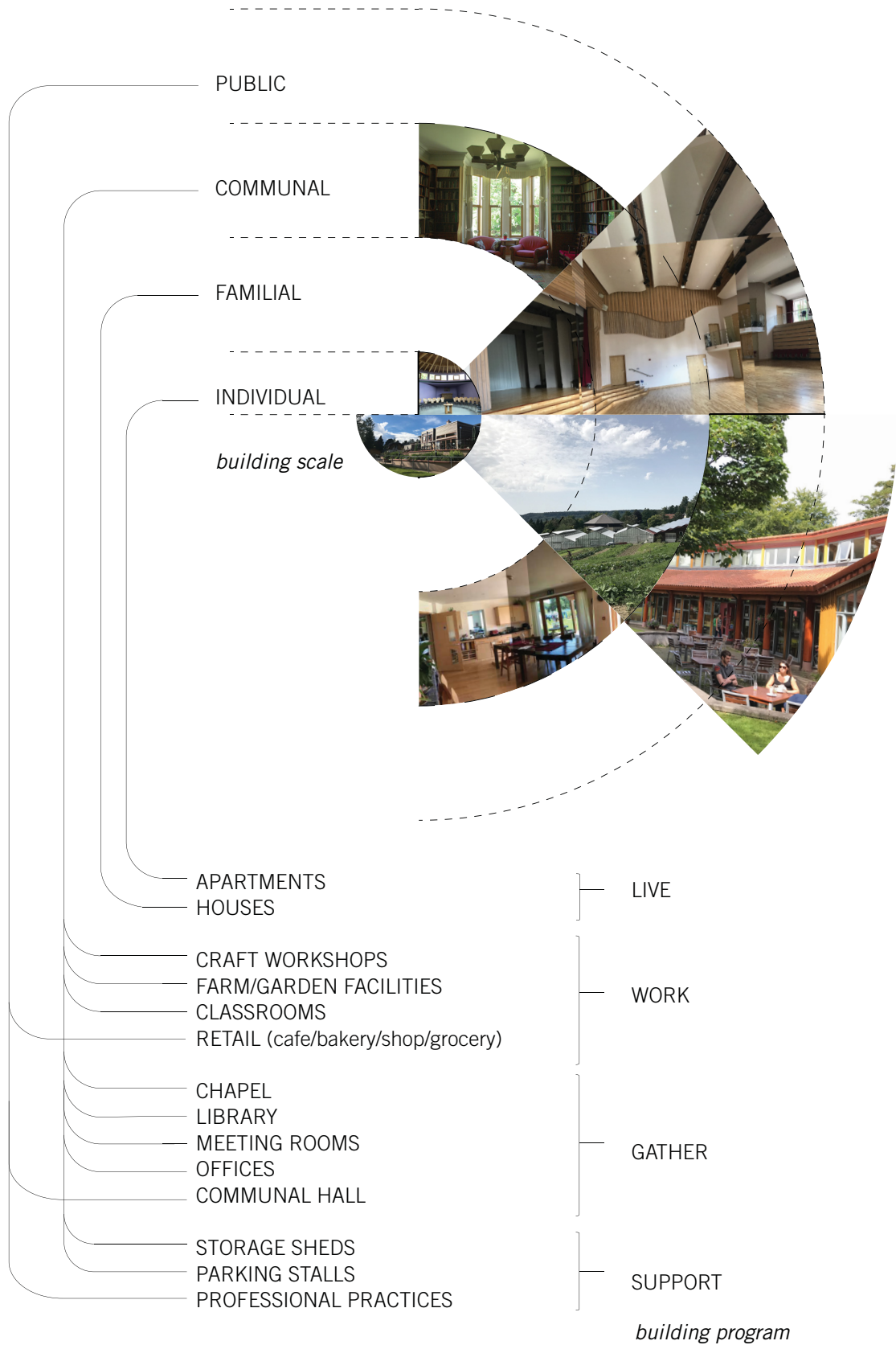
In Summer of 2017 I was awarded the Bruce and Dorothy Rosetti Scholarship to fund a research trip associated with this thesis. With this funding I was able to visit eight Camphill communities in Scotland, Germany and Canada. Like the Camphill movement, my travel began near Aberdeen, Scotland, with visits to five communities: from a school for children to an elderly care home. In Scotland I also visited the office of Camphill Architects, which provides architectural services to communities in the United Kingdom and beyond. I then visited two communities in Germany. Returning to Canada, I spent a week visiting a Camphill inspired community in Québec. These visits showed how the same community typology can be applied to various landscapes and scales.



Camphill Locations and  
Timeline of Community Founding

Over the past three generations the Camphill Family has grown to over 100 communities in 20 countries, the majority of which were founded in the 1960s and 1970s throughout the United Kingdom, Scotland and Europe. The communities visited for this study are called out here in yellow. (from Camphill Worldwide)

# Camphill Building Types



## Camphill School Estate

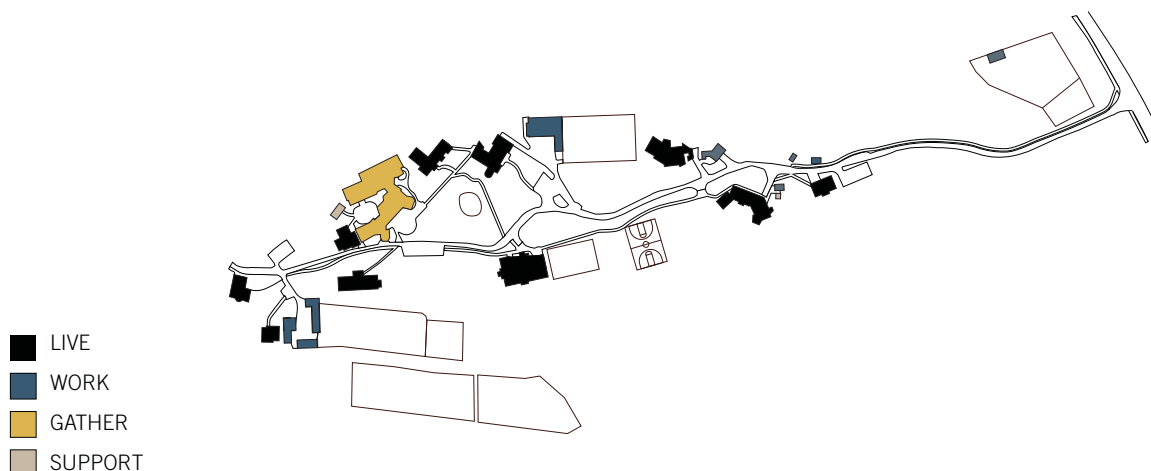


Karl König, a central founder of the Camphill movement.  
(from Camphill Association of North America)

Camphill communities are intentional caregiving communities for people with developmental disabilities. The Camphill movement was founded in 1940 in Scotland by a group of Austrians, fleeing war-torn Europe. Camphill's central founder a pediatrician named Karl König, developed much of the theory on which these communities are based. In an excerpt from a lecture given at Newton Dee Community, 9th August 1964, Karl König explains the threefold social order:

The idea of the Threefold Social Order was not to determine these three spheres. The idea of the Threefold Social Order is the way to divide and to distribute these three spheres. In the sphere of Rights all men are equal. In the sphere of Economy we should establish a sort of brotherhood and help each other. In the sphere of Spiritual Life each of us should be free – free in what he likes to have, to believe, and so on.<sup>47</sup>

Visiting the Camphill Estate School, and in particular Camphill House one of the oldest buildings of the movement, offered historical context for the subsequent settlements I visited. Particular to this site is the extensive schoolhouse, hosting many day students along with those who live full time within the Camphill's houses.



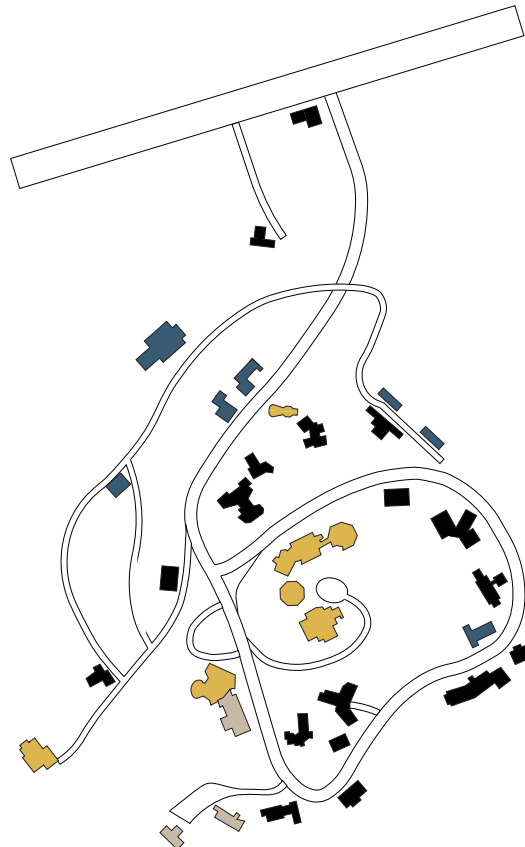


## Murtle Camphill Estate

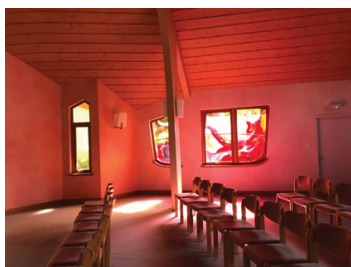


The Camphill Hall on the Murtle Estate has become the archetypal form for all subsequent gathering spaces in these communities. This is in part because it is a spatial expression of the “Three-fold Social Order”. In her book *Living Buildings: An Expression of Fifty Years of Camphill*, Joan de Ris Allen’s description of the early years of the Camphill Movement gives a picture of the necessity of balancing agricultural work, building maintenance, social life and spiritual-cultural festivals in order to create a sustainable community. In reference to the library in this main house, pictured below, Allen writes

“It was also vitally necessary to have a place where weekly religious services could be held for both the children and adults. A large, low-ceilinged sitting room on the first floor of the house was reserved as the ‘special space’ for the latter activities. From its window one can look southward over the rolling fields and hills of the Scottish countryside to the mountains in the distance.”<sup>48</sup>



## Newton Dee Camphill Community



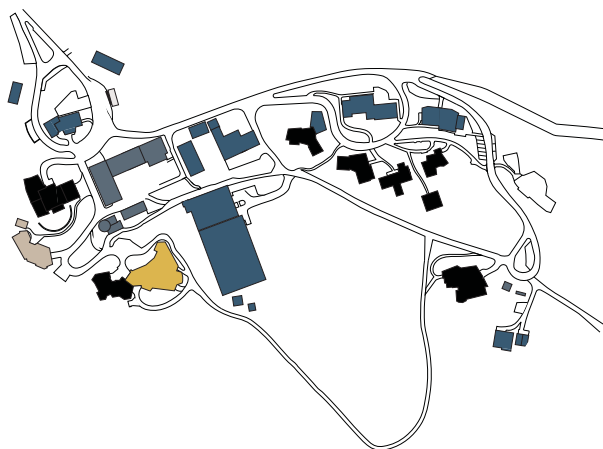
Newton Dee Camphill Community encompasses about 200 residents, around half having special needs and the others are mostly co-workers and their families. Particular to Newton Dee, and very central to this research, is the unique of the architectural design firm “Camphill Architects”. This firm is housed in one of the buildings on the Newton Dee grounds. One of the three full time architects/technologists that works there has been a resident at Newton Dee for several years. Many of the communities I visited have medical or educational professional practices associated with them, however this is the only instance of an architectural practice. This firm services the surrounding communities in Aberdeen as well as others in the UK and the US. The themes of balance between private versus shared space on the scale of the home and the balance between the culture of the community and the relation to the neighbouring villages on a community scale, were central to my discussions with one the architects.



## Lehenhof Village Community



Lehenhof Village Community is located about 70 km away from the Lake of Constance in the south of Germany. I have an appreciation for both the distance and the steep climb up to the community site, as I opted to cycle from the lake to this community. Had I been wiser, I could have taken a bus as there is a bus stop and an artful bus shelter just inside the community grounds. This was the only example I saw of a community taking on construction specific to a public transit network. All of the communities that I visited, except for Simeon which is amongst a residential development, are settled far back from the road. There was typically a long driveway or country road that links the entrance of a given community to a major circulation artery. The topography of this site is characterized not only by the means of accessing it but also by the layout of the buildings. There are a few crescents, around which buildings are clusters, but in general buildings, particularly new ones, and those associated with farming gesture to the south east, towards a brilliant view to the lake.

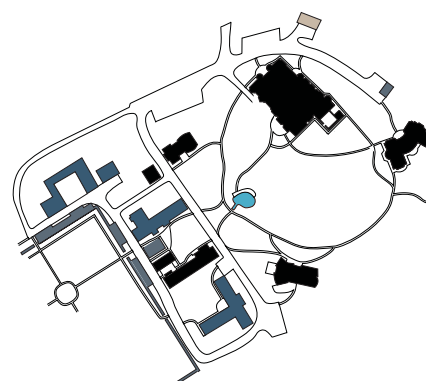


- LIVE
- WORK
- GATHER
- SUPPORT

## Beannachar Camphill Community



Beannachar Camphill Community, a community of about 60 people, 28 adolescence individuals with special need (about half live full-time on the Beannachar grounds and about half are day students) and 28 co-workers (about half long-term and half short-term). Beannachar is an intriguing architectural case study in contrast of building form as two of the residential houses are contained within a 19th century house, while the other two are purpose built houses. One of the long-term co-workers took me on an extensive tour of the building and was very thoughtful in her description of the formal tension of living communally in a building designed with a served and a service wing. The solution was to split the function of the house into two distinct 'houses', Silver Birch and Sycamore. The lessons learned from adapting this building were poured into the communal design of the Rose and Linden, the purpose-built houses. Particularly evident in the Rose house are the themes of spontaneous social gathering and enhancing the familial scale units of the community.



- LIVE
- WORK
- GATHER
- SUPPORT

## Tennental Village Community



Tennental Village Community had the largest agricultural area of any of the communities I visited. The approach and surroundings of the community are less wooded than those in Scotland. Upon arrival at the community, visitors are first greeted by the store and community hall, pictured below. From here the community is organized along a circulation spine for cars and pedestrians. In the eastern direction, the wide path gently meanders through residential houses. Particular to Tennental is a housing form that is repeated five times. These 'M' shaped buildings are large, symmetrical duplexes. The front façade is organized so the largest angle of the 'M' creates a shallow courtyard to receive residents, while the points of the form houses glassy winter gardens. Foot paths give the opportunity to walk around the buildings and the smaller, private courtyards in the back. Again, a glassed-in veranda allows for an interstitial space between indoor and out. Down the western direction of the street you arrive at workshop buildings, while the fields are located south of the east-west axis.

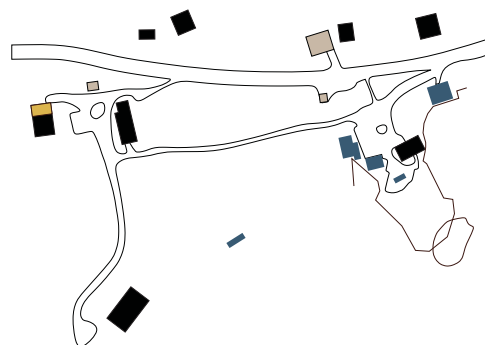




## Maison Emmanuel



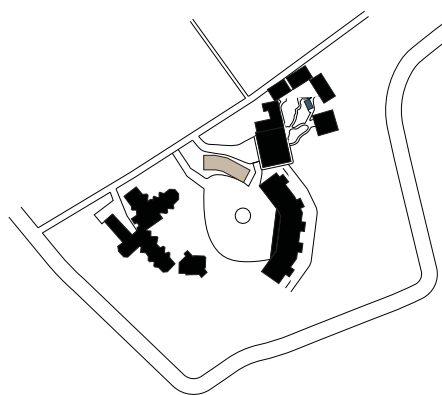
I worked at Maison Emmanuel as a live-in caregiver in 2012-2013, so my visit there in October was a chance to look at a familiar place through a new lens. Maison Emmanuel is a community of about 40 people, with approximately a 1:1 ratio of caregivers to people with special needs. This year the community will celebrate its 35th anniversary. Just over a generation old, Maison Emmanuel has a constant stream of construction. As their population has been relatively stable over the past years their focus on building has been directed towards new configurations for their workshops. This community has recently taken on the full operations of a café and bakery in a nearby town.



## Simeon Camphill Community



Simeon is an expression of the progression of the Camphill Movement over time. This community is in close proximity to Newton Dee, Murtle and the Camphill Estates, however while the other three are sited between the river Dee and a two-lane highway on large plots of wooded land, Simeon is north of the highway in a residential neighbourhood. On the grounds of this community are two elderly care homes, one built in the 1980s and another recently finished, and a home for adolescent individuals with developmental disabilities. Many of the elderly residents have been members of the Camphill Movement, including a woman who knew Karl König in her childhood generously sat and spoke with me during my visit. The crescent shape of this building echos the Newton Dee Hall and Community Store. However in this instance the more public face of the building is on the tighter inside curve of the crescent, with private ensuite apartments lining the larger curve of the form. This gives the opportunity for each resident to have an individual entrance onto a generous outdoor terrace



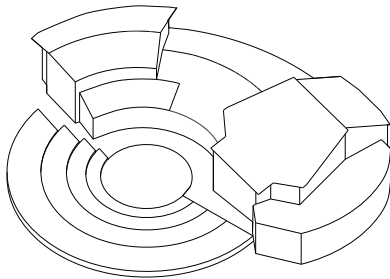
- LIVE
- WORK
- GATHER
- SUPPORT



## Characteristics of Camphill Communities + Their Architectural Implications

### Gesturing towards Community through Building

A circular form is often used a strategy for communal meetings. Individuals turn inward to the group creating a space between them. This organizing principle appears in many Camphill buildings resulting in buildings with geometries based on open angles.<sup>49</sup> In general, I saw complete forms (full circulars, pentagons, heptagons) used as the layout form in several of the smaller chapels. While partial curves (a crescent, two axes meeting at an obtuse angle) were employed for larger gathering buildings like community halls and stores. The complete form of the smaller chapels operates as destination and resting place. While the larger buildings use the opportunity of the crescent form to have a different character on one side or the other.

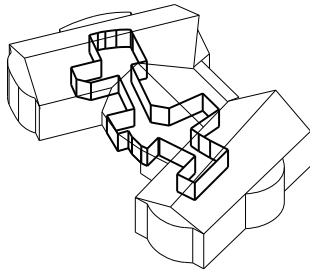


Courtyard Created by Crescent  
Form



### Choosing a Familial Scale: Life-sharing as a model of caregiving

It was remarked to me that once a house is built for a group larger than a nuclear family passages between rooms typically become long corridors. Although these passages are necessary to some degree, there should be care taken to animate them with social interactions.<sup>50</sup> Houses in Camphill communities are modelled after a familial scale in an effort to maintain lively home life for all residents. However, as families grow, particularly as long-term coworkers find partners and have children there can be a desire for an intermediary between the nuclear family and larger care home group. One house at the Newton Dee Camphill negotiates the desire of a two care workers to remain part of the caregiving home while having an increased level of privacy for their young family through one wing acting as an independent apartment by virtue of having a devoted entrance.<sup>51</sup>

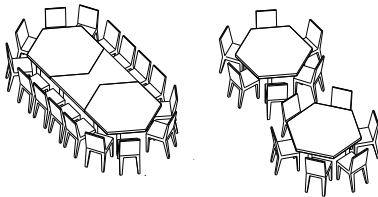


Adjoining Apartments as a Balance of Private + Communal Life



## Eating Together: Communal Mealtimes and the Dining Table

Eating together at a communal table is a central to the familial scaled-relationships in Camphills. As several communities that I visited host both full-time and day-program individuals lunch-time can be a larger group than breakfast or dinner. The Bean-nachar community has employed dining room tables which grows and shrinks to elegantly facilitate this ebb and flow of people.

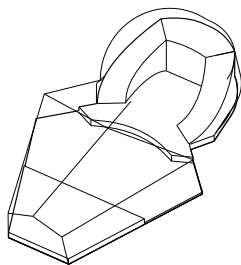


Flexibility through User Interaction



## Enacting a Three-fold Social Order: Camphill Halls

The original layout of the Camphill Hall at the Murtle community reflects not only the concept of a three-fold social order but also the tripartite of body, mind and spirit. Each part having an analogous function in the hall typology: chapel for spirit, mind for auditorium, body for stage. The logic of this plan was expanded to incorporate a larger foyer and service areas. This addition was to be as generous as possible while still maintaining the original formal lines of the building.

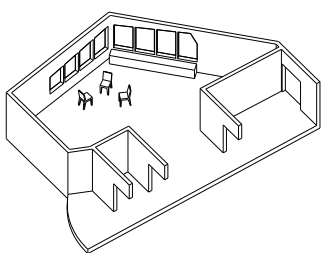


Choreographed Spaces to Support Festivals



### Rhythm of the Seasons: Building with Natural Light

One of the Camphill Architects I spoke with emphasized that any building should be in the service of enhancing the human connection to nature. This can be achieved through physical and visual connection from inside to outside and through imitation of the exterior environment's scale and qualities on the inside of the building.

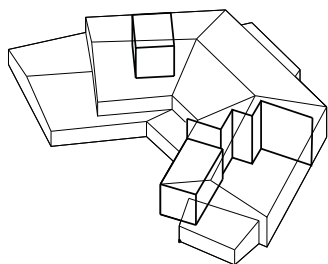


Interstitial Spaces as Social Spaces



### Acknowledging the Individual: Private versus shared Dwelling

In Camphill communities there is a balance to be struck between the needs of the individual and the needs of the community. One trend in this balance told to me by a member of the Beanachar community was the shift away from dormitory style rooms towards individual rooms. This became a strategy for an overall building at the Simeon elder care community. In this instance the architect used the long perimeter of the back side of the building to give each resident a private terrace that is separate but connected to a larger community-wide outdoor patio.



Meandering Circulation to Support Familial Scale



## Appendix B: Field Notes from Maison Emmanuel

October 11, 2017: Visit to Maison Emmanuel /Presentation

I presented for about 40 minutes to the 'House Representatives' weekly meeting in the 'study portion of their meeting, before they moved on to their regular weekly agenda. I printed a seven-page document for each person at the meeting and used that as a tool to frame the presentation. The presentation was as follows:

**COVER PAGE:** How the design of a community plan and hall fits into my Masters thesis as the design component. An explanation of the cover photo of Madelena at the Maison Julia table as an image that expresses the centrality of ritual and routine to life at Maison Emmanuel, something I hope to honour in my architectural proposal.

**COMMUNITY CYCLES DIAGRAM:** This diagram is my attempt to document the passage of time and significant events at Maison Emmanuel. At the time frame of day, a week, the festival year, the agricultural year, the regional cultural year. The final two cycles which have yet to have much information and will be central to this study are the life cycle of a building and the life cycle of a community.

**OVERALL SITE PLAN:** I described that I was drawing the map at this scale to include for the Val-Morin Community and the Val-David Community to express the connection between the two and to acknowledge that any construction become a facility for the immediate community but also the region

**TWO SITE PLANS:** These were simplified diagrams of the Community and Val-David sites. I noted that the work I do for the thesis will consider both sites however the interest of this group



	2. THE DISTRIBUTION OF TOWNS (CA)				47. HEALTH CENTER (CA)						84. TEENAGE SOCIETY (CA)	
TURAL (A)	7. THE COUNTRYSIDE (CA)		81. SMALL SERVICES WITHOUT RED TAPE (CA)	80. SELF-GOVERNING WORKSHOPS AND OFFICES (CA)	ONSITE ARCHITECT (ND)						40. OLD PEOPLE EVERYWHERE (CA)	57. CHILDRE THE CITY (C)
		26. LIFE CYCLE (CA)										75. THE FAM (CA)
		67. COMMON LAND (CA)									127. INTIMACY GRADIENT (CA)	UNIQUENESS OF EACH INDIVIDUAL (ME)
		28. ECCENTRIC NUCLEUS						USE FORM, SHAPE, TEXTURE, COLOUR AND LIGHT TO FOCUS HUMAN COMMUNITY (CD)	36. DEGREES OF PUBLICNESS (CA)			124. ACTIVIT POCKETS (C)
S (CA)	110. MAIN ENTRANCE (CA)		ACTIVITY GROWTH (CD)				181. THE FIRE (CA)					
	DEFINE PUBLIC VS PRIVATE ENTRANCE AT THE COMMUNITY (JC/ND)		30. ACTIVITY NODES	DEFINE NODES FOR TRANSITIONS/ OUTDOOR GATHERING (JC)	129. COMMON AREAS AT THE HEART (CA)	128. SOMETHING ROUGHLY IN THE MIDDLE (CA)		COMMUNAL MEALS (ME)	ADAPTABLE TABLES (CB)			
	102. FAMILY OF ENTRANCES (CA)	122. BUILDING FRONTS (CA)	37. HOUSE CLUSTER (CA)					COMMUNAL DISHWASHING (ND)	147. COMMUNAL EATING (CA)			
RITY (G)			108. CONNECTED BUILDINGS (CA)	MAISON BLOC	ALL ROOMS COULD BE BEDROOMS (JC)				184. COOKING LAYOUT (CA)			
	205. STRUCTURE FOLLOWS SOCIAL SPACES (CA)			FLEXIBILITY OF PROGRAMMED AREAS (JC)	ADJOINING APARTMENTS (JC)	114. HIERARCHY OF OPEN SPACE (CA)						
ION (K)	SPONTANEOUS SOCIAL INTERACTION (CB)				CIRCULATION THROUGH THE HOUSE		111. HALF-HIDDEN GARDEN (CA)	115. COURTYARDS WHICH LIVE (CA)				
IN (S)	OPPORTUNITIES TO PREPARE FOR PROGRAMS (JC)			132. SHORT PASSAGES (CA)				69. PUBLIC OUTDOOR ROOM (CA)	163. OUTDOOR ROOM (CA)	108. POSITIVE OUTDOOR SPACE (CA)	31. FROMENADE (CA)	
ICE TO		130. ENTRANCE ROOM (CA)	125. STAIR SEATS (CA)				105. SOUTH FACING OUTDOORS (CA)		116. CASCADE OF ROOFS (CA)			
	RICH SOCIAL LIFE.		112. ENTRANCE TRANSITION (CA)	OPPORTUNITIES TO PREPARE FOR PROGRAMS (JC)			159. LIGHT ON TWO SIDES OF EVERY ROOM (CA)			117. SHELTERING ROOF (CA)	AREA TO UNLOAD (JC)	
	HEALTHY SOCIAL ENVIRONMENT.						128. INDOOR SUNLIGHT (CA)					
ED (D)						107. WINGS OF LIGHT (CA)		161. SUNNY PLACE (CA)		169. TERRACED SLOPE (CA)		
CA)	RESTORES HUMAN BEINGS CAPACITY FOR SPIRITUAL ACTIVITY	63. DANCING IN THE STREET (CA)	58. CARNIVAL (CA)		238. FILTERED LIGHT (CA)				CARE FOR LAND (ME)	175. GREENHOUSE (CA)		
A)		72. LOCAL SPORTS (CA)			235. SOFT INSIDE WALLS (CA)			A BUILDING TO MAINTAIN (JC)	168. CONNECTION TO THE EARTH (CA)	WINTER GARDENS (JC)	176. GARDEN SEAT (CA)	
						236. WINDOWS	221. NATURAL					177. VEGETA



may be solely on the Community site as that could be the practical location for construction.

CAMPHILL PRECEDENTS: Here I described my travel to Scotland and Germany. I also presented the book 'Living Buildings', talked about the archetypal Camphill Hall. I described the communities I had seen through site plans that show live/work/gather spaces and through photos of gathering spaces (foyers, chapels, outside buildings)

FURTHER RESEARCH: I showed my 'pattern language matrix', highlighting that this just demonstrates my goals on the academic side of digesting theoretical text and translating into spatial experience.

CONSTRUCTION TIMELINE: I presented empty timelines with the years of the community on one axis and # of residents, developments in construction and changes in community culture on the other. I tasked the members of the meeting to fill in this document to the best of their ability.

COMMUNITY MEMBERS RESPONSE: The architect who design Maison Micheal, Maison Ceres and Maison Ellyn gifted Inge plans for a hall in the 90s. It was remarked that it was in a 'mini-Goetheanum' style and that at that time as the population of the community was still very young the program of the building was a central hall with workshops around the perimeter.

It was noted that the idea for a hall has been a discussion ever since with a few iterations.

At the time of this plan the hall was thought to be developed between the existing 4 buildings as a sort of 'heart' of the community

With the development of the dome and the purchase of the land between the dome and the office there become of interest for the community.

The community has been in contact with an architect to develop plans for such a hall. The plans for an office renovation (in the service of getting part of the project underway) and of the overall hall were presented.

The plans for an office renovation and a hall were presented by the Educational Coordinator. It was explained that the current office building is no longer suitable and there is a desire to remedy this in the meantime while a hall is being developed.

The community members responded positive to the plans for the office building but wanted to wait on the design for the hall.

The concerns were voiced that the design for the hall fell too quickly into a discussion about room sizes rather than an overall site study, that the form and appearance of the building is unclear, that the plans suggest a boxy building and that the pitch of the roof (and suggested roof form with two intersecting pitches) seemed questionable in terms of construction and proportion.

It was asked what my opinion of the 'anthroposophic style' of architecture was, I explained that I have concerns about copies of solely style, that the expertise and culture of the local building trades was important to take into account and that I felt Tietz & Tietz had been good role models for me in this regard.

October 12, 2017: Discussion with Richard, head of maintenance at Maison Emmanuel.

As he was fixing a door on the upstairs balcony at Maison Ceres that had a finicky handle, the lower half of the door had already been repaired with the addition of a plywood board to keep the heat in over what must have been a whole. Richard remarked that Renaud, the farmer and wood workshop master had been tasked to make a new door. Richard remarked this was a big job and as it was Autumn Renaud was occupied with the harvest of the garden.

This led me to ask about the seasonality of maintenance work, Richard noted that as the garden and farm become less of a priority outside the growing and harvesting season the winter can be a time for smaller construction jobs in houses. [this I interesting as it relates the building cycle to the agricultural cycle, it also presents a distinction between the season for the larger construction of buildings (spring-autumn) and the season for repair, furniture construction and interior construction (winter)]

I asked Richard what the most common repairs at the community were, he said plastering and painting walls. This is due to intentional damage by residents and unintentional wear and tear, particularly from wheelchairs. We discussed that this could be remedied by a reinforcing material (like wood) on the lower 4 ft of an interior wall.

-Richard also remarked, gesturing to an outdoor light, that any replacement or failure in electricity is costly. He said if you had a simple problem like this at a private home you might quickly do the rewire on your own, however in the community as an electrician must be called in the cost for a simple job

can be high. [this made me think about distinguishing which jobs are taken on by the community and which ones by an outside trade, the question of furniture repairs for example can be taken on the community. This is a reminder to think about the categories of meubles and immeuble that Christine Macy brought up in reference to Le Corbusier's Unite d'Habitation]

In response to a question about how he organizes the maintenance of the community Richard said there are frequent group maintenance meetings, that members of each house come to him directly, that he works with one of the residents often and that he has a never ending list. [Maintenance is a constant]

## NOTES

- 1 Dolores Hayden, *The Grand Domestic Revolution: A History of Feminist Designs for American Homes, Neighbourhoods, and Cities* (Cambridge, MA: MIT Press, 1979), 184.
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- 3 Hilary Sample, *Maintenance Architecture* (Cambridge, MA: MIT Press, 2016), 73
- 4 Ibid., 1.
- 5 Ibid., 65.
- 6 Sherri Torjman, "Policies in Support of Caregivers," *Renewing Canada's Social Architecture*. (Toronto: The Caledon, May 2015), 1.
- 7 Perret in Claudio Martini, *Risk Management in Architectural Design: Control of Uncertainty over Building Use and Maintenance* (Cham: Springer International Publishing, 2015), 4.
- 8 Steven A. Moore and Barbara B. Wilson, *Questioning Architectural Judgement* (New York: Routledge, 2001), i.
- 9 Stewart Brand, *How Buildings Learn: What Happens after They're Built* (New York; Toronto: Viking, 1994), 114.
- 10 Howard Davis, *The Culture of Building* (New York: Oxford University, 1999), 13.
- 11 Ibid., 13.
- 12 John Habraken refers to these parts as Supports and Detachable Units, Stewart Brand as Site, Space Plan, Services, Skin, Structure, Site and Peter Pragnell as Support, Fill and Action.
- 13 John Habraken, *Variations : The Systematic Design of Supports* (Cambridge, MA.: Laboratory of Architecture and Planning at MIT, 1976), 21.
- 14 Brand, *How Buildings Learn: What Happens after They're Built*, 12-13.
- 15 James Conroy, W., Steven J. Dale, and Robert P. McCaffrey, "Current and emerging trends for residential supports for persons with intellectual and developmental disabilities and the impact of managed care initiatives," in *Health care for people with intellectual and developmental disabilities across the lifespan* (Switzerland: Springer, 2016), 257.
- 16 United Nations *Convention on the Rights of Persons with Disabilities*, 2008, <https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities.html>.
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- 19 M. L. Wehmeyer and N. Bolding. "Enhanced Self-Determination of Adults with Intellectual Disability as an Outcome of Moving to Community-Based Work Or Living Environments," *Journal of Intellectual Disability Research* 45, no. 5 (2001): 371.
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- 28 Site visit, Newton Dee Camphill, July 30, 2017.
- 29 Site visit, Maison Emmanuel, October 11, 2017.
- 30 Hayden, *The Grand Domestic Revolution*, 67
- 31 Cati Bestard "The 'Kitchenless' House: A Concept for the 21st Century," Translated by Matthew Valletta, *Archdaily Interview*, (17 August, 2016), <https://www.archdaily.com/793370/the-kitchenless-house-a-concept-for-the-21st-century>
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- 34 Ibid., 23.
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- 36 Edward Allen and Patrick Rand, *Architectural Detailing : Function, Contractibility, Aesthetics*, 3rd ed. (Hoboken, New Jersey: Wiley, 2016), 171.
- 37 Brand, *How Buildings Learn: What Happens after They're Built*, 114.
- 38 John Brown, "Going Home: Future Adaptive Building for Aging-in-Place," (PhD diss., University of Chicago, 2016), 53
- 39 Heschong, *Thermal Delight in Architecture*, vii.
- 40 Lisa Heschong, *Thermal Delight in Architecture* (Cambridge, MA: MIT Press, 1979), 17.
- 41 Brand, *How Buildings Learn: What Happens after They're Built*, 114.
- 42 "History", Maison Emmanuel, accessed March 1, 2018, <http://maisonemmanuel.org/en/>
- 43 Mary Small on the course work of Mariangela Costa, email to the author, October 16, 2017.
- 44 Site visit Maison Emmanuel, October 11, 2017.
- 45 Christopher Alexander, *The Oregon Experiment*. (New York: Oxford University Press, 1975), 67.
- 46 Sherri Torjman, in "Policies in Support of Caregivers." points out that since the 1960s the steady rise in employment of women, along with the economic need for dual income homes, and an aging population positions our moment in history as yet another time to consider the question of how architecture relates to caregiving.
- 47 Allen, *Living Buildings: An Expression of Fifty Years of Camphill*, 19.
- 48 Ibid., 20
- 49 This is a theme in not only architecture from the Camphill Movement, but from an Anthroposophical tradition. With this in mind, we can recognize some aspect of these forms as being influenced not only by their function and atmospheric qualities, but also by their limitation of a style which sought to, as noted in Anthroposophy Today, "break away from the right angle, giving a sense of movement, of flexibility, of change, of freedom"
- 50 Site visit, Beannachar Community, August 1, 2017.
- 51 The second staircase of this house at Newton Dee was the necessity of the building code for a care facility to offer two internal staircases as means of egress from the second floor. This entrance also functioned as the secondary means of egress.



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