ReAwakening

on absence, presence, and the restorative power of music for people with Alzheimer's Disease

by Timothy To

A thesis submitted to the Faculty of Graduate and Postdoctoral Affairs
in partial fulfillment of the requirements for the degree of

Master in Architecture

Carleton University
Ottawa, Ontario

figure 1. lost in myself.

abstract

‘lost’, ‘empty’, ‘forgotten’, ... are terms that people with Alzheimer’s disease wrestle with. Understanding our past, present, and future within time and the environment plays an integral role in giving us confidence, identity, and purpose. A vital task of architecture is to help us to situate ourselves in the world, but one’s ability to navigate and situate in a space is greatly hampered by Alzheimer’s disease.

The thesis aims to propose a space that provides assisted and independent living for people with varying degrees of Alzheimer’s disease while incorporating music, as a therapeutic process and intervention means. The project is developed from the investigation of music and its restorative powers. The amalgamation of day-to-day living and music, creates moments of active participation, where residents, caregivers, and family members, interact to form new memories and reflect on old ones.

“ When the past becomes present, one can be said to have completed an act of memory, or, simply remembered something ”[1]
David Gross. *Lost Time*

1 David Gross, *Lost Time: On Remembering and Forgetting in Late Modern Culture*, MIT Press, Cambridge, MA: 2000

acknowledgements

I want to first express my gratitude and thanks to my thesis advisor, prof. Federica Goffi. Your insights, patience, and support are greatly appreciated.

Ms. Karin Adlhoch, staff and volunteers for their kind and generous help for my short stay at Cummer Lodge. You welcomed me with a kind smile and I am truly amazed at your work and love for the residents residing there.

My parents as my source of encouragement and guidance in life. Your prayers for me shall not be forgotten...

table of contents

list of illustrations

list of illustrations

list of illustrations

figure 2. lost in the forest.

introduction

William Shakespeare's *As You Like It*, is a romantic tale that draws from the theme of love, which is manifested in many forms. There, a monologue is spoken as an address to the world that succinctly summarizes the different stages of one's life. "All the world's a stage, And all the men and women merely players … In second childishness and mere oblivion, sans teeth, sans eyes, sans taste, sans everything."[2]

In the introduction, I'd like to allude to certain themes derived from this play. The world is the stage and our life is the play, a story comprised of the intersection of identities and the notion of chanced, and intended meetings. The characters (identities) of *As You Like It*, are situated in the forest (environment) of Ardenne, where the passage of time and scenes take place (*figure 2.*). These scenes are like the memories that we, as individuals, have created, collected, stored, reminisced, and on a human level, cherished. Whether these scenes are happy or sad, memories take a vital role in giving us identity, shaping our values, forming our person-hood, and arguably our 'being'. For "a simple but profound equation seemed to go unchallenged for centuries: memory equals being, forgetting equals nonbeing."[3]

2 William Shakespeare, *As You Like It*, line from act ii sc. vi.

3 David Gross, *Lost Time: On Remembering and Forgetting in Late Modern Culture*, MIT Press, Cambridge, MA: 2000, 2.

figure 3. memory as narrative

For many aging people, one of the greatest fears is forgetting these memories that they hold dear to. Dementia, a neurological syndrome caused by a series of progressive disorders affecting memory, thinking, and behaviours, plays a major factor for one to 'lose themselves'. In particular, the thesis will focus on Alzheimer's disease (AD), which is the most prevalent disease in causing dementia. While it may be easy for one to say people with AD may undergo a 'second childhood', it is no accurate. For a child has limited history, experiences, and memories, while people in old age, with or without AD, have a long history of experience. Most certainly, they do not 'lose themselves'.

This project thesis attempts to address the question 'How does the environment (more specifically architecture) affect a person with Alzheimer's disease?' This investigation will lead me to explore several topics:

- The importance/non-importance of memory (*on Memories*)
- What is Alzheimer's disease and the strain it has on the people it affects (*on Absence*)
- How should we positively approach in dealing with this illness (*on Presence*)
- Design with an approach to treating AD with music and housing (*muse of Music*)

on Memories

Our memories, fragments of our times passed, had always been thought of as important and something positive. Forgetting, by contrast, had negative connotations. For to forget meant to lose or fail to retain something, resulting in an absence or an emptiness where memory should be.

Our recent ancestors (prehistoric and early historic time) relied on their memories as means of survival and social existence. Memories took on a role as values that enabled one to preserve something inwardly, and call upon when needed. Rituals and traditions played an integral role in maintaining a hierarchy of social life. If one forgot these guidelines, then the individual would not be in tune with the gods. The ability to remember and perform these rituals was “the way to truth and forgetting is the path of untruth.”[4]

4 David Gross, 2.

Memory also played a crucial role in giving people a consistent sense of identity. By remembering one's continuity in time, an individual was able to achieve some degree of ontological security, a sense of who one was in the past and present. A person is able to say that he/she remained the same person even as time passed. If we don't remember the past, then can we say that we are only glimpses of the present moment?

General types of memory include:[5]

Semantic memories	recollection of words/meaning of words/associational relations that exist between one word and another
Propositional memories	recollection of specific kinds of information such as the Newton's Law or the causes of WWII
Implicit memories	remembering how to repeat learned skills such as operating a calculator or playing a musical instrument
Episodic memories	recollection of particular events, which an individual has experienced at an earlier point in his/her life (as a singular 'now' that stands out from a series of 'nows')

5 David Gross, 11-12.

Today however, our view on placing an importance on memory has altered. In the late modern age, it is believed that the information we may have obtained two years or a year ago has now become obsolete and outdated. In regards to personal identity, one may argue that clinging onto our memories inhibits our ability to achieve a free personality, improvise, and adapt to new situations. It is argued, among psychologists and neuro-biologists, that built into our memory is a strong component of forgetting. Most acts of remembering involves certain present materials being projected backwards, which questions the authenticity of our remembered past.[6]

Current scientific opinion maintains that there is no such thing as an exact recall of the past. Rather, our memories are said to be 'reconfigured in the process of being preserved so that what comes out as 'memory', is to a great extent a reconstruction of what actually happened in the past.'[7]

6 David Gross, 3.
7 Ibid., 4.

Memories can be classified by four parameters:[8]

Functions: immediate, recent, and remote	• Immediate: recollection of immediate events • Recent: recollection of events occurring within minutes • Remote: recollection of events in the distant past Immediate and Recent memories are the most vulnerable
Modalities: visual, auditory, tactile	The sensory systems whereby the material remembered was experienced
Processes: registration, storage, retrieval, and retention	• Registration: unable to respond to a memory item because it did not register • Storage: unable to store the information that did register • Retrieval: unable to call upon the item that was stored • Retention: only able to retain the stored information for a finite amount of time
Material: verbal, nonverbal	Material containing both verbal and nonverbal elements seems to be better retained.

8 Jitka M. Zgola, *Doing Things: A Guide to Programming Activities for Persons with Alzheimer's Disease and Related Disorders*, John Hopkins University Press, London, UK: 1987, 10.

on Absence

As people, we occupy our lives by doing ‘things’. Whether it is a daily routine, work, or a hobby, they occupy the majority of our day. These ‘things’ that we do help define who we are and what we say of ourselves, “I am a student,” “I am an architect,” or “I am a mother.” The course of AD takes away our ability to do these familiar “things”. We forget the names of our loved ones. We get lost in the park. Professional caregivers theorize that the loss of tasks and roles take away one’s identity. For individuals who have almost lost all the ability to plan, initiate, or carry out activities, much of their day becomes empty. Thus, pacing, fiddling, and continuous questioning may become an effort to fill in the void.[9]

Alzheimer’s disease is a physical disorder, producing changes in the cerebral cortex, which is the outer layer of the brain and the part most highly developed in humans. Changes affect an individual’s memory, language, ability to abstract, attention, and judgment. Memory problems are usually the first to be noticed.

9 Jitka M. Zgola, *5.*

Over 100 billion cells are housed in a 3 pound jellylike organ, the human brain. Each of the 100 billion neurons has as many as 10,000 little tentacles called axons and dendrites that reach out to other cells. Tubes inside the neurons help to strengthen other cells, transport nutrients and serve other functions. The tubes of certain cells, of someone who developed Alzheimer's, are affected by the tan protein and turn into balls of useless material called tangles. Proteins called beta-amyloid starts to form clumps around and between neurons. These clumps on the outside of neurons are called plaques.[10] In 1906, Dr. Alois Alzheimer was the first to identify the diease. Through the course of AD, these toxic plaques will enlarge causing shrinkage to parts of the brain. Someone who dies at the end of the course of Alzheimer's loses 40% of its weight.[11]

10 John Zeisel, *I'm Still Here: A New Philosophy of Alzheimer's Care*, Penguin Group, New York, NY: 2009, 55.

11 Alzheimer Society Canada

The impacts of AD are far-reaching. Four main categories are commonly affected:

- Cognitive and functional abilities: a person's ability to understand, think, remember and communicate will be affected. This could impact a person's ability to make decisions, perform simple tasks, or follow a conversation. Sometimes people lose their way, or experience confusion and memory loss, initially for recent events and eventually for long-term events.
- Emotions and moods: a person may appear apathetic and lose interest in favourite hobbies. Some people become less expressive and withdrawn.
- Behaviour: a person may have reactions that seem out of character. Some common reactions include repeating the same action or words, hiding possessions, physical outbursts and restlessness.
- Physical abilities: the disease can affect a person's coordination and mobility, to the point of affecting their ability to perform day-to-day tasks such as eating, bathing and getting dressed.[12]

People with dementia are often stigmatized as someone who is deteriorating in both physical and psychological levels. An Alzheimer's diagnosis is an Alzheimer's sentence. AD paints a picture of bleakness, unable to cope with their environment, unable to relate with others, and having lost their sense of self.

12 Alzheimer Society Canada

Stages of Alzheimer's disease:[13]

- Early stage - refers to individuals of any age who have mild impairment due to symptoms of Alzheimer's disease. Common symptoms include forgetfulness, communication difficulties, and changes in mood and behaviour. People in this stage retain many of their functional capabilities and require minimal assistance. They may have insight into their changing abilities, and, therefore, can inform others of their experience of living with the disease and help to plan and direct their future care.
- Middle stage - This stage brings a greater decline in the person's cognitive and functional abilities. Memory and other cognitive abilities will continue to deteriorate although people at this stage may still have some awareness of their condition. Assistance with many daily tasks, such as shopping, homemaking, dressing, bathing and toileting will eventually become necessary. With increasing need to provide care, everyone involved will need help and support.

13 Alzheimer Society Canada

- Late stage - The late stage of Alzheimer's disease may also be called "severe" or "advanced" stage. In this stage, the person eventually becomes unable to communicate verbally or look after themselves. Care is required 24 hours a day. The goal of care at this stage is to continue to support the person to ensure the highest quality of life possible.
- End of life - When the person nears death, comfort measures become the focus. As in the care of any person living with a terminal illness, physical as well as emotional and spiritual needs must be carefully considered and attended to, focusing on quality of life and comfort.

on Presence

We should keep in mind that Alzheimer's disease is an organic illness of the brain, and that sharing care-partnering tasks with others is keeping a promise, not breaking it. Although AD may not be 100% treatable, implementing a mixture of balanced non-pharmacological (careful and meaningful designing for both social and physical environments of the person) with pharmacological approaches, a compromise between inter-disciplinary solutions.

As designers, we should be aware that family/partners or caregivers may get sick more often than the people they care for: They tend not to take care of themselves with the busy and demanding schedule and thus, get sick more often and for longer periods than the people they care for. "Understanding the changes a person with Alzheimer's is going through, is alone a major step towards compassion, a necessary component for treating oneself well and for being able to give of oneself to the other person throughout the illness."[14]

14 John Zeisel, *25.*

As portrayed in the last chapter of the effect of AD has on a person, we should realize that this does not mean he/she can't function well in public, but only that he/she can't do it the way he/she used to. We must learn to celebrate their continuing successes, abilities, and appreciate their capabilities as well as their losses. The lessons one can take from learning about people living with Alzheimer's are applicable to others with physical, sensory, and cognitive disabilities.

John Zeisel, author of I'm Still Here, proposed two 'frequently overlooked uncommon commonsense messages' that embody the essence of the proposed thesis project.

1. The skills and capacities of people living Alzheimer' that don't diminish over time, or do so more slowly, provide windows for connection and communication.
2. Through those windows lie opportunities to establish and build new and vibrant relationships that can sustain us and them over time, supporting both care and well-being.

Everyone has innate, instinctual abilities that building a caring relationship can capitalize on, such as our ability to understand music, facial expressions, and human touch – the meaning of a song, a smile, and a hugs. Tapping into these abilities enables everyone living with Alzheimer's to function better, because they are never 'lost'.[15]

15 John Zeisel, *4.*

As people with Alzheimer's age, there may be certain memories that they retain better than others. This may lead to skills being expressed without them thinking about them, such as knitting, cooking, or playing music. Despite the potential degradation of abilities as described in the previous chapter. One must note that there are certain important characteristics and strengths that are retained by persons with AD. In particularly, the acute sense of responding to music is often displayed even when simply motor functions cannot be performed.

- Habitual skills: once learned, no longer requires planning, organization, and modulation. Often it is triggered or related to a specific environmental stimulus
- Primary Motor Function: motor functions such as strength, dexterity, and muscular control are usually retained
- Primary Sensory Function: An individual may not be able to interpret or make sense completely of all that he/she sees, touches, smells, tastes, and hears, he/she can still derive pleasure from a sweet pleasantry or distaste from a noxious smell. Rhythm seems to be strongly retained as it has been observed that individuals who are strongly impaired can still respond to activities that are strong in rhythmic character and composition, such as dancing and threading beads.

- Emotion: Emotions are real and requires an outlet especially when individuals find it hard to verbalize. Feelings such as frustration and anger, can be expressed through vigorous physical activities. Sensory experiences can be stimulated through music and fragrances, which often will trigger an associated memory of the past.
- Remote Memory: Recollecting certain past memories may be comforting for individuals and may ascertain their presence in the present. One must be aware of not over pushing the individual to perform certain activities that they may once do well at.

Recognizing the balance between 'pride in past accomplishments and expression of current competencies,' is integral for healthy living.[16]

Finally, as architectural designers, we should recognize the importance of sensory experiences. As the decline of most recent memories occur for people with AD, their reliance on direct sensations increase. Senses of a space may be described as 'a projection in the mind of each of us'. Thus, impression of a room differs from person to person. 'Space' becomes a subjective phenomenon. Appealing to our hearing, via music, is the basis of the project's proposal.[17]

16 Jitka M. Zgola, 25.
17 Eckhard Feddersen, *Lost in Space*, Birkhauser 2014, Germany, 15.

muse of Music

It has been said that music, in the thirteenth century, was described as a central healing agent in connection with St. Cecilia, a patroness of music. Cecilia was known for singing from the heart and her passion of using music to access one`s emotions, an important concept of music therapy. After WWII, music therapy was defined as a form of help in lifting moods and motivational intervention for war veterans in the USA and in the UK. (Bunt 1994) This discovery of music as a healing agent, expanded to a larger targeted population ranging from war veterans, prisoners, children with special needs, and later for wider populations.[18]

Stemming from the immediate post-war period, music therapy was mainly focused on the usage of music as an agent of change for educational and behavioural or remedial purposes. Music therapy was recognized as a sequence of events that took place over time, for both the client and therapist, in both musical and non-musical areas. This relationship hinted music therapy, or therapy in general, is about developing a connection between patients and therapists by suggesting changes in both parties.[19]

18 Victoria Bates, Alan Bleakley, Sam Goodman, *Medicine, health and the arts: approaches to medical humanities*, Routledge, London: 2014, 264.
19 Bates, 265.

Music therapy in mental health services has increasingly focused upon group work.. "`Therapy` itself has been broadly defined as including community change or enrichment of life, as helping to improve specific conditions such as communication difficulties and more broadly as aiding the ability to cope with illness or stress." Music can be used as a social activity and when utilized in a group setting, members can learn how to understand others and relate to each other.[20]

The value of music therapy lies in its essential purpose of emotional engagement. Therapists can play music with patients, listen to and experience music created by patients, to better understand their emotions and how they interact with the world. Allowing the patients to share these memories, experiences, and emotions helps to learn how they interact with other people, the environment, and themselves.

20 Bates, 266.

figure 4. lost in habitation.

The chosen location for the thesis is a local site (Ottawa), fronting Rideau Street, bordered by Charlotte Street (east), Cobourg Street (west), and Besserer Street (south). It is situated in the 'Uptown Rideau CDP Boundary'.

figure 5. site location.

Rideau Street was originally laid out by Colonel John By, founder of Bytown (now Ottawa), in 1827 as a corduroy road (laying of perpendicular logs across the roadway to stabilize swampy vicinities). It served as the main route from Ottawa to Montreal. It remained primarily as a street with upscale residences until the turn of the 20th century, which marked the replacement of horse drawn carriages with electric streetcars, which carried passengers from downtown to as far east as Cobourg Street. The combination of ease of transportation, proximity to services, commercial areas, and the Parliament made Rideau Street a desirable location to live. According to the 'Official Plan' of the city of Ottawa, although Traditional Mainstreets are characterized by small-scale buildings built before 1945, Uptown Rideau differs from this definition, as only a handful of such buildings remain today. Over the last two decades of the 20th century, the developments that occurred were primarily large-scale projects ranging from the mixed-use Domicile development (at Rideau/Cobourg) and Loblaws (359 Rideau). In the last 15 years, there has been no further development along Uptown Rideau Street other than one development (Shoppers Drug Mart, 322 Rideau), since the year 2000.[21]

21 City of Ottawa, *Uptown Rideau Street - Community Design Plan (approv. 2015)*, Planning ad Growth Management. 26-28.

figure 6. contextual neighbourhoods.

Sandy Hill neighbourhood is characterized by its heritage value, which lies in association with the early development of the city and Ottawa's role as the nation's capital. Presently, Sandy Hill has a population of 11,000 residents with a high proportion of residents under the age of thirty and one-person households comprising mostly of single-detached houses, apartments, and many embassies.[22]

Lower Town, historically speaking, was a working class neighbourhood with Irish and French settlers, employed as labourers on the Rideau Canal or in timber trade. Currently, Lower Town is a diverse neighbourhood with more than 14,000 residents comprising with a high proportion of residents in their twenties, one person households, seniors living alone and French speaking individuals.[23]

22 City of Ottawa, *Uptown Rideau Street - Community Design Plan (approv. 2015)*, Planning ad Growth Management. 29.
23 Ibid. 28-29.

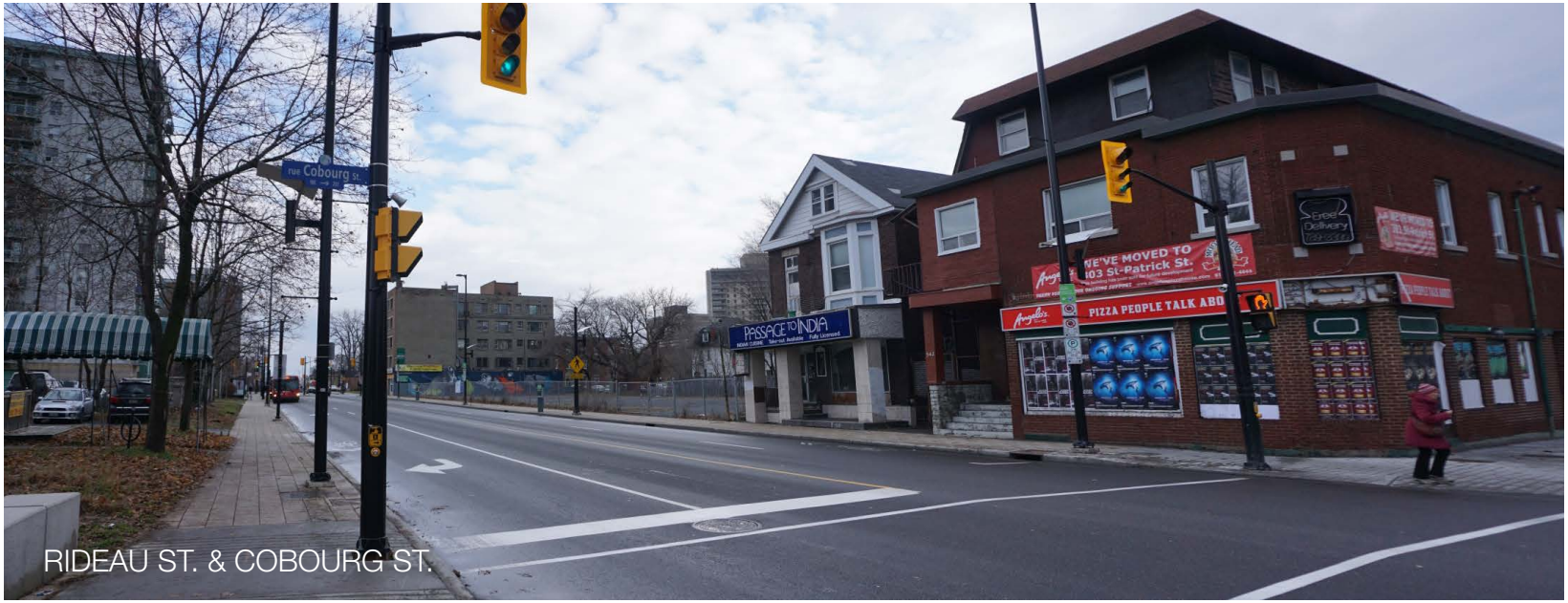


figure 7. photo.

figure 8. photo.

figure 9 photo.

figure 10. photo.

figure 11. photo.

muse of Music_site_program

Assisted Living / Co-Housing Community

- long-term assisted living for people affected by AD
- long-term/short-term residences for local musicians, artists, caregivers, and family members
- meandering meditative pathway/labyrinth (journey)
- communal spaces (dining, amenities such as laundry)

Music Therapeutic Centre

- therapeutic spaces (music, art, Montessori)
- multi-purpose spaces
- performance venue
- studios

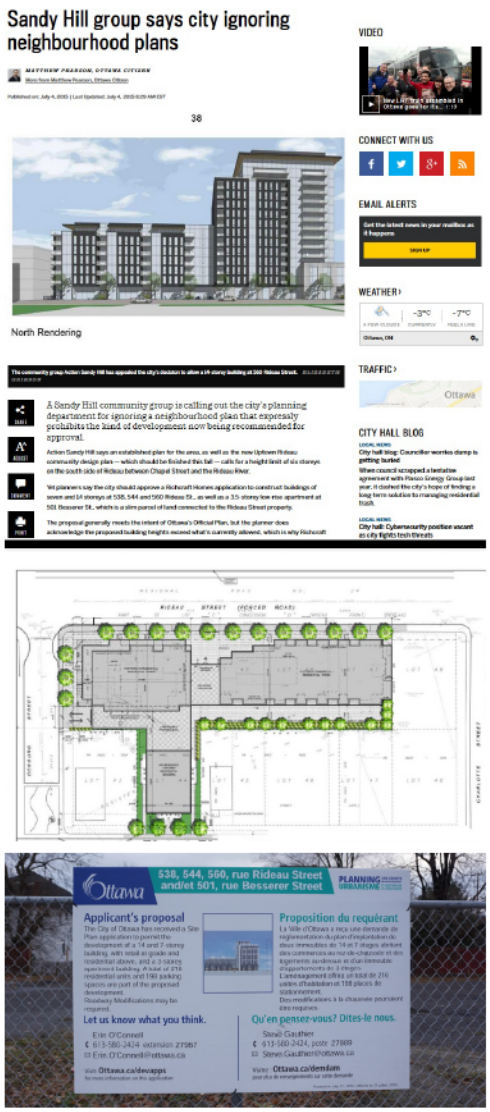


figure 12. concerns for rezoning.

muse of Music_site_rationale

This site was chosen for several reasons:

- Promote transparency and raise awareness on the illness of AD.

Illnesses, such as AD, affects us all in one manner or another. The project intends to connect the local community with the affected residents and form a relationship as intimate as one between a therapist and client. The diverse demographics and services in the surrounding context offers possibilities of local outreach, involvement, and education.

- Offer alternative to proposed redevelopment.

Presently, a developer has submitted a rezoning application for a 14 storey mixed-use high rise. This proposal completely negates the recommended feedback from the Uptown Rideau Street - CDP. Backlashes from local community group were voiced out in a *Citizen Ottawa* article, signaling the disapproval and concerns from local citizens (*figure 12.*). *ReAwakening* attempts to diminish the boundary between the public and patients. From my visit to Cummer Lodge, I felt just the presence alone, of volunteers and staff amongst the affected, has a great positive feedback from the long-term residents.

muse of Music_site_design

I would like to start this section by alluding back to the introduction of the thesis with Shakespeare's play in mind. Our lives are encompassed by many memories and of chanced meetings. The design concept of ReAwakening is to investigate the possibility of integrating music into the everyday lives of people with AD with architecture as the instrument.

Initially, the proposed property encompassed 90% of the block (within the boundaries of Rideau St. (north boundary), Besserer St. (south boundary), Charlotte St. (east boundary), Cobourg St. (west boundary)). The idea was to create a semi-private community within the street block and provide the essential needs for the residents, caregiver, and families in the proposal with a low building height. Thus, four schematic massings were investigated (*figures 14 - 25.*).

figure 13.
conceptual massing schemes.

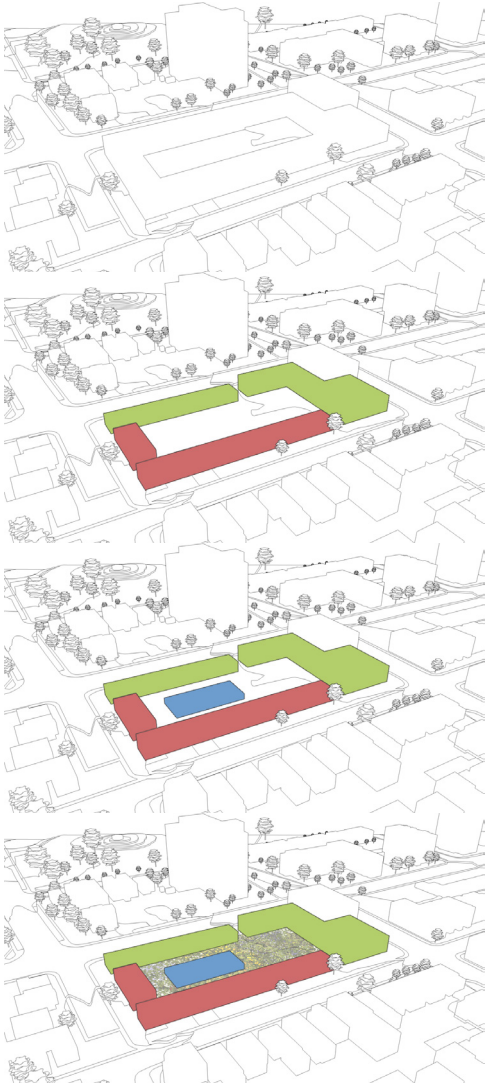


figure 14.
massing - semi-enclosed.

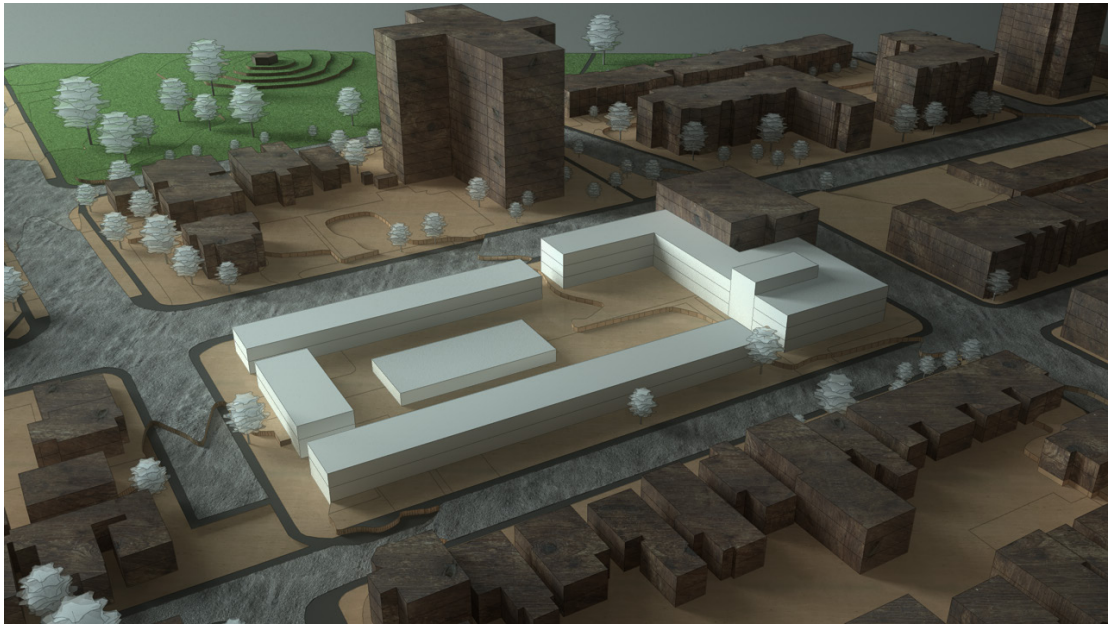


figure 15. massing - semi-enclosed.

Semi-Enclosed

- large courtyard focused
- centralized common space
- semi-enclosed relationship between residences & therapeutic spaces

therapeutic spaces residences common spaces

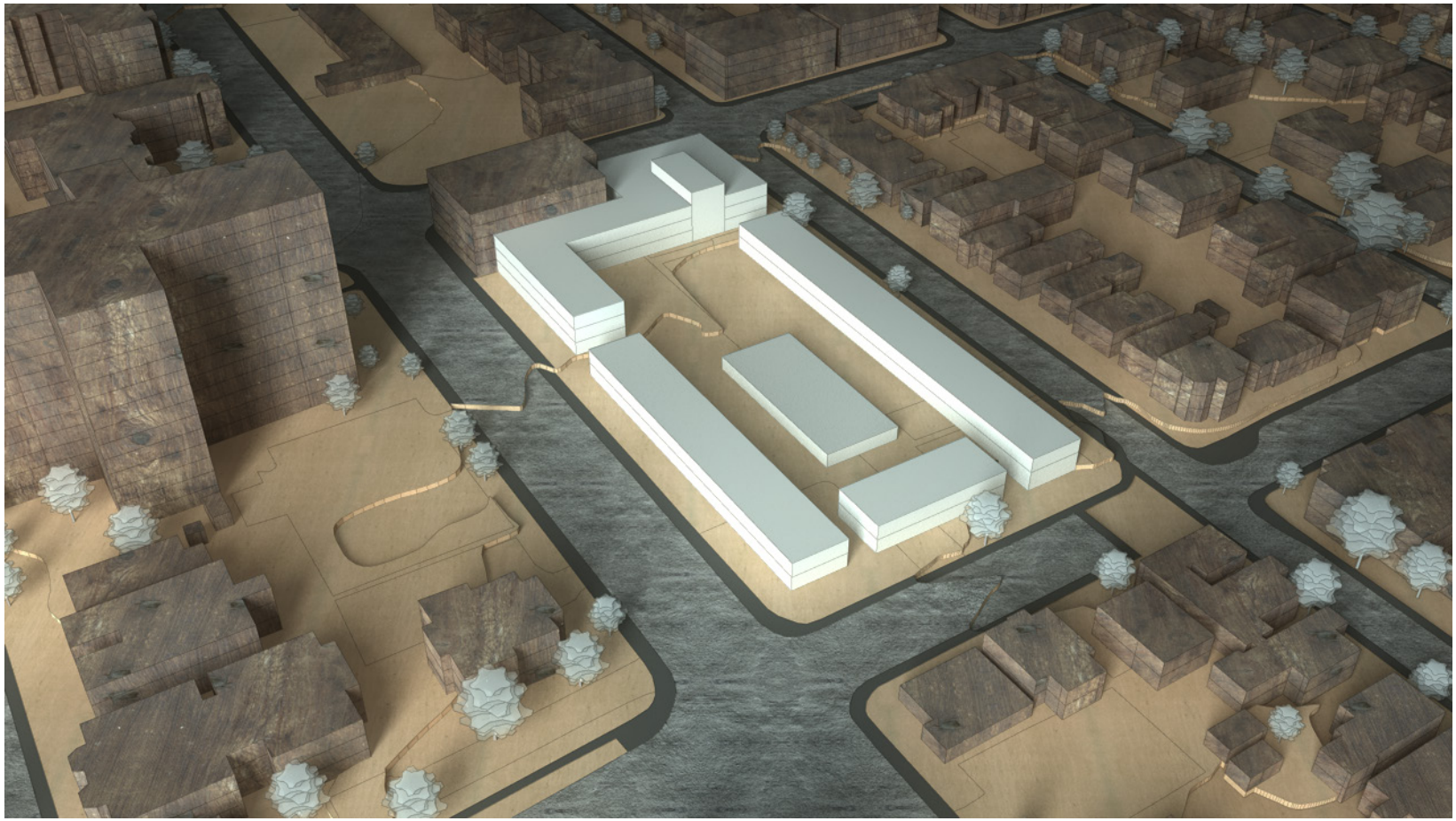


figure 16.
massing - semi-enclosed.

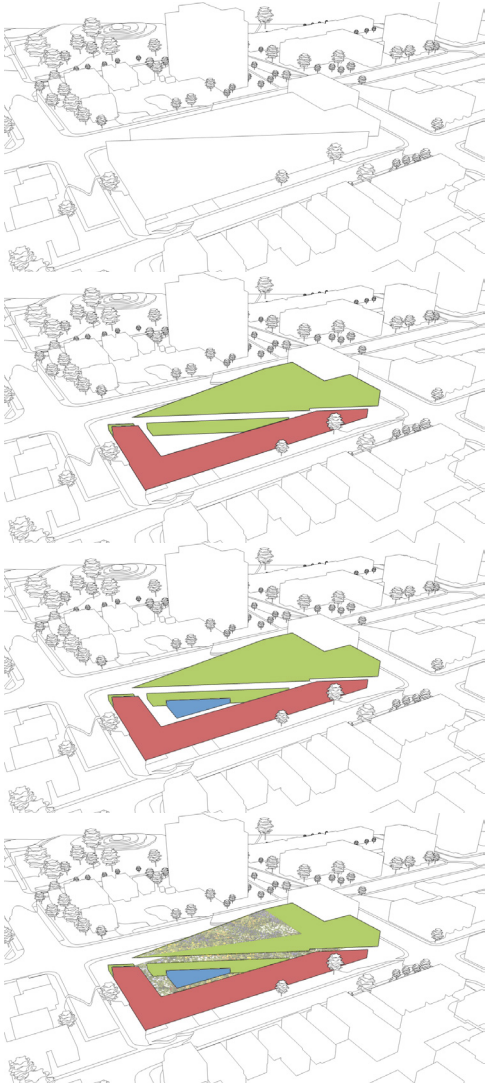


figure 17.
massing - public focused.

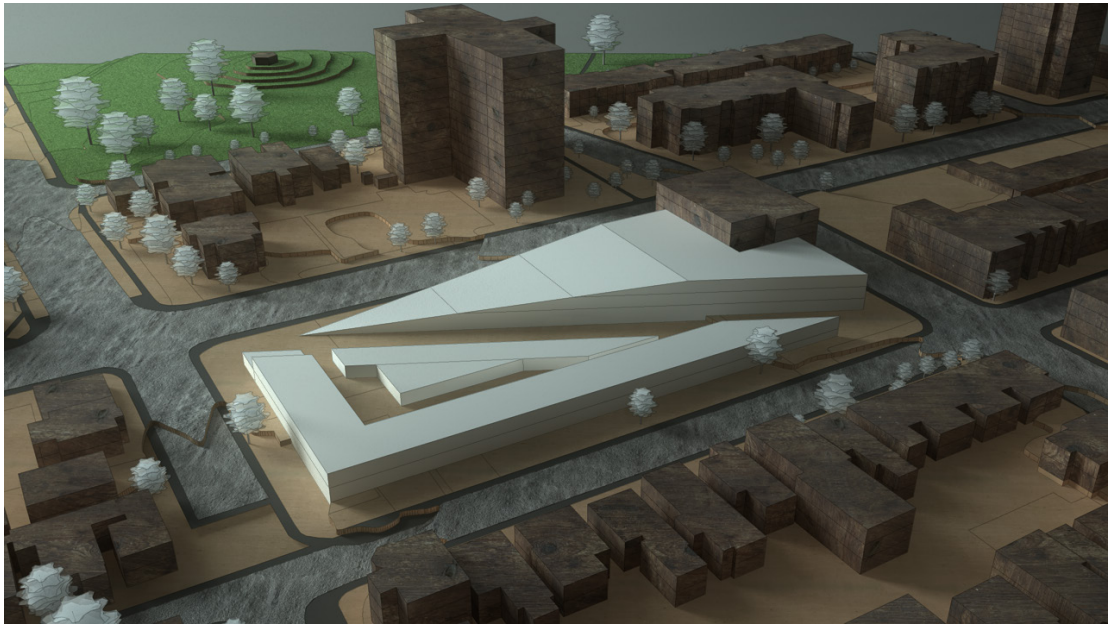


figure 18. massing - public focused.

Public Focused

- centralized public corridor
- open relationship between residences & therapeutic spaces

therapeutic spaces residences common spaces

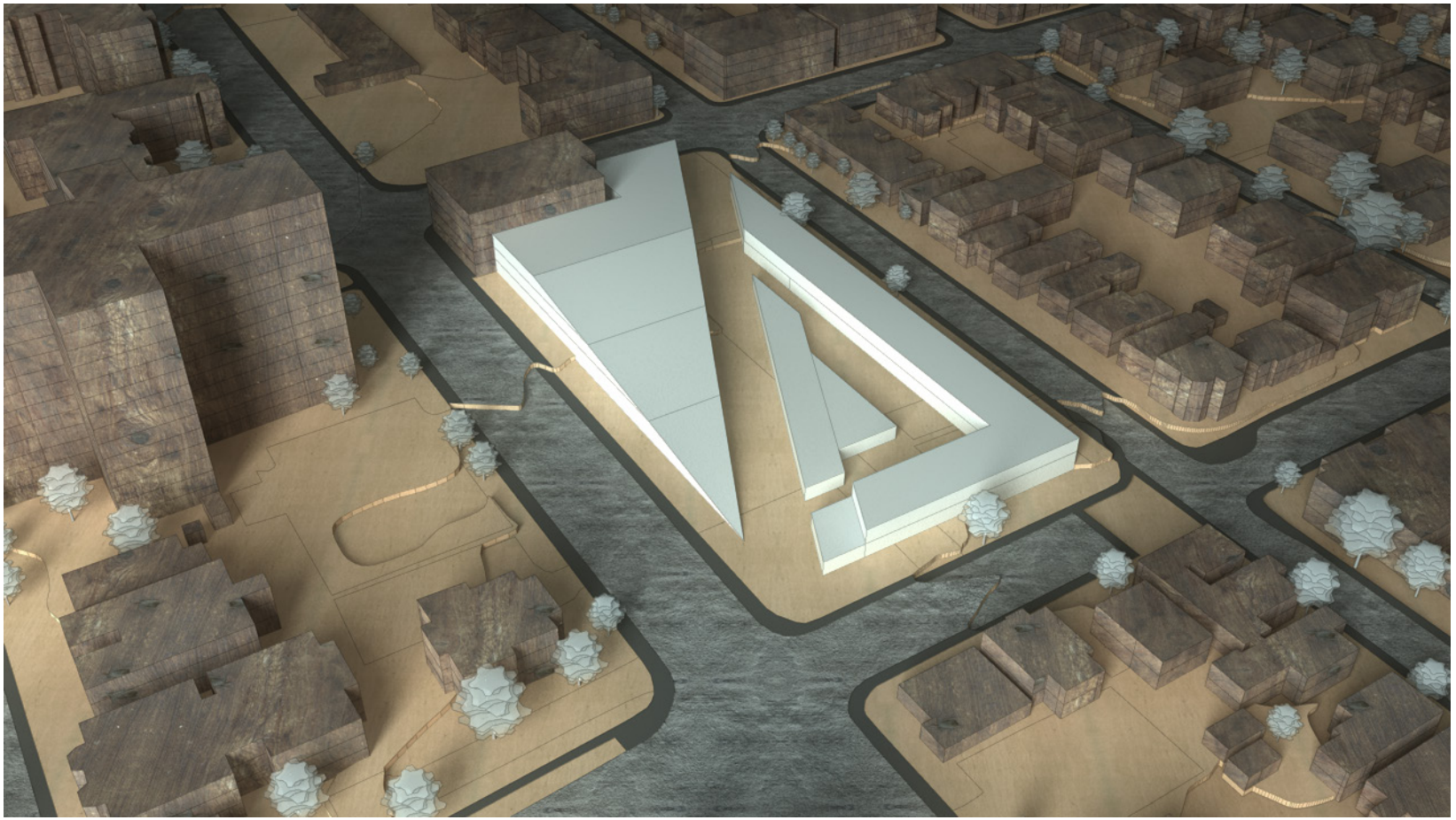


figure 19.
massing - public focused.

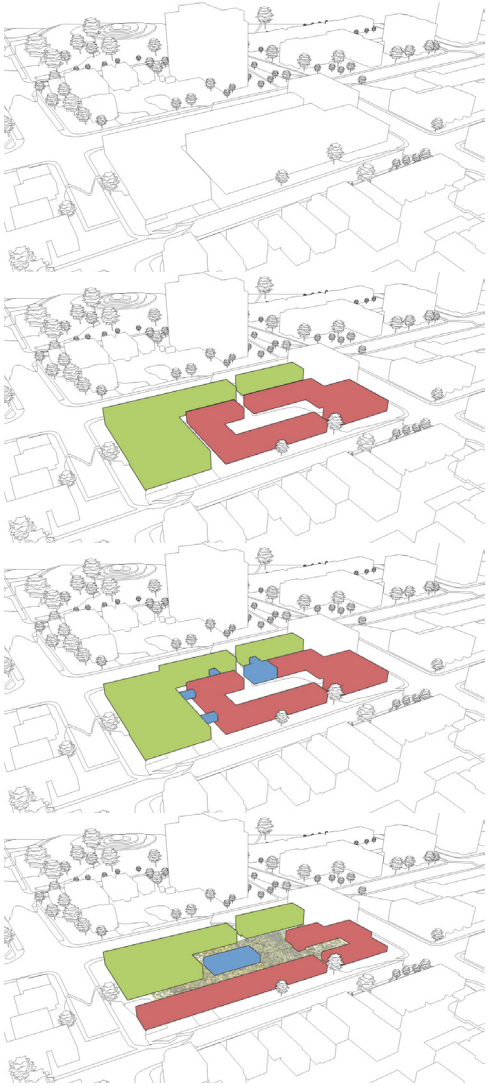


figure 20.
massing - enclosed.

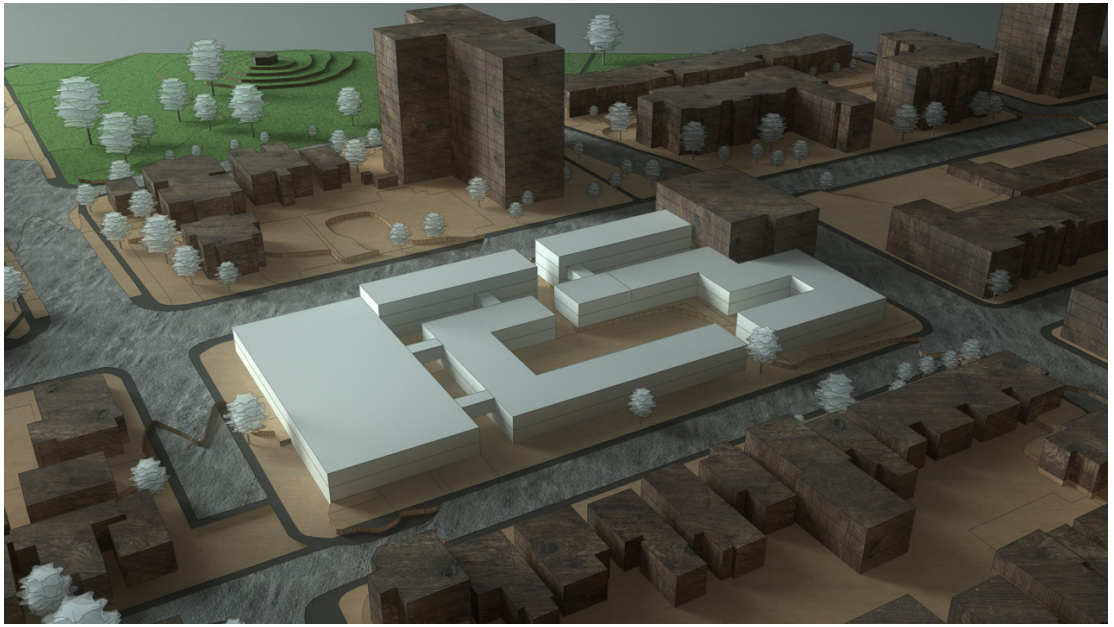


figure 21. massing - enclosed.

Enclosed

- courtyard focused
- closed relationship between residences & therapeutic spaces

therapeutic spaces residences common spaces

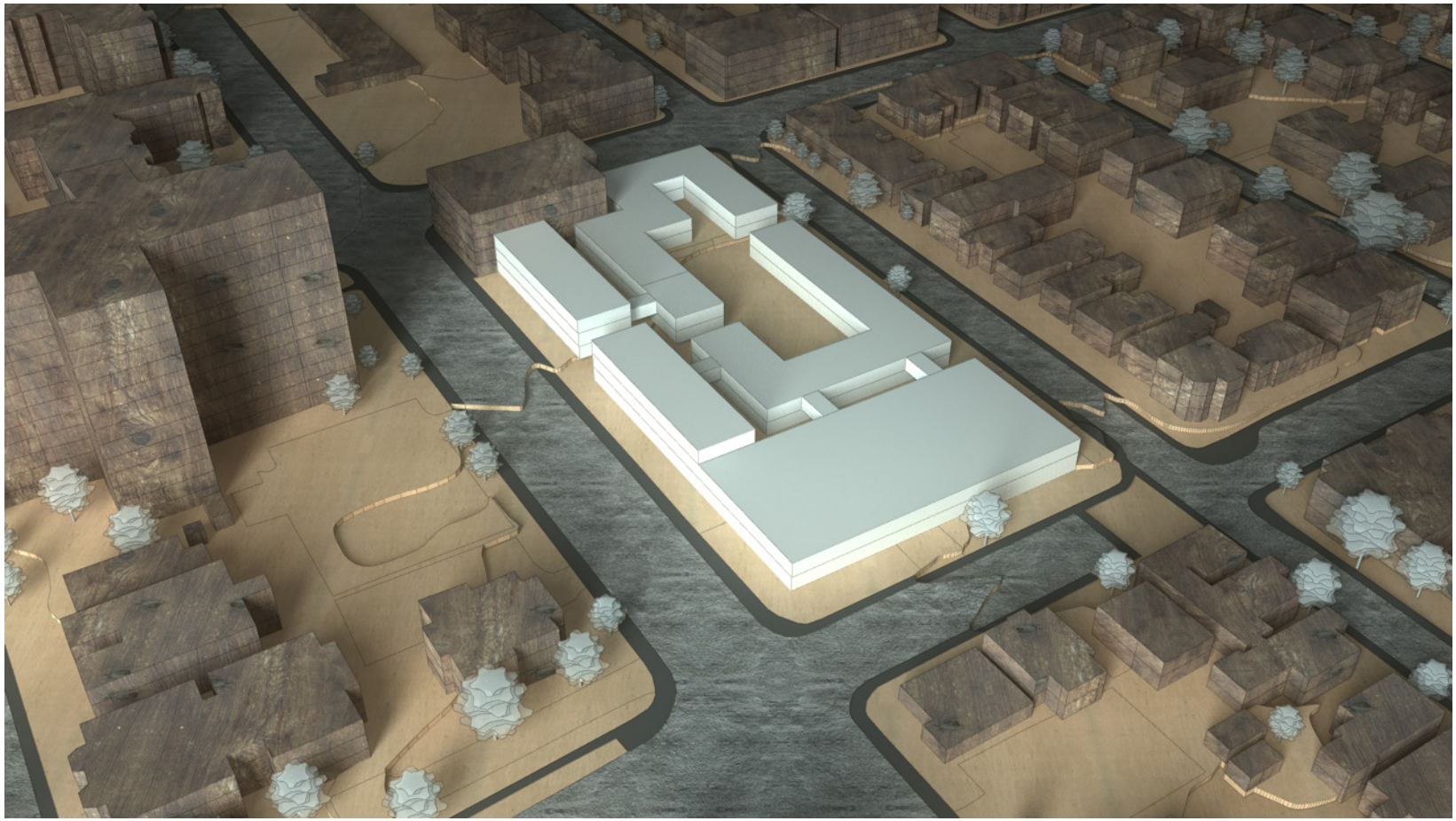


figure 22.
massing - enclosed.

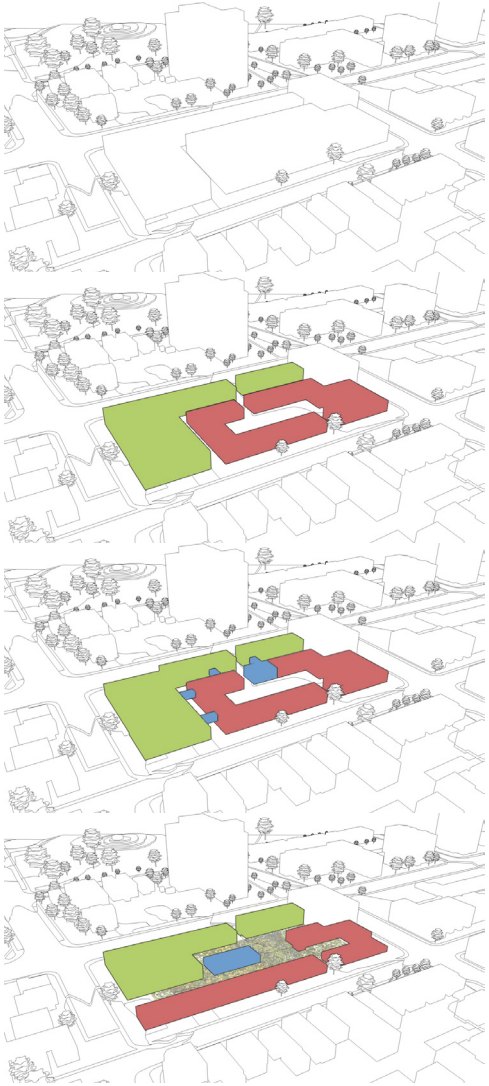


figure 23.
massing - labyrinth-ed.

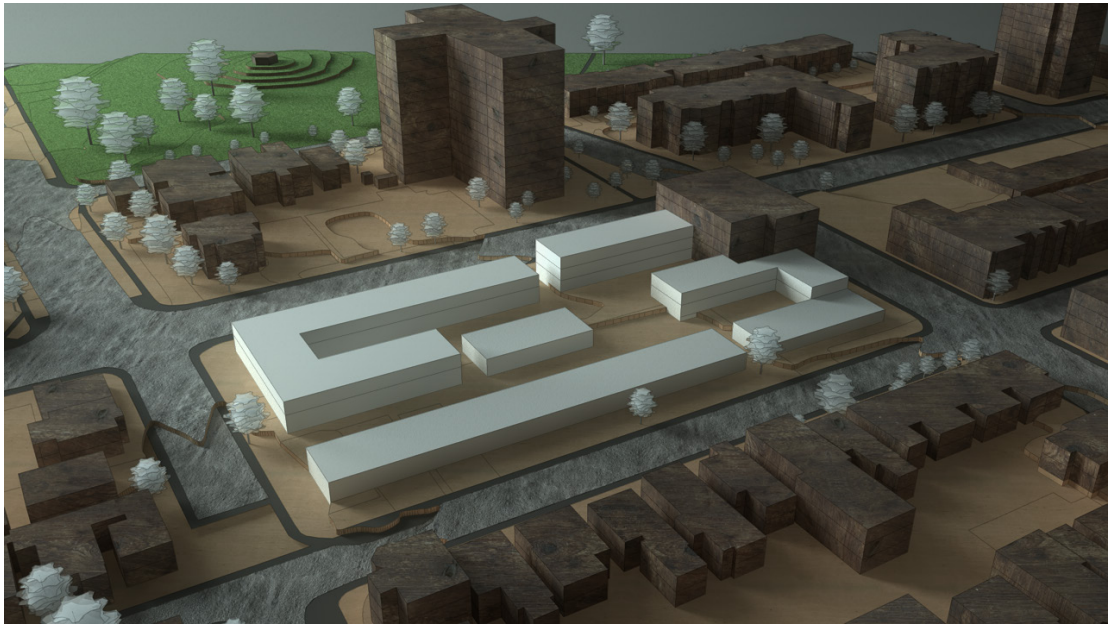


figure 24. massing - labyrinth-ed.

Labyrinth-ed

- circulation focused
- semi-enclosed relationship between residences & therapeutic spaces

therapeutic spaces residences common spaces

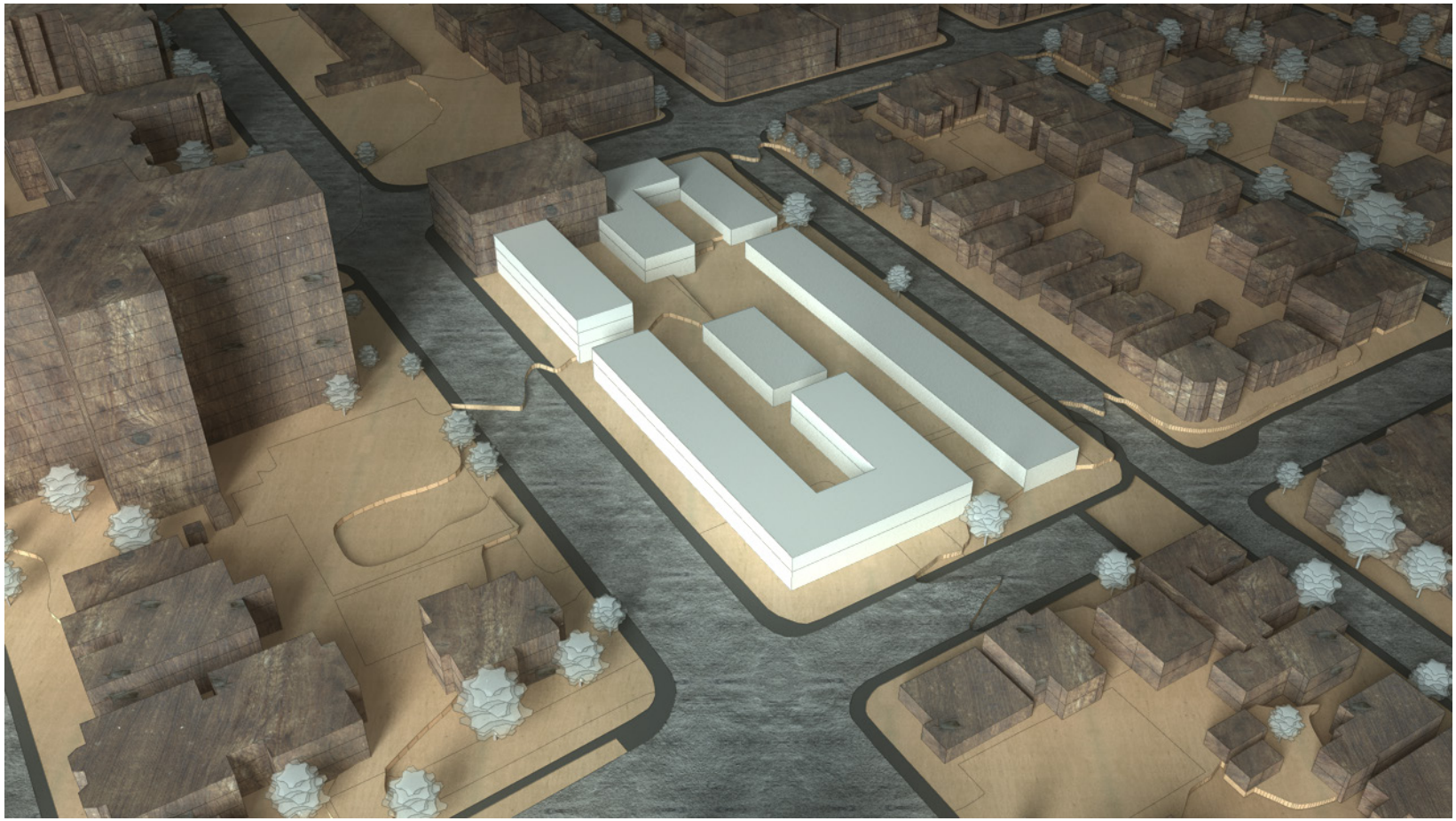


figure 25.
massing - labyrinth-ed.

Following the comments from Colloquium II, the overall site area decreased, as the initial proposed site may be oversized for the program allotted. I began to split the programs into workable floor areas by situating the residences to front Cobourg St. for privacy reasons. The common spaces are located at the intersection of Rideau St. & Cobourg St. and therapeutic spaces, with musician/artist studios, are on Rideau St. for public access and visibility. (*figure. 26*).

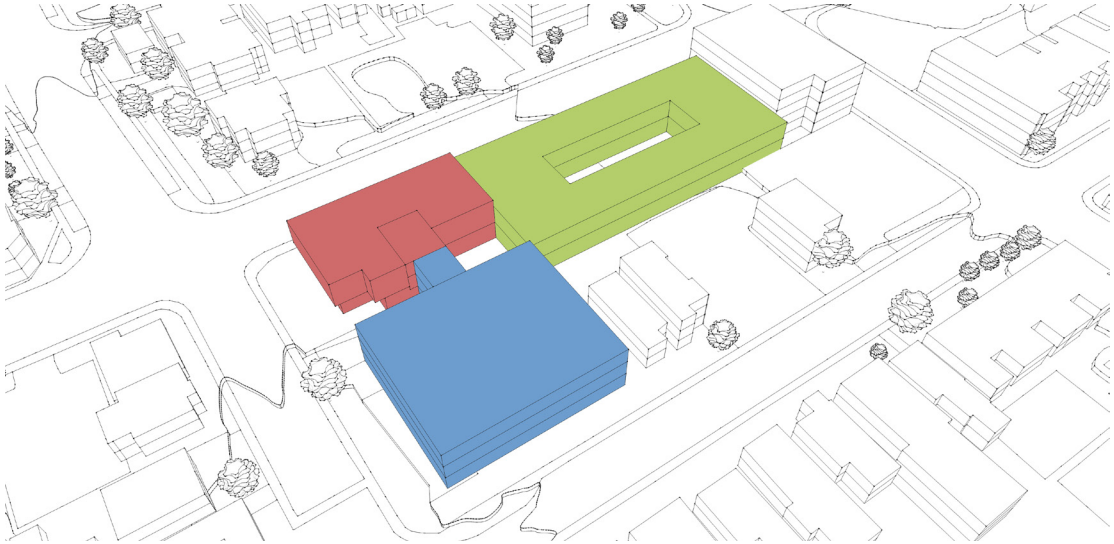


figure 26. schematic massing.

therapeutic spaces common spaces residences

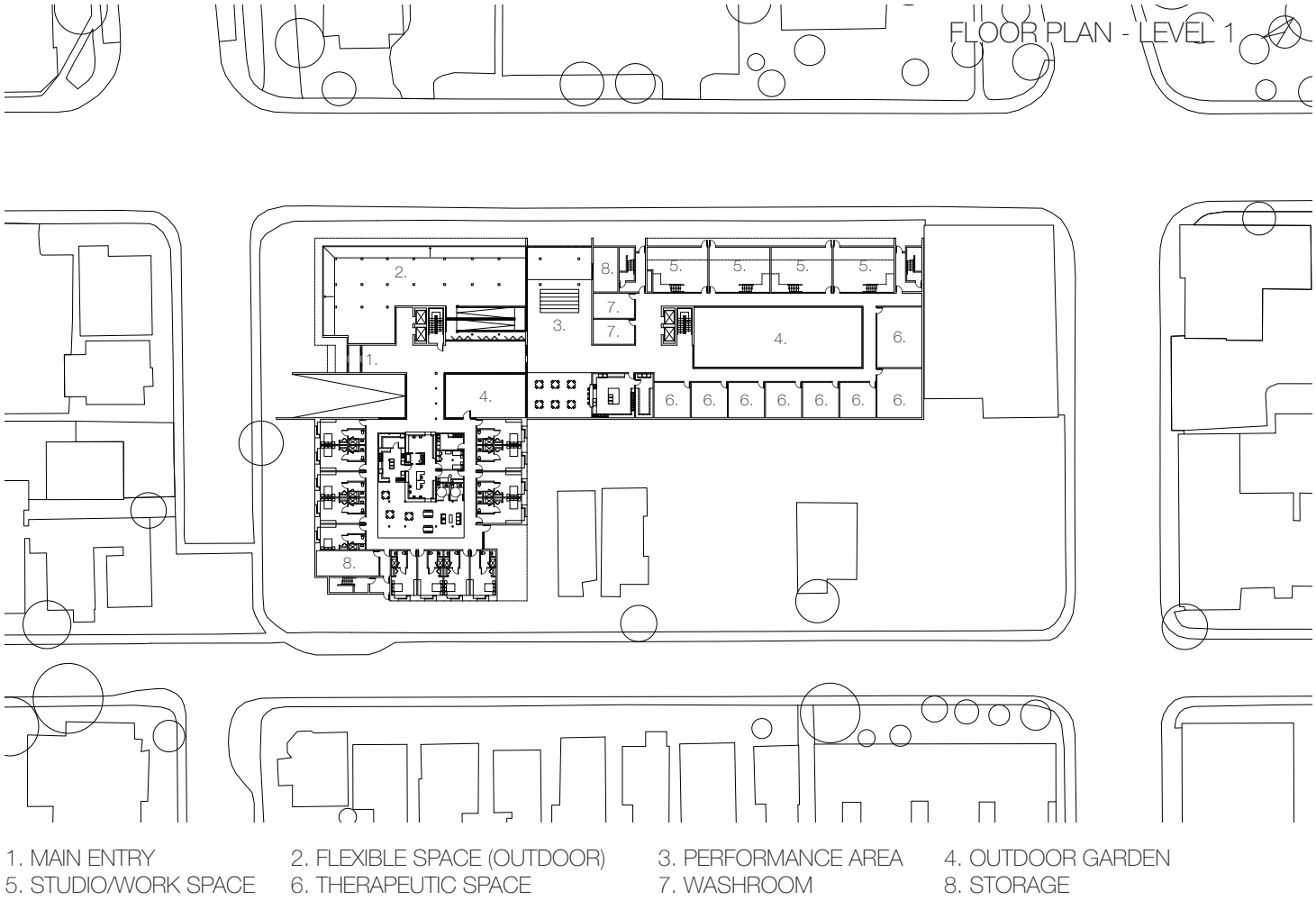


figure 27.
schematic massing 2 - level 1.

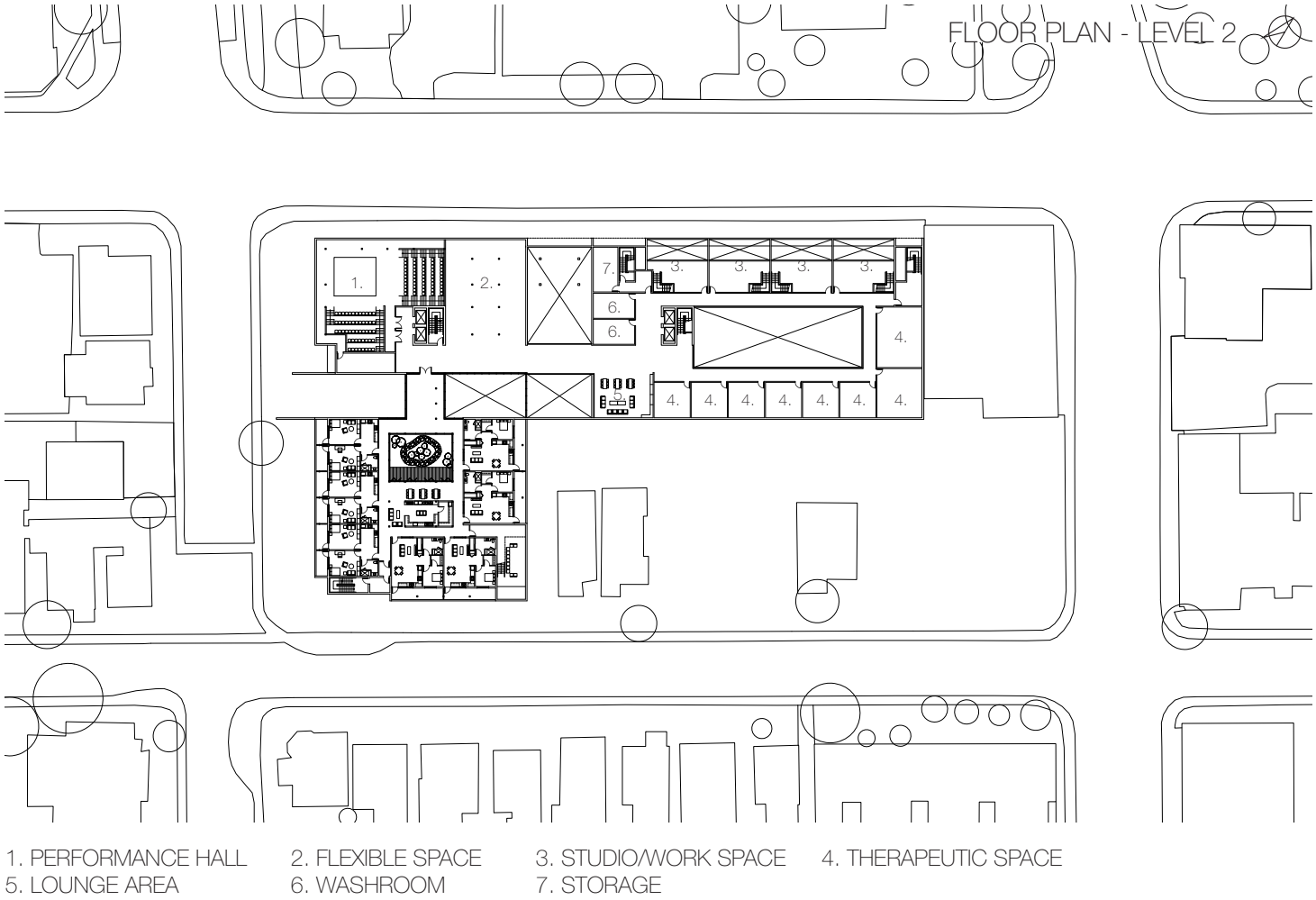


figure 28.
schematic massing 2 - level 2.

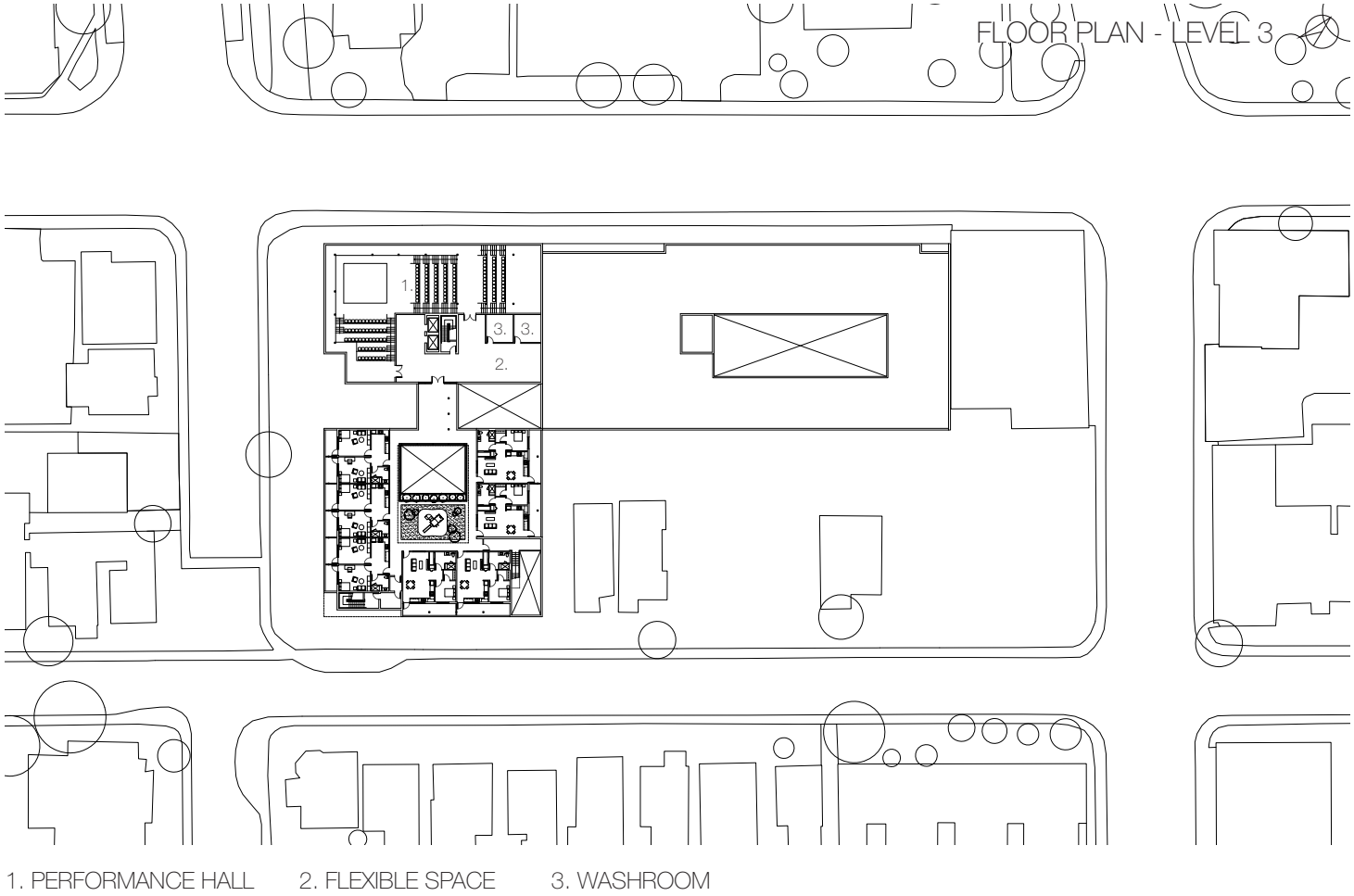
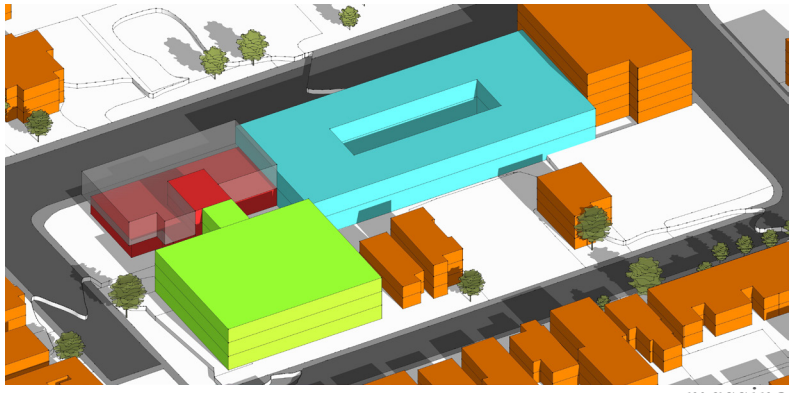


figure 29.
schematic massing 2 - level 3.



massing

level 1

level 2

level 3

figure 30.
schematic massing 2 - breakdown

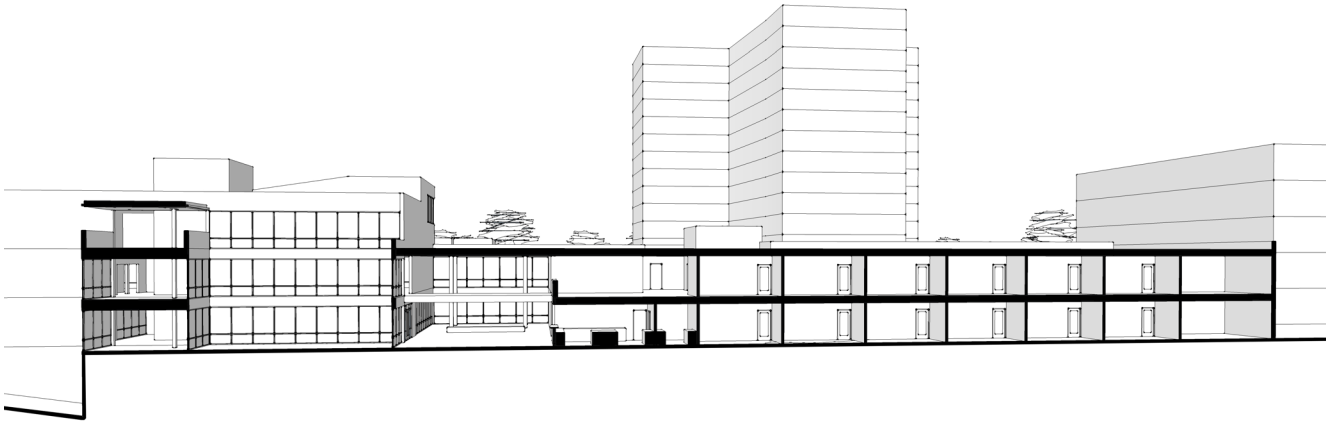


figure 31.
schematic massing 2 - schematic section - east west cut.

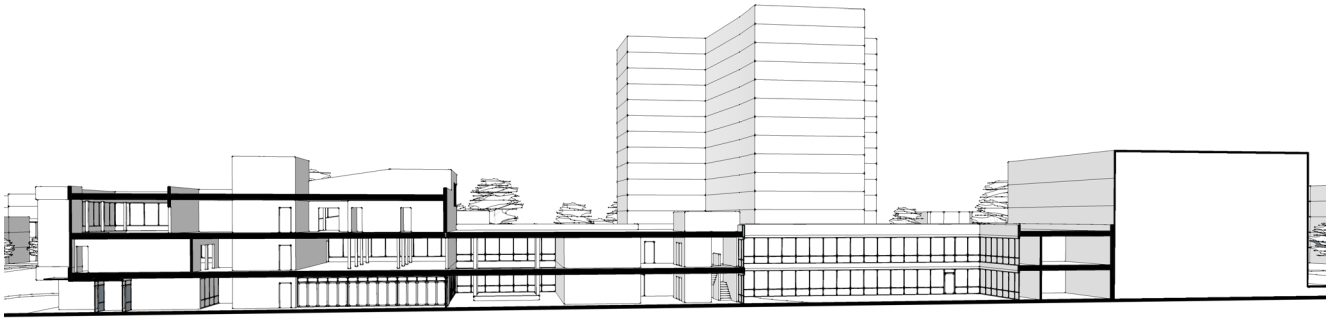


figure 32.
schematic massing 2 - schematic section - east west cut 2.

figure 33.
schematic massing 2 - schematic section - north south cut.

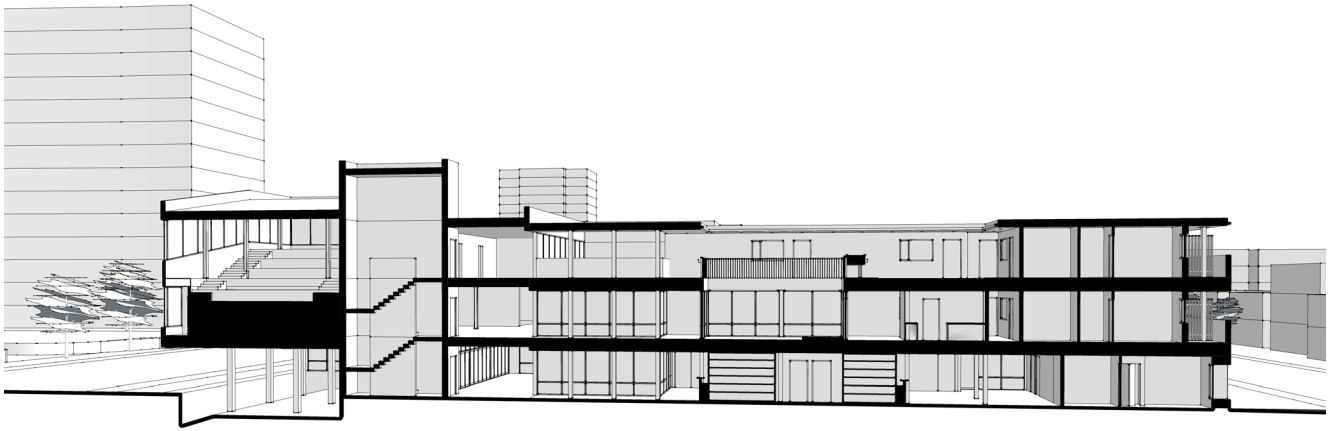
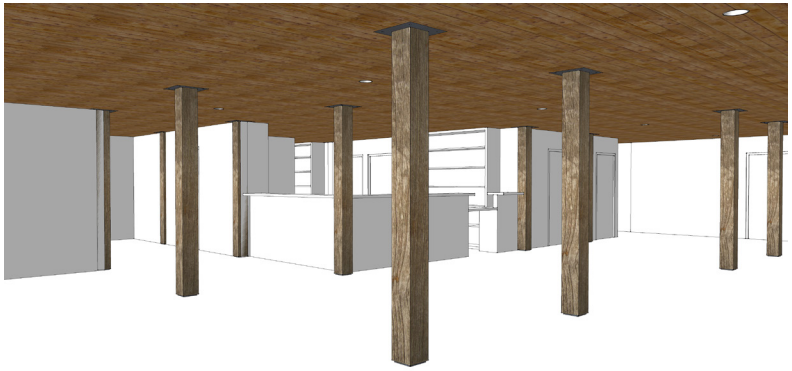


figure 34.
schematic massing 2 - schematic section - north south cut 2.

view to nurse station - lvl. 1.

flexible space - lvl. 1.

residences circulation - lvl. 3.



common space - lvl. 2.

figure 35.
schematic massing 2 - perspectives.

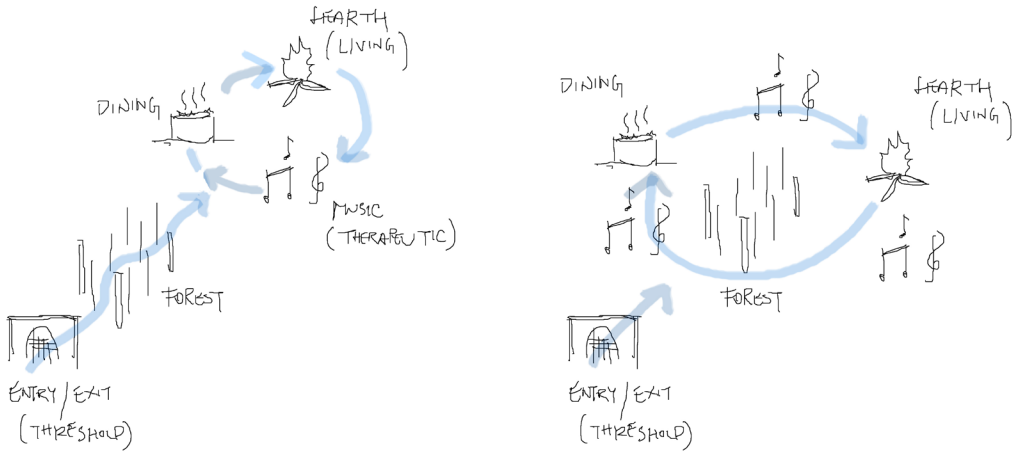
Following the comments from Colloquium III, I had the opportunity to rethink about the general layout of the design. One of the major feedbacks I received was to further investigate the in-between spaces between different programs. By the end of Colloquim III, the design seemed to have ‘compartmentalized’ the programs to its specific use. This does not fully explore the idea of creating spaces that integrates music into the everyday lives of the people with AD, caregivers, and visitors.

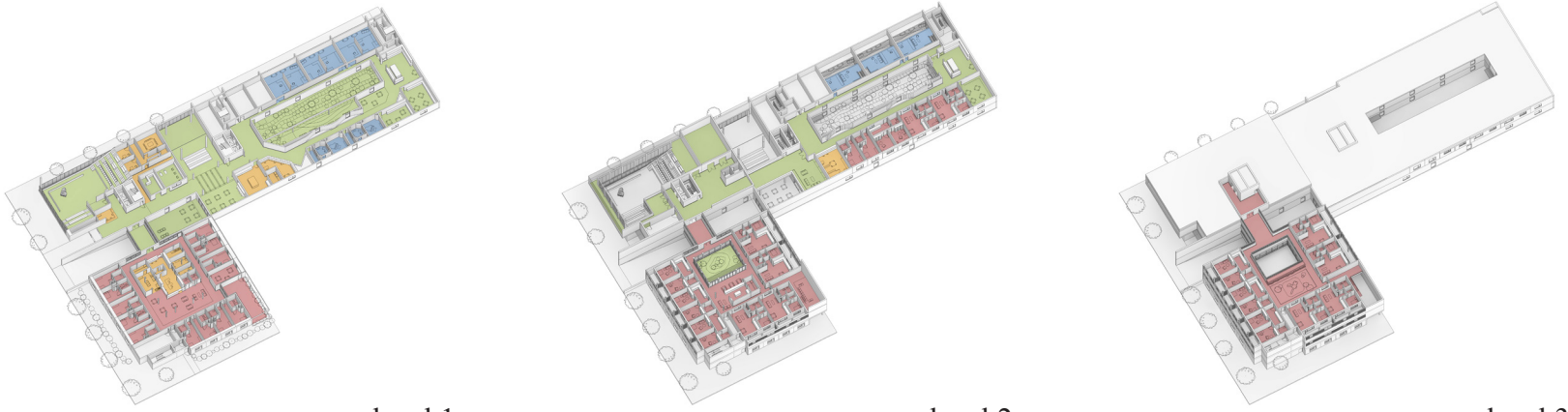
Furthermore, around mid-March, I had the opportunity to visit Cummer Lodge, a long-term care home of around 400 residents, in Toronto. Being amongst the residents and caregivers has given me some understanding of how architectural space may affect one’s perception on orientation and placement. More importantly, this experience has given me a lot of respect for caregivers and family members that are actively involved with the lives of people with AD (Appendix I).

Exploring the use of music as a tool to ‘reawaken’ people with different stages of AD, the design evolved to focus on three major architectural issues that play a vital role in creating a healthy and positive environment for people living with AD. These are: pathing (circulation), thresholds (security), and programming (activity).

Figure 36. shows the concept of tying music into a forest, which alludes back to William Shakespeare’s play from the introduction of the thesis. People in the building will form new memories while revisiting old ones, within the context of the architectural ‘forest’. By forming an environment that not only addresses the physical ailments of someone with Alzheimer’s disease, the architecture also addresses their psychological wellbeing from a social context. As individuals, our lives parallel the characters in this play; each with our own stories, experiences, and memories to share. By chance, you may meet other individuals in this dense forest, when and where memories are formed. Through the enjoyment of music, whether it is singing in a group setting, participating in playing musical instruments, or just listening to music in the comfort of your own room, the design of the thesis looks to stimulate someone with AD from the audio sensory. Someone with AD may arguably undergo a ‘second childhood’, but they are certainly present.

figure 36.
conceptual diagram.





level 1 level 2 level 3

figure 37.
programmatic zoning.

communal residential work nurse/staff

figure 38.
floor plan - level 1.

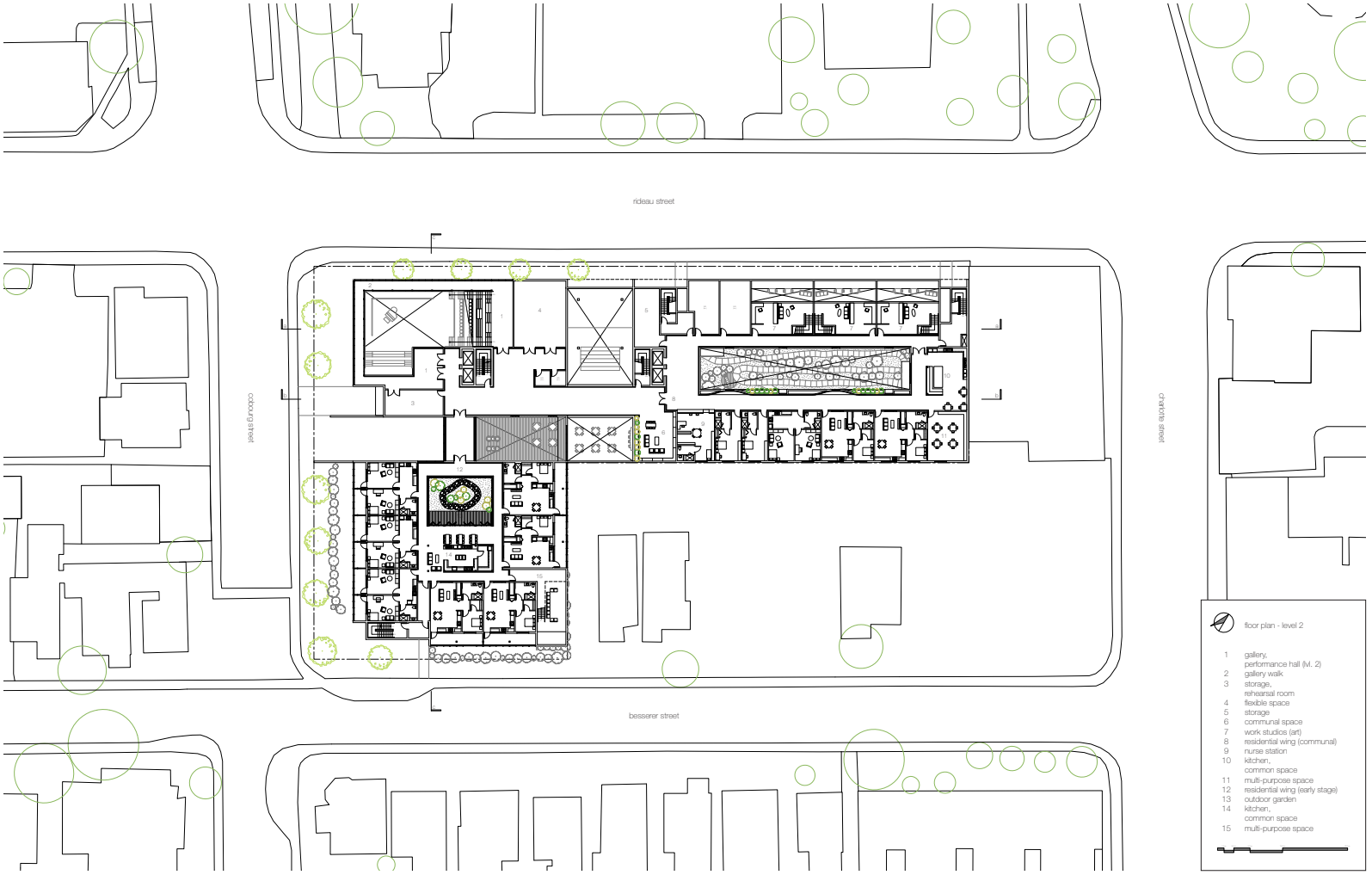


figure 39.
floor plan - level 2.

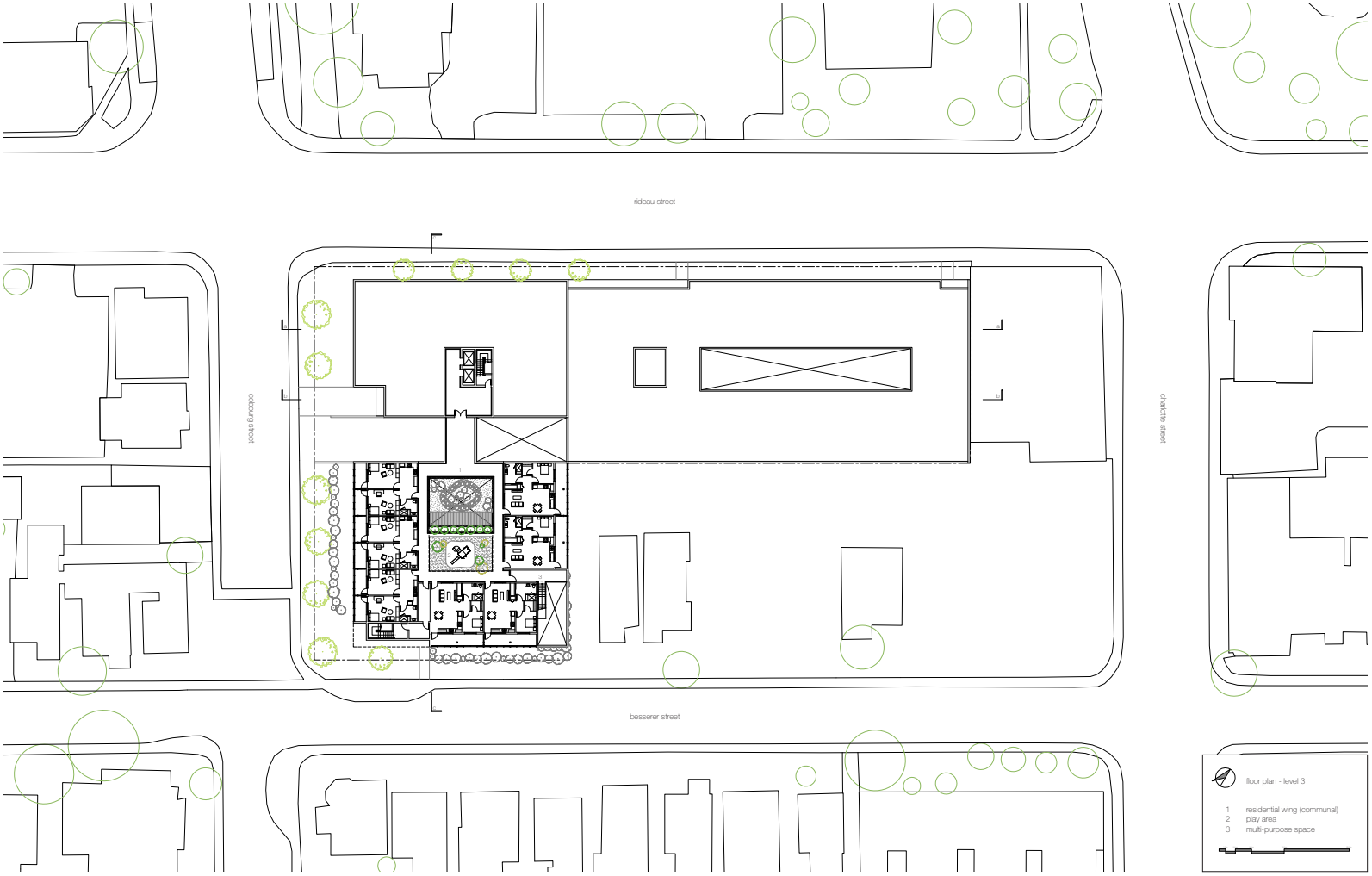
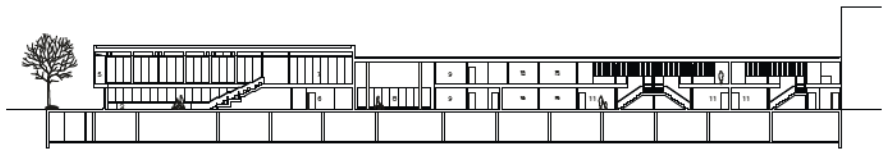
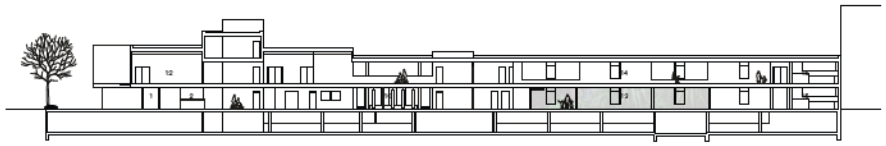


figure 40.
floor plan - level 3.



section aa - performance hall
work studios (art)

figure 41
section - aa.



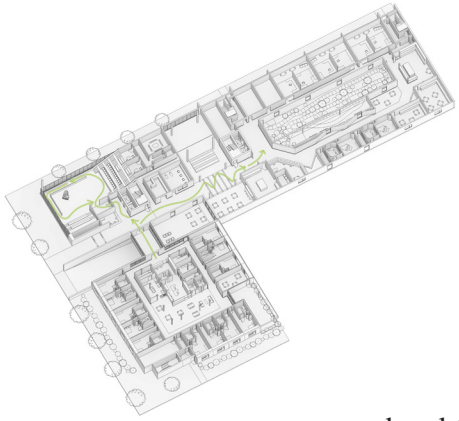
section bb - main circulation
garden (therapeutic path)

figure 42
section - bb.

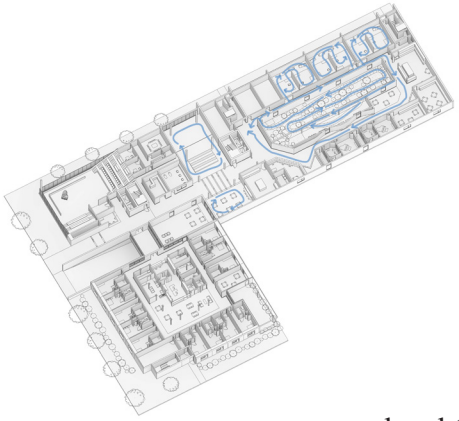
section cc - performance hall
outdoor garden (residential)

figure 43
section - cc.

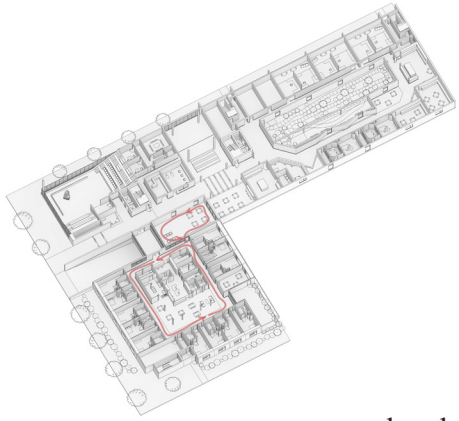
1 entry
2 reception, box office, coat check
3 performance hall
4 gallery, performance hall (M. 2)
5 gallery walk
6 administrative offices, meeting room
7 flexible space
8 open hall
9 storage
10 interactive music element
11 work studios (art)
12 storage, rehearsal room
13 garden (therapeutic path)
14 residential wing (communal)
15 kitchen, common space
16 residential wing (late stage)
17 nurse station
18 outdoor garden
19 residential wing (early stage)
20 play area



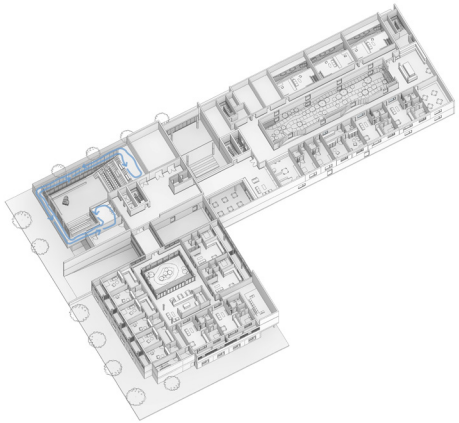
level 1



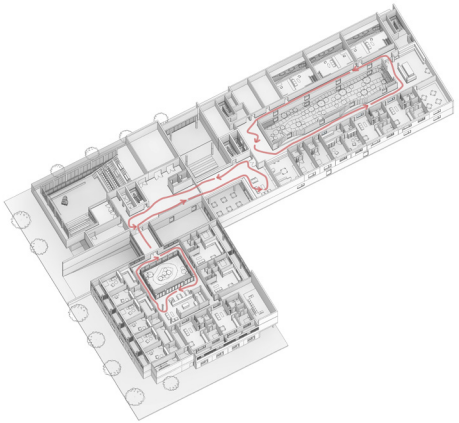
level 1



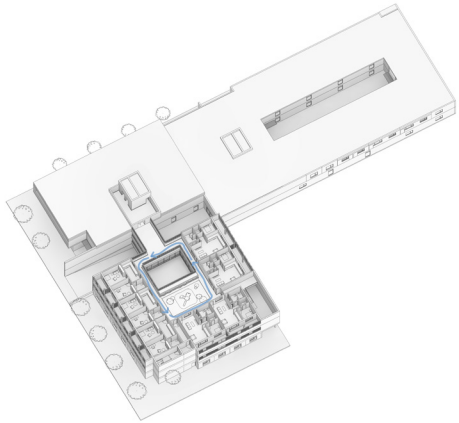
level 1



level 2



level 2



level 3

figure 44.
schematic circulation diagrams.

→ assisted → unassisted → therapeutic

The program of the project primarily includes residential spaces for people with early, medium and late stages of AD, living spaces for local artists, musicians, nursing staff, therapists, and family members of the affected, work studios for artists and musicians, and performance spaces. Providing proper and welcoming living spaces for loved ones of the affected are important. As caregivers, taking care of someone with AD, often neglect their own wellbeing. Understanding the importance of family and caregivers and involving them in the therapeutic process is pivotal to the premise of the thesis.

On the issue of pathing, for people with AD, ‘aimless’ wandering is a common issue. The diminished ability of being able to form a conscious decision of deciding where to go, is a concern for their safety. The design attempts to respond to this issue by locating nurse stations/staff offices at important junctions on each level. Residents with varying degree of AD may be brought to a certain communal node and be left with minimal supervision, as all the circulation in the building does not create a dead end corridor and also loops around. (*figure 44.*) The act of circulating around the circulation becomes a therapeutic process with the guidance of music and green spaces strategically located in the design.

figure 45.
vignette - performance hall.

The project is formally approached from Cobourg Street. All entries and exits are secured with keypads and an office or nurse station is situated within the visual vicinity to all major thresholds within the building. The 2.5 stories clear performance venue is a space opened primarily to the public. Local musicians, theatrical, and dancing groups are invited to perform at this space for local outreach (*figure 45.*).

Different seating arrangements are provided for people with different needs, such as the empty first row for wheelchairs in the front, formal theatre seats, and informal risers where couches can be placed on top for sitting are located on the top rows. Handrails extend around the main stage to allow people to wander around the venue and enjoy the performance from different locations. The idea of wandering paths is embraced and repeated throughout the building by providing continuous handrails where applicable. At turns of circulation, architectural features such as built-in planters or the sound of music indicates the transition in the straight pathway and draws the `wanderer`towards the ends. The second level of this space is a gallery walk path where one may walk around the venue from above, and view out to the street with a forest motif cladded finish on the glazing, alluding back to Shakespeare`s forest of Arden.

figure 46.
vignette - open hall.

Administrative offices are located off of the main corridor behind a tuck shop and hair salon where residents, who may have difficulties leaving the building, can get books, snacks, their hair and nails done (*figure 38, #5, #6*). The open hall on level 1 is an open stage for impromptu performances. It faces toward a dining area that provides snacks and meals. The open spaced idea is to draw people to this space when a musical performance occurs.

Moreover, there is an interactive musical element (*figure 38, #9*), which is a series of ceiling hung lightweight columns made with different textured materials, such as metal, wood, plastic, are situated along the sides of the main corridor. These columns act as drums and can produce different distinctive sounds and beat during music therapy sessions. These sessions are intended to be open to the public where the intended participants can interact with the public at a playful and musical level.

figure 47.
vignette - circulation to residential lvl 2.

Another playful gesture is the corridor on level 2 facing the open hall. Strings with different thicknesses act as rail guards, so that people passing by can strum on them as they walk by to create a guitar-like or harp-like sound, contrasting with the drumming below. The undulating ceiling bounces the sound to accentuate the music throughout this open space.

figure 48.
vignette - work studios corridor

Further entering into level 1 are the work studios of local artists, musicians, and multipurpose spaces. The intent of providing work spaces is to draw talented individuals to live in the building. They may be financially subsidized for their input to the community for providing a degree of care for people with AD. Seating is provided along these corridors for people to sit and listen to the music that comes out from the music studios.

The work studios surround a secured garden with different flora, trees and shrubs, that appeal and relates to the residents in a positive manner (*figure 38, #13*). A proper therapeutic garden, designed for people with AD, can improve the quality of life of those who use them, and help to reduce what are called ‘problem behaviours’. The walk on this garden path becomes a therapeutic process, marked with pauses in the journey with landmarks such as benches and distinctive floral arrangements.

figure 49.
vignette - residential unit.
(late stage, lvl 1.)

Units dedicated for people with AD are wheelchair accessible. Residents with late stage AD that requires 24-hours care are located on level 1. Early to mid-stage residents are on level 2. Dwelling units that look out onto a street are visually mitigated by high planting as the busy and visually stimulating streets may cause anxiety and confusion for people with late stage Alzheimer's. Dwelling units on levels 2 and 3 have different configurations depending on the needs of the dweller.

figure 50.
vignette - common space
(late stage, lvl 1.)

The nurse station penetrates through the center of the residential wing to overlook the threshold entering into the space as well as looking at the common space of the dwelling units on level 1. Set meals are provided to residents in the communal space. Montessori and Music therapy sessions occur in the multipurpose room that opens to a secure outdoor deck area.

figure 51.
vignette - common space
(communal, lvl 2.)

All 3 main residential wings have a circular circulation that allows residents to walk around a central program, whether it`s the kitchen, small garden on the second level, and play area on level 3.

figure 52.
vignette - play area
(communal, lvl 3.)

Local artists, musicians, therapists, and family members are encouraged to stay and live amongst people with Alzheimer`s to promote a highly interactive social environment.

One of the major experiences I obtained from my visit at Cummer Lodge, is that the presence of company cannot be downplayed. Face to face social networks have been found to play a critical role in sustaining quality of life amongst the elderly. Music-making involves strong social networks. These networks, cultivated through group singing, songwriting, and a range of instrumental music-making involving diverse musical genres, have been found to support group identity, collaborative learning, friendship, social support, and a strong feeling of belonging amongst group members.

The thesis, ReAwakening, chooses to celebrate and embrace the social interaction that can be only formed and nurtured at a face to face level, through the use of music as intervention and architecture as instrument.

bibliography

1 Alzheimer Society Canada

2 Victoria Bates, Alan Bleakley, Sam Goodman, *Medicine, health and the arts: approaches to medical humanities*, Routledge, London: 2014.

3 City of Ottawa, *Uptown Rideau Street - Community Design Plan (approv. 2015)*, Planning ad Growth Management.

4 David Gross, *Lost Time: On Remembering and Forgetting in Late Modern Culture*, MIT Press, Cambridge, MA: 2000.

5 Eckhard Feddersen, *Lost in Space*, Birkhauser, Germany: 2014.

6 Jitka M. Zgola, *Doing Things: A Guide to Programming Activities for Persons with Alzheimer's Disease and Related Disorders*, John Hopkins University Press, London, UK: 1987.

7 John Zeisel, *I'm Still Here: A New Philosophy of Alzheimer's Care*, Penguin Group, New York, NY: 2009.

appdendix I - a moment

I entered a brightly lit room, not really knowing what to expect. Particularly, was there something I should avoid doing or saying? It's my second day at Cummer Lodge, a long-term care home providing care and services for those requiring long term care. Today, I had the opportunity to observe a therapy session based on the Montessori approach with some of the residents. A lady seemed to be engaged in choosing some jewelry. She asked if she can get her nail polish from her own room, but she didn't have any; they can't keep the toxic, odorous substance in their rooms. A nurse was spacing out some dominoes with a gentleman, they seemed to be engaged in whatever they were doing. Another gentleman had headphones over his ears, half-asleep. I tried to look for a chair and a corner, trying not to bother whatever the nurse and staff were doing with the residents. A man in a wheelchair was rolled up towards me. "Tim, you want to play crazy eights with [Joe]? He has a great knack for it." It seemed like my attempt to avoid direct interaction fell short. Nonetheless I was relieved as well; my short presence at the long-term care home seemed to have built some trust between me and the staff and residents. The gentleman couldn't keep his mouth fully closed and his vision was a bit misaligned as well. "Do you want to deal?" I asked, thinking I should

offer the task to him so that I wouldn't seem to be undermining him. I probably asked the question, mostly to appease myself. He slurred something briefly and motioned his hands towards me, indicating I should proceed. I dealt the cards out and we started playing. As we played, he held his cards under the table, not revealing his intentions. His movements were precise, cards were flung out, no hesitation in his choices. I tried to drag the game on, randomly putting out cards that could be played, not really thinking about my decisions. The game ended. I was left with some cards in my hand. "Didn't know I was this smart?" he said with a bit of a smirk when commenting it. I paused for a bit, looked at him. It almost felt like a needle pricked my ego. Maybe I did hold back. Out of empathy? Out of pity? I was uncertain of my own feelings and thoughts at that moment. All I could do was clap for him to show my approval and congratulate him for his victory, my defeat. We continued to play, he seemed to be very engaged in the activity, enjoying the game and company. I pushed the cards closer to him so he can reach them. The occasional question popped up from him, asking what card was in play. He won again. A staff approached our table. "Joe, how are you doing? Is it easier to breath with the oxygen tank?" He had a line attached to his nose. I just fully realized he had the device attached to him. The third game was cut short, he was escorted by a nurse to change his catheter bag. I won the round right before he left. "I'll be right back,

don’t leave.” His voice was firm. I can sense he wanted a rematch because I won that round by the luck of a draw. We played once again when he came back. This time, there were four of us around the table. He ended the game with a smile as he placed his last card down, winning the match. A Korean choir group started singing hymns outside our room. [Joe] was clapping along, following the beat. He was very happy. His shoulders shook and hands moved expressively as he was rolled out to join the rest of the group of residents in the area. Enjoying the music, the company, the space…