

**NEW PLA(Y)CES OF LEARNING AND EXCHANGE:
A PROTOTYPE TOWARDS EDUCATIONAL SPACES FOR
CHILDREN AND THEIR CAREGIVERS IN A MODERN CONTEXT**

by

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ABSTRACT

Presently, there are lack of programs, services and indoor places in central Halifax for children (aged 0 – 6) and the caregivers who stay home with them. This thesis proposes the design of two casual “soft play based” drop-in centres for families. Each one is tested architecturally in different urban environments for different client groups. In each case, a set of design strategies is introduced that address the unique maritime climatic and cultural conditions of the area. Rooted in philosophies of early years pedagogy, they set up dynamic programmatic combinations that take into account the needs of children, but also consider the needs of adults. Each example varies in scale and ambition and serves to build a prototype of possible interventions that introduce a typology as a strategy to inform and improve options for early years educational environments. An alternative model to what currently exists in Halifax is presented; where children, parents and caregivers alike, are able to meet and play, share ideas, foster connections, and strengthen community by providing new networks of support.

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CHAPTER 1: INTRODUCTION

Context - Establishing the Need:

The recent work of many psychologists, educators and child development psychologists from around the world has fueled designers to focus their expertise on shaping the most stimulating and interactive learning environments possible.¹ This is a wide topic of discussion with many opinions, angles and design approaches on not only what architecture can offer early learning, and also what early learning requires from architecture.² There are many examples of innovative designs of nursery schools, daycare centers, outdoor playgrounds, and full elementary schools from around the world. What these all share is:

...an ability to reinvent space based on the scale, safety, socialization patterns, involvement, and educational and emotional needs of the children whose formative years take place in these buildings.³

Now, more so than ever, we see designs emerge that take into account the unique position of children. Children's imagination, freedom and willingness to transform space, and create rich environments out of the mundane through their mind's eye is astounding. They will invent and inject their own interpretation on to the spaces they inhabit, even if for a fleeting moment. All learning environments ought to capitalize on this amazing opportunity that children hold; to take cues from children when designing spaces, places and buildings for them.

There is also a call for more child-centered education facilities that focus not only on the needs of the child but also address the family unit and its place and context within the collective community to which it belongs. To provide not only a centre for children, but also a learning environment that has a more public face—a place of connections.⁴ Communal spaces can be designed to have an impact on the neighborhood and be seen as a feature and focus.

1. Wang Shaoqiang, ed., *Play: Indoor & Outdoor* (Berkeley: Gingko Press, 2011), 4.

2. Sarah Scott, *Architecture for Children* (Camberwell: ACER Press, 2010), 2.

3. *Ibid.*, 2.

4. *Ibid.*, 24.

There is a need for the centre to act as a focal point within the community and also as a reflection of its culture, with an equal emphasis on the design of the outside as on the inside of the building.⁵

The first six to seven years of a child's life is a critical period for development in terms of cognitive, emotional and physical well-being. The work of child developmental psychologists underscores the importance of self-directed free and emergent play for children as a biological imperative. For a child of this age, learning is realized through play. It is how they come into their own being, none of these lessons can be taught through verbal means; they can only be learned through experience, which free play provides.⁶

Nurturing a child through this phase as a parent and or caregiver is an important but difficult task with many ups and downs. It is often difficult to provide play environments to children where they are self directed in a way that cultivates these types of experiential play. There is an opportunity to provide places, or even spaces within these places that can satisfy this requirement. To provide a variety of environments that appeal to a wide range of people is paramount.

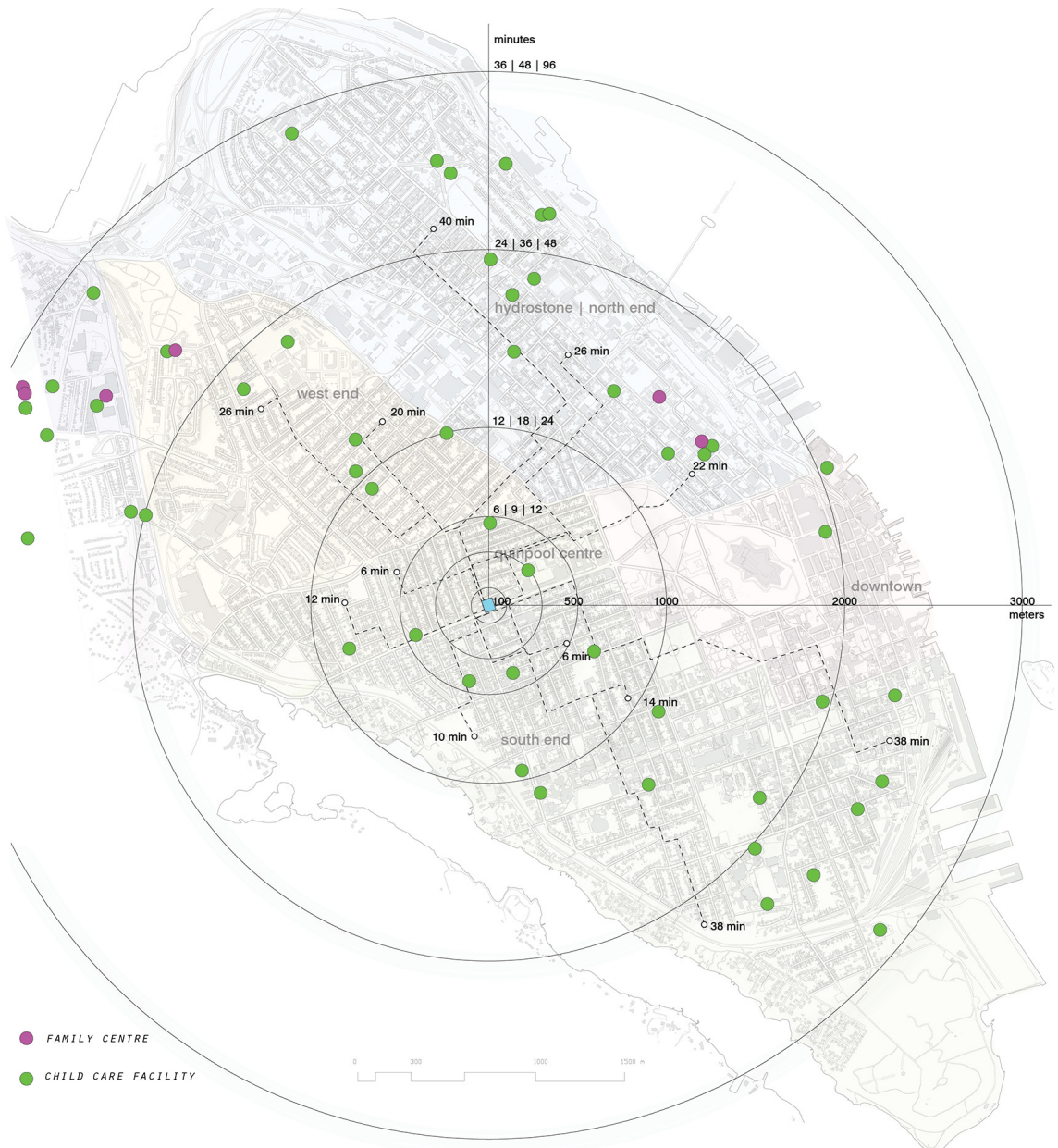
In Canada, there is a lack of funding for early childhood education curriculum and facilities that exists across the board. This is also true for Nova Scotia. In Halifax, early childhood programs operate as fee based day care facilities where you drop of your child. The family centres that exist, offer parent and child programs but advertise, position themselves and operate more like outreach programs that are linked to social services. In many ways they are successful in what services they do offer, but they have limited reach and perhaps detract the attention of average families who could benefit from such places.

Too often childcare takes place in society's cast-off spaces: church basements or converted warehouses. Even centers built for childcare are often designed with more of an eye to adult priorities than children's needs. Ideally, architect and child care professionals work together as peers to create the best possible environment for young children.⁷

5. Ibid., 24.

6. Peter Gray, *Free to Learn* (New York: Basic Books, 2013), 17-18.

7. Pre K Spaces: Designing for a Quality Classroom, Accessed November 13, 2014. <http://www.orchildcare.org/wp-content/uploads/2011/06/SpacesBooklet.pdf>.



Location of both existing family centres on the peninsula and registered drop-off child care facilities; from Nova Scotia Government website database - Early Childhood Education and Development

Playgroups operate infrequently on select days for a couple of hours; they are often poorly advertised and in the fringe of neighbourhoods— many times in church basements or other marginal spaces with poor accessibility for people who might use them.

The above map identifies the Quinpool (site) and outlines typical walking routes and dis-

tances to the site based on walking alone versus walking with a child in stroller and walking with children on foot to in relationship to several neighbourhoods on the peninsula. The intention is the beginning of several explorations and tries to underscore the desire for a centre to be situated in a central high profile location with several access points to many areas--appealing to a wide range of individuals. The map also shows the distribution of existing family centre options (in purple) and child care (drop-off) facilities with infant to prekindergarten care options throughout the peninsula.

There are number of groups from diverse socio-economic backgrounds who have children up to age six who, for a variety of reasons, stay home with them, rather than sending their children to daycare. This is a “prekindergarten” crowd that would benefit from regular communal meeting / play spaces in the centre of the city. These are the average caregivers and their families in the community who are looking for a place to go with their children to play with others and to network with other families that are home with children either on a part time or full time basis: mothers on maternity leave; fathers splitting paternity leave



mom's on maternity



dad's on paternity



stay at home moms



stay at home dads



nannies caring for kids



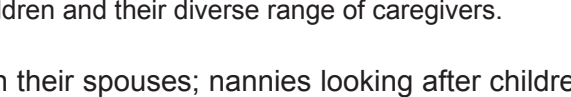
visitng grandparents looking after kids



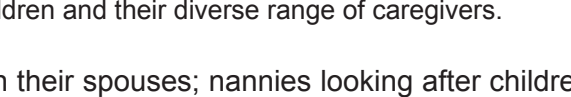
grandparents raising looking after kids



newly arrived imigrants with children



visitors with children



students with kids

Children and their diverse range of caregivers.

with their spouses; nannies looking after children; grandparents that care for their grandchildren; people who are here for school purposes for a short time with their families and may not have a support network.

| South End Peninsula | |
|-------------------------------------|----------------|
| Total infants (0-4) | 945 |
| n/a | n/a |
| Total families | 7025 |
| Total 20 - 30 something individuals | 16,120 (46.8%) |
| Total single parents | 1105 |
| Total immigrants | 4,070 |
| Total seniors | 4,175 |
| Total unemployed | 1760 |

*2006 census data

Demographics data for south end Halifax - from CEU "For our Kids Charette" Report

| HRM (Halifax Regional Municipality) | |
|---|-----------------|
| Total infants (0-4) | 19,970 |
| Total Children (5-9) | 19,160 |
| Total households | 165,155 |
| Total 20 - 30 something individuals | 112,085 (28.7%) |
| Total single parents | 16,810 |
| Total immigrants | n/a |
| Total seniors | 51,100 |
| Total unemployed | n/a |

*2011 census data

Demographics data for Halifax Regional Municipality From Statistics Canada

Halifax poses extra challenges for meeting other at-home caregivers-- inclement weather can hinder families from venturing outdoors, thus reducing the chances of informal "meet-ups" in typical places like outdoor parks and playgrounds that are scattered across the peninsula.



Distribution of Parks and green spaces throughout the Halifax Peninsula and beyond, from GIS Base Map.

Halifax, being a maritime climate, by Canadian standards has temperate coastal weather patterns. It is the fifth wettest city in Canada, on average there are 157 rain days per year with at least 0.2 mm (0.008 inches) of rain.⁸ There are approximately 5.7 hours of sunshine per day averaged over the course of the year, with 290 days with any measurable amount of sunshine.⁹ Average annual precipitation is 57.8 inches or 1468 mm (combined rain and snow.) On September 16th it is partly cloudy 42% of the time and overcast 57% of the time. On December 20th it is partly cloudy 79% of the time and clear or mostly clear 19% of the time. Over the course of the year, the temperature varies on average between -10c and 24 and is rarely below -18c or above 28c.¹⁰

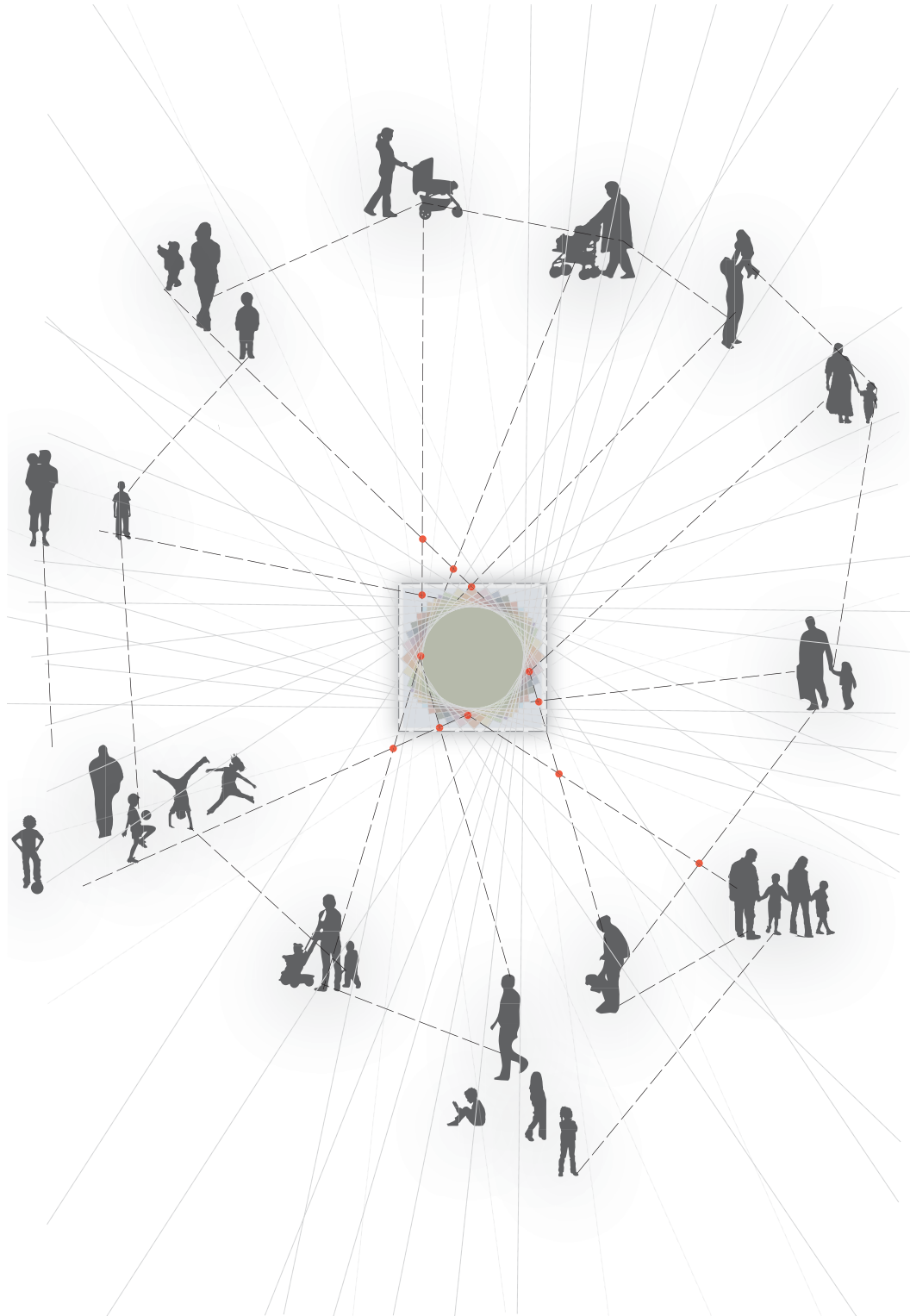
8. Canada's Rainiest Cities. Current Results Weather and Science Facts. Accessed June 15, 2015, <http://www.currentresults.com/Weather-Extremes/Canada/wettest-cities.php>.

9. Sunshine in Canadian Cities, Current Results Weather and Science Facts. Accessed June 15, 2015, <http://www.currentresults.com/Weather/Canada/Cities/sunshine-annual-average.php>.

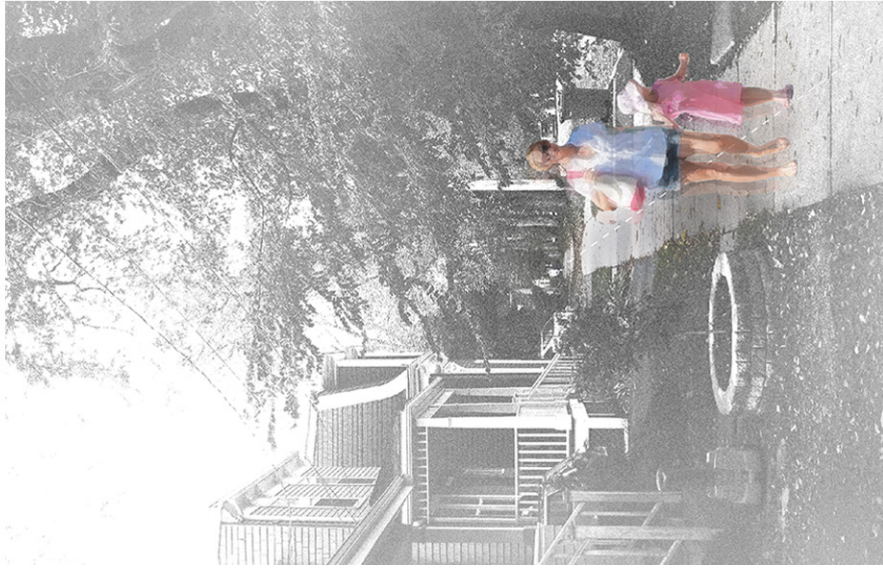
10. Average Weather For Halifax Regional Municipality, Nova Scotia, Canada. Accessed June 20, 2015, <https://weatherspark.com/averages/28270/Halifax-Regional-Municipality-Nova-Scotia-Canada>.



Proposed Quinpool Road site depicting the clients who frequent it.



Proposed centres as a beacon within the community. The parents, children, caregivers and their newly established interconnections.



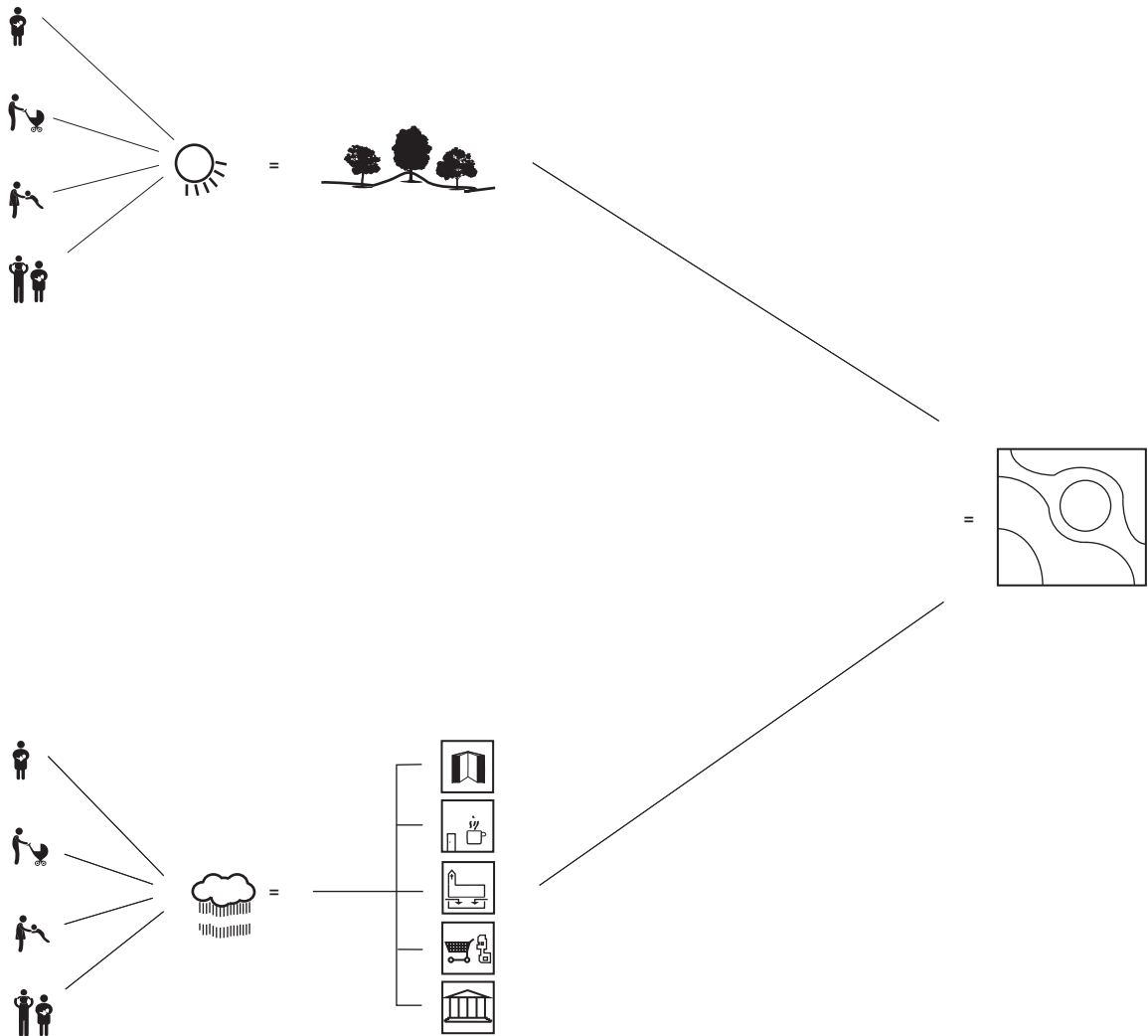
Depiction of the parents and caregivers in Halifax looking for options and places to go with their children.

There is a need for more safe and fulfilling indoor options for families in Halifax that can also act as alternatives to daycares. This point was reinforced by the Cities and Environment Unit in 2009:

There are gaps within our existing local services and programming for families in the southern portion of the Halifax Peninsula. This area has often been painted with the title of being “upper-middle class”; however, the reality is that there is a wide range of economic and social diversity that exists. In keeping with HRM’s strategies and goals to encourage the retention of families on the peninsula, it is critical to address these gaps. There is a clear need within the community for a space that allows for family orientated programming, community networking and inclusion.¹¹

There is a opportunity for architecture to play a pivotal role by providing purposefully designed spaces that satisfy this need. These spaces have the ability to connect people at a time of their lives, where much of the activity in their day inevitably revolves around the needs of their children. Presently, there are not enough places to go for and with children. Aside from the few libraries and museums, many people end up using malls, coffee shops and retail spaces for outings, as they are ‘safe’ public indoor spaces, but these places are not exactly ideal.

11. Cities and Environment Unit, For our Kids Charette, (Halifax: Cities and Environment Unit Publication, 2009), 20.



Fair weather activities as well as inclement weather activities while at the same time a suggestion of a third option that points the new model for a play centre in Halifax as an option for both.

Children are social beings; they are naturally curious and want to explore their world they live in. Being a parent can be challenging at the best of times, it comes with many rewarding and happiness, but at times it can be a lonely and even isolating experience. Both caregiver and children have social needs that need to be met, and without these spaces to go to, there is potential to perpetuate the isolation and loneliness among those who stay at home.

Thesis Question

How can architecture respond to the specific needs of children and to those of adults while reinforcing networks of support for the community in the centre of Halifax?

Design Development Through Research and Example

Play Is Education For Children

What children really need from educational environments during their formative years are environments that provide the best possible conditions to encourage children to engage in free emergent play. Jean Piaget and Rudolph Steiner both used the famous quote “play is the work of children”. Piaget identified the stages of cognitive development that a child goes through as they grow and gain an increased understanding of their own world. The better part of a century before them, Friedrich Fröbel identified this need and made it part of his mandate and incorporated it into his philosophy on kindergarten early years education. He believed that education should be self directed, exploitative and play based and should be implemented much earlier than it had previously been. A famous quote by Fröbel states that:

The play of children is not recreation; it means earnest work. Play is the purest intellectual production of the human being, in this stage ... for the whole man is visible in them, in his finest capacities, in his innermost being.¹²

In his book inventing kindergarten Norman Brosterman has described Fröbel’s kindergarten:

...as a radical and highly spiritual system of abstract design activities developed to teach the recognition and appreciation of natural harmony. Kindergarten has always included singing and dancing, as well as observation of the workings of nature—the growth of plants, the symmetries of crystals and seashells. One’s teacher was usually a woman and she led the class in activities that would have been considered as free play.¹³

12. Froebel’s Kindergarten Curriculum Method & Educational Philosophy. Accessed November 30, 2014, <http://www.froebelgifts.com/method.html>.

13. Kindergarten and the ‘Froebel’s Gifts’ offering free play. Accessed June 5, 2015, <http://www.thearchitectureofearlychildhood.com/2011/04/kindergarten-and-modernist-movement.html>.

Froebel sought to harness this impulse and focus a child's play energy on specific activities designed to lead them to create meaning from their experiences.

Current developmental psychologists have focused their work on the importance of play to children. Dr Deborah McNamara suggests that play is required for proper brain development and that children who lack environments that facilitate and encourage play, will actually develop brains with less capacity than otherwise. Through play, the brain develops the neural networks that are involved in problem solving and creativity. She suggests that not all play is equal, underscoring emergent play, that it is not about the toys, or entertainment and stimulation. Actually, it is quite the opposite. What is needed and often lacking are those environments that foster the type of play that their brains need, where the energy is coming from within the child to construct, build, create and so on.¹⁴ It is here, in environments where children are afforded free, unobstructed play, their imaginations take hold and real learning takes place.“ This type of play is called emergent play, and in this state you see curiosity, imagination, and a sense of discovery in full action.”¹⁵

In “Free to Learn” Peter Gray underscores the importance of free play suggesting:

Free Play is nature's means of teaching children that they are not helpless. In play, away from adults, children really do have control and can practice asserting it. In free play, children learn to make their own decisions, solve their own problems, create and abide by rules, and get along with other as equals rather than as obedient or rebellious subordinates. In vigorous outdoor play, children deliberately dose themselves with moderate amounts of fear—they swing, slide, or twirl on playground equipment, climb on monkey bars or trees, or skateboard down banisters—and they thereby learn how to control not only their own bodies, but also their fear. In social play children learn how to negotiate with others, how to please others, and how to modulate and overcome the anger that can arise from conflicts. Free play is also nature's means of helping children discover what they love. In their play children try out many activities and discover where their talents and predilections lie. None of these lessons can be taught through verbal means; they can be learned only through experience, which free play provides. The predominant emotions of play are interest and joy. In school, in contrast, children cannot make their own decisions; their job is to do as they were told. In school, children learn that what matters are test scores. Even outside of school, children spend increasing amounts of their time in settings where they are directed, protected, catered to, ranked, judged, criticized, praised and rewarded by adults.¹⁶

14. Deborah McNamara. It's Not Just Child's Play. Accessed June 12, 2015, <http://neufeldinstitute.com/blog/2010/09/its-not-just-childs-play/>.

15. Ibid.

16. Gray, Free to Learn, 17-18.



Free play on the beach.

Gray further states that:

WE HAVE HERE A TERRIBLE IRONY. In the name of education, we have increasingly deprived children of the time and freedom they need to educate themselves through their own means. And in the name of safety, we have deprived children of the freedom they need to develop the understanding, courage and confidence required to face life's dangers and challenges with equanimity.¹⁷

Gray also suggests a decline in trustful parenting in the middle of last century alongside a lack of common sense about parenting and a rise of a worldwide network of fear that coincides with the rise of a more globally interconnected world. Children, to a large extent do not play outdoors as they did even 20 to 30 years ago. People weren't afraid to let their kids run freely through the neighborhood and socialize. He points out that there is decline in neighborhoods and a loss of children's neighborhood playgroups.

The biggest attraction for children to the outdoors, or to any place, is other children. So, when some parents begin to restrict their children from playing freely outdoors, the neighborhood becomes less inviting for other children. Moreover, the neighborhood may become truly less safe for any given child when fewer children are out there. There is safety in numbers... It's a vicious cycle: Fewer children outdoors means that the outdoors is less inviting and less safe than it was before, which results in still fewer children outdoors. To make neighborhoods inviting and safe once again for children play, that cycle must be reversed.¹⁸

17. Ibid., 24.

18 Ibid., 212-213.



Lost in Play - Improvised Chalk Hopscotch.

Almost gone are the days when children used to go outdoor for hours on end unguided and undirected to explore, wander, experience and create their own worlds through play. In this regard, to a large extent, in Canada, we now live in a society that is, for better or worse, overprotected. Children are no longer afforded the freedom they once were. In many ways, risk is not celebrated and fear is almost anticipated. In most cases they are not permitted to do anything unattended or unguarded anymore, for fear of the unthinkable. In light of free play, in many ways, this can be seen as a disservice to them.

In many kindergartens as well as regular schools there is also a decline of play in the curriculum despite its known importance and original foundation in the kindergarten movement. Julianna Lichatz suggests:

Play is the necessary basis for the healthy physical psychological, social, and cognitive development of the child. The American Academy of Pediatrics and other professional health organizations have recently drawn attention to this fact.¹⁹

Yet, much of mainstream education including kindergarten downplays this notion. The im-

19. Julianna Lichatz, "The Blessing of Play How Children and Adults Benefit from Apparently Purposeless Amusements", *Renewal*, no 17 (2008): 20.

portance of play has been marginalized and even sidelined and thwarted by the belief that academic work such as reading and writing, maths, etc. are more important; these forms of work are put onto children at an increasingly early age. Lichatz points out that kindergarten children sit in desks and now do academic work and then go home to do homework as opposed to engage in free imaginative play.²⁰

Joan Almon also notes the decline in children's play in mainstream play in learning environments and suggests that it is alarming that play has lost so much ground in young children's lives during the past 30 years.²¹ Academic studies based on standardized testing that ensure results are given priority where free play could prevail. Children are only afforded a short time to run free at recess and lunch hour weather permitting.

Adults can play a huge role in helping children learn through play. Children learn through example, encouraging play, through interaction also has merit. Almon suggests that adults have the ability to set examples in all kinds of activities, "we need to create appropriate spaces where children can play and learn..."²² In the modern context to which we live today, there is room for; a need for new options.

Play is Also Important to Adults:

Play is a fundamental requirement at all stages in life from childhood through to adulthood. The necessities of play and types of play might change and develop over time and the needs of a child are in many ways different that those of an adult. In Lichatz article: "The blessing of Play- how children and adults benefit from apparently purposeless amusements", it is noted that:

We adults need to play. In a recent article in the New York Times ("Taking Play seriously." Feb 17, 2008), Robin Henig surveyed studies of the benefits of play and the problems that may result from its disappearance our society. She concluded that, regardless of scientific data, play is necessary, even if it is simply to bring joy, optimism and goodness to one's life. The physical activity, the exercise of creativity, the activation of both intuiting and analytical faculties that are involved in true play nourish us in body, heart and head, and make us more fully human.²³

20. Ibid., 20.

21. Joan Almon, "The Vital Role of Play in Childhood". Accessed October 21, 2015, <http://www.waldorfresearchinstitute.org>.

22. Ibid., 4.

23. Lichatz, "The Blessing of Play", 2.

In what way can architecture can facilitate a more intuitive unfolding of play between generations? Or, how can architecture bridge play between adults and children? These are also interesting questions that have potential to be explored in a proposal for a play centre prototype that caters to both adults and children.

Two Existing Examples - Lessons

The following two examples form the programmatic and operating foundation that a proposed early years centre in Halifax and other urban and rural areas Nova Scotia could be modelled after.

Ontario:

Early Years Centres in Ontario are a government sponsored and initiated program which are described as:

places where parents and caregivers can:

take part with their children in a range of programs and activities

get answers to questions

get information about programs and services that are available for young children and their families

talk to early years professionals, as well as other parents and caregivers in the community.²⁴

There are over 100 early years centers across Ontario that operate in a variety of situations and contexts. The programs and services are always free to all parents and caregivers of young children who can drop-in at will.²⁵ They often operate out of existing schools in a vacant room(s) - when and where space is available. In many cases the sessions can use some of the school facilities (such as they gym) to help enrich the experience. They are in high demand, open to whoever chooses to attend. Many parents / caregivers use them as a centre to their “lifeline” for social activity, yet they are quiet infrequent; held on one or two days per week for a couple of hours in the morning. There is a facilitator (early childhood education trained) who runs a relaxed organisational structure to the session,

24. Early Years Centres, Ontario Ministry of Education. Accessed October 21, 2015, <http://www.oeyc.edu.gov.on.ca>.

25. Ibid.

where parents and children can take part in the activities if so desired. Otherwise there is free engagement where adults socialize and children play for periods of time.

New Zealand:

In New Zealand “Playcentre” is an early childhood and parenting organisation that operates parent-led early childhood education centres throughout the country. The first centre opened in 1941 and has spread nation wide where it remains a popular format for early childhood education today.

The movement started during the Second World War to provide a break for mothers as well as means to allow for the social development of the child within a cooperative environment... From the start each playcentre was a community driven initiative, organised by parents, utilising existing premises (e.g. church or community halls) and using parents as teachers. This allowed the easy spread of the movement, now encompassing over 450 centres around New Zealand and explains why they are the dominant provider of early childhood education in rural areas.²⁶

The philosophy is based on child-initiated play and recognises parents as the first and best educators of their own children. Playcentre families receive a unique early childhood experience with opportunities for whānau / families to learn together.²⁷ Sessions are run by parents and / or with a supervisor that is trained in early childhood education. Each group has a ratio of about one adult per three to five children. Children are mixed age from 0 - 6 years old. Each centre runs as a co-operative managed by the parents and they set their own curriculum and agenda.²⁸

School Precedents: The Design of Built Environments for Children

The above examples set up some of the principles for what an early years centre in Halifax could be modelled after. Many things work on a number of levels, but what might the architectural translation for such facilities be? What is the future potential of these places. As previously noted, they most often operate in “less than ideal spaces” that for the most part, for a number of reasons often financial, do not really take into account design for children. What elements and aspects could be combined to really make these types of places amazing?

26. Playcentre. Accessed November 3, 2015, <https://en.wikipedia.org/wiki/Playcentre>.

27. Playcentre. Accessed November 3, 2015, <http://www.playcentre.org.nz/index.phpv>.

28. Ibid..

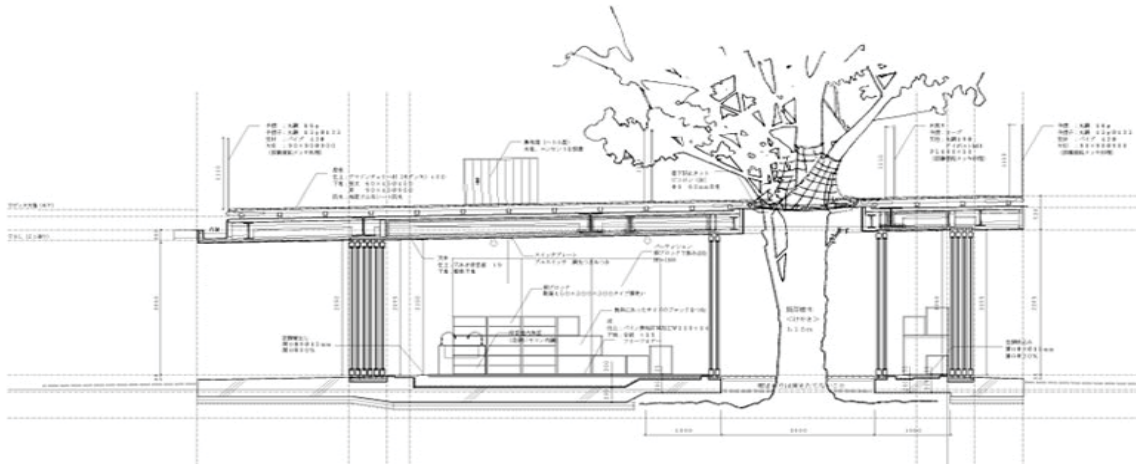
There are many brilliant examples of schools, kindergartens and daycare facilities whose built realization comes out of a great body of research and design by teams of people who have spent their lives investigating what aspects work, these examples will serve as precedents to inform the design process for current prototype proposal here.

Fuji Kindergarten, Toyko, Japan. 2007 - Tezuka Architects

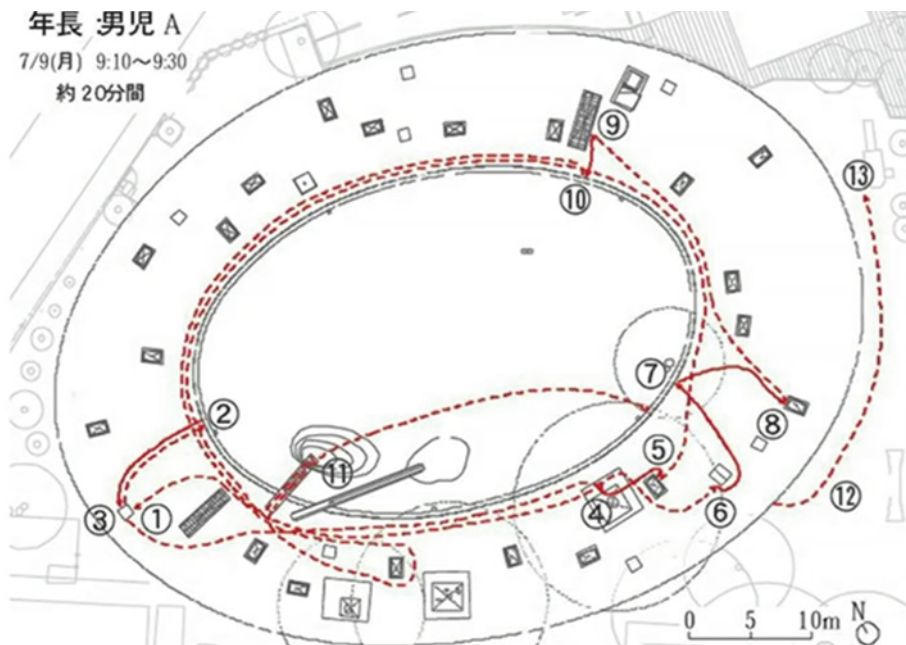
Fuji kindergarten is designed as a oval where circulation is endless and children can essential run at free will. A central courtyard is the focus of the school. Circulation weaves between programmed areas that are for the most part adaptable and re-configurable depending upon the activity or lesson at hand. Children are encouraged to explore and use the space as they see fit. A connection to nature is fundamental to the design; where trees grow up inside and penetrate through the building envelope and become play elements that children gravitate towards.



Fuji Kindergarten open plan activated rooftop and central open air courtyard.
Google image.



Fuji Kindergarten Section. Google image



Fuji Kindergarten Plan showing circular (circulation) route children take. Google image.

Het Kasteel (The Castel School), Souest, Netherlands. 1992 - Ton Venhoeven



Het Kasteel Sections. Image from Daf Architecten



Het Kasteel Interior Landscape. Image from Daf Architecten.

This daycare is a unique example which goes against the norm by presenting a child centered design which created a landscape for early years play that incorporates chilThThis

This daycare is a unique example which goes against the norm by presenting a child centered design which created a landscape for early years play that incorporates children's needs on many levels. Here they are afforded a true environment where they are encouraged to explore. Venhoeven's vision deliberately put the virtues of adventure and play as a requirement for learning while at the same time pushed aside some of the usual overarching health and safety concerns and constraints so that a challenging multi-dimensional environment could be designed and built that celebrates children for what they need at that stage their lives.²⁹ As Mark Dudek suggests:

[He] deliberately incorporated ramps, terraces and level changes which encouraged children to climb and explore, just as they would in the natural landscape...Venhoeven's initial inspiration developed into a whole host of affordances, which tested health and safety requirements to the limit. Because of that, the landscape was extremely rich and challenging...It is an environment which trusts children.³⁰

Elements and Features of Successful Kindergartens and Schools

In her book *Architecture for Children*, Sarah Scott uses extensive case studies that highlight many buildings worldwide to outline key aspects of great child focused spaces. These serve well as guidelines for the successful design of schools and places that are attuned to child minded requirements:

Space:

Multipurpose space is important, but so is public and private. Spaces that are too large and multi-purpose can lead to noise and confusion, however spaces that are too small can create heightened levels of stress and anxiety. 42 to 50 SQFT per child is ideal.³¹

Transparency and Nature:

Spatial extension, views out and beyond, and a visual sense of the collective, create a sense of inclusiveness rather than enclosure. To be able to see the sky and have a visual connection with the natural environment outside is fundamental to us all for both a sense of calmness and normalcy. Children in particular—not yet trained to ignore their instincts—yearn for that outside connection.³²

29. Mark Dudek. *Children's Spaces* (Amsterdam: Elsevier Architectural Press, 2005), xvi - xx.

30. *Ibid.*, xx.

31. Scott, *Architecture for Children*, 22-23.

32. *Ibid.*

Scale:

Children are small—it is their most obvious difference to adults. It is how we identify them and how they identify themselves. Their smallness can make them vulnerable and insecure, so they are naturally drawn to small cubbies and small-scaled areas where they can feel competent to cope with new challenges. Providing small microcosms within the whole give children a sense of safety, control and belonging.³³

Interaction:

Children love a challenge. They do not move in straight lines from A to B as adults do, they take obstacle course and hide and seek, mazes, secret ways and myriad options. Children do not just walk, they hop, skip, shimmy along on their bottoms, run jump and meander, sometimes backwards. Any prop that can be used to extend the scope of movement is seized upon; a wall for balancing, a slippery surface, a secret tunnel or a tiny door.³⁴

Ellen Christensen suggests that a playful use of scale is fundamental. Also that spatial organization should take into account the need for separation but also for interaction of different age groups at various times of the day.³⁵ At some points there will be mixed groups, while at other times certain activities will require separation between ages. Children should also be able to determine by themselves their own level of privacy vs. group interactions dependant on the activity and time of day. Furthermore, vivid colours, unique materials and orientation of light in each space can be artfully designed to correspond with activity intended for the room.³⁶

Findings Summarized

Free play is a necessity for children. We must strive to create the best possible learning environments for children. People need more options, prekindergarten child care facilities are often pay based drop off services that are often located in less than ideal spaces, often in church basements and other poorly designed places. There is a wide and diverse range of caregivers who take care of children who are prekindergarten age 0 – 6 who stay home and have very few indoor options to take their children. A focus on designs that incorporate aspects of play for children is necessary. There is a gap and room to create indoor learning environments for children that serve as an alternative to the traditional daycare

33. Ibid.,

34. Ibid.

35. Wang, Play: Indoor & Outdoor, 3-4.

36. Ibid.

format. Spaces that are designed specific, not only for the needs of children, but can also as a hub for the caregivers who also frequent the space. These places can serve as a place of possibilities - a reflection of the community for the community.

CHAPTER 2: DESIGN

Early Years Play Centre Prototype: 2 Sites, 3 Scales

The prototype is tested architecturally at various scales in different urban environments with varied client groups. Ideas and design principles are tested sequentially steps where each design informs the next. First at the scale of a room in a house, second a series of rooms within the house, proposing the conversion of a traditional house, and third the design of a play centre from the ground up on a vacant urban lot. As the process is mimicked on the next scale, what are the changes, what was successful? How do they differ from small scale to larger scale? Links between them? The idea is to mimic how the growth of such facilities might happen over time.



Proposed site locations for play centres in Halifax.



CONVERSION OF A LATE VICTORIAN ITALIANATE HOME - 1043 TOWER RD

SMALL SCALE: 1500 - 2500 SQFT.

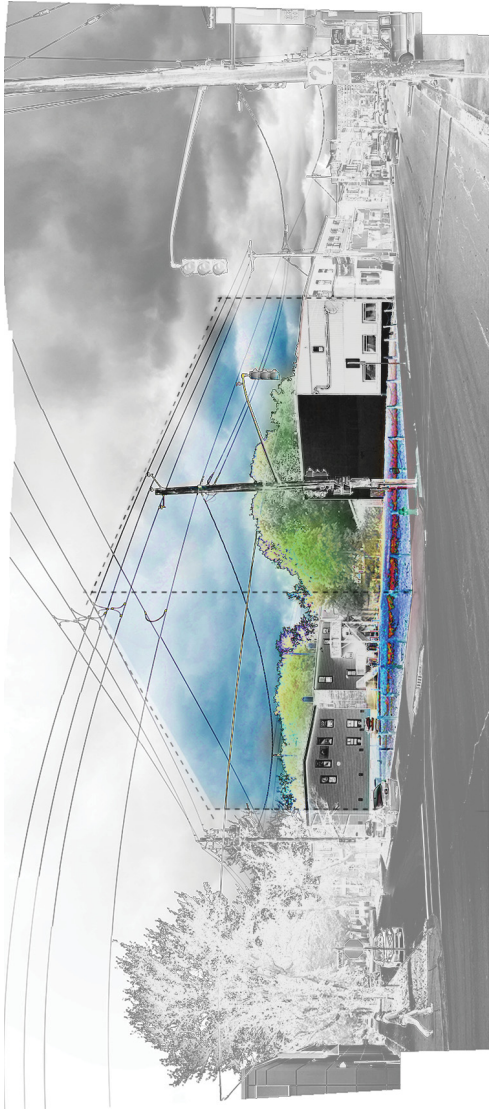
south end Victorian Home

Capacity: up to 20 people

10 - 15 children + adults

1 ECE staff / facilitator

Victorian house to be converted into play centre.



FULL DESIGN OF A PLAY CENTRE ON EMPTY SITE ON QUINPOOL RD @ HARVARD

LARGE SCALE: 5000+ SQFT
 downtown space central accessible location to most neighbourhoods

Capacity: up to 50 people
 20 - 30 children + adults
 2 ECE staff / facilitator

Quinpool Road at Harvard Street: Site for proposed play centre building.

Play Centre Establishment Over Time

How might the growth of such a facility happen over time? What are the seeds for this type of establishment?

A couple of friends with kids get together at the others house for a play date. What are the architectural elements that are required to make a room in a house an ideal environment that best facilitates the occasion and make it a successful lasting experience that will be repeated?

That play date is repeated weekly, bi weekly, on a regular basis. Over time, more people are invited, this play date occasion might happen at one of the other families houses. So it alternates between households. And perhaps it is decided that one establishes itself in a more permanent manner-- a series of rooms are now converted, accommodating more and more people, children and families.

At a given point over time the play date solidifies and merits taking over the entire house or houses. The play date adapts to playcentre. How does the traditional model of that given house change? How do the layout of rooms change? What interventions happen at this stage to facilitate the larger occasion converting this house into a successful "small scale" play centre?

This establishment is a success and several of these can serve individual neighborhoods throughout the city. How far will people travel to these small scale play centres. What is the reach between each neighbourhood? What are the clients' means of transport? Is it by foot, car, bus, bike? And what about the wider community? At some point the playcentre model takes hold and deserves a larger scale effort. A centre that accesses the entire city. Here, there is a certain scale shift. At this scale how do the lessons learnt from smaller scale examples carry over. Many of the essential elements for the house scale still apply and can be incorporated into the design of a large scale centre.

The following diagram depicts this growth and establishment over time. From the individual at the room scale; to a group of individuals at the house scale; to groups of families at the city scale within the wider community and beyond.

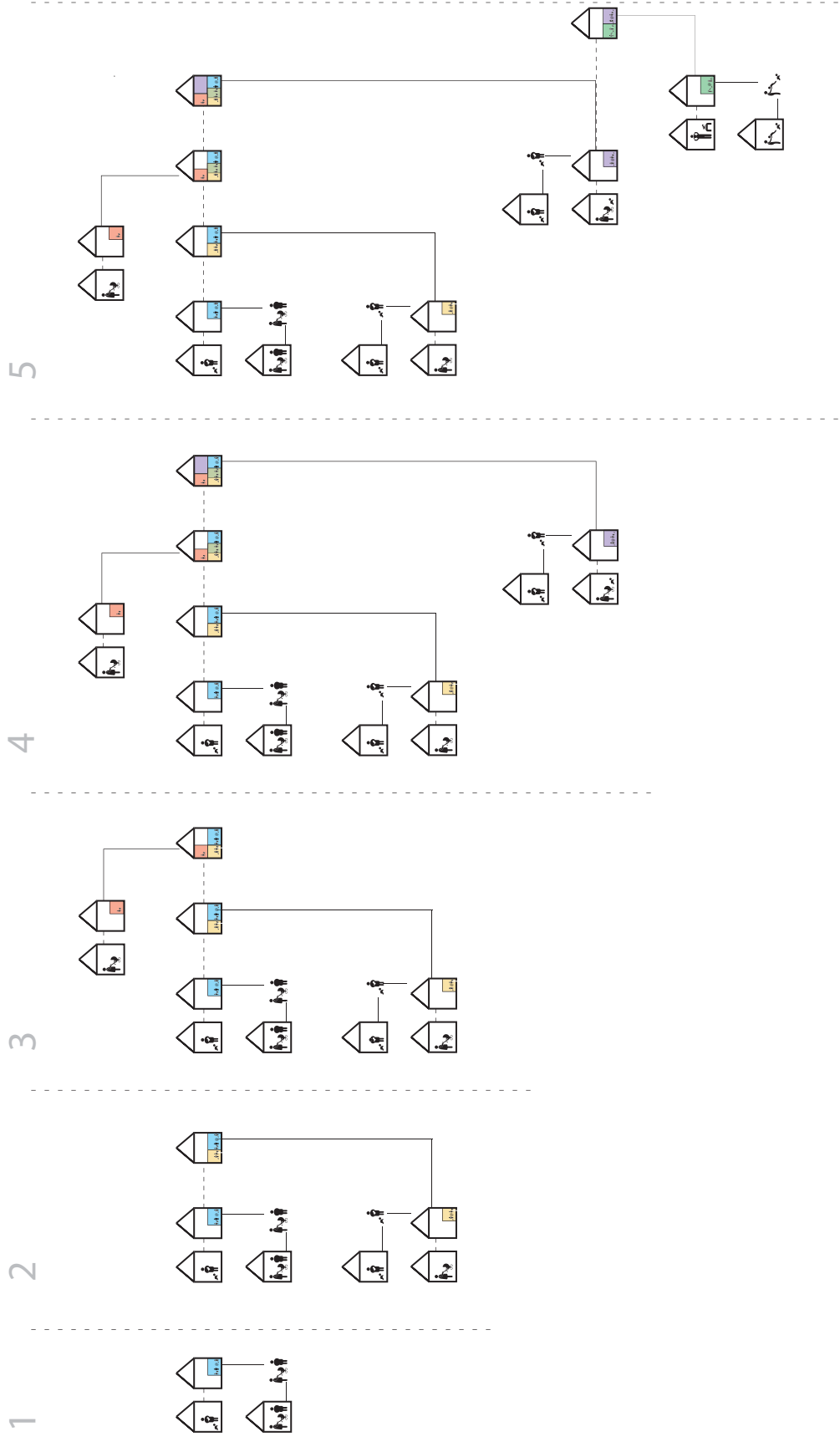
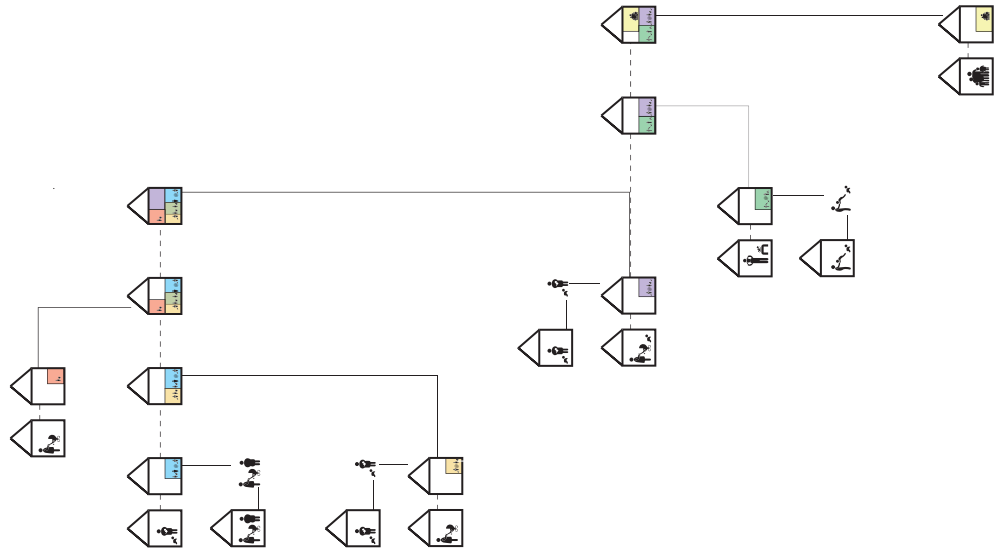


Diagram outlining the establishment and growth of Play centre(s) over time

6



7

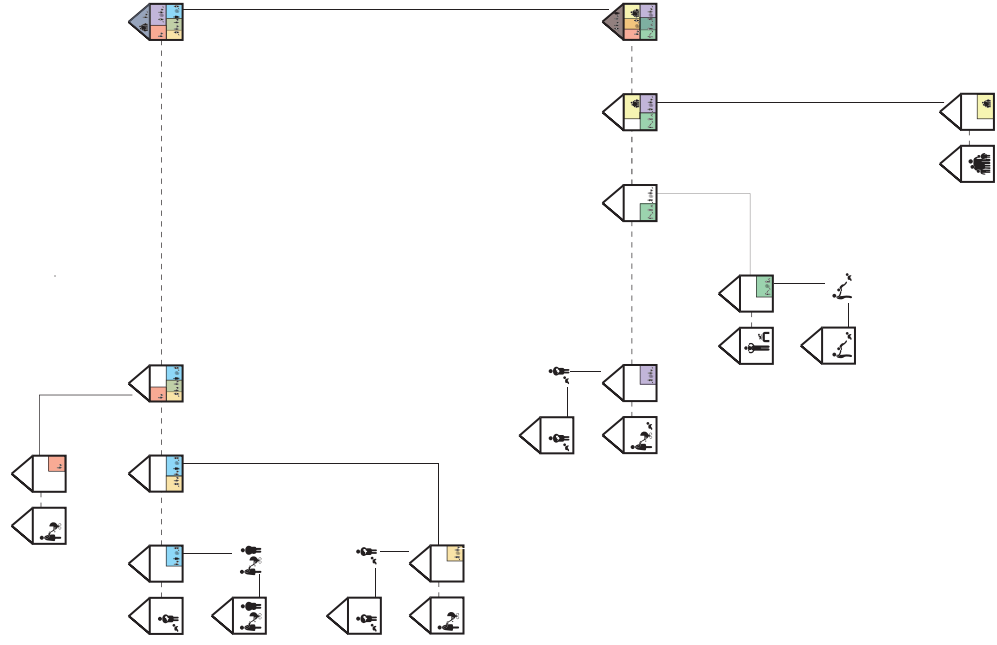
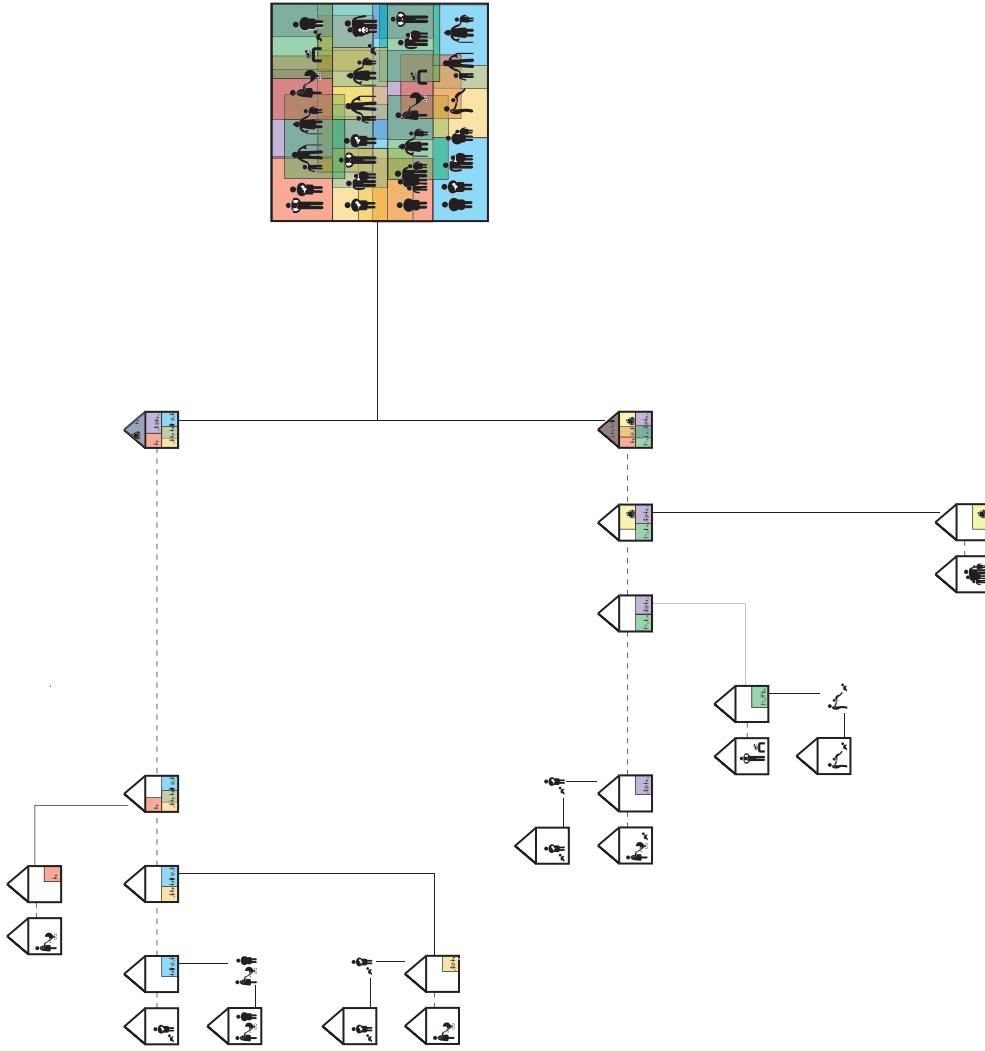


Diagram outlining the establishment and growth of Play centre(s) over time

8

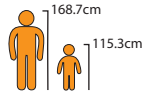


9

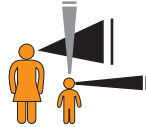
Diagram outlining the establishment and growth of Playcentre(s) over time

Design Principles

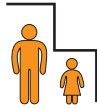
Characteristics of Good Design For Child Lead Play Environments



CONTRAST OF SCALES



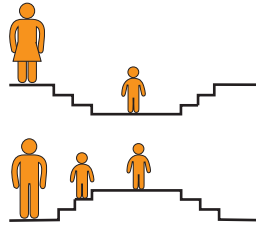
PERCEPTION | AWARENESS



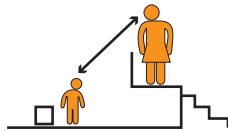
ADULT SPACE | CHILD SPACE



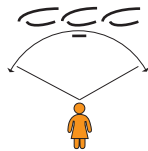
NOOKS



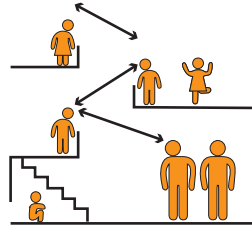
VARIED FLOOR HEIGHTS



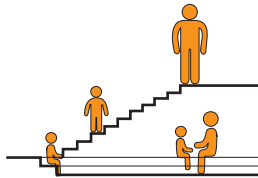
VISUAL CONNECTION BETWEEN SPACES



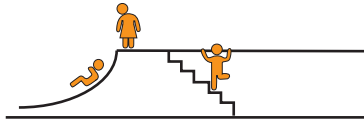
PLAYFUL CEILING PLANES



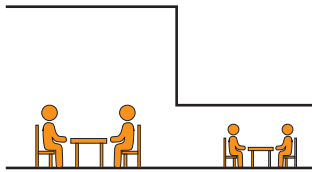
OPENINGS BETWEEN FLOORS



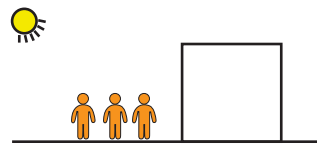
STEPS AS A FOCAL POINT FOR ACTIVITY



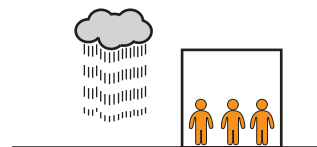
CIRCULATION AS A CIRCUIT

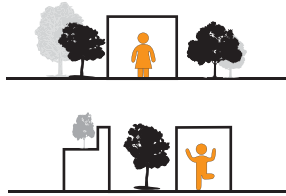


ADULT FUNCTION | CHILD FUNCTION



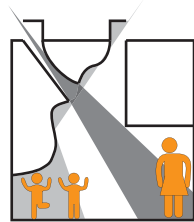
INTERIOR <> EXTERIOR THRESHOLD





HEALTHY BUILDINGS AND MATERIALS

INDOOR ENVIRONMENTS w/ OUTDOOR QUALITIES



LIGHT

Diagram of the design principles for the prototype. Elements adapted from and inspired by Herman Hertzberger's diagrams in *Space and Learning*, 83 - 84.

Translation into Design

A playful use of scales is fundamental.



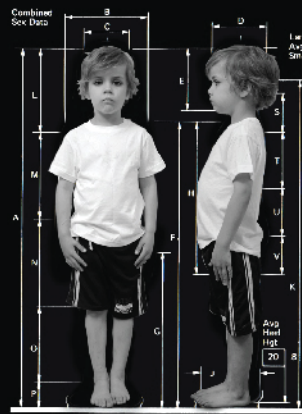
Peter Opsvik - Maxi set including Trip Trapp Chair 1972 - *Century of the Child: Growing by Design, 1900-2000*, 233.

The effort to accommodate children in the physical world of adults, to give them equal footing, in a way characterizes all design for children as inclusive, with results that can be poignant as well as practical.³⁷

Children operate on a different scale than adults do, this becomes obvious when observing the way in which a child looks and moves through as they interact with their environment. Large group areas are necessary for communal group activities and interactions, but there is also a need for smaller spaces and nooks to get away. Multipurpose spaces are key; ones that can be reinterpreted and adapted as needed depending on the occasion. A wide range of activities can take place at a given time. There is also a need for breaking down the traditional classroom model. It is about free movement and flow where children are afforded the opportunities to explore, experience and learn on their own.

37. Juliet Kinchin, Aidan O'Connor, Tanya Harrod, and Medea Hoch. *Century of the Child: Growing by Design, 1900-2000*, (New York: MOMA, 2013), 224.

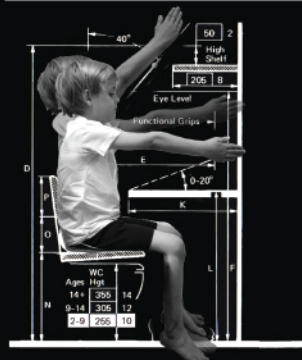
ANTHROPOMETRIC STUDY @ CHILD SCALE



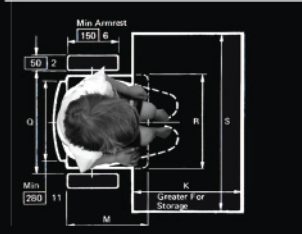
| Age | Standing Height A | Shoulder Width B | Head Width C | Head Length D | Head Height E | Shoulder Height F | Elbow Height G | Wrist Height H | Elbow Height I | Eye Level J | Eye Level K | Weight L |
|-------|-------------------|------------------|--------------|---------------|---------------|-------------------|----------------|----------------|----------------|-------------|-------------|----------|
| 15 | 1800 | 702 | 465 | 182 | 195 | 8.2 | 200 | 7.9 | 225 | 6.8 | 1460 | 57.5 |
| 12 | 1625 | 639 | 396 | 146 | 186 | 8.8 | 190 | 7.4 | 220 | 6.5 | 1370 | 54.0 |
| 9 | 1440 | 566 | 350 | 127 | 175 | 9.2 | 180 | 7.0 | 210 | 6.2 | 1185 | 45.8 |
| 7 | 1275 | 483 | 286 | 113 | 162 | 9.5 | 170 | 6.7 | 205 | 5.9 | 1065 | 41.8 |
| 5 | 1195 | 447 | 260 | 103 | 155 | 9.8 | 160 | 6.5 | 195 | 5.7 | 995 | 38.1 |
| 3 | 1035 | 387 | 240 | 93 | 145 | 10.2 | 150 | 6.3 | 185 | 5.5 | 885 | 34.7 |
| 1 | 725 | 298 | 205 | 80 | 125 | 10.8 | 130 | 6.0 | 165 | 5.2 | 685 | 28.2 |
| Birth | 905 | 199 | 157 | 50 | 95 | 11.0 | 100 | 4.0 | 125 | 5.0 | 275 | 14.9 |



| Age | High Reach A | Low Reach B | Reach Distance C | High Reach D | Reach E | Eye Level F |
|-----|--------------|-------------|------------------|--------------|---------|-------------|
| HS | 2085 | 82.0 | 815 | 52.0 | 735 | 29.0 |
| Jr. | 1785 | 69.4 | 685 | 26.2 | 635 | 26.1 |
| 12 | 1660 | 73.2 | 705 | 27.6 | 665 | 26.2 |
| 9 | 1545 | 60.9 | 590 | 22.1 | 565 | 22.3 |
| 7 | 1445 | 53.0 | 510 | 20.0 | 485 | 19.1 |
| 5 | 1330 | 52.3 | 500 | 19.7 | 480 | 19.0 |
| 3 | 1245 | 49.0 | 485 | 19.0 | 445 | 17.5 |
| 1 | 1085 | 42.7 | 425 | 16.7 | 390 | 15.3 |



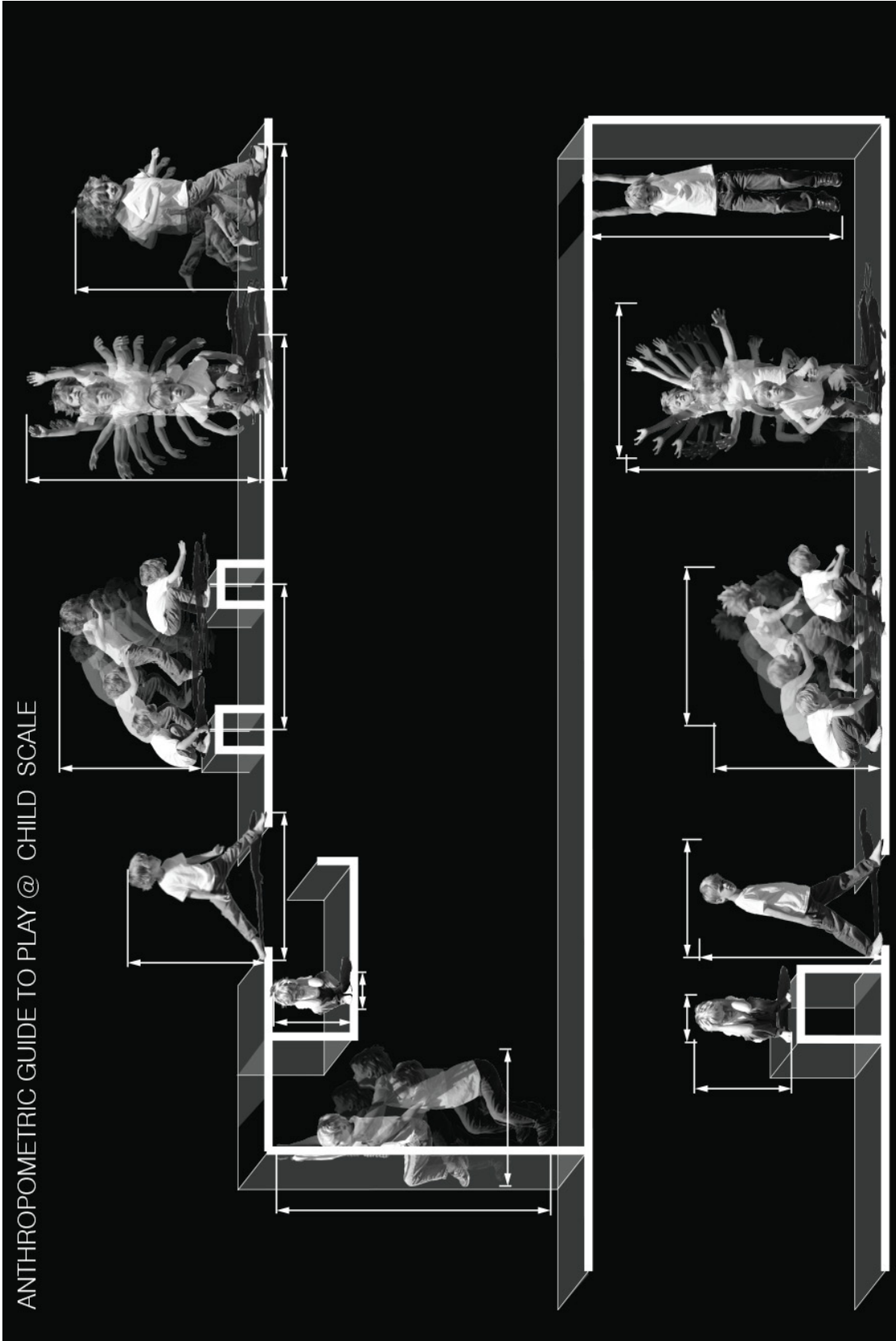
| Up To | High Shelf Height G | Lavatory Height I | Work Top J | Work Depth K | Table Height L | Seat Length M |
|-------|---------------------|-------------------|------------|--------------|----------------|---------------|
| 15 | 1875 | 86.0 | 760 | 30.0 | 915 | 36.0 |
| 12 | 1485 | 58.5 | 685 | 27.0 | 795 | 31.3 |
| 9 | 1320 | 52.0 | 635 | 25.0 | 695 | 27.3 |
| 7 | 1220 | 48.0 | 585 | 23.0 | 635 | 25.0 |
| 5 | 1090 | 43.0 | 485 | 19.0 | 570 | 22.5 |



| Up To | High Shelf Height G | Lavatory Height I | Work Top J | Work Depth K | Table Height L | Seat Length M |
|-------|---------------------|-------------------|------------|--------------|----------------|---------------|
| 15 | 1875 | 86.0 | 760 | 30.0 | 915 | 36.0 |
| 12 | 1485 | 58.5 | 685 | 27.0 | 795 | 31.3 |
| 9 | 1320 | 52.0 | 635 | 25.0 | 695 | 27.3 |
| 7 | 1220 | 48.0 | 585 | 23.0 | 635 | 25.0 |
| 5 | 1090 | 43.0 | 485 | 19.0 | 570 | 22.5 |

Perceived measure of children for design implications. Adapted from Architectural Graphic Standards (10th ed).

ANTHROPOMETRIC GUIDE TO PLAY @ CHILD SCALE



Reality for a measure of children to account for in the design of their environments.

Apparatus vs. Instrument

An adaptation of Herman Hertzberger's suggested model is to be used as a basis for the interventions at various scales in this proposal. Where objects are not anything in themselves but have an open function and therefore stimulate a child's imagination.³⁸ Objects on their own are seen as an apparatus or appliance where they are designed to be single use, directed toward a given purpose. But objects, forms or elements, can also be designed and implemented as something more than a single use. Certain ones have potential to be interpreted by the user where there becomes an exciting opportunity for them to adapt and morph into something dualistic or even pluralistic. They can be interpreted in more than one way. An instrument as it were, that must be played. It is up to the player (child) to decide how, when and what experience will come of the engagement with it. A room can have a wealth of experiences contingent upon the person, their objective and the situation at hand. So spaces can be designed with the ability to be played.³⁹

This becomes very interesting when put into context with a program that is divided not only between adults and children, but also divided amongst the various developmental phases a child goes through from age 0 to 6.

38 Herman Hertzberger. *Space and Learning: Lessons in Architecture 3* (Rotterdam: 010 Publishers, 2008), 227-228.

39 Ibid.

Programmatic Requirements

Child Requirements By Age Group

| | CAREGIVING | ACTIVE PLAY | QUIET PLAY | MESSY PLAY |
|---|--|---|---|---|
| INFANTS :  | diapering sleeping cooking /food prep cuddling caring one on one | rocking swinging crawling bouncing music and movement pulling to stand | reading listening dolls, stuffies wheeled toys light and nature | water sand painting |
| TODDLERS :  | toileting napping cooking /food prep cuddling caring one on one | crawling bouncing balancing sliding running push pull toys | reading listening wheeled toys dolls stuffies light nature simple puzzles blocks | water sand painting finger and easle colouring clay play dough collage |
| PRESCHOOLERS :  | toilets napping cooking /food prep cuddling, wrestling one on one time group play | climbing crawling bouncing balancing sliding running push pull toys music and dance dramatic play themes hiding places | reading listening small unit blocks light nature puzzles imaginary role play | water sand painting finger and easle colouring clay play dough collage |

Adult Requirements



food prep
 sitting
 talking
 socialization
 support
 w/c
 bonding with children
 periods of time away from kids

Typical activities within zones

QUIET ZONE

reading
resting
hanging out
listening
group meetings
private / semi-private spaces

MESSY ZONE

cooking / eating
painting
arts and crafts
personal hygiene / diapering
water and sand play

ACTIVE ZONE

climbing large motor play
costumes and dress up
dramatic play
wheeled vehicles
fantasy imaginary play
large blocks / object play
music and movement

ENTRY ZONE

dressing / undressing
greeting / farewell
storage
dirt control

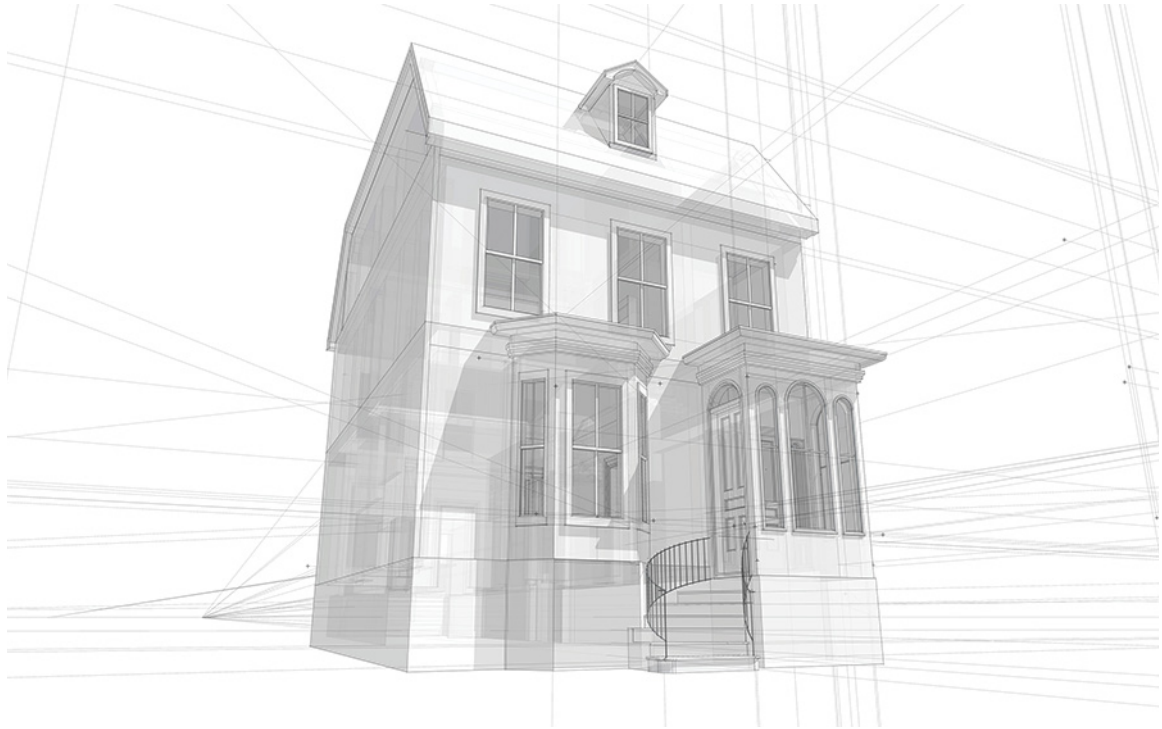


play spaces BIG | small
nooks hidden space
bathrooms at child scale
eating areas | kitchen access
furnishing
downtime quiet zones
napping areas
wet / sand areas within rooms
garden
storage

kitchen
dining
lounge
w/c
resource bulletin area
computers
library
dog run
garden
office / administration
storage

House

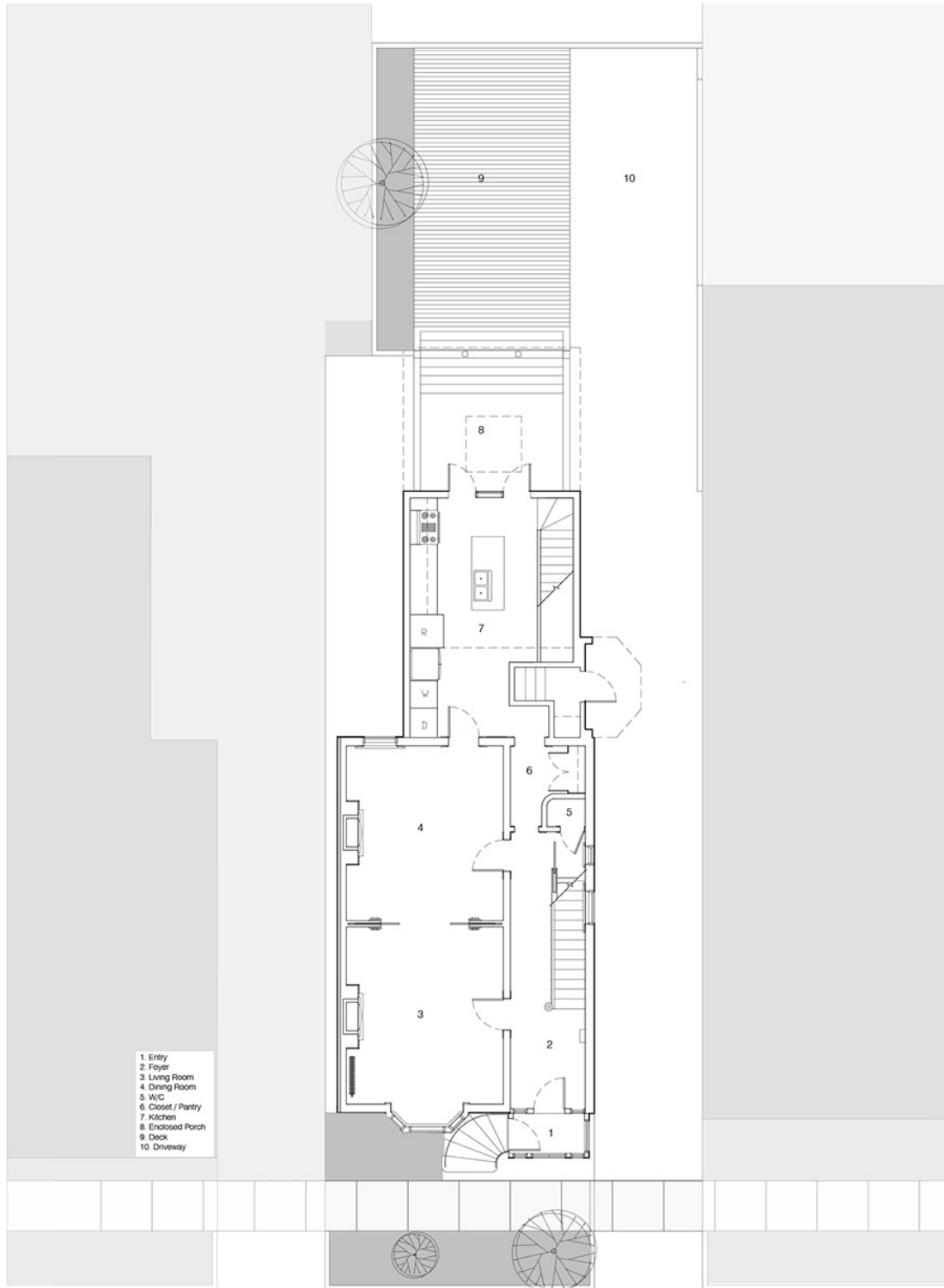
Conversion of a Victorian Italianate Home



Perspective drawing of the house.

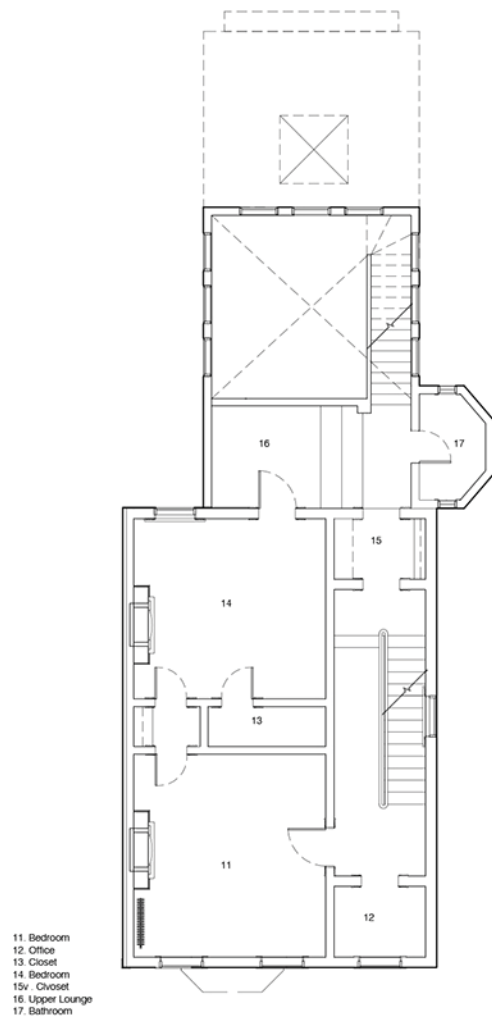
The house provides an interesting testing ground for this thesis. This particular house on Tower Road was selected as a place to be adapted into an early years play centre because of its proximity to the downtown core; its location serves the southern end of Halifax in a diverse neighbourhood core with central access to adjacent established neighbourhoods where daycares and family centres are in low distribution. It has close proximity to universities as well as being close to the Halifax central business district where many groups of clients would have access to it. It can potentially serve the block of the neighbourhood, but also the larger neighbourhood and the downtown core at the same time. In choosing this particular house, it keeps open the possibility and potential for both establishment and expansion of the model or format to other locations in the future.

The house was measured and drawn as built. The following three floor plans show its layout.



1st FLOOR - EXISTING

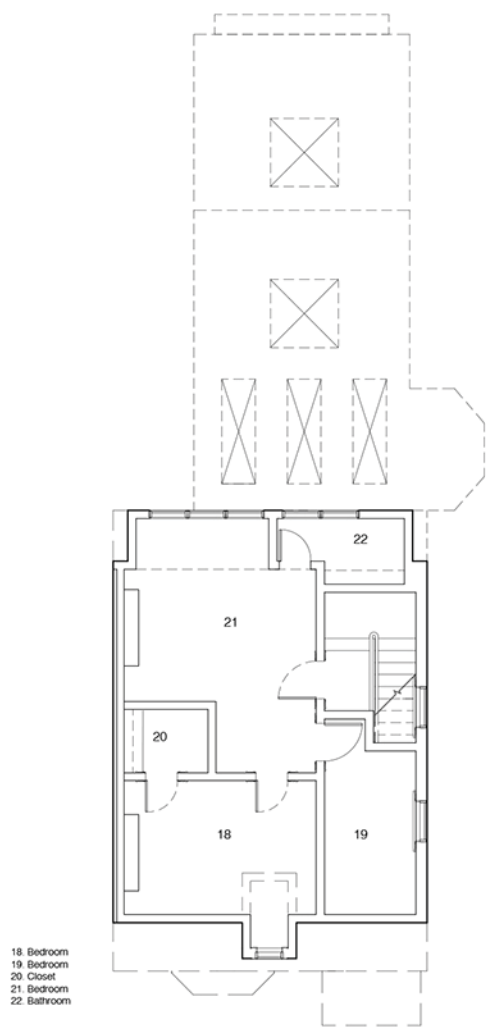
First floor plan - existing.



2nd FLOOR - EXISTING

Second floor plan - existing.

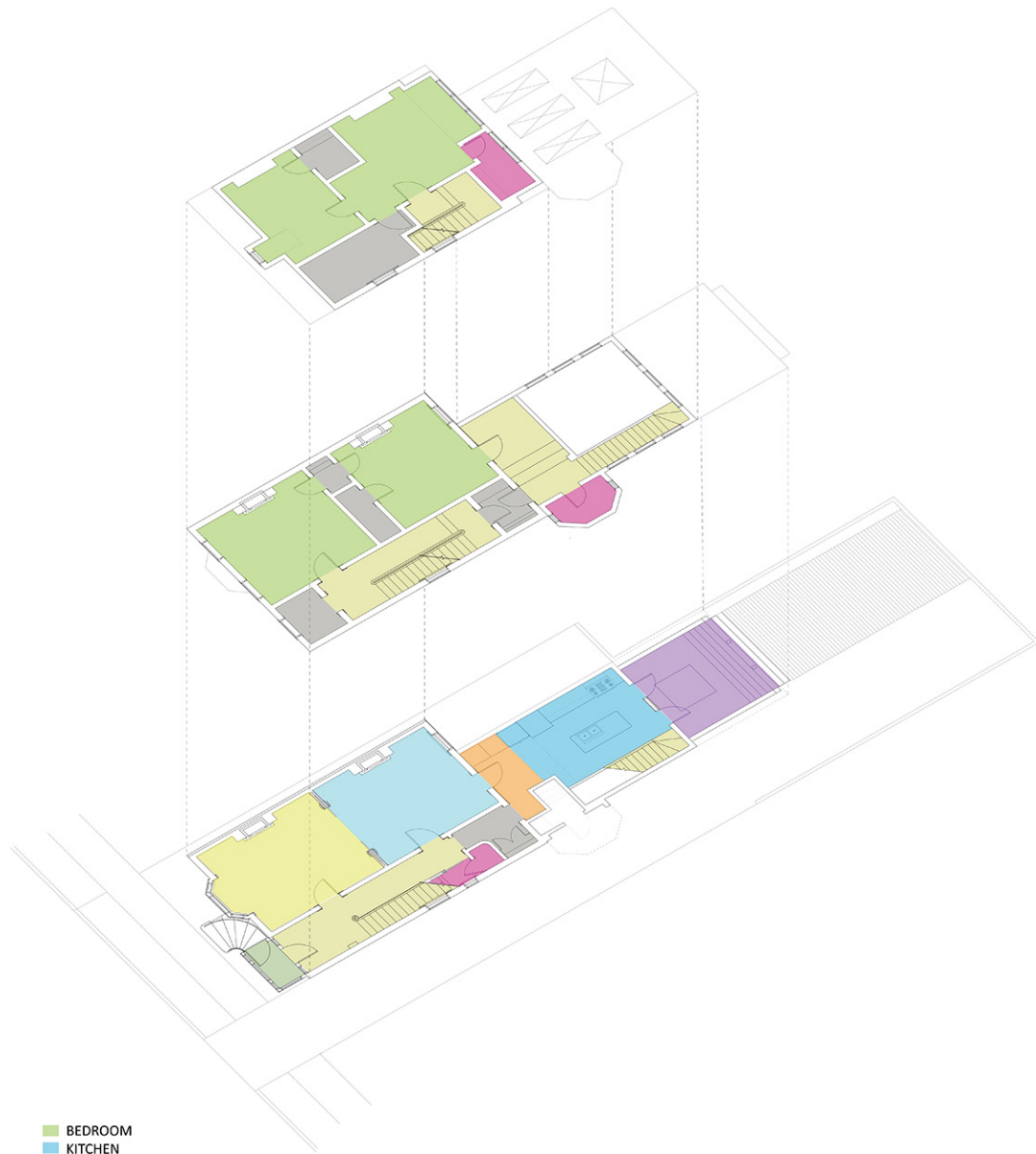




Third floor plan - existing.

Using the house as a testing grounds for the establishment of play centre format on the small scale opens up a number of opportunities. When measured, the traditional house layout as it exists as a home, brings with it certain familiar program implications and patterns of use that we all understand and have a great frame of reference for. Even children have a great reference for, and understanding of a house as it operates as a home. It is, ideally their safe place where their own framing of life unfolds and establishes in their early years. The idea of house as a home contains certain characteristics that have great potential on their own with perhaps very little or no intervention at all. Wooden floors, ornamental detailing, soft materials, staircases, kitchens, bathrooms, bedroom, painted walls, windows and so on. Homes offer a rich palate of offerings that can be exploited when converting a home it into a play centre. It is important then, to take note of these characteristics as opportunities. There are also certain constrains that present themselves that may give clues as to potential interventions. So when measuring the house, a list of opportunities and constrains quickly becomes apparent. These will influence and give clues as to the appropriate interventions that would or could happen when converting a room in the house, or a series of rooms or the whole house into an early years play centre.

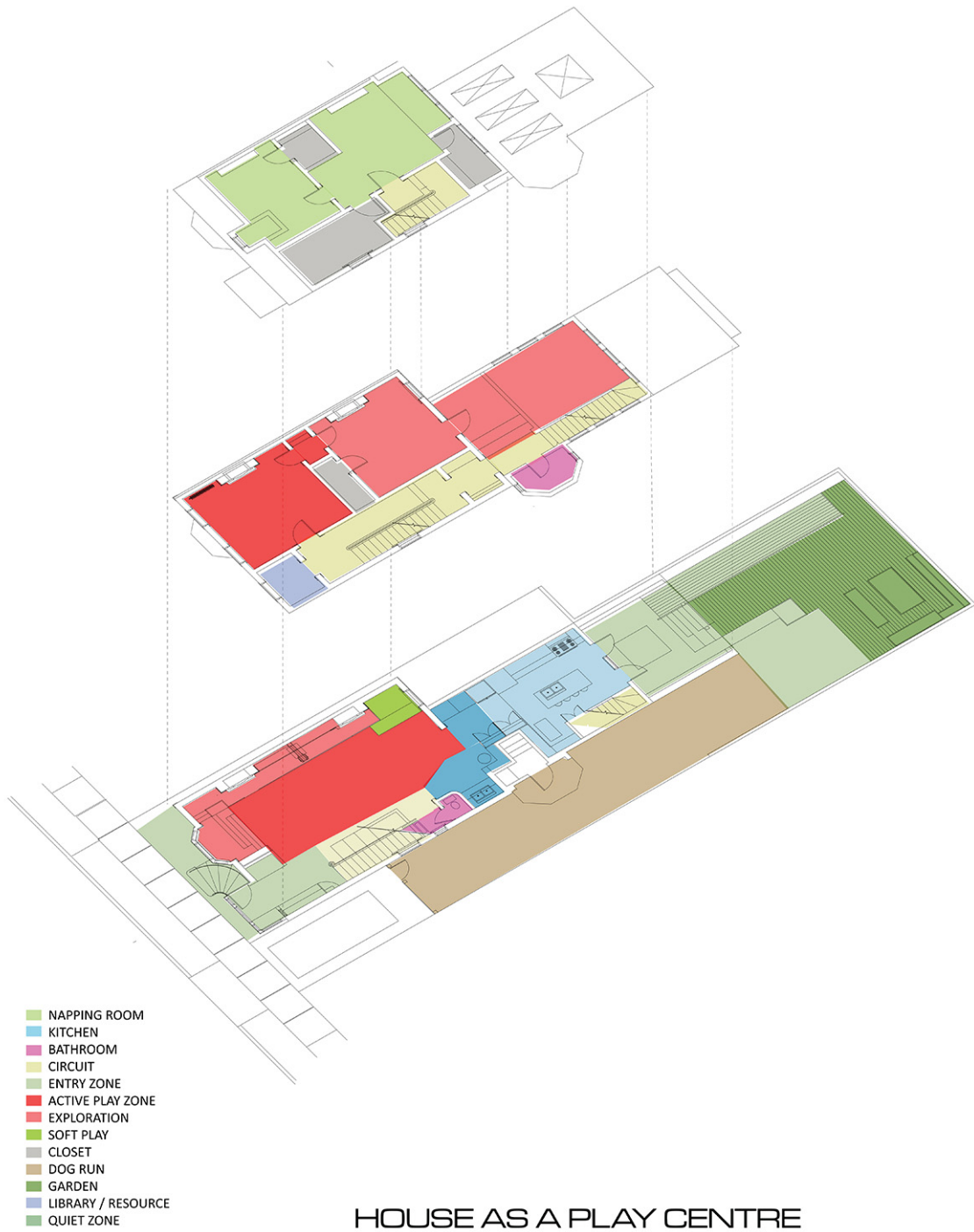
The following diagrams outline the programmatic characteristics of the house as a home as well as the resulting programmatic changes that would happen with the house as a play centre.



- BEDROOM
- KITCHEN
- BATHROOM
- CIRCULATION
- COVERED DECK
- FOYER
- LIVING ROOM
- DINING ROOM
- SERVICES
- CLOSET

HOUSE AS A HOME

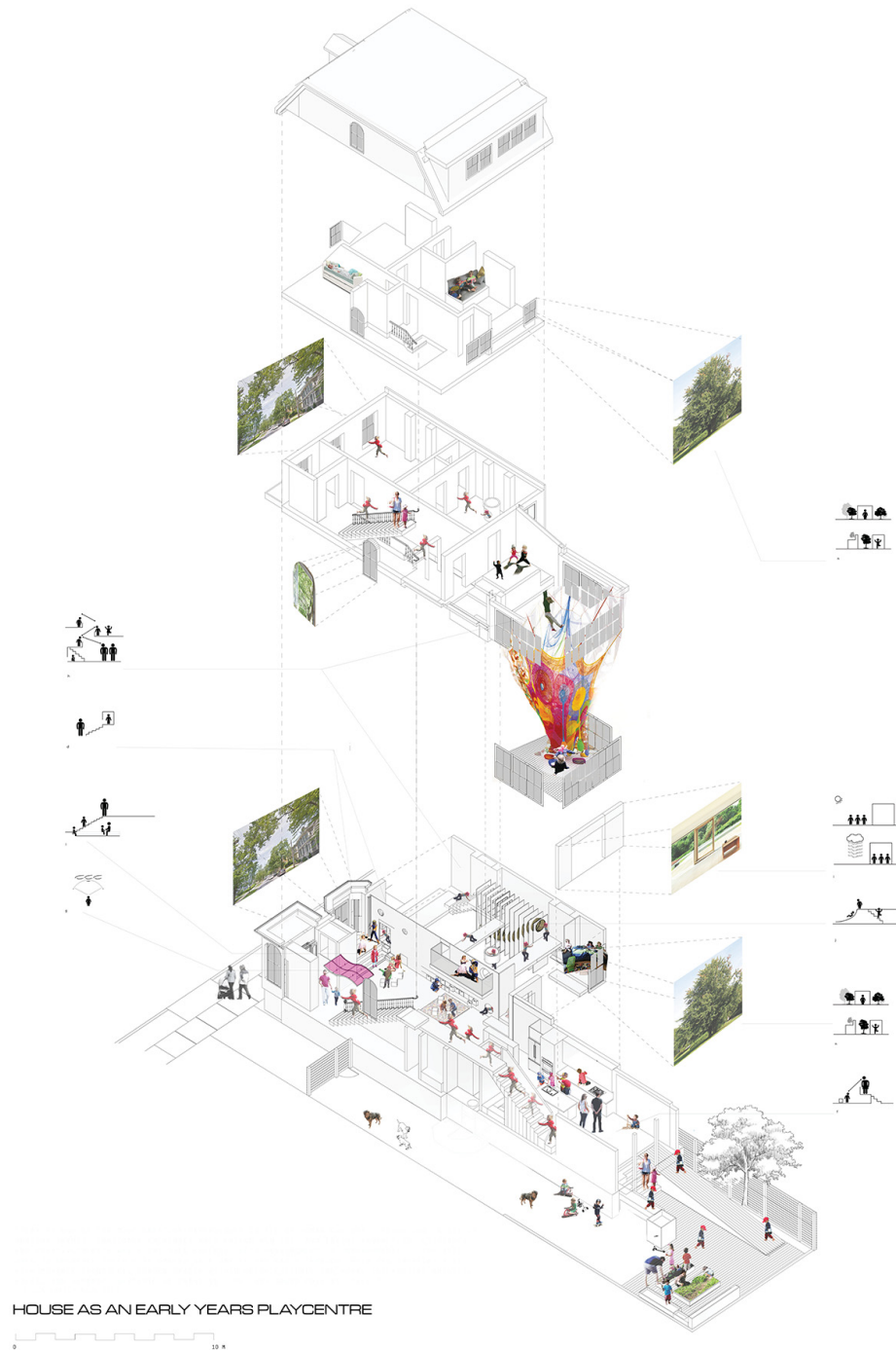
Victorian house as a home.



Victorian house as a play centre

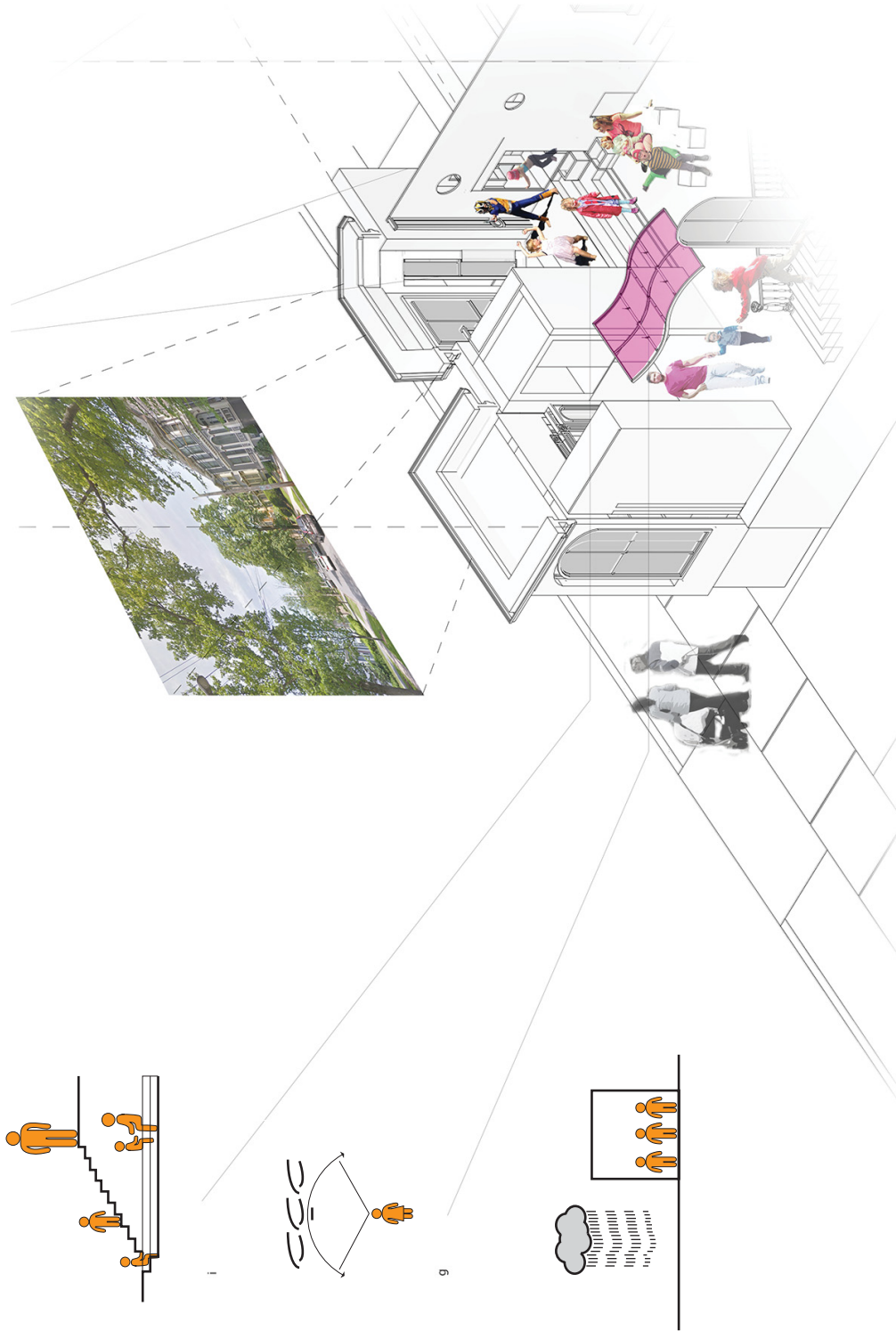
Interventions

The house is adapted, and certain interventions happen on the room scale and others happen throughout the house.



Extended axonometric drawing of the house gives the overall picture of these changes and a feel for how a home would operate as a play centre.

Entry Expanded:



Entry of the house expanded into space traditionally used as circulation.

Secret Hiding Places:

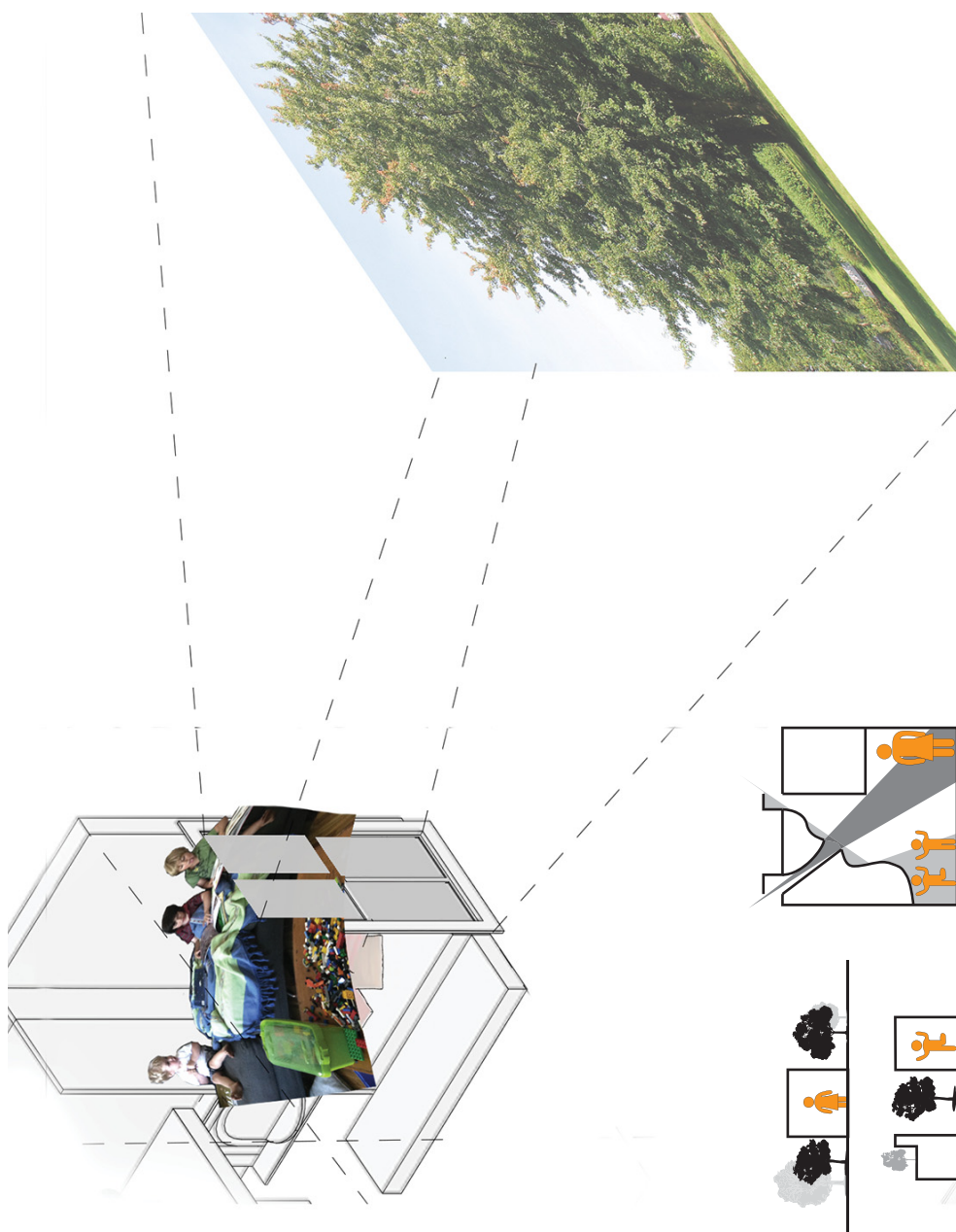
In the living room and dining room several things are introduced including secret hiding places for imaginary play and self discovery, becoming an interactive wall within the room.



Secret hiding places and circuit introduced to the former living and dining rooms .

Soft Play Zones:

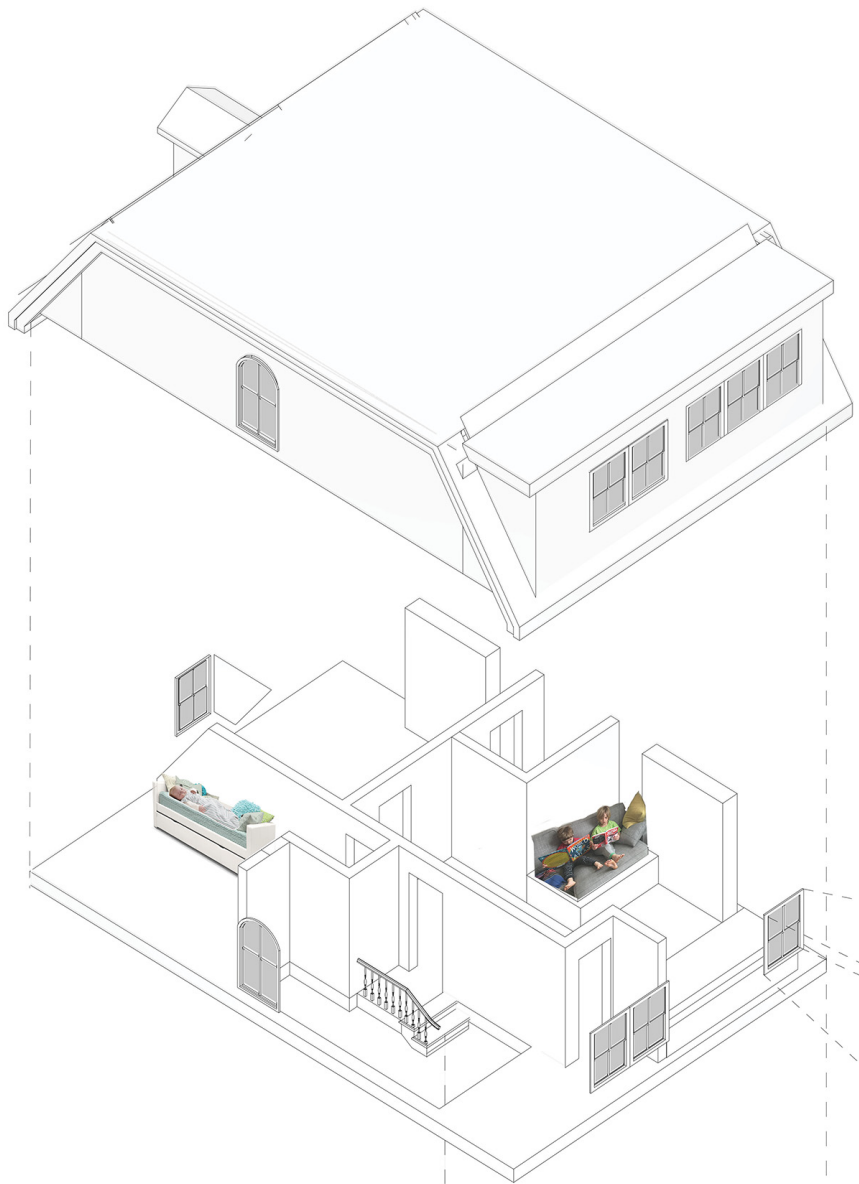
In the corner of the former dining room a multi-levelled soft play area is introduced. These types of zones for soft play activity are important for children to experience at all ages of development. Special attention is given to the window threshold to reinforce the inside experience and maintain a connection to the outdoor realm.



Soft play zone on main floor of playcentre.

Quiet Zones:

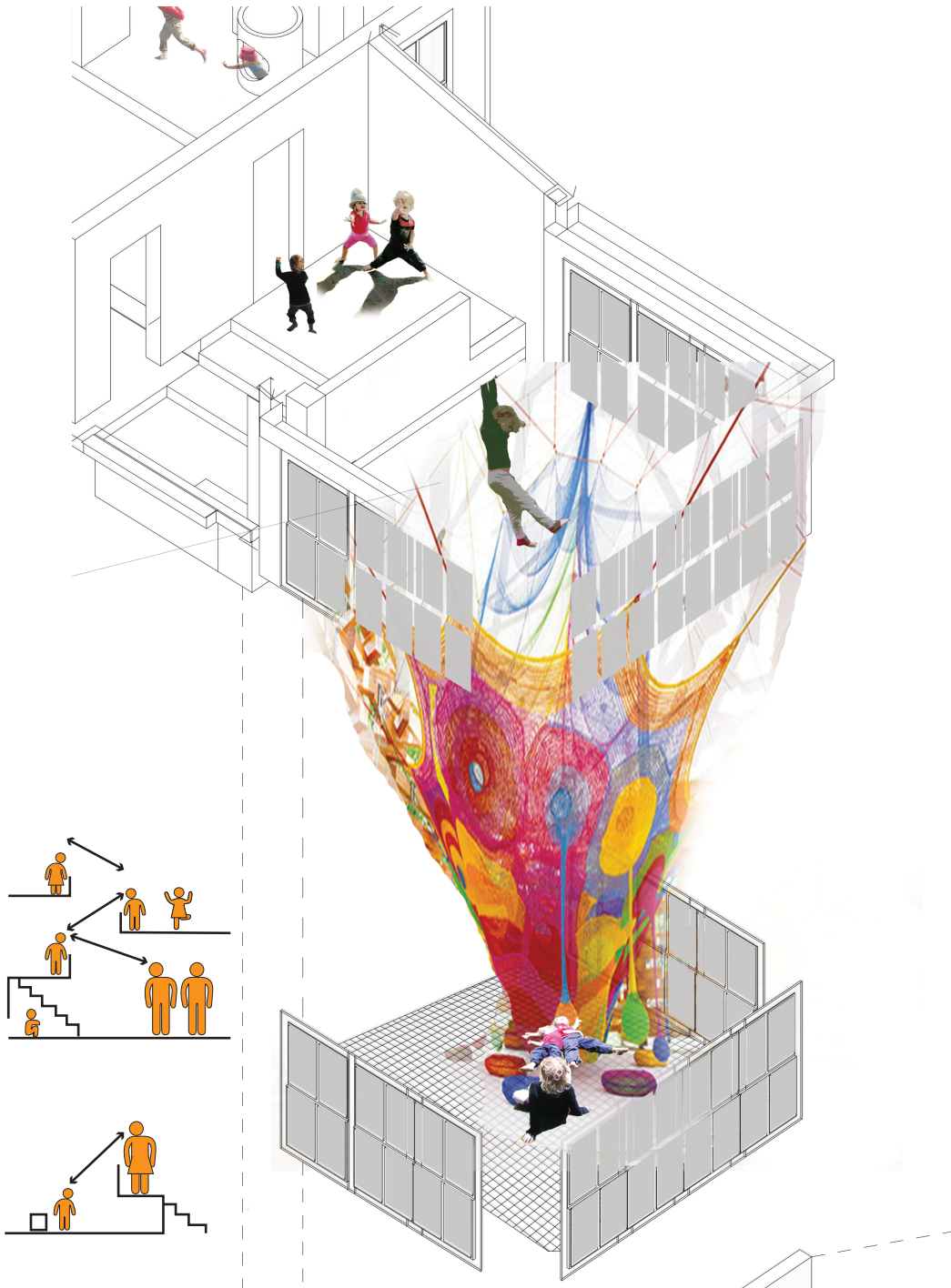
Quiet play zones and napping areas are a priority for certain children of age groups. These spaces coincide with areas in the traditional house that are more private, on the upper floors and away from the bustle of active event and on goings of active play areas both wet and an dry.



Quiet play and napping areas on the third floor.

Active Play Zones:

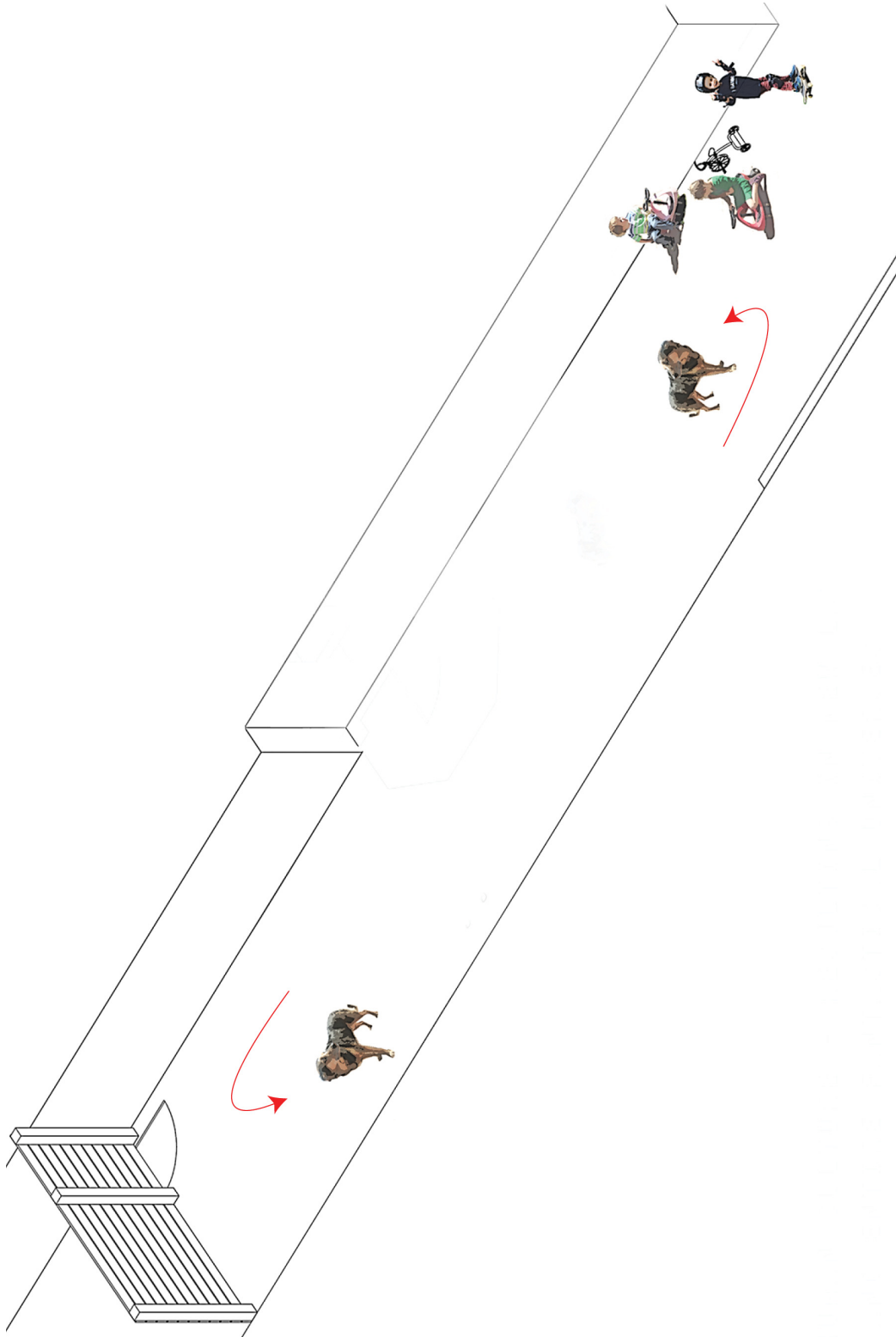
Active play area above kitchen. Net is stretched out over double height ceiling area in kitchen to provide a special area for children and / adults to access while still maintaining a connection to the activities on going in the kitchen.



Net intervention area over kitchen. Google image of net from Hakone Open Air Museum in Japan by Toshiko Horiuchi MacAdam.

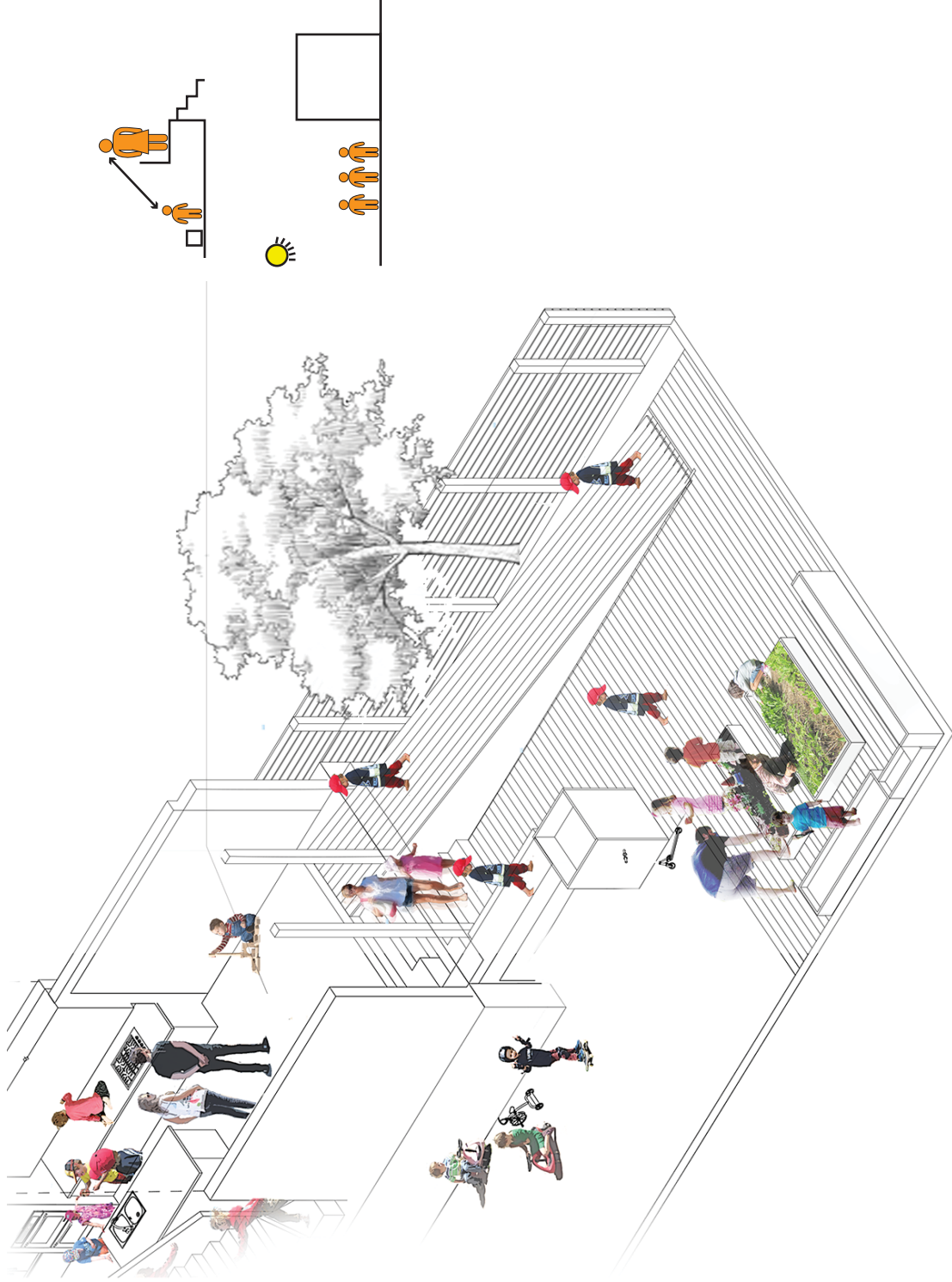
Dog Run:

The driveway is converted into a dog run and outdoor active play zone.



Driveway as a dog run.

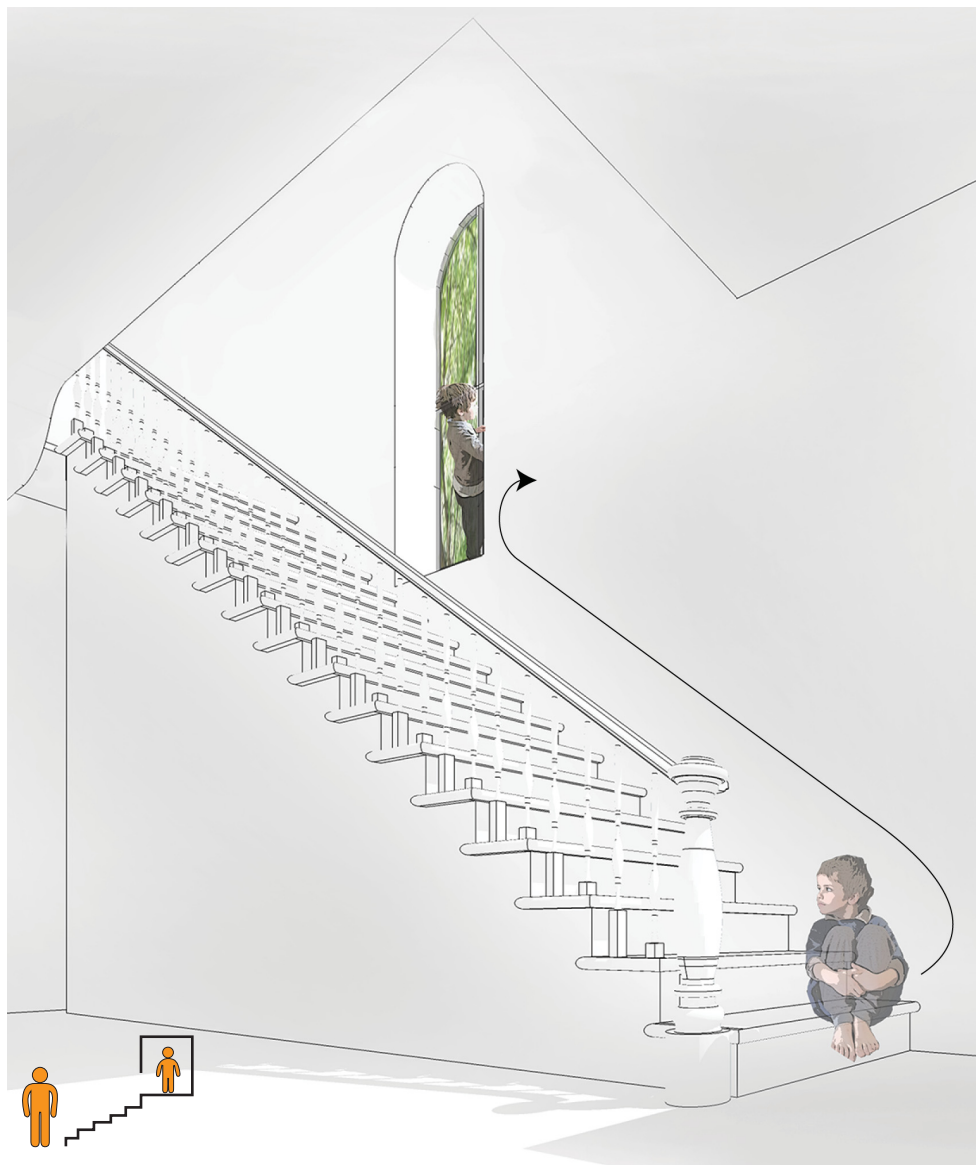
Indoor / Outdoor Threshold Activated:



Gardening areas set up outdoors. Thresholds between indoors and outdoors are activated as special places for learning.

Windows and Stair Thresholds Activated:

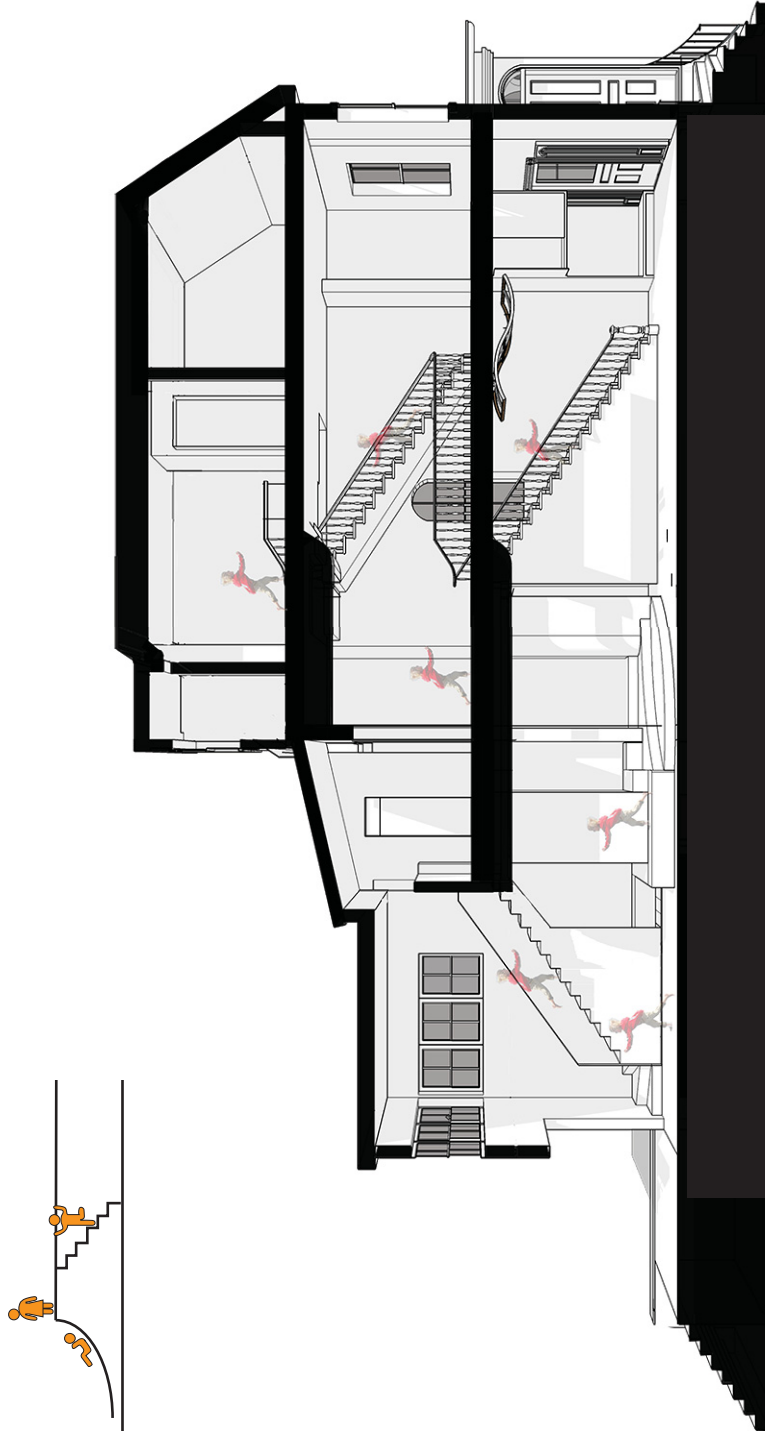
Limited windows in the house are activated as nooks and go to places so as to reinforce connection to outdoors. The architectural potential becomes highlighted when windows are utilized as prime resting places for contemplation and self discovery. Widened and softened window sills provide a comfortable space to linger. These places reinforce connections to nature when playing indoors. Thresholds between inside and outside become very important in play space environments. Maximizing the transparency between these threshold moments is key within the house. This also transfers to the interventions and moments throughout the larger building.



Windows as nooks with outdoor connections

House Circulation as a Circuit:

House circulation is utilized as a circuit. Connections between spaces become opportunities for exploration and exercise.



House circulation is utilized as a circuit.

Bay Window as a Nook and Stage:

The main playroom is the focal point of the play centre. A stage is introduced. The bay window is converted into a special performance area where a multi-height platform is a storage area with drawers and blocks that act as seats as well. The steps become a stage, which also becomes a nook. Beyond is the secret hiding area. Outlined as well is the expanded entrance and varied ceiling planes.

Summary

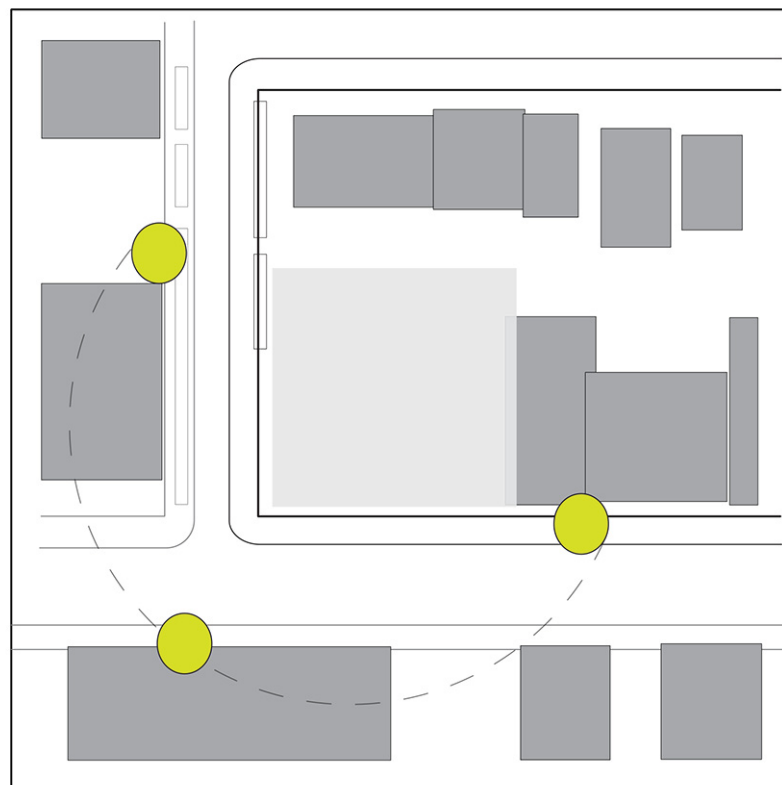
The house serves as a testing ground for the interventions and play centre components as they scale up to a bigger building. The things that are changed in the house are also adapted and included in the building scale. Interventions that make sense in the house also apply to the a larger building. There is a scale shift that happens, the house addresses one neighbourhood and individuals, where as the building addresses both the neighbourhood, the individual, but also draws a further reach to the city, and addresses groups of individuals.

Building

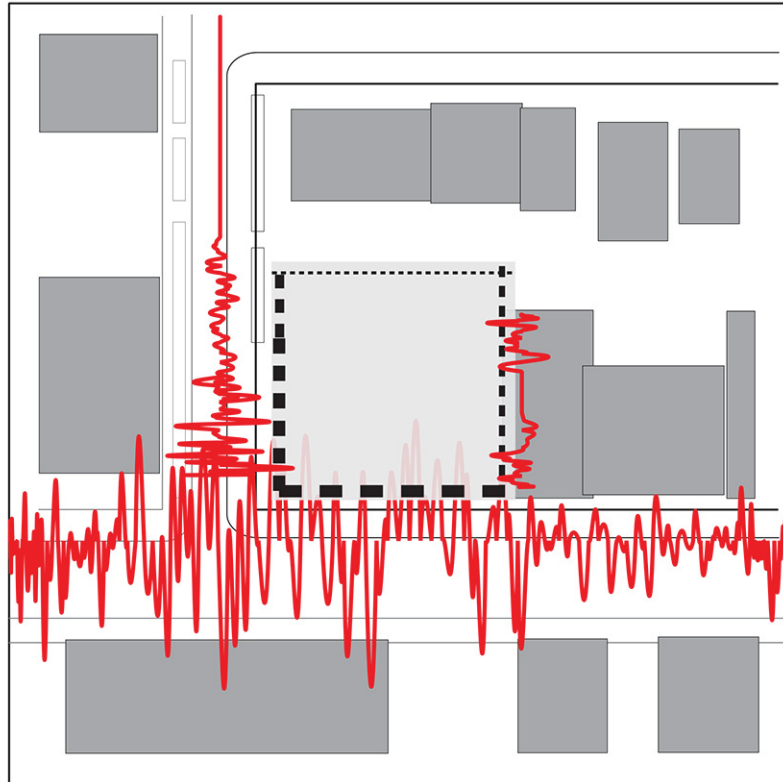
Design of a Play Centre on Quinpool Road at Harvard Street

The site is located at Quinpool Road and Harvard Street. It is at the intersection between the city and the neighbourhood. The site is ideal because it addresses both the city scale and its wider client base as well maintains a connection to the individual(s), the block and adjacent neighbourhoods.

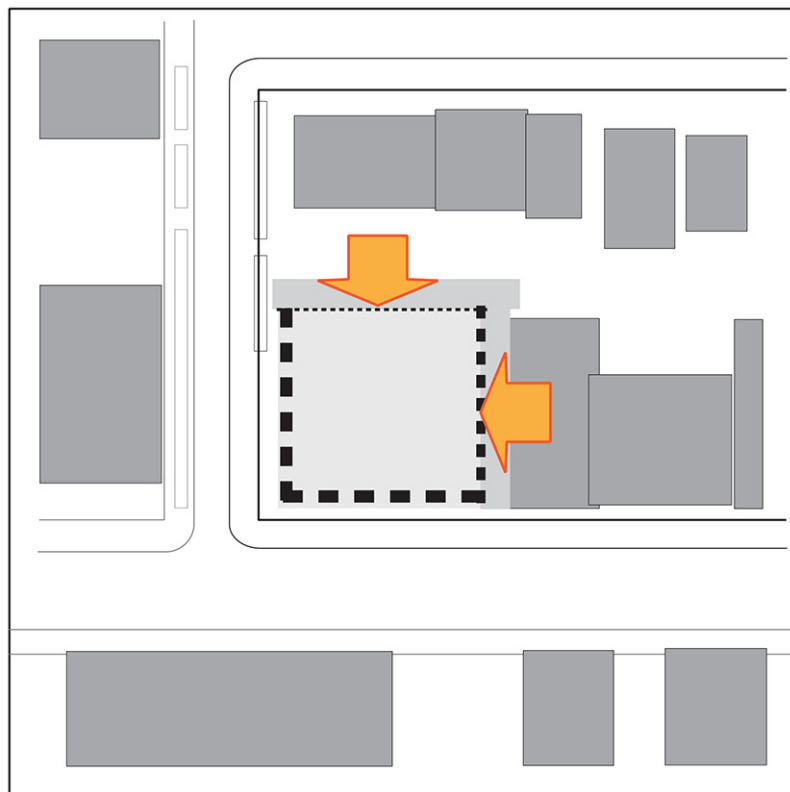
Site Strategy Diagrams



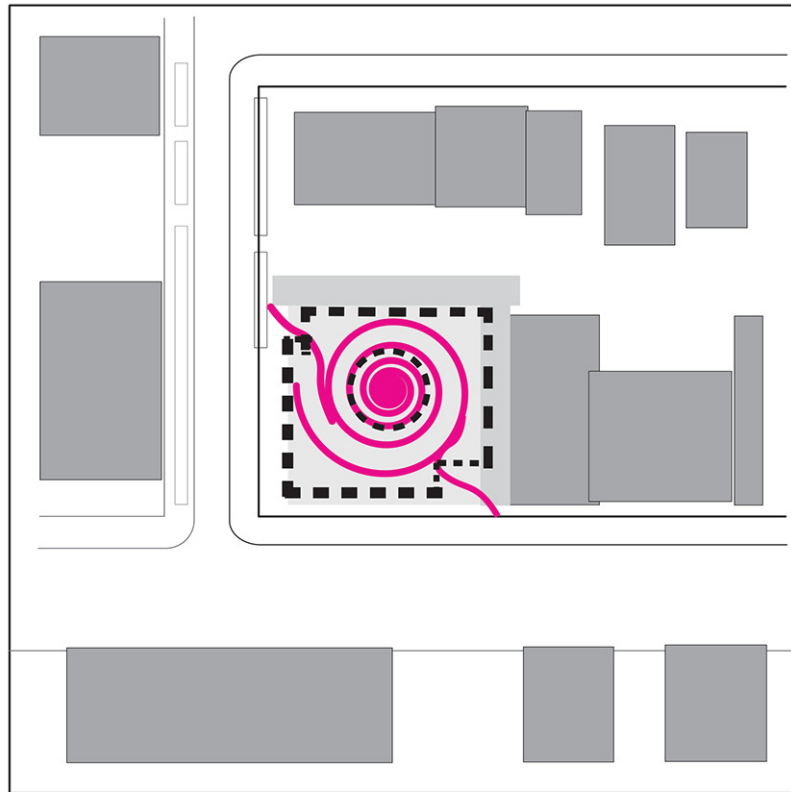
Solar path. Considerations of idea building orientation strategy as it relates to site.



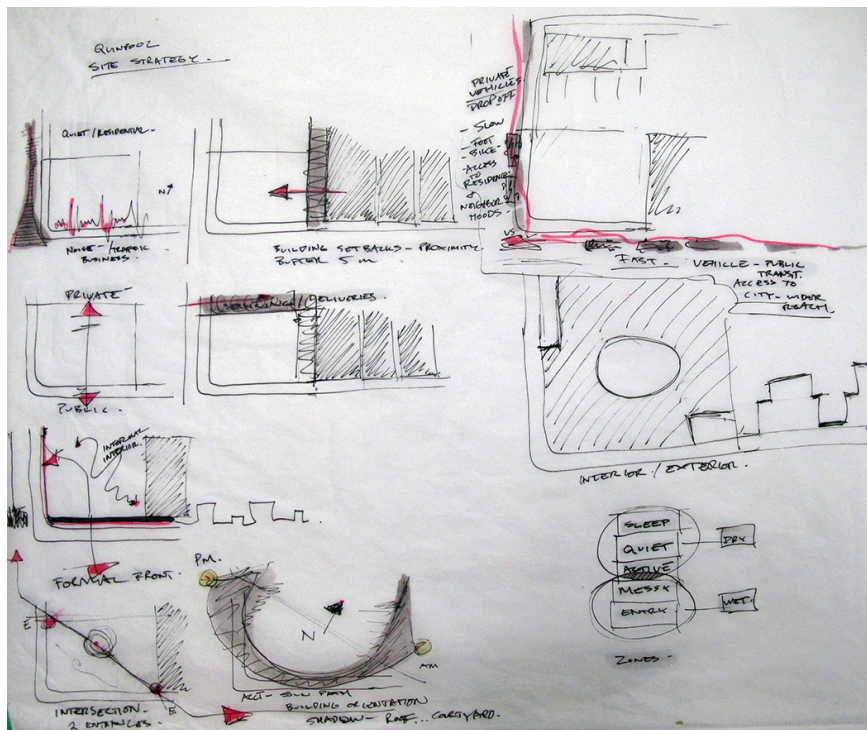
Sound and activity levels of each street.



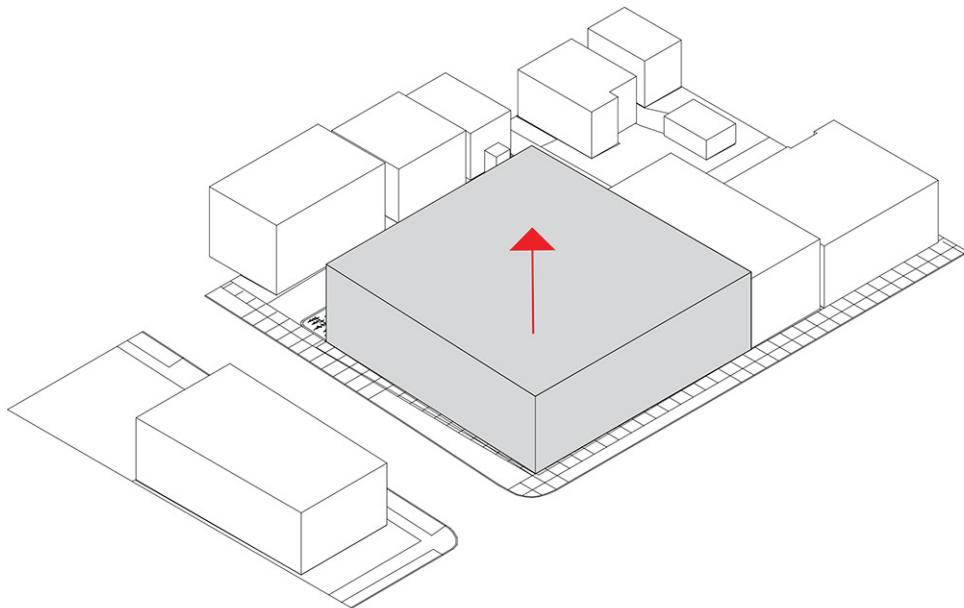
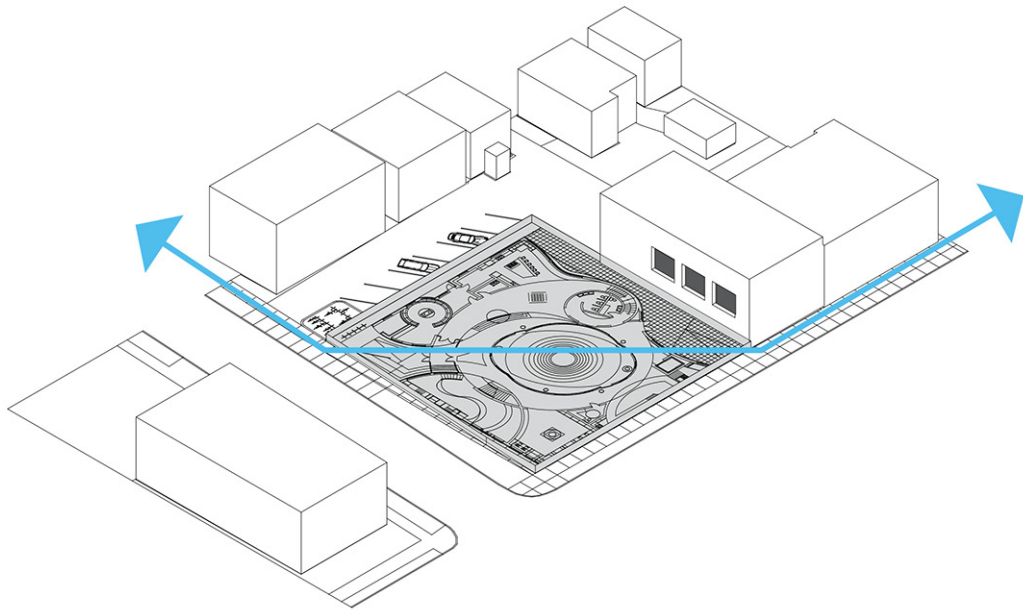
Service buffer and setbacks according to site conditions.



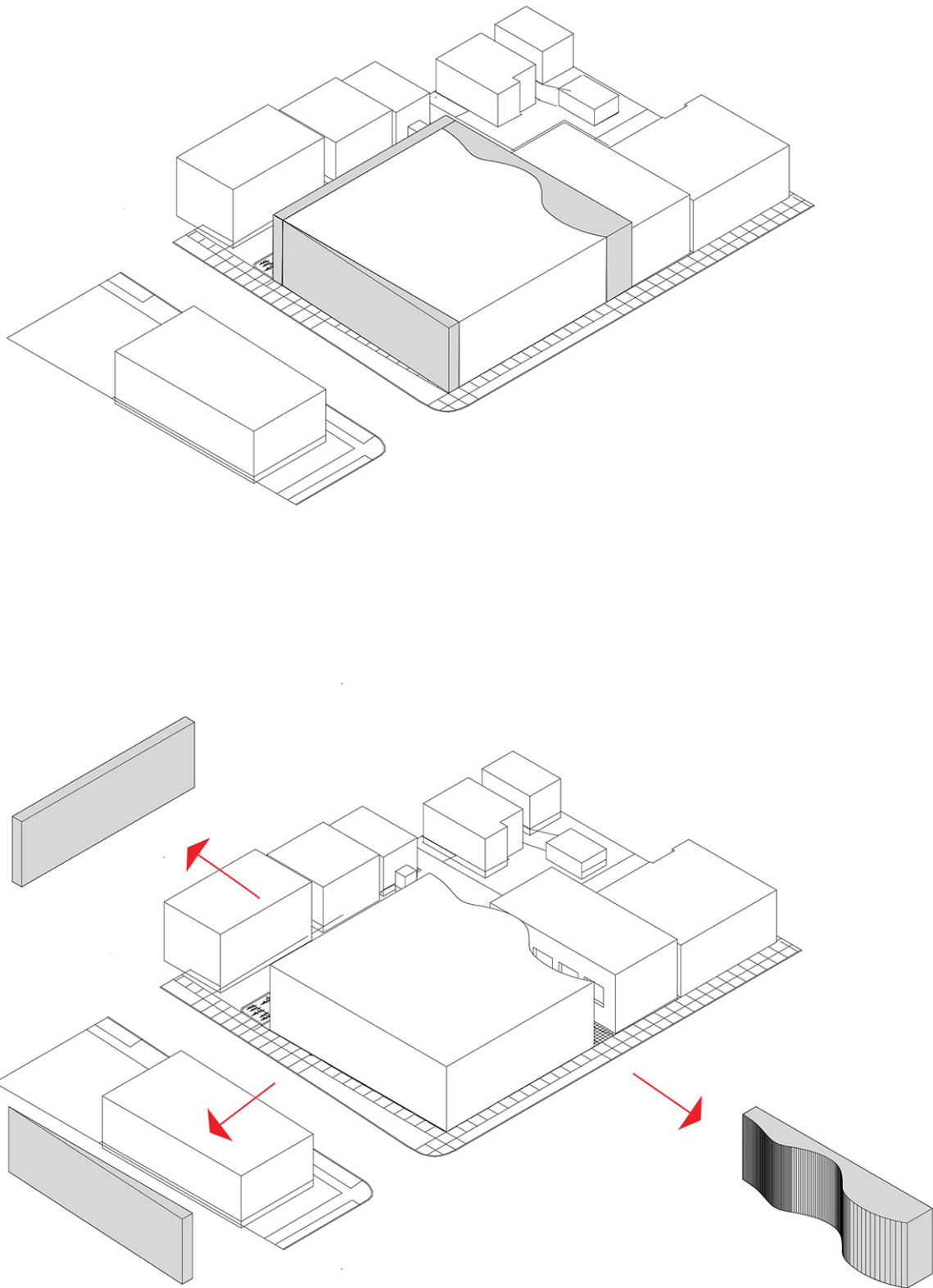
The site as an intersection between formal / public / city / business affairs and informal / private / neighborhood / individual activities.



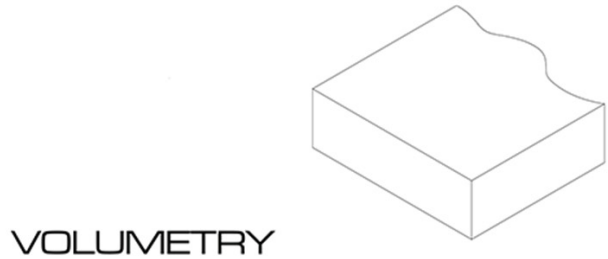
Initial site strategy sketches.



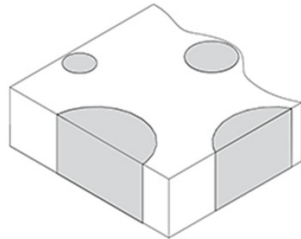
Strategy for a building on the site.



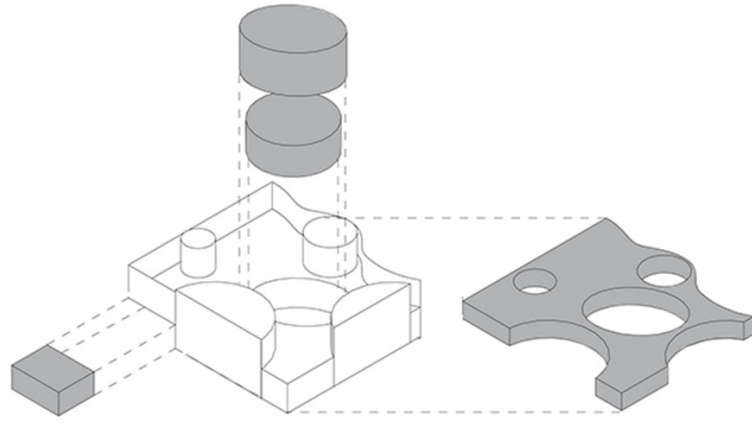
Volumetric cutouts on the site, each with its own benefits and reasoning.



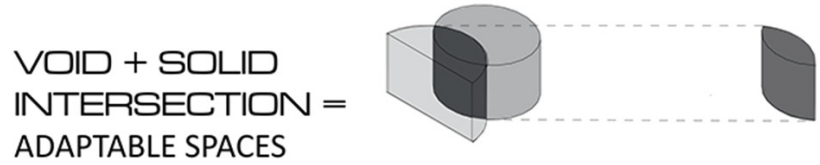
VOLUMETRY



SOLID =
PROGRAMMED SPACE

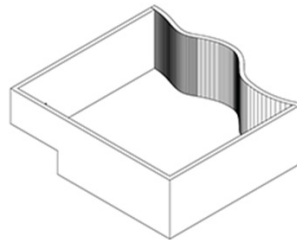


VOID =
FREE OPEN SPACE

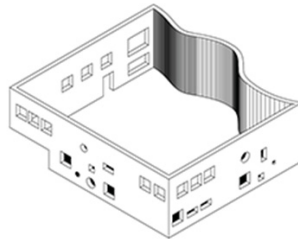


VOID + SOLID
INTERSECTION =
ADAPTABLE SPACES

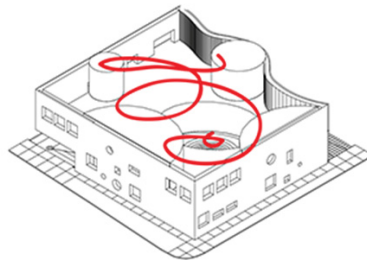
SKIN



OPENINGS =
VANTAGE POINTS

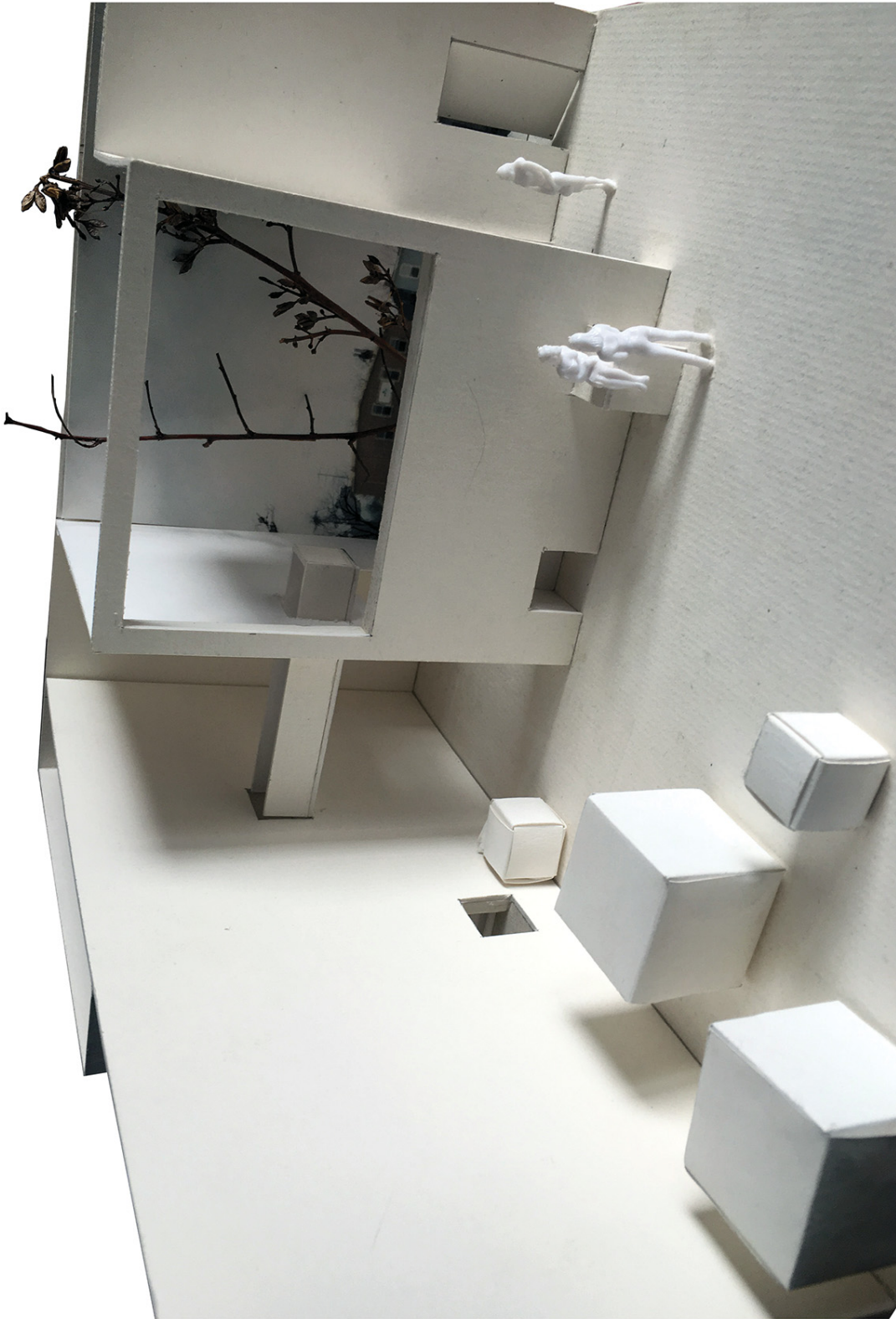


INHABITING
PLA(Y)CES



Volumetric diagram of building strategy

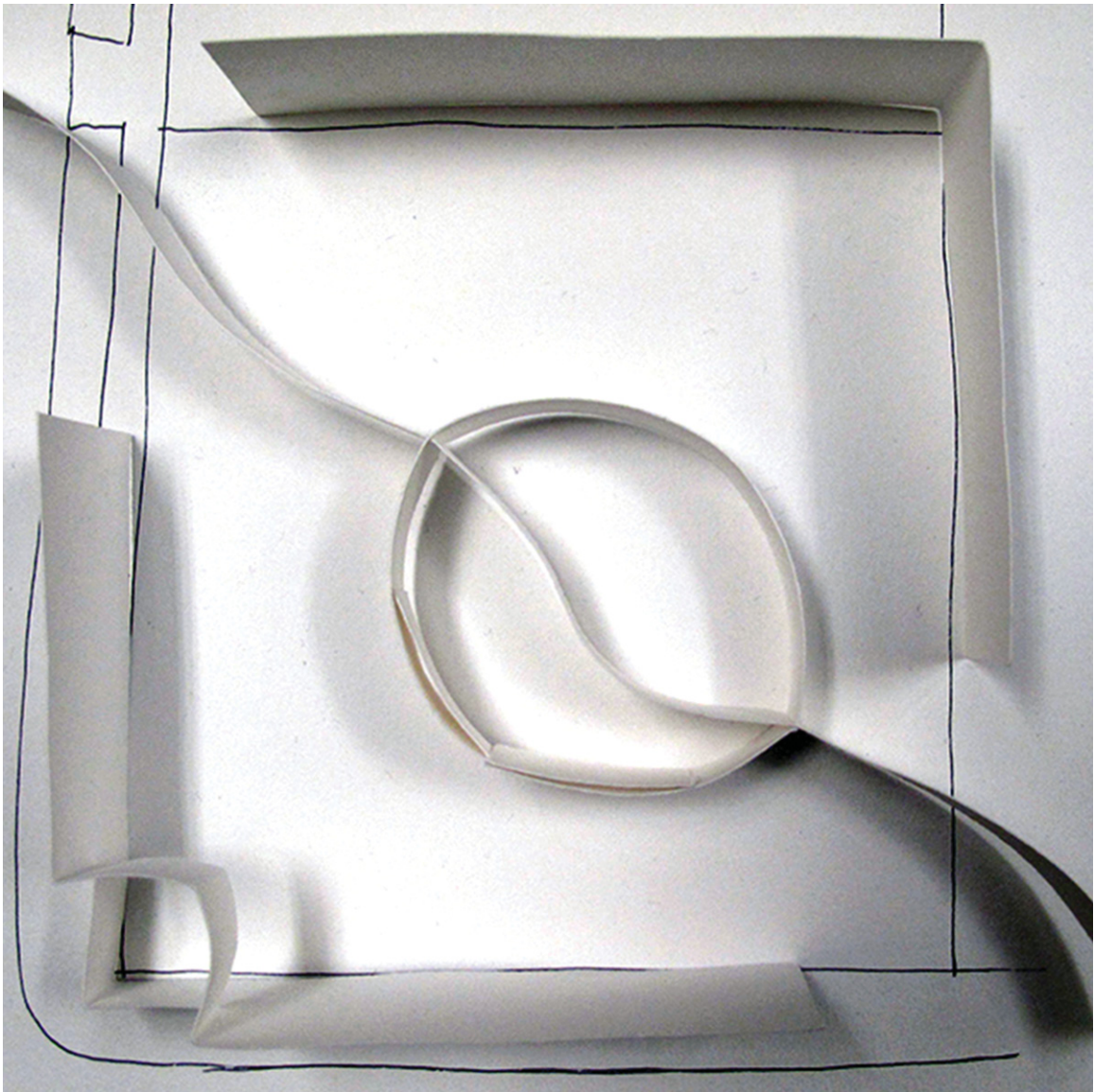
Sketch Models and Studies



Sketch diagram model exploring secret hiding places, opportunities, a playful use of scales between adults and children and indoor outdoor thresholds

On a conceptual basis, the facade of the building is seen as a wooden box, which is a response to a formal perception of exterior. It also addresses the vernacular language and speaks to the house and building typology of Halifax as relates to its surroundings.

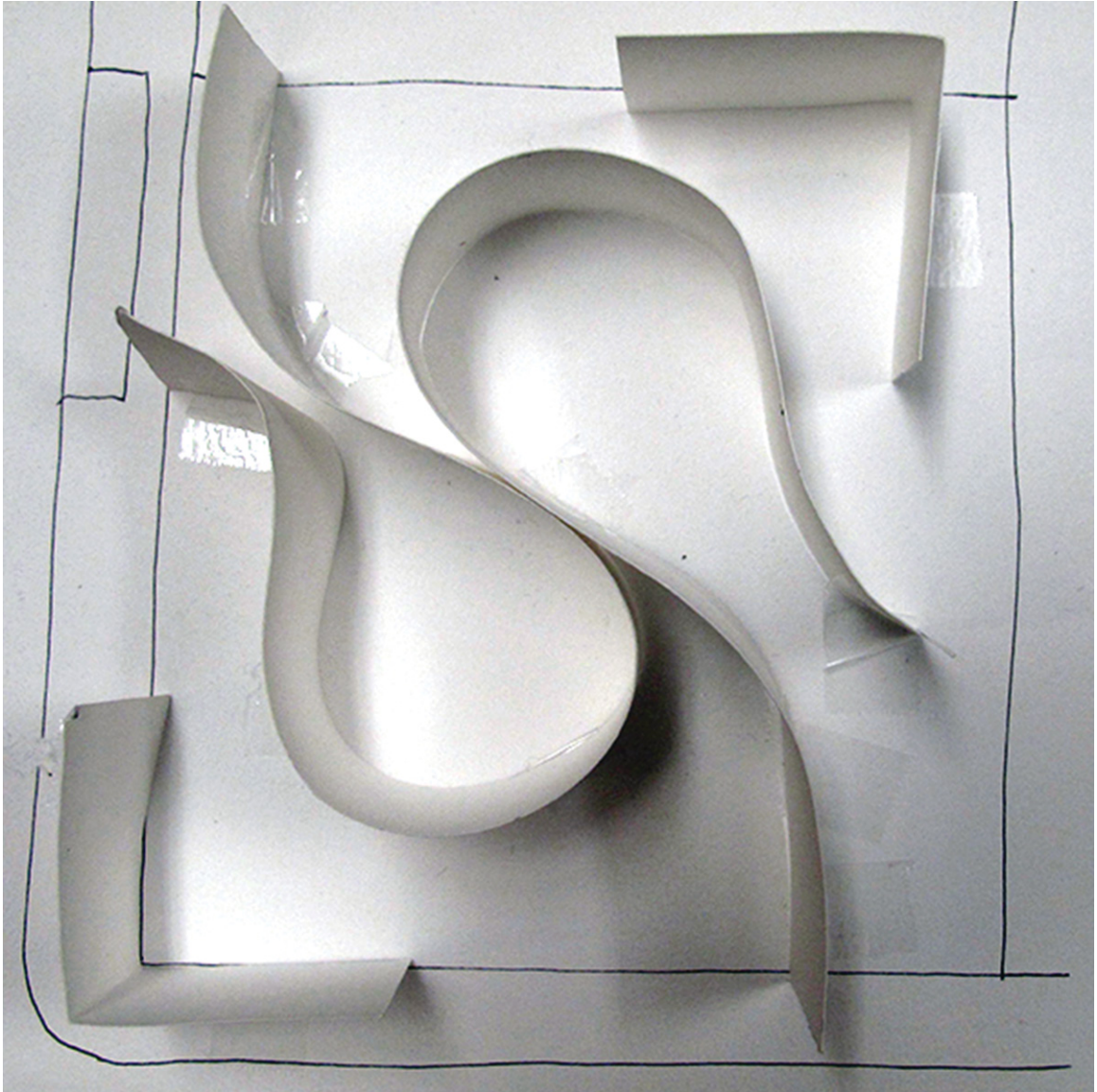
The interior on the other hand is carved out of the box. It is a free flowing movement of circulation through spaces. A playful interior is conceived as a response to the notion of the formal exterior as a perception, which in turn more accurately relates to the free spirit and movement of children. This becomes the starting point for more detailed designs to follow.



Sketch model 1. Intersection / Path



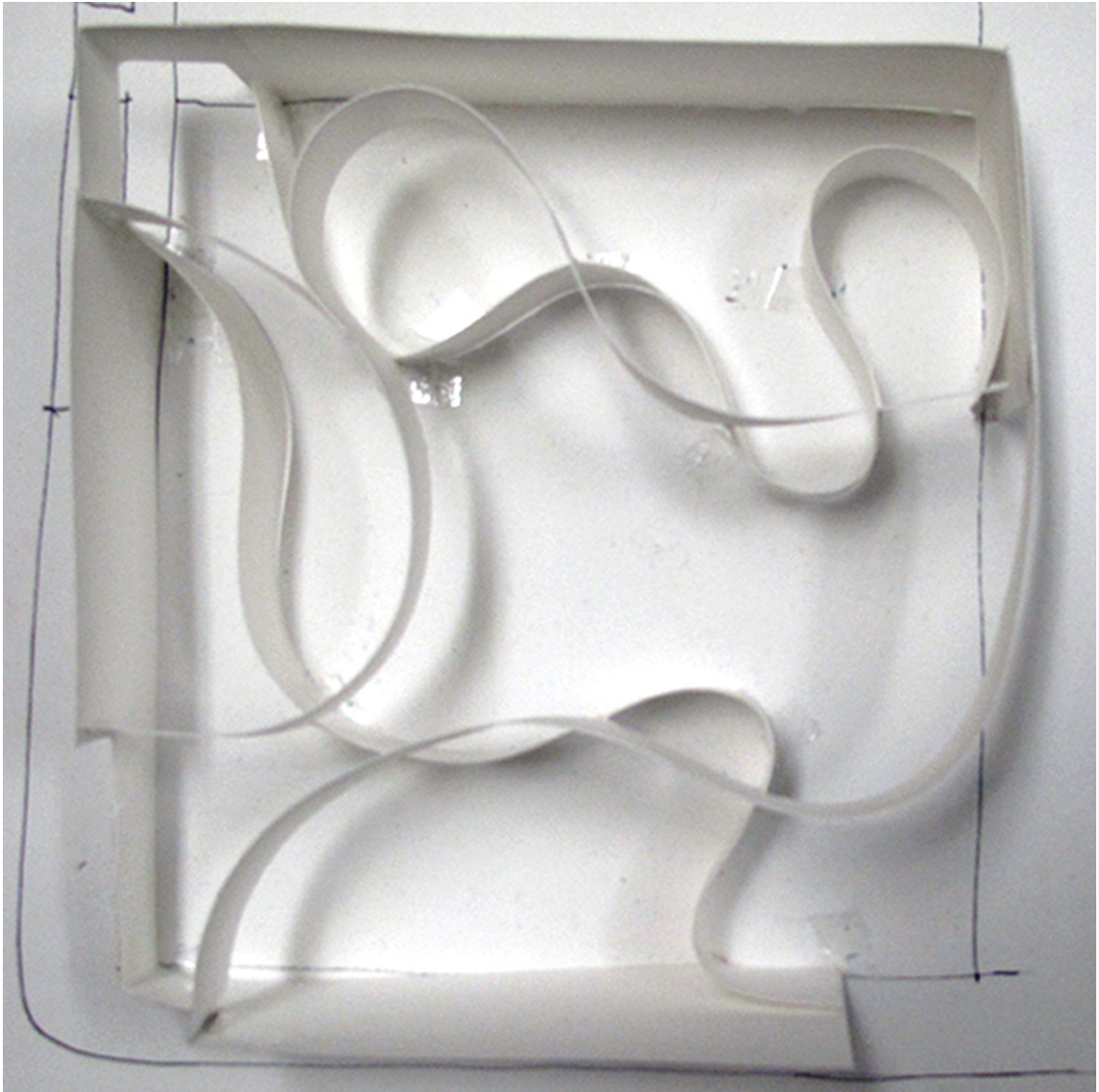
Sketch Model 2. Path, openings, program vs. free space



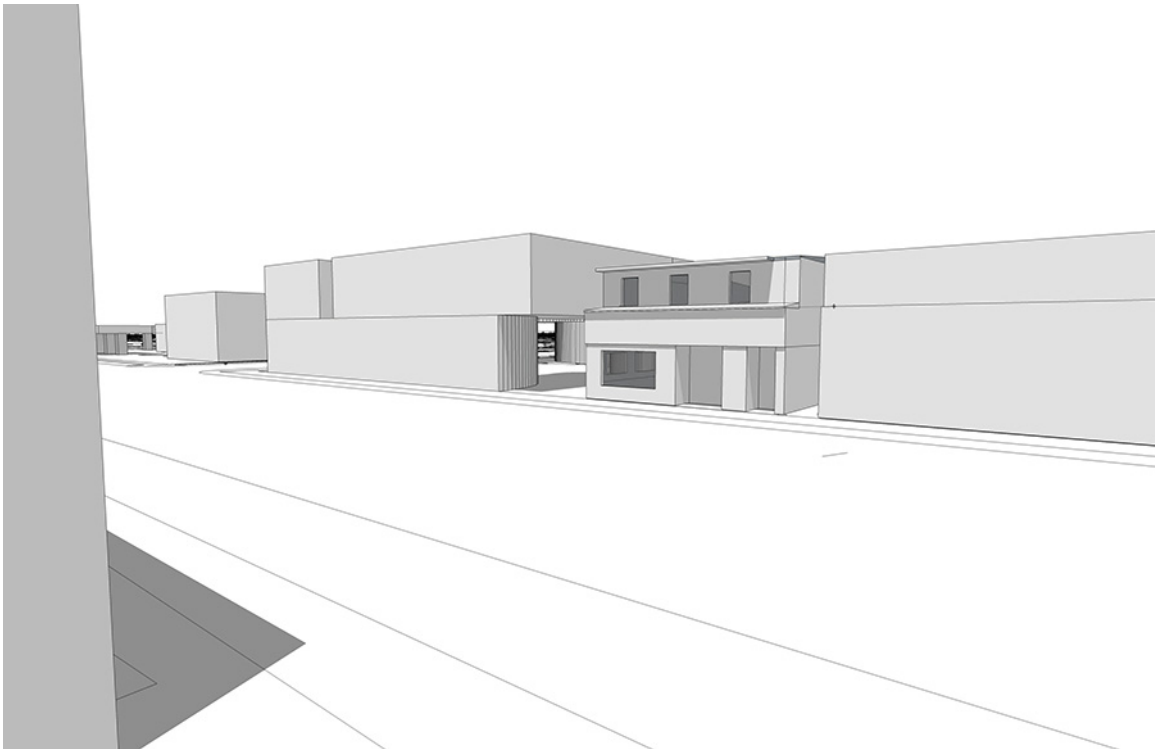
Sketch Model 3.



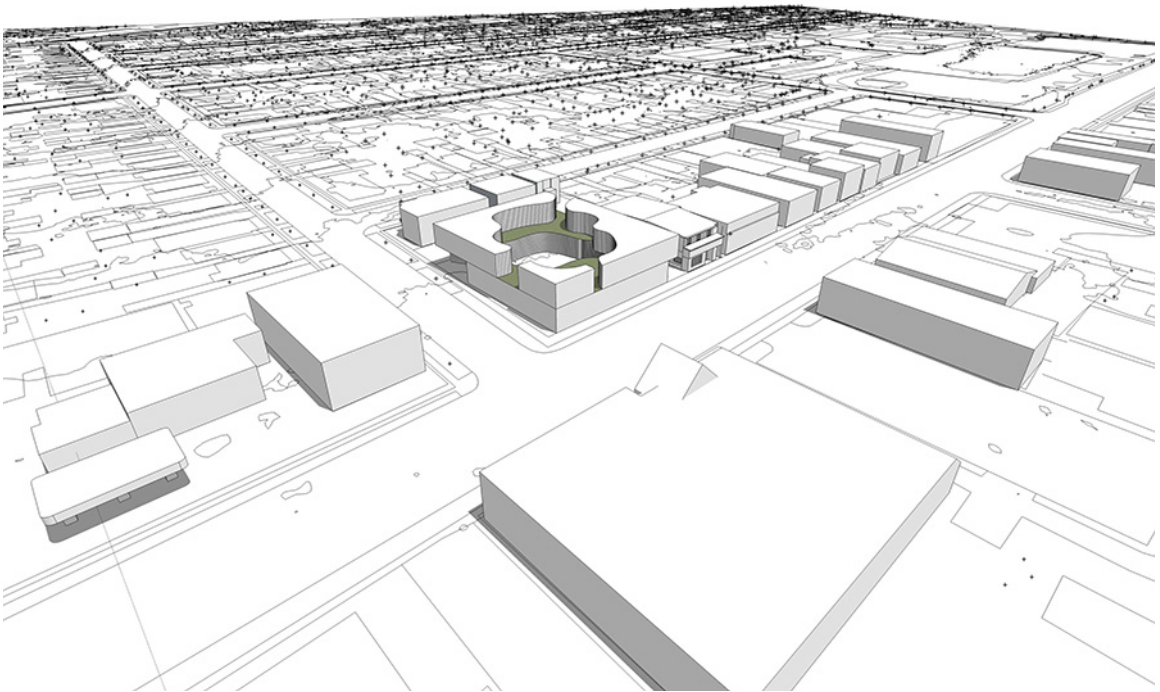
Sketch Model 4.



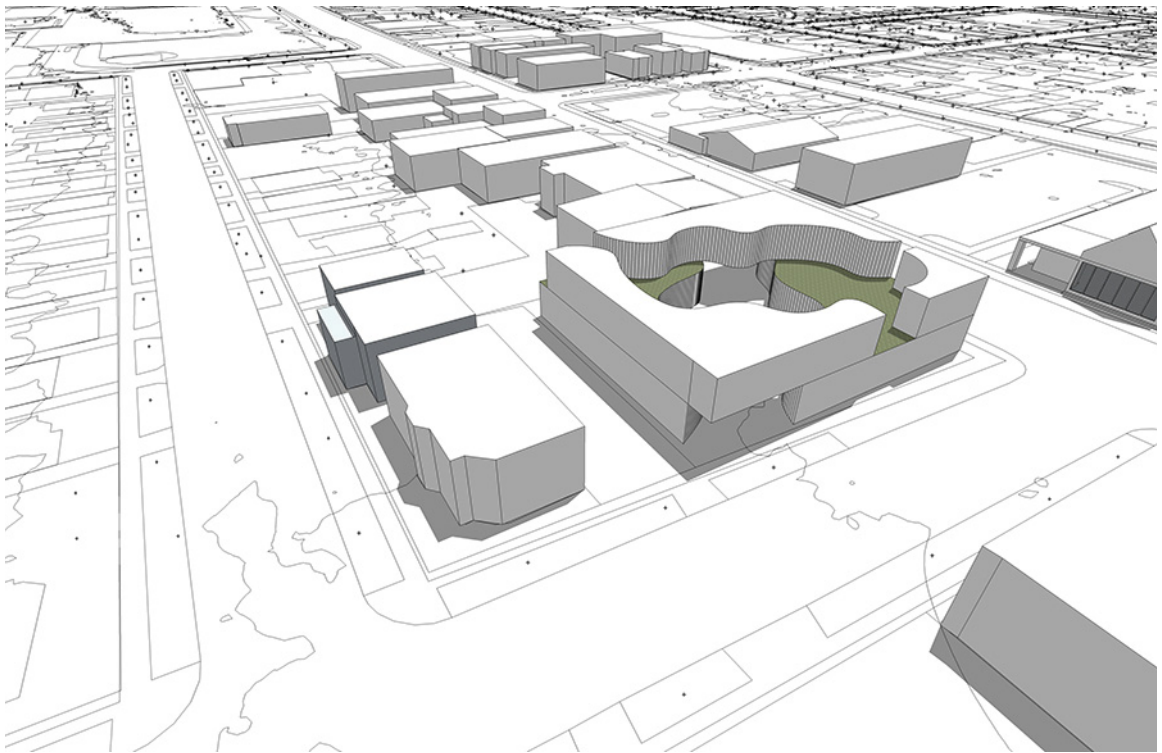
Sketch Model 5. Double height spaces with formal front and informal flowing interior.



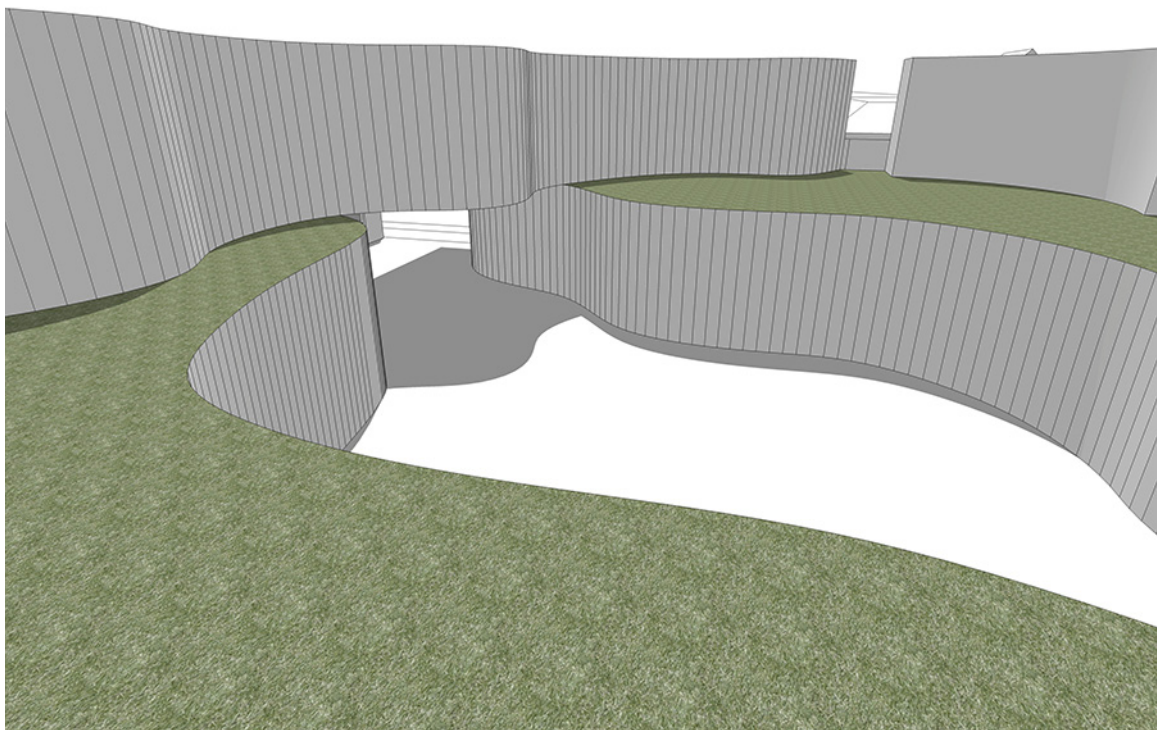
Massing study 1.



Massing study 2.



Massing study 3.



Massing study 4.



Site positioning and access photomontage study.

Orthographics

Site Plan and 1:400 Elevations



1 :400 site plan as it relates to the neighbourhood and elevation of Quinpool Road



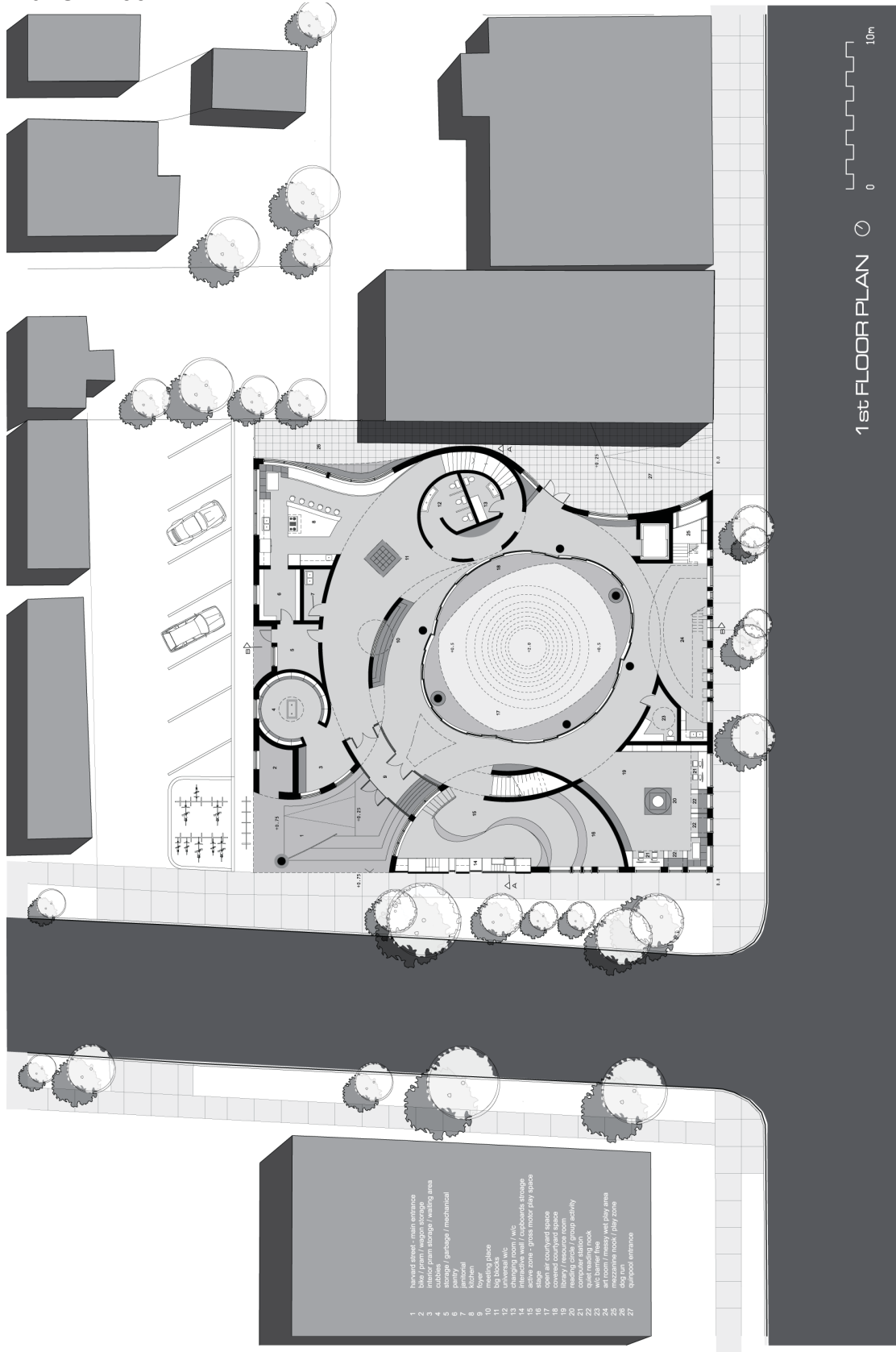
1 :400 west elevation Harvard Street.

The building has two entrances. One on Harvard Street and one on Quinpool Road, which is one of the main through fares that links Halifax CBD to many neighbourhoods, while at the same time links the whole peninsula to the countryside, the surrounding towns, villages and other municipalities. The Quinpool entrance addresses the city; people come and go, it is the “civic” address of the building and is related to formal city affairs. The intention is for the building to make a statement; it acts as a hub and marks its prominence on the streetscape by contributing to it rather than detracting from it. The main pedestrian entrance, however, is on Harvard Street, a slower residential street; it speaks to the residential block, street, and to the neighbourhood. This side of the building is accessible by foot, bike, strollers. Cars and vehicles are able to stop for drop offs and pickups. There is a car park to the back side for services and deliveries.

The centre of the building features an open air courtyard, at the centre of which, there lies a grassy mound. Free space circulation flows in and out and in between this courtyard. The courtyard is surrounded by curved glass sliding windows which can be opened or closed to suit the weather or the activity that is ongoing at the time. There is an intentional transparency between the interior and exterior spaces, and as such the threshold between indoors and outdoors is blurred. The curved walls on the inside are glazed and demand an inward focus to the courtyard. Children weave their way through the open circulation from floor to floor with breakout spaces and specific programmed core rooms.

The programmed rooms are flanked by the exterior walls. Windows are dotted in a playful manner and are linked to various heights of children and adults. Some are accessible to one but not to others. Each provides a different vantage point for the user. Window sills become nooks for resting and contemplations or for quiet play. To people passing by, moments are made possible; the windows offer glimpses into the interior of the building providing hints as to the on goings of the play centre.

Plans 1:100

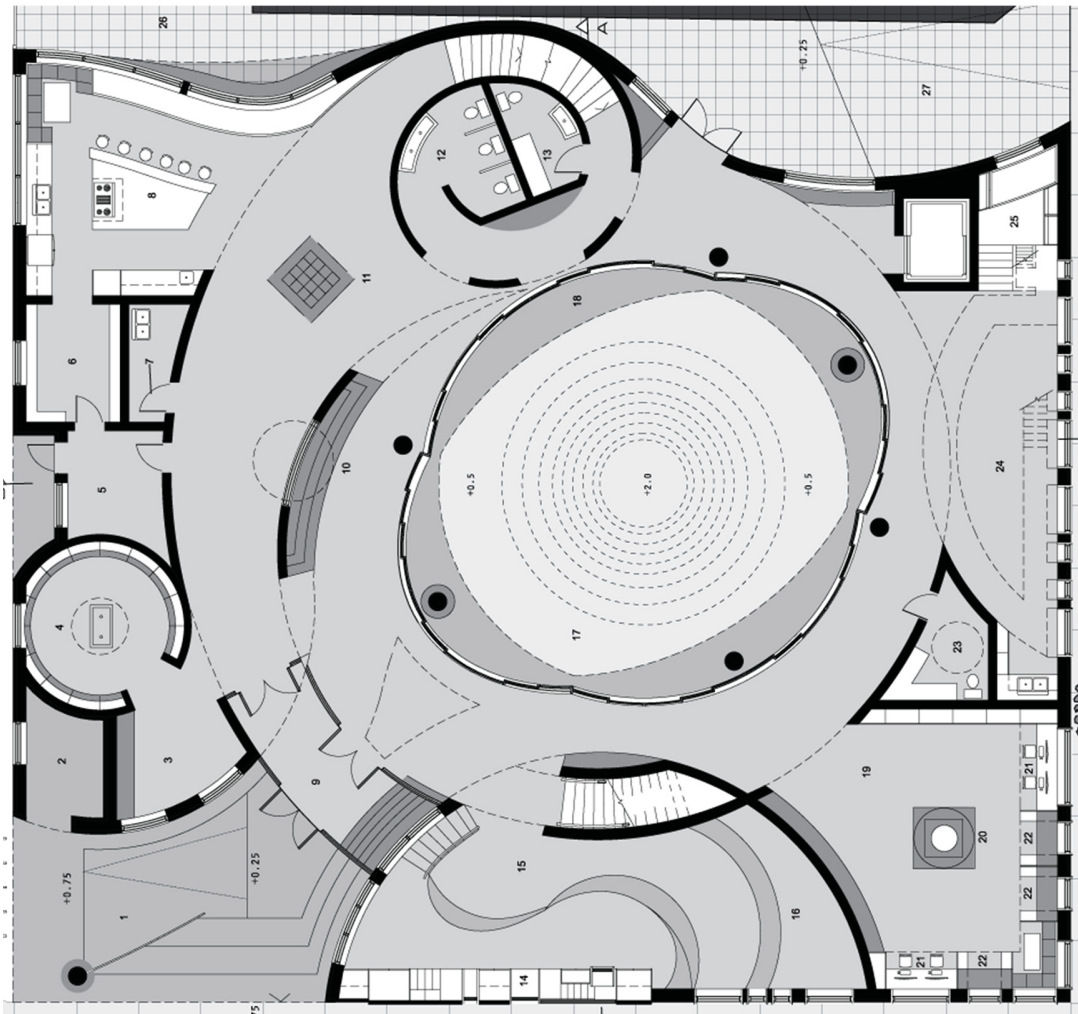


- 1 Harvard street - main entrance
- 2 Interior from mezzanine storage
- 3 cubbies
- 4 lounge / waiting area
- 5 parking / garbage / mechanical
- 6 janitorial
- 7 men
- 8 women
- 9 foyer
- 10 meeting place
- 11 universal wc
- 12 universal wc
- 13 Changing room / w/c
- 14 active zone - sports
- 15 active zone - sports
- 16 active zone - sports
- 17 stage area courtyard space
- 18 covered courtyard space
- 19 storage / restrooms
- 20 storage / restrooms
- 21 computer station
- 22 w/c
- 23 w/c
- 24 rest room / messy wet play area
- 25 rest room / messy wet play area
- 26 rest room / messy wet play area
- 27 quinpool entrance

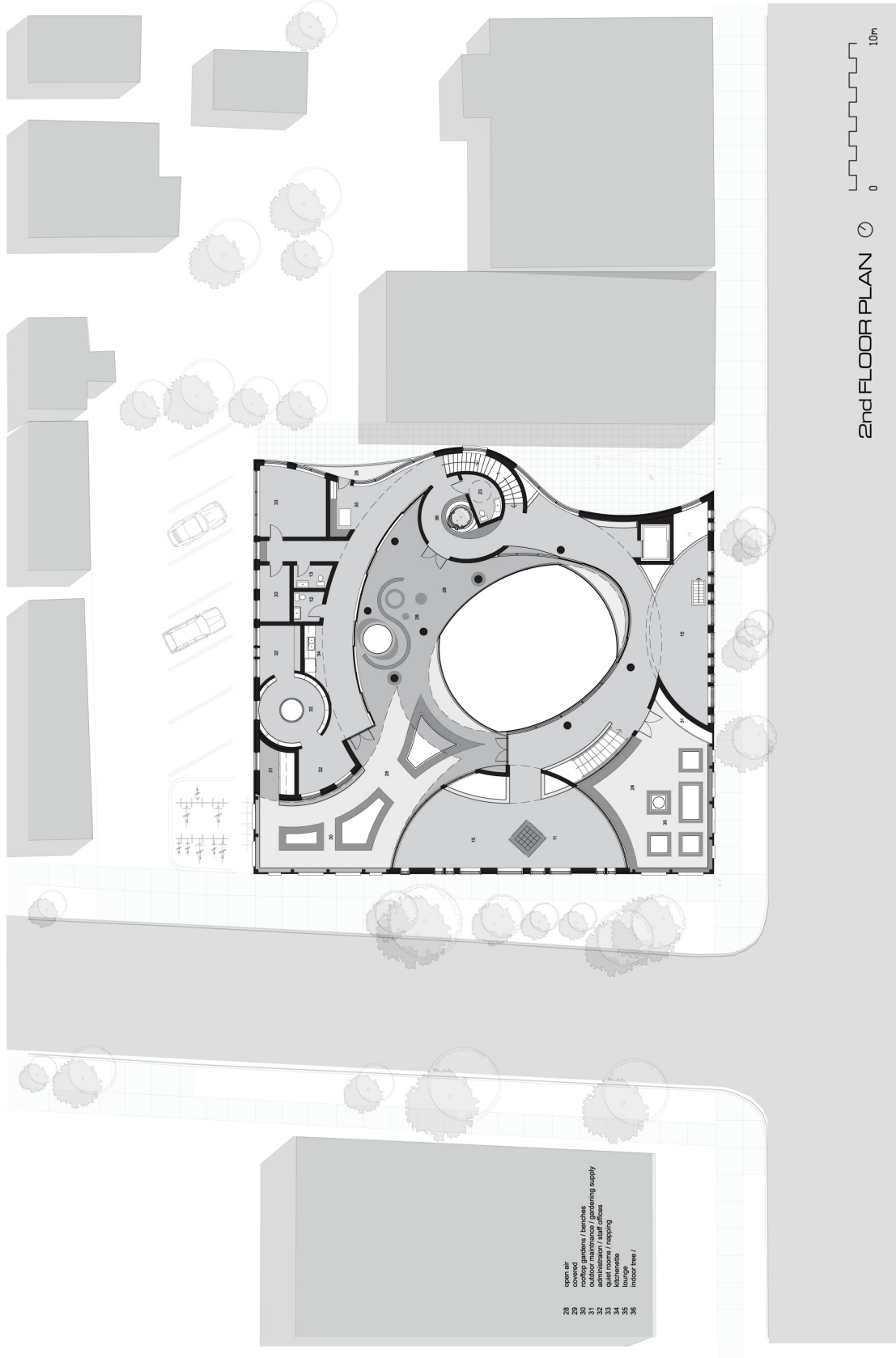
1st FLOOR PLAN 0 10m

1:100 first floor plan.

- 1 Harvard street - main entrance
- 2 bike / pram / wagon storage
- 3 interior pram storage / waiting area
- 4 cubbies
- 5 storage / garbage / mechanical
- 6 pantry
- 7 janitorial
- 8 kitchen
- 9 foyer
- 10 meeting place
- 11 big blocks
- 12 universal w/c
- 13 changing room / w/c
- 14 interactive wall / cupboards storage
- 15 active zone - gross motor play space
- 16 stage
- 17 open air courtyard space
- 18 covered courtyard space
- 19 library / resource room
- 20 reading circle / group activity
- 21 computer station
- 22 quiet reading nook
- 23 w/c barrier free
- 24 art room / messy wet play area
- 25 mezzanine nook / play zone
- 26 dog run
- 27 Quinpool entrance

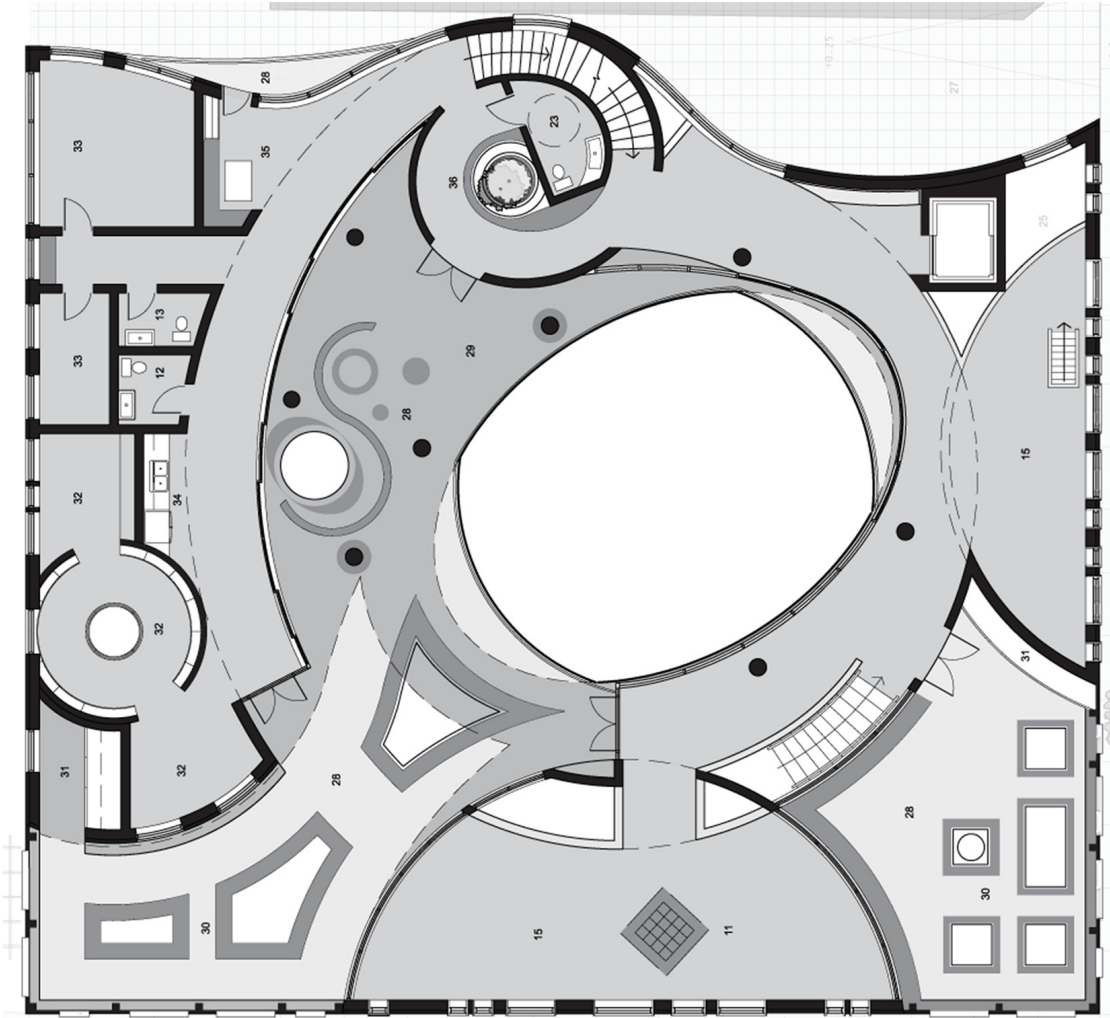


First floor plan (enlarged)

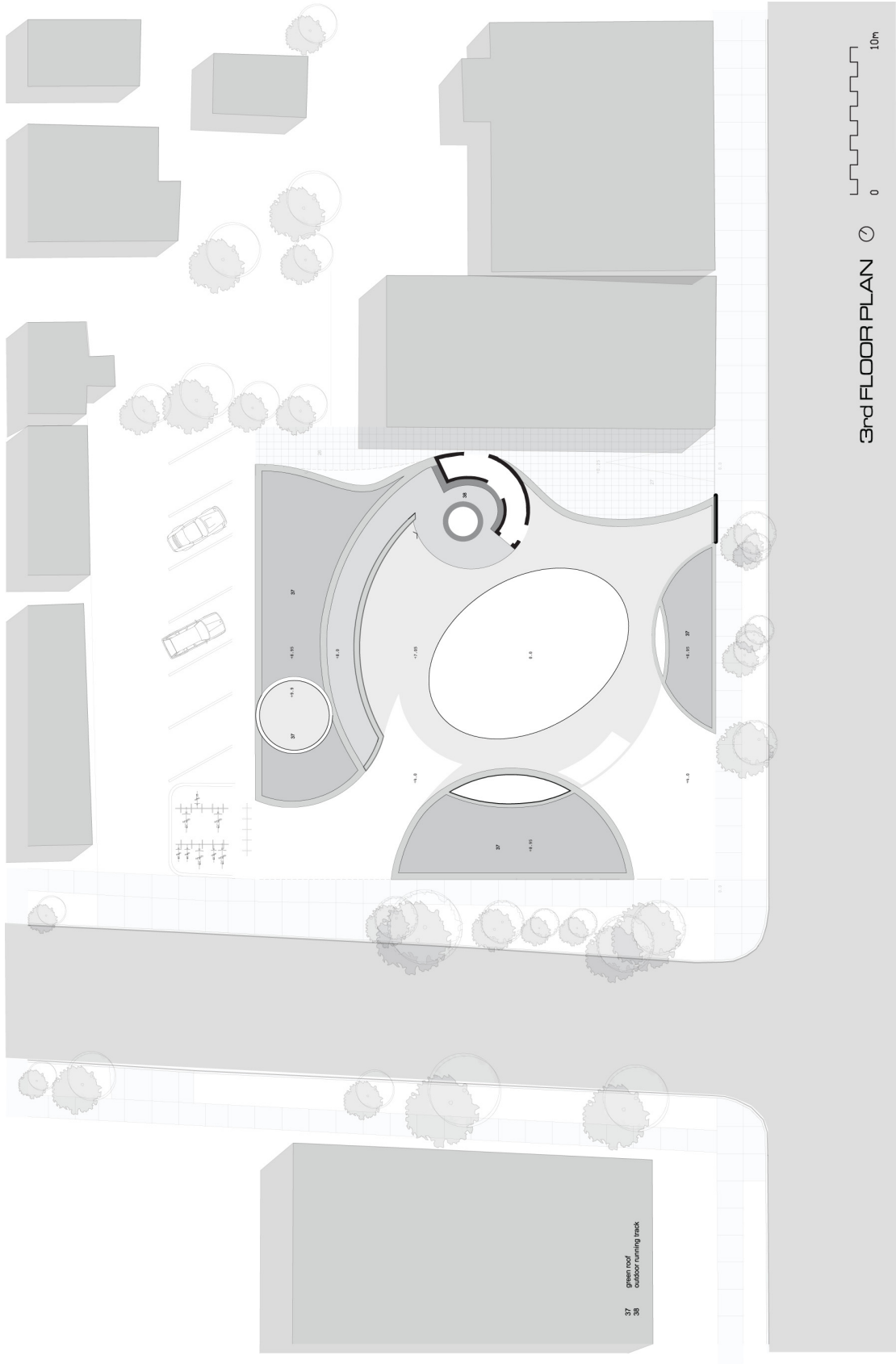


1:100 second floor plan.

- 28 open air
- 29 covered
- 30 rooftop gardens / benches
- 31 outdoor maintenance / gardening supply
- 32 administration / staff offices
- 33 quiet rooms / napping
- 34 kitchenette
- 35 lounge
- 36 indoor tree /

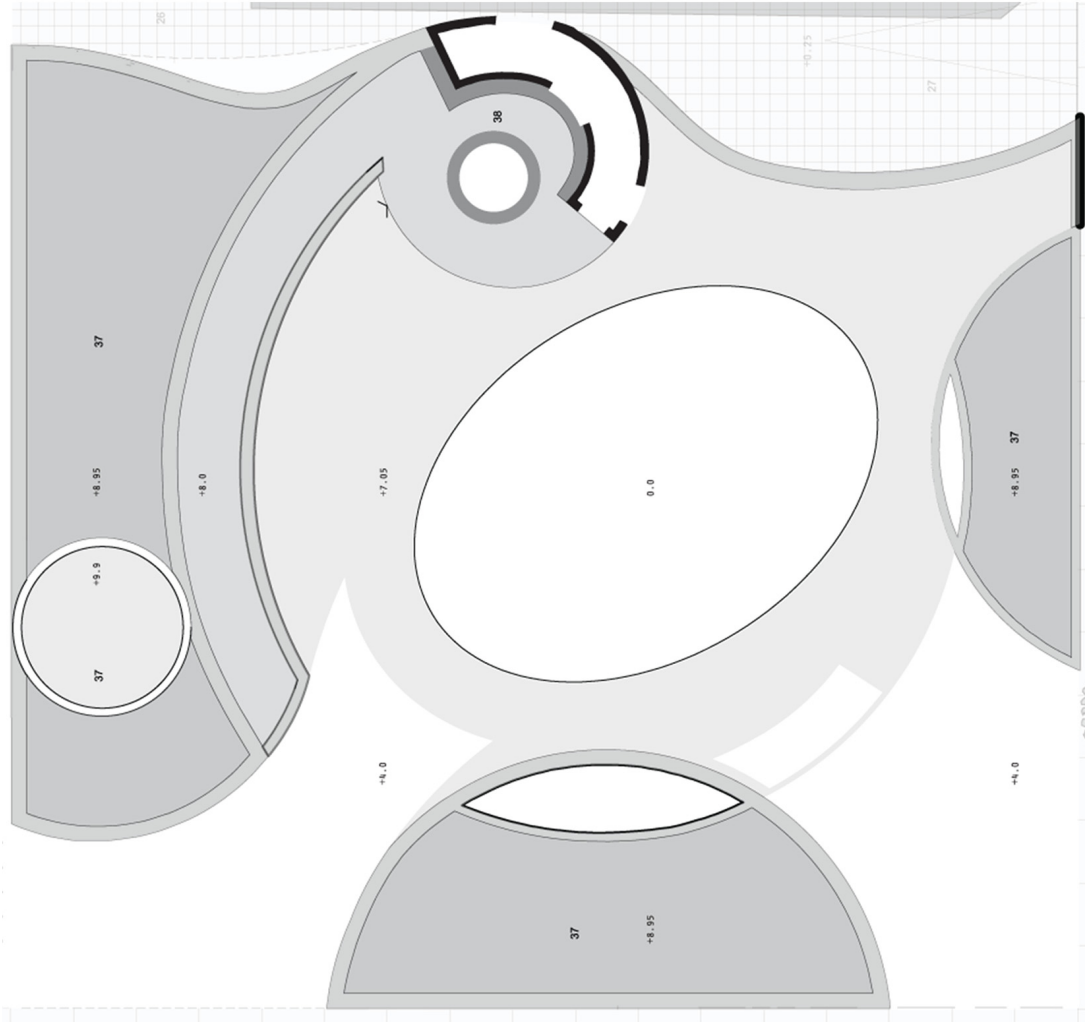


Second floor plan (enlarged)



1:100 roof plan.

37 green roof
38 outdoor running track



Roof plan (enlarged).

Elevations 1:100

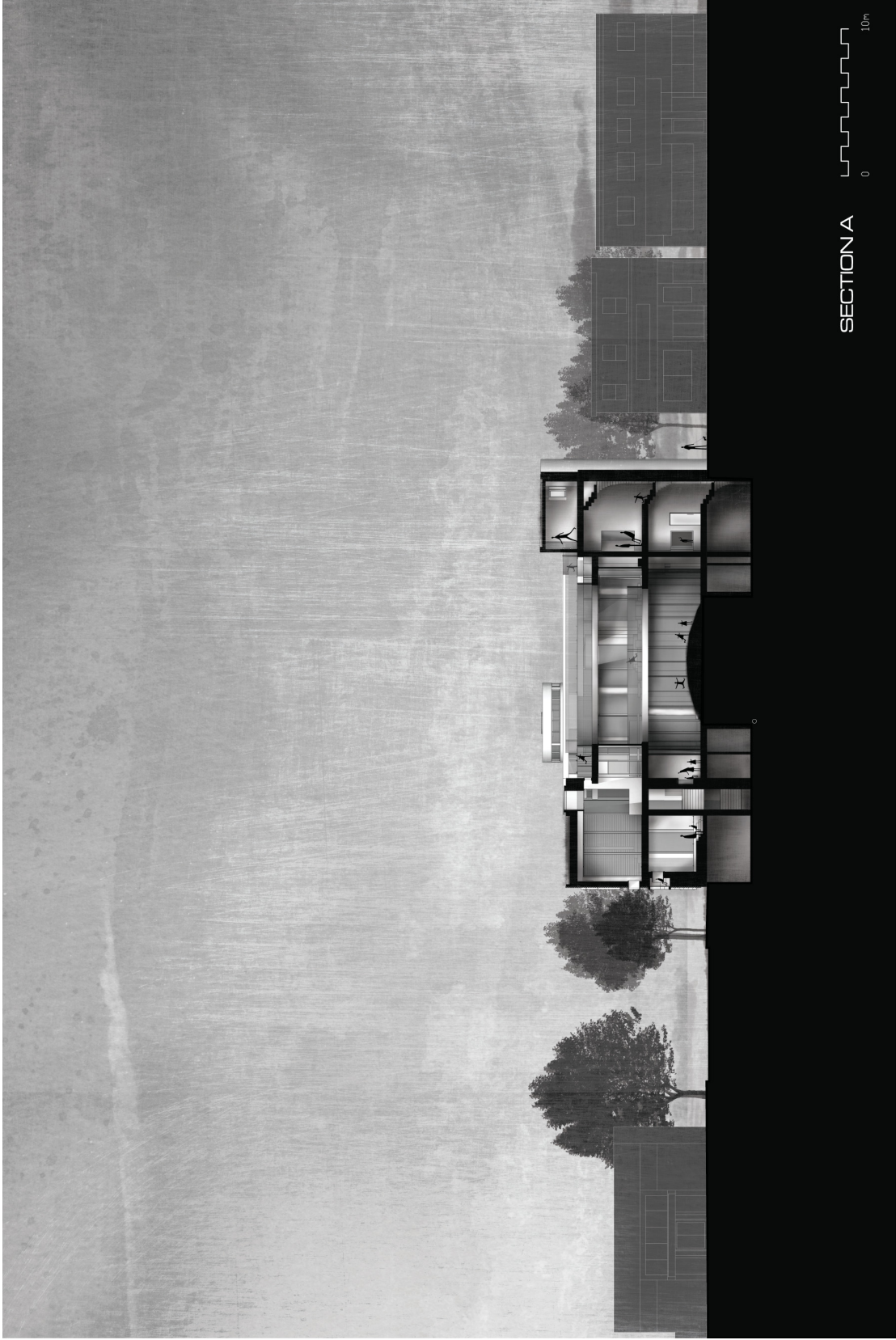


1 :100 South elevation Quinpool Road.

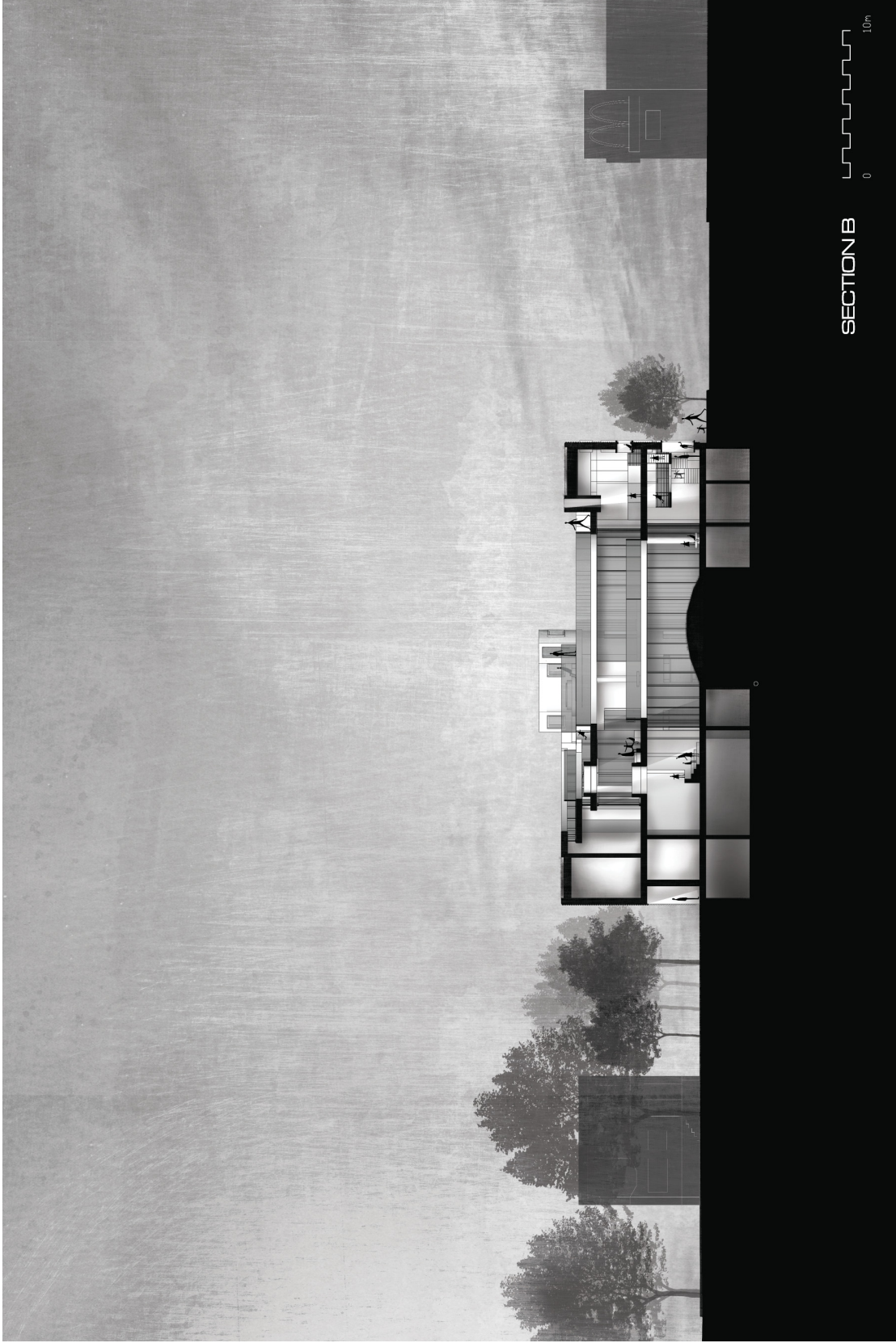


1:100 West elevation Harvard Street.

Sections

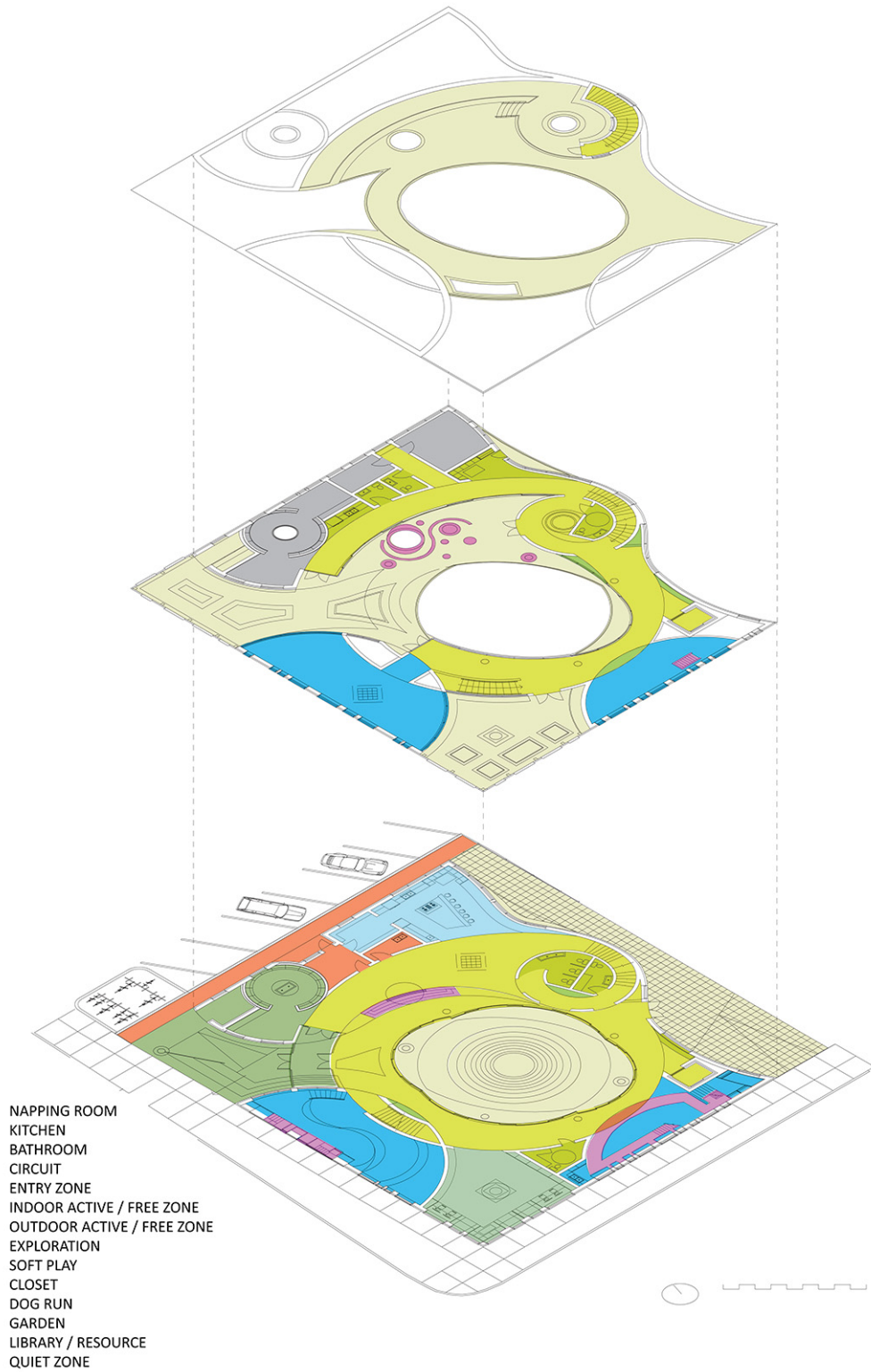


1:100 West elevation Harvard Street.

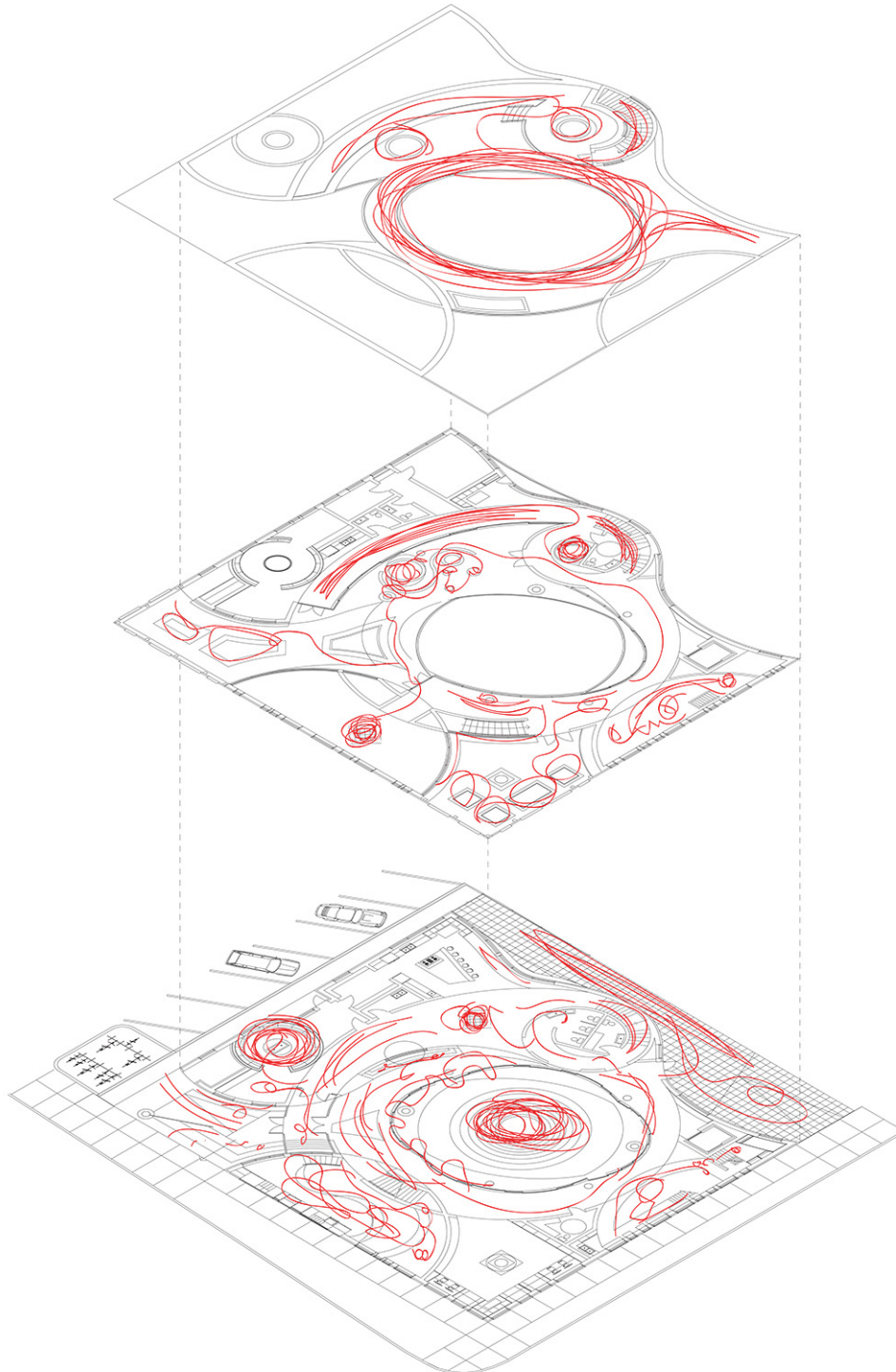


1:100 West elevation Harvard Street.

Program and Events Based Zones



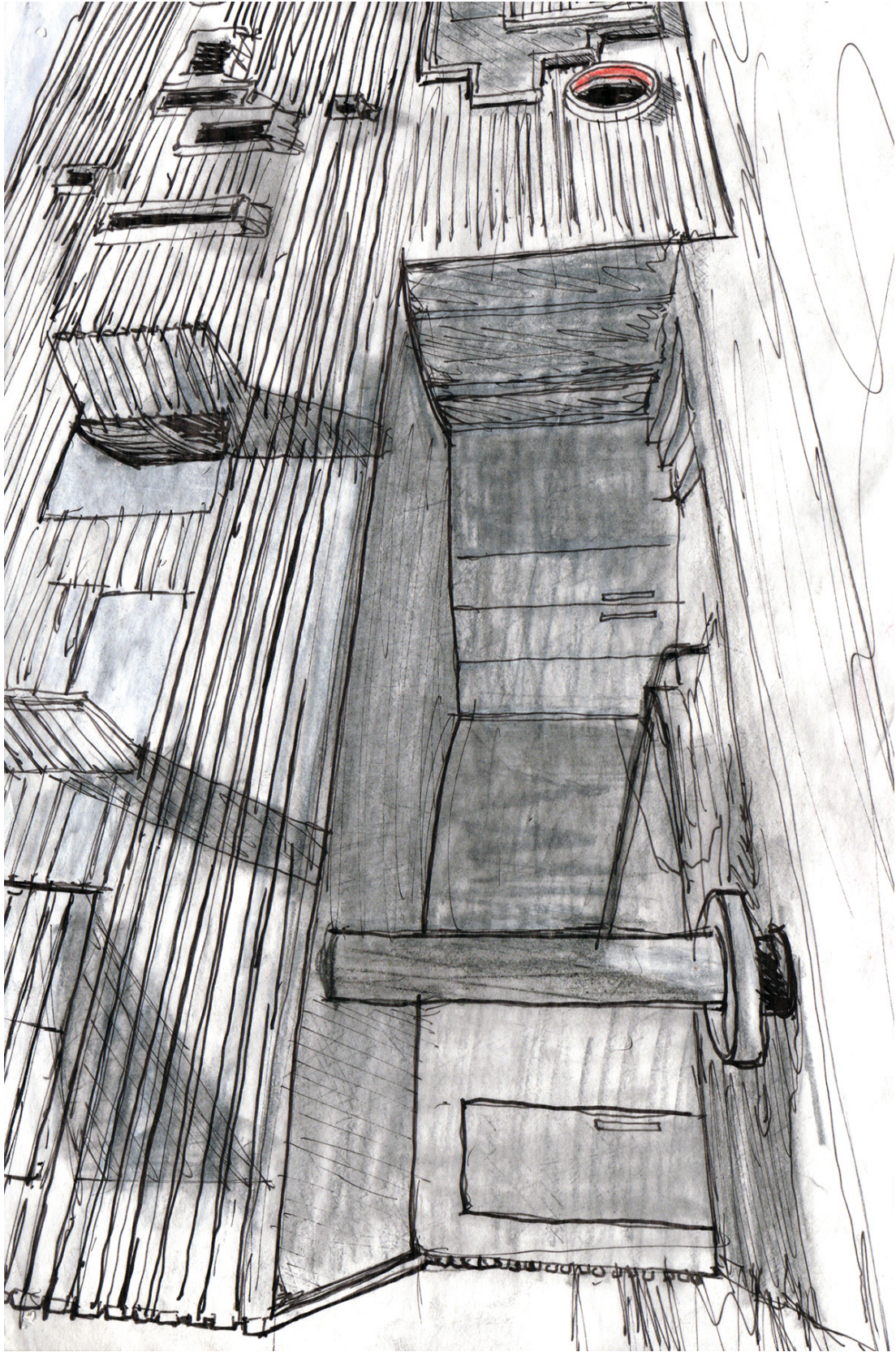
Program diagram of early years play space.



"DIFFERENT PLAY SPACES INFLUENCE DIFFERENT PATTERNS OF MOVEMENT
IN CHILDREN" - MARK DUDEK

Diagram suggesting how architecture can influence patterns of play. Inspired by Mark Dudek 's diagrams in Schools and Kindergartens, pg 43.

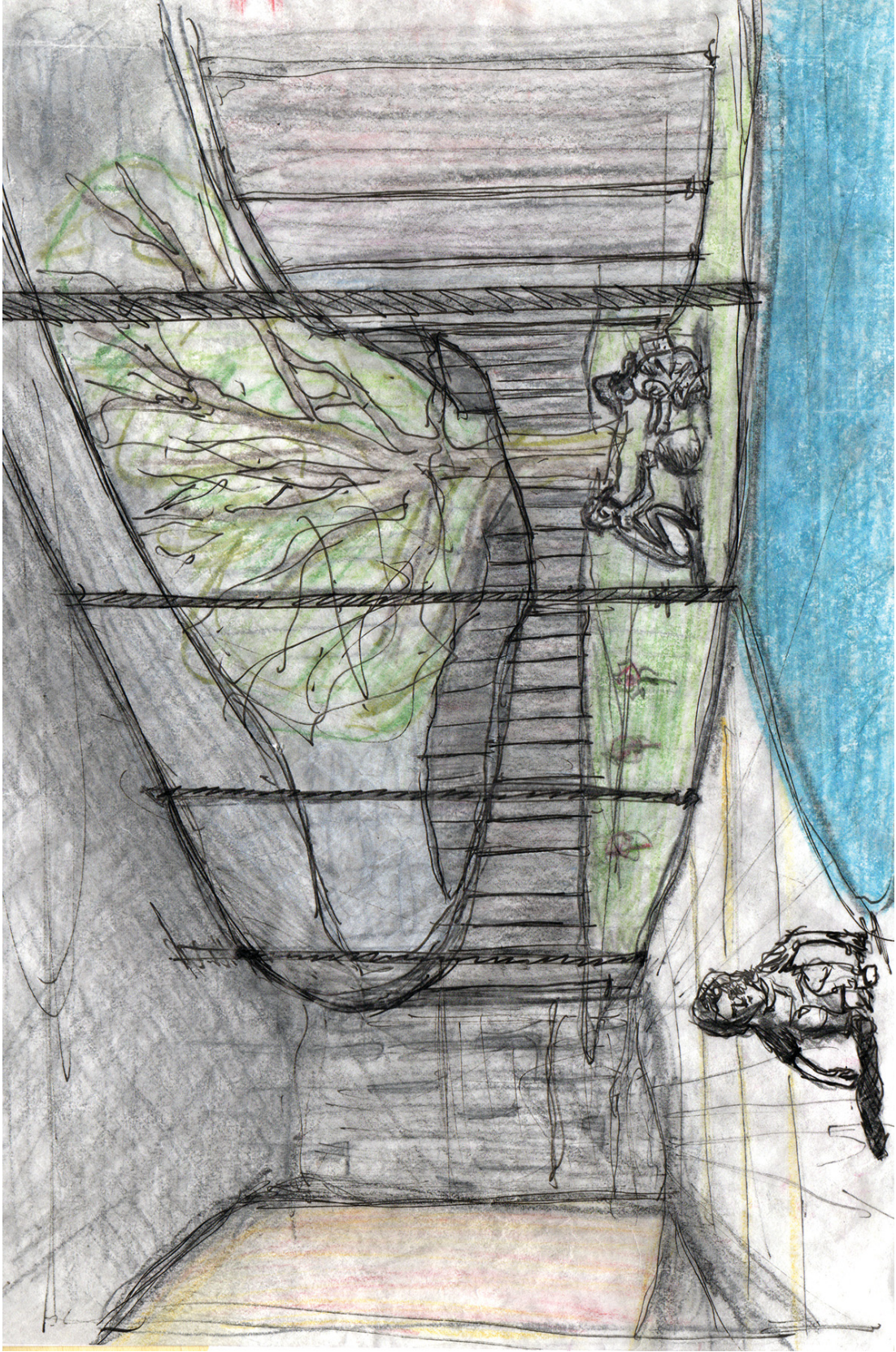
Sketch Studies



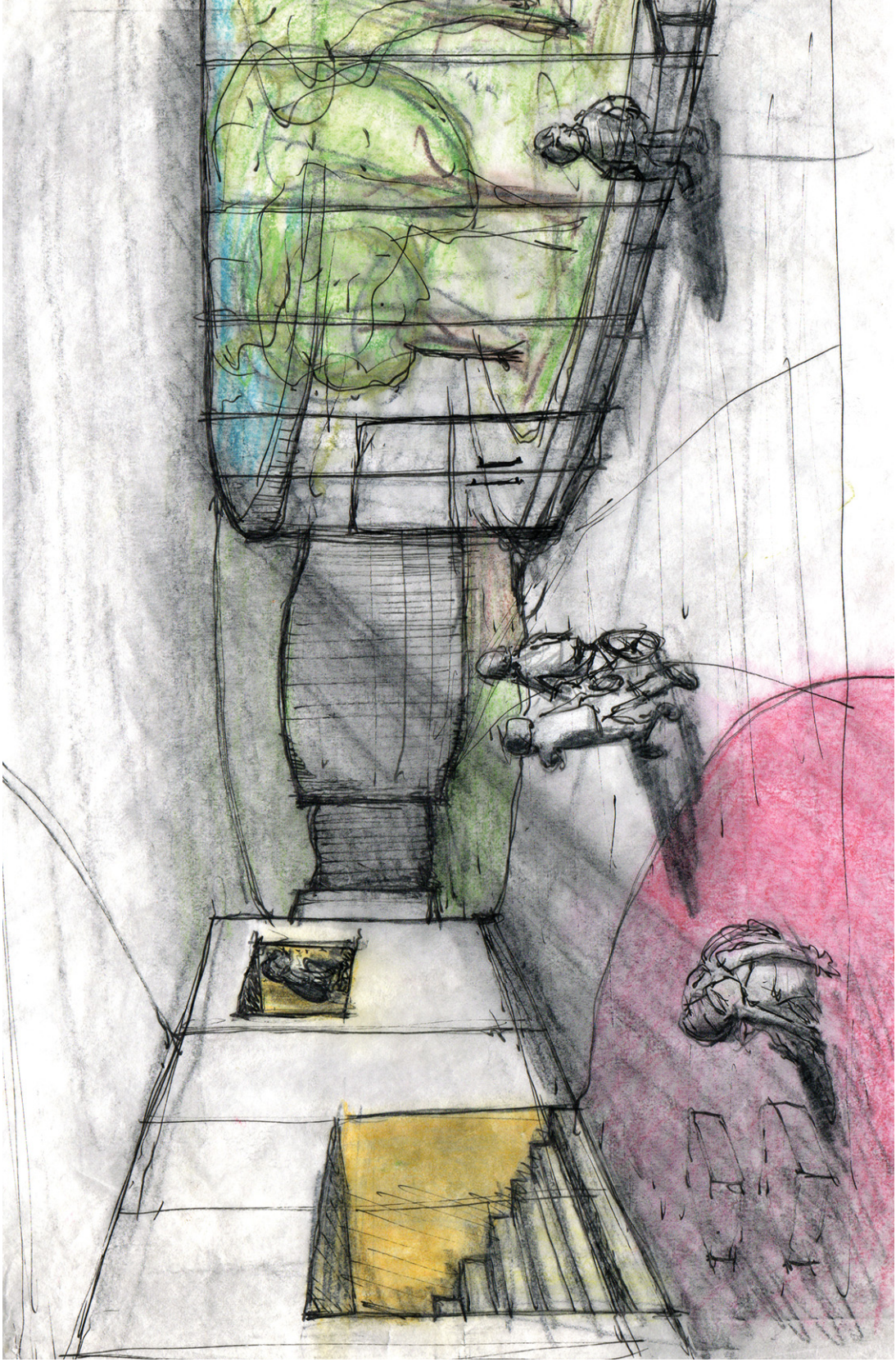
Entry cut of building facade exposing the curved interior and courtyard beyond.



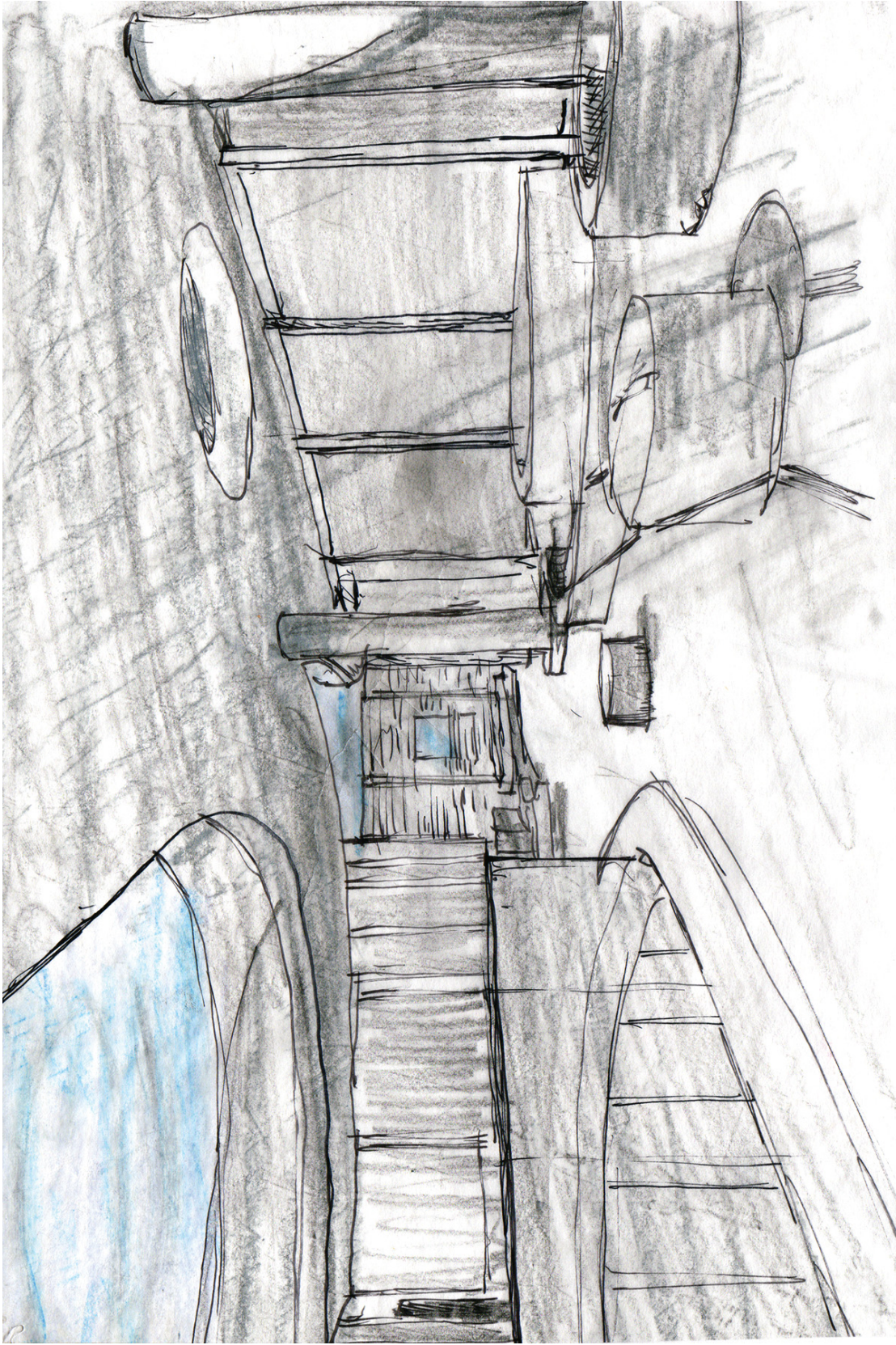
Interior Free space circulation around ground floor courtyard highlighting re-configurable sliding curved window sections that blur the threshold between indoor and outdoor



Circulation circuit showing indoor and outdoor play activities that happen throughout the free plan of the building.

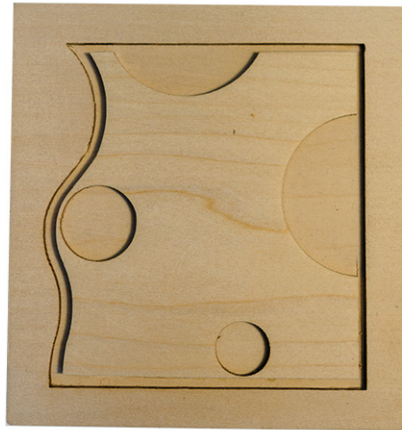


Interior free space circulation around ground floor courtyard highlighting secret hiding places and breakout zones for special activities.

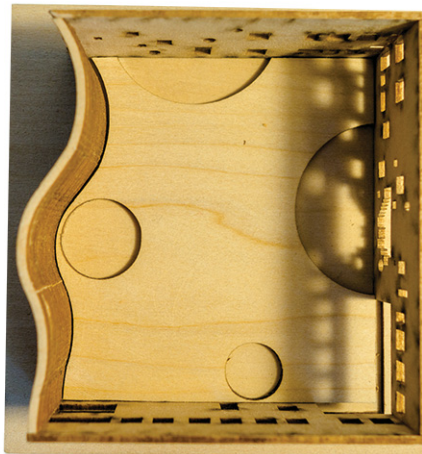


Exterior covered play space with benches and agility track in the foreground overlooking one of the garden areas in the distance.

Model 1:400



Building footprint.



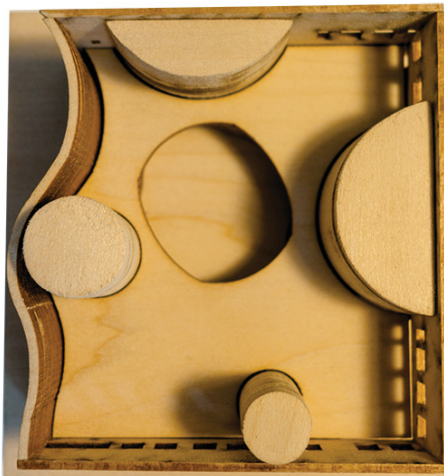
Building facade / skin.



Programmed cores.



First floor free circulation.



Second floor plate.



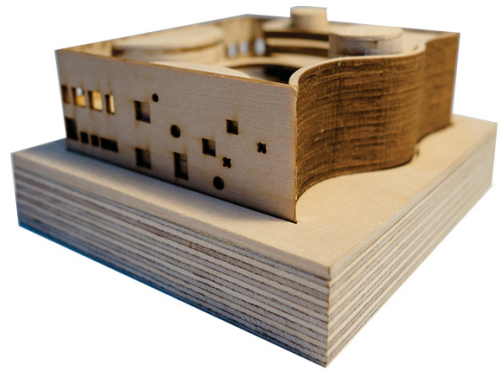
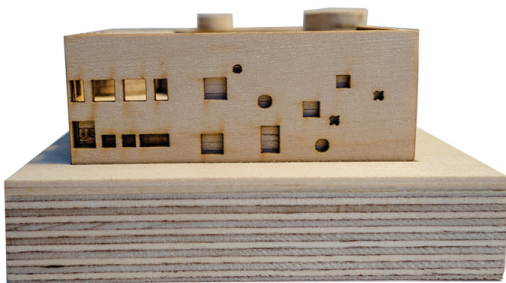
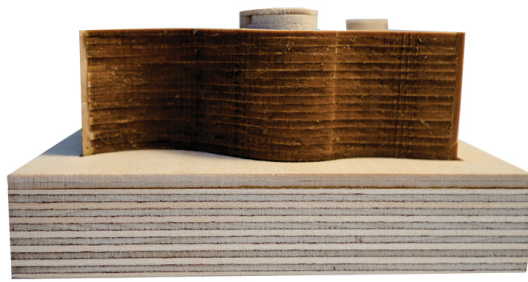
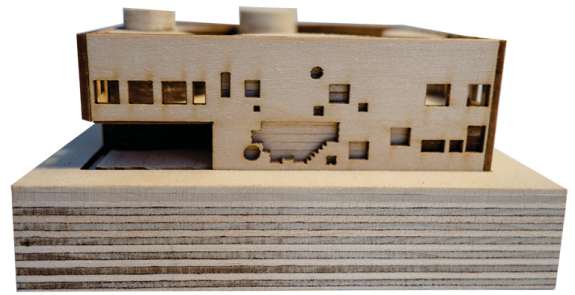
Second floor enclosed circulation.



Roof / third floor plate



Roof enclosed spaces.



Exterior view of building.

Interactive Wall Model 1:50

One of the special features within the building is an interactive inhabitable wall. Within the playroom the exterior walls are thickened from the usual 0.4 metres to 2 metres. This provides opportunity for special moments where children can interact and inhabit within the wall. Cupboards for storage on one side satisfy the needs of adults while on the other side become stairs which lead to nooks and secret hiding places for children. Special moments and thresholds between the formal outside facade of the building and the informal playful interior become obvious to passersby on the street who can catch a glimpse through the window wall.



1:50 model of interactive wall feature in the performance room, exterior and interior view.



1:50 model of interactive wall feature in the performance room, exterior and interior view with shifted angle to show the depth of the wall section.

Perspectives

The main entrance becomes quite important. For a play centre this zone is critical. It becomes stepped and transitions between exterior and interior portions of the building. As people come and go at irregular intervals it becomes a hot spot for activity. There are places to linger, to wait, to hang out, to play, to meet and explore. There are also functional features linked as well. There is an exterior accessible room for stroller, bike, scooter, and other storage. This leads into a ramp with stepped seating and ledges. These follow through the foyer threshold to the main reception area which is linked to an interior stroller room intended for those who have napping babies that need to be looked after. Beyond is the circular children's cubbies room which is all about clothing storage, where children get dressed and hang up their belongings. There is a sink in the middle where they can wash up upon entry or exit. Ample space was afforded to the main entry of the building in order to accommodate the comings and goings of entry. This very thing is one of the carry overs that transfers from the house scale, where insufficient space for entry is remedied.



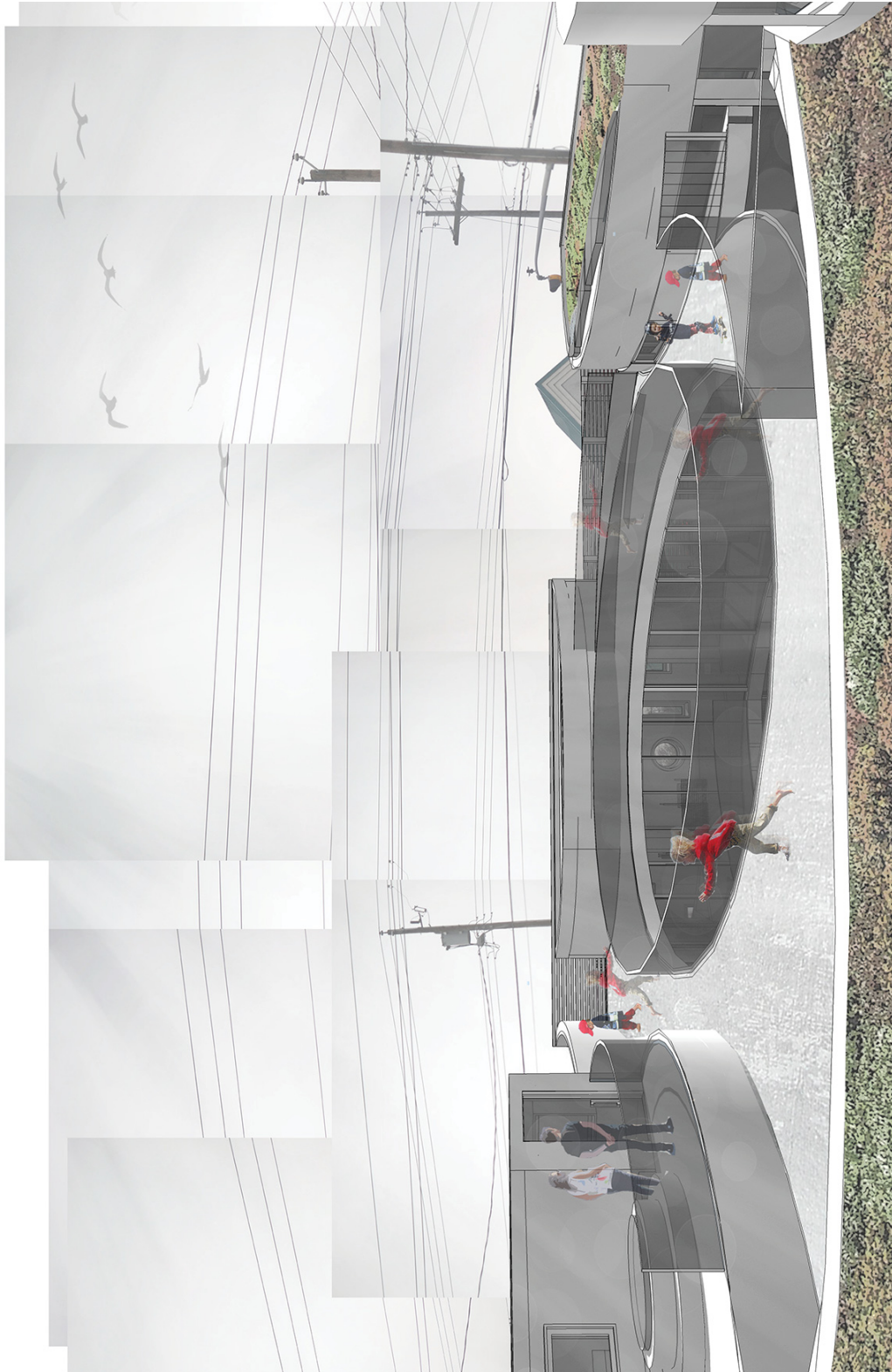
Exterior covered entrance.

Free circulation weaves in and out of the open courtyard through various programmed spaces and breakout zones with adaptable activities. The art room features a nook that leads into a mezzanine type circuit; a children's only zone, which becomes a 1/2 story between first and second floors as an alternate route through the building.



Section cut through Quipool Road to courtyard highlighting the potential of different spaces and transitions throughout the building.

The third floor opens up to a multi-levelled rooftop courtyard with a green roof. It features a running track that flanks the entire circumference of the courtyard in the centre which is open to below.



Rooftop courtyard running track, green roofs and middle open courtyard space with connections to floors below.

CHAPTER 3: CONCLUSION

Architecture can play a pivotal role in defining and reinforcing designs specific for children. In this case, reinforcing the need for play centres in Halifax and beyond. The prototype introduces a model to follow; one that builds into the design, the true needs and interests of children but also takes into account adult priorities. The play centre format as it exists deserves to be looked at from an architectural lens, and in doing so, uncovers the need and potential for these places to positively impact the lives of all who stand to benefit.

After establishing the need for such facilities in Halifax, the proposal looked at the house scale as an incubator and testing ground for the ingredients of good design; outlining a few of the elements and features that should be included in early years play centres. The house serves as an interesting test; it is a familiar format that lays out both constraints and opportunities as a basis for design decisions when considering the programmatic requirements of said facilities. It is a sequential jump from the church basement or a spare room in a rundown school. Houses are familiar to children and contain many elements that complement the play centre format and require very little intervention, but these things scale up very well when informing design decisions in a bigger building format. At the same time there are many opportunities to introduce more fantastical and special architectural interventions that can better facilitate a more natural unfolding, or happening within the house as a play centre. As an alternative to daycares, a house converted from a home to a play centre works very well as a co-operative effort to serve the neighbourhood and small group of individuals.

Early years play centres on the larger scale can act as a focal point within the community and become a reflection of that community. In this case Halifax. A bigger building with a strong presence makes a statement, and serves more people throughout the community, city and beyond. By introducing such a facility at the larger scale an awareness follows, and with more options for people, there can only be positive spinoffs. By introducing good design into the lives of children at a young age, and by giving options to people, caregivers, and parents, who at a time of their lives, are in need of community and networks of support can only bring positive returns. This format has the potential to have a more public presence and impact the lives of many by putting an equal emphasis on the design

of the inside of the building as on the outside. The format tested on the full scale over time presents opportunities that could also inform a later house conversion at the smaller scale. While the building serves the overall communities throughout the city, the house serves the neighbourhood; houses serve several neighbourhoods. Interconnections become ever present and the establishment of the prototype roots itself in the community even more so. It almost becomes a loop with linkages between and throughout the prototype, where the house or houses as play centres exist and serve to inform the design principles and methods to be used at the larger building scale, while at the same time, the larger building serves to inform the overall impact on the community which in turn solidifies and informs the house scale centres' as they further establish themselves over time.

Architecture can respond to both the needs of children and to those of adults. The prototype reinforces networks of support for the community in Halifax. An alternative model to what currently exists is introduced, one that informs and improves options for early years educational environments at multiple scales. There is an opportunity for architecture to play a pivotal role by providing purposely designed spaces that satisfy this need.



Essence of the Play Centre Prototype. Google image of net from Hakone Open Air Museum in Japan.

BIBLIOGRAPHY

- Almon, Joan. "The Vital Role of Play in Childhood." Accessed October 21, 2014. <http://www.waldorfresearchinstitute.org/pdf/BAPlayAlmon.pdf>.
- "Average Weather For Halifax Regional Municipality, Nova Scotia, Canada." Accessed June 20, 2015. <https://weatherspark.com/averages/28270/Halifax-Regional-Municipality-Nova-Scotia-Canada>.
- "Canada's Rainiest Cities - Current Results Weather and Science Facts." Accessed June 15, 2015. <http://www.currentresults.com/Weather-Extremes/Canada/wettest-cities.php>.
- Cities and Environment Unit. 2009. "For our Kids Charette". Halifax: Cities and Environment Unit Publication.
- Dudek, Mark. *Children's Spaces*. Amsterdam: Architectural Press: Elsevier, 2005.
- "Early Childhood Education in Nova Scotia - a Story of Neglect." Early Childhood Education in Nova Scotia. Accessed November 06, 2014. <http://www.childcarecanada.org/documents/child-care-news/14/09/early-childhood-education-nova-scotia-story-neglect>.
- "Early Years Centres." Ontario Ministry of Education. Accessed November 18, 2014. <http://www.oeyc.edu.gov.on.ca>.
- "Froebel's Kindergarten Curriculum Method & Educational Philosophy." Froebel Education Kindergarten Curriculum Method. Accessed November 30, 2014. <http://www.froebel-gifts.com/method.htm>.
- Friendly, Martha, Shani Halfon, Jane Beach, and Barry Forer. "Early Childhood Education and Care in Canada 2012." Child Care Canada. Accessed November 8, 2014. http://childcarecanada.org/sites/default/files/CRRU_ECEC_2012_revised_dec2013.pdf.
- Gray, Peter. 2013. *Free to Learn: Why Unleashing the Instinct to Play Will Make Our Children Happier, More Self-reliant, and Better Students for Life*. New York, NY: Basic Books.
- Hertzberger, Herman. 2008. *Space and learning: lessons in architecture 3*. Rotterdam: 010 Publishers.
- "Het Kasteel." - DaF-architecten. Accessed November 14, 2015. <http://www.dafarchitecten.nl/nl/daf-23/publiek/Het-Kasteel.html>.
- "Its Not Just Child's Play", Dr. Deborah MacNamara, Gordon Neufeld Institute. Accessed November 15, 2014. <http://neufeldinstitute.com/blog/2010/09/its-not-just-childs-play/>

- Kinchin, Juliet, Aidan O'Connor, Tanya Harrod, and Medea Hoch. 2012. *Century of the child: growing by design, 1900-2000*. New York: Museum of Modern Art.
- Lichatz, Julianna. "The Blessing of Play How Children and Adults Benefit from Apparently Purposeless Amusements." *Renewal, a Journal of Waldorf Education*, 17 (2008).
- Liebschner, Joachim. 2002. *A child's work: freedom and play in Froebel's educational theory and practice*. Cambridge: Lutterworth Press.
- "Nova Scotia Government Site for Licensed Daycare Facilities in HRM." Accessed October 14, 2014. <https://nsbr-online-services.gov.ns.ca/DCSONline/ECDS/loadSearch-Page.action>.
- Olds Rui, Anita. 2000. *Child Care Design Guide*. New York, NY: McGraw-Hill Professional.
- Plan showing circulation. Fuji Kindergarten Japan. 2007. Digital Image. Accessed November 16, 2015. http://c1038.r38.cf3.rackcdn.com/group1/building2425/media/media_6.jpg.
- "Playcentre." Playcentre. Accessed November 03, 2015. <http://www.playcentre.org.nz/>.
- "Playcentre." Wikipedia. Accessed November 03, 2015. <https://en.wikipedia.org/wiki/Playcentre>.
- "Pre-K Spaces - Community Playthings." Accessed November 13, 2015. <http://www.communityplaythings.com/~media/Files/CPUS/Library/Training-Resources/Booklets/PreK-Spaces-for-Web.pdf>.
- Ramsey, C., Sleeper, Harold Reeve, & Hoke, John Ray. 2000. *Ramsey/Sleeper architectural graphic standards (10th ed.)*. New York: John Wiley & Sons.
- Rooftop birds eye view. Fuji Kindergarten Japan. 2007. Digital Image. Accessed November 16, 2015. http://c1038.r38.cf3.rackcdn.com/group1/building2425/media/media_6.jpg.
- Scott, Sarah. 2010. *Architecture for children*. Camberwell, Vic: ACER Press.
- Section. Fuji Kindergarten Japan. 2007. Digital Image. Accessed November 16, 2015. <http://homemajestic.com/wp-content/uploads/2015/08/3g.jpg>
- Shaoqiang, Wang 2011. *Play: indoor & outdoor*. Berkeley, CA: Gingko Press.
- "Statistics Canada Demographics." Accessed October 20, 2015. <http://www12.statcan.gc.ca/census-recensement/2011/as-sa/fogs-spg/Facts-cma-eng.cfm?Lang=Eng&GK=CMA&GC=205>.

“Sunshine in Canadian Cities - Current Results Weather and Science Facts.” Accessed June 15, 2015. <http://www.currentresults.com/Weather/Canada/Cities/sunshine-annual-average.php>.

“The Architecture of Early Childhood: Kindergarten and the ‘Froebel’s Gifts’ Offering Free Play.” The Architecture of Early Childhood: Kindergarten and the ‘Froebel’s Gifts’ Offering Free Play. Accessed June 05, 2015. <http://www.thearchitectureofearlychildhood.com/2011/04/kindergarten-and-modernist-movement.html>.

Woods of Net by Toshiko Horiuchi MacAdam. Hakone Open Air Museum Japan. Digital Image Accessed November 16, 2015. <https://s-media-cache-ak0.pinimg.com/236x/ba/2c/44/ba2c44cb5edbd76bb0806d7d83bd9882.jpg>