Re:Generation

A Model For Age-Inclusive Care

by
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AUTHOR'S DECLARATION

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

ABSTRACT

The Canadian population is aging. Seniors are becoming the fastest growing age group as a result of the aging of the baby boom generation, and a lowered fertility rate and an increase in life expectancy in the millennial generation. Currently, the population of Canada is approximately 35 million people, of which five million are aged 65 and over. It is estimated that by 2051, about one in four Canadians will be aged 65 and over.[1]

At the rate our population is aging, it is foreseeable that the cost of services for the elderly will escalate rapidly as a result of an increased demand for services but a lack of caregivers and facilities to support them. As such, there is a growing demand for new models of living and care for seniors with a shift towards a more economically sustainable, community-oriented schema, where the collaboration and mutual support between the residents could ease the economic and social burden for society.

The author has developed a new approach with regards to designing for an aging population – a conceptual kit of parts known as the Model For Age-Inclusive Care. The thesis proposes the development of an age-inclusive multi-service and care hub to reintegrate the elderly into the social fabric of the city by using underperforming, under-utilized commercial developments as an activator. In essence, this thesis will attempt to connect between the more disparate parts of society through the incorporation of places with potential for development in an attempt to present a model of symbiotic community space aging.

1 Federation of Canadian Municipalities. *Canada's Aging Population: The Municipal Role in Canada's Demographic Shift* (2013), 2.

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This thesis is a record of my personal journey, documenting some of the most difficult times of my life. I would not have been able to complete this achievement without the help of those who have touched my life along the way. Thank you for investing in me with your precious time. I am truly grateful for who you are and how you have influenced my life, and I feel privileged to be able to honor you in my thesis book.

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I also wish to thank the external reader, Fred Thompson, for his valuable comments and feedback.

I would also like to thank all those who participated in the interviews of my research study. It was truly inspirational to speak with those who share the same passion for the elderly as I do. Your enthusiasm continually fueled my energy and gave me the strength to keep moving forward.

I am also thankful to Tara Bissett, whose guidance and support during the loss of my grandfather provided me with further insight into my thesis, turning a negative experience into a life lesson that I was able to integrate into my thesis work.

And last but not least, thank you to my family, friends and colleagues who listened, supported and offered encouragement along the way. I value our relationships highly and I hope we only deepen them in the years to come!

DEDICATION

The bulk of this thesis was written in 2016, which marked the passing of my beloved grandparents.

This thesis is dedicated first and foremost to my paternal grandfather whose struggles with old age served as the driving motivation behind this thesis.

This thesis is also written in the loving memory of my paternal grandmother who left this world in order to stay by her husband's side.

May you both rest in peace.

TABLE OF CONTENTS

Author's Declaration iii

Abstract v

Acknowledgements vii

Dedication ix

Table of Contents x

List of Figures xii

Prologue: My Story 1

Part 1: Regarding Old Age

1.1 The Battle: Marginalization & Ageism 5

1.2 The Scar: The Institutions of Society 14

1.2.1 Definition & Critique of Institutions 15

1.2.2 Genealogy of Elderly Care 19

1.3 The Stories: A Need For Change 29

Part 2: Re-imagining Elderly Care

2.1 The Existing: Programs & Typologies 43

2.2. The Strategies: Design Guidelines 66

2.2.1 Site: The Mall & The City 68

2.2.2 Program: Mutuality & the Potential of Intergenerational Living 73

2.2.3 Architecture: Design Qualities 78

2.3 The Prototype: Design Explorations 93

2.4 The Proposal: A New Design Brief 111

Part 3: Re:Generation - Design & Transformation

3.1 The Need: Our Aging Population 117

3.2 The Plan: An Age-Friendly Community 126

3.3 The Site: Centerpoint Mall 139

3.4 The Design: Mutuality as a Typology of Connections 171

3.5 The Future: A New Outlook on Aging 208

Epilogue: The Dying Role 215

Bibliography 223

LIST OF FIGURES

Page 6	**Fig. 1**	**Example of Author's Chinese Calligraphy** Image by Author
Page 7	**Fig. 2**	**Image of The Elder as an Archetype** Accessed June 21, 2016. http://simurguanka.blogspot.ca/
Page 9	**Fig. 3**	**Statistics From the Revera Report on Ageism** Accessed October 27, 2015. http://www.reveraliving.com/revera/files/b2/b20be7d4-4d3b-4442-9597-28473f13b061.pdf
Page 10	**Fig. 4**	**Examples of Ageism in Advertising** Accessed October 27, 2015. http://www.ltcconline.net/lukas/gender/pages/ageism.htm
Page 11	**Fig. 5**	**Newspaper Article on the Increasing Number of Suicides Amongst Older Adults in Rural China** Accessed March 14, 2016. http://www.theglobeandmail.com/news/world/how-chinas-rural-elderly-are-being-left-be hind-and-taking-theirlives/article29179579/?click=sf_globefb

Page 22 **Fig. 6** **Genealogy of Elderly Care – Disciplinary Model**

Diagrams by Author

Plan of Panopticon: Markus, Thomas A. 1993. Buildings & Power: Freedom & Control in the Origin of Modern Building Types. London: Routledge.

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Plan of Y or Hexagonal Workhouse Model: Markus, Thomas A. 1993. Buildings & Power: Freedom & Control in the Origin of Modern Building Types. London: Routledge.

Page 24 **Fig. 7** **Genealogy of Elderly Care – Medical Model (Pavilion Block Model)**

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Plan of Atkinson Morley Hospital: Accessed March 9, 2016. https://historic-hospitals.com/posts/page/6/

Page 27 **Fig. 8** **Genealogy of Elderly Care – Medical Model (Big Block Model)**

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Plan of Favoriten Geriatric Hospital: Verderber, Stephen. 2010. Innovations in Hospital Architecture. New York: Routledge.

Page 30	**Fig. 9**	**Dissolution of the Family Unit** Image by Author
Page 34	**Fig. 10**	**Photographs of the Atrium at Sick Kids' Hospital in Toronto** Images Provided by Athena Hau
Page 44	**Fig. 11**	**System Used by Health Professionals to Determine a Person's Level of Function** Image by Author
Page 46	**Fig.12**	**Structure of Long-Term Care Facility Placement** Accessed January 17, 2015. http://newsroom.carleton.ca/wp-content/files/aD2-now.pdf
Page 47	**Fig.13**	**Levels of Care and Their Respective Programs and Institutions, Adaption From the Health Council of Canada** Edited by Author Accessed November 3, 2015. http://www.alzheimer.ca/durham/~/media/Files/on/Media%20Releases/2012/April%202012/HCC_HomeCare_2d.pdf
Page 48	**Fig. 14**	**Typical Common Programs Within Elderly Care Facilities** Image by Author
Page 49-50	**Fig. 15**	**Decisions - A Mapping** Image by Author
Page 52	**Fig. 16**	**Kamigyo Daycare Center** Plans and Images by: Feddersen, Eckhard; Lüdtke, Insa. Living for the Elderly: A Design Manual. Basel: Birkhäuser Verlag AG, 2009.
Page 54	**Fig. 17**	**City of Santa Cruz Accessory Dwelling Unit (ADU) Development Program** Plans and Images: Accessed October 10, 2015. http://www.cityofsantacruz.com/living/accessory-dwelling-unit-adu-program

Page 56	**Fig. 18**	**Apartments for Senior Citizens** Plans and Images by: Zumthor, Peter. Peter Zumthor, 1985-1989: Buildings and Projects, Volume 1, ed. Thomas Durisch. Zurich: Scheidegger & Spiess, 2014.
Page 58	**Fig. 19**	**Crostettenhaus** Plans and Images by: Feddersen, Eckhard; Lüdtke, Insa. Living for the Elderly: A Design Manual. Basel: Birkhäuser Verlag AG, 2009.
Page 60	**Fig. 20**	**Kenyuen Home for the Elderly** Plans and Images by: Feddersen, Eckhard; Lüdtke, Insa. Living for the Elderly: A Design Manual. Basel: Birkhäuser Verlag AG, 2009.
Page 62	**Fig. 21**	**Carefirst One-Stop Multi-Services Centre** Accessed February 7, 2017. http://www.montgomerysisam.com/projects/carefirst-one-stop-multi-service-centre
Page 64	**Fig. 22**	**Carefirst One-Stop Multi-Services Centre** Plans and Images: Lam, Joanne. "No Place Like Home". Canadian Architect, V.61 N.10, October 2016, p.36.
Page 67	**Fig. 23**	**Older Adults Interacting at the Food Court of Fairview Park Mall** Images by Author
Page 74	**Fig. 24**	**Erik Erickson's Concept of Mutuality Between Generations** Thomas, William H. What are Old People For?: How Elders Will Save the World. Massachusetts: Vanderwyk & Burnham, 2004.

Page 76	**Fig. 25**	**Examples of Integrated Living: the iGen Program at Sherbrookie Community Centre in Saskatoon (left) and Kipling Aces Long-Term Care Home in Toronto (right)** Accessed May 29, 2016. http://www.cbc.ca/news/canada/saskatoon/sherbrooke-community-grade-6-students-igen-1.3591655 Accessed February 23, 2016. http://www.thestar.com/news/gta/2016/02/09/magic-abounds-when-daycare-seniors-home-share-roof.html
Page 80	**Fig. 26**	**Kamigyo Daycare Center** Feddersen, Eckhard; Lüdtke, Insa. Living for the Elderly: A Design Manual. Basel: Birkhäuser Verlag AG, 2009.
Page 82	**Fig. 27**	**Kenyuen Home for the Elderly** Feddersen, Eckhard; Lüdtke, Insa. Living for the Elderly: A Design Manual. Basel: Birkhäuser Verlag AG, 2009.
Page 84	**Fig. 28**	**Carefirst One-Stop Multi-Services Centre** Accessed February 7, 2017. http://www.montgomerysisam.com/projects/carefirst-one-stop-multi-service-centre
Page 86	**Fig. 29**	**Apartments for Senior Citizens** Zumthor, Peter. Peter Zumthor, 1985-1989: Buildings and Projects, Volume 1, ed. Thomas Durisch. Zurich: Scheidegger & Spiess, 2014.
Page 88	**Fig. 30**	**City of Santa Cruz Accessory Dwelling Unit (ADU) Development Program** Accessed October 10, 2015. http://www.cityofsantacruz.com/living/accessory-dwelling-unit-adu-program

Page. 90	**Fig. 31**	**Crostettenhaus** Map from Google Maps Images from Feddersen, Eckhard; Lüdtke, Insa. Living for the Elderly: A Design Manual. Basel: Birkhäuser Verlag AG, 2009.
Page 95-96	**Fig. 32**	**Analysis of Site in Relation to its Surrounding Neighbourhood** Image by Author Map from Google Maps
Page 97-98	**Fig. 33**	**Analysis of Site in Relation to Existing Elderly Care Facilities** Image by Author Map from Google Maps
Page 99	**Fig. 34**	**Analysis of Developer's Proposed Masterplan** Image by Author Plan from City of Toronto Rezoning Application
Page 100	**Fig. 35**	**Visualization of Developer's Proposed Master-plan** Image by Author
Page 101-102	**Fig. 36**	**Diagram of Proposed Design Strategy** Image by Author Map from Google Maps
Page 103	**Fig. 37**	**Analysis of Proposed Reconfiguration of Master-plan** Image by Author
Page 104	**Fig. 38**	**Visualization of Proposed Reconfiguration of Masterplan** Image by Author
Page 106	**Fig. 39**	**Sketch of Proposed Floor Plans** Image by Author
Page 107	**Fig. 40**	**Sketch - Axonometric View From the Parking Lot** Image by Author

Page 108	**Fig. 41**	**Sketch - Axonometric View From the Town Square** Image by Author
Page 118	**Fig. 42**	**Projected Growth in the Number and Population of Canadians Aged 65 and Over, Based on a Medium Growth Scenario** Accessed January 15, 2015. https://www.fcm.ca/Documents/reports/FCM/canadas_aging_population_the_municipal_role_in_Canadas_demographic_shift_en.pdf
Page 118	**Fig. 43**	**Proportion of the Population of Canadians Aged 65 and Over in 2050** Accessed January 15, 2015. https://www.fcm.ca/Documents/reports/FCM/canadas_aging_population_the_municipal_role_in_Canadas_demographic_shift_en.pdf
Page 119	**Fig. 44**	**Long-Term Care Home Demand and Supply per 1000 in Canada** Accessed November 3, 2015. http://www.health.gov.on.ca/en/common/ministry/publications/reports/seniors_strategy/docs/seniors_strategy.pdf
Page 120	**Fig. 45**	**Financial Structure of Elderly Care in Canada** Accessed January 17, 2015. http://newsroom.carleton.ca/wp-content/files/aD2-now.pdf
Page 121	**Fig. 46**	**Public Expenditure on Home Care vs. Long-Term Care in Organization for Economic Co-operation and Development (OECD) Countries** Accessed November 3, 2015. http://www.alzheimer.ca/durham/~/media/Files/on/Media%20Releases/2012/April%202012/HCC_HomeCare_2d.pdf
Page 123	**Fig. 47**	**Canada - An Overview** Applebaum, Edward and Robert Davies. “Caring for the Elderly: Is Big Bad, Better or Both?” Paper presented at the Design and Health 7th World Congress, Boston, July, 2011.
Page 128	**Fig. 48**	**Model of Age-Inclusive Care Imagined as a Kit of Parts** Image by Author

Page 130	**Fig. 49**	**Diagram - Purpose** Image from Author
Page 131-132	**Fig. 50**	**Conceptual Collage No.1 - Learning** Image from Author
Page 133-134	**Fig. 51**	**Conceptual Collage No.2 - Food** Image from Author
Page 135-136	**Fig. 52**	**Conceptual Collage No.3 - Wellness** Image from Author
Page 140	**Fig. 53**	**Neighbourhoods and Major Roads of Toronto** **1:200,000** Image by Author Data by OpenData Toronto
Page 141	**Fig. 54**	**Population By City of Toronto Age Group By Neighbourhood, Census 2006** Image by Author Data by OpenData Toronto
Page 142	**Fig. 55**	**Target Age Group Breakdown, Census 2006** Image by Author Data by OpenData Toronto
Page 143	**Fig. 56**	**Population By City of Toronto Age Group By Neighbourhood, Census 2011** Image by Author Data by OpenData Toronto
Page 144	**Fig. 57**	**Target Age Group Breakdown, Census 2011** Image by Author Data by OpenData Toronto
Page 145	**Fig. 58**	**Population By City of Toronto Age Group By Neighbourhood, Comparison Between Census 2006 & 2011** Image by Author Data by OpenData Toronto

Page 146	**Fig. 59**	**Target Age Group Breakdown, Comparison Between Census 2006 & 2011** Image by Author Data by OpenData Toronto
Page 147	**Fig. 60**	**Existing Care Provisions for the Elderly in the City of Toronto** **1:400,000** Image by Author Data by OpenData Toronto
Page 148	**Fig. 61**	**Local Health Integration Networks (LHIN) in the City of Toronto** **1:400,000** Image by Author Data by OpenData Toronto
Page 149	**Fig. 62**	**In-Depth View of Central LHIN** **1:200,000** Image by Author
Page 150	**Fig. 63**	**Site Selection No.1** **Comparision Between Areas of Interest** Data by City of Toronto Neighbourhood Profiles Accessed August 20, 2016. http://www1.toronto.ca/wps/portal/contentonly?vgnextoid=100c861b9fdb1410VgnVCM10000071d60f89RCRD
Page 151	**Fig. 64**	**Site Selection No.1** **Concentration of Seniors** **1:400,000** Image by Author Data by OpenData Toronto

Page 151	**Fig. 65**	**Site Selection No.1** **Change in Senior Population 2001-2006** **1:400,000** Image by Author Data by OpenData Toronto
Page 152	**Fig. 66**	**Site Selection No.1** **Programs of Interest Within the Central LHIN** **1:400,000** Image by Author Data by OpenData Toronto
Page 152	**Fig. 67**	**Site Selection No.1** **Comparision Between Areas of Interest** Data by City of Toronto Neighbourhood Profiles Accessed August 20, 2016. http://www1.toronto.ca/wps/portal/contentonly?vgnextoid=100c861b9fdb1410VgnVCM10000071d60f89RCRD
Page 153	**Fig. 68**	**Site Selection No.2** **Concentration of Seniors** **1:400,000** Image by Author Data by OpenData Toronto
Page 153	**Fig. 69**	**Site Selection No.2** **Change in Senior Population 2001-2006** **1:400,000** Image by Author Data by OpenData Toronto

Page 154	**Fig. 70**	**Site Selection No.2** **Programs of Interest Within the Central LHIN** **1:400,000** Image by Author Data by OpenData Toronto
Page 154	**Fig. 71**	**Site Selection No.2** **Comparision Between Areas of Interest** Data by City of Toronto Neighbourhood Profiles Accessed August 20, 2016. http://www1.toronto.ca/wps/portal/contentonly?vgnextoid=100c861b9fdb1410VgnVCM10000071d60f89RCRD
Page 155	**Fig. 72**	**Site Selection No.2** **Comparision Between Areas of Interest** Data by City of Toronto Neighbourhood Profiles Accessed August 20, 2016. http://www1.toronto.ca/wps/portal/contentonly?vgnextoid=100c861b9fdb1410VgnVCM10000071d60f89RCRD
Page 155	**Fig. 73**	**Comparision Between Site Selection No.1 and No.2** Data by City of Toronto Neighbourhood Profiles Accessed August 20, 2016. http://www1.toronto.ca/wps/portal/contentonly?vgnextoid=100c861b9fdb1410VgnVCM10000071d60f89RCRD
Page 156	**Fig. 74**	**Proposed Subway Extension** Accessed January 18, 2017. http://www.vivanext.com/PDFs/YSE/2012_ReportConceptualDesign.pdf

Page 157	**Fig. 75**	**Proposed Yonge Street Corridor Redevelopment by the City of Toronto** Accessed January 23, 2017. https://www1.toronto.ca/City%20Of%20Toronto/City%20Planning/Community%20Planning/Files/pdf/N/North%20Yonge%20Planning%20Study/Final_Yonge%20Street%20North_1.pdf
Page 158	**Fig. 76**	**Proposed Yonge Street Corridor Redevelopment by the City of Vaughan** Accessed January 23, 2017. http://www.vaughan.ca/projects/policy_planning_projects/General%20Documents/Official%20Plan%20Vol%202/Yonge%20Street%20Area%20Study/Yonge%20Street%20Area%20Study%20Background%20Design%20Charrette%20Nov%202008/BackgroundReport_Nov2008studyareas.pdf
Page 159-160	**Fig. 77**	**Analysis of Site in Relation to its Surrounding Neighbourhood** Image by Author Map from Google Maps
Page 161-162	**Fig. 78**	**Photographs of Neighbourhood Amenities** Images by Author
Page 163	**Fig. 79**	**Analysis of Disconnects Within the Current Site** Image by Author Map from Google Maps
Page 164	**Fig. 80**	**Photographs of Site Disconnects** Images by Author
Page 165	**Fig. 81**	**Sketch of Strategy 1** Image by Author
Page 166	**Fig. 82**	**Sketch of Strategy 2** Image by Author
Page 167	**Fig. 83**	**Sketch of Strategy 3** Image by Author

Page 172	**Fig. 84**	**Location of Proposed Site** Image by Author
Page 172	**Fig. 85**	**Photos of the Proposed Site** Images by Author
Page 174	**Fig. 86**	**Amplifying Connections – A New Street is Proposed** Image by Author
Page 174	**Fig. 87**	**Amplifying Connections – Enhancement of Pedestrian Links** Image by Author
Page 175	**Fig. 88**	**Circulation Routes of Users Within the Condo Towers to the West** Image by Author
Page 175	**Fig. 89**	**Circulation Routes of Users Within Newtonbrook Secondary School to the West** Image by Author
Page 175	**Fig. 90**	**Circulation Routes of Users Within the Residential Block to the South** Image by Author
Page 175-176	**Fig. 91**	**Site Plan – Proposed Building Footprint** **Scale 1:5000** Image by Author
Page 176	**Fig. 92**	**Ground Plane Connections – Circulation Routes of Users Within Centerpoint Mall** Image by Author
Page 176	**Fig. 93**	**Proposed Bridge Connection from Centerpoint Mall to Proposed Site** Image by Author
Page 177	**Fig. 94**	**Parti** Image by Author
Page 178	**Fig. 95**	**Massing** Image by Author

Page 179	**Fig. 96**	**Diagram of Ground Floor** Image by Author
Page 180	**Fig. 97**	**Ground Floor Plan** **Scale 1:750** Image by Author
Page 181	**Fig. 98**	**Diagram of Second Floor** Image by Author
Page 182	**Fig. 99**	**Second Floor Plan** **Scale 1:750** Image by Author
Page 183	**Fig. 100**	**Diagram of Third Floor** Image by Author
Page 184	**Fig. 101**	**Third Floor Plan** **Scale 1:750** Image by Author
Page 185	**Fig. 102**	**Diagram of Upper Floors** Image by Author
Page 186	**Fig. 103**	**Typical Upper Floor Plan** **Scale 1:750** Image by Author
Page 187	**Fig. 104**	**Diagram of Basement** Image by Author
Page 188	**Fig. 105**	**Typical Basement Floor Plan** **Scale 1:750** Image by Author
Page 189	**Fig. 106**	**North Elevation** Image by Author
Page 189	**Fig. 107**	**South Elevation** Image by Author

Page 190	**Fig. 108**	**East Elevation** Image by Author
Page 190	**Fig. 109**	**West Elevation** Image by Author
Page 191	**Fig. 110**	**Section A-A** Image by Author
Page 191	**Fig. 111**	**Section B-B** Image by Author
Page 192	**Fig. 112**	**Section C-C** Image by Author
Page 192	**Fig. 113**	**Section D-D** Image by Author
Page 195-196	**Fig. 114**	**Rendered Perspective of the Plaza** Image by Author
Page 197-198	**Fig. 115**	**Rendered Perspective of the Feature Ramp** Image by Author
Page 199-200	**Fig. 116**	**Rendered Perspective of the Physiotherapy Room** Image by Author
Page 201-202	**Fig. 117**	**Rendered Perspective of the Age-Inclusive Day Service Facility** Image by Author
Page 203-204	**Fig. 118**	**Rendered Perspective of the Roof Terrace Playground** Image by Author
Page 205-206	**Fig. 119**	**Rendered Perspective of the Roof Terrace Communal Barbeque Area** Image by Author
Page 210	**Fig. 120**	**Photographs of Ha Ling Pei Village on Lantau Island, Hong Kong** Image by Author

PROLOGUE: MY STORY

"Our ultimate goal, after all, is not a good death but a good life to the very end."

- Atul Gawande, *Being Mortal*

My thesis asks the question: "how can architecture add to the quality of life of the elderly?" This issue is particularly important to me because of my grandfather.

I first immigrated to Canada when I was five years old along my mother, who was pregnant with my brother at the time. My father had stayed behind in Hong Kong to work. When we arrived in Canada, my mother and I lived in an apartment in North York with my paternal grandparents and my aunt. Four years later, my father immigrated to Canada and we moved into our own house in Thornhill. My aunt, who is unmarried, continued to stay in the apartment to take care of my grandparents.

Six years ago, however, my grandfather fell off the couch and broke his hip. After his surgery, the doctors discovered that the reason he fell was because the nerves under his feet were deteriorating. As a result, he will have trouble standing on his own and he would have to rely on a wheelchair to move around. Our family had to make a decision.

For the twenty-plus years my grandparents have been in Canada, they have lived in a low-rise apartment in the heart of North York. They lived alone on the third floor, with no one but my aunt to watch over them. The building was not designed for handicapped-accessibility - even the sole elevator that serves the entire residence was too small to fit a standard turning radius. My aunt has a demanding job as an accountant and often had to work late hours; meanwhile, my grandmother is getting older and is starting to have trouble with her mobility. Therefore, we decided that the logical solution would be to place my grandfather into a nursing home where he will be constantly monitored, just in case he falls again.

The home my grandfather was placed into is modest. Originally a hotel built in the 70s, the design is dated. There are over 250 residents in the nursing home. The corridors are constantly congested due to the sheer volume of people in wheelchairs alone. In the communal areas, the interior is dark - with hardwood paneling on the walls and plush burgundy carpet on the floor. The main residential floors resemble that of a traditional hospital - cold, sterile and devoid of life. My grandfather shares a room with three strangers. They share a common bathroom and shower.

In the beginning, my grandfather was defiant and stubborn - refusing to admit that he needed help. He would rush through his physiotherapy sessions; often falling as a result. But eventually, he gave in; he lost his will to fight. He refused to do his exercises and his body rapidly deteriorated as a result. Every time I saw him, he became skinnier and skinner, until he became nothing but skin and bones. It was devastating to watch. I could no longer recognize him.

I often wondered to myself, if we had more money to put him into a better facility, would he have been healthier for longer? If so, does that mean that the architecture was partly to blame for who he had become? Can poorly designed spaces truly make a person sick? If that were true, what can I do, as a designer and as a future architect, to prevent this from happening to somebody else?

... Because I wouldn‘t want to see somebody else go through what my grandfather has gone through.

PART 1

REGARDING OLD AGE

1.1

THE BATTLE: MARGINALIZATION & AGEISM

"Marginality is visible, and painfully visceral. Privilege is invisible, and painlessly pleasant."

- Sherry Ahrentzen, *The F Word in Architecture: Feminist Analyses in/of/for Architecture*

Growing up, I looked up to my paternal grandfather. Because my father wasn't around at the time, my grandfather was like a father figure to me. My strongest memory of him is tied to a deck of cards. He taught me how to play all sorts of card games like Black Jack, Solitaire and Big Two (an Asian form of poker). Even after my father immigrated to Canada and my family moved into our own house, I would pull out a deck of cards every time I visited my grandparents, and my grandfather and I would start playing together. It was the way we bonded with one another.

Although my grandfather had limited schooling, he taught me a lot about the Chinese culture. He was the only person in my family who knew how to write Chinese calligraphy. The ink we use in Chinese calligraphy is very specific. It is made from soot and binders, and you have to rub the mixture with water using an inkstick against an inkstone until you achieve the right consistency. My grandfather taught me how to

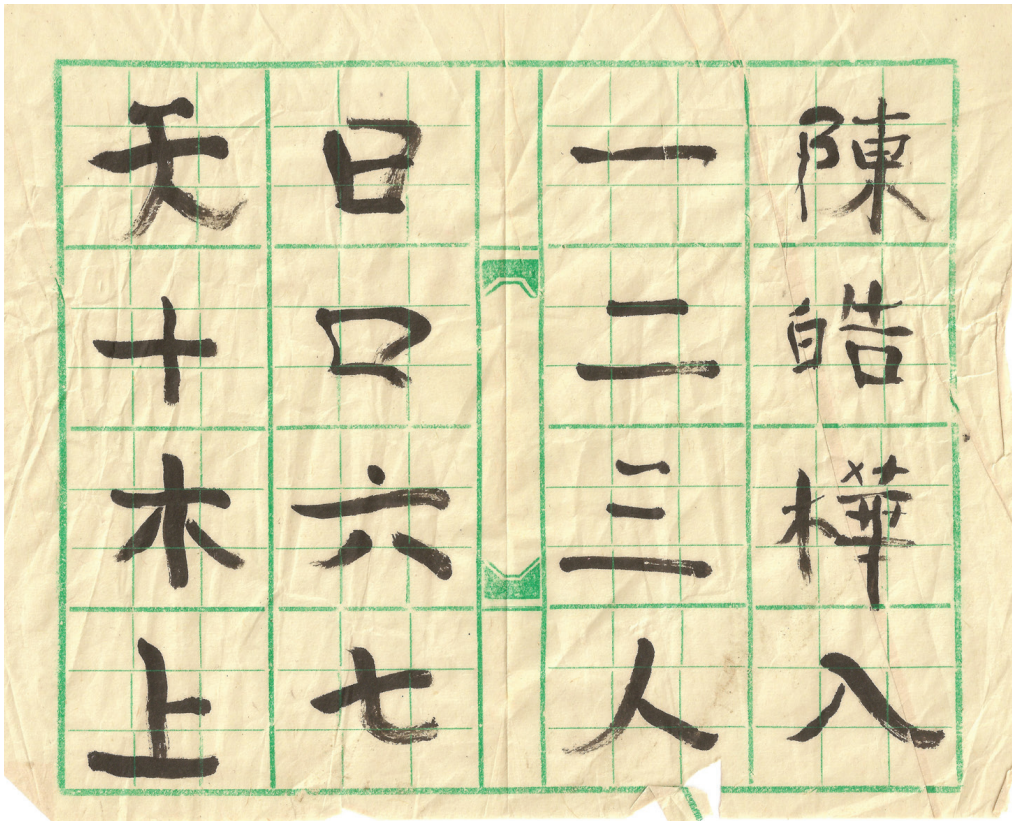


Fig. 1 Example of Author's Chinese Calligraphy

grind the ink, how to hold the brush and how to apply the right amount of pressure in order to draw the strokes correctly. However, no matter how hard I tried, I was never able to write as beautifully as he did.

Cooking in the Chinese culture is something that is usually performed by the females in the household but there was one dish my grandfather would make. It was a sponge cake that was steamed in a wok on a stovetop, made with only three ingredients – eggs, flour and sugar. Because my grandfather did everything by eye and there was no definitive recipe, it took my mother several years before she was able to successfully recreate it. My grandfather also taught me how to make Dit Da Jow (跌打酒), which is a special Chinese ointment that we apply to external ailments such as bruises or soles muscles. Every Chinese family has their own formula that is passed down from generation to generation. The mixture is a concoction of dried herbs and insects brewed in a thrice-distilled rice wine. Each of the ingredients is said to be toxic on its own but the



Fig. 2 Image of The Elder as an Archetype

precise blend of ingredients together is said to "以毒攻毒", meaning that they neutralize one other.

In the past, our elderly were considered to be the bearers of knowledge and wisdom, and within the family unit, they were treated with utmost respect. This is an image that is consistent across all cultures and appears even within the archetypes developed by the prominent psychiatrist and psychoanalyst, Carl Jung. In one of the lectures from one of my graduate electives, a professor described Jungian archetypes as patterns that we live out that can be found across all cultures and is common in all people; something that is a part of our collective unconsciousness. The Sage, The Wise One, and the Elder are examples of Jungian archetypes that we associate with old age and are generally defined as those that offer guidance and appear in our subconscious at times of great transition. We, as humans, strive to gain knowledge and wisdom, and we tend to look to our elders to do so: "While the Self is ageless, and ultimately formless, we reach for the ultimate in human maturing. Initially, our thinking about maturity and wisdom may go to the Elder".[1]

However, the role of older adults in contemporary society has radically changed. Old age is no longer a rarity so the special status that our elderly once held is no longer valid. Technology has also eliminated the role of our elders as the sole bearers of knowledge.[2] We no longer revere old age; rather, we fear and are disgusted by it, resulting in what Dr. William H. Thomas, physician and international authority on geriatric medicine and eldercare, describes as a "declinist view of old age":

> "Rather than seeing the miraculous adaptations the man has made that allow him to live a satisfying life, we see how much he has lost. A declinist view of old age is embedded in our language. It shapes our opinions; it deceives our eyes and ears. Declinism, a concept that has been used to describe the experience of empires that are past their prime, can also be employed to describe the contemporary equation of aging with loss and surrender".[3]

Our elders have become "something discarded". "For most people, growing old is a frightening subject that they try to keep at a distance as long as possible".[4] Our society today does not have room for our senior counterparts. They are rejected and disregarded as though they are no longer considered as full members of the human community. This is known as ageism. According to the "Revera Report on Ageism",

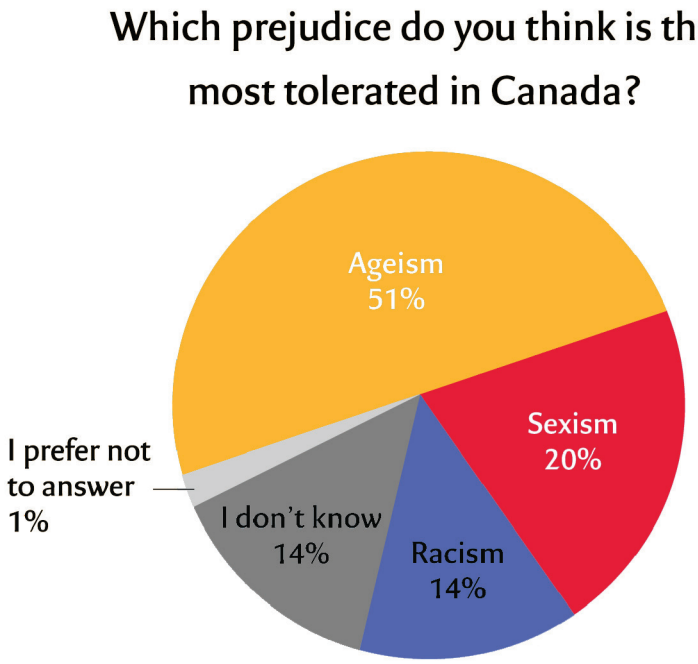


Fig. 3 Statistics From the Revera Report on Ageism

ageism is the most tolerated form of social discrimination in Canada when compared to gender- or race-based discrimination.[5]

Seeing as how we are a media-centric society, mass media, particularly television and movies, define social roles in contemporary culture by presenting a steady and repetitive portrayal of images. The image of aging depicted in the media has generally been one of negative stereotyping, a portrayal that seems to be more negative than any other social group:

> "Every day the media confront us in one way or another with the supposed specter of demographic aging. The most popular of the gloomy scenarios for the future being disseminated always assumes that a society with a larger share of elderly must of necessity be a lesser society, confronted with enormous, perhaps insurmountable problems and with clearly inferior quality of life for all. It is suggested that we are moving inexorably toward a gray and joyless future".[6]



Fig. 4 Examples of Ageism in Advertising

As such, Claire Townsend, a documentary film maker and the author of an expose on nursing homes, goes so far as to describe old age as the last form of segregation.[7] This seems to be a very appropriate expression in a society in which "doing" and "having" is considered to be more important than "being". Thomas describes "doing" and "being" as the following: "Whereas doing is visible and quantifiable and generates useful, real-world results, "being" concerns itself with things that cannot be seen. To "be" is to create and sustain relationships with the invisible and the intangible".[8]

Our desire to attain a job, to acquire material possessions, to maintain good appearances and obtain a certain kind of knowledge, has become so central to our motivation to live that the elderly often become strangers in the society they have helped build. This isolation can result in dire consequences. I recently read an article in The Globe and Mail about the increasing number of suicides amongst older adults in rural China. As a result of the one child policy, there is an increasing number of people migrating from the rural countryside into the city centers in search of work, often leaving their elderly parents behind. As a result, the elderly are left in solitude, and as their health deteriorates, they lack the finances and support to take care of themselves.

THE GLOBE IN CHINA

How China's rural elderly are being left behind and taking their lives

The state kept their families small. The economy pushed their children to faraway cities. Struggling with solitude and stress, China's elderly are killing themselves at an alarming rate. **Nathan VanderKlippe** reports from communities in crisis

NATHAN VANDERKLIPPE
SUN TUN, CHINA | The Globe and Mail | Last updated: Monday, Mar. 28, 2016 11:05AM EDT



Fig. 5 Newspaper Article on the Increasing Number of Suicides Amongst Older Adults in Rural China

Feeling as if they have nothing left to live for, they lose their will to live and ultimately, choose to end their own lives.[9]

If you've ever had the chance to meet an isolated senior citizen like my grandfather, you may notice many differences between them and active, social seniors. I believe that being in good company and avoiding boredom can be all the difference to the health and well-being of the elderly but the first thing we must do is to change our perceptions towards old age because these biases can greatly influence our approach to design.

1 Graham, Jack A. "Reimagining the Self: The Sage, the Wise Old One, and the Elder," *Jung Society of Atlanta*, Summer 2013: 6 – 8, accessed April 19, 2016. http://www.jungatlanta.com/articles/summer13-thesage.pdf

2 Gawande, Atul. *Being Mortal: Medicine and What Matters in the End* (Toronto: Doubleday Canada, 2014), 18.

3 Thomas, William H. *What are Old People For?: How Elders Will Save the World* (Massachusetts: Vanderwyk & Burnham, 2004), 15.

4 Huber, Andreas and Eidgenössische Technische Hochschule Zürich, ed. *New Approaches to Housing for the Second Half of Life* (Zürich: Birkhäuser, 2008), 15.

5 Revera and the International Federation on Aging. *Revera Report on Ageism* (2012).

6 Huber, Andreas and Eidgenössische Technische Hochschule Zürich, ed. *New Approaches to Housing for the Second Half of Life* (Zürich: Birkhäuser, 2008), 15.

7 Townsend, Claire, ed. *Old Age: The Last Segregation* (New York: Grossman Publishers, 1971), 1.

8 Thomas, William H. *What are Old People For?: How Elders Will Save the World* (Massachusetts: Vanderwyk & Burnham, 2004), 118.

9 VanderKlippe, Nathan. "How China's rural elderly are being left behind and taking their lives," *The Globe and Mail*, March 14, 2016, accessed March 14, 2016. http://www.theglobeandmail.com/news/world/how-chinas-rural-elderly-are-being-left-behind-and-taking-theirlives/article29179579/?click=sf_globefb

1.2

THE SCAR: THE INSTITUTIONS OF SOCIETY

"What good is treatment for people who cannot be cured?"

- William H. Thomas, *Life Worth Living*

1.2.1

DEFINITION & CRITIQUE OF INSTITUTIONS

"Space is political and ideological. It is a product literally filled with ideology."

- Henri Lefebvre, *Reflections on the Politics of Space*

In the past, older adults were cared for in multigenerational systems. However, in today's society, old age has changed from being a shared, multigenerational responsibility to, more or less, a private state - something that is experienced largely alone or with the aid of doctors, nurses and medical institutions.

As I had mentioned in a previous chapter, my first encounter with elderly care facilities started six years ago when my grandfather fell off the couch and broke his hip. After his hip surgery, the doctors discovered that the reason he fell was because the nerves under his feet were deteriorating, which means that he will have trouble standing on his own and he will have to rely on a wheelchair to move around. Therefore, we decided that the logical solution would be to place my grandfather into a nursing home where he will be constantly monitored, just in case he falls again. What I didn't realize at the time was that this will ultimately confine him to a wheelchair and the rigidity of life in an institution. All privacy and control over oneself was gone. He woke when they

told him to, bathed and dressed when they told him to and ate when they told him to. He even lived with whomever they said he had to. It was as if he had been incarcerated, in prison for being old.

In his book "Asylums", Canadian sociologist Erving Goffman noted the likeness between nursing homes and prisons. They were considered to be "total institutions", along with military training camps, orphanages, and mental hospitals – places that are cut off from larger society.[1] Goffman's book describes the process by which such institutions regulate behavior on the part of both the "guard" and the "captor". He suggests that many of the features of these institutions serve the sole purpose of ensuring that both groups of people know their function and role within the system established by the institution. "A basic social arrangement in modern society is that the individual tends to sleep, play, and work in different places, with different co-habitants, under different authorities, and without an over-all rational plan".[2] By contrast, total institutions break down the barriers separating our spheres of life in the following ways:

> "First, all aspects of life are conducted in the same place and under the same single authority. Second, each phase of the member's daily activity is carried on in the immediate company of a large batch of others, all of whom are treated alike and required to do the same thing together. Third, all phases of the day's activities are tightly scheduled, with one activity leading at a prearranged time into the next, the whole sequence of activities being imposed from above by a system of explicit formal rulings and a body of officials. Finally, the various enforced activities are brought together into a single rational plan purportedly designed to fulfill the official aims of the institution".[3]

Similarly, French philosopher Michel Foucault writes: "Isn't it surprising that prisons resemble factories, schools, barracks, hospitals, which all resemble prisons"?[4] In his book "Discipline and Punish", Foucault analyzes the social and theoretical mechanisms behind the massive changes that occurred within the Western penal systems during the modern age. He describes the prison as a form of "discipline", a new type of spatial power, which can also be found in other building typologies. Foucault traces the cultural shifts that led to the dominance of the prison as the main building model by focusing on the mechanization of the human body and questions of power. During the classical age, it was discovered that the body could be used as the object and target of power, and discipline was the method that made possible the meticulous control over

the operations of the body, which assured the constant subjection of its forces and imposed upon them a relation of docility-utility. In short, discipline creates subjected and practiced bodies, or what Foucault refers to as "docile bodies".[5]

1 Goffman, Erving. *Asylums: Essays on the Social Situation of Mental Patients and Other Inmates* (New York: Anchor Books, 1961), xiii.

2 Goffman, Erving. *Asylums: Essays on the Social Situation of Mental Patients and Other Inmates* (New York: Anchor Books, 1961), 5-6.

3 Goffman, Erving. *Asylums: Essays on the Social Situation of Mental Patients and Other Inmates* (New York: Anchor Books, 1961), 6.

4 Foucault, Michel. *Discipline & Punish: The Birth of the Prison*, trans. Alan Sheridan (New York: Vintage Books, 1995), 228.

5 Foucault, Michel. *Discipline & Punish: The Birth of the Prison*, trans. Alan Sheridan (New York: Vintage Books, 1995), 136-138.

1.2.2

GENEALOGY OF ELDERLY CARE

"If nursing homes were children, their parents would be poorhouses and hospitals"

- William H. Thomas, *What are Old People For?*

As part of my thesis research, I have been analyzing the methods through which space can be used as a mechanism of power. As such, I have created a genealogy of various forms of institutions – in particular, the prison, hospital, factory, and asylum. Through this analysis, the aim is to trace back the history of institutions to see how these building types have affected each other and ultimately, the modern day nursing home. The categories for this genealogy are based off of the section "The Art of Distributions", in Foucault's "Discipline and Punish":

> "In the first instance, discipline proceeds from the distribution of individuals in space. To achieve this end, it employs several techniques.
>
> 1. Discipline requires **enclosure**, the specification of a place heterogeneous to all others and closed upon itself…
>
> 2. But the principle of "enclosure" is neither constant, nor indispens-

> able, nor sufficient in disciplinary machinery. This machinery works space in a much more flexible and detailed way. It does this first of all on the principle of elementary location or **partitioning**. Each individual has his own place; and each place its individual…
>
> 3. The rule of **functional sites** would gradually, in the disciplinary institutions, code a space that architecture generally left at the disposal of several different uses. Particular places were defined to correspond not only to the need to supervise, to break dangerous communications, but also to create a useful space…
>
> 4. In discipline, the elements are interchangeable, since each is defined by the place it occupies in a series, and by the gap that separates it from the others. The unit is, therefore, neither the territory (unit of domination), nor the place (unit of residence), but the **rank**: the place one occupies in a classification... Discipline is an art of rank, a technique for the transformation of arrangements. It individualizes bodies by a location that does not give them a fixed position, but distributes them and circulates them in a network of relations".[1]

I have divided my analysis into two major categories: the disciplinary model where the prison was the dominant building model and the medical model where the hospital was the dominant building model. There are two dominant models that influenced the design of hospitals – the Pavilion Block hospital and the Big Block hospital.

As the elderly age, they begin to lose their capacities and therefore are not able to take care of themselves. Historically, unless family could take such people in, they had no option left except to enter a workhouse or poorhouse. If you were an older adult and in need of assistance but did not have a child or independent wealth to rely on, a poorhouse was your only means of shelter. Workhouses, or poorhouses, were institutions created to house the poor and give the paupers a function in society by putting them to work. Supervisors would usually treat elderly paupers more leniently with regards to work assignments, but they were still treated as "inmates". Oftentimes, married couples would even be separated. Basic hygiene and medical care was lacking; therefore, filth was the norm.

Although there was an intention to have separate accommodations for the el-

derly (with sleeping compartments for couples), the sick, children and pregnant women, the design was considered to be too costly. "Consequently, the model plans of a little known architect Sampson Kempthorne, for a "general mix" design with strict segregation of the sexes, won the day. When discussing this design… Norton draws attention to an article in the "Illustrated London News" of November 7 1846 by an unknown writer, in which it is said of the plans "they have the name of an architect attached to them but, in fact, are tracings from designs of American prisons".[2]

The workhouse is a prime example of the disciplinary institution that Foucault describes in "Discipline and Punish". Although not its original intention or primary function, they became the first institutions put in place to care for the elderly. In my analysis, I compare Sampson Kempthorne's Y or Hexagonal Workhouse Model to Jeremy Bentham's Panopticon, as well as the Security Pavilion at the Hospital de Richafolles, Ledoux's Ville de Chaux and Glasgow Lunatic Asylum.

In all of these examples, the building or groups of buildings form a defined enclosure, within which there is a clear system of partitioning to divide everyone by rank (whether by gender and/or social status). Because one of the dominant features of this model was surveillance, there was always a central vantage point from which to monitor all of the inhabitants.

Fig. 6 Genealogy of Elderly Care – Disciplinary Model

> "From the middle of the nineteenth century, Unions [workhouses] had been increasingly filled by people in need of some form of nursing care… Old Age and all manner of sickness and disability were now the chief reasons why people became "indoor paupers". As distinct from workhouse infirmaries and some Voluntary Hospitals also carrying the title, the building of the Poor Law Infirmaries ("Hospitals for the Sick Poor") commenced…".[3]

At the time, the miasmic theory of illness was prevalent, which theorized that diseases were spread through a cloud of pollution. The design of the Pavilion block hospital was created to facilitate the dissipation of such miasma by encouraging natural ventilation through the wards. One of the greatest advocates of this design was the famous English nurse and social activist, Florence Nightingale. "Florence Nightingale was not only influential in the establishment of Poor Law Infirmaries but also played an active part in their design".[4] As such, the Hospitals for the Sick Poor were also designed in the Pavilion Block style. These institutions were created to house those who were not only poor, but also sick and disabled, such as elderly paupers.

In my analysis, I compare the Atkinson Morley Hospital to Captain Galton's Royal Herbert Hospital (which is one of the first Pavilion Block hospitals), as well as M.F. Poussin's Fresnes Prison Colony, Albert Kahn's Packard Factory and the St. Lawrence State Asylum.

In all of these examples, the building or groups of buildings typically branch off of a central spine and each "branch" forms a ward that serves a different rank (usually divided by gender). It is important to note that each ward contains a limited amount of partitioning. The architectural design of such buildings is based on the spaces between patients, flow of air through the wards and patterns of ventilation between wards. Everything was constructed to encourage the dissipation of miasma; as a result, partitioning is limited.

Fig. 7 Genealogy of Elderly Care – Medical Model (Pavilion Block Model)

Because of critiques about the harsh living conditions within the workhouse system, policy planners established a pension system to give the elderly a means to leave the workhouse. "Poverty has been a specter haunting old people since time immemorial. Although old age pensions had been available since 1909, the allowance did not keep pace with rising living costs…".[5] In addition, the elderly still ended up in workhouses because they had become too frail or sick to take care of themselves and they had nowhere else to turn to for help.

> "For those who were infirm and poor (although the old age pension was raised to ten shillings a week in 1924), the main sources [of care provision] were the Poor Law Unions (workhouses) and their infirmaries (Hospitals for the Sick Poor). Under the Local Government Act of 1929, the Unions were renamed "Public Assistance Institutions" and the infirmaries to be handed over to local authorities as Municipal Hospitals".[6]

At the time, medicine was undergoing a rapid and historic transformation. As hospitals sprang up, they became a comparatively more attractive place to put the infirm. One by one, the poorhouses closed down and those who had been classified as "elderly paupers" were put into hospitals. However, hospitals could not solve the debilities of chronic illness and advancing age fast enough, and they began to fill up with people who had nowhere to go.

> "In the hospital sphere, old people were said to be "blocking" expensive acute beds, thus reducing "turnover" and creating waiting lists. The only solution generally perceived was provision of more and more long-stay hospital beds, for once a person was labelled "chronic sick", it was presumed that only nursing care was required – and this is of a very basic kind".[7]

The hospitals lobbied the government for help, and lawmakers provided funding to enable them to build separate custodial units for elderly patients; and that was how the nursing home was first created. They were never created to help people facing dependency in old age; they were only created to clear out hospital beds – which is why they are called "nursing" homes .

During this time, the discovery of the germ theory overthrew the miasmic theory of illness and hospitals switched to a model of isolation to minimize cross-infection. The windows that were once so central to the flow of fresh air were sealed and ventilation was carried out by mechanical means. The use of mechanical ventilation allowed the floors to the stacked and the overall building footprint to be reduced, thereby creating the Big Block hospital type that we commonly see today.

In my analysis, I compare Office of Anton Schweighofer's Favoriten Geriatric Hospital to Hopital Beaujon (one of the first Big Block hospitals in Europe), as well as the famous Alcatraz Prison, Foster & Associates' Renault Distribution Centre, and Origo Arkitektgruppe's Kronstad Psychiatric Hospital.

In all of these examples, the building forms a defined enclosure, within which there is a clear system of partitioning to divide everyone by rank (whether by gender or medical status). With the acceptance of the germ theory, there was a return to the emphasis on isolation, as can be seen in the increased amount of partitioning when compared to the Pavilion Block model.

Through the genealogical analysis of institutions, it can be deduced that the early nursing homes were originally developed out of an existing building typology. As a result, the design of these buildings did not develop out of a genuine desire to give our senior counterparts better lives. Instead we divided up our communities and its functions; as Foucault writes, "each individual has his own place; and each place its individual".[8] As such, we need to change the way we approach the design of these facilities by creating new building typologies that actually assist the elderly as they age, with the seniors themselves as the central focus of the design. If the problem with nursing homes today is separation, then perhaps the solution can be found through integration.

Fig. 8 Genealogy of Elderly Care – Medical Model (Big Block Model)

1 Foucault, Michel. *Discipline & Punish: The Birth of the Prison*, trans. Alan Sheridan (New York: Vintage Books, 1995), 141-146.

2 Norton, Doreen. *The Age of Old Age: The Story of Care Provision for the Elderly Over the Centuries* (London: Scutari Press, 1990), 9.

3 Norton, Doreen. *The Age of Old Age: The Story of Care Provision for the Elderly Over the Centuries* (London: Scutari Press, 1990), 17.

4 Norton, Doreen. *The Age of Old Age: The Story of Care Provision for the Elderly Over the Centuries* (London: Scutari Press, 1990), 18.

5 Norton, Doreen. *The Age of Old Age: The Story of Care Provision for the Elderly Over the Centuries* (London: Scutari Press, 1990), 29.

6 Norton, Doreen. *The Age of Old Age: The Story of Care Provision for the Elderly Over the Centuries* (London: Scutari Press, 1990), 22.

7 Norton, Doreen. *The Age of Old Age: The Story of Care Provision for the Elderly Over the Centuries* (London: Scutari Press, 1990), 25.

8 Foucault, Michel. *Discipline & Punish: The Birth of the Prison, trans. Alan Sheridan* (New York: Vintage Books, 1995), 143.

1.3

THE STORIES: A NEED FOR CHANGE

"…we cannot even know today what life in a demographically older society will look like, because we have had no experience with comparable social conditions."

- Herrad Schenk, *The Adventures of Growing Old: On Growing Old and Staying Young*

In the past, older adults were cared for in multigenerational systems. Even when the nuclear family replaced the extended family, the elderly were not left to cope with the infirmities of old age on their own. Children typically left home as soon as they were old enough to start their own families but one child would remain, usually the youngest daughter. This was true within my own family in which my father's youngest sister never married and continued to live with my grandparents until their death.

In contemporary societies, by contrast, old age has changed from being a shared, multigenerational responsibility to, more or less, a private state. The underlying problem with this care model is that it isolates the elderly and separates them from all the things that matter in life. As human beings, we need and desire something more.

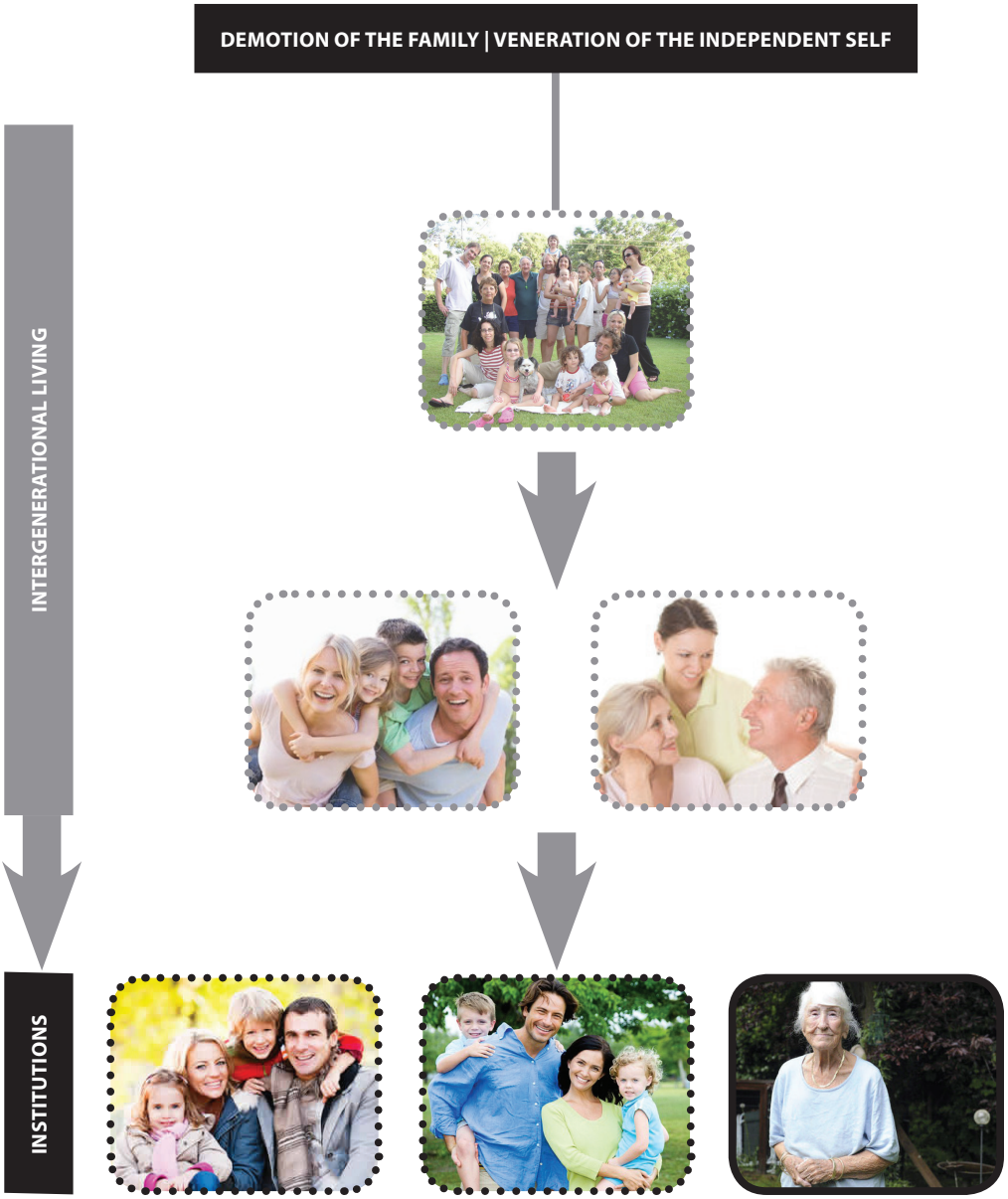


Fig. 9 Dissolution of the Family Unit

As I had mentioned in a previous chapter, Dr. William H. Thomas uses the term "Declinism" to describe contemporary society's view on old age. Thomas suggests that instead of perceiving old age as a period of loss, we should perceive old age as a period of illumination: "Botanists employ [the term] senescence to describe the most fruitful events in a plant's life cycle… Imagine growing into an old age defined by full development, maturity, awareness, readiness, and advancement; it would truly be an opportune time".[1]

There is a need for change; we should not tolerate ageism. We, as a society, need to recognize that aging is not an illness; aging does not make you any less of a human being:

> "People today not only grow to be older on average but also begin to age, physically and mentally, later than the elderly of past centuries. The younger elderly of today are in general healthier and more health-conscious, more physically fit and mobile than their ancestors were in the same phase of life… In general, they are more self-confident and participate in social life. They are better educated and financially better off than previous generations of the elderly, and they have more cultural interests and better developed social networks.
>
> Yet although the social reality and self-image of the elderly has changed over the course of the twentieth century and especially over the last three decades, the cultural stereotype of old age has remained unaffected by that and is still negative".[2]

It is becoming increasingly difficult to make universally-valid statements or generalizations with regards to older adults. Therefore, the task for architecture today is to provide a diversity of housing options, care models, and services that can better support the changing needs of the elderly as they age.

However, as architects, we often approach the design of a building as an outsider and thus may subconsciously project our own world views onto our designs, thereby creating a bias which may or may not benefit its users during the building's operations. Therefore, as part of my thesis research, I knew that I had to conduct interviews with all stakeholders (designers, researchers, staff and residents) involved in the design and operation of the Canadian system of eldercare. The aim of this research is to better un-

derstand the shortcomings (if any) of our current geriatric care facilities, from a design point of view, in order to create solutions to address them.

Prior to conducting any form of academic research, one must obtain permission from the University's Research and Ethics Committee. What I had not realized is that the elderly care facilities that I had wanted to interview may also have their own independent research committee through which I will need to acquire clearance from. In addition, healthcare workers are often unionized, thus I must also obtain permission from their unions prior to speaking with them. Furthermore, if the institution also contains a daycare or early childhood education program, then I must acquire clearance from the Department of Children's Services. These clearances are put in place as a means of protecting the welfare of the residents and staff. After all, those who reside in a geriatric care facility are considered to be a vulnerable population because they may be losing their cognitive abilities and therefore, may lack the verbal acuity to give consent prior to participating in an academic research study. As such, they can become susceptible to manipulation or being taken advantage of. As a result, many of the institutions I contacted refused to collaborate with me because obtaining these clearances is a long and tedious process which can cause a disruption within their already busy schedule and routine. As I continued to prepare for my research study, it became clear to me that the ethics system acts as a double-edged sword – on the one hand, it protects but on the other, it prevents change. For someone like me who is trying to alter the elderly care system, the ethics system actually prevents me from doing so.

After many months of preparation, I finally managed to conduct a series of interviews. These interviews can be broken down into two categories: experts and institutional. The expert interviews were conducted with third-party professionals who are indirectly involved with the operation and/or design of the eldercare system in Canada. The institutional interviews were conducted with management, staff and residents who are currently working in or residing within a geriatric care facility. I was able to conduct a total of seven interviews: four with experts and three with an institution.

LESSONS FROM THE EXPERTS

The first interview that I conducted was with Ivy Lam, a registered dietitian who specializes in working with older adults. For Lam, supervision, security and the ability to observe her patients are her top priorities. As such, in her point of view, design should be functional. Because her work concerns dining, providing appropriate levels of lighting is important. It is also crucial to provide enough contrast, even within a table setting, to ensure that those who have reduced visibility will still be able to enjoy their meal. Navigation and accessibility within a dining room is also imperative. It is important to ensure that the room is not too crowded or it may agitate the residents. The material of the ground should be soft and the room should have high ceilings to give off a spacious but cozy feel, similar to that of a cottage or chapel. Circulation within the building should not be circular in order to prevent wandering behavior. If a building is large in size, Lam suggests breaking it down into smaller neighborhoods or pods to allow for clearer navigation. For a medical professional like Lam, a holistic approach to aging becomes a balance between freedom and safety; safety not only includes the elderly themselves, but also for everyone else around them.

My second interview is with a medical professional who has experience working with both seniors and children, the two target populations that I am interested in. Athena Hau was a volunteer psychometrist at the Geriatric Psychiatry Clinic at St. Michael's Hospital and is currently a clinical research project coordinator at Sick Kids' Hospital. As someone who works in a large building such as a hospital, she believes that design should be used to aid in wayfinding, to ensure that users will be able to locate themselves at all times. Signage should be clear and made with a large font. Color schemes can be used to differentiate between different blocks. To make a building feel less like an institution, Hau believes in the provision of a welcoming, open negative space, using greenery as an accent and with the use of glass to provide views to the surrounding landscape as well as allowing soft diffused light to flow into the building. She particularly enjoys the high-vaulted atrium space at Sick Kids' Hospital. It is open, airy and provides a lot of natural light. There is even a water foundation and an indoor garden. Contrary to popular belief, Hau also believes in promoting stairs. Stairs are often seen as an obstacle for those who are less mobile like the elderly, but stairs can also be used as a means of exercise. All in all, Hau believes in providing users with a choice.

One of the problems that Hau sees within our current society is that older adults are isolated and often feel neglected as a result. To counter this, she believes that we should value their autonomy by asking them directly what it is that they need. We should acknowledge that they have changing needs, but there is no need to pity them

and make decisions for them. She believes that this is the social responsibility of both the institution and the patient. By communicating and forming a personal relationship, we can better develop a care system that is catered to the patient, a concept known as "person-centered care". Hau then introduced me to a more comprehensive version of this concept known as the "family-oriented model of care", something that is adopted by Sick Kids' Hospital. She believes that this care system is particularly helpful at the beginning and end of life, with vulnerable populations such as young children and the elderly, who often have similar needs. This model of care not only focuses on the patients, but the caregivers. It focuses on treating the whole family through education and awareness, recognizing that healthcare is not only provided between the medical provider and the patient, but also to the family and subsequent support network.

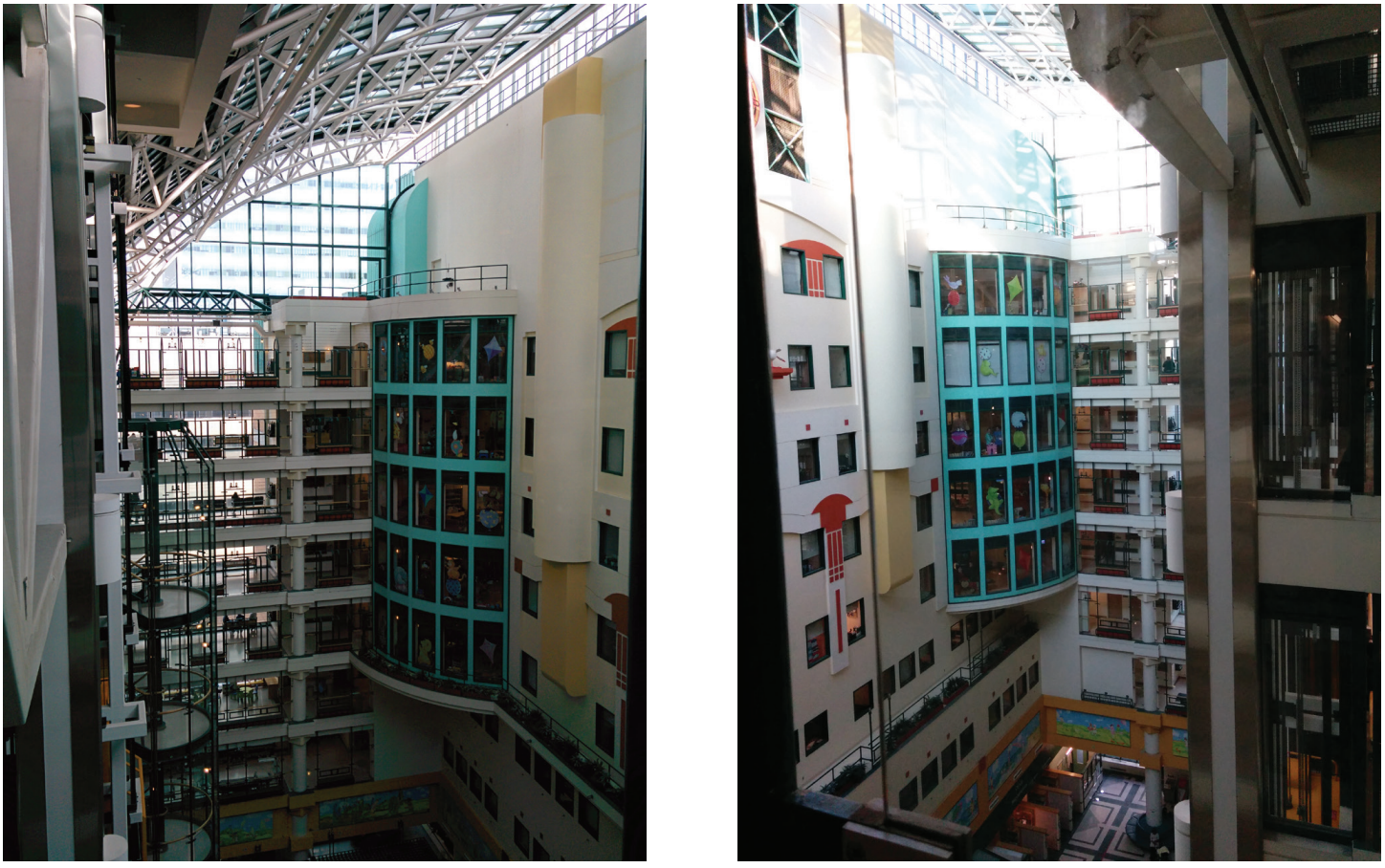


Fig. 10 Photographs of the Atrium at Sick Kid's Hospital in Toronto

I also had the opportunity to speak with Mary Lindsey, the Program Manager of the non-profit organization "Accommodation, Information & Support", otherwise known as AIS. AIS is an organization that provides supportive housing for those with mental health challenges and have experienced homelessness. I had wanted to speak with someone from this particular organization because I think that their vision and the subsequent system that they have put in place is what I want to implement with my design proposal:

> "We believe that stable permanent housing is the foundation of health and success. We value the strengths and uniqueness of the individuals we serve. We believe in recovery and wellness as a life-long process that addresses the needs of mind, body and spirit. We believe our cultural diversity is a source of enrichment. We value the autonomy and interdependence of clients on shaping their communities".[3]

As a non-profit group, AIS relies on funding from the Ministry of Health and Long-Term Care (MHLTC) for the design and construction of their buildings, and funding from the Toronto Central Local Integration Health Network (LHIN) for their support services. These organizations will be described in a later chapter. As such, there is limited funding every year and AIS has only been able to build small developments. They currently have four properties across downtown Toronto.

As a support system, AIS aims to develop a sense of home and community to help their tenants reintegrate into society. Lindsey believes that a community is something that should occur naturally. As such, common, mix-used rooms that provide opportunities for socialization are essential, such as the laundry room, communal kitchen, outdoor patio and garden. To aid in community development, Lindsey and her team puts together a calendar of events to provide opportunities for the tenants to interact with staff and with each other. These events range from activities such as dietitian programs, gentle physical exercise, discussion groups and skill development.

As landlords and developers, accessibility is becoming a growing concern as their tenants begin to age. As such, over the past couple of years, AIS has worked towards retrofitting their buildings to improve its accessibility. In particular, Lindsey is an advocate for no "special" buildings because she believes that all buildings should be accessible – functional at all ages and adaptable to the changing concept of age. As such, in her opinion, if I were to design a community that includes medical care and support,

it should include a graduated program that includes different degrees of support such as emergency medical response and home services.

By far the most important of the expert interviews that I conducted was with Edward Applebaum, one of the Principal Architects of Toronto architecture firm Montgomery Sisam Architects. Within the Canadian architectural community, Montgomery Sisam Architects is renowned for their extensive portfolio of healthcare projects and Applebaum, in particular, is in charge of the design and development of their projects involving eldercare.

Applebaum and I both agreed that bad architecture can make people sick and while architecture cannot be the solution for everything, it can be used to facilitate. As such, while the operation of an elderly care facility is important; as a designer, our priority should lie within the implementation of individual-centered design – creating meaningful, stimulating environments that can provide socialization opportunities.

However, because the industry is economically driven, Applebaum did express that it can be difficult reconciling a limited budget between one's design ambition and the actual building operation. As such, we as designers are limited in what we can do; but if our desire is truly for change, it is our responsibility to educate our clients to do more. We can also lobby to affiliated government organizations such as the Ministry of Health. We can also do our part by simply speaking with the building's staff and residents directly. We should never settle; instead, we should look towards new precedents and present new ideas. Especially at the rate the population is aging, there will certainly be a need for more unique and innovative forms of living. Adult daycare, as an example, is interesting because it is more community-like and provides intergenerational opportunities, and therefore can provide a more normalized environment for the elderly.

At the end of my interview with Applebaum, I asked him what he thinks it means to "age-with-dignity". To him, "aging-with-dignity" means allowing for autonomy and user agency, in order to prevent a loss of self and a loss of dignity. The architecture we build should simulate the normalized aging experience as much as possible because life should not change so rapidly, as is often the case for the older adults who are transitioning to institutionalized care.

LESSONS FROM THE INSTITUTION

As architect Edward Applebaum had mentioned, it is important for designers to speak directly with staff and residents of the facilities we are designing for. As such, the next portion of my interviews pertains to the management, staff and residents of the institutions I spoke with. To provide a range of research material, I had wanted to speak with two institutions: a privately-owned retirement community and a municipally-owned long-term care facility. However, I was unable to obtain permission from the latter so the results that I will present will only concern the former. To protect the identities of those I have interviewed, I was asked by the University's Research and Ethics Committee to keep the following findings as anonymous. The director of the facility has also requested that the facility not be named in my thesis. As such, I shall only provide the following background information as a setting for the next portion of my findings.

The institution that I visited is a privately-owned retirement community in the North York region of Toronto. The facility itself consists of two buildings that are connected by a bridge. Housing approximately 400 residents in total, both buildings offer independent living as well as assisted living suites. As such, the residents are all independent and highly-functioning. The buildings provide amenities such as laundry facilities, a beauty salon, a lounge, a library, a billiard room, a craft and cooking center, an auditorium, a fitness center, a club room, a private dining room with licensed bar service, a common landscaped courtyard as well as weekly shuttle service to neighboring shopping centers.

I had the opportunity to speak with a resident, the receptionist and the director of this facility. As I was conducting my interviews and touring the building, I was overwhelmed with its warm and cozy atmosphere. Everyone seemed to know each other and genuinely cared for one another, regardless of whether they were a resident, staff or a complete stranger like myself. Even as an outsider, I could feel that this institution was truly a community.

The resident I spoke with shall be referred to as Participant A. Participant A is a Japanese retired mechanical engineer who has been in the facility for approximately a year and a half. Even though he is of Japanese descent, he has never been to Japan before and would like to visit one day. Participant A lives in a one-bedroom suite along with his cats. He does not have a balcony in his room but he would like to have one so there is a place for his cats to go play in.

Participant A and his children had chosen for him to stay in this particular

facility because they were impressed by the breadth of participation by both the staff and residents within the community. There are joint meetings and workshops between the staff and residents periodically to improve the building's operation. These meetings and workshops can even be attended by new potential residents. In general, the facility promotes autonomy and user agency. The staff does not put pressure on the residents to do anything they do not want to do and the residents are encouraged to participate within their environment.

Participant A thinks that the institution is implementing a well thought-out system; they provide services that are an extension of home, such as a café and a library, as well as medical services. The facility is safe and secure because it is locked at night and one has to use the intercom in order to access the building. There is nothing he would change with regards to the design of the existing buildings because he believes that the staff and the care they provide is more important.

My next interview was with the receptionist of the institution and she shall be referred to as Participant B. Participant B has been working within the facility since 1988. She attends to resident needs, calculates revenue as well as answer any incoming phone calls to the facility. Her main priority is the general safety and well-being of the residents. She enjoys working within the institution because it feels like a community and a family. She believes that this is a result of the reputation that the facility has developed with the residents as well as their family members.

There is nothing Participant B would change with regards to the design of the current buildings because she thinks it should be the standard for all retirement communities. She believes that the facility is able to bring people together because of the various recreational activities that they provide such as fitness, exercise and outings. These activities are important because they encourage the residents to be independent, which promotes their autonomy. Respecting the resident's various cultural, ethnic and religious diversity is also important to the institution; as such, they have various resident-run organizations to cater to these needs.

My last interview was with the director of the facility and she shall be referred to as Participant C. Prior to speaking with her, I had heard about Participant C during my interview with Participant A and B. She is highly respected by her residents and staff and is regarded as the driving force behind this facility's effectiveness as a community. As such, she is a very busy person. Her 11-hour day is packed with meetings

with her staff as well as conversations with residents who drop by her office spontaneously to bring up any concerns they may have. Despite all this, she enjoys working at the institution because just like Participant B, she feels like the residents are her family; she basically feels like she has 400 grandparents!

One thing that Participant C would like to change about the existing building is that she would like everything to be touch-free and motion-sensored in order to prevent disease outbreaks. This would include sinks, toilets, doors and lights. With the mention of outbreaks, I asked Participant C about their pet-friendly policy and whether that is a point of concern with regards to hygiene. Surprisingly, she said no because studies have shown that the companionship of a pet can increase one's happiness. In fact, the facility hosts a national dog day every year.

In order to promote socialization between the residents, it is important to provide various recreational programs. This programming is very important and should be catered to the clientele. Because the residents of this institution are highly-functioning, they are interested in education. As a result, the facility offers a lecture series that ranges in topics from "The Life and Death of Winston Churchill" to "The Religions of the World". They also encourage their residents to use technology. Prior to moving in, every resident is equipped with an iPad that is specially programmed with a software that was developed in partnership with the University of Toronto.

Participant C also believes in the importance of inclusion and acceptance. As such, the facility hosts an event called World Day every year on October 24th to celebrate United Nations Day. During the event, the staff prepares food for the residents based on their respective cultures and ethnicities. Despite the fact that the residents are usually on a meat and potatoes diet, they are willing to try new things because they know that the food was specially prepared for them by the people who care for them on a daily basis.

Participant C and I also had a long, engaging discussion on the topic of ageism, which I have written extensively about in the previous chapters of my thesis. Participant C notified me that their particular facility is very much against ageism. She and her staff believe that everyone is the same; you can still participate no matter what age you are! Therefore, to Participant C, aging with dignity means having respect and understanding that everyone is someone. Everyone has a story regardless of their age; we just need to take the time to listen.

1 Thomas, William H. *What are Old People For?: How Elders Will Save the World* (Massachusetts: Vanderwyk & Burnham, 2004), 13.

2 Huber, Andreas and Eidgenössische Technische Hochschule Zürich, ed. *New Approaches to Housing for the Second Half of Life* (Zürich: Birkhäuser, 2008), 17.

3 ALS Toronto, "*Vision and Mission and Values*". http://www.aistoronto.ca/about-us/vision-and-mission

PART 2

RE-IMAGINING ELDERLY CARE

2.1

THE EXISTING: PROGRAMS & TYPOLOGIES

"…as a society, we are coming to depend more on social institutions to fulfill the roles family once played."

- William H. Thomas, *Life Worth Living*

Growing old isn't easy for anyone. Physically, the elderly cannot do as much for themselves as they once could. As people age, many of them will start to require some level of assistance with their daily activities such as housework and shopping. However, for those like my grandfather, who have suffered from a fall, they will require a higher level of assistance, such as getting in and out of bed, eating, and using the toilet. When care needs are this great, admission into a nursing home or a long-term care facility is usually the solution provided by one's medical advisor. Healthcare professionals utilize the following classification systems to determine the level of function a person has:

> "If you cannot, without assistance, use the toilet, eat, dress, bathe, groom, get out of bed, get out of a chair, and walk - the eight "Activities of Daily Living" - then you lack the capacity for basic physical independence. If you cannot shop for yourself, prepare your own food, maintain your housekeeping, do your laundry, manage your medications, make phone calls, travel on your own, and handle your finances - the eight "Independent Activities of Daily Living" - then you lack the capacity to live safely on your own".[1]



Fig. 11 System Used by Health Professionals to Determine a Person's Level of Function

If given a choice, most people would probably prefer to remain in their own homes instead of being uprooted and placed into an institution. A concept known as "aging-in-place" has been developed to allow people to do so. Aging-in-place is "a concept that advocates allowing a resident to choose to remain in his/her living environment despite the physical and/or mental decline that may occur with the process of aging".[2]

However, as was the case with my family, there usually isn't enough time to make an informed decision because the transition into higher levels of care usually comes at a sudden, unexpected time such as an illness, an accident or a fall. Because waitlists into a nursing home are long, when a bed does become available, there is tremendous pressure to take it for fear of losing the opportunity. Furthermore, there is additional pressure to the family from the hospitals to discharge older adults who can no longer return home into nursing homes because they are considered to be "bed-blockers".

But long-term care is not the only option. Despite the bleak history that led to the creation of the first nursing homes, a constantly growing body of models for housing and systems of delivering healthcare and supportive services to the elderly was created as a result of the altruism of society to provide and improve these conditions. Nowadays, the elderly are provided with a large range of choices. One can choose home care, where a registered nurse drops by one's home periodically to provide medical care and support services. There are also a variety of elderly care facilities that an older adult can choose to reside in. This chapter presents a set of precedents showing the variation in size, shape, and program that can be found in elderly care facilities around the world.

These examples can be divided into five categories: Adult Day Care/Senior's Center, Accessory Dwelling Unit/Granny Flat, Independent Living/Retirement Community, Assisted Living/Residential Care, and Nursing Home/Long Term Care. These categories are defined as follows:

Adult Day Care or Senior's Centers are "daily structured programs in a community setting with activities and health-related and rehabilitation services to elderly who are physically or emotionally disabled and need a protective environment. This care is provided for during the day, the individual returning home for the evening".[3]

An Accessory Dwelling Unit or Granny Flat is an additional unit built onto a single family lot, usually in the backyard. This method is seen as a cost effective way

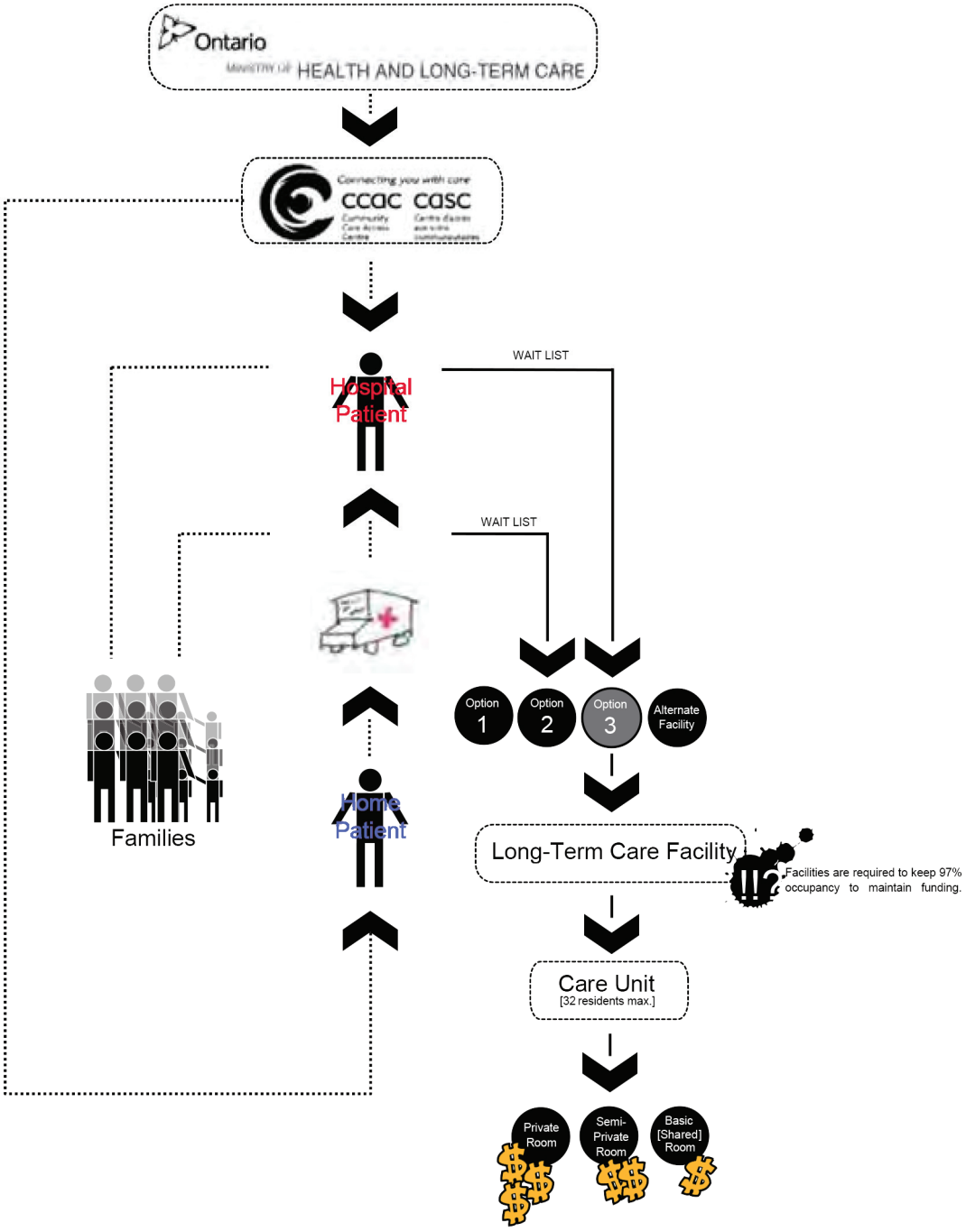


Fig. 12 Structure of Long-Term Care Facility Placement

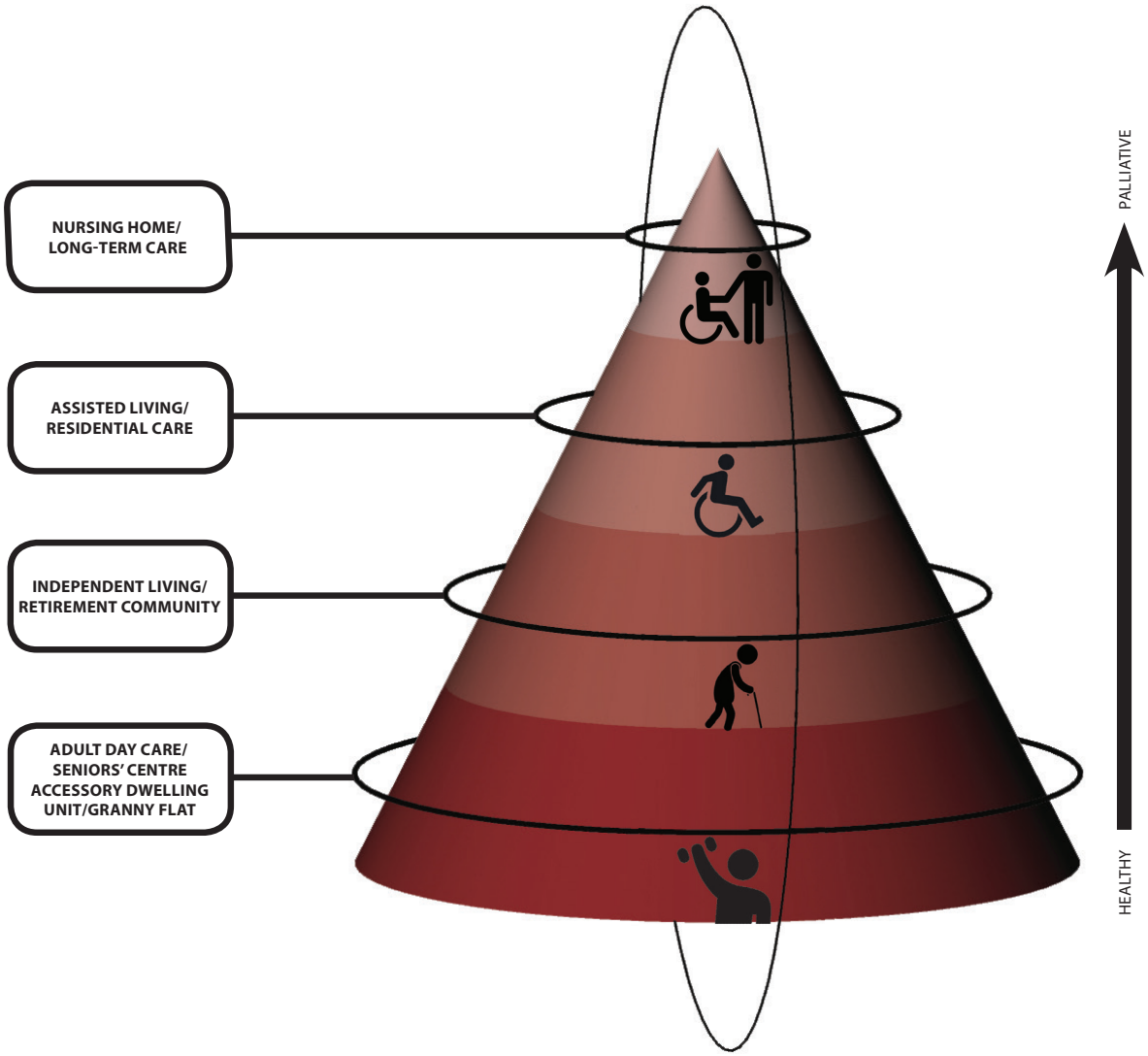


Fig. 13 Levels of Care and Their Respective Programs and Institutions, Adaption From The Health Council of Canada

STAFF

ADMINISTRATIVE SUPPORT
NURSING STATION
NURSING OFFICE
MEDICATION ROOM
STAFF OFFICE
STAFF LOUNGE
STAFF BATHROOM
STAFF LOCKER AREA
LAUNDRY ROOM
CONFERENCE ROOM
DINING HALL/RESTAURANT KITCHEN

SERVICES

STAIRS
ELEVATORS
MECHANICAL/SERVICE ROOM
STORAGE ROOM
GARBAGE ROOM
LOADING DOCK
PARKING

RESIDENTS (PRIVATE)

BEDROOM
DEN
DINING ROOM
BATHROOM
KITCHEN/PANTRY
LIVING ROOM
DINING ROOM
SUN ROOM/SOLARIUM
TERRACE/BALCONY

REIDENTS (SHARED)

FOYER
RECEPTION/WAITING ROOM
LOBBY/LOUNGE
COMMUNAL BATHROOM
COMMUNAL LAUNDRY ROOM
DINING HALL/RESTAURANT
ACTIVITY/DAY ROOM
PHYSICAL THERAPY ROOM/GYM
POOL
TERRACE/COURTYARD
PARK/GARDEN

Fig. 14 Typical Common Programs Within Elderly Care Facilities

to accommodate surging population growth without increasing sprawl. This also allows an older adult to maintain their privacy and independence while being in close proximity to their family or someone who can care for and watch over them.

Independent Living or Retirement Communities refers to a "multiunit senior housing development that may provide supportive services such as meals, housekeeping, social activities, and transportation… Independent living typically encourages socialization by provision of meals in a central dining area and scheduled social programs. May also be used to describe housing with few or no services".[4]

Assisted Living or Residential Care is defined as a "program offered at a residential community with services that include meals, laundry, housekeeping, medication reminders, and assistance with Activities of Daily Live (ADLs) and Instrumental Activities of Daily Life (IADLs). Generally regarded as one to two steps below skilled nursing in level of care".[5]

A Nursing Home or Long Term Care refers to "a facility that provides 24-hour nursing care, room and board, and activities for convalescent residents and those with chronic and/or long-term care illnesses. Regular medical supervision and rehabilitation therapy are mandated to be available".[6]

Through analyzing various precedents, I have compiled a list of program elements, refer to Fig. 14 to the left. While some precedents may have fewer or more programs, those mentioned in the program list were the most common. Fig. 15 describes the reasoning as to why one elderly care typology would be chosen over another, as well as the pros and cons of each. This diagram is followed by a series of precedents of each of the chosen typological categories. These precedents were selected because they were inspirational in terms of their design concepts and nuances. The organization of colors in the program list was utilized to highlight the design layout of each precedent in order to identify programmatic adjacencies and demonstrate the advantages or hindrances of each type.

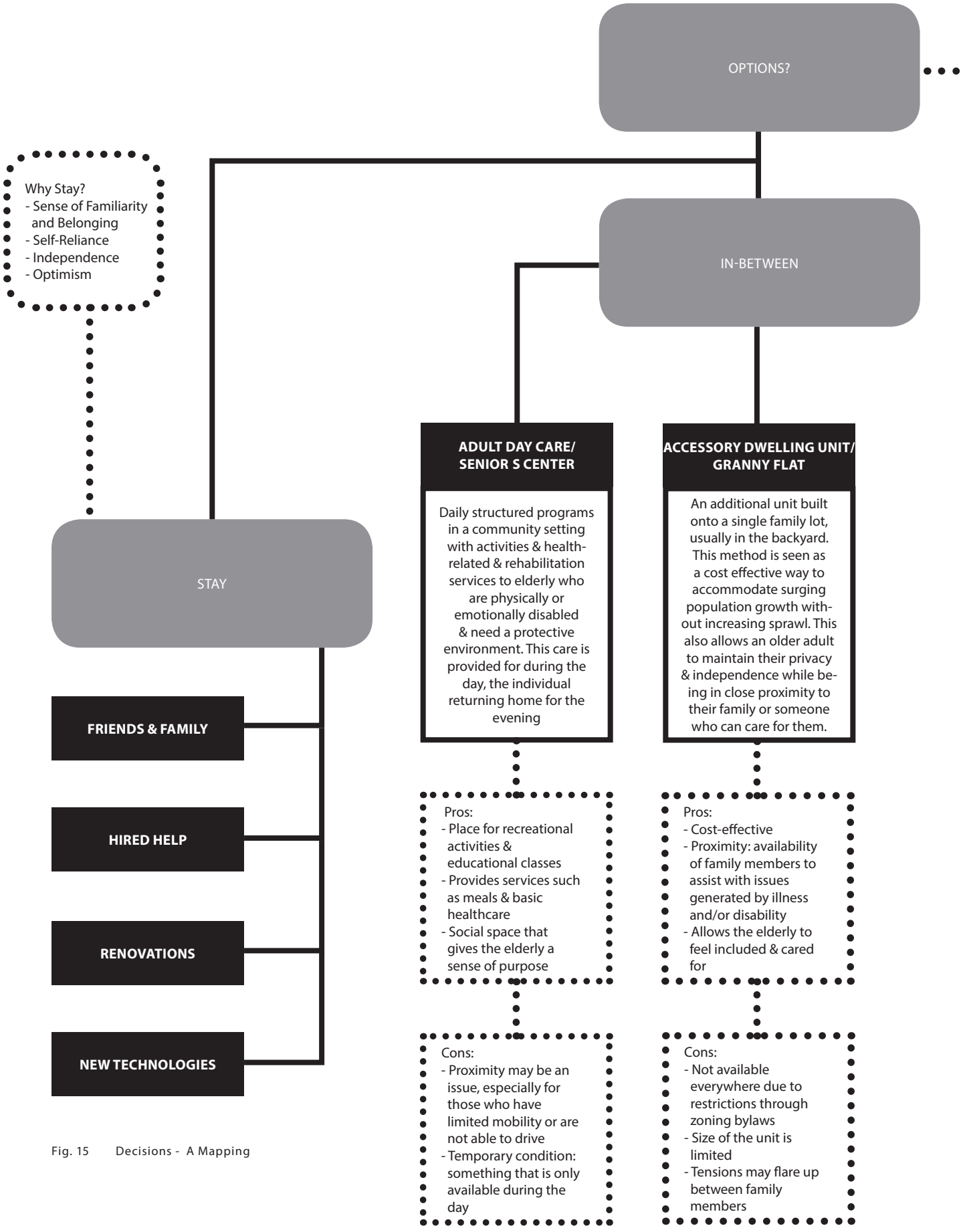
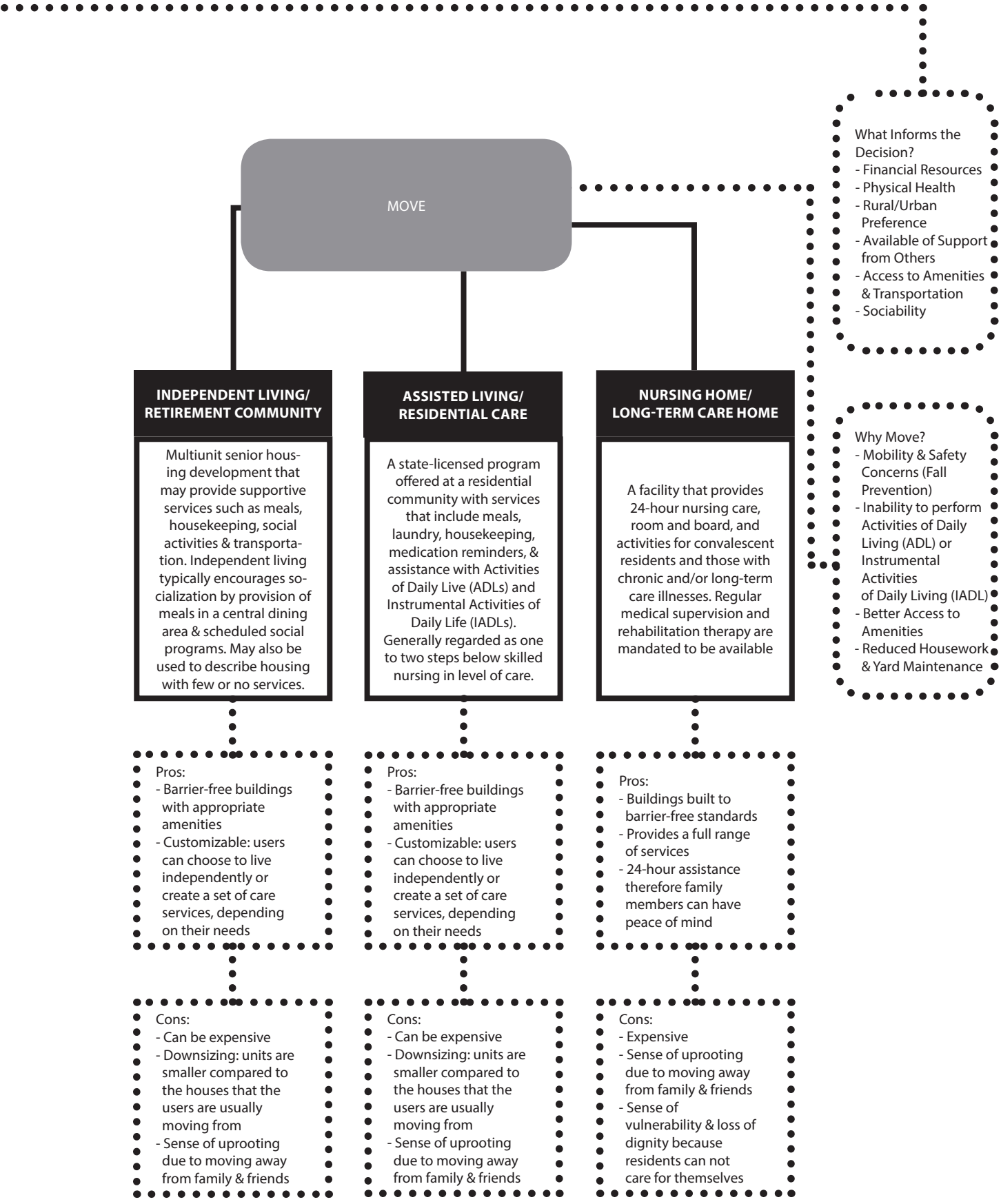


Fig. 15 Decisions - A Mapping


MOVE
What Informs the Decision?
- Financial Resources
- Physical Health
- Rural/Urban Preference
- Available of Support from Others
- Access to Amenities & Transportation
- Sociability
INDEPENDENT LIVING/ RETIREMENT COMMUNITY
Multiunit senior housing development that may provide supportive services such as meals, housekeeping, social activities & transportation. Independent living typically encourages socialization by provision of meals in a central dining area & scheduled social programs. May also be used to describe housing with few or no services.
ASSISTED LIVING/ RESIDENTIAL CARE
A state-licensed program offered at a residential community with services that include meals, laundry, housekeeping, medication reminders, & assistance with Activities of Daily Live (ADLs) and Instrumental Activities of Daily Life (IADLs). Generally regarded as one to two steps below skilled nursing in level of care.
NURSING HOME/ LONG-TERM CARE HOME
A facility that provides 24-hour nursing care, room and board, and activities for convalescent residents and those with chronic and/or long-term care illnesses. Regular medical supervision and rehabilitation therapy are mandated to be available
Why Move?
- Mobility & Safety Concerns (Fall Prevention)
- Inability to perform Activities of Daily Living (ADL) or Instrumental Activities of Daily Living (IADL)
- Better Access to Amenities
- Reduced Housework & Yard Maintenance
Pros:
- Barrier-free buildings with appropriate amenities
- Customizable: users can choose to live independently or create a set of care services, depending on their needs
Pros:
- Barrier-free buildings with appropriate amenities
- Customizable: users can choose to live independently or create a set of care services, depending on their needs
Pros:
- Buildings built to barrier-free standards
- Provides a full range of services
- 24-hour assistance therefore family members can have peace of mind
Cons:
- Can be expensive
- Downsizing: units are smaller compared to the houses that the users are usually moving from
- Sense of uprooting due to moving away from family & friends
Cons:
- Can be expensive
- Downsizing: units are smaller compared to the houses that the users are usually moving from
- Sense of uprooting due to moving away from family & friends
Cons:
- Expensive
- Sense of uprooting due to moving away from family & friends
- Sense of vulnerability & loss of dignity because residents can not care for themselves

ADULT DAY CARE/SENIOR'S CENTER

Name: Kamigyo Daycare Center

Location: Kyoto, Japan

Architect: Toshiaki Kawai

Completed: 2000

Located in the narrow alleyways of the historic quarter of Kamigyo in Kyoto, this barrier-free day care center provides a place for the elderly to visit during the day. The center offers a range of basic services such as providing help with bathing, eating and individual rehabilitation exercises.[7]

Inserted into a gap in the dense urban fabric of traditional Japanese timber houses, the stark white building is easy to find, even though all that is visible is a narrow skewed wall set back from the street. The building creates a sense of familiarity though a subtle but effective interplay of contrasting materials, traditional details and familiar succession of spaces.

Design Concept: Place-Making -Tradition and Culture

Visitors arrive via a forecourt and pass through an entrance with a sliding timber screen, similar to those in traditional Japanese teahouses, before arriving into an inner courtyard. Open to the sky, this pebble-floored space provides access via a ramp to the central reception space. An elevator then provides access to the upper floor. In the main spaces on the ground and upper floor, bare concrete walls and black steel stairs contrast with the traditional timber floors, bamboo matting and Japanese paper ceilings. A two-storey glass facade provides a view onto a traditional courtyard garden.

While the surrounding buildings have pitched tiled roofs, the daycare center has a flat roof with two tea ceremony rooms, which can be accessed via a straight stair. Here, guests can partake in this traditional ritual as they sit on tatami mats, enjoying a view overlooking the city.

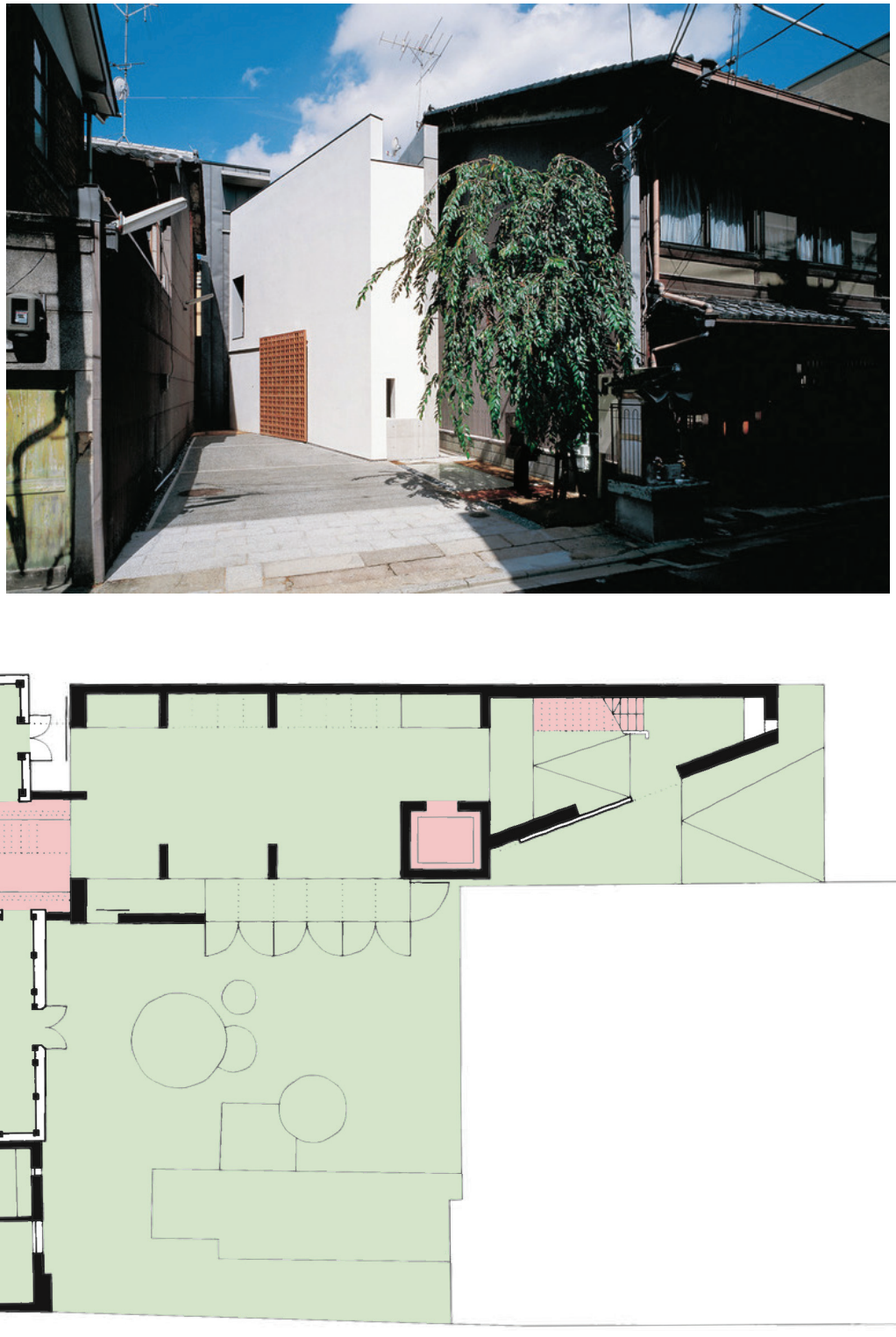


Fig. 16 Kamigyo Daycare Center

ACCESSORY DWELLING UNIT/GRANNY FLAT

Name: City of Santa Cruz Accessory Dwelling Unit Development Program

Location: Santa Cruz, California

Architect: Various

Completed: Various

Like many desirable places to live, Santa Cruz, California, suffers from a lack of affordable housing. During the beginning of the millennium, the city initiated a program to combat the problem by promoting "Accessory Dwelling Units (ADUs)" or "granny flats" on single family lots. For years prior, the state of California has been pushing its municipalities to loosen restrictions on ADUs, seeing them as a cost effective way to accommodate surging population growth without increasing sprawl. This innovative program ended up winning an AIA award for urban planning.

Design Concept: Vision - Initiative and Responsive Action

The program had three major components. In 2002, Santa Cruz changed their zoning regulations, which helped encourage the construction of ADUs. Then using a grant from the California Pollution Control Financing Authority, the city created a comprehensive manual - a how-to guide for ADU planning, approval and construction, including seven prototype designs. To make units more affordable, the city also offered low-interest loans through a local credit union.[8]

All but one of the prototypes are one-bedroom units with about 500 square feet of living space, in styles ranging from traditional to modern. There were also designs that incorporated different site conditions and material approaches, including sustainable options. The designs are intended to be highly adaptable and can serve as either aesthetic guides or actual plans.

The example shown is a one-storey L-shaped building designed by Peterson Architects.

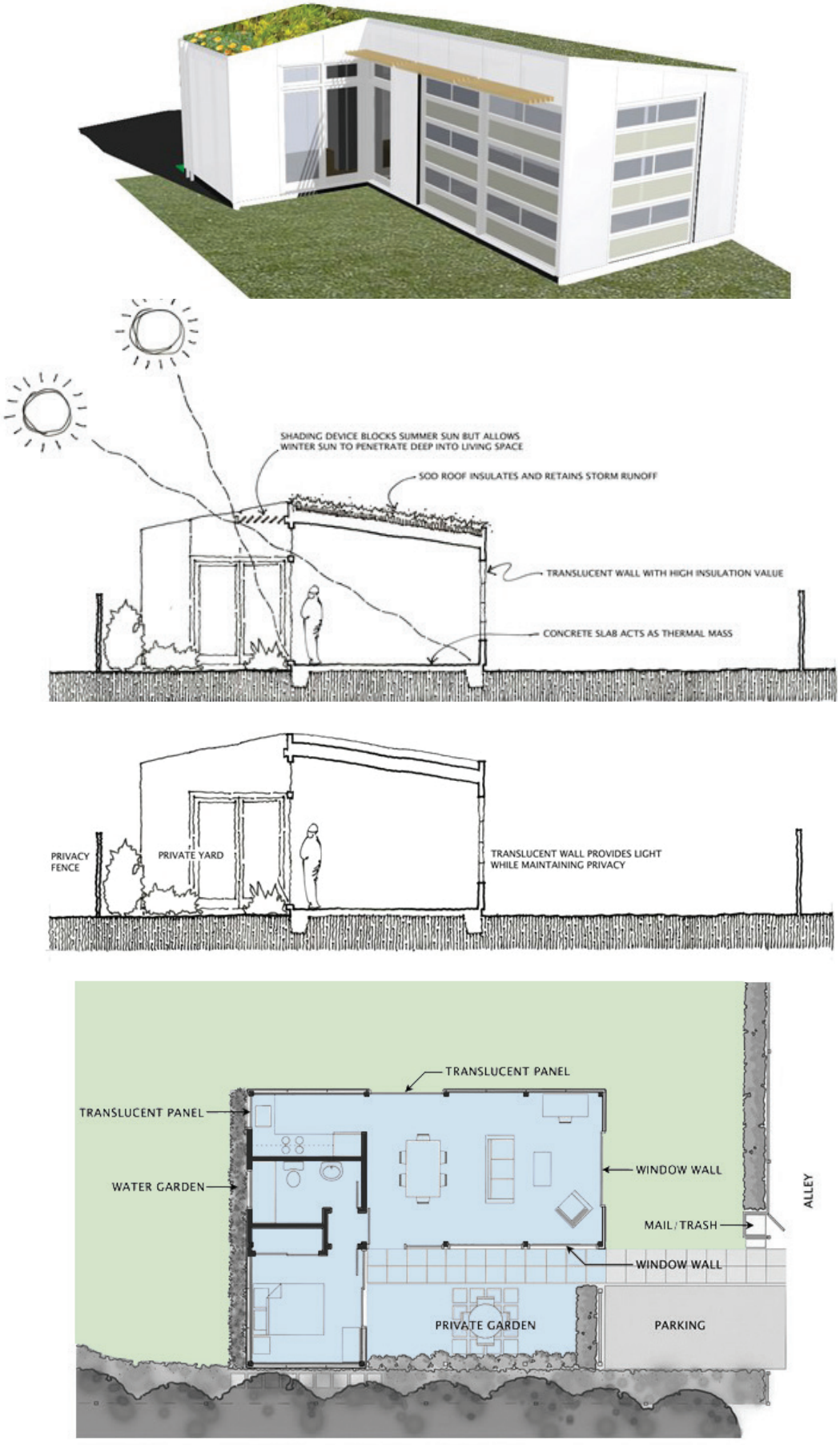


Fig. 17 City of Santa Cruz Accessory Dwelling Unit (ADU) Development Program

INDEPENDENT LIVING/RETIREMENT COMMUNITY

Name: Apartments for Senior Citizens

Location: Masans, Chur, Switzerland

Architect: Peter Zumthor

Completed: 1993

In 1993, Peter Zumthor completed a state-funded nursing home for the elderly. Understanding that the transition of moving is especially difficult for those in their twilight years, Zumthor's design offers something that the occupants knew, liked, and could easily use. A bay window in the living room gives view to the evening sun, the balconies are placed in niches sheltered from the wind, and the kitchen window opens out onto the entrance hall and encourages social contact. The occupants can set up the area outside their apartments with their own furniture and interact with their neighbors as they once did in the village on a bench outside the house.

Design Concept: Familiarity Through Materiality

As a master of materiality, Zumthor utilized tufa masonry, exposed concrete ceilings and larchwood; all of which are familiar to the people within the area. Graubunden tufa is a material that was once used for important public buildings. The waxed larchwood floors are made of thick boards fixed onto a lath underlay so they sound hollow when walked upon.[9] This project demonstrates the potential of materiality to create a sense of familiarity, thus establishing an impression of home despite the formal nature of the institution itself.

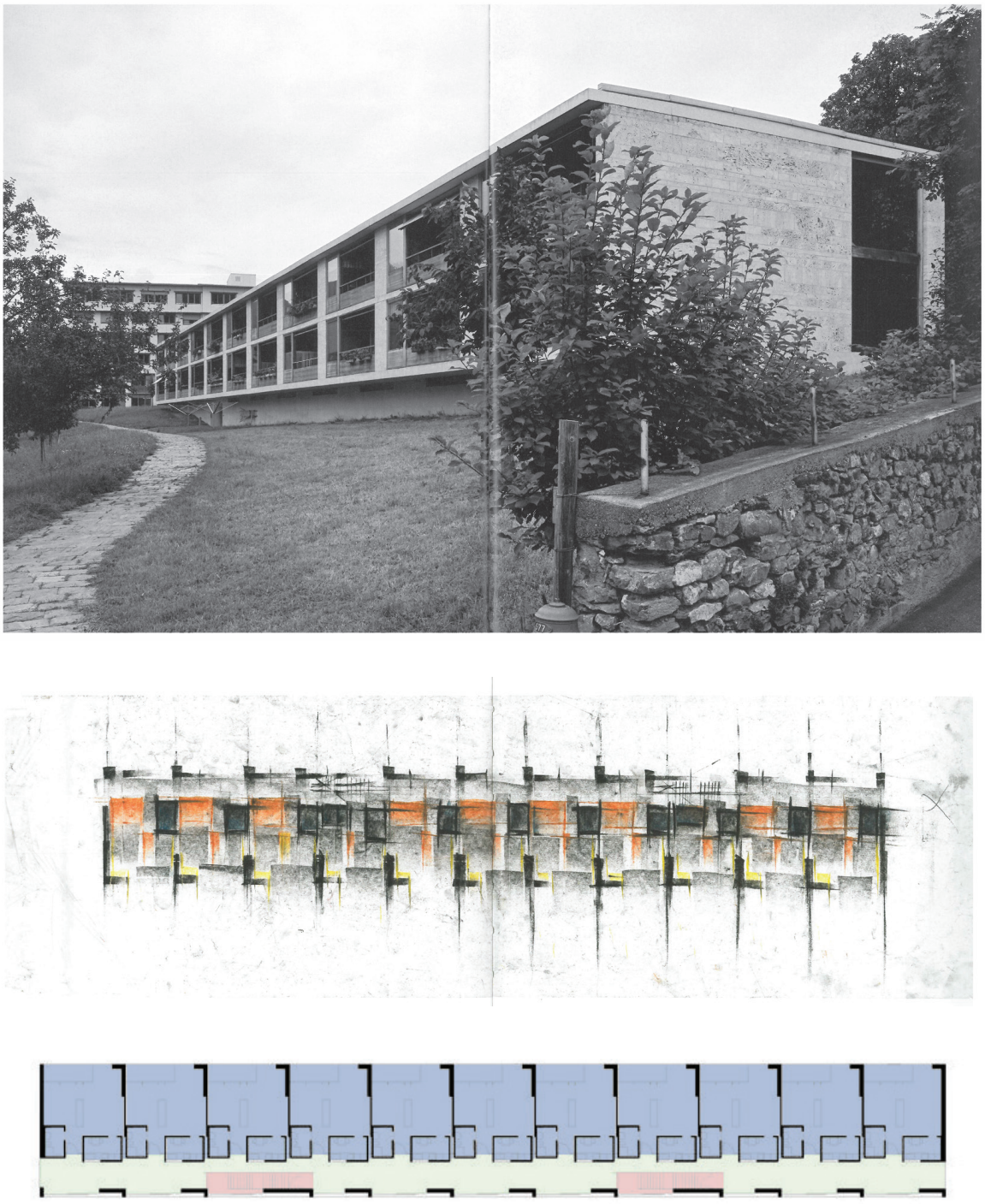


Fig. 18 Apartments for Senior Citizens

ASSISTED LIVING/RESIDENTIAL CARE

Name: Cronstettenhaus

Location: Frankfurt Au Main, Germany

Architect: Frick Reichert Architekten

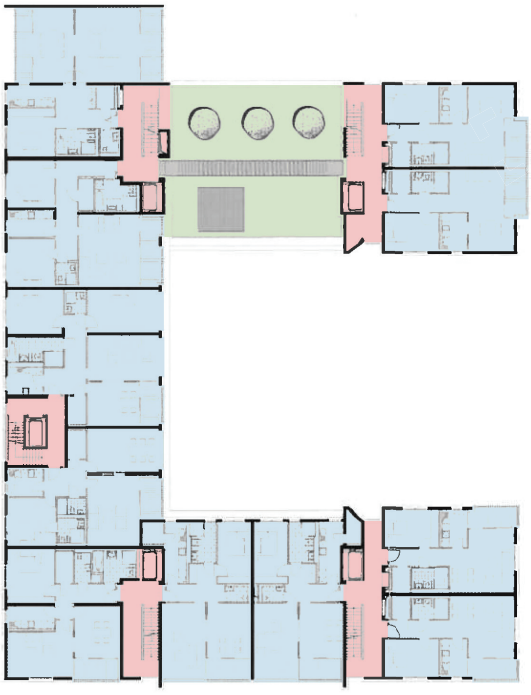
Completed: 2006

The U-shaped floor plan of the Cronstettenhaus is divided into five sections, each with their own access stair and elevator. From a common entrance on the north side, residents and visitors pass through a lobby into the central entrance hall. From here, one can reach the apartments. The entrance hall is adjacent to an open arcade that runs around the perimeter of the interior courtyard garden. In front of this garden is a small square that opens southwards via a gate onto the harbor promenade. The arcade leads to four additional staircases which provides access to the apartments. The ground floor, which acts as a plinth on which the building sits, contains a care station and a variety of communal amenities such as a party room, art room, gym and club room.

Design Concept: Urban Redevelopment - Importance of Density

The Cronstettenhaus is situated on a site that lies directly alongside a harbor separated from the River Main by a pier. This project is part of a larger scheme to redevelop the rundown site of Frankfurt's former trading port into a modern urban center with offices, apartments, shops and restaurants. The Cronstettenhaus extends in an east-west direction in between the banks of the harbor basin and the main road, the Speicherstraußе.[10] The building matches the height of its urban surroundings with its 8-storey high section but towards the harbor basin, the building starts to step downwards, separating out into a series of individual sections along the harbor promenade. With its set-back facade and continuous balconies, the Cronstettenhaus is able to differentiate itself from the rest of the redevelopment, creating a haven for older adults who want to spend the rest of their lives in a dense urban setting.





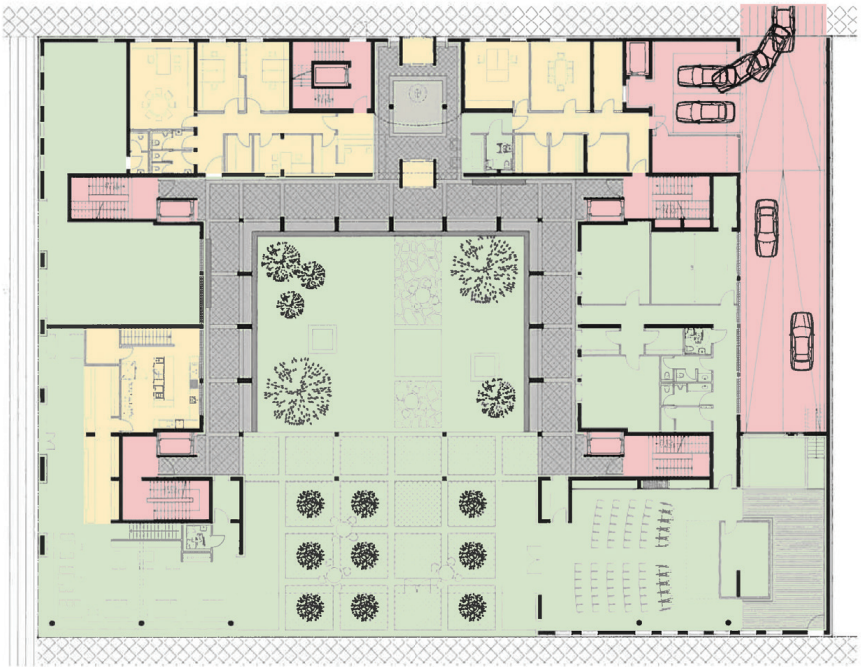


Fig. 19 Crostettenhaus

NURSING HOME/LONG TERM CARE

Name: Kenyuen Home for the Elderly

Location: Wakayama, Japan

Architect: Motoyasu Muramatsu

Completed: 2007

The design of Kenyuen Home for the Elderly utilizes nature as a means of rehabilitation, to help the elderly find their way back into a normal way of life. As such, it was important for the architect to create spaces that were not restrictive. All of the single rooms can be personalized by its occupant and the bed is arranged so that residents are awoken by the morning sun. The extensive volume of the building resulting from its Z-shaped form made it possible to create a variety of spaces with varying degrees of intimacy and openness. Private spaces are programmed alongside a system of semi-private and public areas, much like a village. The central wing is the most public area of the building and contains a fully-glazed two-storey dining hall with a gallery, as well as an extensive outdoor terrace and reception hall on the first floor. Therapeutic facilities such as a gymnastics room, swimming pool and traditional Japanese baths are located in the areas adjoining the central wing.

Design Concept: Poetics - Integration of Nature

Kenyuen Home for the Elderly is situated at the southernmost point of the Japanese mainland on a cliff, overlooking the Pacific Ocean in Wakayama Regional Park. This building was designed specifically for residents whose lives revolved around the cycles of nature and rhythm of the seas, such as farmers or fishermen.[11] The minimal form of the building contrasts strongly against the wilderness of the coastal landscape. The three storeys of the building are layered like bands of rock. Full-height glazing and the narrow width of the building allows the outside world to penetrate inside the building, creating a seamless transition between the interior and exterior.







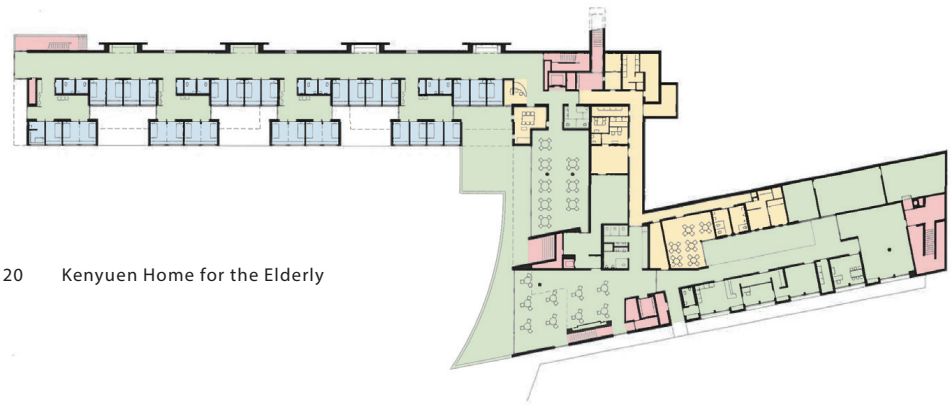


Fig. 20 Kenyuen Home for the Elderly

It is inspiring to see the breadth of innovation and care these precedents present with regards to the development of an architecture that responds to the needs of an aging population. These facilities reflect the cultural idiosyncrasies of their site, climate conditions, religious and cultural beliefs, and public health systems. Each and every design produces an original solution to suit their unique conditions.

Even before I began my thesis research, I had known that I had wanted my design proposal to provide a holistic approach to elderly care that not only eliminates age segregation, but will also provide a more sustainable and cost-effective approach. As Mary Lindsey from AIS had suggested, the design of such a facility should act as a care hub which includes varying degrees of medical support and community services. The programming of this building should support the concepts of "aging-in-place", allowing older adults to stay in their homes and live independently for longer. When their care needs become greater, the building can provide services that allow the elderly and their family time to make necessary care arrangements. Because of the multi-use services that this facility provides, it becomes an institution that is beneficial to all members within a community and thus can be used to promote intergenerational relations.

An example of this model of care is analyzed in the following precedent, which is based on the concept of PACE – Program of All-Inclusive Care for the Elderly:

> "The PACE Model of Care is centered on the belief that it is better for the well-being of seniors with chronic care needs and their families to be served in the community whenever possible… Delivering all needed medical and supportive services, a PACE program provides the entire continuum of care and services to seniors with chronic care needs while maintaining their independence in their home for as long as possible".[12]



Fig. 21 Carefirst One-Stop Multi-Services Centre

THE PACE MODEL

Name: Carefirst One-Stop Multi-Service Centre

Location: Scarborough, Ontario, Canada

Architect: Montgomery Sisam Architects

Completed: 2015

The first of its kind in Canada, Carefirst One-Stop Multi-Service Centre is a community-based health and wellness organization. It is catered to a growing population of Chinese and Southeast Asian seniors in the Greater Toronto Area. Mindful of the values that define these cultures, the design draws on the planning principles of a traditional Chinese courtyard house to offer its users a familiar and comforting care environment. The highlight of this facility is its lush garden which is placed at the heart of the building and provides an amenity for gardening, as well as a space for meditation and exercise.

Design Concept: Integration and Community-Building

This facility is based on the PACE model of care so its design facilitates the integration, coordination and delivery of preventative, primary, acute and long-term care services; therefore, consolidating the programs of different buildings into one. This care hub supports a family health team, a 30-bed short-stay transition care program, an adult day program, mental health counselling, wellness coaching, social services, chronic disease management, vocational training and health education.[13] This facility and its services allows the seniors in the surrounding neighborhood in continuing to live safely, healthily and independently.





Fig. 22 Carefirst One-Stop Multi-services Centre

1 Gawande, Atul. *Being Mortal: Medicine and What Matters in the End* (Toronto: Doubleday Canada, 2014), 15.

2 Anderzhon, Jefrrey, et al. *Design for Aging: International Case Studies of Building and Program* (Hoboken: John Wiley & Sons, 2012), 275.

3 Anderzhon, Jefrrey, et al. *Design for Aging: International Case Studies of Building and Program* (Hoboken: John Wiley & Sons, 2012), 275.

4 Anderzhon, Jefrrey, et al. *Design for Aging: International Case Studies of Building and Program* (Hoboken: John Wiley & Sons, 2012), 278.

5 Anderzhon, Jefrrey, et al. *Design for Aging: International Case Studies of Building and Program* (Hoboken: John Wiley & Sons, 2012), 275.

6 Anderzhon, Jefrrey, et al. *Design for Aging: International Case Studies of Building and Program* (Hoboken: John Wiley & Sons, 2012), 280.

7 Feddersen, Eckhard; Lüdtke, Insa. *Living for the Elderly: A Design Manual* (Basel: Birkhäuser Verlag AG, 2009).

8 Accessory Dwelling Unit Development Progam, last modified 2017. http://www.cityofsantacruz.com/departments/planning-and-community-development/programs/accessory-dwelling-unit-development-program

9 Zumthor, Peter. P*eter Zumthor, 1985-1989: Buildings and Projects, Volume 1*, ed. Thomas Durisch. (Zurich: Scheidegger & Spiess, 2014).

10 Feddersen, Eckhard; Lüdtke, Insa. *Living for the Elderly: A Design Manual* (Basel: Birkhäuser Verlag AG, 2009).

11 Feddersen, Eckhard; Lüdtke, Insa. *Living for the Elderly: A Design Manual* (Basel: Birkhäuser Verlag AG, 2009).

12 What is PACE?", last modified 2017. http://www.npaonline.org/pace-you#Philosphy

13 Carefirst One-Stop Multi-Service Centre, accessed February 7, 2017. http://www.montgomerysisam.com/projects/carefirst-one-stop-multi-service-centre

2.2

THE STRATEGIES: DESIGN GUIDELINES

"[Architecture] is employed more and more as a preventative measure which, by its very nature, limits the horizon of experience…"

- Robin Evans, *Figures, Doors and Passages*

Despite the constantly growing body of models for housing and systems of delivering healthcare and supportive services to the elderly, these models, much like the precedents presented in the previous chapter, are primarily based on an age-segregated approach. As a result, these environments present a homogeneous milieu, where the elderly are physically and socially isolated from the rest of society. However, Mary Lindsey from AIS proposes a different strategy and calls for a concept of no "special" buildings; where all buildings within a community are accessible – functional at all ages and adaptable to the changing concept of age.

As mentioned in a previous chapter, if the problem with these institutions is separation then perhaps the solution can be found through integration. Introducing integration using design can occur through site, program and the architectural qualities of the building itself.



Fig. 23 Older Adults Intereacting at the Food Court of Fairview Park Mall

2.2.1

SITE: THE MALL & THE CITY

"… the new culture of old age. In this context, education, social networks and housing conditions play a key role"

- Herrad Schenk, *The Adventure of Growing Old: On Growing Old and Staying Young*

In recent years, there have been attempts to rethink the current nursing home model by compartmentalizing larger buildings or by creating smaller communities. Some are self-contained housing units, each accommodating a small number of residents similar to a group home; whereas others are called "villages," suggestive of a small, intimate community where everyone knows each other and looks after one another. There are also examples of program hybridization with different building typologies, such as a daycare or a school, as a way to bring meaningful social engagement and establish multigenerational relations. These examples all aim to make the institutionalized environment of long-term care facilities feel more like a home. By creating a sense of familiarity, these examples seek to mitigate issues of isolation and depression.

But there is another area through which we can rethink the way we design institutions of eldercare – site. Although it is not always the case, geriatric care facili-

ties generally are not located in the heart of an urban or suburban core, on land that is considered to be "prime real estate". This seems counter-intuitive because for a population who may be less mobile like older adults, proximity and accessibility becomes very important. As such, my thesis proposes a new form of elderly care that reintegrates seniors into the community by placing them into the center of the suburbs, using the mall as an activator.

The concept of the shopping center as a social and civic center for the suburbs was first established by architect Victor Gruen:

> "The prospect of a more decentralized city, propelled by the growing dependence on the automobile led innovation architect Victor Gruen to argue in an important 1942 article in *Architectural Record that* shopping centers needed to become community centers… He recognized that suburbanization diminished the role of the urban center, emphasized life on the fringe and left a growing number of Americans without a nearby community or civic center. He believed - some say foolishly - that the shopping center could become a downtown for surbanites".[1]

As a result of suburban sprawl, the shopping center has become an active multifunctional space and the main public space for the suburbs. While privately owned and managed, the suburban mall is often a place for social reproduction. Because it offers a large degree of public access, a mall can create a safe and convenient location for people to gather and engage with others. For the elderly who often feel isolated or neglected, the mall can provide some respite. Besides a social space, the shopping center also contain stores that are essential to the daily lives of older adults, such as medical services, pharmacies and grocery stores. Therefore, being in close proximity to a mall can help facilitate accessibility for a group of peoples who may have problems with mobility.

Over time, malls have grown to become a microcosm of the city, combining residential living with the convenience of shopping and entertainment at one's doorstep. The shopping center, much like the city, is a complex open system that changes over time. The problem with many elderly care facilities are that they are modelled after closed systems such as prisons and hospitals. Therefore, they are not as flexible or adaptable to change even though they are very efficient. But the shopping mall offers a new way to rethink institutions of eldercare as an open system and provides a way to

integrate it into the fabric of the suburbs:

> "Healthcare consultant Christopher Press has argued that shopping malls offer more than a new location for medical services. He suggests that malls, along with airports, actually offer an organizational paradigm that would allow a more integrated system to emerge. He notes that for much of the twentieth century, the hospital has been organized on the factory model… The manufacturing model implies linear processes, economies of scale, and the ability to build something from disparate parts and to store the final product for eventual scale. Patients, conversely, act in nonlinear fashion, offer few economies of scale, are prepackaged as a complex integrated organism, and healthcare offers many services that cannot be stored.
>
> In suggesting that hospitals and other healthcare organizations look to airports and shopping malls for new ways to organize their activities, Press finds in these organizations a focus on **orchestration**, not manufacturing. These entities do not provide all the services themselves, but they orchestrate the spaces in which the various services are provided".[2]

The mall not only allows a way for architects to rethink the siting of geriatric care facilities but it can also serve as a way to rethink the institution as a system. Complex systems such as shopping malls focus on orchestration; therefore, the building becomes a facilitator. As such, if institutions of eldercare were to be designed based on such a system, it could become more adaptable to the changing concept of age and become functional for all ages. The goal is not for the system to solve every problem immediately but it should at least provide the basic infrastructure to do so. After all, we are in the midst of a demographic revolution that has never occurred before so we will never know what works or not. There is no right or wrong answer, nor is there a one-size-fits-all solution. "The appropriate attitude towards the future would be **curiosity**, a fundamental willingness to be exposed to new experiences and to arrange life as well as possible under changing circumstances. That is true both of growing old oneself and of the demographic aging of society".[3]

My thesis will also look into addressing some of the current programmatic challenges of the design of geriatric care facilities by using the mall as a means to

manipulate the partitioned uses of hospital and home. The specific programs of long-term care facilities are often a combination of these two uses. In effect, the inhabitants experience a severe juxtaposition between public and private spaces with no buffer in between. As such, it is necessary to look carefully at the building's programming and introduce spaces as thresholds where necessary to create a scale gradient. The shopping center can provide such a method:

> "Architectural and interior designers have responded to the hospital's dynamic nature and the unbundling of services into separate spaces by imagining the hospital as an assemblage rather than the unified multi-story block common during the mid-twentieth century. The shopping mall again provides a pertinent model. The mall ties together the individual stores through a circulation spine and by creating a common space".[4]

1 Sloane, David Charles and Beverlie Conant Sloane. *Medicine Moves to the Mall* (Baltimore: John Hopkins Press, 2003), 90-91.

2 Sloane, David Charles and Beverlie Conant Sloane. *Medicine Moves to the Mall* (Baltimore: John Hopkins Press, 2003), 170-171.

3 Huber, Andreas and Eidgenössische Technische Hochschule Zürich. *New Approaches to Housing for the Second Half of Life*. (Zürich: Birkhäuser, 2008), 16.

4 Sloane, David Charles and Beverlie Conant Sloane. *Medicine Moves to the Mall* (Baltimore: John Hopkins Press, 2003), 110.

2.2.2

PROGRAM: MUTUALITY & THE POTENTIAL OF INTERGENERATIONAL LIVING

"Healthy natural habitats consist of rich layers of biological diversity."

- William H. Thomas, *Life Worth Living*

"An old Balinese legend might help us to think more clearly about our own society and the way we relate to those we have labelled "the old" or "the elderly."

It is said that once upon a time the people of a remote mountain village used to sacrifice and eat their old men. A day came when there was not a single old man left, and the traditions were lost. They wanted to build a great house for the meetings of the assembly, but when they came to look at the tree-trunks that been cut for that purpose no one could tell the top from the bottom: if the timber were placed the wrong way up, it would set off a series of disasters. A young man said that if they promised never to eat the old men any more, he would be able to find a solution. They promised. He brought his grandfather, whom he had hidden; and the old man taught the community to tell top from bottom".[1]

As I had mentioned before, one of the main problems with regards to our current institutions is the problem of separation. We divide up our communities and our activities by age – the young in daycare and various levels of education; while the elderly are warehoused in retirement communities and nursing homes. As the world population continues to age, there is a lot of talk as to how we need to help our senior counterparts. But perhaps, they can help us. When we allow our world to be divided into different categories, we are essentially taking the care out of caring. To combat the problem of separation, we need to reintroduce integration. More specifically, we need to restore the concept of "mutuality" in our communities:

> "…[American-German psychologist Erik] Erickson saw the remarkable degree to which one generation depends on another. He labelled as "mutuality" the tendency of members of different generations to interact. [Austrian neurologist and founder of psychoanalysis Sigmund] Freud made the influence of the parent over the child the focus of his work. Mutuality broadened this view, recognizing the additional age-old truth that children actively shape the development of their parents. We can easily add the observation that grandparents can also be powerful influences in the lives of their grandchildren, and vice versa".[2]

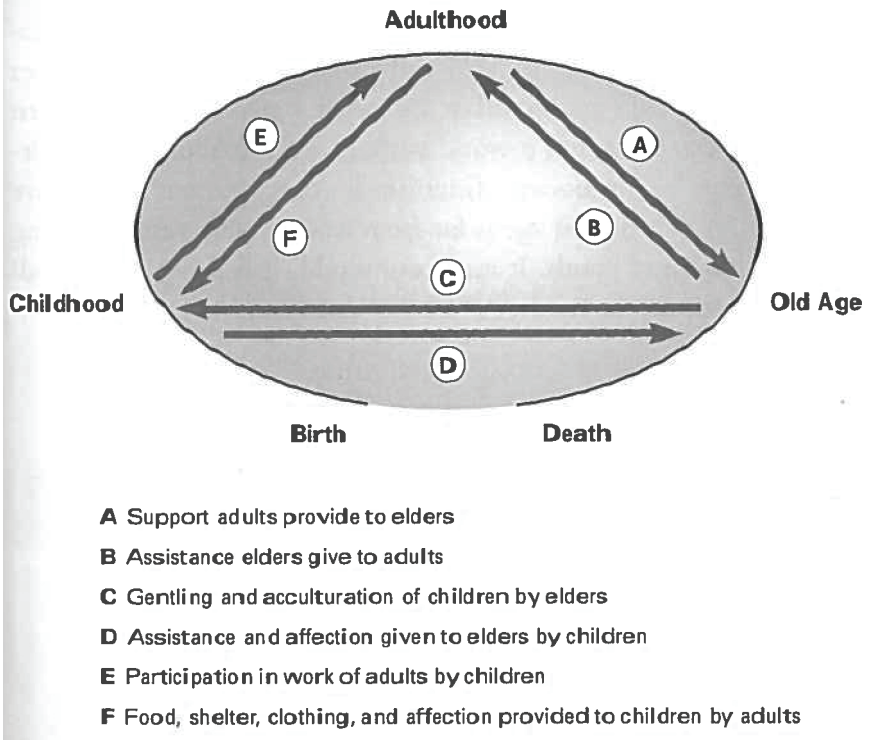


Fig. 24 Erik Erickson's Concept of Mutuality Between Generations

Grandparents, parents, children and grandchildren – all these age groups constitute the entirety of our human life cycle. The true core of caring is found being present with one other. It is the experience of life in a multigenerational, interdependent, richly complex community that will, more than anything else, help us learn how to be human again. If we can improve the standing of our elderly in society, and nurture what they can bring through intergenerational relationships, then perhaps we will build a better community and improve the quality of life for all ages.

A healthy environment, much like an ecosystem, is one that is socially cohesive and integrated. Opportunities for mutual support and collaboration between the different generations is a key factor for viability and sustainable growth. As such, a number of architectural theorists have advocated for a more heterogeneous social milieu within a community. Architect and design theorist Christopher Alexander is one such person: "Make certain that the full cycle of life is represented and balanced in each community".[3] Alexander has noted that the idea of balance in a community is one that calls for all ages to be present. As such, when designing such an environment, it is essential to establish supportive settings for each stage of life.

The main challenge of an intergenerational model is the complexity of multigenerational living and managing the conflicting needs of the various ages. To simplify the different categories of the human life cycle, the age groups have been broken down into three: childhood, adulthood and old age.

Children should be provided with access to pediatric healthcare services, activities outside school, sports facilities, daycare services and educational institutions. Spatially, the development should include an outdoor space for walking and playgrounds for social interaction. Programmatically, their environment should include spaces for exploration and playing, for studying, and for physical activities and other hobbies.

Adults should be provided with access to daily essentials (i.e. grocery store, pharmacy, etc.), leisurely activities (i.e. theater, library, etc.) and public transportation. Programmatically, their environment should include spaces for work, for social gathering and for physical activities and other hobbies.

The needs of the elderly are more complicated. For the early pensioners and independent older adults, access is needed to healthcare services, daily essentials (i.e. grocery store, pharmacy, etc.), leisurely activities (i.e. theater, library, etc.), public trans-

portation as well as caregiving and housekeeping services. Programmatically, their environment should include an outdoor and indoor space for walking, a space for work, places for social interaction and family gathering as well as places for physical activities and other hobbies. For the dependent older adults, there should be access to caregiving and housekeeping services that support their ADL (Activities of Daily Living) and IADL (Instrumental Activities of Daily Living) services, refer to Fig. 11. As this group may have limited physical and cognitive capabilities, it is important to facilitate proximity to spaces for physical activity, rest and social interaction.

An innovative model for the aging population and multigenerational living has been developed under the broader scope of "Integrated Living". The concept of "Integrated Living" generally means that the environment is designed for different groups of people, each with their own specific needs: the elderly, people with disabilities, children, etc.[4] By bringing together a diverse group of inhabitants, such an environment can foster a sense of community and mutual support between its residents. As such, "Integrated Living" can also be regarded as more economically feasible and sustainable approach for an aging population because it can supplement expensive institutional care. With the rising costs in healthcare, it is crucial that elderly care facilities shift towards a more community-oriented schema, where the collaboration and mutual support between the residents could ease the economic and social burden for society.





Fig. 25 Examples of "Integrated Living": the iGen Program at Sherbrookie Community Centre in Saskatoon (left) and Kipling Aces Long-Term Care Home in Toronto (right)

1 Nouwen, Henri J. M. *Aging*, trans. Walter J. Gaffney (Garden City: Doubleday & Company Inc, 1974), 15.

2 Thomas, William H. *What are Old People For?: How Elders Will Save the World* (Massachusetts: Vanderwyk & Burnham, 2004), 113.

3 Alexander, Christopher. *A Pattern Language: Towns, Buildings, Construction*. (New York: Oxford University, 1977), 145.

4 Schittich, Christian, ed. *In Detail: Housing for People of All Ages – Flexible, Unrestricted, Senior-Friendly*. (Basel: Birkhauser Verlag AG, 2007), 12.

2.2.3

ARCHITECTURE: DESIGN QUALITIES

"Architecture cannot change society but it can underwrite and enhance the basic activities of those who work in it."

- Charles Jencks, *The Architecture of Hope*

Legislation and economics can inform and evolve the spaces within our built environments. The new 2012 Ontario Building Code has undergone substantial changes with regards to the barrier-free requirements – proving that the needs of our society is in constant discourse. My thesis will use design investigations to connect the social, private, and healing aspects of geriatric care facilities by shifting the discourse to be less focused on the dimensional requirements in order to encourage the possibilities of promising spatial designs that will increase the quality of our lengthening lives. As described in the previous chapters, this thesis research will look to present a new strategy for designing, situating and programming elderly care facilities. This chapter will focus on architectural design qualities. It will look at how our architectural understanding of building materials, spatial positioning, light and dimensions, might evolve to play a role in improving the living conditions of our senior counterparts.

In a paper presented at the Design and Health 7th World Congress, architects Edward Applebaum and Robert Davies of Montgomery Sisam Architects discussed key architectural design qualities that are essential in all elderly care facilities regardless of size and type. To illustrate these concepts, I have utilized examples from the design precedents that were presented earlier:

HEALING QUALITY OF NATURAL LIGHT

> "The world of the senior can become very dark and depressing. Filling the environment we live in with an abundance of natural light promotes a strong sense of well-being and vitality, lifting the spirits not only of residents, but of staff and visitors as well".[1]

As I had mentioned in a previous section, when the miasmic theory of illness was prevalent, it was believed that diseases could be dispelled through the addition of natural ventilation and sunlight. As such, the design of the Pavilion Block hospital limited the use of partitions and provided an abundance of windows. Windows allow for the flow of natural light and ventilation into a space, but they also act as an important and symbolic architectural element.

"Natural daylight is life-affirming".[2] As people age, some of their senses may start to diminish but the ability to feel the heat of a ray of sunlight as it warms one's skin can still provide a sense of comfort. Access to sunlight can also allow people to maintain a sense of time, as the light and corresponding shadows change throughout the day. However, there may be times where sunlight must be controlled and, in some cases, eliminated: "…as the patient's condition diminishes, whether precipitously or gradually, many tend to begin the process of shutting down, and in so doing crave darkened spaces".[3] Therefore, the lighting in a room must be flexible; equally conducive to letting in sunlight as well as providing a darkened environment should the resident request for it.

Window placement, height and hardware are also important factors to be considered, especially for seniors who may have diminishing physical capabilities. Of equal importance is what the window is framing and the view that the room looks out onto. A window serves a dual purpose, as a view out into the exterior and a frame of the interior, therefore making it an important architectural element to consider.

Kamigyo Daycare Center is a great precedent in presenting the importance of natural light in architecture. Instead of a traditional door, the entrance into the center is through a sliding timber screen which creates a sense of transparency and lightness. Windows were integrated into this building to correspond and suit the needs of each of the different spaces. The view into the courtyard garden is created by floor to ceiling windows which allows the interior space to be lit with natural light. In contrast, the lighting in the traditional tea ceremony room is intimate with windows placed in unconventional locations in order to capture views of the city as well as create a softer, more diffused light.

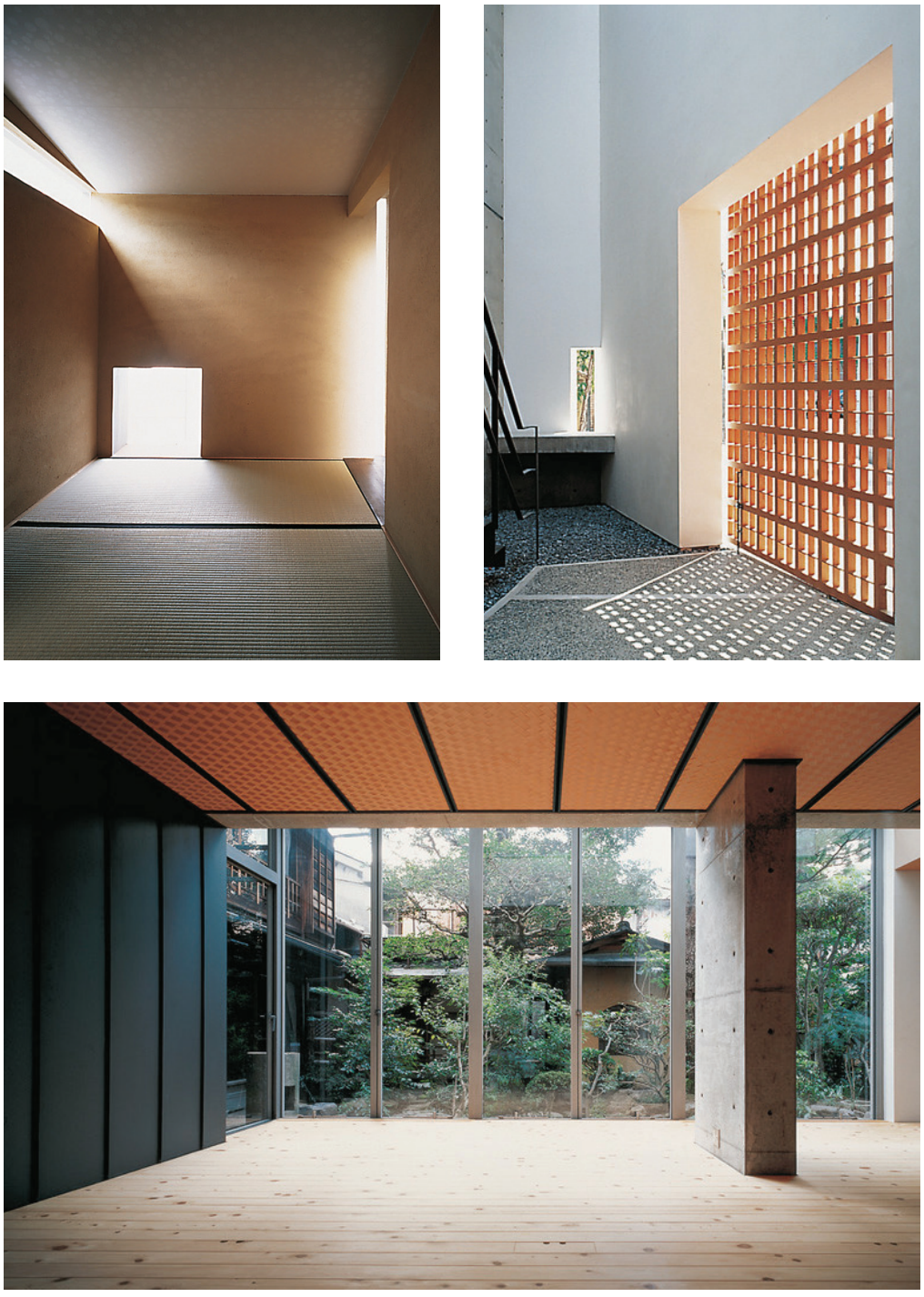


Fig. 26 Kamigyo Daycare Center

INSIDE-OUTSIDE CONNECTION

> "As we age and become less mobile, it becomes more critical to provide the elderly with a sense of the outdoors to combat their sense of isolation from the world around them. Generous windows with low sills that are well located to provide attractively framed views bring the outdoors experience directly to the residents. Easy barrier free access to outdoor therapeutic gardens must be fully integrated into the design".[4]

Using nature to simulate a familiar environment, Kenyuen Home for the Elderly utilizes nature as a means of rehabilitation to help the elderly regain control over their lives. The building was designed specifically for farmers and fisherman whose lives revolved around the cycles of nature and the rhythm of the sea. As such, the building is situated in the heart of nature: at the southernmost point of the Japanese mainland on a cliff, overlooking the Pacific Ocean in Wakayama Regional Park.[5]

As I have experienced from visiting my grandfather in his nursing home in the past, a sterile environment can compound the unease that residents and their families feel when residing in an elderly care facility. As such, an outdoor garden and the inclusion of plants inside the building can be used to alleviate this feeling.

The outdoor garden gives an opportunity to bring aspects of nature into the building. It can also act as a source of activity for the inhabitants – a vegetable and herb garden for the residents to maintain and take responsibility for. The harvest from this garden can also be used as the ingredients in the preparation of the meals that are provided within the facility. Although this garden may only be small and of a manicured or controlled nature, it can still contribute to improving the entire ethos of eldercare.

In addition to the benefits to the human spirit, the inclusion of plants inside a building can also help to improve the overall indoor air quality. Plants can increase the relative humidity and decrease the number of bacteria in the air: "Nature has built into plants the ability to use our wastes for their nourishment… [It's] about time we humbled ourselves and used this system".[6]



Fig. 27 Kenyuen Home for the Elderly

COMMUNITY/PRIVACY

> "Developing meaningful relationships and finding companionship becomes increasingly more challenging for the elderly in long term care. Designing public spaces of different scales and character draw residents together, which are naturally complemented by more private bedrooms for quiet repose is critical to the overall success of the home".[7]

As a healthcare model that combines home-based and center-based services, Carefirst One-Stop Multi-Services Centre demonstrates the importance of designing multi-functional spaces that provide a stimulating environment that can on the one hand, provide opportunities for socialization and on the other hand, provide moments of privacy and respite.

As I had mentioned in a previous chapter, my thesis will look into addressing some of the current programmatic challenges of the design of elderly care facilities by manipulating the partitioned uses of hospital and home. The specific programs of geriatric care facilities are essentially a combination of these two uses. Therefore the inhabitants experience a severe juxtaposition between public and private spaces with no buffer in between.

As such, it is crucial to look carefully at the programming of the building and introduce spaces as thresholds where necessary to create a scale gradient. One can step out from their bedroom into a communal living room, then into a small community space before entering a larger common facility. The introduction of small-scale spaces and the addition of a residential-like distribution of programs will help soften the transition between the small private environment of one's bedroom and the larger scale of the building as a whole.

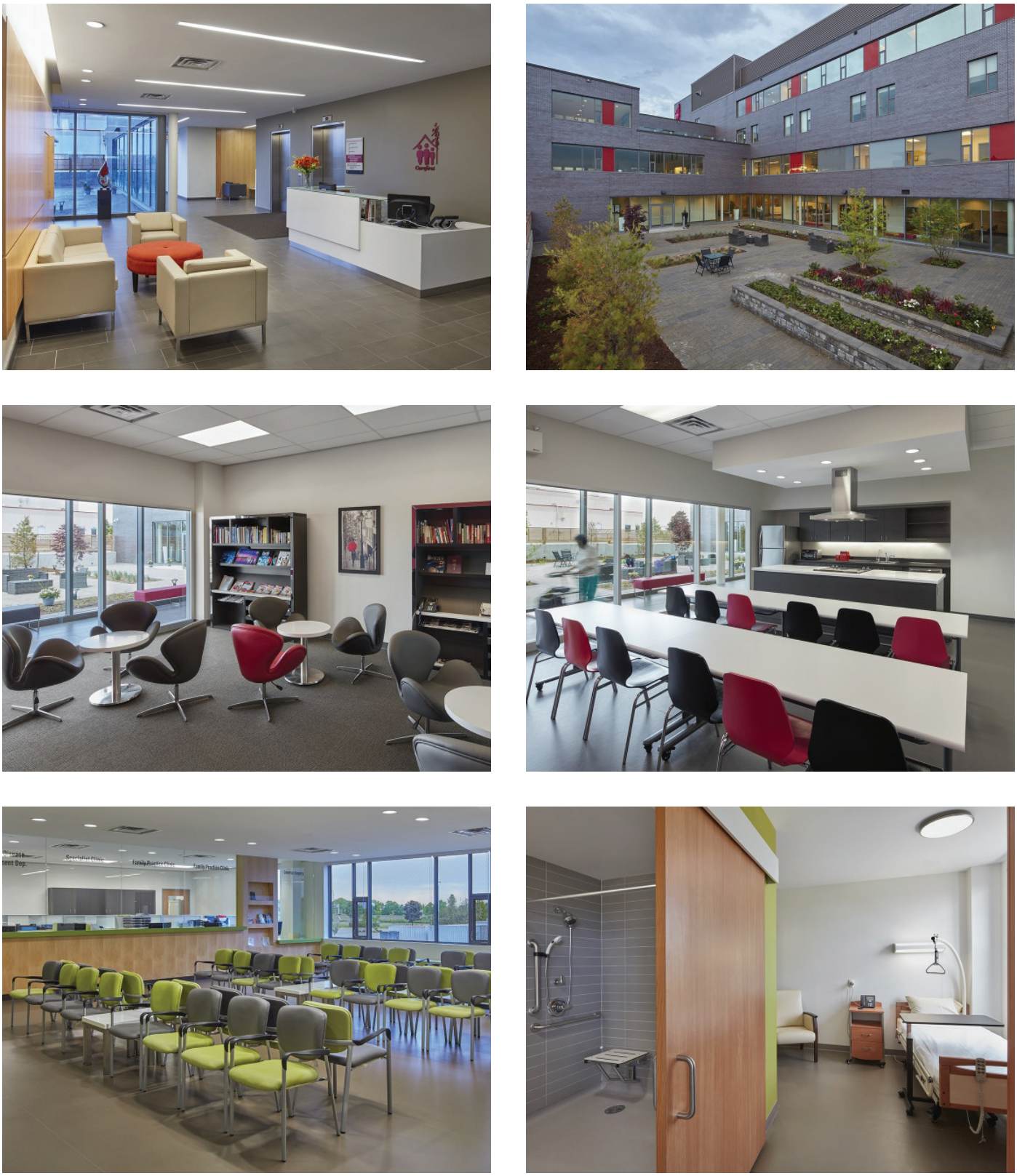


Fig. 28 Carefirst One-Stop Multi-Services Centre

COLOUR/TEXTURE

> "The appropriate use of color and texture adds delight and enjoyment to the resident's day to day life. The design approach must encompass a full understanding of the aging eye and its relationship to spatial perception as well as cognitive impairment in order to be successful".[8]

In the design of spaces, there is the dimensional qualities – the configuration of the space, its floor plan and the proportions of the room, etc., and the visible material surfaces – the floor, ceiling, walls, windows and doors, etc. Architects often consider color at a very late stage in the design and construction process, as if it were just an element of décor to be added when all else is finished. But the design of color concepts actually begins much earlier on with the selection of materials. For example, wood, metal and concrete all have different colors and textures. Together with light, colors and textures can change the way a space is perceived and the impression it creates. Color can also be used for wayfinding and help differentiate between the different functions within a building – how the space is used, who can use the space, what needs to be emphasized, what should be receded into the background, etc.

Frederike Tebbe, the founder of studio farbarchiv, believes that there is a strong connection between color and memory which can be used as a form of stimulation when designing for those with diminishing cognitive capabilities like dementia and Alzheimer's:

> "As humans, we are able to differentiate between some eleven million different shades of color, but we can only identify on average around eight to ten colors. Because we experience colors with our senses, to describe them we rely on analogies and associative terms that we have connected with our impressions of a color and retained in our mind's eye… Unlike forms, we do not perceive colors as something complete. We don't grasp them intellectually in their entirety; we sense them as an idea. Our collective context and personal sensibilities play a key role in the place, connotation and value we accord to color".[9]

The Apartments for Senior Citizens in Chur is an excellent example of the importance of color and materiality in evoking memories and building a sense of familiarity. In this project, architect Peter Zumthor utilized a palette of tufa masonry, exposed concrete ceilings and larchwood; all of which are familiar to the people within the area. Graubunden tufa is a material that was once used for important public buildings and the waxed larchwood floors are made of thick boards fixed onto a lath underlay so they sound hollow when walked upon.[10]



Fig. 29 Apartments for Senior Citizens

FLEXIBILITY OF USE

> "The guiding principles of universal design are being applied throughout the design of long term care homes. This has resulted in highly amenable yet flexible spaces which support a multitude of uses and allow easy access for residents with limited mobility or other special needs issues. The trend away from dedicated to flexible spaces has created more dynamic environments in the homes, spaces that can be used for groups of varying sizes and spaces that draw in the community for special events. Higher more concentrated levels of activity brings energy and liveliness to the home, making it a far more positive environment to live in, visit or work in".[11]

A highly amenable yet flexible space can be achieved through creating a polyvalent, multi-functional space or through an open plan. According to architecture professor Bernard Leupen, polyvalent spaces allows for the possibility to change functions and activities between rooms. Therefore the spatial relationship, programming and circulation between the rooms is very crucial.[12] On the other hand, an open plan is a generic empty space in which the function is undetermined. This gives the residents an opportunity to fill the space and use it for whatever function they choose.

As I mentioned in a previous section, it is becoming increasingly difficult to make universally-valid statements or generalizations with regards to older adults. As such, it is essential that the spaces we design can accommodate a variety of different needs. This is important not only because it is a response to an older adult's changing needs over time, but because it is crucial for developing a sense of autonomy and user agency. To allow an inhabitant to become more familiar and comfortable within their environment, they should be given the opportunity to personalize their own space. The space where one lives should be open to their own interpretation. This can evoke a sense of belonging and build a sense of ownership between the resident and the space they are inhabiting. A sense of home is informed when one is able to leave their own mark, which can have a positive impact on the cognitive health of the residents.

A precedent of this principle is the City of Santa Cruz Accessory Dwelling Unit (ADU) Development Program, which promotes the use of "Accessory Dwelling Units (ADUs)" or "granny flats" on single family lots. The city created a comprehensive manual - a how-to guide for ADU planning, approval and construction, including seven prototype designs.[13] The prototypes range in unit type and vary in styles ranging from traditional to modern. There were also designs that incorporate different site conditions and material approaches, including sustainable options. The designs are intended to be highly adaptable and can serve as either aesthetic guides or actual plans.

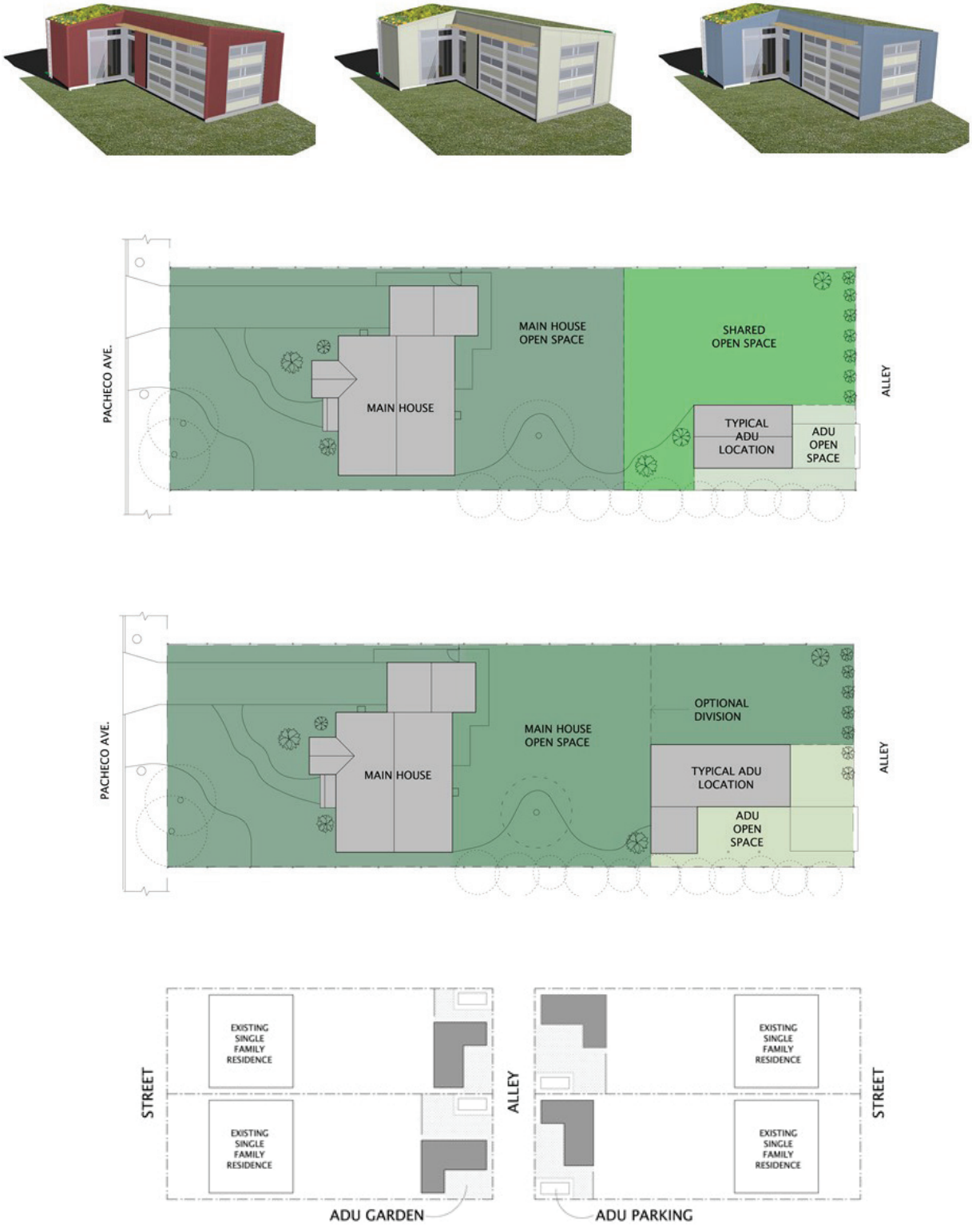


Fig. 30 City of Santa Cruz Accessory Dwelling Unit (ADU) Development Program

HEALTHY/SUSTAINABLE ENVIRONMENTS

> "All buildings in today's world must make a serious commitment to promoting sustainability. Responsible design decisions will be considered and made as part of the integrated design process including improving indoor air quality, selecting recycled materials, choosing the most energy efficient building systems, etc".[14]

With the implementation of the new Ontario Building Code 2012 and its comprehensive updates for Supplementary Standard SB-10 and SB-12, there is an increasing emphasis placed on buildings to be sustainable and energy efficient. This is understandable considering the large impact that the act of construction has on the environment.

Construction consumes a significant amount of materials such as wood, steel, concrete, glass, aluminum, etc. These materials must be extracted from the natural environment, which may lead to habitat destruction. Material extraction is also energy consuming. Physically assembling a building also utilizes a large amount of energy, which is usually harvested from nonrenewable energy sources such as coal, oil, or natural gas. The harvesting of fossil fuel releases carbon dioxide and air pollutants into the atmosphere, in addition to contributing further to resource extraction and habitat destruction.

Density can also influence the environmental impact of the built environment. A dispersed, low-density development becomes dependent on automobiles, which runs on fossil fuels. As such, healthy communities should aim to be walkable, accessible and mixed-use. An example of such is the Cronstettenhaus. The project is part of a larger redevelopment to revitalize the derelict site of Frankfurt's former trading port into a modern urban center with offices, apartments, shops and restaurants.[15] Although the building is designed for the elderly, the architects chose to locate it within a larger urban center. Therefore, the development facilitates proximity to services and activities for a population that is generally less mobile, allowing them to walk to places instead of relying on cars.







Fig. 31 Crostettenhaus

1 Applebaum, Edward and Robert Davies. "*Caring for the Elderly: Is Big Bad, Better or Both?*" (Paper presented at the Design and Health 7th World Congress, Boston, July, 2011).

2 Verderber, Stephen. *Innovations in Hospice Architecture* (New York: Taylor and Francis, 2006), 70.

3 Verderber, Stephen. *Innovations in Hospice Architecture* (New York: Taylor and Francis, 2006), 70.

4 Applebaum, Edward and Robert Davies. "*Caring for the Elderly: Is Big Bad, Better or Both?*" (Paper presented at the Design and Health 7th World Congress, Boston, July, 2011).

5 Feddersen, Eckhard; Lüdtke, Insa. *Living for the Elderly: A Design Manual* (Basel: Birkhäuser Verlag AG, 2009).

6 Thomas, William H. *Life Worth Living: How Someone You Love Can Still Enjoy Life in a Nursing Home – The Eden Alternative in Action*. (Acton: Vanderwyk & Burnham, 1996), 144.

7 Applebaum, Edward and Robert Davies. "*Caring for the Elderly: Is Big Bad, Better or Both?*" (Paper presented at the Design and Health 7th World Congress, Boston, July, 2011

8 Applebaum, Edward and Robert Davies. "*Caring for the Elderly: Is Big Bad, Better or Both?*" (Paper presented at the Design and Health 7th World Congress, Boston, July, 2011).

9 Feddersen, Eckhard. *Lost in Space: Architecture and Dementia*, ed. Insa Lüdtke (Basel: Birkhäuser Verlag AG, 2014), 28.

10 Zumthor, Peter. *Peter Zumthor, 1985-1989: Buildings and Projects, Volume 1*, ed. Thomas Durisch (Zurich: Scheidegger & Spiess, 2014).

11 Applebaum, Edward and Robert Davies. "*Caring for the Elderly: Is Big Bad, Better or Both?*" (Paper presented at the Design and Health 7th World Congress, Boston, July, 2011).

12 Leupen, Bernard. "Polyvalence, a concept for the sustainable dwelling". *Nordic Journal of Architectural Research*, Volume 19, N 3 (2006), 23.

13 Accessory Dwelling Unit Development Progam, last modified 2017. http://www.cityofsantacruz.com/departments/planning-and-community-development/programs/accessory-dwelling-unit-development-program

14 Applebaum, Edward and Robert Davies. "*Caring for the Elderly: Is Big Bad, Better or Both?*" (Paper presented at the Design and Health 7th World Congress, Boston, July, 2011).

15 Feddersen, Eckhard; Lüdtke, Insa. *Living for the Elderly: A Design Manual* (Basel: Birkhäuser Verlag AG, 2009).

2.3

THE PROTOTYPE: DESIGN EXPLORATIONS

"If anything is described by an architectural plan, it is the nature of human relationships..."

- Robin Evans, *Figures, Doors and Passages*

The design of this thesis involved many iterations at various scales. Its constant re-development has resulted in the final proposed design which will be presented in the last section of my thesis. However, one of the early design explorations will be presented in this chapter. Please note that the final proposed design is developed on a different site than the one that will be used for this chapter.

The site I have chosen to test out my design experiment is Shops at Don Mills at the southwest corner of Lawrence Avenue East and Don Mills Road. Shops at Don Mills is part of the Banbury-Don Mills Neighborhood within the City of Toronto. According to the 2011 census, seniors constitute 23% of the neighborhood's population.[1] Directing across from my site, there are four existing elderly care facilities, all of which provide different levels of care. The current context surrounding the site is relatively low to mid-density, with the tallest buildings being 8 storeys in height. In terms of neighborhood amenities, most notably, there are a few schools, churches, a library and an existing hockey arena directly within my site.

It should be noted that there is a masterplan currently being developed for this site. The developer Cadillac Fairview has already been approved for an additional 8 residential towers, which will add approximately 1500 residential units onto the site. I have also discovered that as of this December 2015, the developer has applied for rezoning for the northwest corner of the site in order to construct an additional 2 towers, one of which will be 34 storeys in height and the other will be 39 storeys in height, adding an additional 700 residential units onto the site. The plan also includes demolishing the existing hockey arena and creating a new community center and public park.

As such, my first design attempt was on a masterplan level because I wanted to address some of the issues with the proposed masterplan. When I visited the site, I thought that the existing park felt like an afterthought; it was an awkward shape, bare and underutilized. As a result, my strategy was to take the total surface area of the existing park and redistribute it amongst the site in order to create new axes. In addition, I proposed to maintain the existing hockey arena and created a new building adjacent, which will be the actual design proposal. The one elderly care typology that is currently missing from the neighborhood is an Adult Day Care facility. As such, as the first iteration of this design exploration, the intention of this building was to create a new form of elderly care that promotes intergenerational contact between the youngest and oldest members of our society through combining an early childhood education program with a senior's center to form an age-inclusive day service facility. Because this program will be the first of its kind in the neighborhood, it can be utilized to complement the existing elderly care facilities in the vicinity, thus creating a holistic and comprehensive network of supportive services. This proposal is based on the Japanese model of care, the Toyama-style Day Care Facility:

> "As early as from 1995, some private day-care centers in Toyama Prefecture had provided care to people regardless of age, in a home-like facility. After the implementation of the Long-term Care Insurance System in 2000, these facilities became designated day-service facilities for the elderly. In 2003, the government approved the "Toyama-style Day Care Promotion Special Zone, enabling these facilities for the elderly to also provide care to people (including children) with disabilities in the same environment. The philosophy behind this program was the creation of a welcoming and hospitable society with a small multi-functional care facility for the elderly, the disabled and the infant under a single roof".[2]

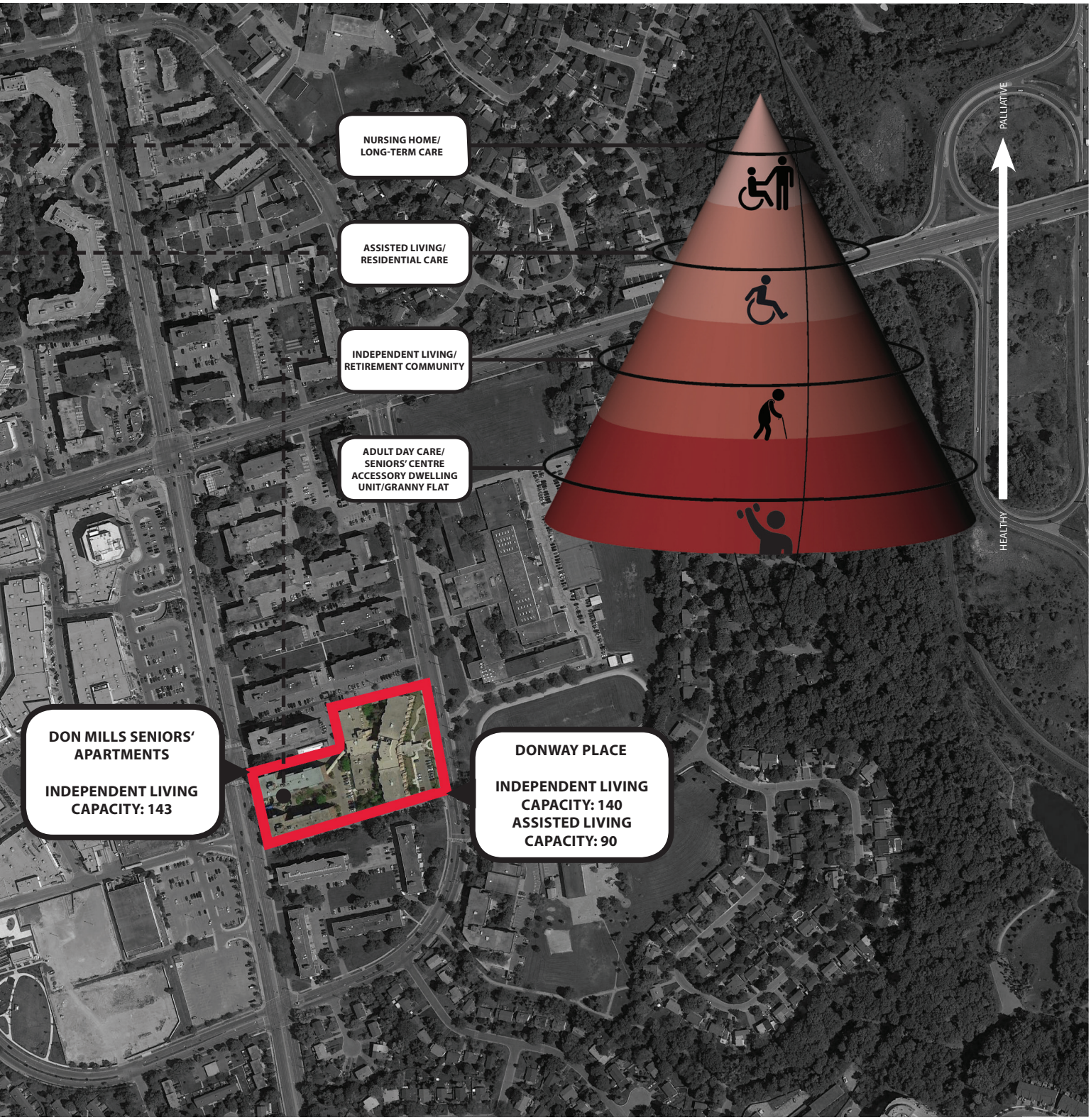


Fig. 32 Analysis of Site in Relation to its Surrounding Neighbourhood


LEGEND
Community Centre
Elderly Care Facilities
Schools
Library
Place of Worship



Fig. 33 Analysis of Site in Relation to Existing Elderly Care Facilities


NURSING HOME/
LONG-TERM CARE
ASSISTED LIVING/
RESIDENTIAL CARE
INDEPENDENT LIVING/
RETIREMENT COMMUNITY
ADULT DAY CARE/
SENIORS' CENTRE
ACCESSORY DWELLING
UNIT/GRANNY FLAT
PALLIATIVE
HEALTHY
DON MILLS SENIORS'
APARTMENTS
INDEPENDENT LIVING
CAPACITY: 143
DONWAY PLACE
INDEPENDENT LIVING
CAPACITY: 140
ASSISTED LIVING
CAPACITY: 90

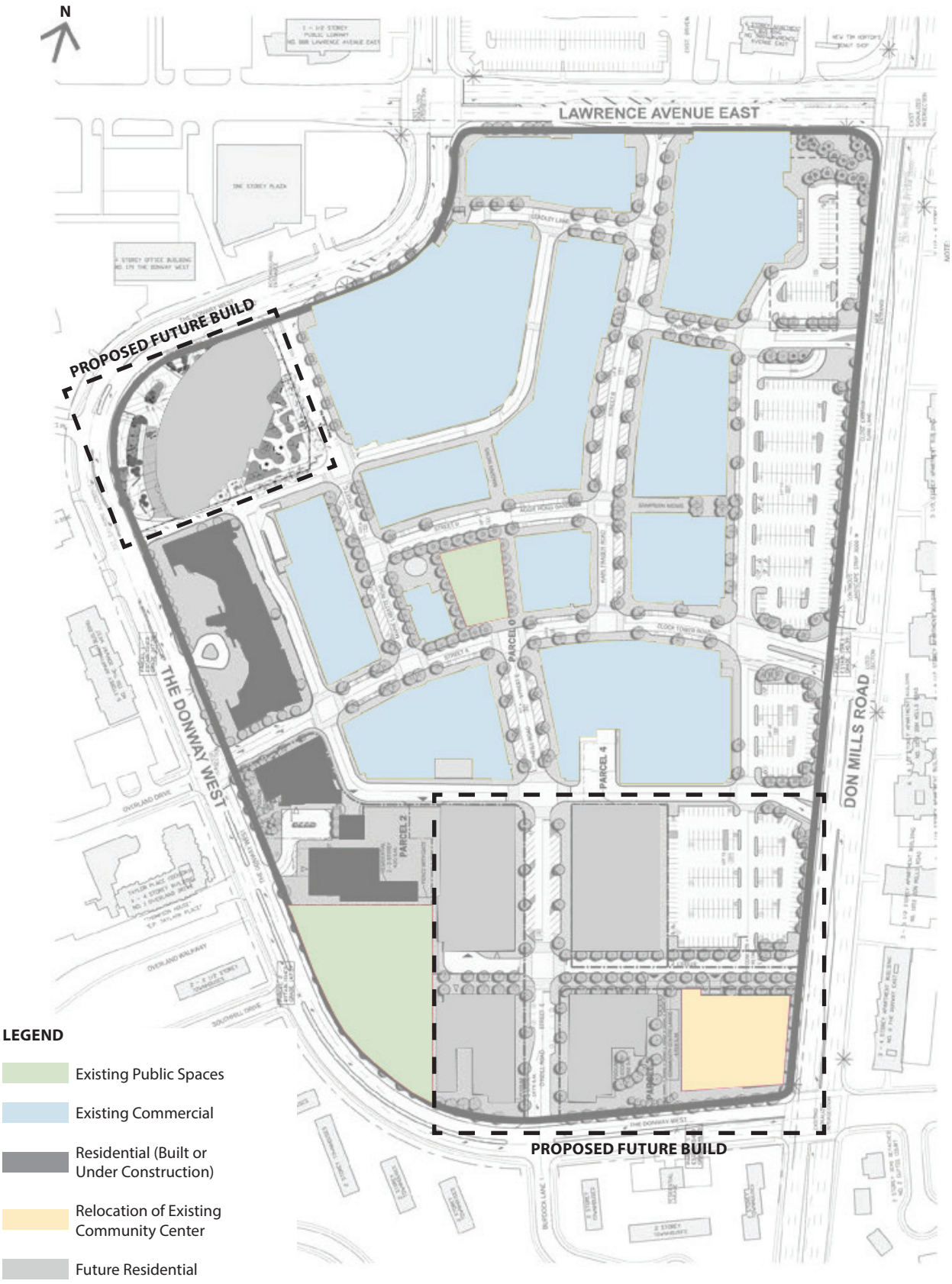
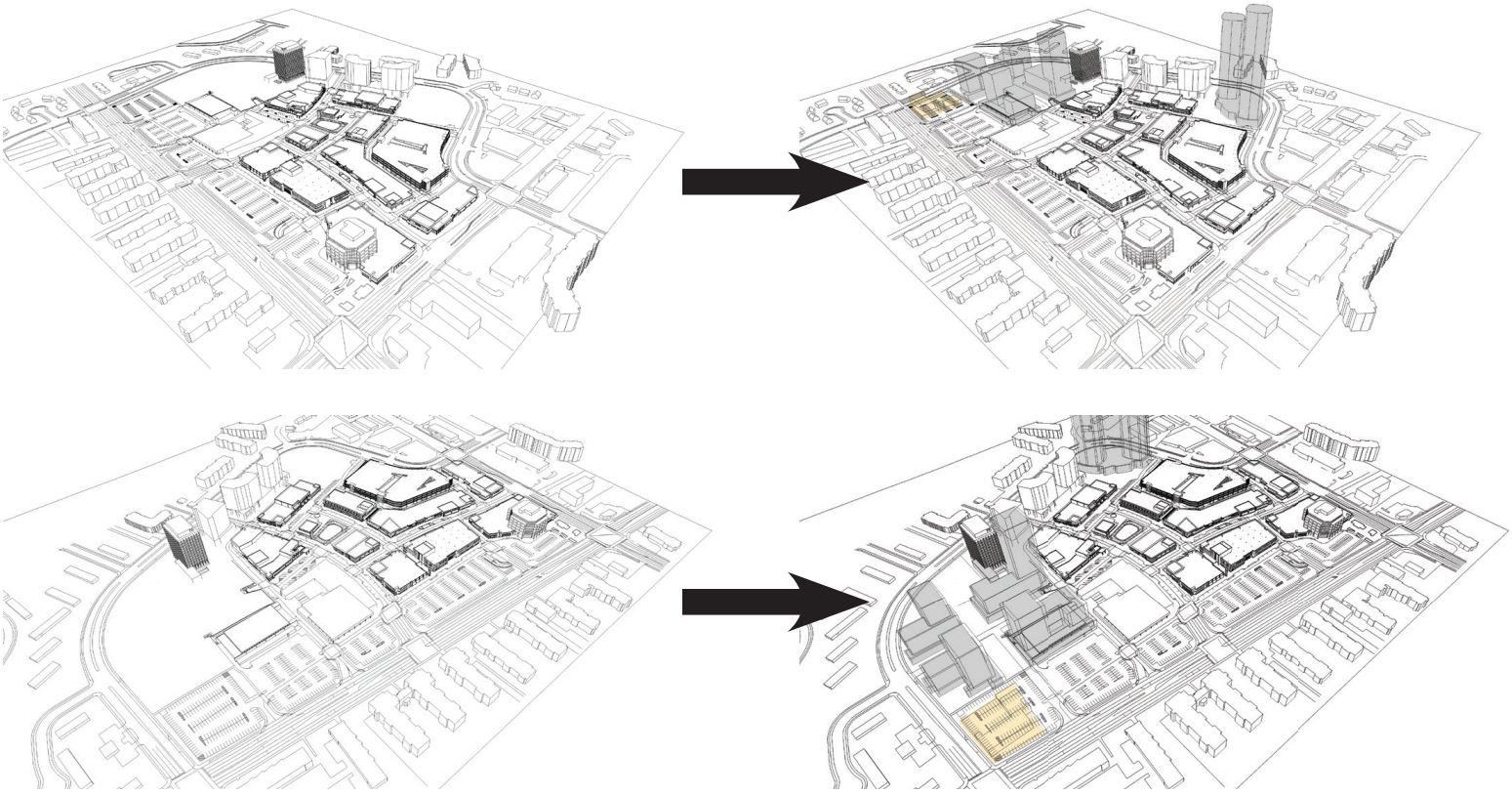


Fig. 34 Analysis of Developer's Proposed Masterplan



CURRENT CONDITIONS **DEVELOPER'S PROPOSED MASTERPLAN**

Fig. 35 Visualization of Developer's Proposed Masterplan

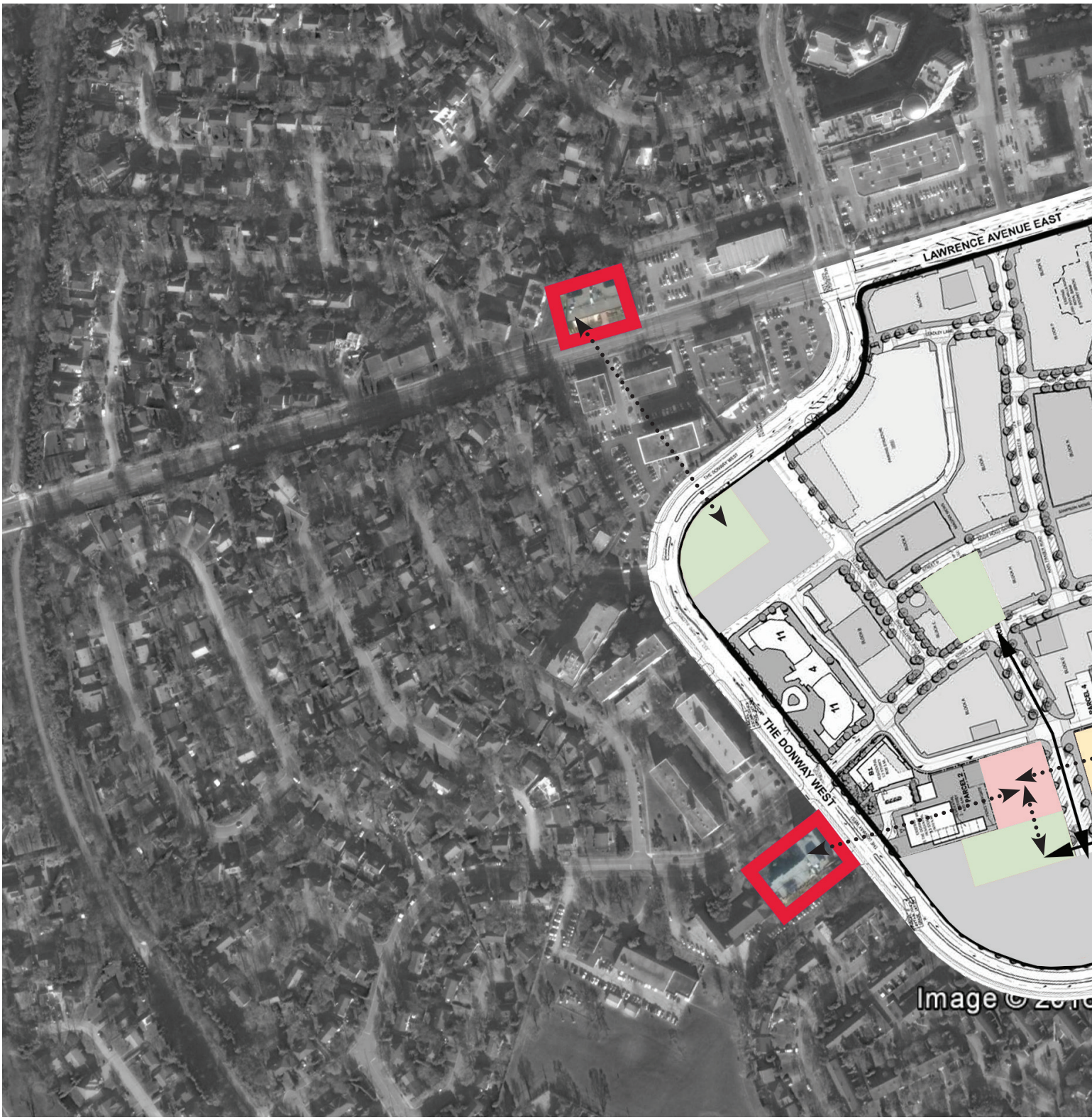


Fig. 36 Diagram of Proposed Design Strategy

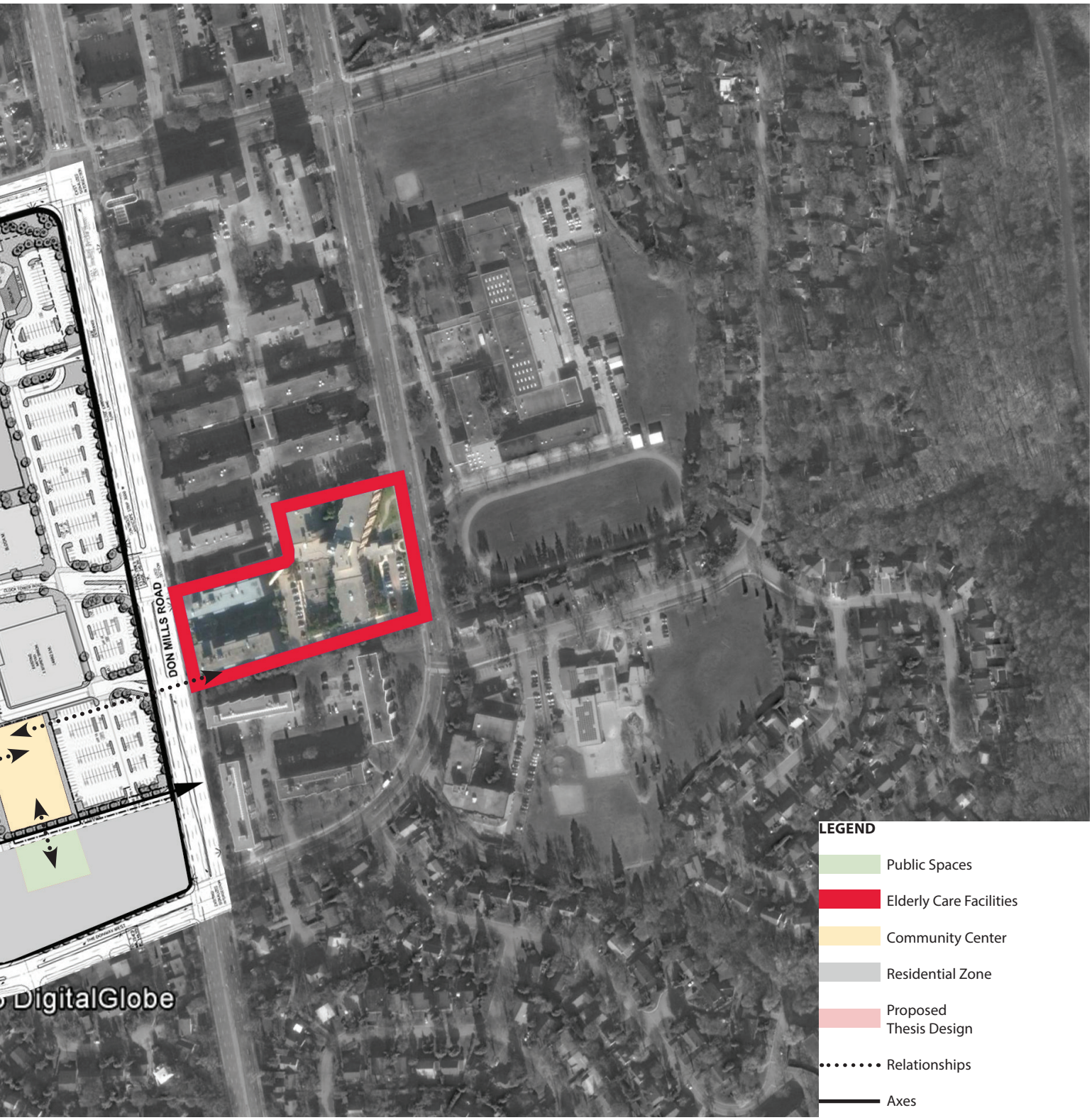
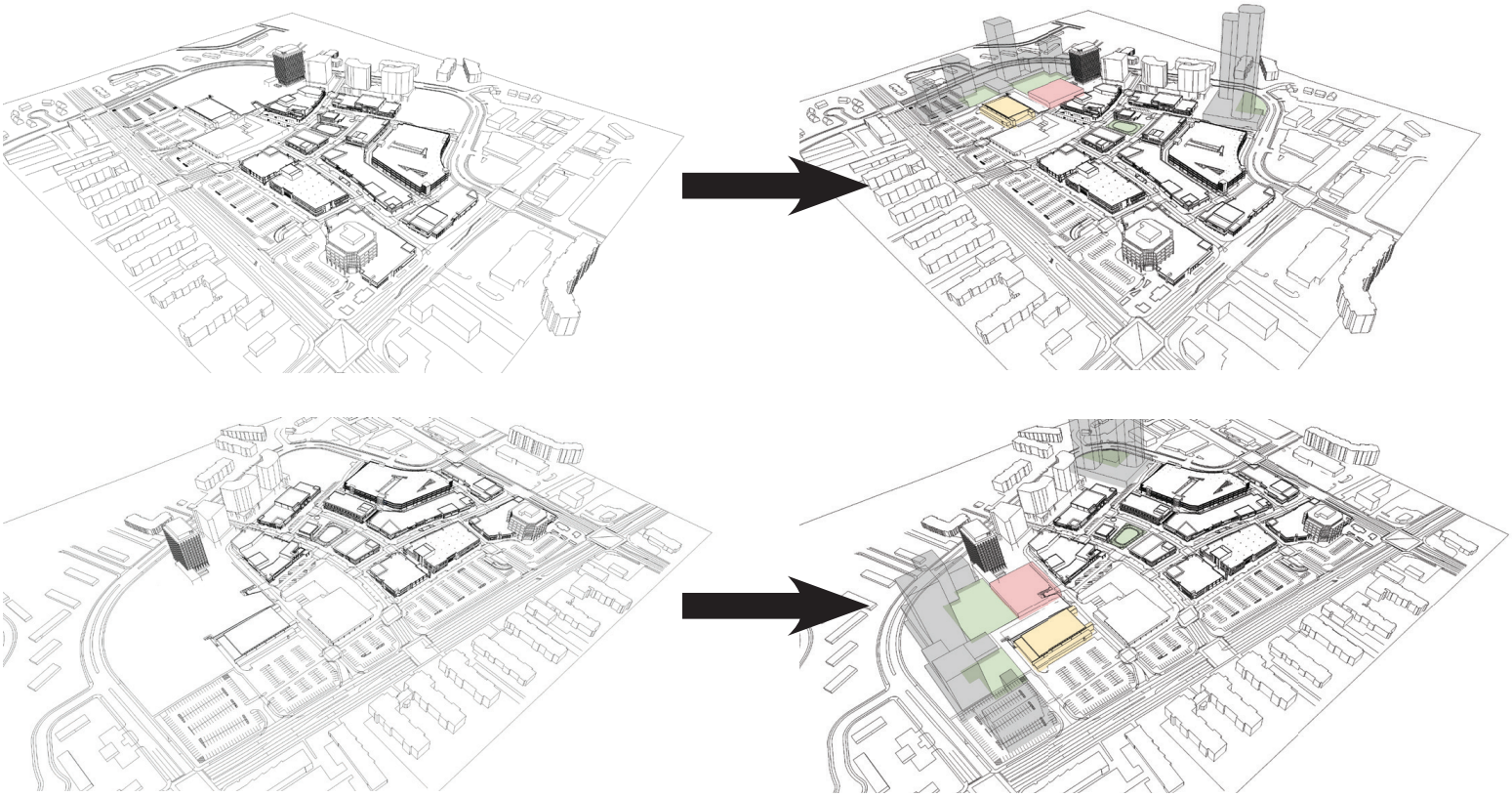

DON MILLS ROAD
DigitalGlobe
LEGEND
Public Spaces
Elderly Care Facilities
Community Center
Residential Zone
Proposed
Thesis Design
Relationships
Axes



Fig. 37 Analysis of Proposed Reconfiguration of Masterplan



CURRENT CONDITIONS

PROPOSED REDESIGN OF MASTERPLAN

Fig. 38 Visualization of Proposed Reconfiguration of Masterplan

Unfortunately, the problem with this design was that it had no relation to the existing shopping center. As I had mentioned in a previous chapter, my intention is to utilize the mall as a way to reintegrate the elderly into the fabric of the suburbs. However, my first design iteration exists independently of the mall – the shopping mall could be demolished and it would not affect my proposed building. As a result, I needed to establish a more concrete relationship between my design proposal and the actual mall itself. What program could serve as the link between these two different building types? I looked at the existing program within the shopping center and chose the grocery store as the site for my second proposal because it will facilitate accessibility to essentials for the elderly, a population who may not be as mobile. I also wanted my proposal to provide a more comprehensive level of care, instead of just being a daycare. As such, I drew inspiration from another Japanese model of care, Gojikara Village:

> "Gojikara Mura is located in Nagakute City in Aichi Prefecture on the Honshu Island in Japan. This organization began with a child day care in 1981. Providing the service for children, the owner believed it would be beneficial for both children and elderly people to have continuous interactions. In 1987, a skilled nursing home for elderly residents was opened, and other elderly-care services were established over time to serve the elderly who required different types of support within the community".[3]

My second proposed design will replace the existing hockey arena, located adjacent to the existing grocery store, to accommodate a new age-friendly day-service facility for the elderly, children and disabled, similar to the aforementioned Toyama-style Day Care Facility. Above the daycare, there will be skilled nursing floors which will bridge over and connect to a series of universally-accessible residences built above the existing grocery store adjacent. There will be two circulation towers that will allow the residents access into the grocery store and into the town square. The residences will be built based on the concept of Universal Design and therefore will not only be able to accommodate the elderly but also families with young children as well as those who are physically disabled or visually impaired. These residences also can be used to house the staff who work in the daycare or skilled nursing wards as well as the family members of those who are residing within the nursing home. The long-term care facility and the day-service facility can share amenities and common spaces, such as the dining room, kitchen, gym and activity room. The goal of this design is to create a holistic and inclusive community where the residents can support one another.

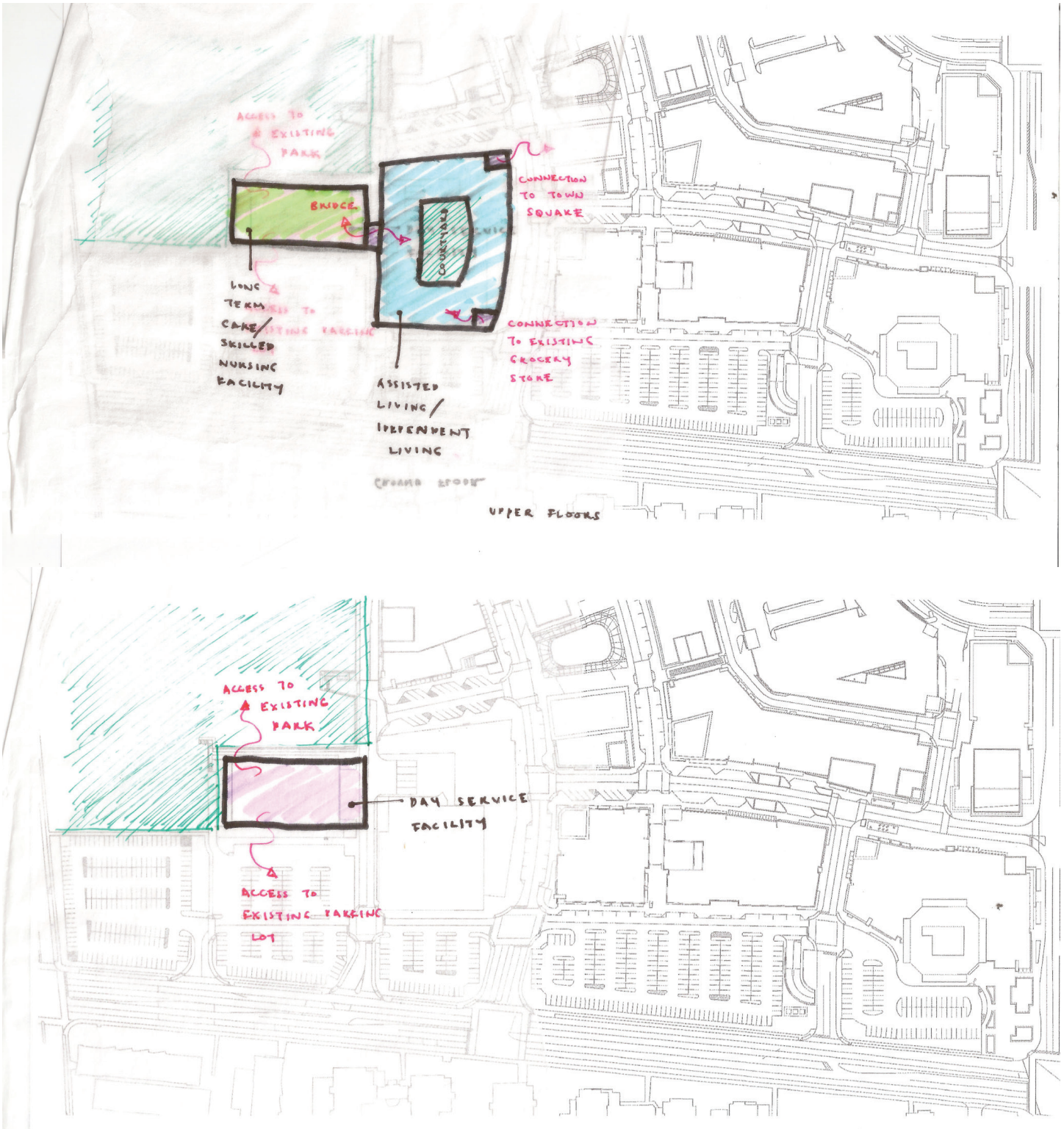


Fig. 39 Sketch of Proposed Floor Plans

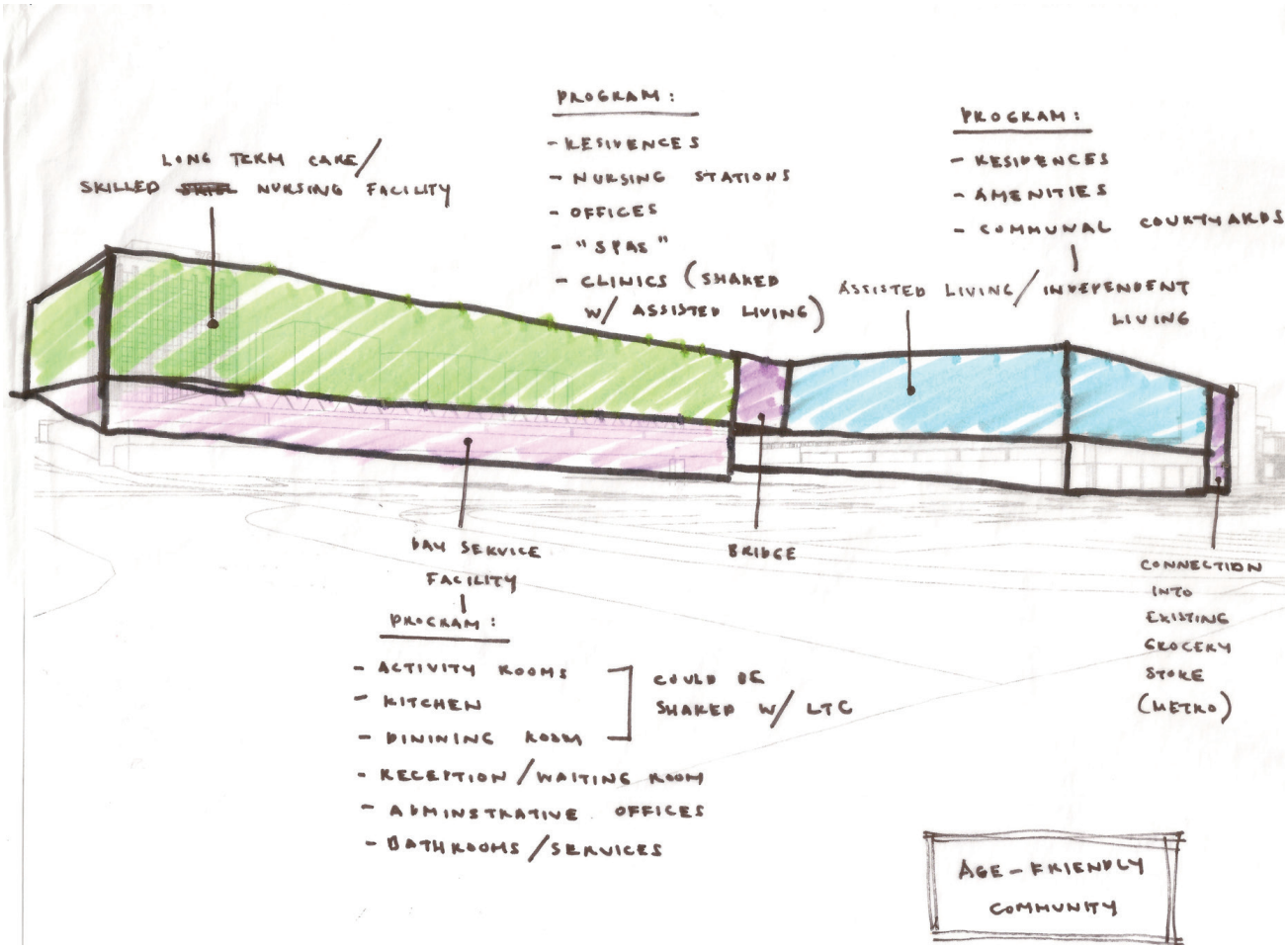


Fig. 40 Sketch - Axonometric View From the Parking Lot

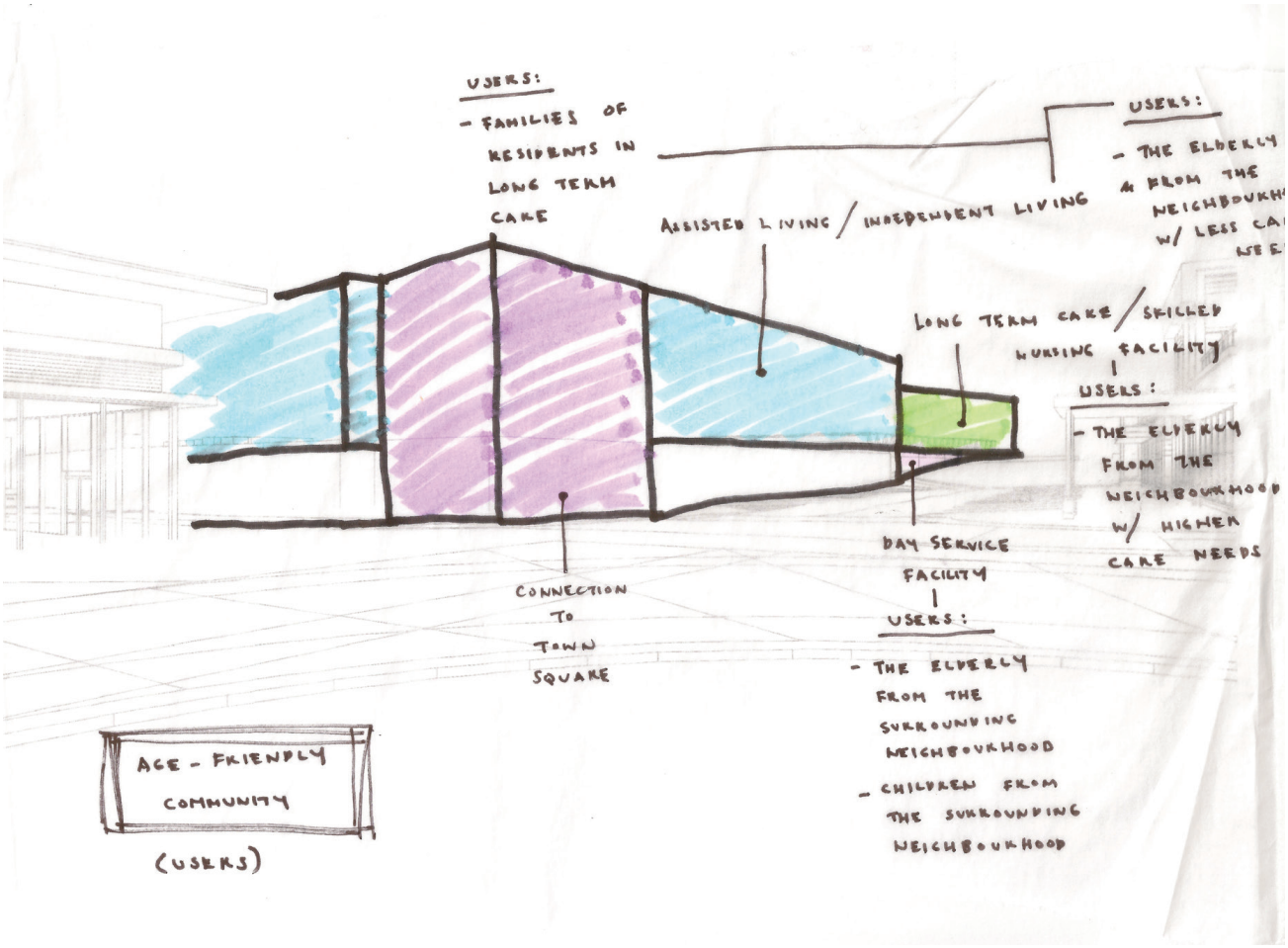


Fig. 41 Sketch - Axonometric View From the Town Square

However, a problem with this proposal is the feasibility of the site. In reality, this project will never be approved because for a large developer like Cadillac Fairview, this proposal is not economical. After the redevelopment of the original enclosed shopping center, the value of the land within this site has increased, as can be seen from the intense densification of the developer's masterplan. As such, from an economic standpoint, it would not be cost effective for the elderly, who are relying on pensions and retirement funds, to move into this development despite the various amenities and conveniences the site offers.

Though I have learnt a lot through the iteration of this design experiment, it became apparent that the site was not ideal. Shops at Don Mills already has the advantage of having an established elderly community and I feel that my thesis proposal can become conceptually stronger if it can aid in the creation of such a community. In addition, as a more cost-effective proposal, this thesis would be better implemented on the site of underutilized and underperforming commercial developments or "dead malls", creating a symbiotic relationship: the mall can be regenerated due to the increase flux of people, whereas the elderly can have access to essentials and basic amenities as well as a place to gather and socialize. From a financial perspective, this proposal would prove to be more cost-effective because it avoids new land costs; by piggybacking off of an existing building, only construction costs will be accrued. The new development can also take advantage and make use of the existing infrastructure and parking. This is crucial because lowering the overall costs of the development will allow the residential and care units to be sold at a more economically feasible price, therefore making the proposal accessible to a wider audience.

1 City of Toronto, Neighbourhood Profiles. Accessed October 26, 2015. http://www1.toronto.ca/City%20Of%20Toronto/Social%20Development,%20Finance%20&%20Administration/Neighbourhood%20Profiles/pdf/2011/pdf1/cpa42.pdf

2 Kurian, Rachel and Chihiro Uchiyama. "Models of Elderly Care in Japan and the Netherlands: Social Quality Perspectives." *The International Journal of Social Quality 2*, no. 1 (Summer, 2012): 76.

3 Anderzhon, Jefrrey, et al. *Design for Aging: International Case Studies of Building and Program* (Hoboken: John Wiley & Sons, 2012), 85.

2.4

THE PROPOSAL: A NEW DESIGN BRIEF

"Architecture as an advocacy profession for social justice would not only seek new programs but, more important, would also restructure the social relationships of those involved in placemaking."

- Sherry Ahrentzen, *The F Word in Architecture: Feminist Analyses in/of/for Architecture*

At the rate our population is aging, it can be anticipated that the cost of services for the elderly will grow exponentially as a result of an increased demand for services but a lack of caregivers and facilities to support them. As such, there is a growing demand for new models of living and care for seniors with a shift towards a more economically sustainable, community-oriented schema. My thesis proposes the development of an age-inclusive multi-service and care hub to reintegrate the elderly into the social fabric of the suburbs by using underperforming, under-utilized commercial developments as an activator.

As a result of suburban sprawl, the shopping mall no longer acts simply as a commercial development for the purpose of consumption; the mall has evolved into an

active multi-functional space that forms the main public square for the suburbs. However, the enclosed shopping centers which were once so prevalent are now slowly being replaced with big box stores:

> "As retail logistics globalizes and big-box power centers replace enclosed shopping malls from the postwar era, a distinct form of social infrastructure vanishes as well. 'Dead malls' are now a staple of North American (sub)urban landscapes, and have provoked local activism in many places… Much of the disjuncture between popular outcry and academic silence relates to conceptions of 'public' space… This is particularly true in declining inner suburbs, where poor and racialized communities depend more heavily on malls for social reproduction as well as recreation and consumption".[1]

As a result of this phenomenon, there is a growing number of underutilized shopping malls across the suburbs that are being demolished or waiting to be redeveloped. For a population such as the elderly, who are not as mobile, it is essential to facilitate accessibility and proximity to essentials, such as access to medical services, grocery stores and pharmacies – stores that form the anchors within these enclosed shopping centers.

Furthermore, in order to revitalize these underperforming shopping centers, my intention is also to return the enclosed shopping malls to the original vision of architect Victor Gruen, who believed that "the shopping center of tomorrow will be more than its name implies… [It] will, besides its commercial function, fill the vacuum created by the absence of social, cultural and civic crystallization points in our vast suburban areas".[2]

> "Gruen… introduced the strategic elements for the regional shopping center that he would emphasize throughout his careers: first and foremost, the organization and separation of traffic; second, a programmatic mix that would include civic and social functions; and third, the use of public art, landscaping, and other amenities to create a diverse pedestrian environment. The ability of the public spaces to support social and cultural activities would ensure the commercial success of the center. It was the public space – as much as the department store – that would be the attractor".[3]

As I had mentioned before, the intention for my design proposal is to provide a holistic approach to elderly care that not only eliminates age segregation, but will also provide a more sustainable and cost-effective approach. As a result, the design of such a facility should include a graduated program that includes varying degrees of medical support and community services. This facility should support the elderly when they are healthier and allow them to stay in their homes and live independently for longer. When their care needs become greater and they require more support, the building can act as a transitional space where the older adult and their family can have time to make necessary care arrangements. In addition, because of the community services that this building will provide, it becomes a facility that is beneficial to all ages and thus can be used to promote cross-generational relations. I have named this design strategy as a Model For Age-Inclusive Care. Based on the concept of PACE (Program of All-Inclusive Care for the Elderly), the Model For Age-Inclusive Care provides a multi-services and care hub that is aimed to support every stage of life.

From the point of view of an older adult, the integration of this variety of programming allows for a model of holistic care – a one-stop shop for medical care and community services all under one roof. With all the services in a single building, both medical and social needs are only an elevator ride away. Not only does this arrangement save time that might otherwise be spent shuttling between appointments, it also significantly reduces stress for the elderly, as well as for their family and caregivers. From the point of view of the community, this building will revitalize the civic and social functions that is currently lacking from the generic suburban shopping centers, therefore restoring the full potential of the mall as a town center and destination for the suburbs.

In essence, my design proposal will attempt to connect between the more disparate parts of society through the incorporation of places with potential for development in an attempt to present a model of symbiotic community space aging.

1 Parlette, Vanessa and Deborah Cowen. "Dead Malls: Suburban Activism, Local Spaces, Global Logistics," (*International Journal of Urban and Regional Research*, Volume 35.4, July 2011), p. 794

2 Wall, Alex. *Victor Gruen: From Urban Shop to New City* (Barcelona: Actar, 2005), 80.

3 Wall, Alex. *Victor Gruen: From Urban Shop to New City* (Barcelona: Actar, 2005), 80.

PART 3

RE:GENERATION - DESIGN & TRANSFORMATION

3.1

THE NEED: OUR AGING POPULATION

"We are, in fact, privileged to be living in the midst of a demographic revolution, for it is unique in the whole history of mankind."

- Doreen Norton, *The Age of Old Age*

The Canadian population is aging. Seniors are becoming the fastest growing age group as a result of a lowered fertility rate, an increase in life expectancy and the aging of the baby boom generation, now known as the Silver Tsunami. Currently, the population of Canada is approximately 35 million people, of which five million are aged 65 and over. It is estimated that by 2051, about one in four Canadians will be aged 65 and over.[1] As such, it is crucial for us as architects to start changing the way we approach design, especially with regards to buildings that are essential in serving an aging population. Architecture can be used as a tool to help prepare our buildings and communities for the upcoming demographic shift.

Despite the rapid rate at which our population is aging, there are only a handful of long term care facilities and retirement homes in Canada – in short, there is not enough support to meet the upcoming demand. In addition, there are many nursing homes that were designed under an outdated set of guidelines, small budgets and an

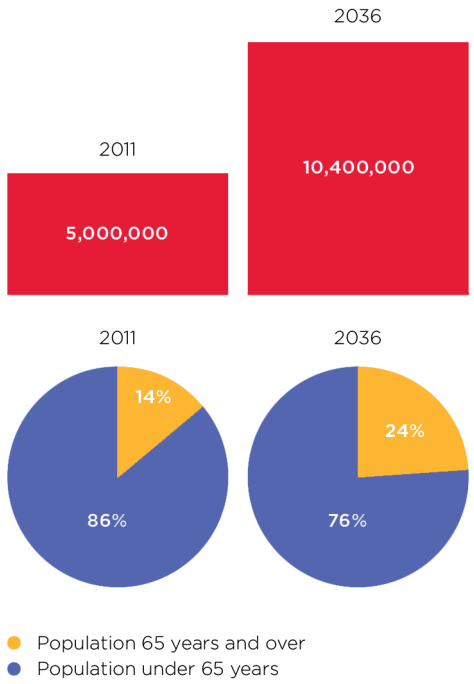


Fig. 42 Projected Growth in the Number and Population of Canadians Aged 65 and Over, Based on a Medium Growth Scenario



Fig. 43 Proportion of the Population of Canadians Aged 65 and Over in 2050

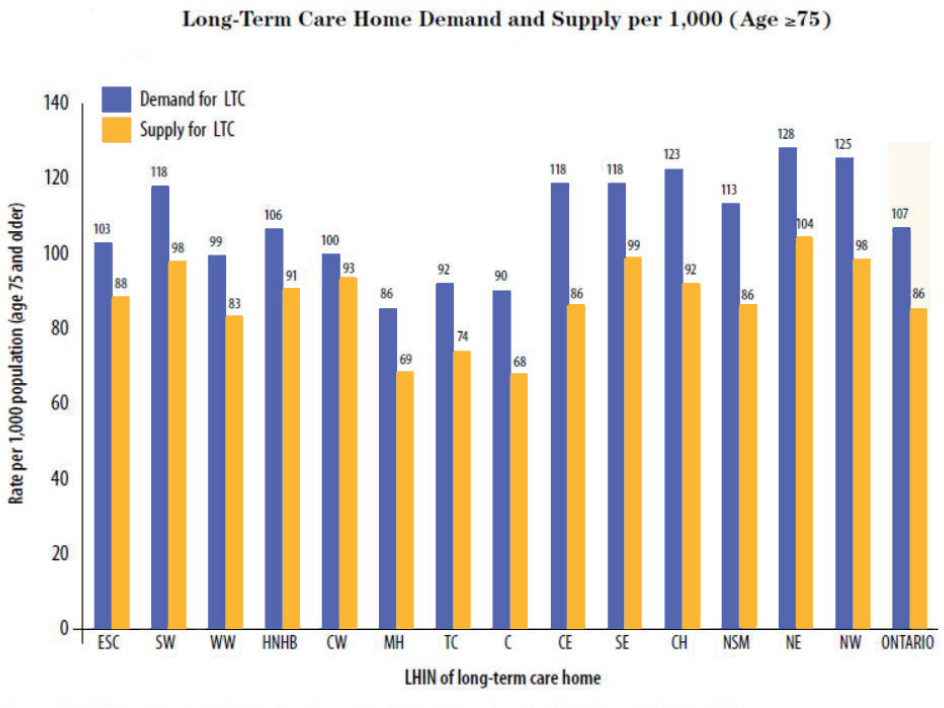


Fig. 44 Long-Term Care Home Demand and Supply per 1000 in Canada

incomplete understanding of the illnesses and treatments related to long-term care. As a result, these facilities are often poorly designed and are incompatible with current healthcare standards. These buildings, similar to my grandfather's nursing home, may have as many as four people in a room with shared communal washrooms and bathing areas as well as common storage areas. Congregate dining could be up to 100 people and there may be a significant lack of amenity spaces. Residents may also be gathered together in wings that are separated by gender. As the registered dietitian, Ivy Lam, had mentioned during my interview with her, overcrowding in a facility can lead to increasing levels of aggravation and irritation in residents, thus reducing their quality of life.

It is important to understand that elderly care facilities are situated within economic, political, institutional and environmental contexts, all of which can influence the style and quality of care that is provided. Available funding, government regulations, staff training and the design of the facility itself are all essential in shaping the caregiving practices in these institutions. A brief introduction into the framework encompassing the elderly care system in Canada will provide a better understanding of the challenges facilities and designers face in an attempt to create a better life for residents, families and staff.

In Canada, healthcare is funded by the federal government and governed by the provincial governments. Within this structure, elderly care is provided by three distinct groups: Municipal Homes, Charitable Homes or Private Homes. These groups are required to meet a minimum set of operational standards as established and regulated by the authorities of the province in which they are located.

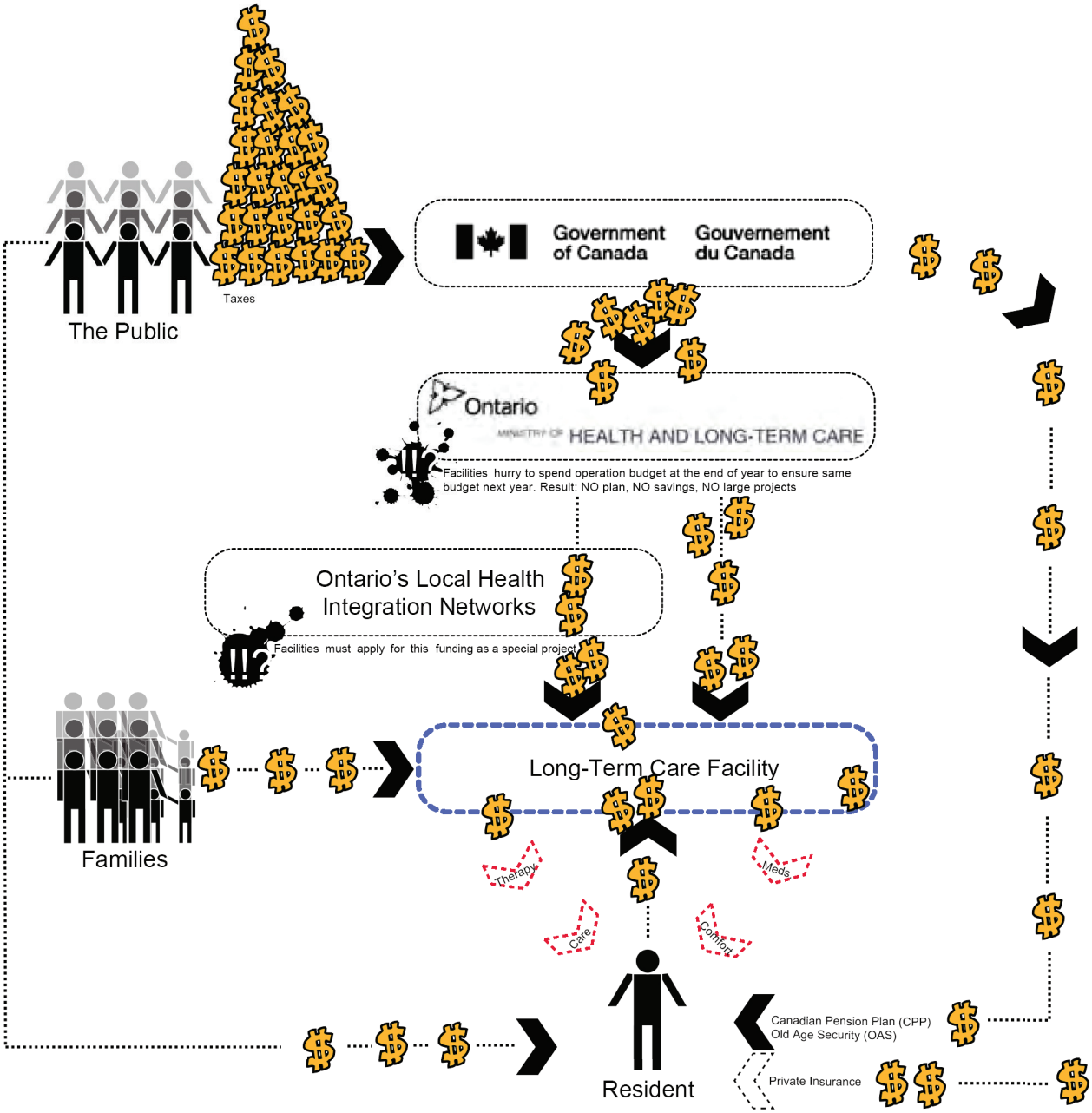


Fig. 45 Financial Structure of Elderly Care in Canada

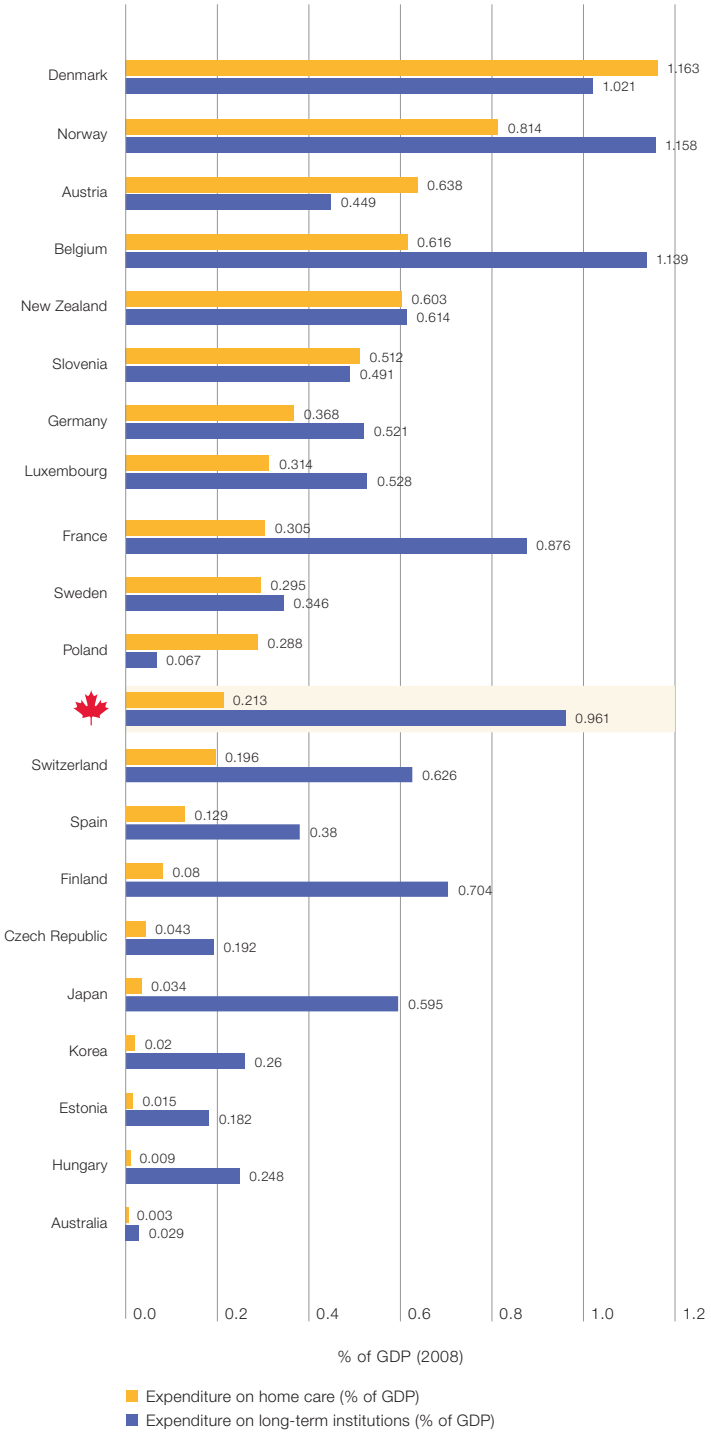


Fig. 46 Public Expenditure on Home Care vs. Long-Term Care in Organization for Economic Cooperation and Development (OECD) Countries

> "Municipal Homes are owned and operated by regional municipalities or other government jurisdictions… These homes are generally designed with a greater emphasis on the provision of community support and programs. Diverse programs such as Adult Day Care, Respite Care and other forms of supportive care are often provided in municipal homes…
>
> Charitable Homes are owned and operated by various charitable groups and foundations… Many of these are comprised of ethnic and/or faith-based communities whose homes reflect their own unique character… the charitable homes tend to provide excellent complementary programs and services, not unlike the municipal homes.
>
> Private Homes are owned and operated by a range of private operators, from individuals to corporations, and are run as for-profit businesses… However, since private homes must compete for clients, their level of amenity and service needs to be at a similar standard to not-for-profit homes".[2]

In constructing new builds and for the renovation of elderly care facilities, architects must abide by a set of guidelines. In the province of Ontario, two main provincial government documents must be followed; the Ministry of Health and Long-Term Care (MHLTC) Design Manual and the Ontario Building Code (OBC). These guidelines exist to maintain consistency throughout all elderly care facilities and provide a minimum standard for health and safety. As eldercare covers a broad range of residents, all of whom have different needs, the guidelines do not always address the specific needs of each resident. As such, we, as architects, must look for opportunities for creative solutions while adhering to the design objectives and requirements of the provincial government.

Another concern relates to our ability to afford services in the future. Our publicly funded healthcare system is already strained by insufficient resources. Nurses are few and healthcare aids are limited. As such, the cost of living in an institution has significantly increased. The Health Council in Canada estimates that living in long term care facilities cost almost five times more than home care, which is the highest differential when compared to other Organization for Economic Cooperation and Development (OECD) countries – see Fig. 46. For the elderly, who may be relying solely

Canada is the world's second largest country by land mass, after Russia. It is bounded by the world's longest unprotected border to the south, the Atlantic Ocean to the east, the Pacific Ocean to the west and the Arctic Ocean to the north. The country is divided politically into 10 provinces and three territories. 80% of its 34 million people live in urban environments distributed as follows between the provinces:

British Columbia	4,531,000
Alberta	3,720,900
Saskatchewan	1,045,600
Manitoba	1,235,400
Ontario	13,210,700
Quebec	7,907,400
New Brunswick	751,800
Nova Scotia	942,400
Prince Edward Island	142,300
Newfoundland and Labrador	509,700
Population of Canada	**34 million**
% of population over the age of 65 in 2011	14 %
% of population over the age of 65 in 2031	23 %
Average life expectancy for women	83
Average life expectancy for men	78
Average annual household income	$63,900
Canada's national debt	$563 billion
per person	$16,500
Average cost of healthcare to persons over 80 years	$18,000/ annum
Number of licensed long term care beds	193,858
% of population who use long term care services	0.56%
Average length of stay	3.5 years

Fig. 47 Canada - An Overview

on retirement funding and pensions, higher costs for medical care and support can significantly impact their quality of life. If the percentage of the elderly is to double by 2031, as seen in Fig. 47, this will further decrease our ability to pay for care:

> "It is foreseeable that the cost of services for the elderly will escalate rapidly, caused by an increased demand for affordable care and support services coupled with the unfavorable conditions. The aging of society in general will be accompanied by a parallel decline in the level of support provided by the families, resulting in a contradiction for service providers: the number of elderly people dependent on help and services of various kinds will rise; at the same time the cost of these services will rise disproportionately as increasing demand leads to bottleneck in supply and higher prices".[3]

Therefore, my thesis proposes a new model of living and care for the elderly with a shift towards a more economically-sustainable, community-oriented schema, where the collaboration and mutual support between the residents could ease the economic and social burden for society:

> "In the interest of the elderly and of the public sector, the changes described make it essential to develop new, innovative forms of living that foster self-organized arrangements and integrate forms of mutual assistance. In addition, it will be necessary to develop a variety of different offerings so that people with different needs can find an option appropriate to their requirements: the ability to remain independent for as long as possible and to make use of care and support only where absolutely necessary".[4]

1 Federation of Canadian Municipalities. *Canada's Aging Population: The Municipal Role in Canada's Demographic Shift* (2013), 2.

2 Applebaum, Edward and Robert Davies. "*Caring for the Elderly: Is Big Bad, Better or Both?*" (Paper presented at the Design and Health 7th World Congress, Boston, July, 2011), 4.

3 Feddersen, Eckhard; Lüdtke, Insa. *Living for the Elderly: A Design Manual* (Basel: Birkhäuser Verlag AG, 2009), 23.

4 Feddersen, Eckhard; Lüdtke, Insa. *Living for the Elderly: A Design Manual* (Basel: Birkhäuser Verlag AG, 2009), 23.

3.2

THE PLAN: AN AGE-FRIENDLY COMMUNITY

"The 'empowerment of multiplicity' that bell-hooks calls for is the construction of interconnected communities of resistance as opposed to competitively fragmented and separate ones."

- Sherry Ahrentzen, *The F Word in Architecture: Feminist Analyses in/of/for Architecture*

As the population continues to age, Canada will face tremendous challenges. The increasing percentage of seniors within our population as well as a higher life expectancy have brought forth a new social phenomenon: "a combination of extended multigenerativity (i.e., different generations alive at the same time for longer periods of time) and multiculturality (i.e., a high percentage of immigrants in later generations)".[1] This phenomenon will be accompanied by socio-cultural changes, such as the changing perceptions of old age as well as a decrease in traditional multigenerational households and therefore a proportional increase in multi-locational families. These changes will significantly impact various aspects of society, including labor markets and social policy, healthcare systems, as well as design and urban planning.

A constantly growing body of models for housing and systems of delivering healthcare and supportive services to the elderly are primarily based on an age-segregated approach, such as long-term care, assisted living and retirement communities. As a result, these environments present a homogeneous milieu, where the elderly are physically and socially isolated from the rest of society.[2] However, Mary Lindsey from AIS proposes a different strategy and calls for a concept of no "special" buildings; where all buildings within a community are accessible – functional at all ages and adaptable to the changing concept of age.

In the previous section, I had presented iterations of an early design exploration which has resulted in the conclusion that communities should become the new paradigm for elderly care facilities. Based on the concepts of "integration", "mutuality" and "integrated living", I am proposing a new approach to designing for an aging population – the Model For Age-Inclusive Care. The Model For Age-Inclusive Care aims to create a multigenerational community where diversification of people and services will be encouraged within an otherwise segregated typology. For my thesis design iteration, the Model For Age-Inclusive Care will culminate as a multi-service care hub, providing a wide range of medical and social services to support healthy living for all those within the community and in particular, allow the elderly to "age-in-place". I am not proposing this development as an alternative to traditional age-segregated institutions but rather as a complementary component to the overall system of care. Because the Model For Age-Inclusive Care is only model, it acts as a conceptual kit of parts utilizing pre-fabricated concepts known as "Modules". A module is generally defined as an independent unit that can be used to construct a more complex system. In the context of my thesis, "Modules" shall be defined as self-contained program blocks which together, form the framework of a particular Model For Age-Inclusive Care. As such, depending on the site that is selected, different "Modules" can be chosen to supplement any programs or services that may be missing from the surrounding community. Therefore, every Model For Age-Inclusive will be different. The intention is to provide the aging population with a system of choices.

Although the "Module" approach seems intuitive and straightforward, it is actually designed to suit the provincial government's fragmented funding model; which is one of the reasons why medical care and community services are generally not combined under a single roof. As a result of this new approach, the Model For Age-Inclusive Care benefits from administrative and economic flexibility. Separate boards of directors can be chosen for each of the different Modules so it can be managed and staffed independently. As such, the Modules can also be funded separately, which lends itself to the provincial government's fragmented funding model. This approach also lends itself to public-private partnerships.

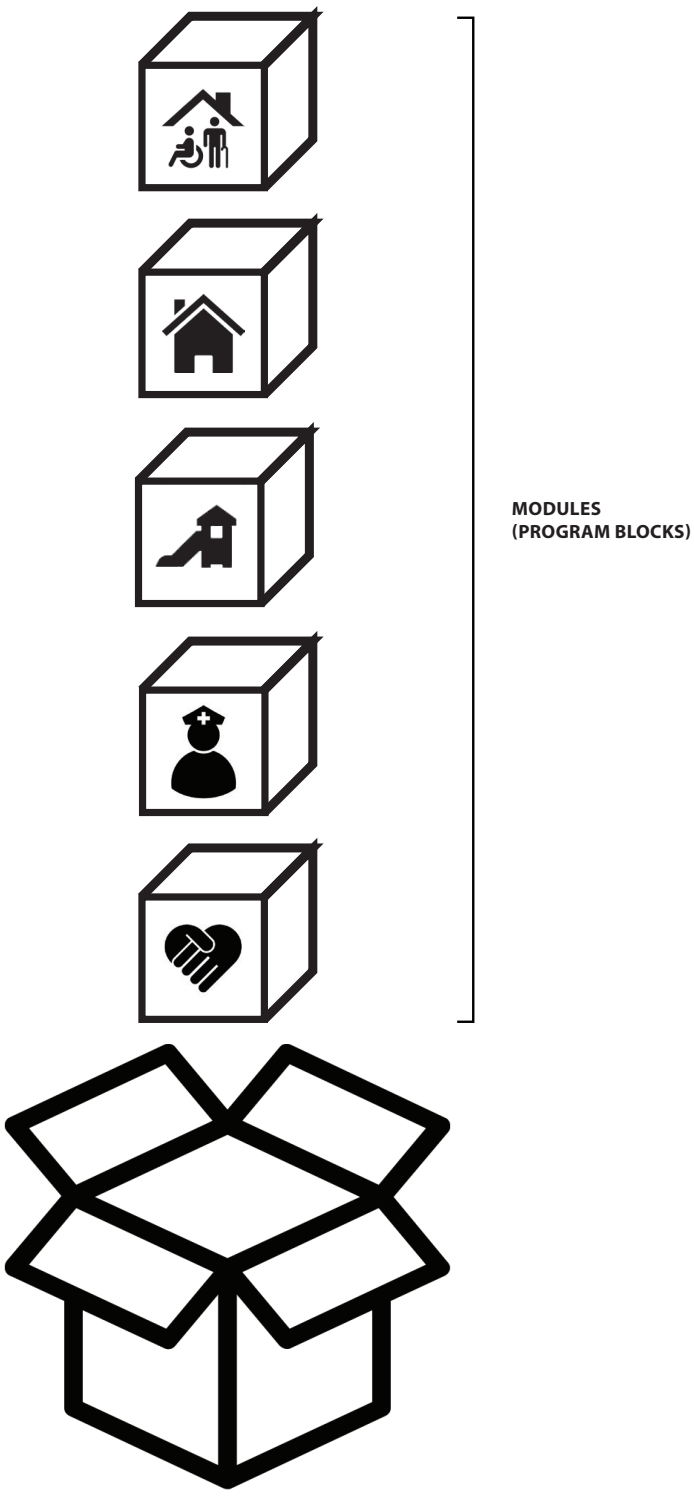


Fig. 48 Model of Age-Inclusive Care Imagined as a Kit of Parts

In the case of my chosen typology of sites – i.e. the mall – the Model For Age-Inclusive Care will aim to reintroduce architect Victor Gruen's original vision for the American shopping center by reactivating the social and civic potentials of the mall as the center of the suburbs. As such, I have chosen to use a Community Module, Medical Module, Daycare Module, Residential Module and Transitional Module as the base programming for my design

The Community Module will offer a variety of spaces for different activities and classes, much like any community center. The offerings are geared towards able and independent seniors as well as the rest of the community. The Medical Module will house ambulatory as well as specialized medical services to support the health and well-being for the surrounding community as they age. Inspired by the Toyama-style Day Care Facility, the Daycare Module is centered around a day-service facility that is age-inclusive and is designed to serve young children and less-abled seniors who require extra care. This space is designed to promote intergenerational contact between the youngest and oldest members of our society. The Residential Module will house private suites that range in type to suit a variety of individuals as well as families. Following the principles of Universal Design, every suite will be designed for handicap accessibility. The Transitional Module will contain transitional care wards, a facility staffed around-the-clock by nurses, where less-abled seniors can stay for a short period of time. It acts as a bridge for older adults who are returning from the hospital to their homes or are waiting for placement into a long term care facility. This allows expensive hospital beds to be freed for others while creating time for the elderly and their families to make necessary care arrangements.

Prior to designing my intervention, I decided to focus on the topic of "purpose" – why will people come to this building, what will they do, who they will they meet, etc. Focusing on the Community Module and Daycare Module, I started by brainstorming activities where the elderly and different age groups can interact with one another such as gardening, cooking and eating, and these activities informed a series of spaces such as a vegetable garden, a community kitchen and a communal dining room.

I have grouped the activities and spaces into three major categories – learning, food and wellness, each of which aims to fulfill a different level in Abraham Maslow's Hierarchy of Needs, which I have used as a way to quantify a person's emotional and physical needs. The figures presented at the end of this chapter represent visualizations of these spaces; a series of conceptual collages that depict a community where different generations from all walks of life can come together as one. The intention is for these images to become a catalyst and inspiration for the final thesis design that will be presented at the end of this section.

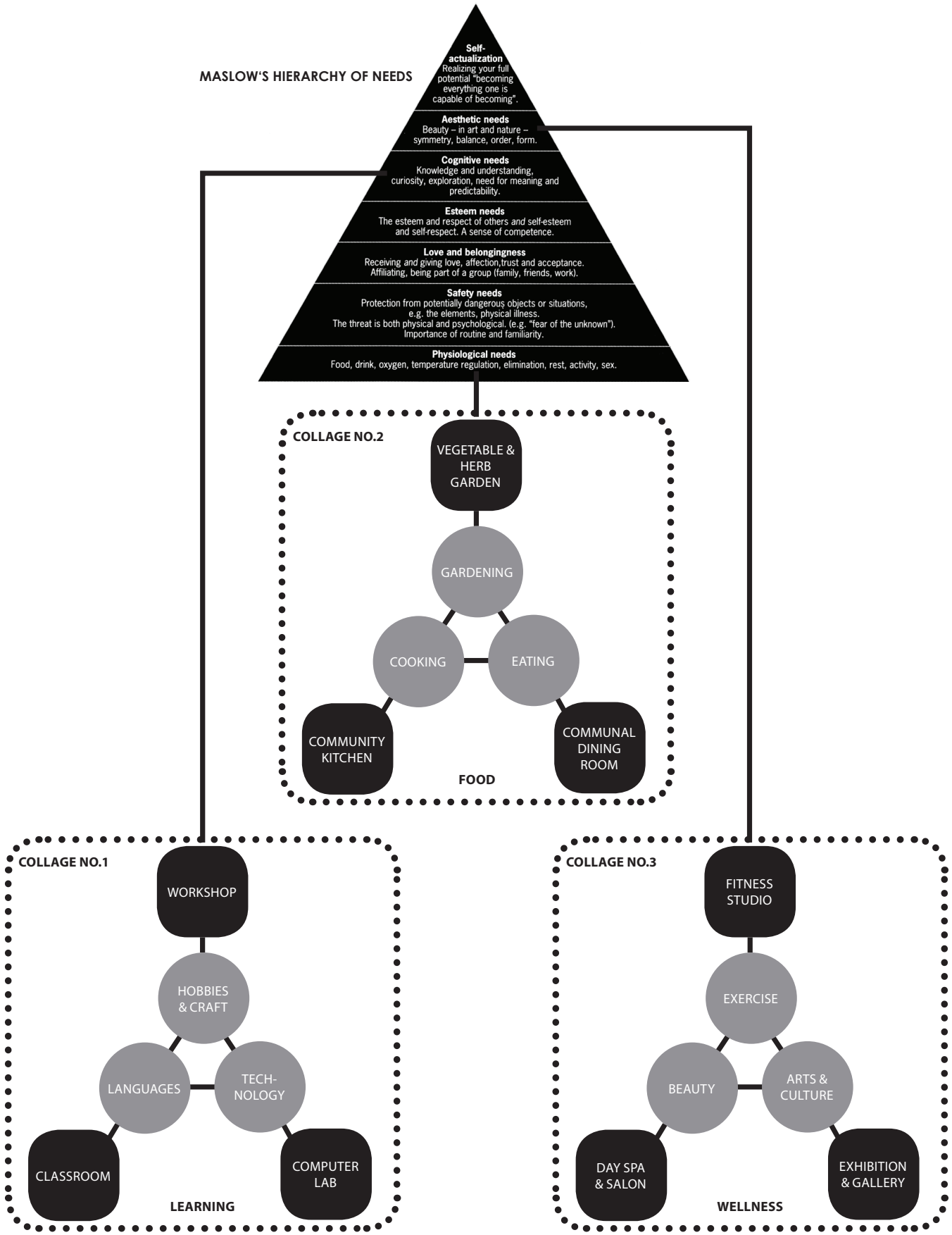


Fig. 49 Diagram - Purpose



Fig. 50 Conceptual Collage No.1 - Learning





Fig. 51 Conceptual Collage No.2 - Food





Fig. 52 Conceptual Collage No.3 - Wellness



Ultimately, the hope is to be able to use my design intervention and strategies as a prototype that can be replicated across the City of Toronto in order to create an age-friendly community within every neighborhood of Toronto in order to serve any population group and to provide a network of care that is consistent and accessible.

1 Huber, Andreas and Eidgenössische Technische Hochschule Zürich. *New Approaches to Housing for the Second Half of Life*. (Zürich: Birkhäuser, 2008), 33.

2 Peace, Sheila M. and Caroline Holland, ed. *Inclusive Housing in an Ageing Society – Innovative Approaches*. (Bristol: The Policy Press, 2001), 195.

3.3

THE SITE: CENTERPOINT MALL

"Age-Friendly Cities are communities that enable residents to age actively through supportive policies, services and infrastructure"

- Federation of Canadian Municipalities, *Canada's Aging Population: The Municipal Role in Canada's Demographic Shift*

Although the specific siting of this design proposal has changed over the course of this thesis, the overall context has always resided within the City of Toronto. Toronto is arguably one of the most diverse cities in Ontario and is divided into 140 neighborhoods – see Fig. 53. Toronto has the fastest growing senior population and therefore requires much attention in terms of the proposal of a new form of eldercare. The distribution of older adults is varied across the city. As such, understanding their population distribution can help to determine which areas would benefit the most from the implementation of this design proposal.

1 West Humber-Clairville
2 Mount Olive-Silverstone-Jamestown
3 Thistletown-Beaumond Heights
4 Rexdale-Kipling
5 Elms-Old Rexdale
6 Kingsview Village-The Westway
7 Willowridge-Martingrove-Richview
8 Humber Heights-Westmount
9 Edenbridge-Humber Valley
10 Princess-Rosethorn
11 Eringate-Centennial-West Deane
12 Markland Woods
13 Etobicoke West Mall
14 Islington-City Centre West
15 Kingsway South
16 Stonegate-Queensway
17 Mimico
18 New Toronto
19 Long Branch
20 Alderwood
21 Humber Summit
22 Humbermede
23 Pelmo Park-Humberlea
24 Black Creek
25 Glenfield-Jane Heights
26 Downsview-Roding-CFB
27 York University Heights
28 Rustic
29 Maple Leaf
30 Brookhaven-Amesbury
31 Yorkdale-Glen Park
32 Englemount-Lawrence
33 Clanton Park
34 Bathurst Manor
35 Westminster-Branson
36 Newtonbrook West
37 Willowdale West
38 Lansing-Westgate
39 Bedford Park-Nortown
40 St.Andrew-Windfields
41 Bridle Path-Sunnybrook-York Mills
42 Banbury-Don Mills
43 Victoria Village
44 Flemingdon Park
45 Parkwoods-Donalda
46 Pleasant View
47 Don Valley Village
48 Hillcrest Village
49 Bayview Woods-Steeles
50 Newtonbrook East
51 Willowdale East
52 Bayview Village
53 Henry Farm
54 O'Connor-Parkview
55 Thorncliffe Park
56 Leaside-Bennington
57 Broadview North
58 Old East York
59 Danforth Village - East York
60 Woodbine-Lumsden
61 Crescent Town
62 East End-Danforth
63 The Beaches
64 Woodbine Corridor
65 Greenwood-Coxwell
66 Danforth Village - Toronto
67 Playter Estates-Danforth
68 North Riverdale
69 Blake-Jones
70 South Riverdale
71 Cabbagetown-South St.Jamestown
72 Regent Park
73 Moss Park
74 North St.Jamestown
75 Church-Yonge Corridor
76 Bay Street Corridor
77 Waterfront Communities-The Island
78 Kensington-Chinatown
79 University
80 Palmerston-Little Italy
81 Trinity-Bellwoods
82 Niagara
83 Dufferin Grove
84 Little Portugal
85 South Parkdale
86 Roncesvalles
87 High Park-Swansea
88 High Park North
89 Runnymede-Bloor West Village
90 Junction Area
91 Weston-Pelham Park
92 Corsa Italia-Davenport
93 Dovercourt-Wallace Emerson-Junction
94 Wychwood
95 Annex
96 Casa Loma
97 Yonge-St.Clair
98 Rosedale-Moore Park
99 Mount Pleasant East
100 Yonge-Eglinton
101 Forest Hill South
102 Forest Hill North
103 Lawrence Park South
104 Mount Pleasant West
105 Lawrence Park North
106 Humewood-Cedarvale
107 Oakwood-Vaughan
108 Briar Hill-Belgravia
109 Caledonia-Fairbanks
110 Keelesdale-Eglinton West
111 Rockcliffe-Smythe
112 Beechborough-Greenbrook
113 Weston
114 Lambton Baby Point
115 Mount Dennis
116 Steeles
117 L'Amoureaux
118 Tam O'Shanter-Sullivan
119 Wexford/Maryvale
120 Clairlea-Birchmount
121 Oakridge
122 Birchcliffe-Cliffside
123 Cliffcrest
124 Kennedy Park
125 Ionview
126 Dorset Park
127 Bendale
128 Agincourt South-Malvern West
129 Agincourt North
130 Milliken
131 Rouge
132 Malvern
133 Centennial Scarborough
134 Highland Creek
135 Morningside
136 West Hill
137 Woburn
138 Eglinton East
139 Scarborough Village
140 Guildwood

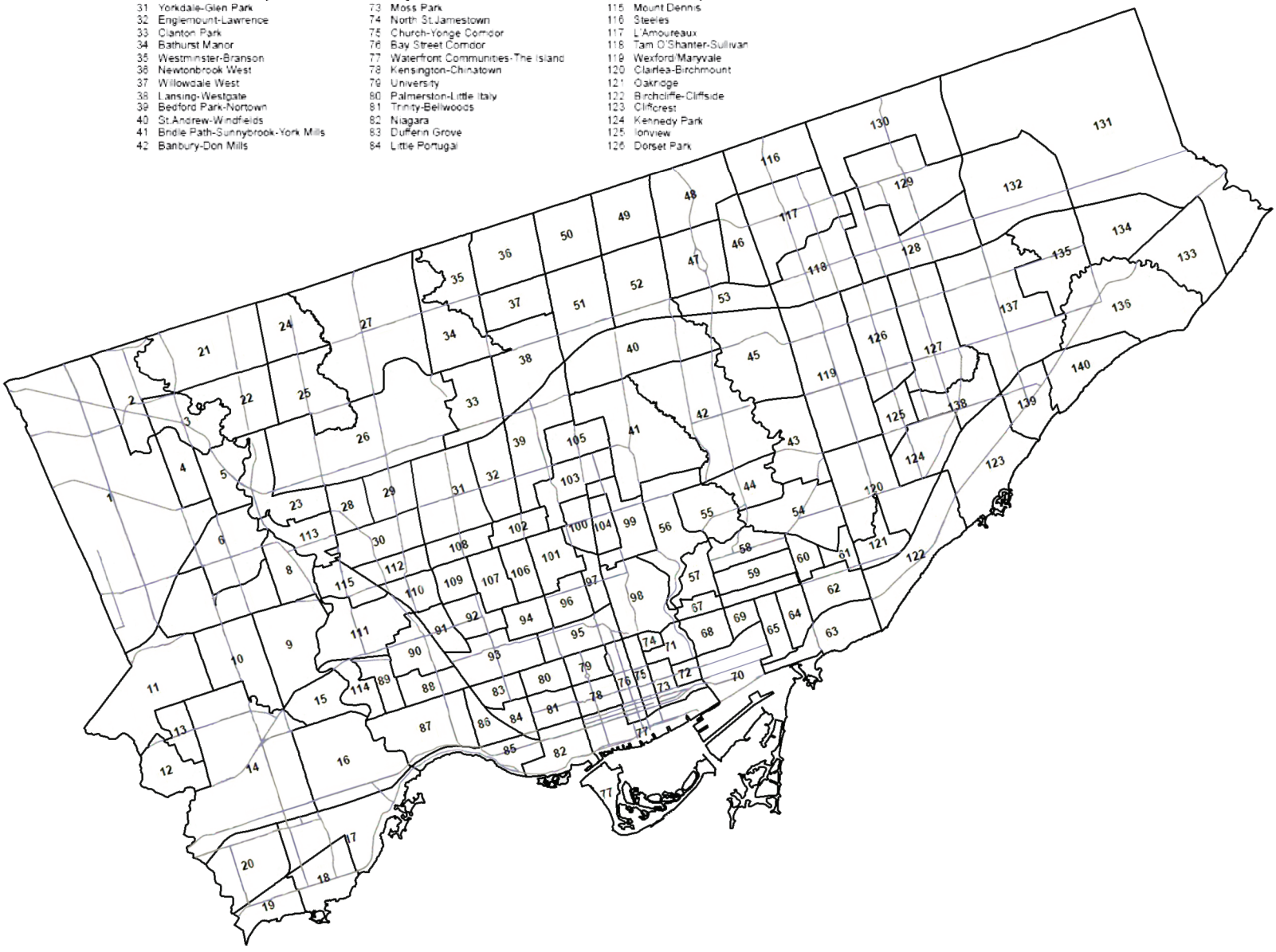


Fig. 53 Neighbourhoods and Major Roads of Toronto
1:200,000

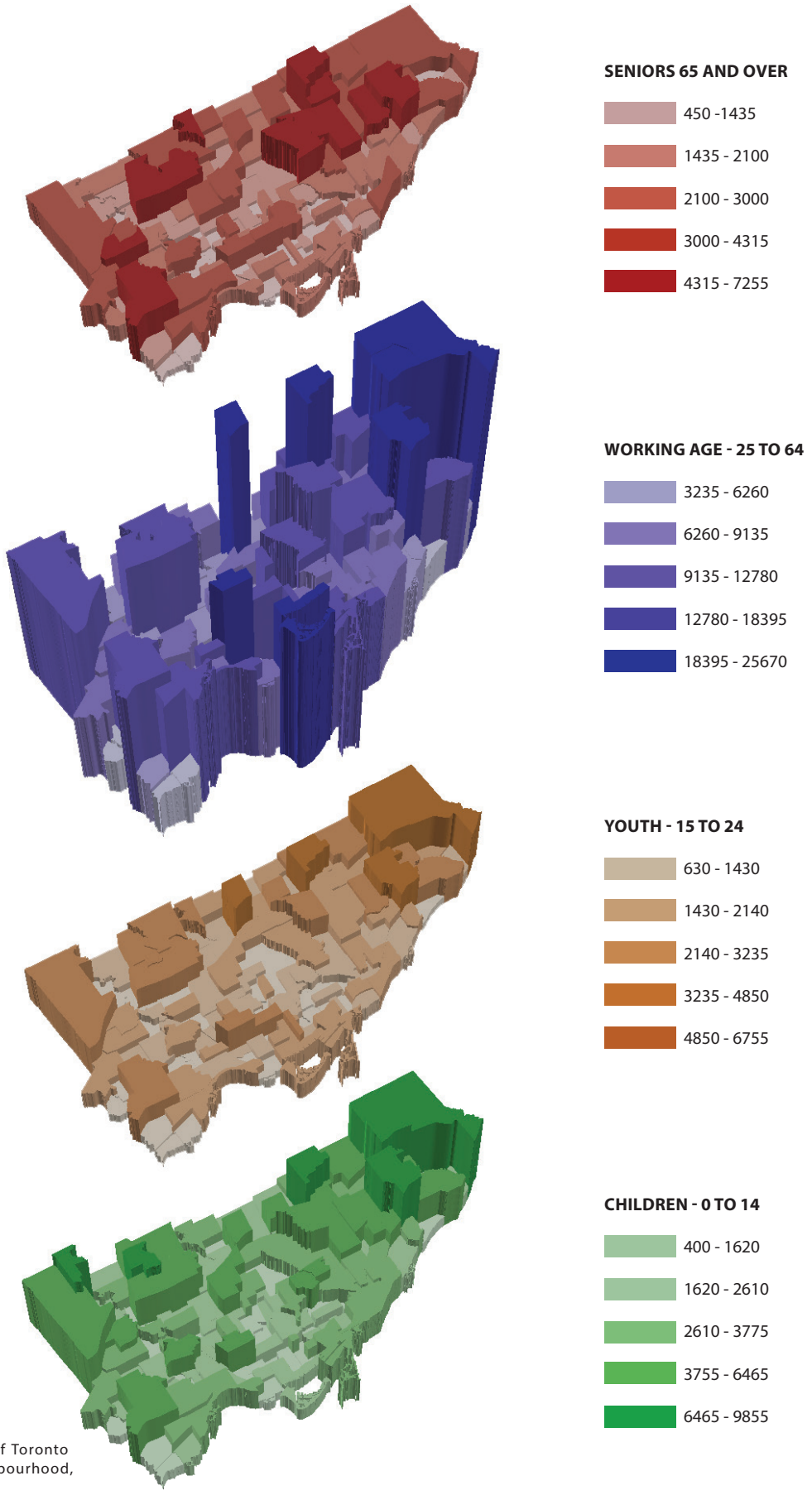


Fig. 54 Population By City of Toronto Age Group By Neighbourhood, Census 2006

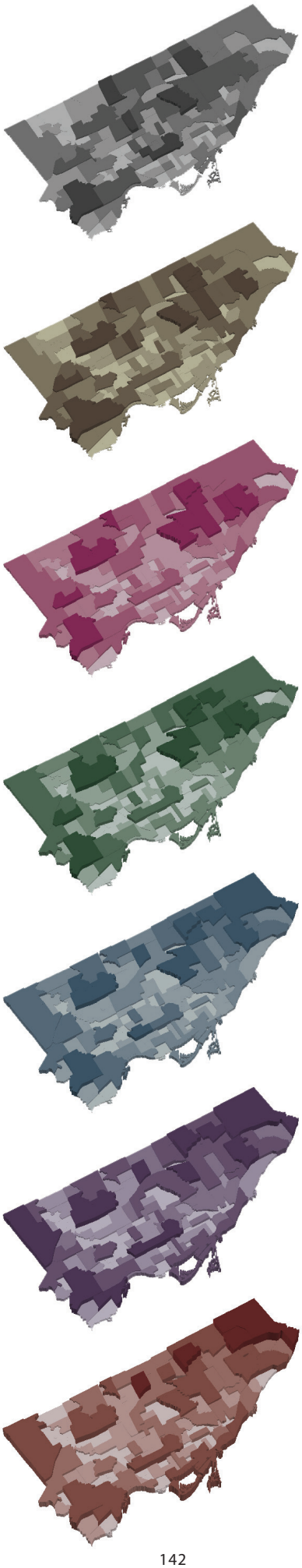


Fig. 55 Target Age Group Breakdown, Census 2006

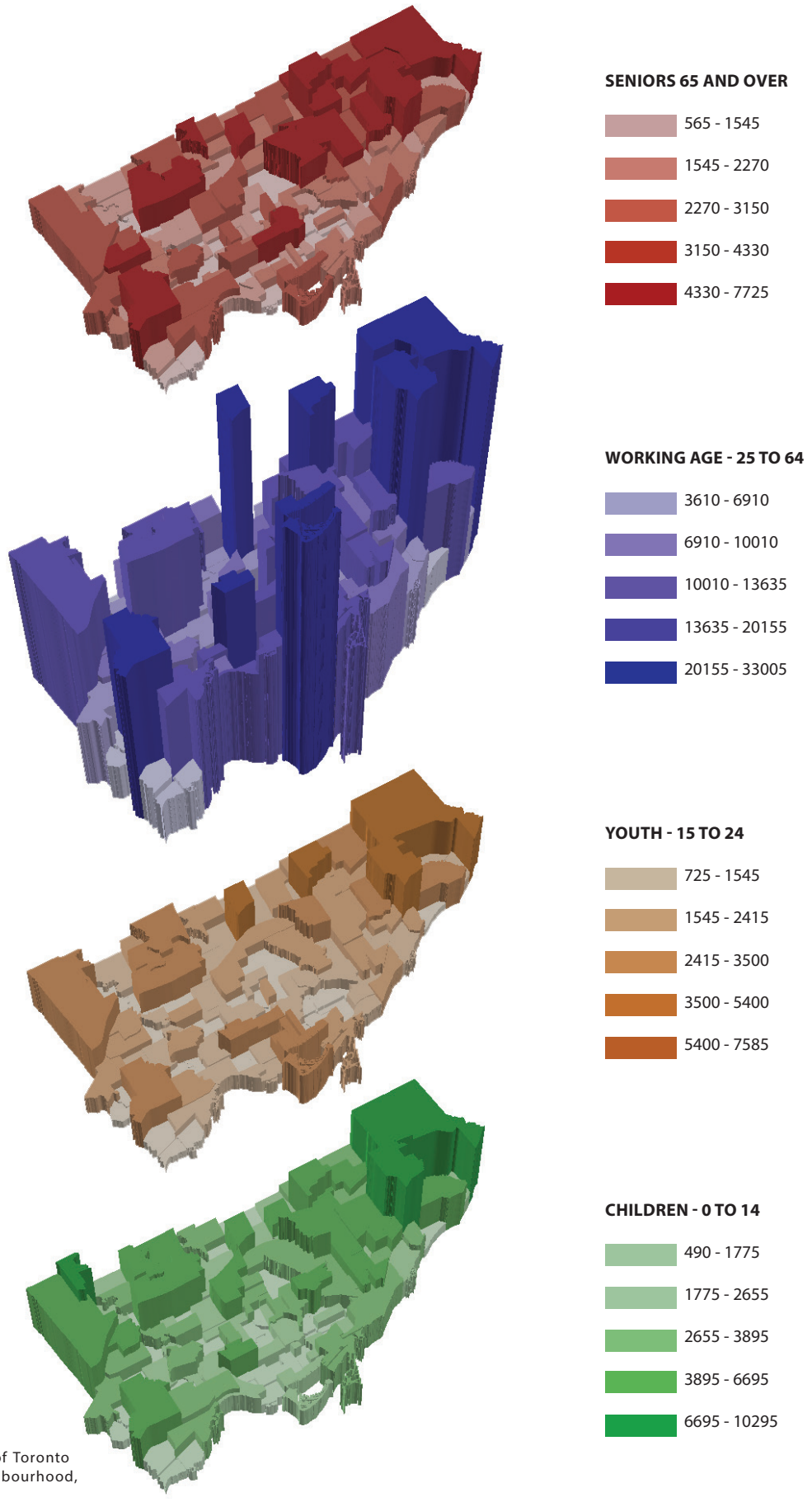
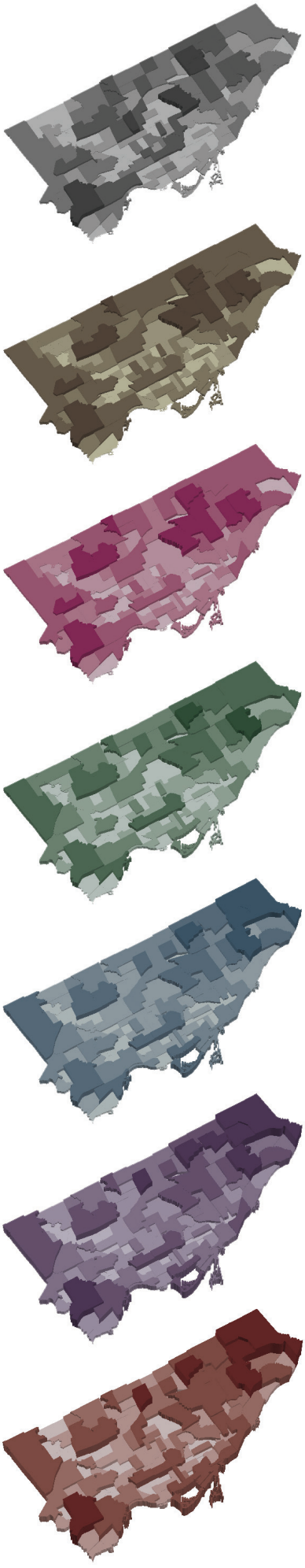


Fig. 56 Population By City of Toronto Age Group By Neighbourhood, Census 2011



POPULATION 85 AND OVER
- 40 - 220
- 220 - 375
- 375 - 595
- 595 - 925
- 925 - 1305

POPULATION 80 TO 84
- 65 - 210
- 210 - 320
- 320 - 470
- 470 - 765
- 765 - 1270

POPULATION 75 TO 79
- 110 - 315
- 315 - 475
- 475 - 705
- 705 - 1070
- 1070 - 1690

POPULATION 70 TO 74
- 140 - 405
- 405 - 620
- 620 - 920
- 920 - 1310
- 1310 - 1865

POPULATION 65 TO 69
- 210 - 435
- 435 - 675
- 675 - 1015
- 1015 - 1525
- 1525 - 1955

POPULATION 60 TO 64
- 305 - 570
- 570 - 900
- 900 - 1325
- 1325 - 1855
- 1855 - 2790

POPULATION 55 TO 59
- 365 - 715
- 715 - 1040
- 1040 - 1450
- 1450 - 2105
- 2105 - 3355

Fig. 57 Target Age Group Breakdown, Census 2011

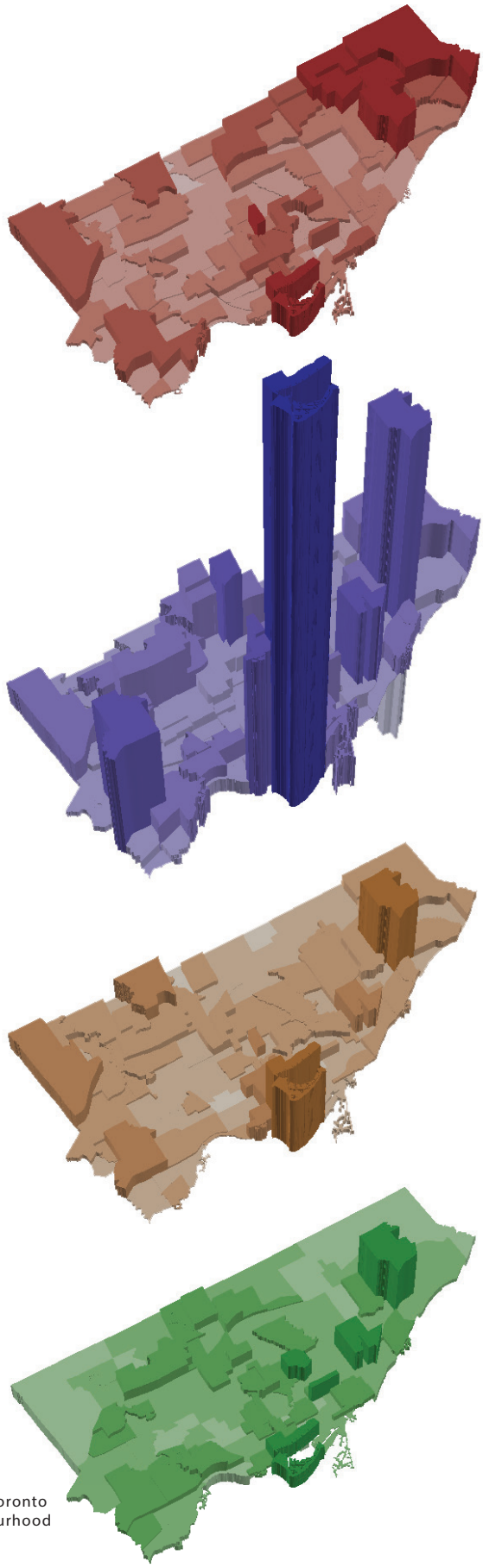


Fig. 58 Population By City of Toronto Age Group By Neighbourhood Comparison Between Census 2006 & 2011

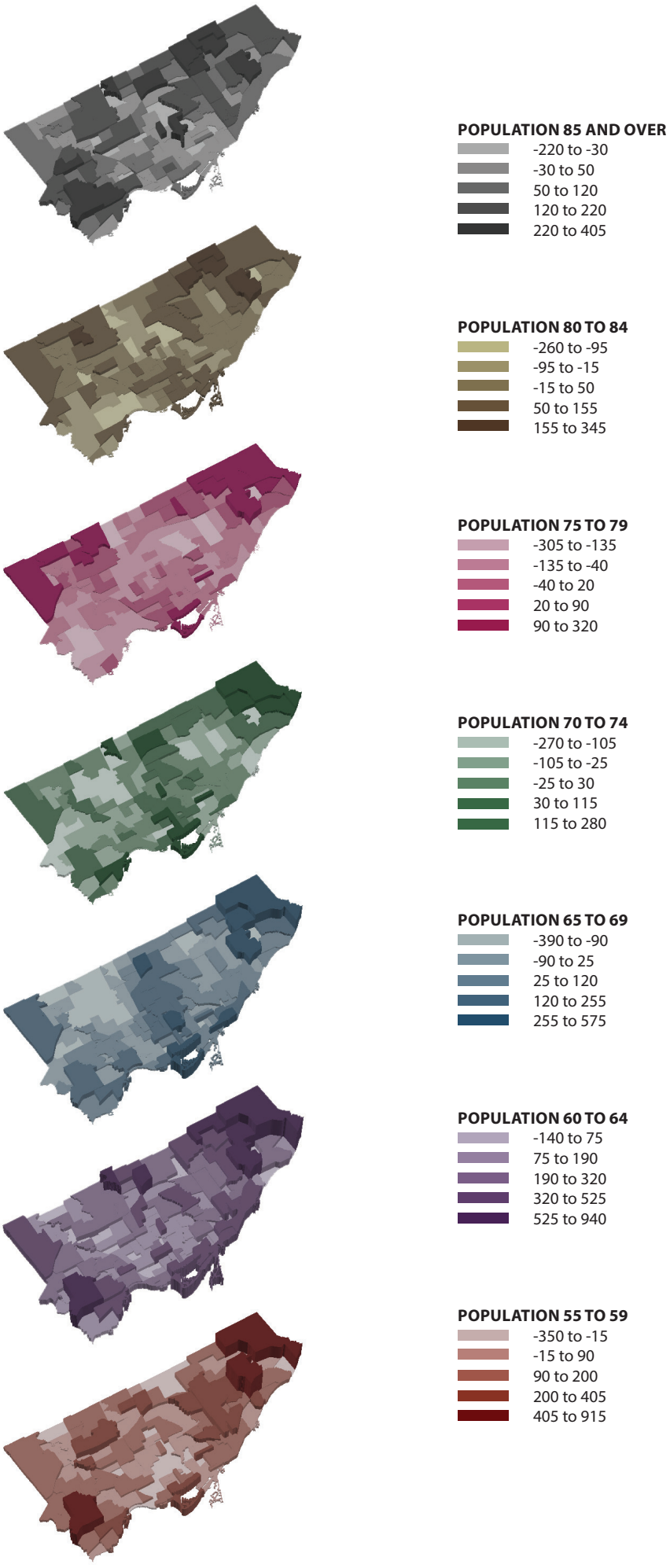


Fig. 59 Target Age Group Breakdown Comparison Between Census 2006 & 2011

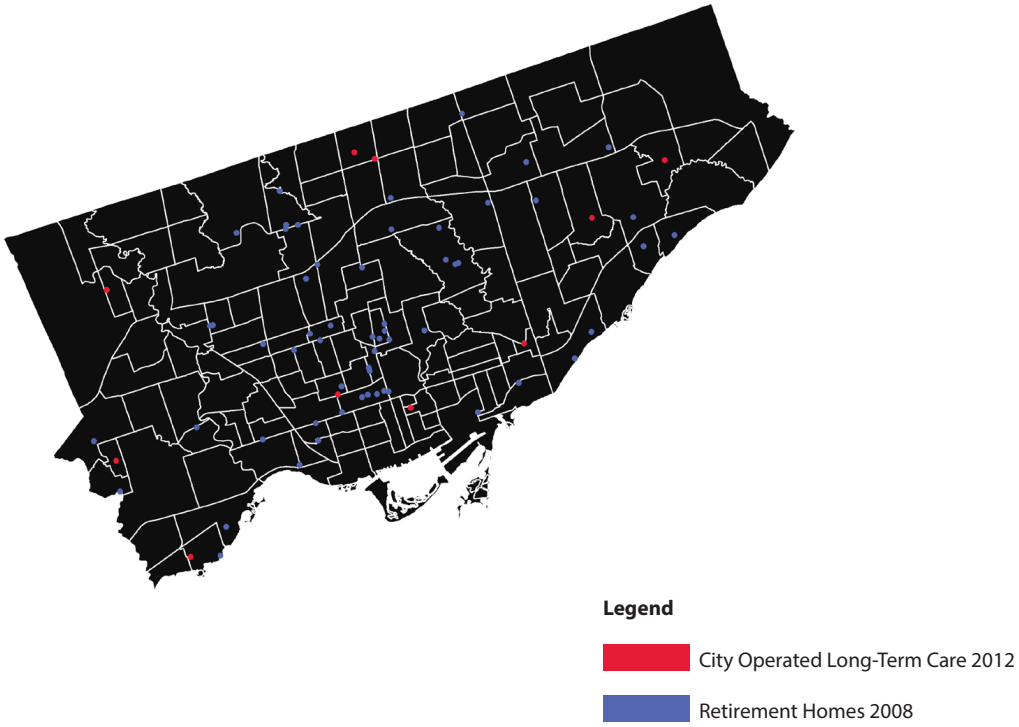


Fig. 60 Existing Care Provisions for the Elderly in the City of Toronto
1:400,000

Looking at preceding series of figures, it can be deduced by the distribution of people, specifically seniors, and the distribution of existing elderly care facilities, that there are many distinct neighborhoods that lack accessible services. For the senior population who may have problems with mobility, proximity is crucial; therefore, it is necessary to facilitate access to services that are essential in assisting an aging population.

Before the selection of a site, it is important to understand the networks put in place by the government to oversee and manage healthcare services. The Local Health Integration Network (LHIN) was an initiative put forth by the Ontario Ministry of Health and Long-Term Care (MHLTC) and has been in place since April 1st, 2007. Each LHIN consists of hospitals, community support services, long-term care, mental health and addictions services, community health centers and community care access centers (CCAC).[1] CCACs should be highlighted because they are an agency that provides information to the elderly about care options. Prior to obtaining specialized medical services, an older adult has to apply to the CCAC. The agency helps people to live independently at home through home care and apply for admission into a day service program, assisted living programs and long-term care facilities.[2]

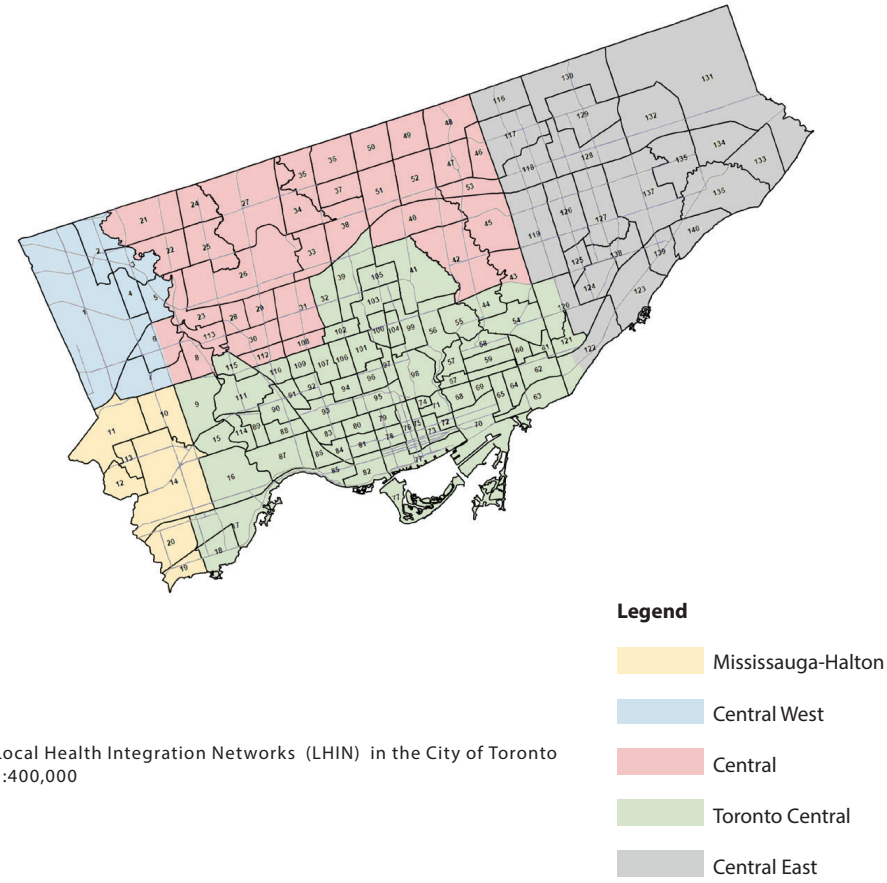


Fig. 61 Local Health Integration Networks (LHIN) in the City of Toronto 1:400,000

The province of Ontario is divided into fourteen LHINs and each LHIN is given the task of planning, funding, and integrating health services within their respective community. This allows for a more tailored approach to addressing the different needs and priorities of each locality.[3] There are five LHINs within the City of Toronto – Mississauga-Halton, Central West, Central, Toronto Central and Central-East – refer to Fig. 61. Because my thesis proposal will look to add density in order to regenerate underperforming commercial developments, it is probable that I will need to find a site outside of Toronto's downtown core. As such, I have chosen to focus my search for a site within the Central LHIN sector of the City of Toronto:

> "Central LHIN is geographically varied and comprises sections of northern Toronto, a portion of Etobicoke, most of York Region and South Simcoe County. Covering an area of 2,730 square kilometers, Central is one of the smallest LHINs geographically.
>
> For planning purposes, Central LHIN is divided into seven geographical planning areas. Each planning area has varying populations, age structures, economic conditions, and health and social characteristics". [4]

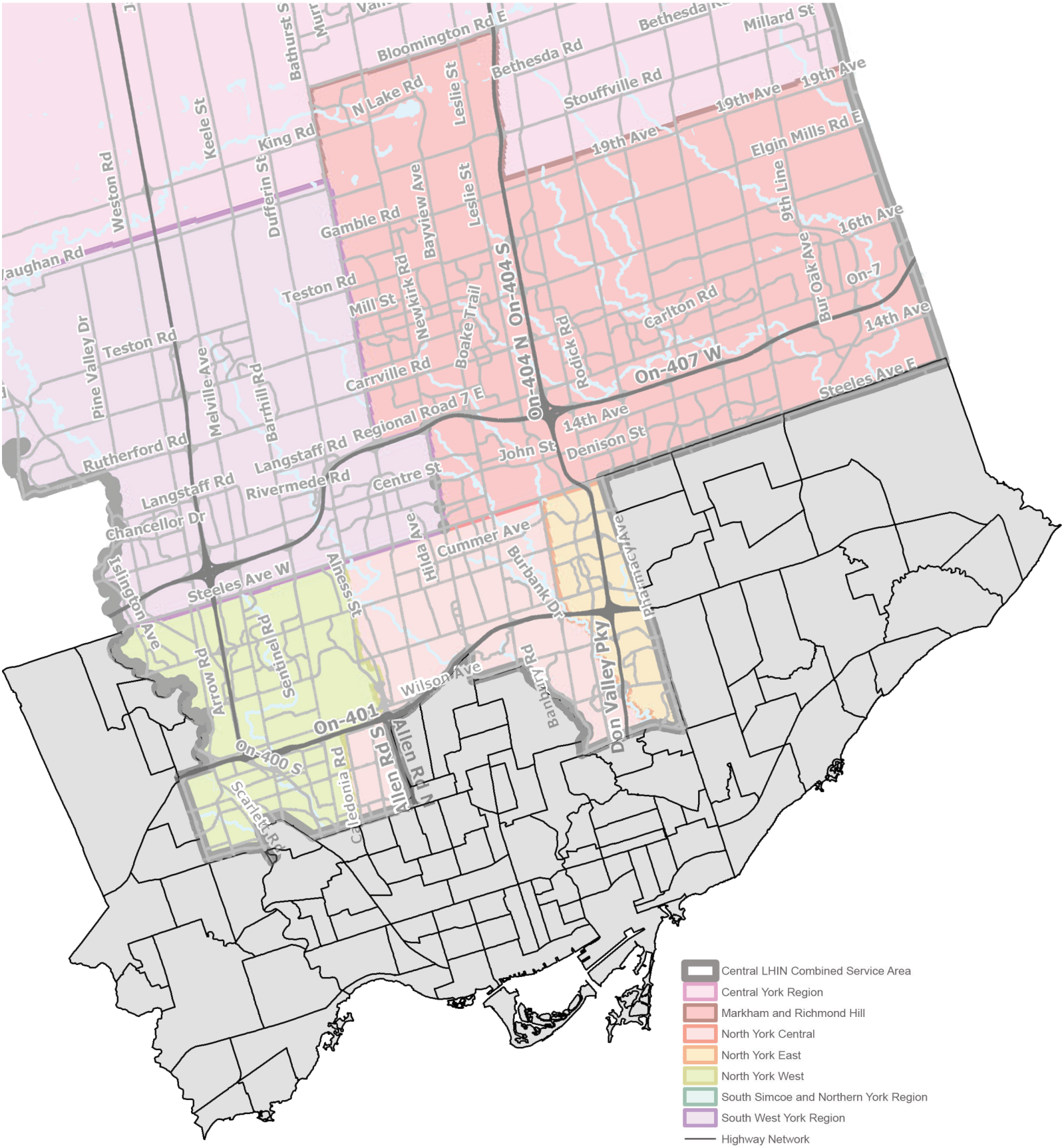


Fig. 62 In-depth View of Central LHIN
1:200,000

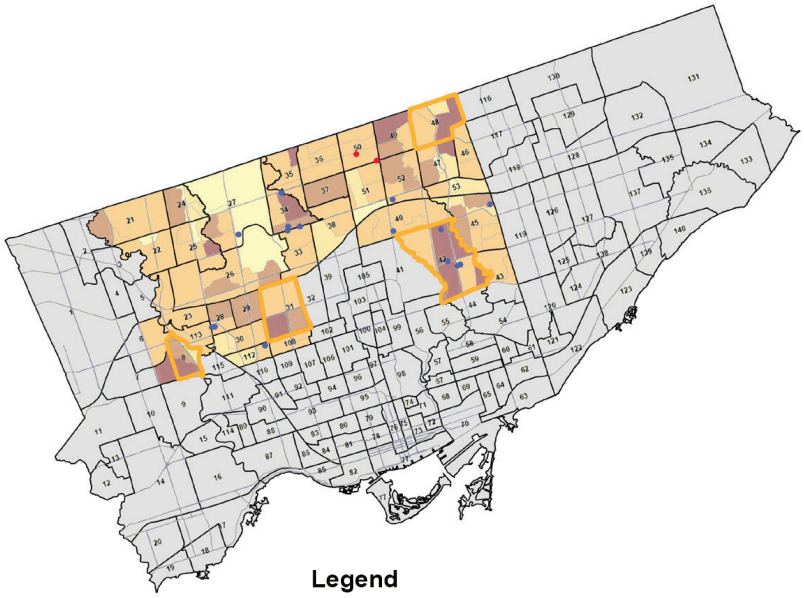
To reiterate, my thesis proposes the development of an age-inclusive, multi-service and care hub to reintegrate the elderly into the social fabric of the suburbs by using underperforming shopping malls as an activator. As such, during site selection, it is important to consider whether the site currently has a significant senior population and access to existing elderly care services as well as whether there is presently an underutilized shopping center.

As such, I began my search by looking for neighborhoods with the highest concentration of the elderly and the largest change within the senior population, as well as whether these neighborhoods currently have access to long-term care facilities as well as retirement homes. The neighborhoods of interest are the following:

Neighbourhood	**% Senior Population**	**% Change in Senior Population 2001 - 2011**	**Existing Elderly Care Facilities**
8: Humber Heights-Westmount	27%	14.2%	None
31: Yorkdale-Glen Park	23%	8.5%	None
42: Banbury-Don Mills	23%	2.8%	4
48: Hillcrest Village	22%	23.3%	None

Fig. 63 Site Selection No.1
Comparision Between Areas of Interest

The second criteria for my site selection is to look for an underperforming commercial development within the aforementioned neighborhoods of interest. To facilitate accessibility, the mall must also have access to public transportation because it is crucial for the elderly, a population who may not as mobile and may not have the physical and cognitive abilities to drive on their own. It is also important for the mall to have medical services, a grocery store and a pharmacy, stores that can provide the daily essentials for an aging population. The following is a list of shopping centers within the aforementioned neighborhoods of interest:



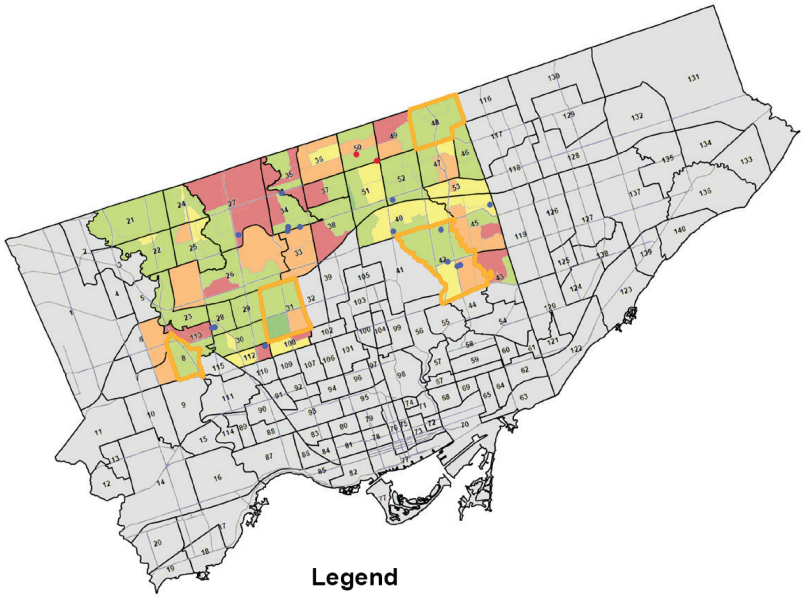
Legend

Senior Persons as % of Total Population (65+, by Census Tract)

- 3% - 8%
- 9% - 12%
- 13% - 20%
- 21% - 25%
- 26% - 76%

- Neighbourhoods of Interest
- City Operated Long-Term Care 2012
- Retirement Homes 2008

Fig. 64 Site Selection No.1
Concentration of Seniors
1:400,000



Legend

Change in Senior Population (65+, by Census Tract)

- -355 to -55
- -54 to 0
- +1 to +30
- +31 to +325
- +326 to +925

- Neighbourhoods of Interest
- City Operated Long-Term Care 2012
- Retirement Homes 2008

Fig. 65 Site Selection No.1
Change in Senior Population
2001-2006
1:400,000

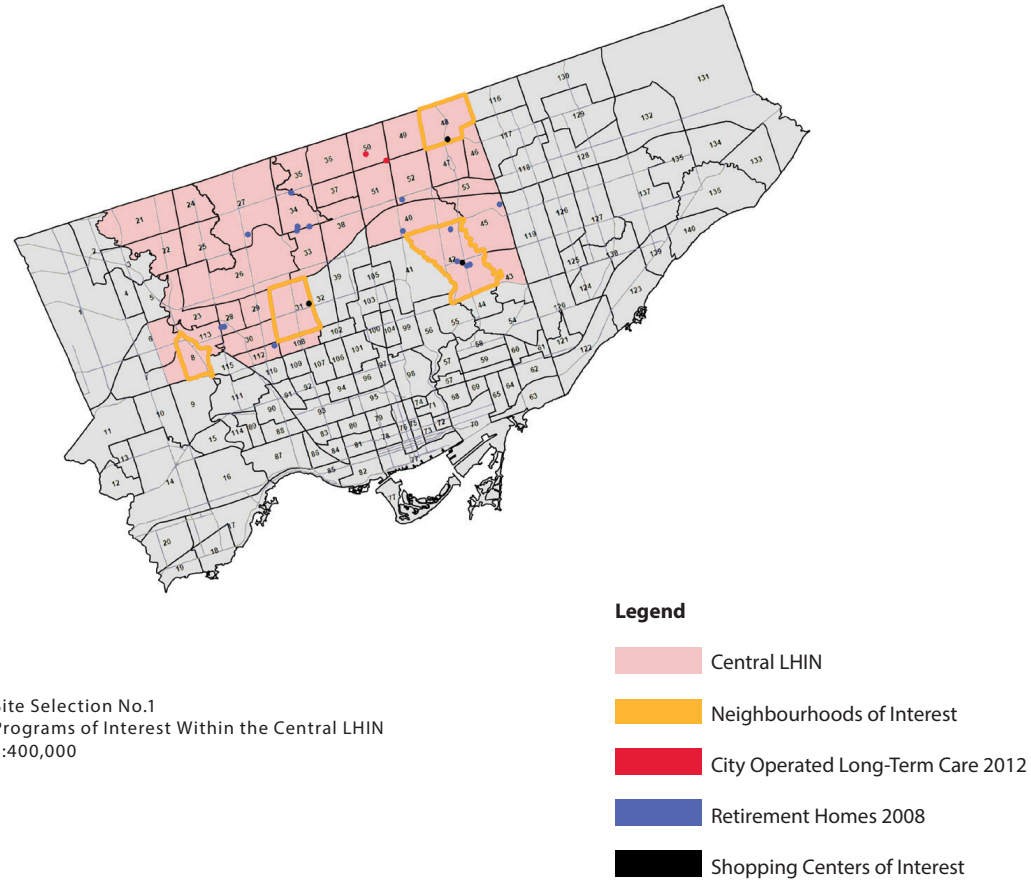
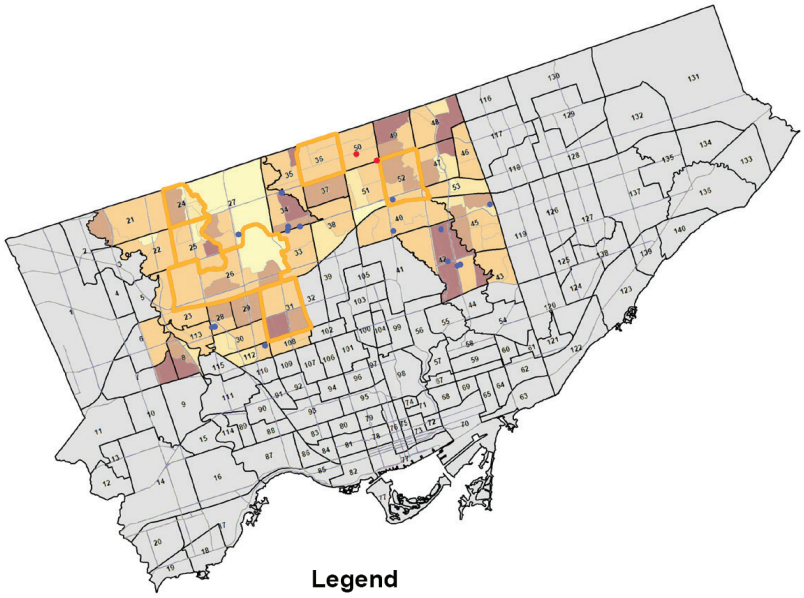


Fig. 66 Site Selection No.1
Programs of Interest Within the Central LHIN
1:400,000

Fig. 67 Site Selection No.1
Comparision Between Areas of Interest

Neighbourhood	Name of Mall	Comments
8: Humber Heights-Westmount	N/A	N/A
31: Yorkdale-Glen Park	Lawrence Square	To be demolished as part of a larger urban revitalization of the Lawrence Heights area
42: Banbury-Don Mills	Shops at Don Mills	Chosen site for an early design exploration but was rejected due to a lack of economic feasibility
48: Hillcrest Village	Skymark Place	Too far from the main subway line

The first round of site selections concluded with no results. As such, I decided to reverse the selection process and begin by looking for an underperforming commercial development that is within the Central LHIN sector. To narrow the search, I have decided to look only at enclosed shopping malls. The following is a list of district or neighborhood shopping centers that are typically enclosed and built around anchor stores such as grocery stores and department stores, and are surrounded by a free parking lot:



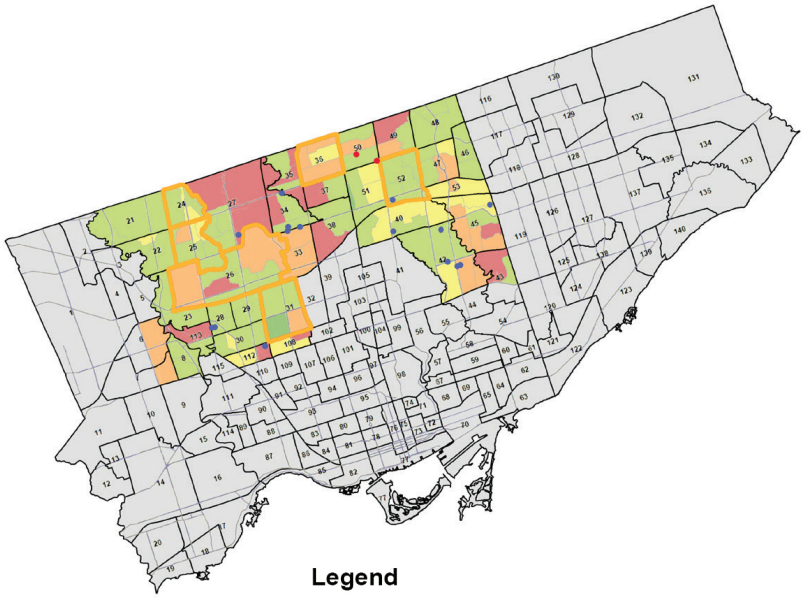
Legend

Senior Persons as % of Total Population (65+, by Census Tract)

- 3% - 8%
- 9% - 12%
- 13% - 20%
- 21% - 25%
- 26% - 76%

- Neighbourhoods of Interest
- City Operated Long-Term Care 2012
- Retirement Homes 2008

Fig. 68 Site Selection No.2
Concentration of Seniors
1:400,000



Legend

Change in Senior Population (65+, by Census Tract)

- -355 to -55
- -54 to 0
- +1 to +30
- +31 to +325
- +326 to +925

- Neighbourhoods of Interest
- City Operated Long-Term Care 2012
- Retirement Homes 2008

Fig. 69 Site Selection No.2
Change in Senior Population
2001-2006
1:400,000

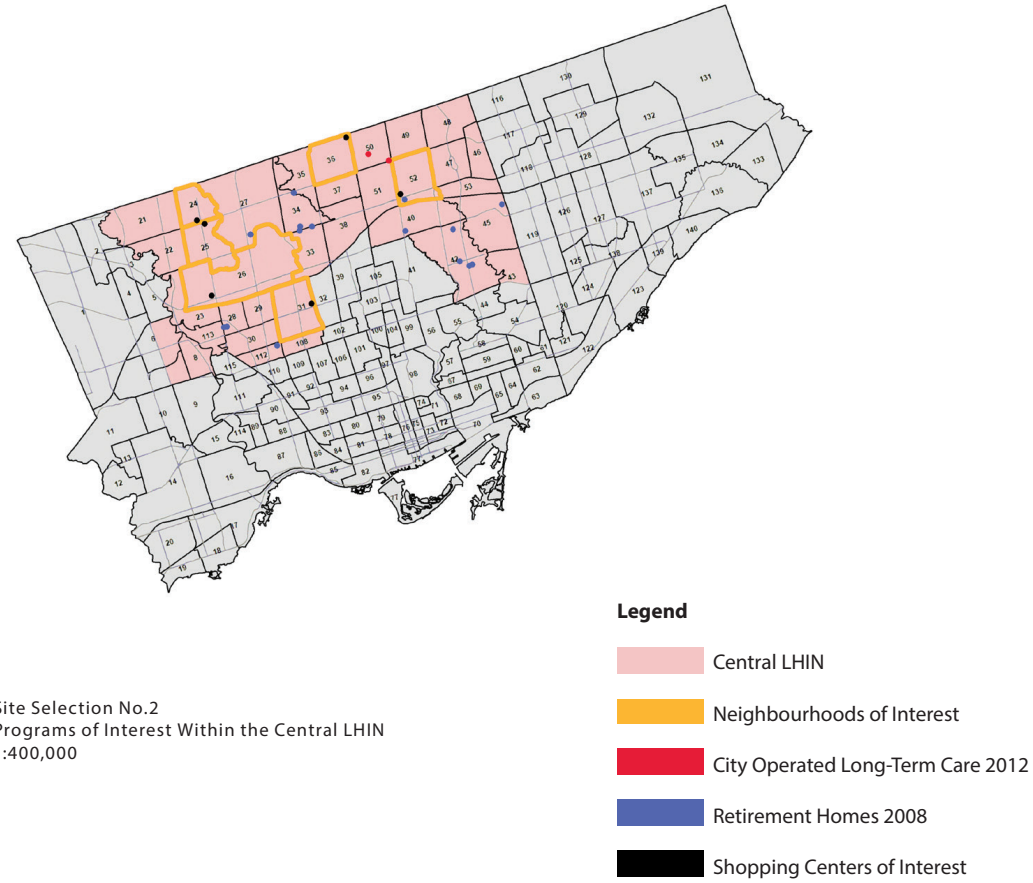


Fig. 70 Site Selection No.2
Programs of Interest Within the Central LHIN
1:400,000

Neighbourhood	Name of Mall	Comments
24: Black Creek	Yorkgate Mall	Too far from the main subway line
25: Glenfield-Jane Heights	Jane & Finch Mall	Too far from the main subway line
26: Downsview-Roding-CFB	North York Sheridan Mall	15 minute bus ride from Wilson subway station
31: Yorkdale-Glen Park	Lawrence Square	To be demolished as part of a larger urban revitalization of the Lawrence Heights area
36: Newtonbrook West	Centerpoint Mall	10 minute bus ride from Finch subway station
52: Bayview Village	Bayview Village	A flourishing, upscale shopping center built adjacent to Bayview subway station

Fig. 71 Site Selection No.2
Comparision Between Areas of Interest

Once again, the second step is to analyze whether the aforementioned neighborhoods of interest have a high concentration of the elderly, a large change within the senior population, and whether these neighborhoods currently have access to existing long-term care facilities and retirement homes. The following is the analysis of the aforementioned neighborhoods of interest:

Neighbourhood	% Senior Population	% Change in Senior Population 2001 - 2011	Existing Elderly Care Facilities
24: Black Creek	12%	38.2%	None
25: Glenfield-Jane Heights	15%	14.5%	None
26: Downsview-Roding-CFB	15%	7.6%	None
31: Yorkdale-Glen Park	23%	8.5%	None
36: Newtonbrook West	16%	1.6%	None
52: Bayview Village	17%	47.9%	None

Fig. 72 Site Selection No.2
Comparision Between Areas of Interest

The second round of site selection resulted in two possible sites: North York Sheridan Mall and Centerpoint Mall. A side-by-side analysis can be found below:

Shopping Center	North York Sheridan Mall	Centerpoint Mall
Neighbourhood	26: Downsview-Roding-CFB	36: Newtonbrook West
Location	Close to where Highway 400 and 401 intersect	Adjacent to the northern border of the City of Toronto
Access to Public Transportation	15 minute bus ride away from Wilson subway station	10 minute bus ride away from Finch subway station
Percentage of Senior Population	15%	16%
Percentage Change 2001 - 2011	7.6%	1.6%
Existing Long Term Care Home	None	None
Existing Retirement Home	None	None

Fig. 73 Comparision Between Site Selection No.1 and No.2

From the chart above, it can be deduced that both sites are very similar. Ultimately, I decided to choose Centerpoint Mall as my site because it is situated on the border between the City of Toronto and the suburbs to the north. Because of its location, Centerpoint Mall acts as a transit hub, connecting the York Region Transit (YRT) and VIVA buses with the Toronto Transit Commission (TTC) buses to Finch subway station. The City of Toronto also tends to value land around subway stations; therefore, a location like Centerpoint Mall, which is close to but not directly adjacent to a subway station is more financially and politically feasible.

However, there are future plans to extend the subway north of Finch Station to Richmond Hill Centre – see Fig. 74. In fact, Steeles Station is proposed directly adjacent to my site. As such, proposing my design on this site before the station is built would allow my users to benefit from the future subway extension without accruing additional costs due to an increase in land value. In anticipation of the subway extension, there is actually an extensive study that was completed by both the City of Toronto and the City of Vaughan to intensify and densify this section of the Yonge Street corridor, including proposals on the Centerpoint Mall site – see Fig. 75 and Fig. 76. From what I can deduce from these proposals, the intention is to demolish and completely redevelop the existing shopping center.

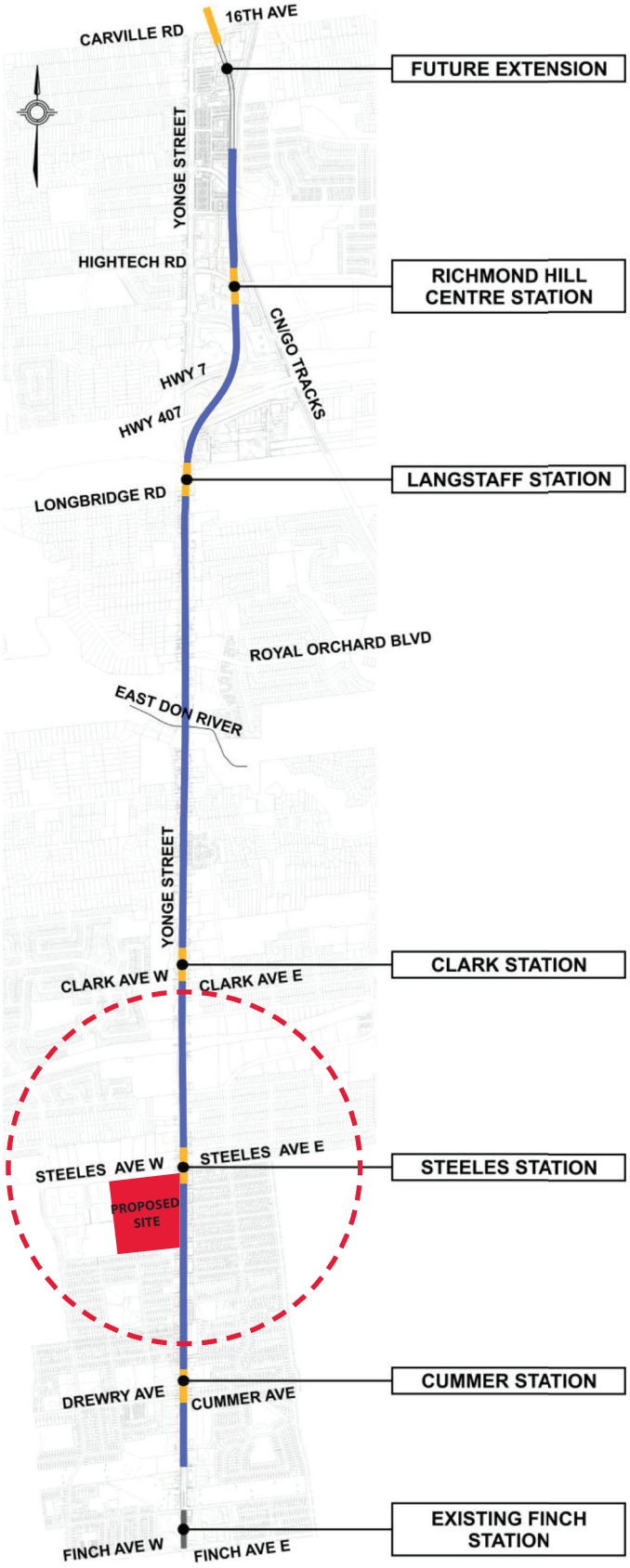


Fig. 74 Proposed Subway Extension

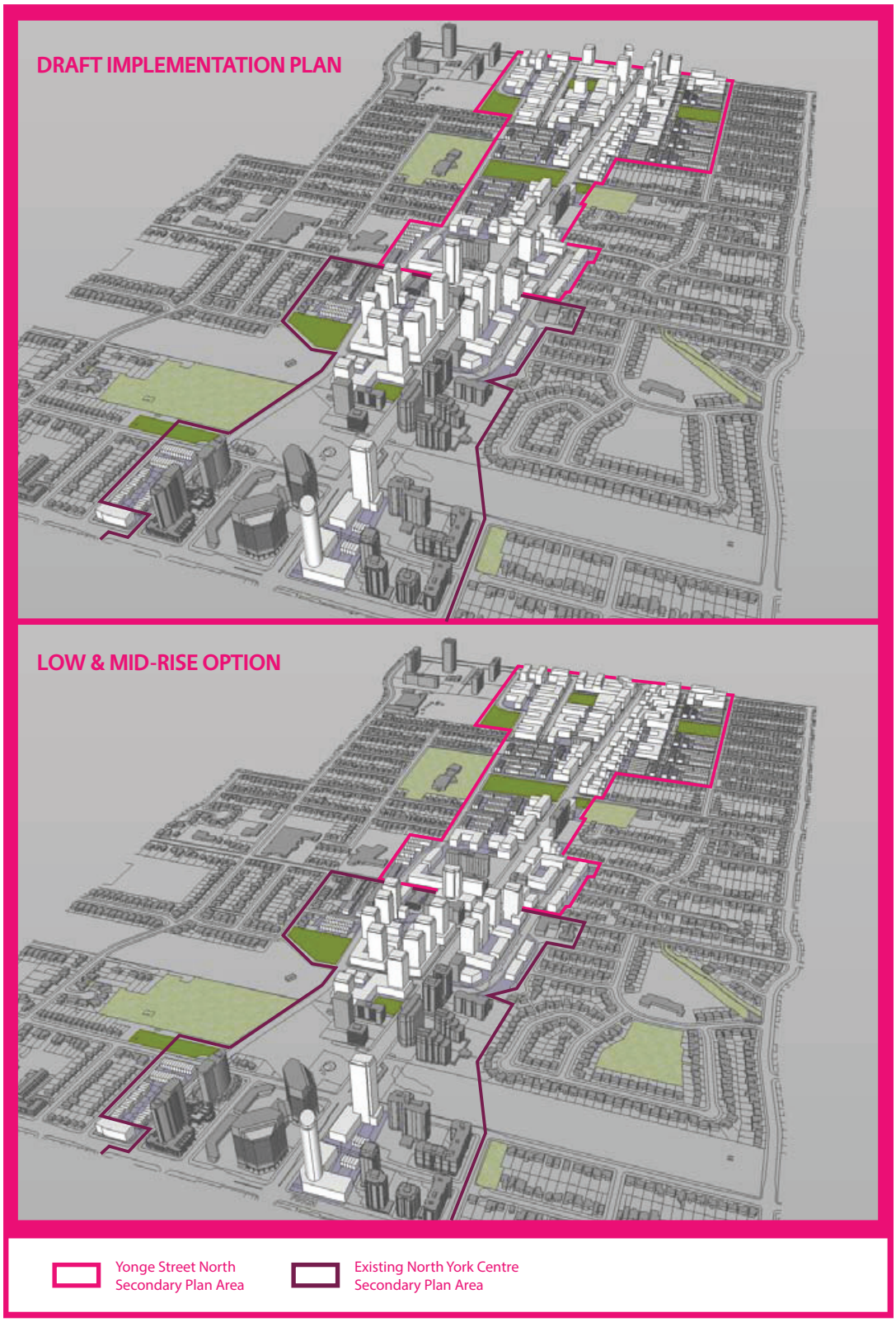


Fig. 75 Proposed Yonge Street Corridor Redevelopment by the CIty of Toronto

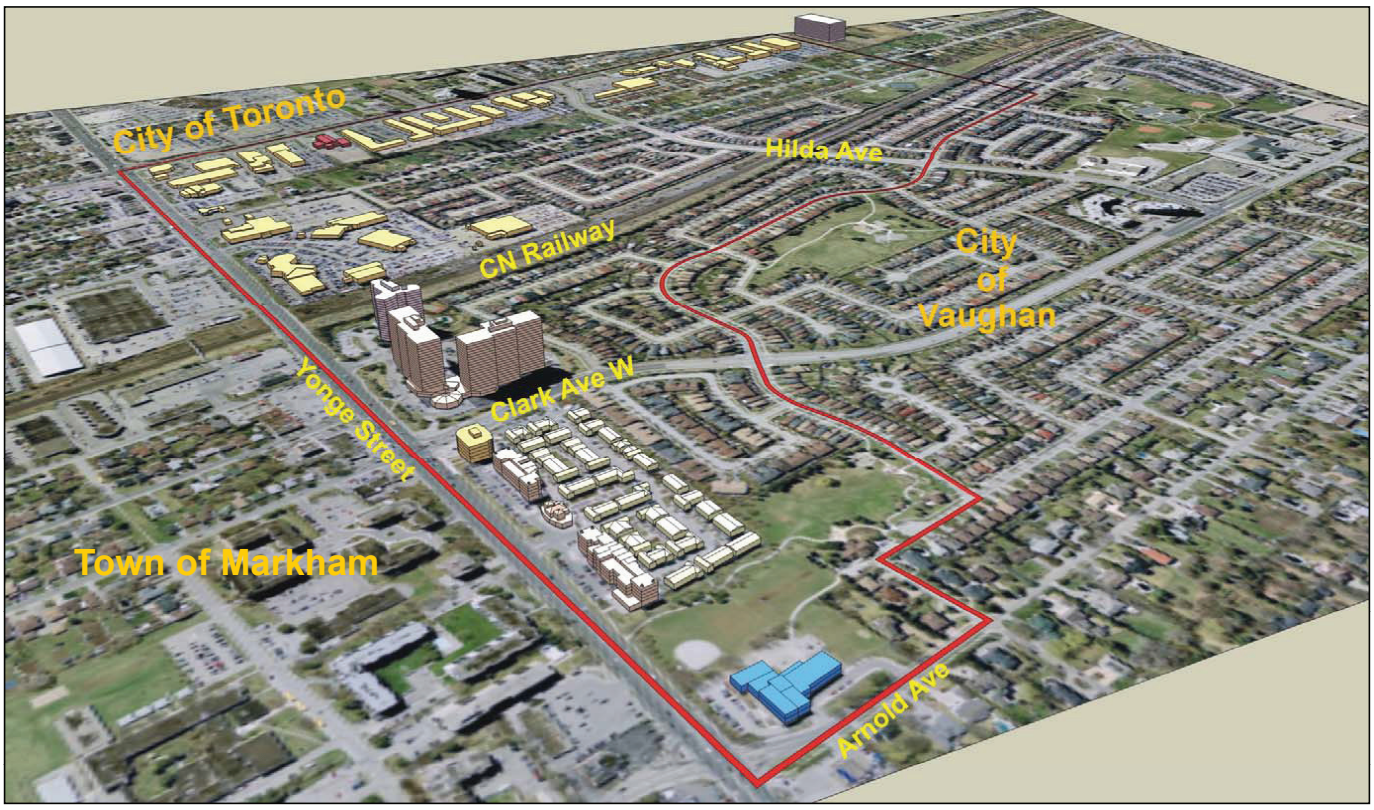




Fig. 76 Proposed Yonge Street Corridor Redevelopment by the City of Vaughan

The following figure presents an analysis of Centerpoint Mall in relation to its surrounding neighbourhood. Due to a high concentration of single-family residences in the area, there is a variety of existing amenities. Schools, community centers, churches and parks are abundant in the neighborhood, making it suitable and desirable for all ages. An 850-meter walking radius around the site was chosen for experimentation to showcase these neighborhood amenities:



Fig. 77 Analysis of Site in Relation to its Surrounding Neighbourhood


850m WALKING
RADIUS
YONGE STREET
11
2
1



1 The Salvational Army North York Temple
A community church with family services, community outreach programs and a food bank.



2 Centre Park
This 1.1 hectare tree-lined park features a ball diamond and a children's playground.



3 Goulding Community Centre
The building has an indoor arena, outdoor pool, and several amenity spaces including a viewing gallery and a multipurpose and dance room for various uses.



4 Goulding Park
This 4.6 hectare park features two lit ball diamonds, three tennis courts, three lit bocce courts and a children's playground.



5 Newtonbrook Secondary School
Considered to be one of the more sports-oriented schools in the Toronto District School Board, this school is for students from Grades 9 to 12.

Fig. 78 Photographs of Neighbourhood Amenities



6 St. Paschal Baylon Church
Established to fulfill the great need for a new parish because of the growth of Italian and other ethnic families moving into the area.



7 St. Paschal Baylon Separate School
Part of the Toronto Catholic District School Board, St. Pascal's is a school for children in Preschool through Grade Eight.



8 St. Theodore of Canterbury Anglican Church
Built by a dedicated group of families in the late 50s. Due to demographic changes, the church has become a multicultural community.



9 Steeles Memorial Chapel
A Jewish chapel that provides funeral services, funeral planning and grief counselling.



10 Alborz Educational Centre
A private school that offers a Canadian School that teaches students from Grade 9 to university entrance, as well as a Farsi Language School that teaches students from grade 1 to grade 12.



11 Toronto Kanglim Methodist Church
A Christian church serving the Korean community.

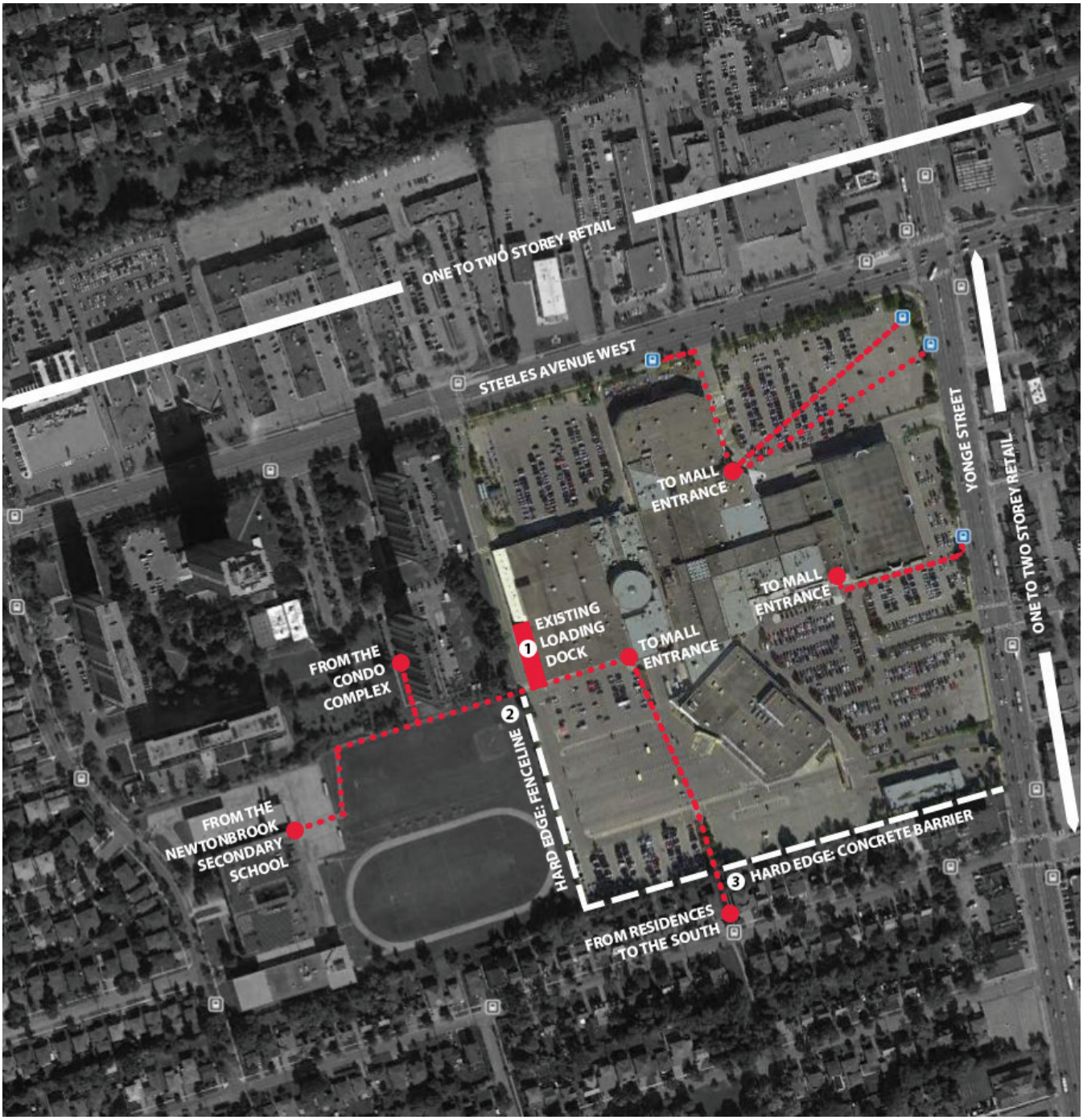


Fig. 79 Analysis of the Disconnects Within the Current Site



1 Canadian Tire Loading Dock
Trail from school and condo complex leads directly into the Canadian Tire loading dock before one can enter into the mall.



3 Concrete Barriers Along the Residences to the South
Guardrail-height solid concrete walls divide the backyards of the single-family homes to the south from the mall's parking lot.



2 Fence Surrounding Newtonbrook Secondary School
A chain-link surrounds the sports field east of Newtonbrook Secondary School.

Fig. 80 Photographs of Site Disconnect

For the chosen site of Centerpoint Mall, there is currently several disconnects between the enclosed shopping center and the surrounding neighborhood – see Fig. 79. To the north and the east, the site is bordered by two major streets – Steeles Avenue and Yonge Street. Along these major corridors is a series of one to two-storey retail strips. Access to public transportation from the mall is also located along these major streets. The shopping center lacks a street presence along these corridors due to the depth of the parking lots that surround the mall and separates it from the street, making it difficult for users to access public transportation. To the south, the shopping mall is bordered by single family homes. The shopping center can be accessed through a narrow pathway but once again, one must navigate through the parking lot in order to get into the mall. To the west, the site is bordered by five condo towers and Newtonbrook Secondary School. The shopping center can be accessed through a trail that runs beside the school's baseball field. Unfortunately, the trail runs directly into the rear loading dock of Canadian Tire, a potential hazard for vulnerable populations such as the elderly and young children. In order to address the disconnects within the site, I have proposed the following three design strategies:

STRATEGY 1: BUILD ON TOP OF MALL

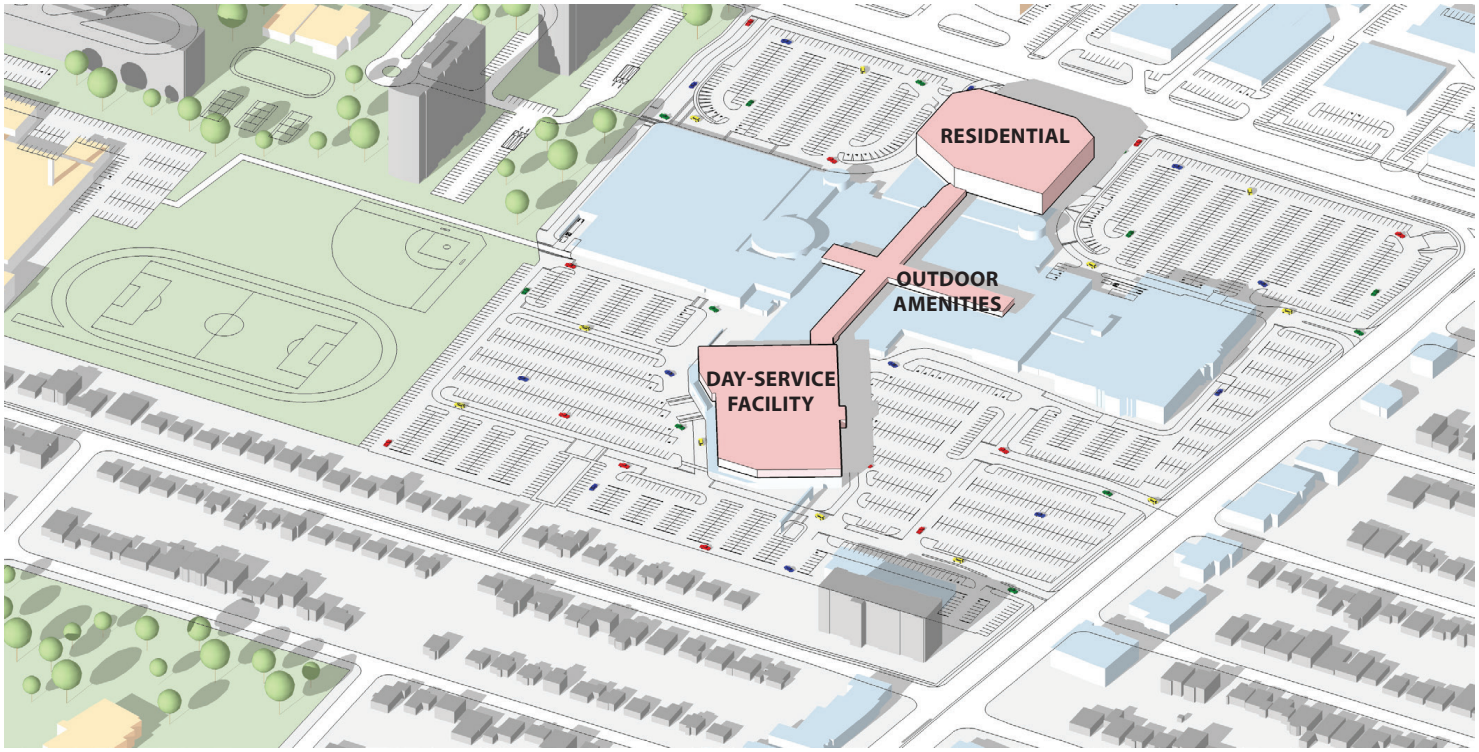


Fig. 81 Sketch of Strategy 1

LEGEND

- Proposed
- Green Space
- Existing Commercial
- Existing Residential
- Existing Neighbourhood Amenities

Strategy 1 envisions the thesis intervention to be built on top of the existing shopping center. Residential suites will be provided on top of the existing Lowe's on the north end of the mall. An age-inclusive day service facility will be provided on top of the existing No Frill's on the south end of the shopping mall. The two buildings will be accessed by a corridor on top of the roof with outdoor amenities branching off of it. Unfortunately, this strategy does not address any of the aforementioned disconnects with the existing site.

STRATEGY 2: BUILD ON PARKING LOT

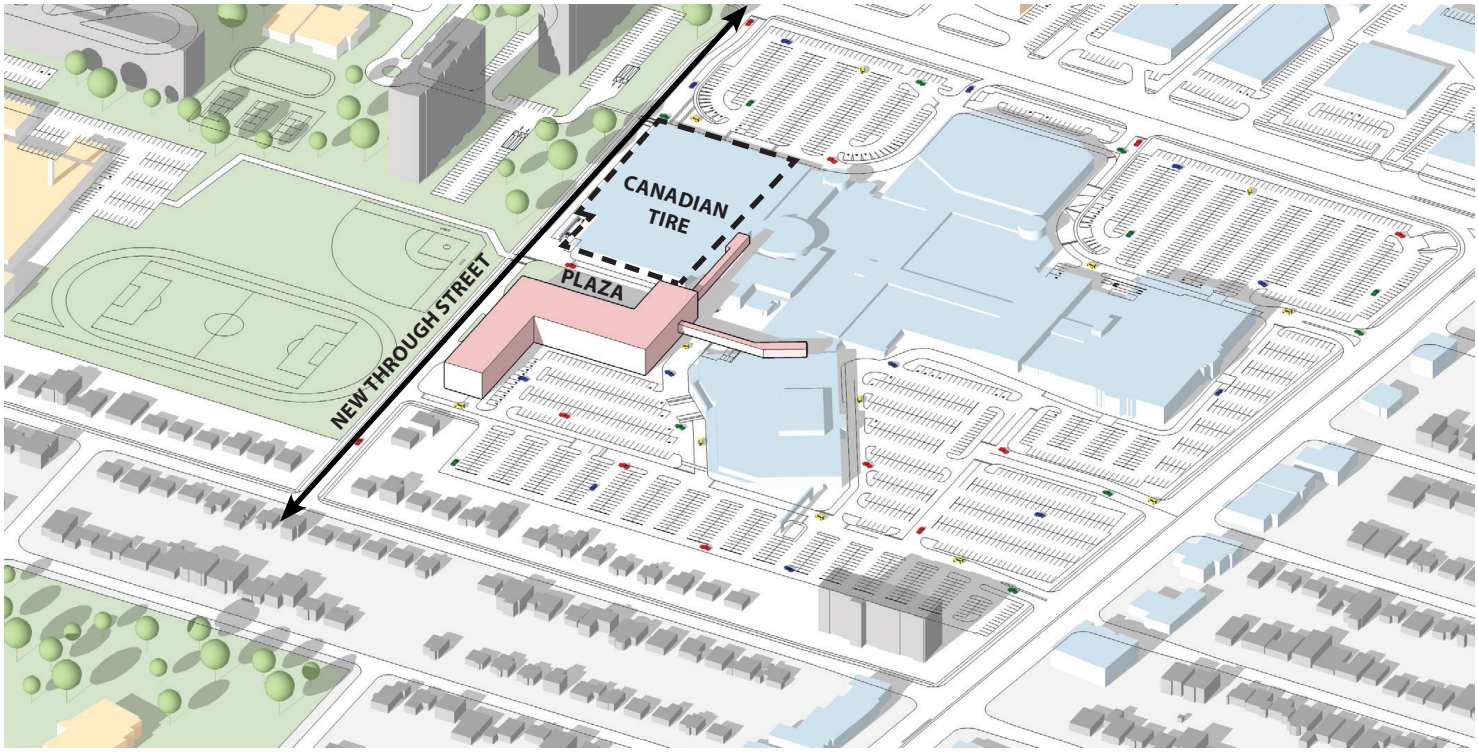


Fig. 82 Sketch of Strategy 2

LEGEND

- Proposed
- Green Space
- Existing Commercial
- Existing Residential
- Existing Neighbourhood Amenities

Strategy 2 envisions a separate building to be built on top of the existing parking lot just south of Canadian Tire on the west end of the shopping center. Bridges will branch off the building to connect to the shopping mall at different locations. As mentioned above, one of the main disconnects between the mall and the condo towers and Newtonbrook Secondary school is that the trail that connects the two sites runs into the loading dock at the back of Canadian Tire. In order to address this issue, a new through street is proposed that connects Steeles Avenue to the north and Moore Park Avenue to the south. The new street also allows my intervention to have an address and street presence. The existing pedestrian laneway between the condo and the school is diverted south into a new proposed plaza, avoiding the loading area for Canadian Tire. This new intersection and plaza creates a new landmark and highlights my thesis intervention as a destination for the surrounding neighborhood.

STRATEGY 3: REDEVELOPMENT OF MALL

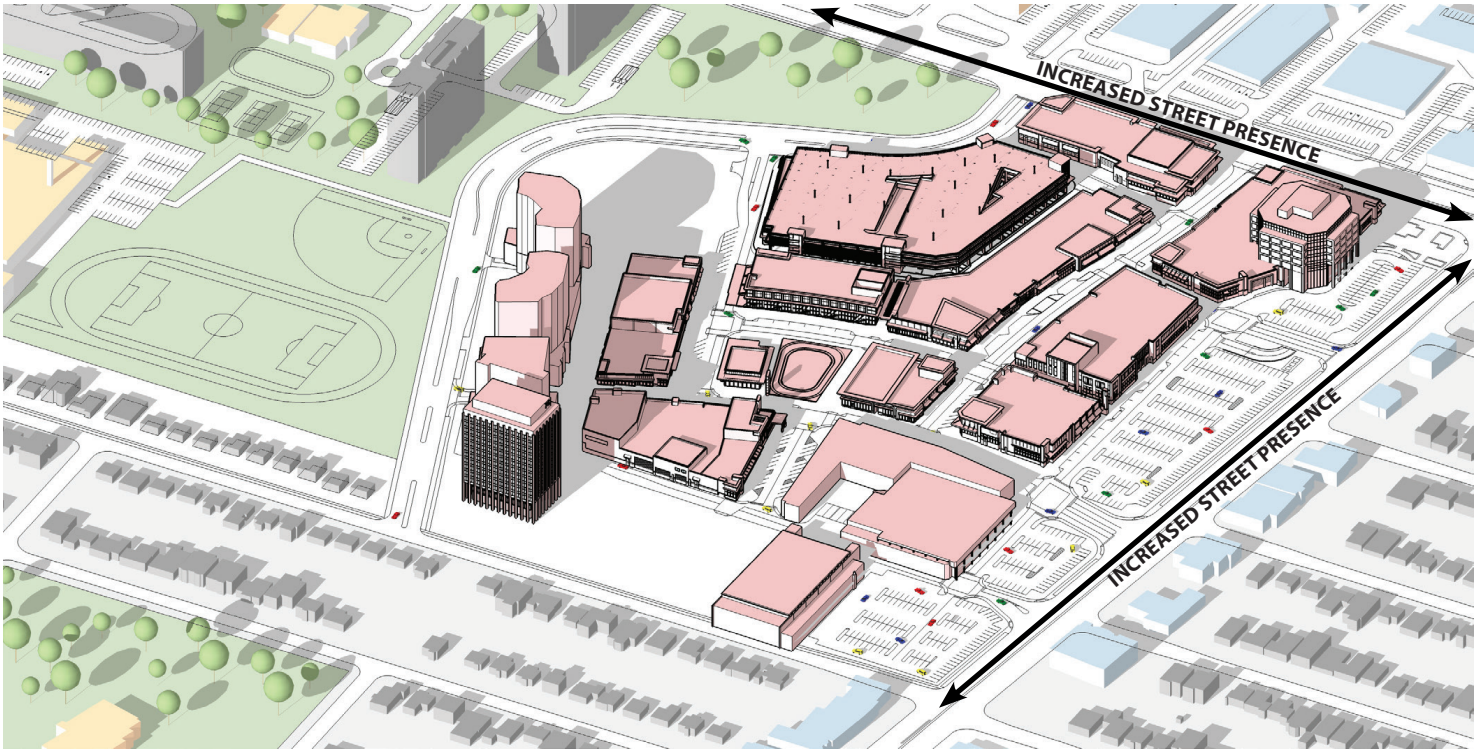


Fig. 83 Sketch of Strategy 3

LEGEND

- Proposed
- Green Space
- Existing Commercial
- Existing Residential
- Existing Neighbourhood Amenities

Strategy 3 includes the complete redevelopment of the shopping center. In order to better integrate the building into the surrounding urban fabric, the mall will be broken into blocks to form an open air shopping district. As mentioned before, one of the main disconnects between the shopping mall and the surrounding neighborhood is that the mall lacks a street presence along the main street corridors, Steeles Avenue and Yonge Street, due to the depth of the parking lots that surrounds the existing shopping center. As such, within this scenario, the new retail blocks will be located closer to Steeles Avenue and Yonge Street. For illustration purposes, Shops at Don Mills was used to envision what the new development may look like. It should be noted that this development will be the least economically feasible because it is a complete redevelopment of the existing site in which none of the existing infrastructure or parking can be reused.

The scenario to be considered for the building design of my iteration of a Model For Age-Inclusive Care is one which employs Strategy 2 – Build on Parking Lot. This scenario was chosen because it gives me the most flexibility as the designer. It addresses some of the issues of the existing site by allowing the shopping center to be better accessed by Newtonbrook Secondary school and the condo towers to the west, while allowing the intervention to benefit from the existing amenities, parking and infrastructure of Centerpoint Mall.

1 "Ontario's Local Health Integration Networks" Ontario Ministry of Health and Long-Term Care. http://www.lhins.on.ca/ (accessed August 20, 2016)

2 "Community Care Access Centres" Ontario Ministry of Health and Long-Term Care. http://www.health.gov.on.ca/en/public/contact/ccac/ (accessed March 16, 2017).

3 "Ontario's Local Health Integration Networks" Ontario Ministry of Health and Long-Term Care. http://www.lhins.on.ca/ (accessed August 20, 2016)

4 "Central LHIN" Ontario Ministry of Health and Long-Term Care. http://www.centrallhin.on.ca/ (accessed August 20, 2016)

5 Your City - Demographics" City of Toronto. http://www1.toronto.ca/wps/portal/contentonly?vgnextoid=100c861b9fdb1410VgnVCM10000071d60f89RCRD (accessed August 20, 2016)

6 Your City - Demographics" City of Toronto. http://www1.toronto.ca/wps/portal/contentonly?vgnextoid=100c861b9fdb1410VgnVCM10000071d60f89RCRD (accessed August 20, 2016)

7 Your City - Demographics" City of Toronto. http://www1.toronto.ca/wps/portal/contentonly?vgnextoid=100c861b9fdb1410VgnVCM10000071d60f89RCRD (accessed August 20, 2016)

8 Your City - Demographics" City of Toronto. http://www1.toronto.ca/wps/portal/contentonly?vgnextoid=100c861b9fdb1410VgnVCM10000071d60f89RCRD (accessed August 20, 2016)

3.4

THE DESIGN: MUTUALITY AS A TYPOLOGY OF CONNECTION

"Active Aging is the process of optimizing opportunities for health, participation and security in order to enhance the quality of life as people age."

- Federation of Canadian Municipalities, *Canada's Aging Population: The Municipal Role in Canada's Demographic Shift*

The final iteration of the Model For Age-Inclusive Care takes the form of an independent building to be proposed on an area currently occupied by a parking lot south of the Canadian Tire on the west end of Centerpoint Mall. It takes the existing fire routes as its bounding property lines and proposes a new through street to act as a buffer to the condo towers and Newtonbrook Secondary School to the west. The aim of this project is to integrate the building into the existing context in a manner respective of the different building typologies which surround it, while at the same time providing a new model of elderly care that is currently not found within the community. The design of the building focuses particularly on the senior population as its main users; however, it is also intended to be an age-inclusive design that provides an environment for all ages and family structure types. The design thus presents the community with a diverse range of possibilities for community services, medical care and inhabitation that aims to support healthy living for an aging population. It blurs the boundaries of traditional age-segregated institutional programming through the integration of live, work, play and care spaces into its program. The result is an attempt to architecturally display a possible solution to the issues that have been raised throughout this thesis.

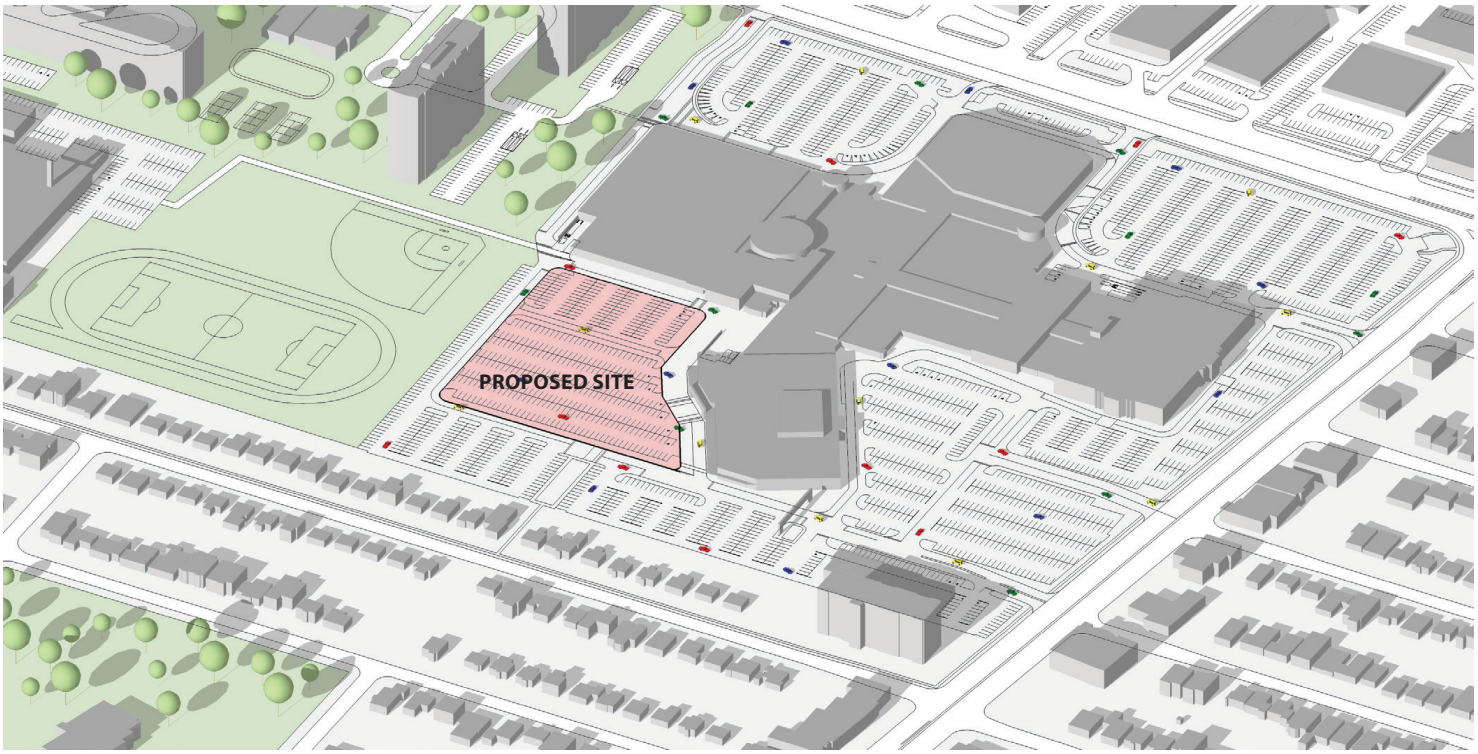


Fig. 84 Location of Proposed Site



Fig. 85 Photos of the Proposed Site

IMPORTANCE OF SITE CONNECTIONS

As mentioned in the previous section, in order to revitalize Centerpoint Mall as a regional shopping center, my intention is to return it to the original vision of architect Victor Gruen: "…first and foremost, **the organization and separation of traffic; second, a programmatic mix that would include civic and social functions; and third, the use of public art, landscaping, and other amenities to create a diverse pedestrian environment".** [1]

The following study will address the first of Gruen's strategic elements: the organization and separation of traffic. Prior to the design of this intervention, it was necessary to understand the flows within the site such as pathways and streets, movement of people surrounding the site and circulation of people within the existing building itself. The following series of diagrams depict a study of these site circulations, resulting in the proposed building footprint as shown in Fig. 91:

PEDESTRIAN PATHS & VEHICULAR STREETS

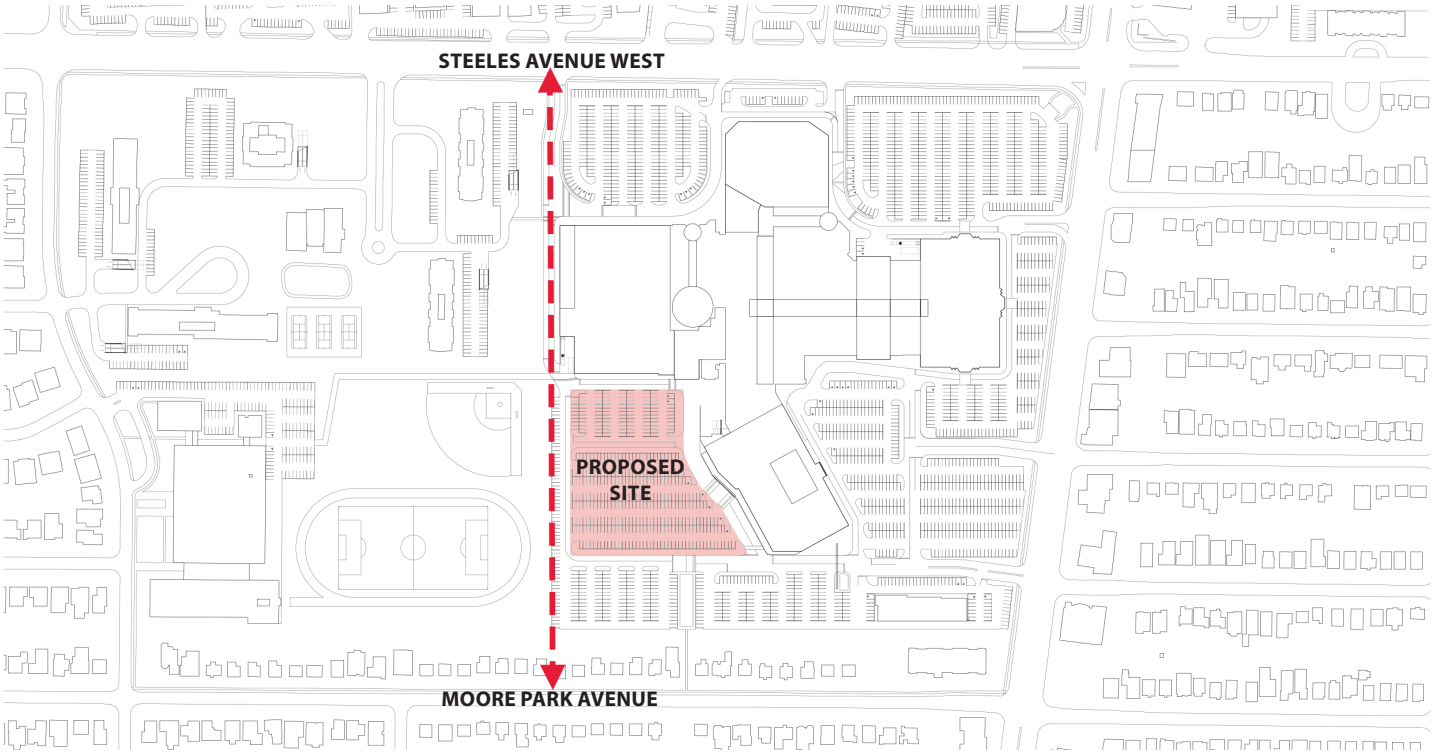


Fig. 86 Amplifying Connections - A New Street is Proposed

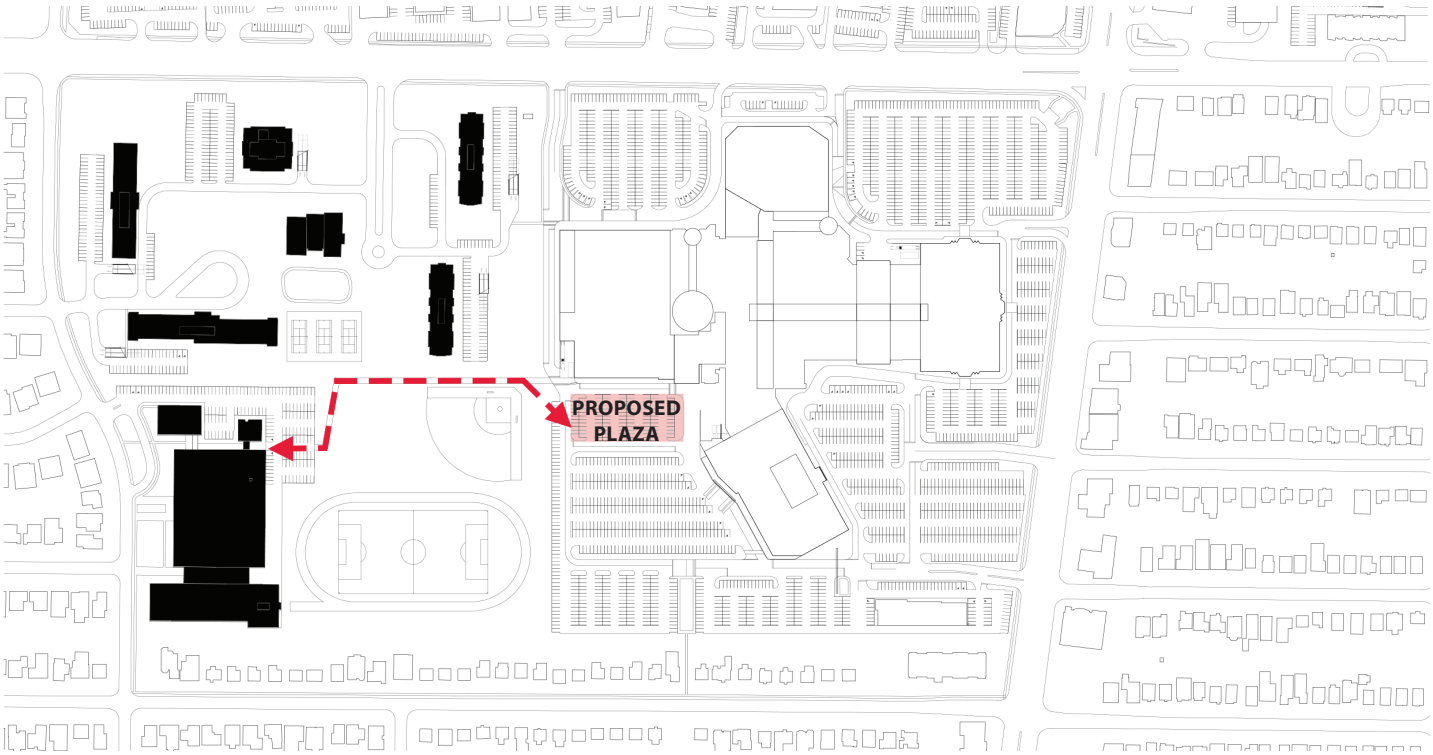


Fig. 87 Amplifying Connections - Enhancement of Pedestrian Links

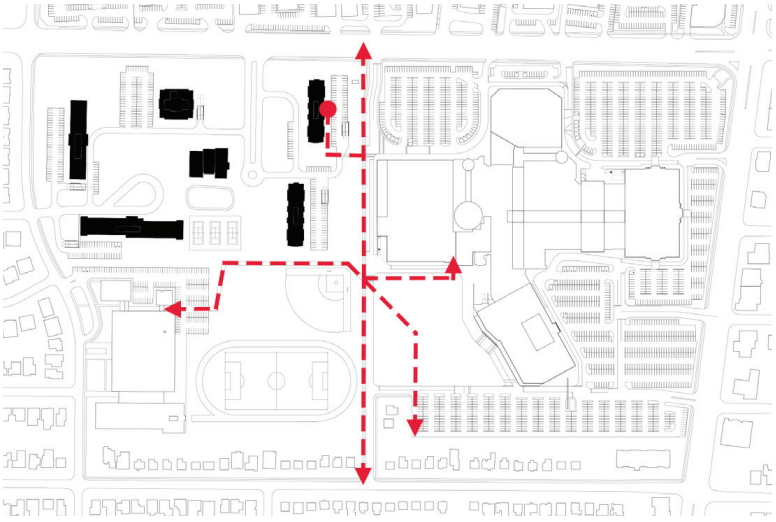


Fig. 88 Circulation Routes of Users within the Condo Towers to the West

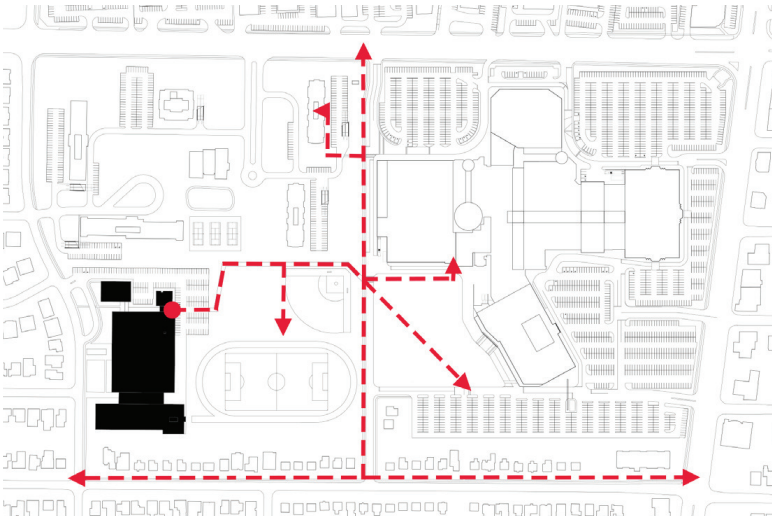


Fig. 89 Circulation Routes of Users within Newtonbrook Secondary School to the West

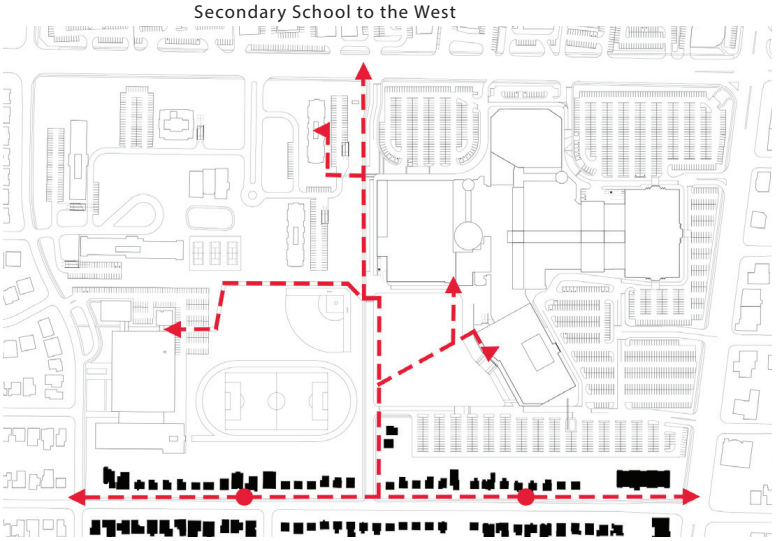


Fig. 90 Circulation Routes of Users within the Residential Fabric to the South

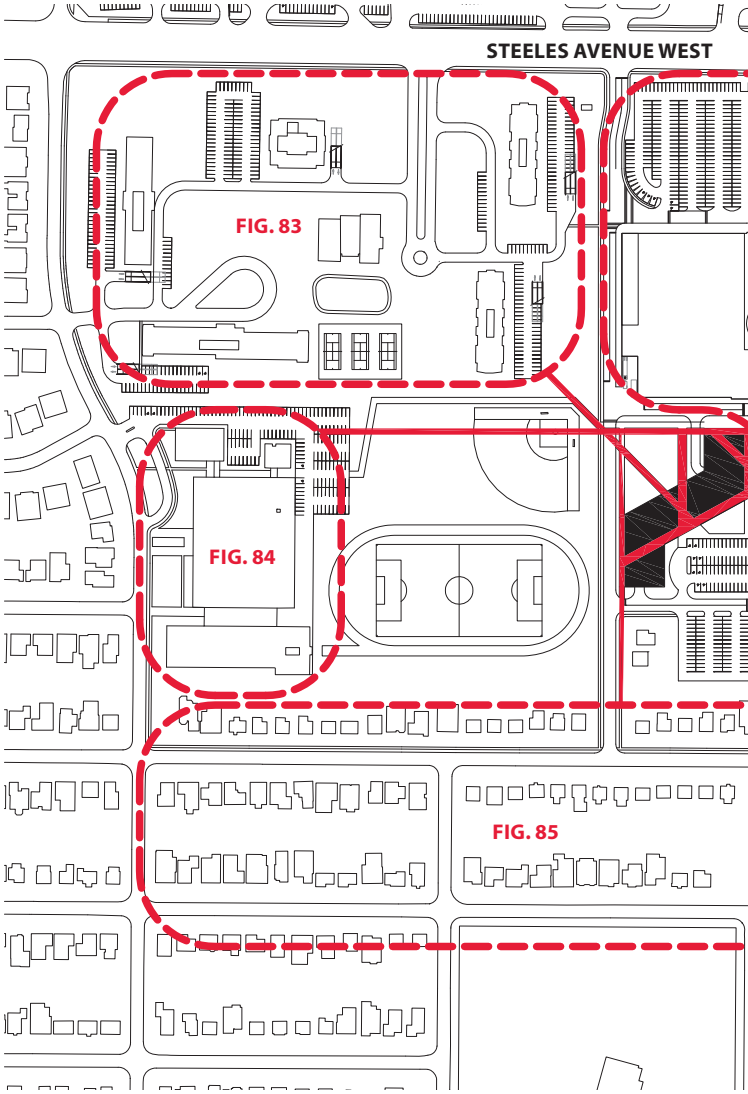
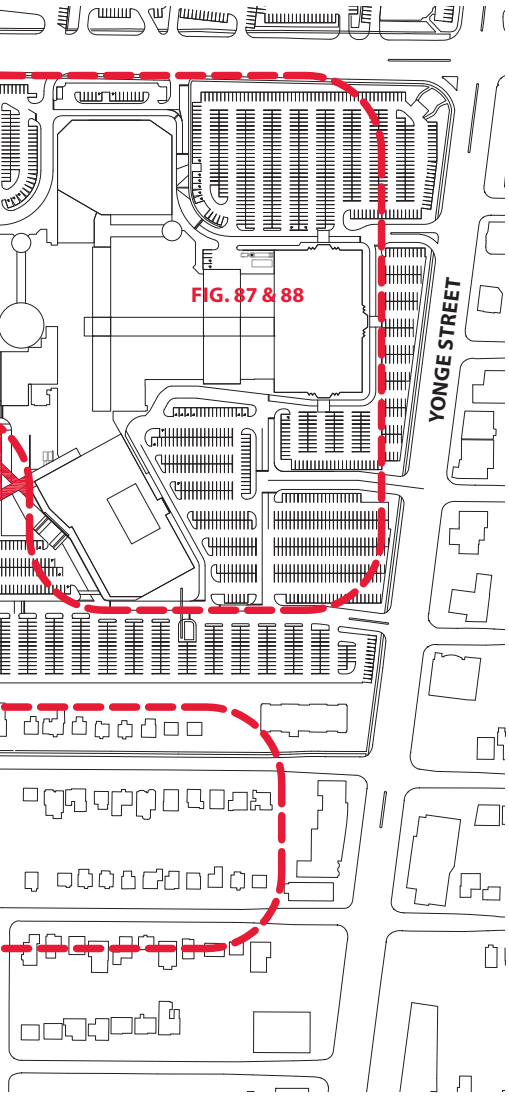


Fig. 91 Site Plan - Proposed Building Footprint
Scale 1:5000



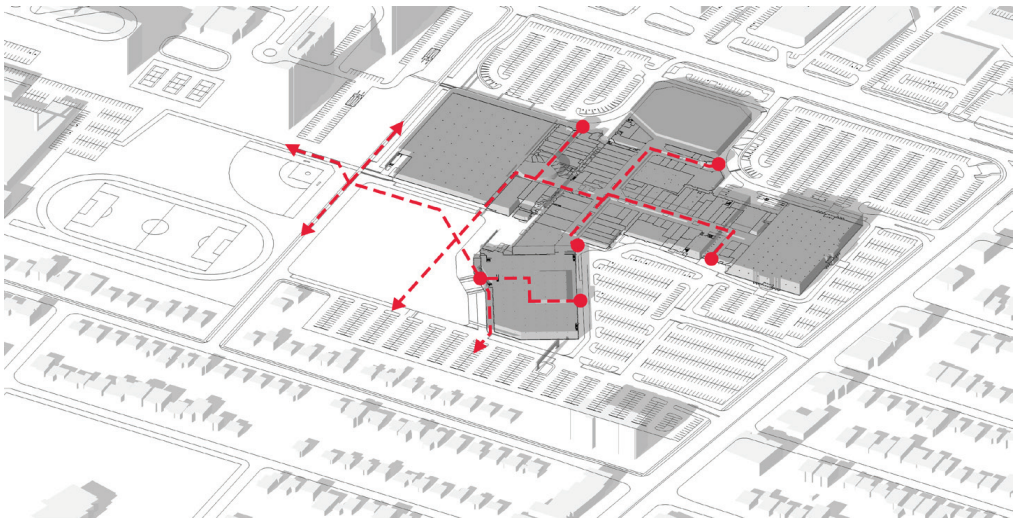


Fig. 92 Ground Plane Connections - Circulation Routes of Users within Centerpoint Mall

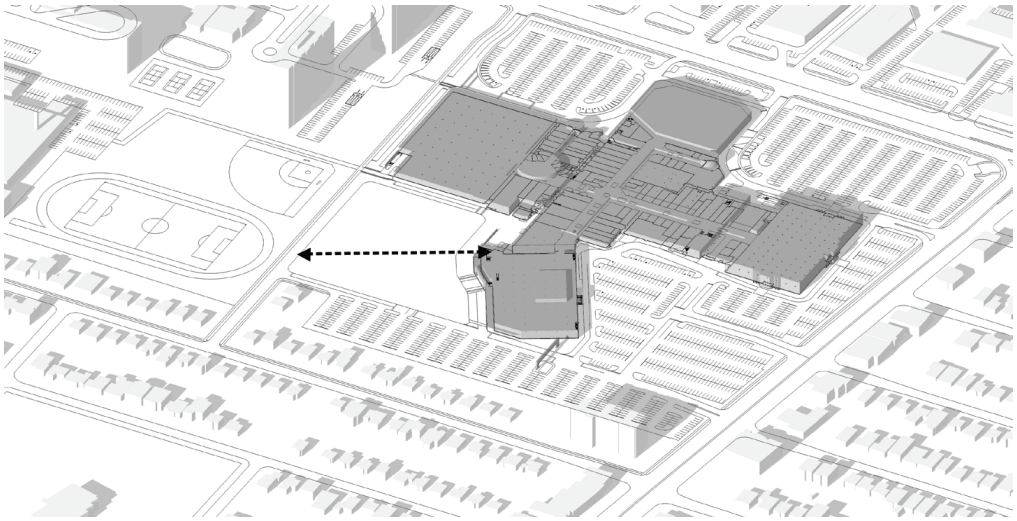


Fig. 93 Proposed Bridge Connection from Centerpoint Mall to Proposed Site

The next step in the design will address Gruen's second and third strategic elements: **a programmatic mix that includes civic and social functions, and the use of public art, landscaping, and other amenities to create a diverse pedestrian environment. This is achieved through utilizing Erik Erickson's concepts of "mutuality" to generate a typology of connections and encourage different generations to interact with one another. As Gruen states:**

> "The ability of the public spaces to support social and cultural activities would ensure the commercial success of the center. It was the public space – as much as the department store – that would be the attractor".[2]

PARTI

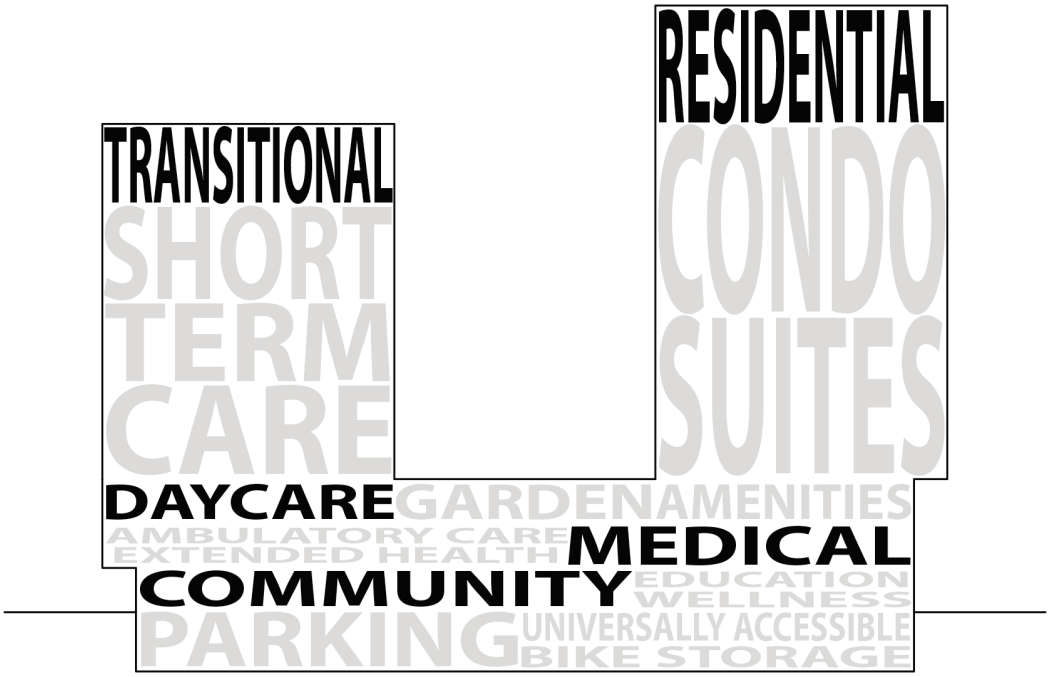


Fig. 94 Parti

As a Model of Age-Inclusive Care, the base programming of this building contains various Modules: Community, Medical, Daycare, Residential and Transitional. The design allows the programs to be organized by floor, with the public programs on the lower levels and the more private programs on the upper levels. The floors are accessed by a series of cores. One of the publicly accessible core serves the first and second floor while the other connects to the third floor only. The remaining two cores are private and are used to access the transitional care wards as well as the residential suites.

The massing of the building is envisioned as multiple volumes that are bridged on the third floor where the public and private programs become blurred. The programs within the first two floors are broken up into separate buildings to blur the lines between the interior and exterior, and create a more intimate ground plane with the feel of a neighbourhood with a diverse streetscape. Open stairs and ramps lead up to the bridge which connects to Centerpoint Mall while allowing for a place to sit and people-watch. The third floor is a singular volume which encompasses this ground plane and acts as a roof of shelter. Above this volume, on the fourth floor, the building is once again broken into separate volumes; this time as two towers, housing the most private programs.

MASSING



Fig. 95 Massing

GROUND LEVEL - COMMUNITY MODULE



Fig. 96 Diagram of Ground Floor

The community program is located on the very visible and public ground floor plane. It offers a variety of spaces for different activities and classes, much like any community center. The offerings are geared towards able and independent seniors as well as the rest of the community. Robust volunteering programs can also be developed with the adjacent Newtownbrook Secondary School. The community services are divided into two separate blocks: wellness to the west and education to the east. There is also a block to the south that contains retail suites for small shops and restaurants.

From the ground, one can access Centerpoint Mall through the north entrance into the existing food court, one of the areas in the mall where people tend to gather. There is also a feature ramp on the south side of the building which leads into the Centerpoint Language and Skills (LINC) and the existing grocery store, No Frills below. As a program of the Toronto District School Board, LINC provides language instruction to newcomers to Canada.

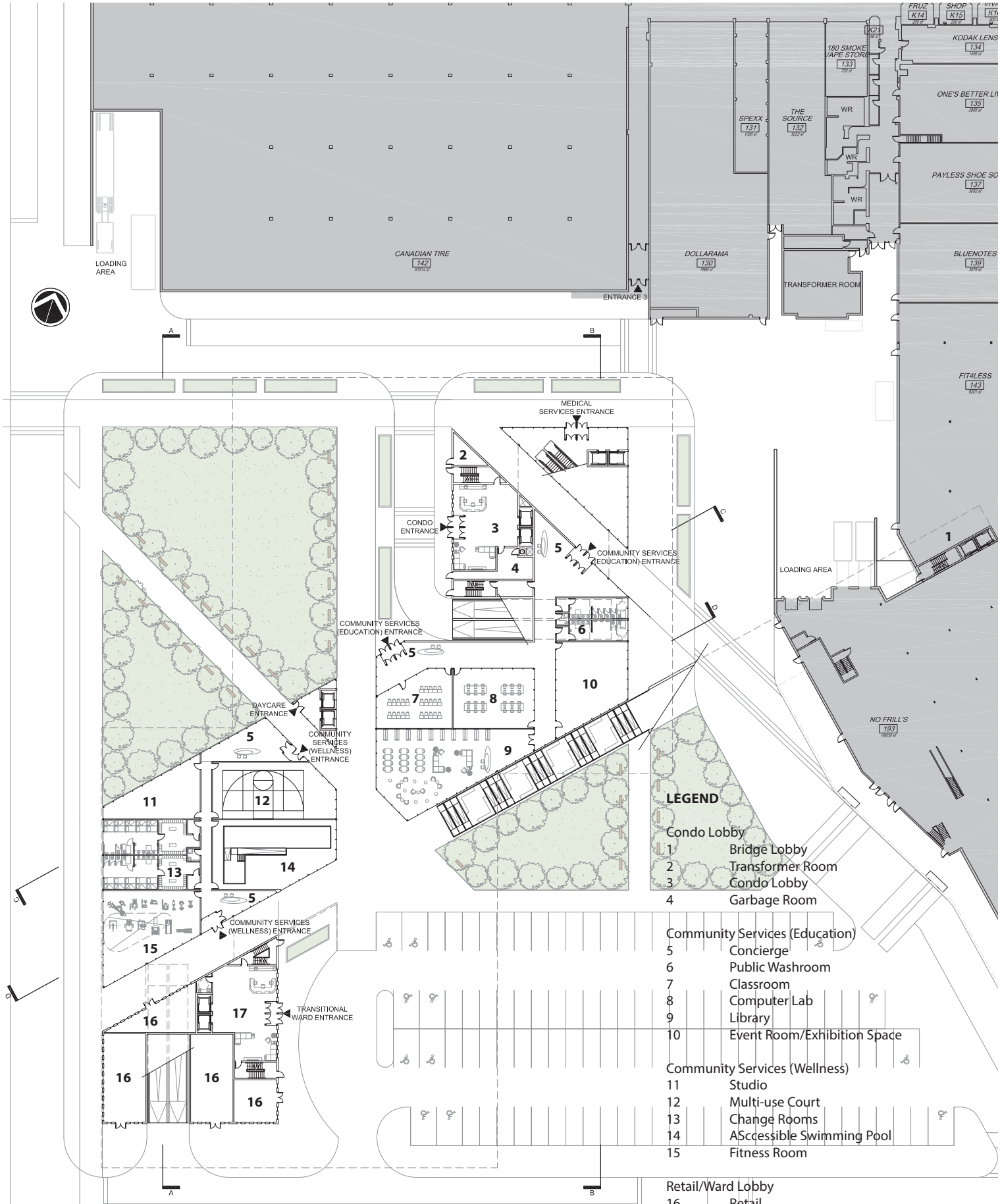


Fig. 97 Ground Floor Plan
Scale 1:750

SECOND LEVEL - MEDICAL MODULE

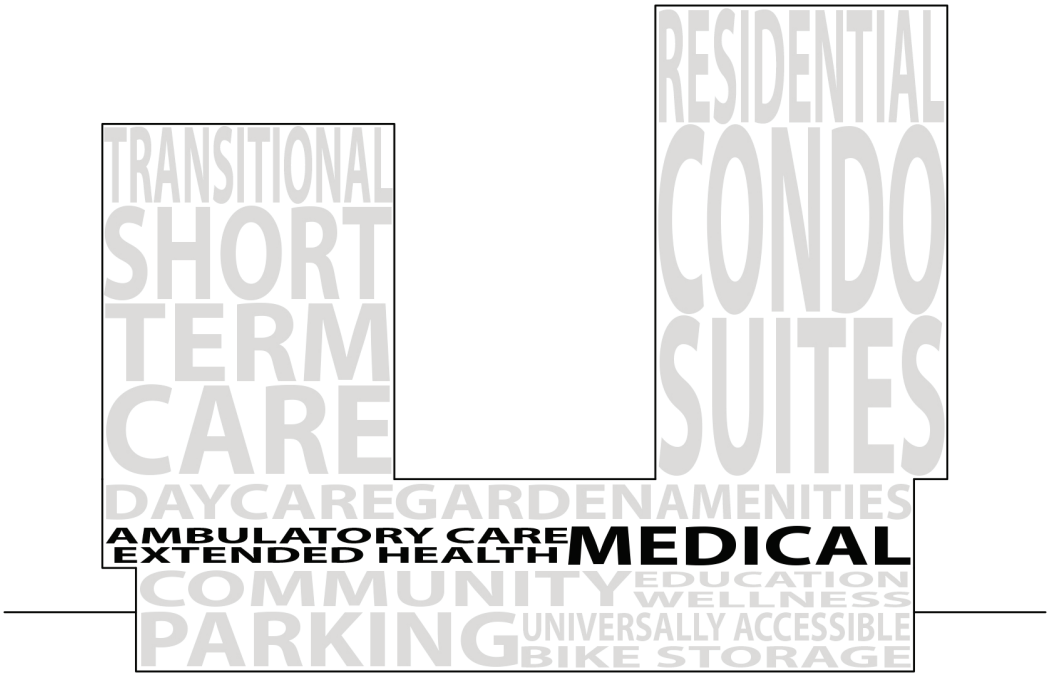
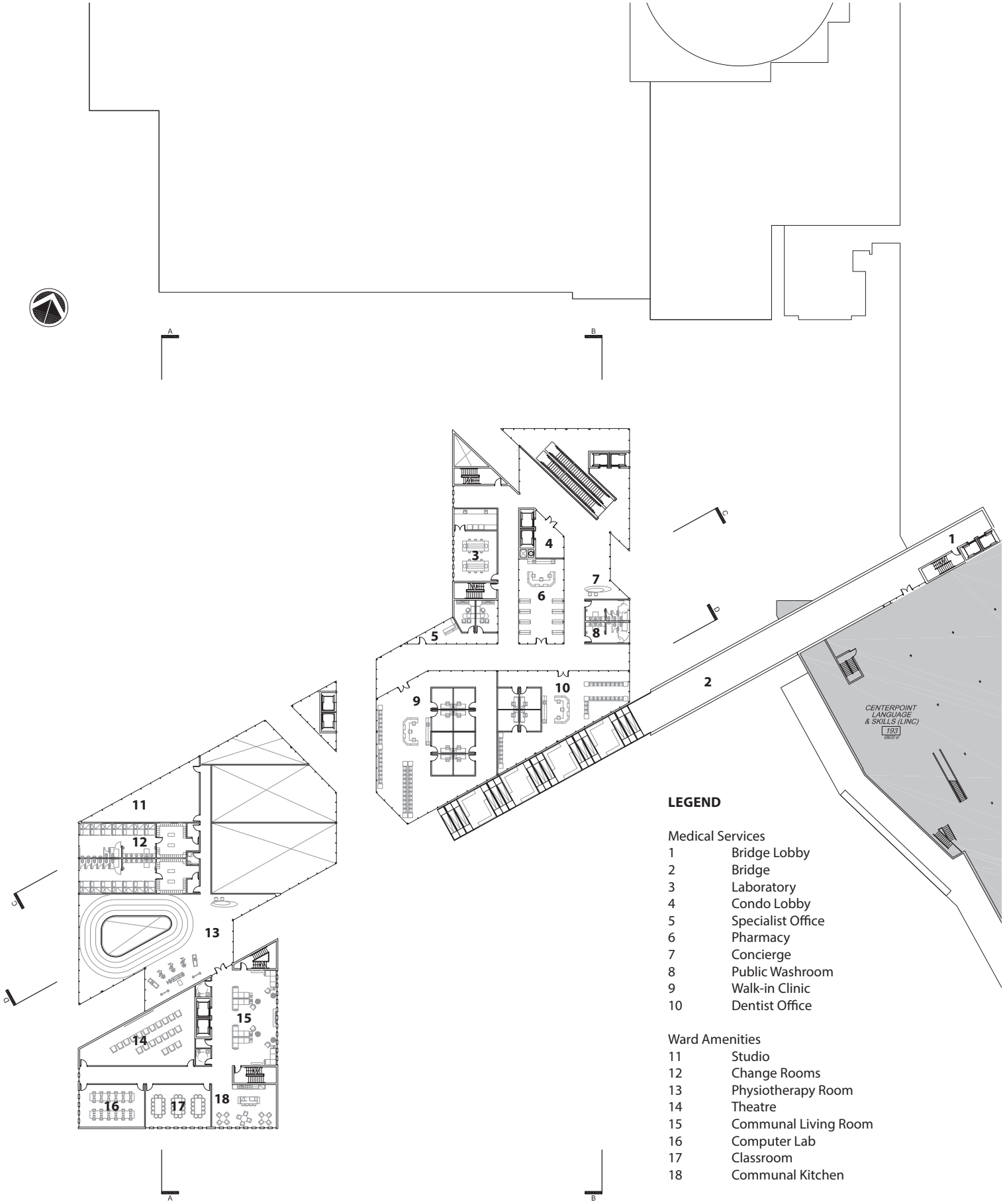


Fig. 98 Diagram of Second Floor

The second floor houses medical services broken into two separate blocks. The eastern block is anchored around an ambulatory care clinic which serves the entire community. Specialized medical services provide extended healthcare to supplement the services provided by the doctor's clinic such as a dental office, a pharmacy, a laboratory and an office for specialists.

The western block houses amenities for the transitional wards. It is centered around a physiotherapy office with a walking track. There is also a fitness room and studio, as well as spaces for entertainment such as a communal living area, theatre, communal kitchen as well as classrooms and computer labs.



LEGEND

Medical Services

1	Bridge Lobby
2	Bridge
3	Laboratory
4	Condo Lobby
5	Specialist Office
6	Pharmacy
7	Concierge
8	Public Washroom
9	Walk-in Clinic
10	Dentist Office

Ward Amenities

11	Studio
12	Change Rooms
13	Physiotherapy Room
14	Theatre
15	Communal Living Room
16	Computer Lab
17	Classroom
18	Communal Kitchen

Fig. 99 Second Floor Plan
Scale 1:750

THIRD LEVEL - DAYCARE MODULE

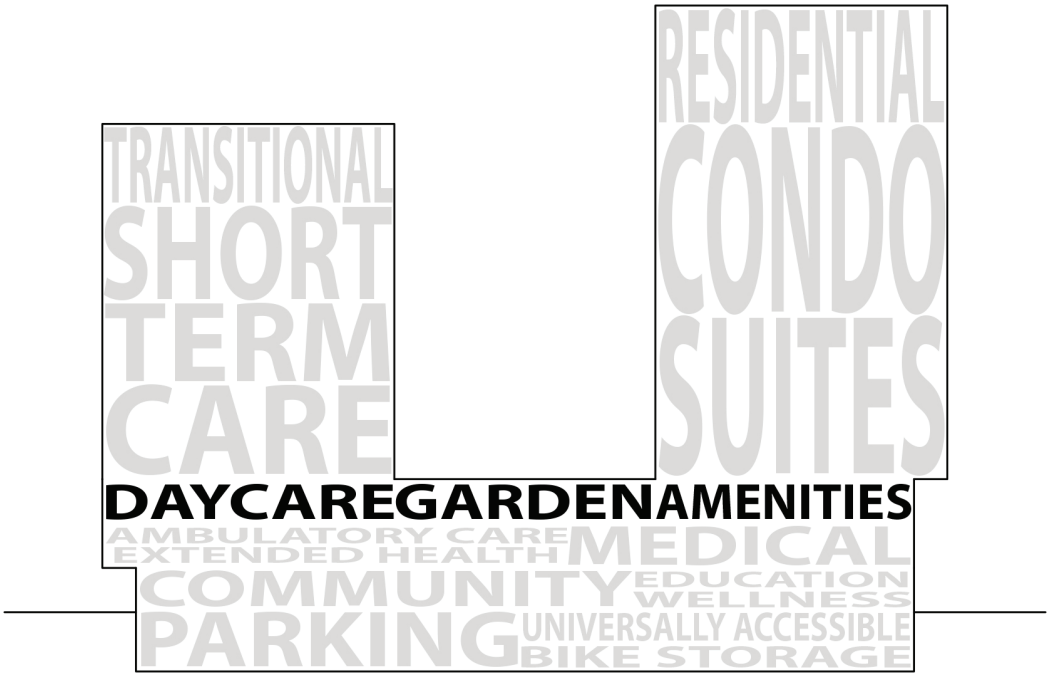
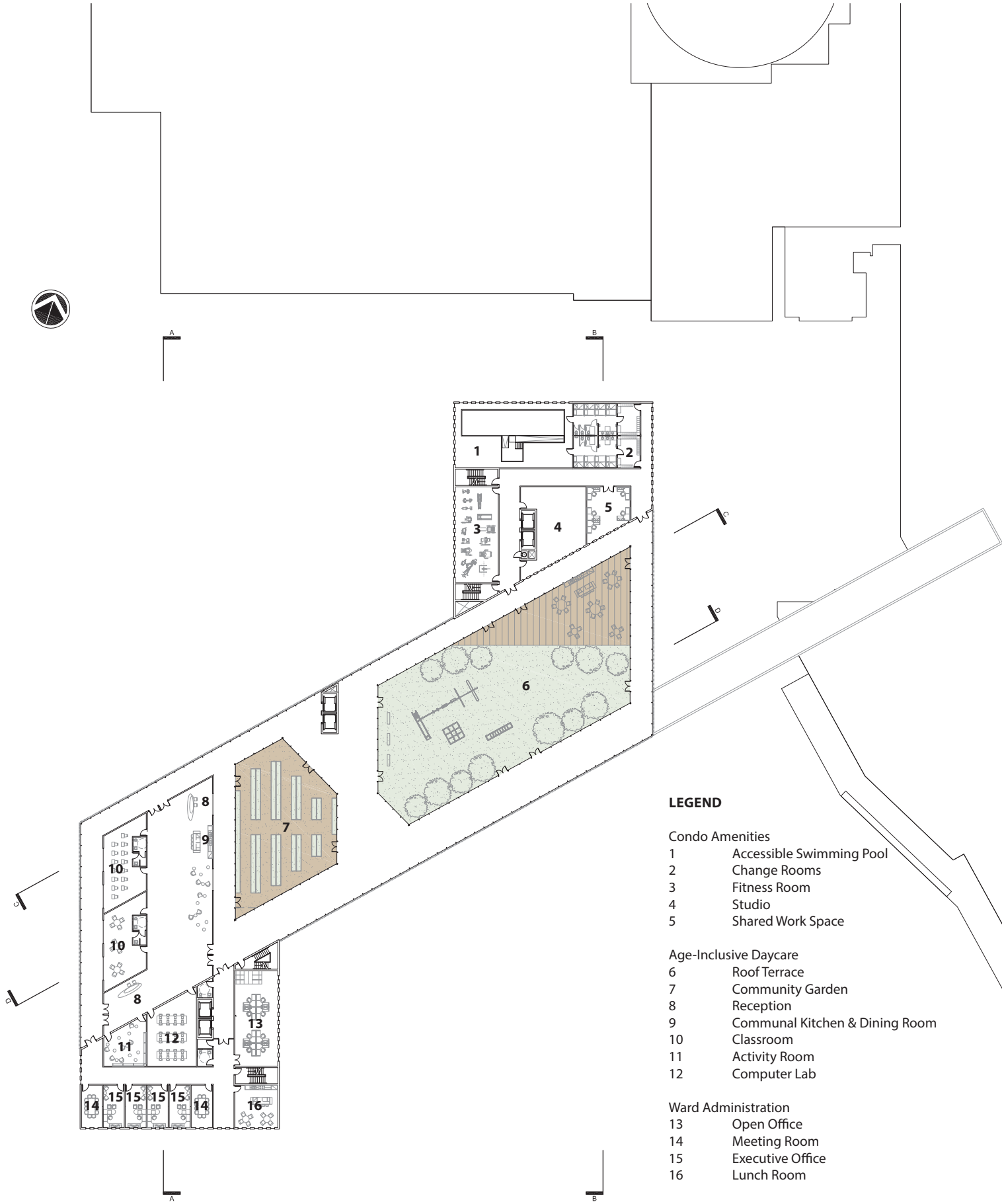


Fig. 100 Diagram of Third Floor

Only on the third floor does the volume of the building becomes one, punctured only by two courtyards to provide exterior amenity spaces. The day service facility is the highlight of the third floor. It is one of the few publically-accessible programs on this level besides the communal garden and roof terrace adjacent. Inspired by the Toyama-style Day Care Facility, this daycare is age-inclusive and is designed to serve young children and less-abled seniors who require extra care, including those who may be residing in the transitional care wards above. This space is designed to promote intergenerational contact between the youngest and oldest members of our society. The program of the daycare is centered around the concept of nature and food cultivation. As such, in the heart of the daycare is a large kitchen with direct access into the community garden.

On the northern end of this floor are the private amenities for the residential suites while the administration level for the transitional care wards is located to the south. It should be noted that both areas contain secure access.



LEGEND

Condo Amenities
1 Accessible Swimming Pool
2 Change Rooms
3 Fitness Room
4 Studio
5 Shared Work Space

Age-Inclusive Daycare
6 Roof Terrace
7 Community Garden
8 Reception
9 Communal Kitchen & Dining Room
10 Classroom
11 Activity Room
12 Computer Lab

Ward Administration
13 Open Office
14 Meeting Room
15 Executive Office
16 Lunch Room

Fig. 101 Third Floor Plan
Scale 1:750



Fig. 102 Diagram of Upper Floors

On the fourth floor and above are the private suites. The building to the north houses the universally-accessible residential suites. There are a variety of suites per floor that range in type to suit a variety of individuals as well as families – bachelor, one bedroom, one bedroom plus a flex space, two bedroom and two bedroom plus a flex space. Following the principles of Universal Design, every suite is designed for handicapped accessibility.

The building to the south contains transitional care wards, a facility staffed around-the-clock by nurses, where less-abled seniors can stay for a short period of time. It acts as a bridge for older adults who are returning from the hospital to their homes or are waiting for placement into a long term care facility. This allows expensive hospital beds to be freed for others while creating time for the elderly and their families to make necessary care arrangements.

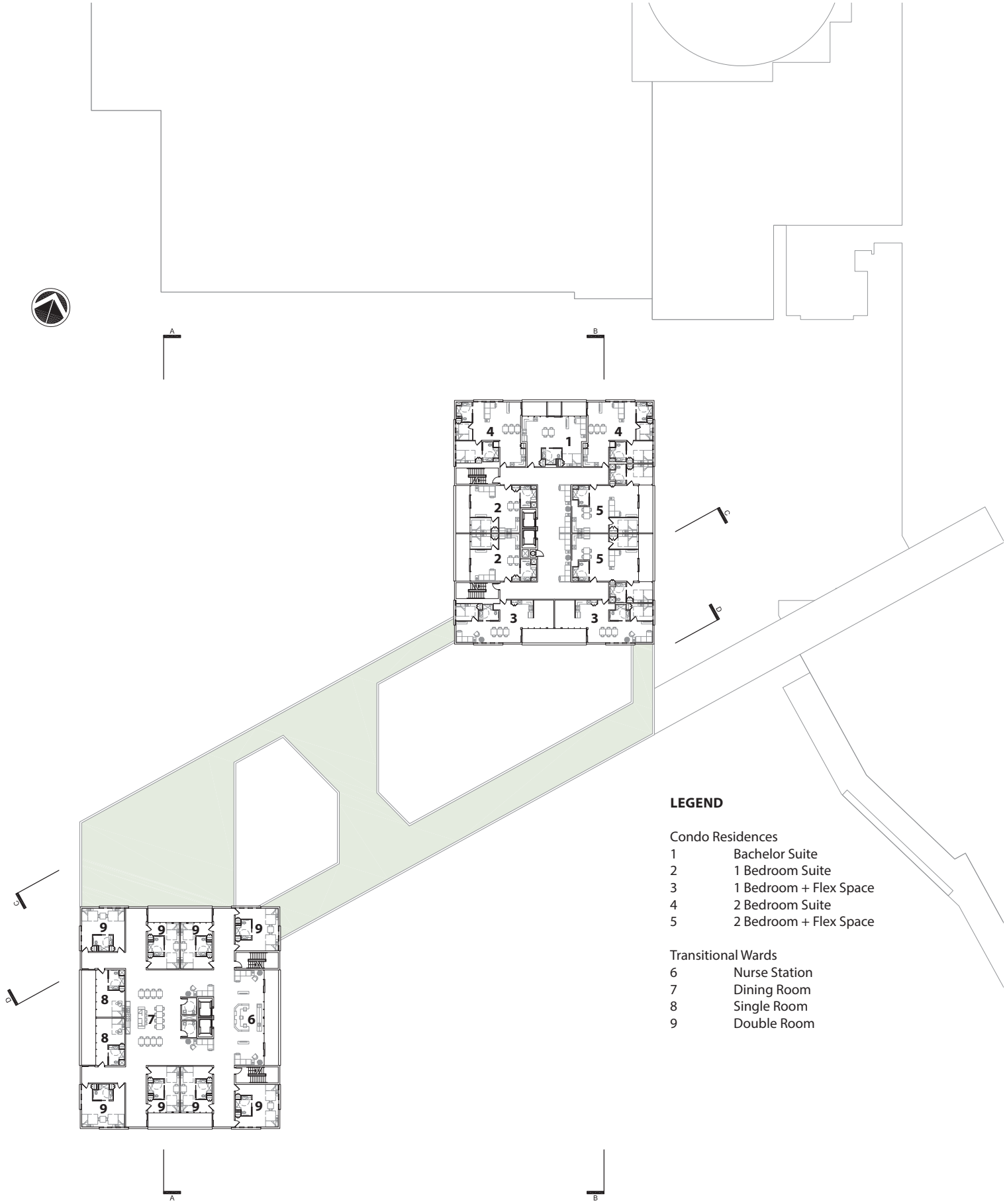


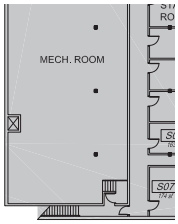
Fig. 103 Typical Upper Floor Plan
Scale 1:750

BASEMENT LEVELS - PARKING SUBMERGED

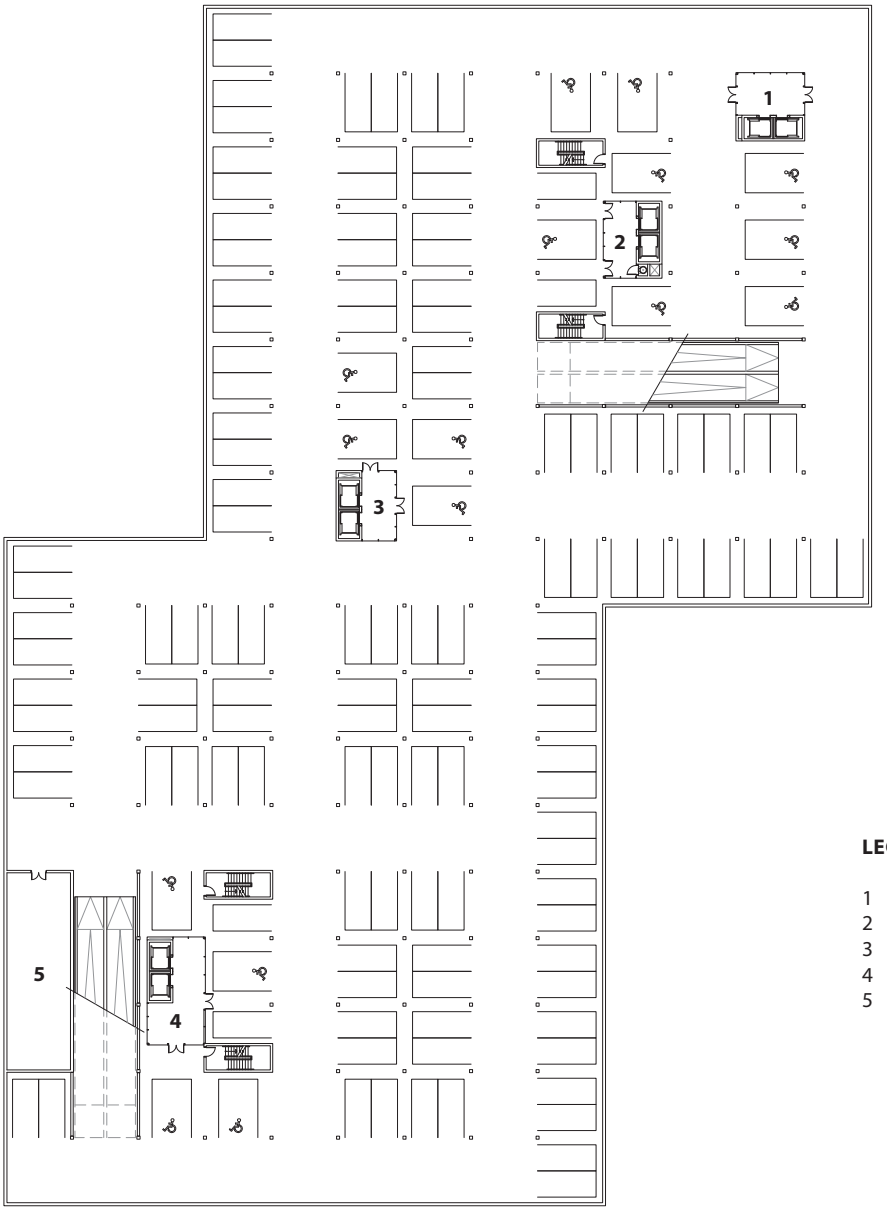


Fig. 104 Diagram of Basement

The existing section of the parking lot will be replaced by an underground parking lot so as to free up part of the ground plane for the proposed building and its two drop-off areas as well as the new proposed plaza. A total of two full underground levels allow for 248 parking spaces and 32 handicapped parking spaces as well as storage areas for bikes, strollers and wheelchairs. On the surface, there is also an additional 97 parking spaces and 12 handicapped parking spaces.







PARKING COUNT PER FLOOR:
124 PARKING SPACES
16 HANDICAPPED SPACES

LEGEND

1	Main Building Lobby 1
2	Condo Lobby
3	Main Building Lobby 2
4	Trasitional Ward Lobby
5	Storage

Fig. 105 Typical Basement Floor Plan
Scale 1:750

ELEVATIONS

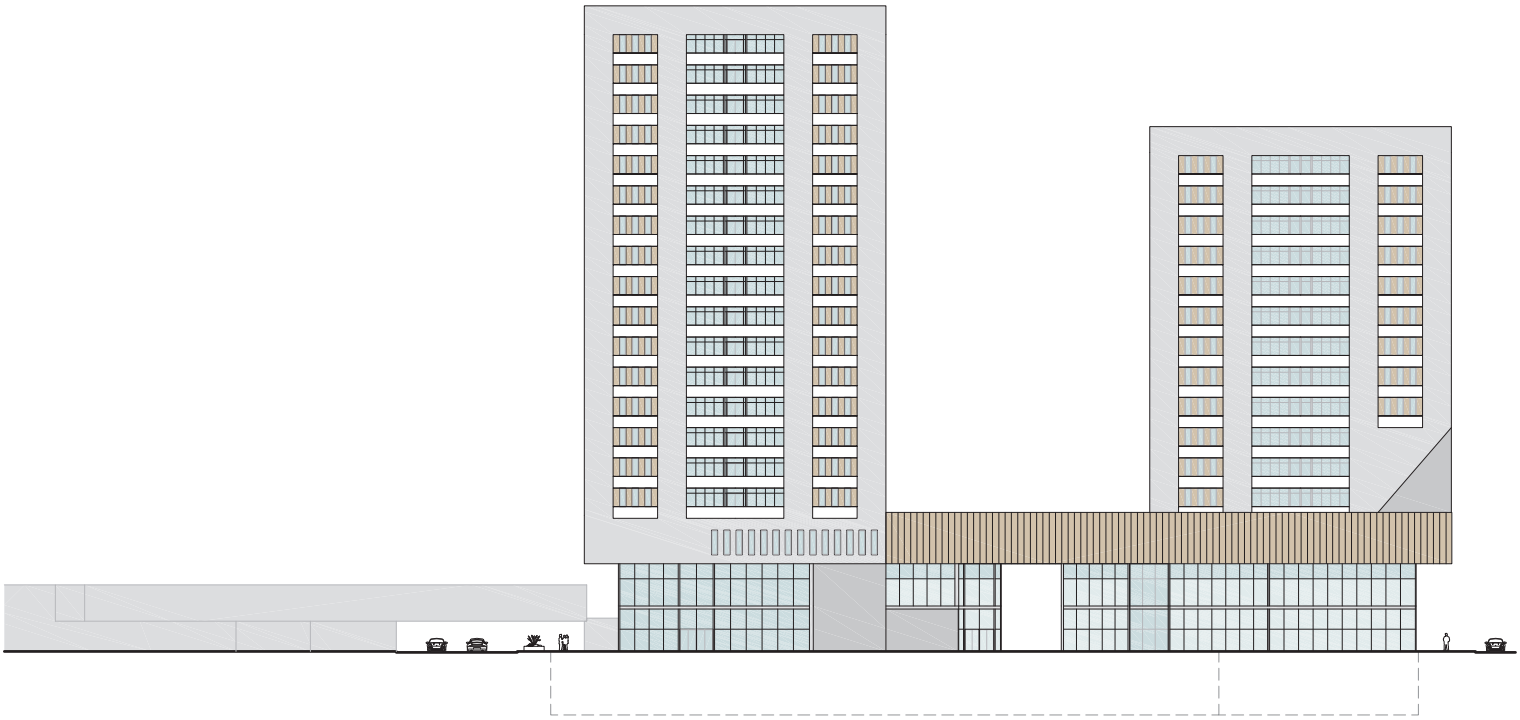


Fig. 106 North Elevation

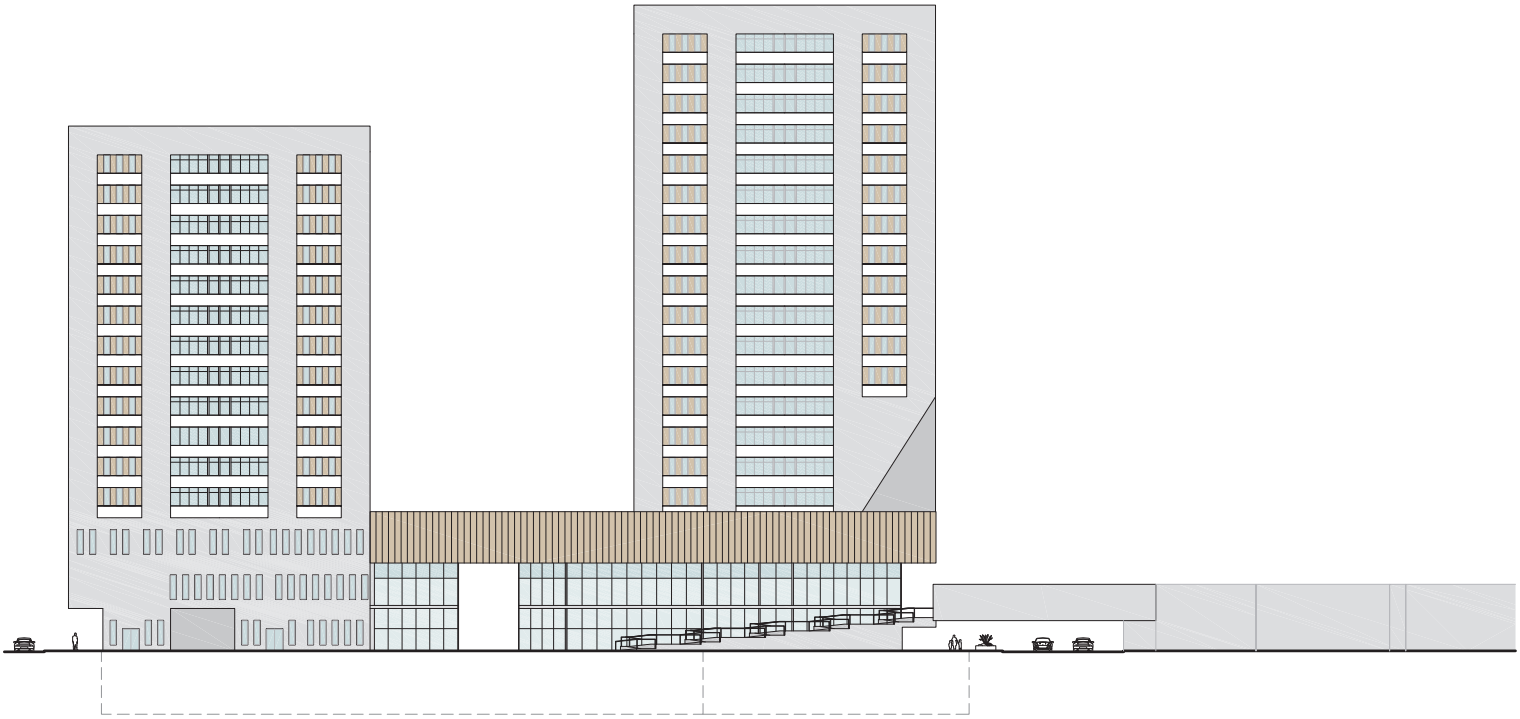


Fig. 107 South Elevation

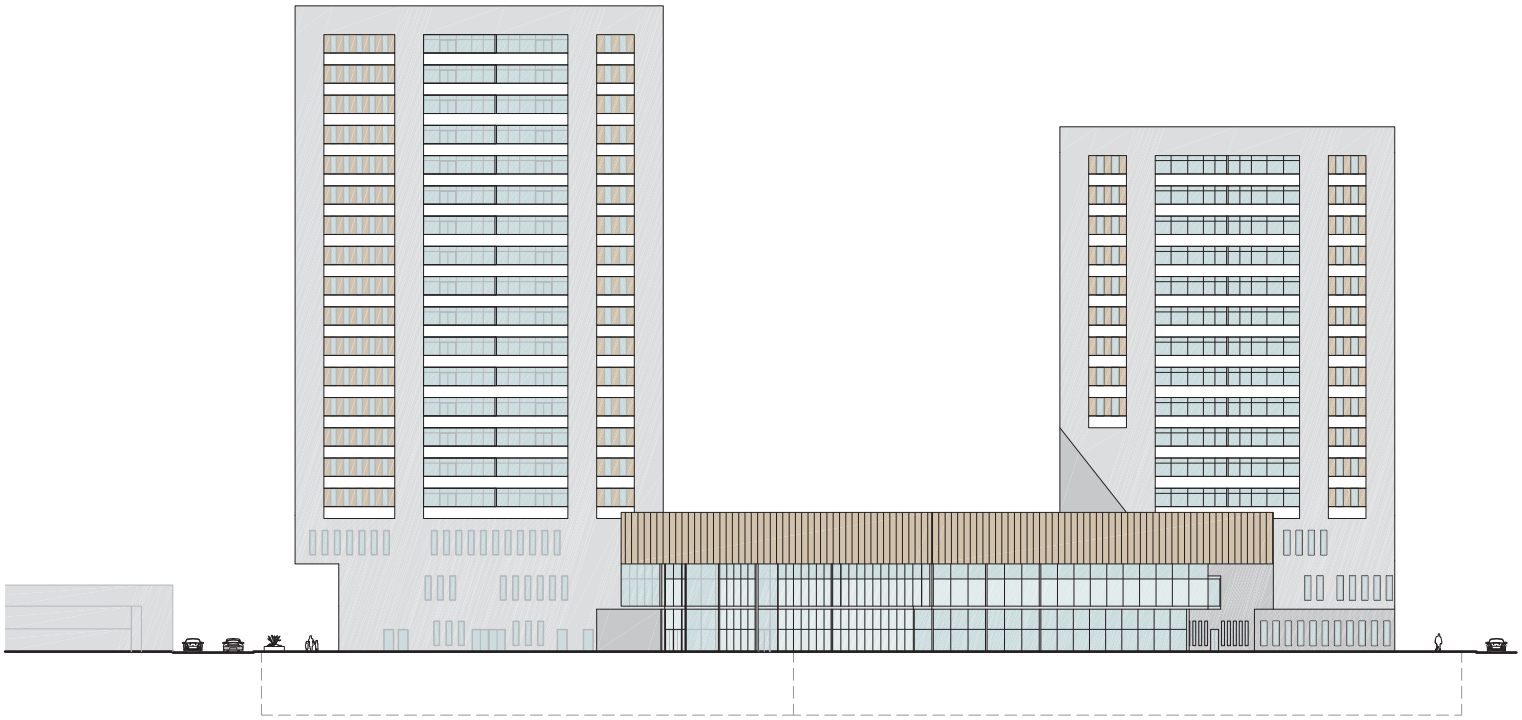


Fig. 108 East Elevation

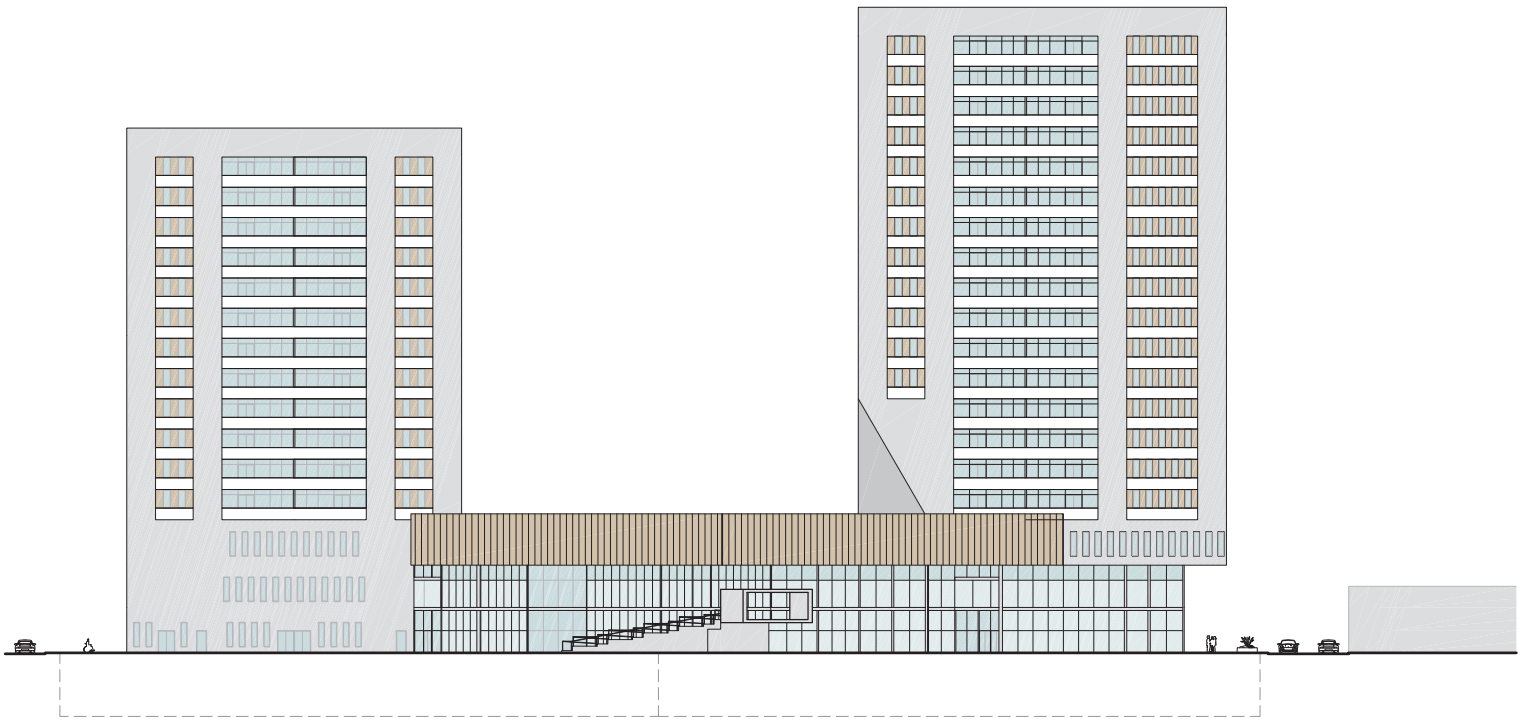


Fig. 109 West Elevation

SECTIONS

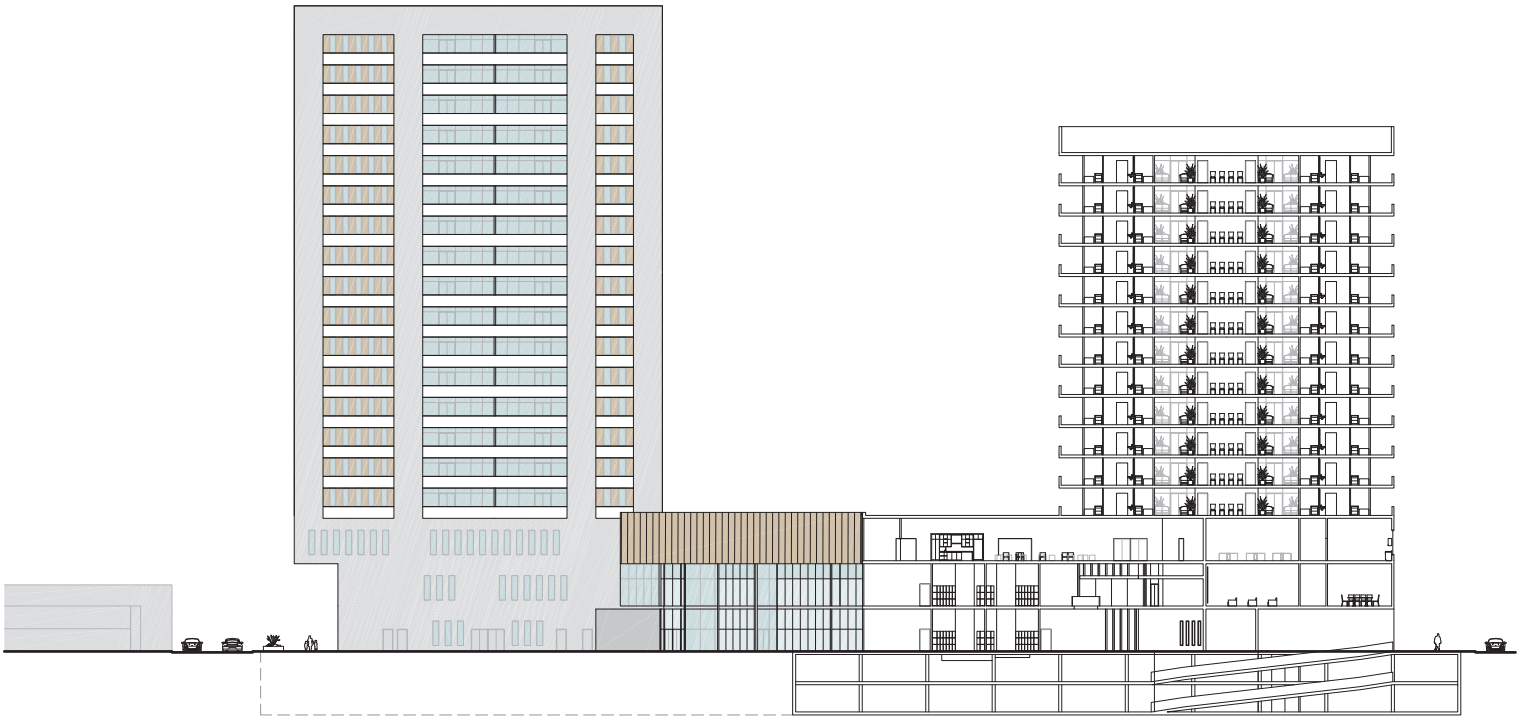


Fig. 110 Section A-A

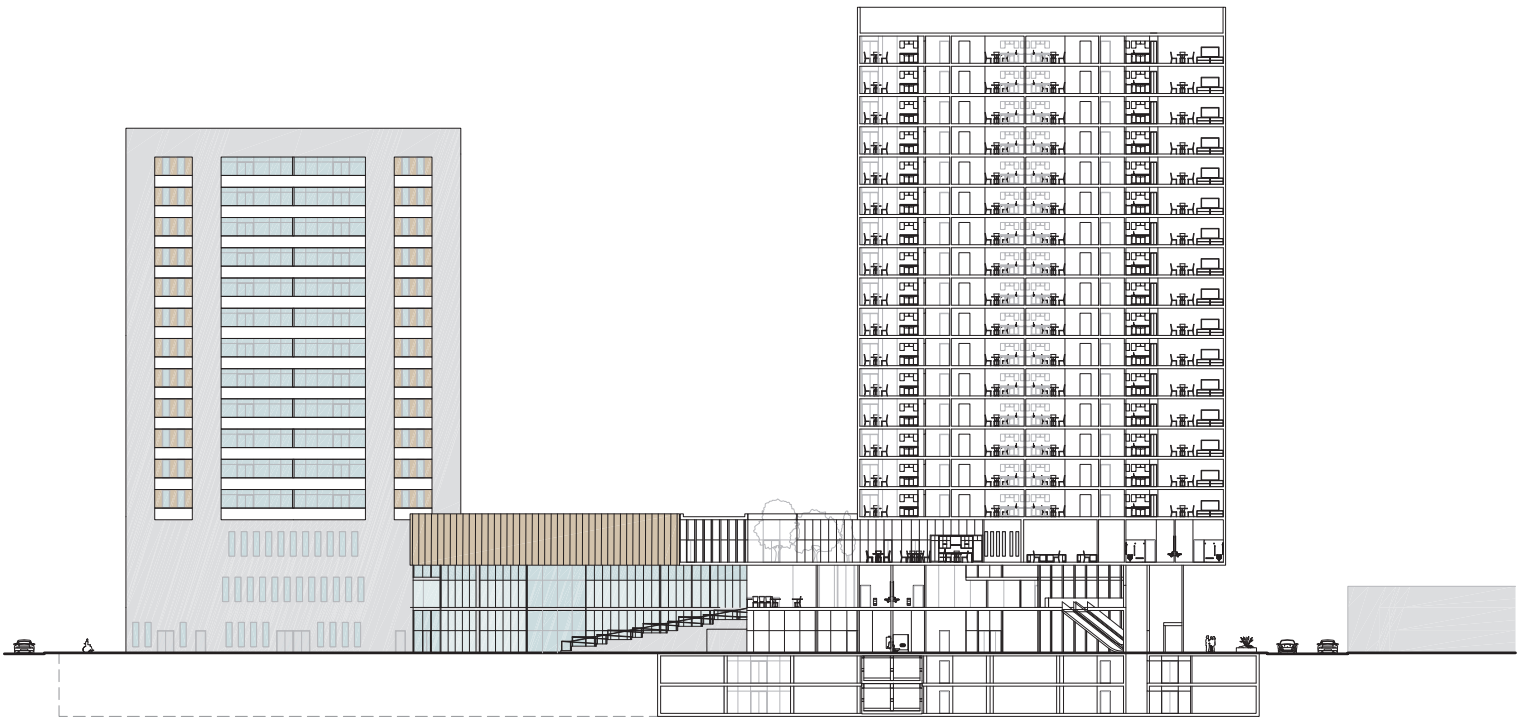


Fig. 111 Section B-B

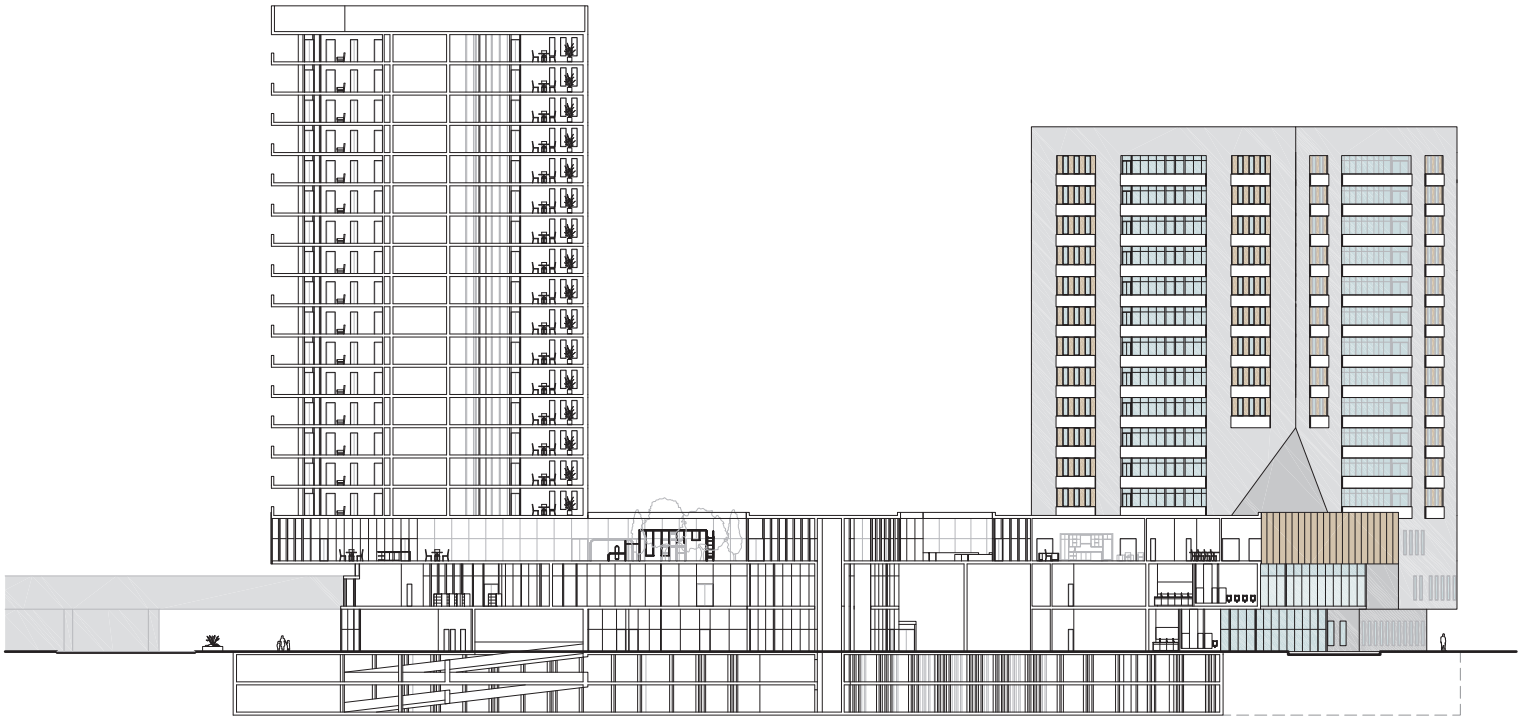


Fig. 112 Section C-C

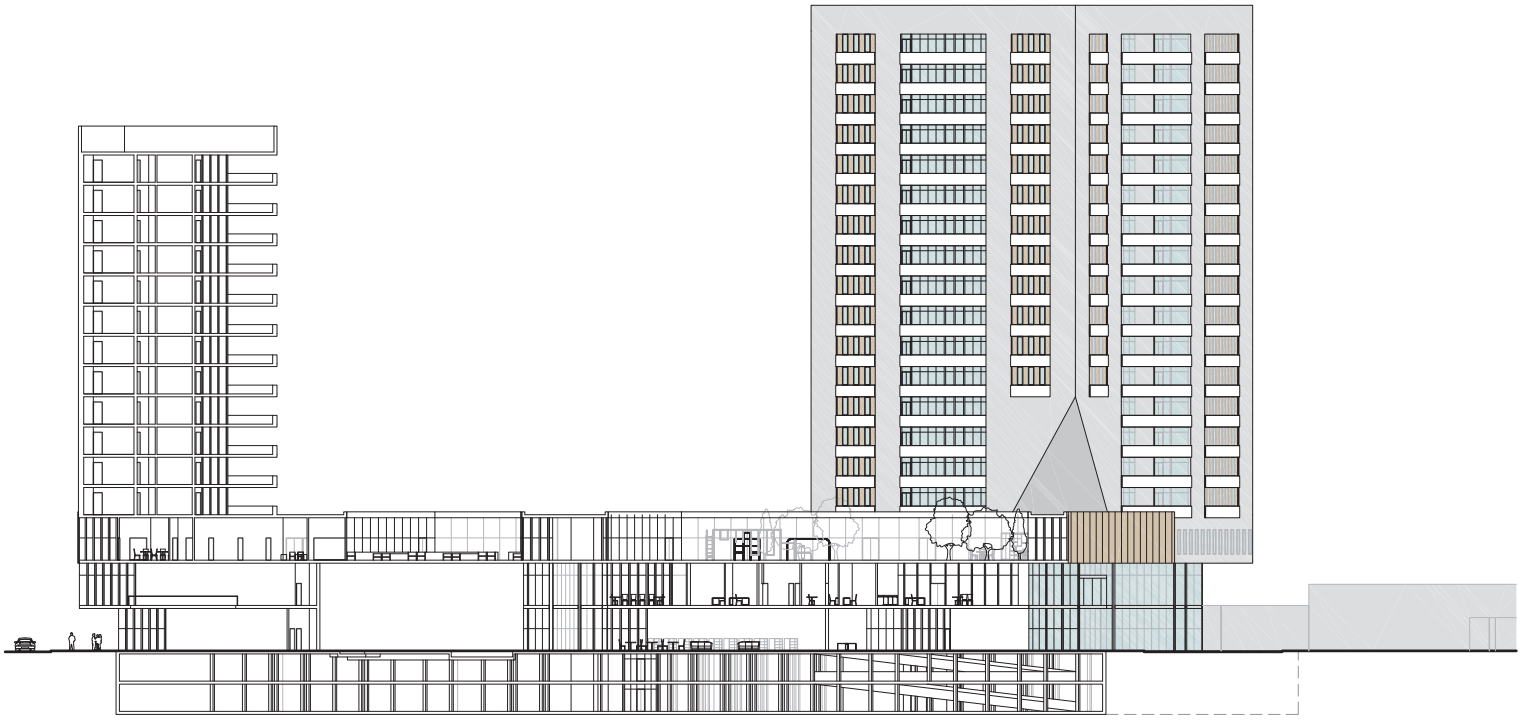


Fig. 113 Section D-D

MODEL FOR ALL-INCLUSIVE CARE

Based on the concept of PACE (Program of All Inclusive Care for the Elderly), the Model For Age-Inclusive Care is programmed to support healthy living for an aging population. As a multi-service and care hub, the facility offers a graduated program that includes varying degrees of community services, medical care and inhabitation. The building offers a wide range of amenities and social spaces that are beneficial to all ages and promotes cross-generational relations. As such, this building will revitalize the civic and social functions that are currently lacking from Centerpoint Mall, therefore restoring the full potential of the mall as a town center and destination for the suburbs.

Fig. 114 depicts the plaza of the building, conceived as a buffer and intermediary space between the different building typologies which surround the thesis intervention and acts as a landmark highlighting the building as a destination for the community. Paths and seating areas are interspersed throughout. The elderly can find space for socialization and contemplation while families are provided with various play elements and opportunities for exploration.

The new streetscape displays the integration of the building into its urban environment. The once utilitarian parking lot has become a vibrant street full of activity. From the ground, one can also access Centerpoint Mall through a series of ramps which leads into the Centerpoint Language and Skills (LINC) and the existing grocery store, No Frills below. The landings on the ramps provide a generous viewing platform from which to people-watch and gather with those from the surrounding community. See Fig. 115.

More importantly, the Model For Age-Inclusive Care acts as a supplement to the current eldercare system by encouraging the senior population to "age-in-place" and live independently for longer. If their care needs become greater and they require more support, the building also acts as a transitional space for the older adult while they are waiting for further care arrangements. From the point of view of the elderly, the integration of this variety of programming allows for a model of holistic care – a one-stop shop for medical care and community services all under one roof. With all these programs within one single building, both medical and social needs are only an elevator ride away. See Fig. 116.

Fig. 117 depicts the highlight of this programming – the all-inclusive day service facility. Based on the principles of the Toyama Day Care Facility, the daycare combines an early childhood education program with that of a senior's center. In an

age where family structures are dissolving, both the young and the old will have an opportunity to establish mutually beneficial cross-generational relationships based on empathy and understanding.

This thesis design revolves around the concepts of nature and food cultivation. I have always believed that food is the one thing that can bring everybody together, regardless of their age, gender or culture. Therefore, utilizing the activities of gardening, cooking and dining, the daycare is programmed with a community garden as well as a communal kitchen and dining room in addition to typical daycare programs such as classrooms and computer lab. The daycare is surrounded by lush roof terrace, providing not only an amenity for gardening but can also act as a contemplative retreat and place for exercise. See Fig. 118 and Fig. 119.

A PLACE FOR SOCIALIZATION



Fig. 114 Rendered Perspective of the Plaza



A PLACE TO PEOPLE-WATCH



Fig. 115 Rendered Perspective of the Feature Ramp





Fig. 116 Rendered Perspective of the Physiotherapy Room



A PLACE FOR LEARNING



Fig. 117 Rendered Perspective of the Age-Inclusive Day Service Facility



A PLACE TO PLAY



Fig. 118 Rendered Perspective of the Roof Terrace Playground



A PLACE FOR RELAXATION



Fig. 119 Rendered Perspective of the Roof Terrace Communal Barbeque Area



1 Wall, Alex. *Victor Gruen: From Urban Shop to New City*. (Barcelona: Actar, 2005), 80.

2 Wall, Alex. *Victor Gruen: From Urban Shop to New City*. (Barcelona: Actar, 2005), 80.

3.5

THE FUTURE: A NEW OUTLOOK ON AGING

"Old age is not the source of our problems; it is where we will find the answers we need."

- William H. Thomas, *What are Old People For?*

My paternal grandfather was the inspiration and driving motivation behind this thesis. When he fell, my family decided to place him into a nursing home because that was what the doctor recommended. We were not given any other options; but in hindsight, I do not think that the option we chose was the proper course of action. Whenever I visited him in the nursing home, I could not deny how unpleasant of a place it was. The home reminded me of a hospital; clinical, sterile and cut off from the rest of the world. In some way or another, I probably blamed the nursing home for the rapid rate at which my grandfather deteriorated. Because of these experiences, I ultimately concluded that the elderly as a whole were a vulnerable population who were often neglected or were unfairly treated and thus are at risk to being taken advantage of.

However, a comment from a professor during my M2 mid-review changed my perceptions and has continued to haunt me throughout my thesis development. The professor stated that I needed to realize that the group I am designing for, i.e. the

elderly, was not a homogeneous population. At the time, I did not understand what she meant. As I progressed in my thesis research, I read articles describing how as a result of better healthcare, the elderly are aging later and living longer, and as a result of better education, they are becoming more diversified. As such, there are no longer any generalizations that one can make about the senior population as a whole. As such, in the realm of eldercare, there are no right answers because what works for one person, might not work for another. This was made particularly evident in a recent trip abroad.

During the course of my thesis, I unfortunately lost both my paternal grandparents who resided in Canada. As a result, my family decided that it was time to make a trip back to Hong Kong to visit my maternal grandparents while they are still alive.

My maternal grandparents live on Lantau Island, where the Hong Kong International Airport is located. Prior to the development of the airport, the island was mainly farmland and the original residents who live in the area were mainly farmers and fisherman. As a result, these residents mainly live in villages. There is a range of housing types within these villages – from modern houses to simple concrete box with openings without windows. Due to the mountainous terrain of the island, the land within the village is not flat; thus stairs are built at where necessary to allow for access. Because of space restrictions, the stairs are often narrow and steep, which would not comply with North American accessibility standards.

To a foreign designer like myself, one would not consider these villages to be appropriate for a vulnerable population such as the elderly to reside in. Where are the ramps? The steep staircases are an accident waiting to happen. Where is the signage? It is so easy to get lost because the village is like a labyrinth. But for my maternal grandparents who have grown accustomed to these conditions, walking up and down the stairs help to strengthen their legs and sense of balance, and the maze-like landscape of the village helps to strengthen their mind and sense of memory. As such, despite being the same age as my paternal grandparents, my maternal grandparents are extremely healthy by comparison. Unlike my paternal grandfather who was bedridden, my maternal grandfather is able to walk on his own with the assistance of a cane. Unlike my paternal grandmother who refused to leave her apartment, my maternal grandmother would take a bus by herself into Hong Kong Island to play mahjong with her friends.





Fig. 120 Photographs of Ha Ling Pei Village on Lantau Island, Hong Kong

The village in which my maternal grandparents reside is called Ha Ling Pei, a 15-minute car ride away from the nearest subway station. The village is mainly comprised of original residents and their families; as such, everyone knows one another. This sense of community has enabled my grandparents to remain socially active. The Chinese are taught to revere and respect their elders and this is especially upheld within the traditional villages of Lantau Island. The villagers would often look to the elders such as my grandfather for advice. They would listen intently to my grandfather as he recounted his experiences of fighting in the war or his many tales of acquiring land and different business acquisitions. Despite his stories being of time long passed, the younger generations still find meaning and lessons to be learnt. They give him not only respect but their respect also brings dignity to his life. This seemingly hazardous environment strengthened my grandparents' bodies and kept their mind sharp, and the community filled their hearts and enrichened their lives. As such, the seniors who reside in the village are full of life and vigor.

As a result of my thesis research and my trip back to Hong Kong, my perceptions surrounding the senior population and eldercare began to change. One of the most important lessons that I have learnt is that as humans, we must recognize and eliminate any biases that we may hold towards our senior counterparts. It is important to recognize that one generation is not better than another; each age is different and they each have something different to contribute to society as a whole: "…old age is different from adulthood, just as adulthood is different from childhood. Age changes us".[1]

Another lesson that I have learnt is that it is crucial to provide the elderly with a stimulating environment so that they can remain as independent and as physically and socially active as possible. If you've ever had the chance to meet an isolated senior citizen like my paternal grandfather, you may notice many differences between them and active, social seniors. I believe that being in good company and avoiding boredom can make all the difference to the health and well-being of the elderly. As a designer, this can be achieved through programming, which should include proximity to essentials, such as medical services, grocery stores and pharmacies, as well as amenities that can provide a range of activities to support healthy living. This was something that was evident from observing my paternal grandmother.

A couple years ago, the nursing home in which my paternal grandfather was residing in, had built a development adjacent that contained a retirement community

with a church. As a result, my paternal grandmother decided to move into this community in order to be closer to my grandfather. As my grandmother grew older, she became more sensitive to the cold; even a small draft in a room could make her feel uncomfortable. As a result, she refused to leave her building because whenever she went outside, she would have to dress in multiple layers in order to keep herself warm, even during the summer months. As such, it was very convenient that the ground floor of her building provided a variety of services, including a clinic, a restaurant as well as various community services such as a gym, a library and an arts and crafts room. The lobby on the ground floor also acted as a large communal living room – an active social space for the residents to gather and socialize with one another. With all the services in a single building, both medical and social needs were only an elevator ride away. Not only did this arrangement save time that might otherwise be spent shuttling between appointments, it also significantly reduced stress for my grandmother as well as the rest of my family.

This thesis proposes a new form of elderly care, a design approach known as a Model For Age-Inclusive Care. As a model, this approach is flexible and acts as a kit of parts, containing pre-fabricated concepts known as Modules which can be chosen to adapt to different sites. In the case of my thesis design, a multi-service and care hub was proposed to reactivate the social and civic potentials of underutilized commercial developments. As an inclusive environment for the elderly, it supports the concepts of "aging-in-place" whereas intergenerational strategies are implemented in order to allow for various generations to come together for mutual support and understanding.

During my interview with Edward Applebaum, principal architect of Toronto architecture firm Montgomery Sisam Architects, we both agreed that the most important thing that we can do as designers is to allow users the ability to choose. Applebaum believes that this is the key to the concept of "aging-with-dignity". Through promoting user agency and control, we can prevent a loss of self and a loss of dignity, and ensure a sense of autonomy:

> "As Dworkin wrote in his remarkable 1986 essay on the subject, "The value of autonomy… lies in the scheme of responsibility it creates: autonomy makes each of us responsible for shaping his own life according to some coherent and distinctive sense of character, conviction, and interest. It allows us to lead our own lives rather be led along them, so

> that each of us can be, to the extent such a scheme of rights can make this possible, what he has made himself".[2]

In conclusion, I would like to clarify that this thesis only attempts to present an alternative approach to addressing some of the issues surrounding the design for elderly care; by no means do I feel that this is the right solution or the only solution. In addition, I am not proposing that this type of development become the alternative to traditional age-segregated institutions, such as my grandfather's nursing home; but rather, I believe it should act as a complementary component to the overall system of care. Once again, the intention is to provide the aging population with a range of choices.

I truly hope that my final thesis design can act as a prototype or at least, the strategies that I have presented can be used as a thought exercise. As Mary Lindsey from AIS stated, we should all advocate for no "special" buildings. All buildings should be accessible – functional at all ages and adaptable to the changing concept of age so that every community can become active, stimulating and age-inclusive – architecture that truly serves our aging population.

1 Thomas, William H. *What are Old People For?: How Elders Will Save the World* (Massachusetts: Vanderwyk & Burnham, 2004), 19.

2 Gawande, Atul. *Being Mortal: Medicine and What Matters in the End* (Toronto: Doubleday Canada, 2014), 140.

EPILOGUE: THE DYING ROLE

"Endings matter, not just for the person but, perhaps even more for the ones left behind."

- Atul Gawande, *Being Mortal*

Although my thesis does not deal with death in particular, it does deal with those who are nearing the end of life.

> "Technological society has forgotten what scholars call the "dying role" and its importance to people as life approaches its end. People want to share memories, pass on wisdoms and keepsakes, settle relationships, establish legacies, make peace with God, and ensure that those who are left behind will be okay. They want to end their stories on their own terms. This role is, observers argue, among life's most important, for the dying and those who are left behind".[1]

Unresolved grief is cumulative and cumulatively negative. Our bodies are designed to process emotions not store them. Eventually we need to go through our grief so that we can complete incomplete feelings. Once we do, we will be able to honor our

memories without the fear of pain. The death of my grandfather in the middle of my thesis development has helped me to obtain certain insights on this matter. This chapter will record and share my experiences.

I have been very fortunate to not have come in contact with death many times throughout my life. My first encounter with death was the death of my great-grandmother when I was 2 or 3 years old. All I remember was seeing someone laying in a black box but I do not register anything else from that time, nor do I have any emotional attachment to that event because I was too young to remember her. My second encounter with death was the death of my classmate when I was 9 years old. He was a cancer survivor and unfortunately, he had gone into remission and passed away at the young age of 10. I remember being very angry at God because I felt like it was unfair for someone as young as myself to die, before he could even have the opportunity to do something with his life. As such, when the time finally came for my grandfather to pass, it hit me quite hard. It was the first time someone close to me, whom I cared deeply about, left my life.

On Saturday, July 9th, 2016, I was attending the school coffeehouse at BRIDGE, enjoying the musical talent of my fellow colleagues. Shortly before the musical act of several Master's students from my cohort, I received a text from my mother stating that my grandfather had gone into the hospital and was in critical condition. Over the next half hour, I subsequently received calls from my mother and my younger brother to brief me in on what had happened.

Earlier that week, the workers at the nursing home had called my father to let them know that my grandfather had a high fever. They wanted to see whether he could authorize them to bring my grandfather into the emergency room. When they arrived at the hospital, the doctors confirmed that my grandfather had aspiration pneumonia, which is generally caused by food or liquid getting caught in the lungs, thus creating a breeding ground for bacteria. He was moved from the emergency room into a care ward the day after.

When my family went to visit my grandfather earlier that day, the nurse said that he was in better condition when compared to the day before, but he was still unconscious. The nurse was giving my grandfather an antibiotic but it wasn't very effective so the nurse decided to use an additional antibiotic as per the doctor's orders. Near the evening, the nurse called my dad to let my family know that my grandfather

was in critical condition and only had about half an hour left to live. Subsequently, my family rushed over to the hospital to see him one last time. At the time, I was still in Cambridge and had no means to get back to Toronto. Fortunately, because I was at a school event, I was in the company of my friends and classmates and two of them, a couple, was kind enough to drive me all the way to Scarborough Grace Hospital where my grandfather resided.

My grandfather passed away peacefully on the hospital bed at around 9pm, coincidentally at the moment when everyone had stepped out of the room. A professor told me later on that she often wonders whether the dying really wants anyone to be present before they take their one last breath. This thought definitely made me wonder whether my grandfather took the opportunity to pass while he was alone as well.

Unfortunately, I was still on my way from Cambridge to Scarborough at the time and was unable to see my grandfather one last time before he passed but the nurse said that they could keep his body there for a couple more hours so I could see him before they took him away.

When I got to the hospital, I felt this sense of dread; an impending sense of doom. My brother escorted me into the hospital room and upon seeing my grandfather lying there, I collapsed and broke into tears. His body was stiff, his face was sunken and there was a gaping hole where his mouth was, reminiscent of Edvard Munch's infamous painting "The Scream". My mother stayed with me to comfort me. It was at that moment that everything became real; the situation was similar to the paradox of Schrodinger's Cat. Schrodinger's cat is trapped in a box with something dangerous. Before you open the box, the cat is neither dead nor alive. Prior to seeing my grandfather's body, in my mind, he was neither dead nor alive. One might call it ignorance or denial.

From that moment on, I was in a daze. I lost all sense of time and it became very hard to focus. A professor told me later on that she believes that this is the way the brain defends itself in times of mourning. It forces you to think laterally so you cannot narrow in on anything so as to protect you from the grief and pain. My body was constantly tired and I felt unmotivated, especially since this thesis is inspired by and dedicated to my grandfather.

Surprisingly, the rest of my family was handling the situation quite well, probably because they had been anticipating it for a while. My grandmother was apparently

even doing better after my grandfather's passing than she had been when he was first admitted into the hospital. But for me, because I had been kept in the dark until the last possible moment, it came to me as a shock and affected me all that much more.

The next couple of days were incredibly busy; I had not realized how much work there was to be done when someone passes away. There was a long list of tasks and you had to complete them all. There was no time to grief; you have to deal with everything that was left behind first.

The day after my grandfather's death, I went to visit my grandmother to keep her company while my father and my aunt made an appointment to meet with the funeral home. We then proceeded to clear out my grandfather's belongings from his nursing home. My grandfather's caregivers were not aware of his passing and they came by the room to offer their condolences. Many of them were in tears as my grandfather was a good tenant; quiet and reserved but always smiling. Their tears also prompted my tears because I was very happy to see how deeply they had cared for him. One of the nurses even told me that she was very angry when they moved him into the hospital; she would have rather that he passed away in his own bed in the nursing home.

As I was sorting through my grandfather's belongings, I was amazed at my attachment to the objects that were left behind. Things that were once meaningless, suddenly became precious – photos, clothes, glasses, a radio that he has had since he immigrated to Canada and a plastic clock that he apparently used to constantly look upon. Of course, my aunt and my father refused to keep anything because they were worried it was covered in germs but they let me keep a photo of him from a day trip that he had went on with the other residents at the nursing home.

The day after, my parents and my aunt went to the funeral home to finalize the details of the ceremony while my brother and I once again kept my grandmother company. There was a lot to discuss with regards to the planning of the funeral – the date, the time, the style of ceremony, the checking of the gravesite, the design of the gravestone, etc. One of the things that I had not thought about before was the language(s) on which the gravestone should be engraved in. When you really think about it, the gravestone is not for the dead; it is for the living, a marker left behind for future generations to pay their respects. As a bilingual family, it was necessary for the gravestone to be engraved in both Chinese and English because it was not a guarantee that the next generations would be able to read Chinese.

The funeral was set for the morning of Sunday, July 17th and will be a traditional Taoist, "道教", ceremony as per my grandmother's wishes. Timing is important to our culture and so my grandfather was to be buried before noon. There were many preparations to make in a Taoist ceremony. There were specific priests called "道士" that we had to arrange for. The flowers had to be arranged in a certain way. Each branch of the family tree was to present their own flower arrangement. Each of the arrangements had specific writing on either side of it which was written on a piece of white ribbon with each of the family members' names. As the flowers are to be buried along with the body, the ribbons are to be removed prior to the burial so as to not "bury" the living. The children of the deceased are to buy a special blanket that would cover the body and a small bead is to be placed in the mouth of the deceased. There are also many paper offerings that one can burn in order to prepare the deceased for the afterlife – a passport, clothes, shoes, a house, even a rice cooker.

The funeral preparations were finally in place but another obstacle stood in our way – the clash of family culture and religions. Earlier in the year, my cousin became engaged to a Taiwanese girl. Residents of Taiwan are particularly conservative in terms of Chinese traditions. In our culture, happy events are considered to be "紅日", literally "red day", and tragic events are considered to be "白日", literally "white day". Tradition states that the two are not supposed to happen sequentially or too close together because the negative energy from the "white day", "白日", can affect the positive energy of the "red day", "紅日". In contemporary culture, the standard amount of days between the two events has become more lax; according to the funeral director, typically 10 days and up to 45 days. However, in Taiwan, they are still keeping to the age-old tradition of 100 days. As a result, my cousin's mother, who is in Hong Kong and is the child closest to my grandmother, was unable to attend her own father's funeral because all those who participated in the funeral were not allowed to go to the wedding and were not even allowed to send gifts or money.

Although I am an enthusiast of traditions and culture, I was bewildered by the turn of events. I became very angry because in this particular situation, our traditions became a cause for pain and grief, especially on the part of my aunt. A professor told me later on that she believes that in your time of grief, anger is the easiest emotion to slip into because it gives you a sense of control in a situation that was beyond your control. My cousin's fiancée's family was distantly related to my grandfather and thus they had no emotional attachment to his passing but regardless, how could you deny a child from seeing their parent one last time? My roommate, who is Iranian, had told me that

in their culture, there is a similar tradition but in this situation, the wedding would be adjusted according to the funeral. After all, the wedding is in the future but the dead belong in the past; they cannot die again.

Finally, it was the day of the funeral. Sunday, July 17th, was a bright and sunny day. The family members were to arrive at 8:30am to prepare for the viewing at 9am. Everyone was dressed in somber neutral colours, traditionally white. The male children of the dead, like my father, had to wear a black ribbon on their lapel while the male grandchildren, like my brother, had to wear a white ribbon. The female children of the dead, like my aunts, had to wear a flower made of white string whereas the female grandchildren, like myself, had to wear a flower made of green string. The ribbons and flowers are to be removed and placed on the coffin to be buried alongside the dead.

Prior to the viewing, I avoided being in the room with the coffin because seeing my grandfather laying there was very upsetting to me. I watched my father as he stood solemnly, staring at the body of his father. His face was thick with makeup, especially blush in order to give him a healthy complexion. Fake teeth were placed in his mouth to close the gaping hole where his mouth had been. The suit he was wearing covered his skinny, stiff body. It was a complete 180 degrees from the body that I had seen laying in the hospital. It seemed so surreal; he didn't seem real to me.

The ceremony was small and intimate with immediate and distant family members only. Unfortunately, my grandmother was unable to attend due to her poor health. Every guest gives money as a sign of their condolences to the immediate family and in turn, receives a white envelope from the immediate family that contained a candy and a dollar. The candy is said to sweeten the bitterness of the loss and is to be consumed directly after the burial. The dollar must be spent the day of the funeral. It is said to be "lucky money" so it is supposedly good for purchasing a lottery ticket.

The Taoist, "道教", ceremony started at 10am with the "道士", Taoist priests, chanting and creating a hypnotic rhythm using a series of bells and drums. As they were chanting, they would present a series of offerings to the dead, including apples, oranges, chicken, fish, Chinese barbeque pork, and three types of Chinese sweets. They also burned the paper offerings provided by the family in order to prepare the dead for the afterlife. They also burned incense with the family members, with which they had to hold and walk in a circle along with the Taoist priests before bowing three times in front of the body. At the end of the ceremony, the immediate family was to come up

one by one to bow three times in front of the body before standing off to the side. The guests would then come up as a group with their family and bow three times in front of the body before bowing three times in front of the immediate family. Afterwards, the coffin is closed and covered with Taoist seals, and the coffin is carried off by the pallbearers. The firstborn child, my father, carried a framed black-and-white photo of my grandfather and stood behind the coffin. The rest of the immediate family followed behind, with the distant relatives in the back.

We arrived at the gravesite. A perfect rectangular hole in the ground awaited us. The surrounding area was covered in astroturf to cover the ramps that were put in place. A pulley system was set up to lower the coffin into the ground. The coffin was placed into the burial plot. We stand as a group off to the side. My grandmother had warned us to be careful not cover the grave with our shadows, known as "遮影", which would prevent the spirit from passing over. The "道士", Taoist priests, once again burned incense and chanted rhythmically as everyone was given a flower to place on the coffin as they bowed one last time. The pins and flowers the family members wore on their lapel were also placed on the coffin, along with the food offerings and the flower arrangement of red roses sent on behalf of my grandmother.

As I watched my aunt cry silently, the grave was lowered into the ground and the pulley system was removed as a bobcat comes over to cover the gravesite with dirt. I was astonished at the precision and efficiency at which this was performed; it was at the level of an art form. The funeral home staff placed all the remaining flower arrangements over the grave, of which the ribbons with the writing of each of the family members' names were removed so as not to "bury" the living. The funeral home director announced that the ceremony was over and that it was customary in Chinese culture to visit the gravesite three days after the funeral. Everyone started to walk away. As I followed the crowd of people, I paused for a moment to glance back at the grave. I no longer felt sad; rather, I felt a sense of relief. I guess that is what funerals are for – closure. And there, under the clear blue sky and under a bed of colourful flowers, in the ground laid my grandfather. The one who taught me how to play cards, the one who taught me Chinese calligraphy, the one who taught me so much about my culture and heritage. May you rest in peace. "爺爺，請你安息".

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