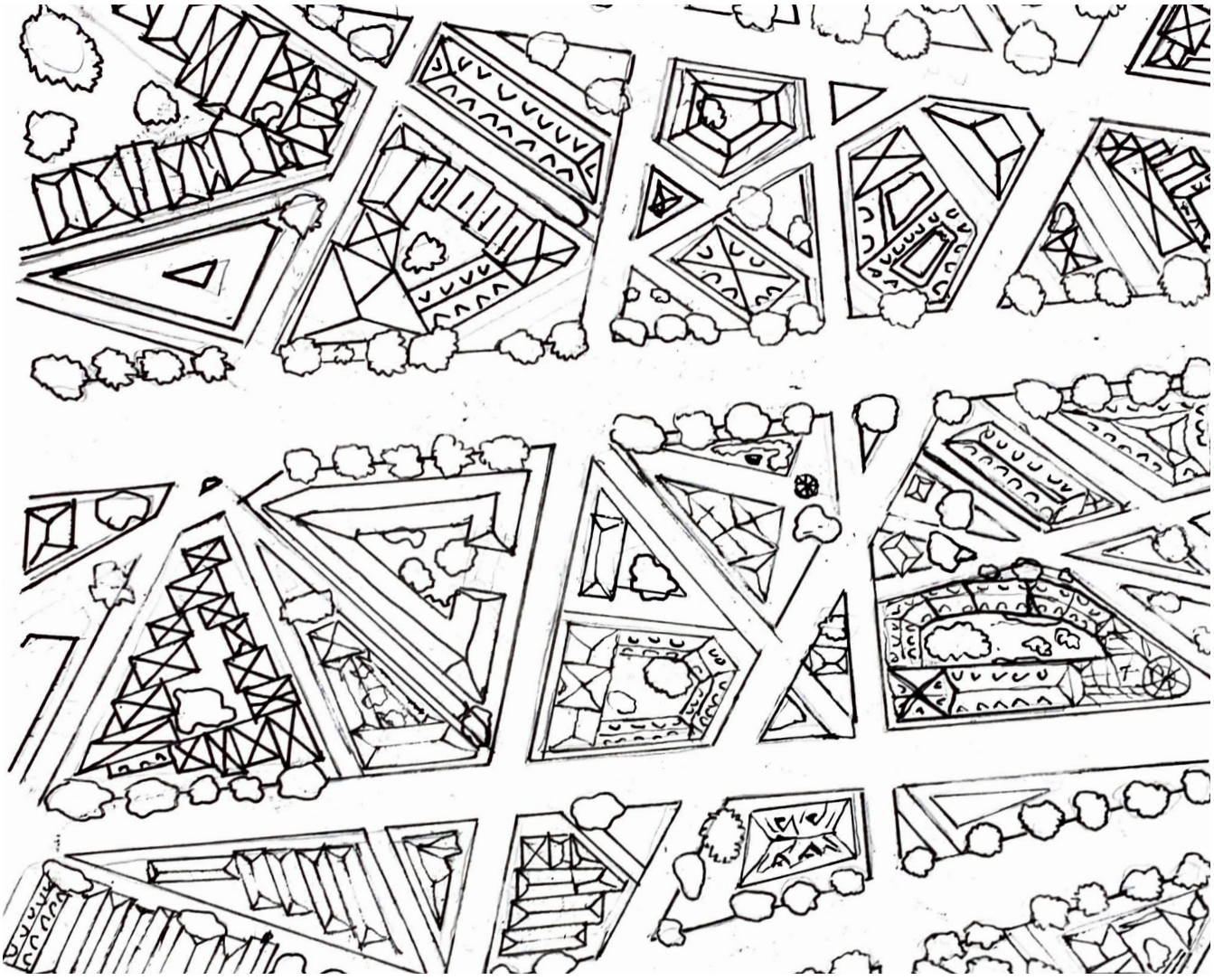
Urban Planning &
Architecture

2025

CAMERON MCDOWELL

Selected Works



Cameron McDowell

ABOUT ME

I am a graduate of the University of Alberta, where I earned my B.A. in Planning. Currently, I am further enhancing my skills in architecture and urban design by pursuing two certificate programs in architecture at Citrus College in California. My passion lies in creating functional, impactful spaces that improve communities and facilitate better urban navigation.

EDUCATION

B.A. in Planning 2022
University of Alberta
Edmonton, Canada

CERTIFICATES

Certificate in Computer Aided Design (CAD) 2025
Citrus College
Glendora, California

Certificate in Computer Generated Imagery (CGI) 2025
Citrus College
Glendora, California

Certificate in Sustainability 2022
University of Alberta
Edmonton, Canada

Certificate in Interdisciplinary Leadership Studies 2022
University of Alberta
Edmonton, Canada

Technical Skills

Adobe Creative Suites
Photoshop, InDesign, Illistrator (excellent)
3D Modelings,
SketchUp (excellent), Rhino (excellent),
AutoCad (excellent), Revit (excellent)
Microsoft Office
Word, PowerPoint, Excel (Excellent)

ADDITIONAL SKILLS

Document Formatting and Design (1 year)
Creative Problem Solving (5 years)
Environmental Planning (1 year)
Customer Service (5 years)
Community Engagement (1 year)

EXPERIENCE

All One Sky Foundation – Internship 2023–2024

Reviewed and summarized municipal planning policies and other related documents.

Analyzed and synthesized aspects of Climate Action Plans for communities in Alberta.

Prepared memos, proposals, research reports, workshop summaries, policy briefs, and Climate Action Plans.

Frosted Shaved Ice – Co Founder 2021–2022

Designed and constructed a mobile food cart for venue and private bookings.

Managed the permitting process with Alberta Health Services for food permits, inspections, and the City of Edmonton.

Marketed the business through various social media platforms to drive community engagement.

Delivered a positive customer service experience to foster customer loyalty.

Negotiated the sale of the business, handling all related paperwork.

Home Reusables – Staff 2020–2022

Assisted customers and addressed their needs in person and over the phone.

Reclaimed and recycled building materials from historic homes for resale at the shop.

Habitat Studio– Labourer 2017–2021

Analyzed blueprints for housing projects and scheduled daily tasks accordingly.

Gained a comprehensive understanding of the construction process.

VOLUNTEERING

The Painted Turtle 2023–2024
Assisted with four-week-long medical camps for sick children outside of Lake Hughes, California.

Little Bits 2015–2023
Facilitated positive horseback riding interactions for children with disabilities.

City of Edmonton Youth Council 2018–2019
Assisted with the Urban Planning Sub-Committee, organizing fundraising and networking events.

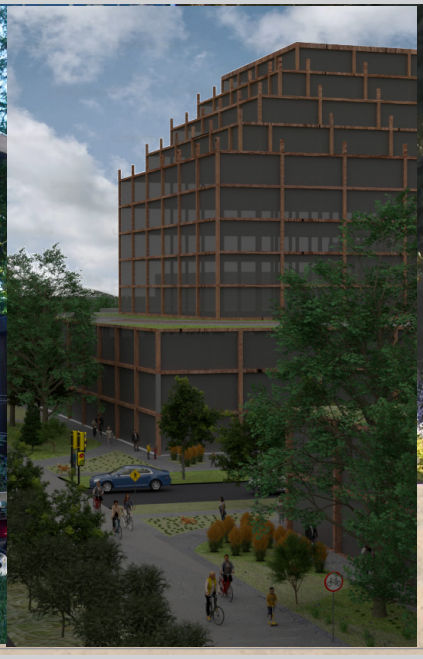
TABLE OF CONTENTS

CONTENTS

01

02

03



04

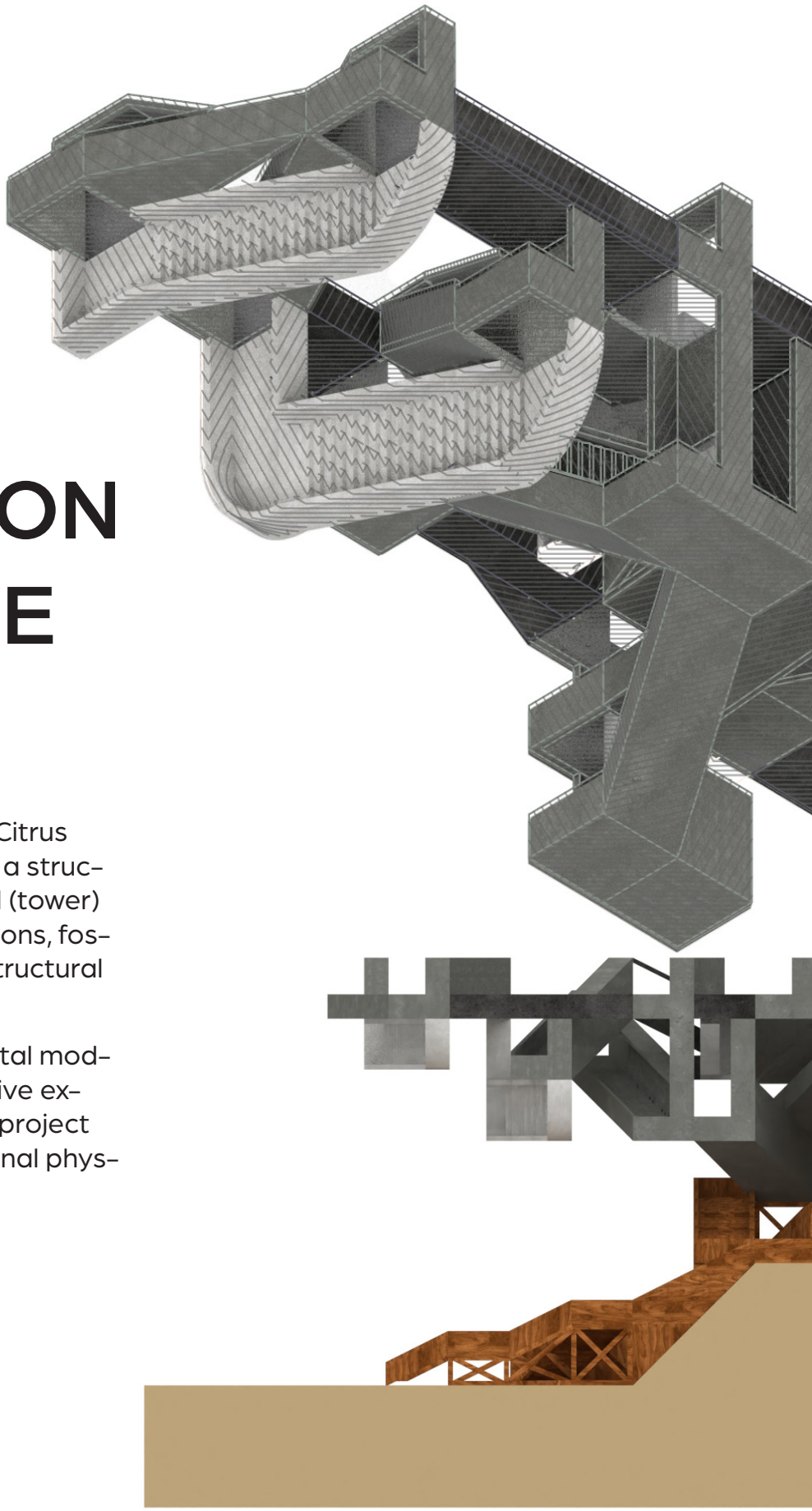
05

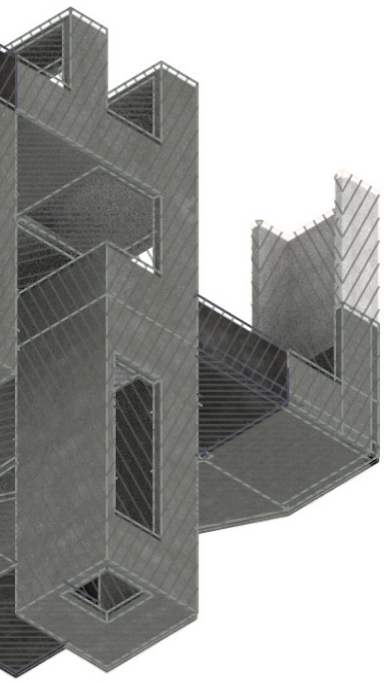
DUAL-ORIENTATION STRUCTURE

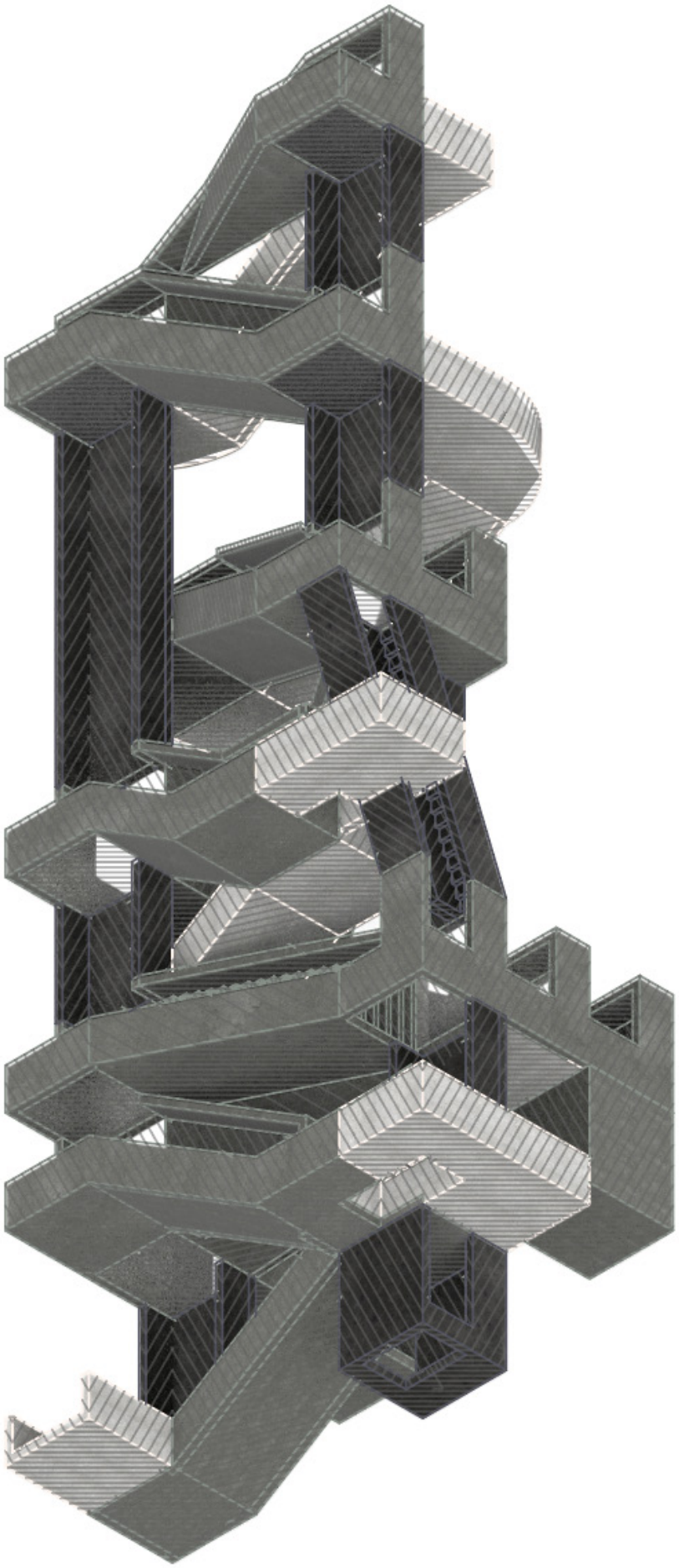
STUDIO PROJECT

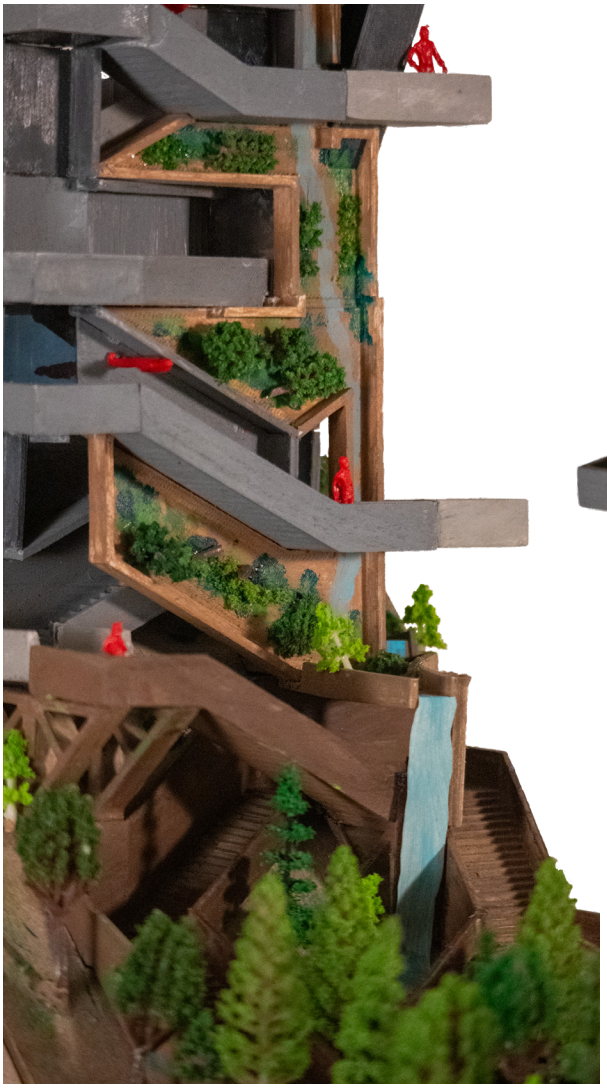
In an architecture studio course at Citrus College, I was challenged to design a structure that functioned in both vertical (tower) and horizontal (cantilever) orientations, fostering a deeper understanding of structural dynamics and adaptability.

The design process began with digital modeling in Rhino 3D, allowing for iterative exploration of form and balance. The project finished with the construction of a final physical model.





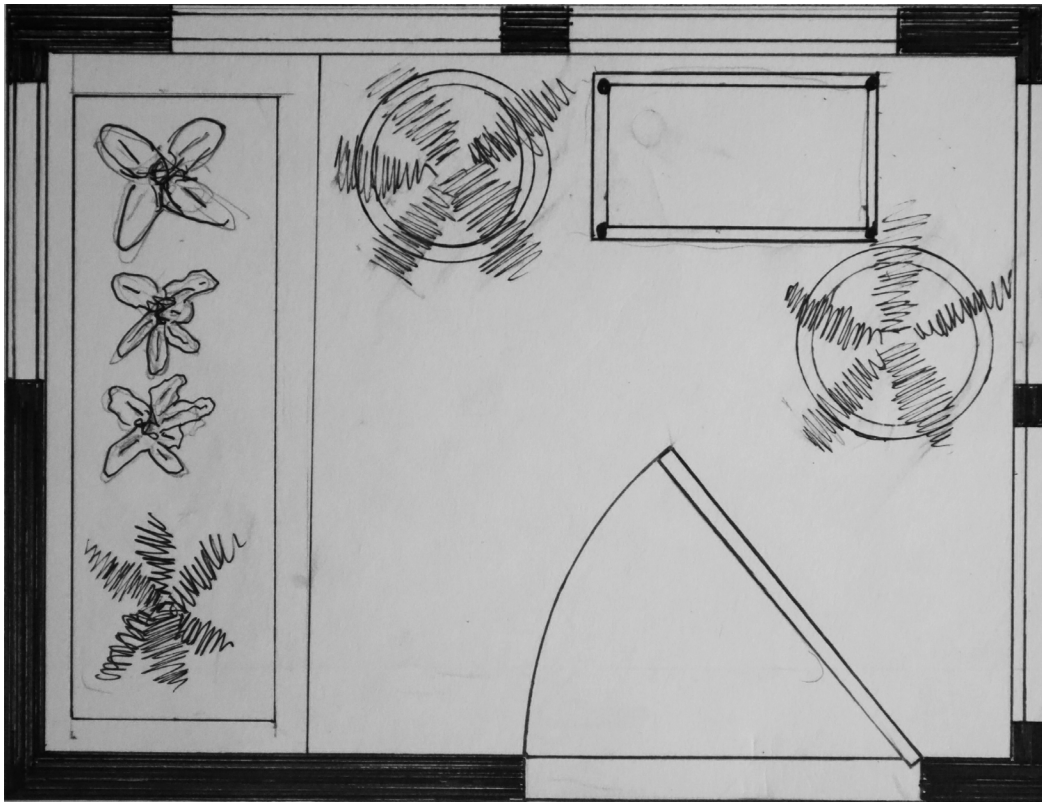




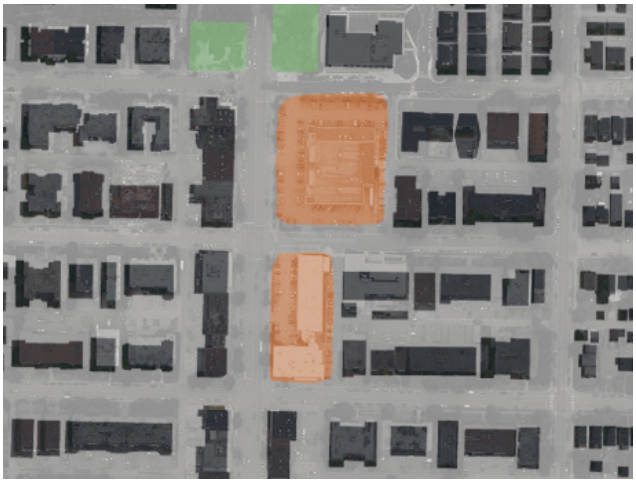
I created a detailed physical model utilizing a 3D printer, laser cutter, and acrylic paint. I engineered a mechanism incorporating counterweights and pivots, allowing for seamless rotation between different orientations. I envisioned the structure nestled within a forested setting with scenic views, complementing the model with trees to show it within the natural environment.

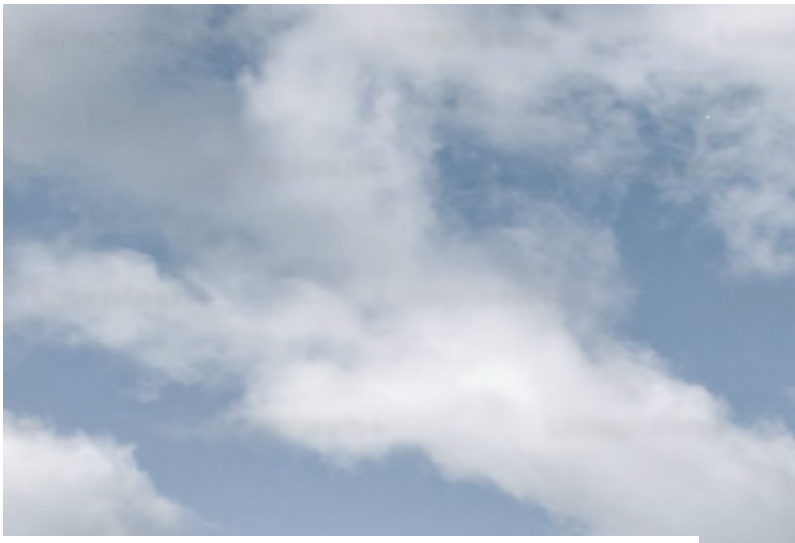
MODULAR 4X8 PANEL GREENHOUSE EDMONTON, CANADA

As part of my Certificate in Interdisciplinary Leadership Studies, I designed and built a modular greenhouse that disassembles into transportable 4x8 panels—the size of a standard truck bed—for easy relocation. This allows it to be moved between sites such as community events and gardening pop-ups that promote urban farming. Constructed entirely from reclaimed materials, the project emphasizes sustainability. The windows and door came from a home that was being torn down. The siding came from palets.




Zinfandel



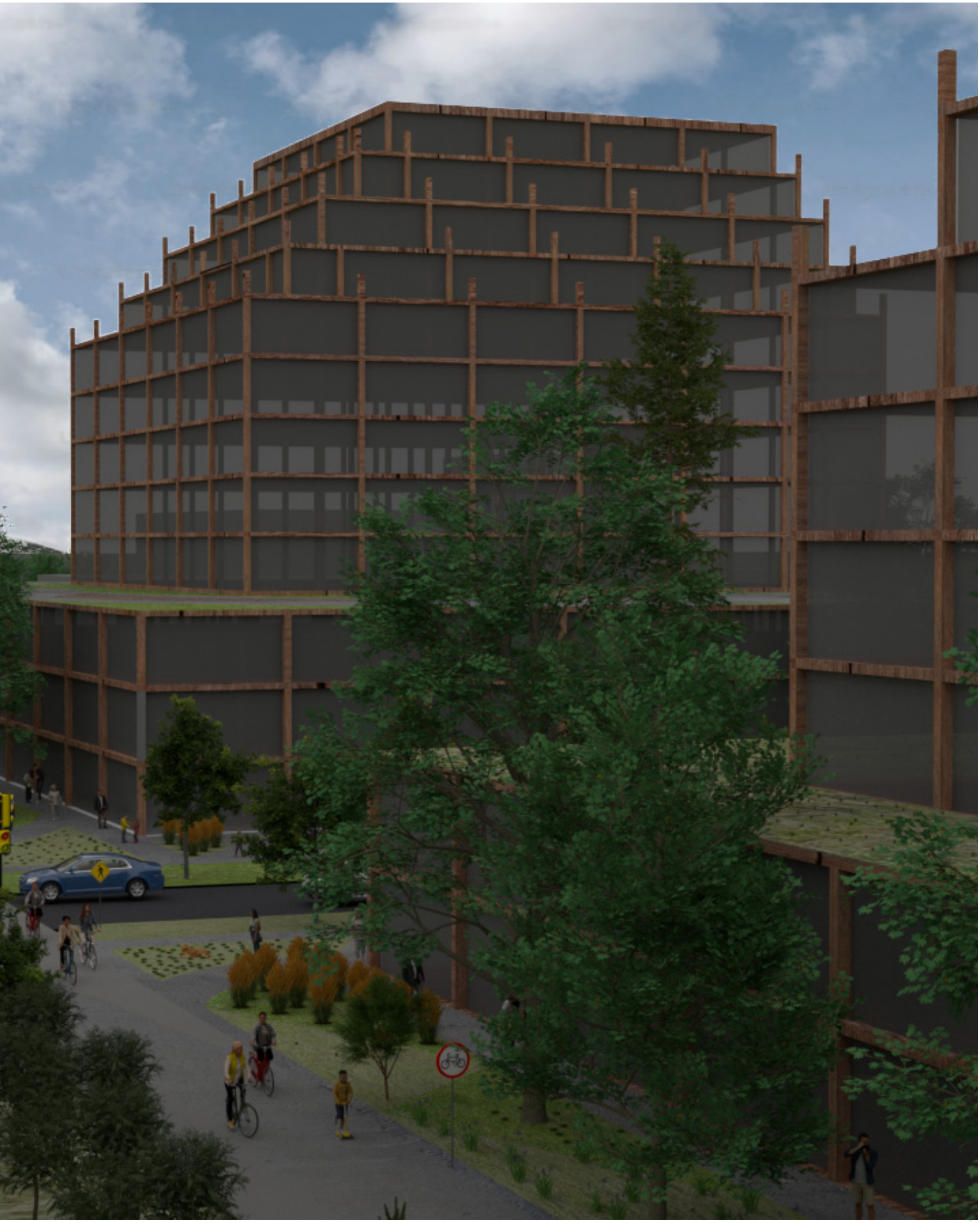


MASS TIMBER FEASIBILITY STUDY

CITY OF NORTH VANCOUVER, CANADA

For my undergraduate capstone project, I collaborated with four other students, as well as planners and engineers from the City of North Vancouver, to conduct a feasibility study on Tall Wood/Mass Timber construction—building structures over six stories using wood. We focused on a real-world hypothetical site that the City of North Vancouver was considering for redevelopment. Our primary focus was on zoning and how much density the site will allow and what the massing would look like.

My contributions included research, policy writing, and 3D modeling. Our final plan featured two mass timber towers, one 12 stories and the other 8 stories, designed to demonstrate the viability and sustainability of this innovative construction method.



BUILDING TALL WOOD IN THE CITY OF NORTH VANCOUVER

NAVIGATING ITS ECONOMIC, ENVIRONMENTAL, AND REGULATORY DIMENSIONS

Final Report

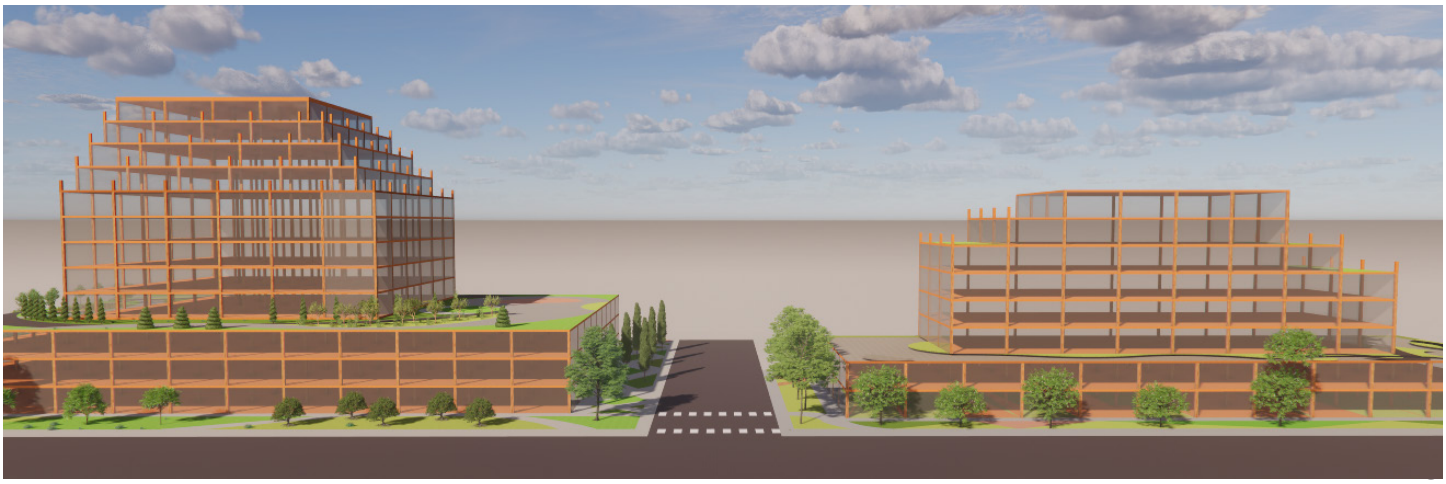
Prepared For: City of North Vancouver

Project Team
Inderjit Chhina
Erin Doyle
Eric Lillow
Cameron McDowell
Lincoln Nicholls

UNIVERSITY OF ALBERTA

Key Findings

- Renewable reasource has the beneifit of carbon sequestration within the timber.
- Timber from trees killed by the mountain pine beatle can be used.
- Traditional construction methods such as concrete and steel is most cost effective above 30 stories.
- Biggest market potential for MTC is 7–14 storeys, where steel or concrete construction is less financially viable.
- LLRS design (Lateral Load–Resisting System) provides stiffness, ductility, “sway” to resist winds and earthquakes.
- Comparable strengths to concrete and steel.
- Off–site manufacturing speeds up construction timelines by 25%, within multiple stages.
- Visible timber within buildings has psychological and physiological benefits for humans.
- While fire is a concern, through the use of sprinklers and fire resistant coating the risks are mitigated.
- 7–inch CLT slowly chars from outside; takes 3 hours to burn.
- Wood below the char; retains 85–90% structural integrity.



CLIMATE RISK ASSESSMENT & ADAPTATION PLAN

INTERNSHIP – TOWN OF DEVON, CANADA

I worked for a year as an intern specializing in climate adaptation and mitigation planning for municipalities in Alberta, Canada. My work involved gathering public input through workshops and surveys, analyzing climate data projections, and identifying the most pressing climate impact scenarios for communities. I organized climate data into tables and graphs, making complex information more accessible to the public.

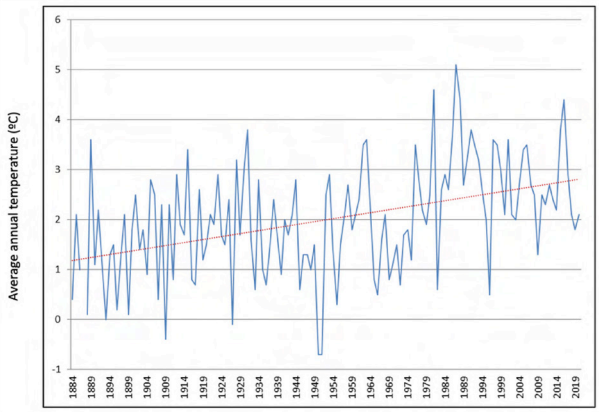
To develop a Climate Assessment & Adaptation Plan, we first collected climate data from local weather stations and national databases. This data was then analyzed and modelled using 14 different scenarios to predict trends and potential changes.

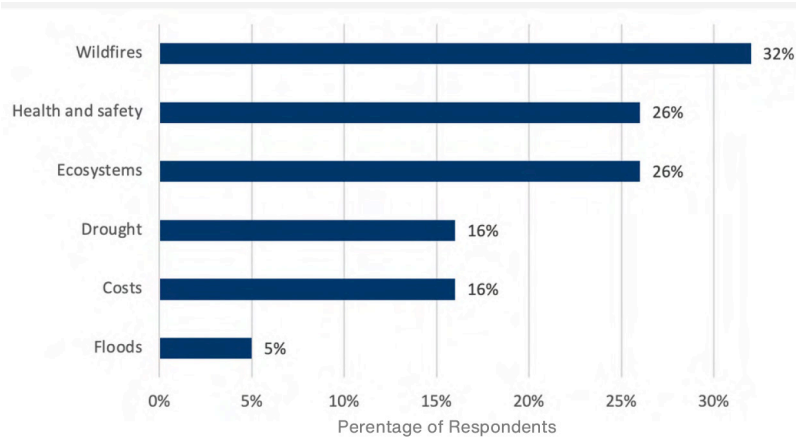
Once the data was processed, we visualized it through graphs and charts for clarity. We also conducted surveys and community engagement sessions to create and assess climate impact scenarios—potential weather events—ranking them based on their likelihood and potential consequences.

Finally, we compiled the findings into a report, presenting the data alongside recommendations to mitigate the risks associated with these climate impact scenarios.

Climate Variables	Baseline (1976 - 2005)			2050s (2041 – 2070)			Mean Projected Change
	Min.	Mean	Max.	Min.	Mean	Max.	
Annual Temperature (°C)	3.3	3.5	3.7	4.9	6.4	7.07	+2.9
Average Spring Temperature (°C)		9.83			13.08[8]		+3.25
Average Summer Temperature (°C)		14.74			18.52[8]		+3.78
Average Fall Temperature (°C)		-2.99			1.04[8]		+4.03
Average Winter Temperature (°C)		-7.86			-3.1[8]		+4.76
Number of Hot Days (> 30°C)	2	3	4	6	14	22	+11
Number of Very Cold Days (< -30°C)	5	6	7	0	1	2	-5
Annual Precipitation (mm)	456	474	488	490	528	563	+53
Spring Precipitation (mm)	146	155	168	140	181	227	+26
Summer Precipitation (mm)	175	196	208	154	206	229	+9
Fall Precipitation (mm)	53	58	63	61	68	74	+9

Figure 2 Average Annual Temperature (1884-2018)

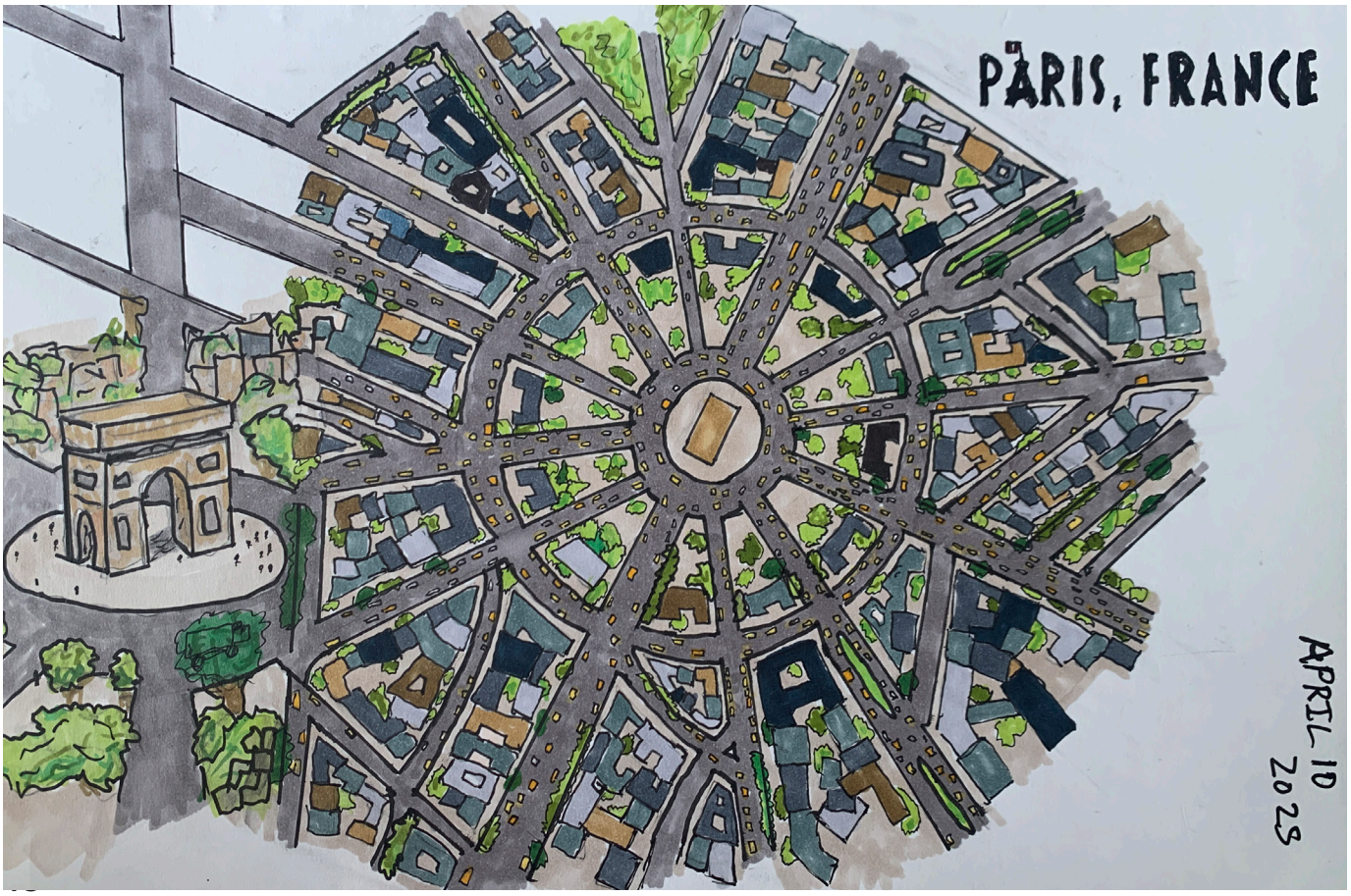


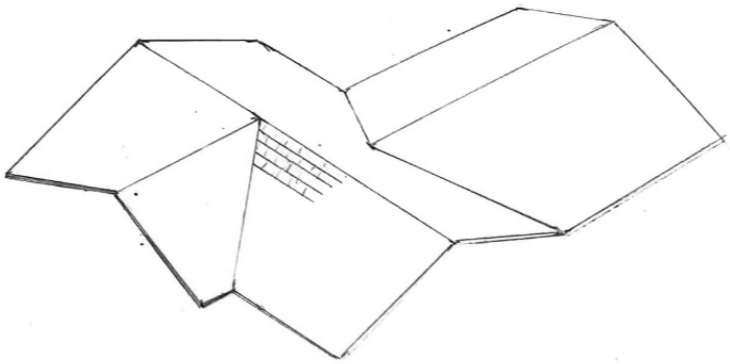


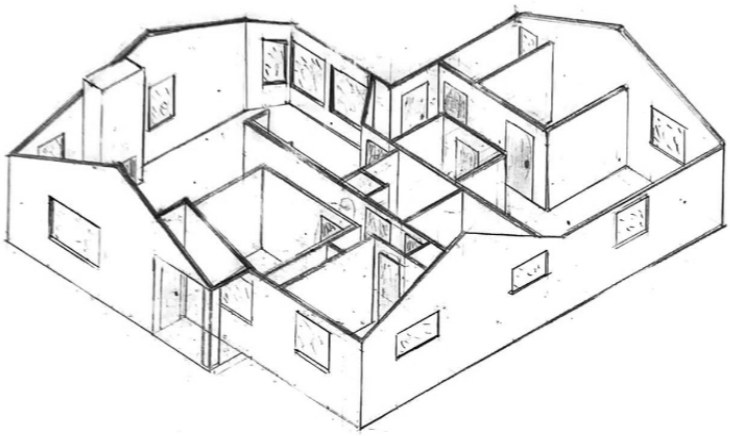
Climate Impact Scenario - consequence[16]	Likelihood Score	Consequence Score	Risk Level	Rank
Wildfire Smoke - Health and respiratory impacts	5	4.2	Very High	1
Outbreak of invasive species - Damage to forest and trees	5	3.8	Very High	2
Heat wave - Negative health impacts	5	3.7	Very High	3
Meteorological drought - Increased water demand, water supply issues	4	4.6	Very High	4
Hotter summer temperatures - Heat stress on natural landscape	5	3.5	Very High	5
Hotter summer temperatures - Increased space cooling requirements	5	3.4	High	6
Wildfire Smoke- Impacts to building filtration (HVAC) systems	5	3.2	High	7
Hotter summer temperatures - Increased surface water temperatures	5	2.9	High	8
Meteorological drought - Stress on natural landscapes and gardens.	4	3.1	High	9
Freezing Rainstorm - Health and safety risks	3	4.1	High	10
Hailstorm - Damage to home and building envelopes	4	3.0	High	11
Extreme rainfall and overland flooding - Homes, buildings, and infrastructure	3	3.9	High	12
Windstorm - Damage to homes, buildings and infrastructure	3	3.8	High	13
Freezing Rainstorm - Damage to homes, buildings, and infrastructure	3	3.5	High	14

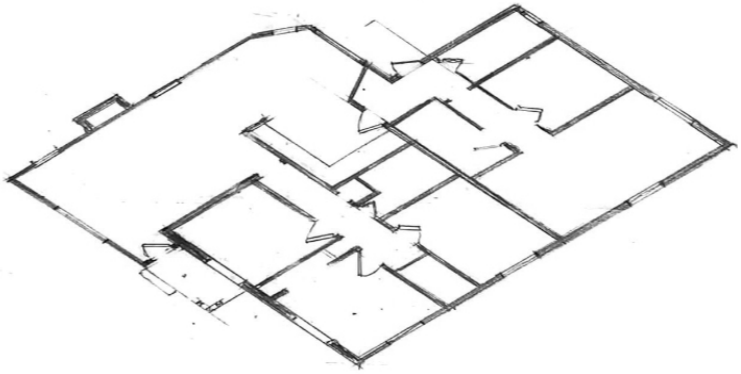
CREATIVE & SKETCHES

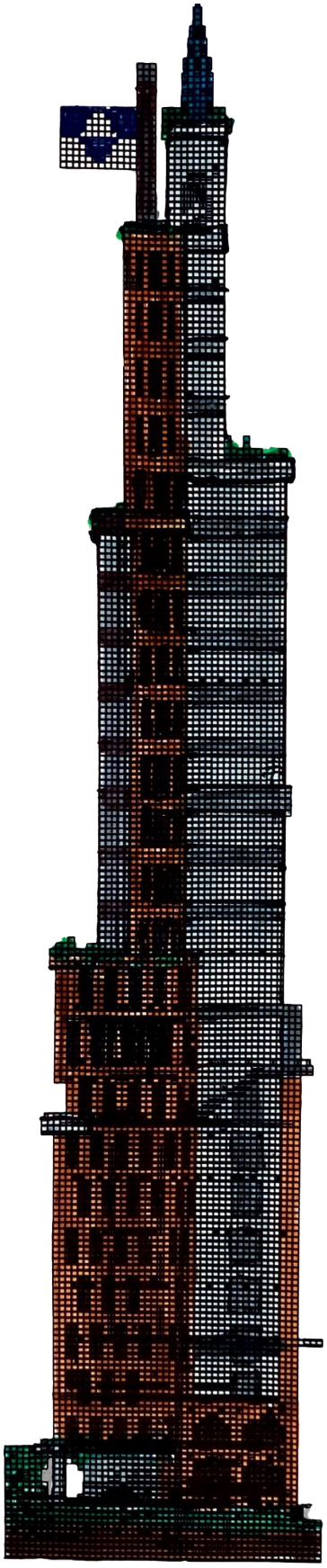
I have a passion for sketching and drawing, particularly exploring cities, architecture, and the urban environment. In my free time, I enjoy creating conceptual sketches, cities and regions from above or city skylines from different view points.











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