# POR TFO LIO

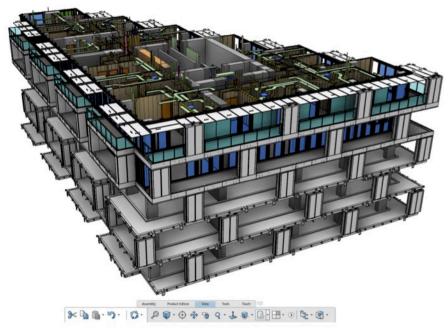
**ARCHITECTURE** 

**AMIRTALACHIAN** 

YOU EMPLOY STONE, WOOD AND CONCRETE, AND WITH THESE MATERIALS YOU BUILD HOUSES AND PALACES. THAT IS CONSTRUCTION. INGENUITY IS AT WORK.
BUT SUDDENLY YOU TOUCH MY HEART, YOU DO ME GOOD, I AM HAPPY AND I SAY: THIS IS BEAUTIFUL. THAT IS ARCHITECTURE. ART ENTERS IN.

# **ARCHITECTURAL**

PROJECTS



#### Vancouver House

1460 Howe St, Vancouver, BC V6Z 1R8

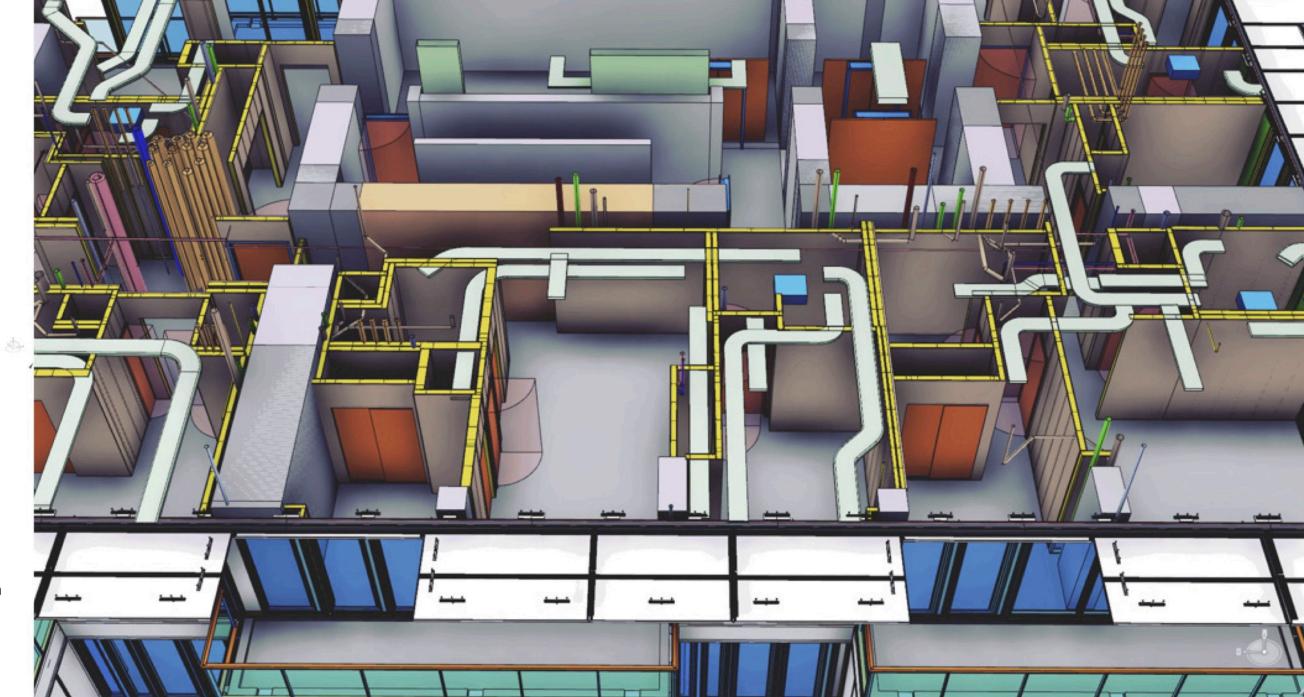
Architect: Bjarke Ingels Group, DIALOG, James KM Cheng Architects Builder: Westbank

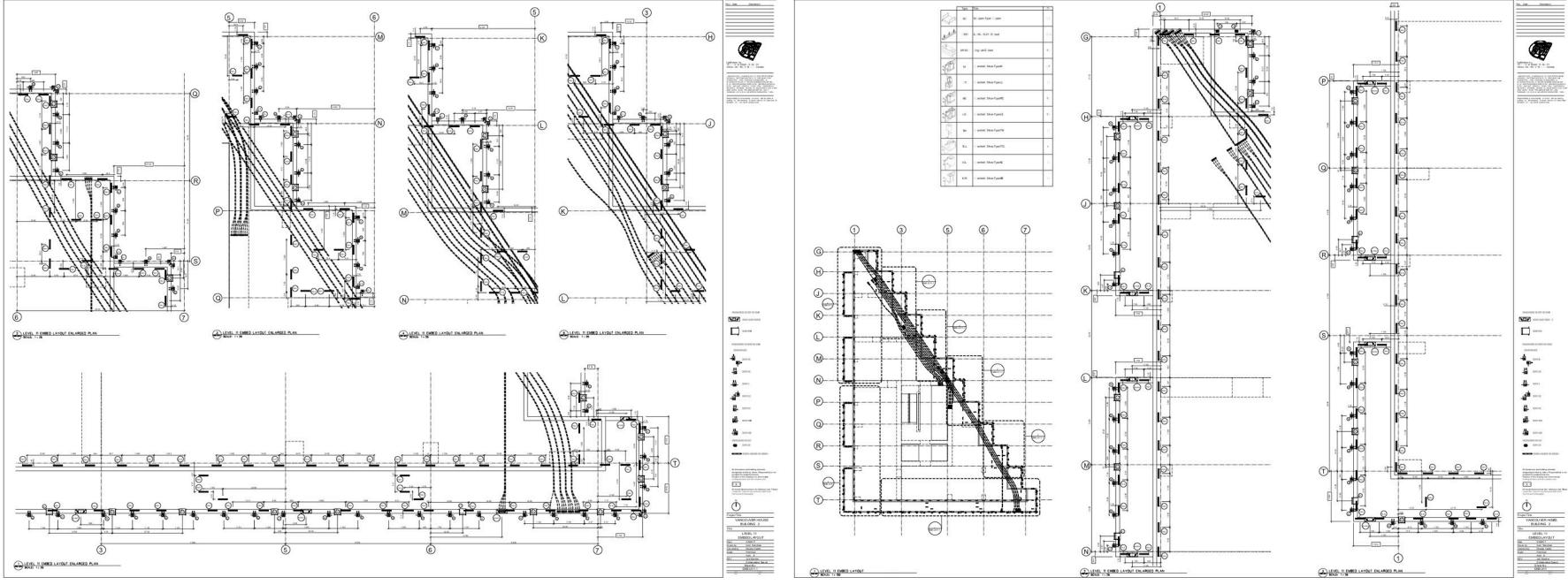
Completion 2018

#### Responsibility:

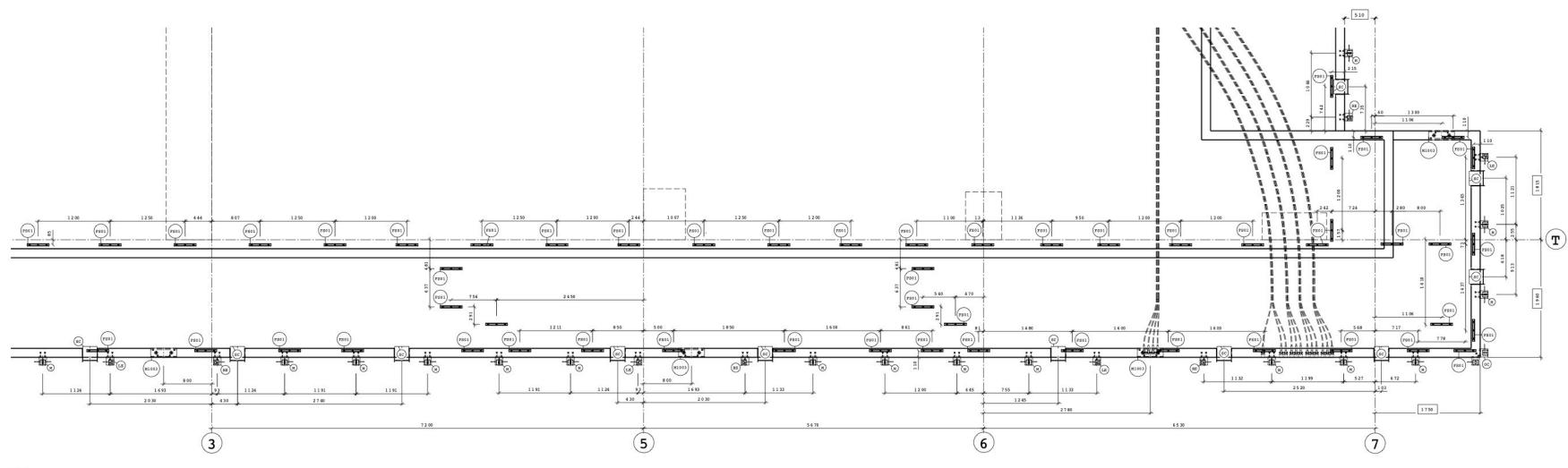
Exterior facade design, design and analysis of building elements, such as embeds, guardrails, drainage, ISAs, headers and starter tracks. Study of structure, rebars, PT cables and clearance height base on BCBC. Design and analysis of manhoist to building envelope. Developing construction drawings for ICON.

while working at CadMakers



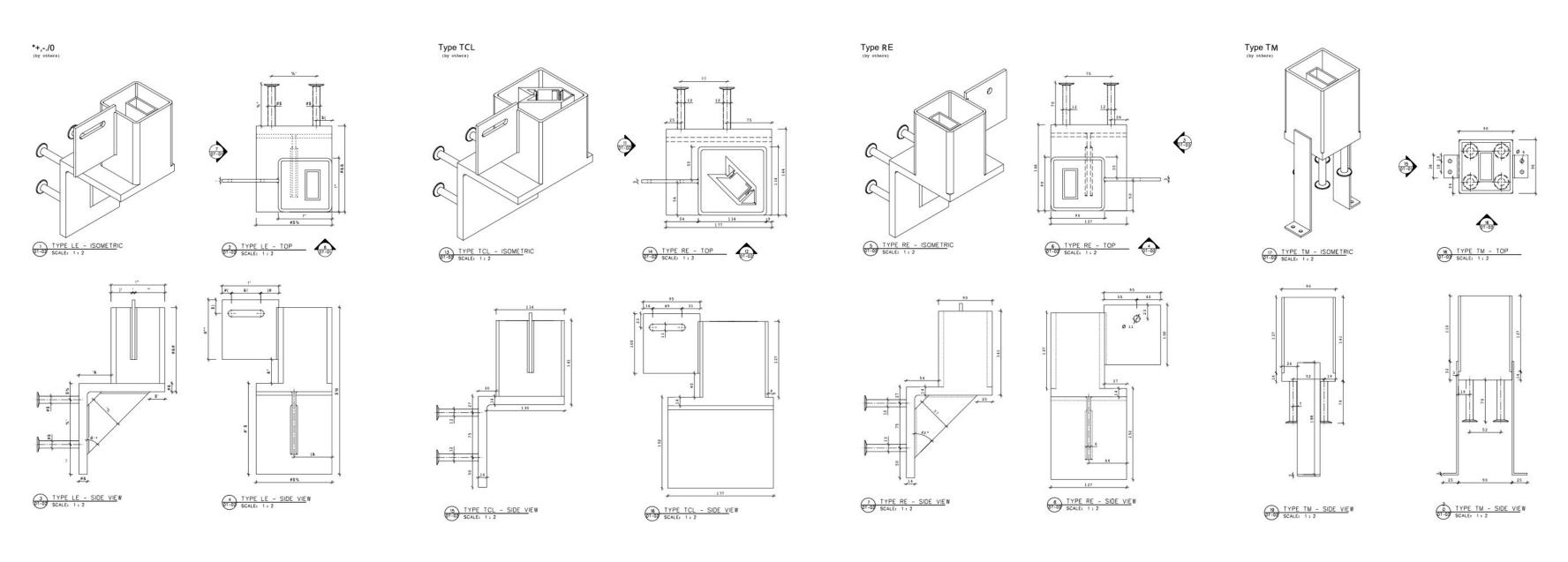


while working at CadMakers



1 LEVEL 11 EMBED LAYOUT ENLARGED PLAN

SCALE: 1: 25





Telus Sky

7th Avenue and Centre St. S.W.

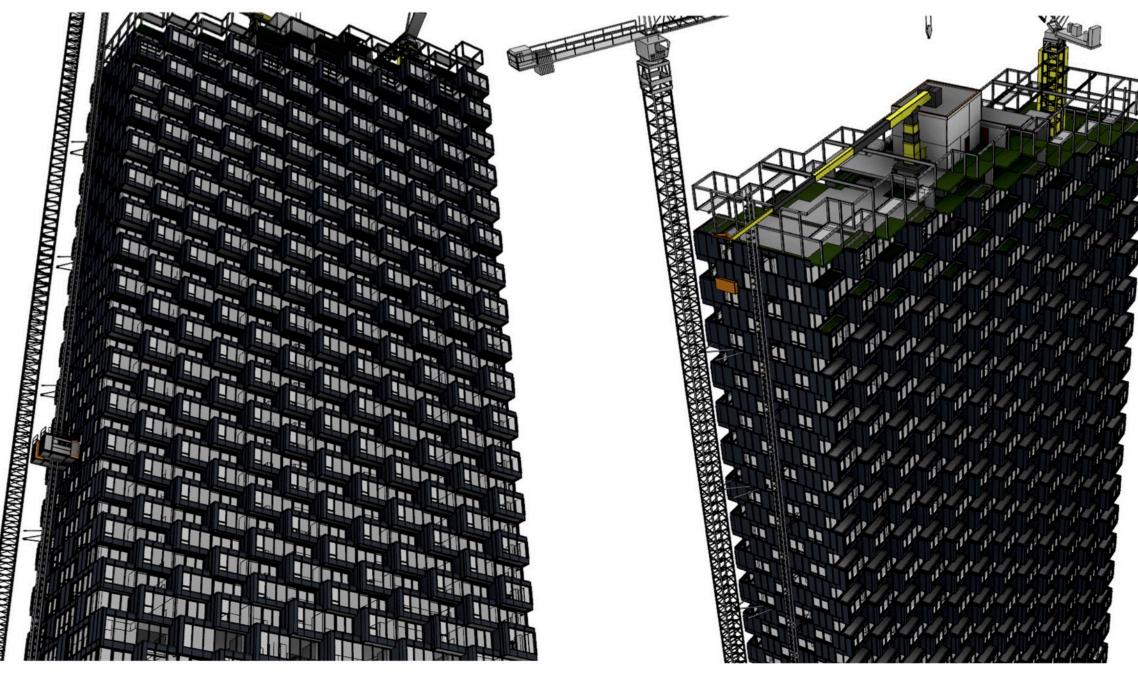
Architect: Bjarke Ingels Group

Builder : Westbank

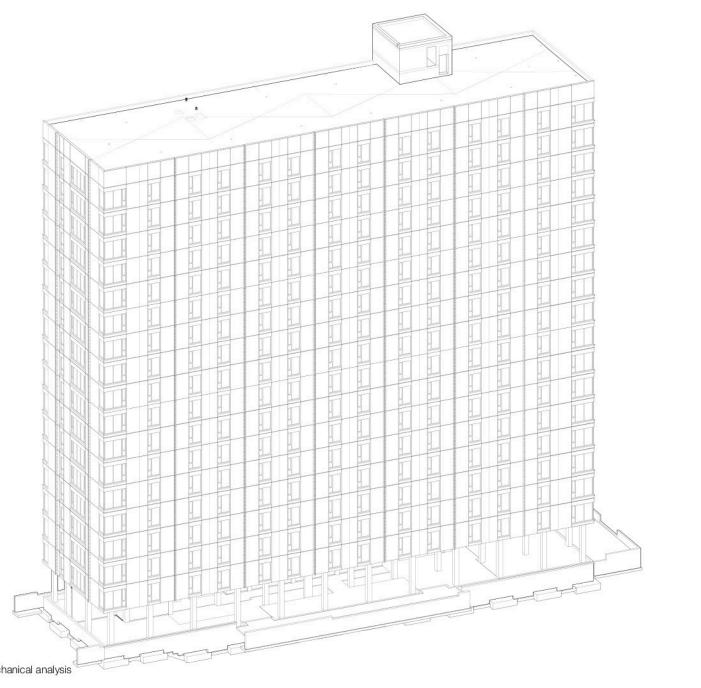
Completion 2018

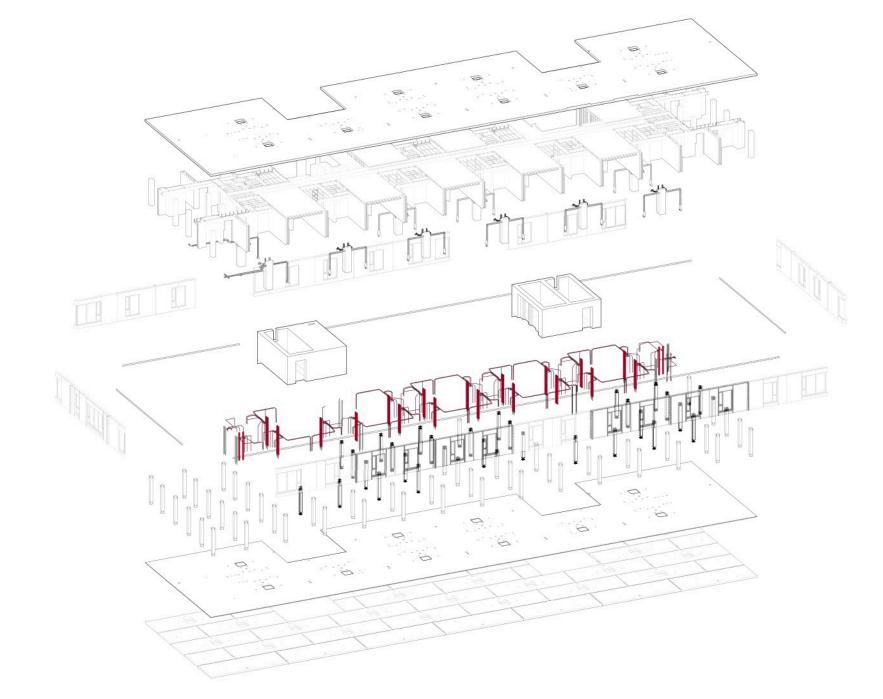
#### Responsibility:

Envelope design, detail modelling and analysis of over 300 types of panels for commercial and residential levels (level 03 - 28, 29 - 60). Designing "smart" parametric panels to reform base on types. Using scripts to place each panel.



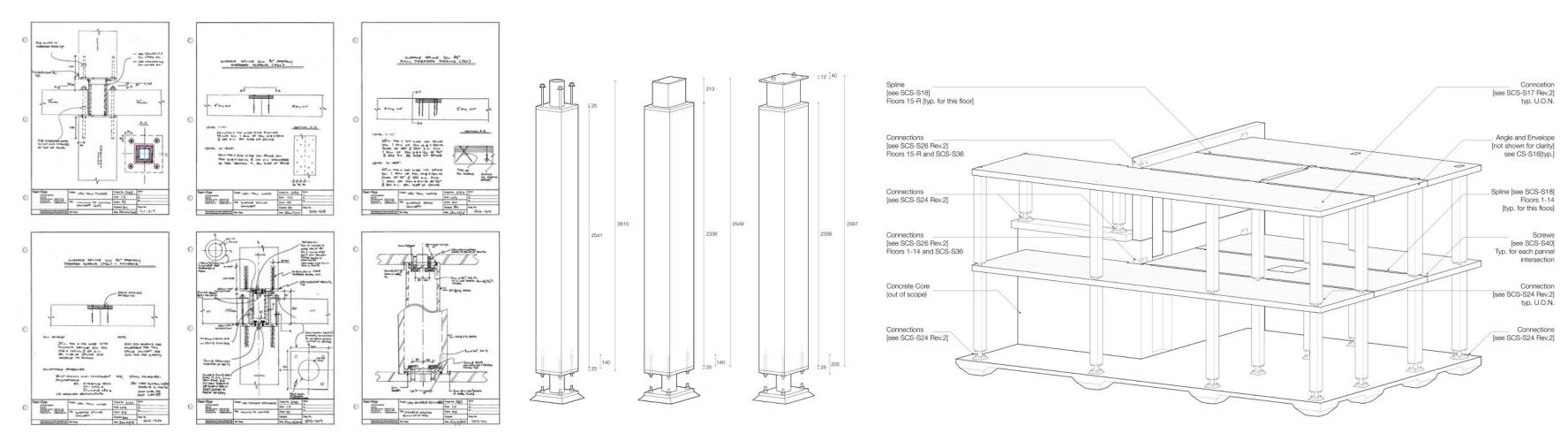






Brock Commons Tallwood House UBC, Vancouver

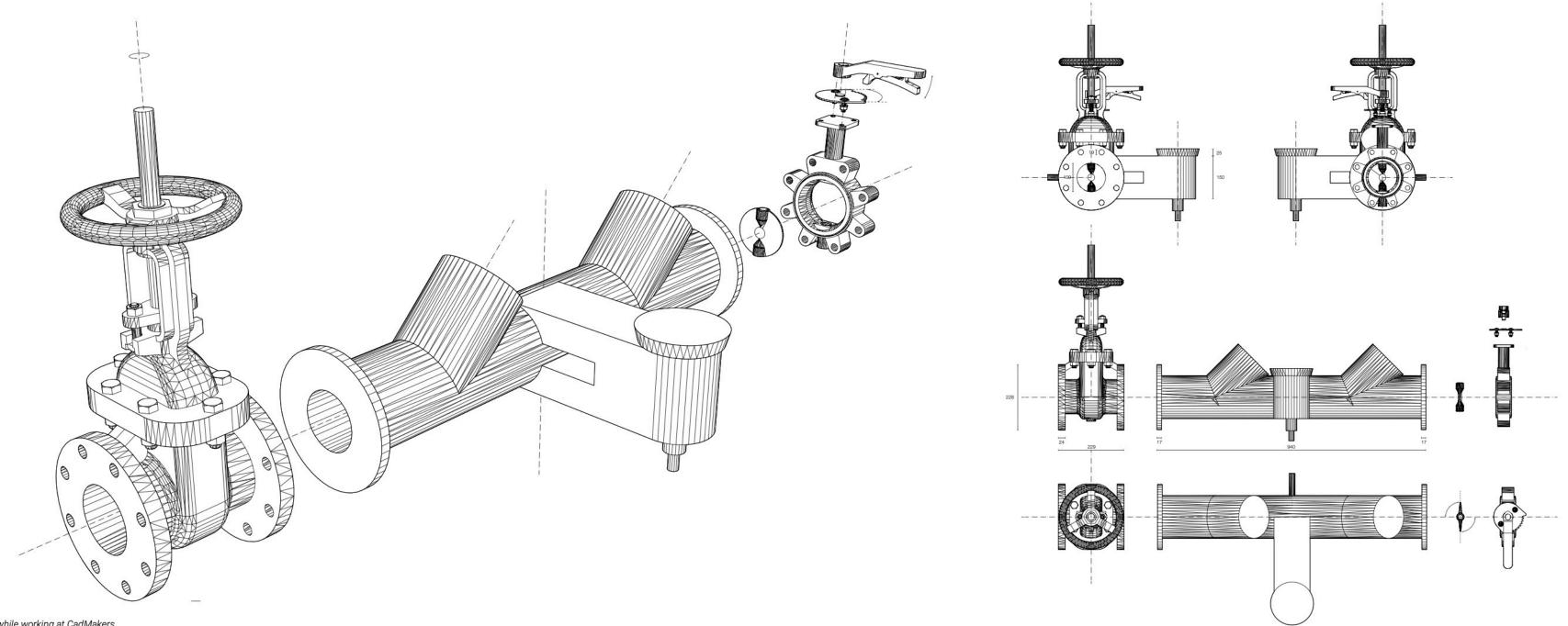
Architecture, structure and mechanical analysis while working at CadMakers

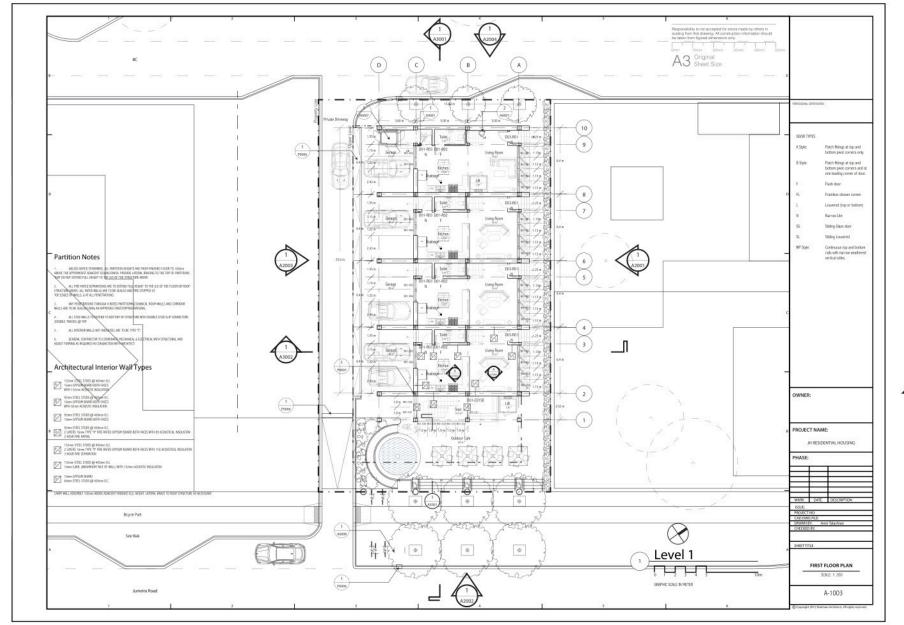


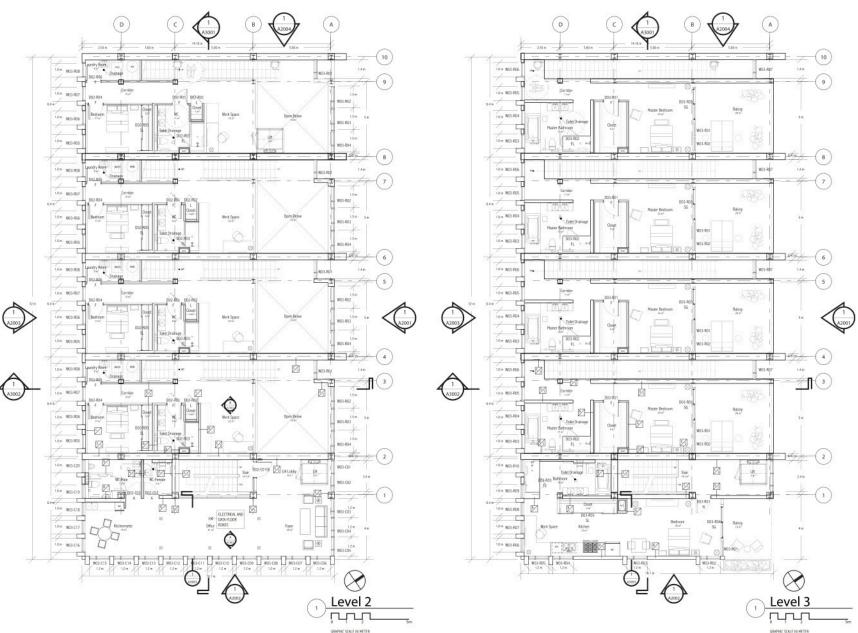
#### Brock Commons Tallwood House UBC, Vancouver

Architecture, structure and mechanical analysis

while working at CadMakers



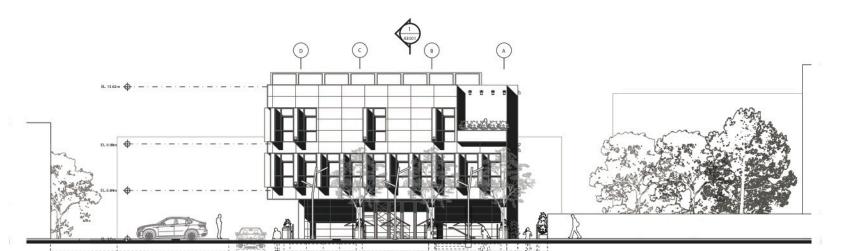




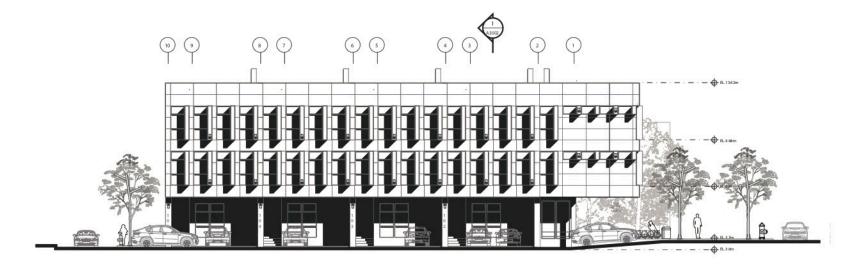
Duration: 12 weeks



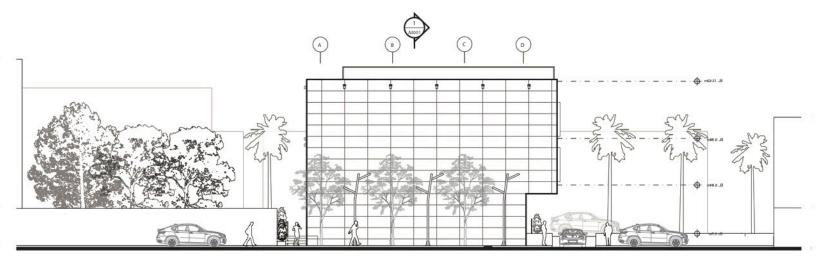




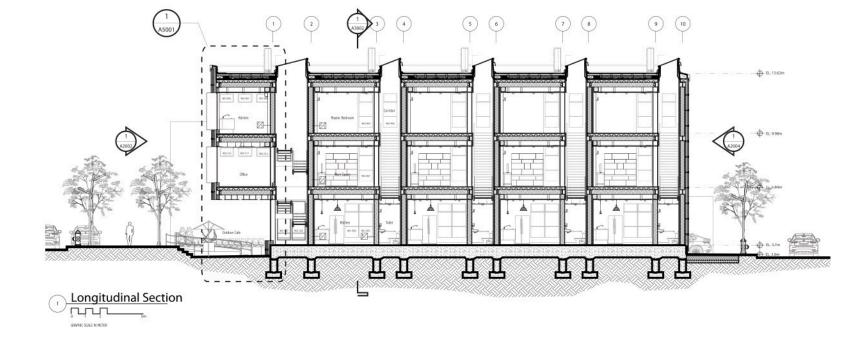


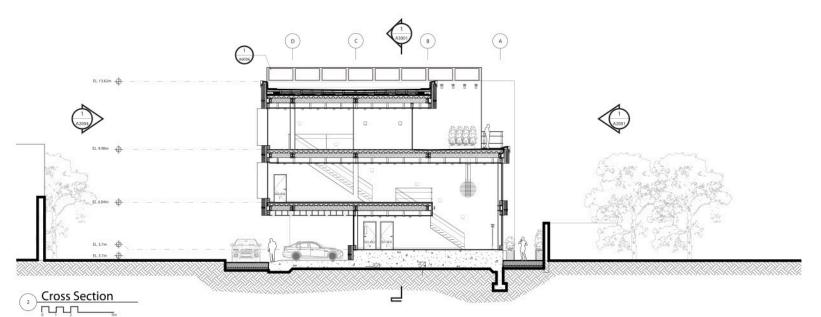


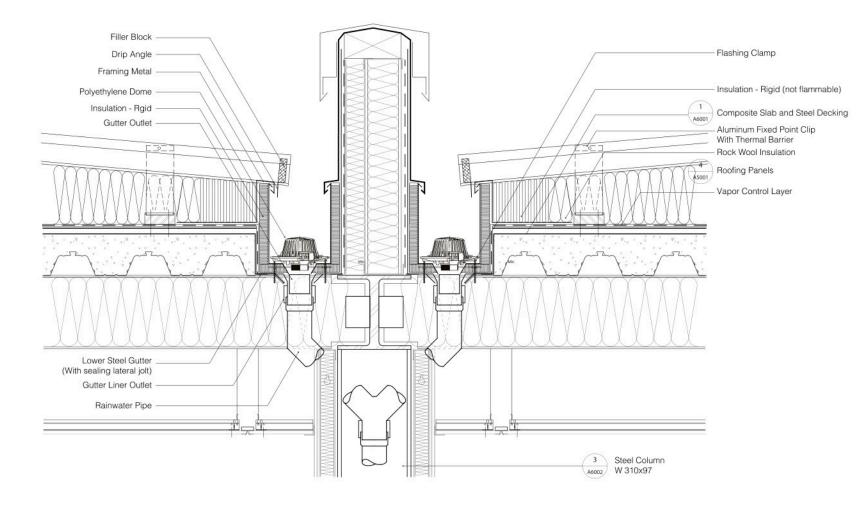


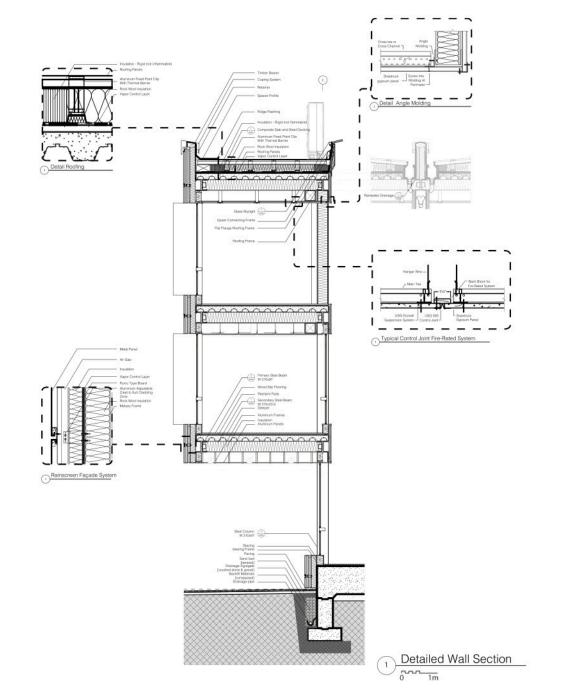




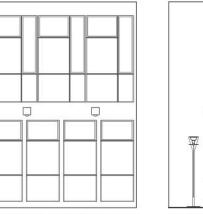


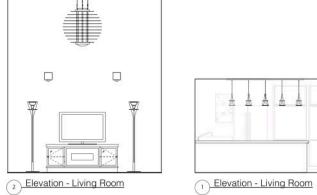






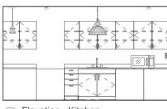
# A Elevation - Living Room



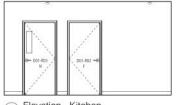


3 Elevation - Living Room

## A Elevation - Kitchen





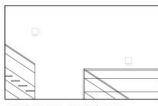


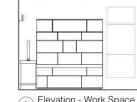
3 Elevation - Kitchen

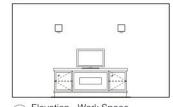
2 Elevation - Kitchen

Elevation - Kitchen

# B Elevation - Work Space







Blevation - Work Space

2 Elevation - Work Space

1 Elevation - Work Space







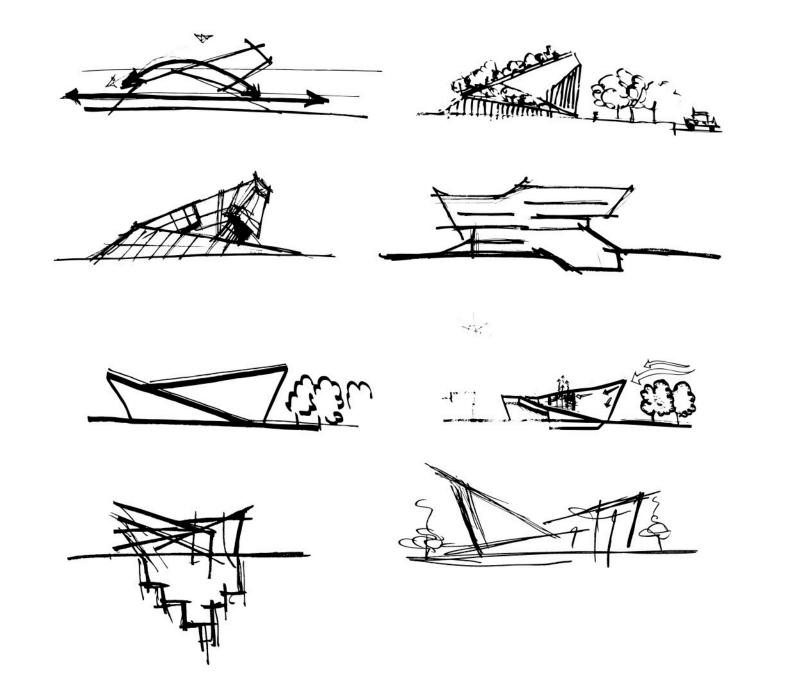


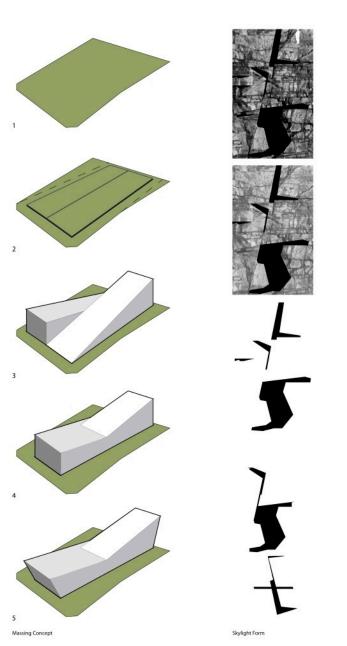


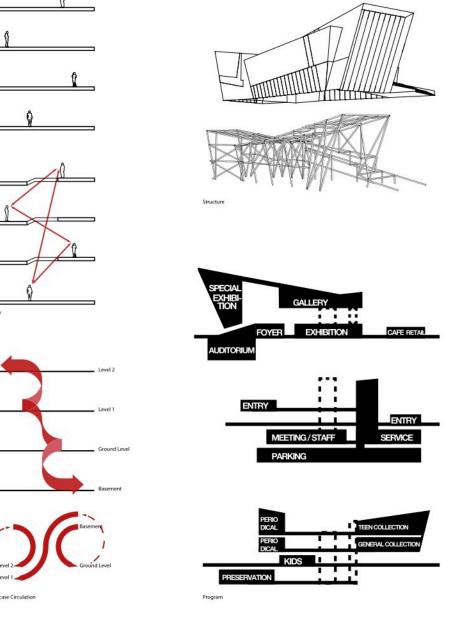


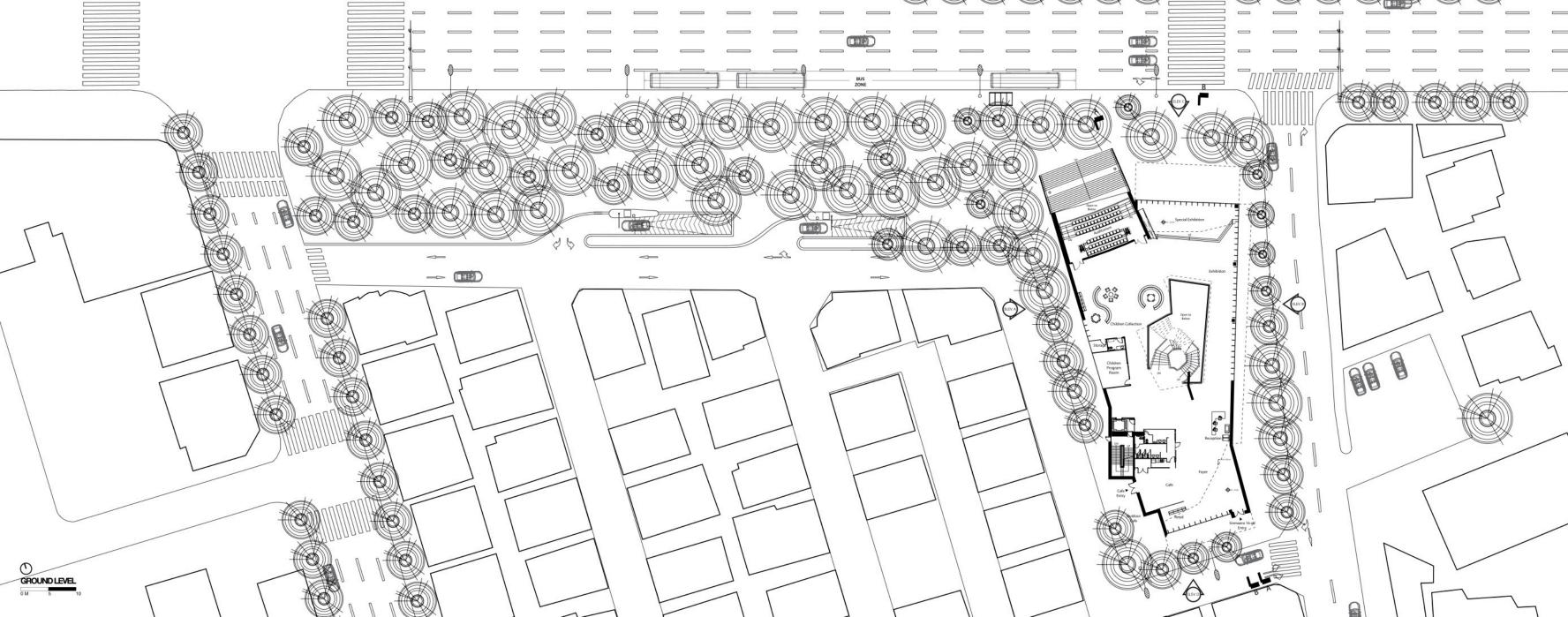


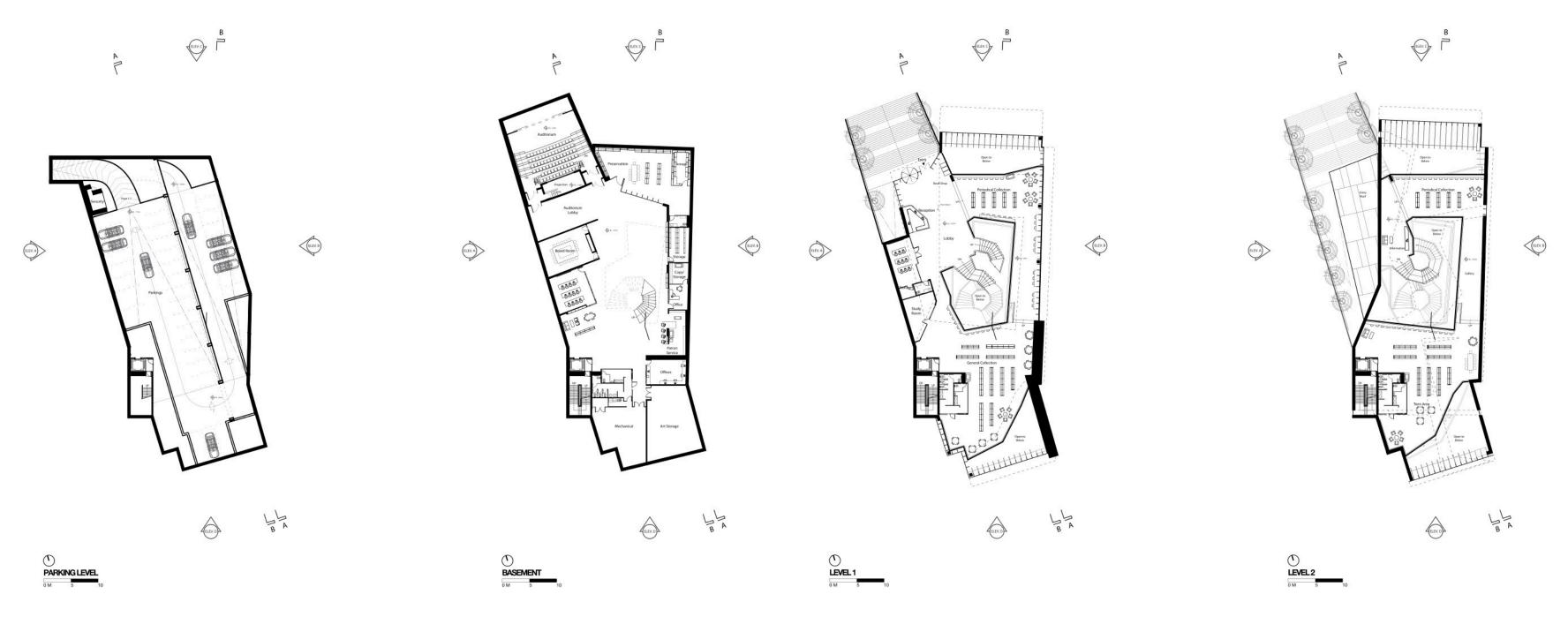


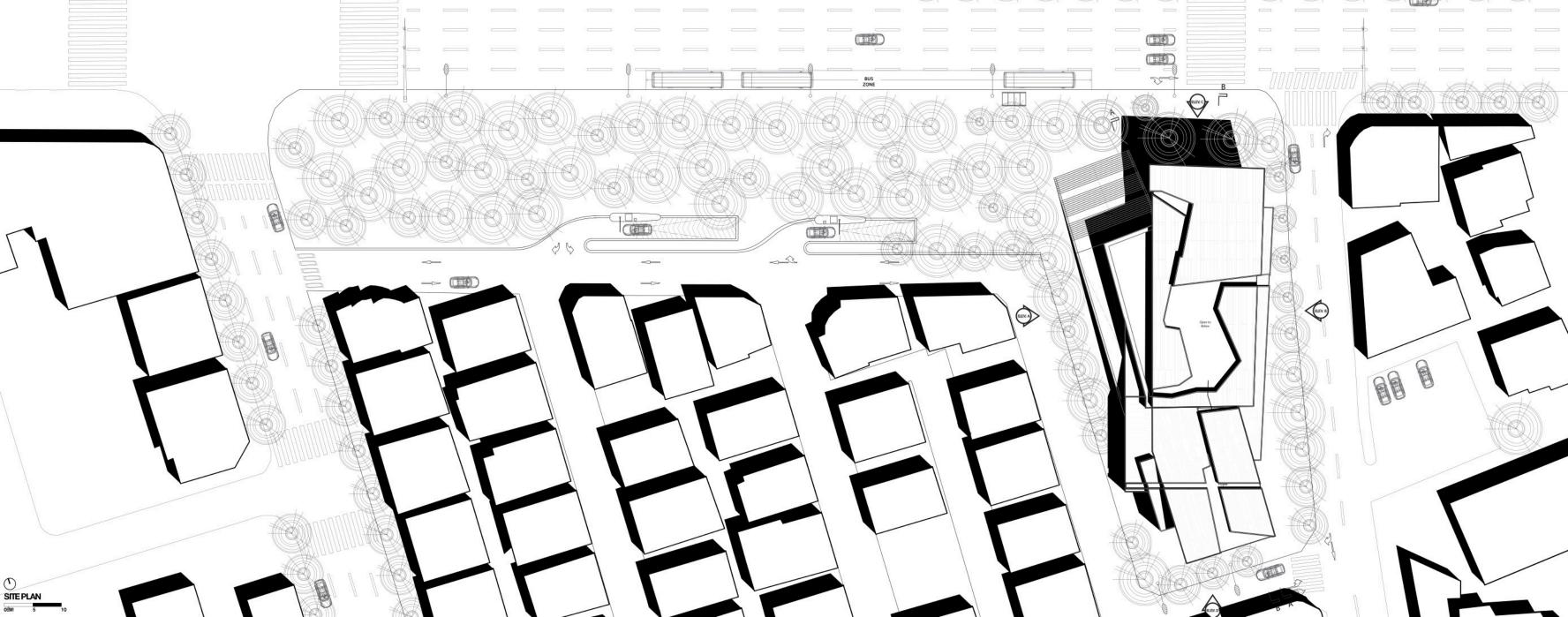


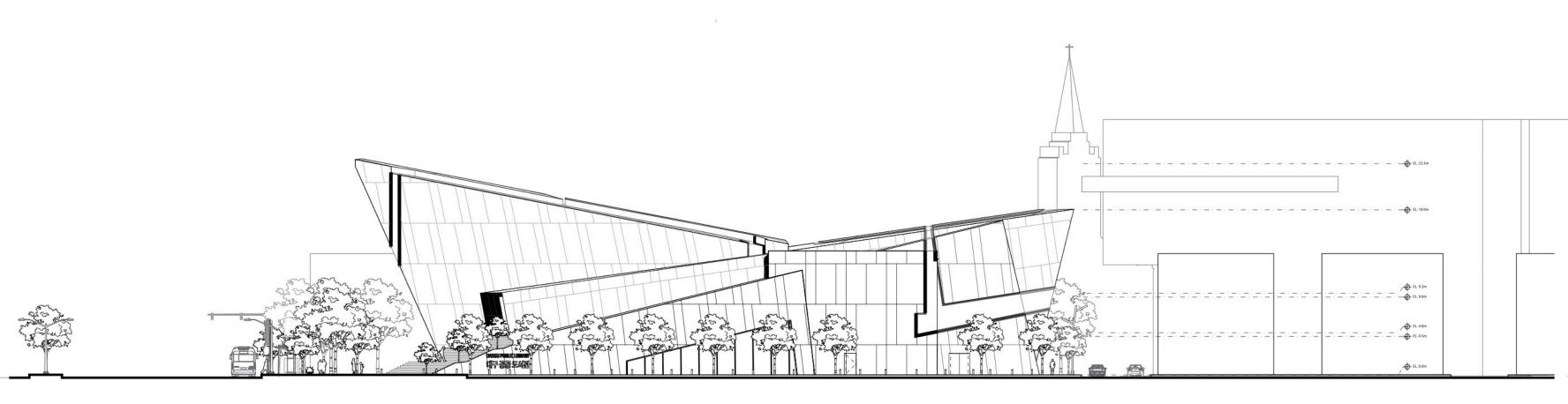




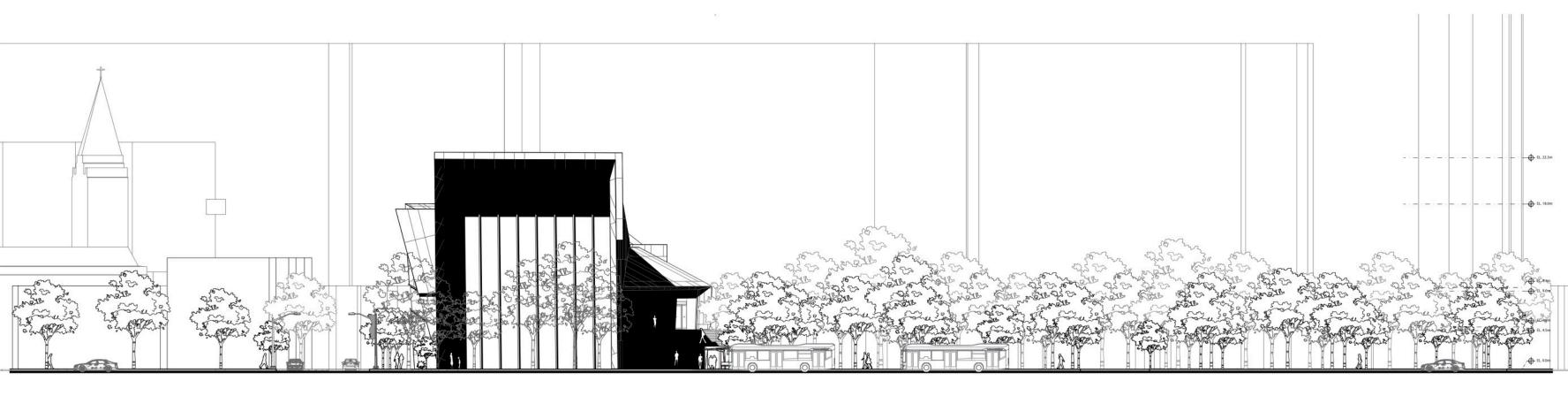




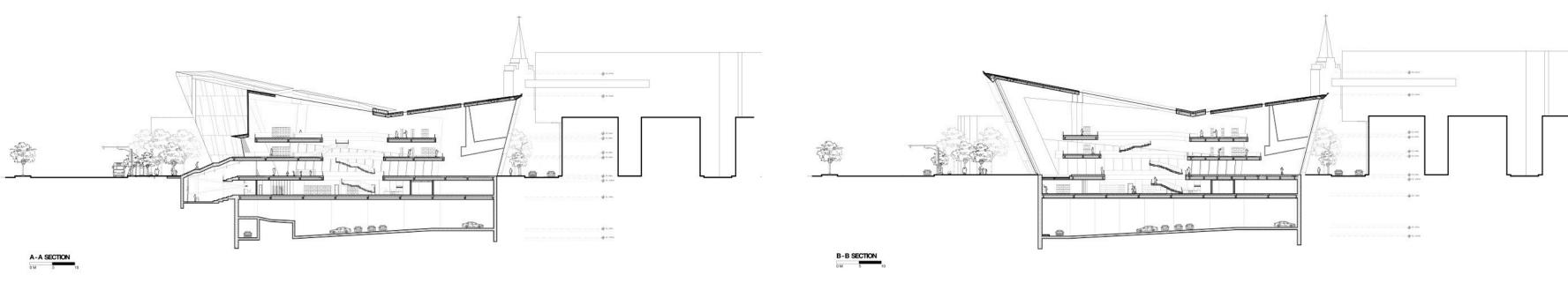


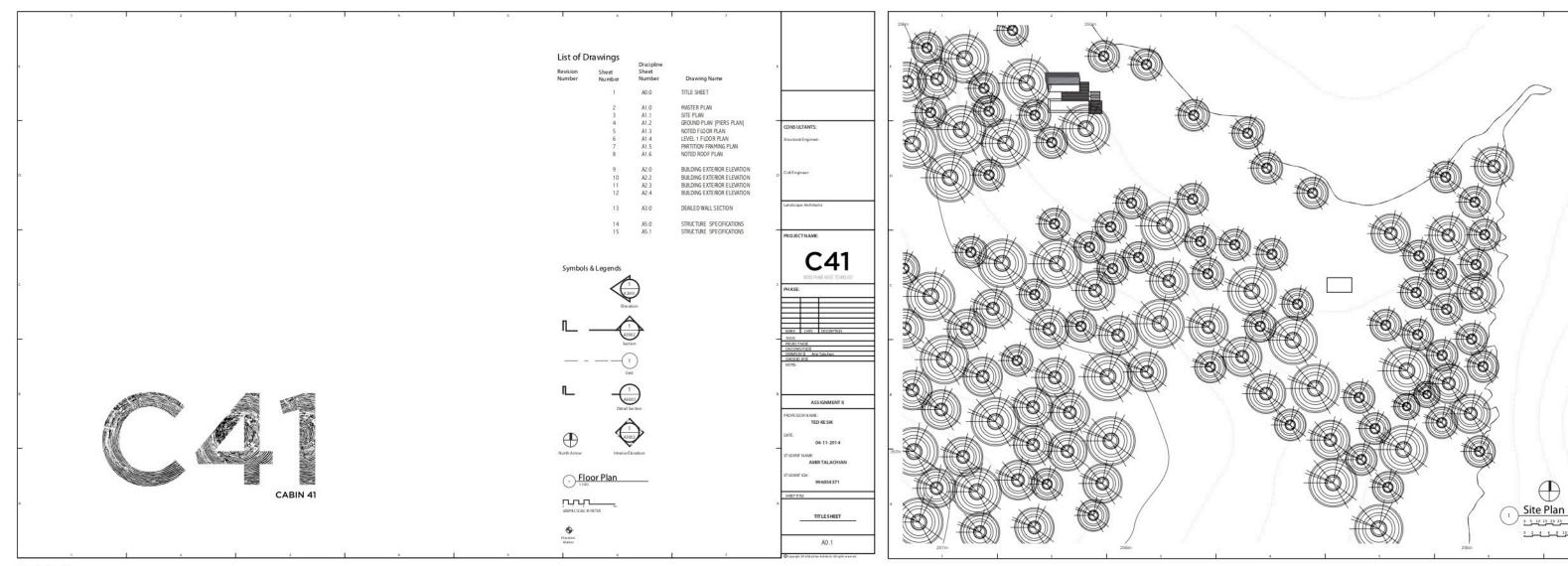


### ELEVATION A









CONSULTANTS:

ROJECT NAME:

C41

ASSI GNMENT II

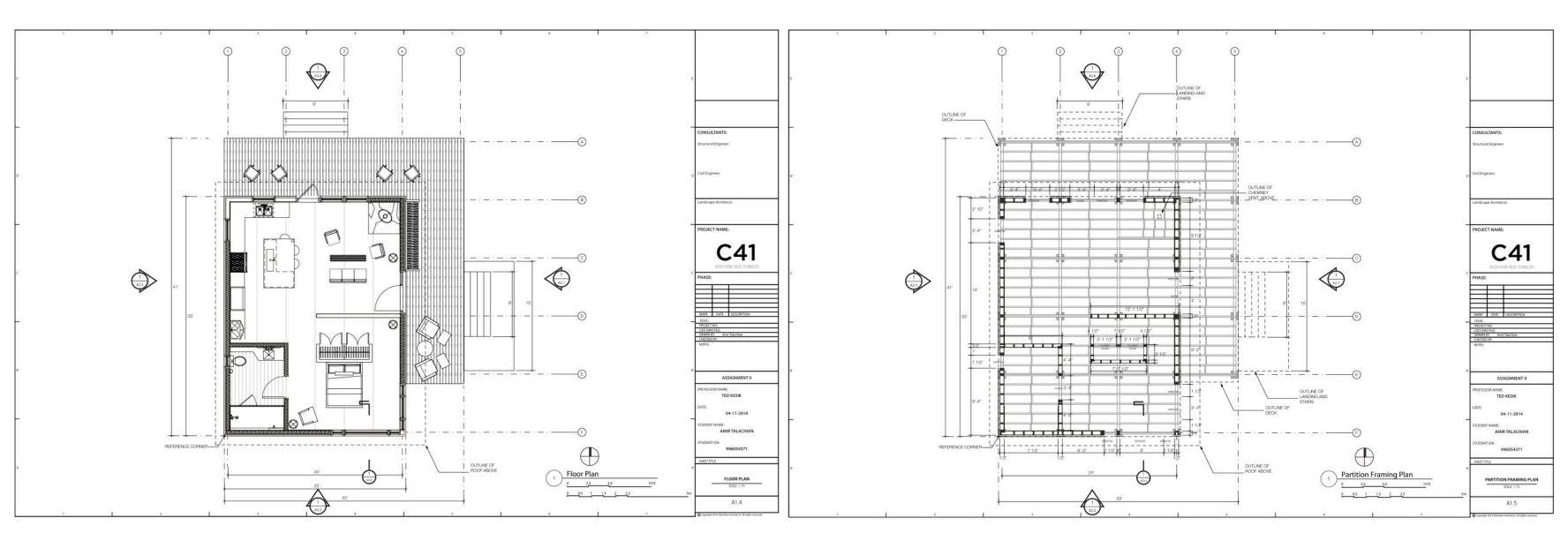
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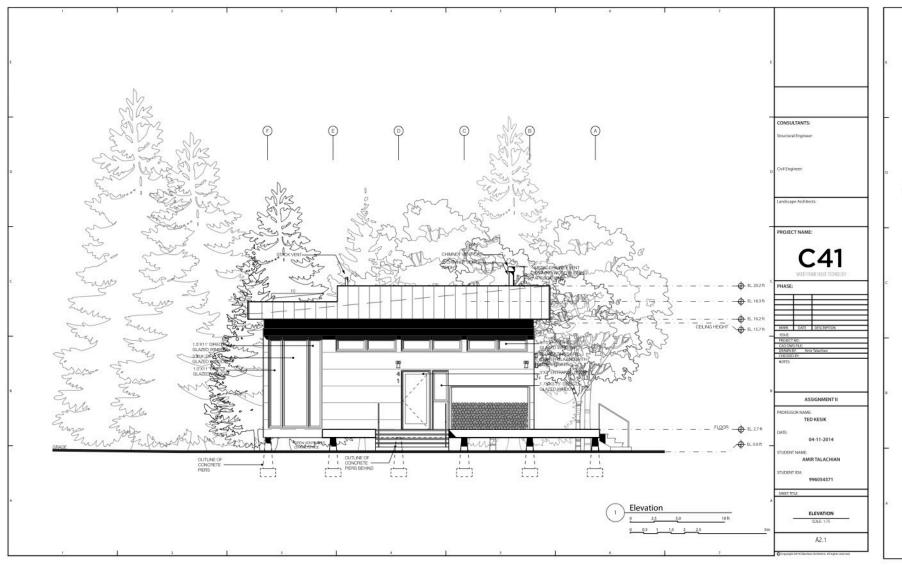
AMIR TALACHIAN

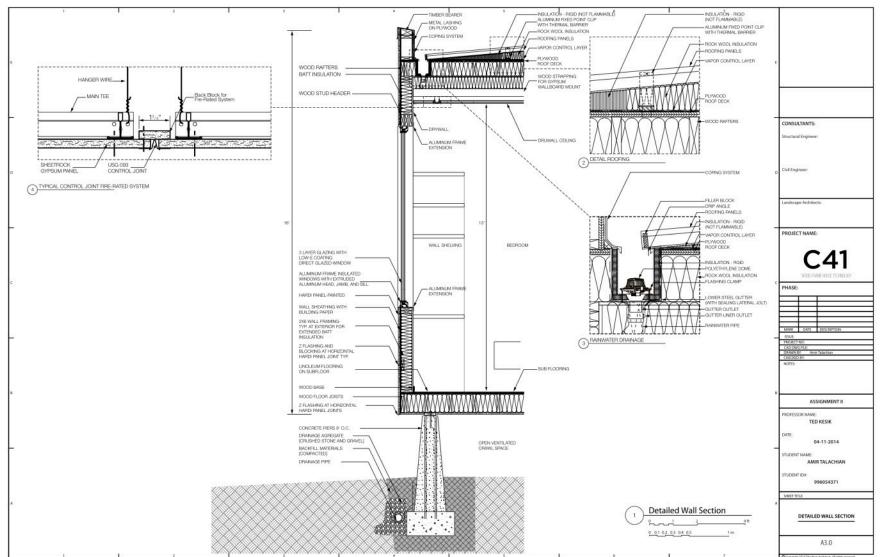
SOLED 10500

TED KES IK

Cabin41 Cloyne, Ontario Designed 2013



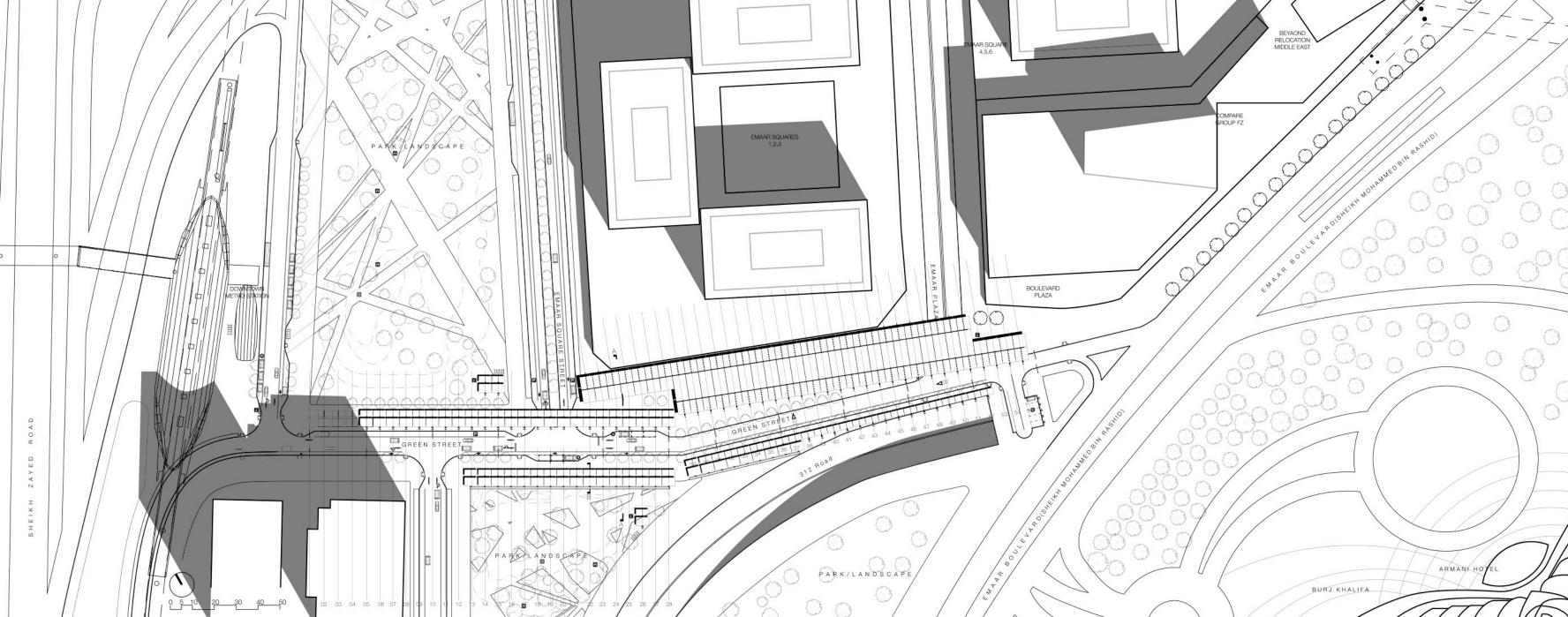


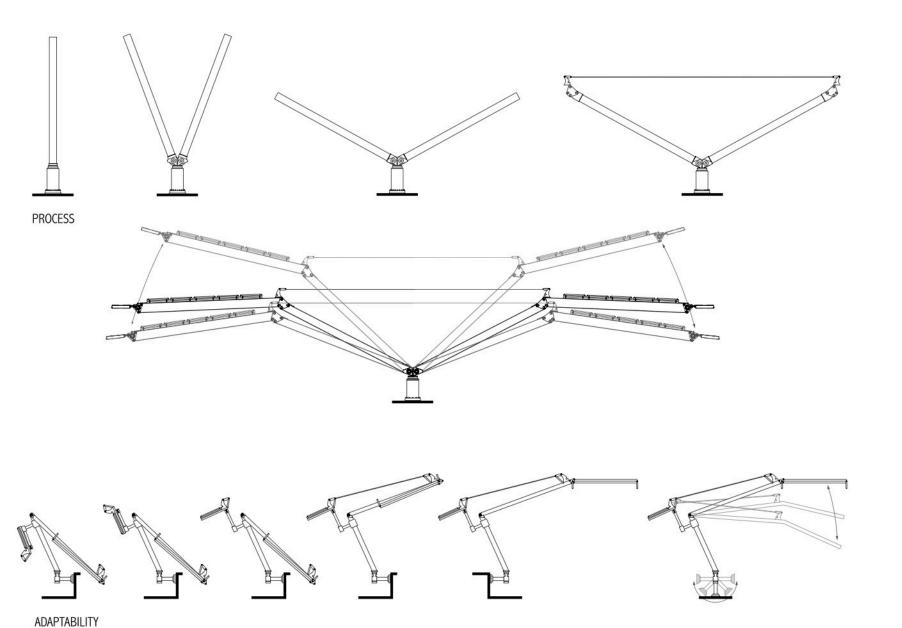












- SIDEWALK SETBACK 30M EMAAR SQUARE WALL 5M HEIGHT
- 2 ENCLOSURE RATIO 1:3

  THE TOTAL WIDTH OF THE STREET SHOULD NOT EXCEED THE BUILDING HEIGHTS IN ORDER TO MAINTAIN A COMFORTABLE FEELING OF ENCLOSURE.

"BUILDING SETBACKS FROM THE STREET, ORIGINALLY INVENTED TP PROTECT THE PUBLIC WELFARE BY GIVING EVERY BUILDING LIGHT AND AIR, HAVE ACTUALLY HELPED GREATLY TO DESTROY THE STREET AS SOCIAL SPACE." (ALEXANDER, ISHIKAWA, AND SILVERSTEIN, 1997, P. 593)

3 COOLING - GEPTHERMAL SYSTEM
CLOSED GEOTHERMAL SYSTEM U-TYPE. PLACED EVERY 6M TO ENSURE
HEAT EXCHANGE.

10M DEEP TO REACH DUBAI WATER TABLE. DUBAI WATER TABLE 7M-9M

EACH UNIT INCLUDES 150WATT PUMP. ENERGY CONSUMPTION 630kW PER ANNUM. TOTAL ENRGY CONSUMPTION OF 102 GEO. PUMPS IS 64,260kW PER ANNUM.

4 TO PROVIDE NET ZERO ENERGY SYSTEM PVS PLACED ON THE STRUCTURE TO PROVIDE ENERGY.

EACH ELEMENT FOLDED TO MAXIMIZE SOLAR RECEIVE IN SUMMER AND WINTER

THE TOTAL AREA OF INSTALLED SOLAR PANELS IS 319 SQ.M, WHICH CAN PRODUCE UP TO 4.5 TIMES A 10K SOLAR SYSTEM. THIS MEANS THE SITE IS EXPECTED TO PRODUCE FROM 106,762.5 kW TO 110,795.75 kW PER ANNUM (DUBAI AVG. SUN PER DAY = 6.5 HRS)

5 ELEMENTS EXTENDED TO PROVIDE BASIC SHADING STRUCTURE AND ENLARGE SUN FACING SURFACES.

TO SPAN 15M IT IS RECOMMENDED
TO USE LOW COST, CURVED, AND LIGHT
STRUCTURE.
PROPOSED MATERIAL: FIBERGLASS

IN ADDITION TO BUILDING PRODUCTS THAT ARE LONG LASTING AND HIGHLY ENERGY EFFICIENT, THE MATERIALS USED TO PRODUCE INFINITY

PRODUCTS ARE KIND TO THE PLANET AS WELL.

ULTREX FIBERGLASS IS MADE PARTIALLY FROM RECYCLED MATERIALS
THE GLASS IN INFINITY PRODUCTS CONTAINS 15% - 33% RECYCLED
CONTENT

ULTREX REQUIRES 39% LESS ENERGY TO PRODUCE THAN VINYL AND 80% LESS TO PRODUCE THAN ALUMINUM

THE MAIN INGREDIENT USED TO MAKE ULTREX FIBERGLASS IS GLASS, WHICH IS MADE FROM SILICA SAND, AN ABUNDANT NATURAL RESOURCE

VERTICAL FARMINGS
PROVIDES: ATTRACTION, IDENTITY, ENVIRONMENTAL GOALS AND POLICIES, INTEREST FOR GREEN HOUSE, INTEREST FOR SUSTAINABLE DEVELOPMENT, PUBLIC AWARNESS., CLEAN AIR, RECYCLING GRAY WATER, ORGANIC FOOD FOR RESTAURANTS.

IN BIGGER SCALE:
NATURAL RESOURCES, REDUCE POLLUTION, ECOLOGICAL, ECONOMICAL

8 IT IS IMPORTANT TO NOTE THAT PDESTRIANS PREFER CONTINUITY OF DESIGN AND THEMATIC ORDERING.

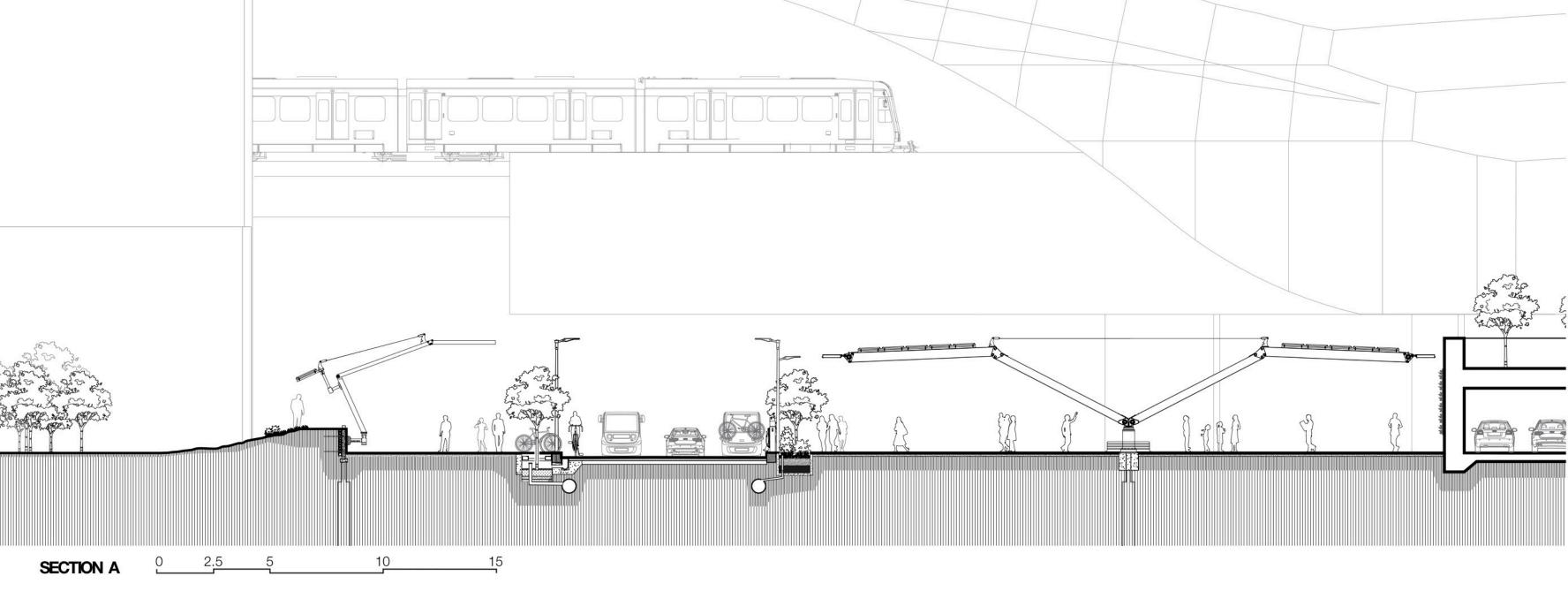
9 LIGHTING FEAUTURES ARE ADDED.
EACH LIGHTING ELEMENT INCLUDES 3-6 10WATT LED LIGHTS.
TOTAL ENERGY CONSUMPTION FOR LIGHTING, INCLUDING 24 STREET
LIGHTS (50W EACH) = 18,564 kW/YEAR

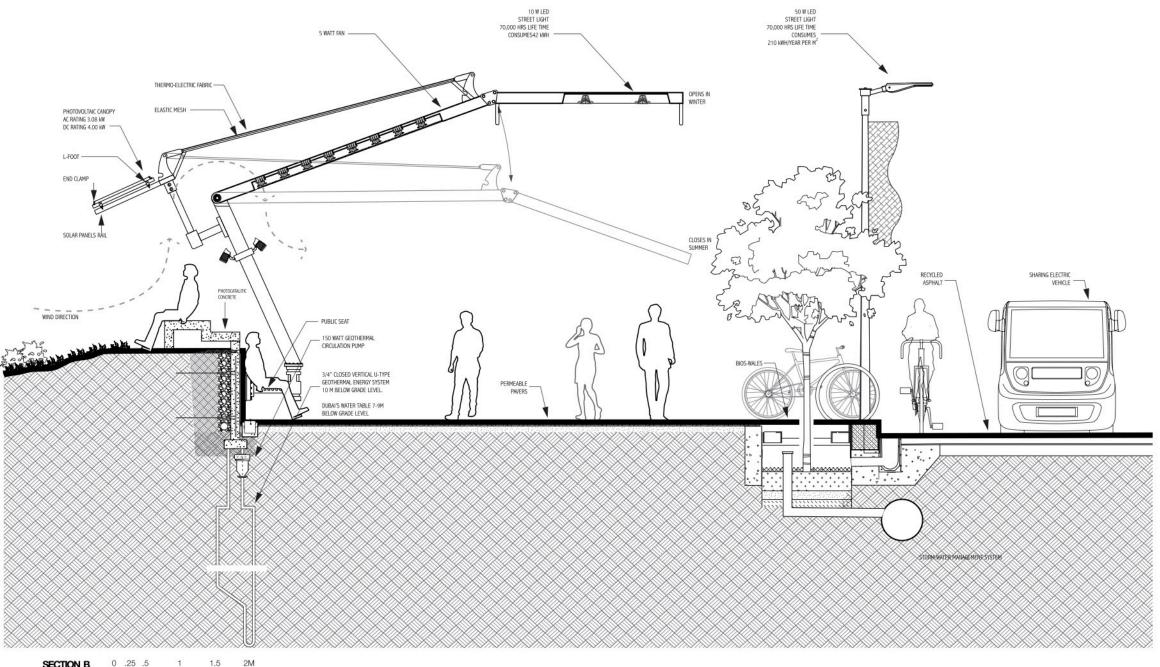
10 COOLING - GEOTHERMAL SYSTEM + WIND
TO ACCELERATE WIND VELOCITY, LANDSCAPE RAISED TO PUSH WIND
INTO UPPER SURFACE OF CANOPY WHERE FANS ARE LOCATED TO
INCREASE WIND SPEED.

GEOTHERMAL SYSTEM PIPES ARE LOCATED FACING FANS TO COOL DOWN THE WIND TEMPERATURE TO PROVIDE COOLER SPACE.

TOTAL ENERGY CONSUMPTION FOR 955 FANS (5W EACH) = 20,055 kW PER ANNUM.

- 1 1 TOTAL CONSUMPTION OF ENERGY = 97,840 kW/YEAR MINIMUM EXPECTED ENERGY PRODUCTION = 106,760 kW/YEAR
- 12 STREET FURNITURE
  ADDING PHYSICAL ELEMENTS THAT MATCH THE SIZE AND PROPORTIONS
  OF HUMANS AND EQUALLY IMPORTANT, CORRESPOND TO THE SPEED AT
  WHICH HUMANS WALK. ELEMENTS SUCH AS PAVEMENT TEXTURE, STREET
  TREES, STREET FURNITURE, LIGHTS.
- TREES ARE LOCATED ON OUTER PART OF SIDEWALK THIS WILL PROVIDE MORE COHERENCY. SHADE OF TREES PLANTED CLOSE TOGETHER RESULT IN AN UNINTERRUPTED PATTERN OF LIGHT AND SHADE, UNIFYING A SENCE. TREES ALSO PROVIDE RICHNESS AND COMPLEXITY. THEY INCREASR SENCE OF HUMAN SCALE AND PROVIDE OUTER STREET WALL.
- ADDING TREEPIT RAIN GARDENS WHICH INTRODUCES MORE AND HEALTHIER STREET TREES THAT ARE NATURALLY WATERED BY RUNOFF. INCREASES URBAN BIODIVERSITY, AND PROPERTY VALUES AND HELPS LOCAL CLIMATE. WATER FILTERATION. HOMEZONE CREATION, CREATIVE USE OF LANDSCAPING AND VEGETATION CREATES A SAFER AND MORE PLEASANT ENVIRONMENT FOR PEDESTRIANS WHILE REDUCING RUNOFF. PREMEABLE SURFACES, ALLOWS WATER TO INFILTRATE, REDUCING THE AMOUNT OF WATER ENTERING THE SEWERS AND POTENTIALLY INCREASING AQUIFER RECHARGE.





Streets are critical to the livability and sustainability of urban environments and are important places for people to meet and socialize.

The Atmospheric is an adaptable design, which can be easily be effective in other cities and climates. It is a system, not just an element. Each element in this system might not be effective if they be used individually. The key element of the design is the flexible canopies, which can be transform and change to work in any environment. The system formed by various existing forces of the site. It has being designed by controlling these forces to neutralize each other and use the advantage of each other.

The canopies are the most important element of the system, which is willing to transform the Green Street to a public domain; and is fundamental to the form and function of the urban environment. To increase social and civic activity on the street, we have to change our focus on facilitating vehicle movements and parking to a "shared spaces" with a diverse set of vehicular and pedestrian uses of the street. The Atmospheric system promotes a more balanced idea of street design that recognizes the need to accommodate public life and amenity as well as cater for traditional linking and transport corridor function.

"Walking sets eyes on the streets, it enhances public life and increases the local ownership and knowledge of the city. There is more to walking than walking: Walking is the first step making invitations to stop, to linger, to talk, to watch, to participate and to perform are the others."

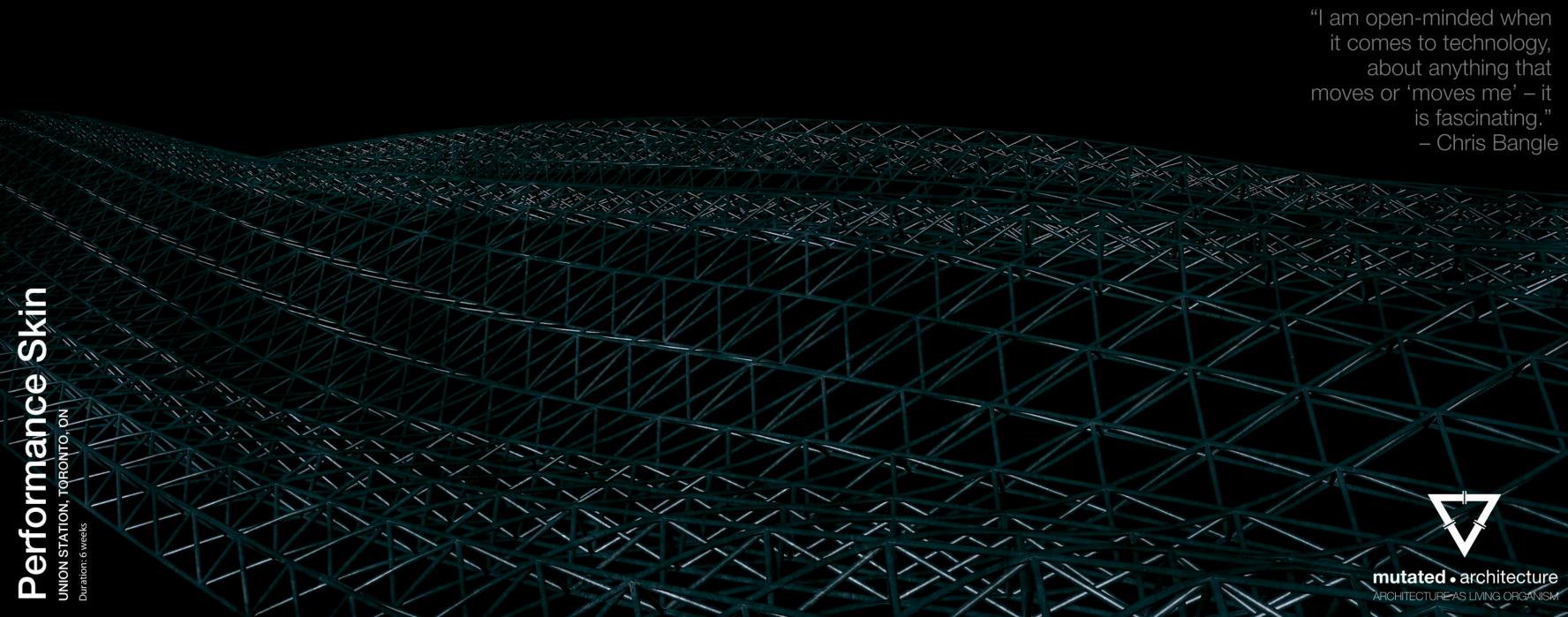
J. Gehl, Public Space - Public Life, 2007

The Downtown Green Street is a prototype, which provides sustainability, cooling, and water sensitive urban design (WSUD) that can be applied to all areas within the city of Dubai. The Green Street design will also encourage the use of roads and highways as an infrastructure to achieve more livable areas within the city as well as a coordinated and consistent palette of materials and long-term maintenance benefits.

"Great streets do not require lavish materials or fancy street lights and furniture to make them comfortable, attractive and functional places... the appeal of great streets stems more from pale footpaths and appropriate street trees, and from the presence of building frontages whose windows, doors and awnings are oriented to the street."

-C. Bohl, 2002





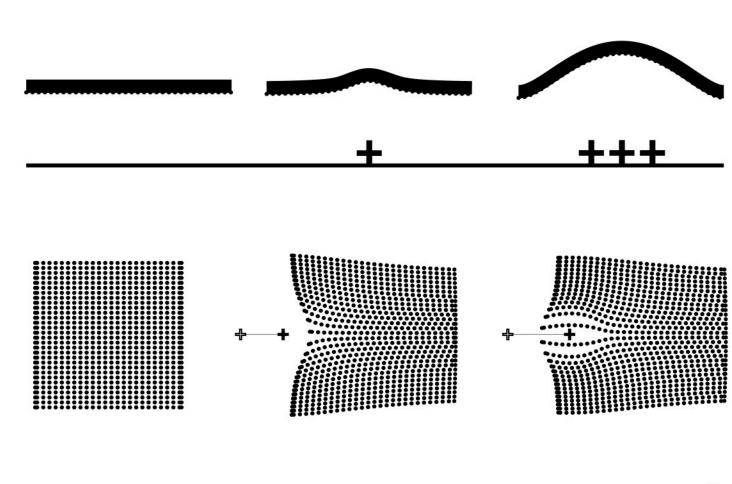
## Architecture as Living Organism

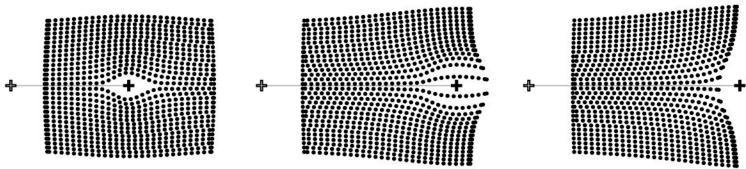
The objective of this project is to reveal the most important and yet mostly forgotten characteristic about architecture: architecture is alive and lives among us. This project is inspired by the movements, responses and growth of the plants around us. Through the patterns of its mechanical structure I t translates the patterns and behavior of nature.

The study includes a coding system which functions based on the proximity of human presence. As well it includes coded algorithms based on the relation of each structure to its environment. Each structure equipped with sensors and digitally controlled mechanical servers provides a new artificial life form, which emerges with its own set of behaviors. The focus is performance and adaptation - a setting with responsive actions and living technologies at primitive level that could be developed and used for creating a self-sufficient architectural system.

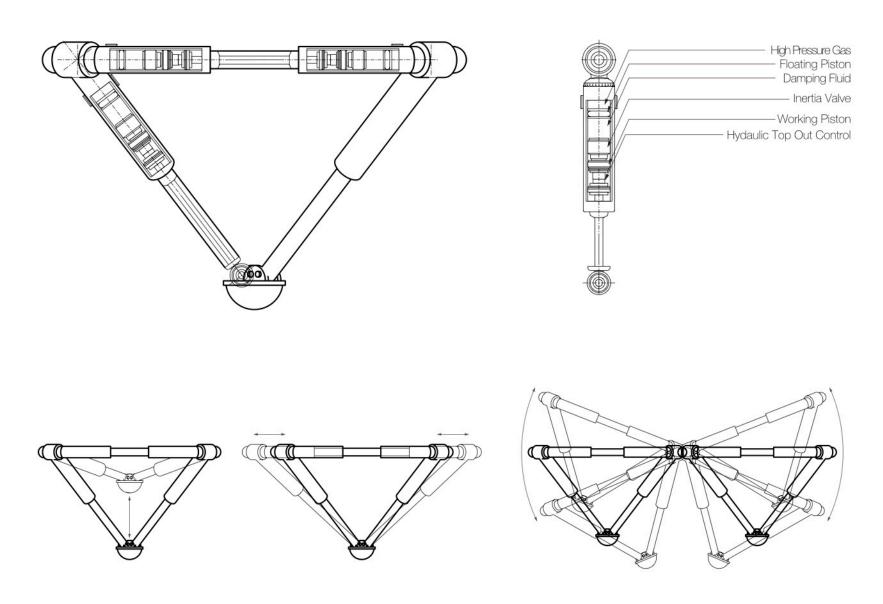




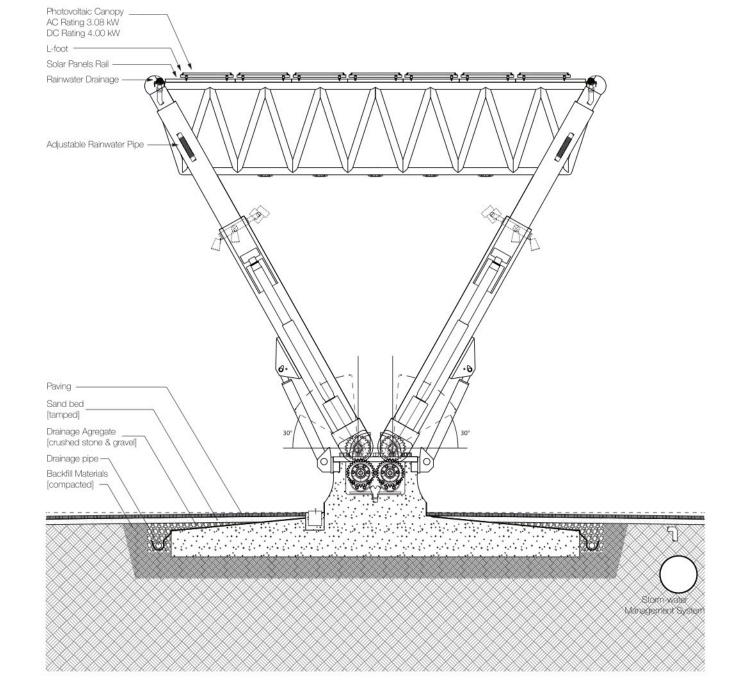


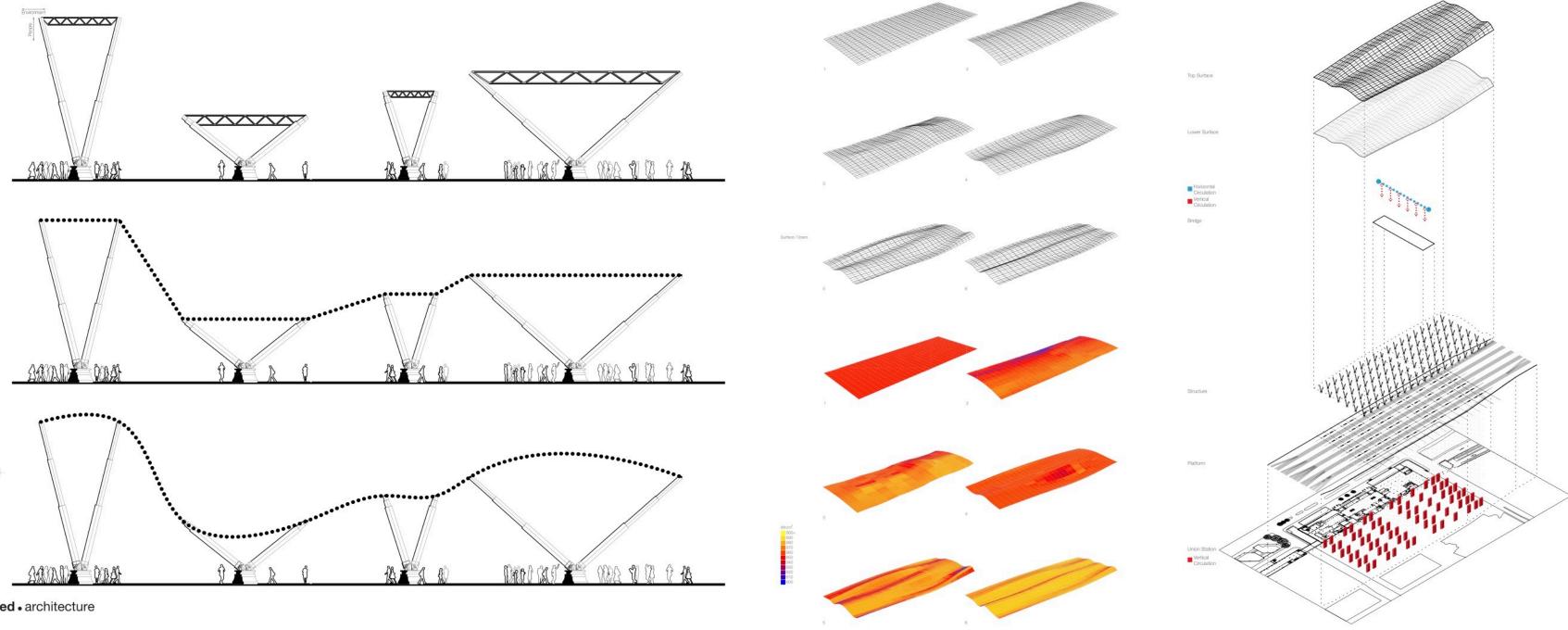


mutated • architecture

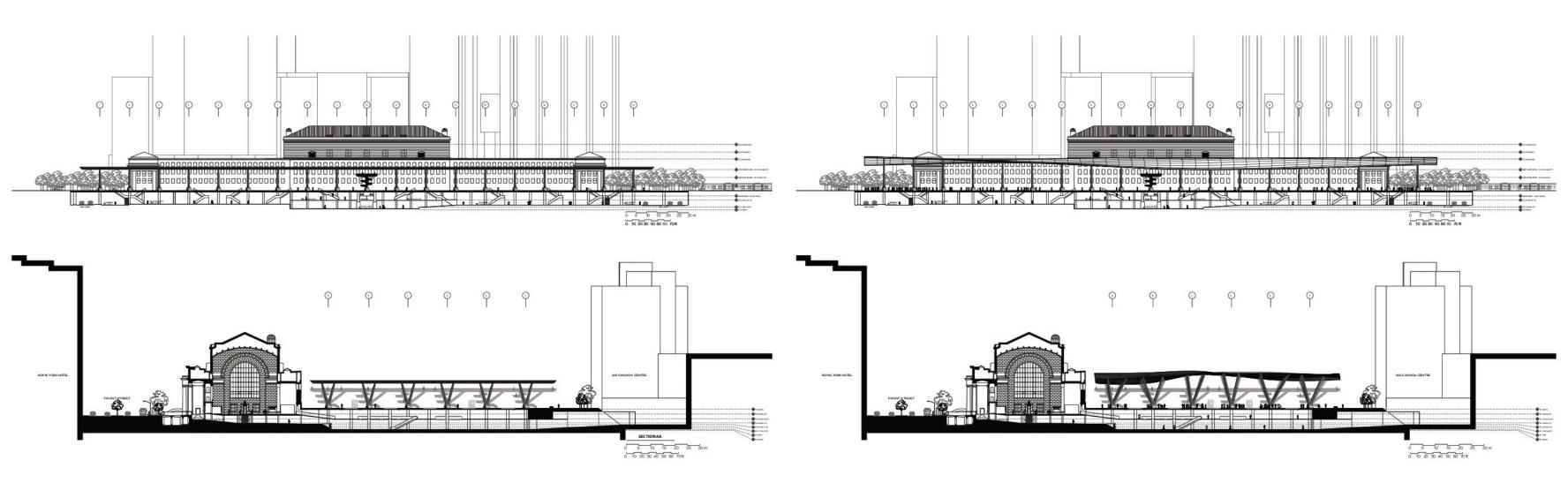


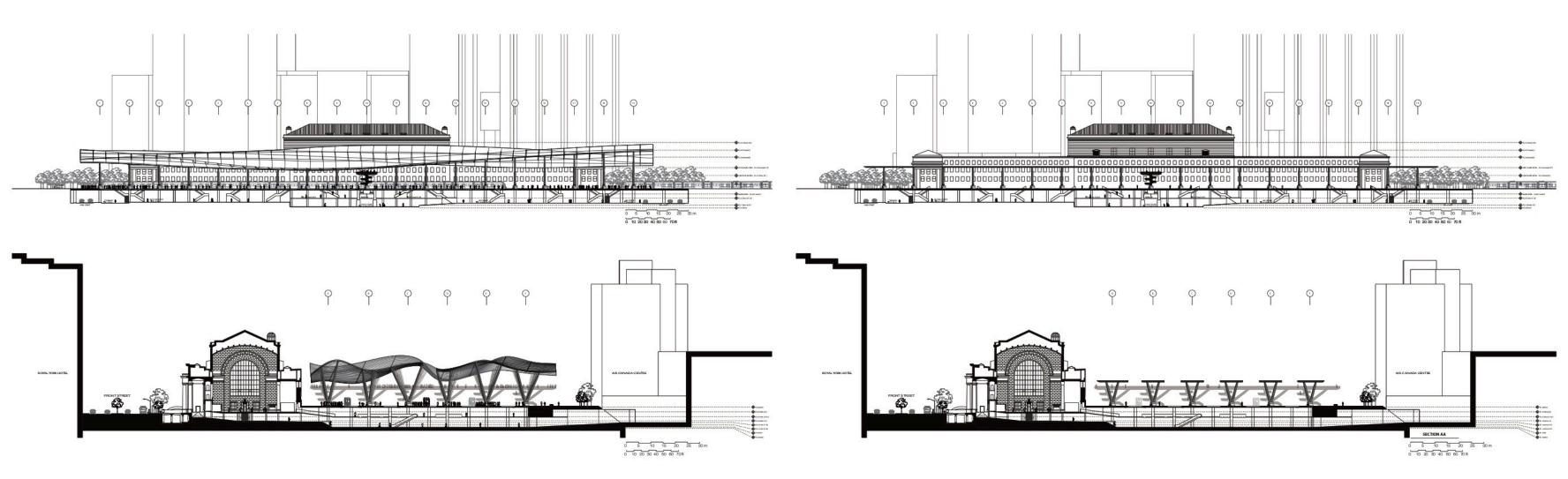




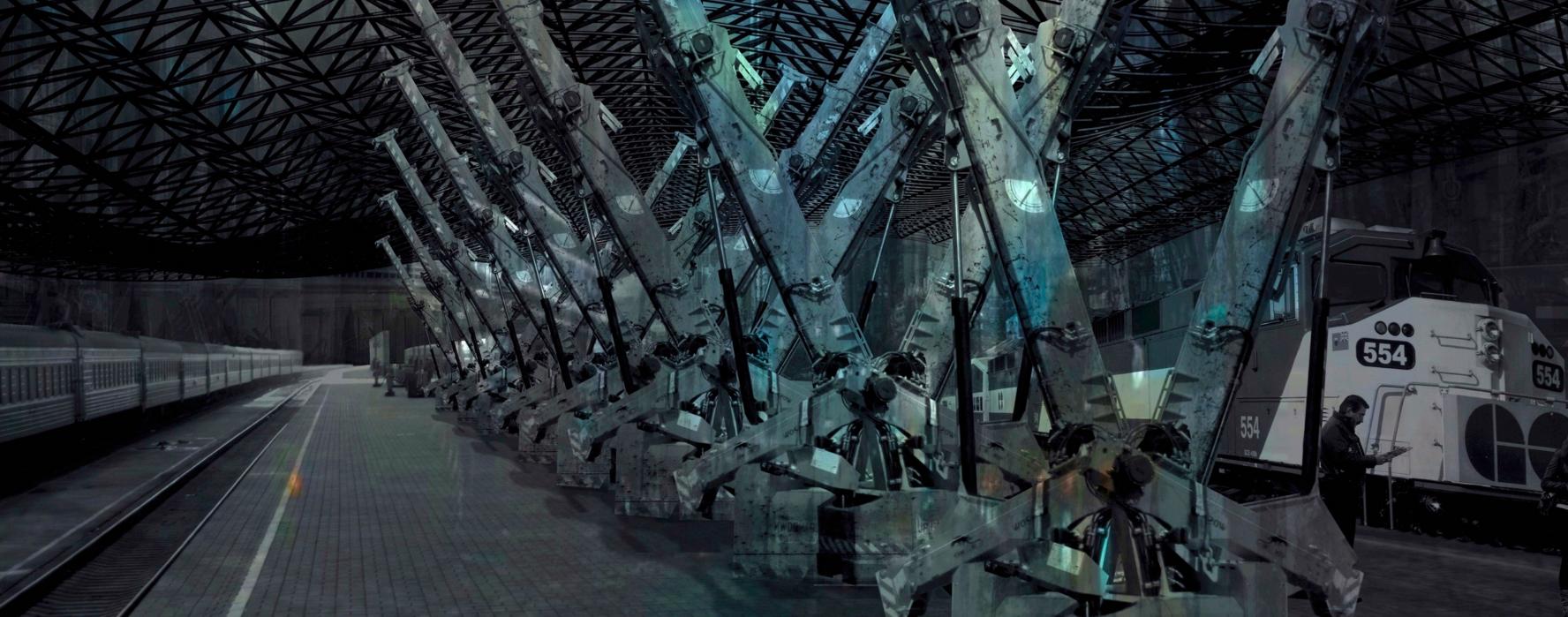


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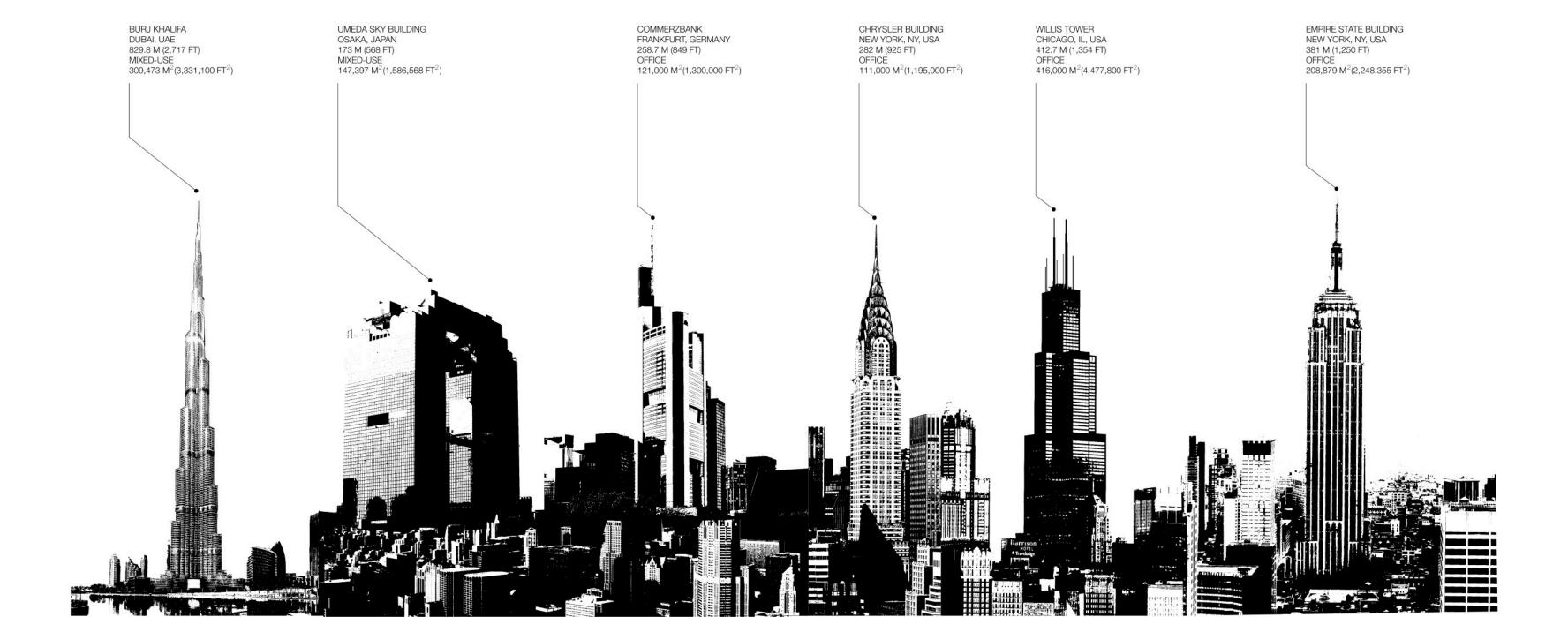








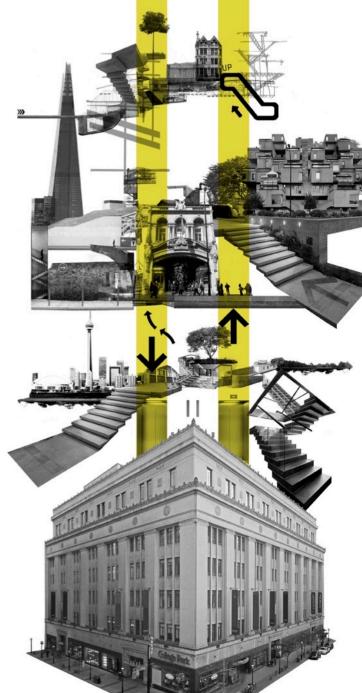
## The Generative Halite City











The College Park at 444 Yonge Street built in early 1930s is a mixed-use building, which was the first phase of proposed skyscraper in downtown Toronto. Its foundation is strong enough to support hundreds of feet high structure.

Halite, commonly known as rock salt, is the mineral form of sodium chloride (NaCl). Halite forms isometric crystals. The mineral is typically colorless or white, but may also be light blue, dark blue, purple, pink, red, orange, yellow or gray depending on the amount and type of impurities. It commonly occurs with other evaporite deposit minerals such as several of the sulfates, halides, and borates.

Image from Tumblr



Inspired by nature specifically forming process of Halite rock salt; as well as taking an advantage of existing supporting structure of College Park, we can provide a new set of layers to the existing urban fabric of downtown Toronto.

Each volume is made of a series of layers; and "plugged-in" to the main structural core supporting structural loads and providing space for circulation and linkage to each space. Since the concept is based on main core as a platform with several plugged-in volumes, it offers the opportunity of

customization. This will give the citydwellers the capability to resize their living space, reform it, or edit the number of amenities. Compare such level of freedom to design your own space as a resident to what is happening today in the repetitive apartment building industry.

Adding such feature in a city like Toronto would have a whole new meaning to its urban structure and grid system. I believe what is lacking in today's market is that the architecture is not responsive enough to dwellers needs and is less related to context. As we look at many high-rises today, the concept of the projects fail mostly due to their disproportionality to the existing urban framework as well as human needs and environmental requirements. Seems the industry today looks at humans as objects and their homes as their basic shelter.

