

portfolio.

2026

Architecture

MINI

MoWA

Verdura

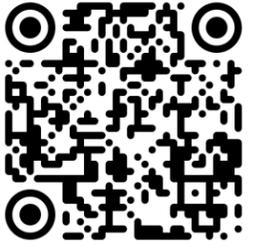
Moving Bricks

House of Assembly

Changwan (Charlie) Lim

Syracuse University School of Architecture Undergraduate

about



Changwan (Charlie) Lim
Syracuse University School of Architecture
Undergraduate

Architecture is a book of the humankind. It records the histories, aesthetics, and technologies of an era. For me, learning and practicing architecture is writing a new chapter of the book, but also the inspiration that guides my life and career.

The portfolio includes selected works from my undergraduate studios. Each projects have different scales, programs, and design innovations that adapt to the site.

I am interested in modular or systematic architectural elements that explores flexibility and different modes of inhabitation. Also, interested in persuing my career in designing large public infrastructure like airports, train station, ports, etc.

Thank you for your interest and time viewing my architecture portfolio.

Changwan Lim

Charlie

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clim04@syr.edu

EXPERIENCE

JPARK ARCHITECT / Intern / CA USA
STUDIO S FINE ARTS / TA / WA USA

EDUCATION

SYRACUSE UNIVERSITY / School of
Architecture / NY USA

BOTHELL HIGH SCHOOL // WA USA

AWARDS

PORTFOLIO SCHOLARSHIP + DEAN'S LIST /
Syracuse University / 2021 - 26

PROJECTS

AIRPORT ARC DESIGN / 2025 +

EXHIBITIONS

URBAN REUSE / 2024 / London UK
RESILIENT HOUSING / 2024 / NY USA

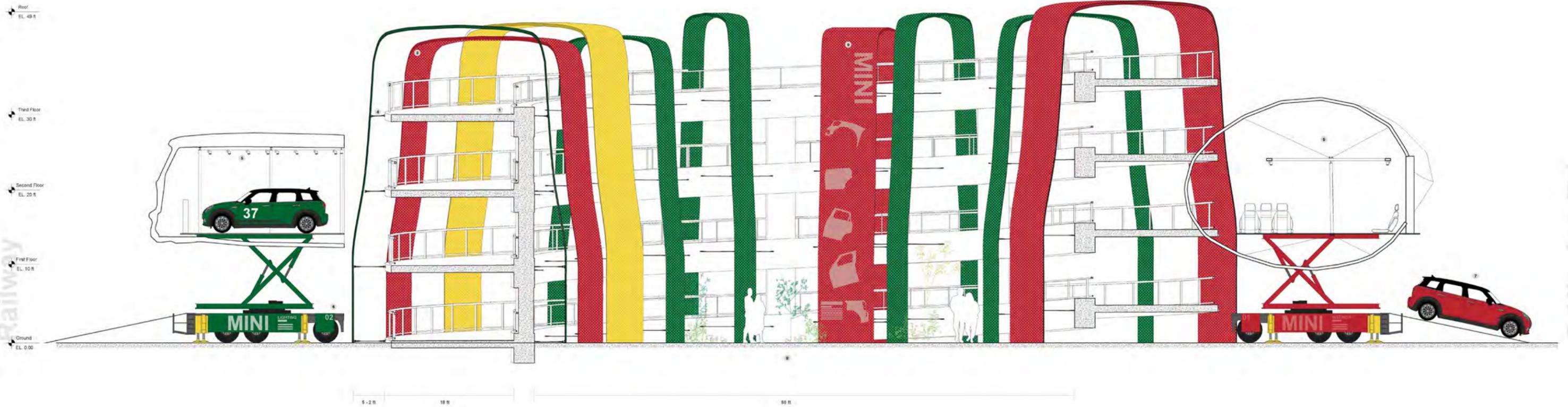
SOFTWARES

RHINO 3D
PHOTOSHOP
ILLUSTRATOR
INDESIGN
PREMIR PRO
D5 RENDER
V-RAY
SKETCH UP

SECTION

1/4" = 1'

- 1 Spiral Ramp
- 2 Existing Handrail
- 3 Colored Metal Strip Panel
- 4 Facade Support
- 5 Pod
- 6 Pod Transport Vehicle
- 7 MINI
- 8 Experience Center
- 9 Info Panel



MINI

Pop-Up Store / 2025 / CA USA
Changwan (Charlie) Lim + Xuance (Cooper) Wang

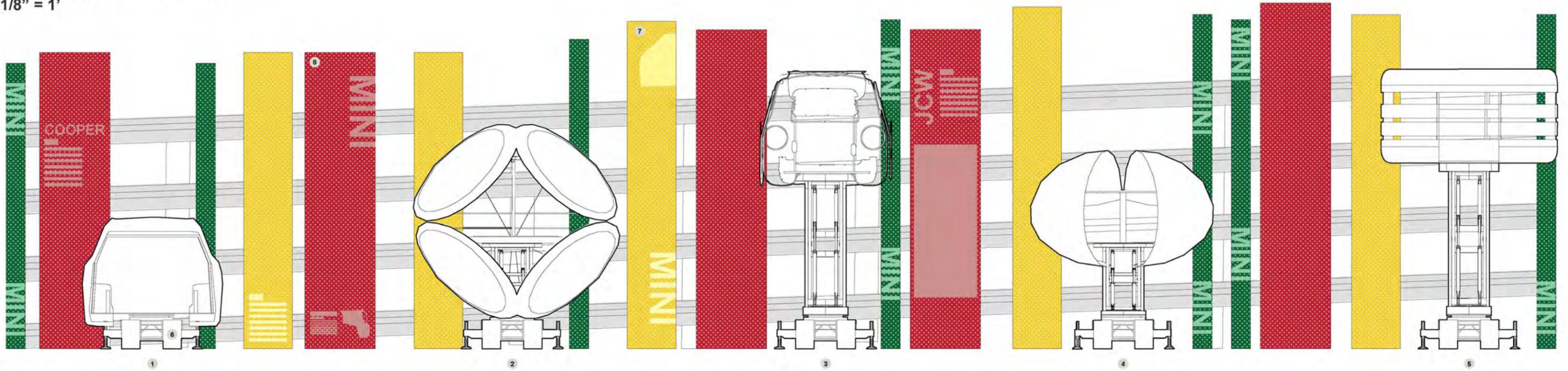
Brand identity; instead of representing a brand on a two dimensional billboard, the project proposes architectural solution: pop-up store. It is temporary and flexible in mobility and customization. Perfectly aligning with MINI's (car manufacturer) brand identity.

The project re-imagines a bicycle ramp near 6th street viaduct in Los Angeles into a MINI customization zone. It proposes five different programs of pods where MINI would be customized, lifted, and drive off. These pods are mobile and easily deployable to a chosen site with elevation



UNROLLED ELEVATION

1/8" = 1'



- 1 Decal Pod
- 2 Wheel Pod
- 3 Panel Pod
- 4 Interior Pod
- 5 Lighting Pod
- 6 Pod Transport Vehicle
- 7 Colored Metal Stripe Panel
- 8 Info Panel



DELIEVERY - INSTALLATION

1/4" = 1'

1 Semi-Truck + POD Transportation

Individual PODs (5) are transported to desired location by semi-truck on a trailer.



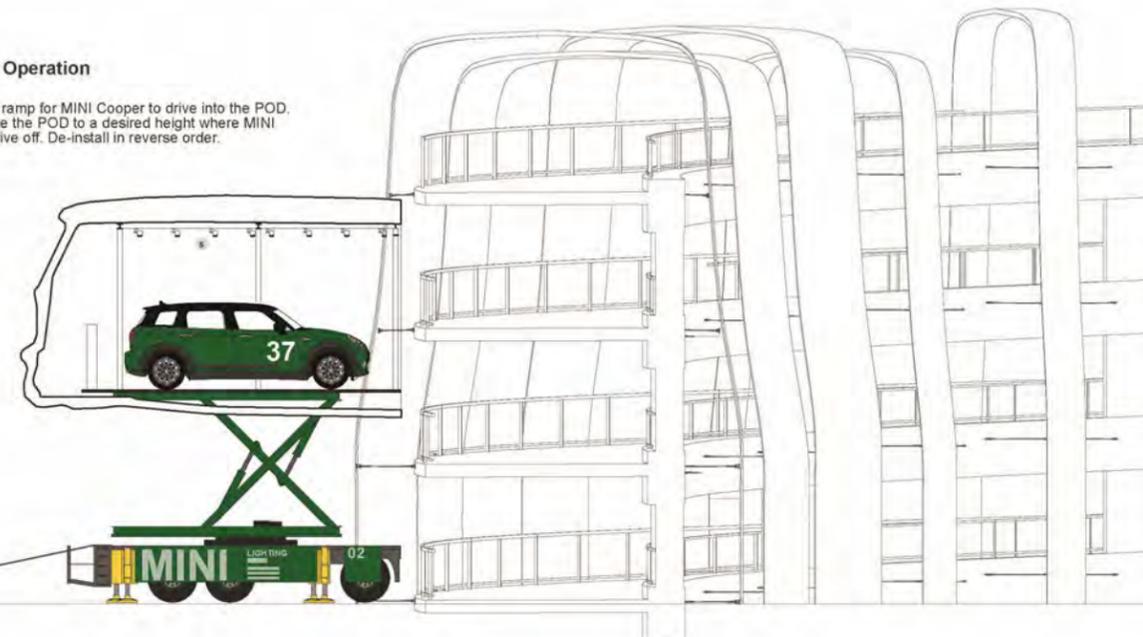
2 POD Trailer Unload / Installation

At a desired location, drop-off POD trailer and lower the landing gear for stability.



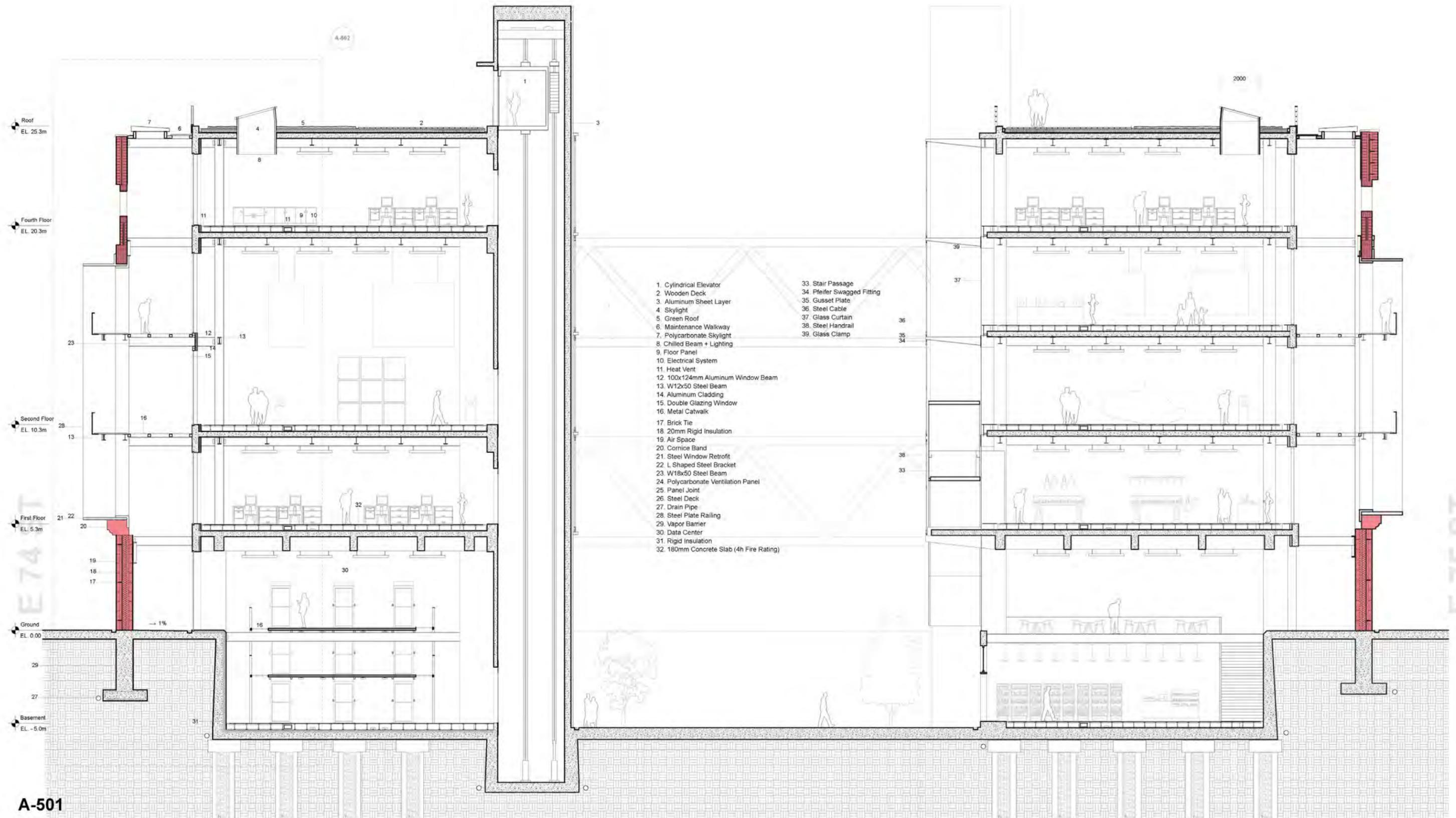
3 POD Operation

Install ramp for MINI Cooper to drive into the POD. Elevate the POD to a desired height where MINI can drive off. De-install in reverse order.



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4-501

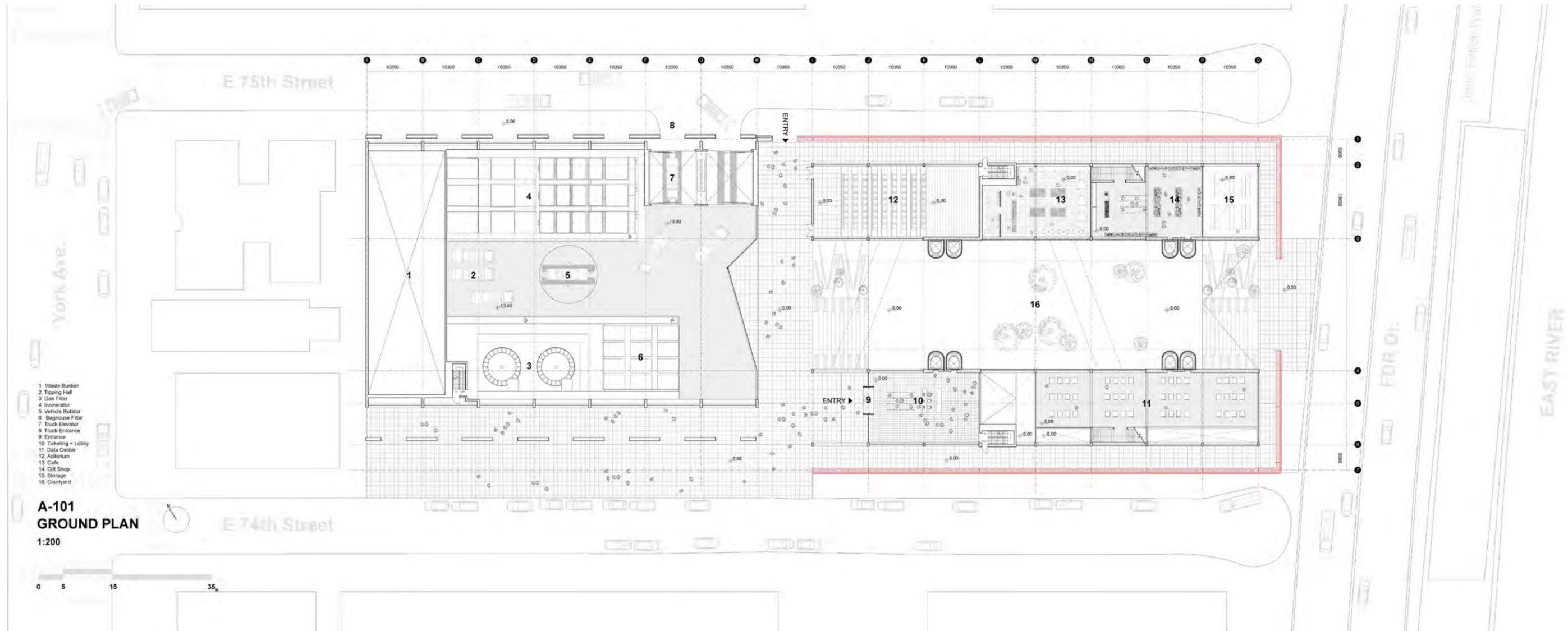


- 1. Cylindrical Elevator
- 2. Wooden Deck
- 3. Aluminum Sheet Layer
- 4. Skylight
- 5. Green Roof
- 6. Maintenance Walkway
- 7. Polycarbonate Skylight
- 8. Chilled Beam + Lighting
- 9. Floor Panel
- 10. Electrical System
- 11. Heat Vent
- 12. 100x124mm Aluminum Window Beam
- 13. W12x50 Steel Beam
- 14. Aluminum Cladding
- 15. Double Glazing Window
- 16. Metal Catwalk
- 17. Brick Tie
- 18. 20mm Rigid Insulation
- 19. Air Space
- 20. Cornice Band
- 21. Steel Window Retrofit
- 22. L Shaped Steel Bracket
- 23. W18x50 Steel Beam
- 24. Polycarbonate Ventilation Panel
- 25. Panel Joint
- 26. Steel Deck
- 27. Drain Pipe
- 28. Steel Plate Railing
- 29. Vapor Barrier
- 30. Data Center
- 31. Rigid Insulation
- 32. 180mm Concrete Slab (4h Fire Rating)
- 33. Stair Passage
- 34. Pfeifer Swagged Fitting
- 35. Gusset Plate
- 36. Steel Cable
- 37. Glass Curtain
- 38. Steel Handrail
- 39. Glass Clamp

A-501
DETAIL SECTION (SHORT SIDE)
 1:75

E 74 T

E 75 ST



MoWA

Museum of Waste Art

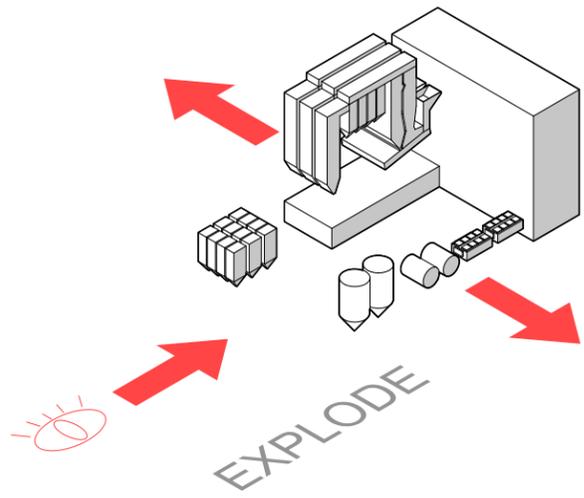
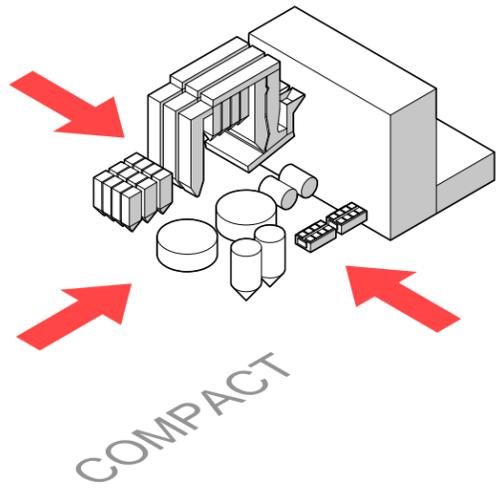
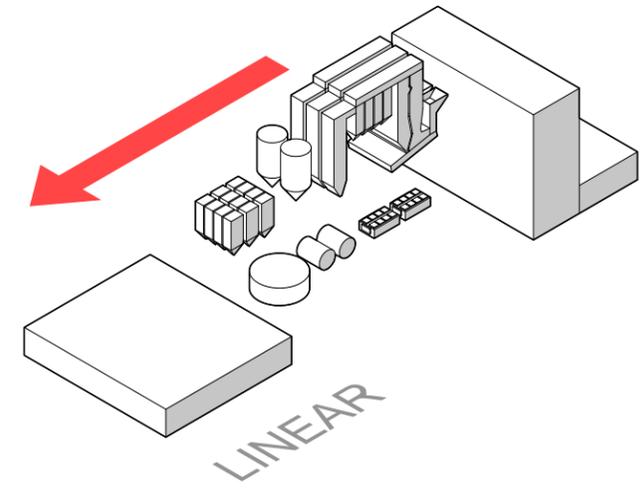
Waste to Energy / 2024 / NY USA

Changwan (Charlie) Lim + Max Marcin Walewski

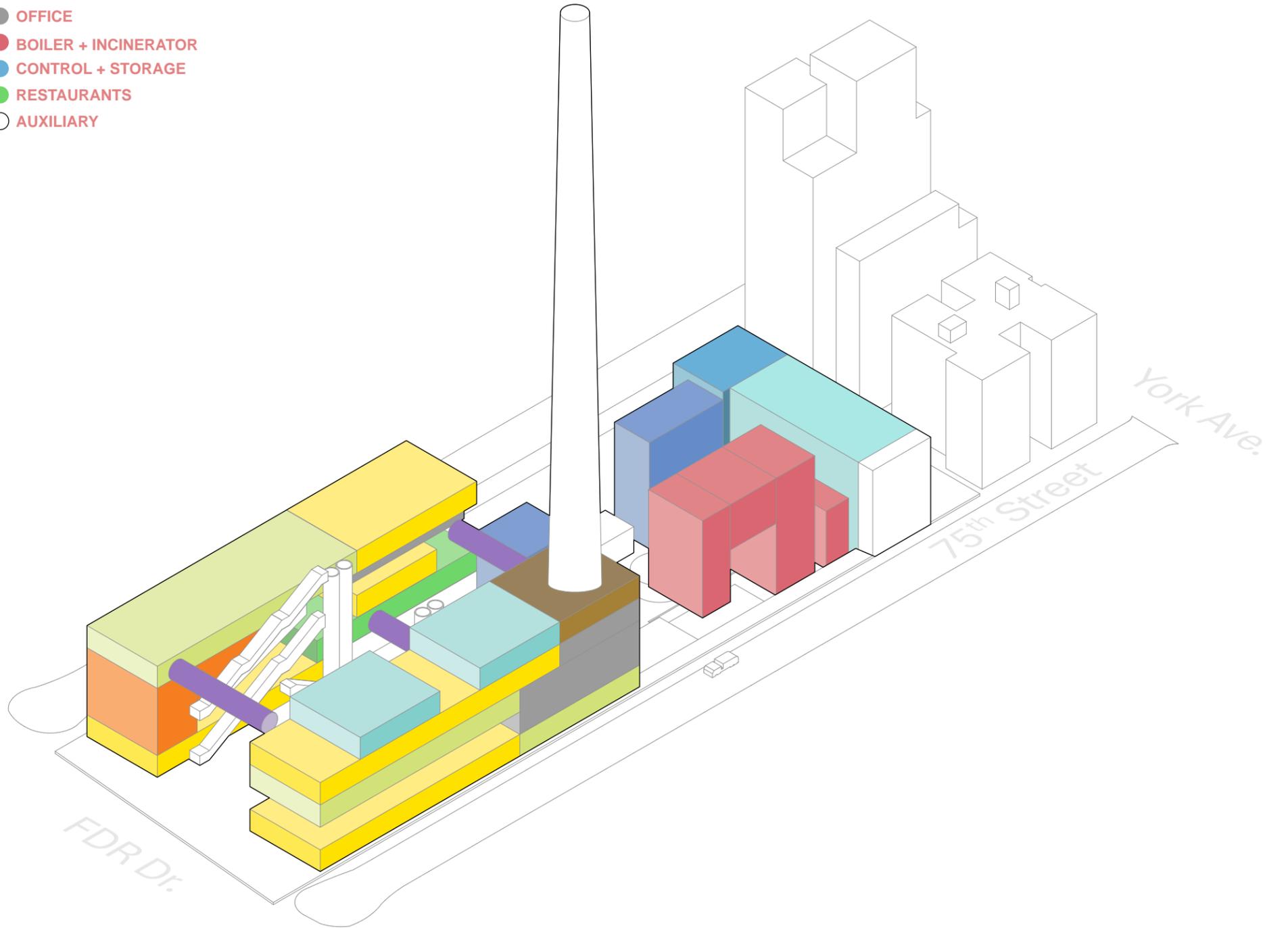
Environmental concern is a rising issue due to improper practice of recycling and use of resources. Unlike other countries, recycling is not a practice in the United States. No matter which bin you trash, it is likely to end up in a landfill. However, it is reaching to its capacity and US is not prepared.

The project aims to increase the number of Waste to Energy Plant with the coexistence of public program that blends into urban environment.

MACHINERY ARRANGEMENT



- BUNKER HALL
- EMISSION MONITOR
- FILTERS
- EXHIBITION
- SKY LOUNGE
- BRIDGE
- AUDITORIUM
- ARCHIVE
- OFFICE
- BOILER + INCINERATOR
- CONTROL + STORAGE
- RESTAURANTS
- AUXILIARY

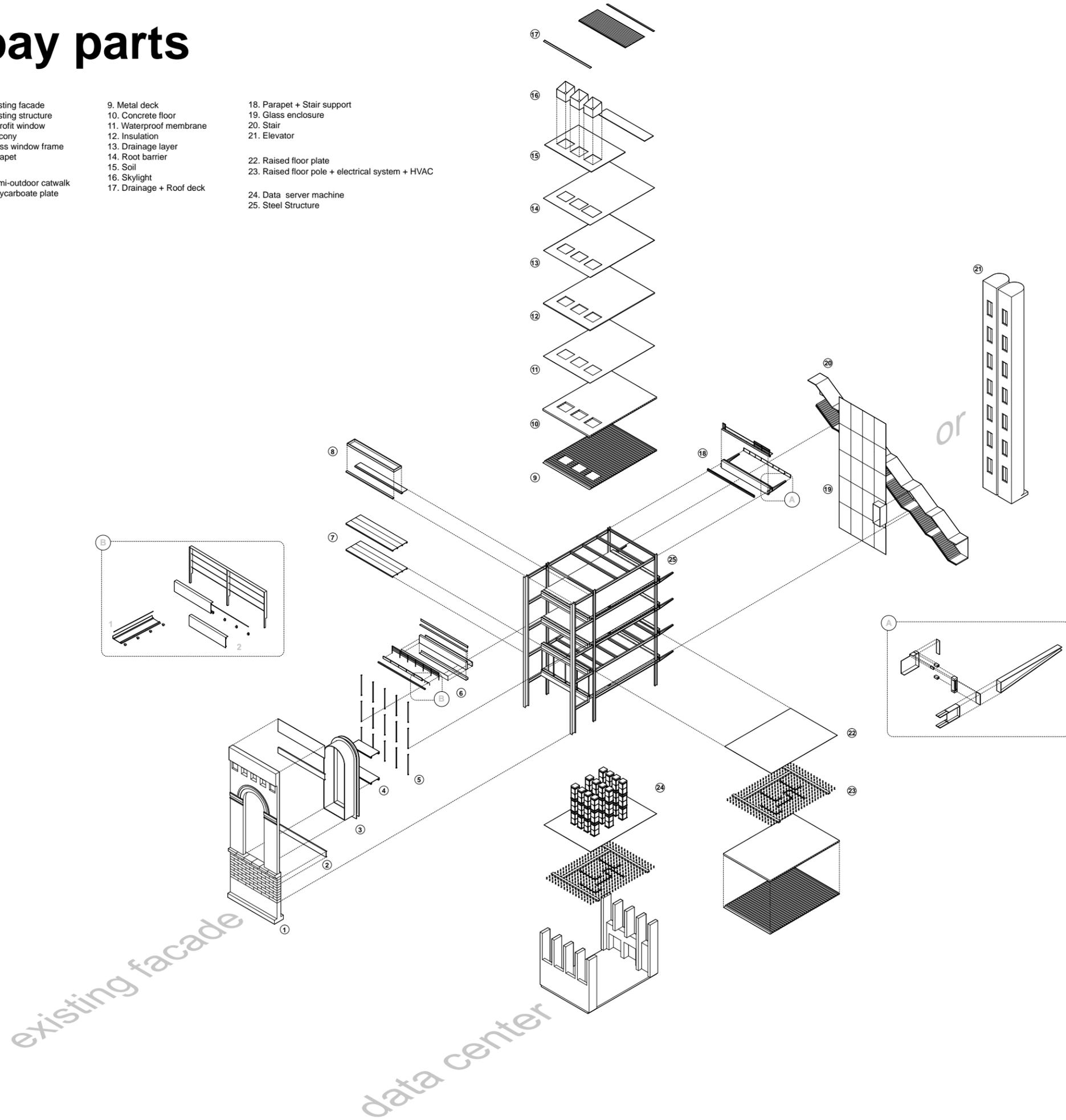


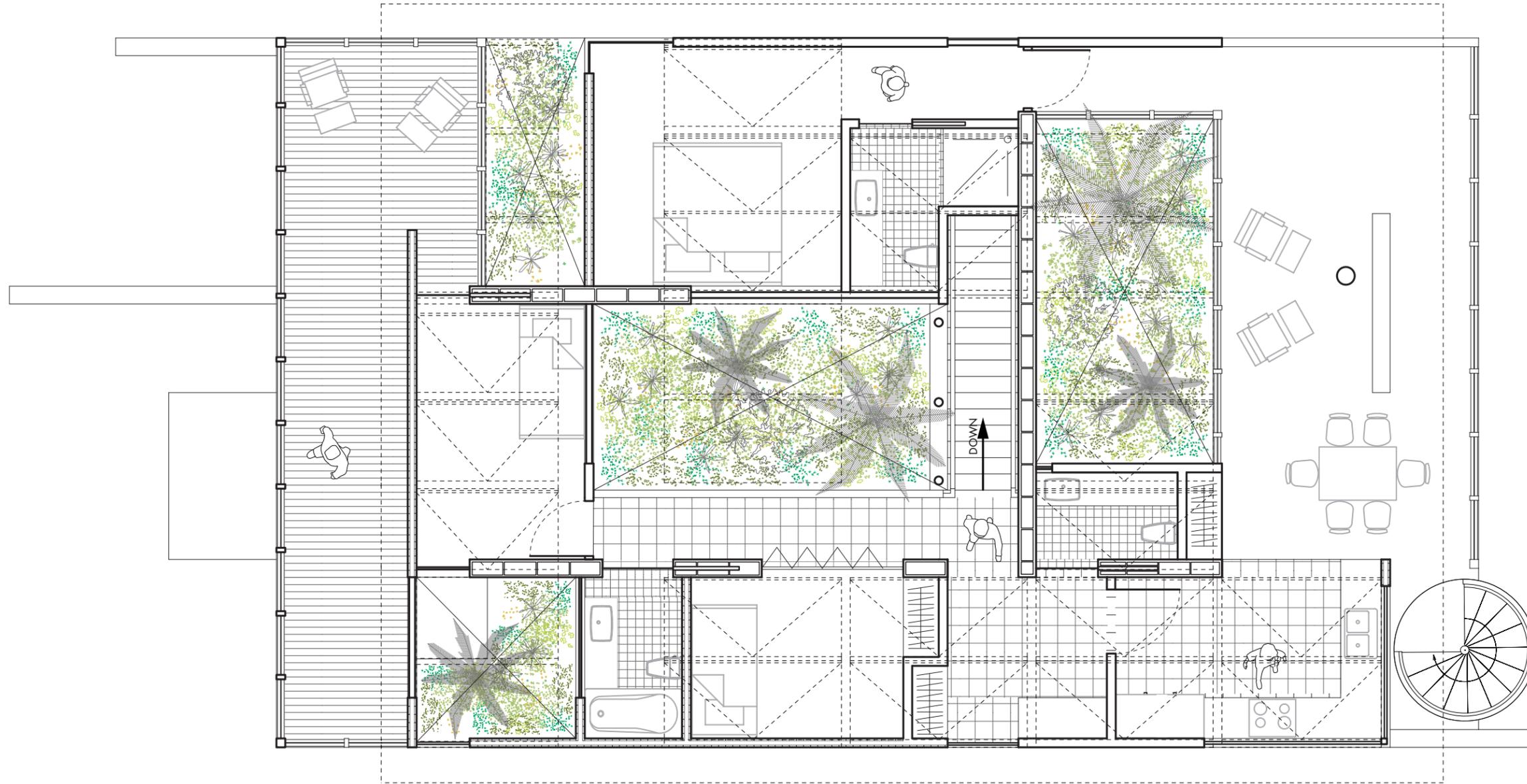
bay parts

- 1. Existing facade
- 2. Existing structure
- 3. Retrofit window
- 4. Balcony
- 5. Glass window frame
- 6. Parapet
- 7. Semi-outdoor catwalk
- 8. Polycarbonate plate

- 9. Metal deck
- 10. Concrete floor
- 11. Waterproof membrane
- 12. Insulation
- 13. Drainage layer
- 14. Root barrier
- 15. Soil
- 16. Skylight
- 17. Drainage + Roof deck

- 18. Parapet + Stair support
- 19. Glass enclosure
- 20. Stair
- 21. Elevator
- 22. Raised floor plate
- 23. Raised floor pole + electrical system + HVAC
- 24. Data server machine
- 25. Steel Structure





Verdura

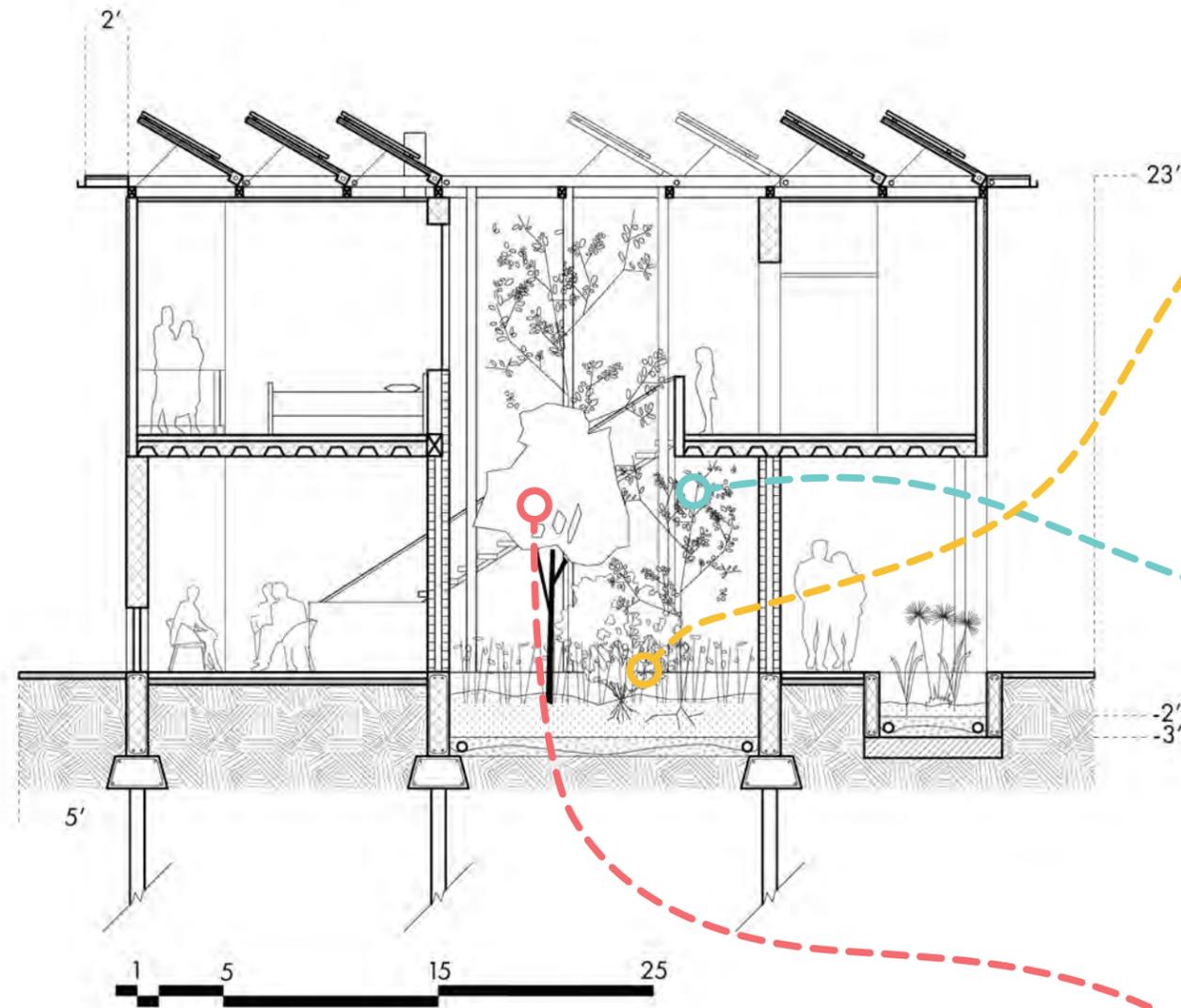
Vegetation

Resilient Housing / 2024 / FL USA
Changwan (Charlie) Lim + Cheng Lu

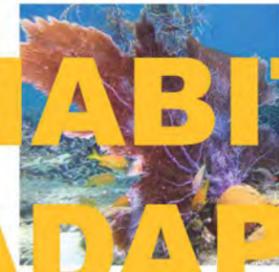
Climate changes due to global warming; also sea level. Over decades, sea level rises submerged many lands and homes and some countries are in danger. Surfside, Miami is not an exception. Sea walls has been continuously risen to prevent water from the ocean. However, rainwater and drainage became a problem creating a bathtub effect.

The project proposes a conceptual idea that would adapt its uses as sea level continues to rise. It elevates the ground floor and allows water to flow. Plantations resilient to sea water the storm surges has been placed within the house. Solar panels that can retract during storms and provide power after the event.

HABITAT ADAPTIVE TO MIAMI



SHORT SECTION A
1/8"=1'



MANGROVE REEF WALL 05
KEITH VAN DE RIET UNIVERSITY OF KANSAS ARCHITECTURE
+ IMITATE ORGANIC STRUCTURE OF MANGROVE
+ DISSIPATE WATER
+ PRECASTED CONCRETE PANEL
+ PROVIDE HABITAT



SEAGRASS 01
+ GROWS ALONG COASTLINE
+ DISSIPATES WAVE
+ HABITAT FOR MICRO ORGANISM
+ LIGHT REQUIRED FOR SURVIVAL



PALM TREE 03
+ TOLERANT TO MIAMI WEATHER
- STORE LOW CO2 EMISSION
- SMALL SHADE AREA
- MAINTANANCE REQUIRED BEFORE STORM SURGES



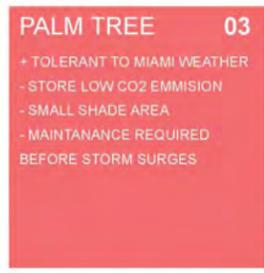
MANGROVE 02
+ GROWS ALONG COASTLINE
+ DISSIPATES WAVE & WIND
+ PREVENT FLOODING & EROSION
+ BUILDS UP SOIL
+ HABITAT FOR SMALL SPECIES
+ ROOT EXPOSURE REQUIRED FOR SURVIVAL



MANGROVE REEF WALL 05
KEITH VAN DE RIET UNIVERSITY OF KANSAS ARCHITECTURE
+ IMITATE ORGANIC STRUCTURE OF MANGROVE
+ DISSIPATE WATER
+ PRECASTED CONCRETE PANEL
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MANGROVE 02
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PALM TREE 03
+ TOLERANT TO MIAMI WEATHER
- STORE LOW CO2 EMISSION
- SMALL SHADE AREA
- MAINTANANCE REQUIRED BEFORE STORM SURGES



SEAWEED CLAD 07
KATHRYN LARSEN
+ PROVIDE THERMAL SYSTEM
+ ABSORB WATER
+ PROVIDE HABITAT
+ PREFABRICATED



SEAWEED CLAD 07
KATHRYN LARSEN
+ PROVIDE THERMAL SYSTEM
+ ABSORB WATER
+ PROVIDE HABITAT
+ PREFABRICATED



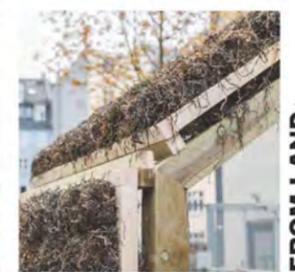
WEeping FIG 04
- MOST DAMAGING TREE TO INFRASTRUCTURES
- INVASIVE
- POISONOUS TO SOME SPECIES



WEeping FIG 04
- MOST DAMAGING TREE TO INFRASTRUCTURES
- INVASIVE
- POISONOUS TO SOME SPECIES



WEeping FIG 04
- MOST DAMAGING TREE TO INFRASTRUCTURES
- INVASIVE
- POISONOUS TO SOME SPECIES



SEAWEED CLAD 07
KATHRYN LARSEN
+ PROVIDE THERMAL SYSTEM
+ ABSORB WATER
+ PROVIDE HABITAT
+ PREFABRICATED

TO WATER

FROM LAND

FUTURE PROJECTION

GUMBO LIMBO / SEA GRASS
Prevent erosion & Shading

SEA OATS / COCOPLUM
Prevent brief flooding & stabilizes soil

MANGROVE / BUTTWOOD
Prevent flooding & slows water flow
prevent erosion & Shading



2030
1'-2' SEA LEVEL

- Increasing Natural Plantation (Salt Wind Erosion Tolerant)
- Mangrove Sea Oats, Guttonwood, Gumbo Limbo...etc.
- House Function as a Machine for Single Family
- 18 Panel per house x 1.9kWh = 27 kWh / day = 2 electric cars

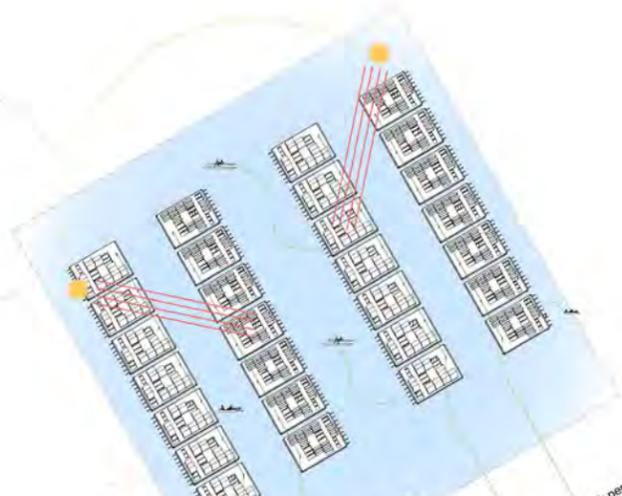
2060
3' SEA LEVEL

- Growth of Courtyard Housing
- Functional Natural Habitat
- Increasing Natural Plantation
- Cools air



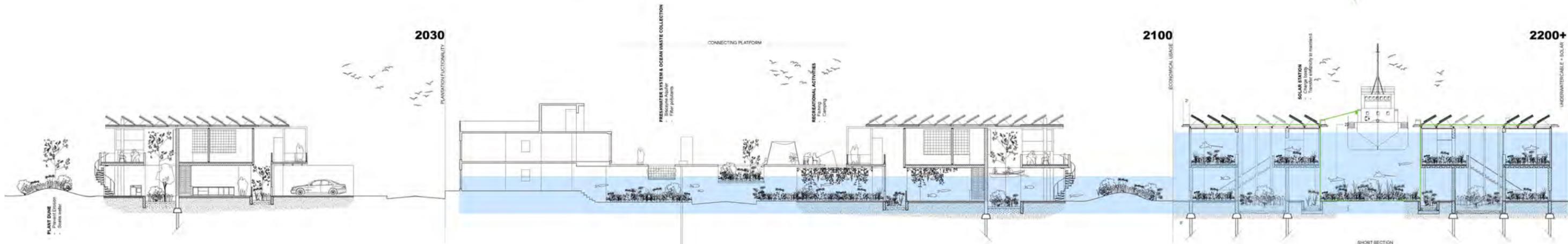
2100
6' SEA LEVEL

- Connection with Neighborhood
- Expanded Platform -> Give Residents Benefit for Tax Reduction
- Electricity Guarantee / Reduced Cost
- Understory Coral Reef Structure



2200+
12+ SEA LEVEL

- Solar Energy Station
- 18 x 10,500 Wh per house
- 5 boats per day per house
- Avg \$16,000 invest per house x 28 = \$448,000
- Profit in 98d (1kWh = \$1 inflation)
- Service / Government / Electric Station



2030

PREPARATION SYSTEM & OCEAN WASTE COLLECTION

CONNECTING PLATFORM

RECREATIONAL ACTIVITIES

2100

ECONOMICAL USAGE

SOLAR STATION

2200+

UNDERWATERCABLE + SOLAR

SHORT SECTION



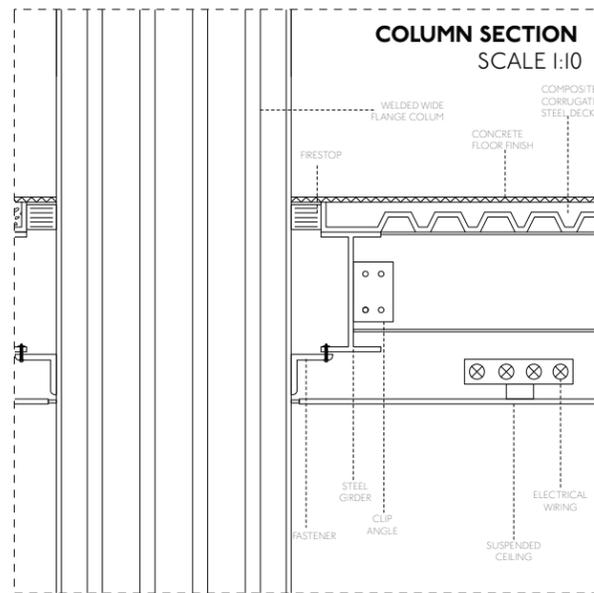
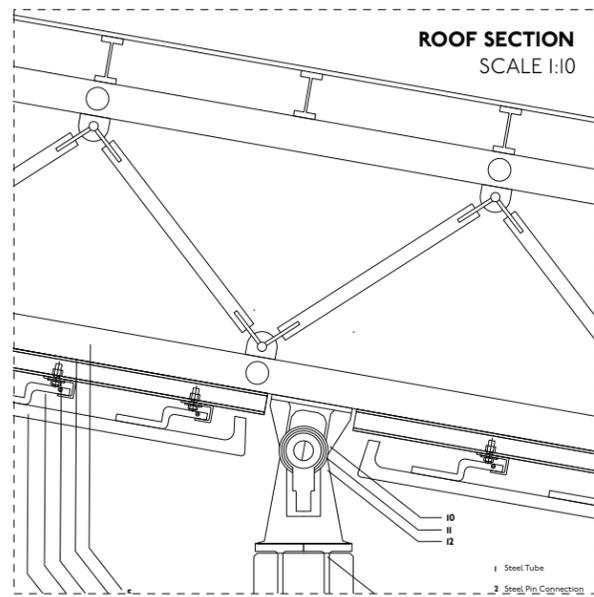
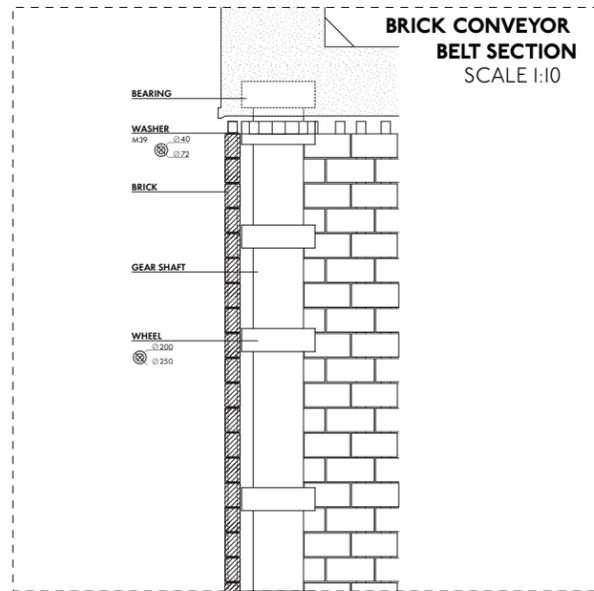


Moving Bricks

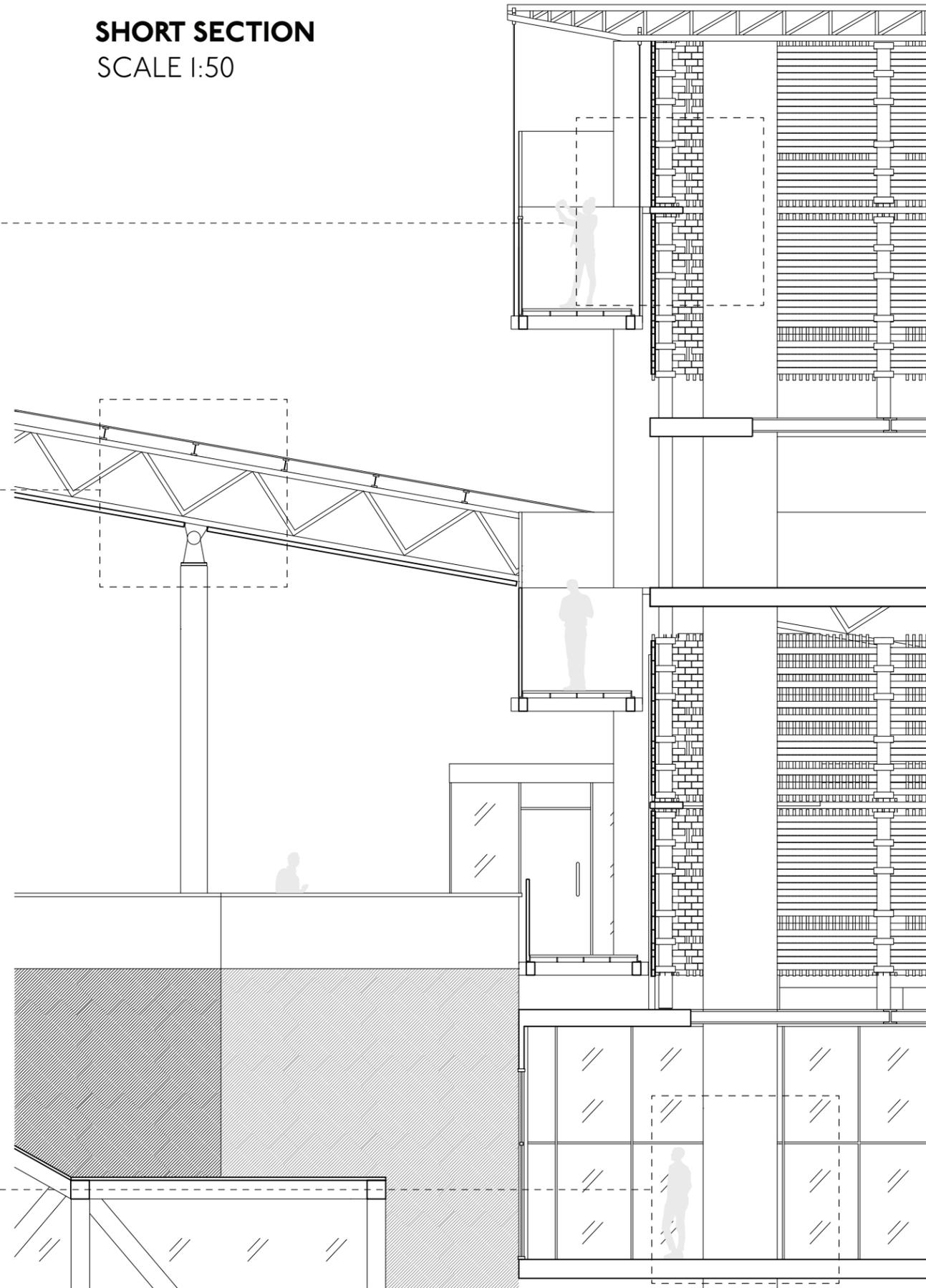
*Adaptive Reuse / 2024 / London UK
Changwan (Charlie) Lim + Mingrui Xie + Serena IP*

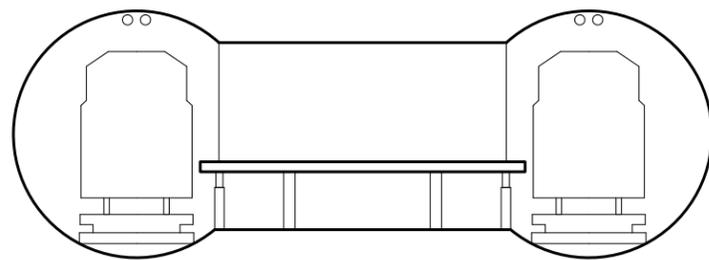
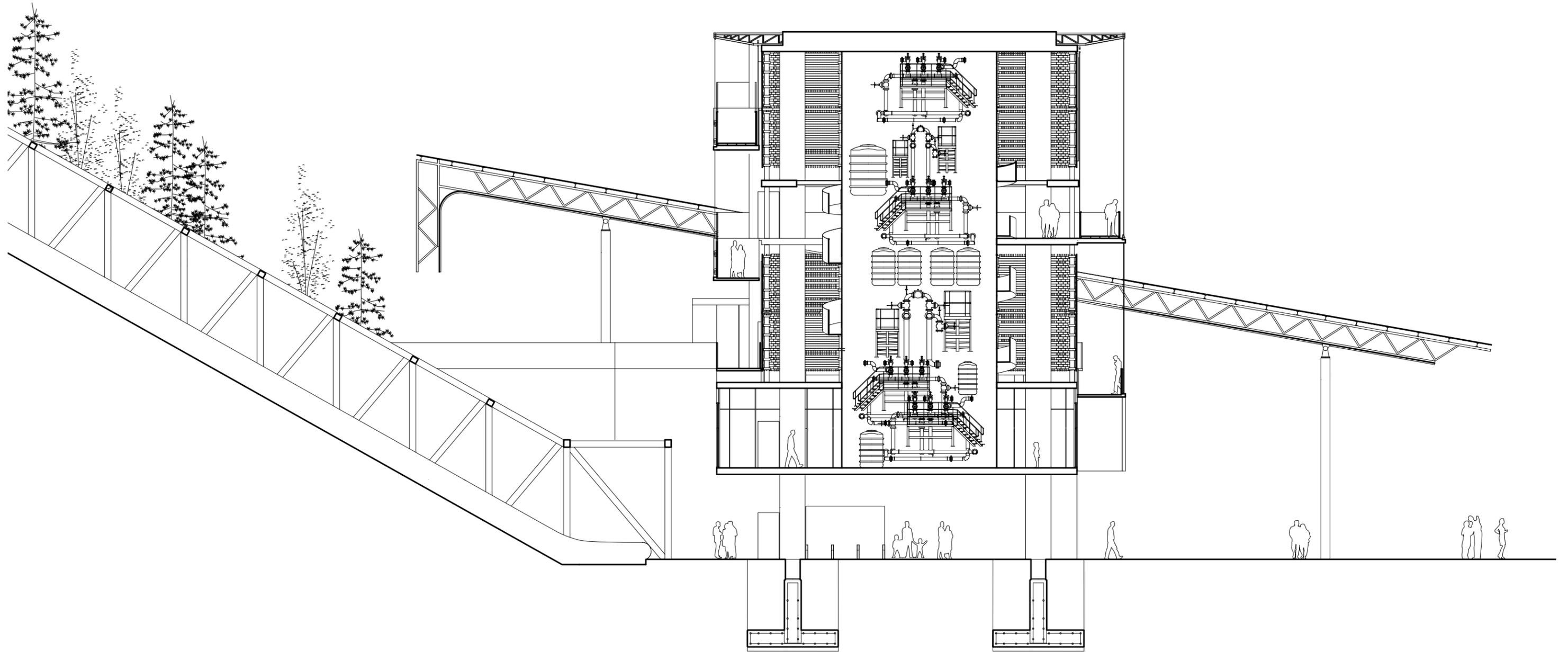
London has a long history of trains and some of the stations are left abandoned as new routes and technologies evolved. Highgate Station was once a railway station which today is replaced by underground tube station. Often, it was entered by artists who painted graffiti onto different surfaces.

The project decides to celebrate the graffiti by introducing a overground station connected to tube with a canvas of bricks that spins like a conveyor belt. Graffiti painted will be scanned, displaced digitally, and cleaned for a new round.

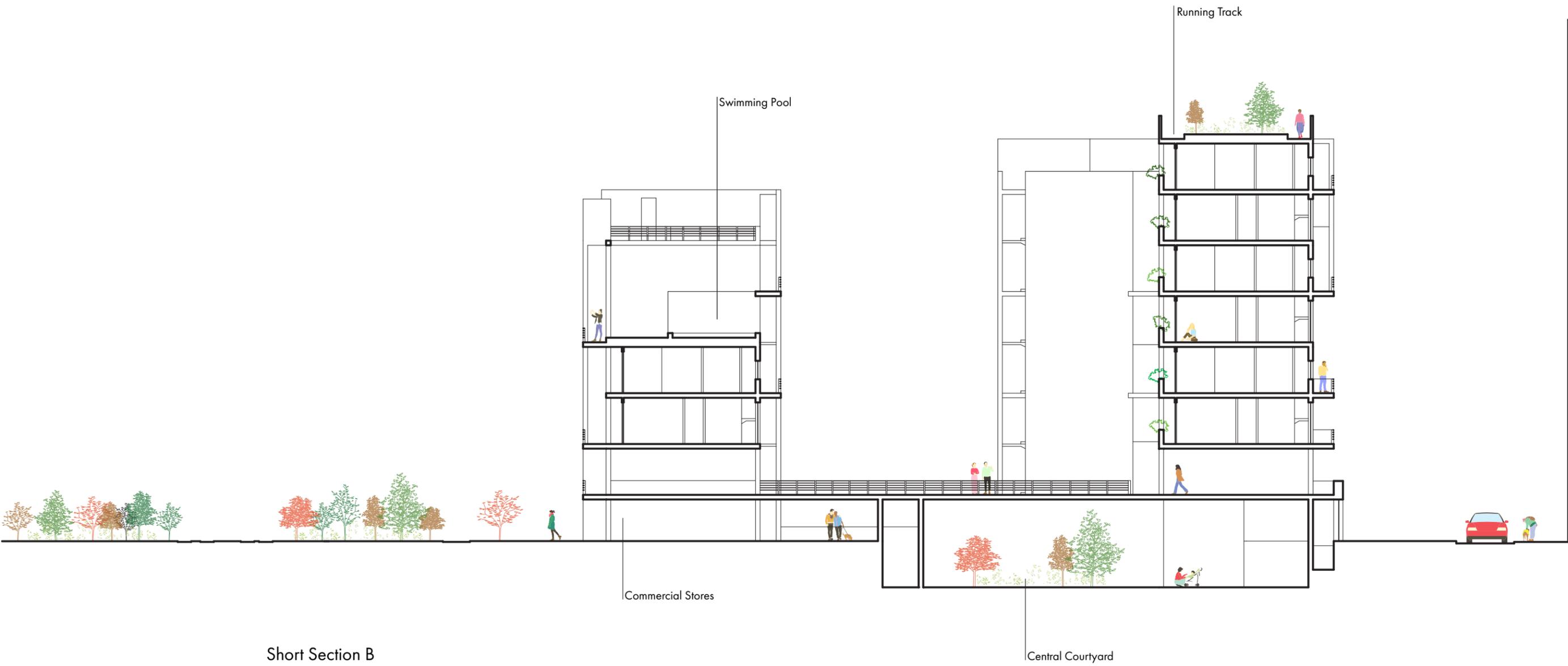


SHORT SECTION
SCALE 1:50









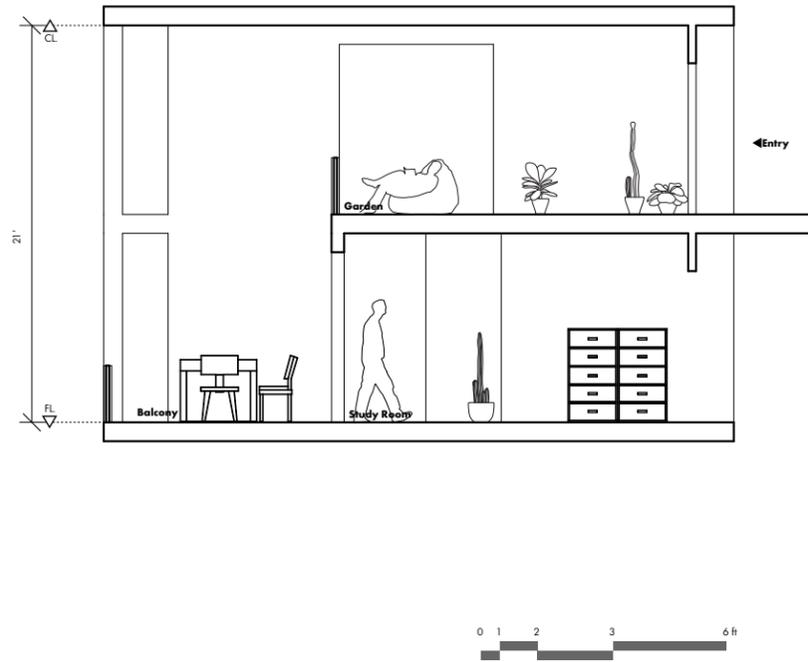
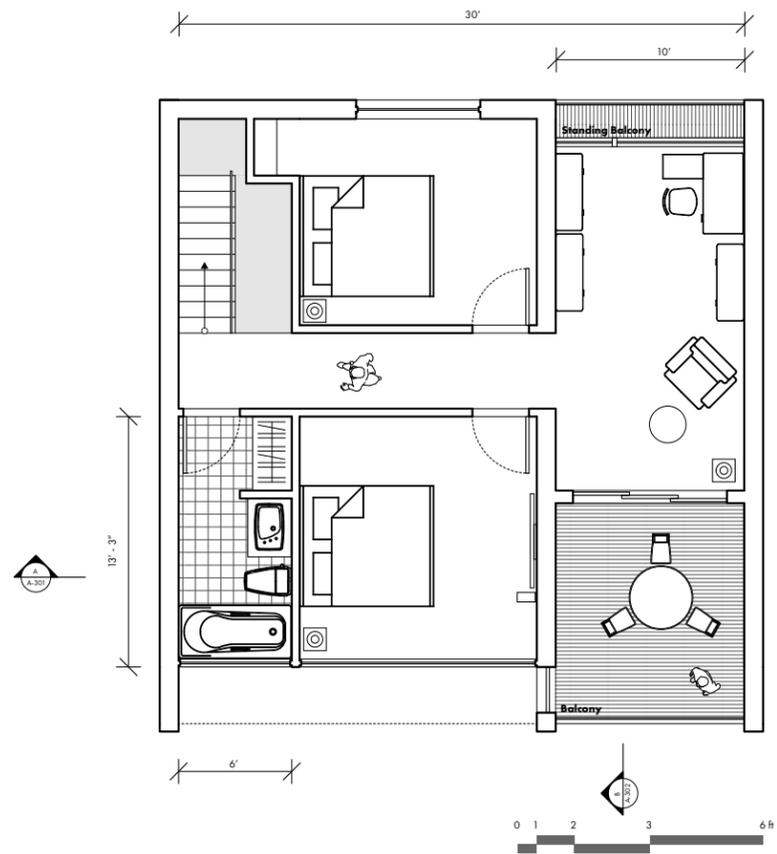
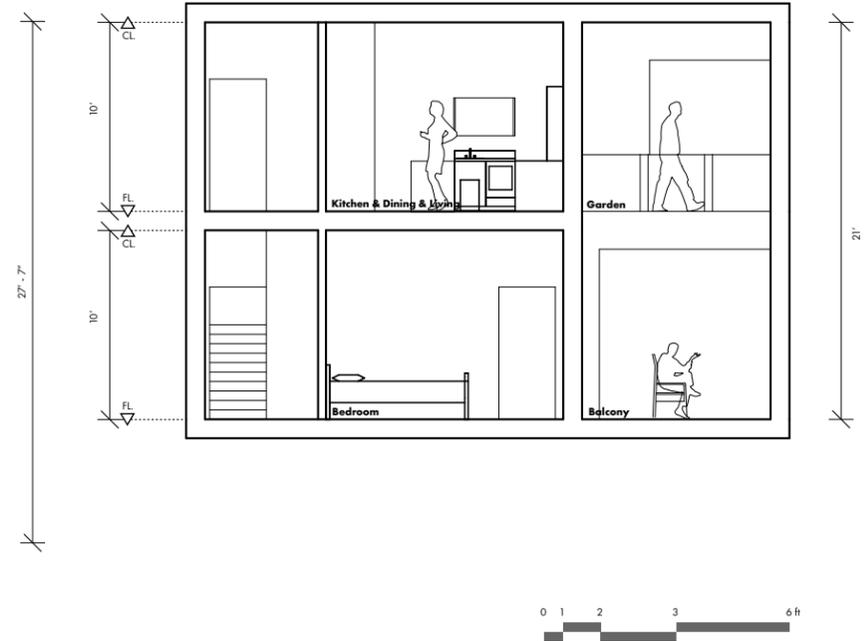
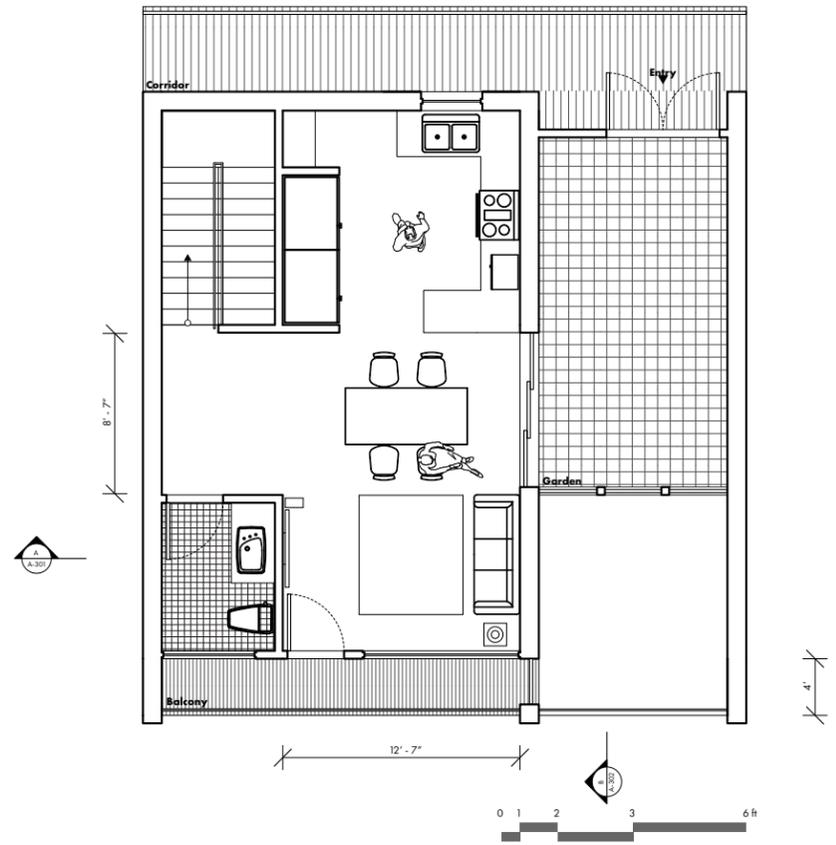
Short Section B
1'=1/16"

House of Assembly

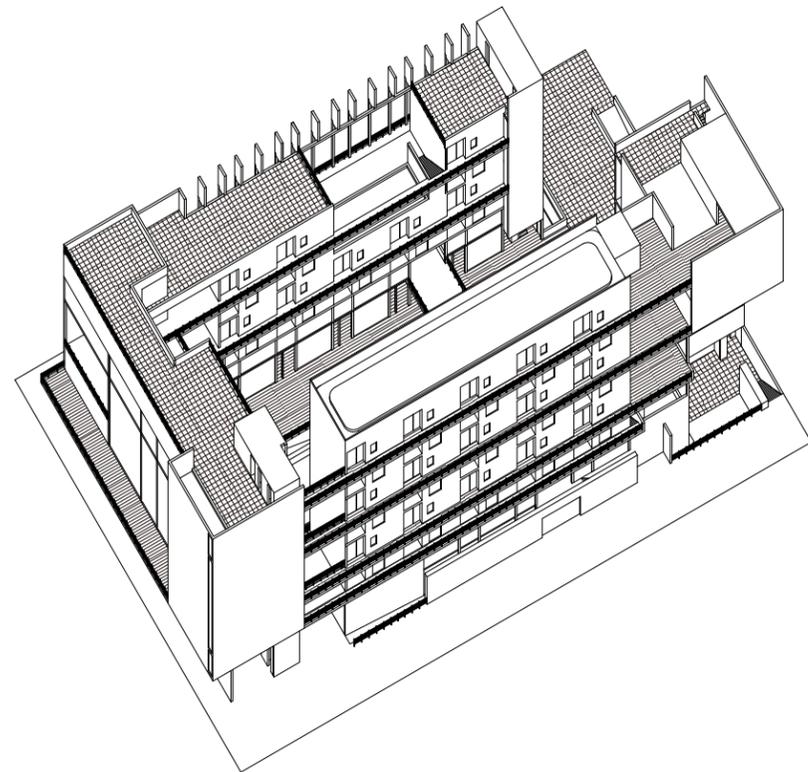
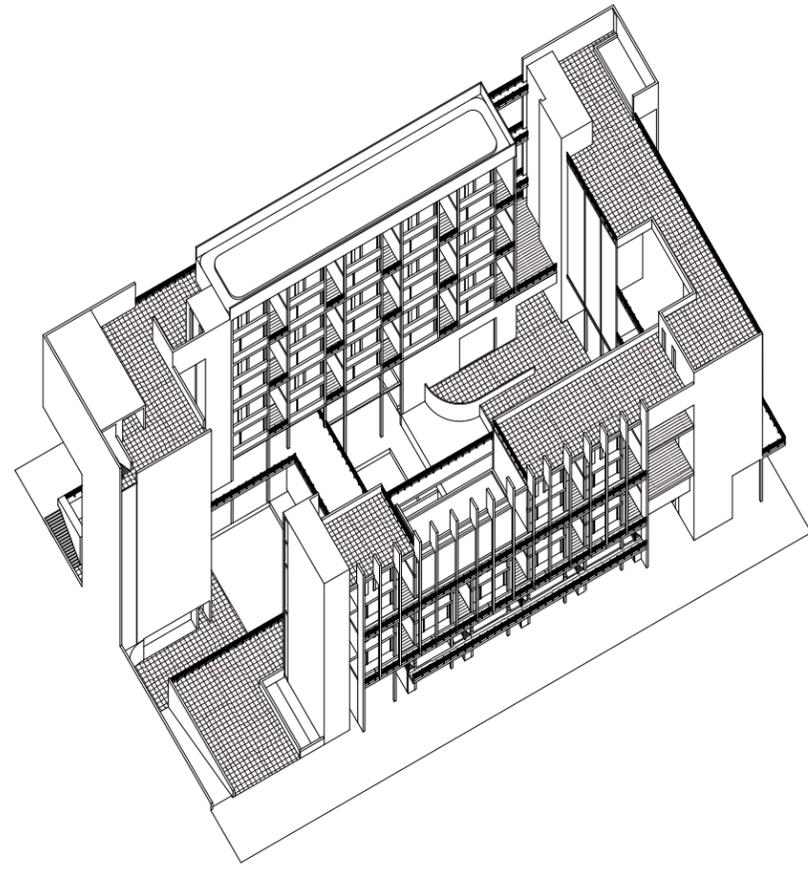
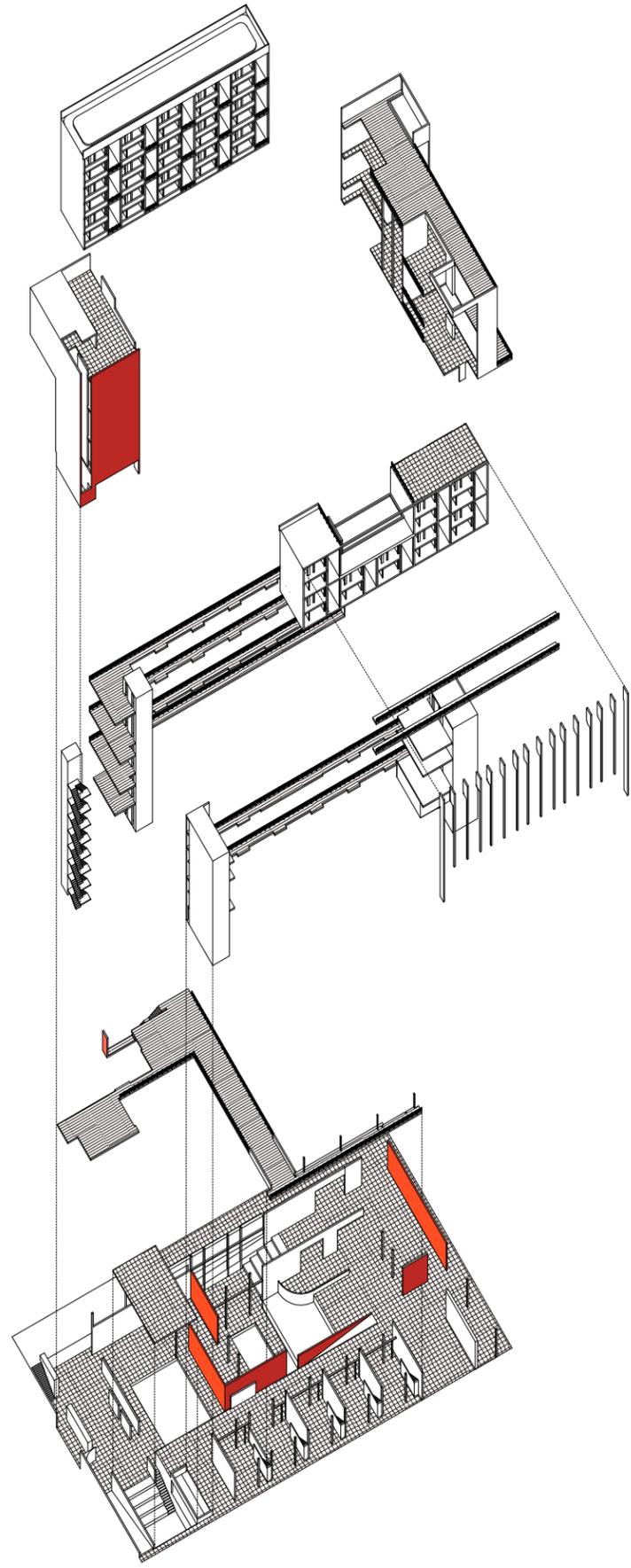
*Housing / 2023 / Amsterdam Netherland
Changwan (Charlie) Lim*

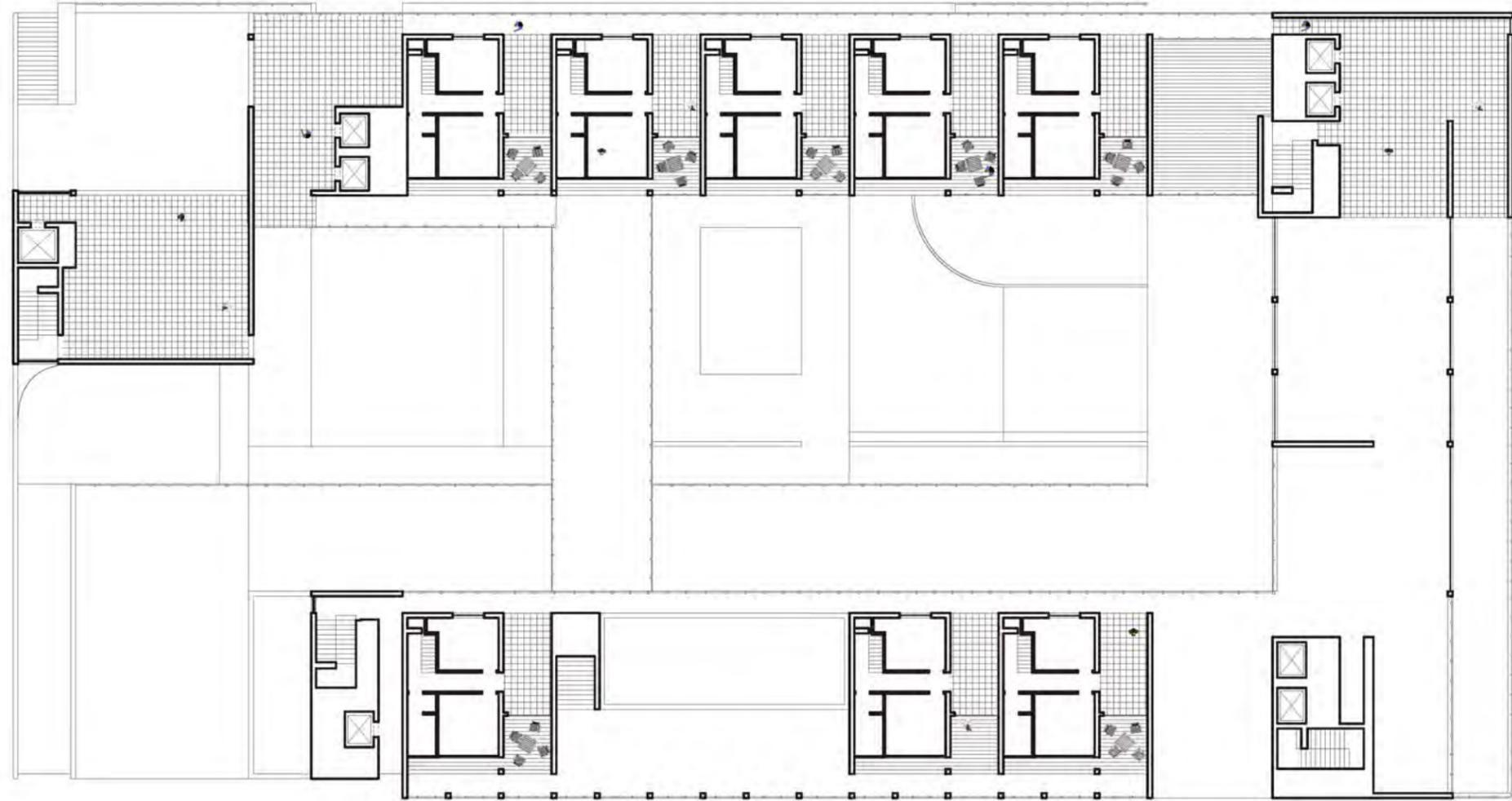
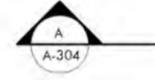
Residential units are the largest in architecture in numbers. Depending on the design and the placements of units, corridors, lights, ventilation, etc. the experience of living dramatically changes.

The project proposes a metropolitan apartment that integrate public programs and amenities into the community. The units are single loaded corridors with double story heights facing towards the park and central courtyard. It explores commercial programs on ground floor and a school directly linked to units eliminating needs of car.



Total Unit Area:
1,370 sq ft





Unit Plan
1"=1/16"



portfolio.

2026

Architecture

Changwan (Charlie) Lim
Syracuse University School of Architecture Undergraduate