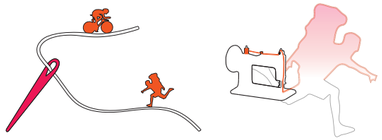
TERF

TEXTILE EXPERIMENTATION RESEARCH FACILITY

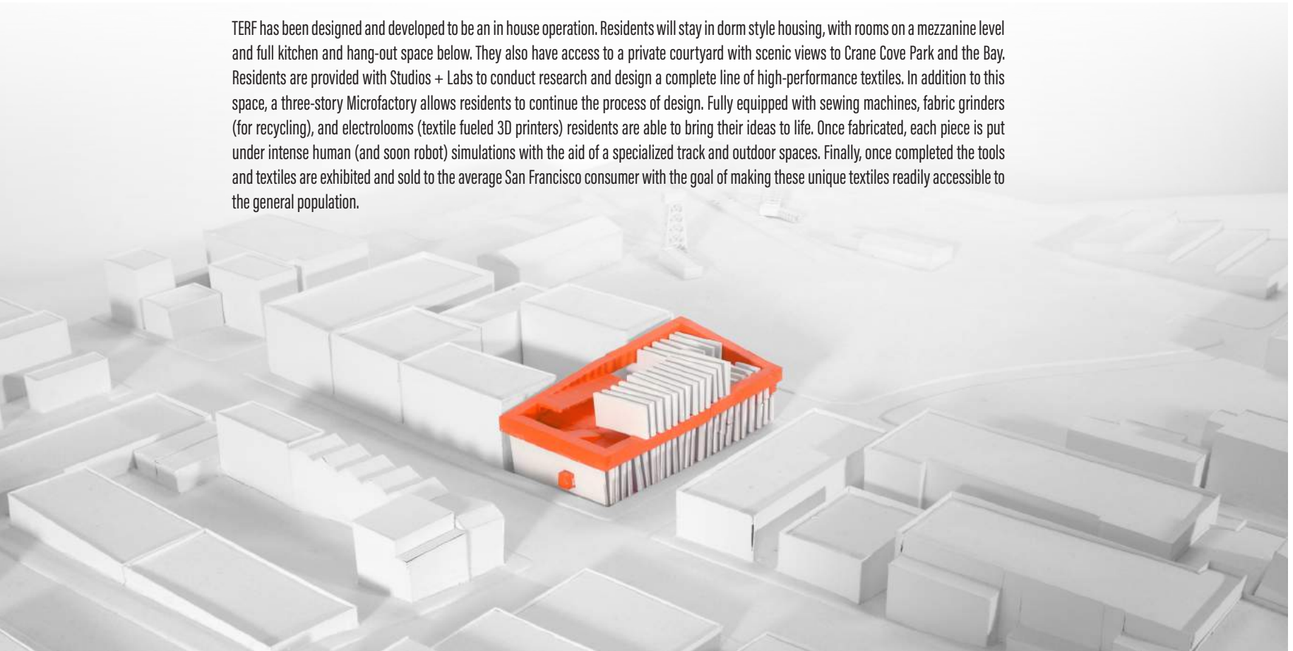
MACKENZIE BAILEY AND ERIN MORRATO

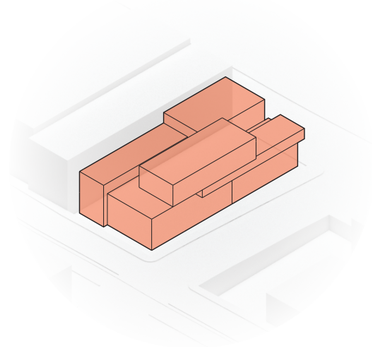
DESIGN . RESEARCH . MANUFACTURE . SELL .



TERF is a collective of designers, material engineers, and athletic textile companies that strive to design and research the highest quality sport performance clothing. During their residency, each individual field extensively researches, designs, and manufactures a new cutting edge collection that integrates new textile technology and fibers using the unique facility and testing track. The conclusion of each residency is a temporary exhibit and shop that shares and sells developments and discoveries with the average San Francisco consumer.

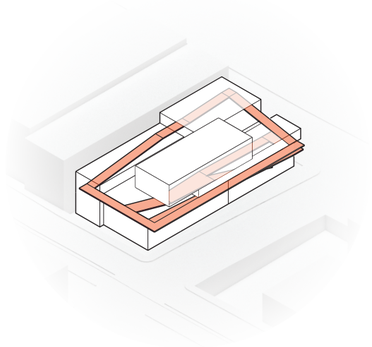
TERF has been designed and developed to be an in house operation. Residents will stay in dorm style housing, with rooms on a mezzanine level and full kitchen and hang-out space below. They also have access to a private courtyard with scenic views to Crane Cove Park and the Bay. Residents are provided with Studios + Labs to conduct research and design a complete line of high-performance textiles. In addition to this space, a three-story Microfactory allows residents to continue the process of design. Fully equipped with sewing machines, fabric grinders (for recycling), and electrolooms (textile fueled 3D printers) residents are able to bring their ideas to life. Once fabricated, each piece is put under intense human (and soon robot) simulations with the aid of a specialized track and outdoor spaces. Finally, once completed the tools and textiles are exhibited and sold to the average San Francisco consumer with the goal of making these unique textiles readily accessible to the general population.





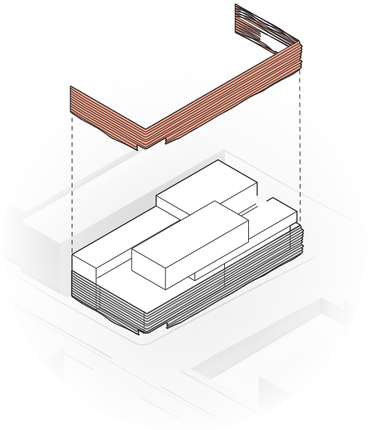
MASS

Rectilinear masses compartmentalize programs and push and pull against one another to create simple voids and passageways that allow for the path to move between programs.



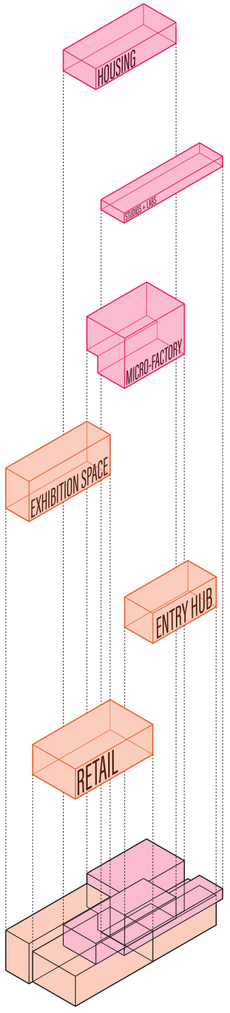
PATH

The path is not only testing space, but extended public space. The consumer visually and physically connects to the life cycle of the garment by observing and experiencing the design, research, testing, manufacturing, and selling of performance textiles.



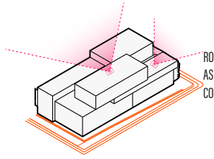
VEIL

Composed from a high performance textile, the fabric veil inspires individuals of what is possible within the building and gives programs privacy from the environment while also opening and closing to reveal key views along the path.

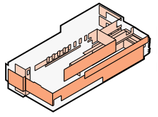


PROGRAM MASSING

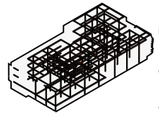
TERF PROGRAMS MIMIC THE LIFE CYCLE OF A TEXTILE. FROM DESIGN, TO RESEARCH AND TESTING TO MANUFACTURING AND FINALLY SELLING. PROGRAM ADJACENCIES ARE PLACED TO ENCOURAGE COLLABORATION AND CONNECTION THROUGH THE LIFE CYCLE OF A GARMENT.



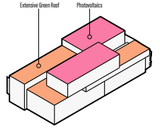
ROOF PLANES ARE UTILIZED AS PUBLIC AND PRIVATE COURTYARDS.



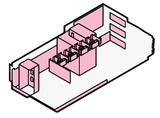
GLASS CREATES STREET LEVEL TRANSPARENCY AND OPTIMIZES DAYLIGHTING.



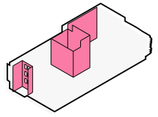
CONCRETE COLUMNS AND BEAMS SUPPORT THE DEAD AND LIVE GRAVITY LOADS. LOCATIONS OF COLUMNS ALLOW FOR PATH TO FLOW UNIMPEDED.



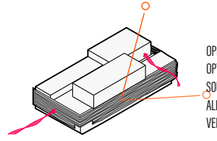
GREEN ROOFS MITIGATE THE HEAT ISLAND EFFECT AND MITIGATE STORM WATER RUNOFF.



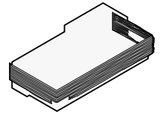
MASS WALLS ARE PLACED TO BLOCK WESTERN & EASTERN LIGHT.



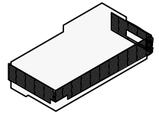
CONCRETE SHEAR WALLS LOCATED IN EGRESS AND SERVICE CORES PROVIDE AMPLE LATERAL SUPPORT.



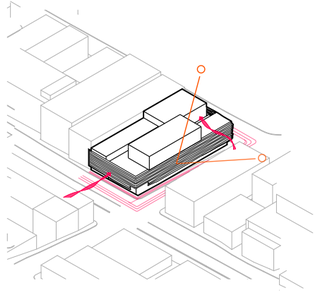
OPERABLE FACADE OPTIMIZES SHADING ON SOUTHERN FACADE AND ALLOWS FOR NATURAL VENTILATION.



THE VEIL DIFFUSES LIGHT AND CREATES PRIVACY FOR THE PUBLIC.

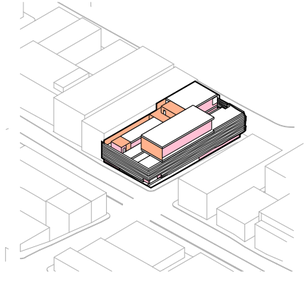


TRIANGULAR STEEL GIRT SYSTEM KEEPS FABRIC IN TENSION WHILE STEEL CLIPS KEEP FABRIC IN PLACE.



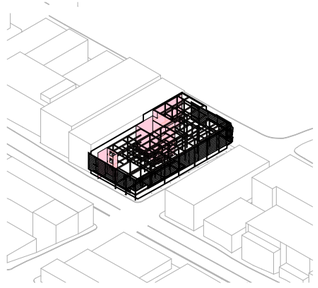
SITE AND ENVIRONMENTAL RESPONSE

PROGRAMS ARE PUSH AND PULLED TO ALLOW FOR LIGHT ACCESS, NATURAL VENTILATION, AND TO SOFTEN THE BARRIER BETWEEN SIDEWALK AND BUILDING WITH A PROTECTED PASSAGEWAY. GEOTHERMAL ENERGY BRINGS CONDITIONED AIR TO THE MICRO FACTORY AND RADIANT HEATING TO HOUSING.



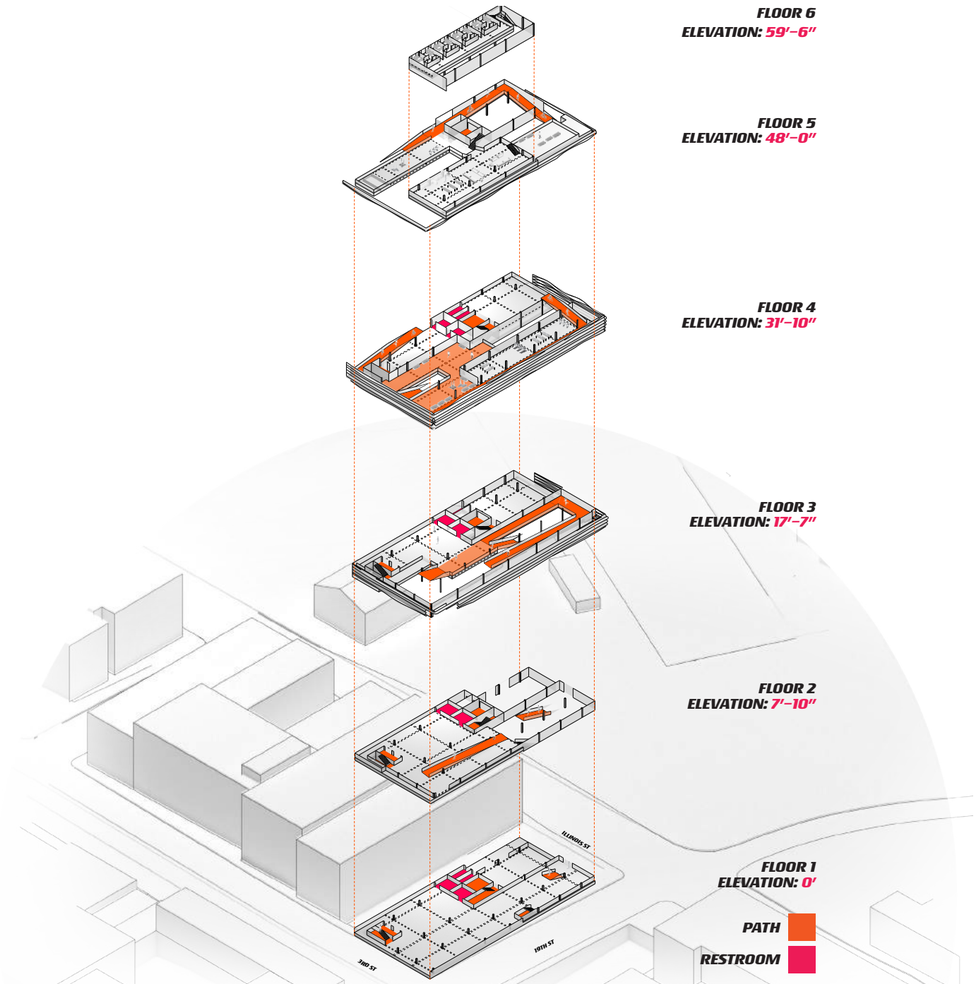
ENVELOPE BREAKDOWN

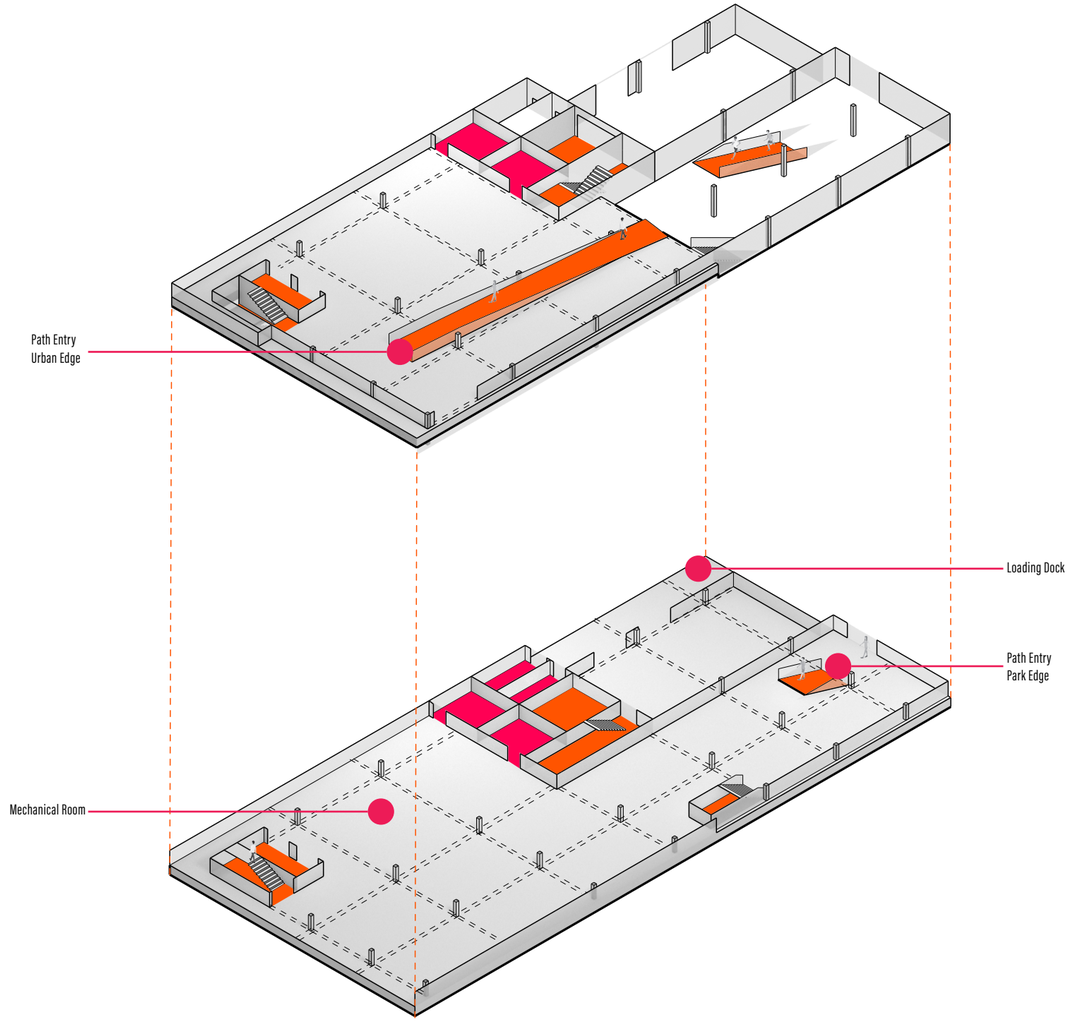
TRANSPARENCY BETWEEN THE PATH AND THE MASSES FOSTERS INSPIRATION BETWEEN RESIDENTS AND VISTORES WHILE THE DOUBLE SKIN VEIL FACADE SYSTEM SHROUDS THE BUILDING IN SOFT LIGHT.

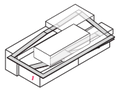


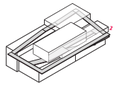
STRUCTURAL SYSTEM

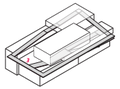
PRE CAST CONCRETE COLUMNS AND FLOOR SLABS ACT AS THE PRIMARY STRUCTURE. THE PATH IS CANTILEVERED AND HUNG FROM FLOOR SLABS AND THE VEIL IS ATTACHED TO A TERTIARY STEEL FACADE SYSTEM.

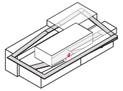

FLOOR 6
ELEVATION: 59'-6"
FLOOR 5
ELEVATION: 48'-0"
FLOOR 4
ELEVATION: 31'-10"
FLOOR 3
ELEVATION: 17'-7"
FLOOR 2
ELEVATION: 7'-10"
FLOOR 1
ELEVATION: 0'
PATH
RESTROOM
ILLINOIS ST
WITH ST
3RD ST

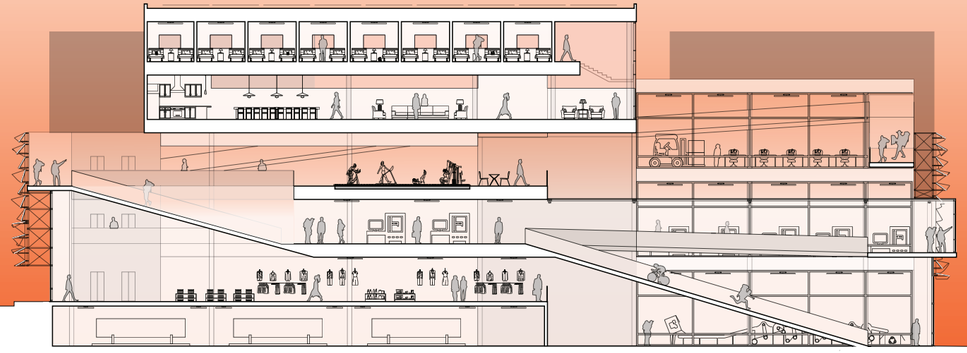

Path Entry
Urban Edge
Loading Dock
Path Entry
Park Edge
Mechanical Room



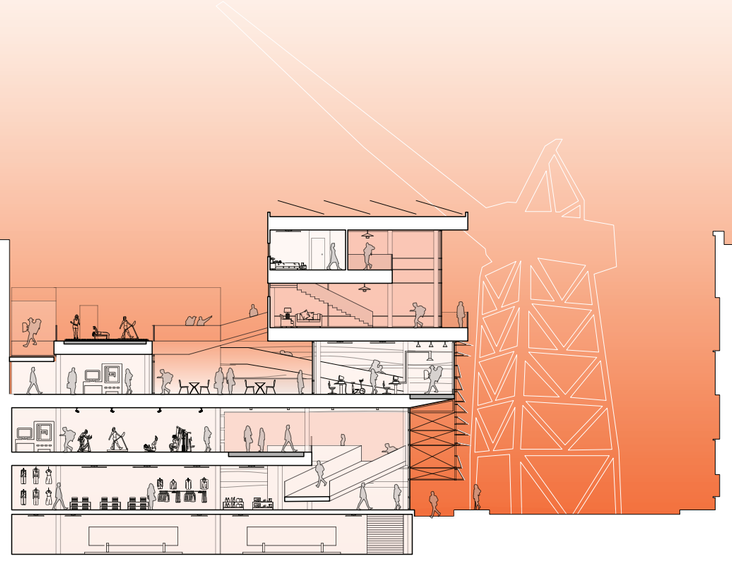




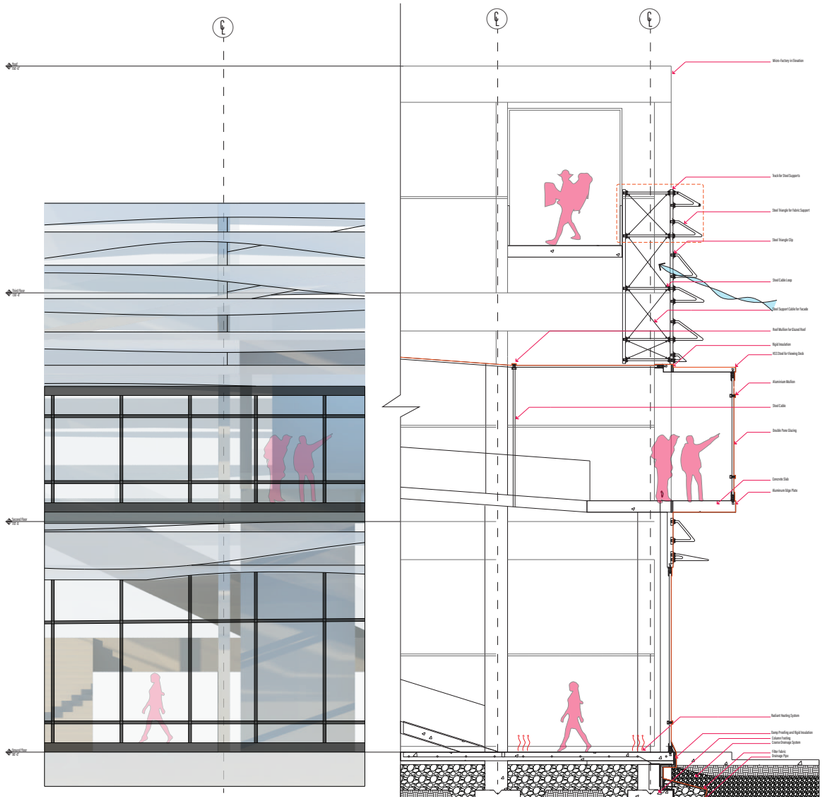




LONGITUDINAL SECTION

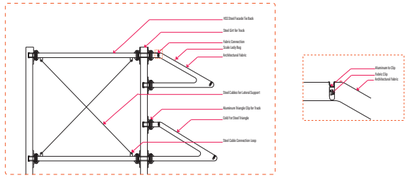


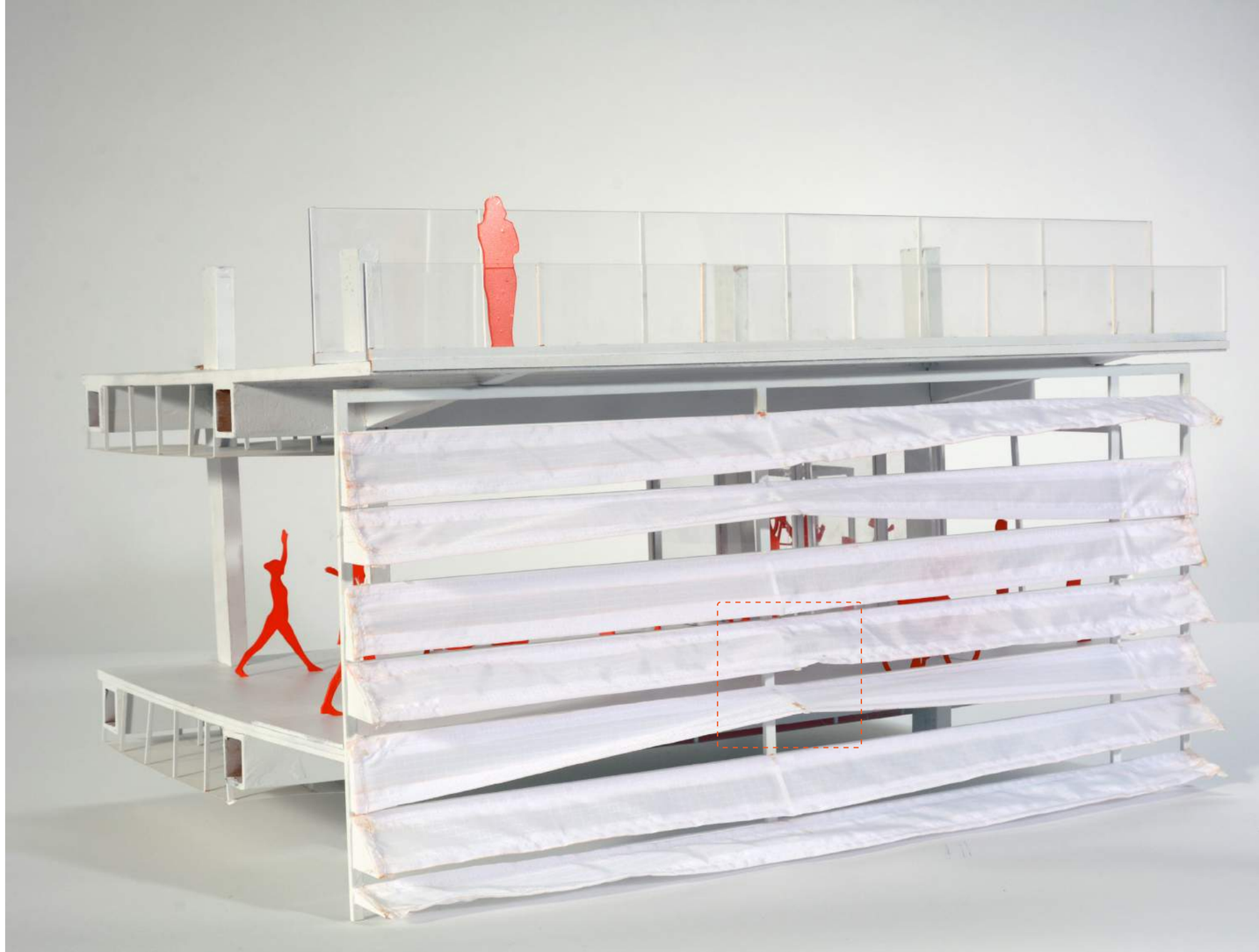
TRANSVERSE SECTION

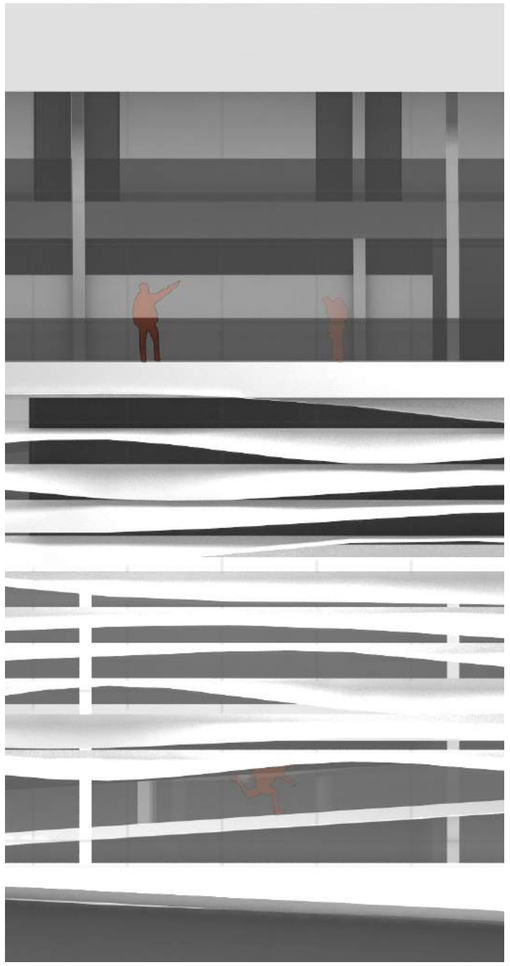


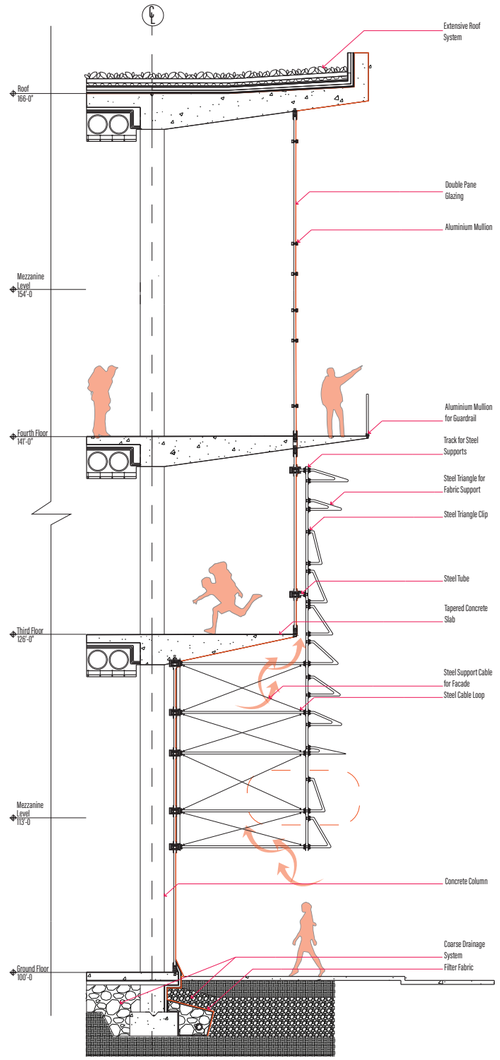
West Elevation
1'-0" = 0.5"

Wall Section of West Elevation
1'-0" = 0.5"








Extensive Roof System
Roof 166'-0"
Double Pane Glazing
Aluminium Mullion
Mezzanine Level 154'-0
Aluminium Mullion for Guardrail
Fourth Floor 141'-0"
Track for Steel Supports
Steel Triangle for Fabric Support
Steel Triangle Clip
Steel Tube
Tapered Concrete Slab
Third Floor 126'-0"
Steel Support Cable for Facade
Steel Cable Loop
Mezzanine Level 113'-0
Concrete Column
Coarse Drainage System
Filter Fabric
Ground Floor 100'-0