

Portfolio

Amrita Adhikari



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PREFABRICATED HOUSING

Affordable single family house in California

Academic work : 2022
(Individual project), selected
as top 3 designs in class.

Professor : Joseph Wheeler

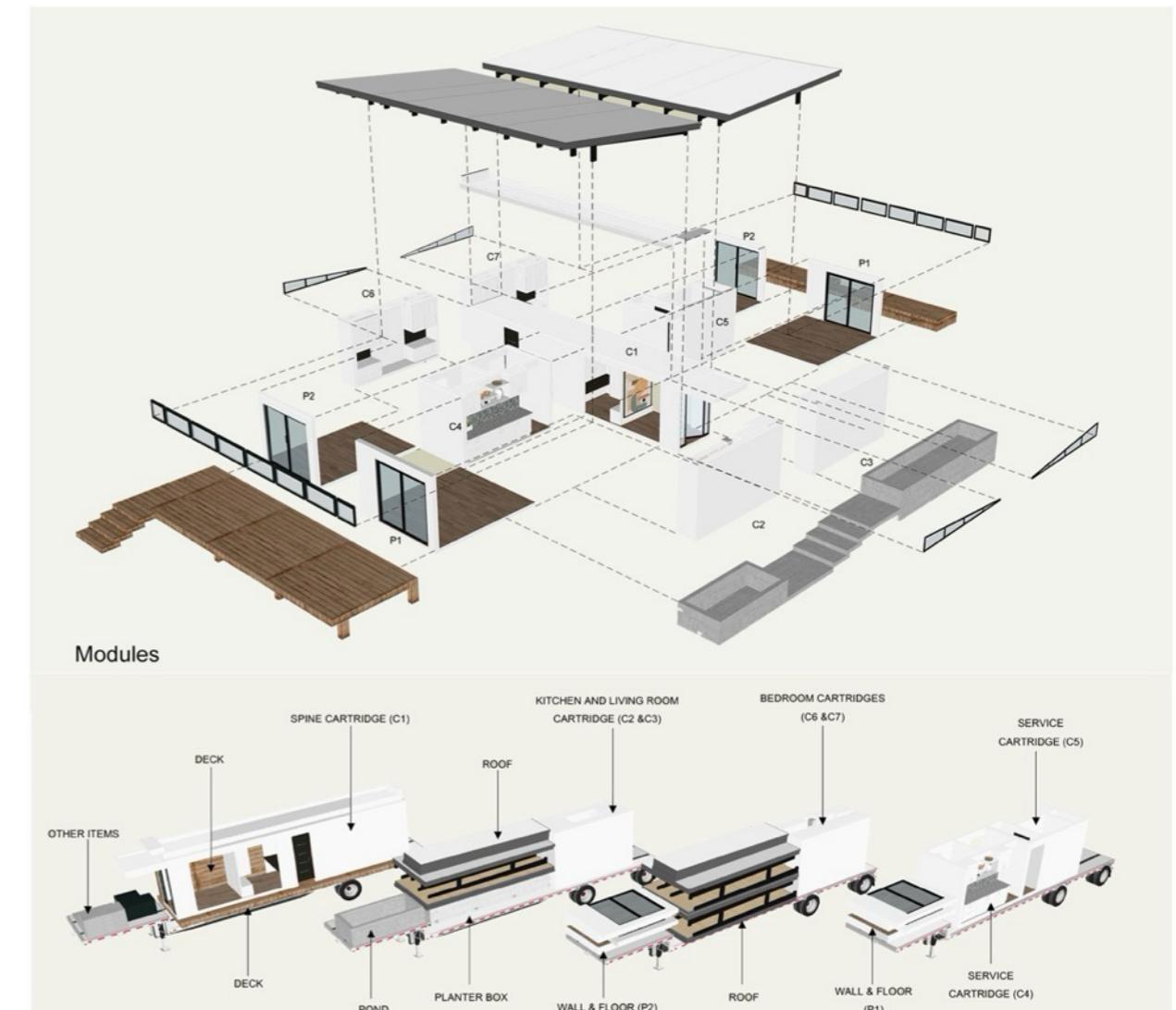
Softwares used :
Autocad, Sketchup, Photoshop and Enscape.

Project summary :

This is my first project as a graduate student at Virginia Tech. It is a sustainable prototype of an affordable house for the 2023 Orange County Sustainability Decathlon. This 1,115 sqft. single-family house embraces technological innovation, optimized performance, and environmental considerations. Utilizing prefabricated cartridges and panelized building parts, the design ensures efficient construction in controlled factory conditions, reducing environmental pollution. The modular components are transported on standard oversized trailers, minimizing on-site construction costs and time. The focus includes energy efficiency, sustainable material selection, water conservation, indoor air quality, and adaptability, while also engaging the community through educational initiatives. A comprehensive cost analysis underscores the economic viability of this forward-thinking, environmentally conscious design.



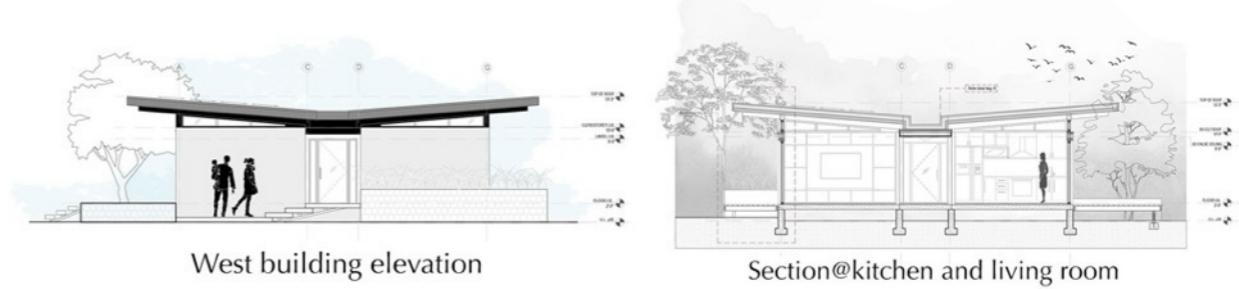
Exterior view modelled in sketchup and rendered in Enscape.



Transportation of components to site on standard step deck trailer

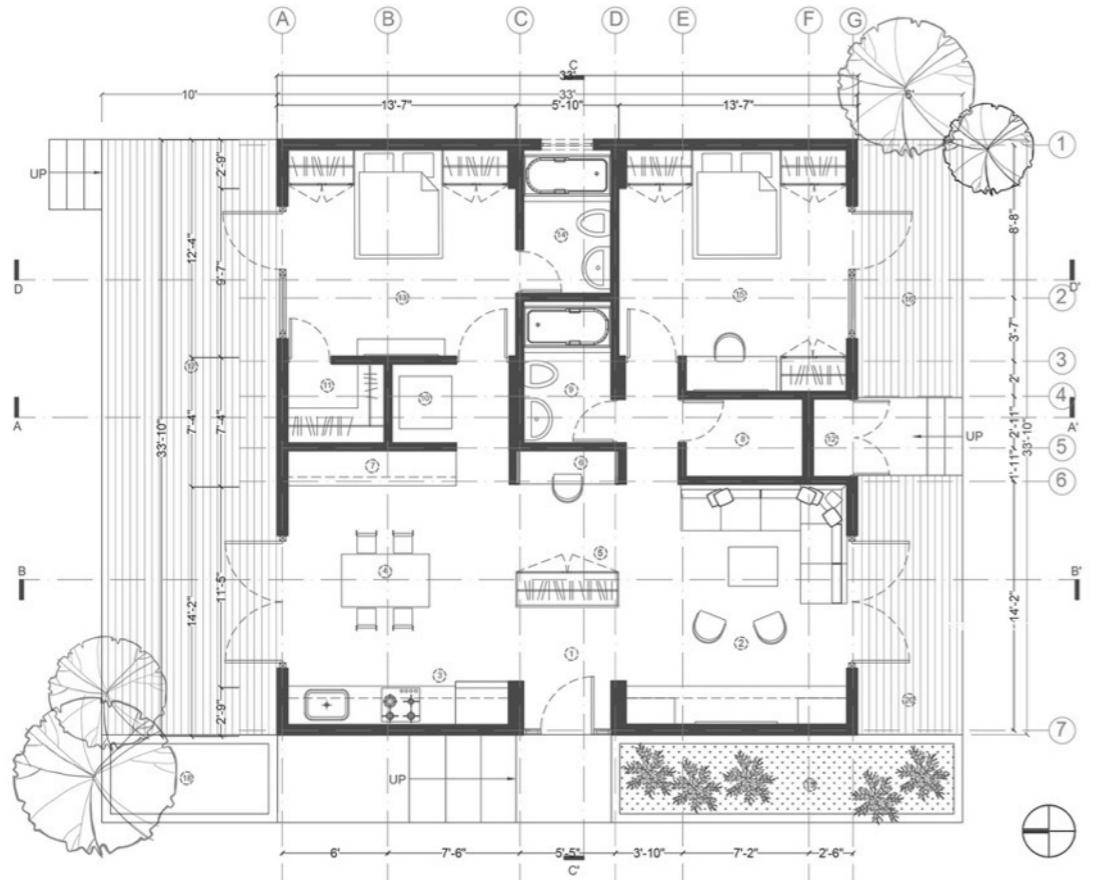


Conceptual model showing different cartridges and panelised components



West building elevation

Section@kitchen and living room



Notes : P - Panelised components; C - Cartridges

Layout Plan; (Below) assembly of cartridges and panelised components

- KEY NOTES**
1. Entry Lobby
 2. Living Room (13' x 11')
 3. Kitchen (13' x 11')
 4. Dining
 5. Sliding Closet
 6. Home Office
 7. Kitchen Counter
 8. Mechanical Room (7' x 5')
 9. Common Bathroom (5' x 8')
 10. Washer/Dryer
 11. Walk-in Closet (5' x 4'-8")
 12. Electrical Room (2'-6" x 4'-5")
 13. Master Room (13' x 12')
 14. Bathroom (5' x 8')
 15. Bedroom (13' x 13'-9")
 16. Deck (6' x 14'-8")
 17. Deck (10' x 33'-10")
 18. Lily Pond
 19. Planter
 20. Deck (6' x 14'-8")



Interior views modelled in sketchup and rendered in Enscape.



'Concept for multi-family housing/homeless shelter using boxed modules'



INNOVATION PARK SWAZILAND

IT office building in Kingdom of Swaziland, Africa

Professional work : (2015), Architectural Intern

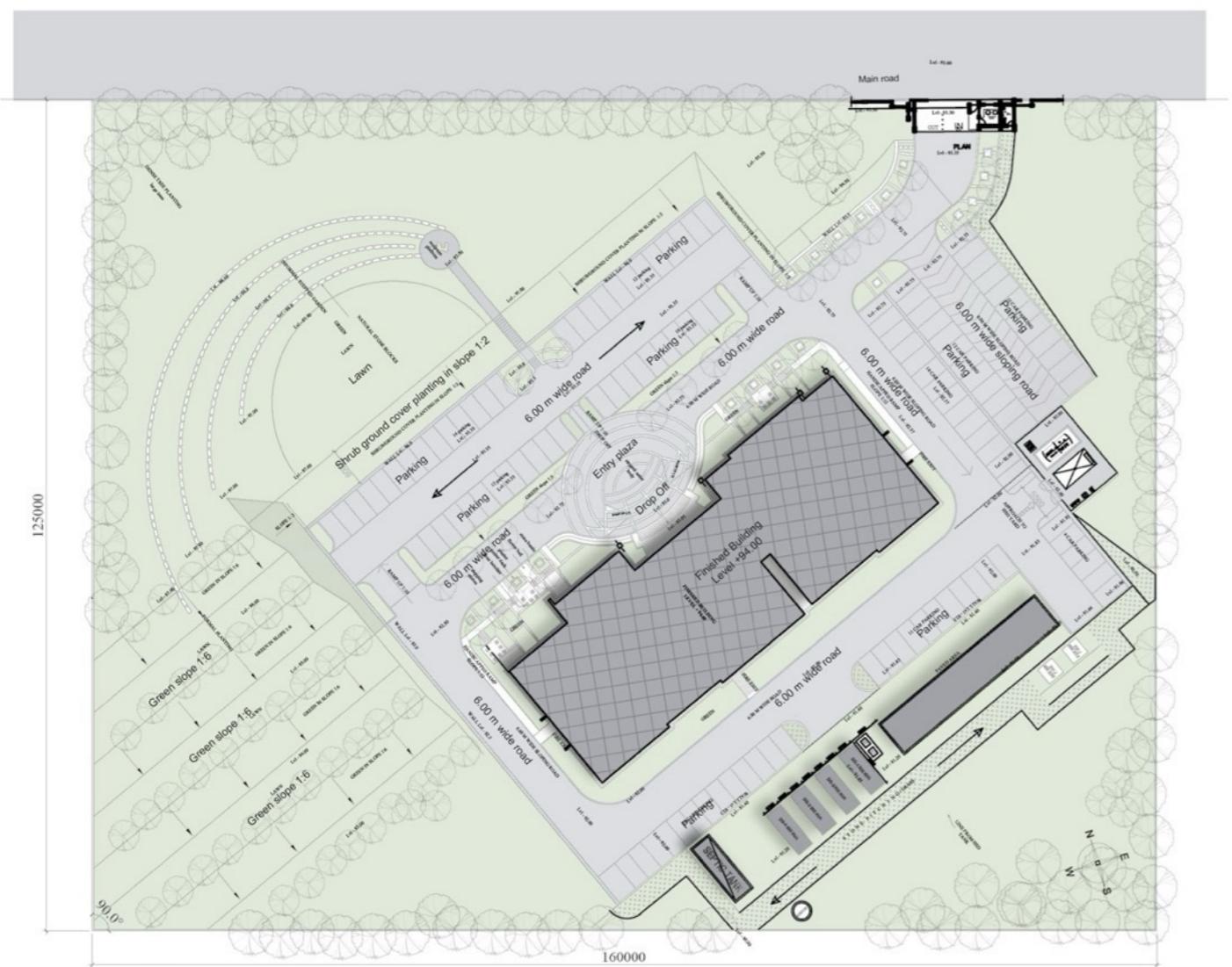
Architect: ENAARC Associates Pvt. Ltd.

Project architect : Rakesh Sood

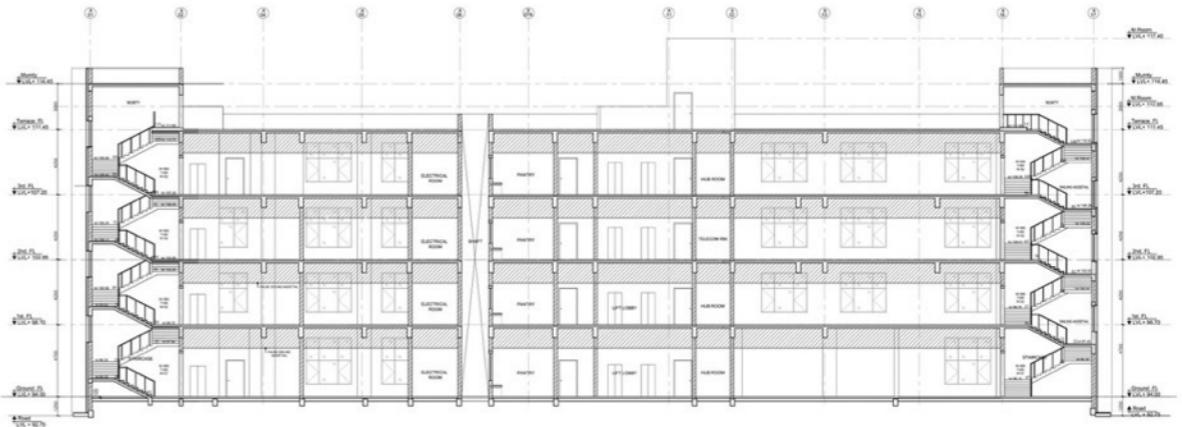
Contractor : Angelique International

Contribution : Construction drawings,
schematic drawings,
interior drawings and
3D Modelling.

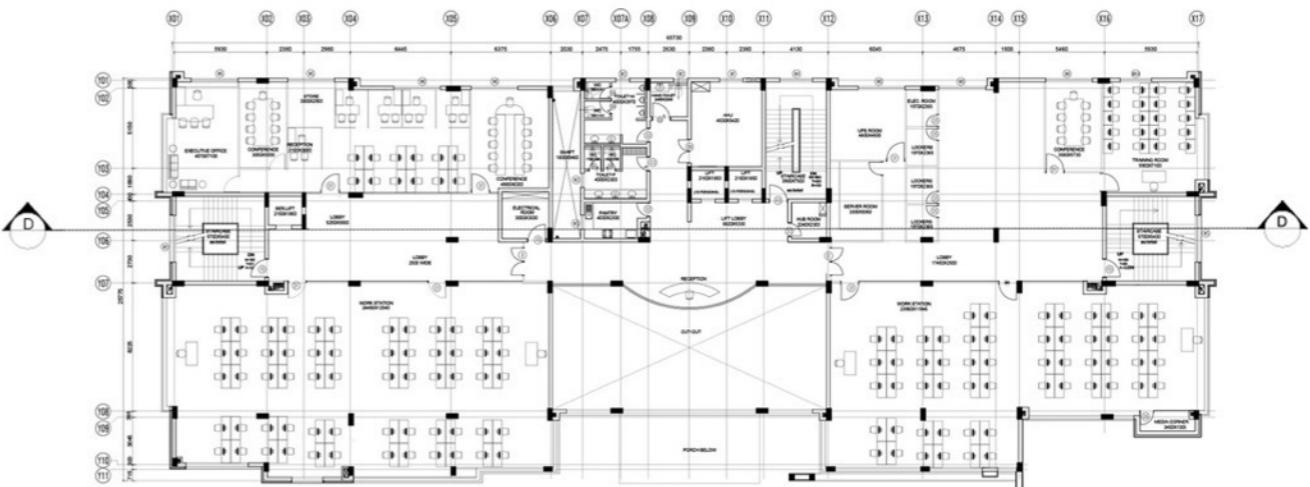
Softwares used :
Autocad, Sketchup, Photoshop and Vray.



Site plan



Section D-D



First floor plan



NETAJI NAGAR HOUSING

Government proposed group housing project in New Delhi

Academic work : 2014 (group project)

Contribution : Design development, presentation and 3D modelling.

Softwares used :

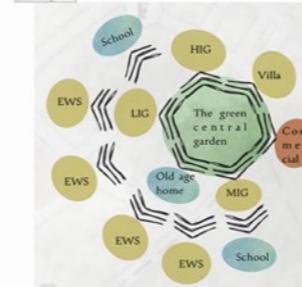
Autocad, Revit, Sketchup, Lumion, Photoshop and Indesign.

Project summary :

The Netaji Nagar housing project, initially proposed by the government to address the increasing demand for high-rise group housing for its staff, underwent a transformative reimagining as part of our academic project. Situated in Chanakyapuri, New Delhi, on a sprawling 56-hectare site, our alternative design prioritized functionality, sustainability, and inclusivity for diverse occupants categorized by income groups, including HIG (High Income Group), MIG (Middle Income Group), LIG (Low Income Group), and EWS (Economically Weaker Sections). Embracing the concept of 'self-sufficiency,' our approach extended beyond mere housing, incorporating provisions for the elderly, sports complexes, gyms, parks, retail spaces, commercial facilities, and even horticulture and vegetable gardens, fostering a community that could grow its own organic food. Despite the socio-economic stratification, the central green space emerged as the unifying heart of the entire site. The design prioritized user comfort across all units, ensuring efficiency and optimal planning, even for the smaller LIG and EWS residences and EWS residences.



Exterior view modelled in sketchup, rendered in Lumion.



Site development scheme

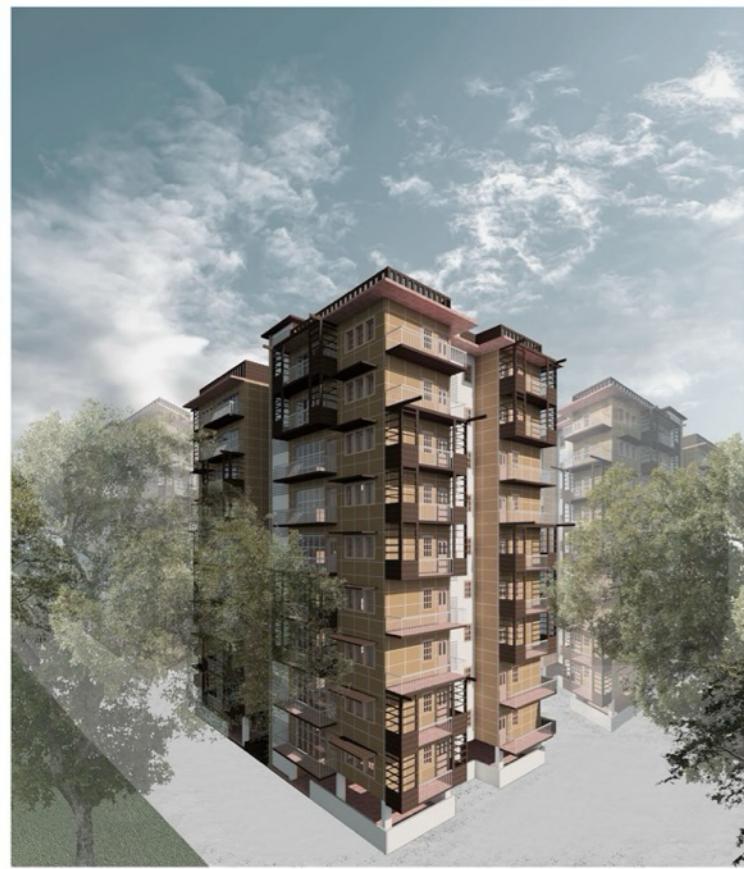


View of MIG (Middle Income Group) housing.

Total site area= 142 acre/56 hectares
Maximum ground coverage= 35% = 49.7 acre
Maximum FAR = 300
Max height = 37 mtrs



Group housing integrating green spaces and public facilities such as schools, old age homes, colleges, bus depots and markets.



Exterior view, section and elevation of EWS block modelled and rendered in Revit.



Exterior view of MIG block modelled in sketchup and rendered in Lumion.



Typical layout plans of dwelling units

PHENOMENON OF HOMELESSNESS

Affordable housing in Brooklyn, New York

Academic work : 2023, (M.ARCH Thesis at Virginia Tech)

Thesis guide: Prof. James Jones

Softwares used: Autocad, Revit, Sketchup, and Photoshop

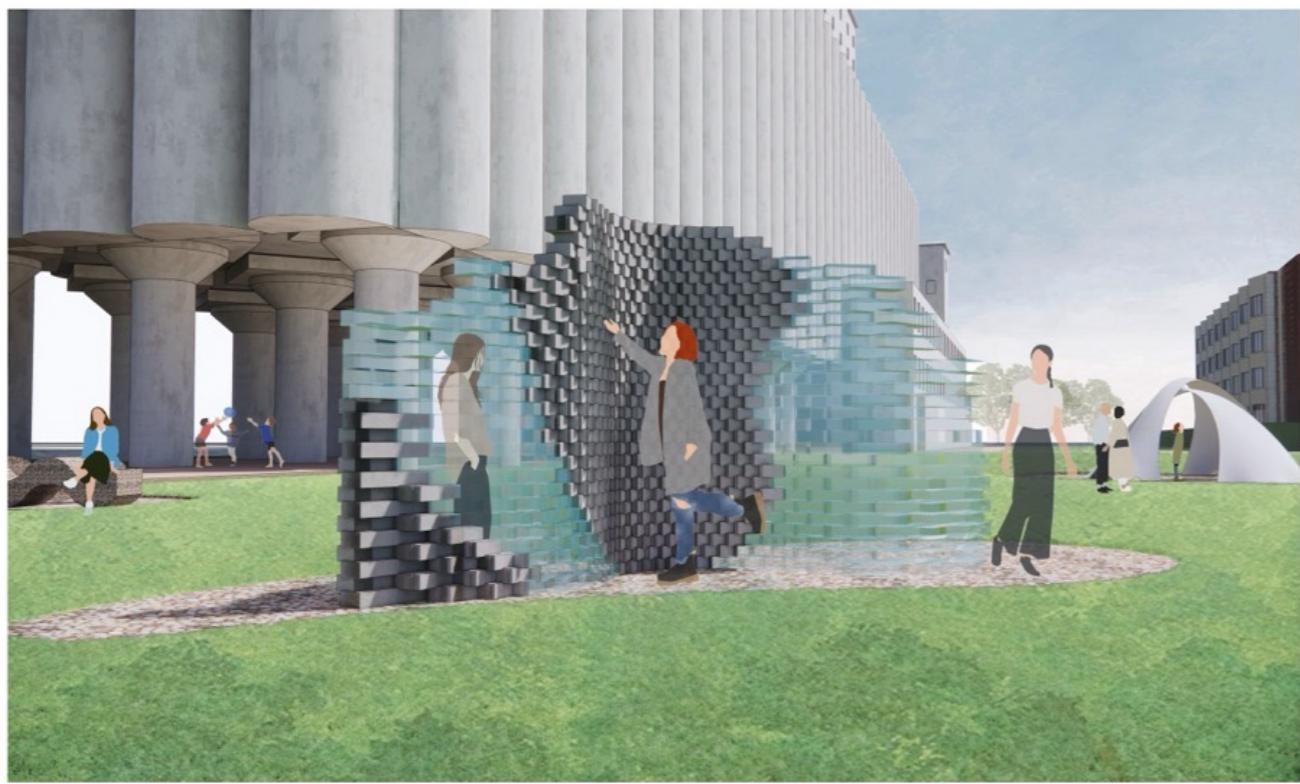
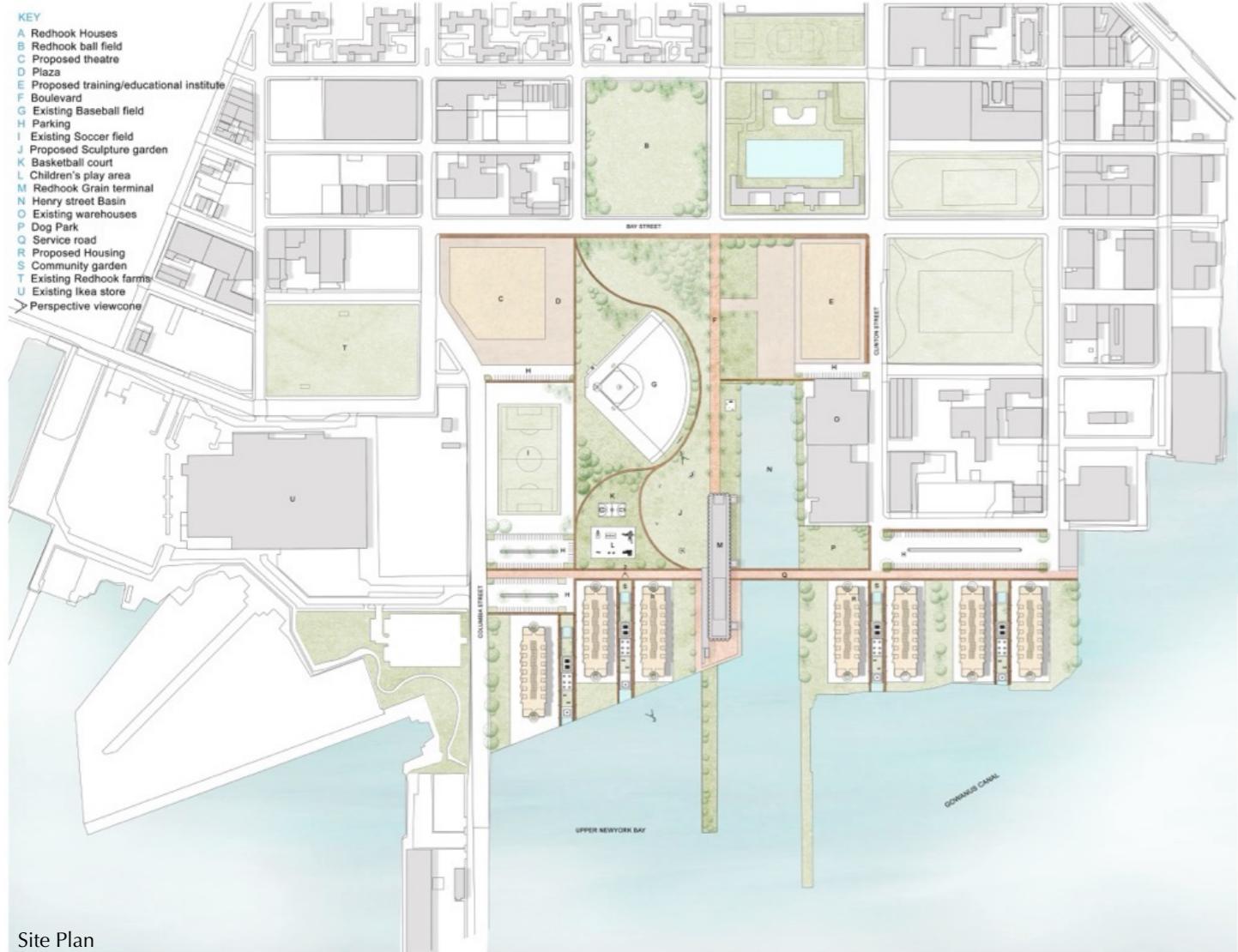
Project Summary: The thesis investigates how we experience our physical environments through our senses and how we derive meaning from these interactions. By examining the physical conditions inhabited by homeless individuals and their psychological and physiological impacts, the research aims to understand the nature of this physical space in detail. The thesis then translates these insights into the design of a housing project, creating spaces that heal, nurture, inspire, and instill hope through the physical space created. Based on the principles of Phenomenology, the thesis aspires to formulate architecture that mediates between phenomena such as light quality, sound and material texture, and the positive human experiences these elements generate.



" My body remembers who I am and how I am located in the world; it is the very locus of reference, memory, imagination and integration." Juhani Pallasmaa

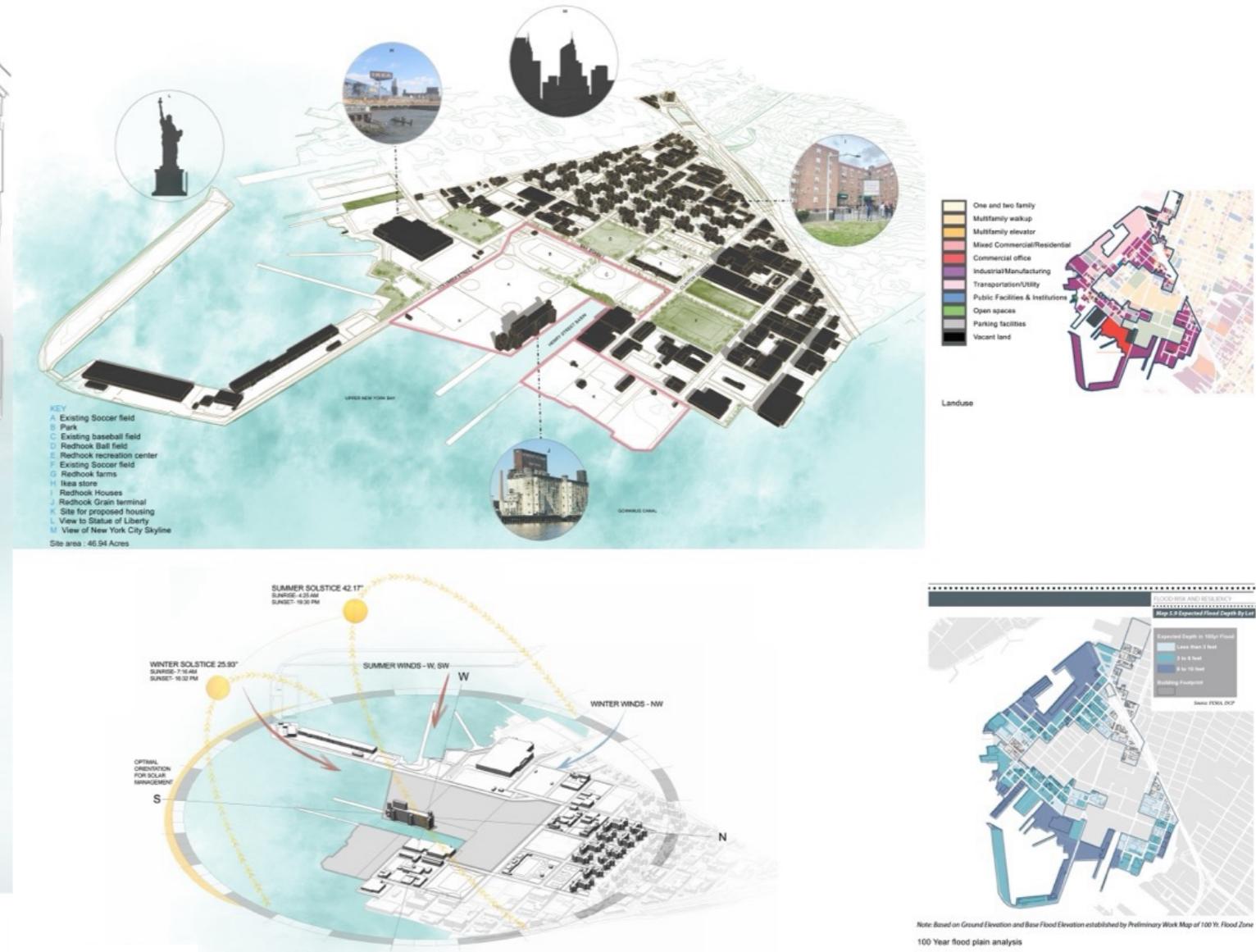


"We come to see not the work of art, but the world according to the work"..... Maurice Merleau Ponty

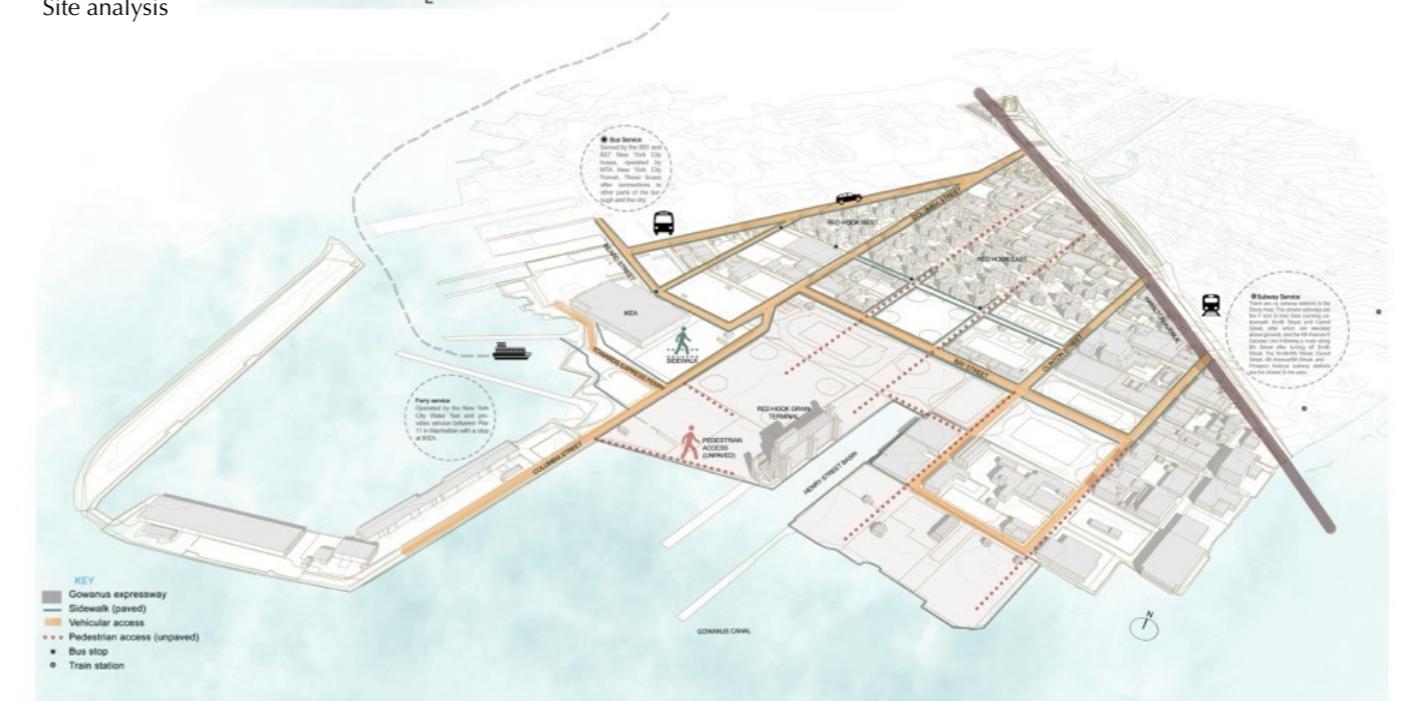


Story telling through architecture: sculptures used to convey the idea of connection and isolation.

Site (Existing) - Red Hook, Brooklyn, New York



Site analysis



Site accessibility



Corridor day lighting during different times of the day creates temporal awareness



Light wells allow for natural lighting during the daytime making the common areas livable.



Large floor to ceiling window allows natural light into the rooms.



Kitchen windows open towards corridor light wells.



View of the community garden



Visual axis connects the existing community with the waterfront



Section A-A'

MULTIFAMILY RESIDENTIAL

Professional work: Project Architect at MHS Architecture

Supervisor: M. Buldo, Santiago Torres and Marie Tedrick

Softwares used: Revit, AutoCAD, Bluebeam

Project Summary:

- Contributed to construction documents for **4** multi-family residential projects. Developed exterior models, plans, elevations, sections and detail drawings in Revit.
- Coordinated with structural, MEP, and Interior design consultants, and ensured compliance with applicable building codes and industry standards.
- Supported Construction Administration by reviewing and processing submittals.



619 Marin: 17 floor two-tower multifamily luxury mixed use residential project in Jersey City



Tag Crown Village (Building 4) : Mid-rise affordable housing in Newark



Parker East: 5 floor luxury mixed use residential project in East Rutherford, New Jersey