



MR PORTFOLIO

Marisabel Marrero Ortiz

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787-236-6277



PROFILE

I am interested in developing projects that demonstrate that an intervention does not have to be large to be meaningful, especially when it becomes part of everyday life. This perspective is reflected in my approach to housing projects and object fabrication, where I explore color, identity, and functionality as tools to enrich the spatial experience. I am seeking an opportunity to begin my professional practice by applying my skills and interests to real-world projects, in an environment where I can gain experience in project management and continue developing my design judgment as I work toward architectural licensure.

CONTACT

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EDUCATION

Master of Architecture
University of Puerto Rico - Río Piedras Campus
Summer 2025 - December 2026 (expected) | GPA 4.00

Capstone: Identidad y conectividad en el entorno urbano de Roosevelt:
Activación del no lugar para generar espacios más seguros e inclusivos.
Mentors: María Guzmán Bonilla, José Rodríguez López, María H. Luengo

Bachelor's Degree in Environmental Design
University of Puerto Rico - Río Piedras Campus
August 2020 - May 2025 | Summa Cum Laude - GPA 3.97

Prototyping and 3D Printing Workshop - FabLab (Digital Fabrication Laboratory)
- Professor: Carlos Casillas Charrón
Deco Desk: basswood object assembled through laser cutting.
Concrete Modeling: 3D-printed mold for casting Escofet furniture.
Rolling Desk: folding table designed to assist wheelchair users.

EXPERIENCE

Aqua Dorado - Front Desk
Dorado, PR | March 2026 - Present

- Assist guests with questions, accommodations, and matters related to their stay.
- Handle reservations, availability inquiries, and check-in/check-out procedures.
- Monitor the properties during assigned shifts and communicate guests' needs to the property manager.

Ópticas Buena Visión - Optician's Assistant
Corozal, PR | June 2023 - August 2024

- Schedule and confirm appointments to help maintain an efficient patient flow.
- Organize frames and lenses according to exam dates and corresponding prescriptions.
- Assist with inventory management and merchandise organization.

SKILLS

Programs

Beginner

Intermediate

Proficient

Microsoft Office

AutoCAD

SketchUp

Adobe Illustrator

Enscape

Revit

Adobe InDesign

Photoshop

Rhinoceros 3D

Strengths

Bilingual

Organized

Attention to detail

Analytical thinking

Problem solving

Adaptability

Continuous learning

SELECTED WORKS

ARCHITECTURE



01
ROOSEVELT HUB

Mixed-use Student Community
Roosevelt Avenue Hato Rey, San Juan PR



02
GÁNDARA RESIDENCE

Pet-friendly Student housing
Gándara Avenue intersection, Río Piedras PR



03
VILLA CONTORNOS

Mixed-use Adaptive Reuse Hotel
Bayamón City Center, Bayamón PR



04
BOUGAIN-VILLE GARDEN

Landscape Pavillion
Palmatum at Jardín Botánico UPR, Río Piedras PR



05
ATELIER SCHOOL

Educational and Community Center
PR 705 Aguirre, Salinas PR

SPATIAL OBJECTS



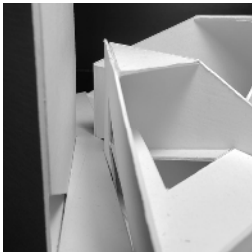
06
AGUIRRE CANE TOWER

Landmark Viewing and Exploration Pavillion
PR 705 Aguirre, Salinas PR



07
FENESTRA NATURA

Perception and Light Exploration Pavillion
Prque del Centenario University of Puerto Rico, Río Piedras PR



08
SPATIAL SEQUENCE

Focal Point Exploration Sequence
Prque del Centenario University of Puerto Rico, Río Piedras PR

PROTOTYPING



09
ROLLING DESK

Adaptive Furniture
PLA filament | PETG filament | 1/2" PVC pipes | Wood panels



10
DECO DESK

Modular Desk Organizer
Bass Wood | Laser Cut | Interlocking



11
ROD PUPPET MOTION

Layered Depth Exploration
Bristol paper | Bass Wood

01 ROOSEVELT HUB

Mixed-Use Student Community

Area: 140,000 sq ft

Location:

Roosevelt Station | Hato Rey, San Juan PR

M.Arch Capstone Design

Academic year 2025 - 2026

Mentors:

María del C. Guzmán Bonilla

José J. Rodríguez López

María H. Luengo Duque

Description:

This project proposes an urban and architectural intervention around Roosevelt Station in Hato Rey, transforming vacant and underutilized spaces into an active mixed-use environment. Located across from the Polytechnic University of Puerto Rico, the proposal responds to urban disconnection, limited pedestrian accessibility, and perceived insecurity by strengthening the relationship between the station and its surrounding context.

The program integrates student and young professional housing with art and design workshops, entrepreneurship spaces, commercial uses, and active public spaces. A pedestrian-centered design strategy improves circulation and connectivity while encouraging activity throughout the day, creating opportunities for interaction, permanence, and natural surveillance.

Through programmatic activation and improved accessibility, the project seeks to transform the existing “non-place” into a safer, more inclusive, and connected urban destination, reinforcing a stronger sense of identity and belonging around Roosevelt Station.

CONCEPT COLLAGE

Photoshop



APPROACH

MASTER PLAN

Revit | Illustrator

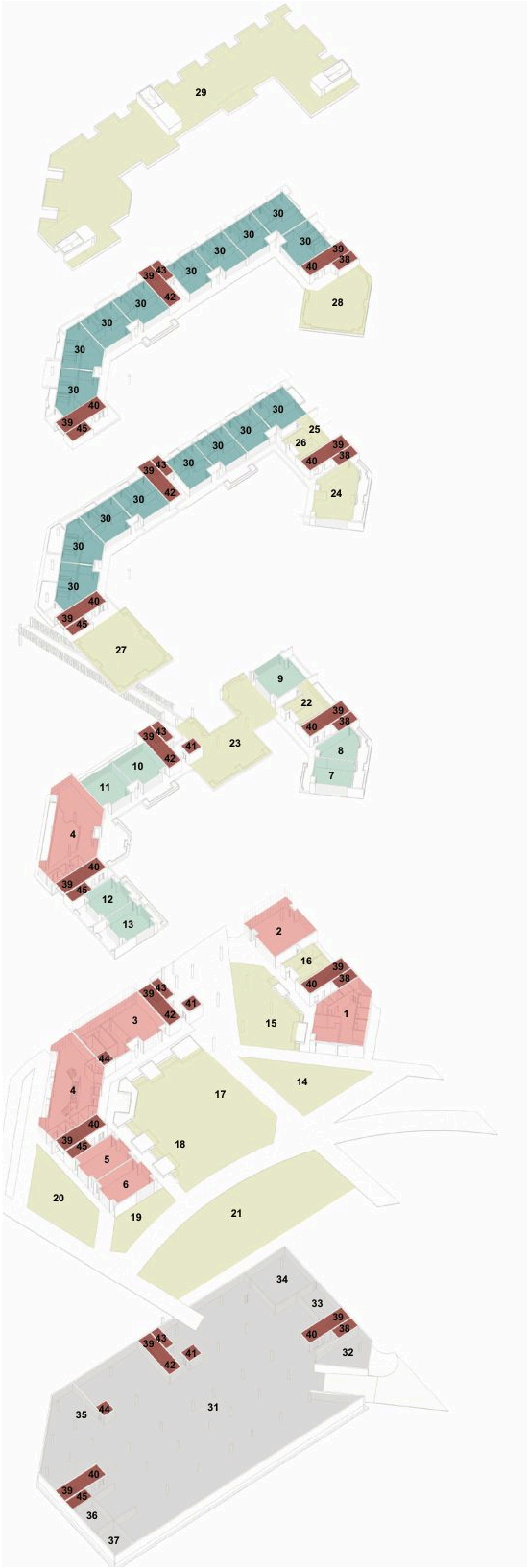
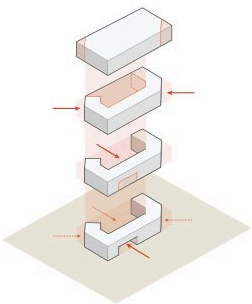
- Roosevelt Station .01
- F.D. Roosevelt Avenue .02
- Luis Muñoz Rivera Avenue .03
- Juan Ponce de León Avenue .04
- Juan B. Huyke Street .05
- Polytechnic University .06
- Parque Gándara .07



.08
Selected phase of the proposed
master plan for development.

FORM SUBTRACTION

SketchUp | Illustrator



PROGRAM DIAGRAM

Revit | Illustrator

LEGEND:

Commercial

- 01. Mini Spa
 - a. Reception
 - b. Office
 - c. Snack area
 - d. Restrooms
 - e. Massage rooms
 - f. Sauna
 - g. Storage
- 02. Gym
- 03. Brunch
 - a. Kitchen
 - b. Storage
 - c. Restrooms
 - d. Dinnig area
- 04. Bookstore & Café
 - a. Storage
 - b. Restrooms
 - c. Offices
 - d. Coffee bar
 - e. Reading area
- 05. Pet supply store
- 06. Bicycle shop & accessories

Workshops

- 07. Visual Arts
- 08. Ceramics
- 09. Dance
- 10. Screen Printing
- 11. Photography
- 12. Product Design
- 13. Finance

Public

- 14. Yoga area
- 15. Outdoor Gym
- 16. Public restrooms with showers
- 17. Pilates Area
- 18. Dog park
- 19. Bicycle parking
- 20. Catio
- 21. Skate park
- 22. Restrooms and storage
- 23. Pedestrian bridge reception
- 24. Multipurpose room
- 25. Shared laundry
- 26. Multipurpose restrooms
- 27. 1st level residential terrace
- 28. 2nd level residential terrace
- 29. Community garden

Residential

- 30. Apartments (17 units)
 - a. Kitchen
 - b. Dining room
 - c. Living room
 - d. Bathroom
 - e. Bedroom 1
 - f. Bedroom 2

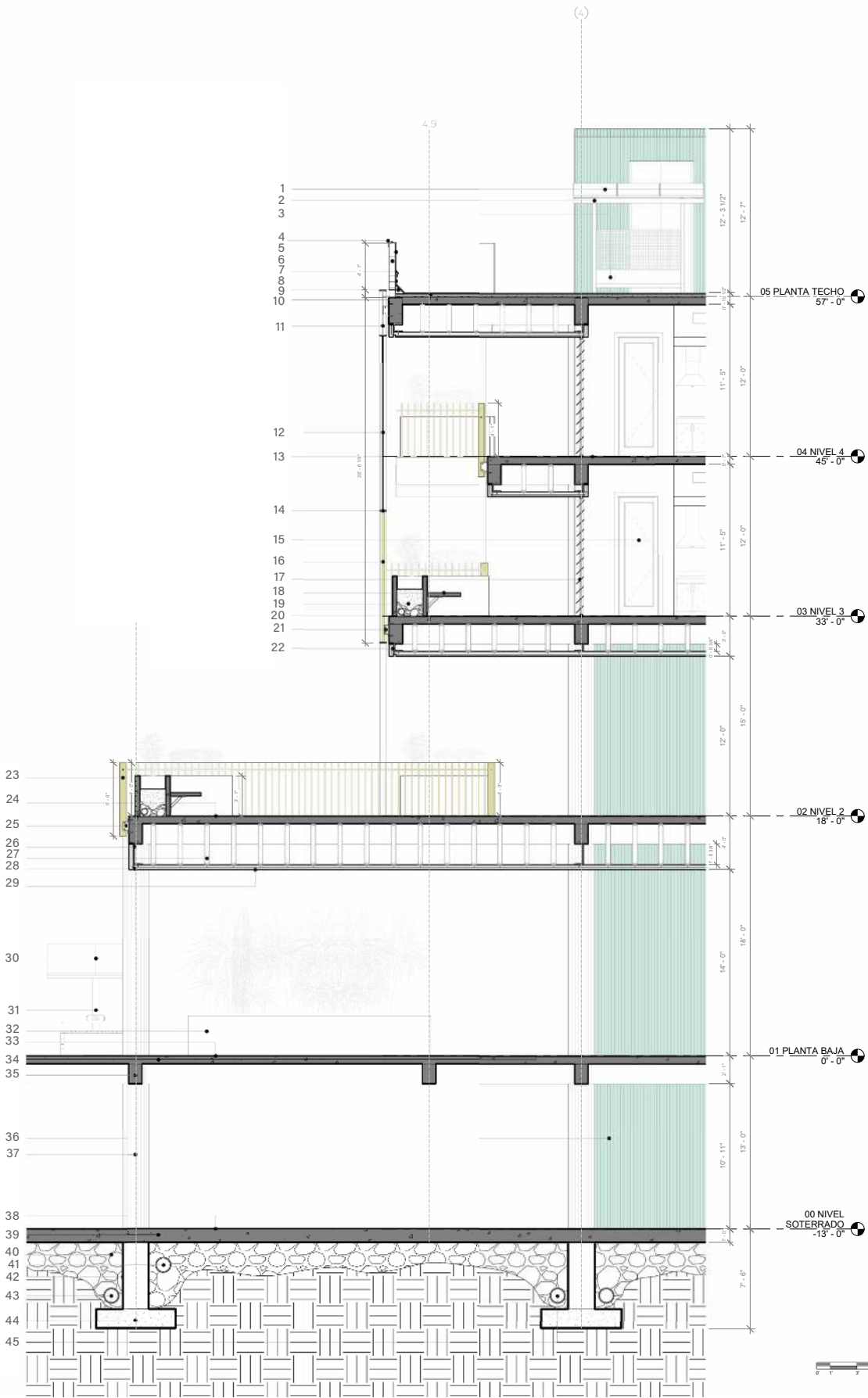
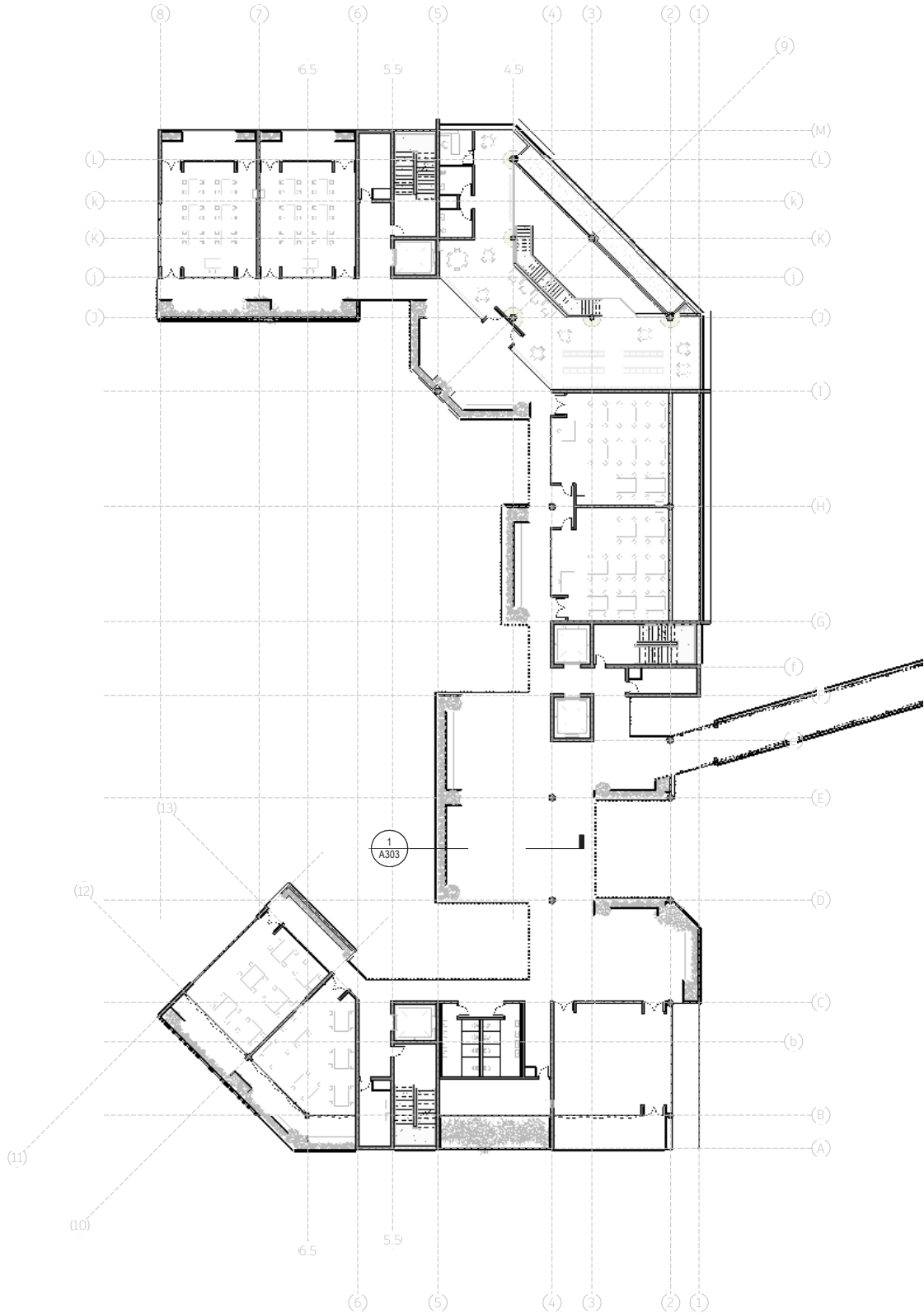
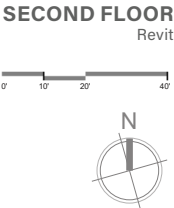
Services

- 31. Parking
- 32. Main electrical room
- 33. Pump room
- 34. Water tank
- 35. Loading area
- 36. Main mechanical room
- 37. Sprinkler water tank

Circulation

- 38. Electrical rooms
- 39. Emergency stairs
- 40. General elevators
- 41. Public elevator
- 42. Residential elevator
- 43. Janitor's closet
- 44. Freight elevator
- 45. Mechanical rooms

DETAILS



WEST WALL SECTION
Revit

LEGEND

- 01. Solar panels
- 02. Steel panel supports
- 03. Under-support planter
- 04. Cap flashing
- 05. Waterproof barrier
- 06. Parapet block wall
- 07. Counterflashing
- 08. Base flashing
- 09. Cant strips
- 10. Insulation
- 11. Perforated aluminum panel in white finish
- 12. Perforated aluminium panel in charcoal finish
- 13. Tile finish
- 14. Aluminum frame in white finish
- 15. Aluminum louver door in charcoal finish
- 16. Transparent lime-green-tinted acrylic panel
- 17. Glass louver window with aluminum frame
- 18. Wood-plastic composite bench seating
- 19. Concrete corner planter
- 20. Aluminum window frame
- 21. Aluminum sunshade support
- 22. Exterior gypsum soffit board
- 23. Lime-green aluminum railing anchored to the concrete slab with Hilti Kwik Bolts
- 24. Exposed concrete floor finish
- 25. Railing panel supports
- 26. Metal support framing at beam
- 27. Metal stud framing at 24" O.C.
- 28. Drip groove
- 29. Exterior gypsum soffit board
- 30. Sunbolt solar panels
- 31. Sunbolt solar charging station
- 32. Concrete planter
- 33. Exposed concrete floor finish
- 34. 7" reinforced concrete slab
- 35. 12"x 24" concrete beam
- 36. Striated concrete pattern wall finish
- 37. 24" diameter column
- 38. Exposed concrete floor finish
- 39. 12" reinforced concrete slab
- 40. Gravel
- 41. Drain tile
- 42. Moisture barrier
- 43. Foundation drainage system under slab
- 44. Foundation footing
- 45. Retaining wall drainage

RENDERS

MAIN FACADE

Revit | Enscape

Facade view from the Roosevelt
Urban Train Station and Luis
Muñoz Rivera Avenue.



DOG PARK

Revit | Enscape

View of the project's central park,
including the dog park and west
facade, from beneath the Urban
Train tracks near Parque Gándara.



CORNER APARTMENT

Revit | SketchUp | Enscape

PROGRAM

- 01. Dining area
- 02. Kitchen
- 03. Living area
- 04. Bathroom
- 05. Bedroom 1
- 06. Bedroom 2
- 07. Balcony

Axonometric perspective of the
typical housing module located
at the chamfered corners of the
architectural proposal.



TYPICAL APARTMENT

Revit | SketchUp | Enscape

PROGRAM

- 01. Dining area
- 02. Kitchen
- 03. Living area
- 04. Bathroom
- 05. Bedroom 1
- 06. Bedroom 2
- 07. Balcony

Axonometric view of the typical
housing module located along
the straight sections of the
architectural proposal.



02 GÁNDARA RESIDENCE

Pet-Friendly Student Housing

Area: 36,000 sq ft
Location:
Gándara Avenue | Río Piedras, San Juan PR

BED Intermediate Design II
Second Semester 2022 - 2023

Mentor:
María H. Luengo Duque

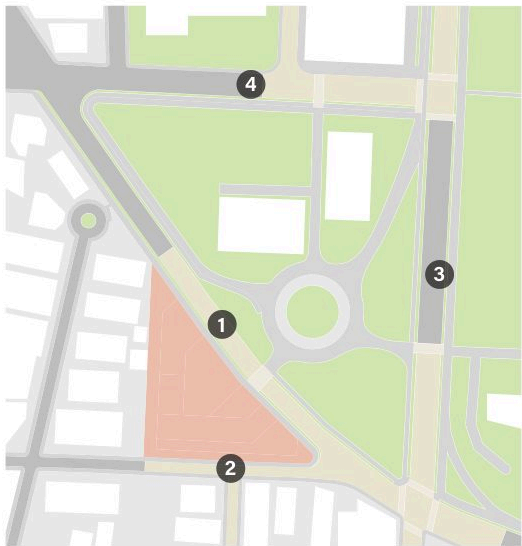
Description:
This project proposes a sustainable housing complex in the Santa Rita neighborhood of Río Piedras, combining student residences with a cat sanctuary to address both the shortage of lodging and the overpopulation of stray animals.

Framed within a broader urban strategy to improve pedestrian and cyclist mobility, the design blends residential units with public services, pet-friendly amenities, and commercial components such as a café, market, and mixed-use spaces. Students not only live in the complex but also participate in its daily operations, fostering a sense of ownership, economic opportunity, and collaboration.

The inclusion of a community garden supports local food production and sustainability, while the spatial organization allows for fluid transitions between functions. As a whole, the project operates as a sustainable node, a socially inclusive and ecologically responsive intervention rooted in the urban fabric of Río Piedras.

SITE PLAN
Illustrator

Dr. José N. Gándara Avenue .01
Amalia Marín Street .02
Juan Ponce de León Avenue .03
University Avenue .04

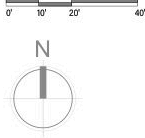


NORTH ELEVATION
SketchUp | Enscape

Render elevation view from Dr.
José N. Gándara Avenue.



GROUND FLOOR
AutoCAD | Illustrator | Photoshop



GROUP
SCALE: 1

PROGRAM

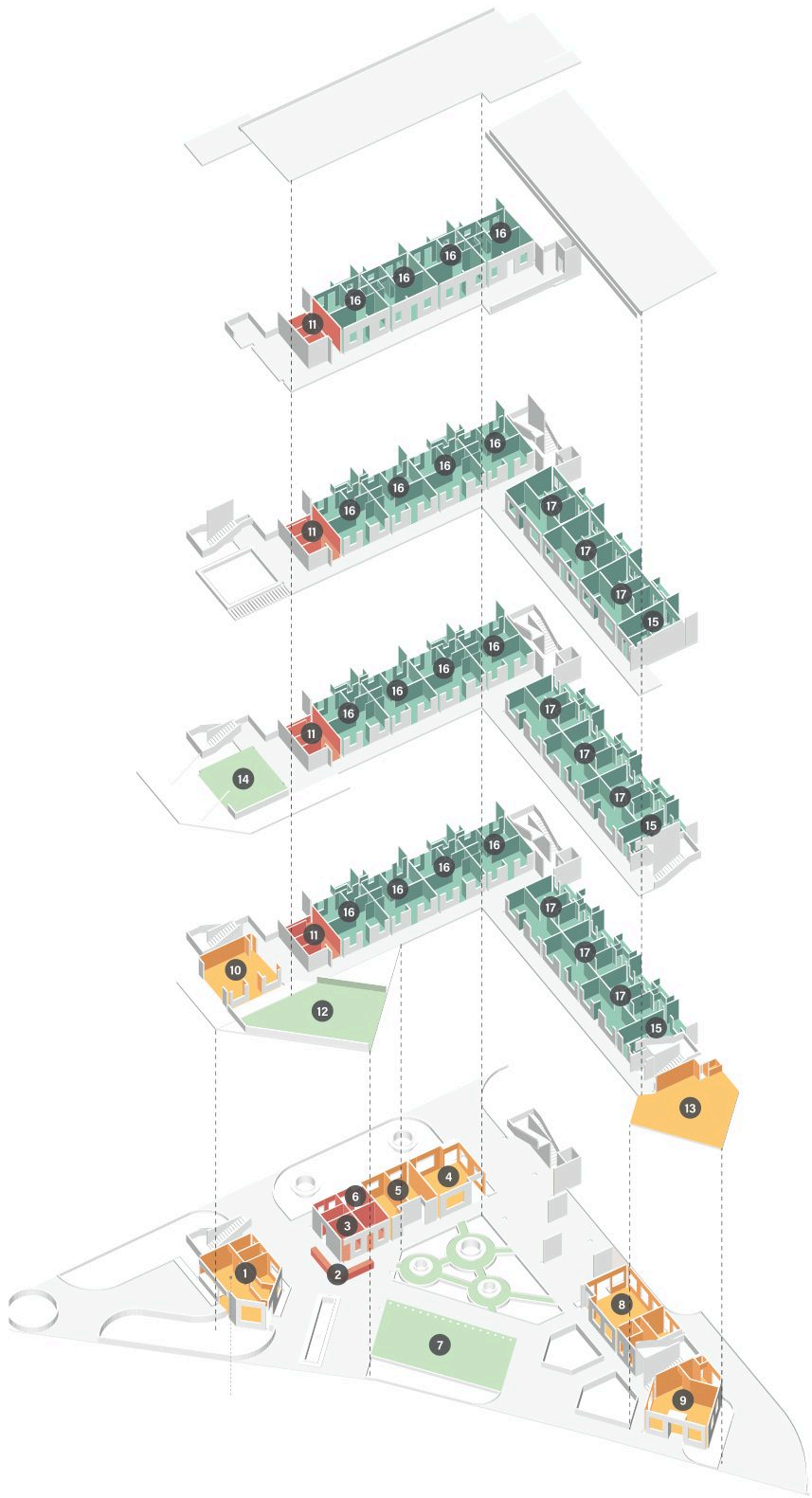
PROGRAM DIAGRAM

SketchUp | Illustrator

LEGEND:

- Administrative
- Residential
- Commercial
- Open Areas

- Coffee Shop .01
- Lobby .02
- Administration .03
- Workshops .04
- Restrooms .05
- Laundry .06
- Pet Park .07
- Cat Shelter .08
- Market .09
- Study Room .10
- Janitor's room .11
- Terrace .12
- Community Garden .13
- Multi-use Space .14
- Studio Apartment .15
- Private Unit .16
- Shared Unit .17



LONG SECTION

AutoCAD | SketchUp | Photoshop

0' 10' 20' 40'



PET PARK

SketchUp | Enscape

Render view from Gándara Avenue toward the Pet Park.



UNIT TYPES

SketchUp | Enscape

- 01. Shared Unit
- 02. Private Unit
- 03. Studio Apartment



03

VILLA CONTORNOS

Mixed-Use Adaptative Reuse Hotel

Area: 30,000 sq ft
Location:
Bayamón City Center | Bayamón, PR

BED Advanced Design II
Second Semester 2023 - 2024

Mentors:
Robin R. Planas Casado
Rafael Castro Montes de Oca

Description:
This project proposes a mixed-use hotel complex located in the urban heart of Bayamón, aiming to activate the surrounding context through architecture that responds to both cultural identity and urban flow. The design integrates fluid and curved volumes that align with the axis of the adjacent church, generating a formal dialogue and reinforcing its civic presence within the city.

The hotel program includes residential units, office spaces, and commercial areas, creating a dynamic environment that serves both visitors and the local community. Circulation is organized to encourage pedestrian engagement and visual continuity with the historic fabric, while the massing and materiality respond to the rhythm and texture of the urban surroundings.

At its core, the project seeks to strengthen the urban center by offering a spatial and programmatic structure that honors Bayamón's heritage while embracing a contemporary architectural language. The result is a flexible and inclusive space that blends functionality, culture, and public life.

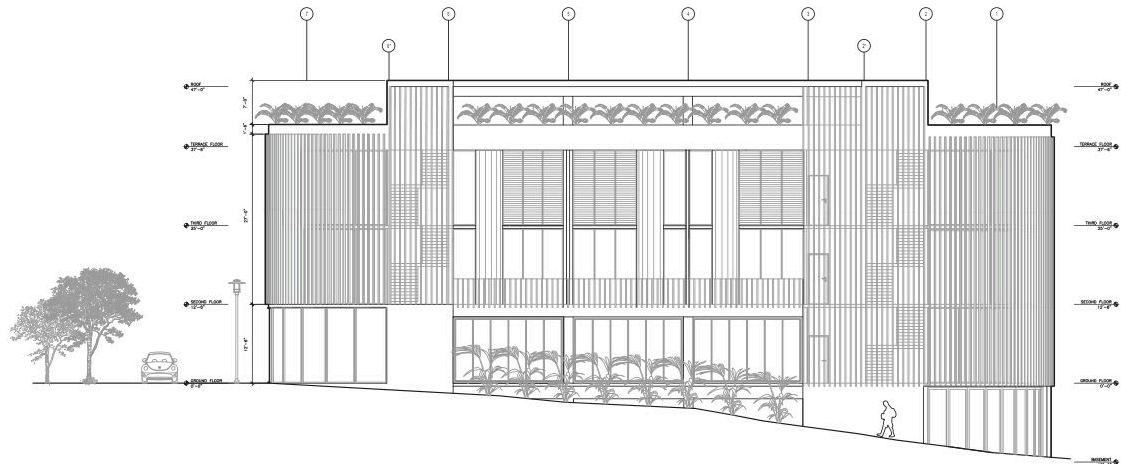
SITE CONCEPT
SketchUp | Enscape

Palmer Street .01
Alum Tio Street .02
Dr. Ferrer Street .03



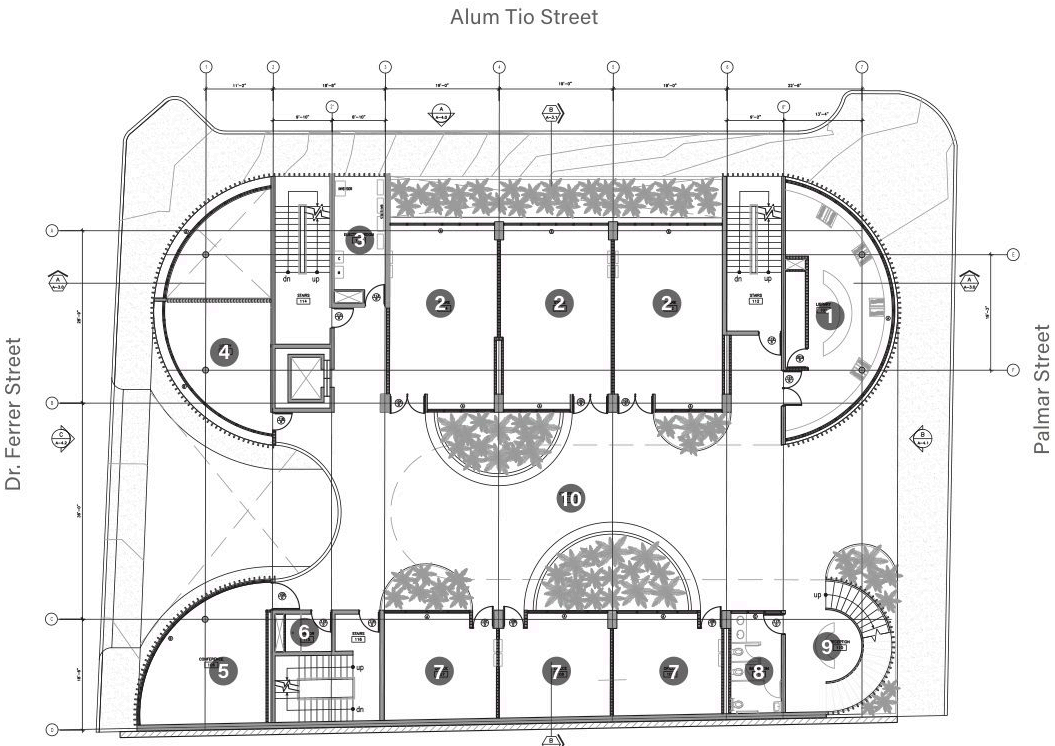
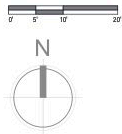
NORTH ELEVATION
AutoCAD

0' 5' 10' 20'



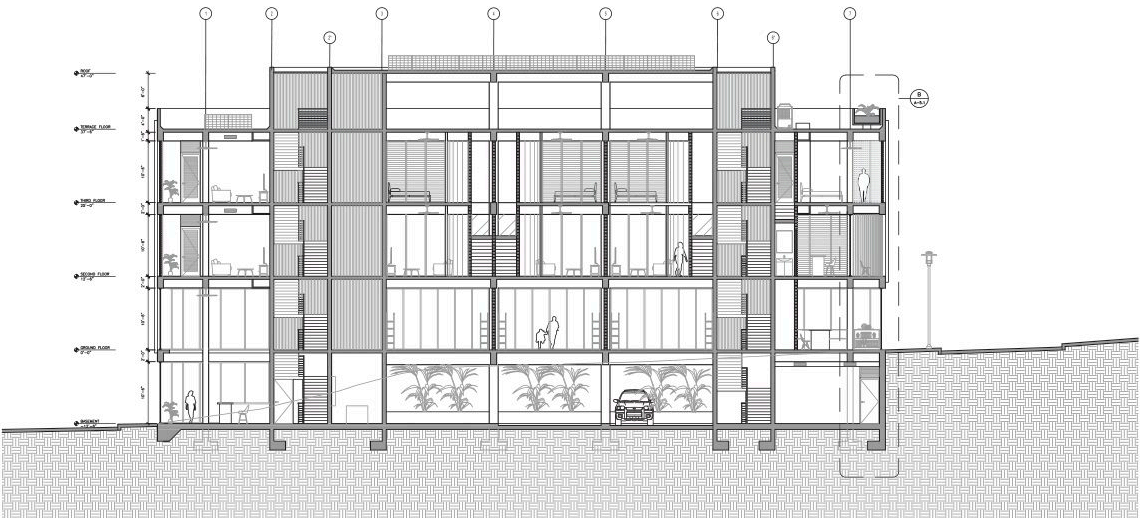
GROUND FLOOR
AutoCAD

- PROGRAM**
- 01. Library
 - 02. Stores
 - 03. Electrical room
 - 04. Lobby
 - 05. Conference room
 - 06. Janitor's room
 - 07. Offices
 - 08. Restrooms
 - 09. Reception
 - 10. Courtyard



LONG SECTION
AutoCAD

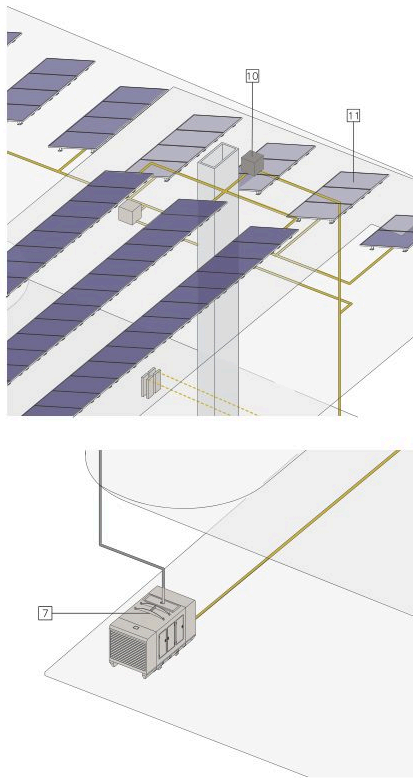
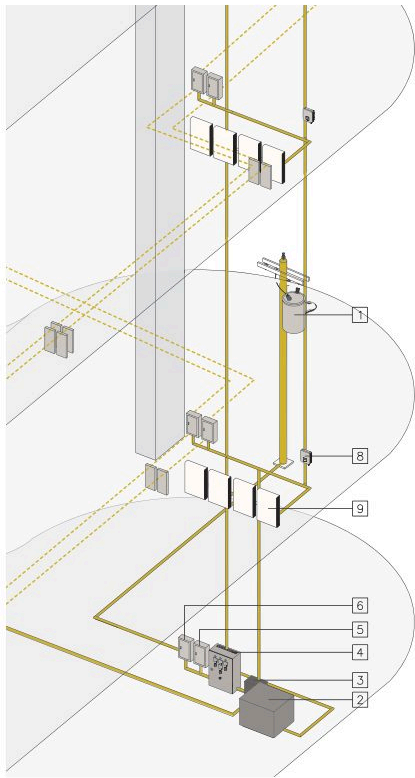
0' 5' 10' 20'



DETAILS

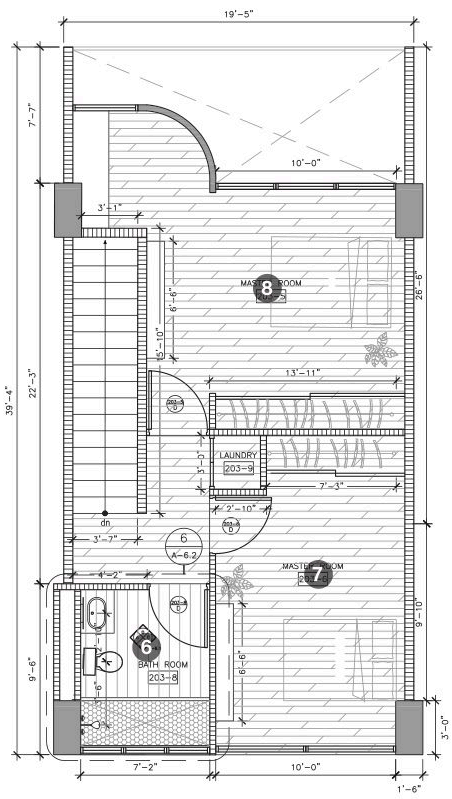
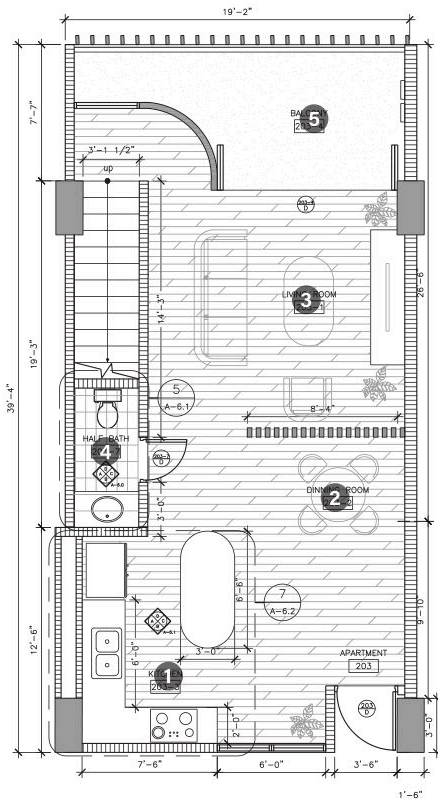
ELECTRICAL DETAIL

- AutoCAD | SketchUp | Illustrator
- LUMA Supply .01
 - Transformer .02
 - Automatic Transfer Switch .03
 - Main Distribution Panel .04
 - Common Panel .05
 - Mechanical Panel .06
 - Electric Generator .07
 - Inverter .08
 - Batteries .09
 - Solar Charge Controller .10
 - Solar Panels .11



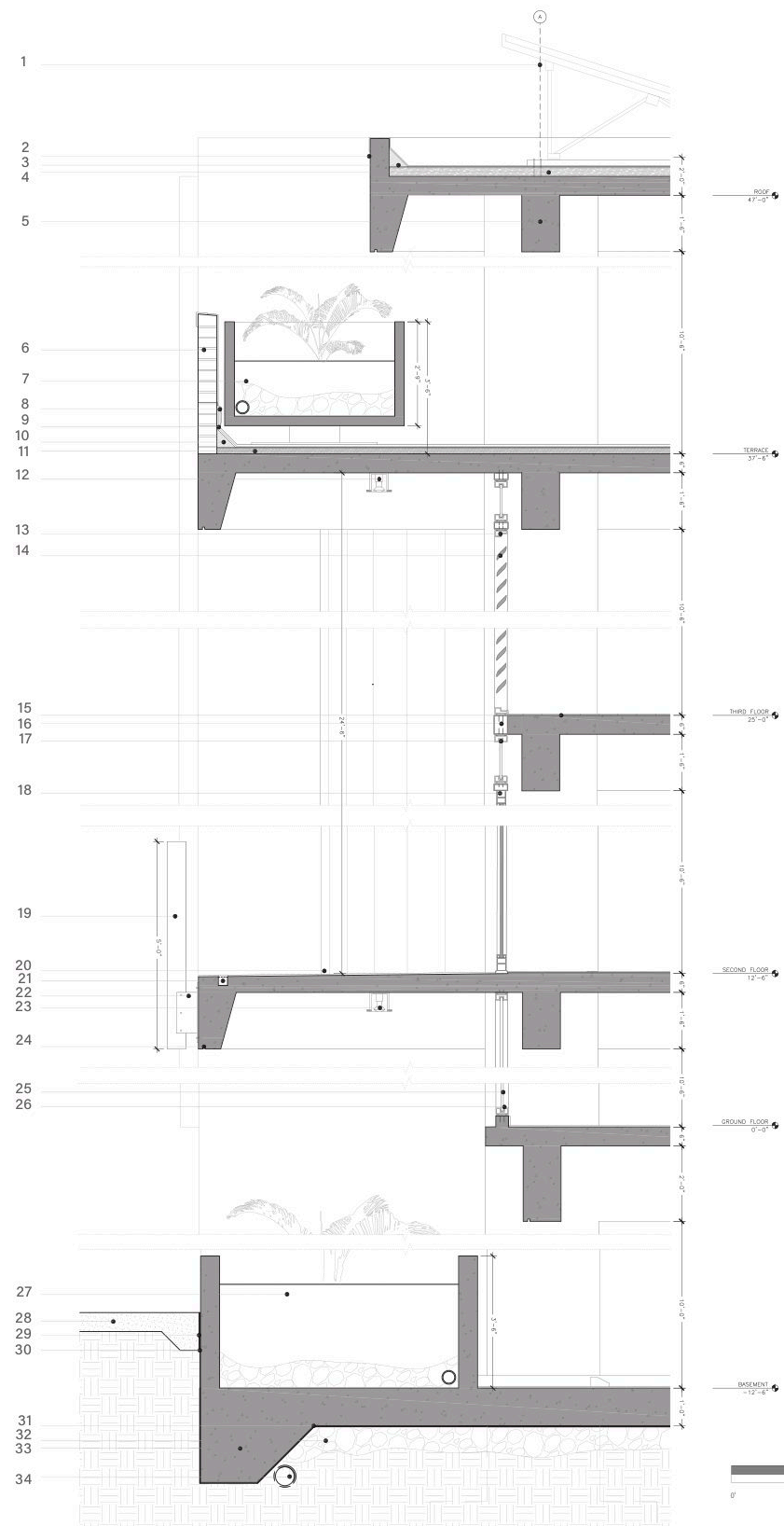
APARTMENT BLOWUPS

- AutoCAD
- 0' 5' 10'
- PROGRAM
- Kitchen .01
 - Dining area .02
 - Living area .03
 - Half bath .04
 - Balcony .05
 - Bathroom .06
 - Bedroom .07
 - Master room .08



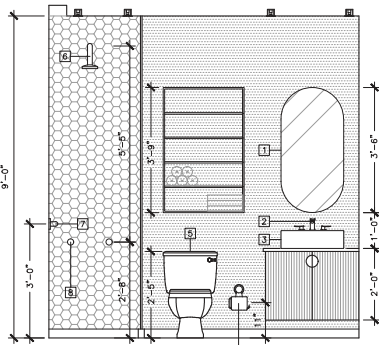
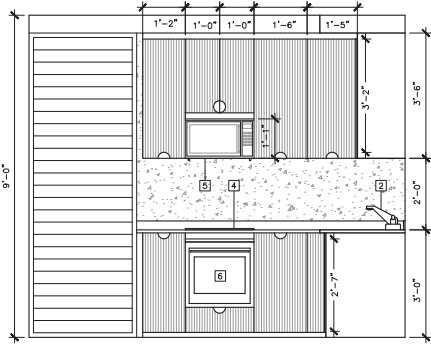
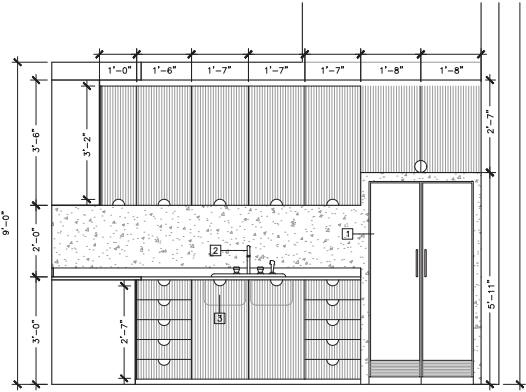
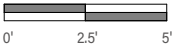
NORTH WALL SECTION

- AutoCAD
- LEGEND
- 01. Solar panels
 - 02. Cap flashing
 - 03. Waterproof barrier
 - 04. Solar panel support
 - 05. Concrete branch
 - 06. Block wall
 - 07. Planter
 - 08. Counterflashing
 - 09. Base flashing
 - 10. Cant strip
 - 11. Insulation
 - 12. Balcony LED light
 - 13. Aluminum window frame
 - 14. 4" louvers
 - 15. Floor tile
 - 16. 6"x 4" aluminum tube
 - 17. Folding door frame
 - 18. Aluminum glass folding door
 - 19. Aluminum panel
 - 20. Aluminum door base
 - 21. Balcony drainage
 - 22. Panel supports
 - 23. Balcony lamp
 - 24. Drip groove
 - 25. Glass window
 - 26. Aluminum window frame
 - 27. Planter
 - 28. New sidewalk
 - 29. Plastic filler
 - 30. Expansion joint
 - 31. Moisture barrier
 - 32. Gravel
 - 33. Foundation footing
 - 34. Drain tile



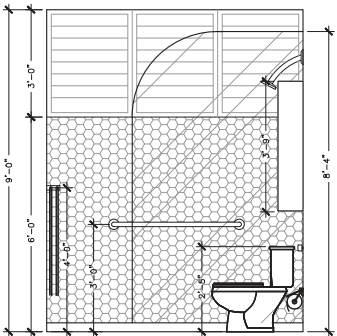
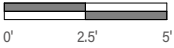
KITCHEN DETAILS
AutoCAD

- Fridge .01
- Faucet .02
- Sink .03
- Stove .04
- Microwave .05



BATHROOM DETAILS
AutoCAD

- 01. Mirror
- 02. Faucet
- 03. Sink
- 04. Paper holder
- 05. Toilet
- 06. Shower head holder
- 07. Grab bar
- 08. Shower faucets



RENDERS

CHURCH'S VIEW
SketchUp | Enscape

Render view toward the Church.



KITCHEN

SketchUp | Enscape
Interior render of a typical apartment kitchen.



BATHROOM

SketchUp | Enscape
Interior render of a typical apartment bathroom.

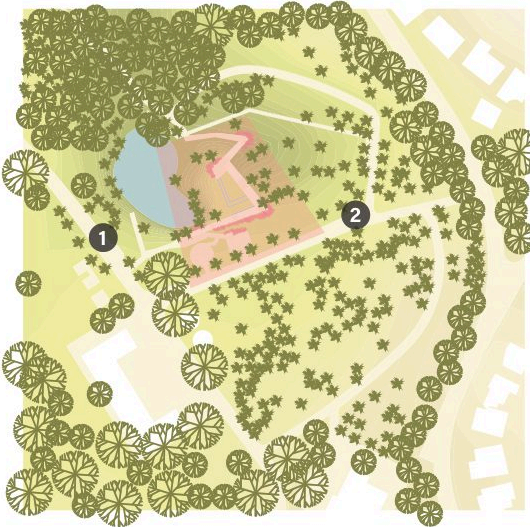


04 BOUGAIN-VILLE GARDEN

Landscape Pavillion

SITE PLAN
AutoCAD | Illustrator

Palmatum Street .01
Palma Real Street .02

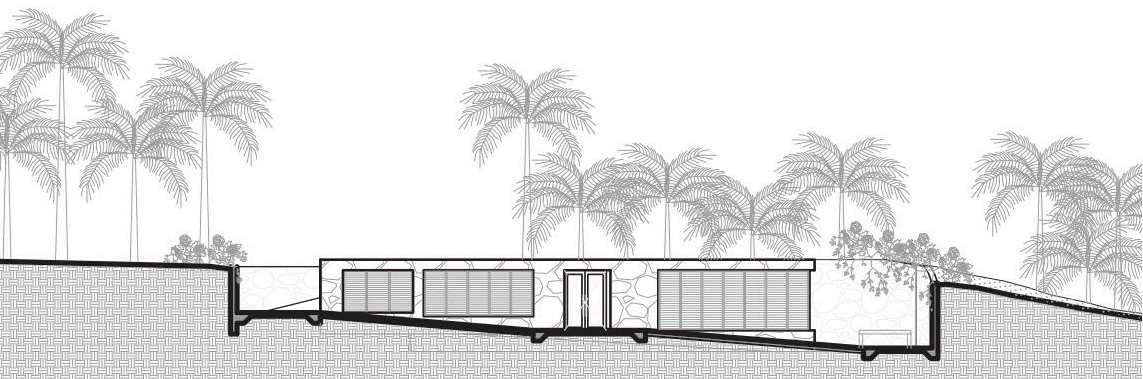


AXONOMETRIC
SketchUp | Illustrator



MAIN ELEVATION
AutoCAD

0' 5' 10' 20'



Area: 1,500 sq ft
Location:
Jardín Botánico UPR | Río Piedras, San Juan PR

BED Design Fundamentals II
Second Semester 2020 - 2021

Mentors:
Shellar M. García Córdova
Anixa Gonzáles Ríos

Description:
This project proposes a pavilion integrated into the landscape of the UPR Botanical Garden, specifically in the Palmetum area. The intervention seeks to establish a spatial and natural connection between the upper bougainvillea garden and a lower garden with diverse vegetation located further down the slope, at the level of the lake. Through an inclusive ramped pathway, visitors transition from one ecological environment to another, experiencing changes in vegetation, terrain, and views. The design involves cutting into the land to embed the pavilion into the terrain, using a green roof to reduce thermal load and blend with the surroundings. The pavilion acts as a pause point for reflection and frames open views toward the surrounding natural landscape. At the same time, the path functions as a linear bougainvillea garden, guiding the sensory experience and highlighting the value of the existing vegetation.

GROUND FLOOR
AutoCAD

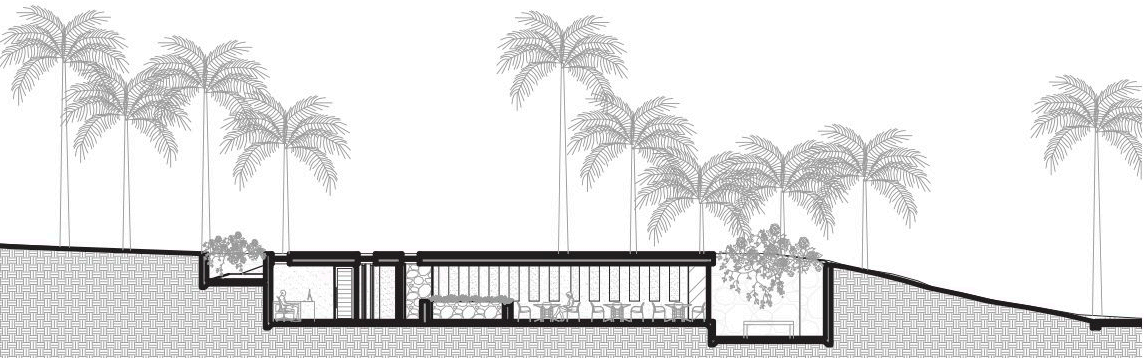
PROGRAM
01. Terrace
02. Multipurpose Room
03. Office
04. Storage
05. Accessible Restroom
06. Standard Restroom

0' 5' 10' 20'



SECTION
AutoCAD

0' 5' 10' 20'



RENDERS

MAIN FACADE
SketchUp | Enscape

View from the central garden toward the northeast-facing main facade.



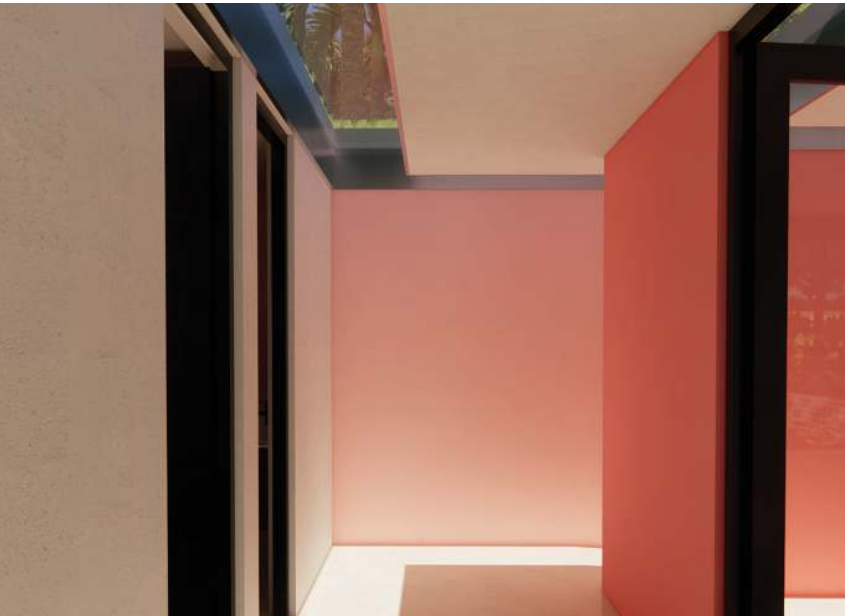
TERRACE
SketchUp | Enscape

View toward the outdoor terrace: a transitional space between interior and exterior circulation.



CORRIDOR
SketchUp | Enscape

Interior corridor view naturally illuminated by a skylight.



GARDEN VIEW
SketchUp | Enscape

View from the outdoor terrace toward the central garden.



MULTIPURPOSE AREA
SketchUp | Enscape

Interior view of the multipurpose area.



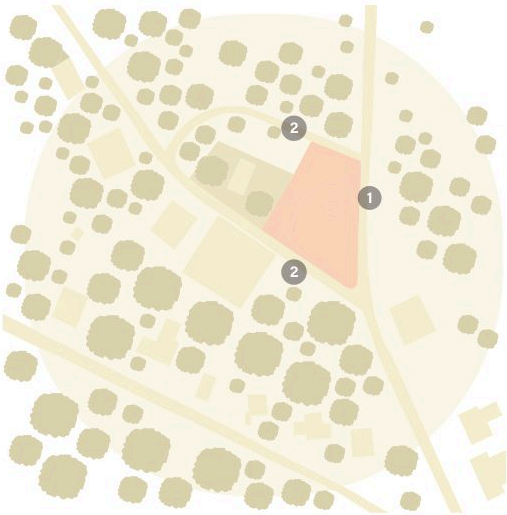
05

ATELIER SCHOOL

Educational and Community Center

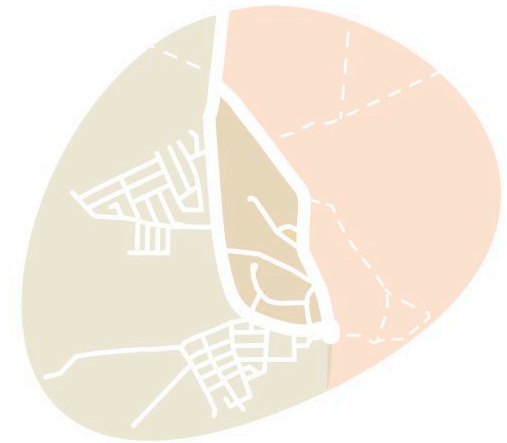
SITE PLAN
Illustrator | AutoCAD

PR-705 .01
Trinitaria Street .02



CONCEPT
Illustrator | AutoCAD

Montesoria
Aguirre
Gathering



Area: 6,200 sq ft
Location:
Aguirre | Salinas PR

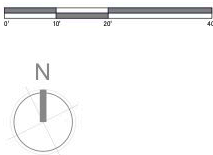
BED Elemental Design I
First Semester 2021 - 2022

Mentors:
Doel Fresse Álvarez
Raphael Osuna Segarra

Description:
This project presents an Atelier School and Community Center located in the historic area of the former Central Aguirre in Salinas, Puerto Rico. Inspired by the past separation between Aguirre and Montesoria, a divide shaped by social and economic differences, the design creates a space that encourages unity and cooperation between the two communities. With areas for learning, woodworking, and gathering, the project supports the recovery of traditional wood construction and helps strengthen community ties. The program includes workshops, a library, multipurpose rooms, guest rooms, and outdoor spaces. Beyond meeting functional needs, the project also aims to restore social and cultural value. Its layout and spatial design are shaped by the history and memory of the site, recognizing the potential of Aguirre as the last remaining company town. Although currently neglected, it still holds important meaning for future generations.

GROUND FLOOR PLAN
AutoCAD | Photoshop

- PROGRAM
- 01. Parking
 - 02. Reception
 - 03. Library
 - 04. Conference room
 - 05. Restrooms
 - 06. Multipurpose area
 - 07. Wood workshop
 - 08. Storage
 - 09. Loading zone
 - 10. Teachers' offices
 - 11. Administrative office
 - 12. Kitchen
 - 13. Guests' rooms
 - 14. Bathrooms
 - 15. Courtyard

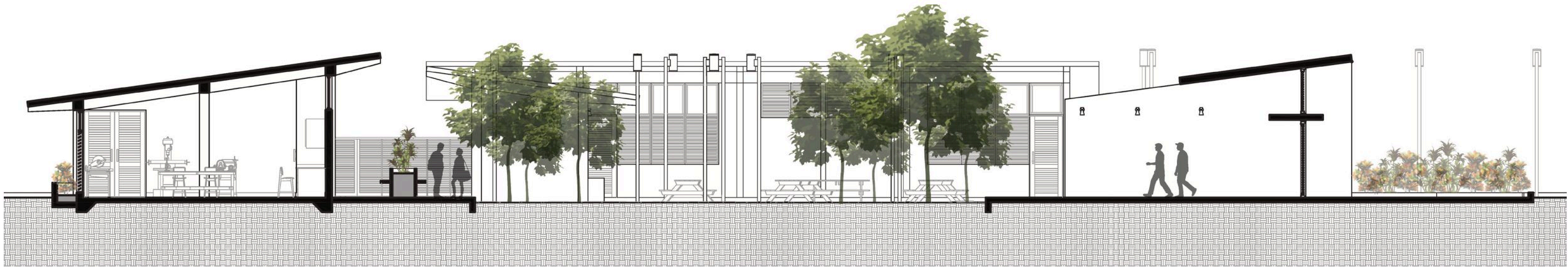


ELEVATION RENDER
SketchUp | Enscape

View of the main facade and project entrance from trinitaria street, near PR-705.



SECTION
AutoCAD | SketchUp | Photoshop



RENDERS

COURTYARD
SketchUp | Enscape

View from the Reception Area
Toward the Interior Courtyard.



LIBRARY
SketchUp | Enscape
Library interior view at night.



WOOD WORKSHOP
SketchUp | Enscape
Woodworking workshop interior view.

06 AGUIRRE CANE TOWER

Landmark and View Exploration

SITE PLAN
SketchUp | Illustrator

PR-705 .01
Located at the PR-705 junction in Aguirre, Salinas, PR.



BED Elemental Design I
First Semester 2021 - 2022

Mentors:
Doel Fresse Álvarez
Raphael Osuna Segarra

Description:
Aguirre Cane Tower is conceived as a visual landmark for the historic company town of Aguirre, shaped by its sugarcane industry and abandoned sugar mill. The design uses cubic volumes and cylindrical vertical elements to reference different forms of sugar, while four stacked levels are oriented toward specific views of the road, neighboring landscape, natural reserve, and former Central Aguirre. The project transforms the lookout into both an observation point and a symbolic marker of place.

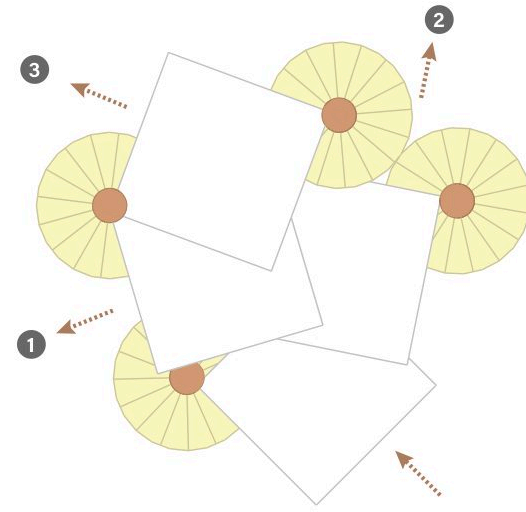
AXONOMETRIC
SketchUp | Illustrator



CONCEPT
SketchUp | Illustrator

"Levels are oriented toward specific views of the road, neighboring landscape, natural reserve, and former Central Aguirre."

Natural reserve .01
Neighboring landscape .02
Central Aguirre .03



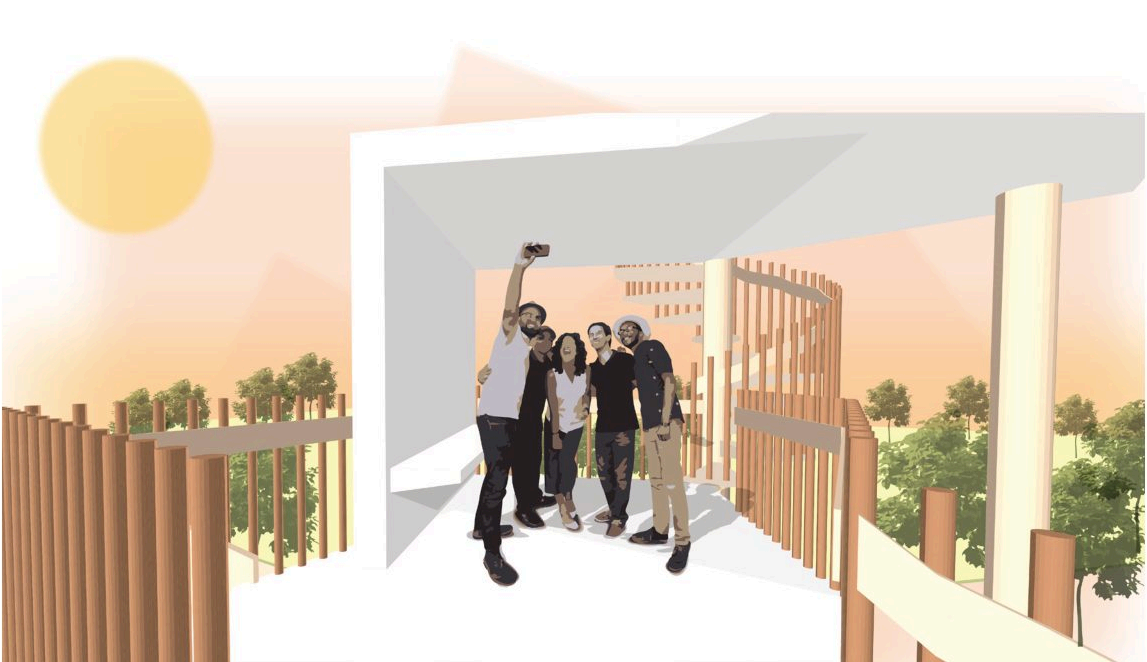
PERSPECTIVE
SketchUp | Illustrator

View from PR-705 toward the project entrance.



INTERIOR
SketchUp | Illustrator

Interior view of the third level oriented toward the Jobos Bay National Estuarine Research Reserve.



07

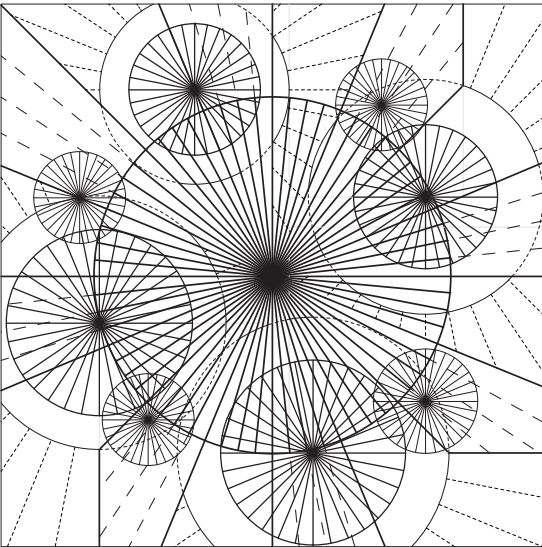
FENESTRA NATURA

Perception and Light Exploration

COMPOSITION

Hand sketch | Illustrator

The central circle represents my gaze, while the overlapping circles symbolize the perspectives of those around me. The radiating lines represent light and its essential role in shaping how we perceive our surroundings.

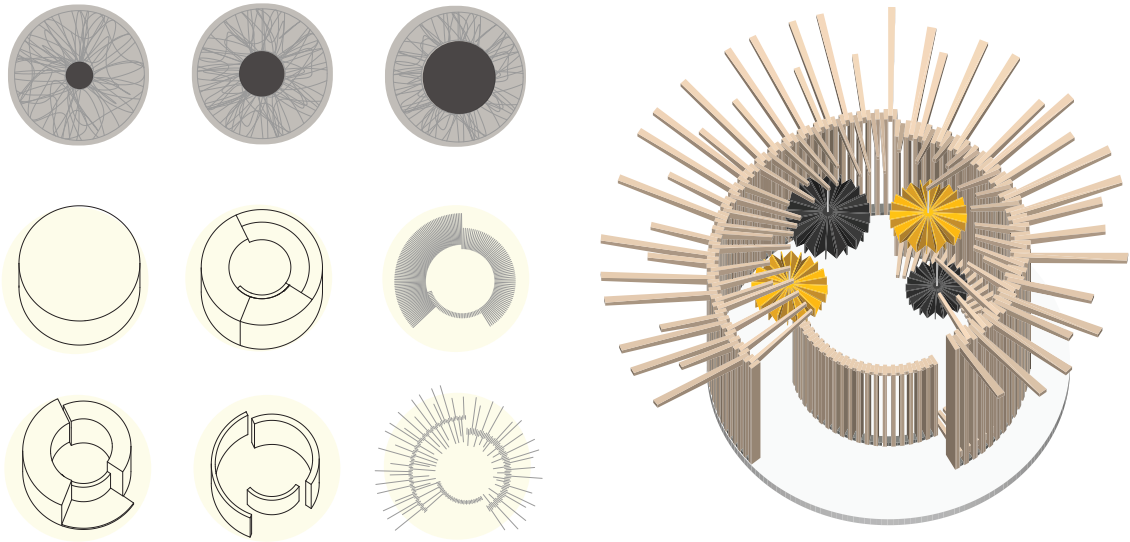


BED Elemental Design II

Second Semester 2021 - 2022

Mentors:
Blanquita Calzada Acosta
Caludia C. Cintrón Rivera

Description:
Fenestra Natura explores the window through the idea of the human gaze and its connection to the surrounding environment. Inspired by the iris, light, and pupil dilation, the project uses circular fragments, vertical wooden elements, and suspended mobiles to guide the user's attention upward. Located at the University of Puerto Rico - Río Piedras Campus, the installation responds to views of the sky and tree canopy, transforming the window into a dynamic experience of light, movement, and perception.



CONCEPT

SketchUp | Illustrator

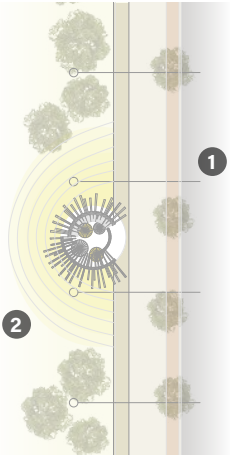
Development of the conceptual form, where the dilation of the eye defines the different radii used in shaping the pavilion space.

FINAL MODEL

Wooden craft sticks | Foam board
| 0.8 mm brown wire | Clay |
Colored papers

Photo by Marisabel Marrero.

University Avenue .01
Parque del Centenario .02



Located between the Student Center and Parque del Centenario at the University of Puerto Rico, Río Piedras Campus.



MODEL CLOSE-UP

Wooden craft sticks | 0.8 mm brown wire | Colored papers

Photo by Marisabel Marrero.

Close-Up View of the Hanging Elements in the Physical Model.



MODEL RENDER

SketchUp | Illustrator | Enscape

User's perspective view of the colorful suspended elements, designed to direct the gaze toward the sky and complement the movement of the trees in the wind.



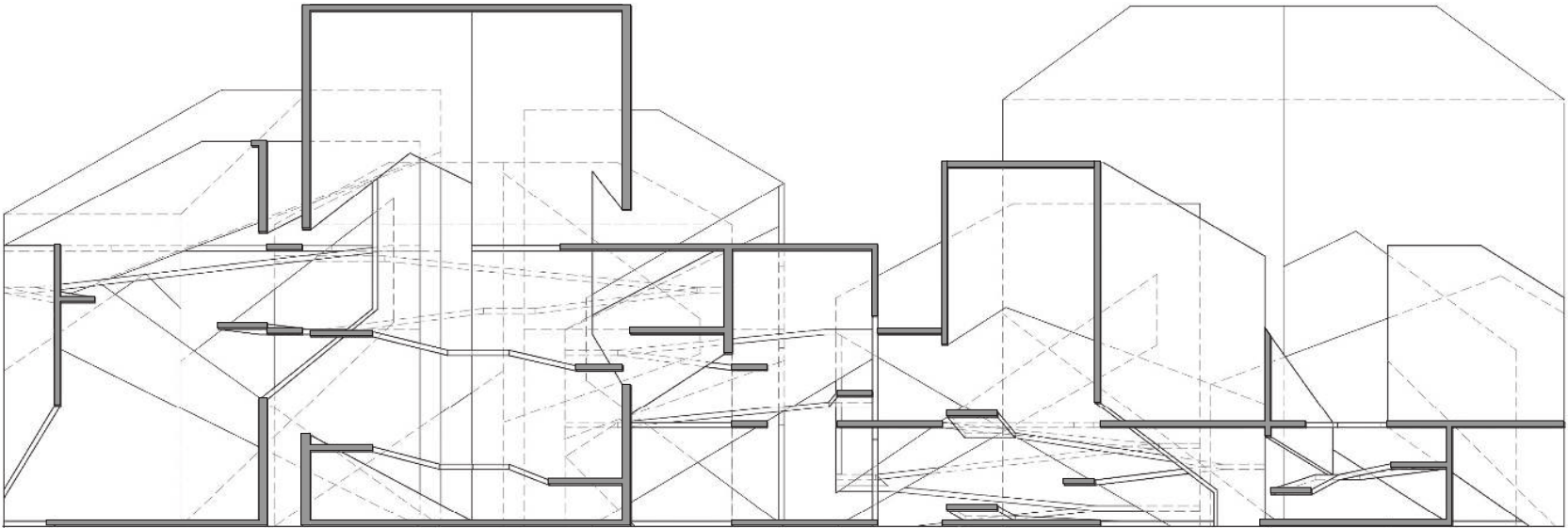
08 SPATIAL SEQUENCE

Focal Point Exploration

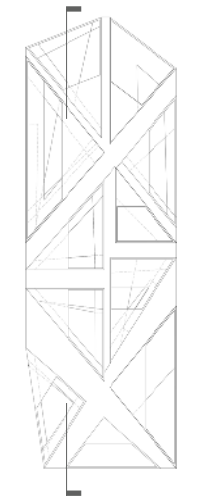
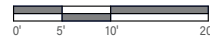
BED Design Fundamentals I
First Semester 2020 - 2021

Mentor: Luis Alonso Conty

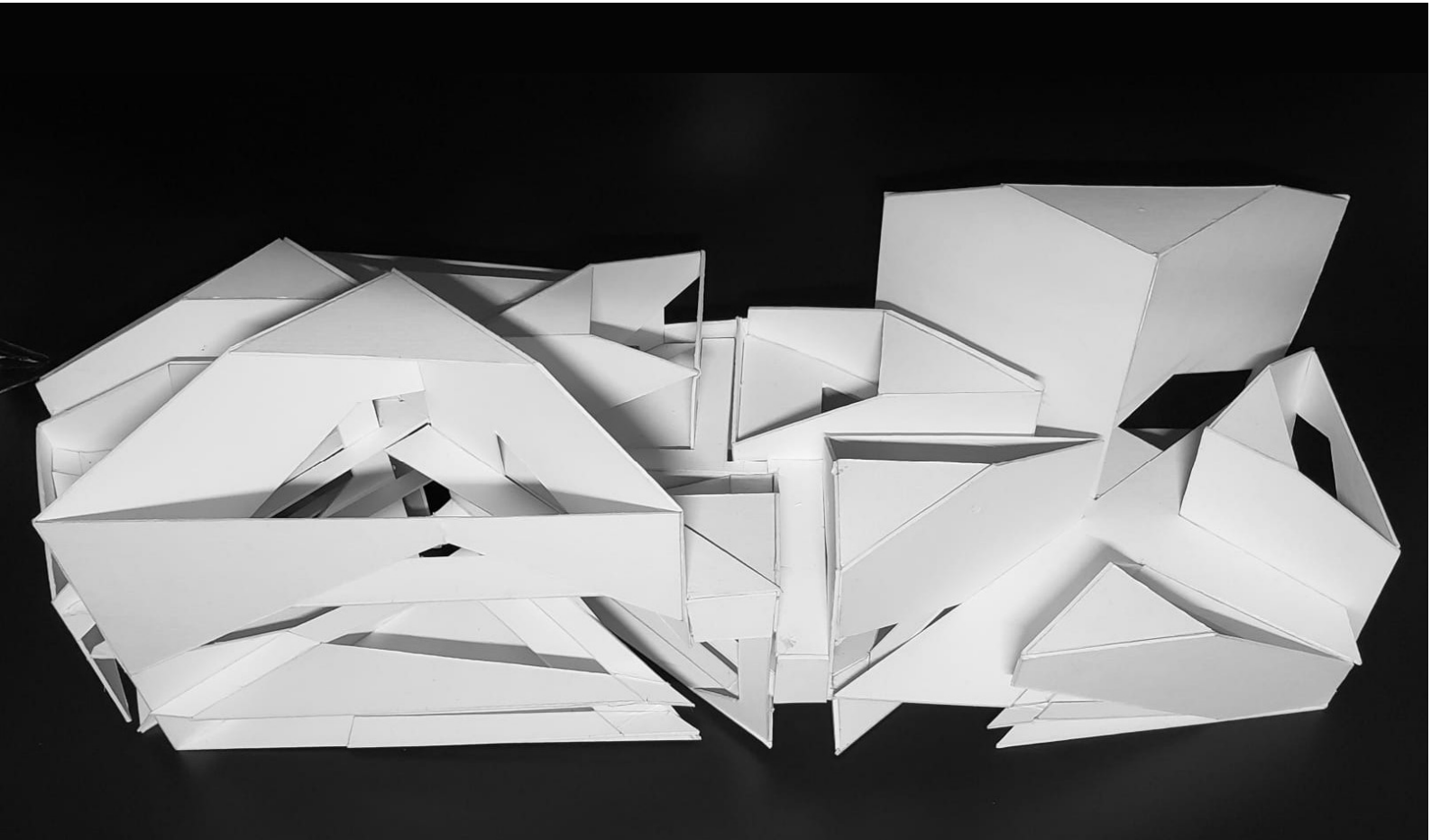
Description:
This project explores the development of a spatial sequence within a 50 ft x 150 ft x 50 ft volume, inspired by the song "La Nueva Ciudad". The composition translates elements of the song into spatial form, using focal point principles to organize movement, hierarchy, and visual connections. Two larger volumes act as dominant elements within the sequence, representing the moments when the chorus appears and creating stronger points of emphasis throughout the spatial experience.



LONG SECTION
AutoCAD



FINAL MODEL
White mat board
Photo by Marisabel Marrero.



MODEL ELEVATION
White mat board
Photo by Marisabel Marrero.



MODEL CLOSE-UP
White mat board
Photo by Marisabel Marrero.



09 ROLLING DESK

Adaptive Furniture

FINAL PROTOTYPE
Components installed on a wheelchair

Wood panels | ½" PVC pipes | PLA filament | PETG filament | Screws | Nuts | Washers

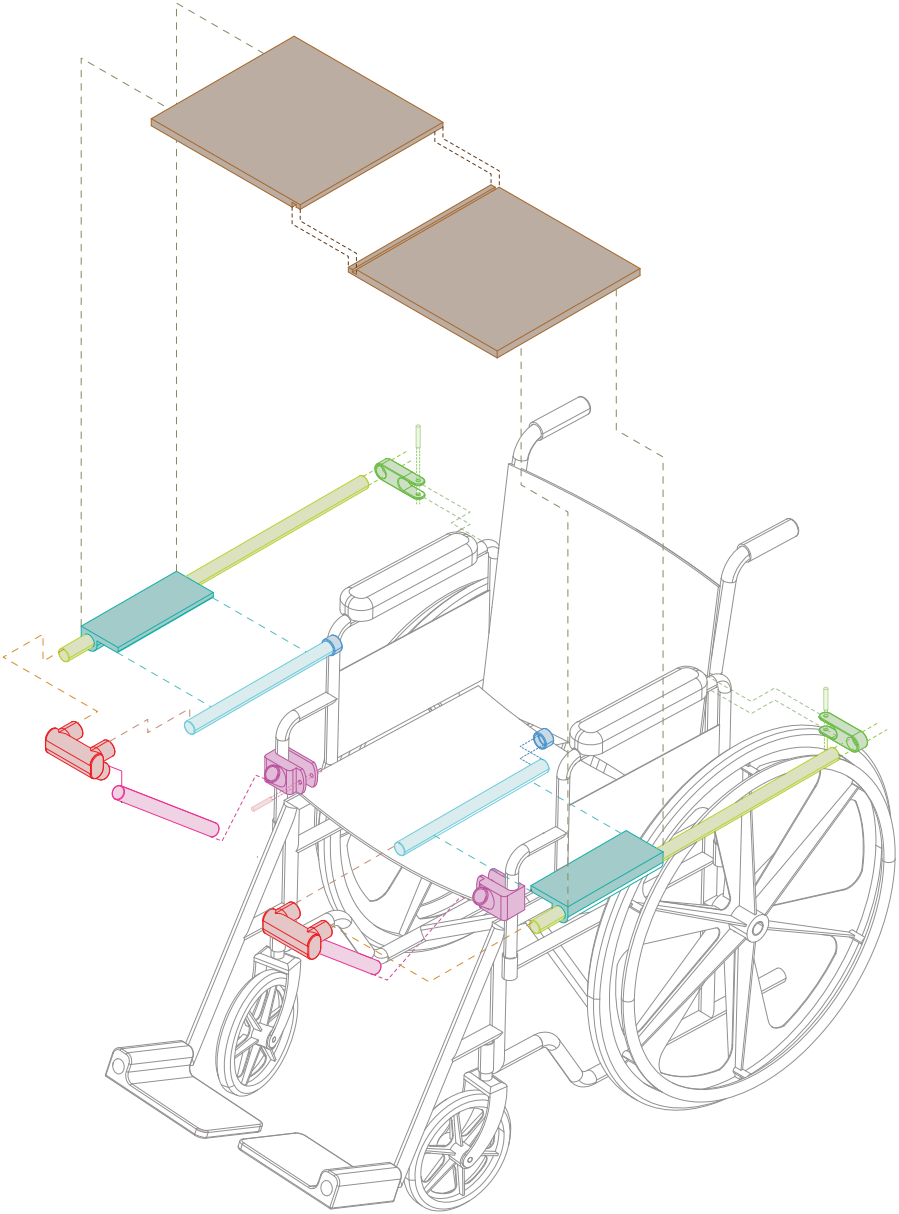
Photo by Marisabel Marrero.



BED Prototyping and 3D Printing
First Semester 2024 - 2025

Mentor: Carlos Casillas Charrón
Team: Nayelis Pérez Ándujar

Description:
Rolling Desk is a foldable, adjustable, and removable work surface designed to attach directly to a wheelchair, providing users with a comfortable and adaptable space for daily activities. The project focuses on accessibility, ease of use, and customization, allowing the desk to respond to different needs and preferences. The system is designed as a replicable and reconfigurable product using simple, accessible components such as PVC tubing, wood panels, and 3D-printed parts. Its modular assembly allows the desk to be easily produced, adjusted, and assembled while maintaining a lightweight and practical design.



ASSEMBLY DIAGRAM
Rhinoceros 3D | AutoCAD | Illustrator

- INSTRUCTIONS:**
01. Attach the lower component to the front of the wheelchair frame using a 1-1/2" screw and nut.
 02. Attach the rear component behind the armrest, with the opening facing forward, using a 1-1/2" screw and nut.
 03. Insert the 10" PVC pipe into the front lower component.
 04. Slide the sliding component onto the 25" PVC pipe, with the rounded side facing outward.
 05. Insert the rear end of the 25" PVC pipe into the rear component while supporting the front end with the sliding component.
 06. Connect the front component to the 10" pipe through the downward-angled opening and to the 25" pipe through the outward-facing opening.
 07. Insert the 12" PVC pipe into the remaining inward-facing opening and install the stop at the rear end.
 08. Rotate the sliding component until it rests on the 12" pipe, then secure the wood panel with adhesive from the outer corner toward the center.
 09. Repeat the assembly on the other side.

Representation by Nayelis Pérez.
Model by Marisabel Marrero.

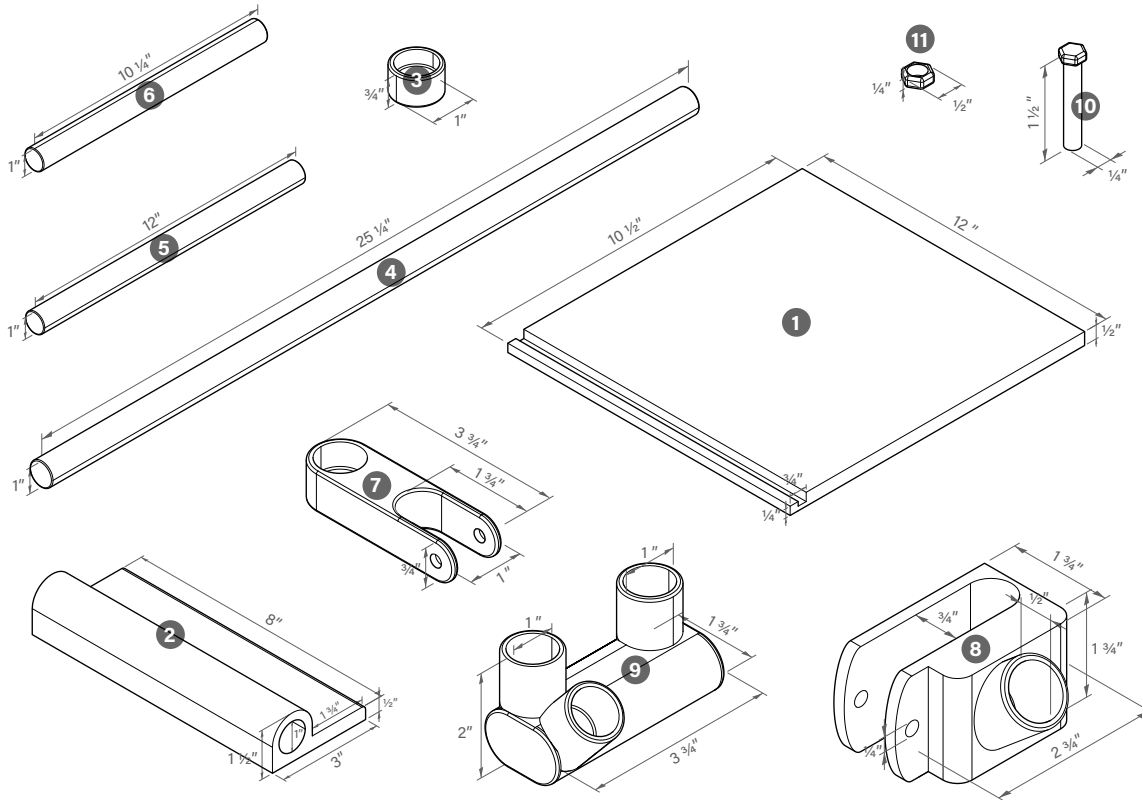
KIT OF PARTS
Rhinoceros 3D | Illustrator

- 2 wood panels .01
- 2 PLA sliding components .02
- 2 PLA stops .03
- 2 PVC pipes 25" .04
- 2 PVC pipes 12" .05
- 2 PVC pipes 10" .06
- 2 PETG rear components .07
- 2 PETG lower components .08
- 2 PETG front components .09
- 4 x 1-½" screws .10
- 4 nuts + washers .11

Representation by Marisabel Marrero and Nayelis Pérez.

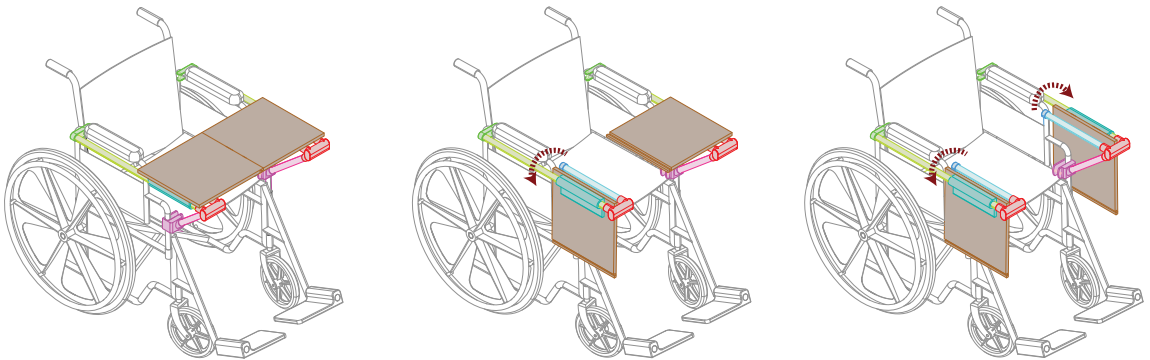


Photograph by Marisabel Marrero, Enhanced Using AI tools.



OPERATION DIAGRAM
Rhinoceros 3D | AutoCAD | Illustrator

Diagram by Marisabel Marrero, based on an original representation by Nayelis Pérez.





10 DECO DESK

Moudular Desk Organizer

FINAL PROTOTYPE
Laser Cutting | Basswood
Photo by Marisabel Marrero.



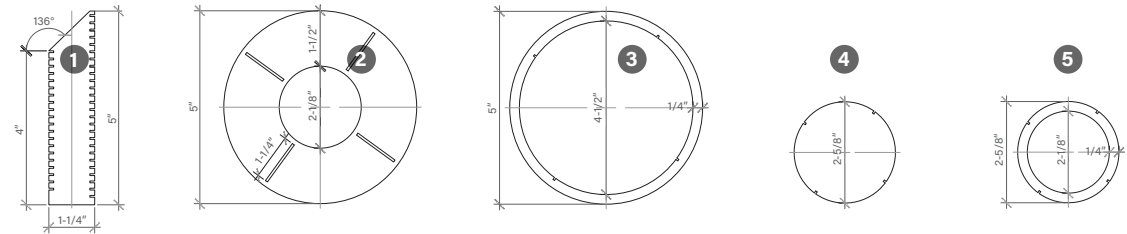
BED Prototyping and 3D Printing
First Semester 2024 - 2025

Mentor: Carlos Casillas Charrón
Team:
Nayelis Pérez Ándujar
Grace S. Rodríguez Colón

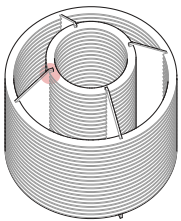
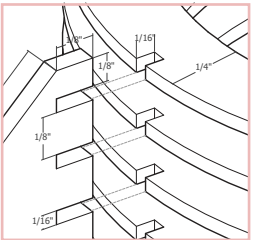
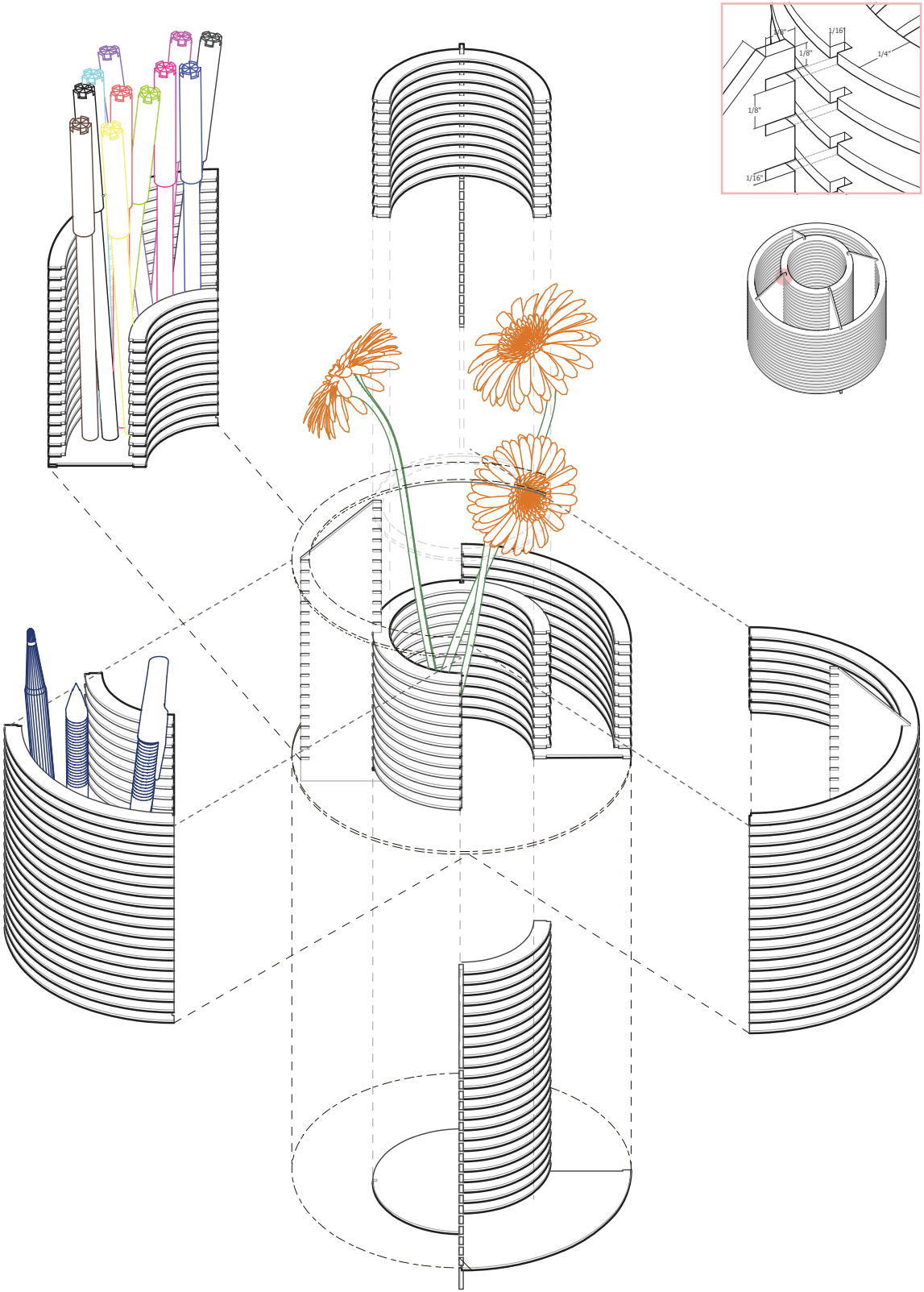
Description:
DecoDesk is a modular line of desk organizers designed to combine functionality and versatility within a cohesive aesthetic. The system can function as both a pencil holder and a vase, while also incorporating a small tray for items such as clips and pins. Its modular components allow users to customize the arrangement according to their workspace needs.
The product uses an interlocking construction system, in which horizontal and vertical pieces fit together to form both the structure and the final object. This approach creates a lightweight, modern, and visually refined organizer designed to be both practical and adaptable.

- KIT OF PARTS**
AutoCAD | Illustrator
- 4 x Slotted vertical panels .01
 - 1 x Large circular base .02
 - 19 x Large circular rings .03
 - 1 x Small circular base .04
 - 24 x Small circular rings .05

Drawing by Marisabel Marrero.



PRODUCT RENDER
AutoCAD | SketchUp | Enscape
*Model by Marisabel Marrero.
Scene by Nayelis Pérez.*



INTERLOCKING DETAIL
AutoCAD | SketchUp | Illustrator
Drawing by Marisabel Marrero.

AXONOMETRIC
AutoCAD | SketchUp | Illustrator
*Representation by Nayelis Pérez.
Model by Marisabel Marrero.*



11

ROD PUPPET MOTION

Layering and Depth Exploration

BED Elemental Design II
Second Semester 2021 - 2022

Mentors:
Blanquita Calzada Acosta
Caludia C. Cintrón Rivera

Description:
This exploration studies the defining characteristics of rod puppets and translates their movement into an abstract layered composition. The rod was identified as the primary element that animates the puppet, inspiring the use of thin intersecting elements of varying thicknesses. Through overlapping paper layers within an 8 × 8 in. wooden frame, the composition creates different levels of depth and a visual language that emphasizes movement, direction, and spatial tension.

FINAL COMPOSITION
Basswood | Bristol Paper |
AutoCAD
Photo by Marisabel Marrero.



COMPOSITION LAYERS
Basswood | Bristol Paper |
AutoCAD
Photos by Marisabel Marrero

01



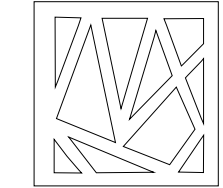
02



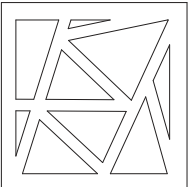
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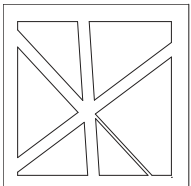
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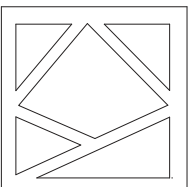
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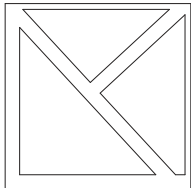
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C

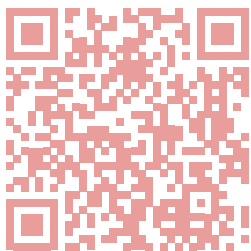


D



E

THANK YOU



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