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portfolio_selected works
neuro node | technology start up incubator

Located in the center of Buenos Aires, Argentina, this 500,000 SF building has the potential to play a significant role in supporting the economy of Buenos Aires. Currently abandoned, the new design will support the community and growth of the city at an urban scale. The project looks at transforming the existing building into a start up technology incubator that will support the growing technology industry in Buenos Aires. Neuro Node questions the traditional organization and use of an office building. It provides a space for both community and worker to engage with one another as well as a means for the building to financially support itself through the inclusion of retail, exhibition and competition spaces amongst the start up companies.

In order to preserve as much of the existing building as possible, Neuro Node formally consists of one large scale central public auditorium in the center of the U-shaped existing building and four smaller scale support nodes that are located on the exterior north, south and west facade. The public auditorium connects these four nodes by a bridge that punctures through the existing building.
vertical vs horizontal building space usage

vertical vs horizontal building components data
circulation + program

facade detail
auditorium level floor plan

ground plan
**dis(PLACE)ment | refugee housing**

In light of the current refugee situation in 2022, dis(PLACE)ment seeks to provide a solution to this crisis while also addressing the issues of community, security, and isolationist attitude typically apparent. This project will function as a prototype for temporary emergency housing. This temporary housing structure can be broken down into multiple layers of thickness, the thickness of the site, the conical massing, and the wall and facade.

Keeping in mind the state of emergency, a modular system of units was designed that can house four to six people. The beds are built into the thickness of the module, which is then carved into the thickness of the cone. In addition to the modular units, the facade can also be broken down into modules.

Formally this structure can be broken down into 4 cones that intersect with each other. This shape informed the placement of the units, community and support spaces, as well as the interior atrium.
- tent - living quarters
- varying sizes for varying size families
- single persons section
- just arrived temporary section
- food voucher distribution center
- basic supplies and tent distribution center
- sports field/ playground area
- outhouse (restrooms and showers)
- medical center
- hospital
- nurses station
- schools
- cultural center
- small shops
- administrative offices/ buildings
- check-in point
- water tanks
- telephone mast - electricity
- religious buildings
- community spaces/ pavilions
- security fence/ boundary wall
healing trail | health center

The Healing Trail seeks to provide a safe, comfortable space where those looking to overcome health challenges can learn and grow as a community. Poughkeepsie, a town that has a lot of gang and addiction related activity, lacks the permanent space and programs necessary for addressing these topics. With a focus on the 12 Steps Program for recovering addicts, this health center will incorporate healing through a peer-to-peer support and learning system, challenging the current health care model.

Architecturally, the building seeks to use the healing properties of nature through the use of interior gardens that also function as light wells bringing natural lighting into the interior. Formally, the building slopes with the topography, blending with the natural landscape. The roof of the building functions as a roof garden and pathway that connect the existing and heavily used Dutchess Rail Trail to the new Meditation Labyrinth and Ancestral Garden. Celebrating the African Spirit is planning to create, drawing the community to this space.
existing meeting locations
A SET OF SPIRITUAL PRINCIPLES

FAITH
DISCOVER
SURRENDER
REFLECT
HONESTY
TRUST
MEDITATION
PRAYER
ASK FOR HELP
LEARN FROM OTHER'S EXPERIENCES
MAKE AMENDS
COMMUNITY
SPONSORSHIP
GLOBAL SCALE
GROUP MEETING

12 STEPS

1. Admit we are powerless over our weaknesses
2. Believe in a Higher Power
3. Be willing to surrender yourself into the hand of the Higher Power
4. Discover the will, when, where, and how this weakness has affected you
5. Reflect, assess, and correct our defects to others
6. Be completely ready to have God remove all these defects
7. Humbly ask Him to remove our shortcomings
8. Make a list of all the people we have harmed
9. Make amends, where possible, with the people we have harmed
10. Continue to take personal inventory
11. Remember to keep asking for help
12. Carry the 12 Steps message to others

OUTSIDE CLINICS/ORGANIZATIONS
MENTOR
GROUP MEETINGS
PEER-TO-PEER SUPPORT
COMMUNITY ACTIVITIES
COUNSELOR
FAMILY
PATIENT CENTERED
BH CARE MANAGER
DIPALYTIC PROFESSIONALS
PRIMARY CARE PHYSICIAN
PSYCHIATRIC CONSULTANT

2 steps program
axonometric view

meditation labyrinth entrance view
bloom | residential apartments

With Bloom, we are challenging the standards of living in New York. We redefine these standards to emphasize the need to be able to commune with nature, have ownership, and appreciate community. This project aims to nourish the community with nature, food, community relationships and autonomy of space. We push on the idea of boundaries to create a flexible and adaptable space that promotes the versatility of way of living. Through a system of terraces we create an artificial landscape that connects the site as a whole, the individual to the community, and the inside to outside, and encourages healthful living through interactions and relationships with nature, food, the community, and one’s self.
the bronx - food and transportation
artificial landscape

new addition
flexible + adaptable boundary

surface areas
starting 1 br
720 sq ft
864 sq ft
900 sq ft
936 sq ft
starting 2 br
936 sq ft
ground floor

Winter

Summer

elevation
residential level

section
learning field | k - 8th grade school

The Learning Field seeks to create a fluidity between the different learning spaces to allow for a passing back and forth of knowledge between the different classes. The analysis of the impact point of a soccer ball and the effect it has on the arc of the ball’s path informed the carving of the arched and lofted learning spaces. These spaces are visually connected horizontally across the two end bars of the building, and onto the central, multifunctional soccer field, and vertically within the end bars, to allow for students to be inspired to learn and experiment through observing the movements and actions occurring around them.
kinetic analysis
programm diagram

observation + soccer field

3 small fields

classroom + maker spaces

roof + cantilever
maker space
circulation for public transit space

Through surveying the NYC Port Authority Bus Terminal, this project seeks to address the poor circulation, programming, and dark ambiance of public transit spaces. A new circulation system is proposed that defines void and programming spaces to create a relaxing, brightened, and less stressful experience through the terminal.
lighting
circulation mesh framing detail
appendix

Visual Studies
A Ultra Real | Rift
B Re-Thinking BIM | 130 Williams
C Speculative City | A Guide for Refugees in NYC

Architectural Technology
D ATII | The Markthal
E ATIII | Wall Details
F ATIV | P.S. 64
G ATV | Core and Egress Stair

Architectural Drawing
H ADRI | Diamond Princess Cruise Ship
I ADRII | Representation of Time
programm diagram

Percentage of occupied hours where illuminance is at least 28 footcandles
- 0%
- 25%
- 50%
- 75%
- 100%

daylight study

optimized facade
speculative city | a guide for refugees in nyc

legend

- community based organization
- community center + schools
- hospitals
- farmers markets
- grocery stores
- thrift shops

Zone 1:
You will find a large number of Grocery stores off of Broadway as well as East 14th Street.

Zone 2:
You will find a large number of community center and educational facilities in this area. East 14th Street connects this zone with the public transportation system.

Zone 3:
You will find a large number of community center based organizations along Broadway, specifically around Penn Station transit hub in Midtown New York City and towards the lower end of Downtown New York City.

Zone 4:
You will find a hospital here. Highlighted is within 10 blocks of the hospital. In terms of proximity to other programs, the overlap is a clear indication of being within a 15 to 20 minute walk to the other programs.

Zone 5:
You will find your Farmer’s Markets located off of Broadway as well. There is easy access to these markets through the use of the public transit along Broadway.

Refugee / Asylum Seekers will be able to find almost all the necessities and support programs around the Downtown New York City area.
supports

Reactions
Values: \( R_z \)
Linear calculation
Load case: LC1
System: Global
Extreme: Global
Selection: S1\ldots S64,
B1509..B1620, B1653,
B1671..B2181, S50, S

beams

1D internal forces
Values: \( N \)
Linear calculation
Load case: LC1
Coordinate system: Principal
Extreme 1D: Global
Selection: B1078..B1429,
B1509..B1620, B1653..B1669,
B1671..B2181

beams

1D deformations
Values: \( \Delta x \)
Linear calculation
Load case: LC1
Coordinate system: Global
Extreme 1D: Global
Selection: B1078..B1429,
B1509..B1620, B1653..B1669,
B1671..B2181

2D displacement
Values: \( u_x \)
Linear calculation
Load case: LC1
Extreme: Global
Selection: S30, S31..S317, S320,
S322..S334
Location: In nodes avg. on macro.
System: LCS mesh element

1D stresses
Values: \( \sigma_x \)
Linear calculation
Load case: LC1
Coordinate system: P
Extreme 1D: Global
Selection: B1078..B1429
B1509..B1620, B1653..B1669,
B1671..B2181

2D internal forces
Values: \( N_x \)
Linear calculation
Load case: LC1
Extreme: Global
Selection: S30, S31..S317, S320,
S322..S334
Location: In nodes avg. on macro.
System: LCS mesh element

2D stress/strain
Values: \( \varepsilon \)
Linear calculation
Load case: LC1
Extreme: Global
Selection: All
Location: In nodes avg. on macro.
System: LCS mesh element
3d structure analysis

3D displacement
Values: Pascal
Linear calculation
Load case: LCI
Selection: B1607..B1429,
B1509..B1620, B1603..B1669,
B1671..B2181, 550, 531..5317, 5326,
5322..5334
Location: In nodes avg. on macro.
System: LCS mesh element

3D stress
Values: mm (1/100)
Linear calculation
Load case: LCI
Selection: B1678..B1429,
B1509..B1620, B1603..B1669,
B1671..B2181, 550, 531..5317, 5320,
5322..5334
Location: In nodes avg. on macro.
System: LCS mesh element
Basic magnitudes

"keystone" mobile scaffolding
at iii | wall details

precast concrete wall detail

stick built curtainwall section detail

stick built curtainwall plan detail

brick veneer wall detail
stone veneer wall detail

- CMU Backup Wall
- Vapor Barrier
- Veneer Ties
- Stone Veneer
- IGU
- Concrete Floor Slab with Metal Decking
- Mechanical Equipment
- Dropped Acoustic Ceiling
- Steel Column W14
- Steel Beam W12
- Insulation
- Air Cavity
physical mode

directional light

perspective view

sectional view

fire standpipe detail

perspective view

egress stair detail
adr i | diamond princess cruise ship

unique built environment for studying covid-19 spread
adr ii | representation of time

movement through time

information gathering + producing over time