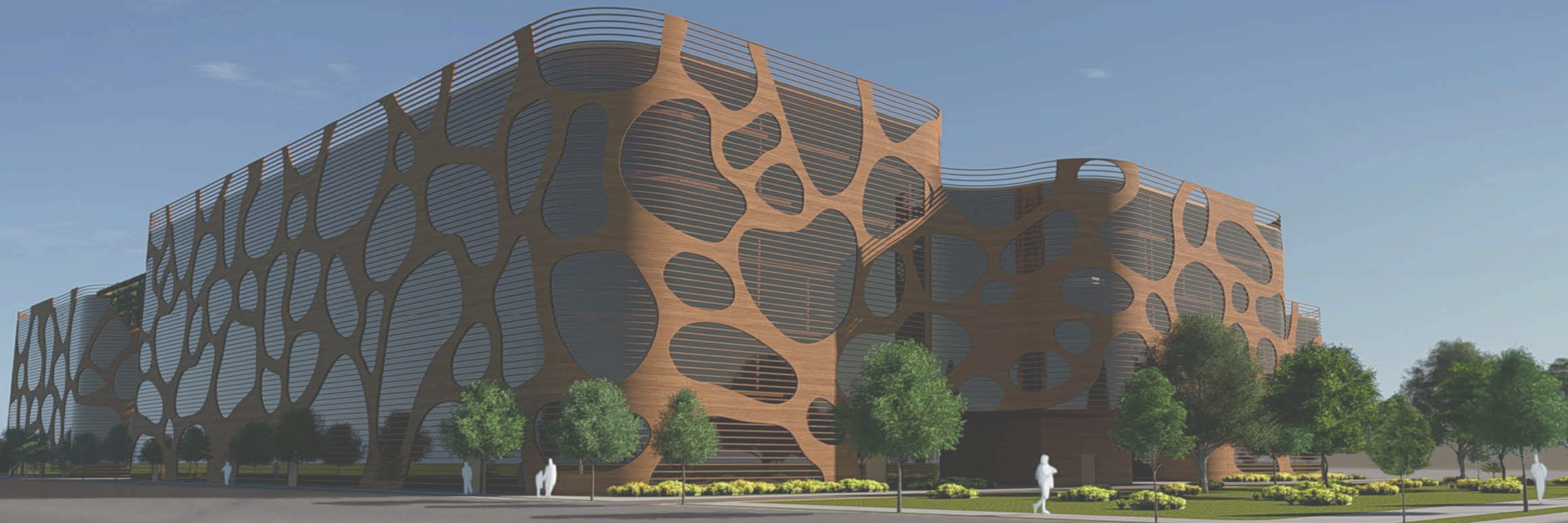


Old Growth

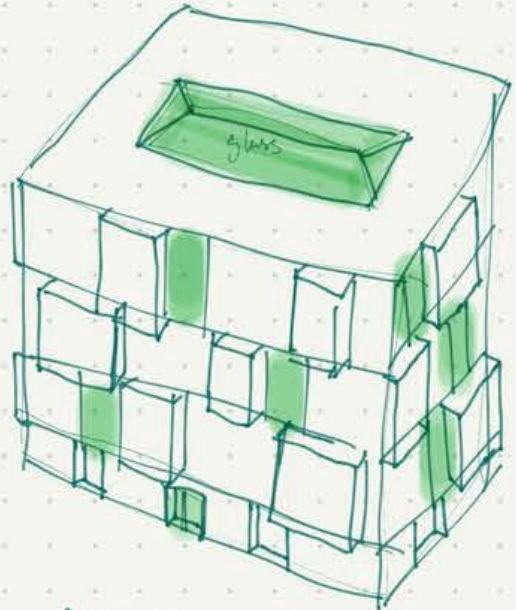
A p a r t m e n t s



Piper Thorson, ARCH 472, Spring 2025, Ali



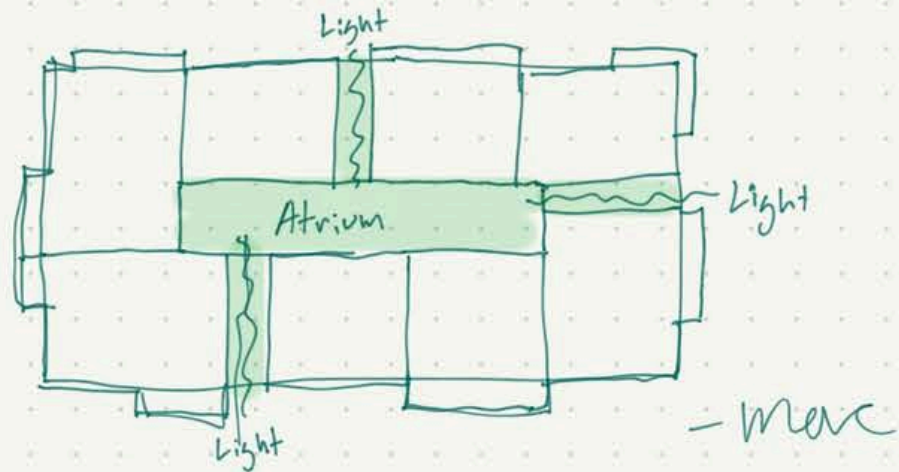
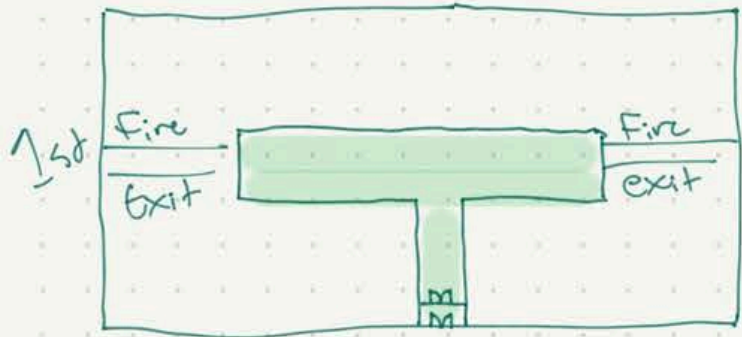
Early Ideation



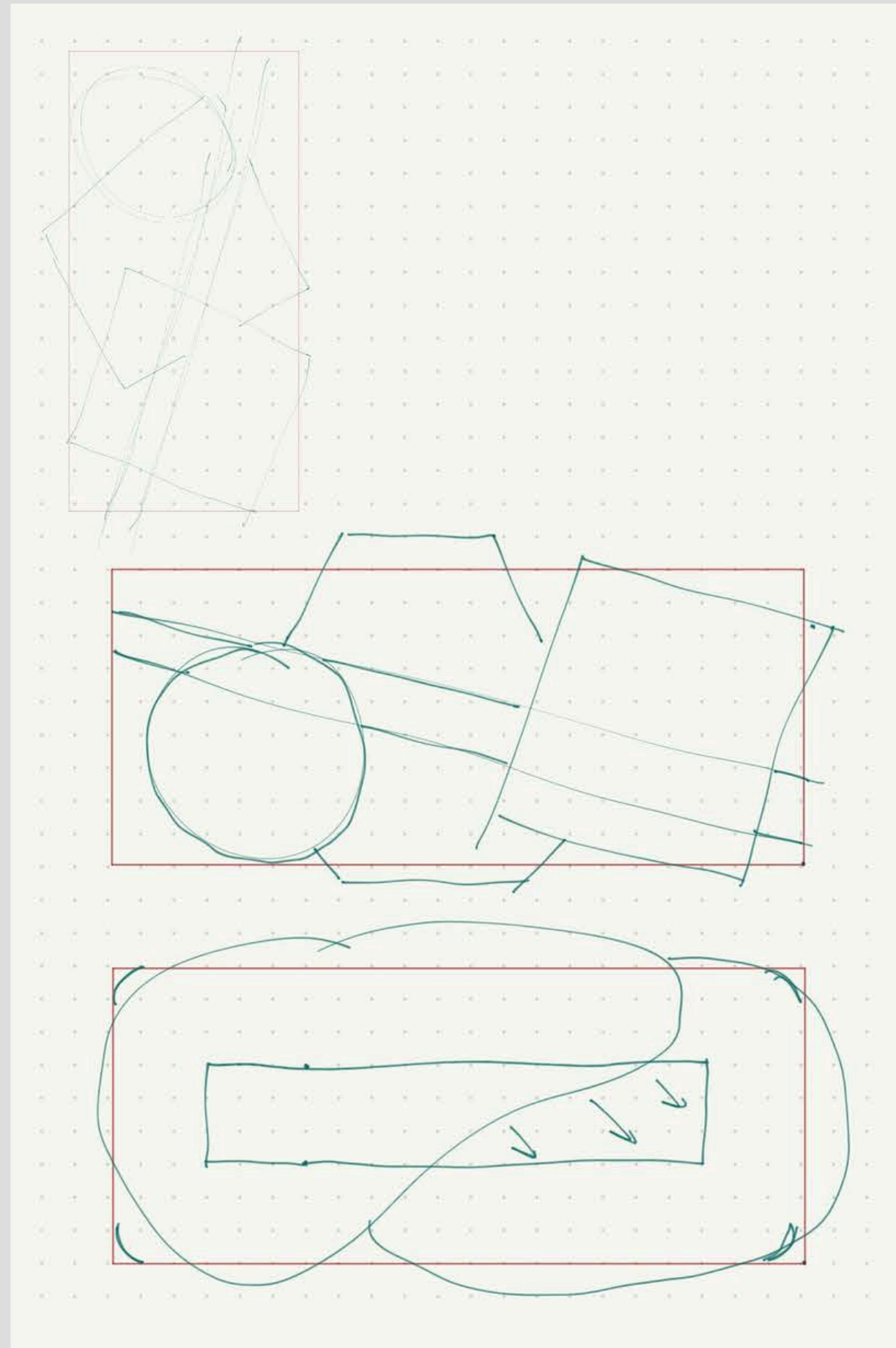
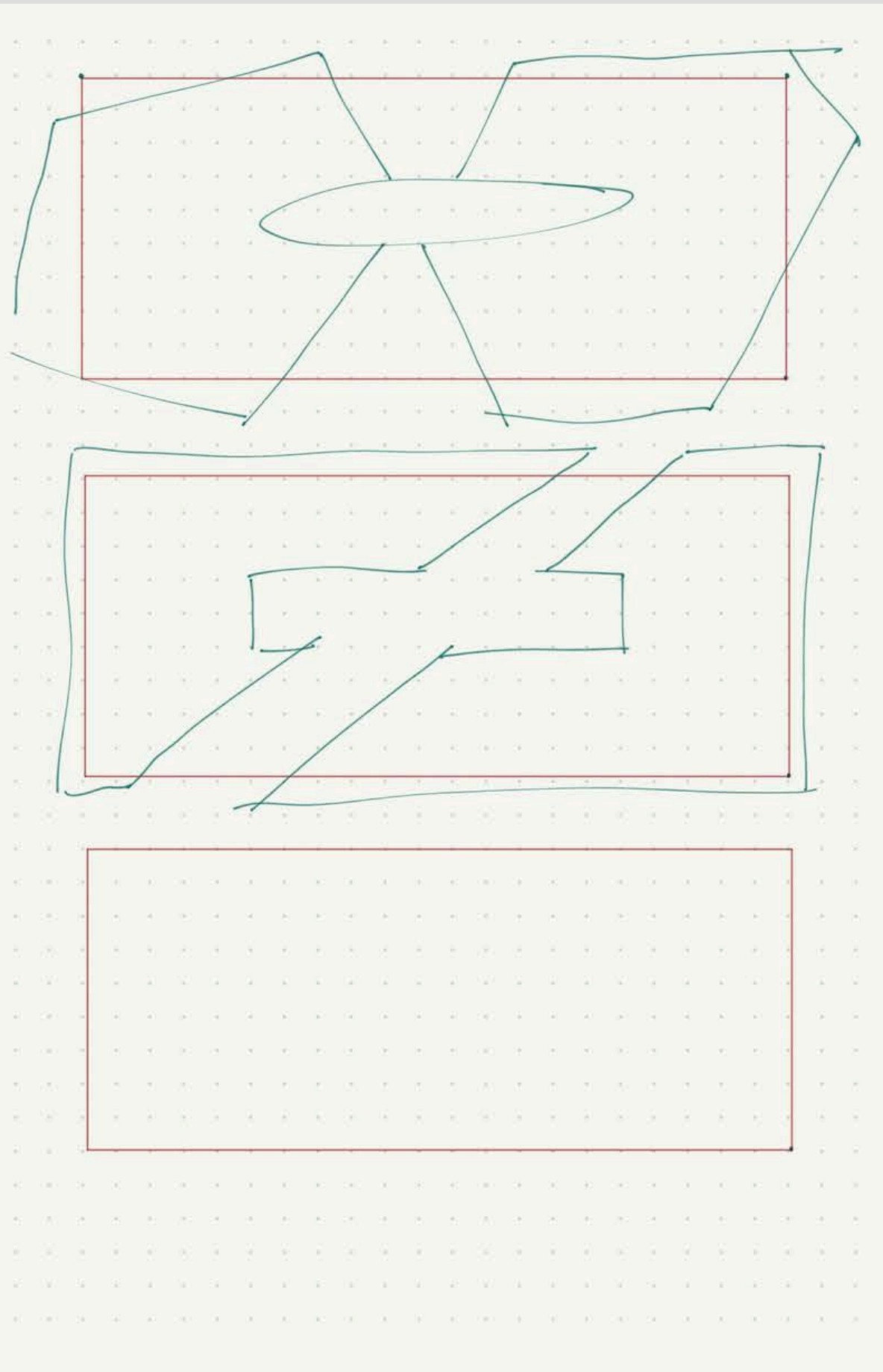
Motorola Building Chicago
Embassy Suites
Blearyton

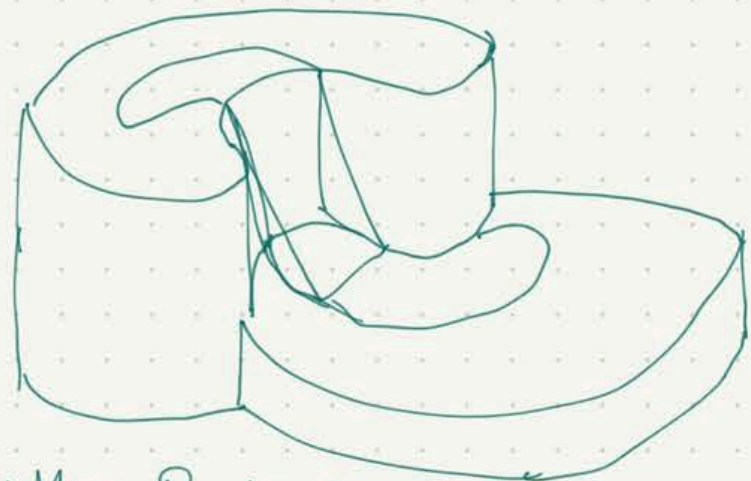
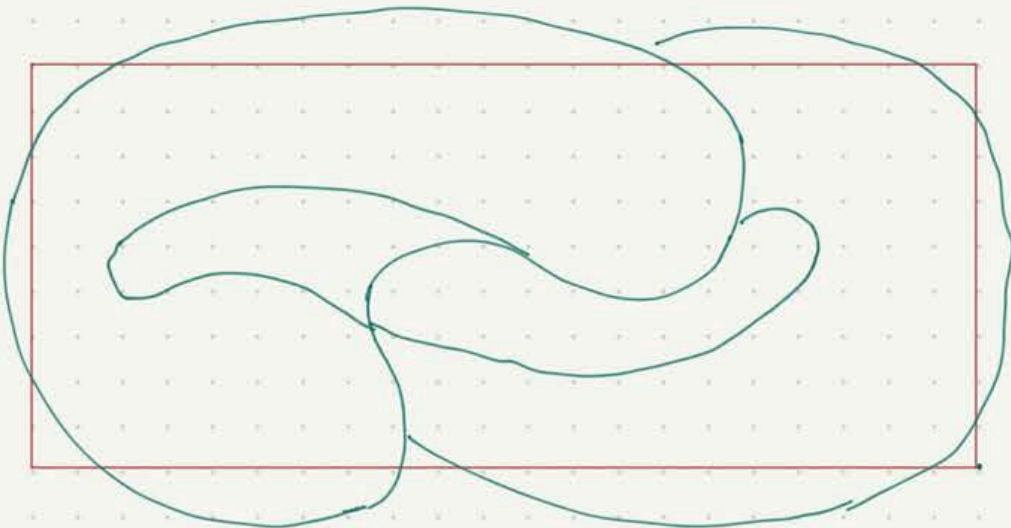
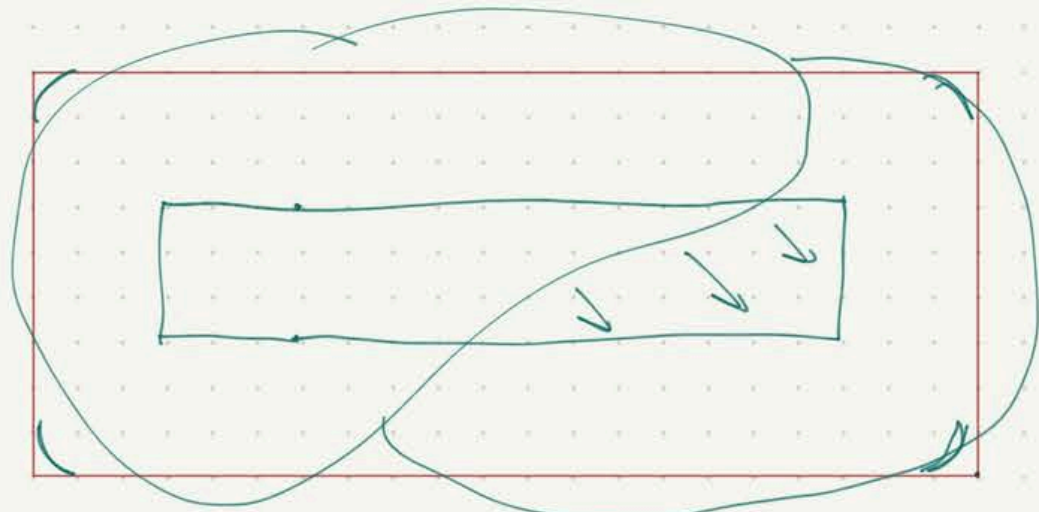
green glass?

Glass on 1st floor
corners for visibility



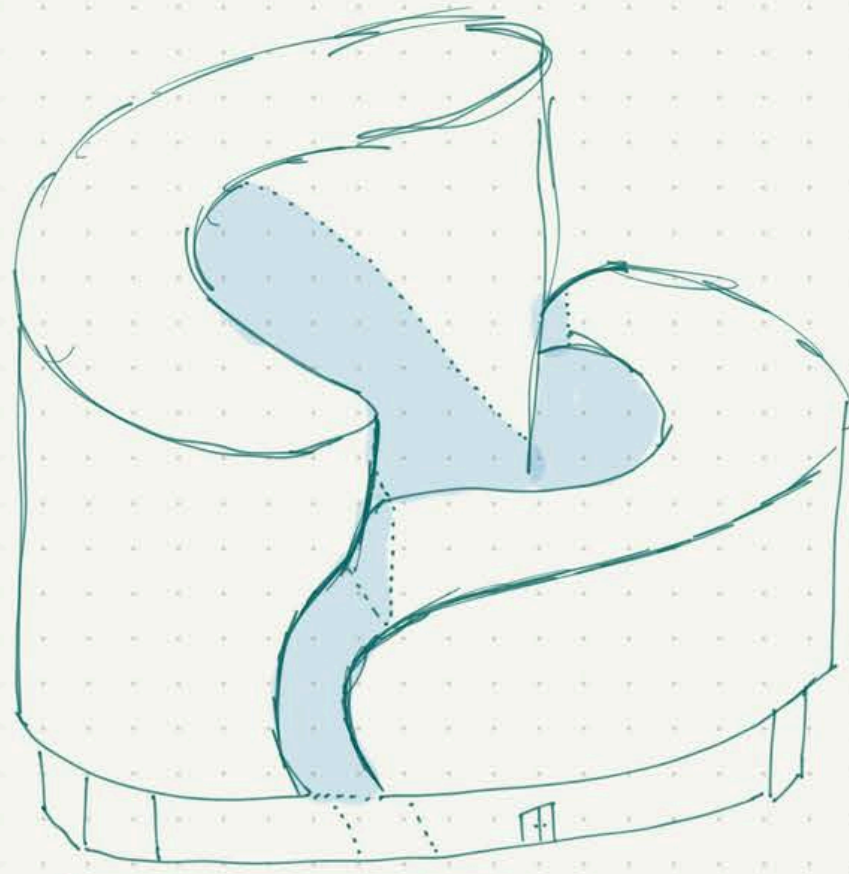
• Throw out sense of place



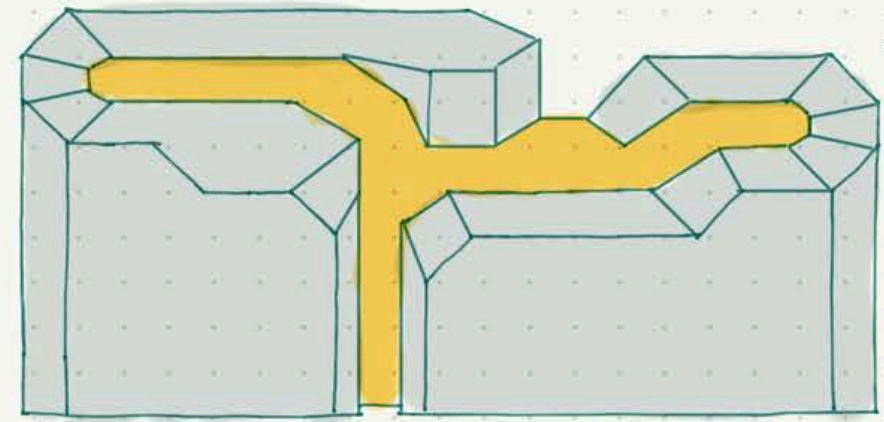
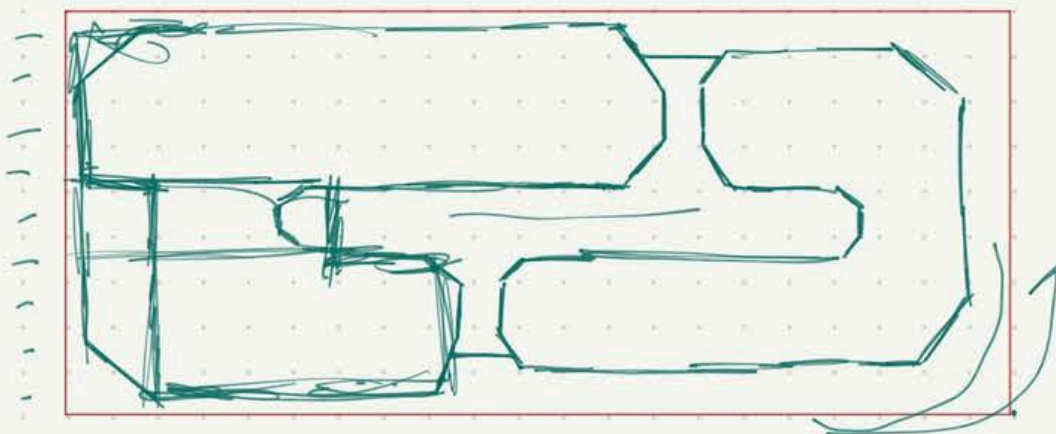


View of Mary-Rocks from Site

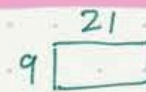
Waterfall



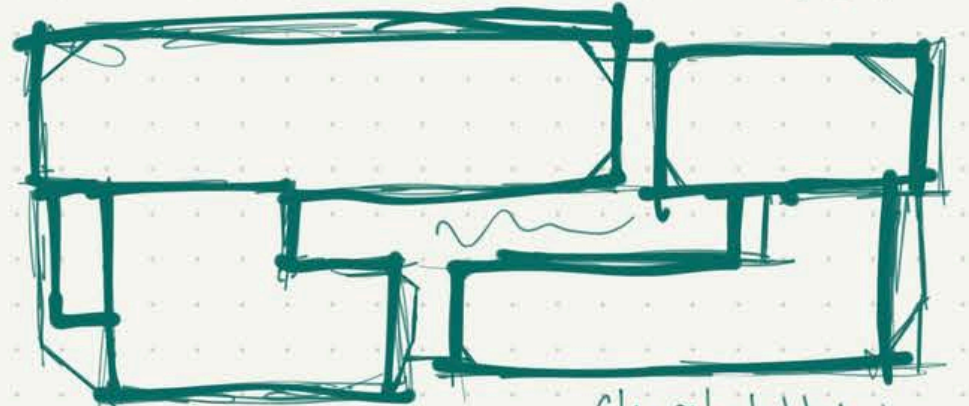
→ geometric →



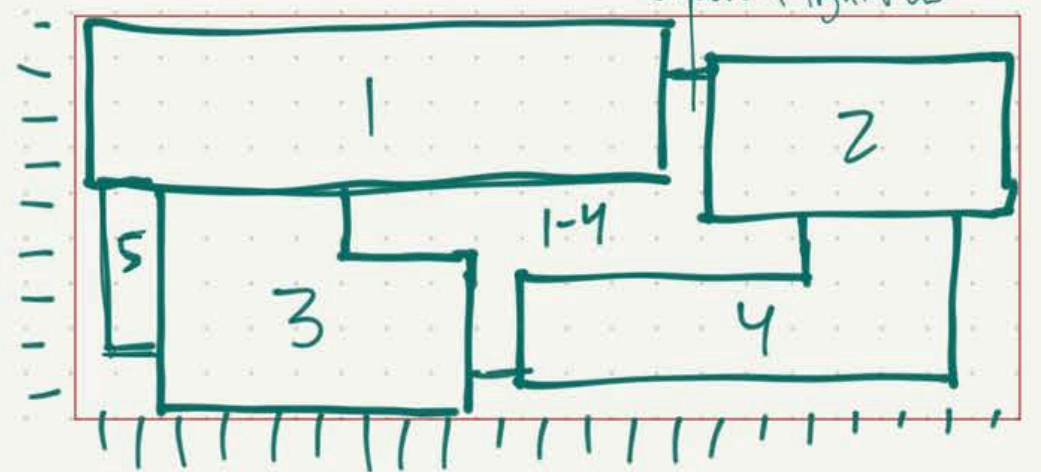
Build a Box,
Make it fancy



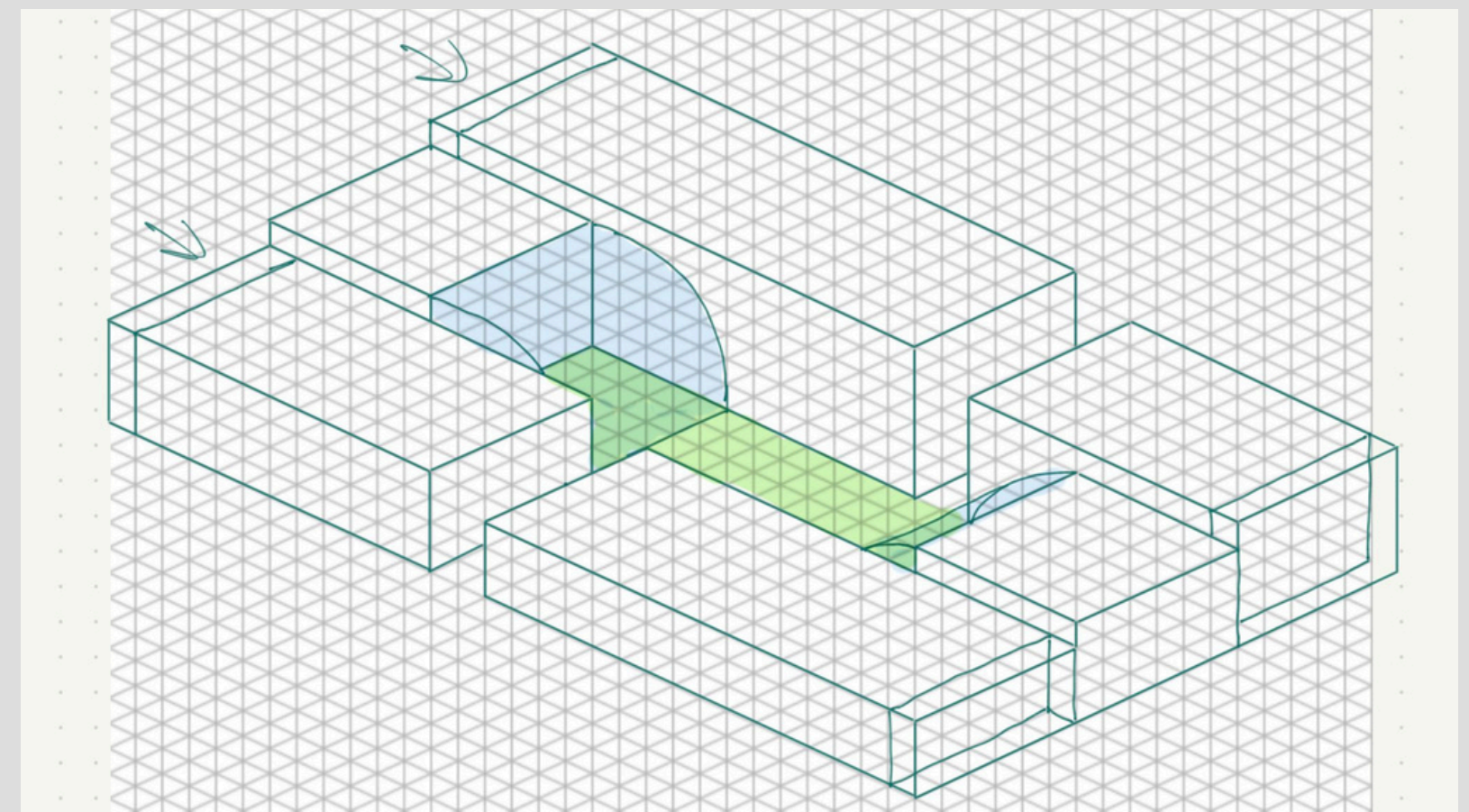
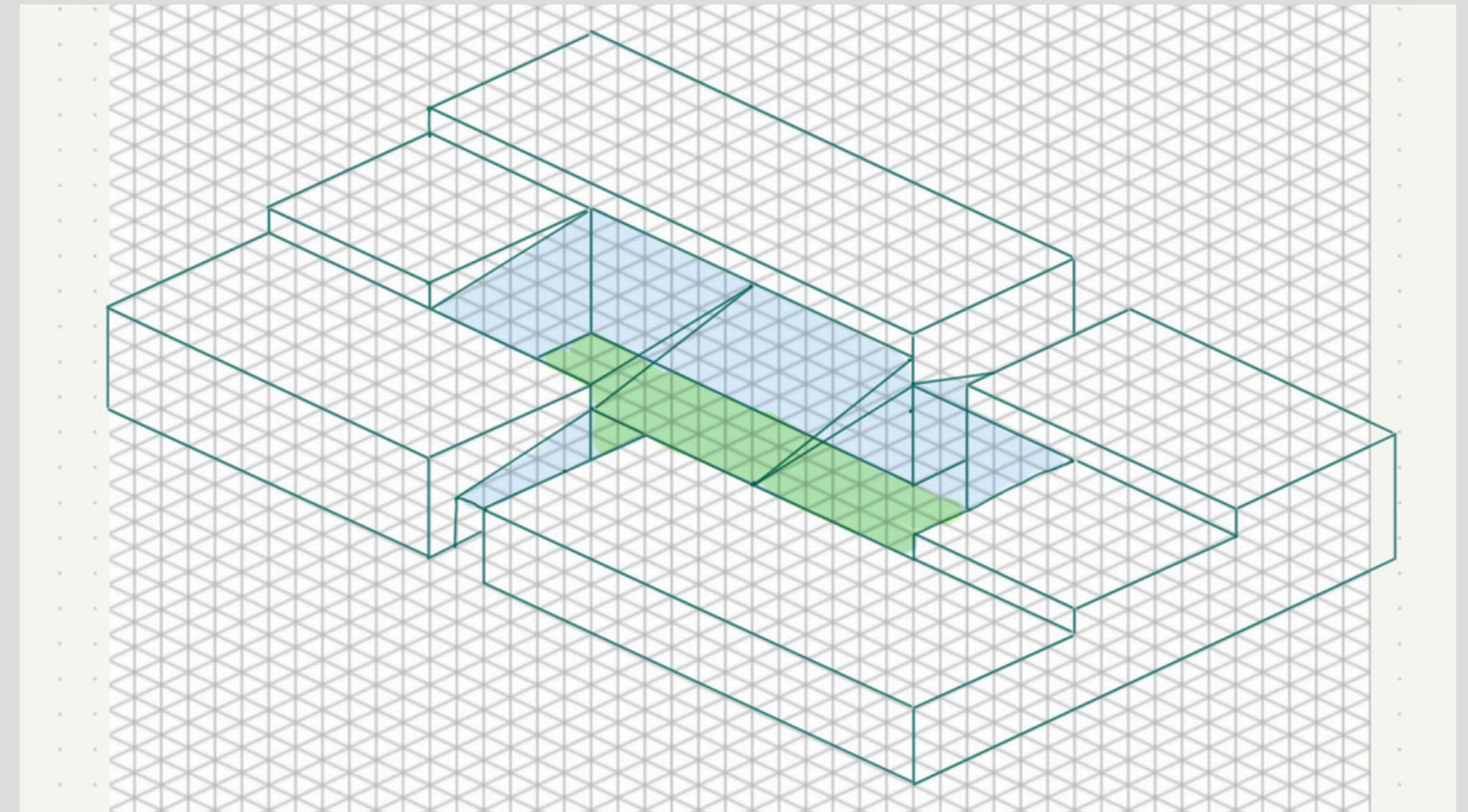
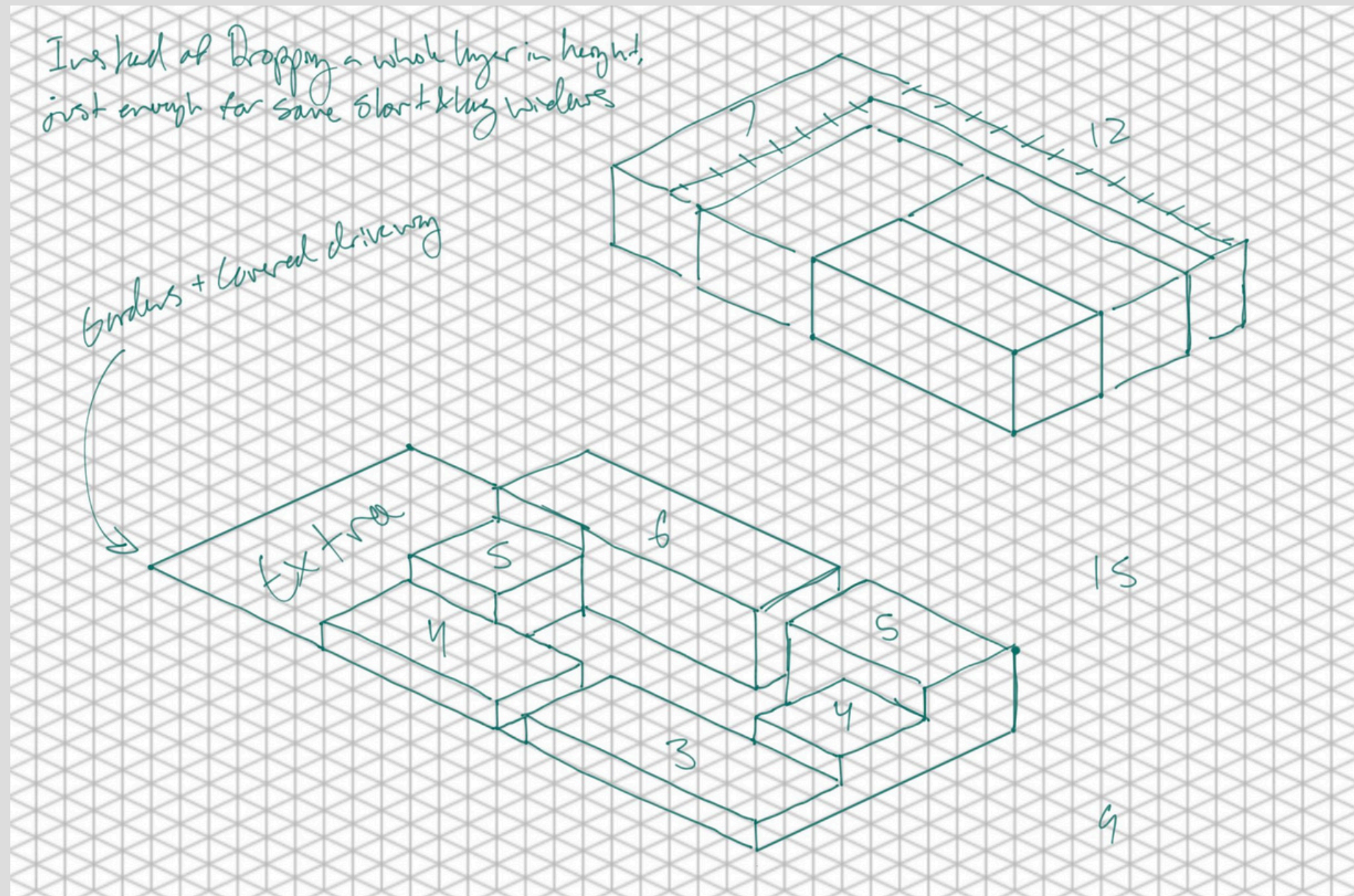
Exterior shades pinned to concrete/Exterior material



Church light view



Isometric

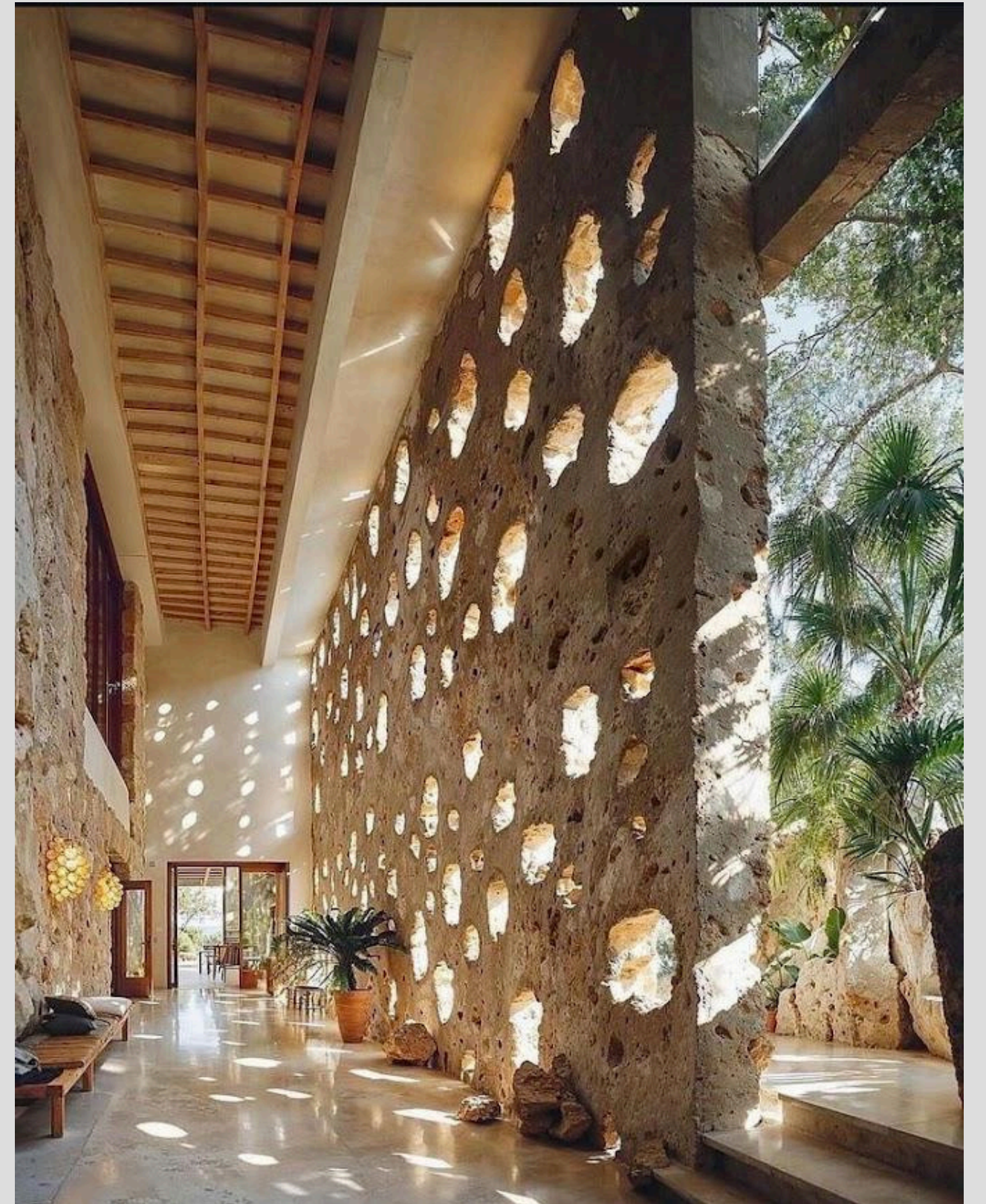




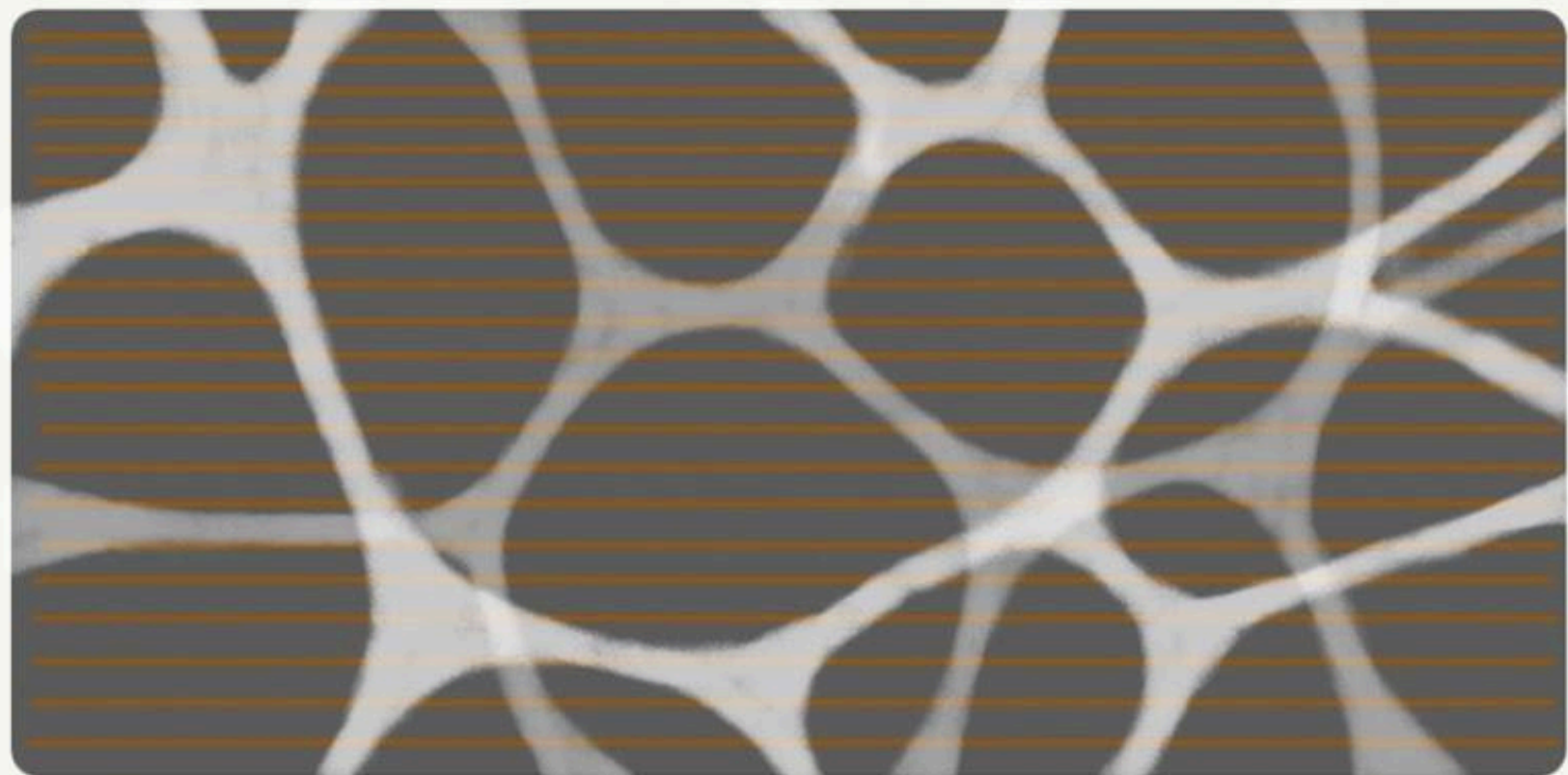


↑ Vine Runs

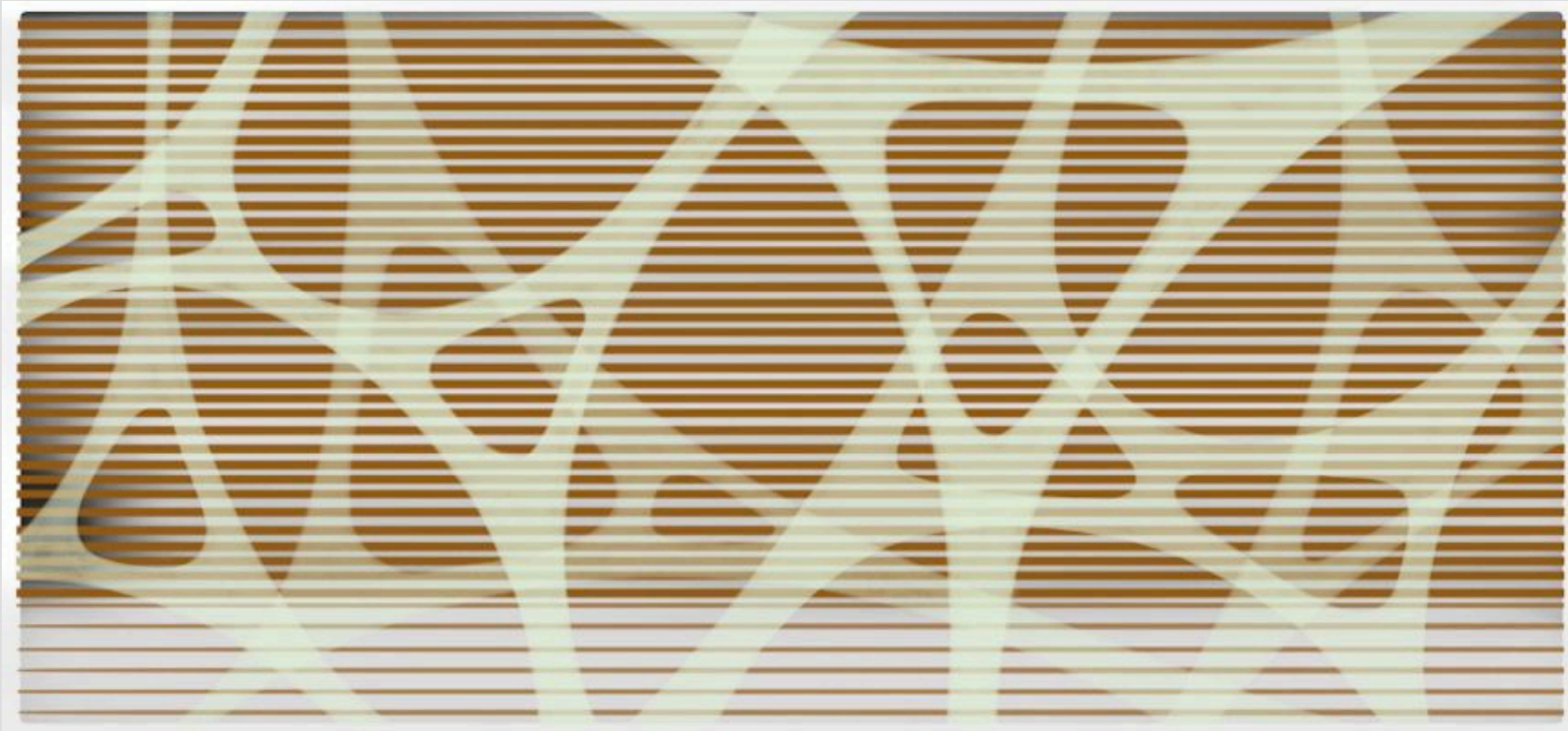
Skin

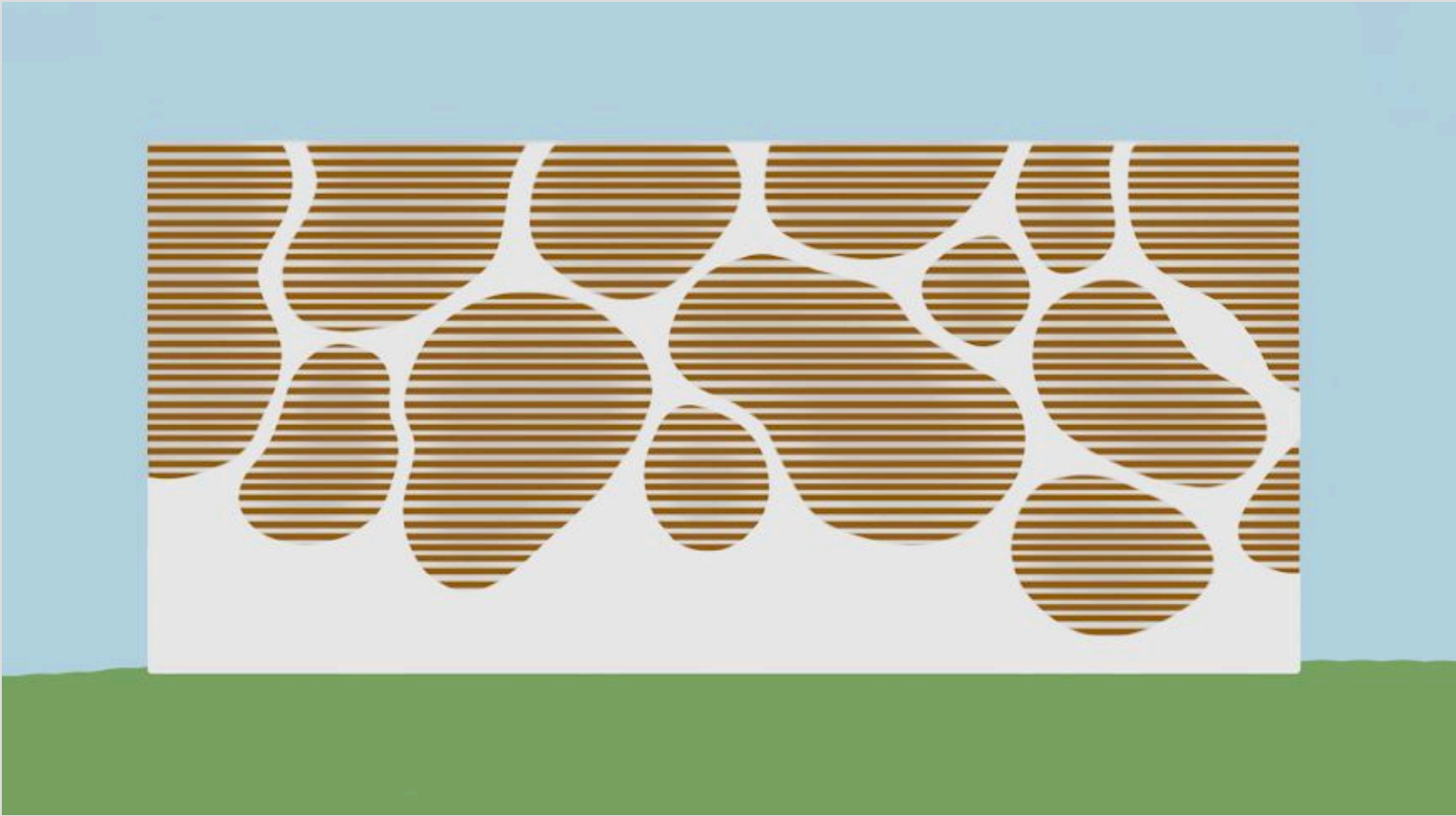
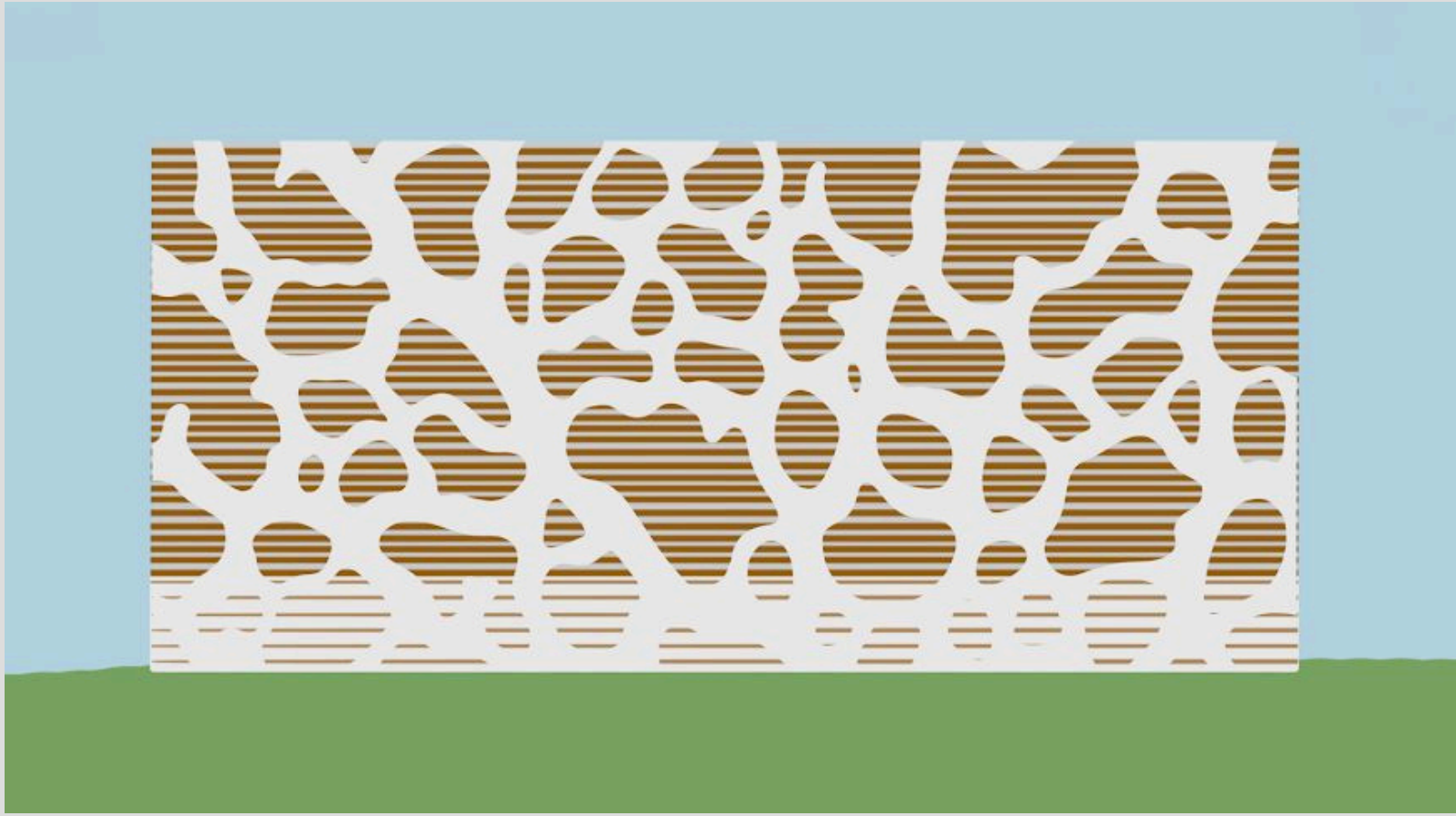
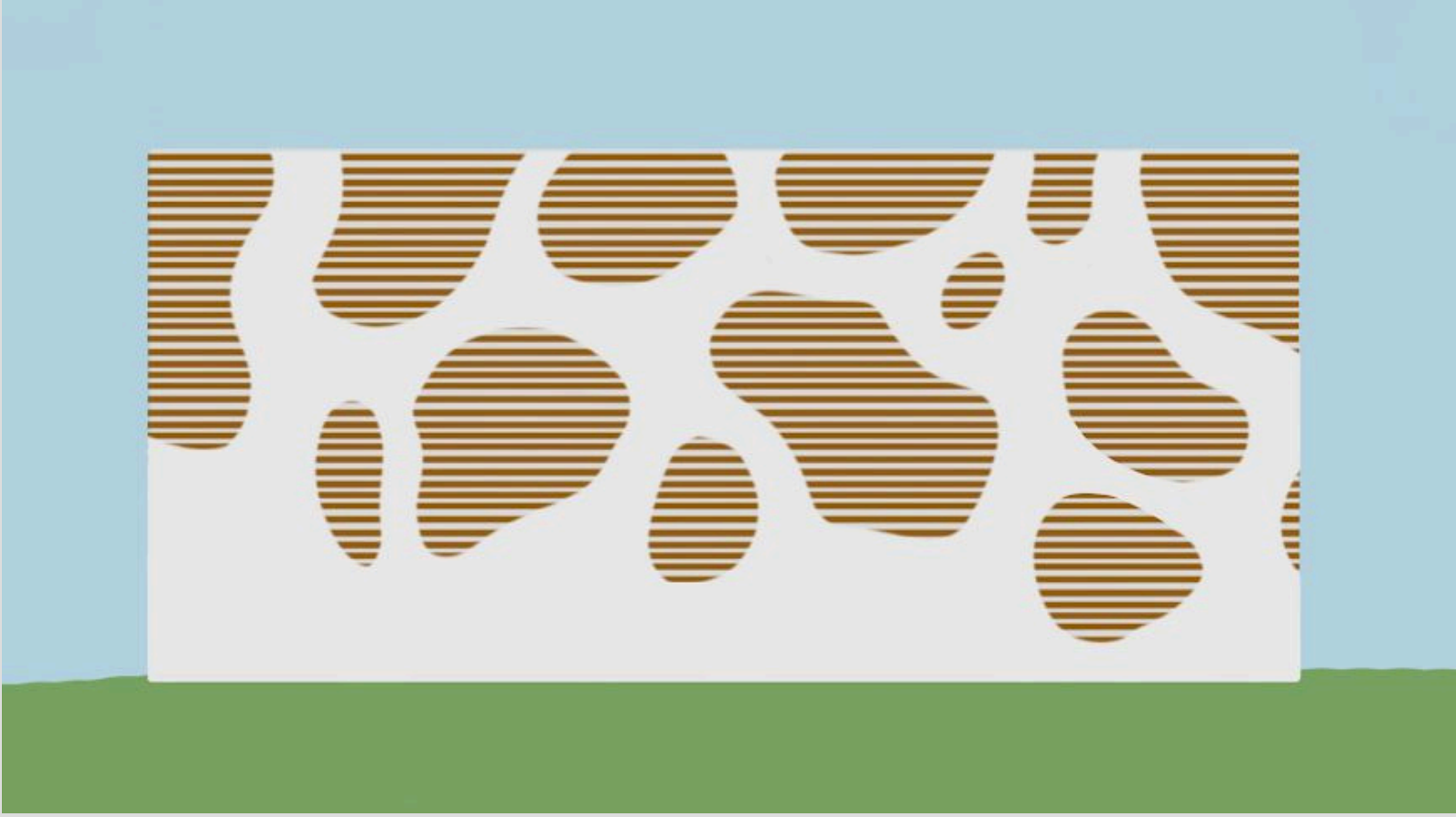
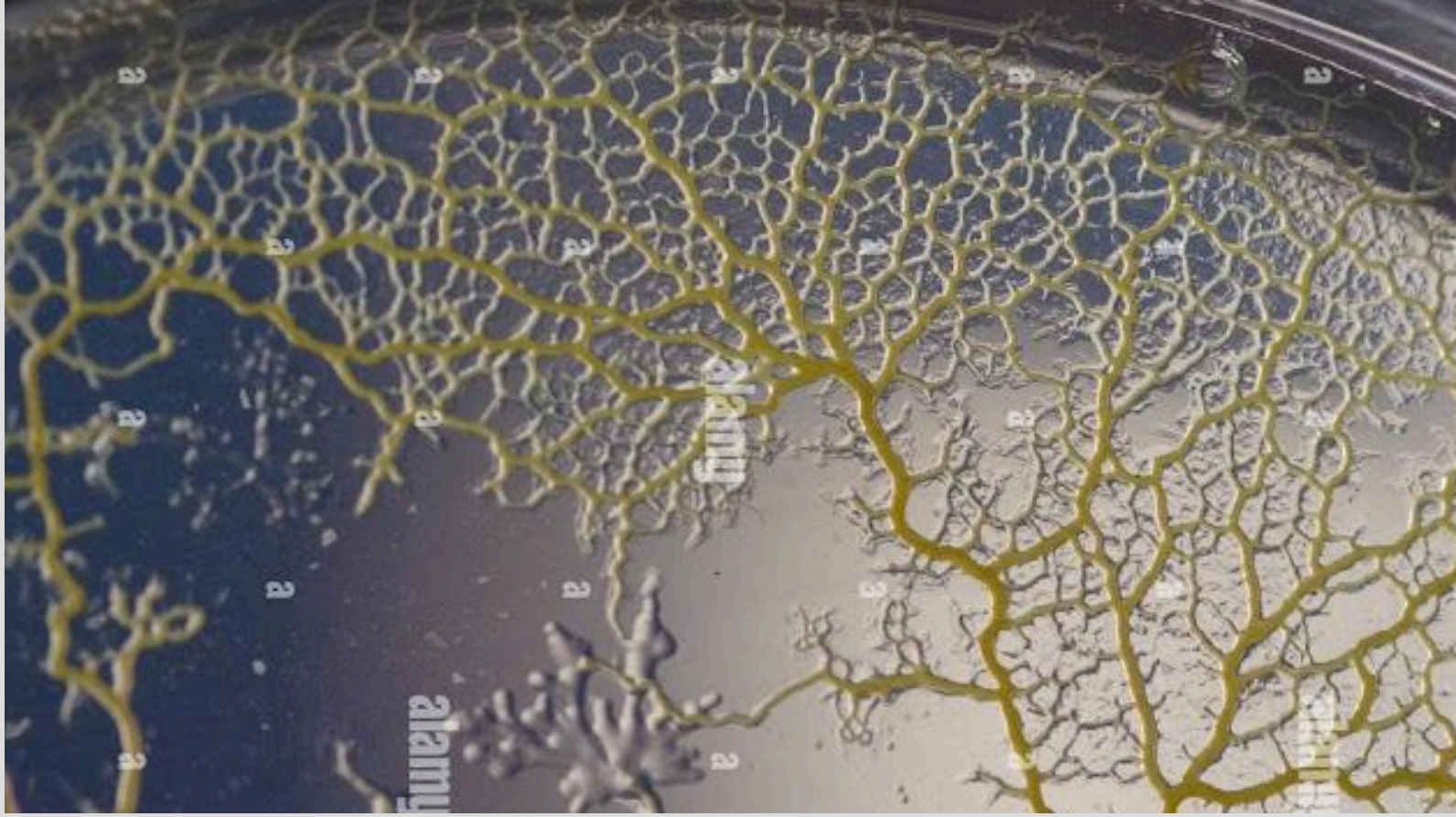


Slime Mold



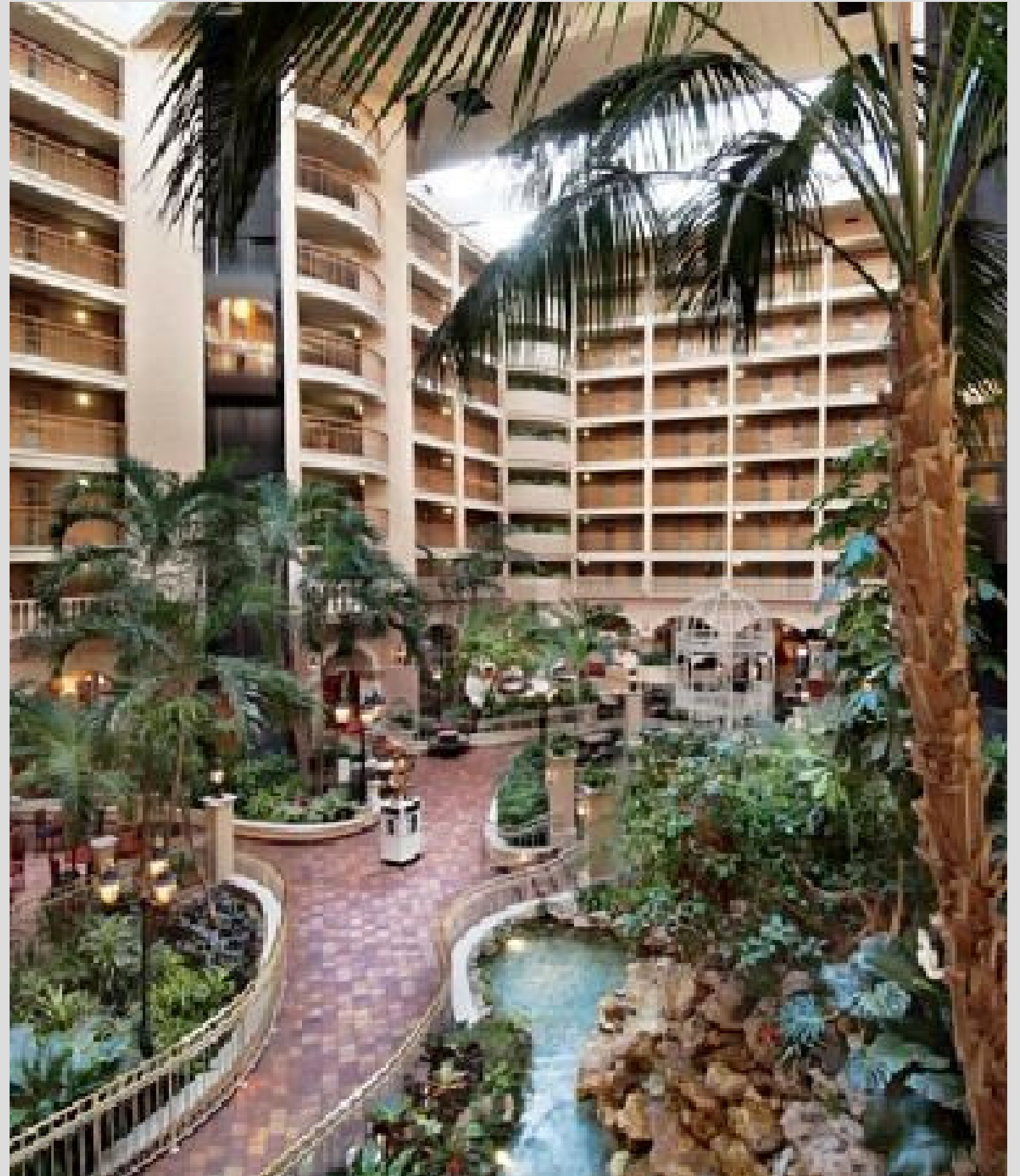
Translucent fabric, nets?
Backups Hide Stretched over frame





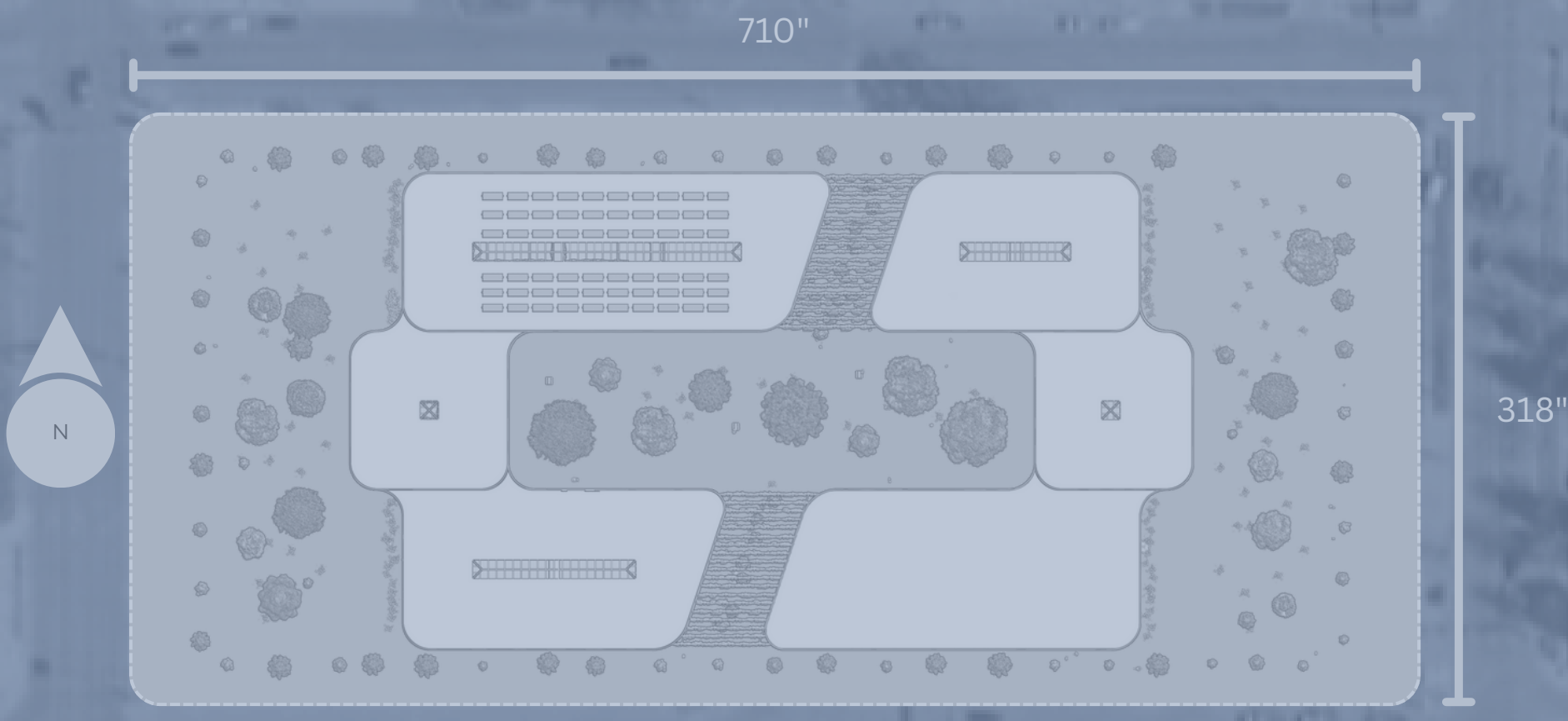
Materials



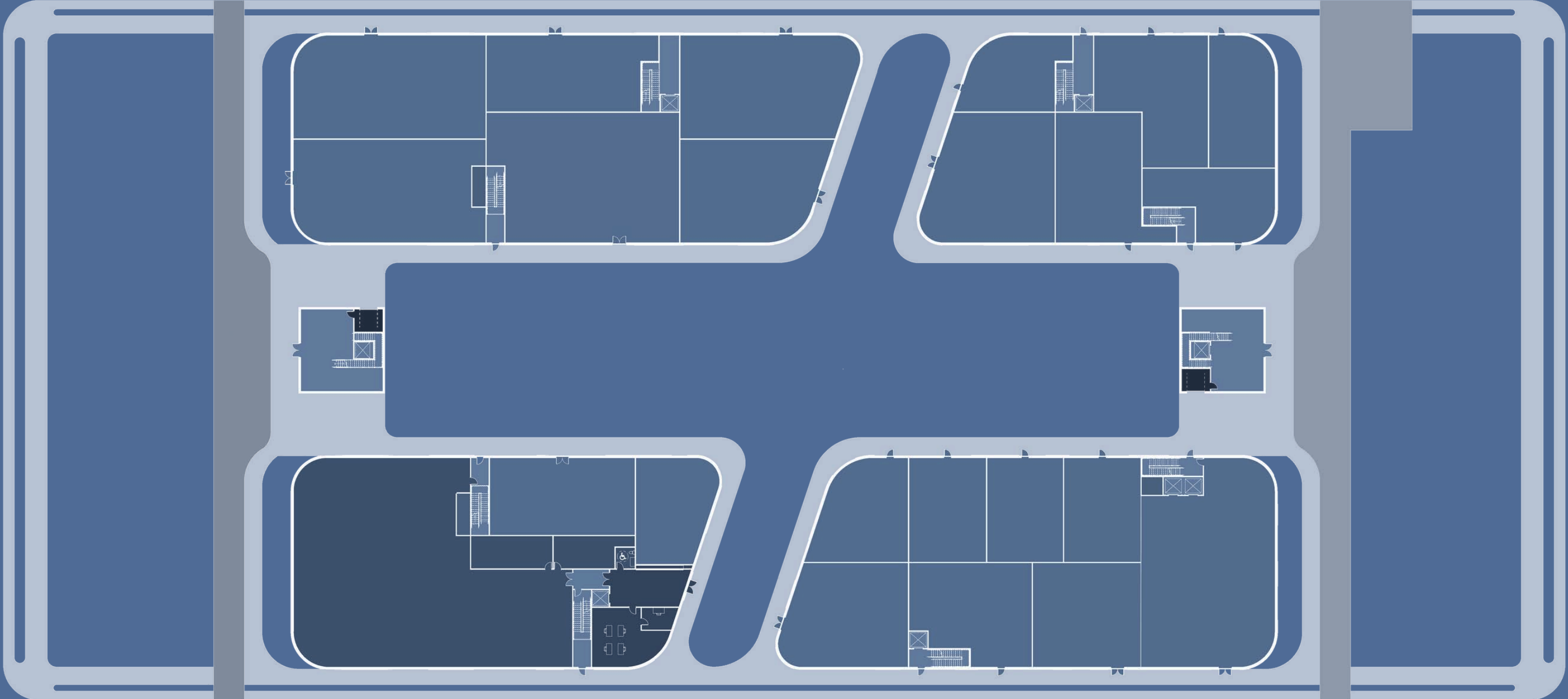


Site and Building

Site Plan with Context



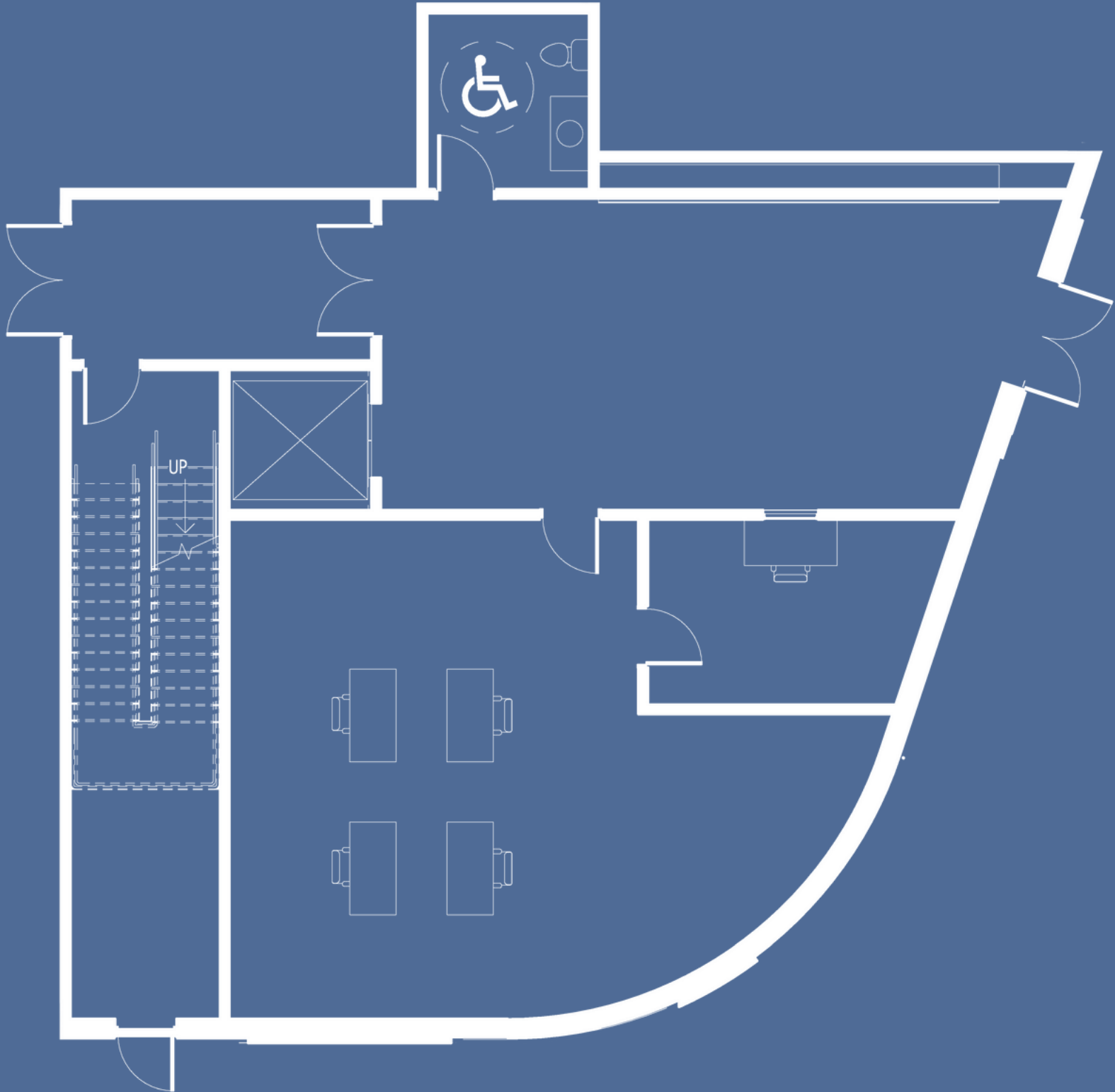
1st Floor with Sidewalk Plan



- Garbage
- Lobby
- Gym
- Mechanical
- Commercial
- Circulation



Lobby Plan



Amenities:

- Hair Salon
- Food
- Chapel
- Gym - with Pool
- Sanford
- Grocery Delivery
- Covered Entry
- Social Spaces
- Atriums
- Courtyard Park

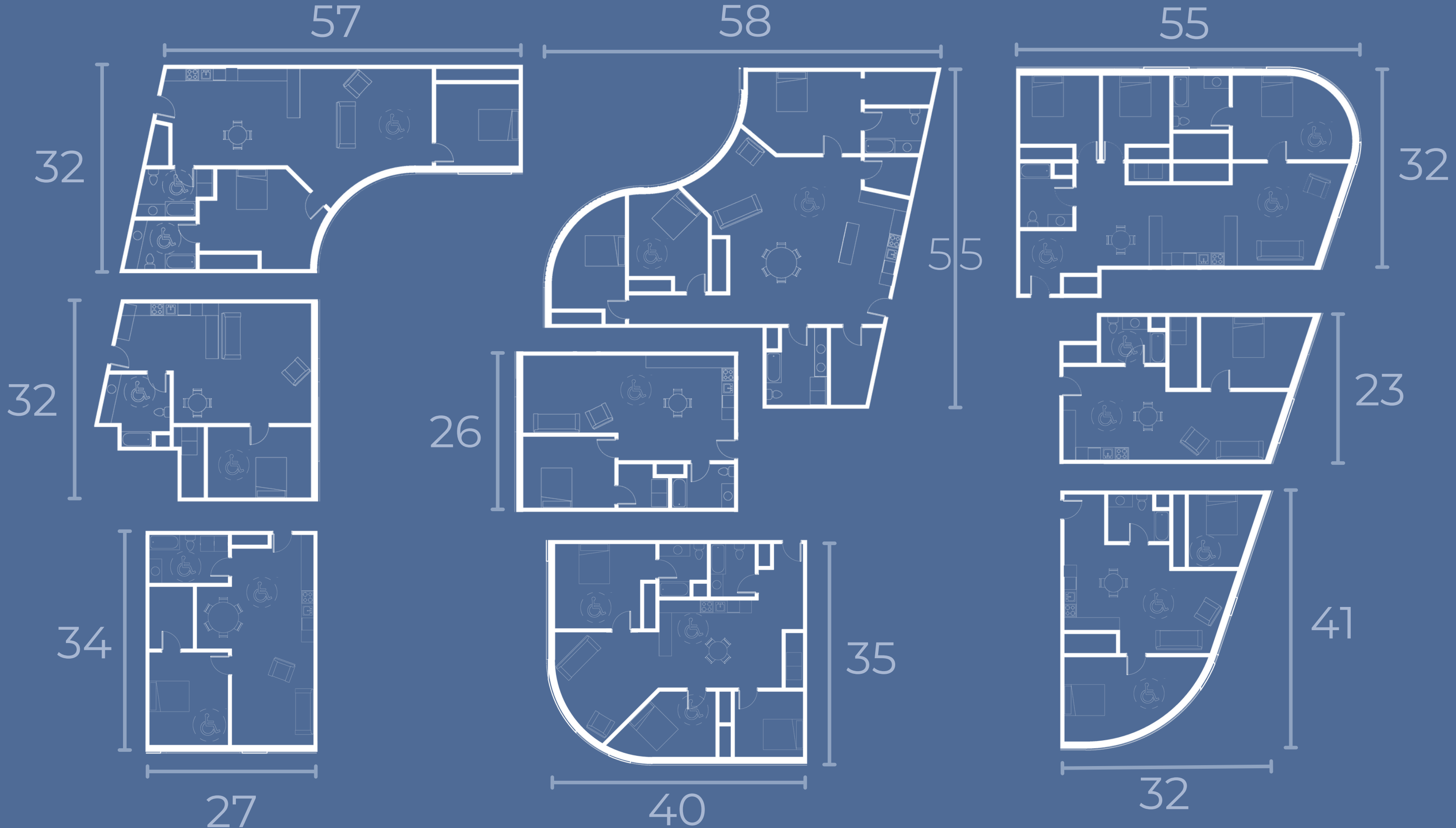
Floors 2 and 3



- Commercial
- Circulation
- 1 Bedroom
- 2 Bedroom
- 3 Bedroom



Unit Plans

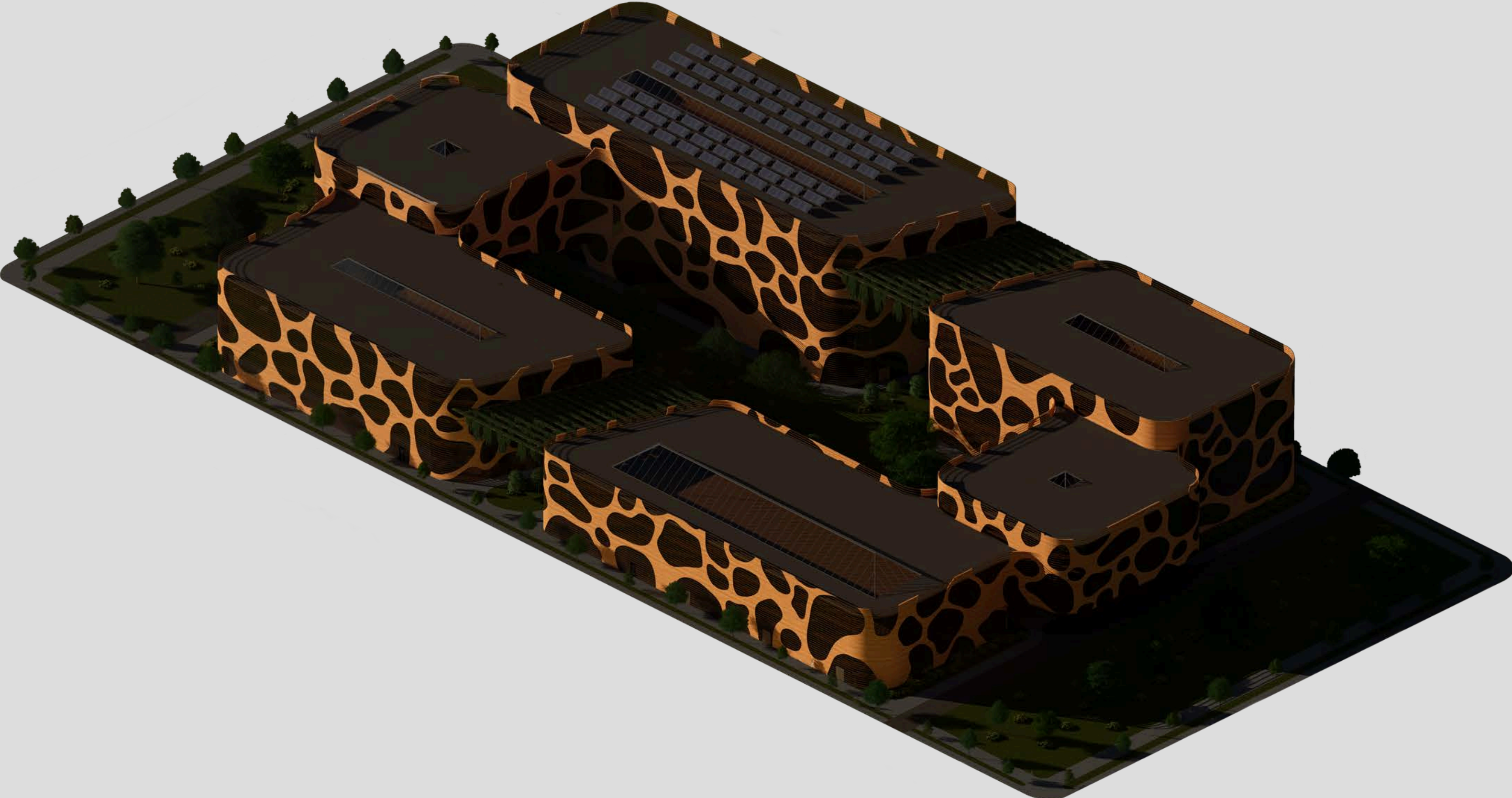


Diagrams

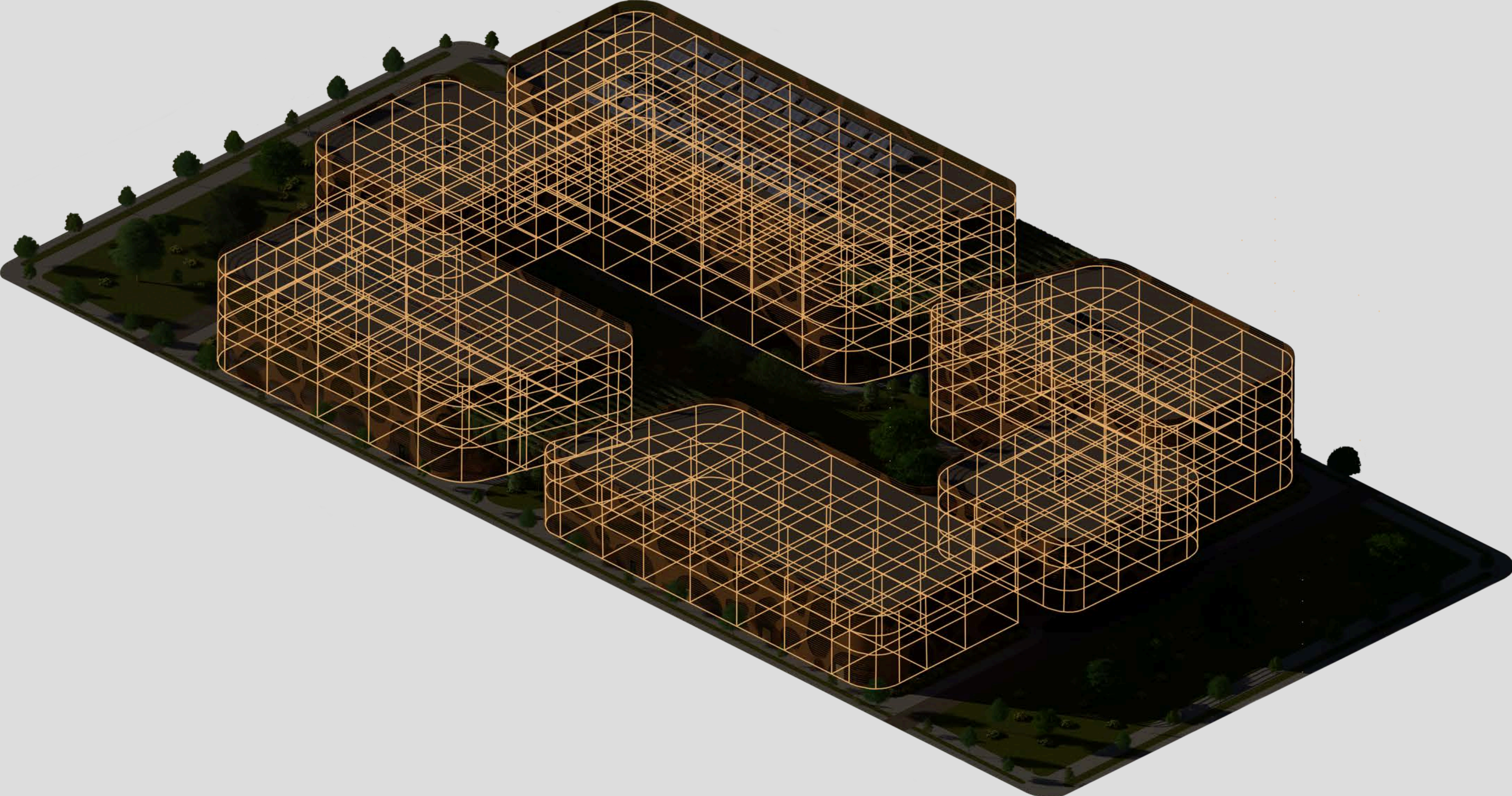
Axon



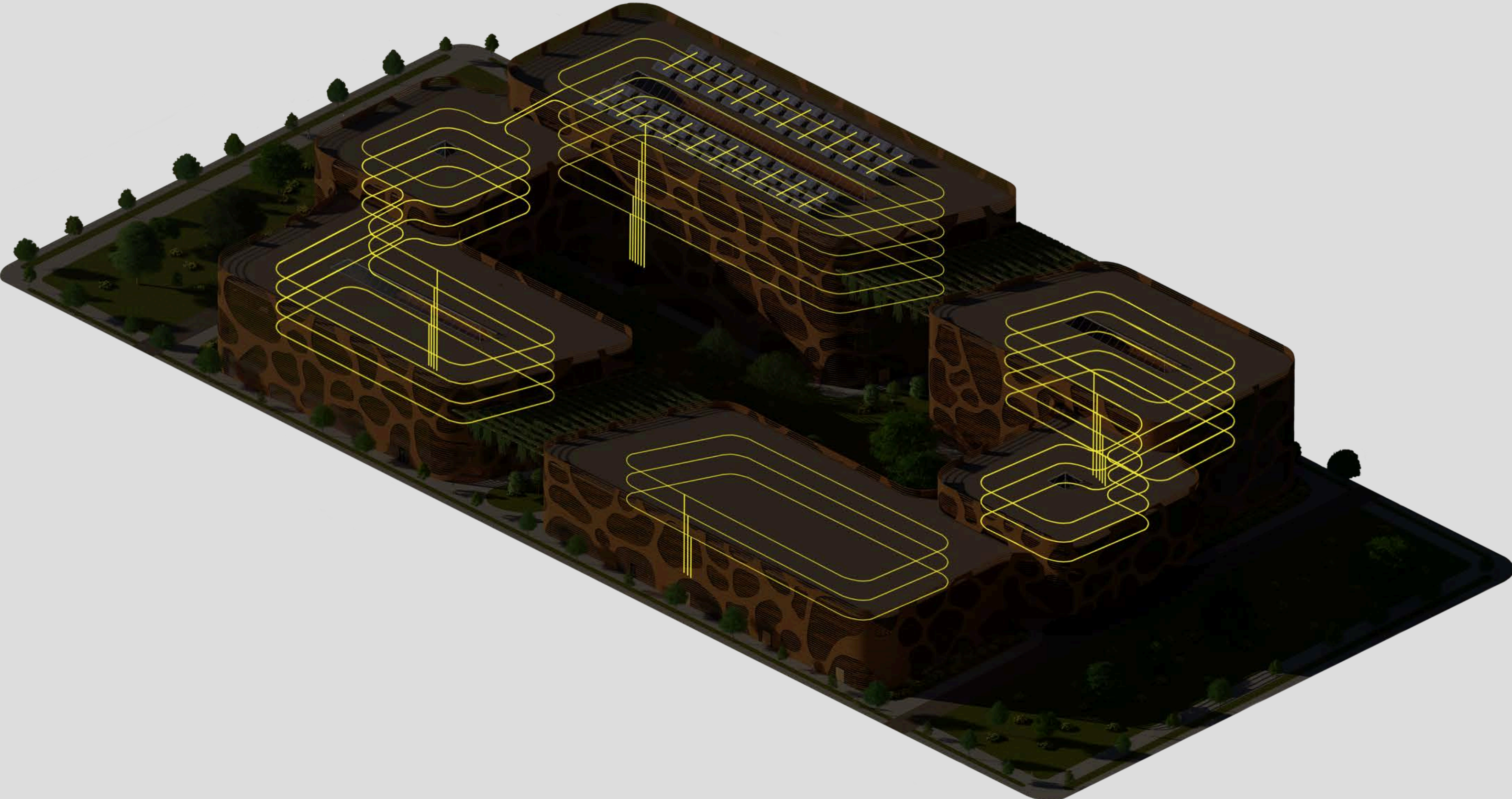
Skin



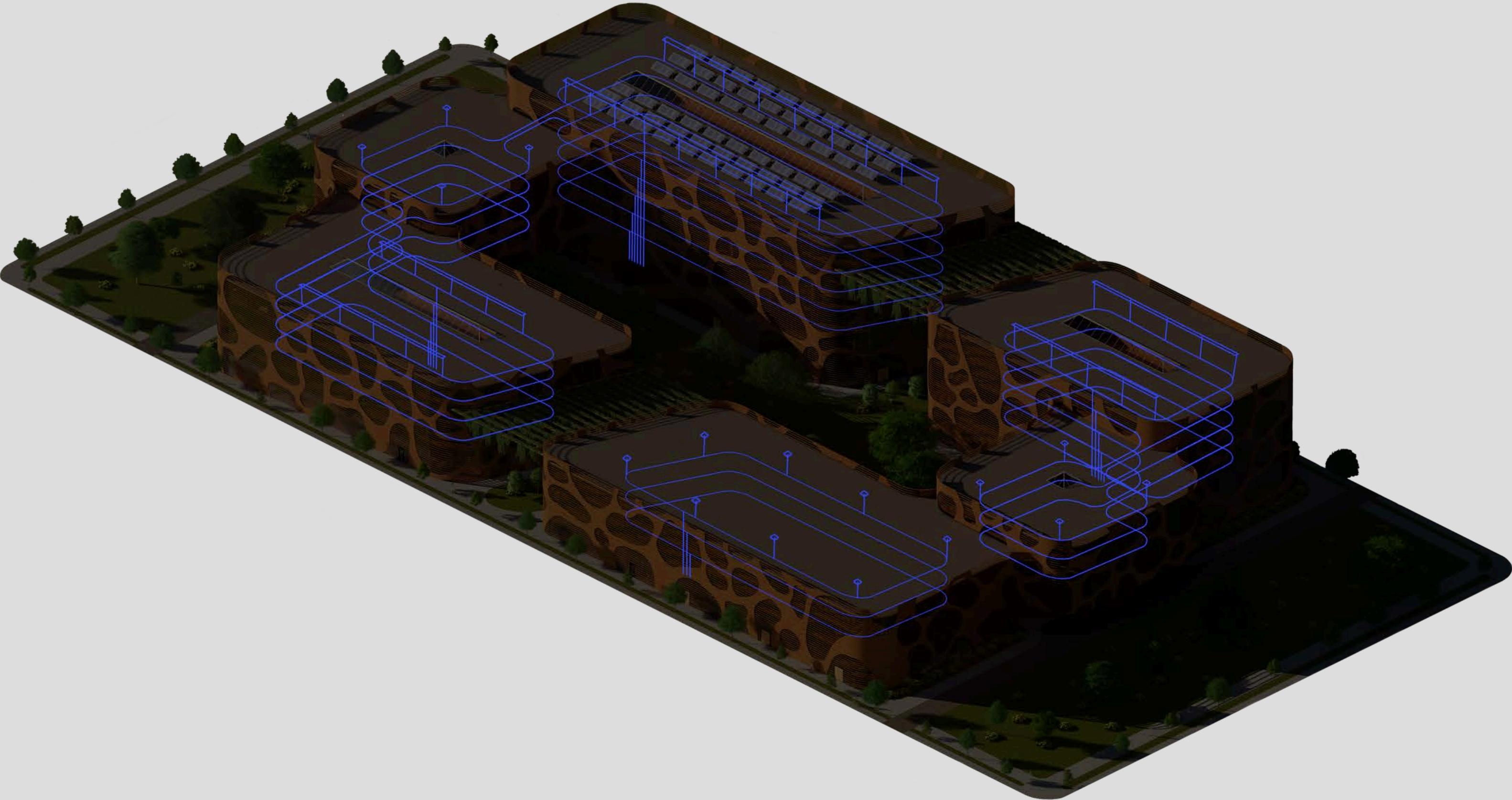
Structure



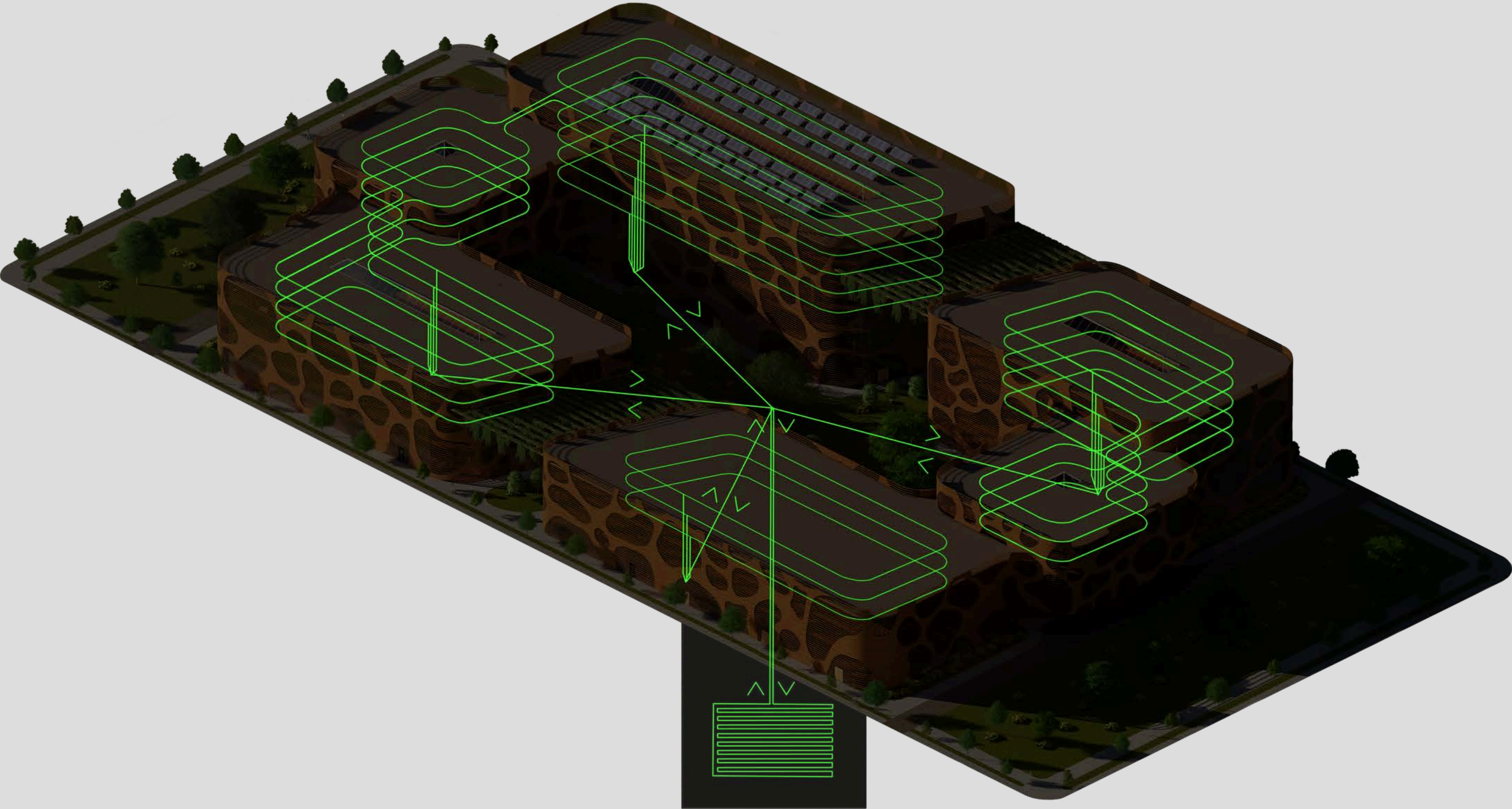
Electrical - with Solar



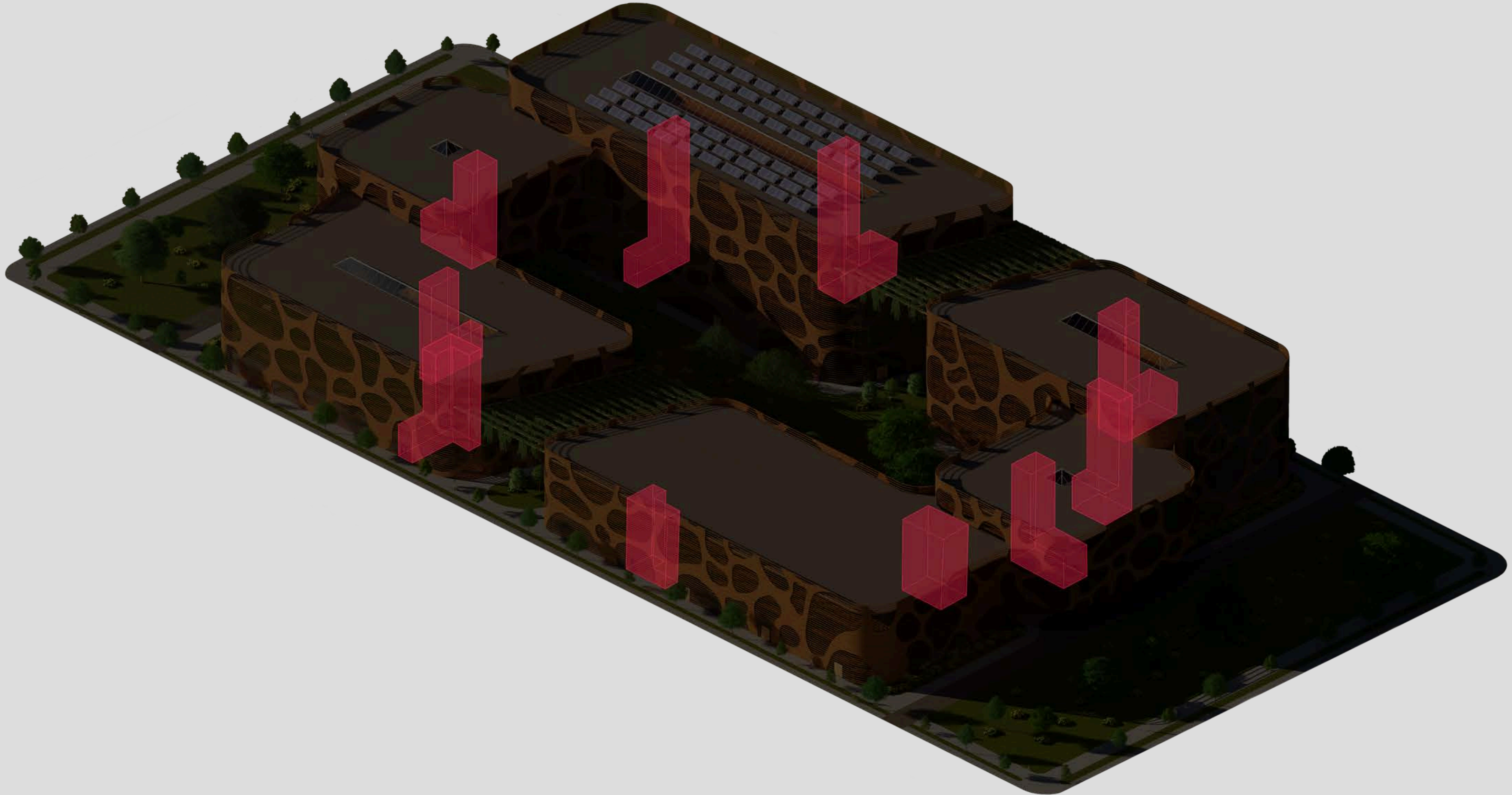
Plumbing - with Rain Collection



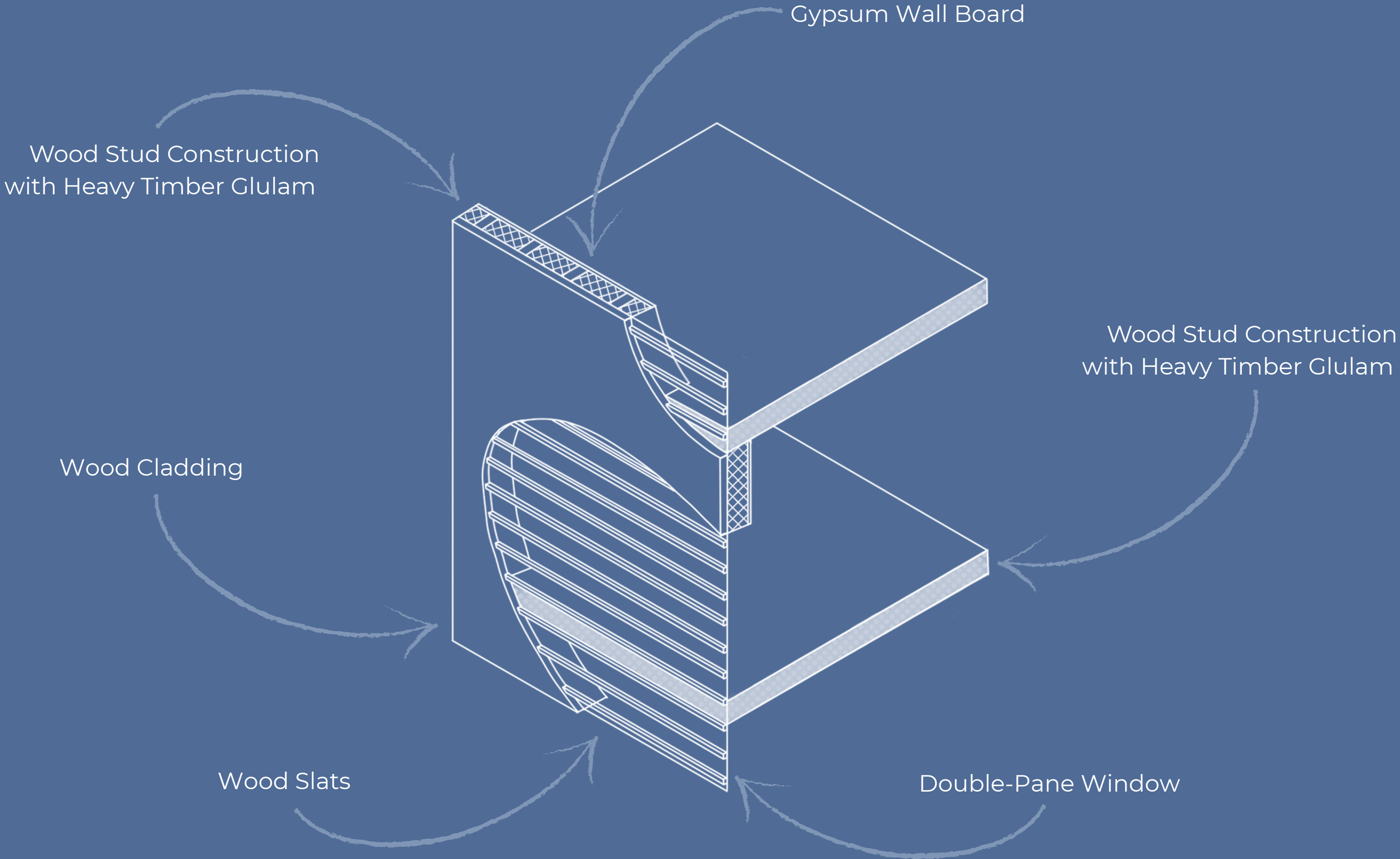
HVAC - Chiller System and Geothermal System



Egress



3D Wall



Materials:

Bingham Lumber - Local Reclaimed Wood

Heavy Timber Glulam

Concrete in parking only

Renders

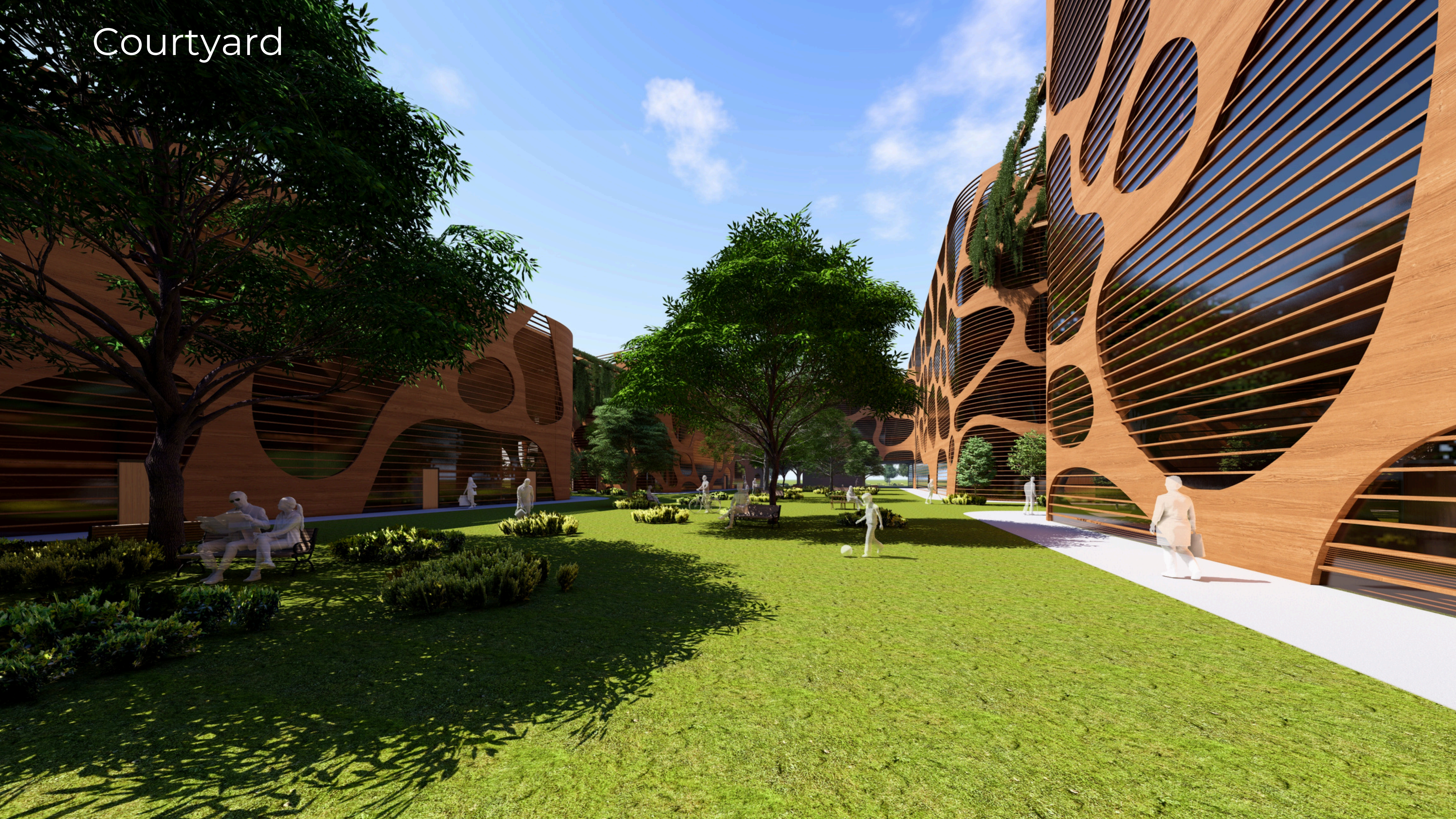
View from NW Corner of 7th and Broadway



View from SE Corner of 9th and Main



Courtyard



Lobby



Atrium



Apartment



Proforma and LEED

Proforma - Residential and Commercial

| | | 4/25/2025 | |
|-------------------------------|-------------------------------------|----------------------|-----------|
| | Specific | | Line # |
| General | Gross Floor Area (gsf) | 420,587.00 | 28 |
| | Occupancy Rate | 93% | 31 |
| | Tax Rate | 25% | 32 |
| | O+M Cost (\$/gsf/yr) | \$ 1.00 | 33 |
| Residential Lease | Residential Leaseable % | 69% | 34 |
| | Net Residential Lease Space | 288,701.00 | 35 |
| Unit Sizing | Average 3 Bed Unit (sf) | 1,686.00 | 36 |
| | Average 2 Bed Unit (sf) | 1,314.00 | 37 |
| | Average 1 Bed Unit (sf) | 873.00 | 38 |
| | Average Low Income Housing (sf) | 750.00 | 39 |
| Unit Distribution | Percentage of 3 Bed Units | 25% | 40 |
| | Percentage of 2 Bed Units | 24% | 41 |
| | Percentage of 1 Bed Units | 51% | 42 |
| | Percentage of Low Income Units | 0% | 43 |
| Units In Building | 3 Bed Units | 43 | 44 |
| | 2 Bed Units | 41 | 45 |
| | 1 Bed Units | 87 | 46 |
| | Low Income Units | - | 47 |
| Theoretically Occupied | Occupied 3 Bed Units | 40 | 48 |
| | Occupied 2 Bed Units | 48 | 49 |
| | Occupied 1 Bed Units | 156 | 50 |
| | Occupied Low Income Units | - | 51 |
| Unit Pricing | 3 Bed Unit Price (\$/month) | \$ 1,600.00 | 52 |
| | 2 Bed Unit Price (\$/month) | \$ 1,200.00 | 53 |
| | 1 Bed Unit Price (\$/month) | \$ 1,000.00 | 54 |
| | Low Income Unit Price (\$/month) | \$ 800.00 | 55 |
| Revenues by Unit | 3 Bed Units (\$/month) | \$ 64,000.00 | 56 |
| | 2 Bed Unit (\$/month) | \$ 57,600.00 | 57 |
| | 1 Bed Unit (\$/month) | \$ 156,000.00 | 58 |
| | Low Income Unit (\$/month) | \$ - | 59 |
| | Monthly Residential Revenue: | \$ 277,600.00 | 60 |

| | | 4/25/2025 | |
|----------------------------------|-----------------------------------|----------------------|-----------|
| Pro-Forma Group | Specific | | Line # |
| Commercial Lease Overview | Gross Building Area (sf) | 420,587 | 61 |
| | Commercial Lease Allocation (sf) | 131,886 | 63 |
| | Net Commercial Space | 80,000.00 | 65 |
| First Floor Lease | Commercial Lease Space (sf) | 92,830.00 | 67 |
| | Lease Price (\$/sf/yr) | \$ 31.00 | 68 |
| | Monthly Revenue | \$ 239,810.83 | 69 |
| Second Floor Lease | Commercial Lease Space | 20,207.00 | 71 |
| | Lease Price (\$/sf/yr) | \$ 39.60 | 72 |
| | Monthly Revenue | \$ 66,683.10 | 73 |
| Third Floor Lease | Commercial Lease Space | 20,207.00 | 75 |
| | Lease Price (\$/sf/yr) | \$ 30.00 | 76 |
| | Monthly Revenue | \$ 50,517.50 | 77 |
| Fourth Floor Lease | Commercial Lease Space | - | 79 |
| | Lease Price (\$/sf/yr) | \$ 18.00 | 80 |
| | Monthly Revenue | \$ - | 81 |
| Fifth Floor Lease | Commercial Lease Space | - | 83 |
| | Lease Price (\$/sf/yr) | \$ 20.00 | 84 |
| | Monthly Revenue | \$ - | 85 |
| 6th Floor Lease | Commercial Lease Space | - | 87 |
| | Lease Price (\$/sf/yr) | \$ 64.80 | 88 |
| | Monthly Revenue | \$ - | 89 |
| Additional Roof Top Lease | Commercial Lease Space | 20,207.00 | 91 |
| | Lease Price (\$/sf/yr) | \$ 108.00 | 92 |
| | Monthly Revenue | \$ 181,863.00 | 93 |
| | Monthly Commercial Revenue | \$ 538,874.43 | 94 |

Proforma - Income and ROI

| Pro-Forma Group | Specific | | 4/25/2025 | Line # |
|-----------------------------|--------------------------------------|-----------|---------------------|--------|
| | | | | |
| Income | Monthly Revenues | | 816,474.43 | 95 |
| Property Liabilities | Debt Costs (Monthly Mortgage) | \$ | (327,748.22) | 96 |
| | Operating Costs (monthly) | \$ | (35,048.92) | 97 |
| | Monthly Liability Cost | \$ | (362,797.14) | 98 |
| | Net Monthly Income | \$ | 453,677.29 | 99 |
| Tax Liabilities | Bismarck Property Yearly Tax Rate | | 1.2% | 100 |
| | Bismarck Property Monthly Tax cost | \$ | (45,702.61) | 101 |
| | Monthly Gross Profit | \$ | 407,974.69 | 102 |
| | 25% Taxes on Gross Profits | \$ | (101,993.67) | 103 |
| | Net Monthly Profit | \$ | 305,981.02 | 104 |
| | Yearly LIHTC Ammount | \$ | - | 105 |
| | 10yr Net Yearly Profit | \$ | 3,671,772.18 | 106 |
| | 20yr Net Yearly Profit | \$ | 3,671,772.18 | 107 |
| Return on Investment | 10 yr Investor ROI % per year | | 20.085% | 108 |
| | 10 yr Project ROI % per year | | 4.017% | 109 |
| | 20yr Investor ROI% per year | | 20.085% | 110 |
| | 20yr Project ROI% per year | | 4.017% | 111 |

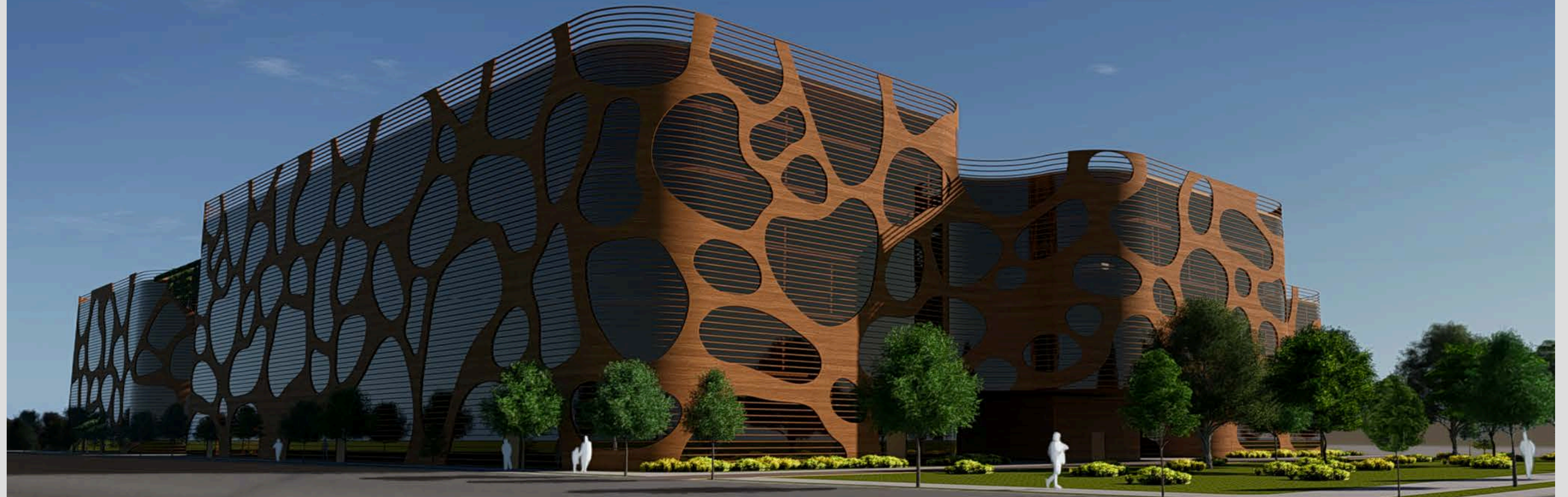
LEED:

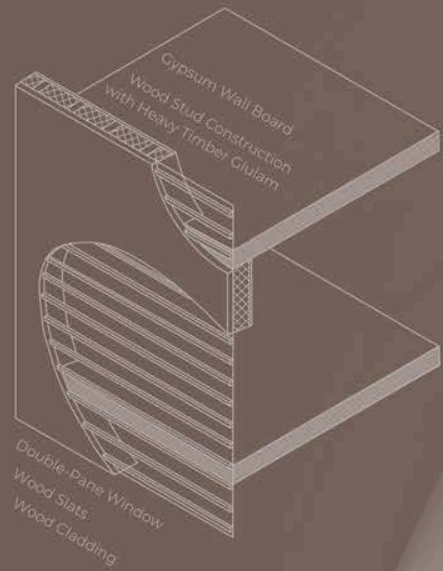
- Reduced Parking Footprint
- Open Space
- Rainwater Management
- Indoor Water Use Reduction
- Renewable Energy Production
- Green Power and Carbon Offsets
- Daylight
- Quality Views
- Acoustic Performance
- Thermal Comfort
- Low-Emitting Materials

Boards

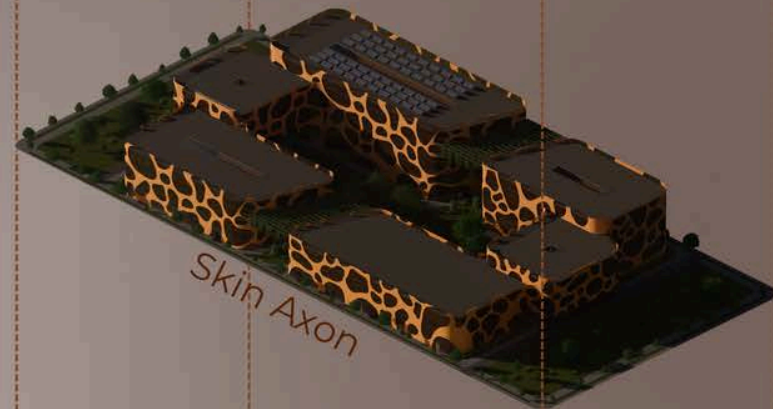
Old Growth

A p a r t m e n t s



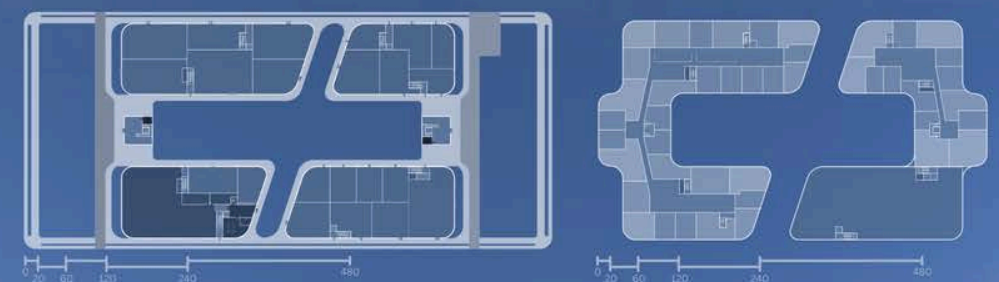
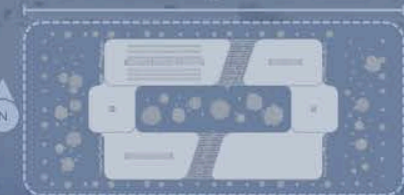


The structure consists of heavy timber glulam columns and beams.



The building skin is based on slime mold patterns, this makes it feel very natural and organic.

I made it a point to include atriums in the center of each residential area, to regulate temperatures and provide natural lighting to hallways and community areas.



- Garbage
- Lobby
- Gym
- Mechanical
- Commercial
- Circulation
- 1 Bedroom
- 2 Bedroom
- 3 Bedroom

Thank You, Comments?

