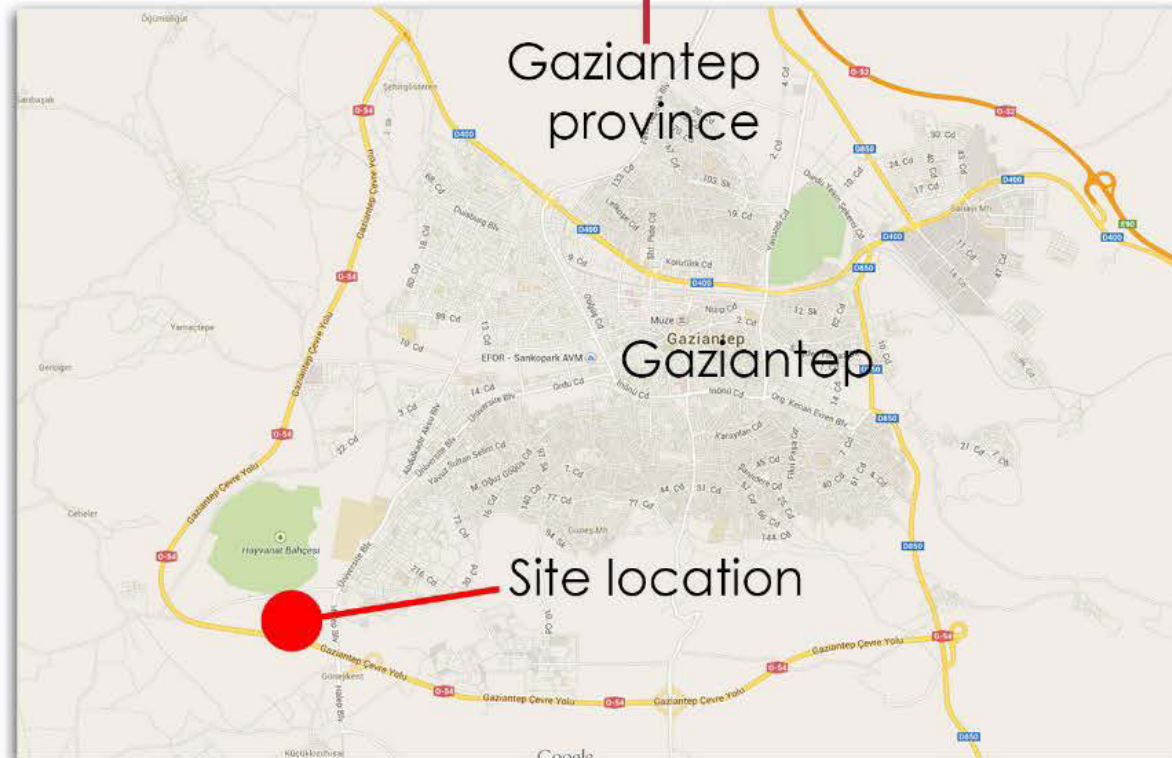


School of tomorrow - Gaziantep

ISOVER Multi - Comfort House 2014



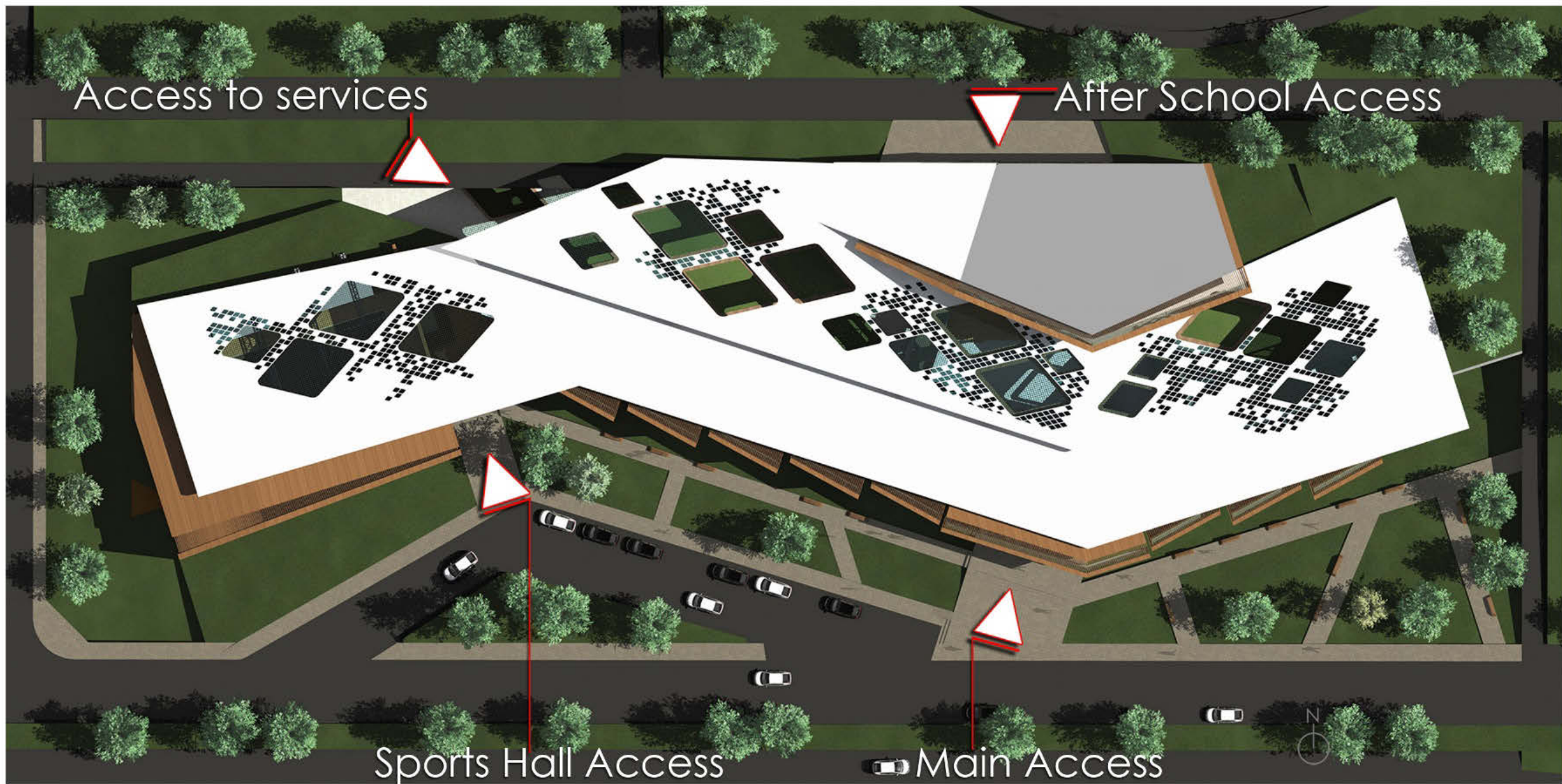


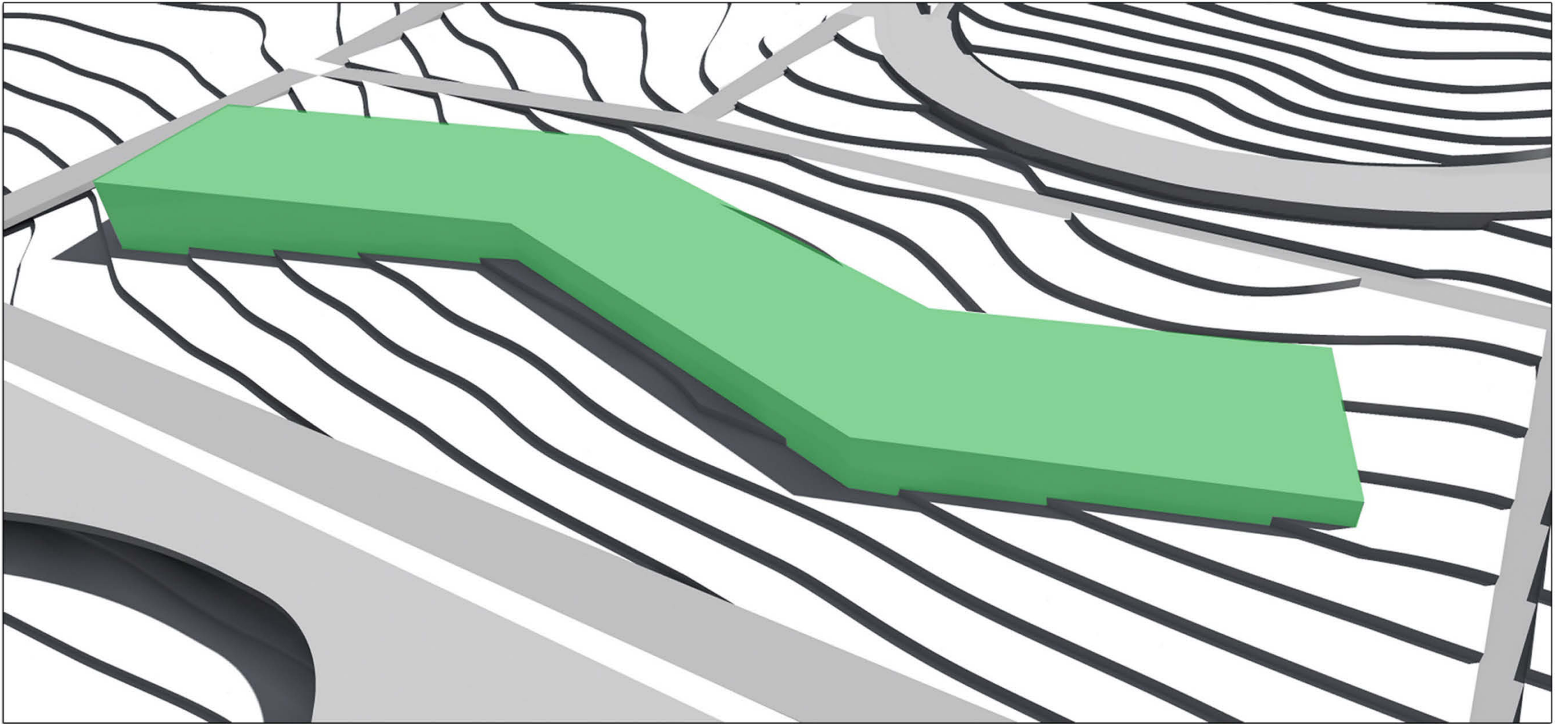
Access to services

After School Access

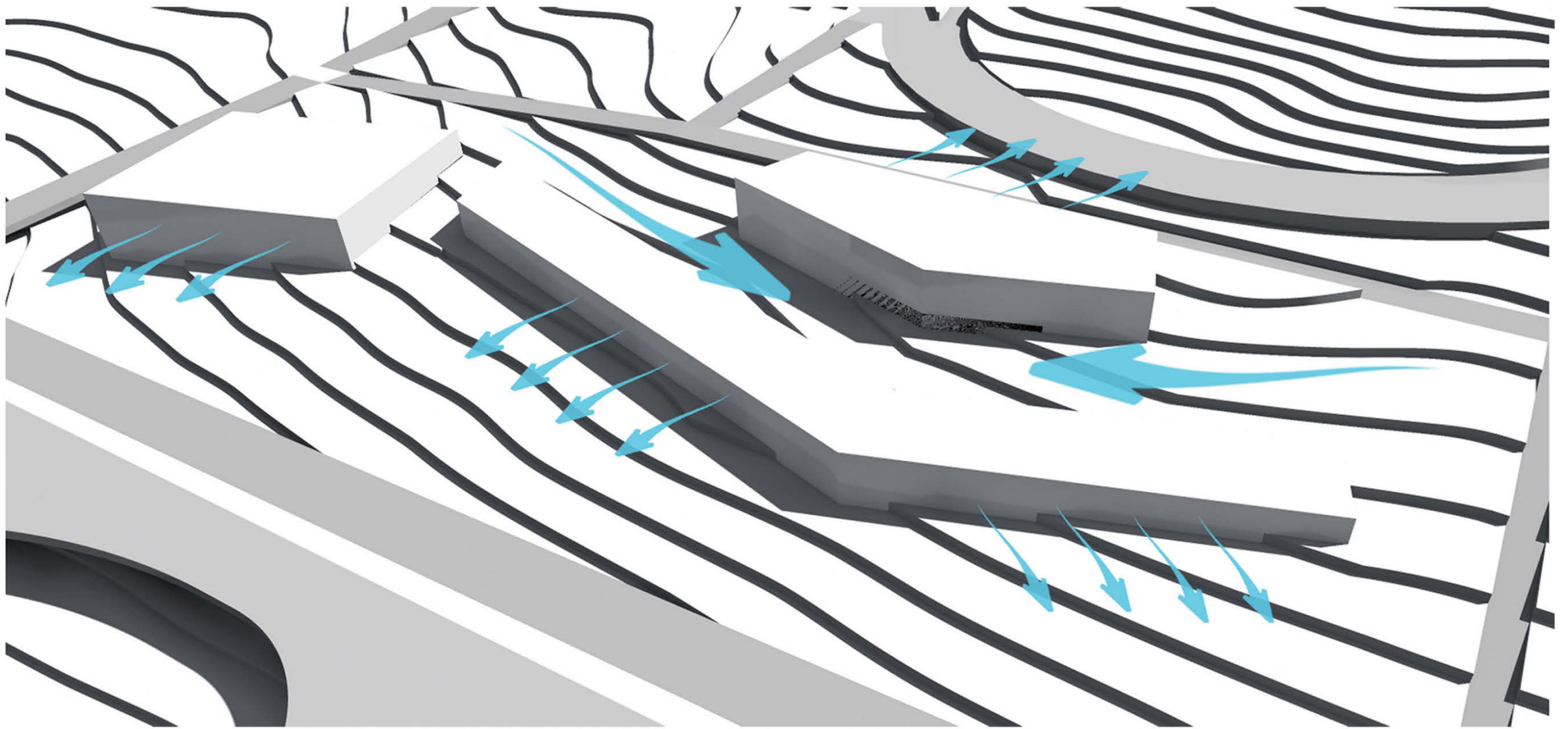
Sports Hall Access

Main Access



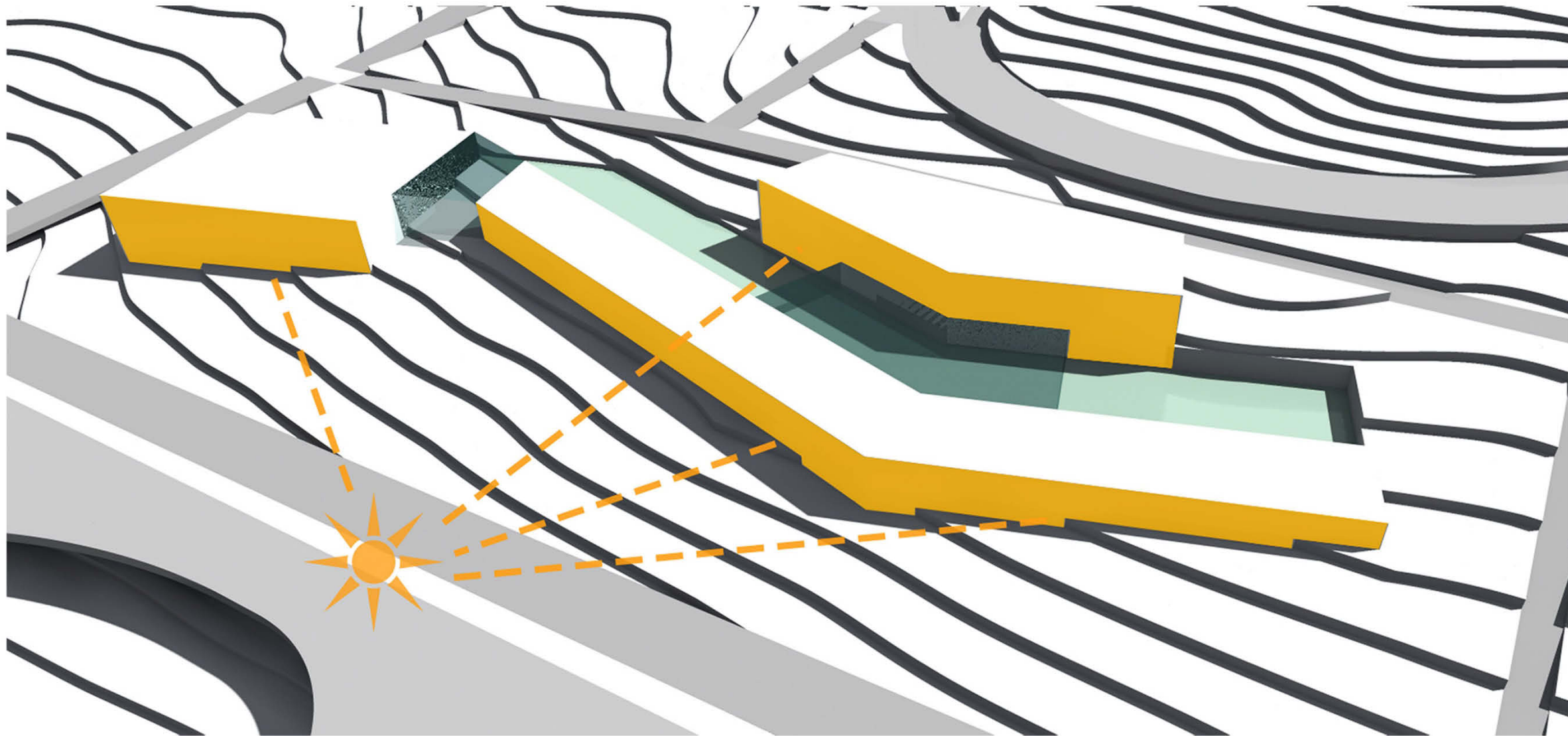


Monotone site ⇔ Dynamic form

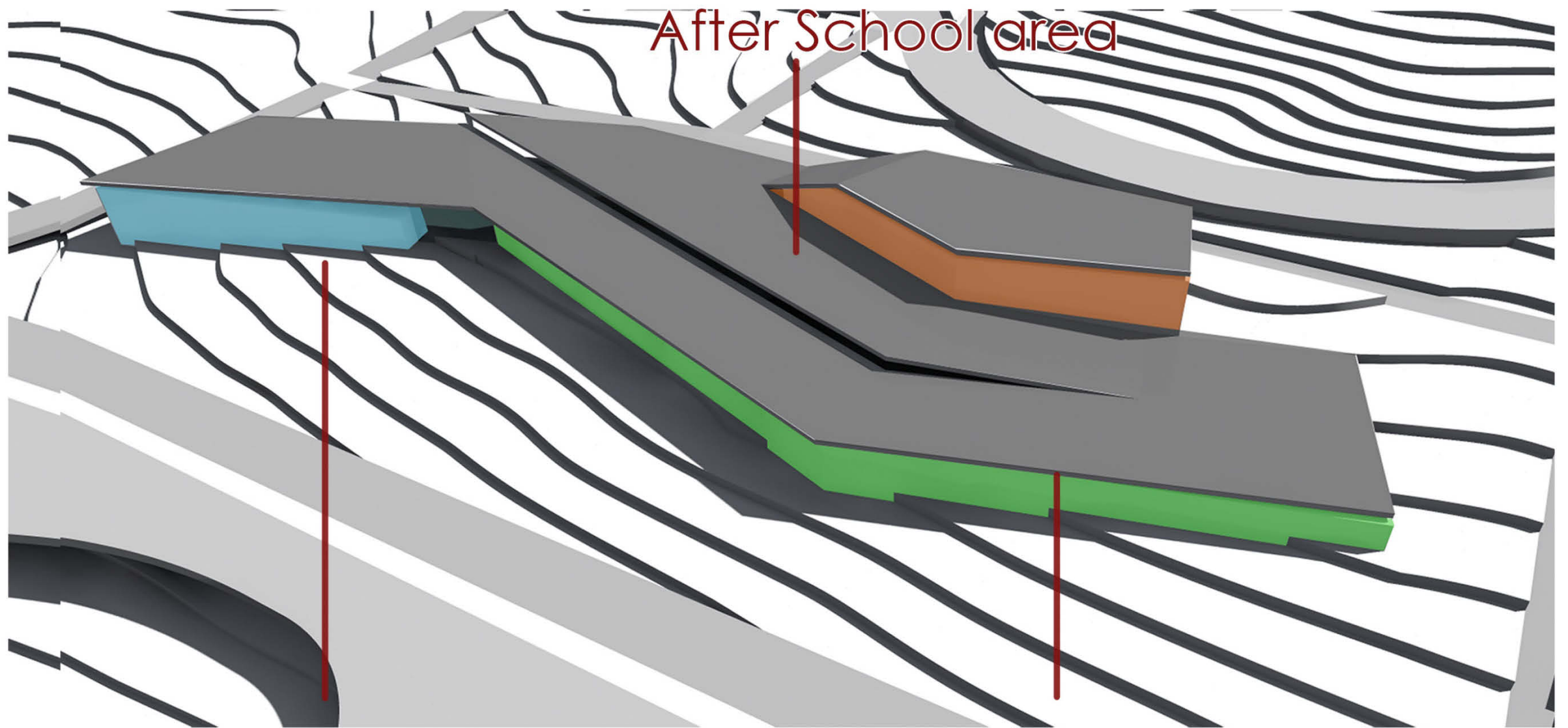


Natural ventilation

Concept



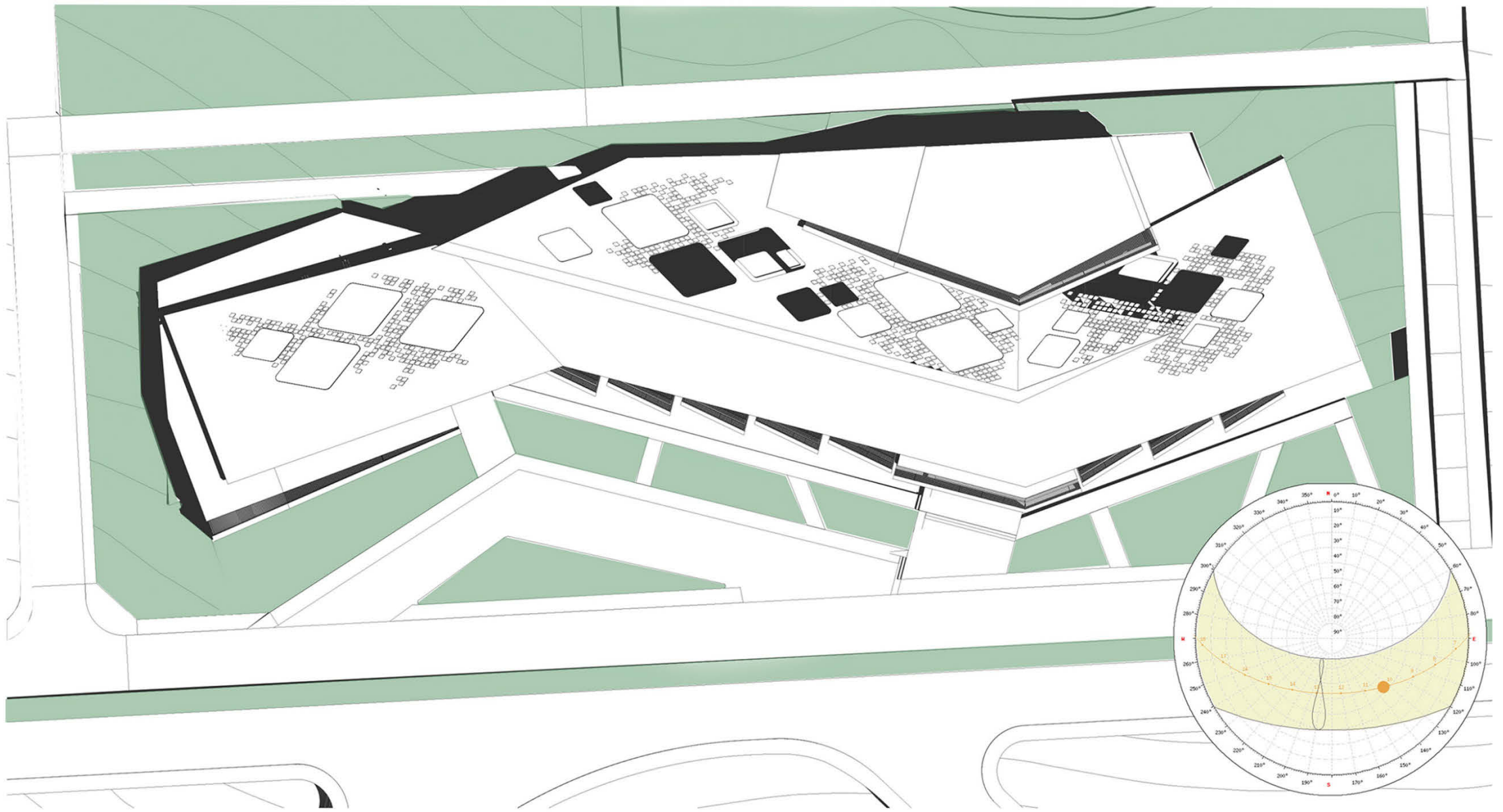
Natural light
Concept

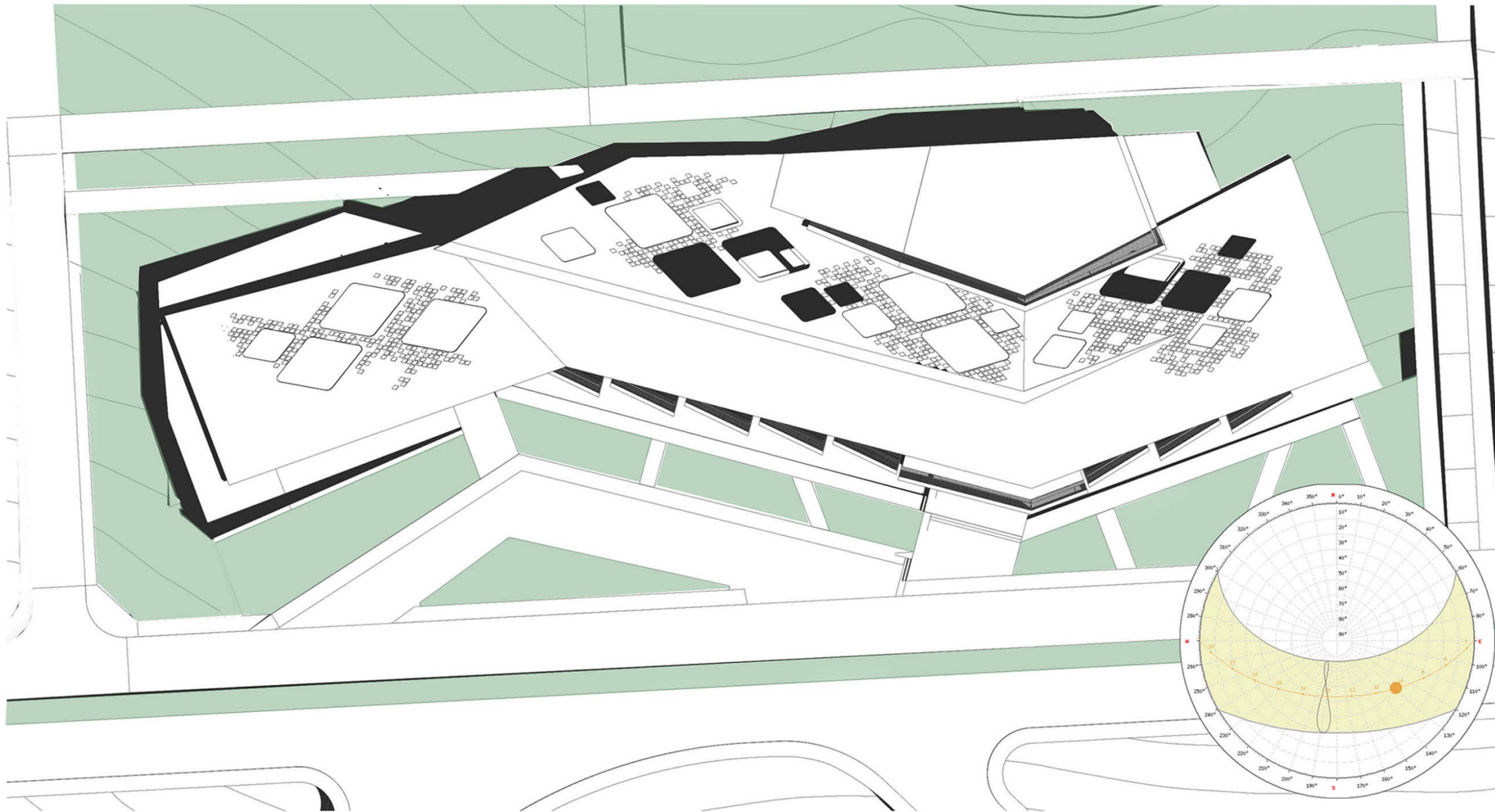


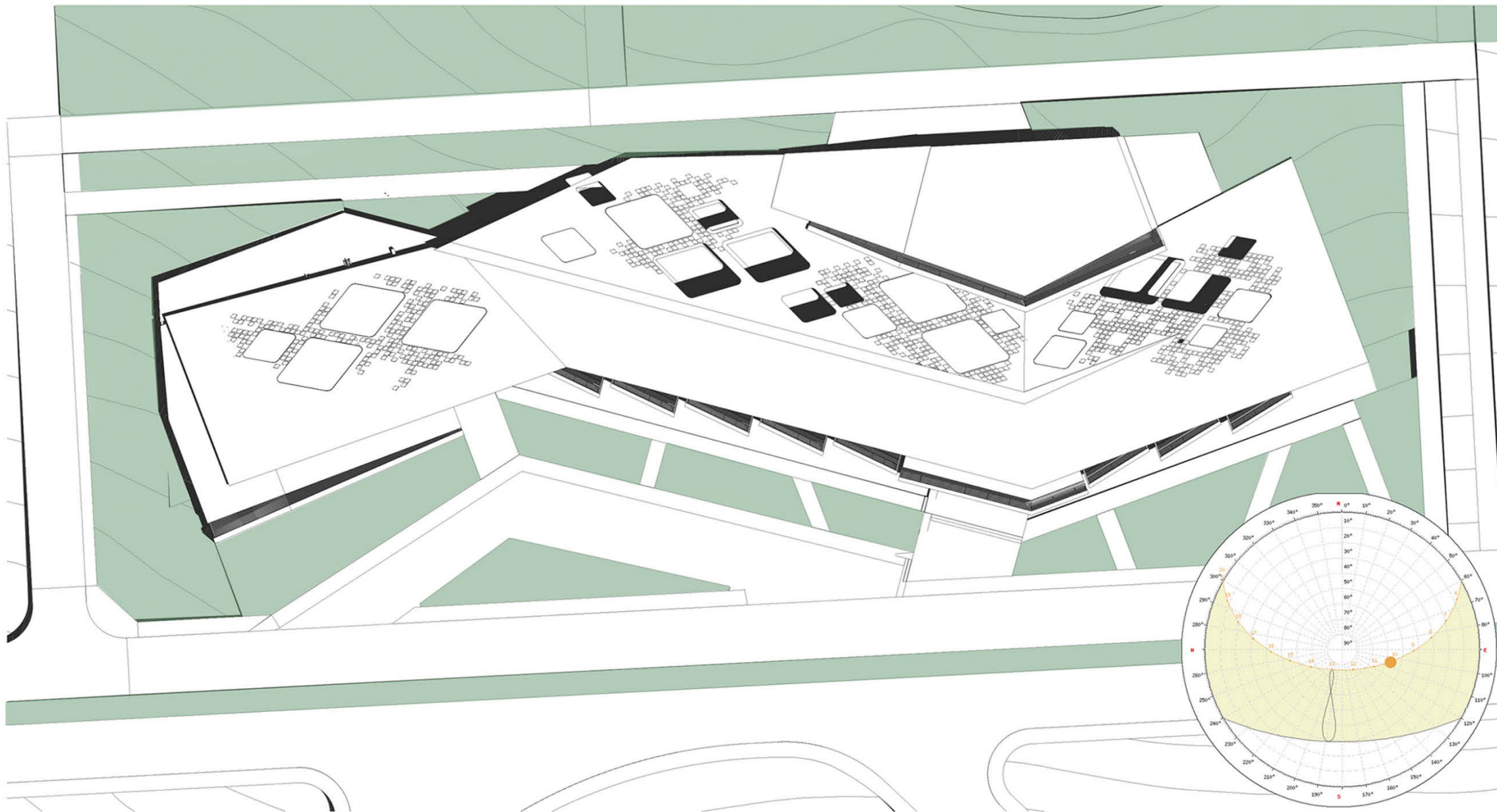
After School area

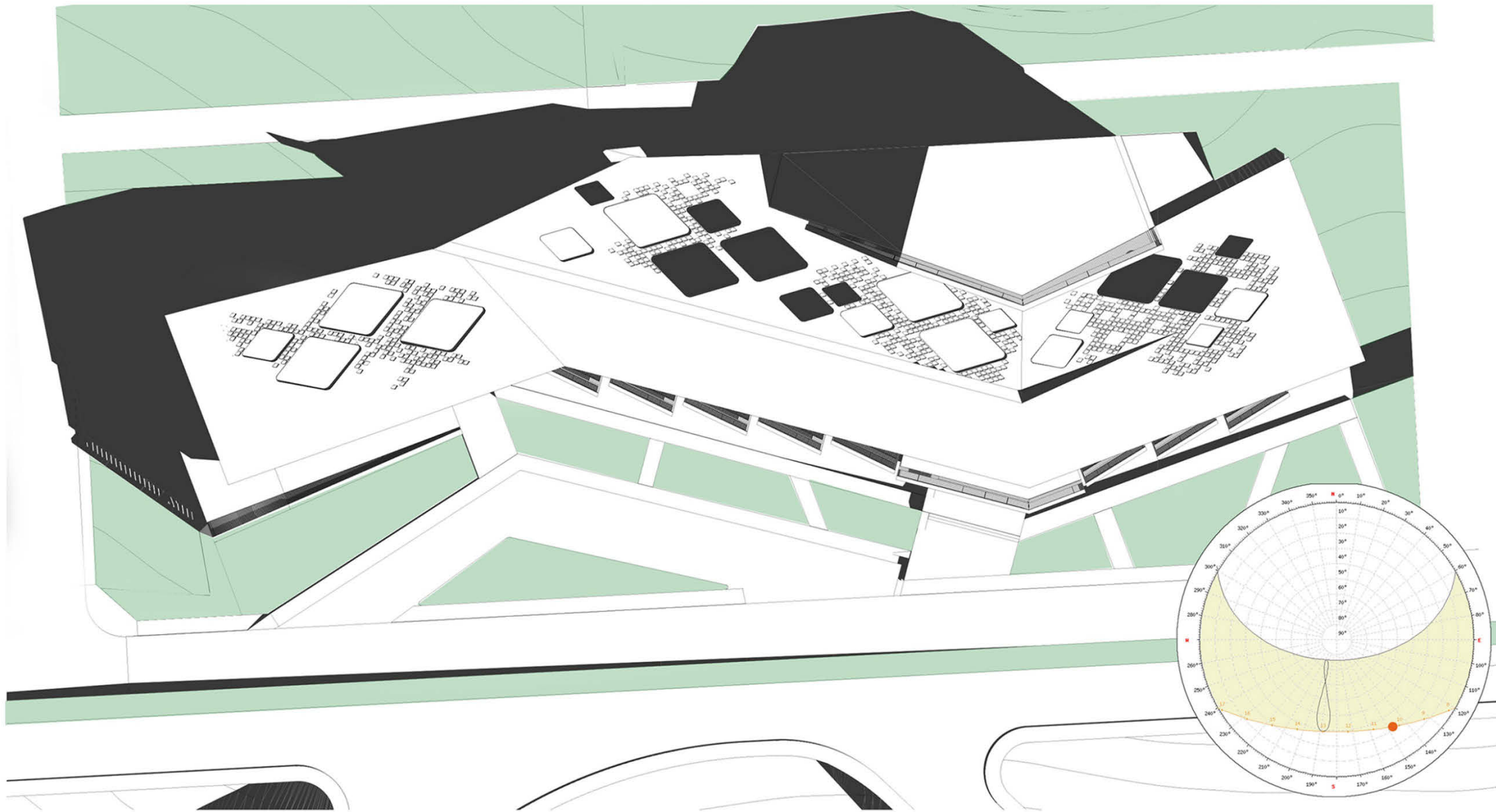
Sports hall

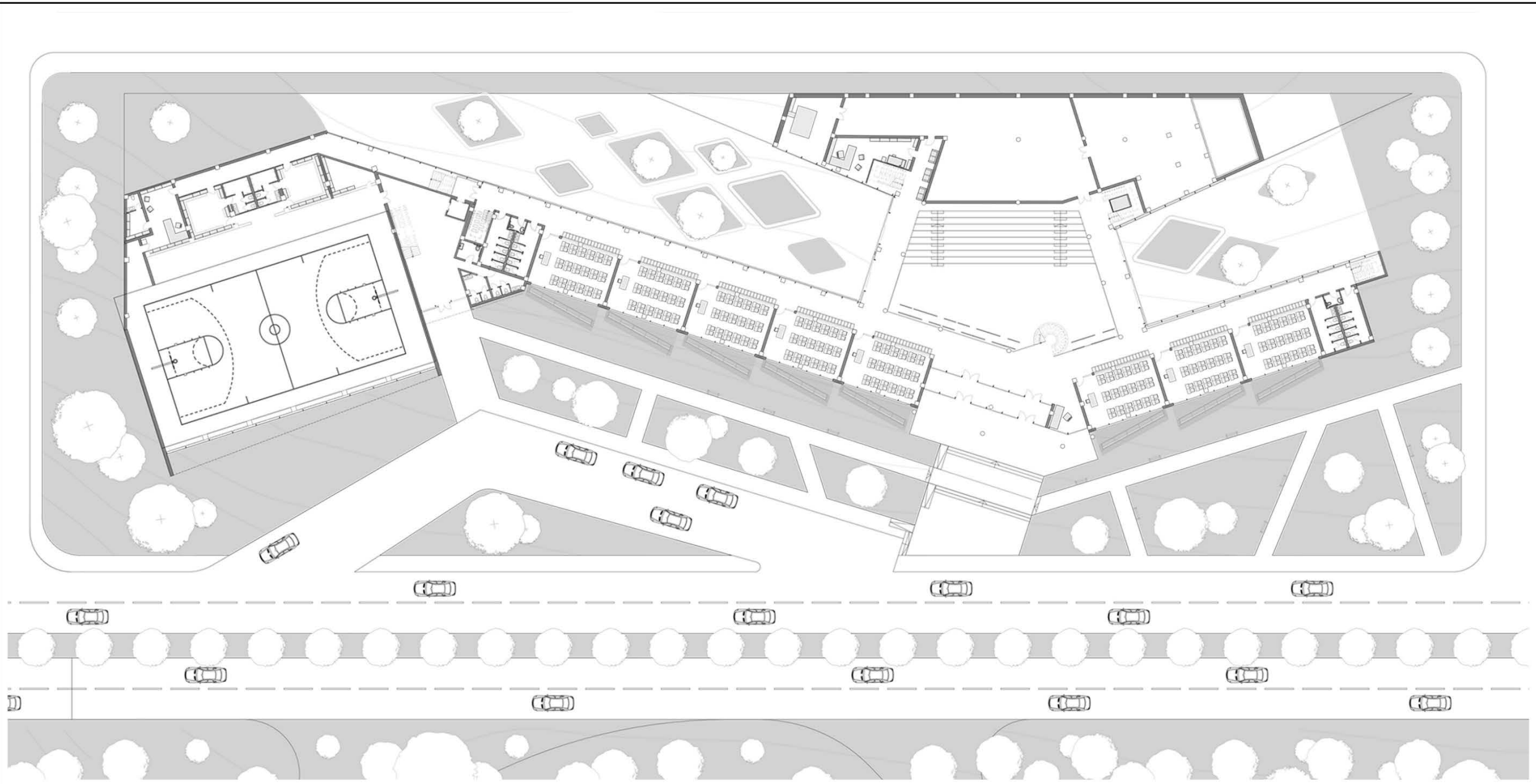
Classroom area





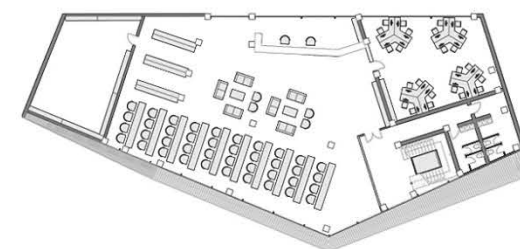




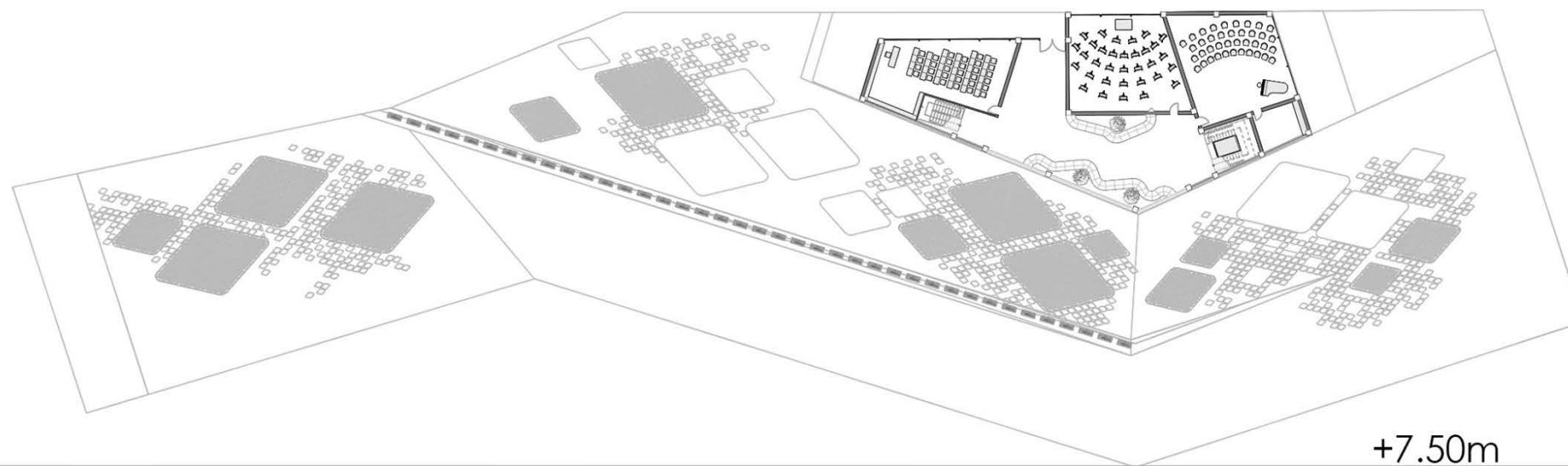




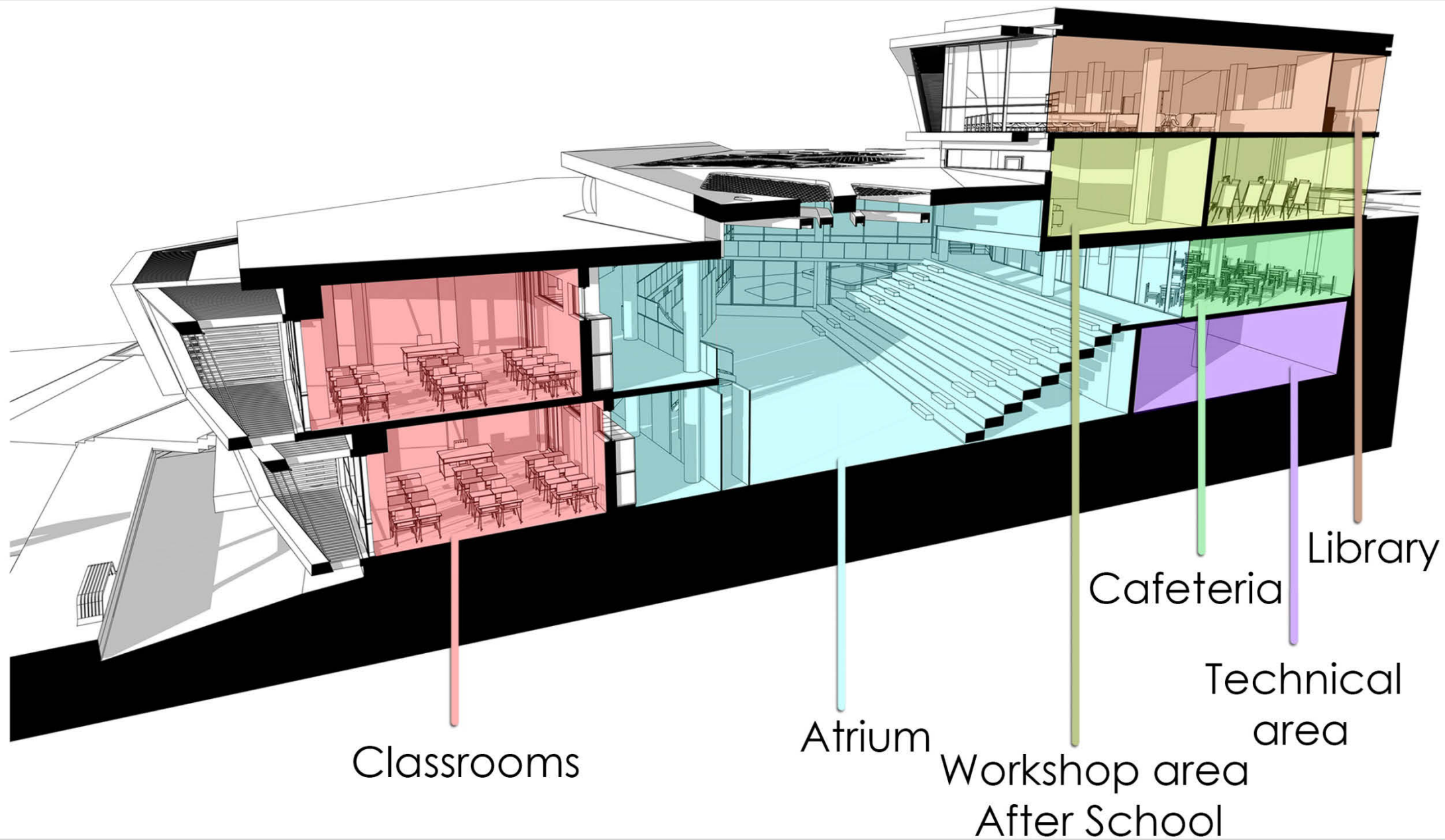
+3.50m



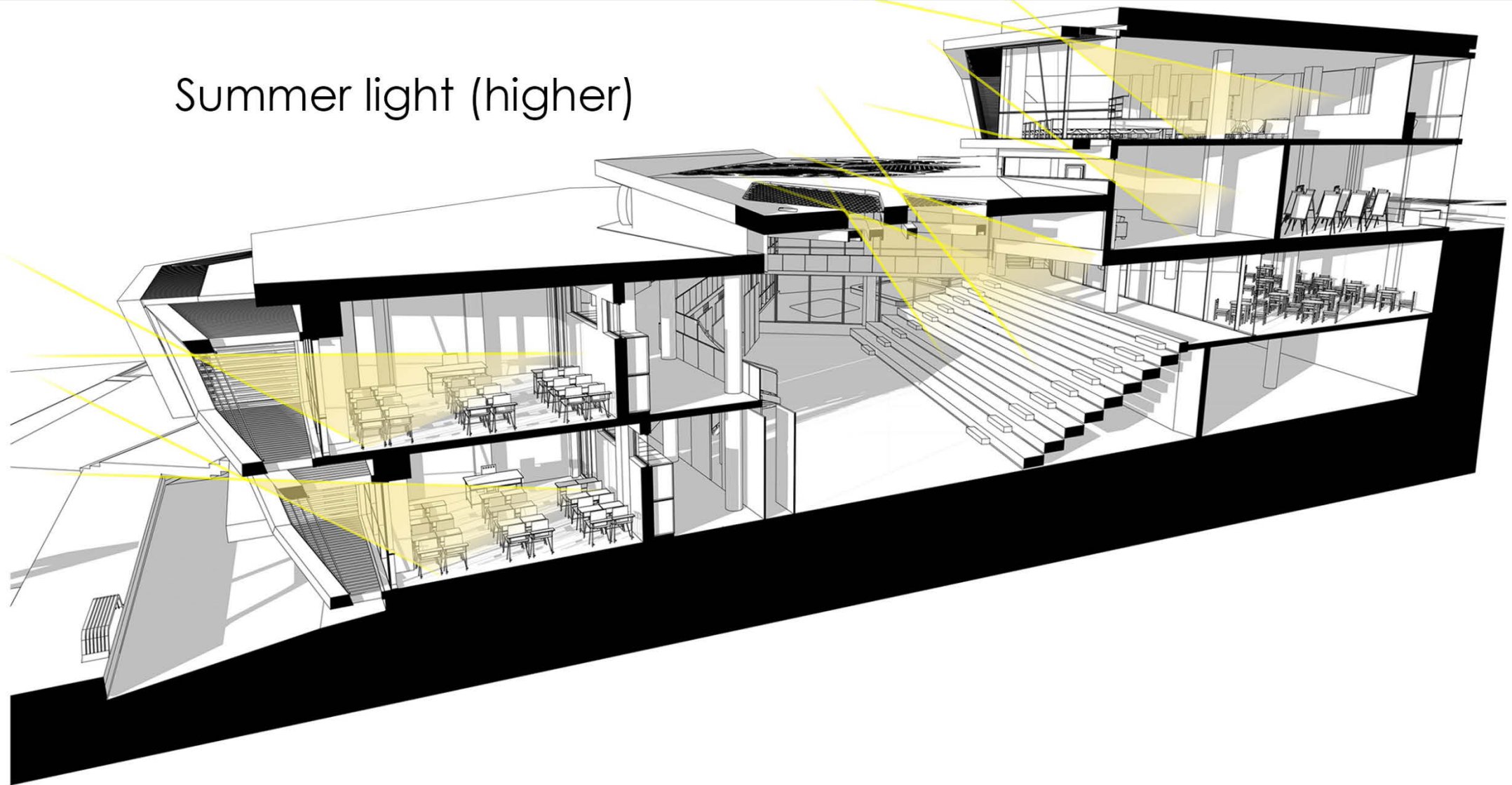
+10.5m



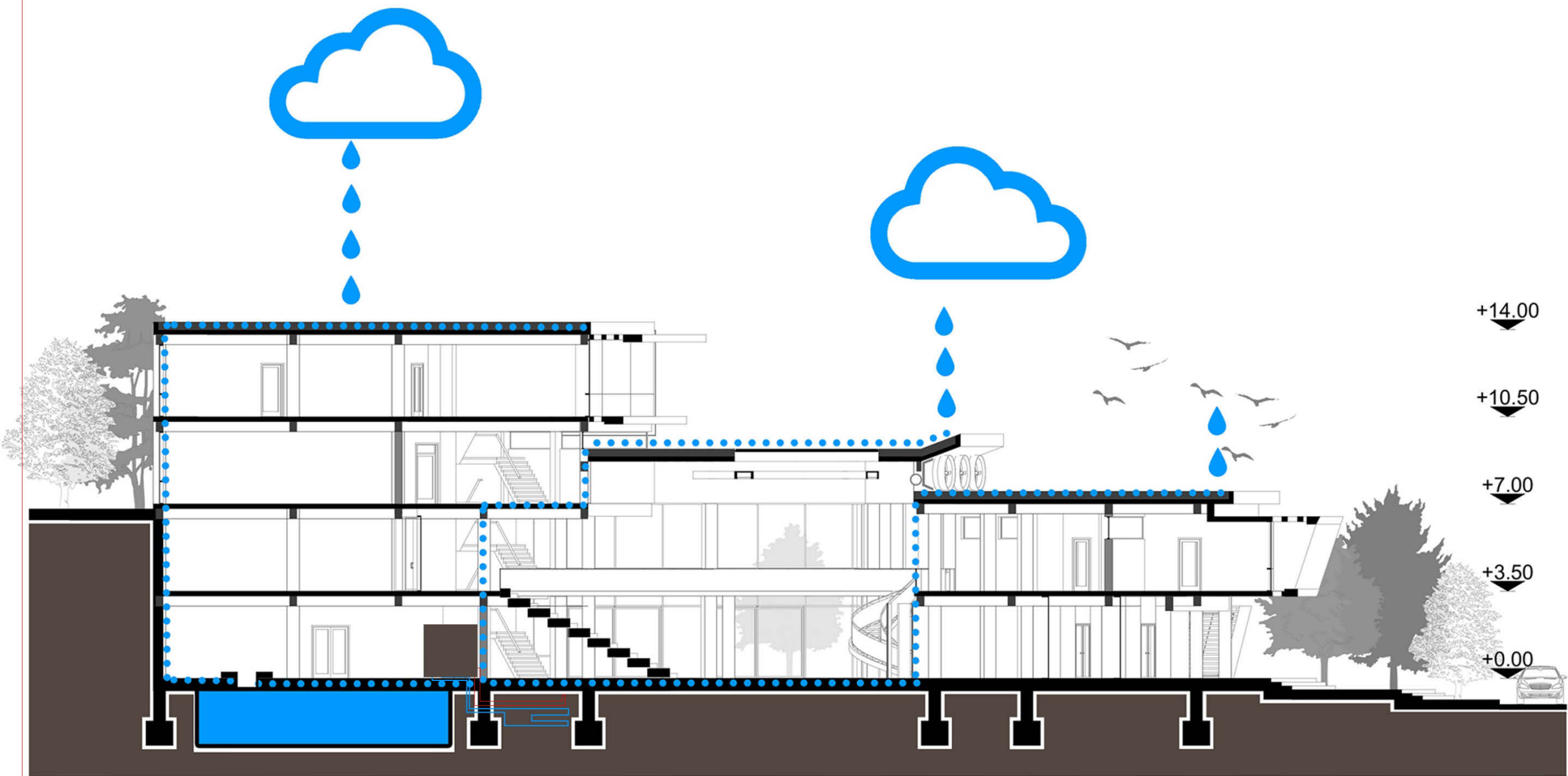
+7.50m



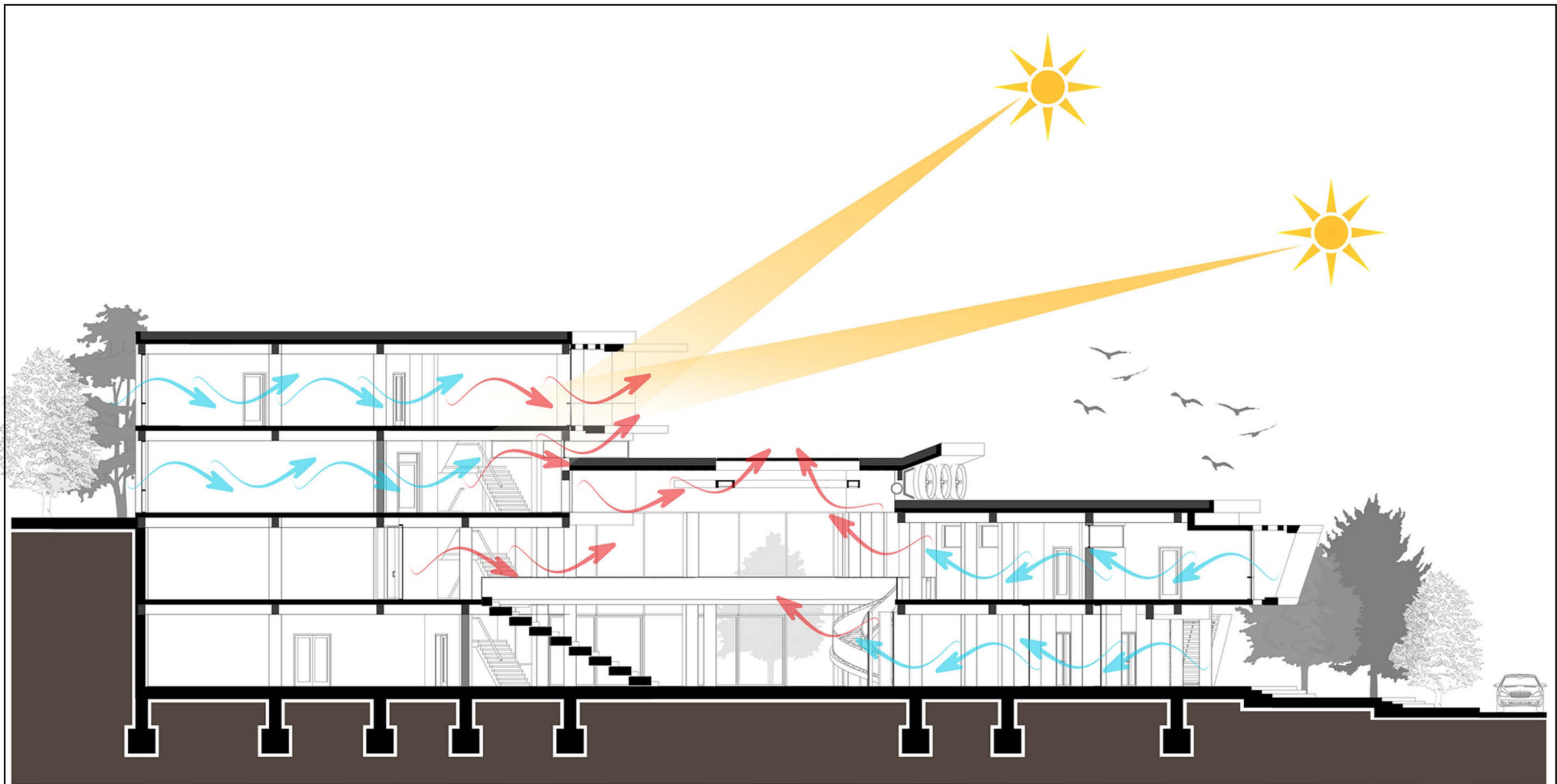
Summer light (higher)



Winter light (lower)



Rainwater drainage - Geothermal energy



Transparent
photovoltaic
panel



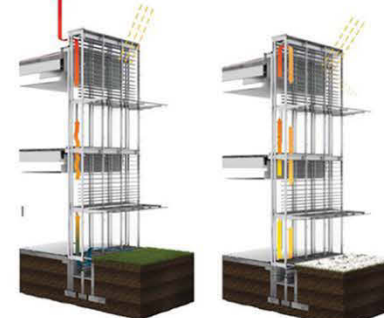
4800 kW/year

Residential
wind turbines



8000 kW/year

Double Skin Facade



U-Value = $1.8 \text{ W/m}^2\text{K}$

+14.00

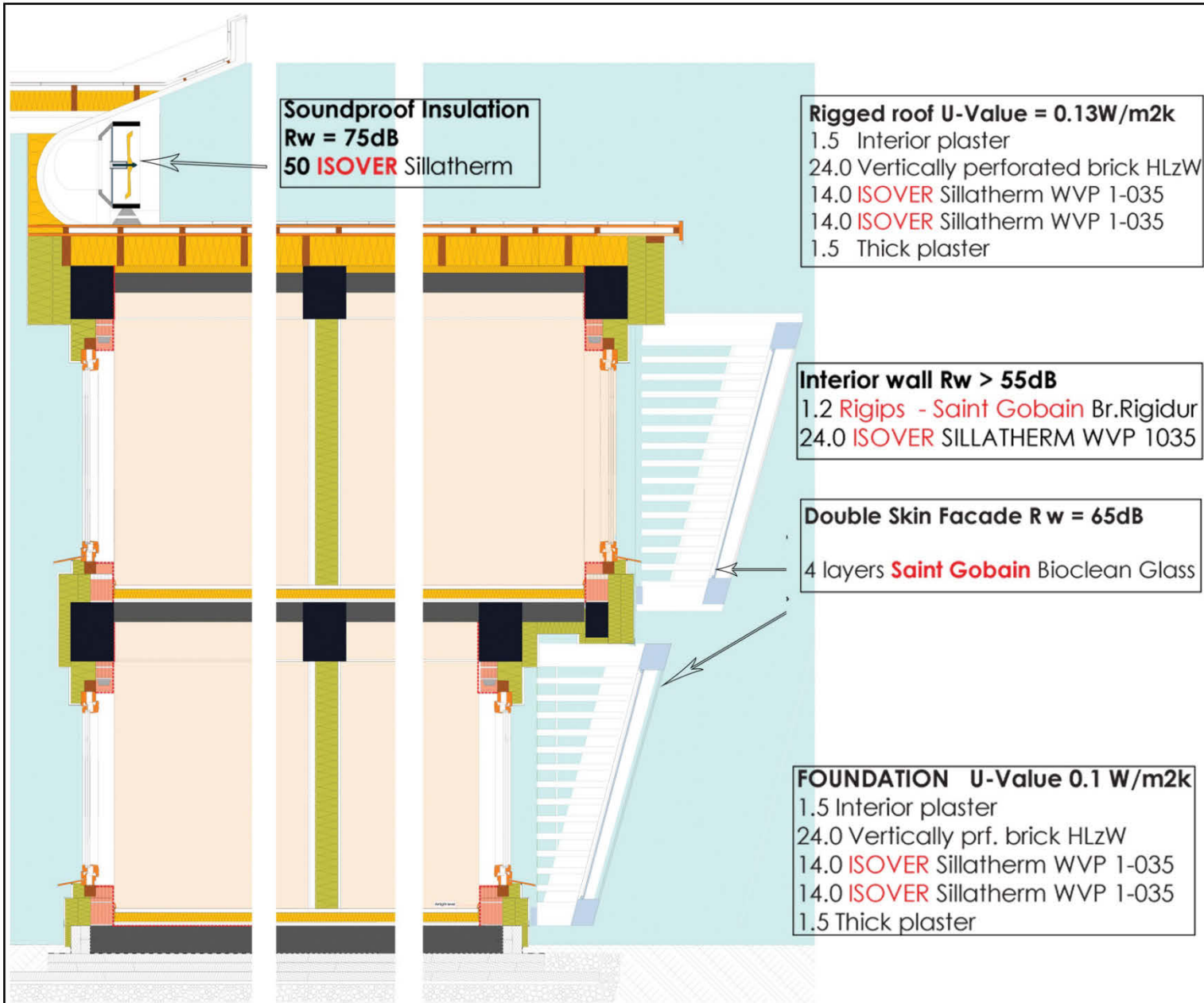
+10.50

+7.00

+3.50

+0.00

Acoustic protection



Overview

A. Data input

1. General project data

Object:	School
Town:	Gaziantep
Country:	Turkey
Building type:	Non-resident
Usage:	School
Interior temp.:	20°

2. Areas

Total Heated Space Area:	6802.00 m ²
Total Heated Space Volume:	32988.50 m ³

3. Construction U-values

Flat Roof:	0.10 W/(m ² K)
Wall against air:	0.11 W/(m ² K)
Wall against ground:	0.21 W/(m ² K)
Slab against ground:	0.10 W/(m ² K)

4. Envelope - Windows And Doors

Average U-Values	
Windows:	1.00 W/(m ² K)
Doors:	1.20 W/(m ² K)

5. Thermal bridge-free

Guaranteed	Yes
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6. Forced ventilation

Pressed:	33.00%
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B. Calculations

Transmission Heat Losses:	149675 kWh/a
Ventilation Heat Losses:	69135 kWh/a
Total Heat Losses:	218811 kWh/a
Internal Heat Gains:	56222 kWh/a
Available Solar Heat Gains:	99677 kWh/a
Total Heat Gains:	146431 kWh/a
Annual Heat Demand:	72379 kWh/a
Spec. Annual Heat Demand:	9.6 kWh/(m²a)

7. Reverberation time

Empty classroom value	0.93 s
Occupied classroom value	0.87 s





Wabeeja Medawagse Mersi unalchéesh Tingki Komapsumnida Shukuria Paldies Hatur anifa Maake Denkauja gozaimashita Fakaau Spasibo Ekhmet Mehrbani Nenachalhya Spassibo Aguyje Maiteka ekoju Tavtapuch suksama Sikomo Maiteka Baiika Yuspagaràtam Minmonchar Atto Gaejtho Yaqhanyelay Efcharisto Gui Dankscheen Arigato Merci Shukria lah Merastawhy Dhanyabaad Chaltu Biyan Grazie Snachalhuya Juspaxar Multumim