

AR536 VDC MIDTERM PROJECT

ASSIST. PROF. HASAN BURAK ÇAVKA

SPRING TERM 2023



DIFFERENT LEVEL SOCIAL ARCHITECTURE SCHOOL

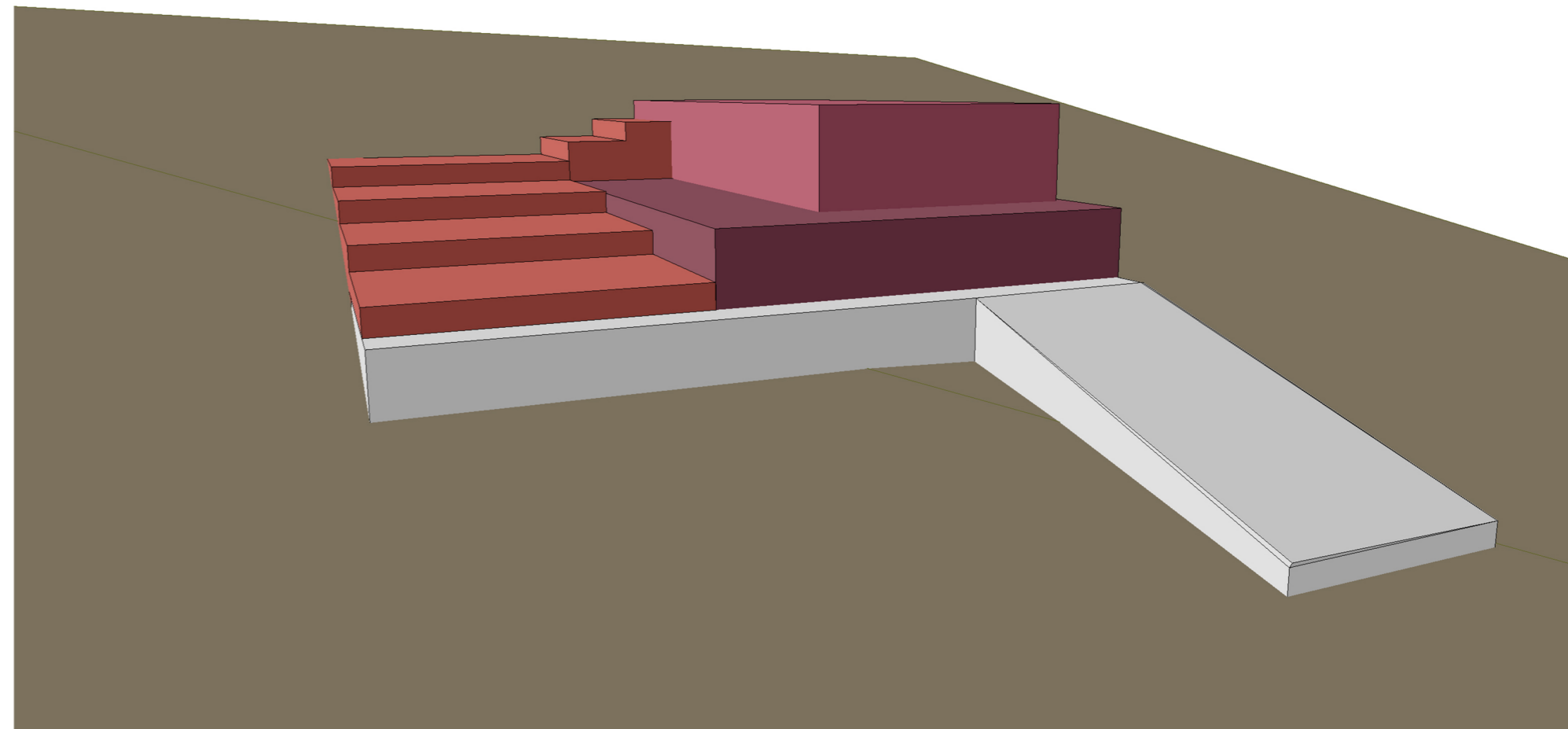
ANIL BORA 303081002

YİĞİTCAN ÇOBANOĞLU 303081016

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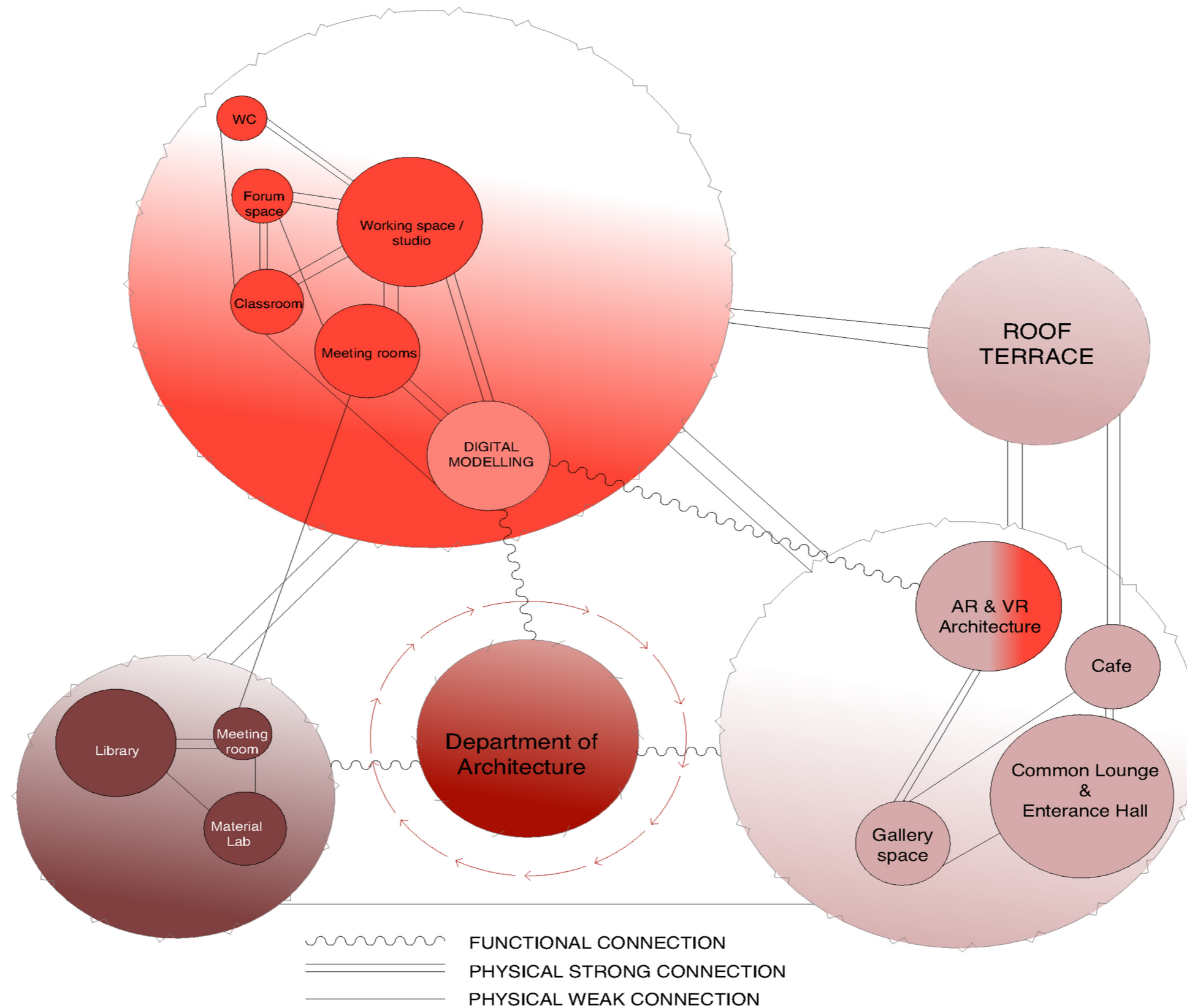
DESIGN IDEA

The project was designed with social areas at different levels. Because the land is in a slope area, different levels were obtained and access to these levels was made with an amplification system and all areas were connected to each other from different levels.



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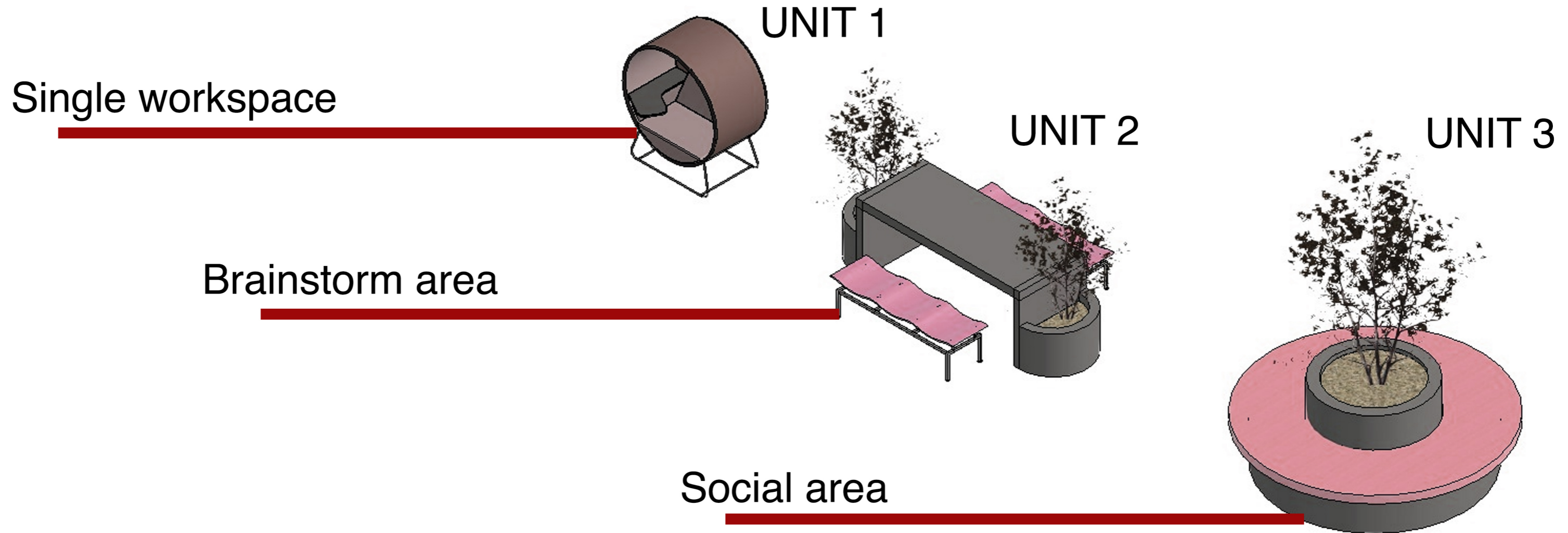
BUBBLE DIAGRAM



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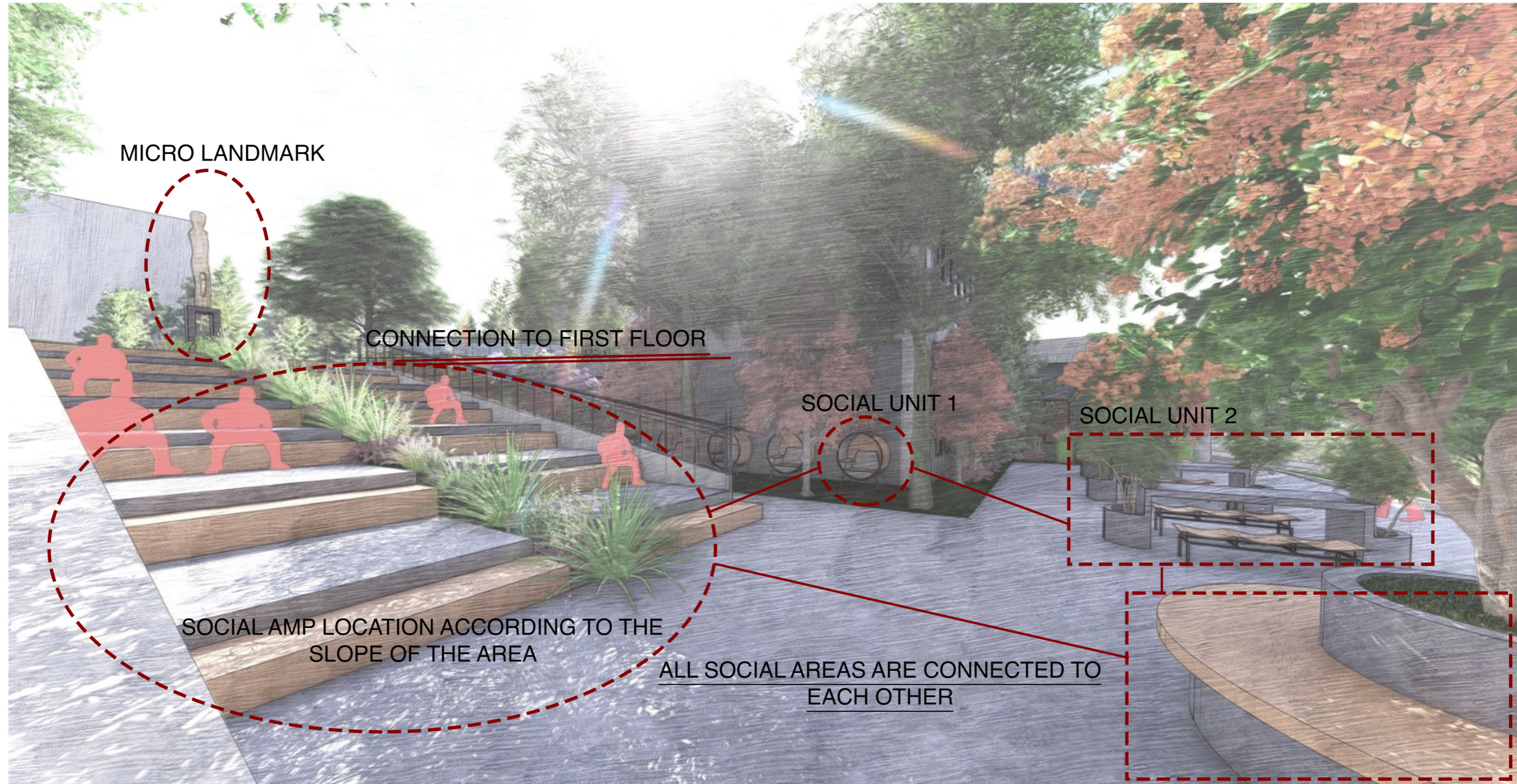
SOCIAL UNIT

Social areas integrated with the landscape are designed for students to socialize and to brainstorm



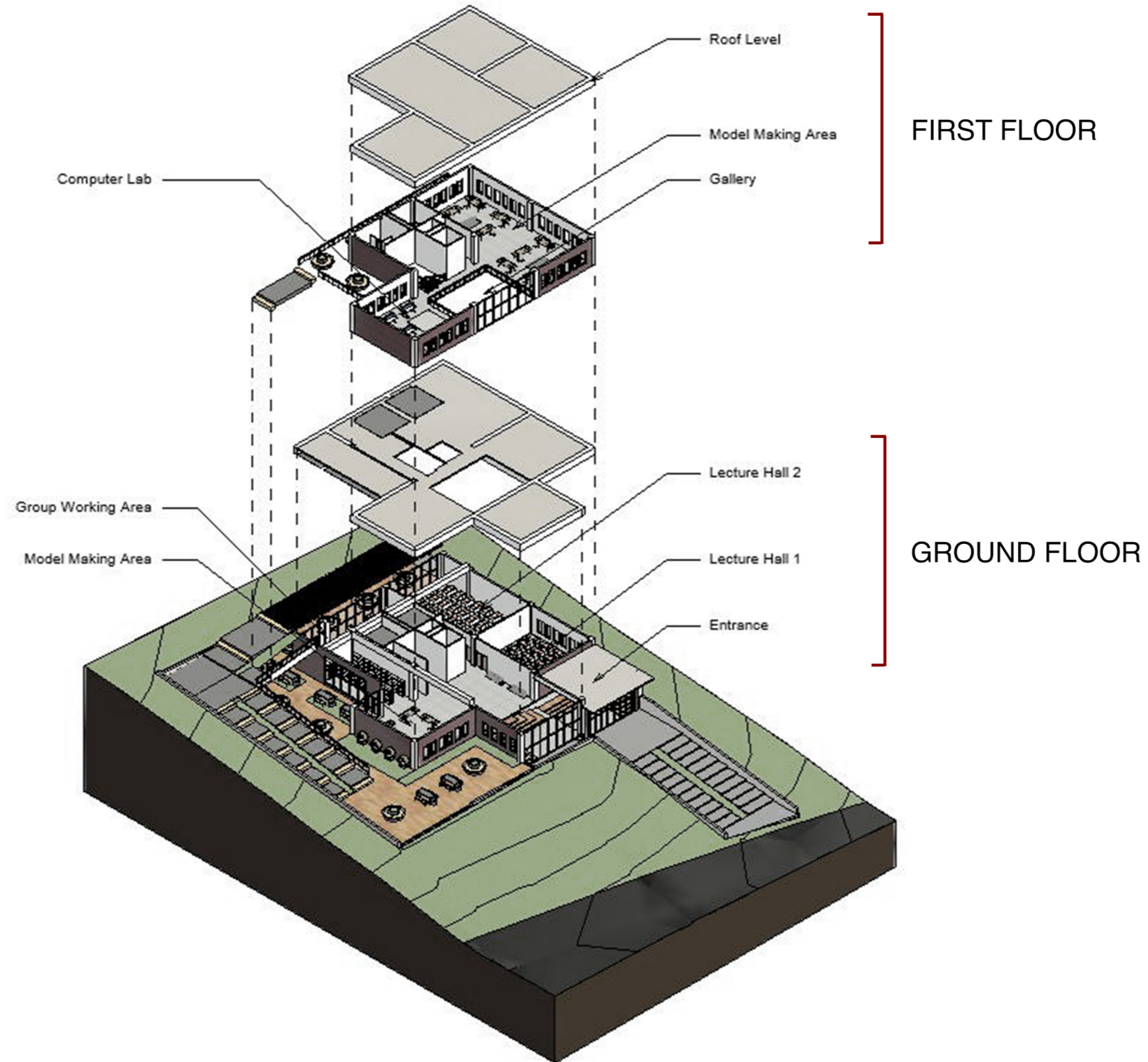
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SOCIAL AREA DIAGRAM



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EXPLODED DIAGRAM



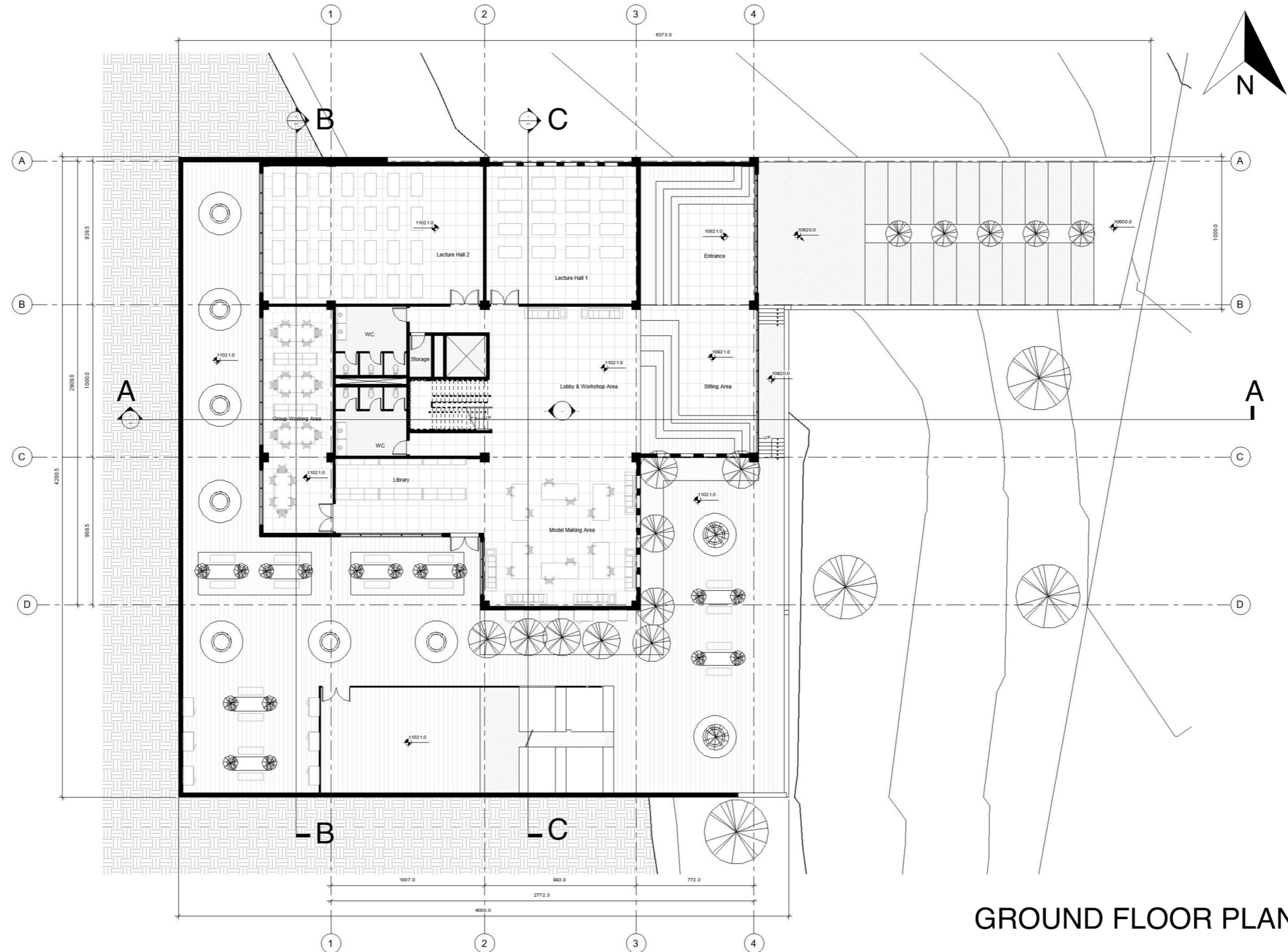
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SITE PLAN



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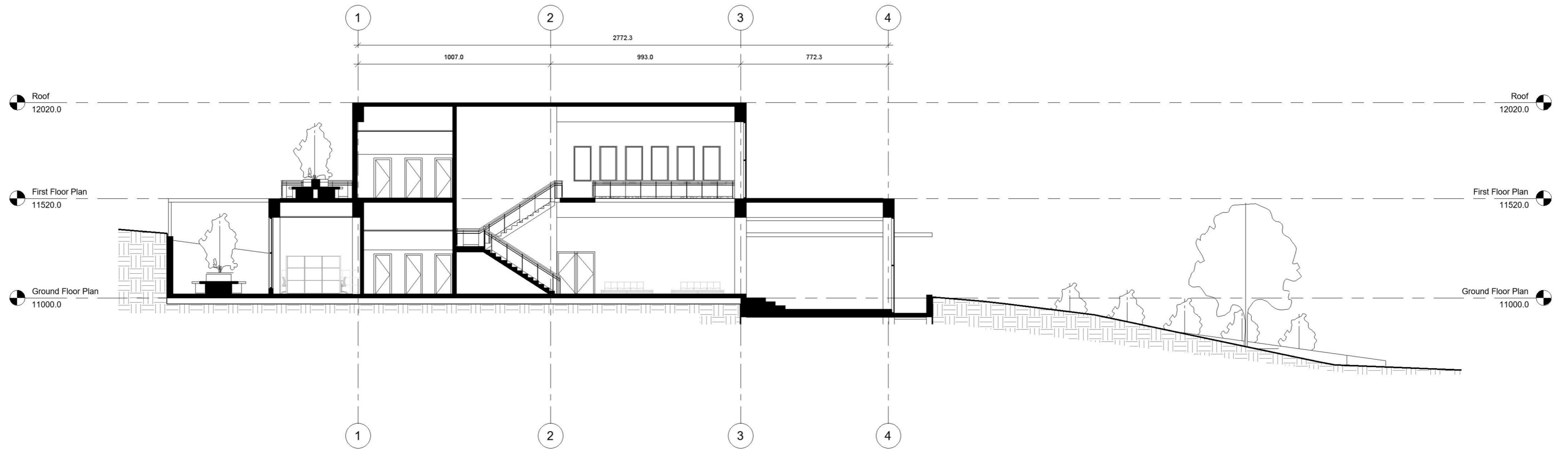
PLAN



GROUND FLOOR PLAN

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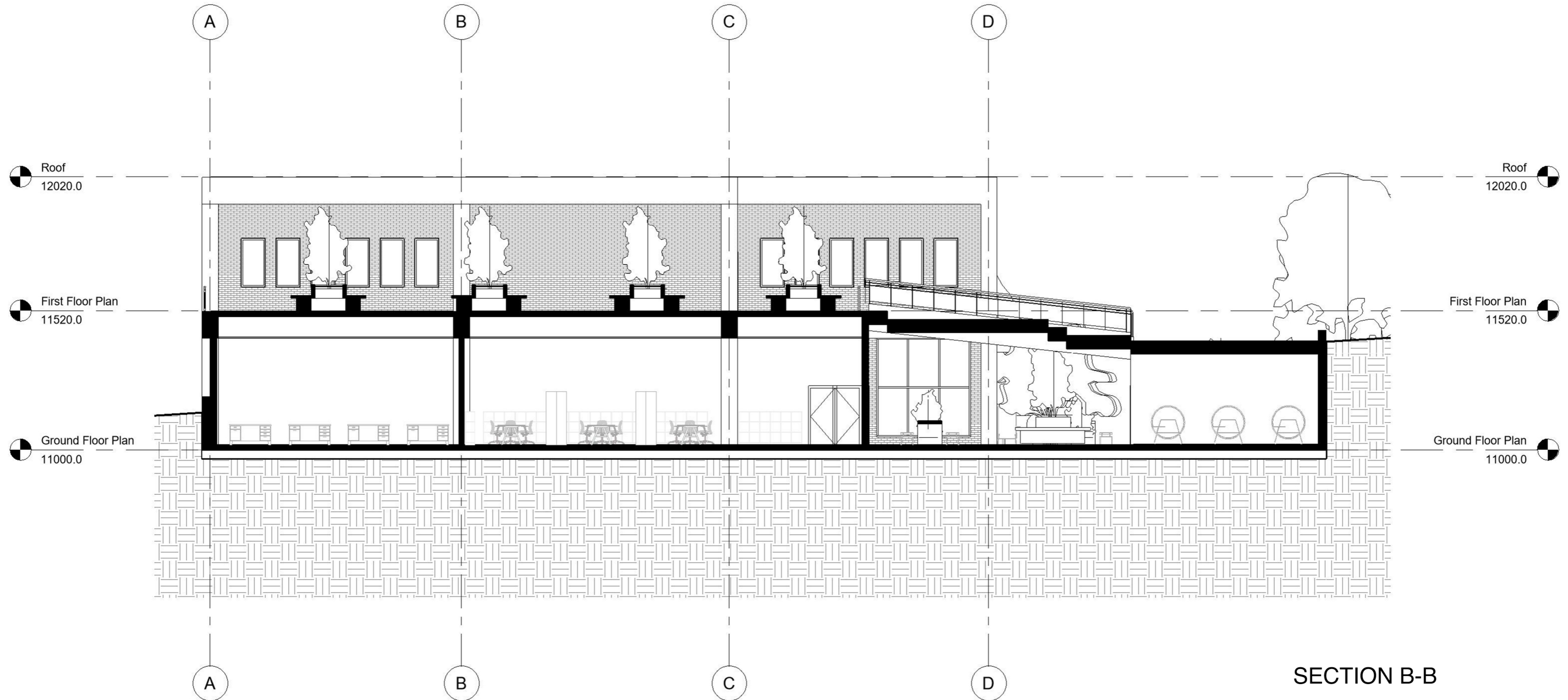
SECTION



SECTION A-A

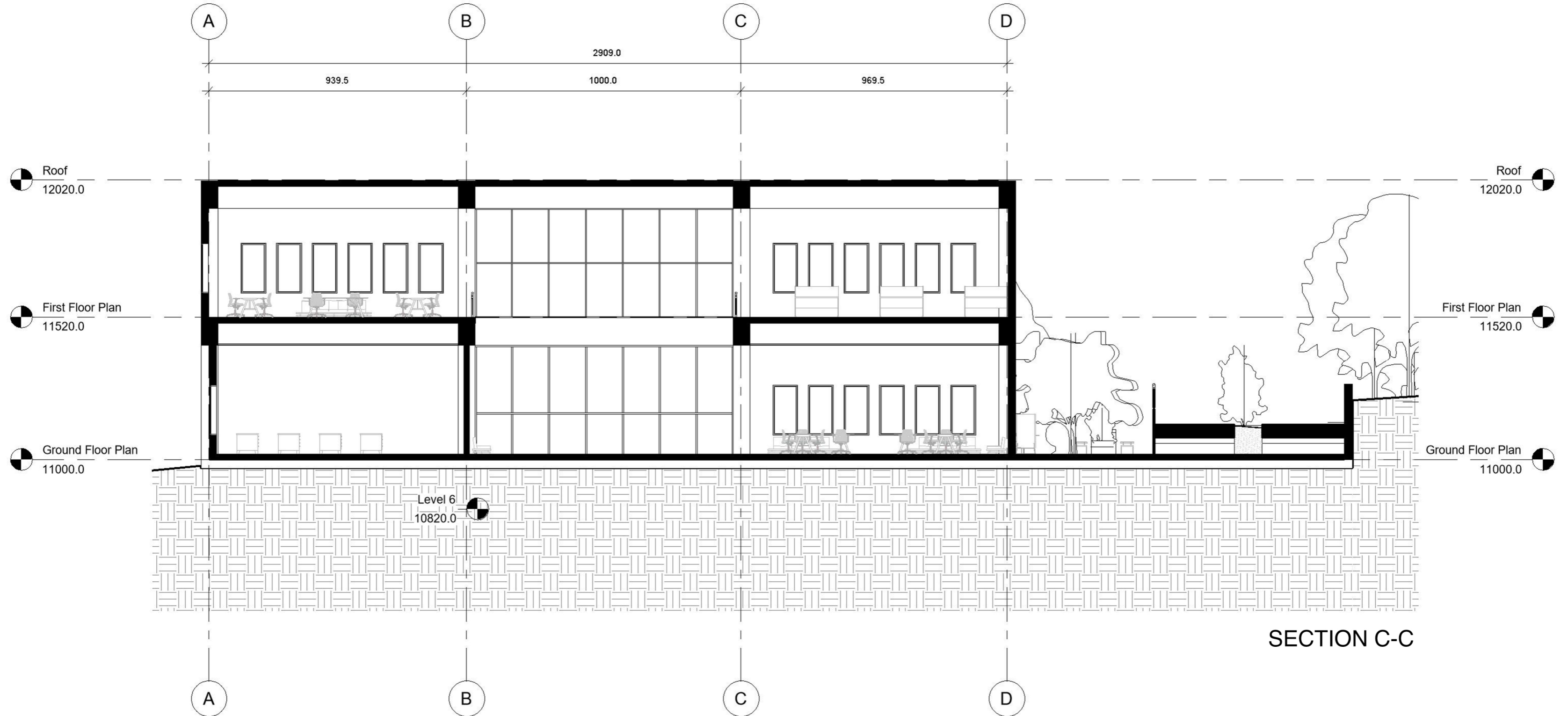
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SECTION



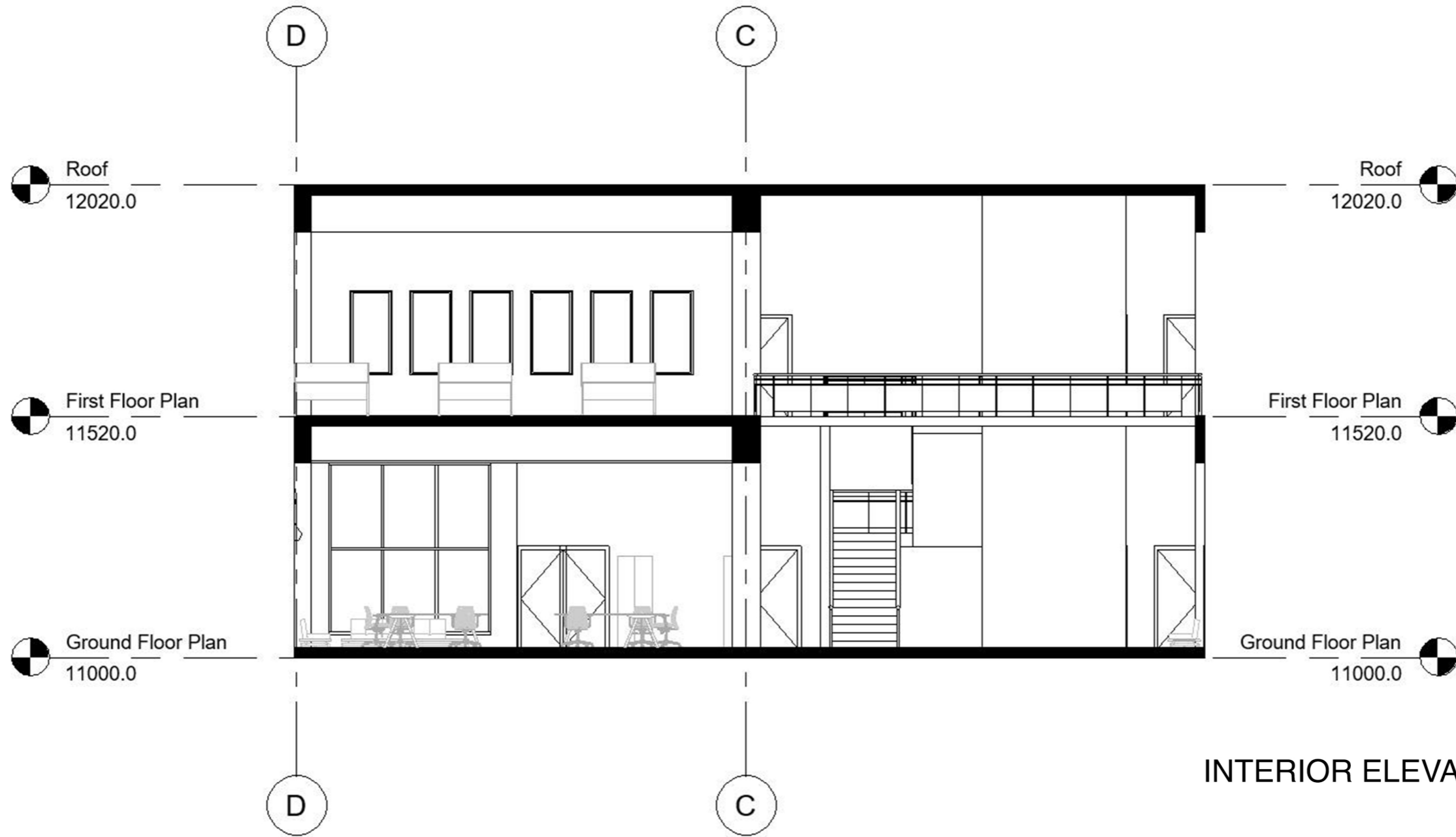
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SECTION



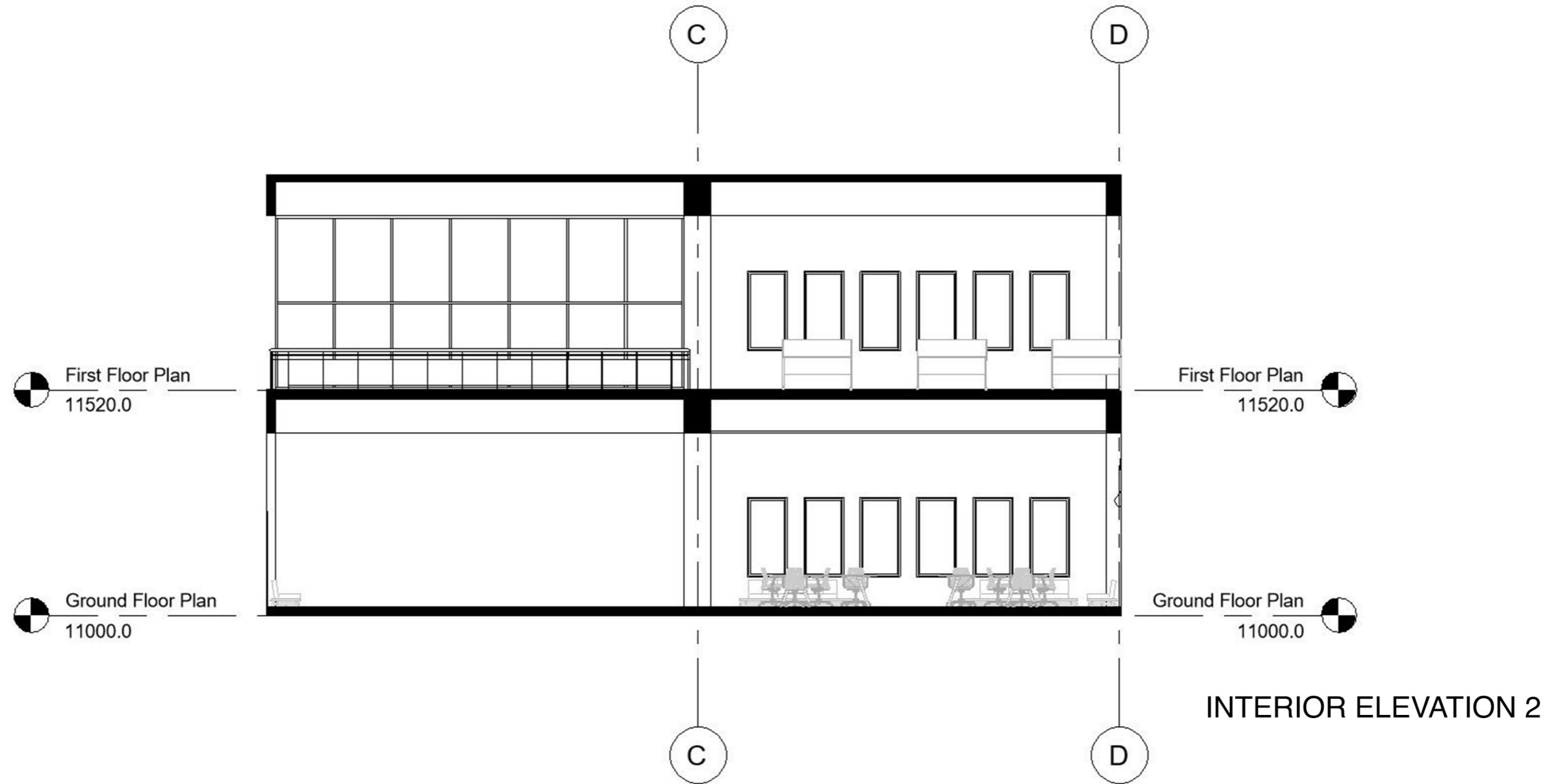
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ELEVATION



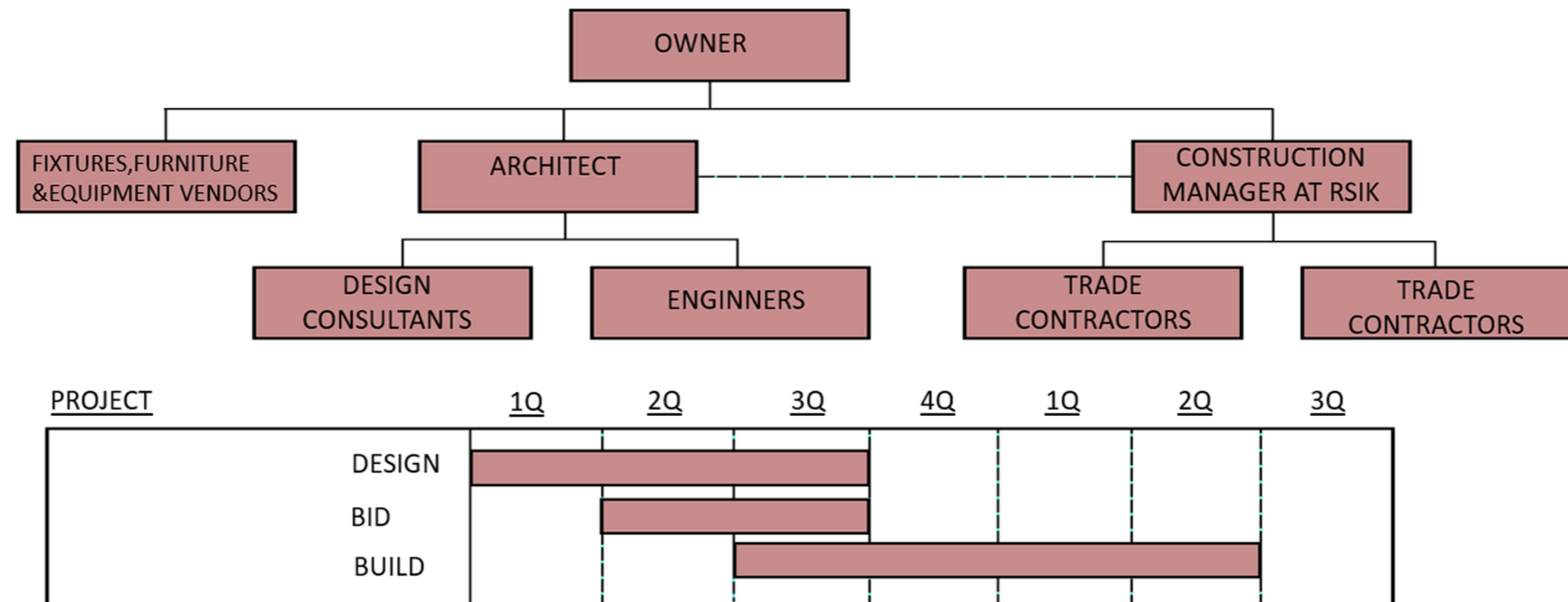
DIFFERENT LEVEL SOCIAL ARCHITECTURE SCHOOL

ELEVATION



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CONSTRUCTION MANAGER @ RISK



Why use this project delivery method?

The matrix system is needed for projects that require a high level of construction management due to multiple stages, technical complexity or multidisciplinary coordination. It works with an expert contractor and the result is a quality project. CM's expertise in prequalification contractors helps to achieve performance and quality. Since the design concept is clear, the result of this method results in the closest project to the desired design. Since the project will include lab, office and social activity areas, an owner who has more than one discipline should be selected. Since it is an innovative and sustainable building, a team set up by architects and engineers is needed, and since this team is directly connected to CM, even if problems occur in the project, the incident is resolved before it grows as a result of rapid interventions. Since the budget to be spent on the project is determined, it cannot be exceeded and even savings can be achieved through close dialogues. Because innovative materials will be used in the project, the cost will be high and savings may be needed. At the same time, as stated in the project planning, a faster construction process occurs because the design, bid and build part are intertwined. Of course, this matrix system also has disadvantages, the owner is dealing with more than one workload, a very creative project may not emerge because the desired design is certain. CM has less power in the engineering and design process, making it difficult to respond at the time of the problem. However, this is the best matrix system as it is a large-scale and multi-disciplinary project.

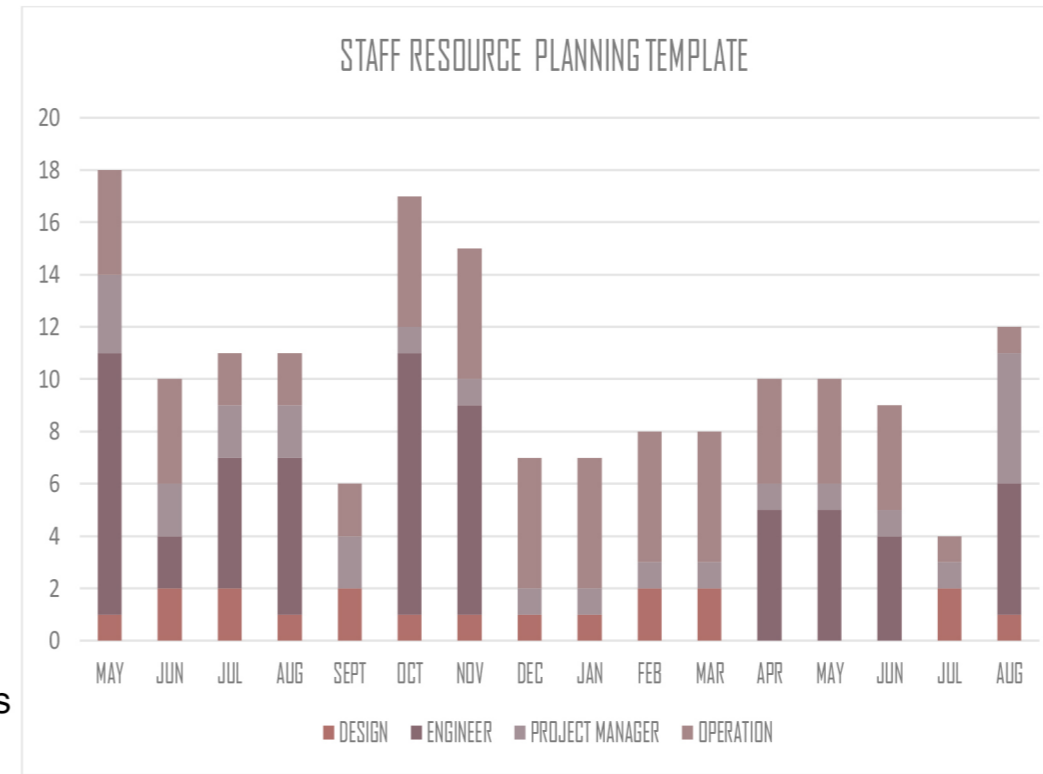
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PROJECT GUIDELINE

The project will be held between 01.05.2023-01.08.2024 -Working percentages of the disciplines are given below.

	DESIGN	PROCUREMENT	CONSTRUCTION	
MAY	80			-conceptual design
JUN	100			-detailed design
JUL	100			-as-builts
AUG	40	100		
SEPT	20	100		
OCT		80	100	-long lead components
NOV		80	100	-other major components
DEC		60	100	-innovation components
JAN			100	
FEB			90	
MAR			90	
APR			90	-site preparations
MAY			80	-excavations
JUN	30		60	-foundations
JUL	25	10	60	-mechanical components
AUG	15	10	60	-electrical components

The resource needs of staff change over time and their needs are provided in accordance with this table.



	DESIGN	ENGINEER	PROJECT MANAGER	OPERATION
MAY	1	10	3	4
JUN	2	2	2	4
JUL	2	5	2	2
AUG	1	6	2	2
SEPT	2		2	2
OCT	1	10	1	5
NOV	1	8	1	5
DEC	1		1	5
JAN	1		1	5
FEB	2		1	5
MAR	2		1	5
APR		5	1	4
MAY		5	1	4
JUN		4	1	4
JUL	2		1	1
AUG	1	5	5	1

-Cost calculated according to Unit Method (early stage)

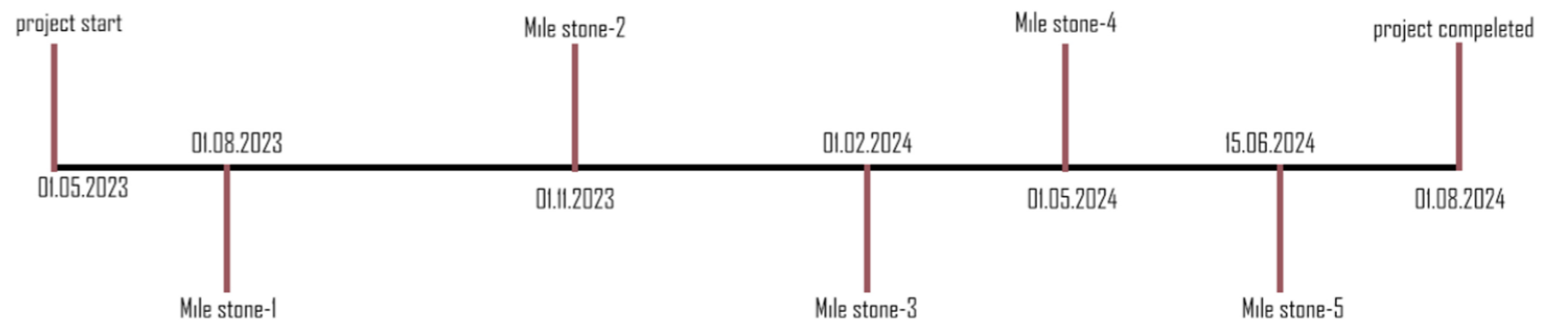
Total coast = per unit X m² Total coast = per unit X m²

m² price determined for university campus = 10,650 TL (Fifth class-A group)

$$10,650 \times 890 \text{ M}^2 = 9.478.500 \text{ TL}$$

Landscape areas are not included.

Resource planning, status report and budget management presented in the project plan are reviewed and applied at this stage. Since it is an innovative and complex project, the project manager sets certain dates between start and end dates and reviews all controls.



DIFFERENT LEVEL SOCIAL ARCHITECTURE SCHOOL

VISUALIZATION



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