

Architecture Thesis Booklet

OMULI MUSEUM OF THE HORSE



Politecnico di Milan

Masters of Architecture
supervisor: Barbara Coppetti
students: Jingjing Ni /940095
Xiangxiang Zhu /939678



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Design Thesis Cluster : Background, Frame & Platform
Under the supervision of Prof. Barbara Coppetti

I

INTRODUCTION

Abstract

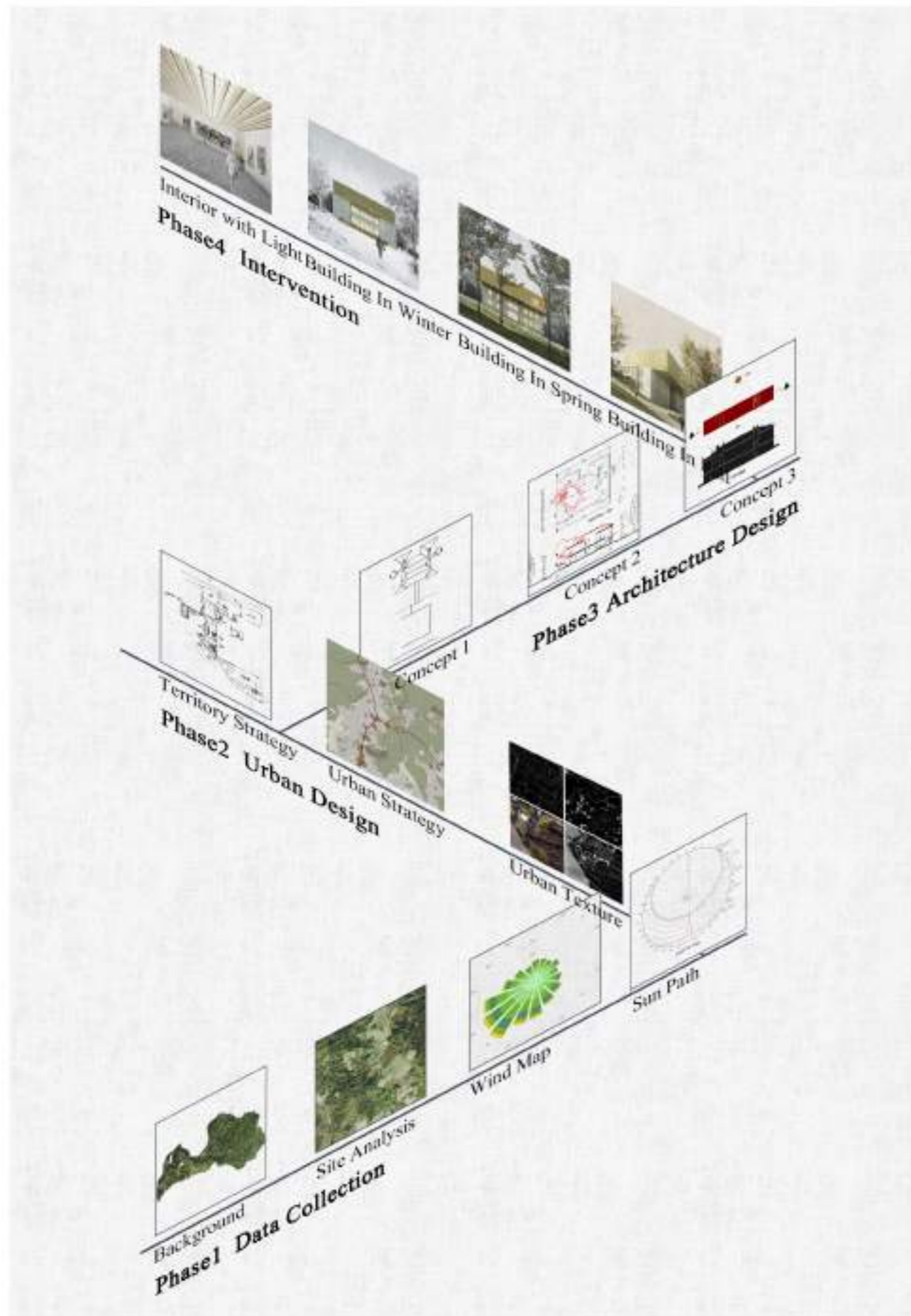
The Omuli Museum of the Horse project is tasking architecture enthusiasts with redesigning and reimagining a historical school building within the UNESCO-recognised North Latvia Biosphere Reserve. In the town of Oculi, the impact of regional art landmarks on local revitalization, the relationship between natural light and lighting for art exhibitions, and the dialogue between new volumes and historic buildings will be explored. In this graduate design, will focus on urban design, landscape design and update the logic relation between the building, and to further explore how to through the update of historical buildings will artists, different needs and behavior of the foreign visitors and local residents coexist in one place, and explore a silent dialogue between architecture and nature, and historic buildings in the new era of new possibilities.

Introduction

The Omuli Primary School, originally built in 1936, is planned to become a museum to educate visitors about the nature and history of local horse breeds. The structure will also function as a guest house and artist-in-residence living and workspace.

The construction of the Omuli Primary School was a source of great excitement when it first opened in 1936, with the local paper detailing its inauguration by Minister of Justice Hermanis Apsītis. Commissioned by the President of Latvia K. Ulmanis in order to offer better conditions and better addition to the local children, the school accommodated 75 students until 1954/55 when the 5th, 6th and 7th grades were discontinued. Students were sent instead to the Ergeme School which was 7–12 km away, forcing students to either board or walk the distance every day. Finally, in 1975, the school was closed when the 30 remaining students completed their school year. In fact, the Omuli farm was also liquidated, creating Lenin's collective farm.

The school building was then used as the Omuli Folk House, the Omuli library, a post office, and an Omuli branch of a household service complex, as well as a space of two apartments, before being devastated by vandalism. When the residents of Omuli separated from the large Lenin collective farm in 1988 and re-established the collective farm "Omuli", the old school structure was repaired, replacing floors and installing furnaces. The Omuli Primary School building continued to operate as a post office, library, office and apartments until 2015 when the municipality sold the building to the local agricultural holding.



Thesis Mindmap

Thesis Framework

Aim

Explore how different needs and behaviors of artists, visitors and local residents coexist in one place through the renewal of historic buildings, and explore a silent dialogue between buildings and nature, and new possibilities of historic buildings in the new era.

Research Question

How to maximize the interaction between different areas while ensuring the privacy of different groups of people?
 How can natural light be used in the exhibition space of a modern museum without compromising the visitor experience?

II

**THEORETICAL & CASE
RESEARCH**

Study From Nature
Light in Architecture

“I sense a Threshold: Light to Silence, Silence to Light – an ambiance of inspiration, in which the desire to be, to express, crosses with the possible Light to Silence, Silence to Light crosses in the sanctuary of art.”

—Louis I Kahn

Light can give power in architecture that affects the interior space and atmosphere. There is an increasing amount of transparent buildings being constructed all over the world along with LED installations that enforce the impression that light eliminates all relevance of shadow. However, Louis Kahn, known as the master of light, designs architecture was shaped by light and shadow.



National Assembly in Dhaka, Bangladesh



Presidential Plaza

Louis Kahn's archetypal forms relate back to Greek architecture, which he studied in the 1950s: "Greek architecture taught me that the column is where the light is not, and the space between is where the light is. It is a matter of no-light, light, no-light, light. A column and a column brings light between them. To make a column which grows out of the wall and which makes its own rhythm of no-light, light, no-light, light: that is the marvel of the artist."

Light was also a very important central element in Louis Kahn's philosophy because he regarded it as a "giver of all presences": "All material in nature, the mountains and the streams and the air and we, are made of Light which has been spent, and this crumpled mass called material casts a shadow, and the shadow belongs to Light." For Kahn, light is the maker of material, and material's purpose is to cast a shadow.

It is in the hands of the architect to evoke silence, secret or drama with light and shadow – to create a "treasury of shadows," a "Sanctuary of Art."

"Even a room which must be dark needs at least a crack of light to know how dark it is."



Yale University Art Gallery, ca. 1954

LIGHT & SHADOW LOUIS KAHN





Garden In Motion

On such pieces of land, the existing sources of energy - growth, struggle, shifting, exchange - do not encounter the obstacles usually set up to oblige nature to yield to geometry, to tidiness, or any other cultural principal. «to do as much as possible for and as little as possible against» is a résumé of the Garden in Motion. As with all species that sustain life - plants, animals, humans - the Garden in Motion is subject to the evolutionary process resulting from long term interaction.

The Garden in Motion recommends maintaining those species that decide where they wish to grow.

Planetary Garden

Each garden, necessarily enhanced by species from all corners of the globe, can be looked upon as a planetary index.

The Planetary Garden is a means of considering ecology as the integration of man - the gardener - into its smallest spaces.

Its guiding philosophy is based on the principle of the Garden in Motion «Do the most for, the minimum against».

The ultimate goal of the Planetary Garden consists of exploiting diversity without destroying it.



Patrick Berger, Gilles Clément / J. P. Viguier & J. F. Judry, Alain Provost, Parc André Citroën, Paris, competition 1985

The Third Landscape

The Third Landscape – an undetermined fragment of the Planetary Garden -designates the sum of the space left over by man to landscape evolution – to nature alone.

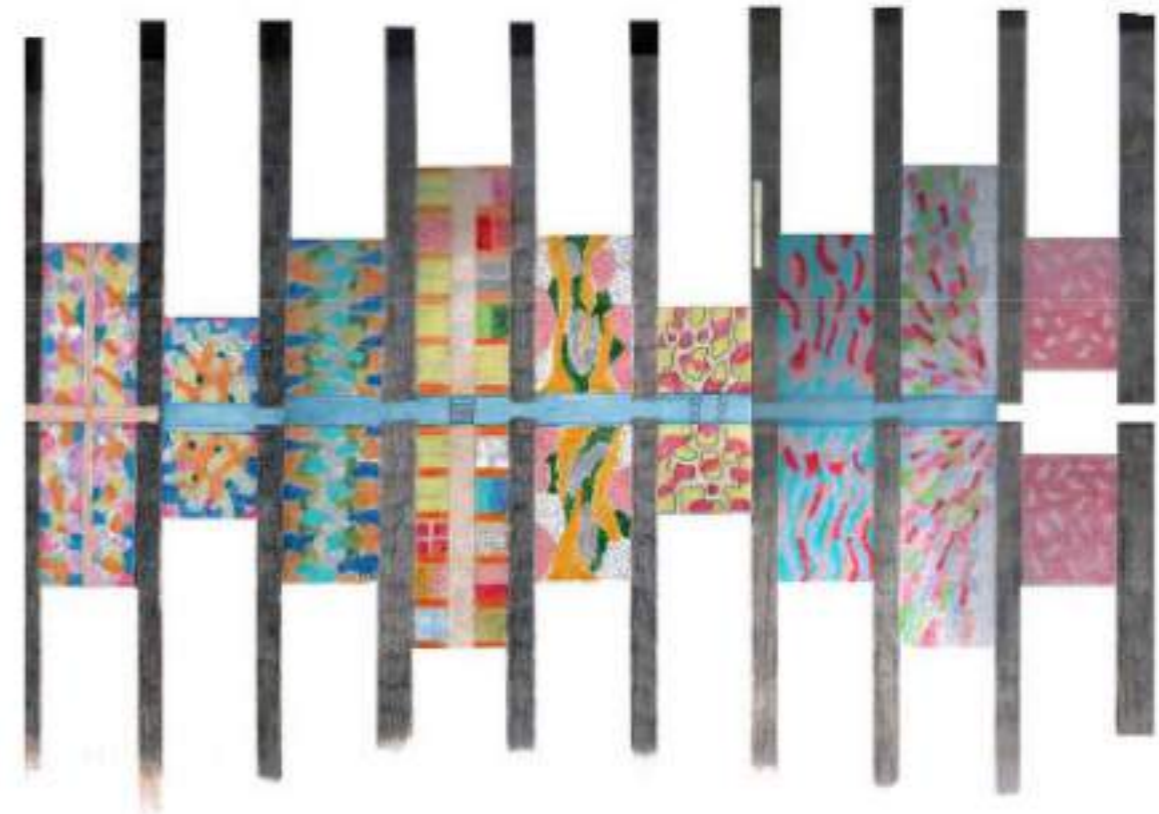
Compared to the territories submitted to the control and exploitation by man, the Third Landscape forms a privileged area of receptivity to biological diversity.

From this point of view, the Third Landscape can be considered as the genetic reservoir of the planet, the space of the future.



Gilles Clément (with Coloco), Jardin du Tiers-Paysage, Saint Nazaire, France, 2009-2011

LANDSCAPE AS ECOLOGY



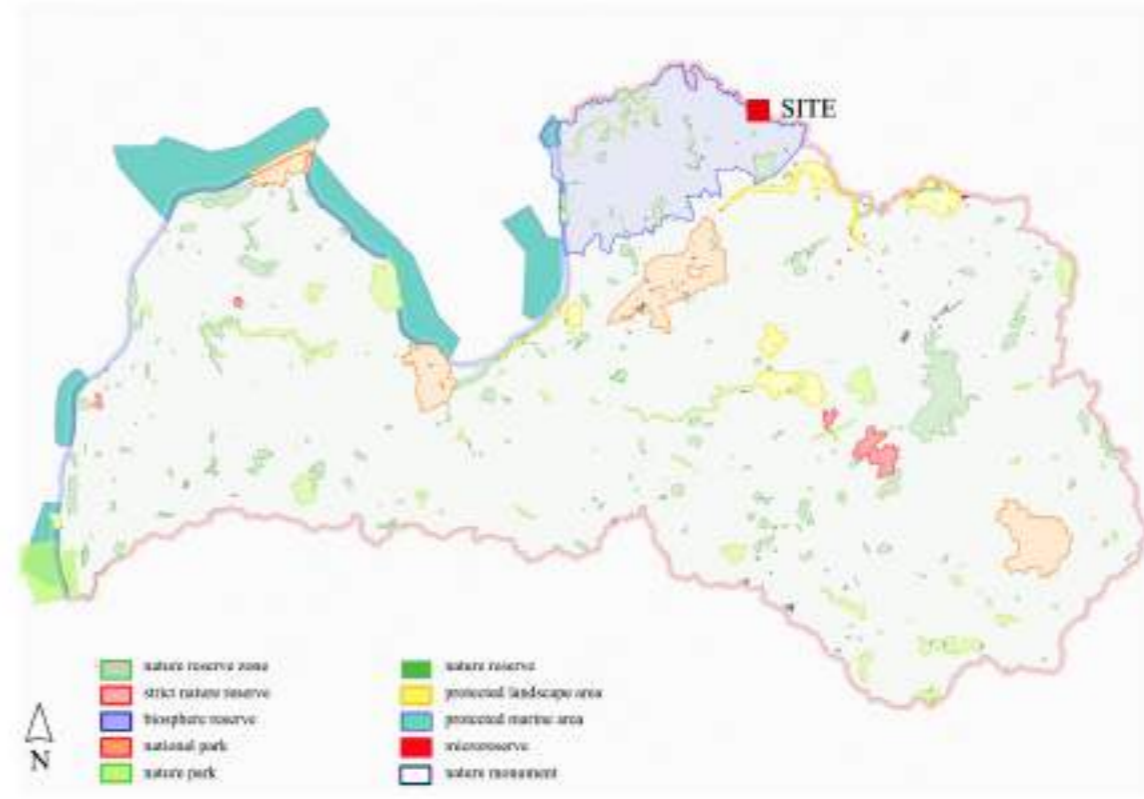
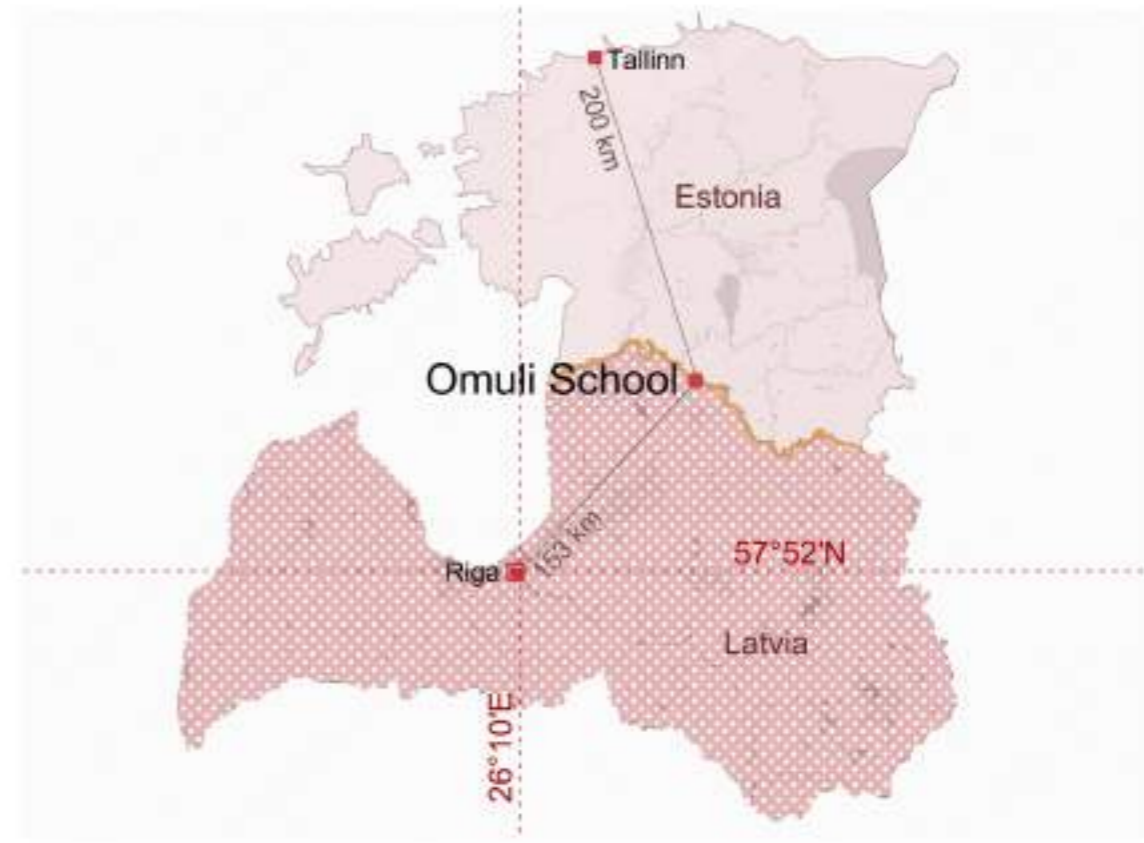
The concept of the Planetary Garden emerges from a triple observation:

- ecological finality
- planetary stirring
- human engagement

"Together, let us assume that the Earth is one small garden." By encompassing in his vision the entire planet - a fragile, autonomous enclosure - Gilles Clément calls for better understanding before intervention, for observation before action, for doing with rather than against nature. Our stroll takes us into the "Garden of Knowledge", where science meets with art, with the imaginary, with myths and legends in a place of greenery and poetry. Diversity, movement, an assembly of the living: nature's rich landscape unfolds before the human gardener. It is up to him to organise his territory and life depending upon his culture and dimension. To withdraw without destroying, consume without defacing, produce without depleting, live without destruction, all is possible.

III OMULI TOWN EXPLORATION & INTENTION

BACKGROUND





Spring



Summer



Autumn



Winter

OMULI OLD TOWN

Primary school
in the past

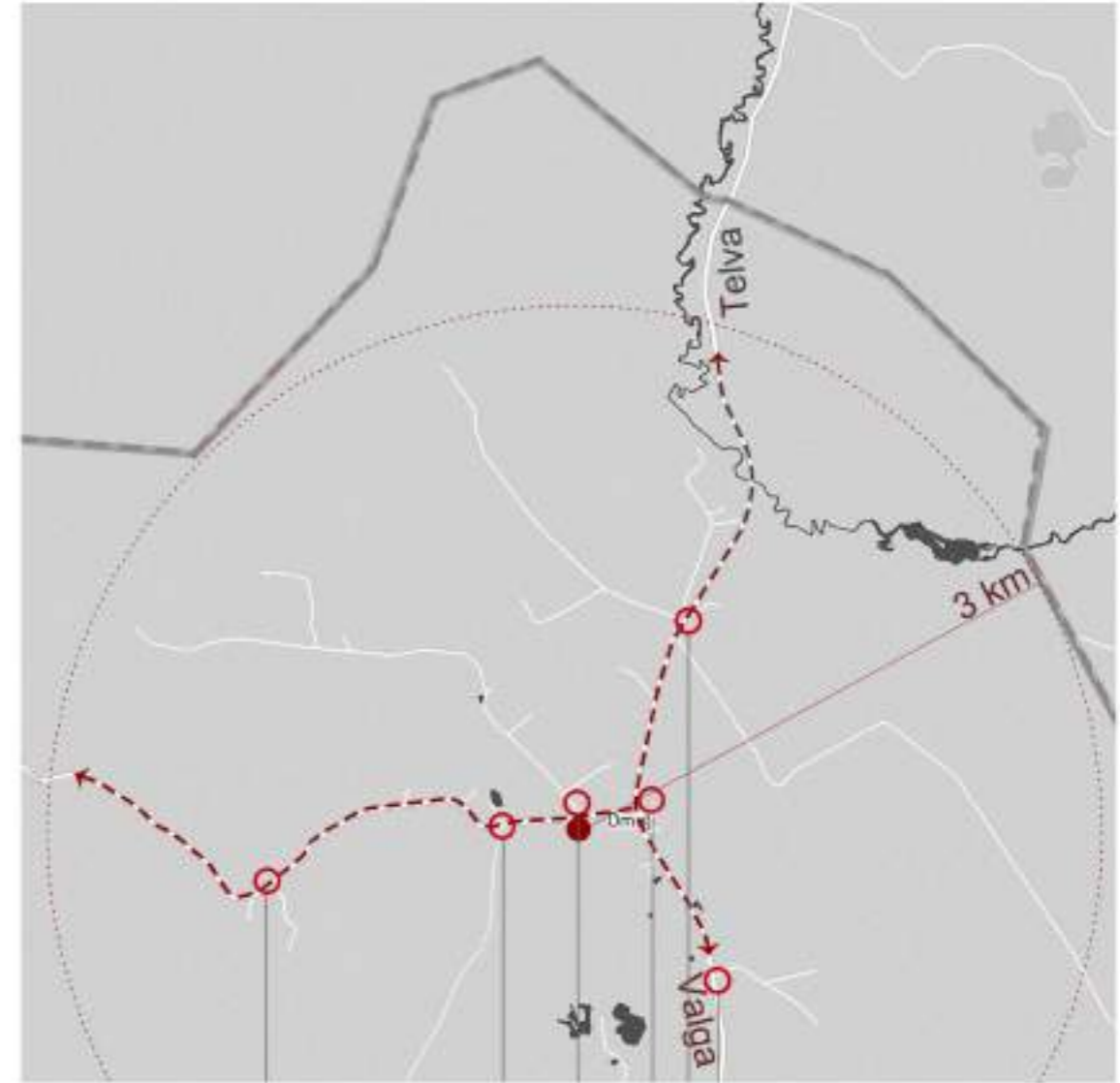


in 1975, the school was closed when the 30 remaining students completed their school year. In fact, the Omuli farm was also liquidated, creating Lenin's collective farm. The school building was then used as the Omuli Folk House, the Omuli library, a post office, and an Omuli branch of a household service complex, as well as a space of two apartments, before being devastated by vandalism.

Transportation between cities



SITE ACCESSIBILITY



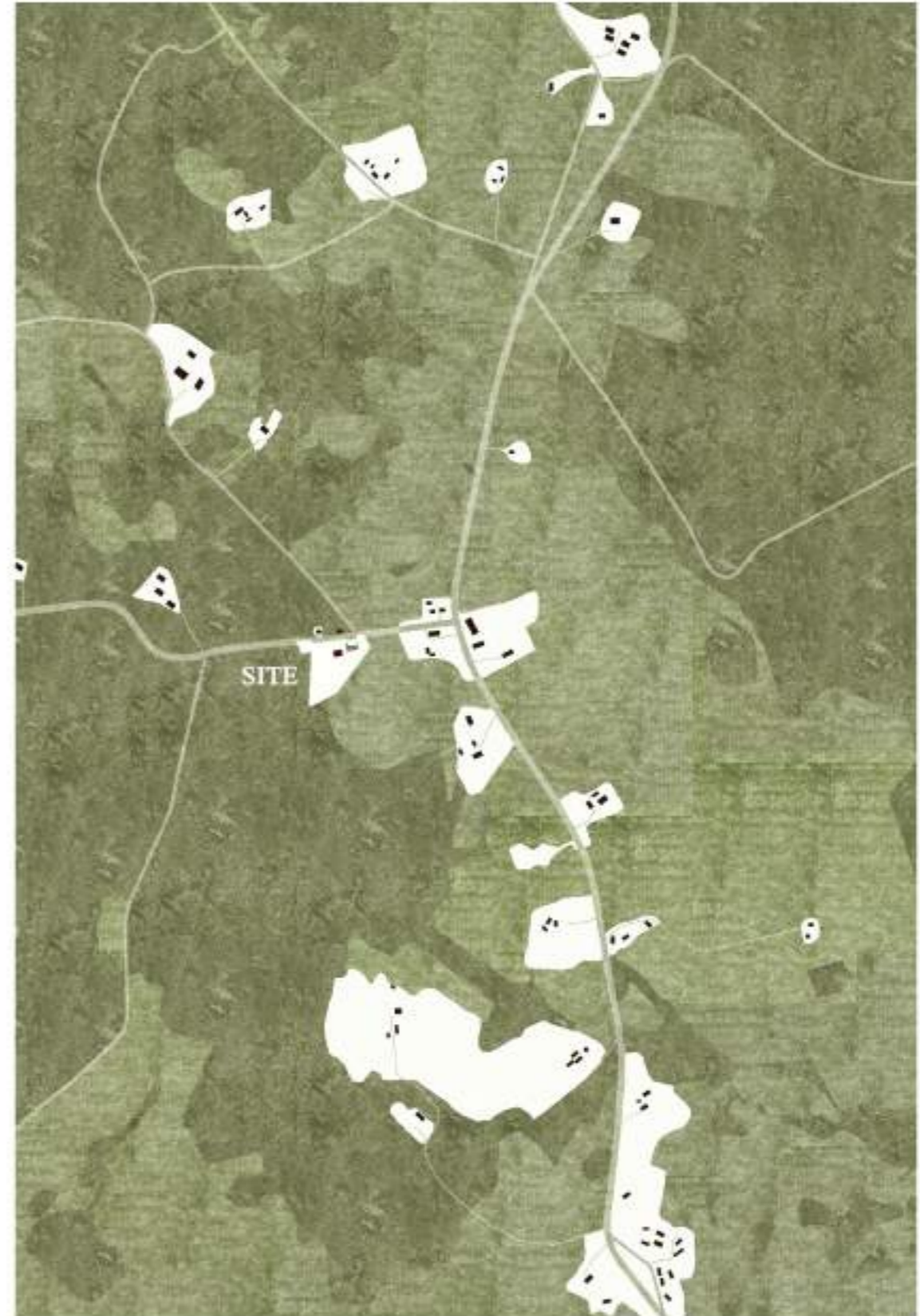
Asphalt road



Typical
housing view



SITE BUILT UP AREA



SITE LANDSCAPE



Typical
landscape view



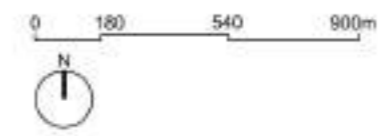
URBAN STRATEGY

Activate Omuli Town

Through the transformation of buildings, and the introduction of artistic creation and museum functions to attract foreign artists and tourists, and then further attract more people to come here with the passage of time, and finally regenerate the old buildings and restore the withered town. The vitality of the past (because the increase in tourists will inevitably give birth to more service facilities, such as restaurants, hotels, and even other art-related activities), at the same time, it also conveys and spreads a protective Awareness, protection of historical buildings, protection of the local natural environment, protection of agricultural towns, etc.

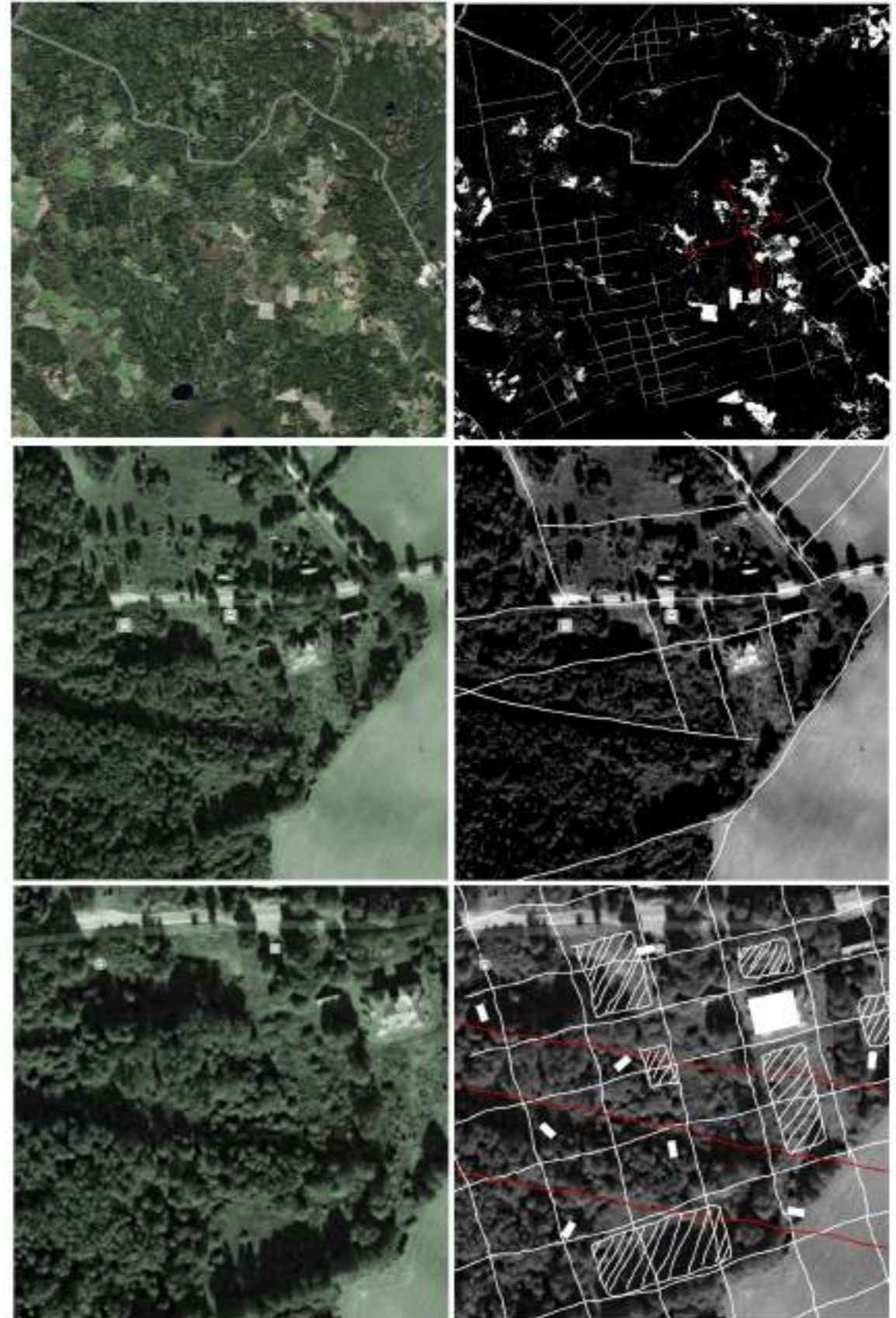
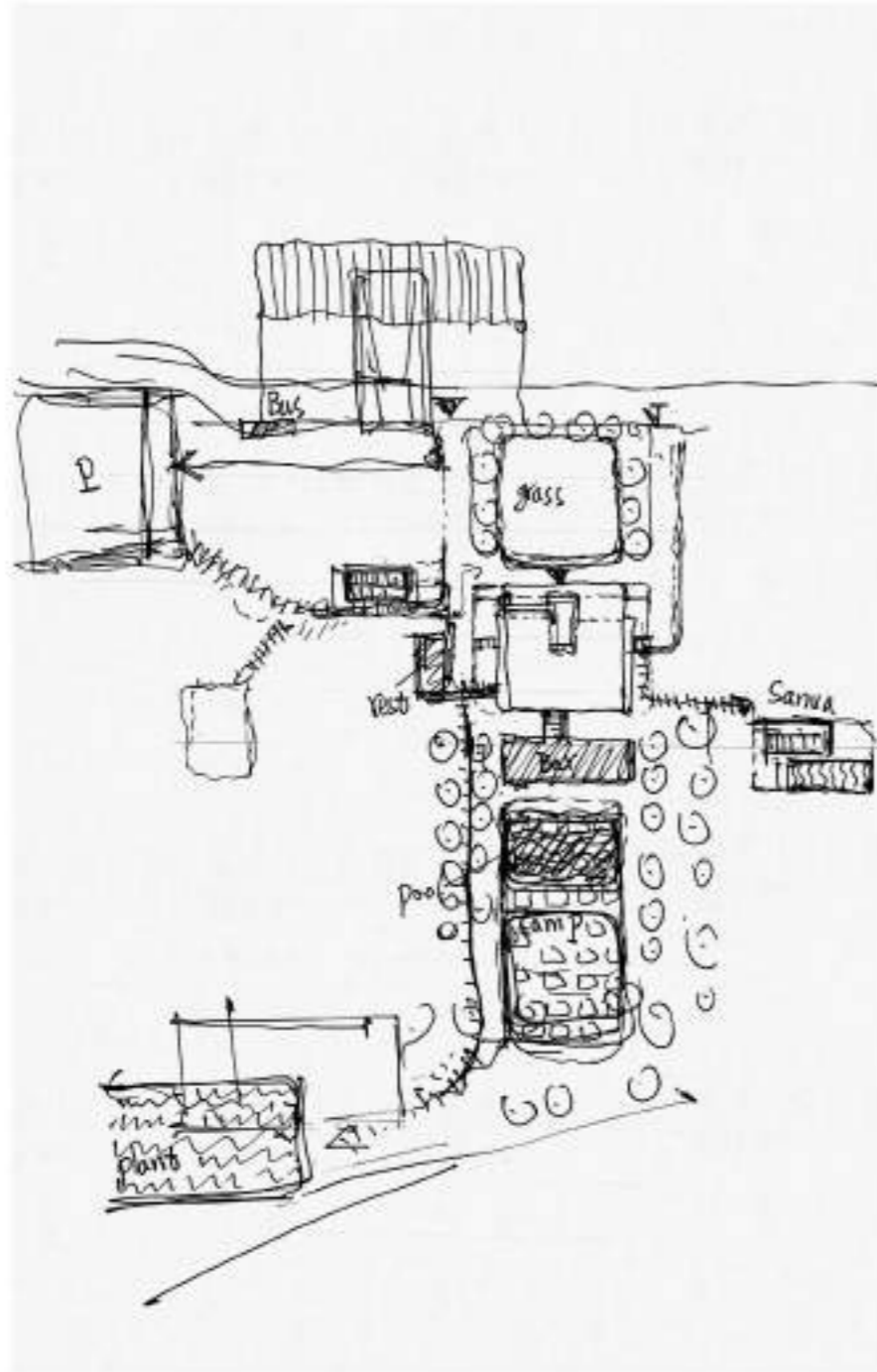


- Forest
- Farm Land
- Grass
- Primary Road
- Secondary Road
- Third Road
- Bus Stop
- Spruce
- White Birch
- Camphor
- Wheat
- Barley
- Water



SITE TEXTURE

Design sketch



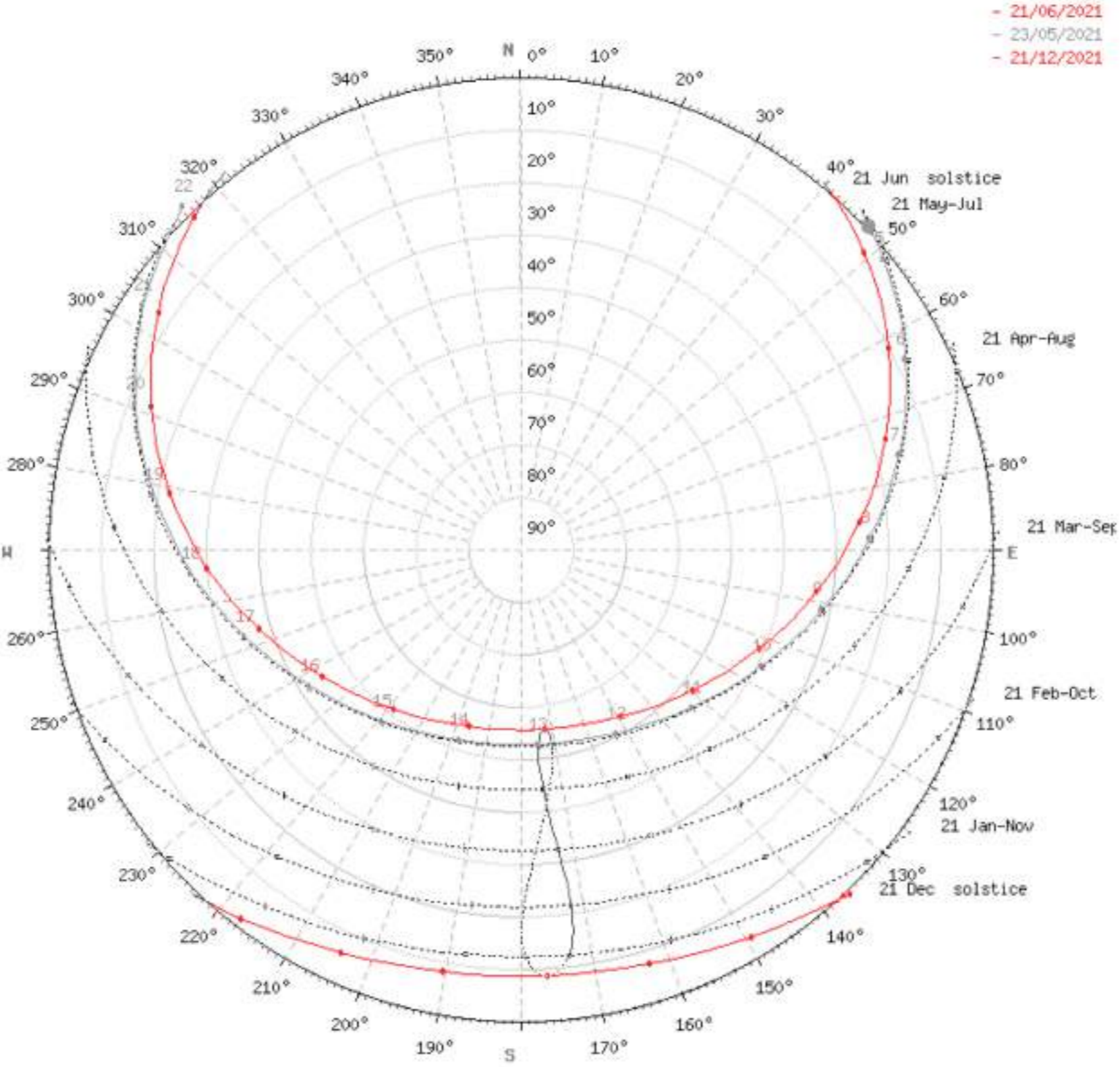
OLD SCHOOL



IV OMULI PRIMARY SCHOOL EXPLORATION & INTENTION



OMULI SUN PATH



ORIGINAL MATERIAL

Roof



red tile

Floor

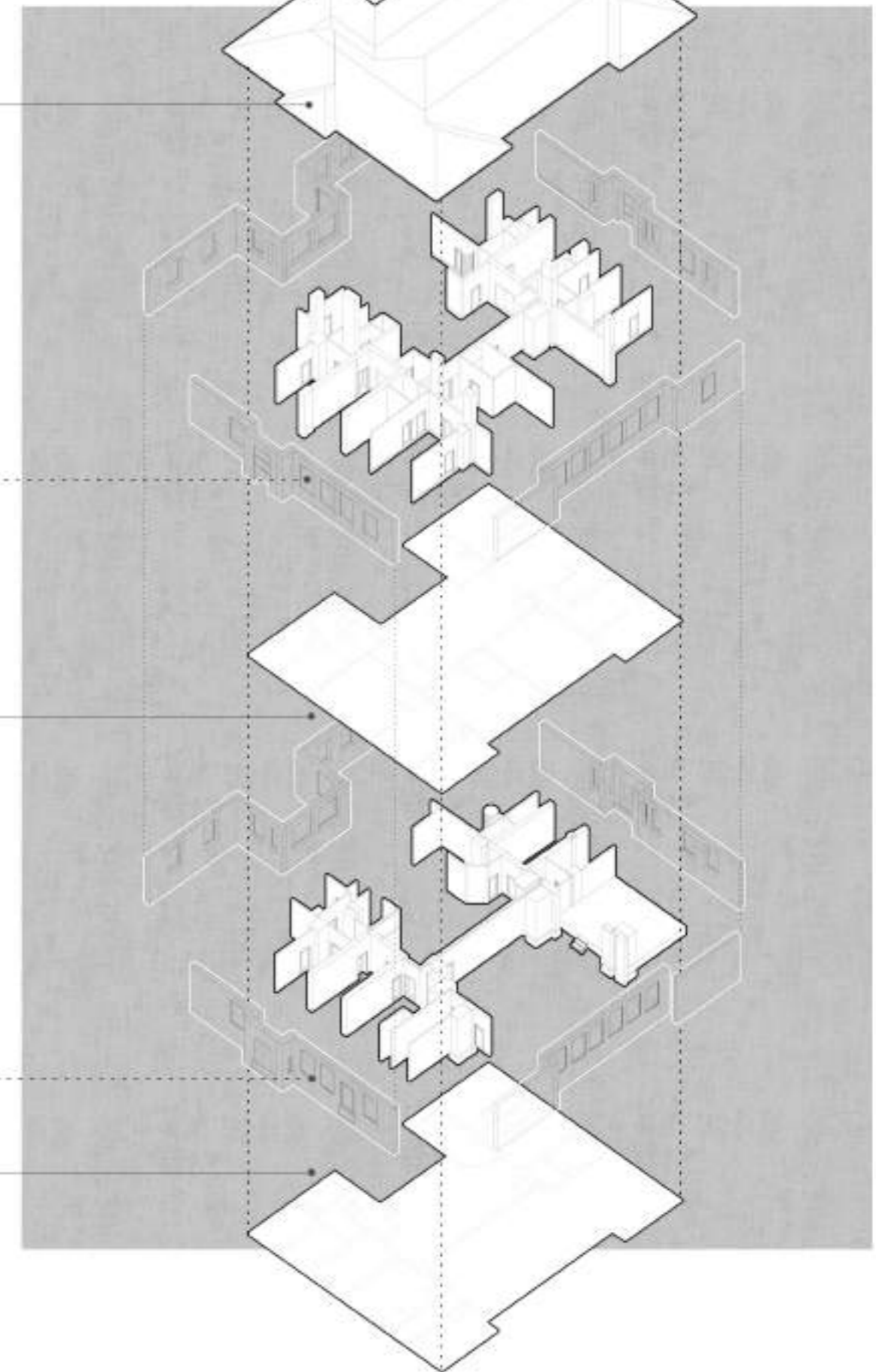


timber

wall



brick



ORIGINAL STRUCTURE

Timberwork
Roof



changeable

Partition
Interior wall

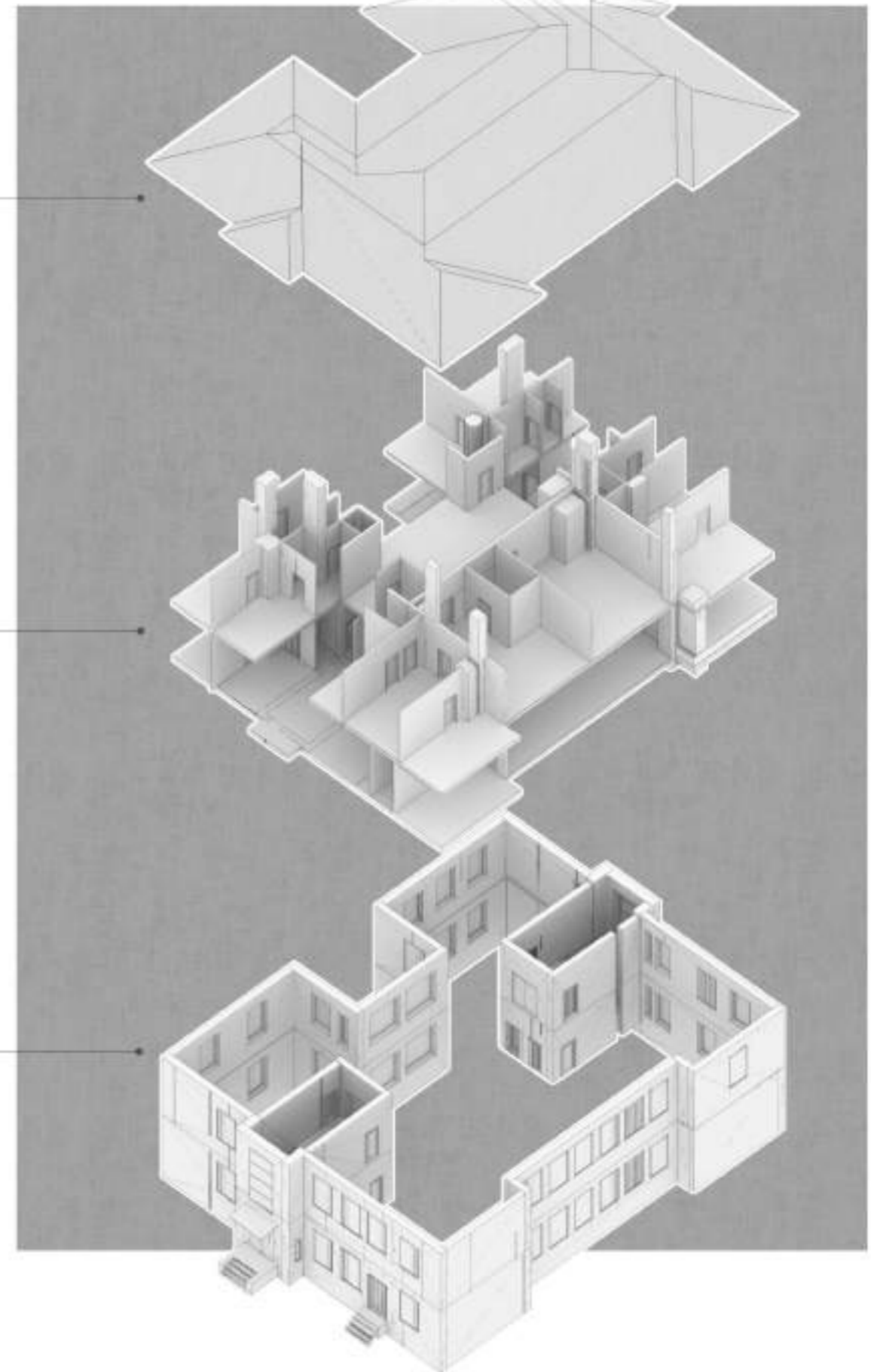


changeable

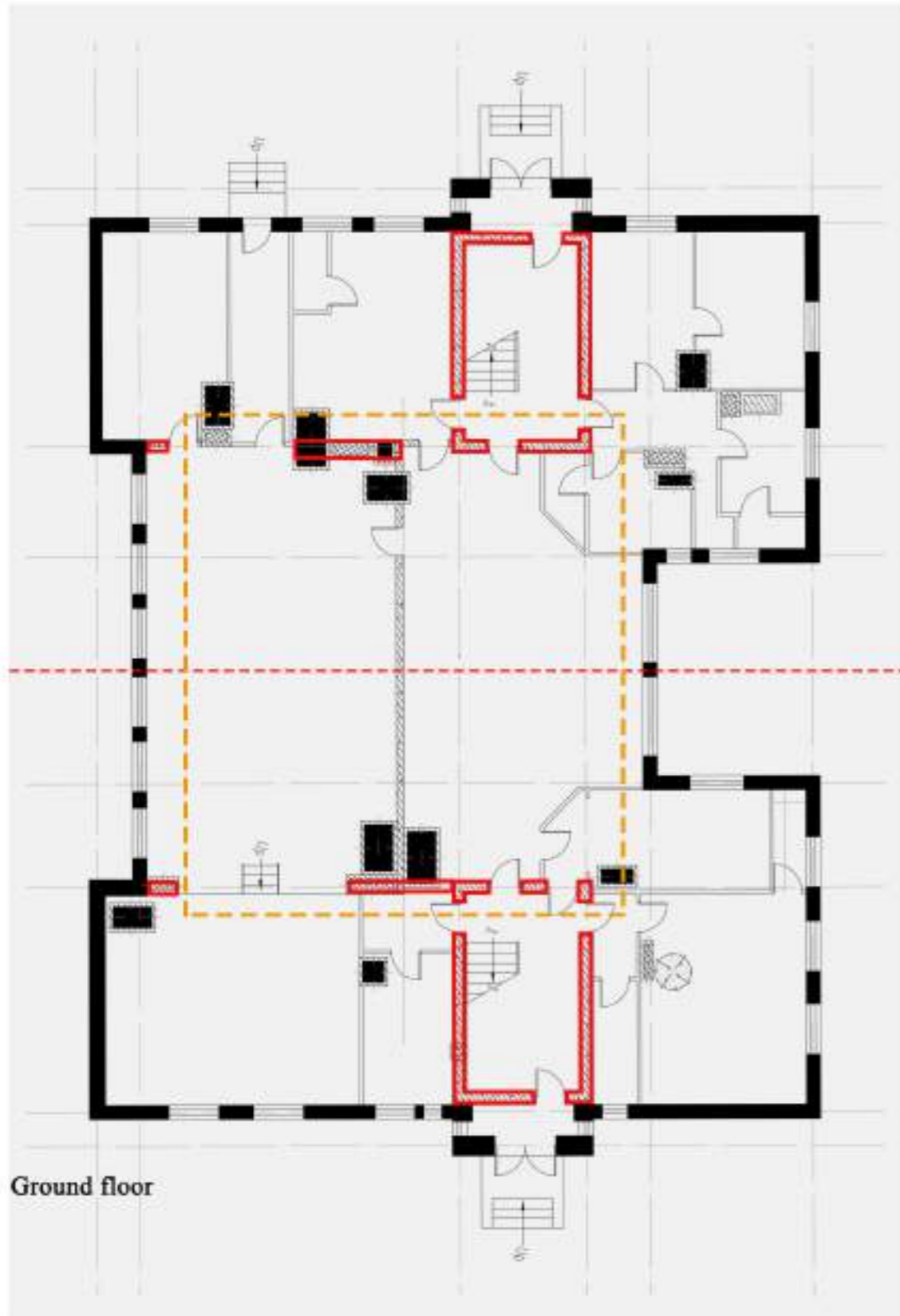
Bearing
Exterior wall

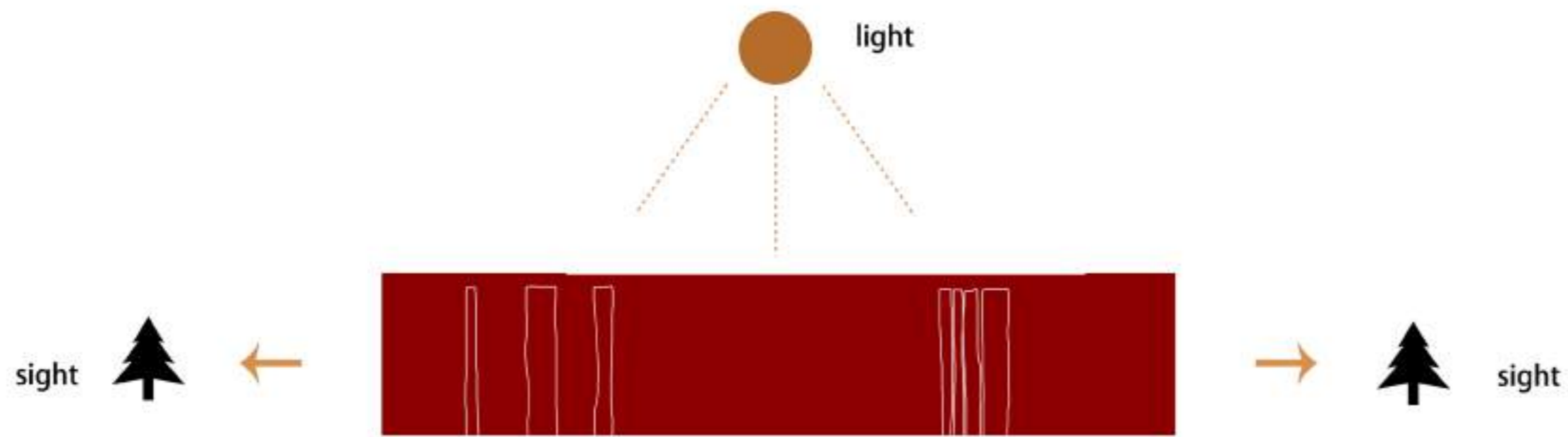


no demolish

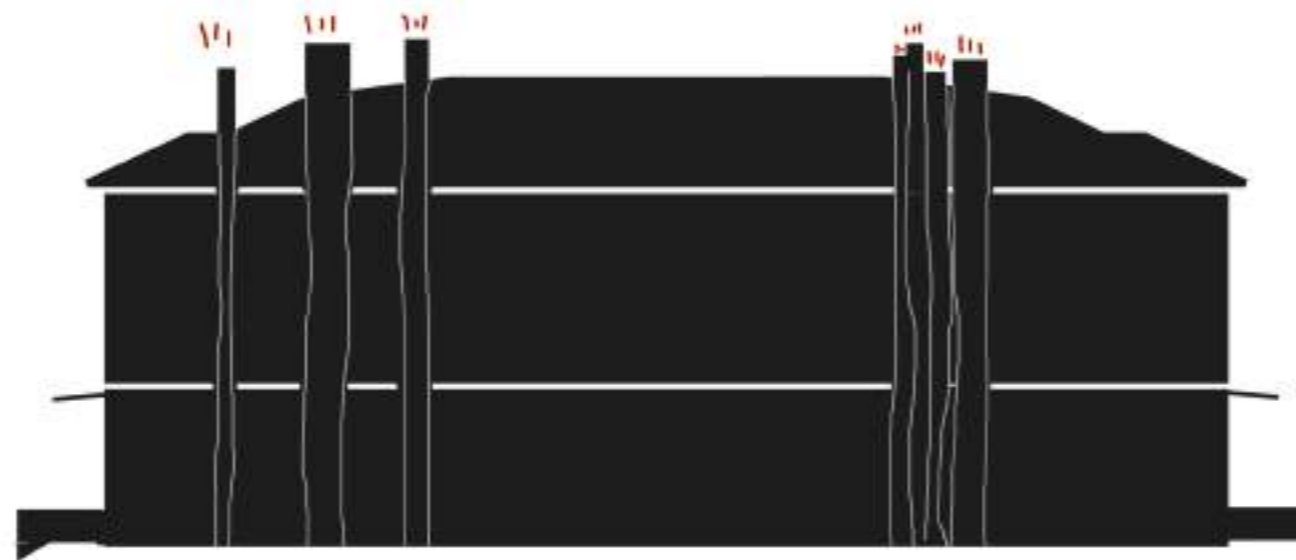


ORIGINAL BUILDING FLOWS





+



CONCEPT

V
DESIGN INTERVENTION

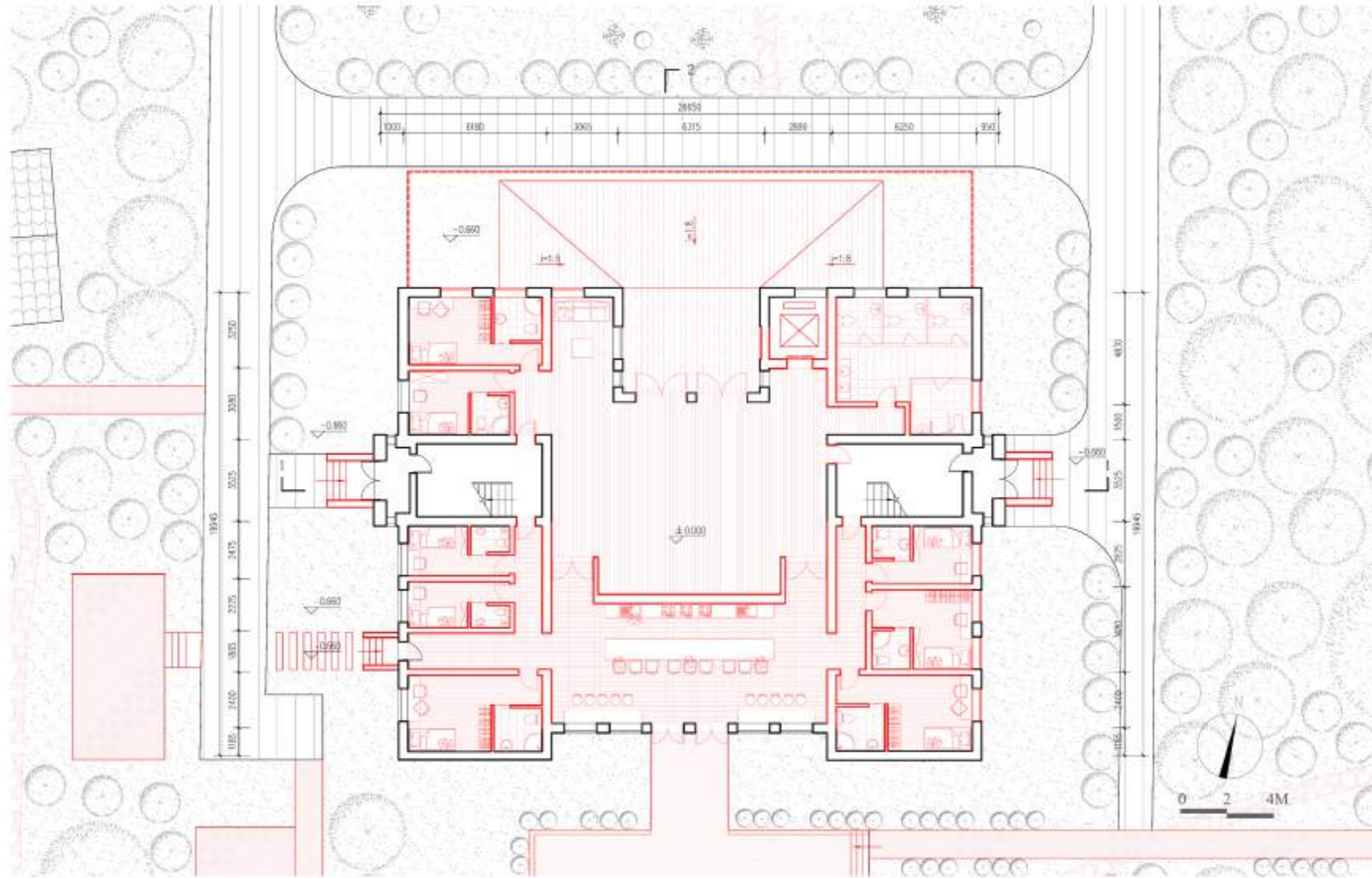




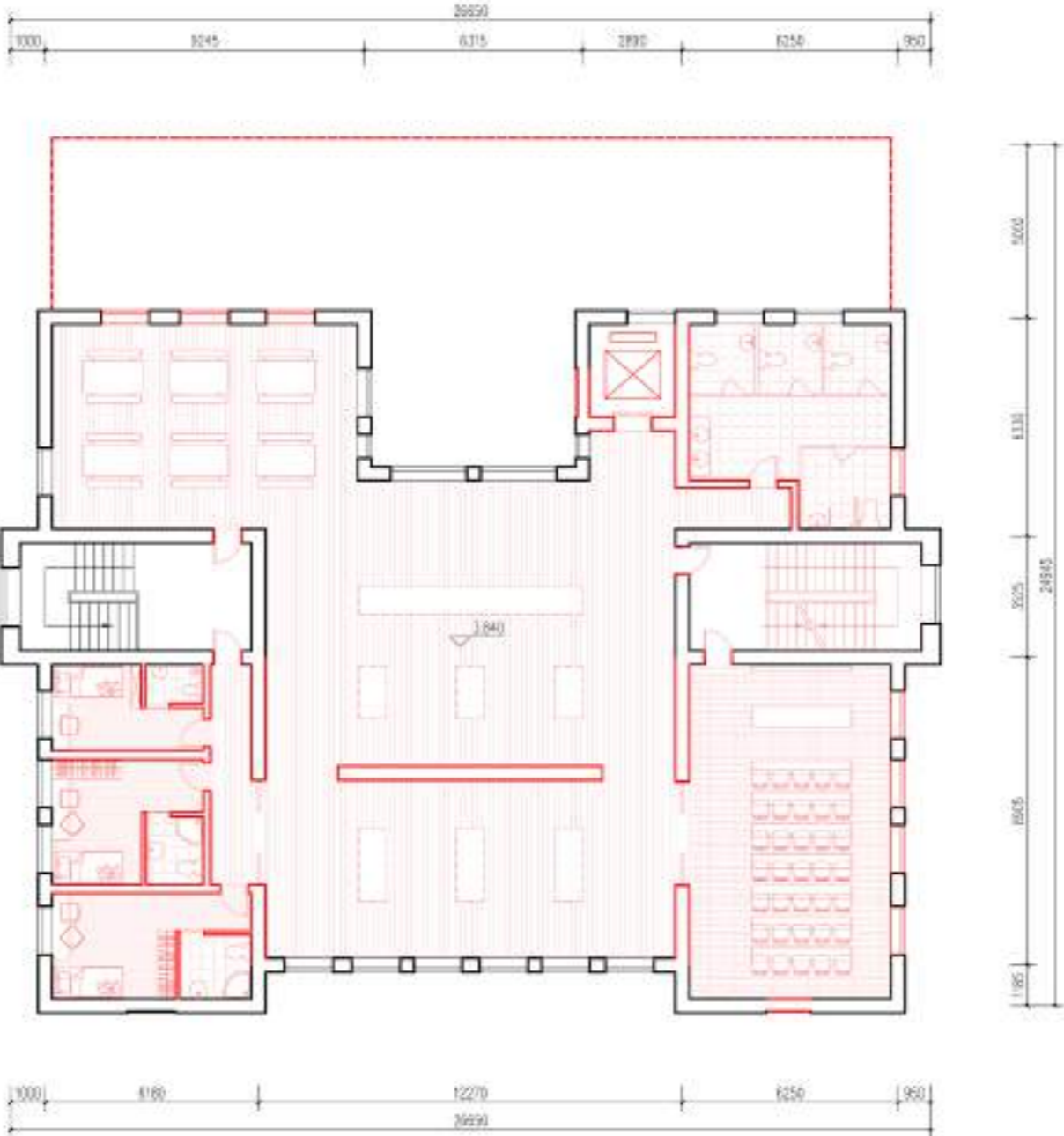
MASTER PLAN



GROUND FLOOR



FIRST FLOOR

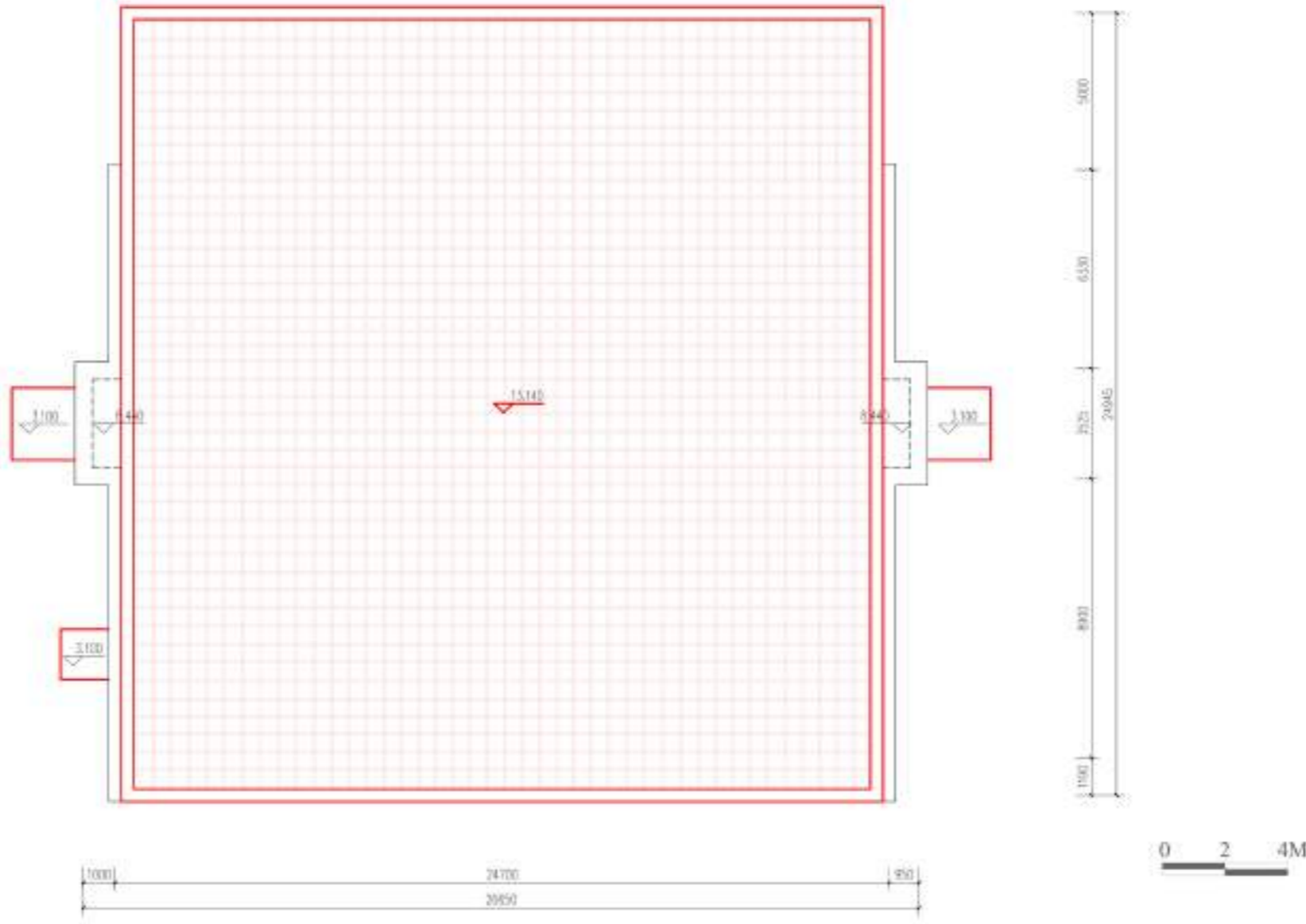


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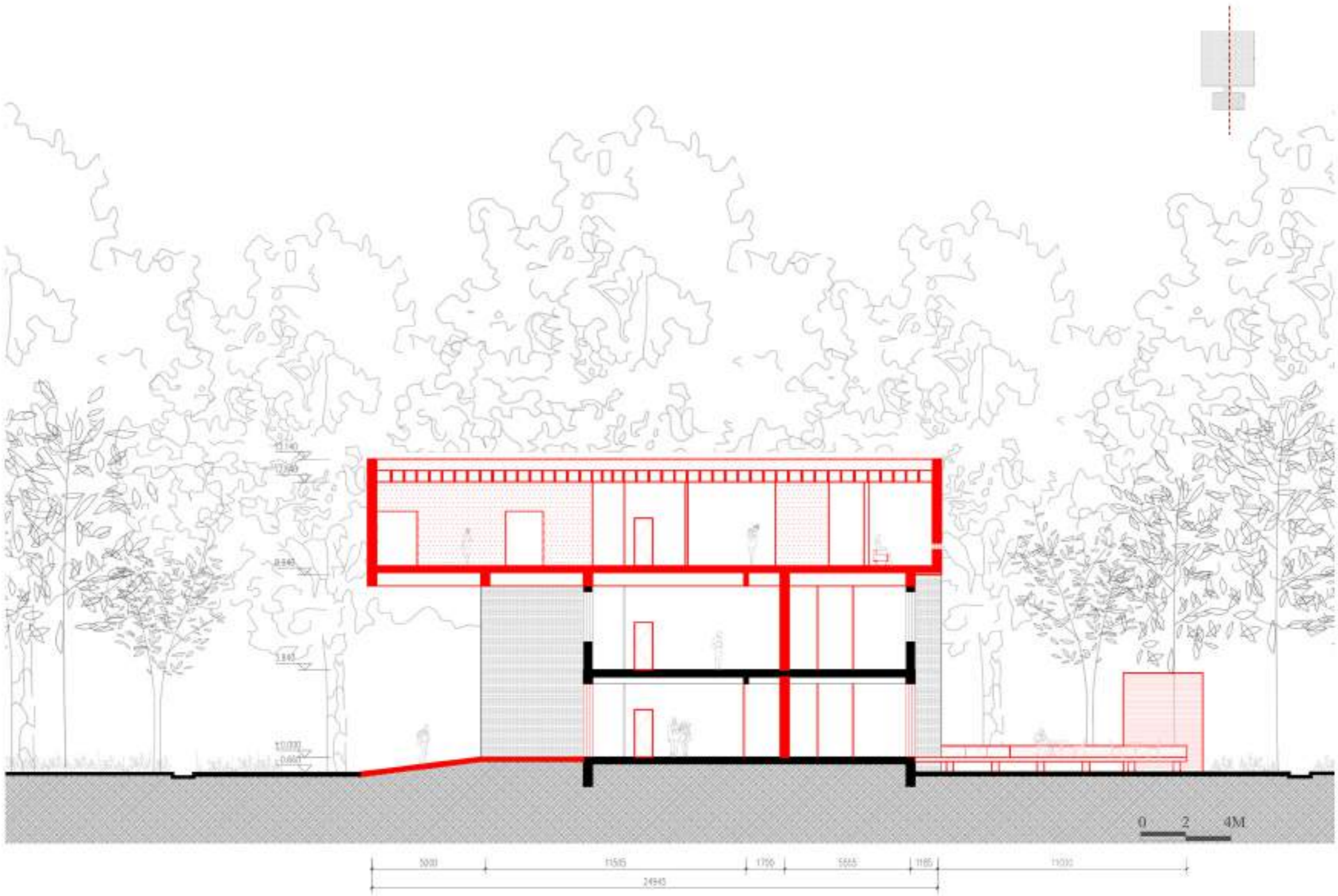
ADDITION FLOOR



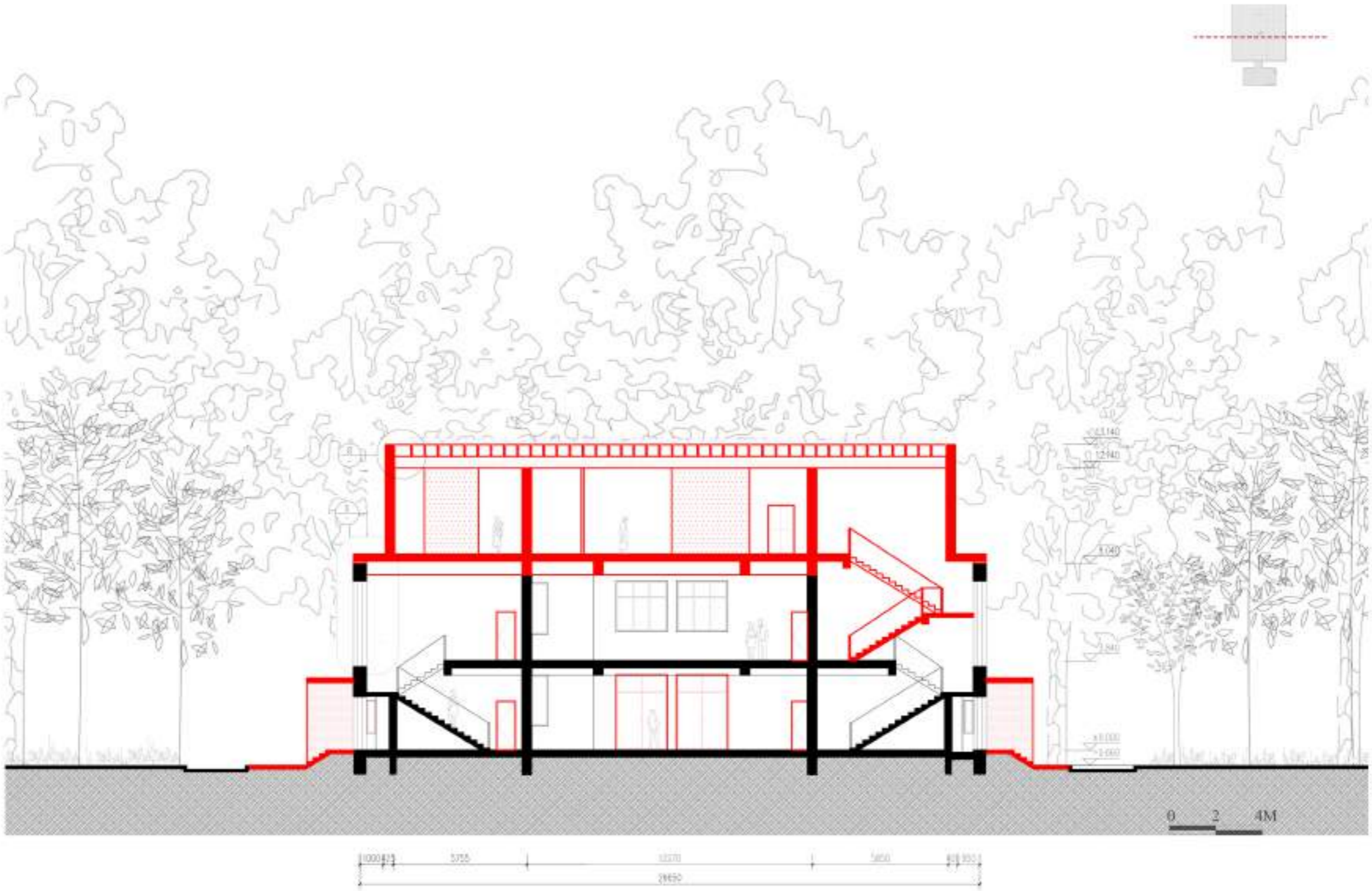
ROOF FLOOR



SECTION



SECTION



SOUTH ELEVATION



NORTH ELEVATION

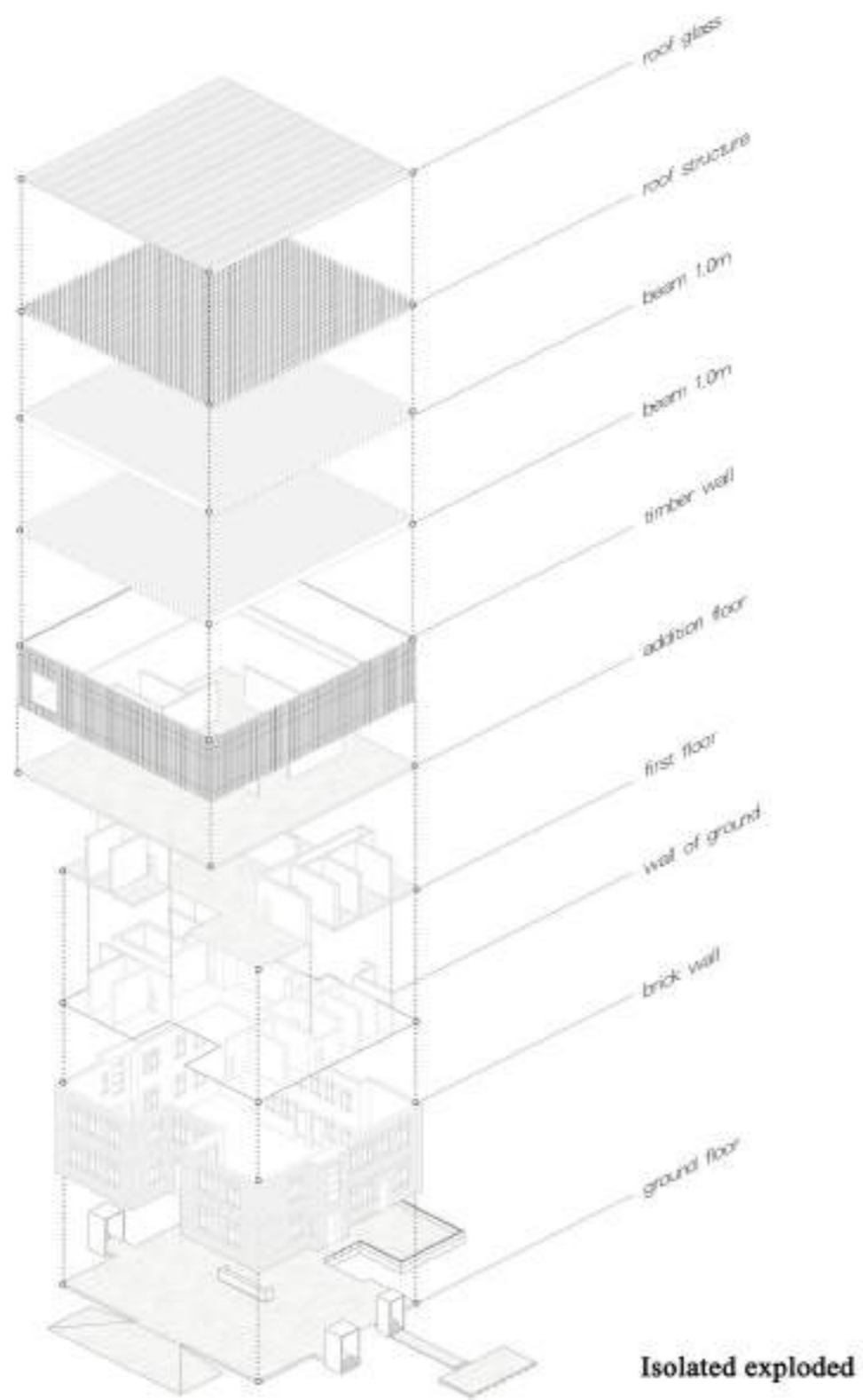


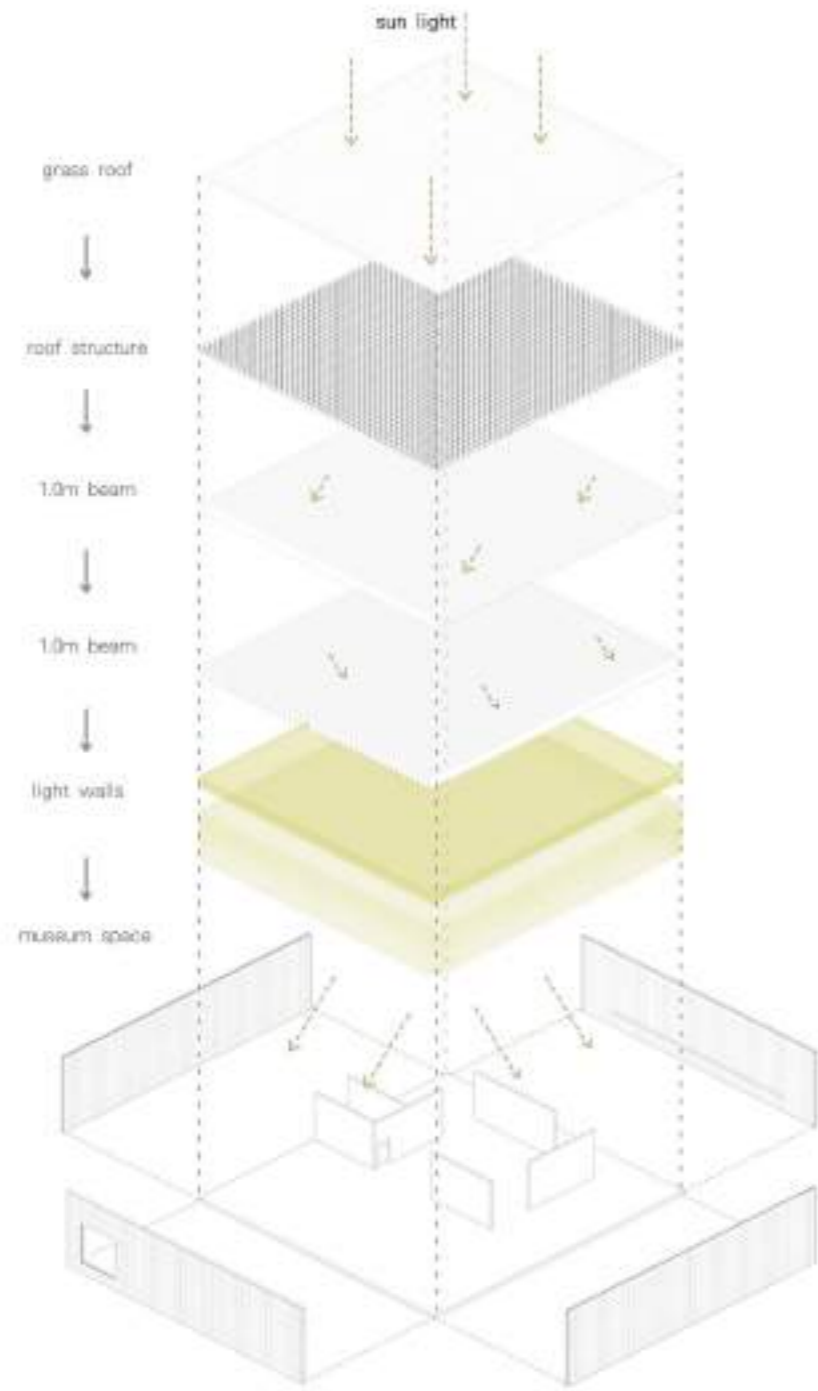
EAST ELEVATION



WEST ELEVATION



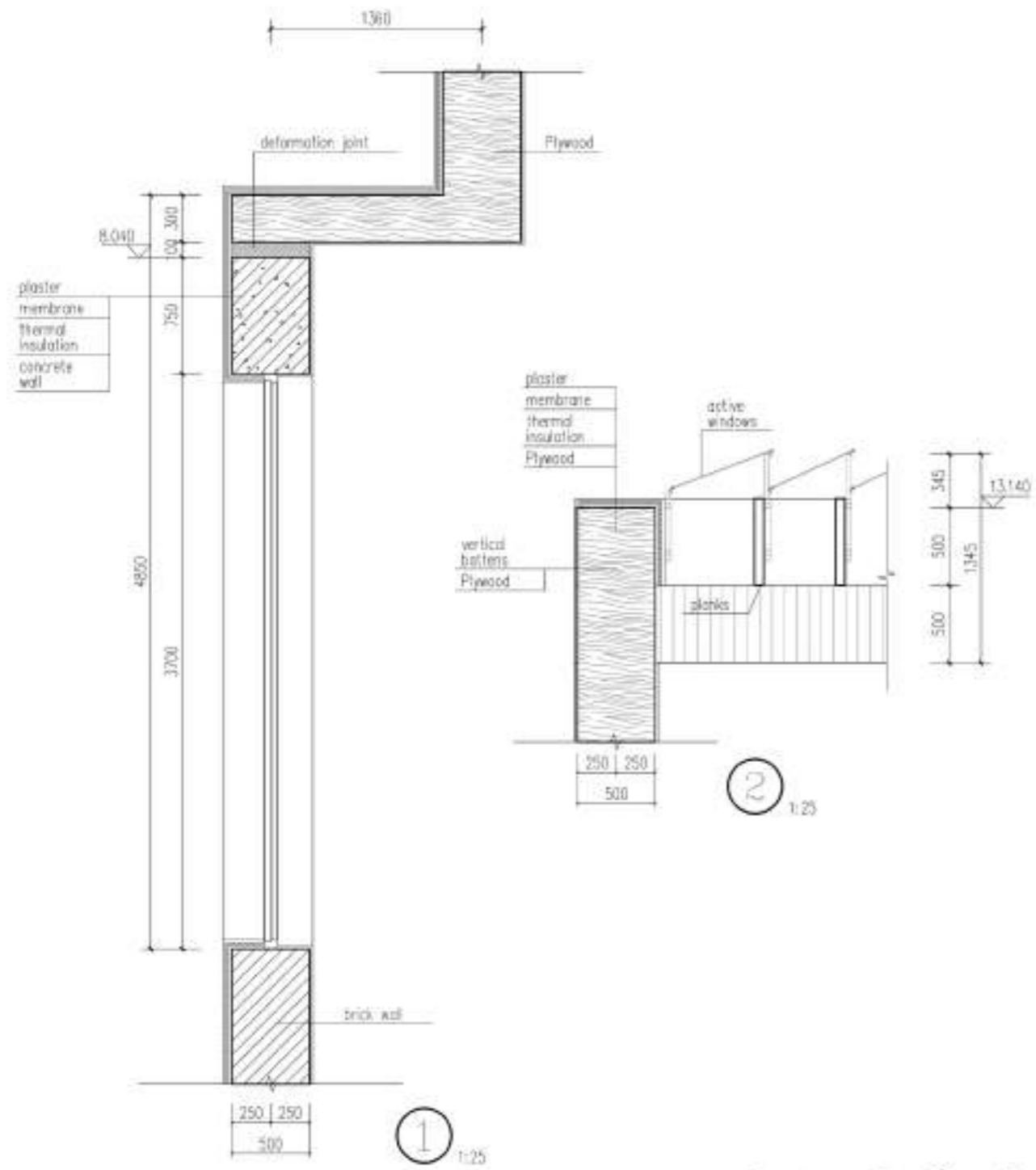




In Latvia, the longest year-round sunshine time is about 18 hours a day, and the shorter time for about seven hours a day, and enough sunshine for the museum of natural lighting provides the possibility for long, for the museum, stable and uniform light is the key to obtain good visiting experience, then, We used two beams and columns on the roof, each one meter deep, to obtain a stable and uniform diffuse light to provide natural light for the museum.

Diffused reflection



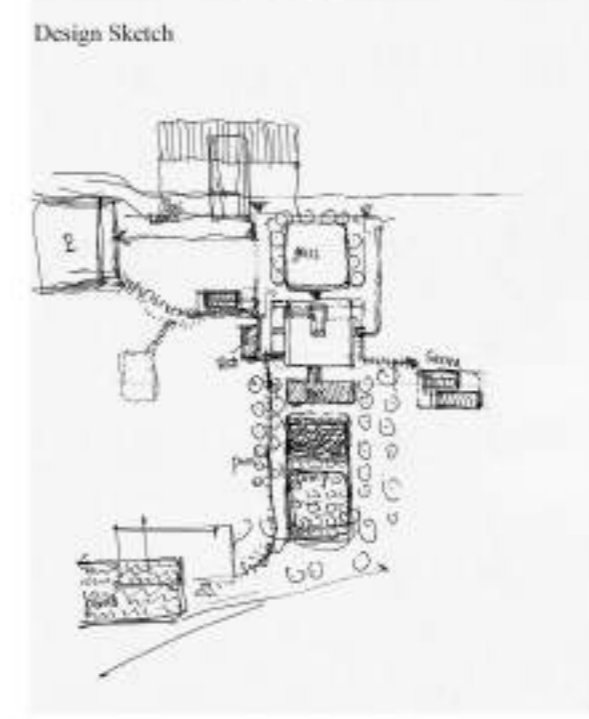
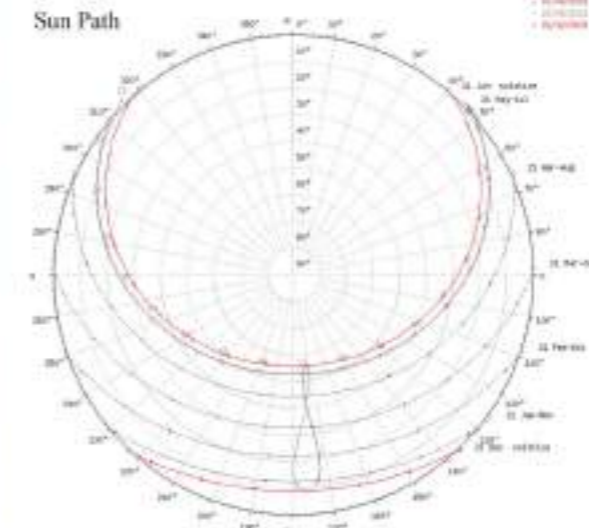
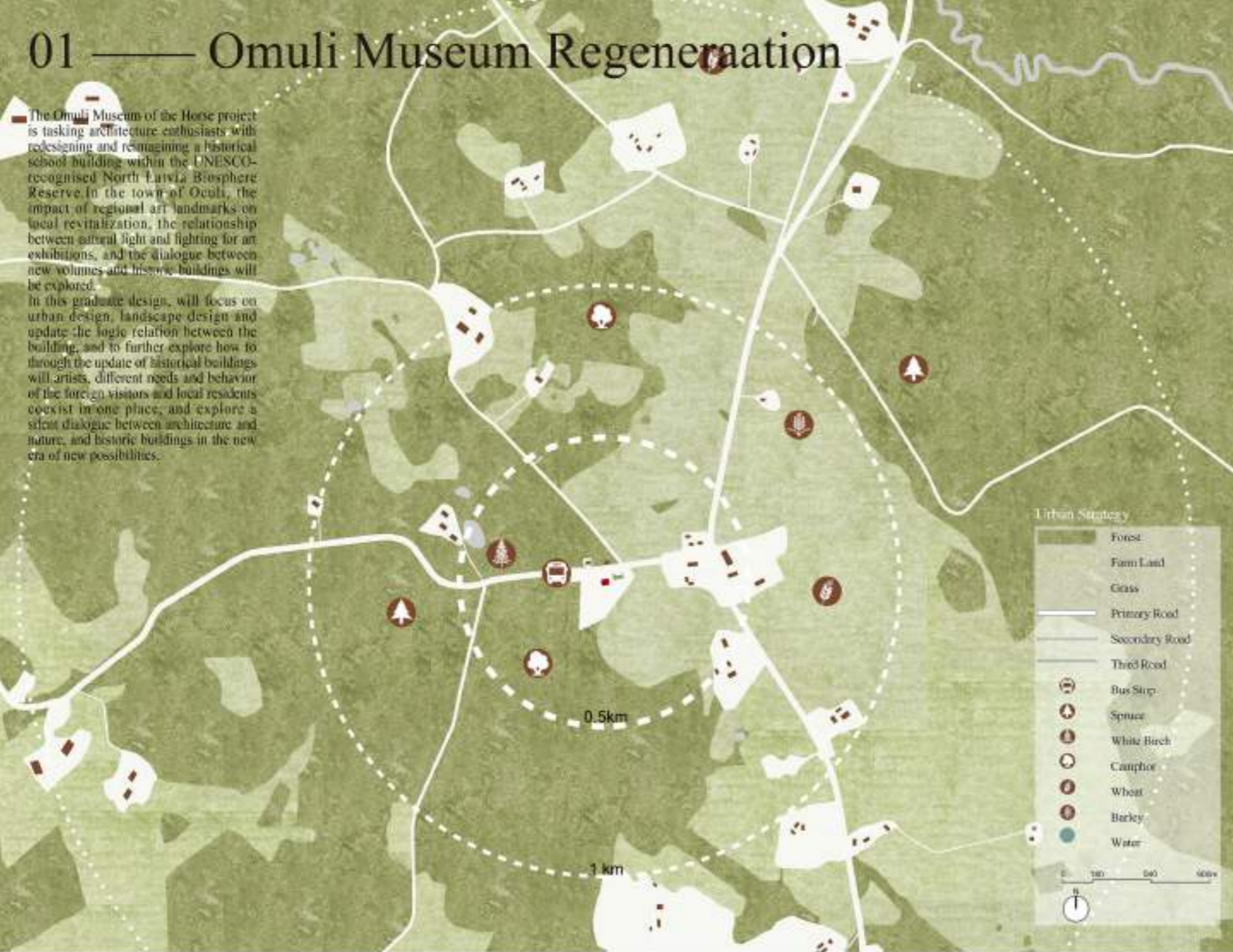


VI
PANELS

01 — Omuli Museum Regeneration

The Omuli Museum of the Horse project is tasking architecture enthusiasts with redesigning and reimagining a historical school building within the UNESCO-recognised North Latvia Biosphere Reserve. In the town of Omuli, the impact of regional art landmarks on local revitalization, the relationship between natural light and lighting for art exhibitions, and the dialogue between new volumes and historic buildings will be explored.

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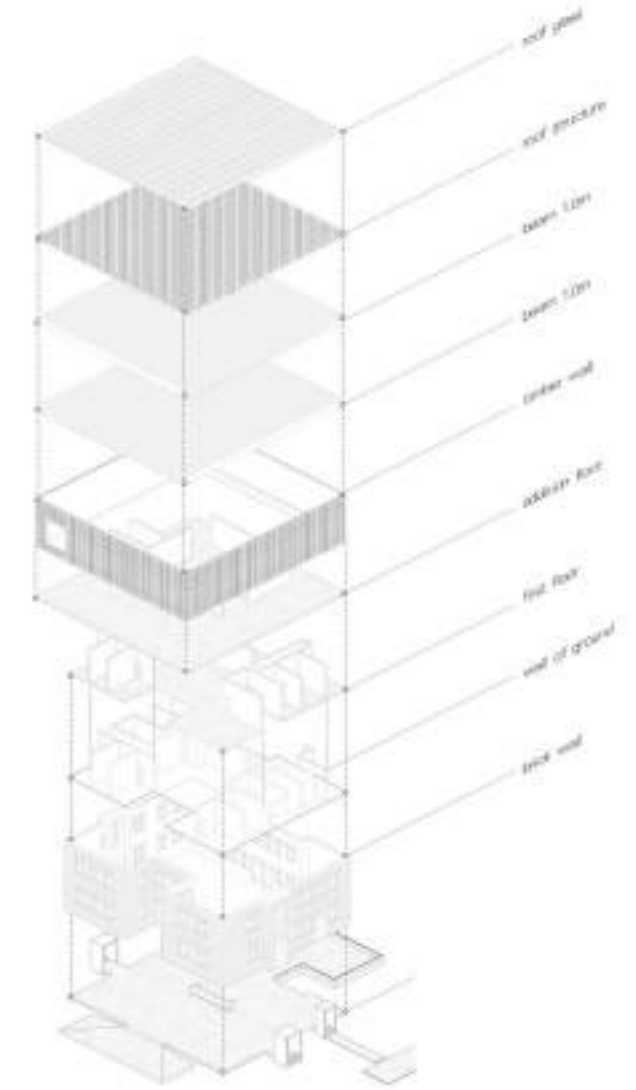
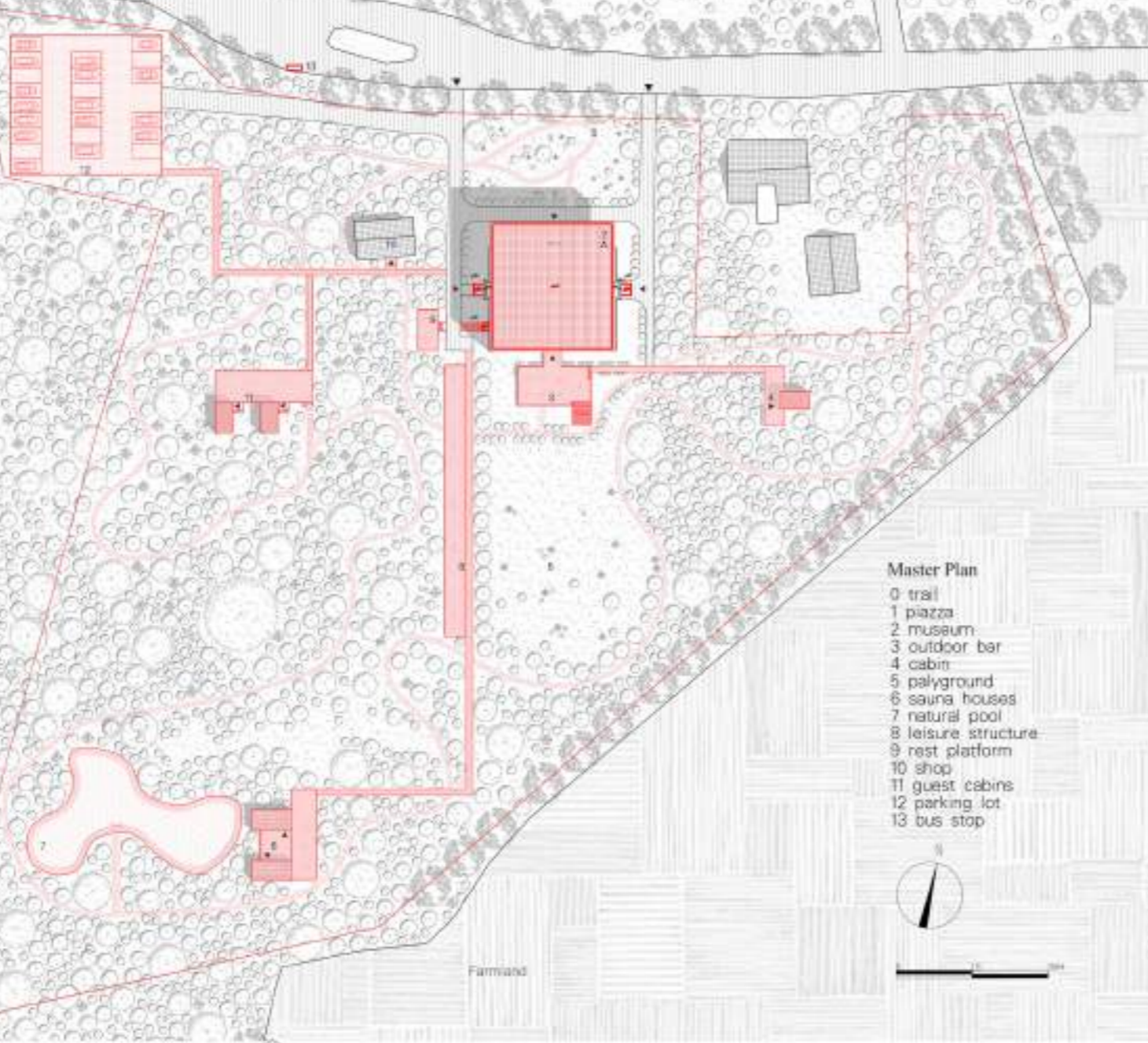


02 Omuli Museum Regeneraation

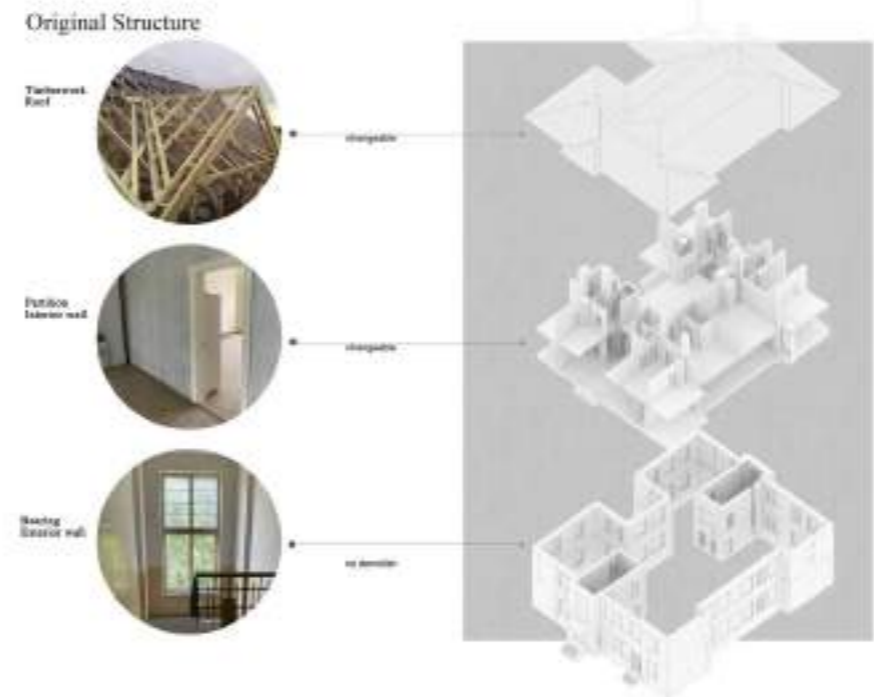
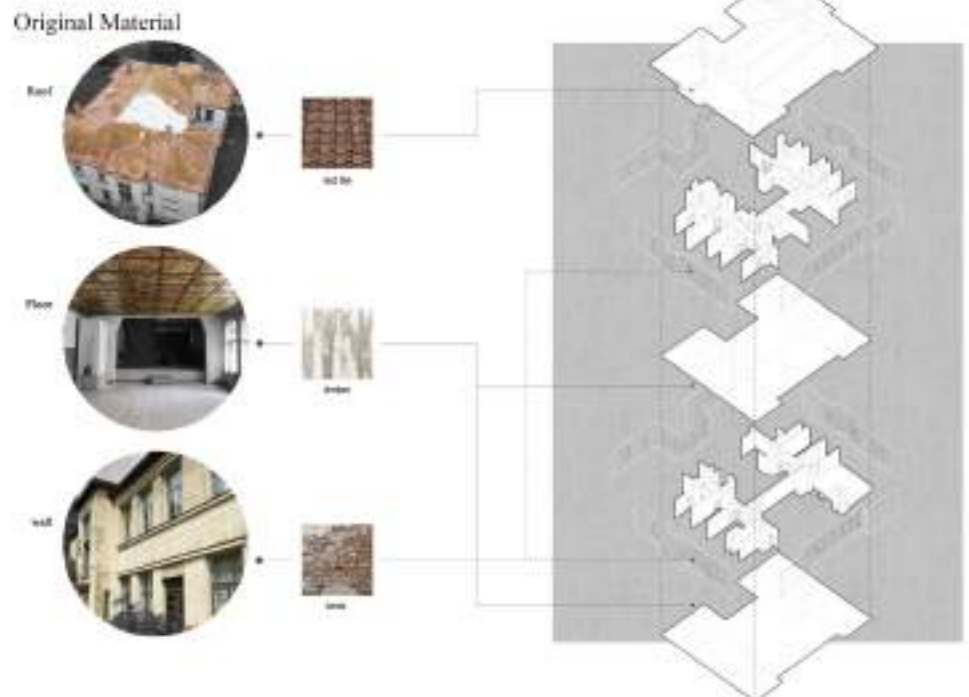
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03 — Omuli Museum Regeneraation

