

INTRODUCTION

WHAT IS AUTISM

A neurodevelopmental disorder characterized by impaired social interaction and verbal and nonverbal communication deficits causing narrow interests and repetitive behaviors. Parents usually notice the first signs within two years of the child's life and often a clear diagnosis can be made within thirty months of life. Currently, the causes of this manifestation are still unknown, divided between acquired constitutional neurobiological and psychoenvironmental causes.

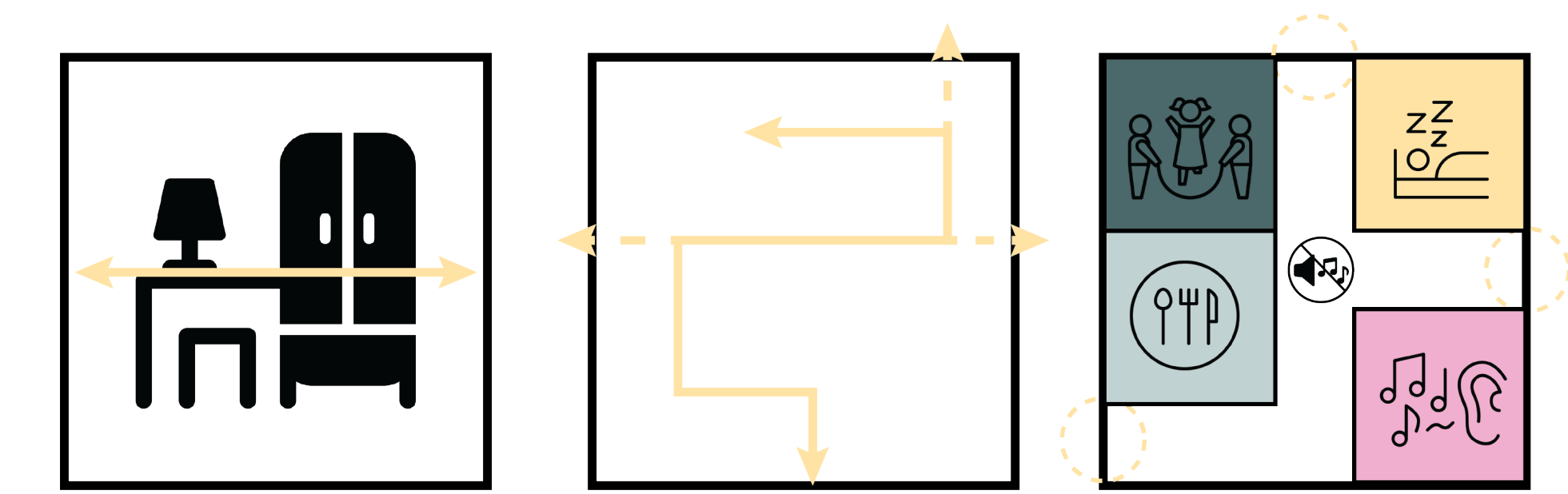
There are a thousand standards for the design of buildings where the architectural practice takes into account the existence of people with different types and degrees of disability:



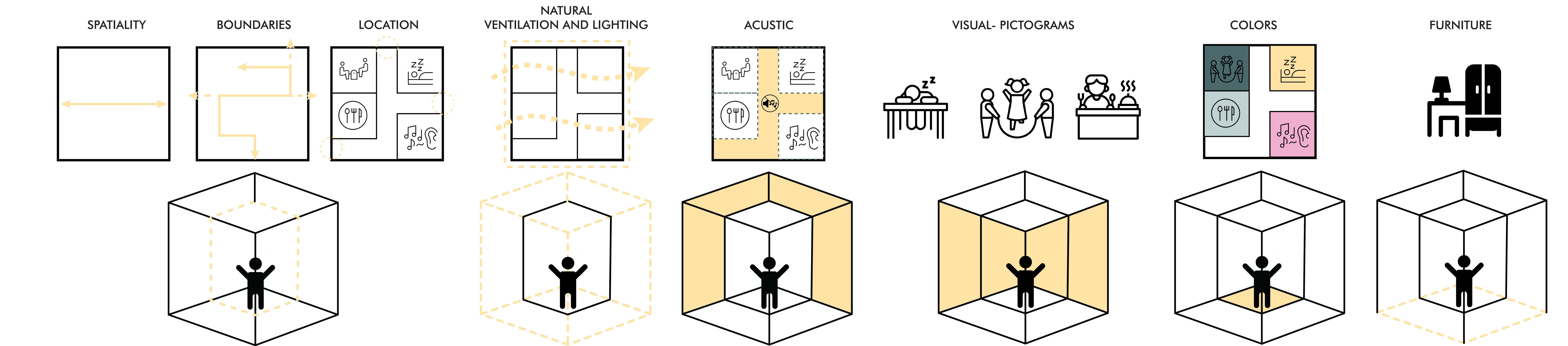
We then speak of **"accessibility"**, which is mainly a physical concept: it is about allowing access to buildings/spaces for people with disabilities, which ultimately makes it possible for them to inhabit them.

HOW ARCHITECTURE CAN INFLUENCE THE INTEGRATION OF THE CHILDREN WITH AUTISM?

Thinking about the design of spaces in a general way, it is possible to overlook details that may interfere with the integration of a child with autism to daily activities, so it is important to consider relevant features such as **materiality, thermal comfort, lighting, spatiality, among others.**



ARCHITECTURAL ELEMENTS FOR A POSITIVE INTEGRATION



TIME LINE

1887

Dr. John Down, began to investigate people with developmental delay, within this category were classified people who today would be autistic.

1911

Dr. Eugen Bleuer, proposed the term autism in the psychiatric literature describing a group of children who seemed to be "closed in on themselves" (basic disturbance in schizophrenia), who presented a distinct thinking "autistic thinking".

1927

Eugène Minkowski, a student of Bleuler, investigates autism in depth and concludes that autism is the "generator of schizophrenia problems".

1943

Leo Kanner, from John Hopkins Hospital, makes a medical classification of autism, naming it as "early infantile autism".

1944

Hans Asperger, defined "autistic psychopathy", but his work was not recognized until 1981.

1961

Charles Ferster (Learning psychologist), and child psychiatrist Miriam K. DeMyer, demonstrated the efficacy of the Operant Behavior Modification Methods.

1972

Eric Schopler, Schopler initiated the Treatment and Education of Autistic and Related Communication Handicapped Children. The purpose of the TEACCH program is to create tools for improved social functioning in individuals with Autism.

1980

The term "infantile autism", was added for the first time to the Statistical Manual of Mental Disorders (1980), under impulse control disorders.

1987

The term "infantile autism", was replaced by "autistic disorder" in the Statistical Manual of Mental Disorders and a broader diagnosis was given.

1991

Some schools begin to recognize the population with autism and to include them in the learning process; likewise, some schools specialized in teaching children with autism appear.

1993

The fifth edition of the Statistical Manual of Mental Disorders is published, in which significant changes are made to the criteria for the diagnosis of autism.

2013

The DSM-V (Diagnostic and Statistical Manual of Mental Disorders), introduced the category of autism spectrum.

ARCHITECTURE REFERENCES

TEL AVIV INCLUSIVE SCHOOL

1. Use furniture as a structuring element of spaces and activities, tailor-made, with rooms for different functions complementing each classroom's soft and intimate corners.

2. Control over the use of colors, being soft tones combined with natural wood to avoid emotional overload.

3. The search for children's inspiration through the spaces, allowing their participation in various ways, reinforcing empathy, social skills, and learning.

LIGHTING STRUAN'S NEW AUTISM CENTER

1. Curved walls: allowing to reduce the number of sharp angles, corners, and accidents with children, as well as a way to lead children from one space to another in a more subtle way.

2. Glass windows in the doors allow children to visualize the next space they are swallowing.

3. The planned use of colors to promote feel in the building and avoid overloading the children, using colors that positively impact people with autism.

SWEETWATER SPECTRUM COMMUNITY

1. Spaces are designed to reduce sensory over-stimulation and provide a serene environment, with subdued colors, finishes, and indirect lighting.

2. Various simple universal design strategies allow for generous accommodations and equal access for all ages and abilities.

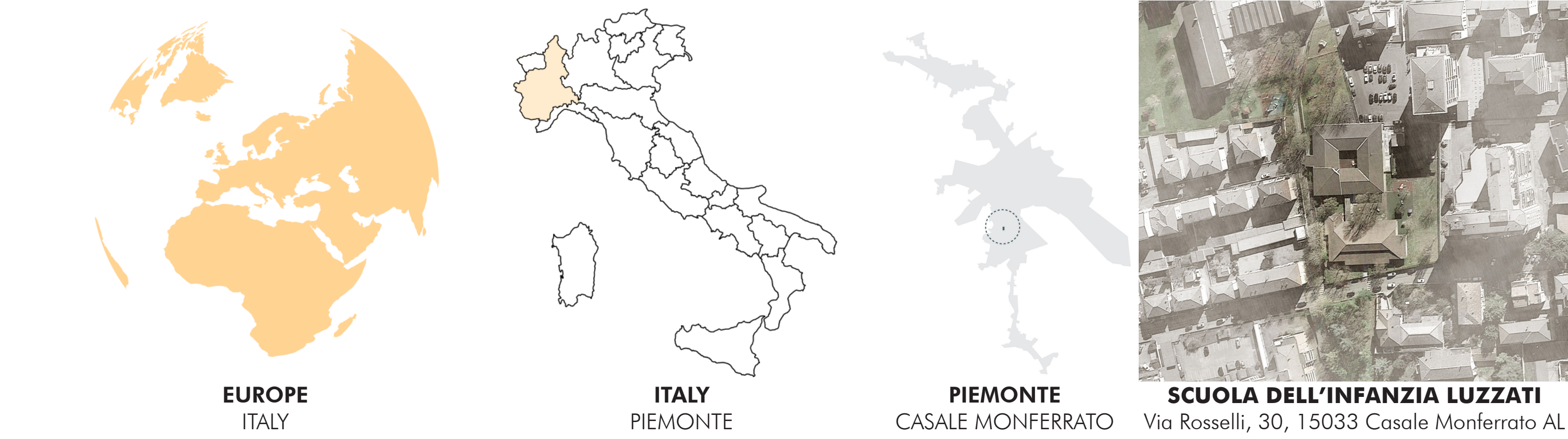
3. Strategies for building systems have been used to avoid creating noise or negative stimuli for people with autism.

ANALYSIS

2

CONTEXT SCALE:

LOCATION
SCUOLA DELL'INFANZIA LUZZATI



URBAN ANALYSIS

USES ANALYSIS:

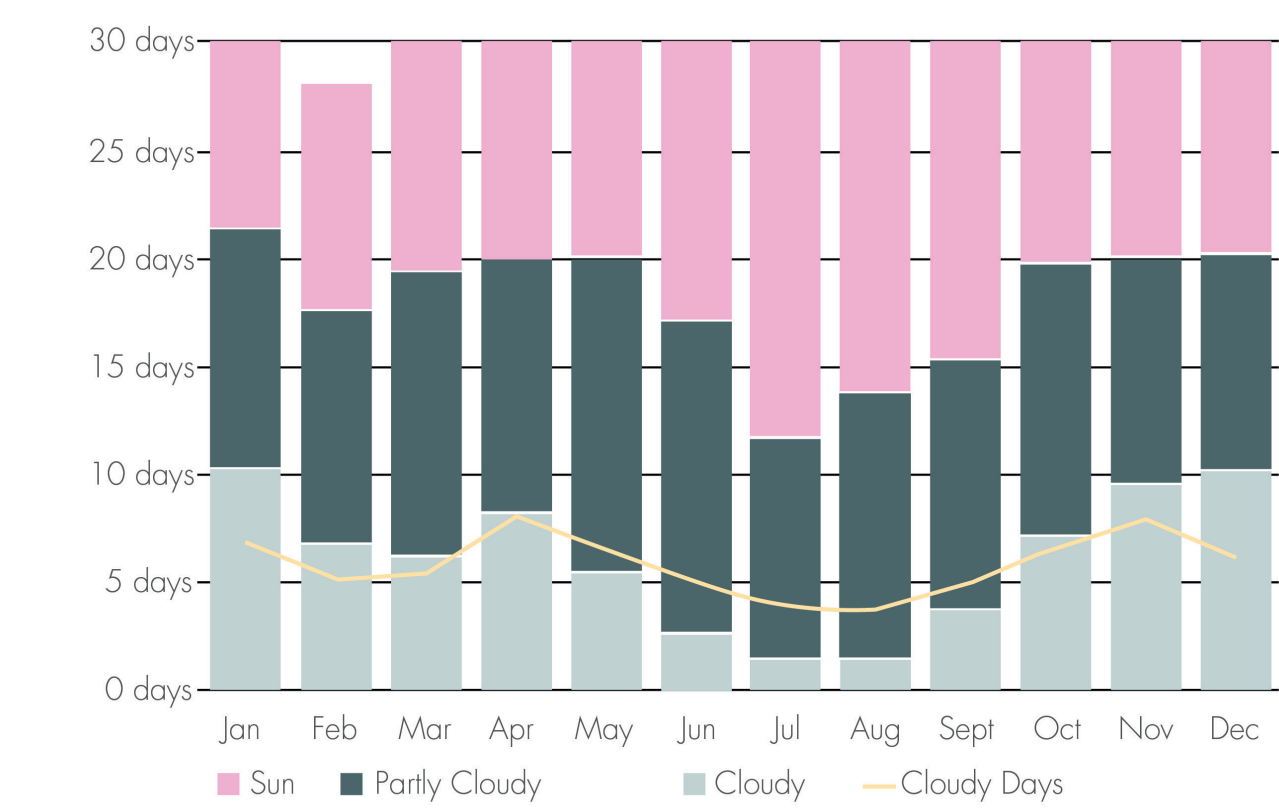


USES

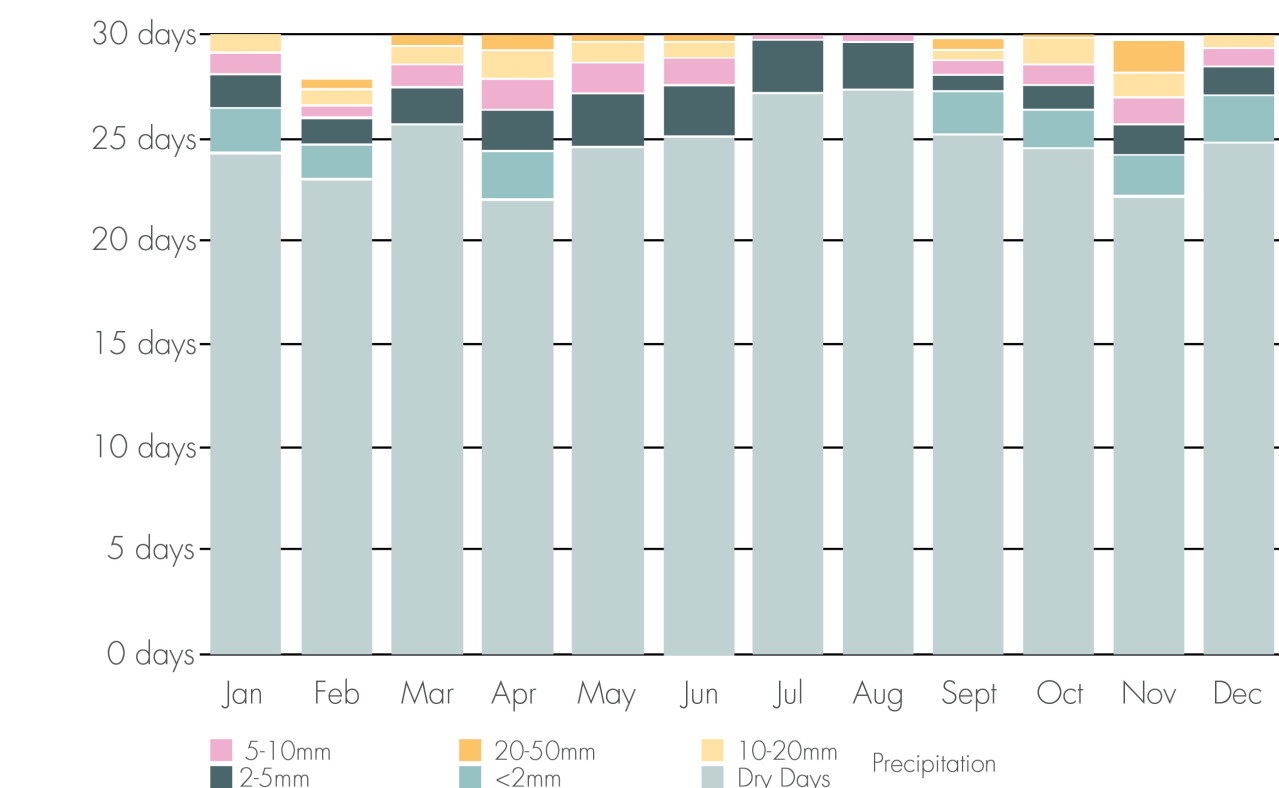
- Residential
- Services, health, religious
- Schools, education
- Commerce and shops

WEATHER ANALYSIS, CASALE MONFERRATO

CLOUDY SKIES, SUNSHINE AND PRECIPITATION DAYS:



AVERAGE PRECIPITATION:



GREEN AREAS AND ACCESSIBILITY:



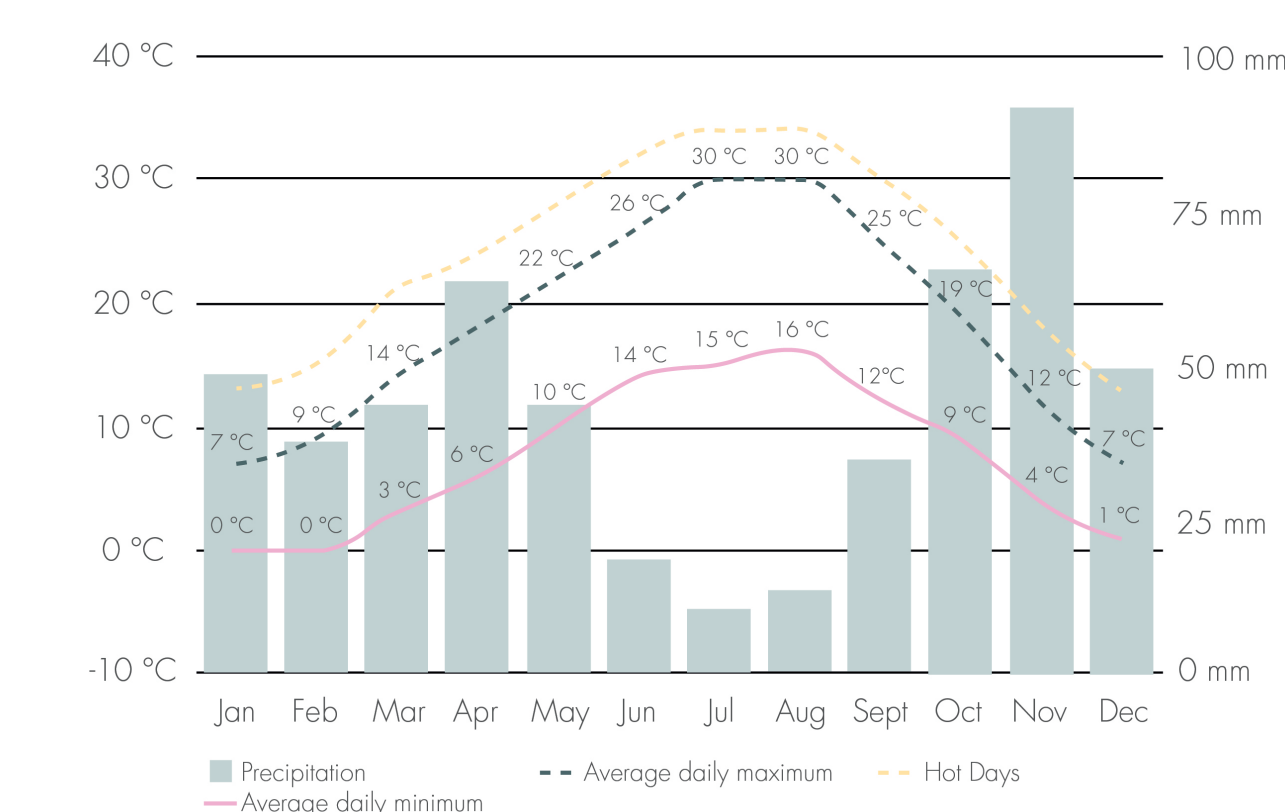
ACCESSIBILITY

- Regional Street
- Main Local Street
- Secondary Local Streets
- Bus Stop

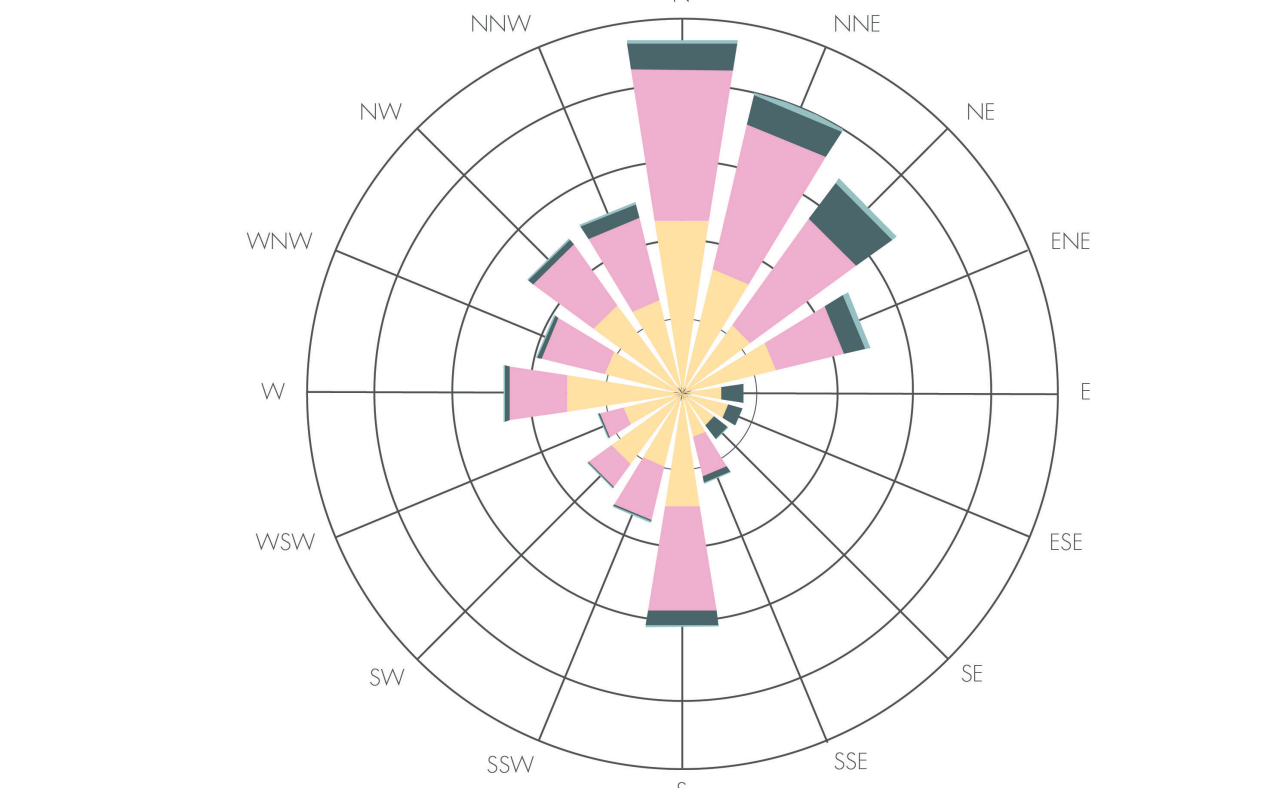
GREEN AREAS

- Public green areas
- Specific Location of trees

AVERAGE TEMPERATURES:

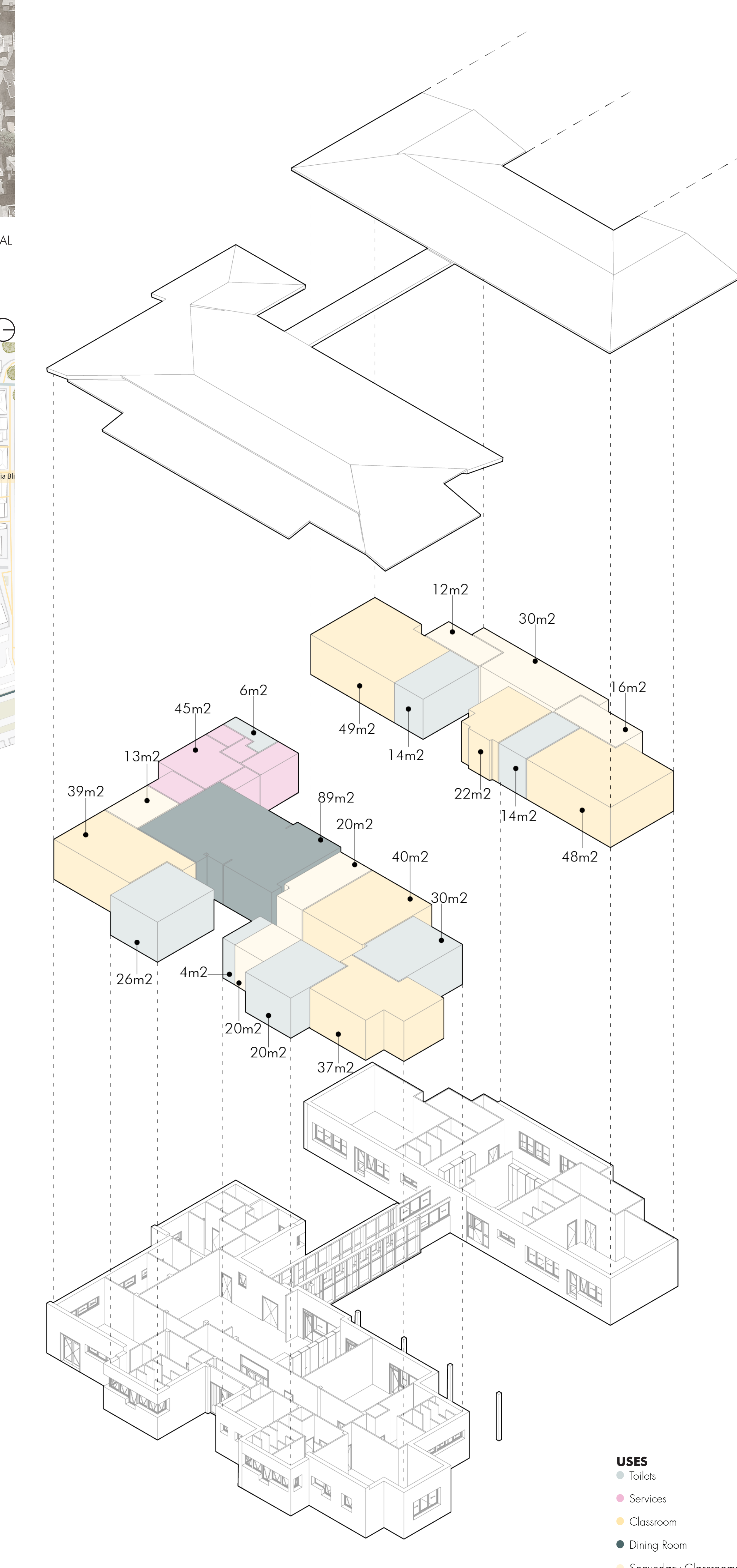


WIND SPEED:



PROJECT SCALE:

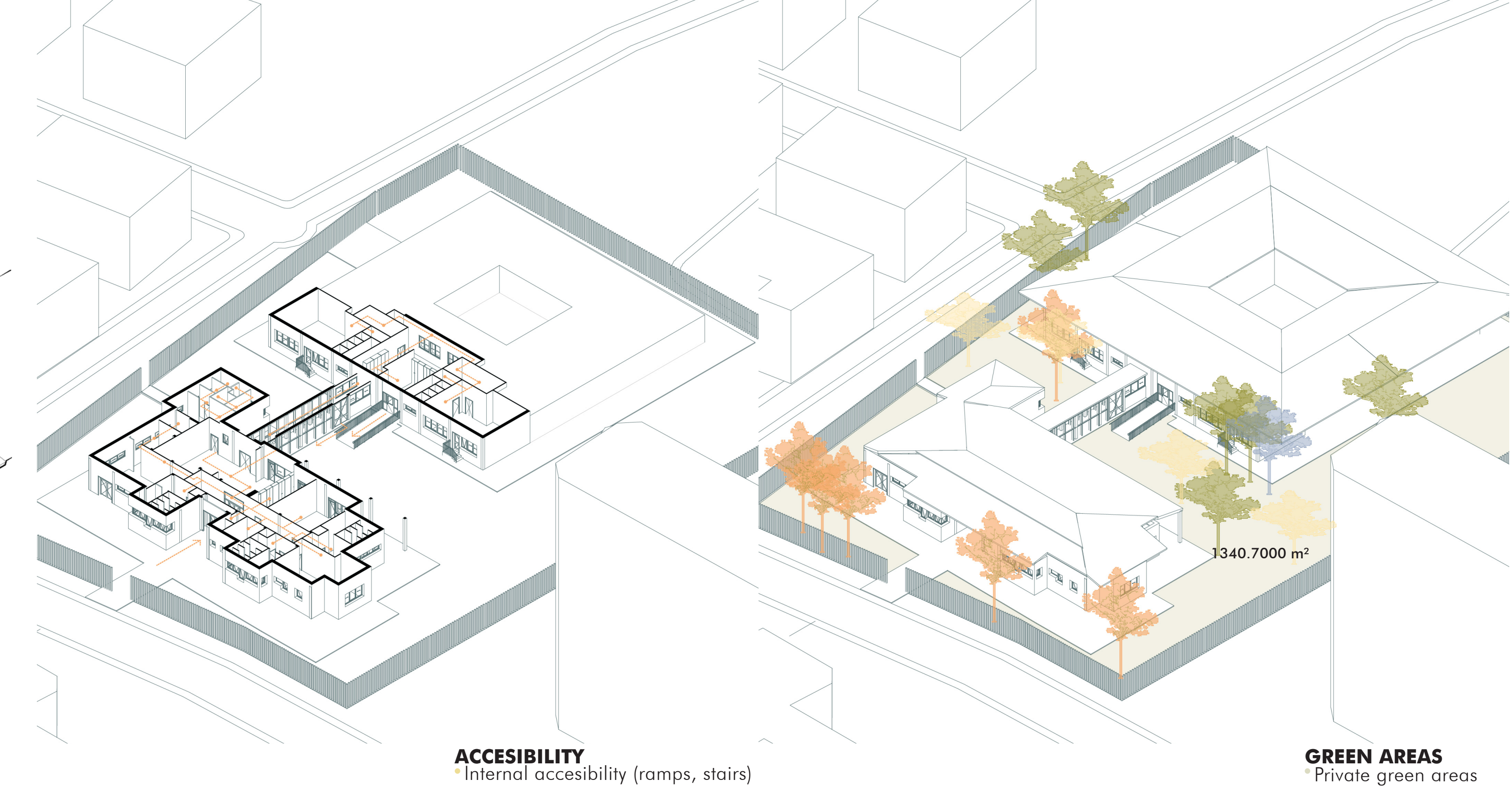
AXONOMETRY
SQUARE METERS FOR EACH USE



USES

- Toilets
- Services
- Classroom
- Dining Room
- Secondary Classrooms

ACCESSIBILITY:



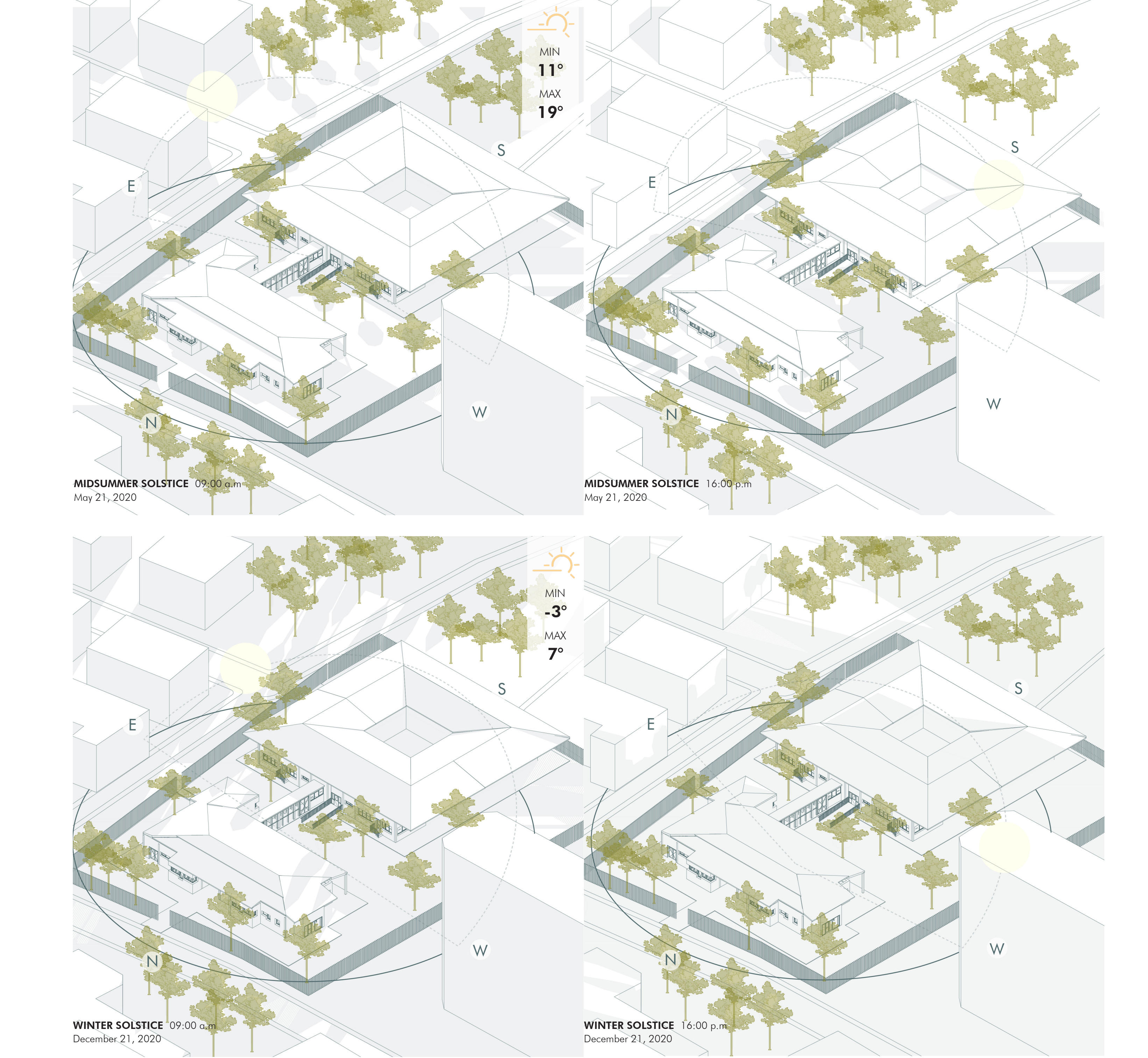
ACCESSIBILITY

Internal accessibility (ramps, stairs)

GREEN AREAS

Private green areas

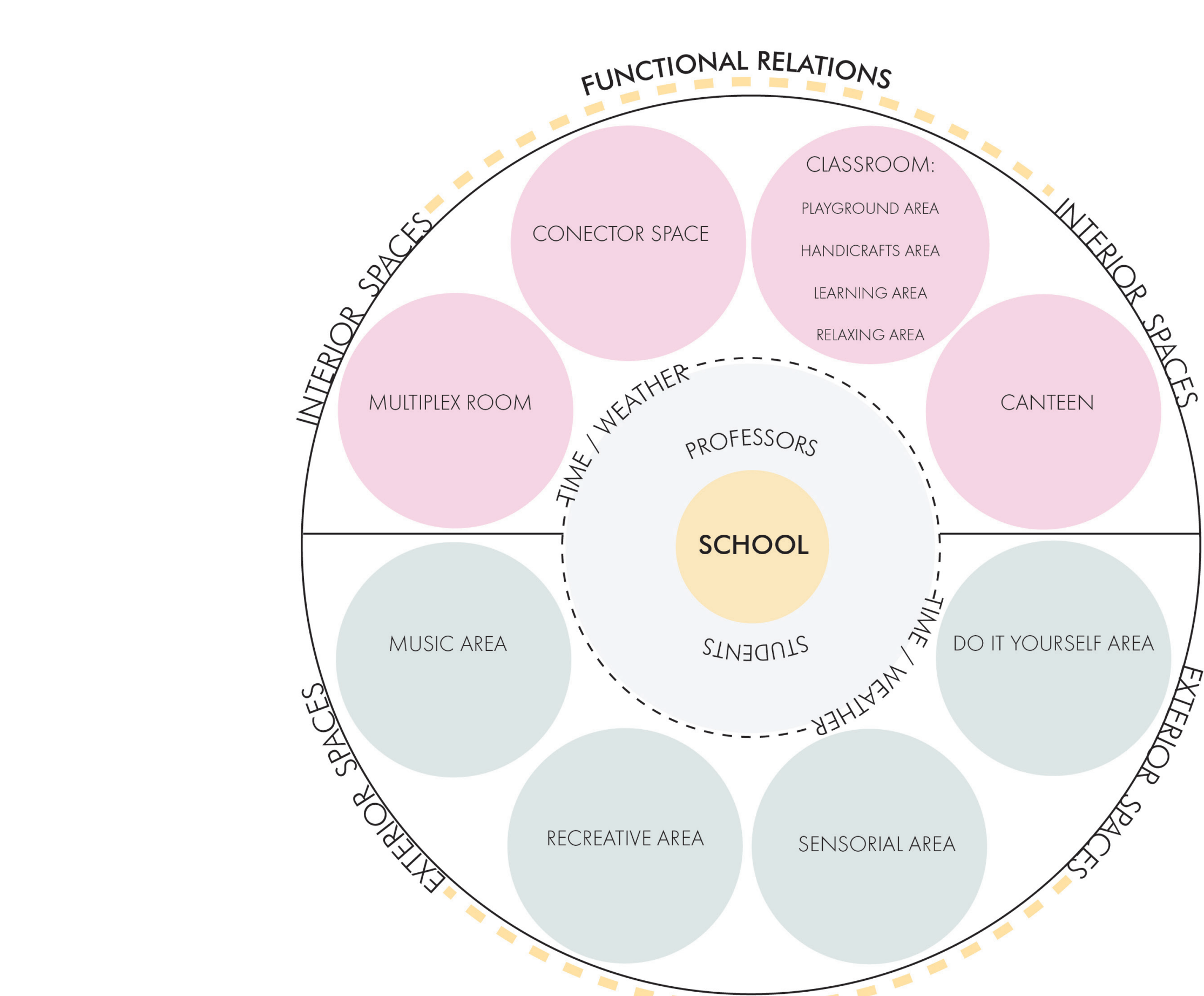
SOLAR ANALYSIS:



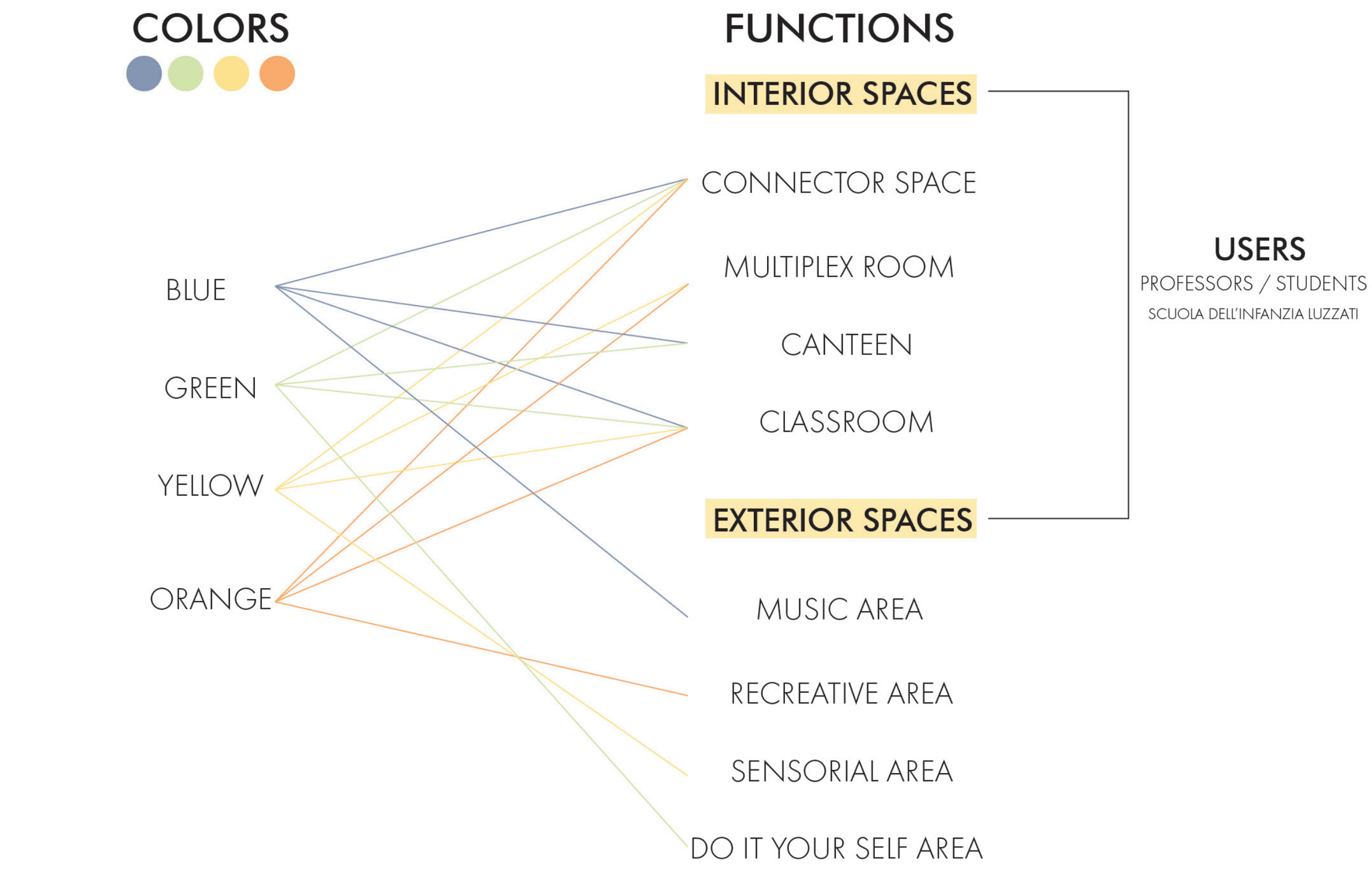
Politecnico di Torino - Final Project
MSc - Architecture for Sustainability Design | 2021-22
Inclusive and Educational Spaces for Children with Autism

Professors: Lorenzo. Savio, Daniela. Bosia. Team: Antonia. Ballesteros, María Alejandra. Sánchez

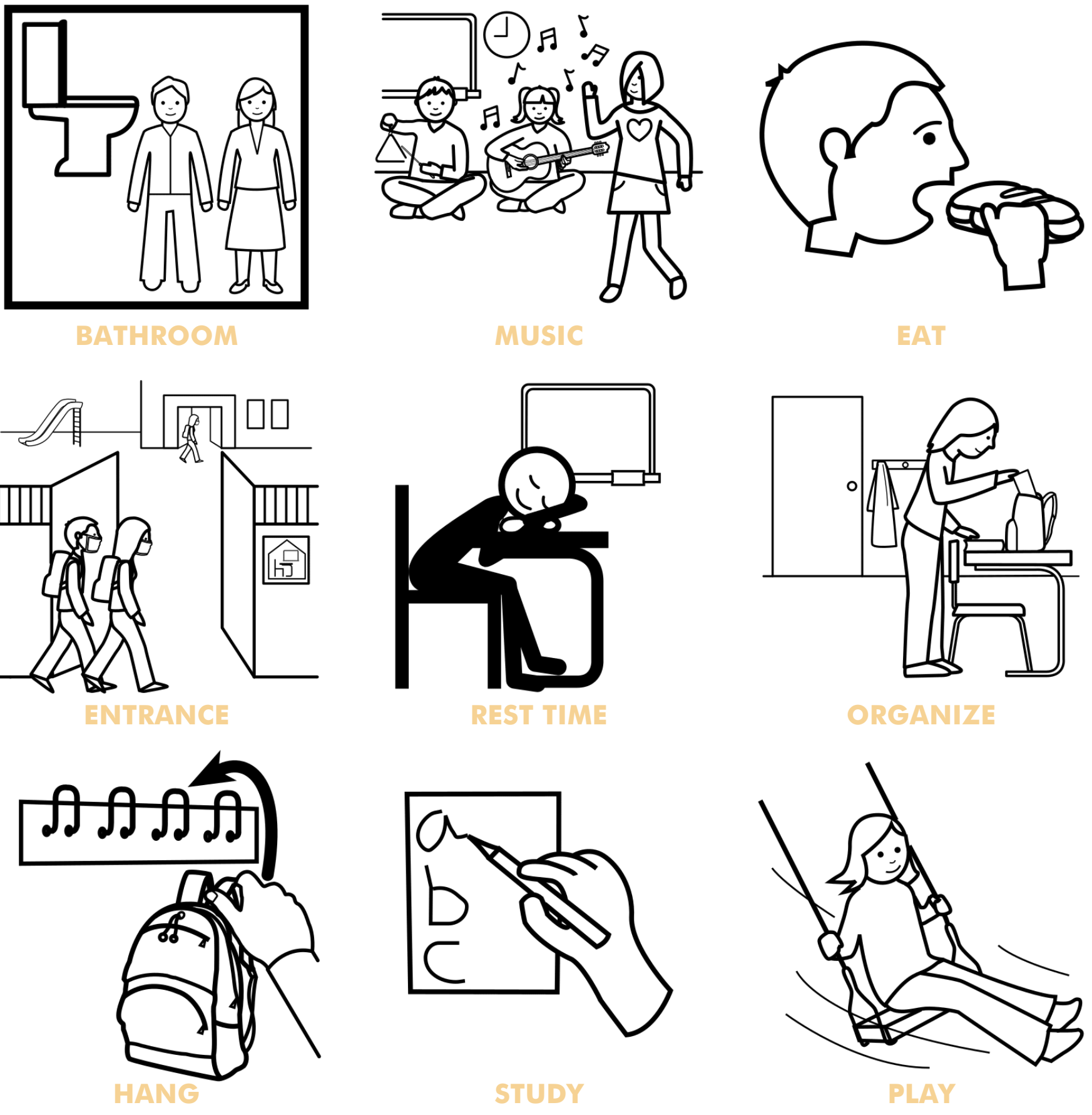
FUNCTIONAL RELATIONS



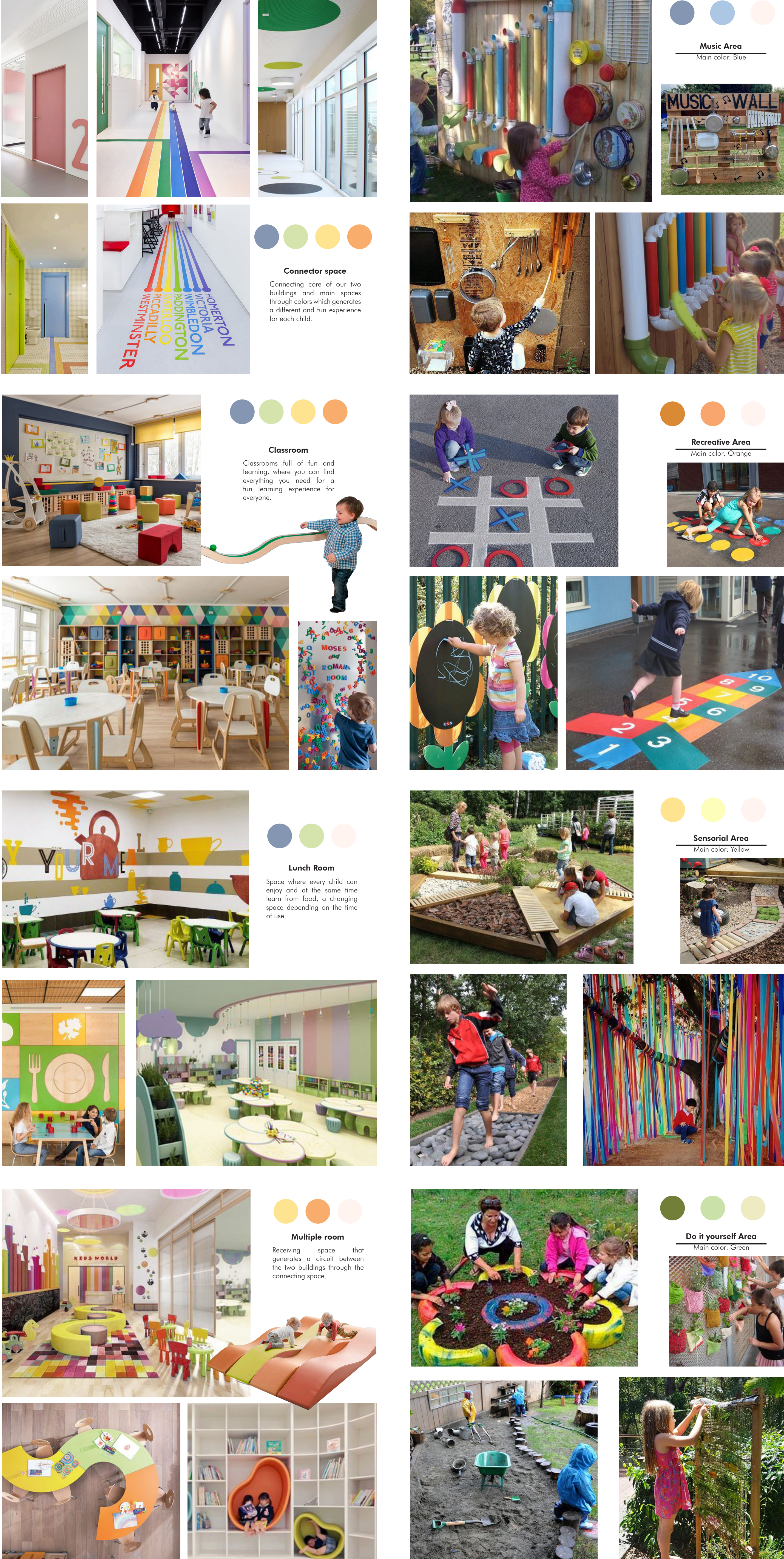
COLORS/FUNCTIONS/USERS



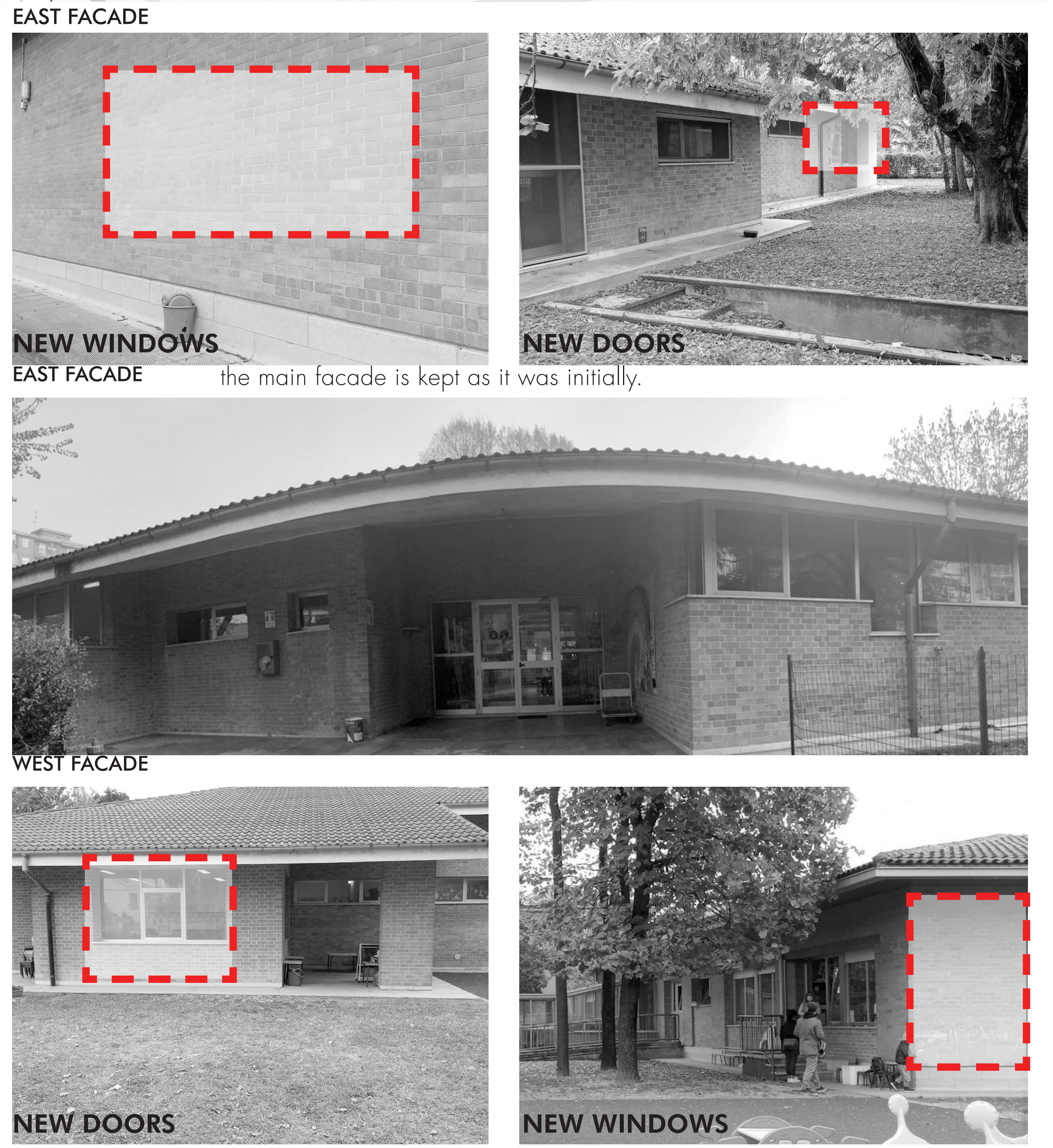
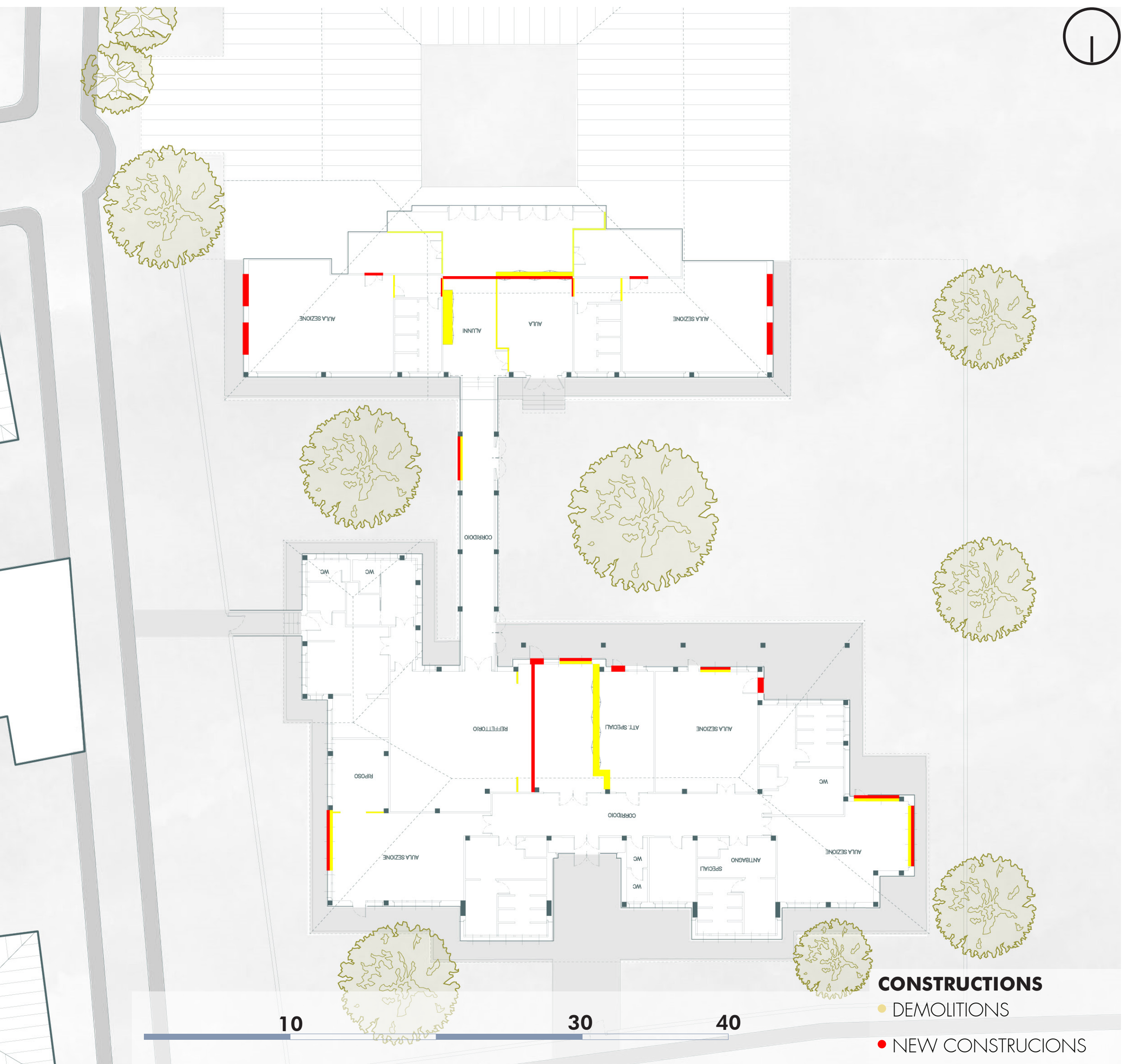
PICTOGRAMS

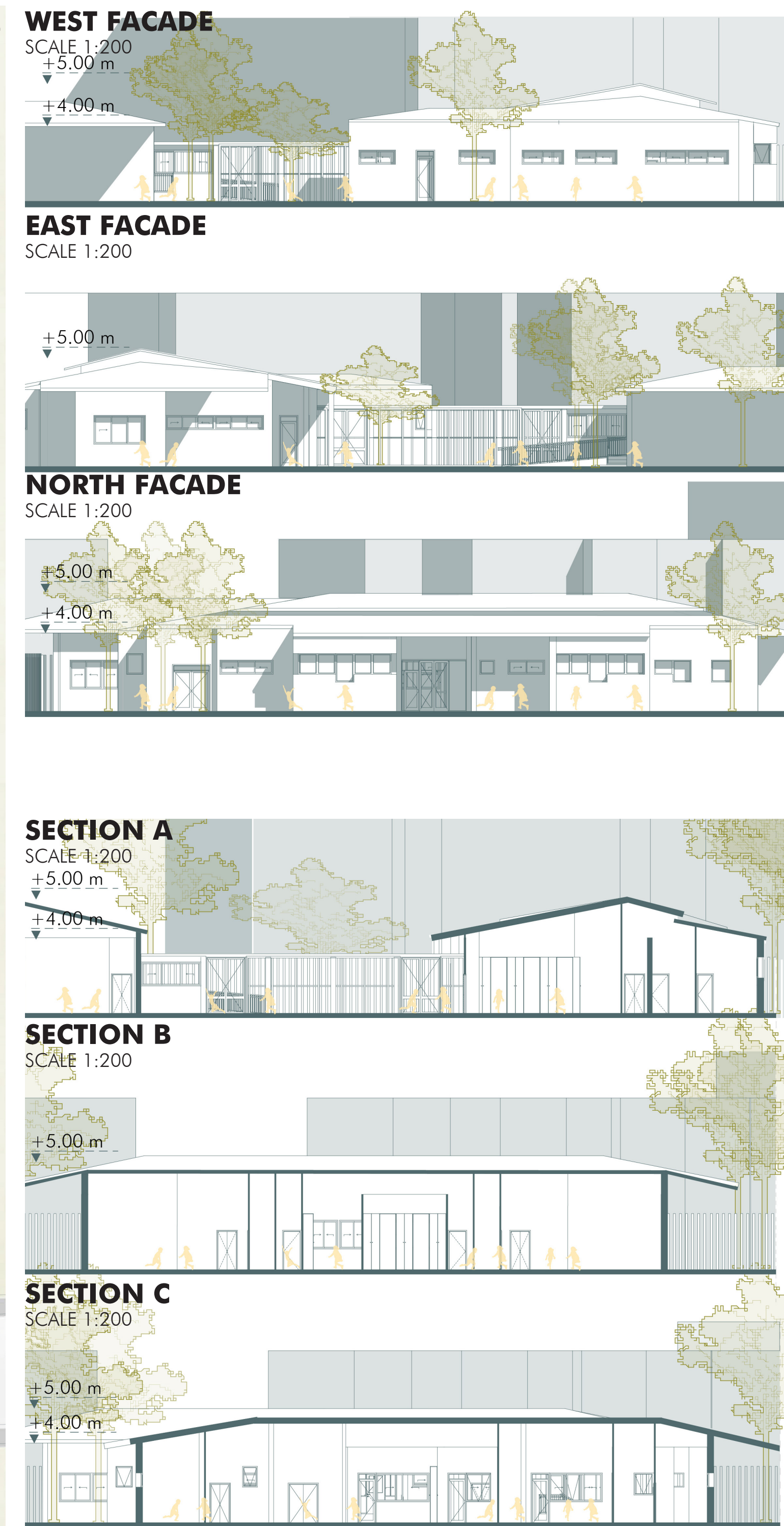
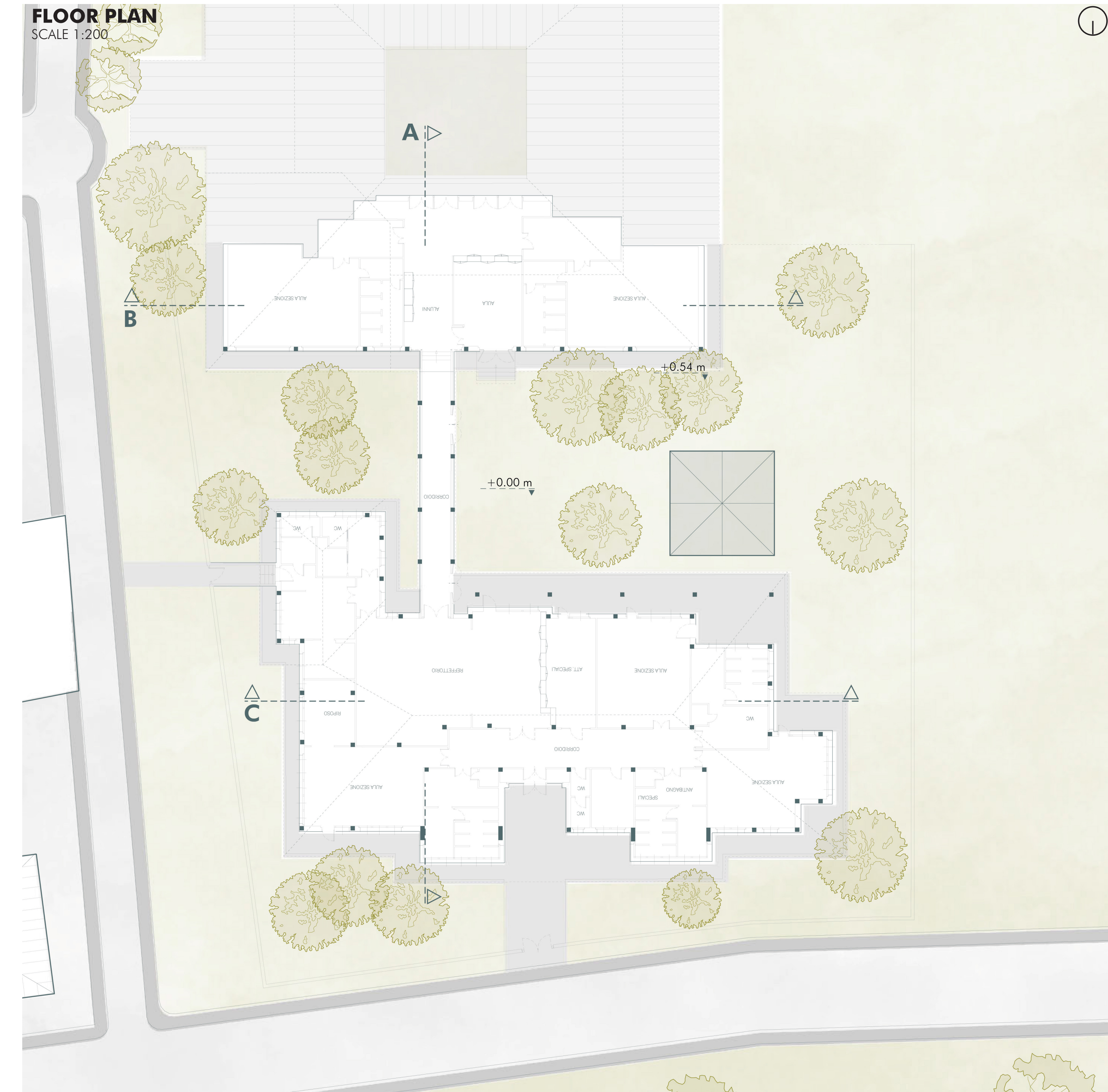
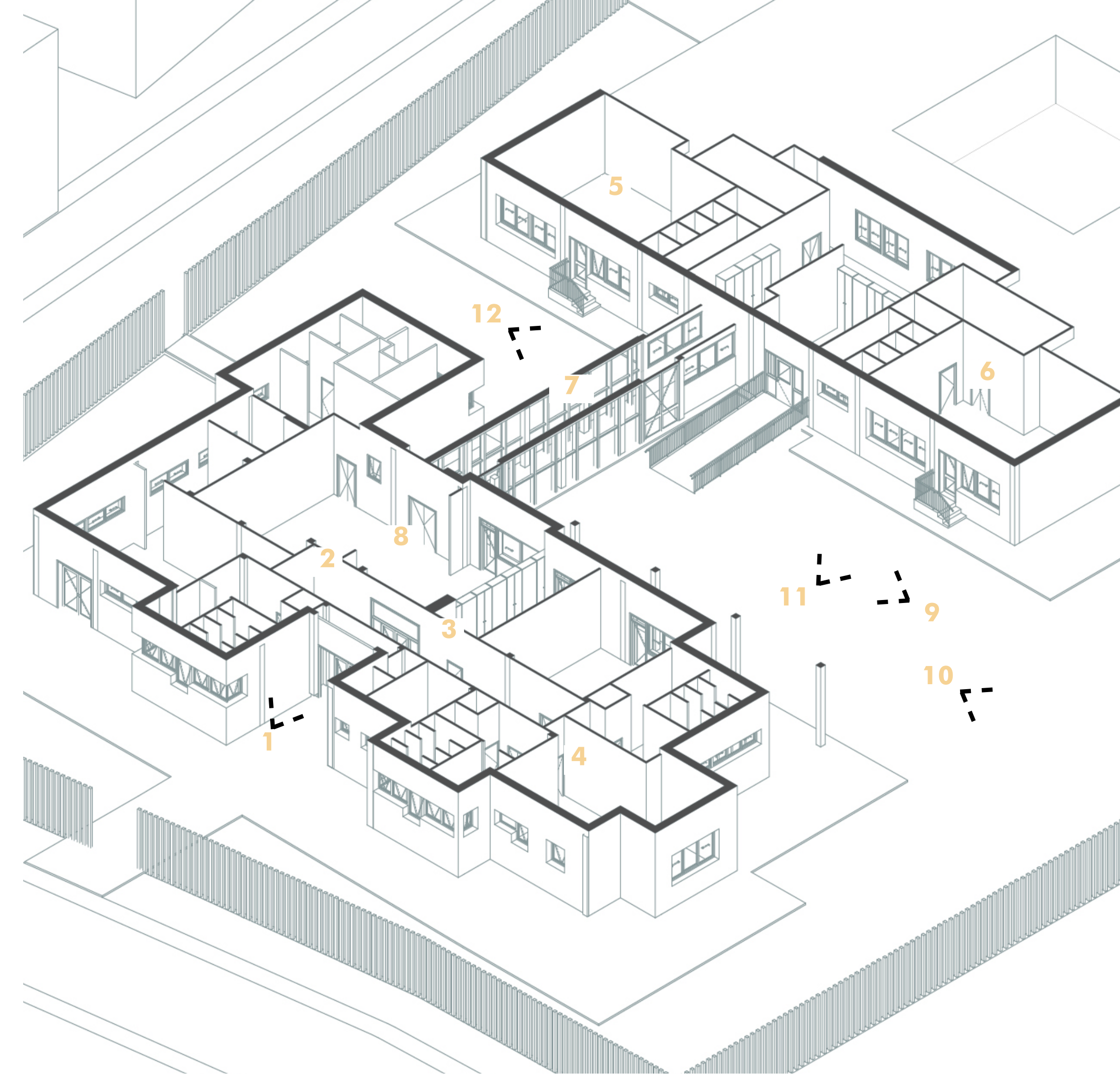


MOODBOARDS INTERNAL AND EXTERNAL SPACES



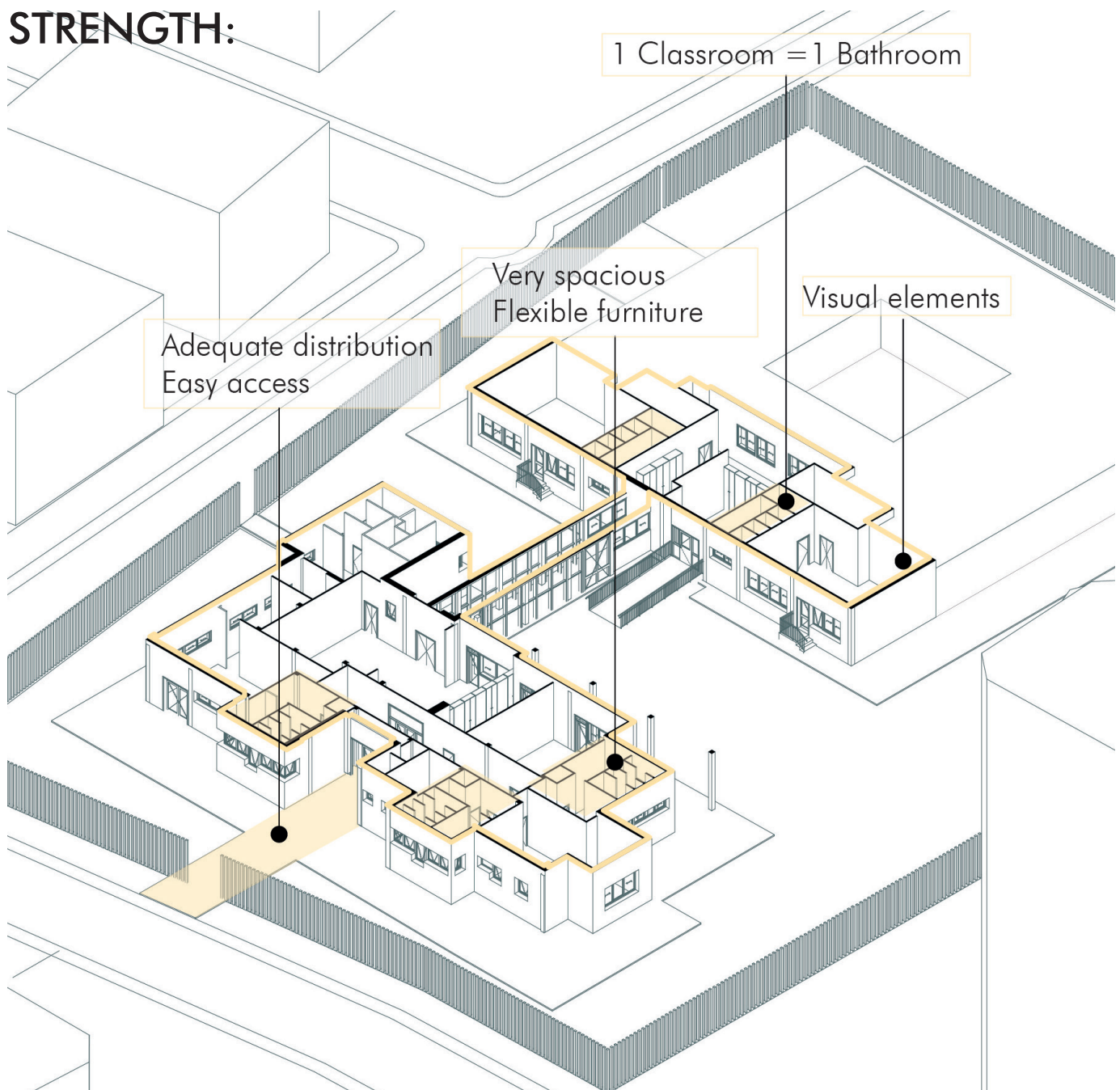
DEMOLITIONS AND NEW CONSTRUCTIONS



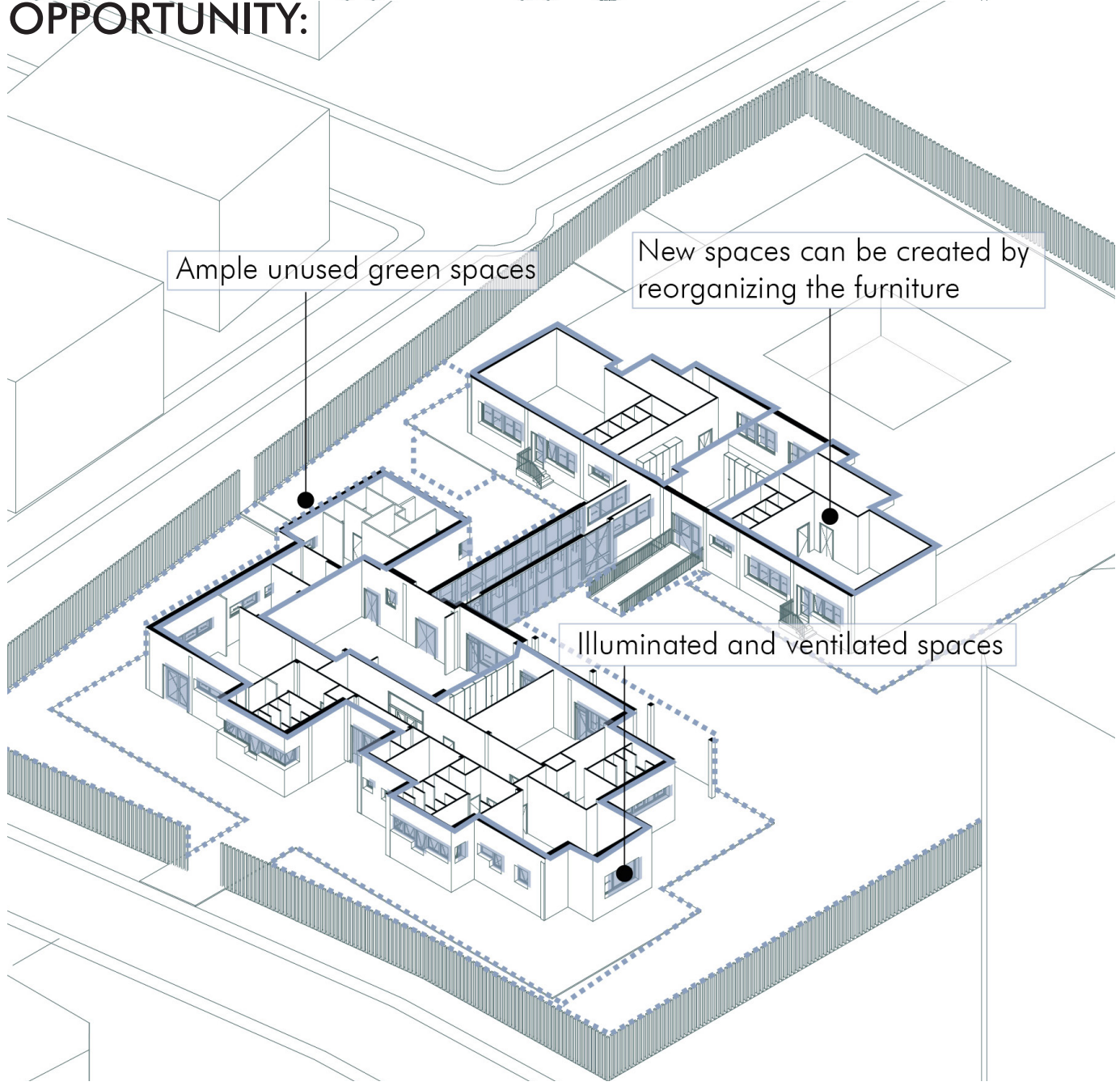


SWOT ANALYSIS: STRENGTH, WEAKNESS, OPPORTUNITY, THREAT

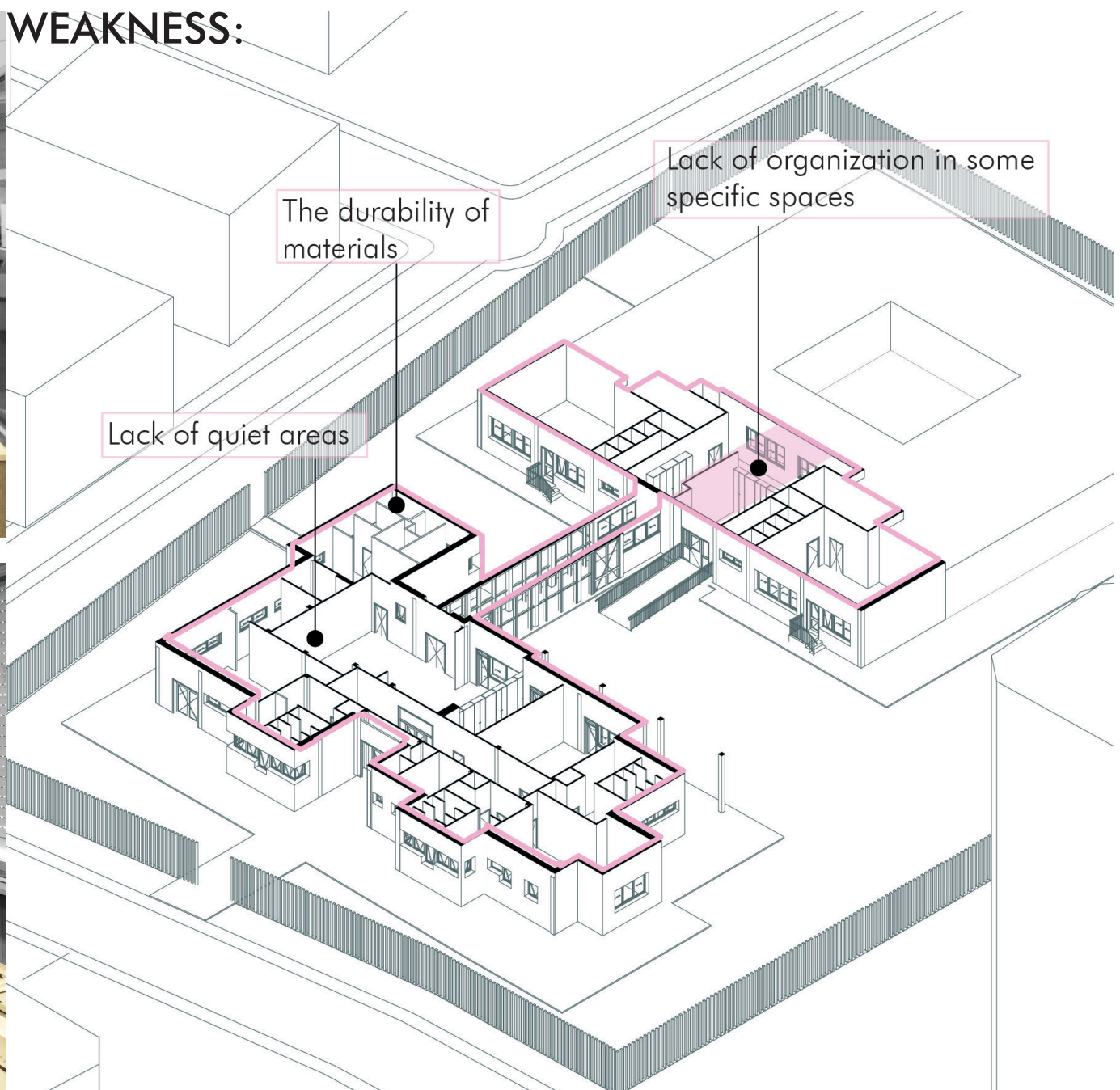
STRENGTH:



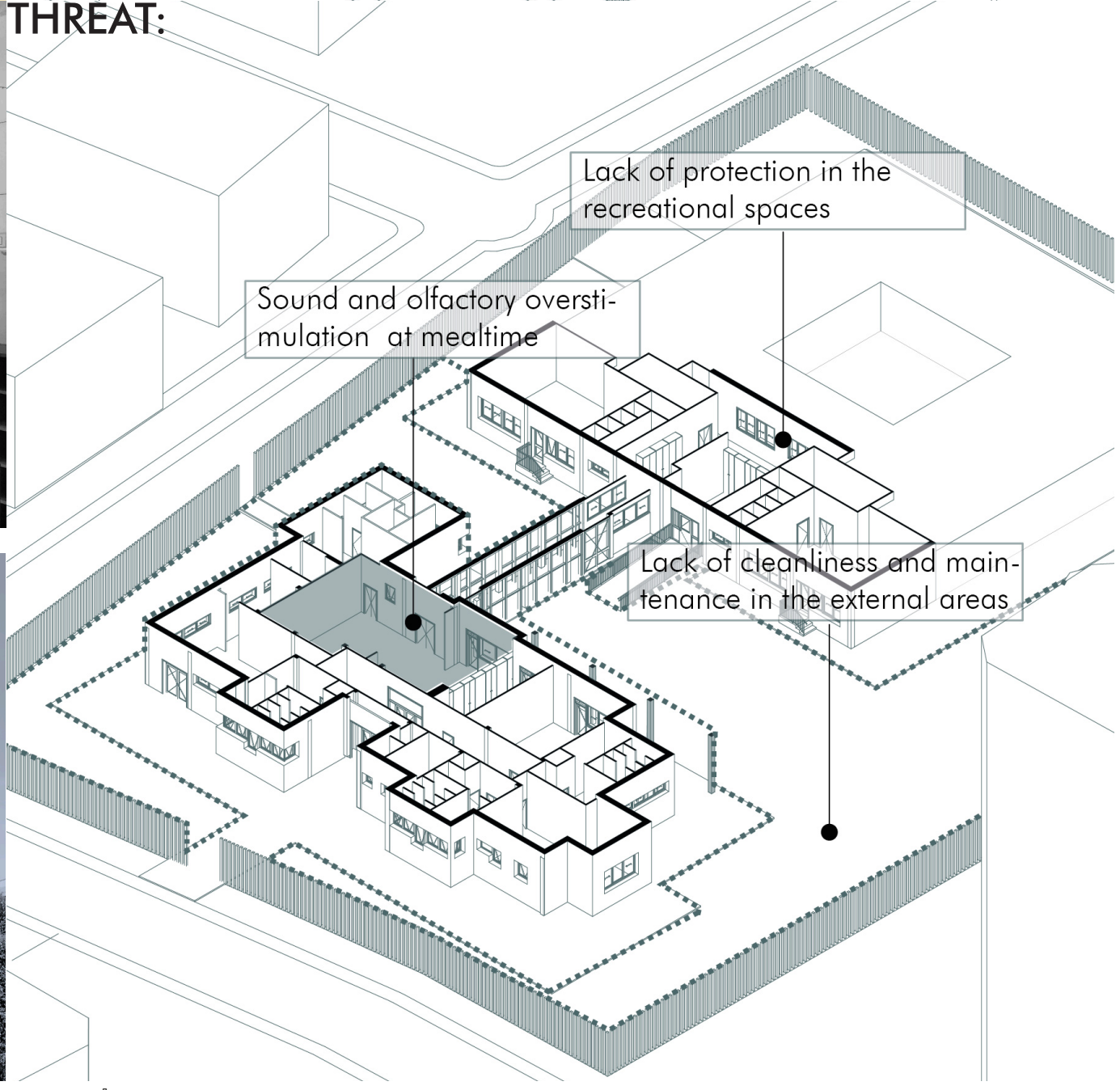
OPPORTUNITY:



WEAKNESS:



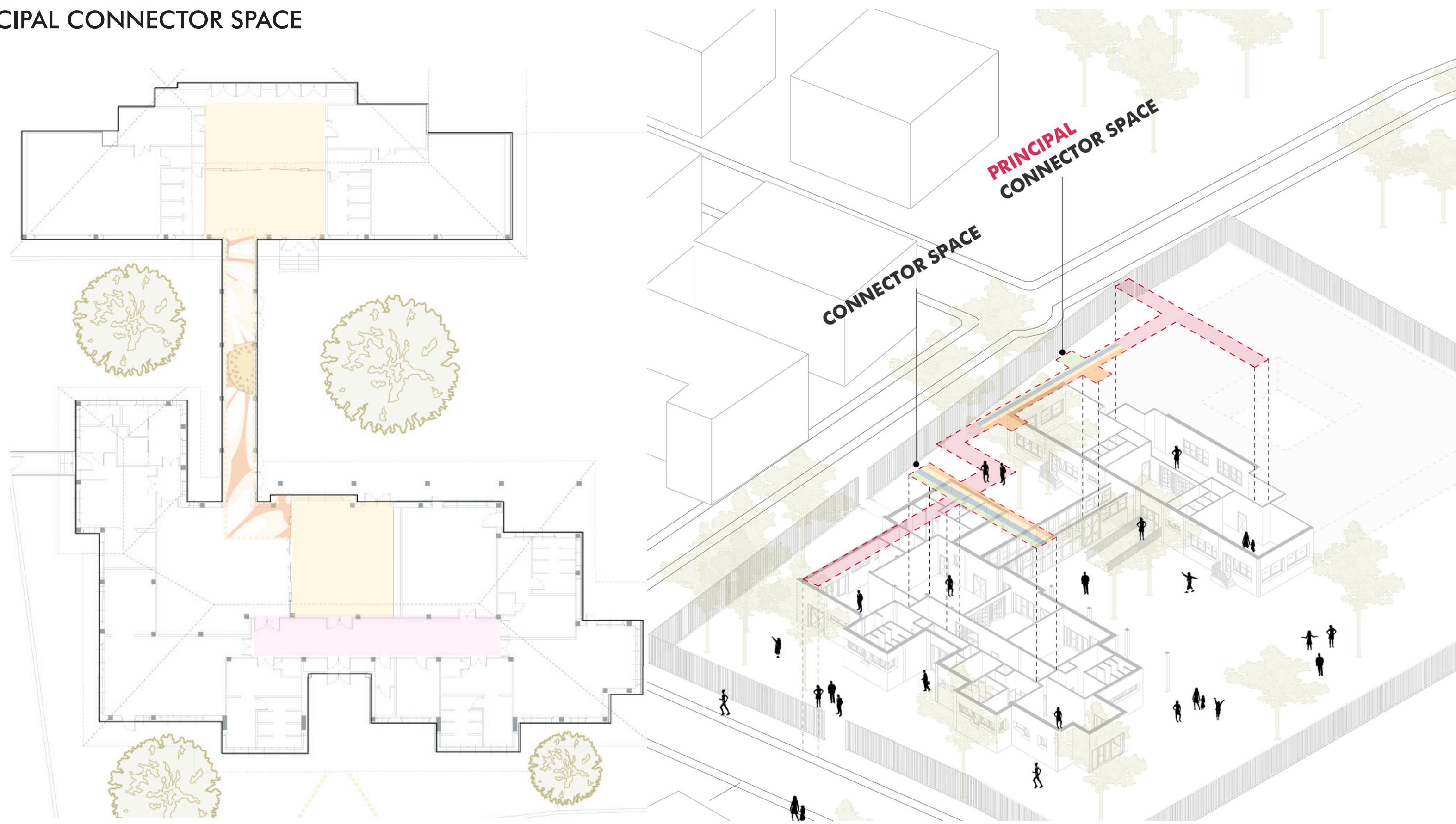
THREAT:



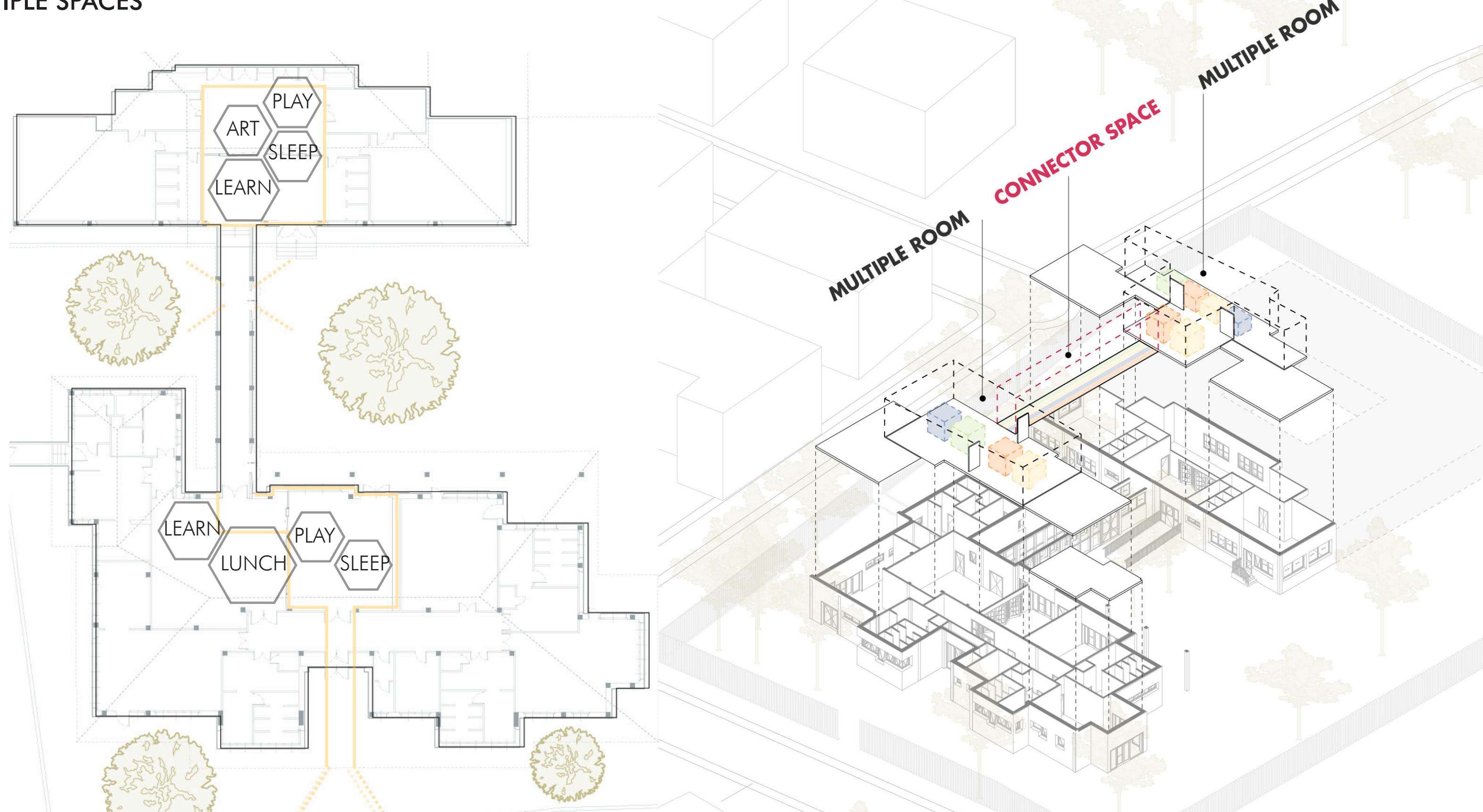
CONCEPT IDEA

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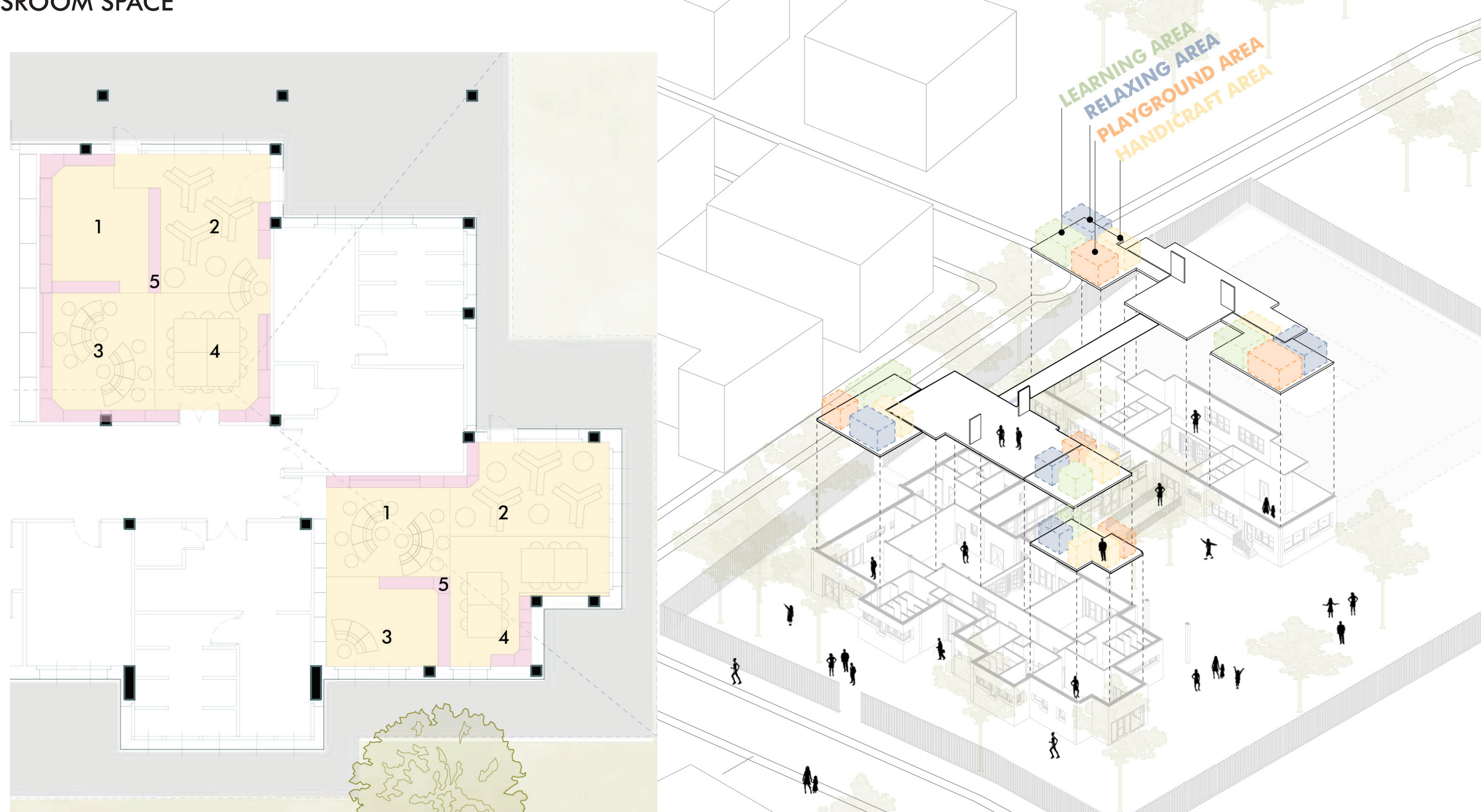
SCHOOL SCALE: PRINCIPAL CONNECTOR SPACE



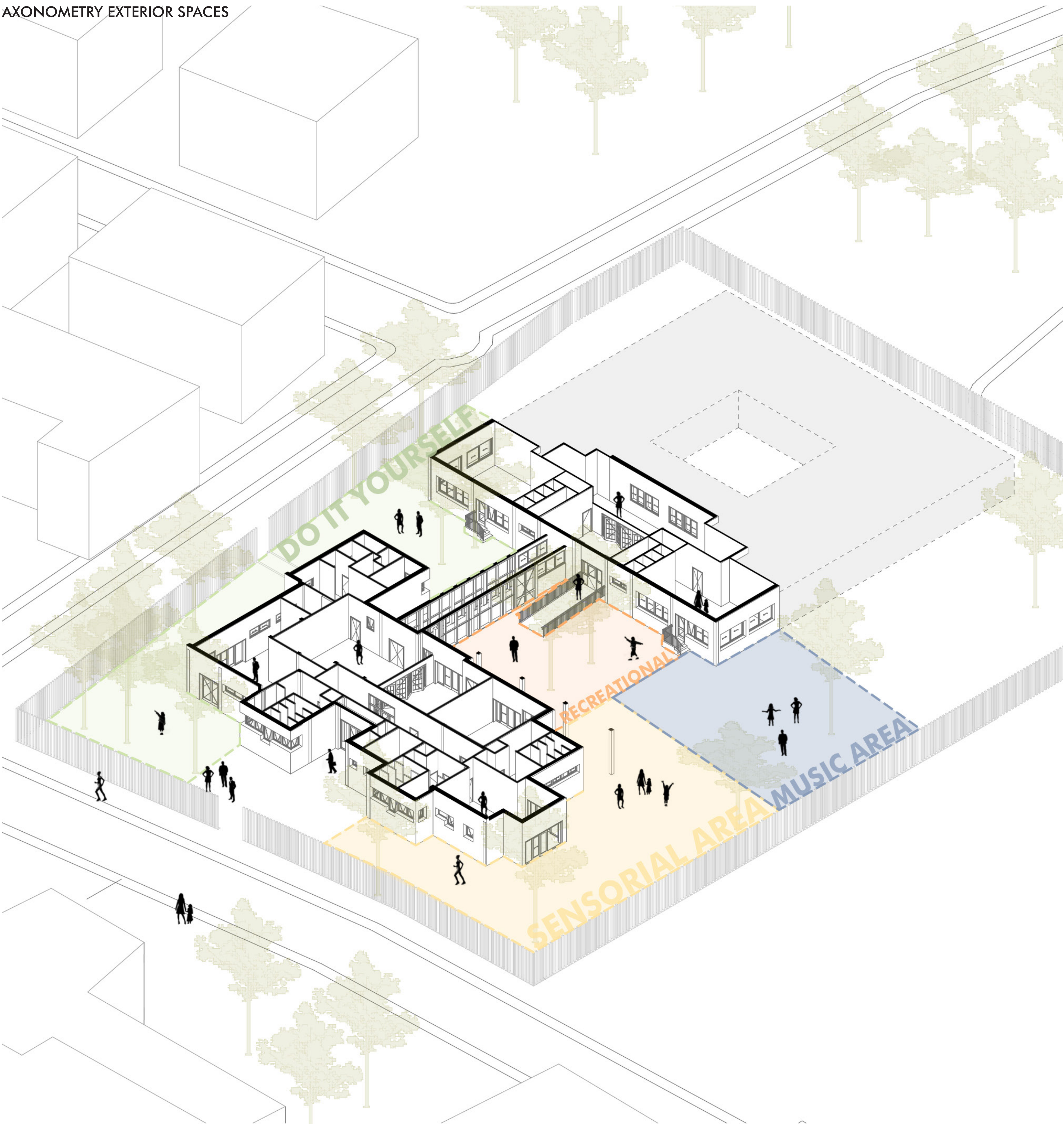
MULTIPLE SPACES



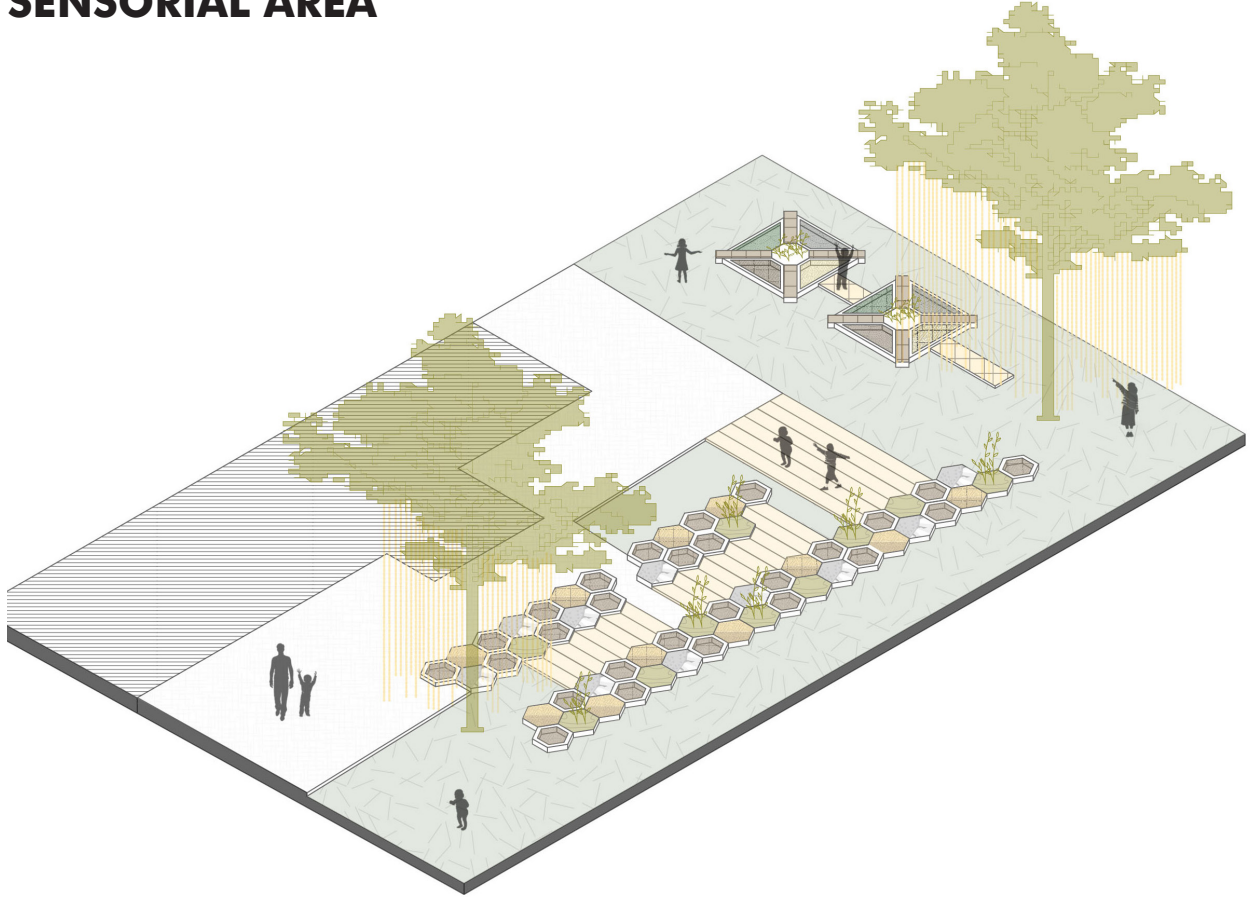
CLASSROOM SPACE



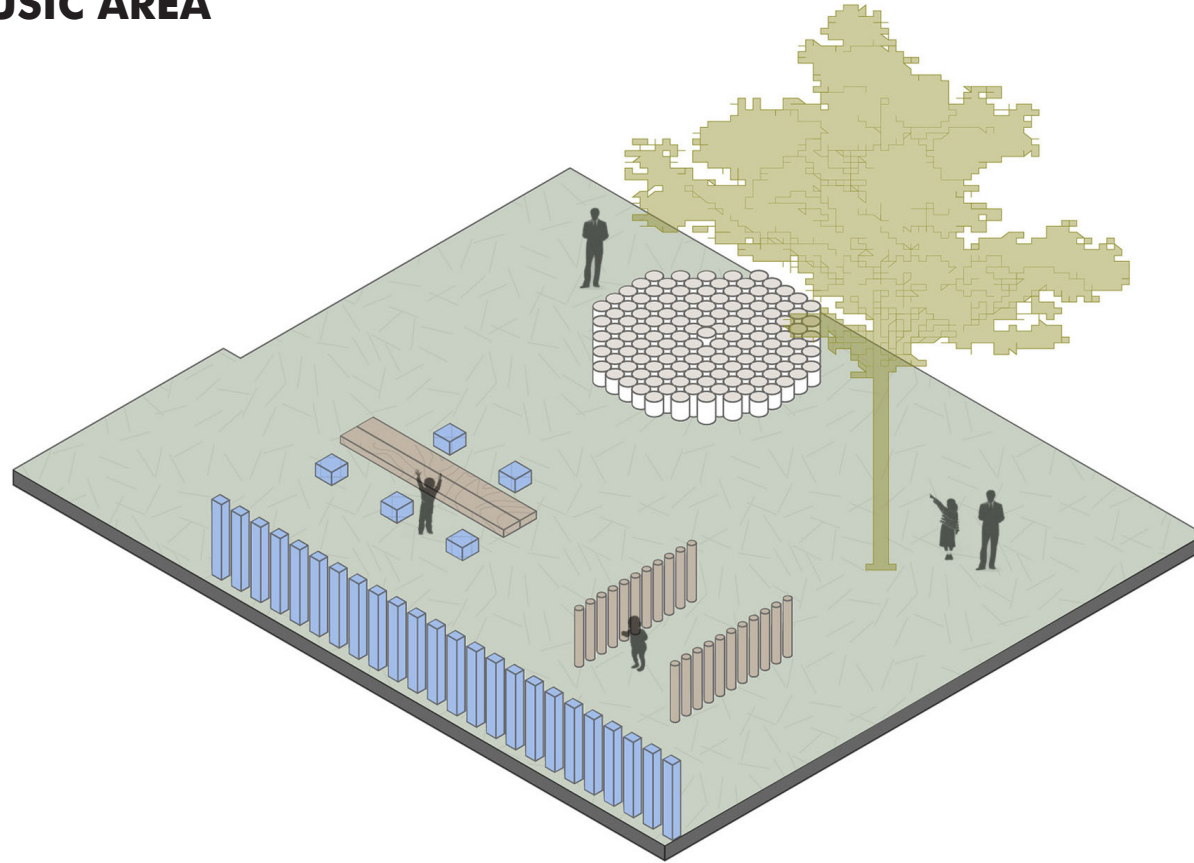
AXONOMETRY EXTERIOR SPACES



SENSORIAL AREA



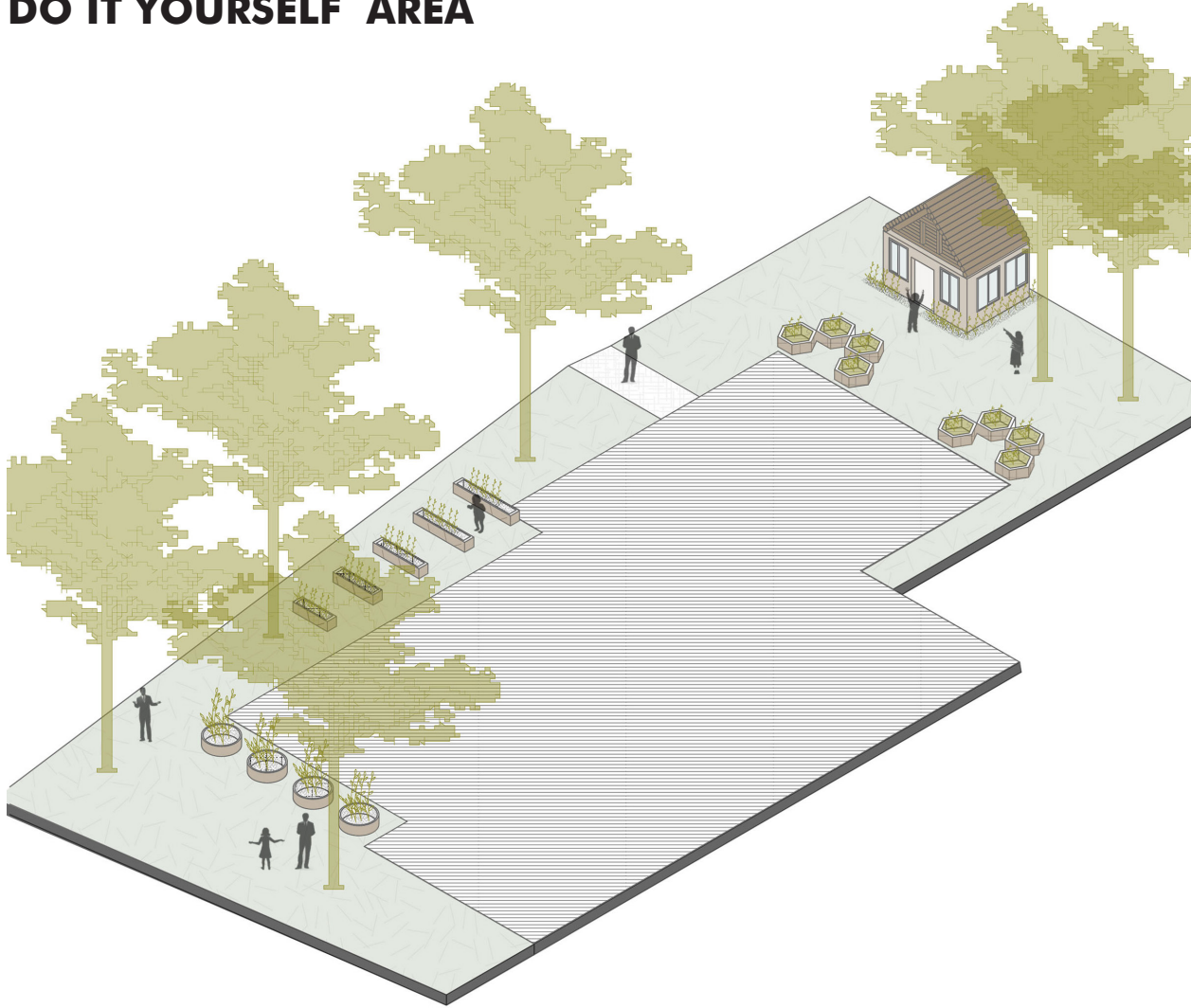
MUSIC AREA



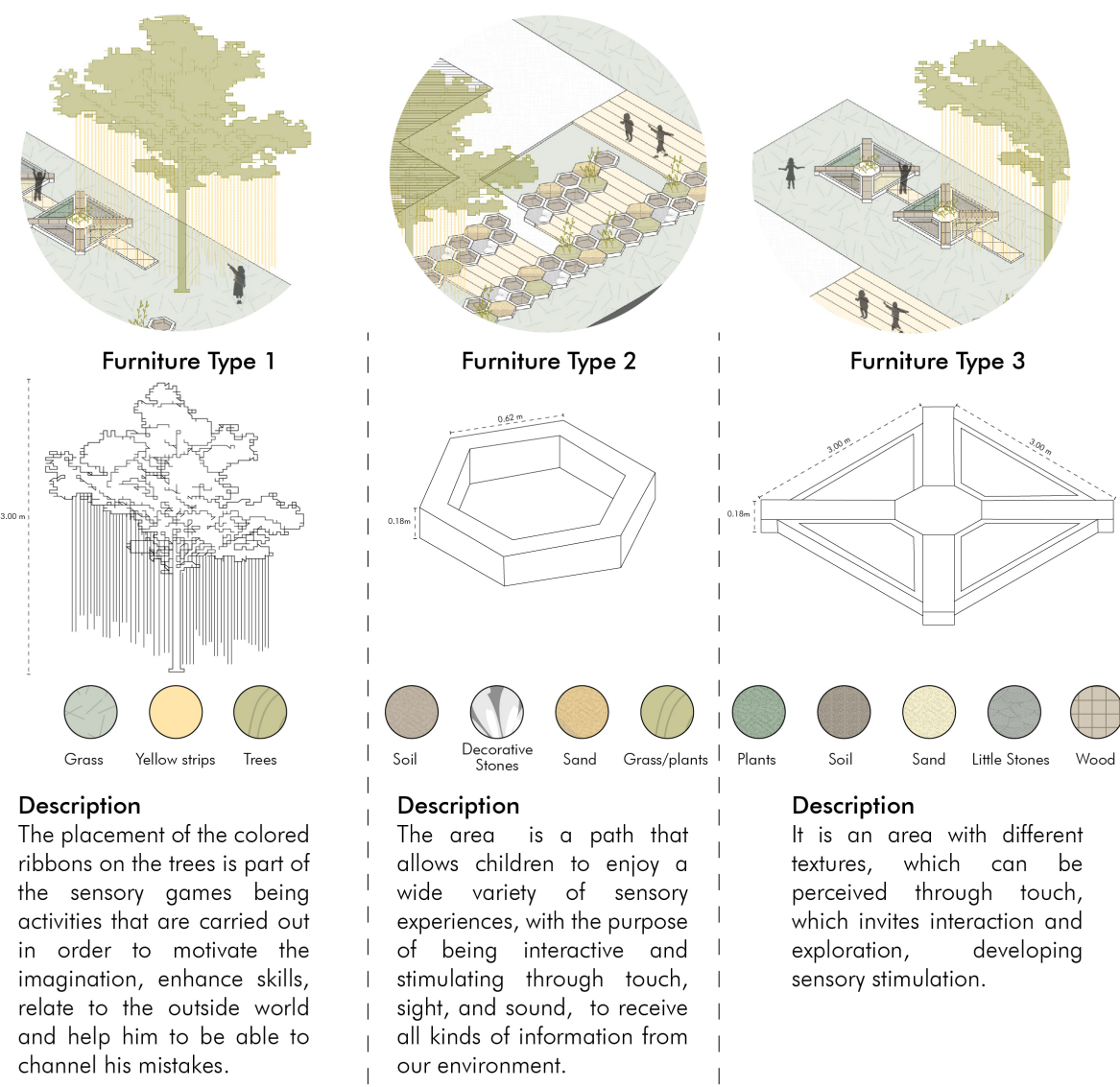
RECREATIONAL AREA



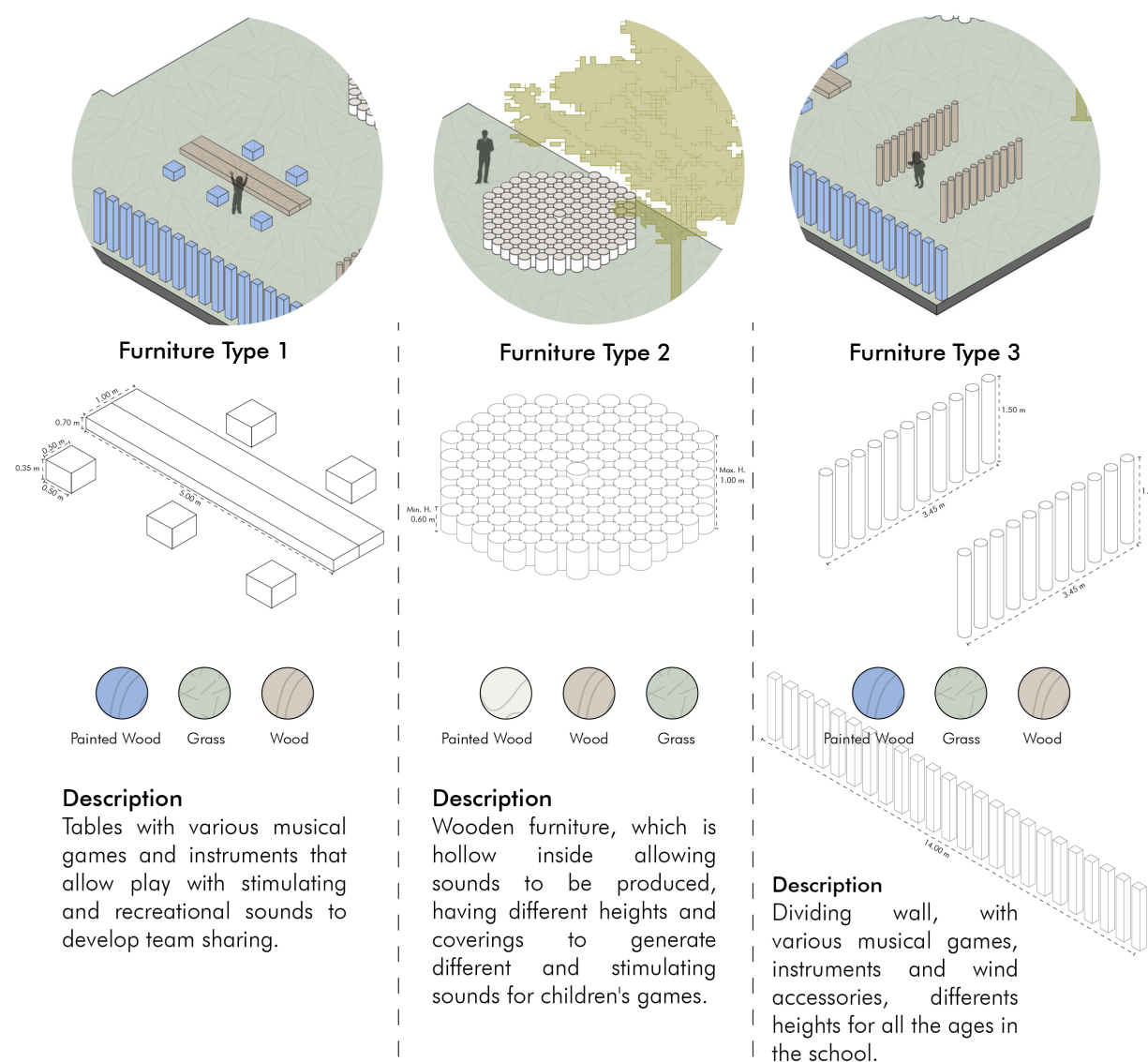
DO IT YOURSELF AREA



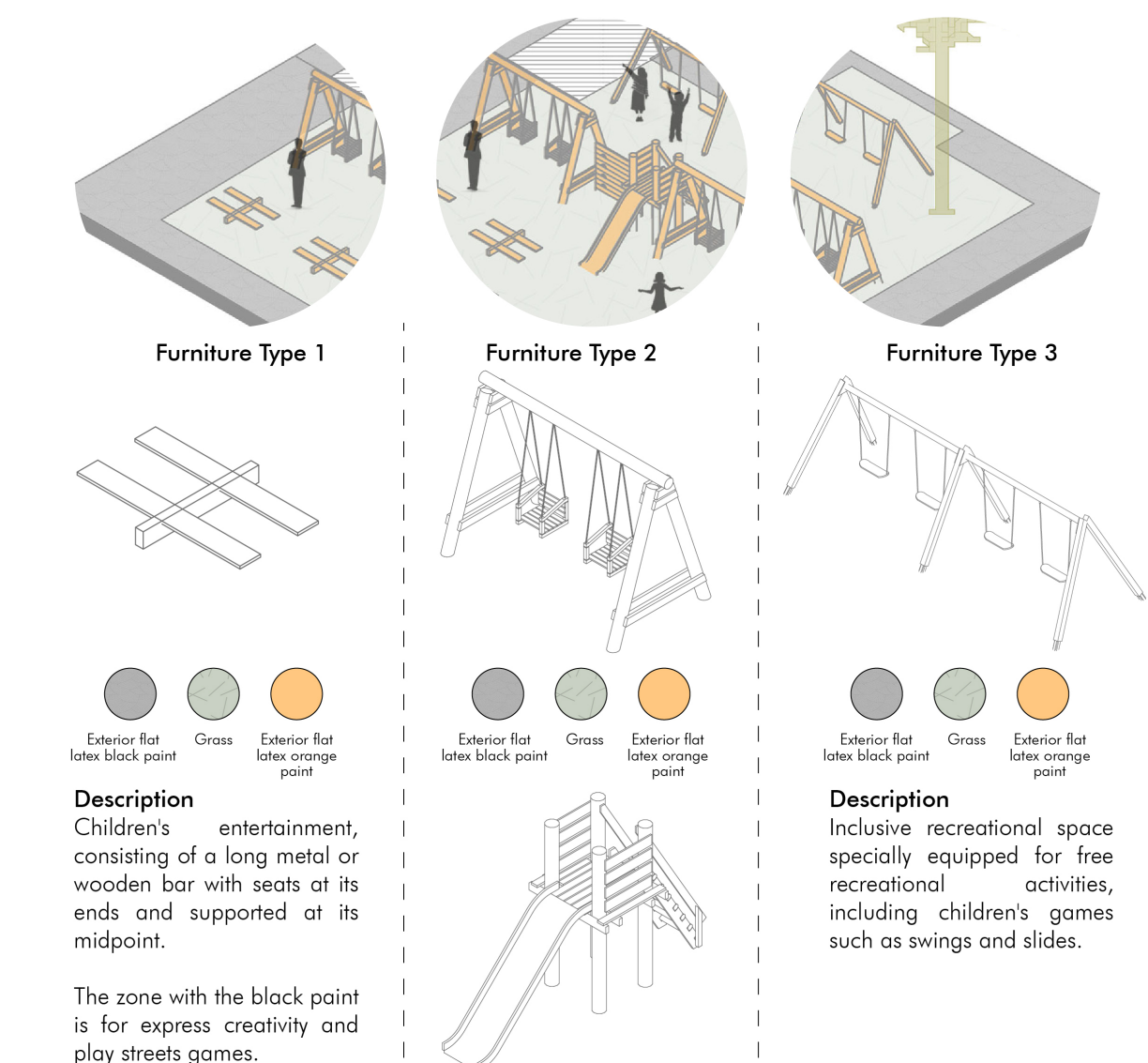
FURNITURE DETAILS SENSORIAL AREA



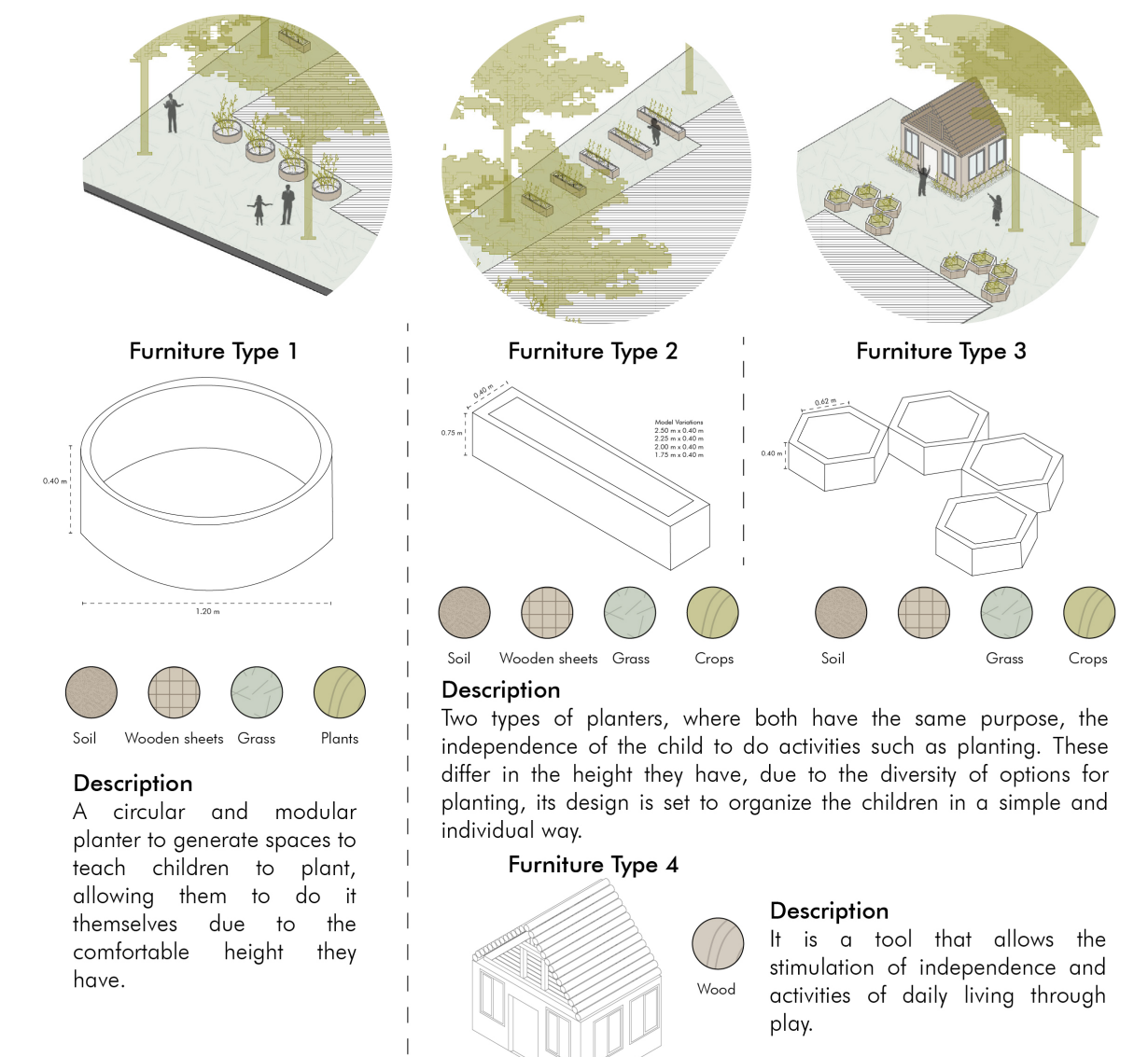
FURNITURE DETAILS MUSIC AREA



FURNITURE DETAILS RECREATIVE AREA



FURNITURE DETAILS DO IT YOURSELF AREA



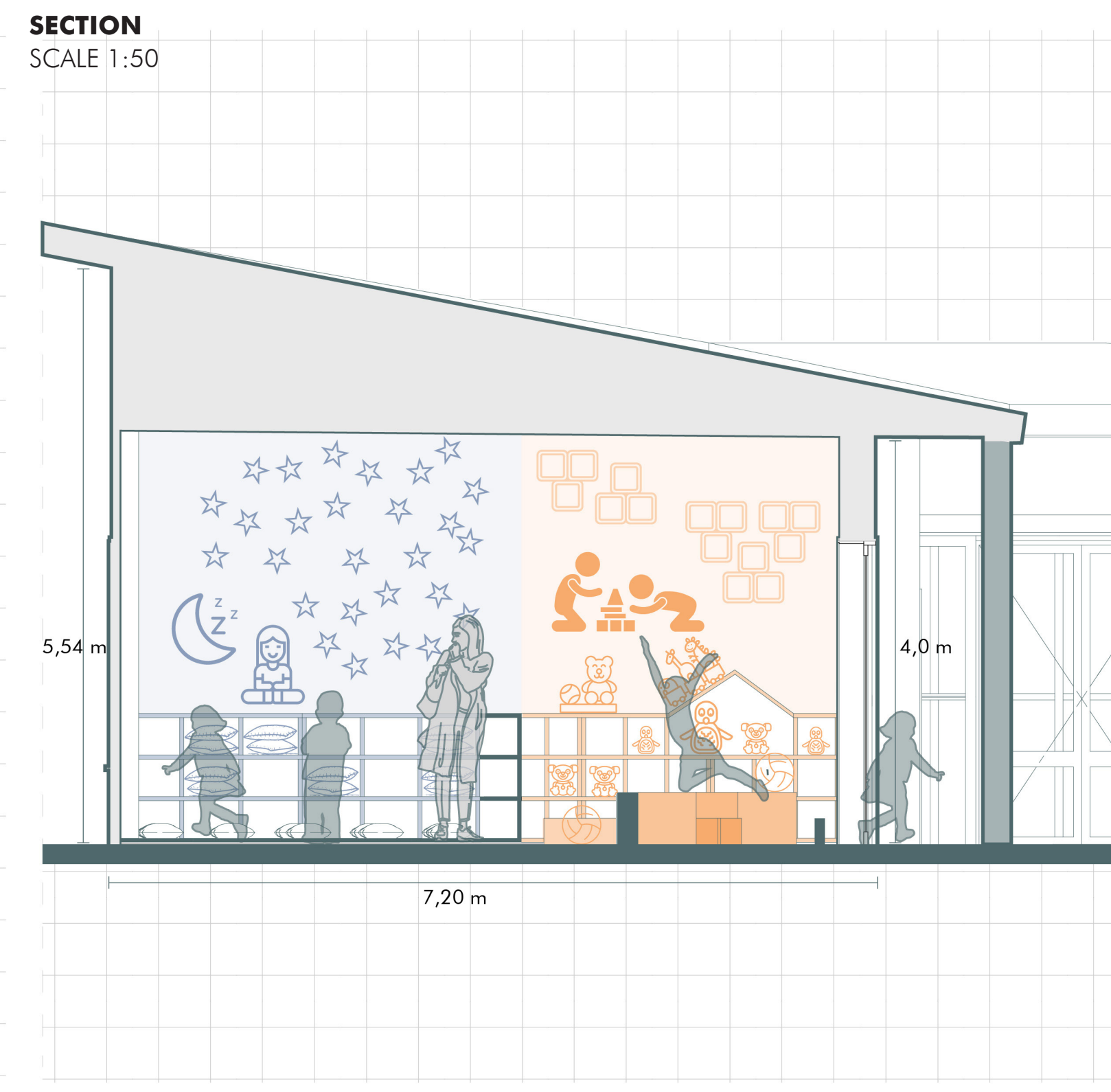
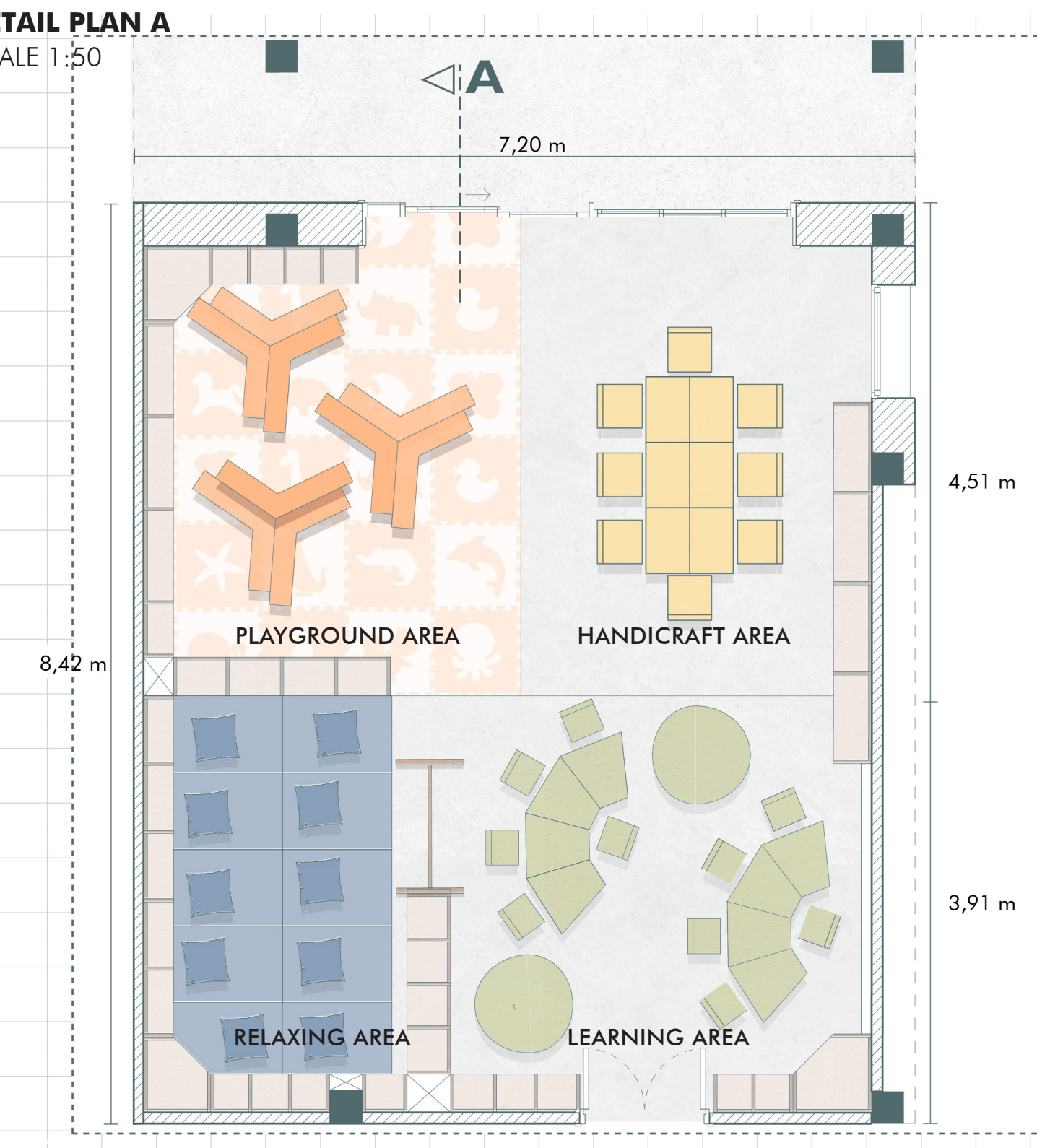
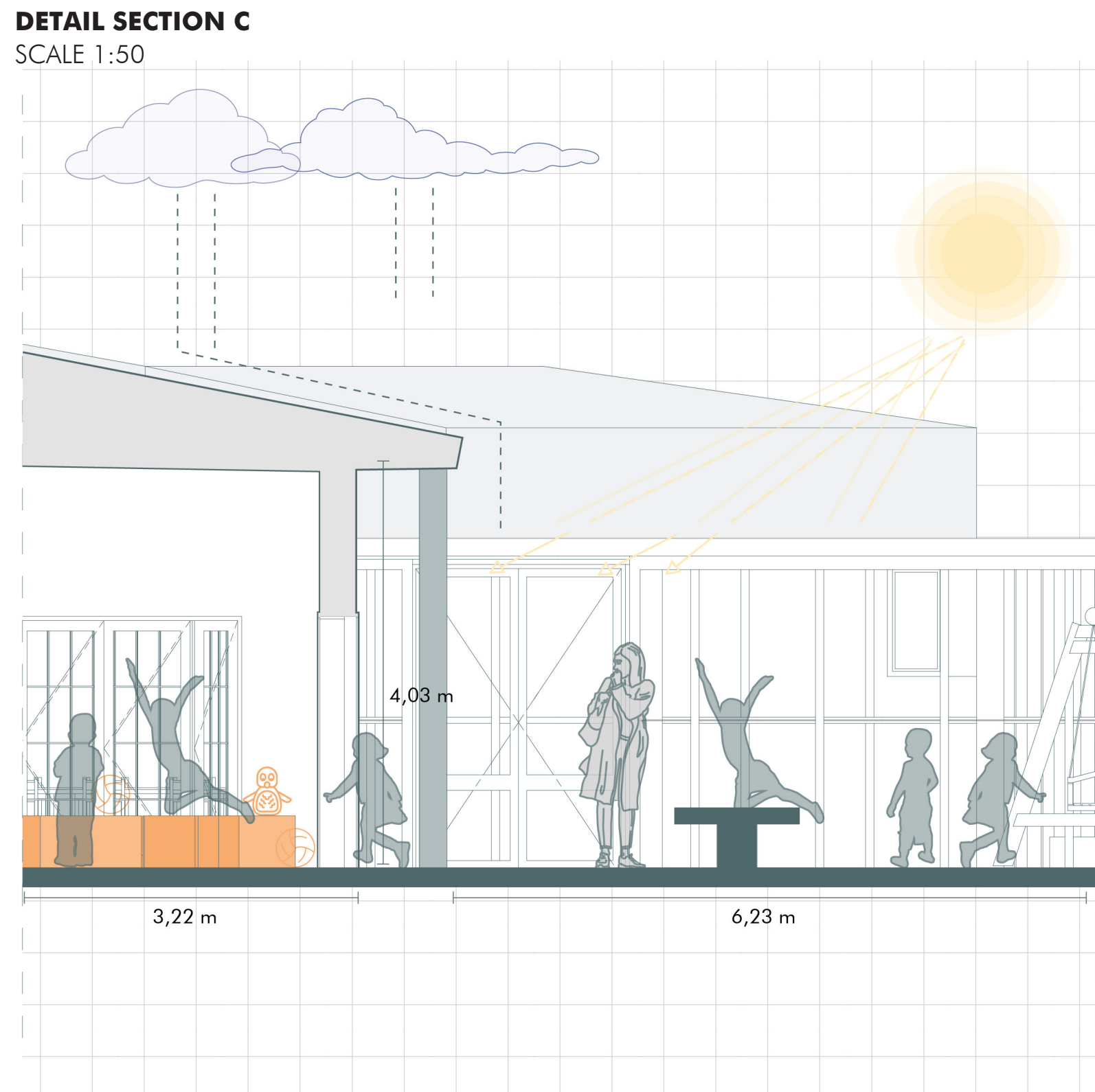
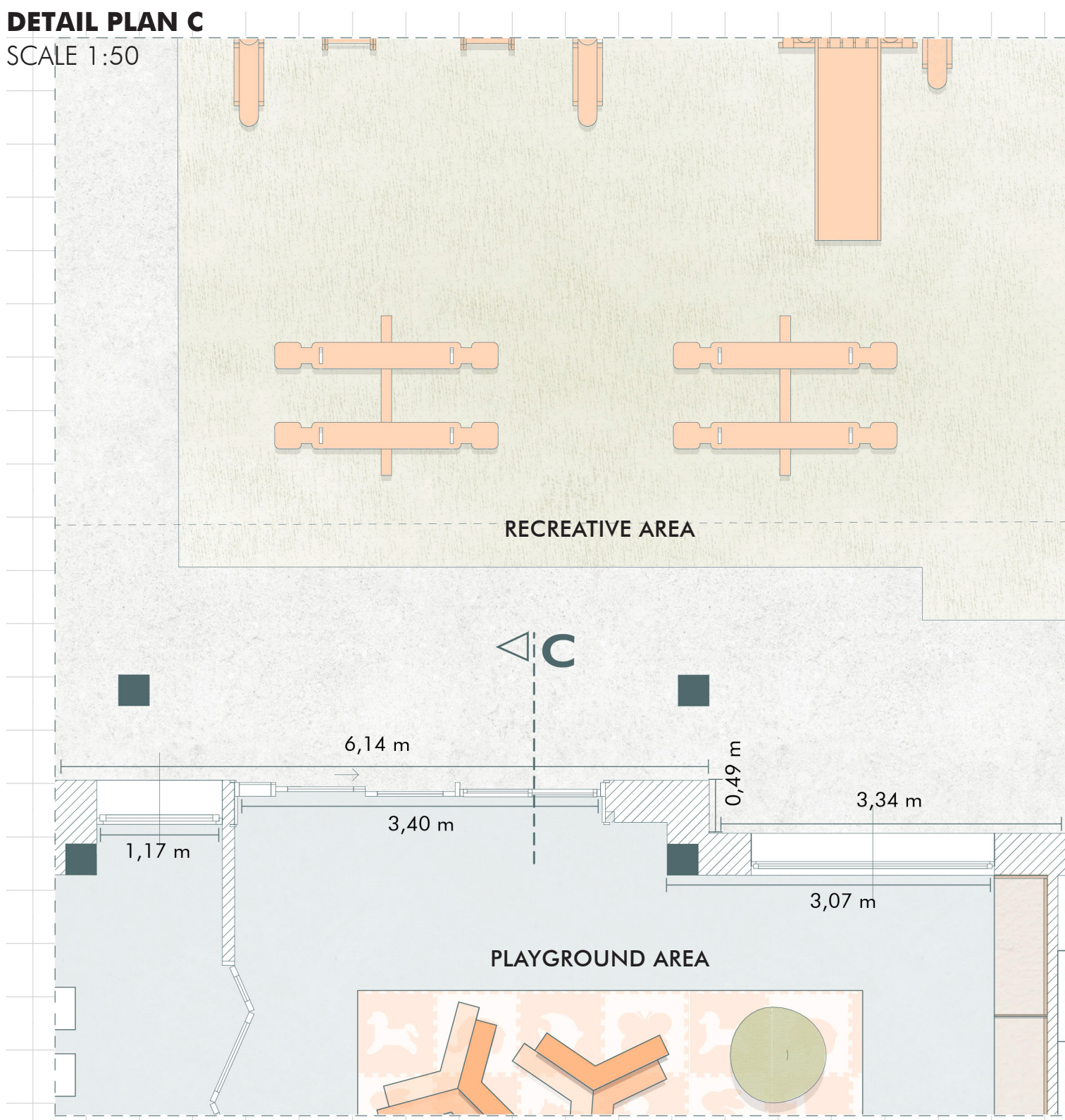
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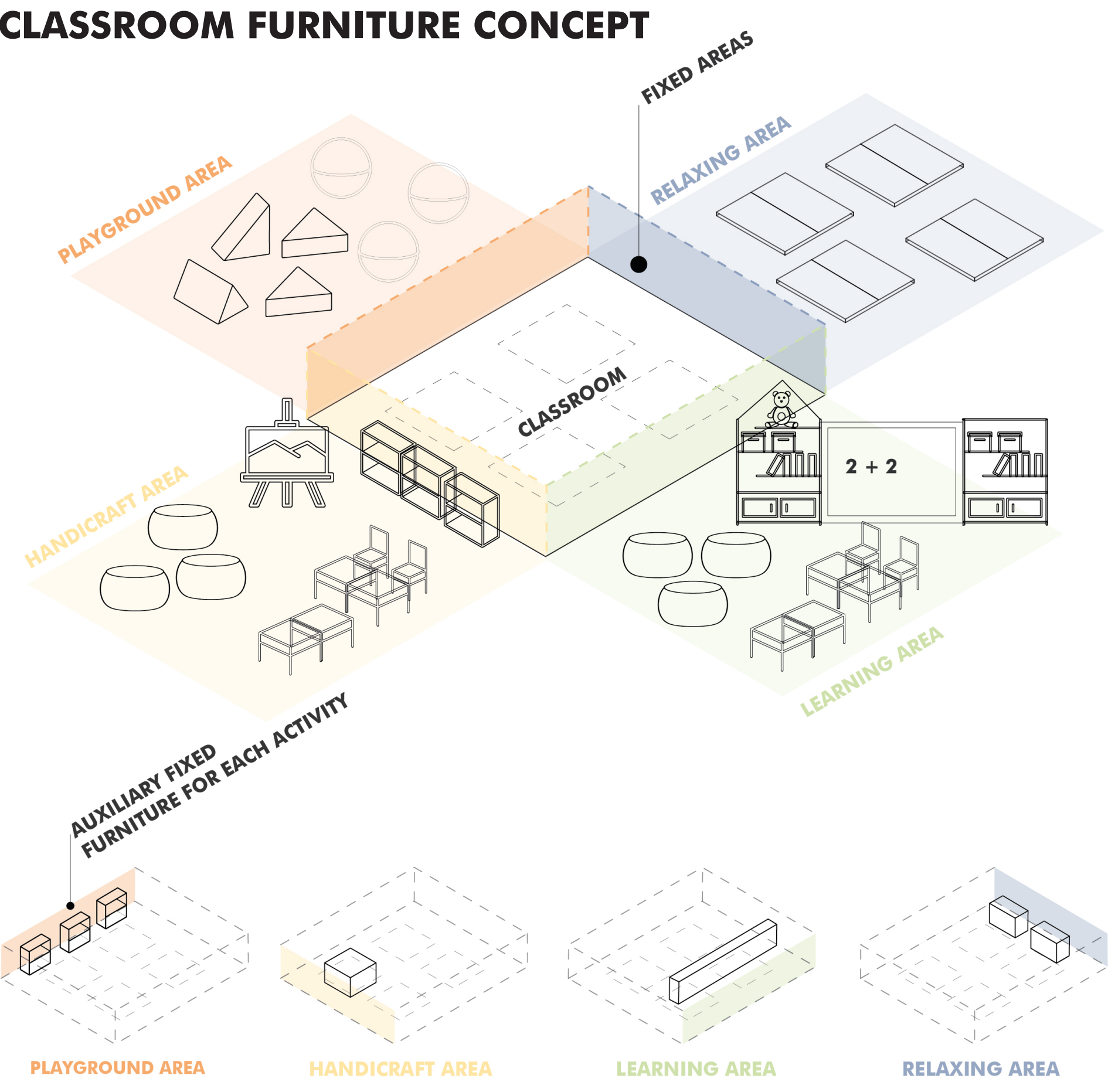
Team: Antonia. Ballesteros, María Alejandra. Sánchez

CLASSROOM SCALE:

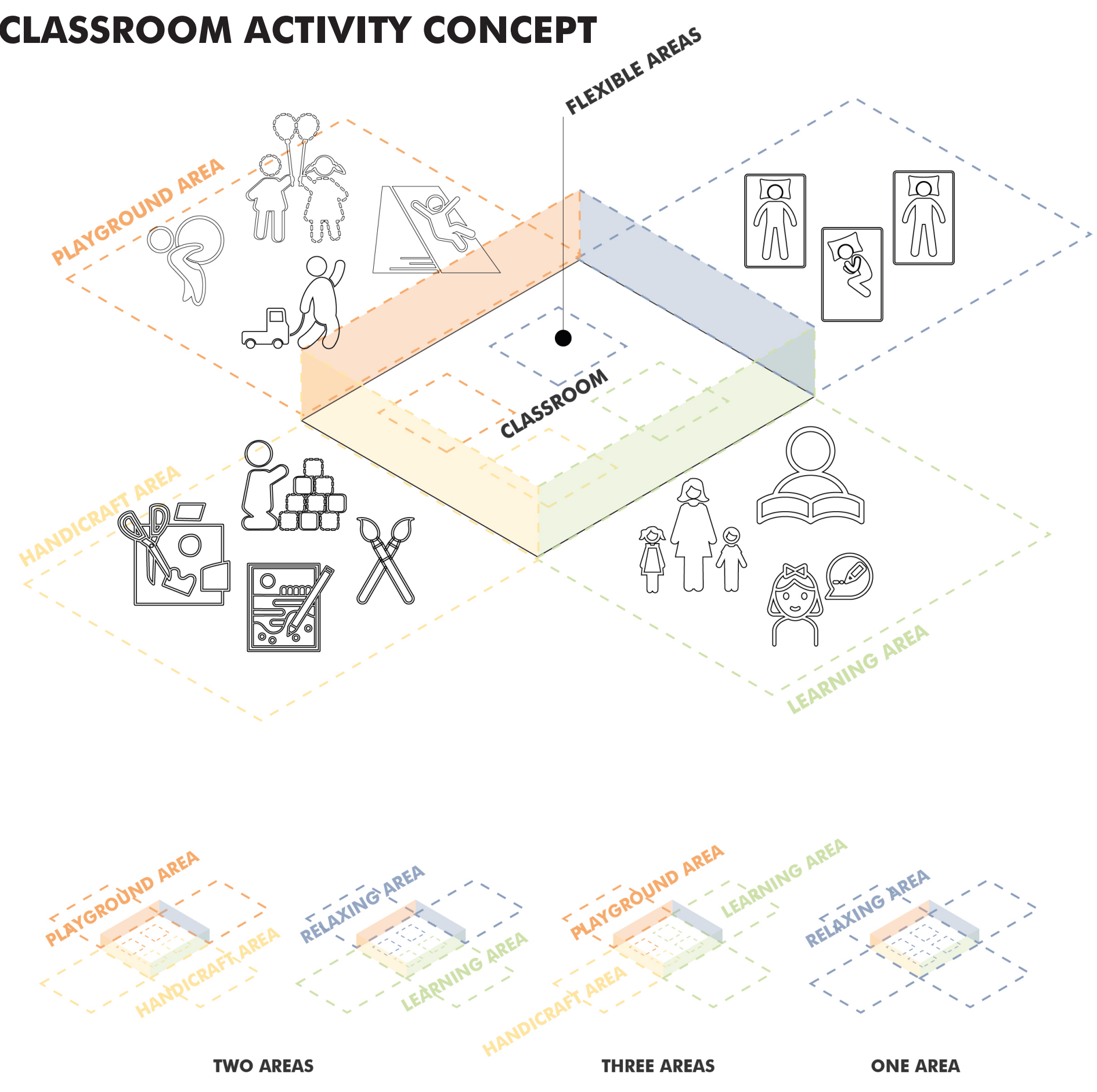
INDOOR OUTDOOR RELATION SPACES



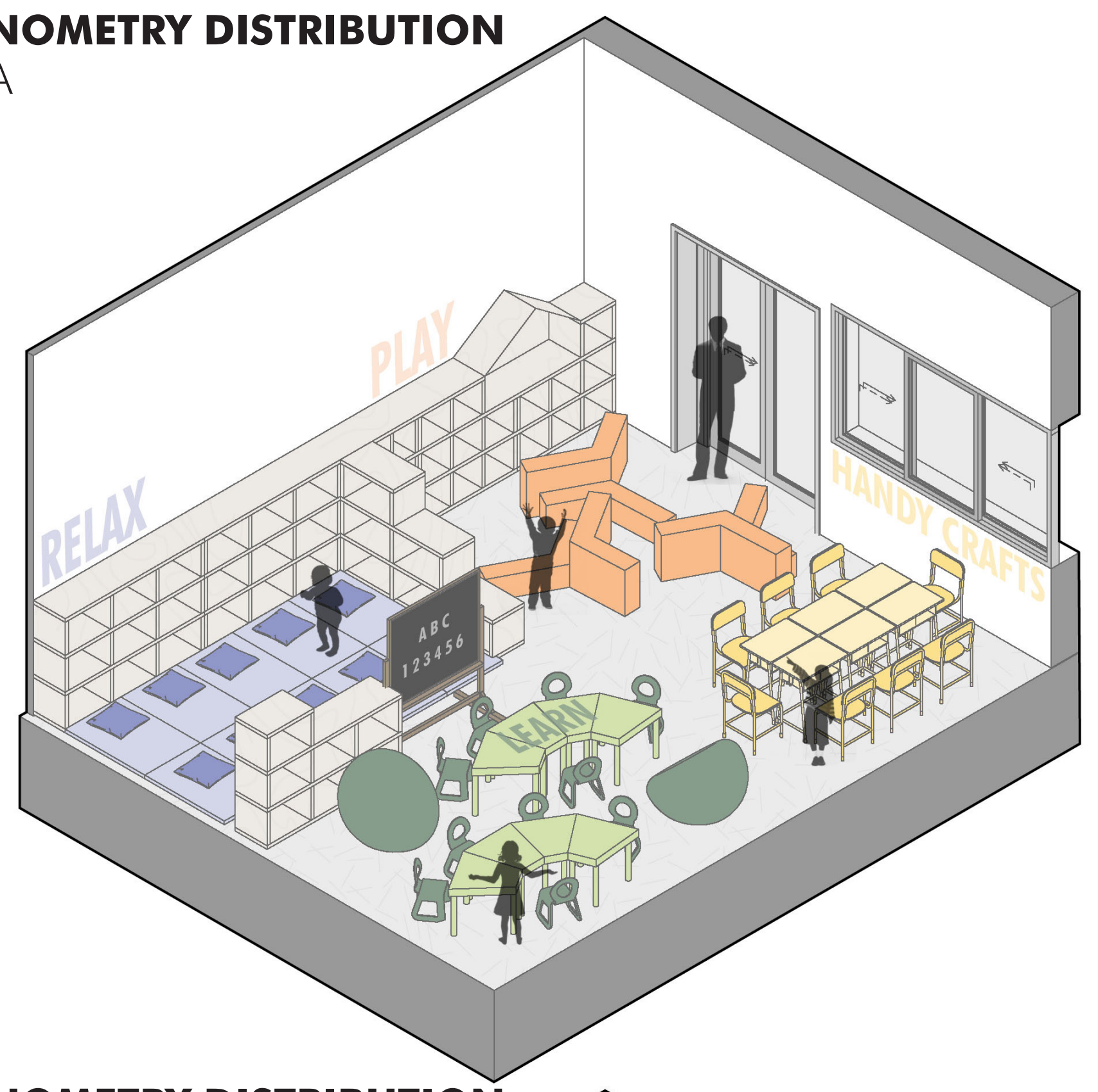
CLASSROOM FURNITURE CONCEPT



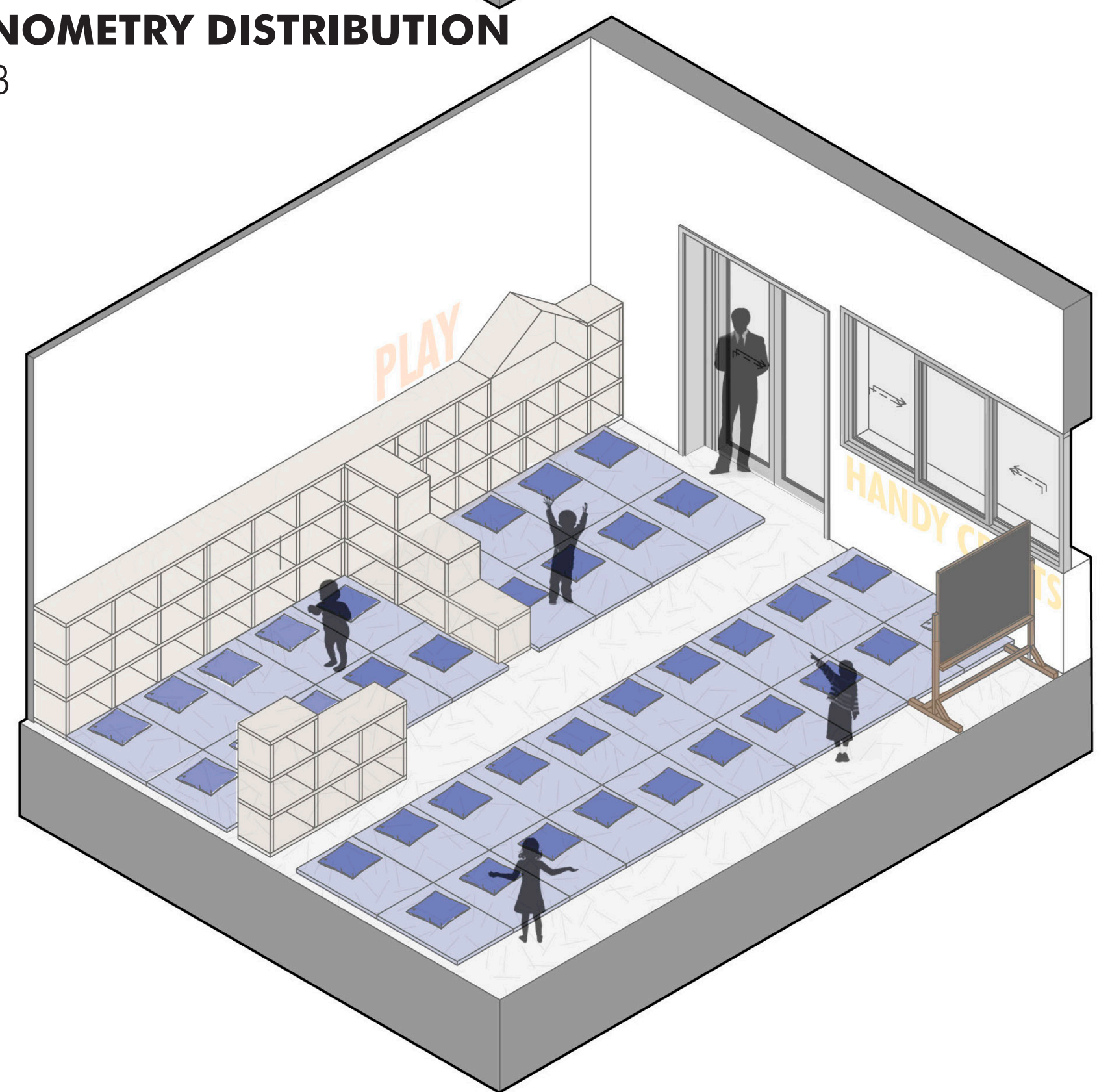
CLASSROOM ACTIVITY CONCEPT



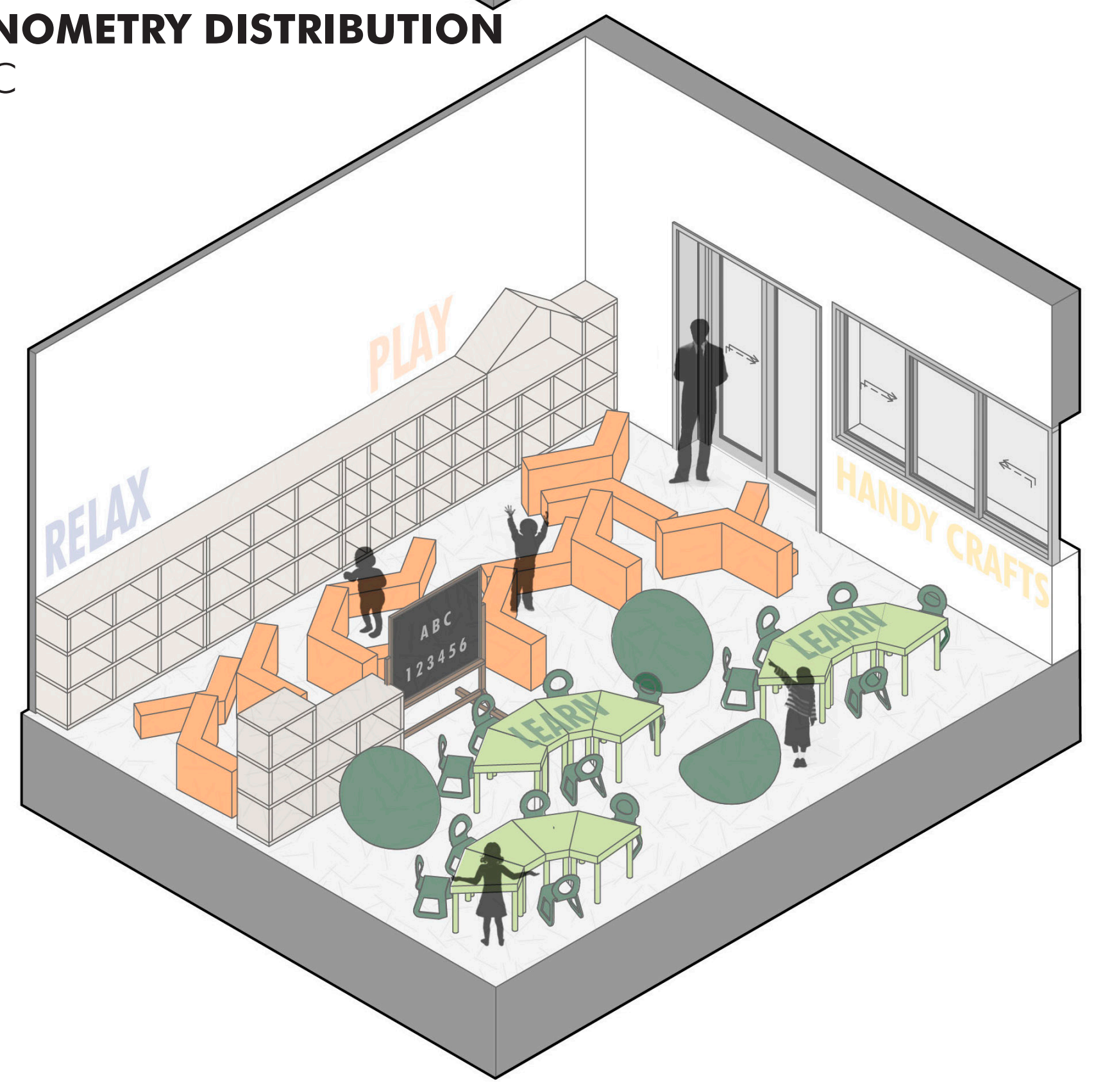
AXONOMETRY DISTRIBUTION
TYPE A



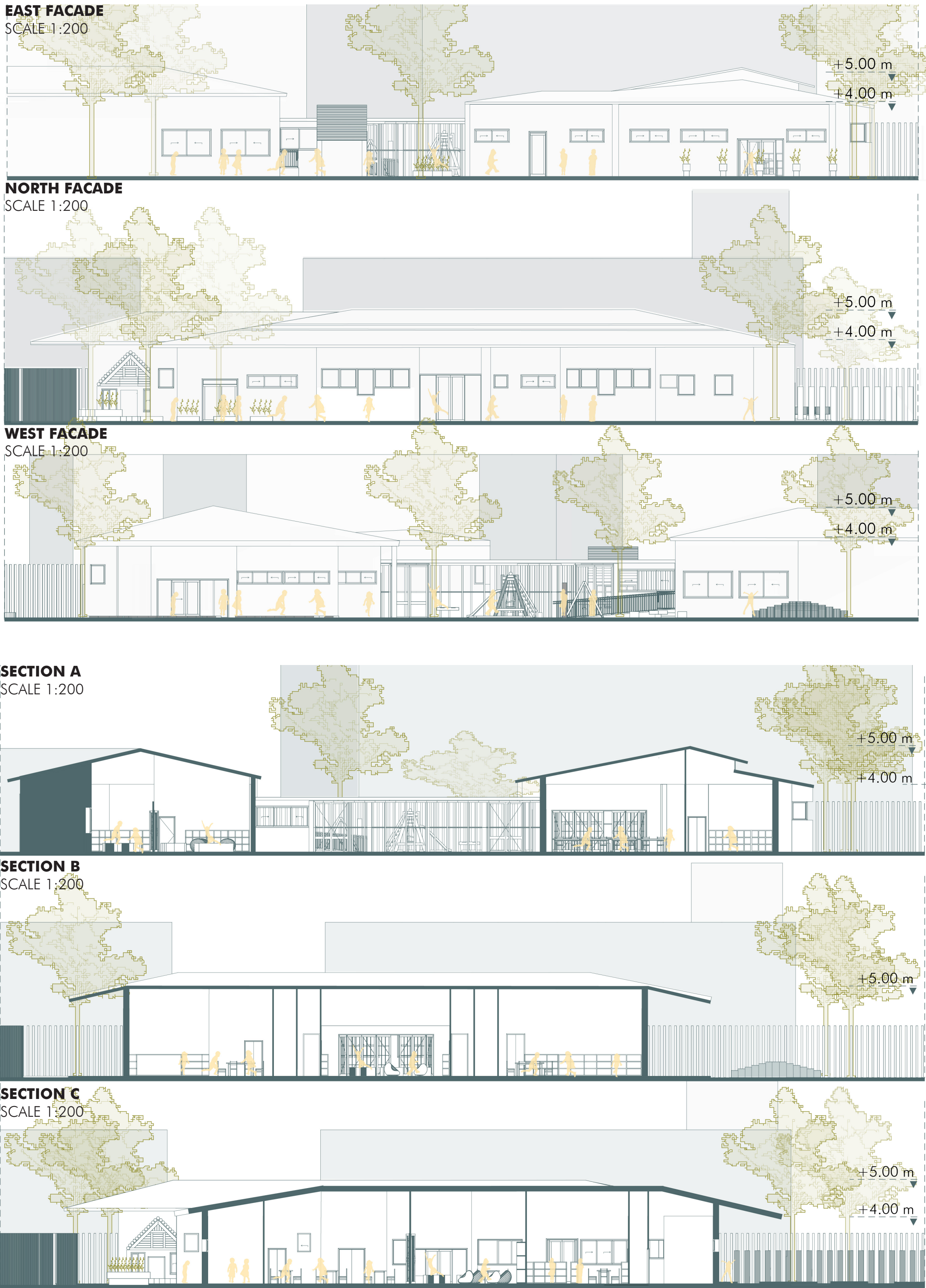
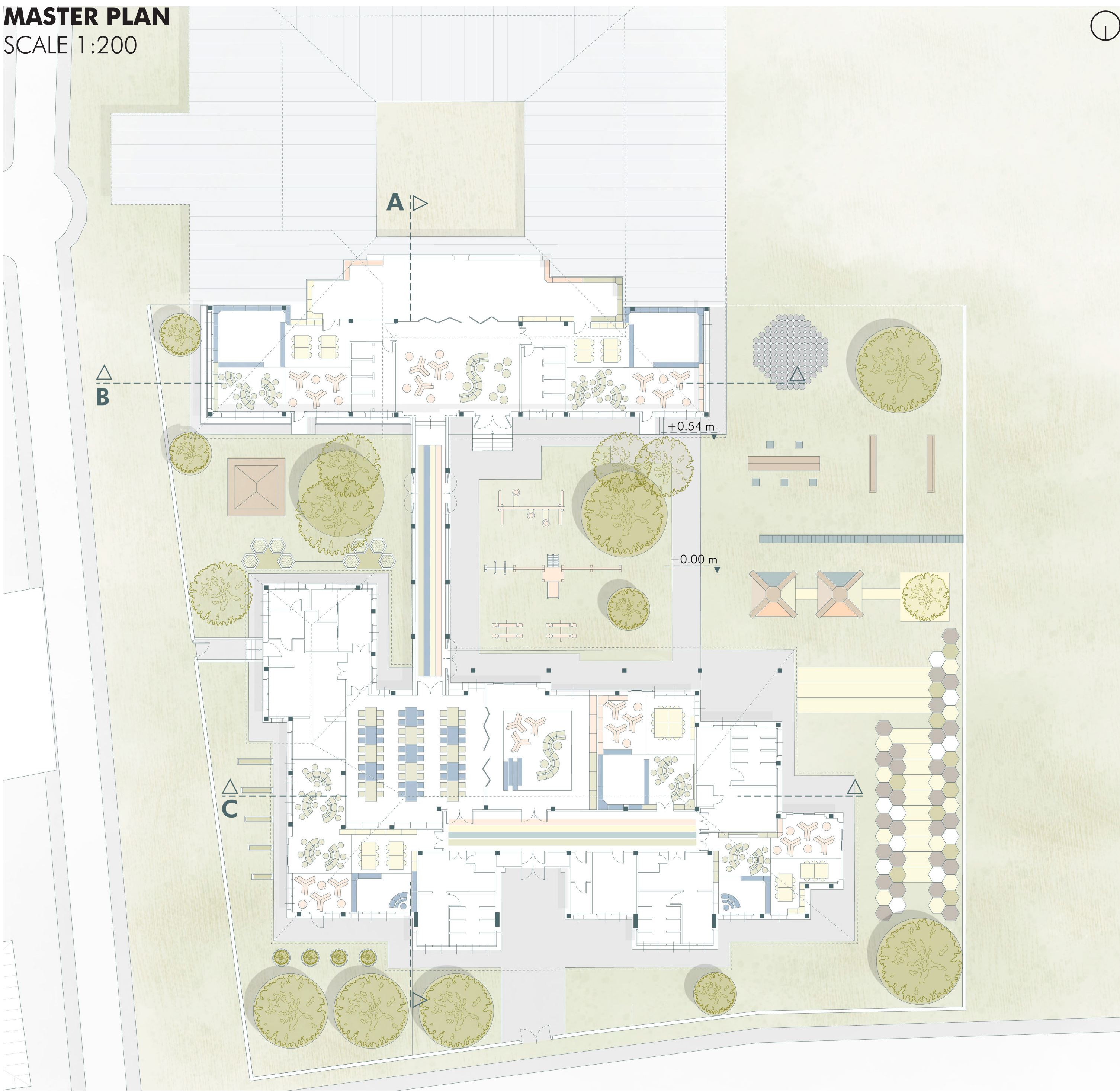
AXONOMETRY DISTRIBUTION
TYPE B



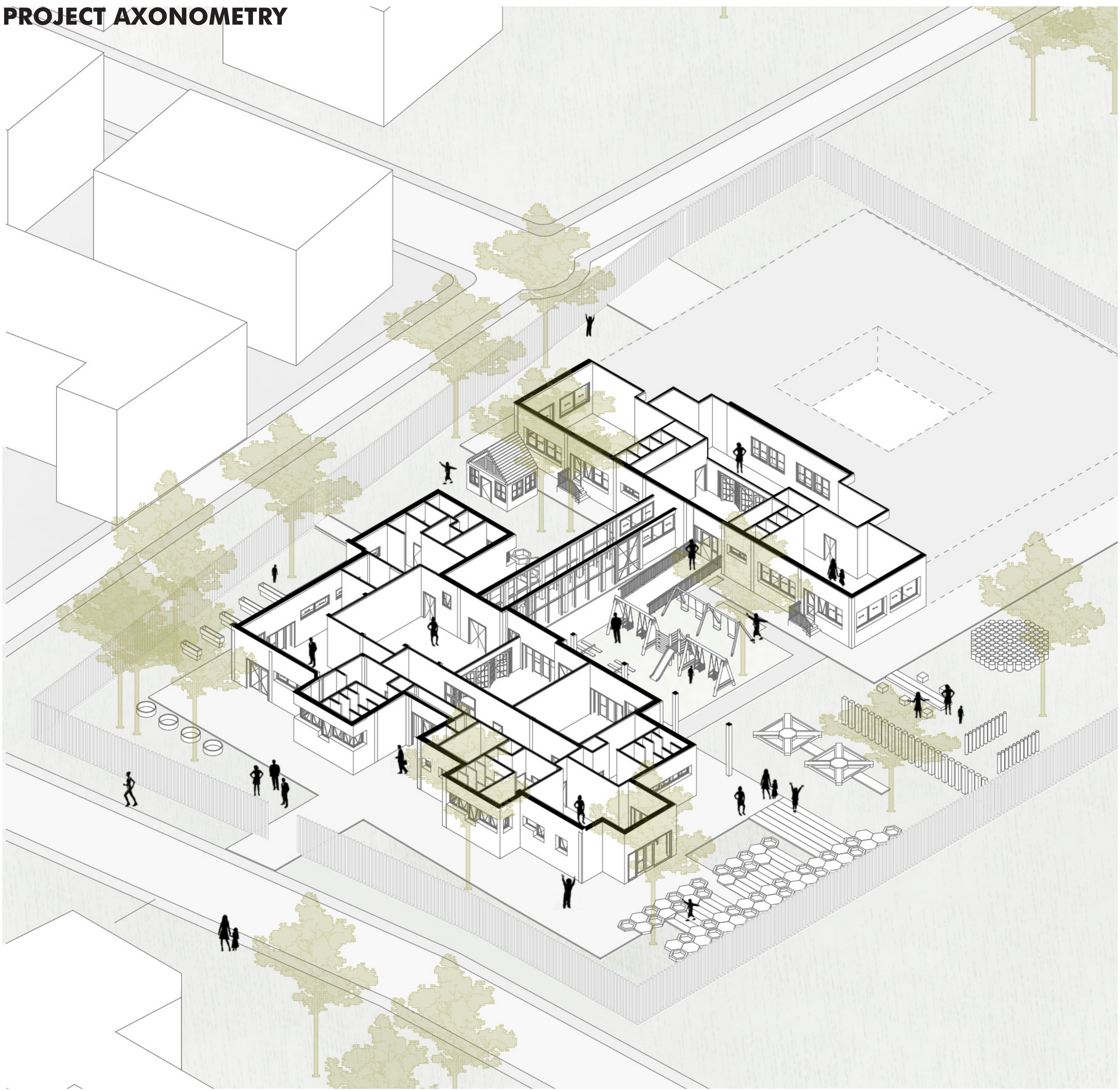
AXONOMETRY DISTRIBUTION
TYPE C



MASTER PLAN
SCALE 1:200



PROJECT AXONOMETRY



INTERNAL VIEW
CLASSROOM



INTERNAL VIEW
CLASSROOM



EXTERNAL VIEW
RECREATIVE AREA



EXTERNAL VIEW
SENSORIAL AREA

