

**REPUBLIC OF ALBANIA
UNDP-ALBANIA**

Number: 65526

ARCHITECTURAL DESIGN

**FOR THE CONTRACT
PREPARATION OF DESIGN AND SUPERVISION FOR REPAIR AND
RETROFITTING OF:**

ISMET NANUSHI JOINT HIGH SCHOOL



**LOT I
MUNICIPALITY OF DURRES**

**CLIENT
CONSULTANT**



This Project is Funded by the
European Union



August 2020

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urban planning, architectural and interior design, construction, roads, plumbing and sanitation

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1. INTRODUCTION

This process is a part of the “EU4Schools” Action, an initiative funded by European Union in response of the earthquake of 26 November 2019 and will be implemented by UNDP. It consists of provision of services on preparation of the: “Designs and Supervision for Repair and Retrofitting of the objects of Lot I”.

It aims to contribute in the improvement of education sector in Albania through repair and reconstruction of educational facilities in five municipalities affected by the earthquake. It is part of the financial package committed by European Union to support Albanian citizens during the donor conference organised in Brussels on 17 February 2020. The Action will be implemented by UNDP Albania.

In response to the needs of those most affected, vulnerable and marginalized, as well as the local communities impacted by the earthquake, the focus will be to support national and local governments in reducing further social and economic losses, and to accelerate the recovery process by building on prior UNDP work with vulnerable communities ensuring that the poorest and most-at-risk population segments can benefit from educational facility repairs and reconstruction. The Action will deliver rapid assistance to help restore education services in local communities in order to ensure students loose minimum school and learning days, and to enable the gradual normalization of life of affected population in those municipalities, with education the foremost priority.

The Action will ensure that the recovery process does not recreate the vulnerability that led to the disaster in the first place and must leave the communities safer by reducing risks and building resilience. It would give the impacted communities the chance to reduce risk not only from the immediate hazard but provide an opportunity to sustainably reduce the future risk, to rebuild stronger, safer, more disaster-resilient infrastructure and systems and with higher standards.

2. MAIN OUTPUTS OF THE ASSIGNMENT

The main outputs of the assignment will come as a result from below mentioned main deliverables and phases:

Deliverables I

- Preliminary evaluation report and design

Phase I (design task analyses) and Phase II (design preliminary ideas)

Deliverables II

- Completing/delivering the detailed design

Phase III (preparation of the detailed technical design) and Phase IV (construction permit approval project) Phase V (final cost estimation)

Deliverables III (building process)

- Complete supervision and preparing the full hand over file and as build drawings

Supervision phase

During the preparation of the project, the Consultant will strictly follow the administrative routes and will cooperate closely with:

- UNDP-Albania;
- Municipality of Durrës;
- Other actors;

3. PROJECT DESCRIPTION

Joint School Ismet Nanushi (Sukth);

The joint school Ismet Nanushi is situated in Kulle-Manez street, Administrative Unit of Sukth in Municipality of Durres. It is a two-floor building.



Description and Capacity: The building serves to 705 students. The school has a total surface area of 960 m2. It is built in 1979. It has 15 classrooms and 4 auxiliary premises.



Physical appraisal of the facility: The existing conditions of the building are assessed based in detailed inspection of the building in consideration of modern codes of construction for the seismicity like EC-2, EC-6 and EC-8. After field verification, it's observed that the object has fissures of retaining walls in the two corners on the right side; it has also a diagonal fissure in the entrance wall of the building, it has a lot of problems with finishes and presence of humidity. The school is recommended for repair and retrofitting.

Architectural description of the existing situation

The joint high school "Ismet Nanushi" Kulle, is damaged by the earthquake of November 26 with damage to the structure, the building was built in 1979 with retaining walls and columns without reinforcement. The school has a total of 705 students divided into cycles. The kindergarten has 85 children, but the requirements for enrollment are higher. In primary education, 245 students teach in 10 classes, who teach the second shift as they do not have facilities. The 9-year cycle has 203 students divided into 8 classes, the high school has 172 students divided into 7 classes. The yard area is considerable of 4000 square meters, but it is unorganized and unpaved. Inside the school yard is the village Health Center, which has often been the subject of problems as it is an obsolete and damaged facility. The Health Center is also damaged by the earthquake and is currently uninhabitable, so the management staff of the school wants to see the possibility of building a Health Center outside the school yard, possibly at the former old building. Inside the school yard are three buildings, the kindergarten damaged by the earthquake, the two-storey building damaged by the earthquake with structural damage and a building with lighter damage but which needs intervention and has only 4 functional classes. The school does not have halls for laboratories, there are not enough facilities for teachers' halls because in an environment of 10 square meters there are 40 teachers, there is not enough environment for the directorate, there is no environment for the school psychologist, for the school security officer. The facilities for the library are very small, there is no gym for the development of physical education and school activities. The material base is depreciated as they have not been supplied with equipment for a period of over 20 years.

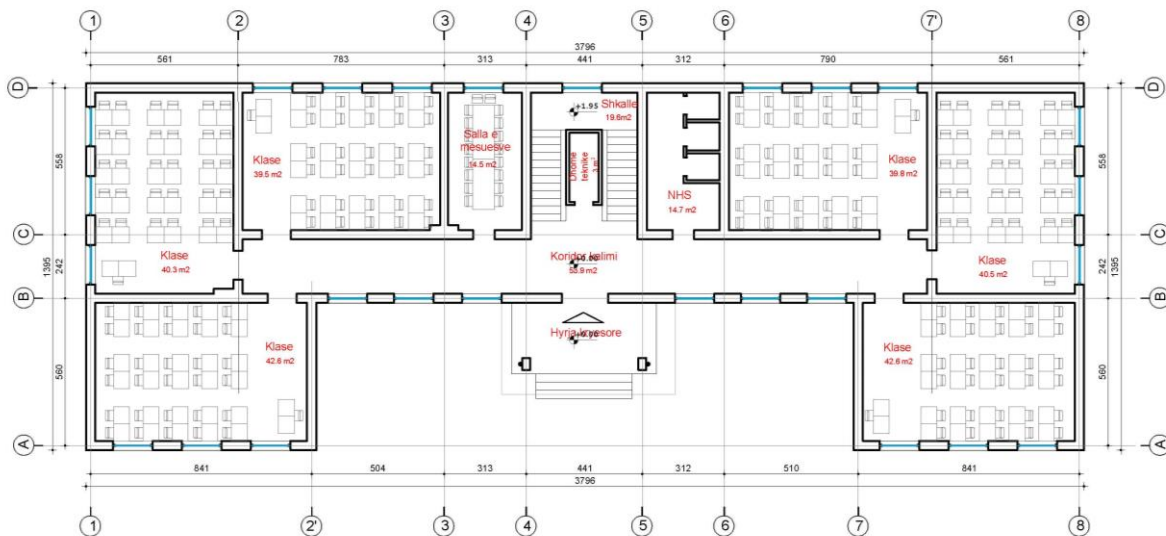
The existing school, apart from the very serious structural damages and the marked lack of facilities, ie the reduced capacity with which it works, does not meet any norms or standards in accordance with the educational facilities. The width of the corridors is quite small 200 cm, the height of the floor is 290 cm on the ground floor and 280 cm, the width of the stairs is 114 cm. These parameters are outside the design standards and it is impossible to improve through reconstruction.







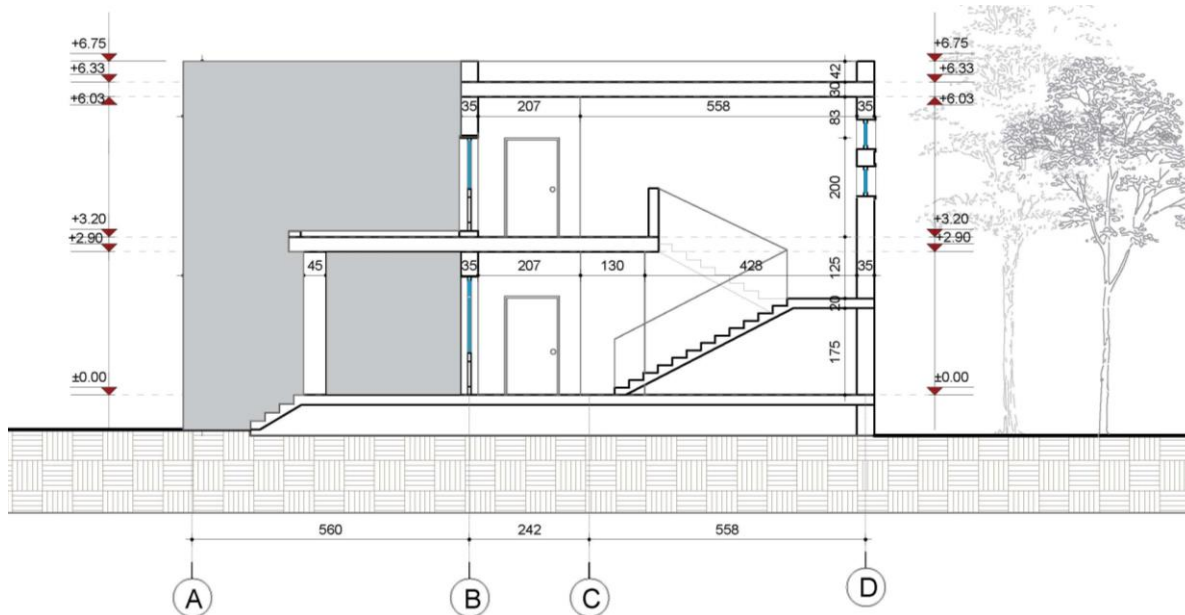
IMAGES



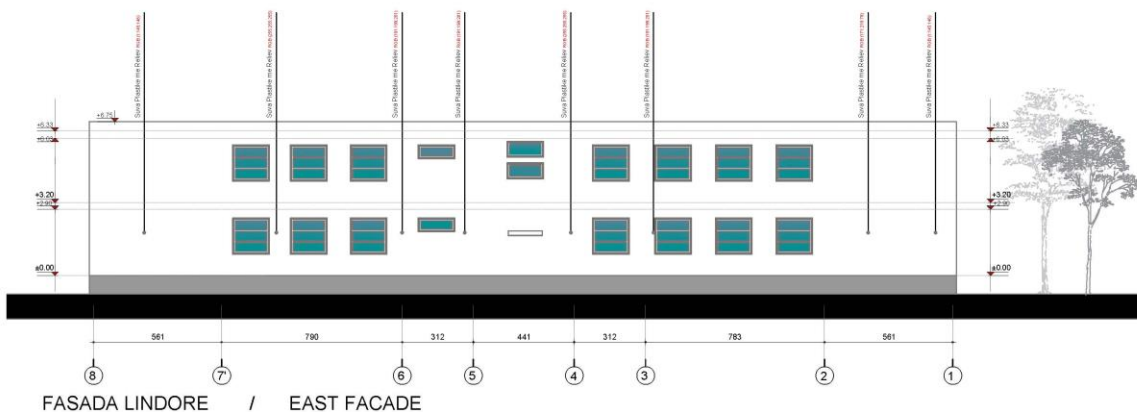
GROUND FLOOR PLAN



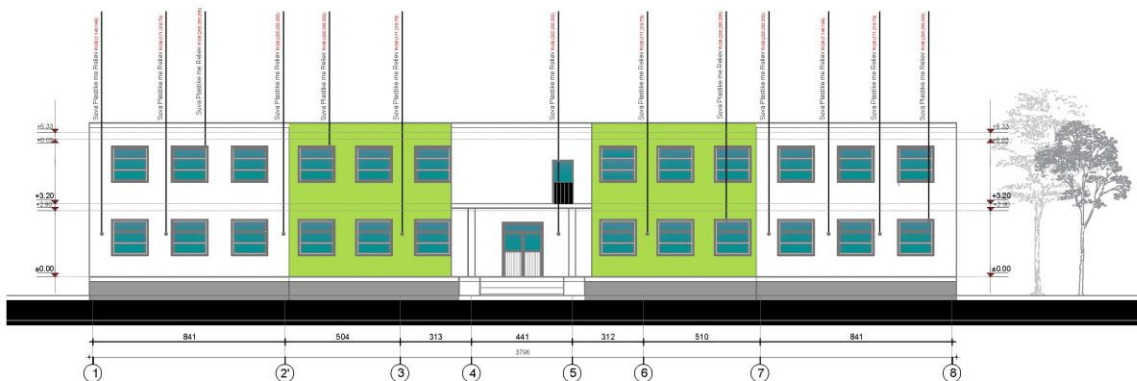
FIRST FLOOR PLAN



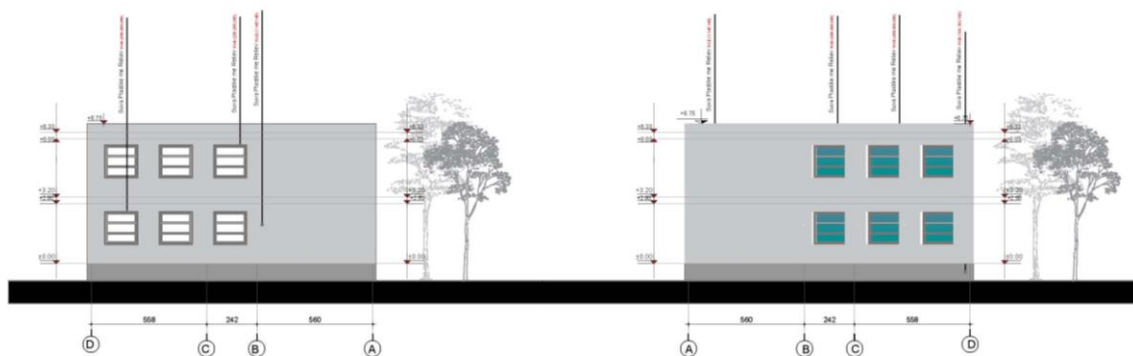
SECTION



FASADA LINDORE / EAST FACADE



FASADA PERENDIMORE / WEST FACADE



FACADES

4. PROJECT IDEAS AND PUBLIC HEARING

On July 27th in the existing building of "Ismet Nanushi" High School was held the public hearing of technical evaluation and two versions of the concept design, "Ismet Nanushi" High School, designed by "Arkimate" Company.

In this public hearing were present representatives of the Municipality of Durrës, Representatives of the Education Directorate, school principal and teachers, parents and students and UNDP Representative.

The concept design was presented by Ark.Iva MEZEZI, representative of "Arkimate" Company. She made the presentation of two versions of the concept design of the school "Ismet Nanushi".

The purpose of the meeting was also:

- Explanation of technical interventions;
- Making appropriate decisions about suitable materials in the premises;
- Information on the steps that will be followed in the preparation of the project, as well as the start of implementation works in the respective facilities.

In these meetings, the various problems raised by the participants regarding the progress of the implementation of the process, the quality and types of materials to be used and the graphs of project preparation and implementation of works were clarified.

1. Proposed design

Ismet Nanushi School has serious structural problems due to the earthquake, and their repair is very expensive. This school does not meet the capacity of students with the necessary facilities for teaching. The parameters of the school premises do not comply with the design standards. For these reasons we suggest the construction of a new school, with the required standards and parameters of a school, to respect the functional division according to age groups, to meet the required capacity and the necessary facilities for the development of teaching according to the curriculum. We also suggest building a new gym, as well as sports grounds, yard arrangement and fencing.

This requires the demolition of all existing buildings and the new construction of a building for preschool, elementary and 9th grade as well as the high school.

a. 1ST Version

In this version is conceived a common object with organic shapes intertwined with regular rectangular shapes, each of them has different columns,
Each of the schools has separate entrances. Although the functions are separate, a door has been left for emergency reasons connecting (or for internal access to the gym) between the 9-years school and the high school on the 3rd floor.

- Ground floor 1735m²
- First floor 1735m²
- Second floor 1185m²
- The kindergarten is organized in one floor level
 - On the ground floor it occupies 1/4 of the floor plan
- The 9-year-old is organized on all 3 floors
 - On the ground floor 3/10 of the floor stain
 - On the first floor 1/3 of the floor plan
 - On the second floor 1/2 of the floor plan
- The high school is organized on 3 floors level
 - On the ground floor it occupies 2/10 of the floor plan
 - On the first floor it occupies 4/10 of the floor plan
 - On the second floor it occupies 1/2 of the floor plan
- The gym is organized on 1 floor (equal to 2 teaching floors)
 - On the ground floor it occupies 1/3 of the floor plan
 - On the first floor it occupies 1/5 of the floor plan

Facade:

On the facade, is been used the combination of graphite plaster with dark gray tones and imitation of wood tiles in buildings with regular shapes at the edges. The intersection is in the vertical direction, but there are also fractures with protruding frames 150 cm with light gray color.

In the organic part of the building that connects the two ends, the exit of the slab is 40 cm, with light gray graffiti plaster material, and combined with dark gray graffiti plaster inside. Verical wooden brisoleil have been used in the windows of the classrooms, oriented by sun exposure.

b. 2ND Version, consist of ;

- Construction of each of the functions of separate schools, starting from the kindergarten, 9 years school and high school, with separate entrances. Intended system with inner and outer yard unifies the concept.
- Ground floor 2035m²
- First floor 1720m²

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- Second floor 515m²
- The kindergarten as a separate object is developed in 1F
- The 9-year-old as a separate object takes place in 2F
- The high school as a separate object is developed in 3F
- Shared gym, accessed by 2F High school

Facade:

In the facades have been used the combination of concrete stucco with linear frames at the external parts of the building. These linear frames have a 30 cm depth and they are coloured in cherry colour.

During the presentation and after, the representatives of all stakeholders shared with the designers the problems they had in relation to certain issues that concerned them.

During the hearing it was agreed to pick the 1ST version.

The issues discussed and decided to make changes are as follows:

- To add a floor due to the lack of physical space for the 9-year cycle. This change came as a result of the fact that the required number of classes for the 9-year cycle was implied for two cycles; grades 1-4 and grades 5-9, not as much as their total. In this way out of 9 classes reflected in the project in the public hearing were required 18.
- The external system will be reviewed once again so that the division between study cycles is more pronounced. This will be achieved through grids, stairs and high greenery.

Archimade Company will consider all requests submitted by interest groups at this public hearing.

5. IMPLEMENTATION PROJECT

5.1. The architectural design

In the final version, a common object is conceived for all the 3 cycles with organic shapes intertwined with regular rectangular shapes, each of which has different column steps. Each of the schools has separate entrances. Although the program cycles are separate, contact is allowed between them, the 9-year school and the high school on the 3rd floor (also for internal access to the gym). In the parts where the direction of the axes changes in the planimetry, an antiseismic joint has been made, due to the escalation that the object presents in the plan and in height.

GENERAL DATA:

- Property Area 5785 m²
- Print Surface 2000 m²
- Total Constructed Area 7660 m²
- Building surface on the ground 6505 m²
- Ground Floor Area 1155 m²
- Construction Intensity 1.12

Utilization Rate 34.5%

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SITE PLAN - SC 1:300

Map i Ri Rrethues
New Surrounding Wall

TE DHENA TE PERGJITHSHME

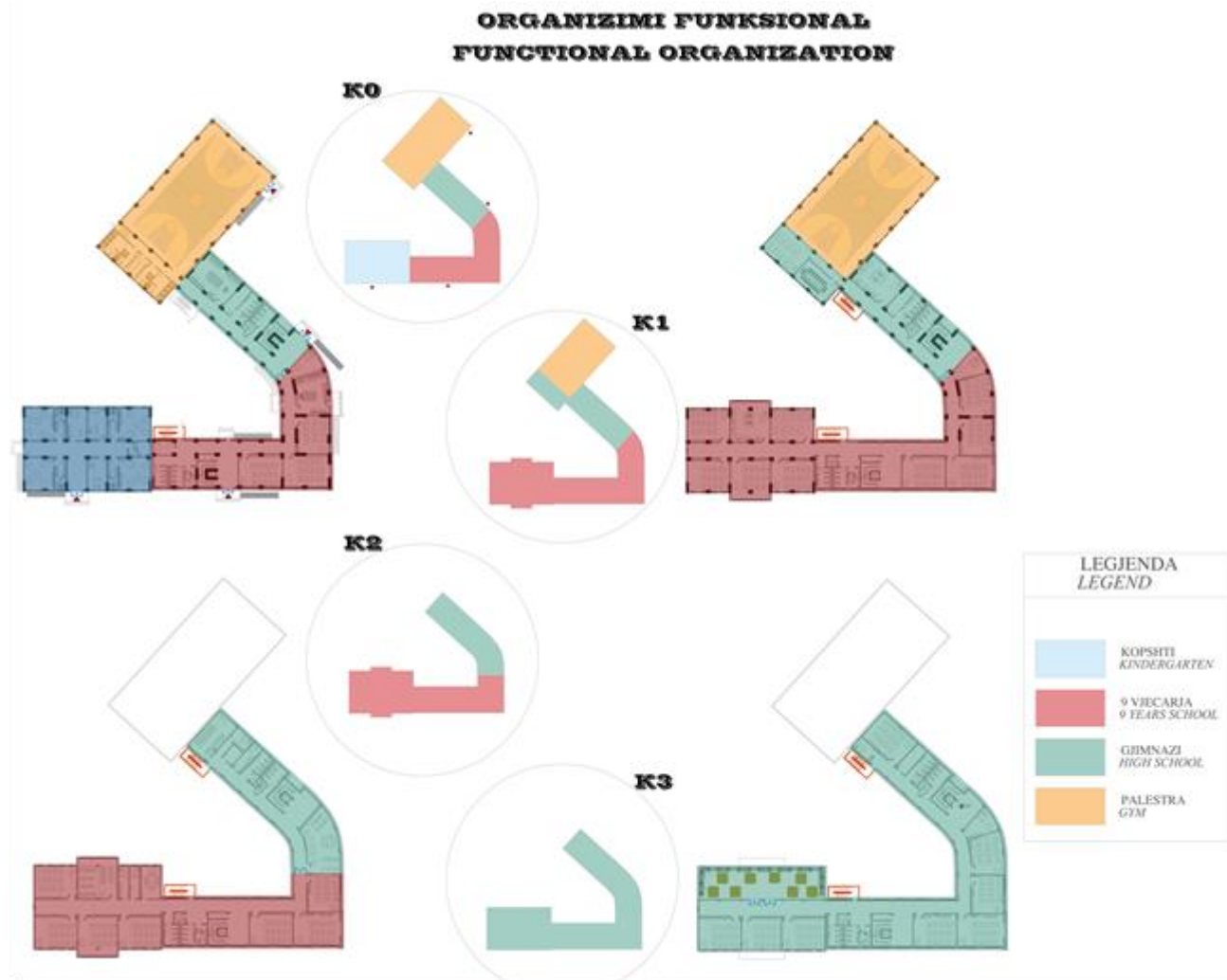
- Superfaqe Prome 5785 m²
- Superfaqe Njolle 2000 m²
- Superfaqe Totale Ndertimi 7660 m²
- Superfaqe Ndertimi mbi toke 6505 m²
- Superfaqe Kati Nentoke 1155 m²
- Intensiiteti i Ndertimit 1.12
- Koeficienti i Shfrytëzimit 34.5

LEGJENDA

- Hapësira Rekreative
- Objekt i Ri-Shkolle
- Palësier
- Objekte Ekzistuese
- Hapësira Qarkullimi
- Hyrje ne Objekt
- Kufiri i Prones

[illegible]

- Ground floor **2000m²**
- First floor 1865m²
- Second floor 1320m²
- Third floor 1320m²



Of which

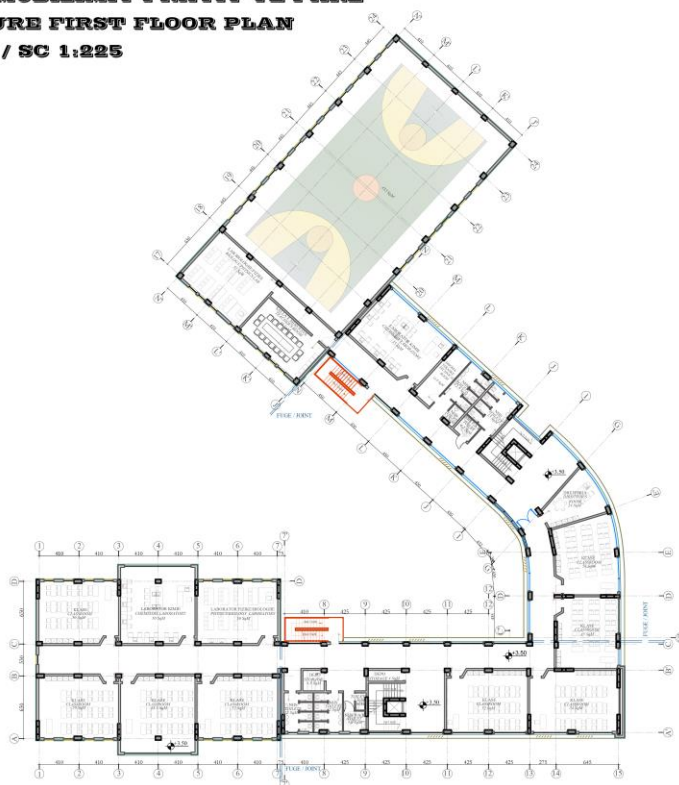
- The kindergarten is organized in 1 floor
- The 9-years school is organized on the first 3 floors.
- The high school is organized on all 4 floors
- The gym is organized on 1 floor (as high as 2 teaching floors)



PLANI I MOBILIMIT I KATIT PERDHE
FURNITURE GROUND FLOOR PLAN
SH 1:225 / SC 1:225

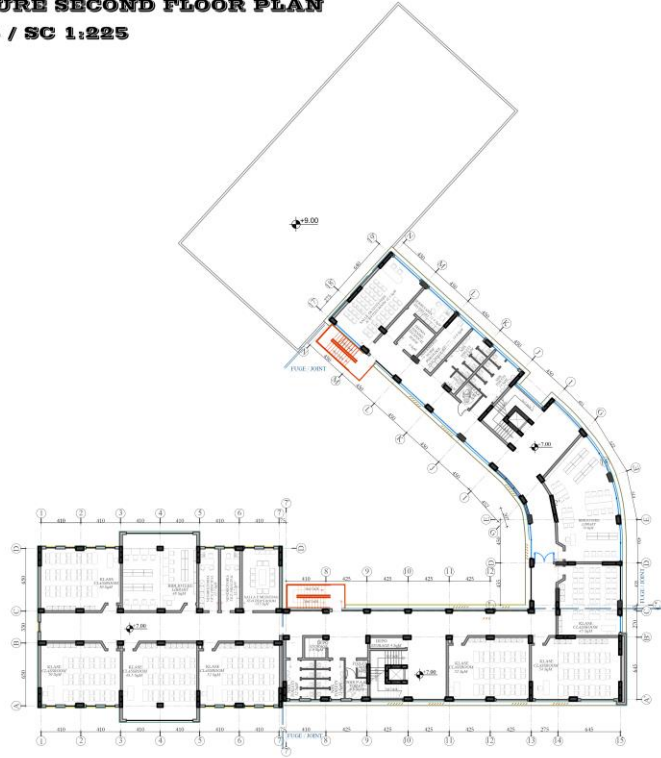


PLANI I MOBILIMIT I KATIT TE PARE
FURNITURE FIRST FLOOR PLAN
SH 1:225 / SC 1:225





PLANI I MOBILIMIT I KATIT TE DYTE
FURNITURE SECOND FLOOR PLAN
SH 1:225 / SC 1:225



PLANI I MOBILIMIT I KATIT TE TRETE
FURNITURE THIRD FLOOR PLAN
SH 1:225 / SC 1:225



In the organic-shaped part of the building that connects the two ends, the expansion of soles by 40 cm is intended, with light gray graffito stucco material, and with dark gray graffito stucco inside to create contrast. Also, shading elements with aluminum material and wood imitation paint are used, which will function as vertical shading, and will create the right angle depending on the geographical orientation. These elements will be captured with rails in the protruding parts of the soles and will be movable manually.

In the facade is used the envelope system of thermal insulation, where, to achieve the necessary refractions, with the respective relief, their specor varies from one material to another, with 2 cm and 8 cm polystyrene.

[illegible]

FRAGMENT 1



FRAGMENT 2



FRAGMENT 3

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Architectural elevation drawing of the 'South East View' of the 'New School' building. The drawing shows a long, multi-story building with a central entrance and a large, multi-story glass facade. The building is divided into several sections, each with its own entrance and facade. The drawing includes labels for various architectural elements and dimensions.

Labels and dimensions:

- Top left: 'Section of Plastic Window Frame' (Section of Plastic Window Frame)
- Top center: 'Section of Plastic Window Frame' (Section of Plastic Window Frame)
- Top right: 'Section of Plastic Window Frame' (Section of Plastic Window Frame)
- Bottom left: 'Section of Plastic Window Frame' (Section of Plastic Window Frame)
- Bottom center: 'Section of Plastic Window Frame' (Section of Plastic Window Frame)
- Bottom right: 'Section of Plastic Window Frame' (Section of Plastic Window Frame)

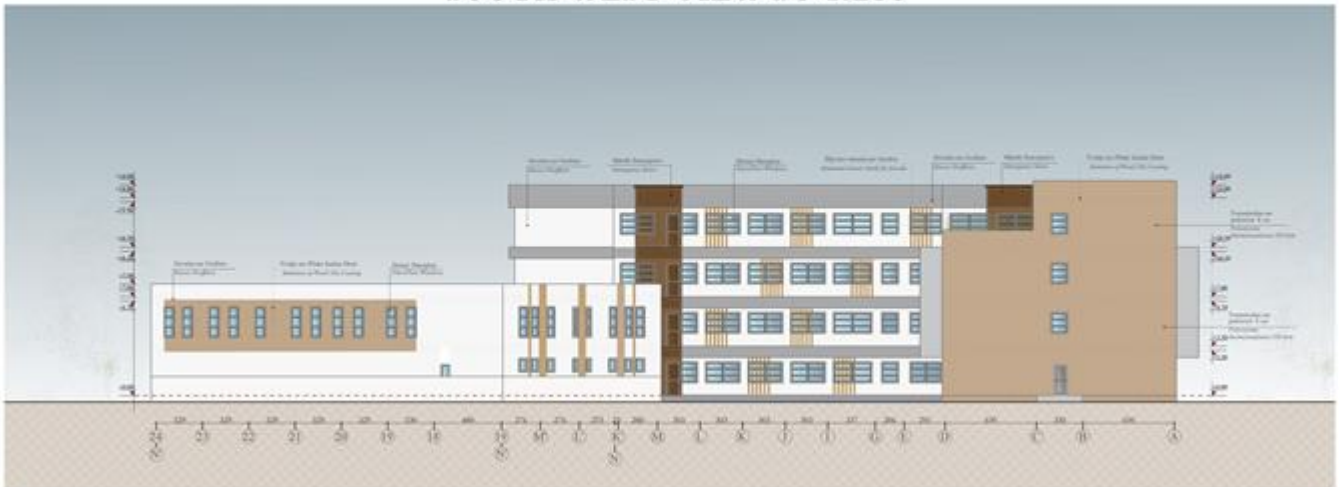
Dimensions (m):

- 1.00, 1.50, 2.00, 2.50, 3.00, 3.50, 4.00, 4.50, 5.00, 5.50, 6.00, 6.50, 7.00, 7.50, 8.00, 8.50, 9.00, 9.50, 10.00, 10.50, 11.00, 11.50, 12.00, 12.50, 13.00, 13.50, 14.00, 14.50, 15.00

**PAMJE VERI-LINDORE SH 1:200
NORTH-EAST VIEW SC 1:200**



**PAMJE JUG-PERENDIMORE SH 1:200
SOUTH-WEST VIEW SC 1:200**

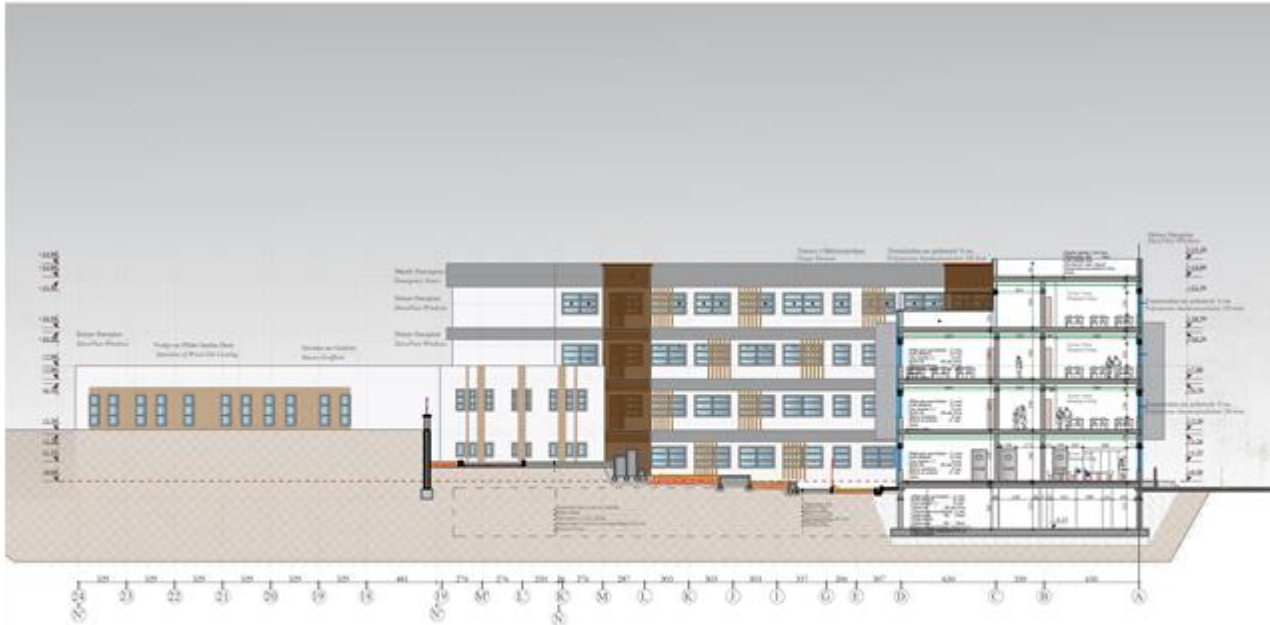


The school will have plastic windows with double glazing, with 3 compartments and 2 openings, which makes ventilation possible.

Classroom doors will be wooden, first quality, glazed at the top. They have a width of 100 cm in order to be accessed by PWD. Respecting the norms, the opening is done from the outside, without compromising the movement in the corridors, as well as in case of evacuation. Toilet doors are duralumin with tempered glass.

Also, in terms of energy efficiency, the terrace will have a layer of waterproofing and thermal insulation and drainage of rainwater will be done through vertical gutters with baked sheet metal.

**PRERJA A-A SH 1:200
SECTION A-A SC 1:200**



Regarding the accessibility of the disabled, there will be ramps with rough surfaces at each entrance and 2 elevators. In all four floors in the sanitary facilities there will be sanitary boxes for PWDs, in addition to those for staff and students, according to the norms of MES and MUD.

Regarding the emergency stairs, the 9-years school and the high school each have their own stairs, each with exits and evacuation routes, without compromising the division of school functions, adapted to the system.

A groove will be created around the building to remove rainwater from the yard and the building. The yard will be paved with tiles in the entrance alleys and the sidewalk around the building, while the gardens will be planted with grass and new lime trees. For division between the 2 program cycles of schools, and the kindergarten in the inner courtyard, the plant of the ligustra and the nets are intended.

Concrete stairs are intended as a solution for recreation, differentiation between recreational spots between schools and kindergarten and as utilization of the slope of the terrain.

Due to the existing relief, with high level, it is proposed terracing, with excavation and filling, mainly in the north of the field, where the gym and fields are arranged, with sports fields and gymnasiums.

To accomplish this in the gym facility, the exit to the backyard is done with a few steps of climbing stairs. The backyard of the kindergarten is designed with green terraces and concrete stairs that come according to the slope of the terrain.

**PRERJA B-B SH 1:160
SECTION B-B SC 1:160**

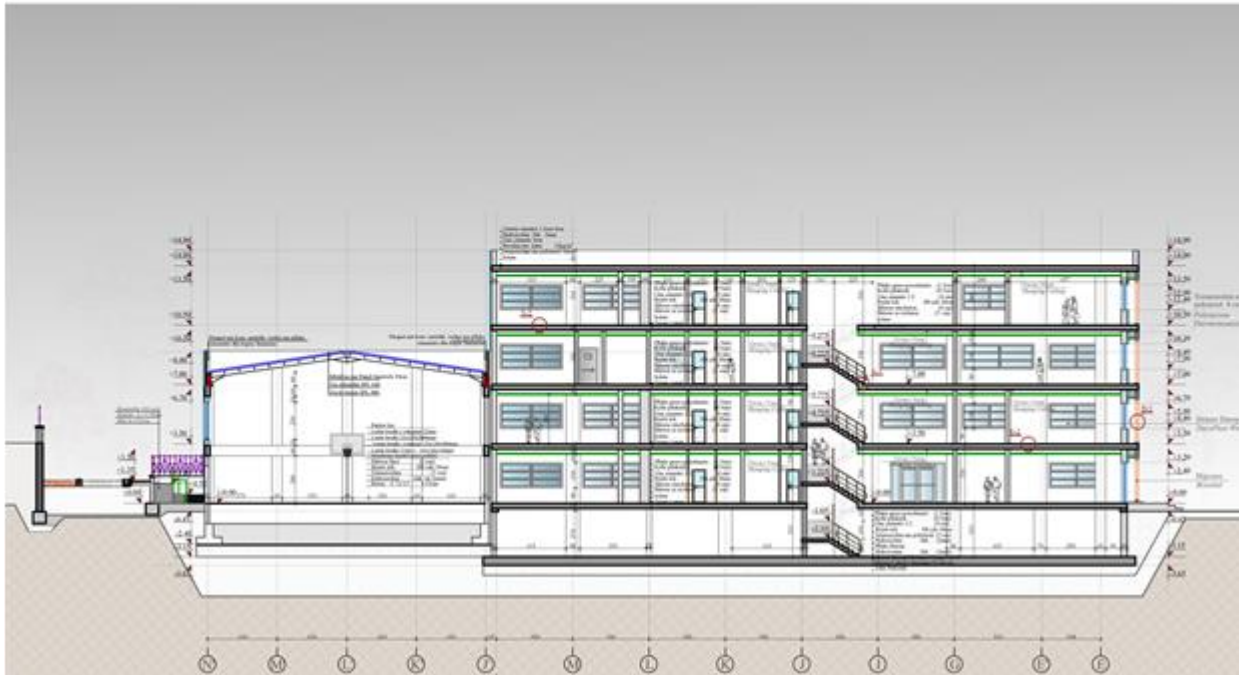


The yards of each cycle will be separated from each other by vegetation and concrete stairs of the amphitheater type. In this way we maintain the security and privacy of each cycle according to age groups.

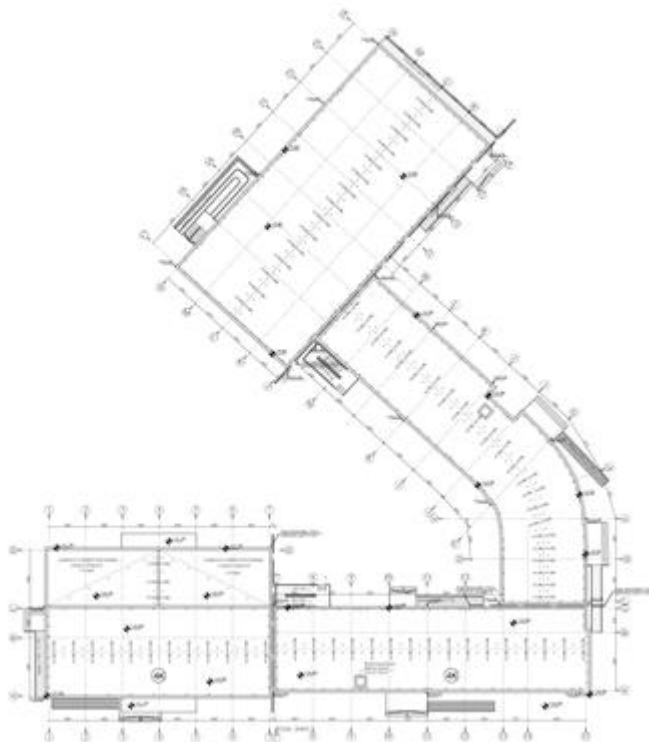
A green strip with grass and trees is left around the school.

It is also intended to leave parking spaces and an electric cabin for control.

PRERJA C-C SH 1:160
SECTION C-C SC 1:160



PLANI I KULLIMIT TE UJERAVE SH 1:250
DRAINAGE PLAN SC 1:250



Functions:

- Gym - Access from high school, 2 Entrances from outside
435 m2
- Wardrobe is divided into 2 Toilets / Female & Male Showers
2 Toilets / Staff Shower & 1 wardrobe

- Kindergarten (1 main entrance)
- 4 groups, each with anteroom and a toilet - 25 children
- Directors room
- Room for parents' meeting / rest
- Toilet
- Nursing Office / Psychologist / Isolation environment

- 9 years School

Ground floor - 1 entrance (and 2 exits, 1 emergency exit / gym access)

Toilets- boys girls, staff and PWD, 2 Storages

Security

3 classes (30 students)

1 Technology laboratory

Office Psychologist / Nursing

Secretary

First floor

Toilets- boys girls, staff and PWD, 2 Storages

8 classes (30 students)

1 Chemistry Laboratory

1 Biology / Physics Laboratory

Joint Directory.

Second floor

Toilets- boys girls, staff and PWD, 2 Storages

7 classes (30 students)

Library

Teachers' room

2 Vice principal offices

- High school

Ground floor

- 1 entrance (and 1 exit / emergency connection with 9 years school) & access to the Gym

Toilets- boys girls, staff and PWD, 1 Storage

1 Technology laboratory

Technical room

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First floor - takes premises from the Gym (and 1 exit / emergency connection with the 9 years school)

Toilets- boys girls, staff and PWD

1 Chemistry Laboratory

1 Biology/physics Laboratory

Technical room

Teachers' room (by Gym side)

Second floor (1 exit / emergency connection with 9 year old)

Toilets- boys girls, staff and PWD

Activity room

Secretary

Office Psychologist / Nursing

Library

Third floor (1 exit / emergency connection with 9 year old)

Toilets- boys girls, staff and PWD Technical rooms

8 classes (30 students)

2 Vice principal offices

Utilized terrace.









PERSPECTIVE FRAGMENTS



Architect
Iva Mezezi
 Nr.Lic.A.0831/3