

AFFORDABLE SCHOOL PROJECT

MODERN – SUSTAINABLE – FUNCTIONAL



PROJECT TYPE:
Architecture Design
Revit BIM Model



PROJECT GOAL:
Create a low-cost, modern
and eco-friendly school for
children's future.



CONCEPT:
Smart design with nature,
natural light and open
learning environment.

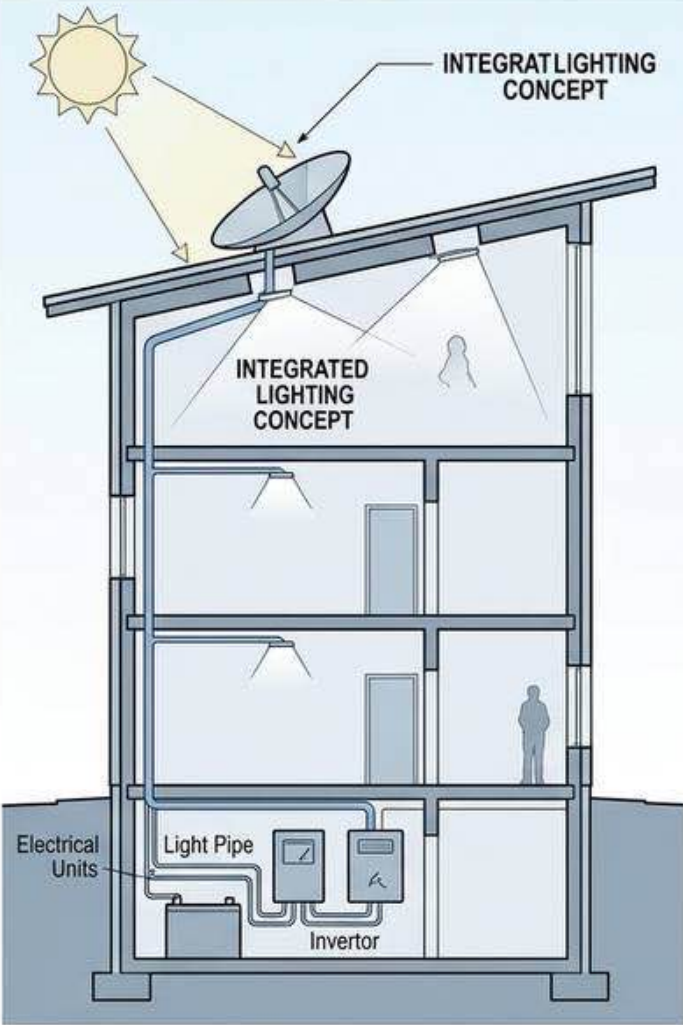


SOFTWARE:
Autodesk Revit
Autodesk 3ds Max
Lumion 12



SHAKHIYOR URAYIMJONOV
ARCHITECTURAL DESIGNER

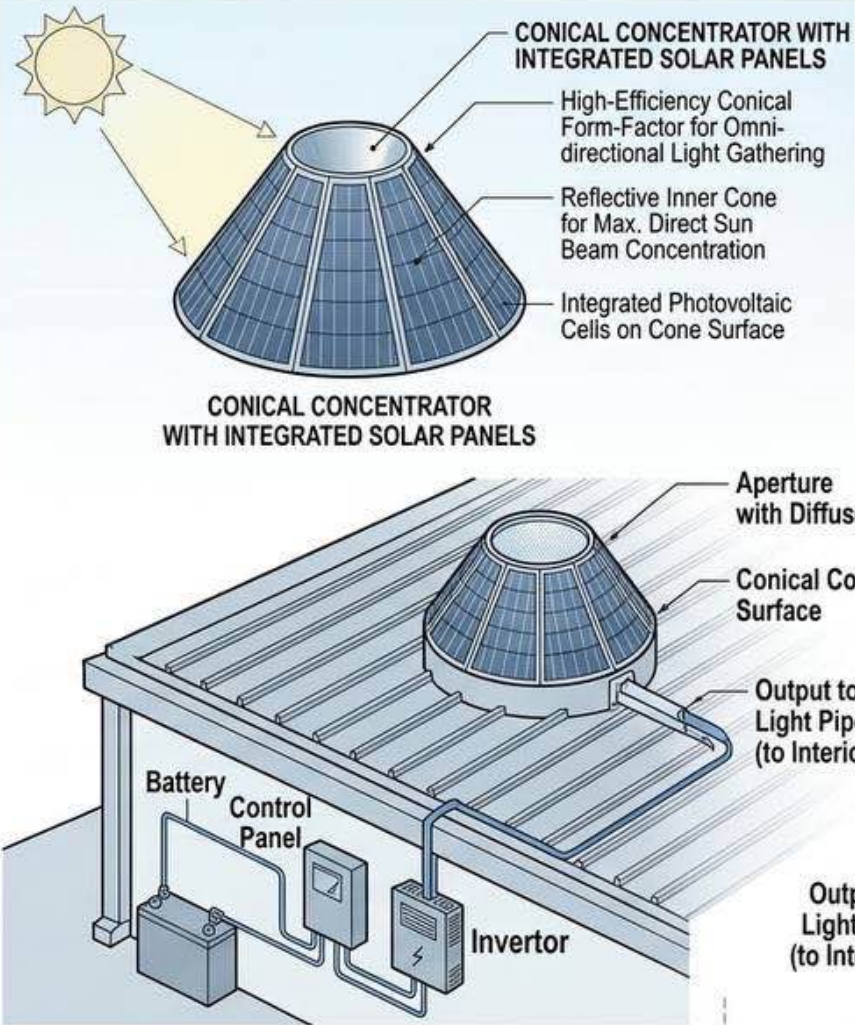
OVERALL SYSTEM INTEGRATION



Scale 2.5
0 2 4 6

LumenCone - Technical Drawing (Compact Edition)

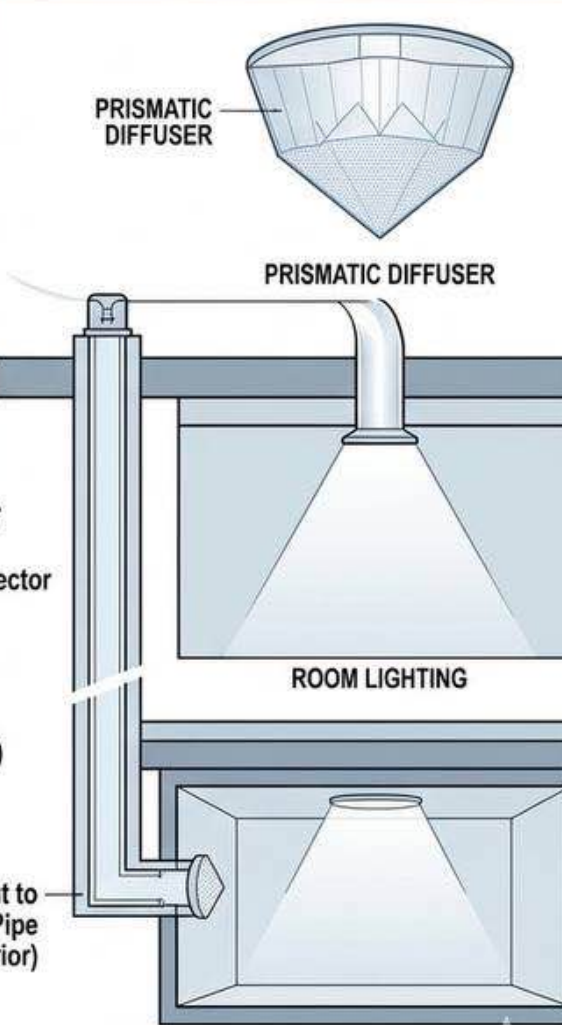
EXTERIOR COMPONENT: CONICAL CONCENTRATOR & COLLECTION UNIT



Scale 0.5
0 1 3 6

LumenCone - Technical Drawing (Compact Edition)

INTERIOR COMPONENT: LIGHT PIPE & EMITTER



Scale 2.5
0 2 4 6

LumenCone - Technical Drawing (Compact Edition)

SMALL SCHOOL PROJECT

Low-cost, Modern and Eco-friendly School



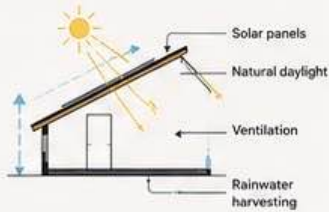
A school that provides quality, safety, and inspirational learning environment for children.

PROJECT FEATURES



LOW-COST STRATEGY

- Simple and compact form – reduced construction cost.
- Locally available materials – brick, wood, concrete.
- Natural lighting and ventilation – reduced energy use.
- Solar panels – clean and affordable energy.
- Rainwater harvesting – water saving.
- Modular design – easy to build and future expansion.



MATERIALS AND CONSTRUCTION



BUILDING SECTION



FIRST FLOOR PLAN

M 1:200

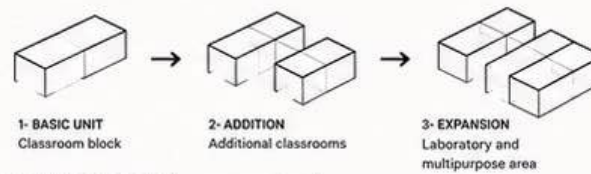


- 1 Entrance and waiting area
- 2 Classrooms (6 units)
- 3 Library
- 4 Laboratory / STEM room
- 5 Teacher's room
- 6 Dining area
- 7 Toilets
- 8 Storage / Technical room
- 9 Handwashing area
- 10 Outdoor stage / amphitheater

COURTYARD / AMPHITHEATER



MODULAR DESIGN – EASY TO EXPAND

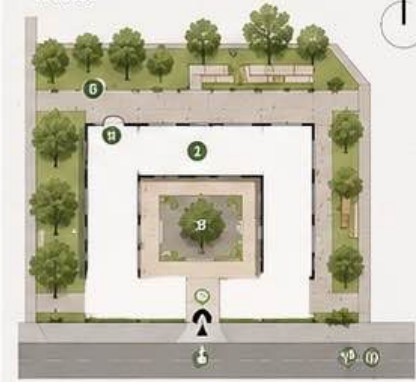


COST ESTIMATE (low-cost variant)

No	ITEM	UNIT	QTY	UNIT PRICE (so'm)	TOTAL (so'm)
1	Construction (basic building)	720 m ²		3 000 000	2 160 000 000
2	Roofing	720 m ²		450 000	324 000 000
3	Doors & windows	120 m ²		700 000	84 000 000
4	Electrical & lighting system	Complete		120 000 000	120 000 000
5	Plumbing system	Complete		80 000 000	80 000 000
6	Solar panel system (10 kW)	Complete		100 000 000	100 000 000
7	Water tank and filtration	1 complete		60 000 000	60 000 000
TOTAL					2 928 000 000 so'm

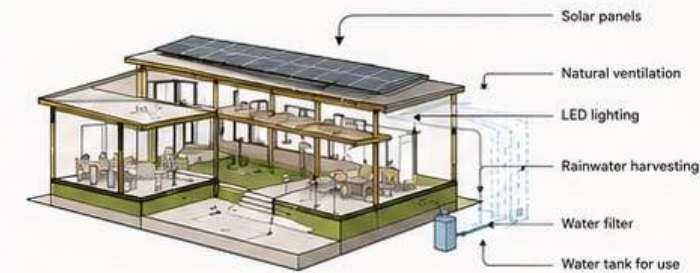
SITE PLAN

M 1:1500



- 1 School building
- 2 Playground / sports field
- 3 Garden / green space
- 4 Main entrance
- 5 Vehicle drop-off (front)
- 6 Technical area / service entrance

ENERGY AND WATER SYSTEM



CLASSROOM INTERIOR



1 OVERVIEW

A LOW-COST, MODERN AND ECO-FRIENDLY SCHOOL



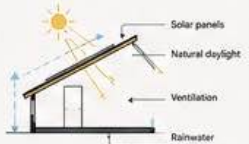
A school that provides quality, safety, and inspirational learning environment for children.

FEATURES



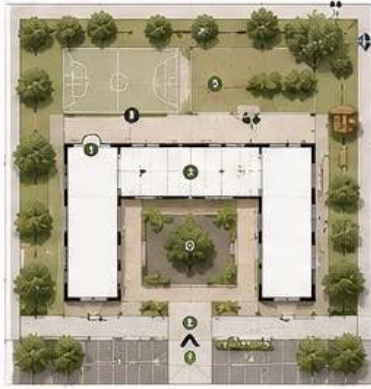
LOW-COST STRATEGY

- Simple and compact form
- Locally available materials
- Natural lighting and ventilation
- Solar panels - clean and affordable energy
- Rainwater harvesting - water saving
- Modular design - easy to build and future expansion.



2 MASTERPLAN

SITE PLAN AND OUTDOOR SPACES
M 1:500



- 1 School building
- 2 Playground / sports field
- 3 Garden / green space
- 4 Main entrance
- 5 Vehicle drop-off (front)
- 6 Technical area / service entrance
- 7 Outdoor classroom
- 8 Amphitheater
- 9 Parking area
- 10 Bicycle parking

SUN PATH



WIND DIRECTION (NATURAL VENTILATION)



TREE STRATEGY



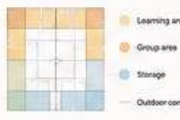
3 FLOOR PLAN DETAIL

1:100

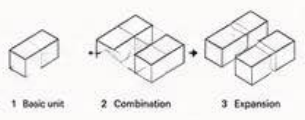


- 1 Classrooms (6 units)
 - 2 Library
 - 3 Laboratory / STEM room
 - 4 Teacher's room
 - 5 Dining area
 - 6 Toilets
 - 7 Storage / Technical room
 - 8 Handwashing area
 - 9 Open learning zone
 - 10 Outdoor connection
- Student flow
 Emergency exit
 Natural ventilation

CLASSROOM ZONING



MODULAR CLASSROOM SYSTEM



4 ECO & ENERGY SYSTEM

SUSTAINABLE AND EFFICIENT SOLUTIONS



PASSIVE STRATEGY



ZERO-ENERGY APPROACH



5 CONSTRUCTION & MATERIALS

LOW-COST AND DURABLE SOLUTIONS

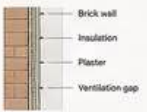
MATERIAL PALETTE



EXPLODED AXONOMETRY



WALL SECTION



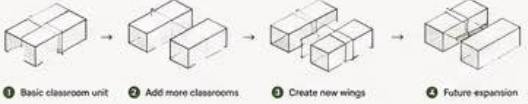
ROOF DETAIL



FOUNDATION DETAIL



MODULAR & EXPANDABLE



6 INTERIOR ATMOSPHERE

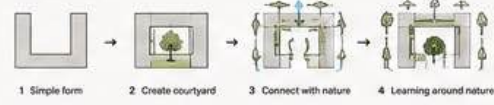
WARM, NATURAL AND INSPIRING SPACES



7 CONCEPT & STORY

LEARNING WITH NATURE

CONCEPT DIAGRAM



WHY THIS SHAPE?

- All classrooms get natural light and ventilation
- Safe and controlled courtyard for children
- Strong connection between indoors and outdoors
- Easy to expand in future

EDUCATIONAL PHILOSOPHY



SCHOOL AS A SMALL VILLAGE



A place where children grow, explore and become their best selves.

8 FINAL VISION

AFFORDABLE FUTURE SCHOOL



“Designing today for a better tomorrow.”