

PAN YACH SCHOOL IN JALLE



ORGANIZATION OVERVIEW

Sustainable Hope & Development is the result of South Sudanese envisioned sustainable development.

We aim to encourage, educate, and empower our own communities. We have seen that among our own people, there is talent and a desire for peace. These desires need to be given environments and opportunities to grow.

We are therefore focused on the healing of our society both by building infrastructure and developing human capacity through education to foster economic development and psychologically strong societies. We recognize that our people are struggling in a context of unjust global systems, national conflict, and small scale violent movements (e.g., cattle raiding and child abduction). Our work is guided one step at a time by our own needs on the ground.

There are many groups working for change at the national level of our beloved South Sudan. We are working for change from the grass roots level; we know that both good governance and strong communities are required for a stable nation.

There is much work for us as a South Sudanese to do, and we must do the work to heal our own societies in partnership with other national and international partners.

PROJECT OVERVIEW

The very first Sustainable Hope & Development project is construction of a school building and community meeting center in Jalle Payam (or Jalle County). We set out to build a meeting place that will continue to stand for decades to come. The school is designed to handle environmental challenges and support a conducive learning environment even in the rainy season. The building will withstand flooding through a raised floor and piling foundation technology and subvert the effects of extreme heat through natural ventilation systems.

This building provides space for primary education to girls and boys, community meetings, church gatherings. This structure is more than a building; it is a place for dialogue, reconciliation, local civic participation, and even refuge when raids come to pass.

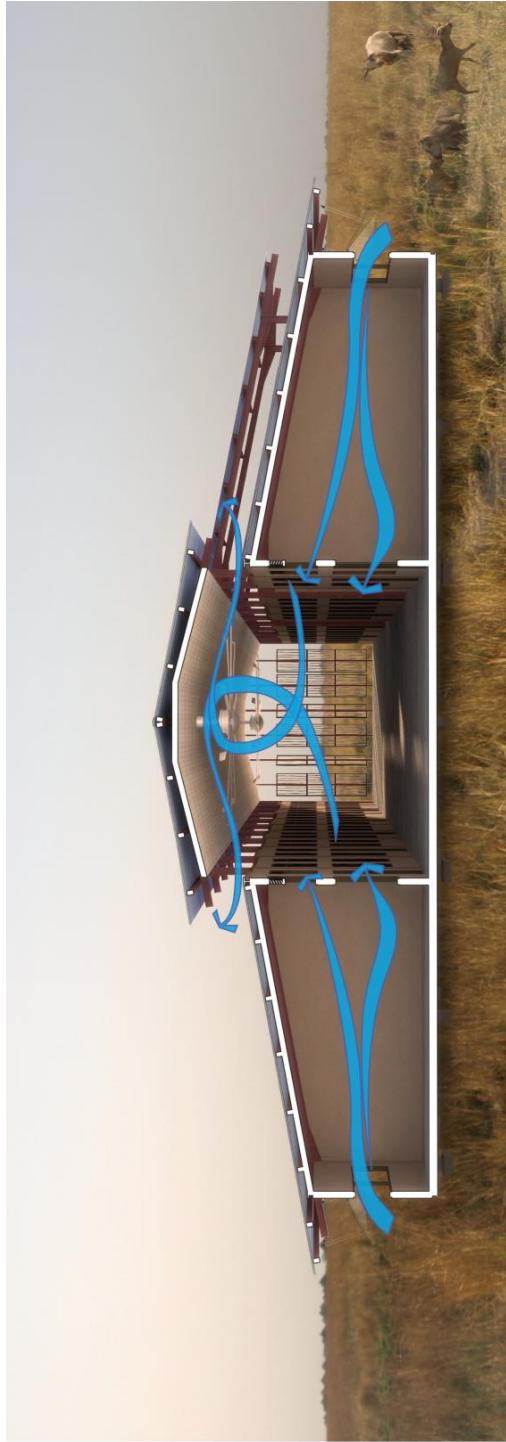
WHY YOUR PARTNERSHIP MATTERS

There are number of ways that this project benefits both the regional area of greater BorTown in addition to the wider nation.

- Sustainable Design, Technology
- Girl Child Education
- Peace Education
- Economic Development

DESIGN TECHNOLOGY

- South Sudan has many rural and populated areas on flood plains.
- We hope that this design can be replicated.
- We are contributing to regional infrastructure.



GIRL CHILD EDUCATION

Currently this school is serving over 200 children, girls and boys, even as it is only partially constructed.

- Alternatives to early marriage
- Work with local women who advocate to families for girls to stay in school.
- Ensure that bor holes and grinders are eventually available at the school so girls can meet home expectations and attend school.



Daruka Ajith Kuol, Girl Child Education Advocate at the Ministry of Education, goes out into the payams and villages to speak with parents about the importance of keeping girls in school.

PEACE EDUCATION-

- Host Teacher Trainings
 - professional development
 - non-violent communication
 - Reconciliation, Forgiveness and Trauma Healing
- Redirecting Cattle Raiding Conflict- once we finish this project we hope to begin researching in Boma State a project to support alternative

SOUTH SUDANESE ECONOMIC DEVELOPMENT-

- South Sudanese Engineering Expertise and Workers for construction
- South Sudanese Job Training- Construction for men
- Host women's empowerment trainings, job skills training.

WHAT WE HAVE



573 girls and boys attend school in the structure.

- Sustainable Design – see Appendix C for in depth explanation
- School Structure:
 - Foundation
 - Steele Frame
 - Roof
- \$18,170 USD
- Partnerships:
 - Home Trade Construction (South Sudanese Engineering and Construction Expertise)
 - South Sudan Council of Churches
 - Ministry of Education, Jonglei State
 - RESCOF
 - Rebuild South Sudan
 - BorCounty and Jalle Payam Leaders

WHAT WE NEED: NEXT STEPS

- *Finish the Structure*
- *Install Solar*
- *Supplies, Desks, etc*
- *Amenities that support Girl Child Education*



Jalle Children, August 2018

FINISH THE STRUCTURE

Jalle School Construction Summary		Cost in USD
Site preparation and Earth works		\$1,270
Concrete work		\$45,876
Floor timber Work		\$30,200
Wall		\$36,120
Doors and Windows		\$6,510
Roof		\$1,200
Finishing		\$19,440
Buffer*		\$20,000
Grand Total		\$160,616

SOLAR

Item	Cost in USD
Cost of School Lighting for Jalle (33 units @ 329 per unit)	\$10,857.00
Transportation of Materials	\$3,000.00
Installation	\$5,000.00
Training in Kejukeji- Cost of two Jalle people to get trained by an existing program to operate and maintain the system.	\$1,000.00
Buffer*	\$4,000.00
Total Project Cost	\$23,857.00

* It is our experience that due to changing conditions in SS, prices often go up and are hard to predict. Therefore we always estimate 20-30% buffer in order to remain on budget. Extra funds go directly into community projects or can be returned to the donor if needed.

INTERNAL MATERIALS AND SUPPLIES-

Will make proposal to VISTAS/ USAID who only do in kind donations.



APPENDICES

APPENDIX A- ORGANIZATION VISION

Sustainable Hope and Development is an initiative to help the communities of South Sudan help themselves. Our goals are to build schools for our children and clean, modern wells for the communities. We hope to improve literacy rates, promote equality, and offer the generation of children—who have thus far only known fear and violence—a future for themselves and generations to come.

mission statement

The mission of Sustainable Hope and Development is to encourage, strengthen, and support those whose lives were devastated in the 21-year-long civil war between Sudan and South Sudan by providing education to children and youth who have experienced war firsthand, providing clean drinking water for those returning from refugee camps, promoting educational and economic opportunities for women, and working to provide adequate health care in the villages of Southern Sudan.

peace education

For a generation that has known nothing but war, peace needs to be learned. It starts with education, providing schooling opportunities for the thousands of children displaced by the war.

widows and orphans

The war left behind countless widows and orphans in South Sudan. These are the most helpless of the population, those without any means of supporting themselves. Compounding the difficulties are the

cultural stigmas against widows and orphans; women are still second-class citizens. Without a husband, how does a widow support herself and her children?

sustainable design

Sustainable Hope and Development believes in designing and building permanent structures with attention to natural heating, cooling and light.

rebuilding communities

South Sudanese are returning to their home villages after more than two decades of war. After a generation of living in refugee camps, rebuilding their lives and lost traditions will not be easy. There are no resources, few jobs, and even fewer educational opportunities, for both youth and adults. Providing for basic human needs will contribute to the stability of the area.

Sustainable Hope and Development aims to build schools, health clinics, and wells for clean drinking water. Rebuilding community by rebuilding a place to call home.

APPENDIX B- FULL BID FROM HOME TRADE CONSTRUCTION

Technical Specification for Construction of School in Jalle,Jonglei state.

Description	Unit	Qty	Rate	Amnt(Usd)
SITE PREPARATION				
Clear site of bushes, shrub including grubbing up their roots and subsequent disposal.	Item	1	200	200
EXCAVATION AND EARTHWORK				
Excavate Supporting columns foundations; commencing from stripped ground levels exceeding				

500mm wide; maximum depth not exceeding 2M	M3	25	15	375
Ditto; pit for column bases	M3	5	15	75
Remove surplus excavated material from site.	M3	15	10	150
Level and compact bottom of excavated column to receive concrete.	M2	50	5	250
Backfilling of excavation with selected materials excavated around supporting column foundations	M3	12	10	120
Site Preparation and Excavation Collection				1,270

CONCRETEWORK						
Plain in-situ concrete (1:3:6-19mm aggregate) in: 50mm blinding to column bases	M3	5	250	1250		
Ditto in foundation strip	M3	3	220	660		
Reinforced concrete (1:2:4-20mm aggregate) in: Column bases(1200x 1200 x 500mm)	M3	28	250	7,000		
Great beam (400 x200mm)	M3	25	250	6250		
Ring Beam (400x200mm)	M3	25	250	6250		
Reinforcement ; High Yield High tensile steel reinforcement to B.S 4461						

Great and Ring beam	M2	250	4	1,000.00
Great Beam and windows bottom	M	312	2	614.00
Concrete work Collection				45,876.00
FLOOR TIMBER WORK				
General Joinery approved soft wood selected and kept clean 100x50mm Joist plugged to Great Beam and 75x50mm timber Brandering @ 600mm c/c				
100x50mm	M	1200	3	3,600
75x50mm	M	2000	2.5	5,000
Normal iron sheet to protect board from	M2	864	10	8,640

water incase						
Fixing of 18mm Marine board (1200X2400mm) as suspended						
floor on timer to Horizontal soffit	M2	864	15	12,960		
Floor Work Collection				30,200		
WALL						
Block work(masonry work). Approved cement sand block 150mm thick wall with suitably located attached pier	M2	1204	30	36,120		
Wall collection				36,120		

DOORS					
Supply and fix the following Metal glazed and Pannel doors with 44mm thick solid Timber frames to detail					
Metal glazed gate size 1400 x 2400mm high	No	1	200	200	
Metal glazed gate; size 1200 x 2400mm high	No	4	150	600	

Pannel door size 900 x 2400mm high	No	11	250	2,750
IRONMONGERY	No	16	20	320
Mortice key locks				
Hinges	No	48	15	720
Dowels	No	32	15	480

cement and sand (1:5) mortar						
WINDOWS						
STEEL CASEMENT WINDOWS						
Size 1200 x 1200mm high	No	12	120	1,440		
Doors and Windows collection					6,510	

ROOF	Allow a provisional sum for the supply and fixing of damaged Iron sheet on roof structure.	Item	1	1200	1,200				
		Roof			1,200				

Internal finishing	15mm cement and sand(1:4)mortar to wall and ring beam using steel trowelled hard and smooth on wall internally.	M2	630	8	5,040		
	Prepare prime and supply one coat and 3coats emulsion						
	Paint on plastered internal wall	M2	630	20	12,600		
External Finishing	The external finishing will be pointing						

Allow a provisional sum for external finishing (pointing)	Item	500						
Blackboard.								
Designing and finishing of classroom and Adminstration blackboard.	No	10	80	800				
Finishing Collection								19,440

Jalle School Construction Summary	
Site preparation and Earth works	1,270
Concrete work	45,876
Floor timber Work	30,200
Wall	36,120
Doors and Windows	6,510
Roof	1,200

Finishing				19,440
Grand Total				140,616

APPENDIX C - FULL SCHOOL CASE STUDY: HISTORY, DESIGN, AND NEEDS

FOUNDATION HISTORY, 2012

We set out to use a helical pier technology for the foundation: fifty steel pilings that would be screwed into the ground by man power. These work well in Colorado's ground where they were developed, but did not work in Jalle. Instead our contractor dug fifty-two holes, each two meters deep and installed concrete pilings into the ground.

The foundation is a series of 52 concrete pilings, each of which is two meters deep into the ground. We know that concrete is strongest in compression (the downward weight of the building), but we put rebar within the concrete so that a foundation can also handle tension forces (uplift or bending forces). Our

first contractor incorrectly installed some of the rebar in the foundation and therefore, we need to further strengthen the foundation.

The measurements were also not followed as originally specified to due some misunderstanding. This therefore, changed the spacing of the beams, but not any height information.

STEEL FRAME ERECTION, 2013

The steel frame went up in 2013. Please see the Dimensions section below.

CORREGATED TIN ROOF, 2015

The roof was installed in October 2015 by foreign workers. The roof is screwed down to the metal frame and is supposed to be screwed in like according to the diagram on the right where the screws go in the low points of the tin.

QUESTION 4: Should the metal roof panels be attached at the high point of the panel or at in the low point (trough) of the panel? If at the high point, is blocking put behind the high point to keep it from being flattened (see attached photo)?



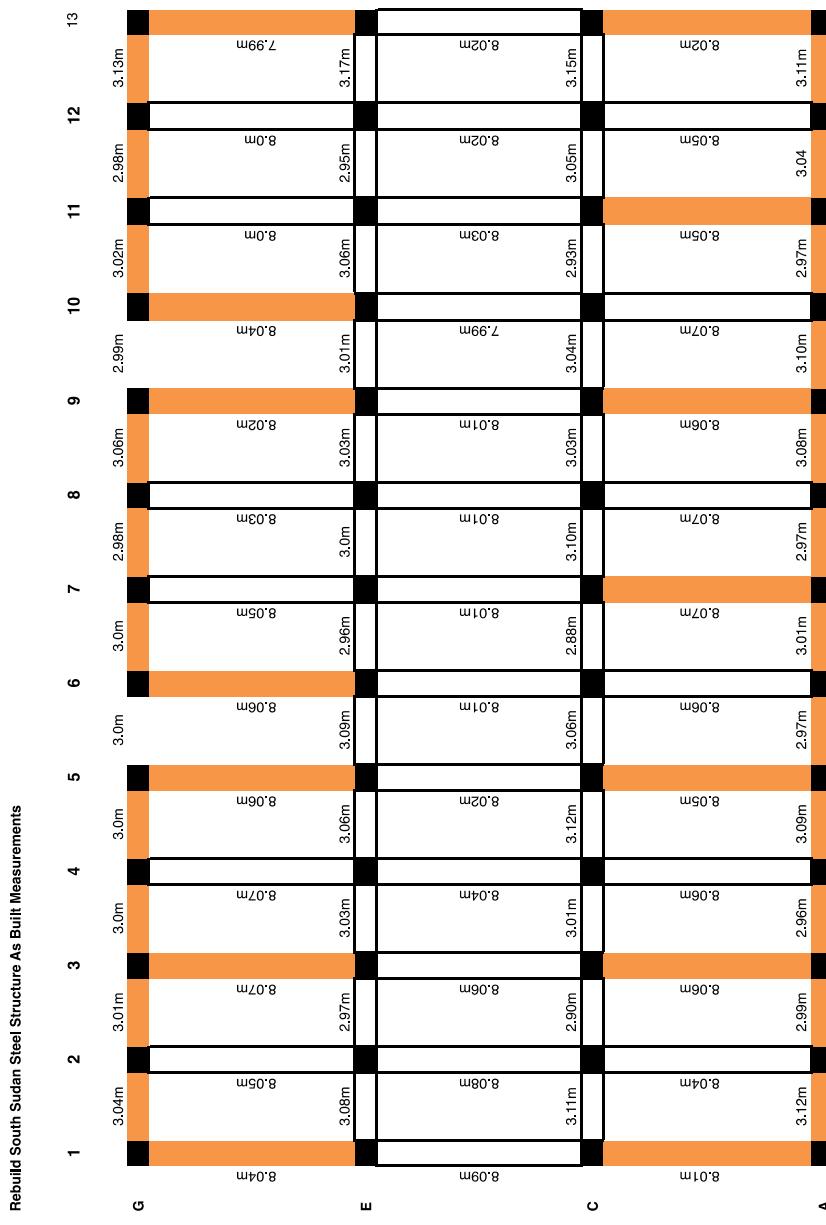
OR



The roof installation was rushed due to a cattle raid attack on Jalle which occurred while the workers are on site. We suspect that are not enough screws or that the screws may have been put in the wrong place. Consequently, some of the corrugated roof panels have sustained wind damage. However we have not been able to get to Jalle to verify the problem with our own eyes.

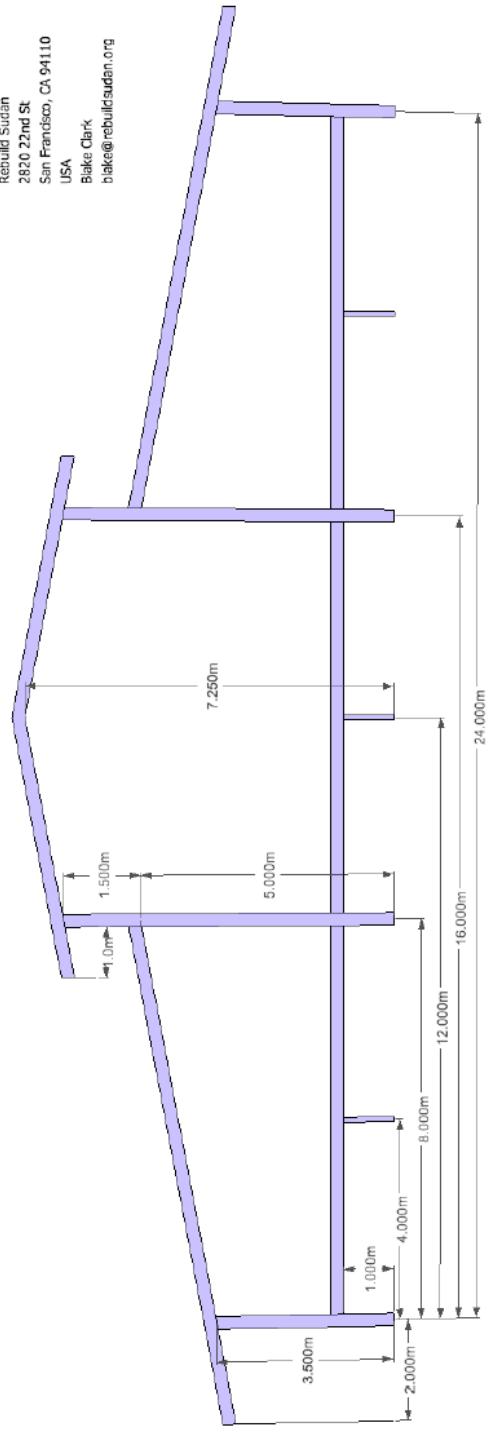
DIMENSIONS OF BUILDING

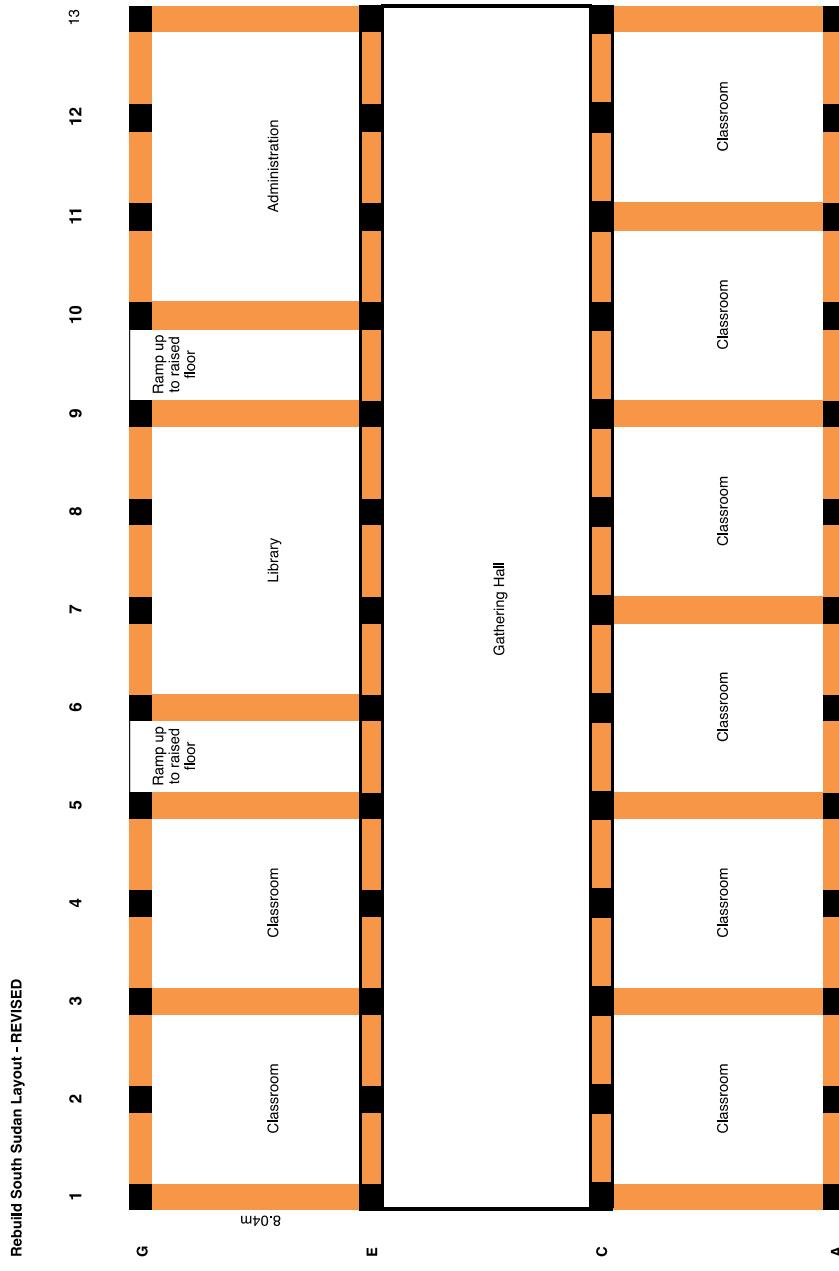
Installed Dimensions: Please see the inserted documents which show the actual as built dimensions of the building. These dimensions differ from the original plans in terms of spacing between the beams. Height should still be the same dimensions.



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Steelwork Section Dimensions





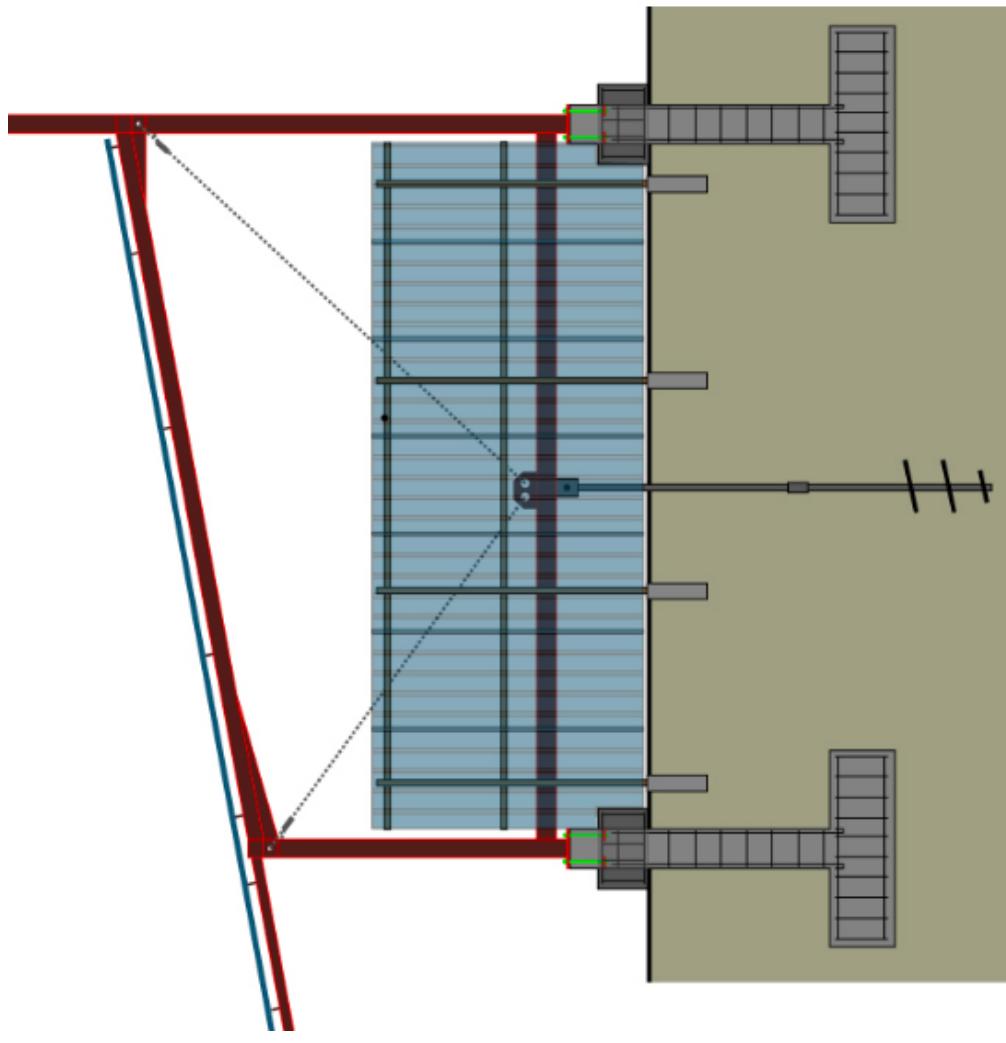
WHAT NEEDS TO BE DONE

1. SECURE ROOF:

The roof installation was rushed due to a cattle raid attack on Jalle. We suspect that are not enough screws or that the screws may have been put in the wrong place. Consequently, some of the corrugated roof panels have sustained wind damage. There is also possible uplift risk in addition.

Here is a concept drawing of an idea proposed. Again we trust you as the expert!

This drawing addresses both securing the roof and fortifying the foundation, which is number 2.



2. FORTIFY THE FOUNDATION:

The foundation is a series of 52 concrete pilings, each of which is two meters deep into the ground. We know that concrete is strongest in compression (the downward weight of the building), but we put rebar within the concrete so that a foundation can also handle tension forces (uplift or bending forces). Our first contractor incorrectly installed some of the rebar in the foundation and therefore, we need to further strengthen the foundation.

3. WALLS AND RAISED FLOORING:

Walls: At this time, we see that the way forward is to use blocks, like the ones installed on the bottling factory in Bor.

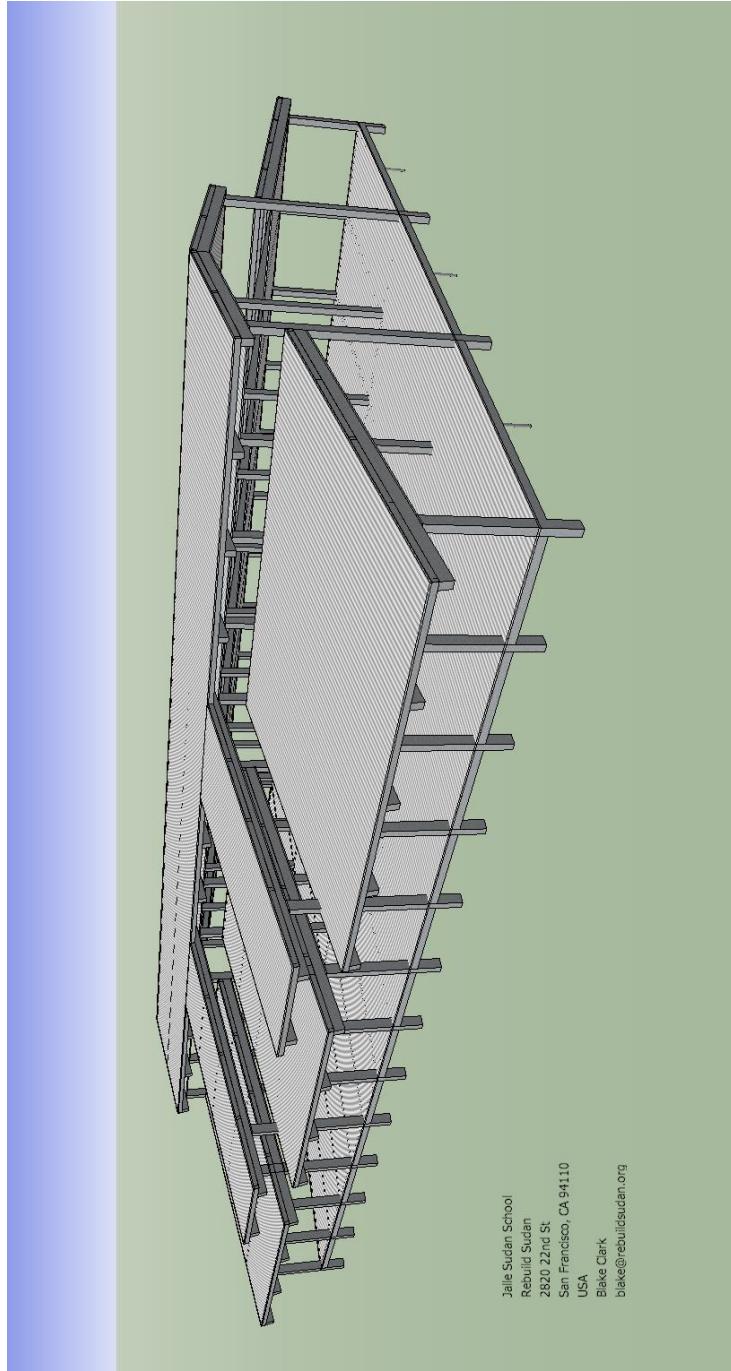
Flooring: A previous plan was to purchase floor girders to support the raised floor. We believed we should install the floor beams at the same time we fix the foundation. The walls were originally supposed to be a light weight material, but we have abandoned the notion of new technology and have pursued the route of blocks (in the fashion of the bottling factory you built in Bor). **We trust your judgement for the best recommendations on the floor and walls to get the school finished.**

For your reference here is a conversation which occurred about the intentions of the raised flooring.
Again, we are in no way asking for this specifically, only we want to share original intentions with you in case it is useful to you.

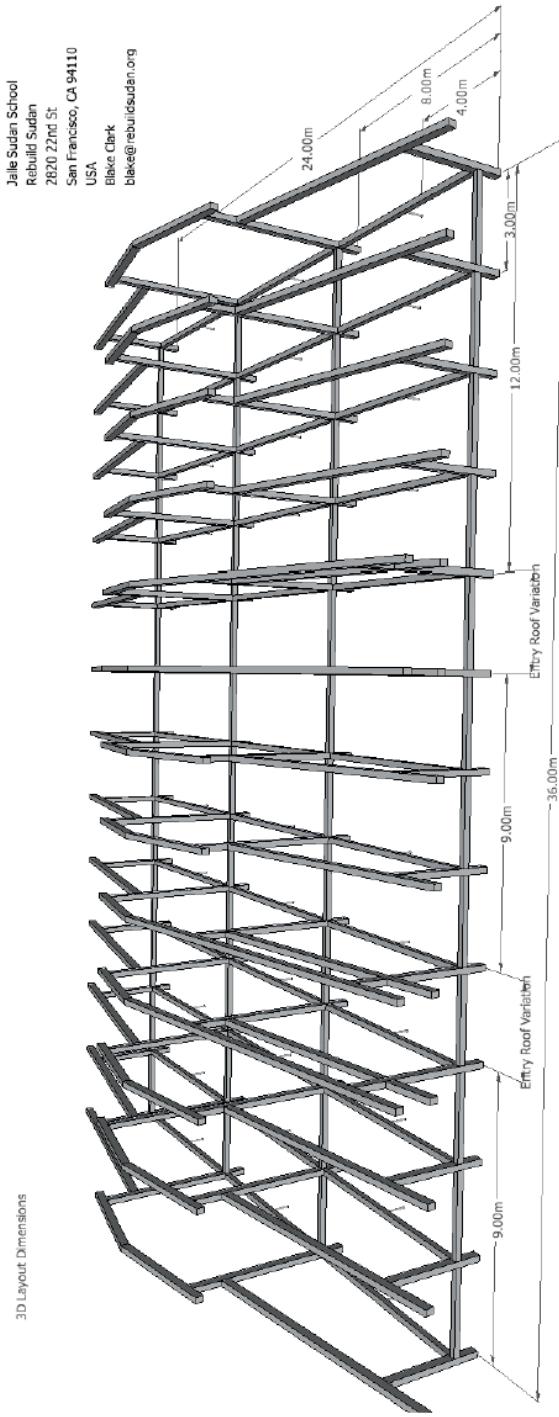
Steel Contractor: Do you need a steel sheet decking (4.5mm thick) to fix the timber floor or can the timber floor be fixed directly on a grid of secondary steel work spaced at 600mm centres?

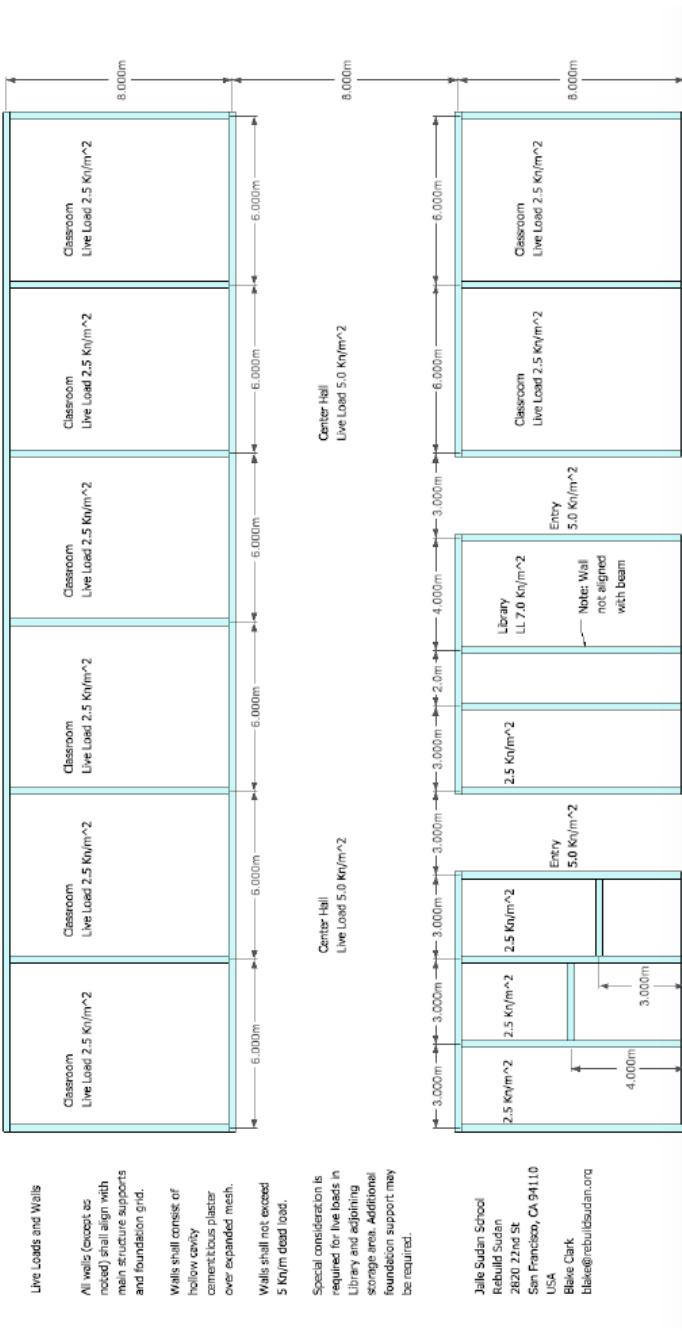
Rebuild South Sudan: A corrugated steel deck support for the timber floor is our preferred option. However, cost for the steel deck might prove prohibitive. Please kindly quote both options listed above.

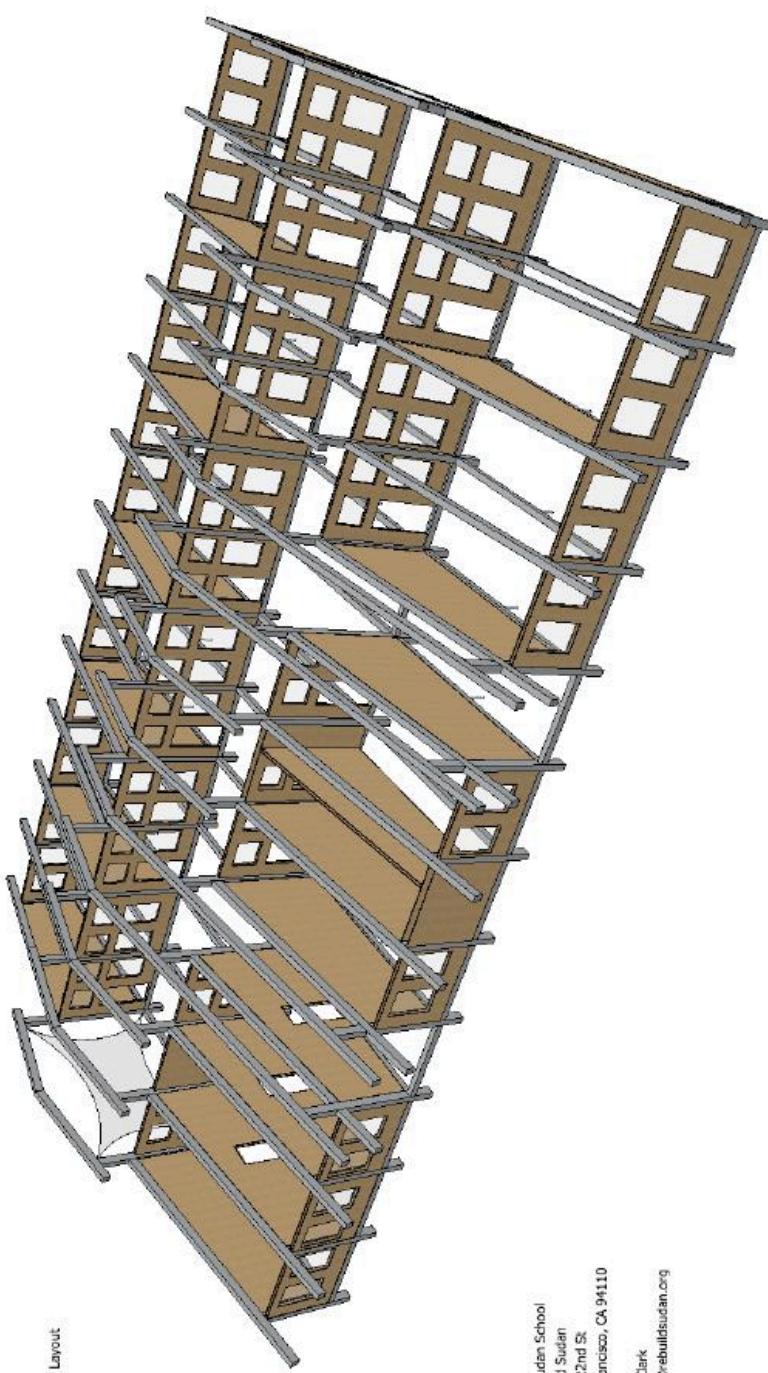
Steel Contractor: The corrugated steel decking which is available is 0.6mm galvanised sheets which we use as a permanent formwork when using concrete slabs. This sheets are not intended to carry live load of the intended purpose. Hence the first option, we will give you the steel supporting system at 600mm centres so that you can fix timber planks directly. The second option we will give with 3.0mm MS sheets below the timber planks.



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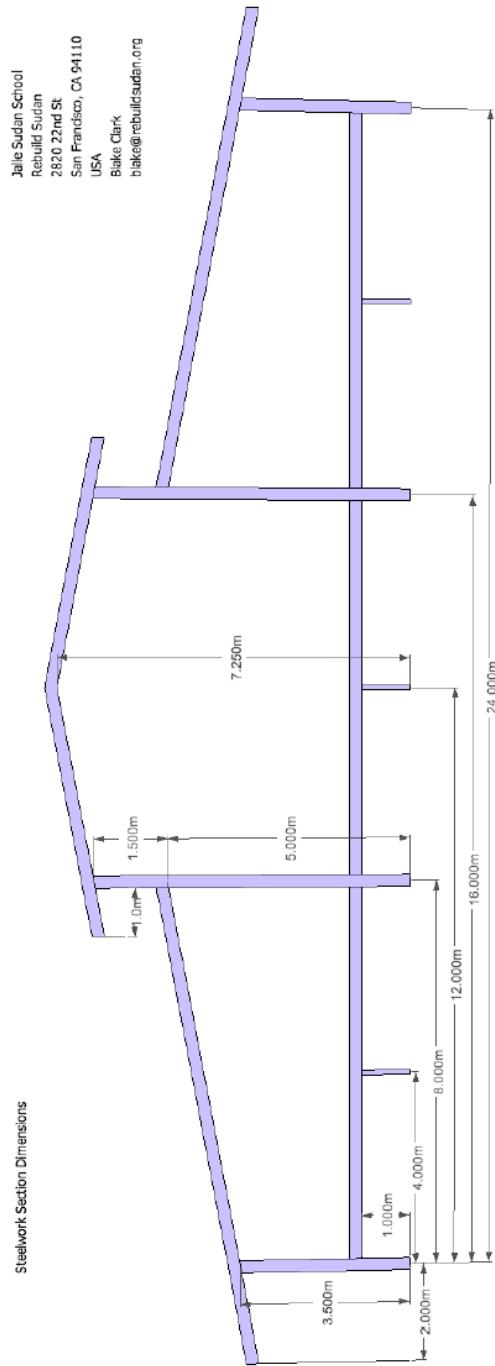


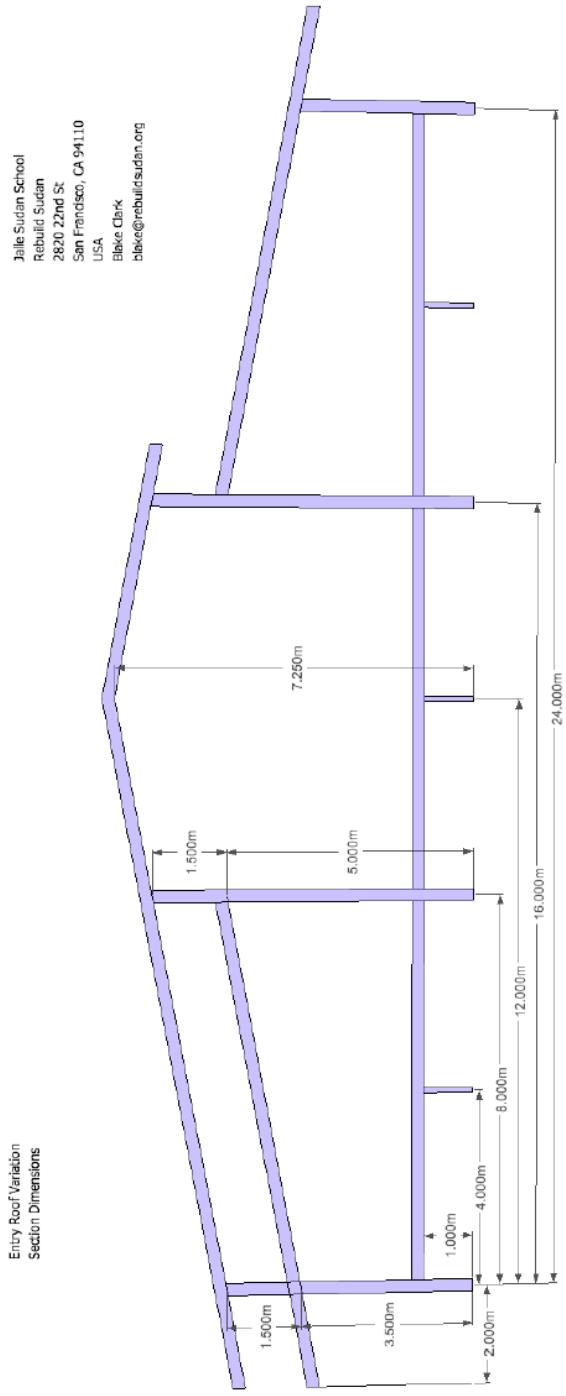


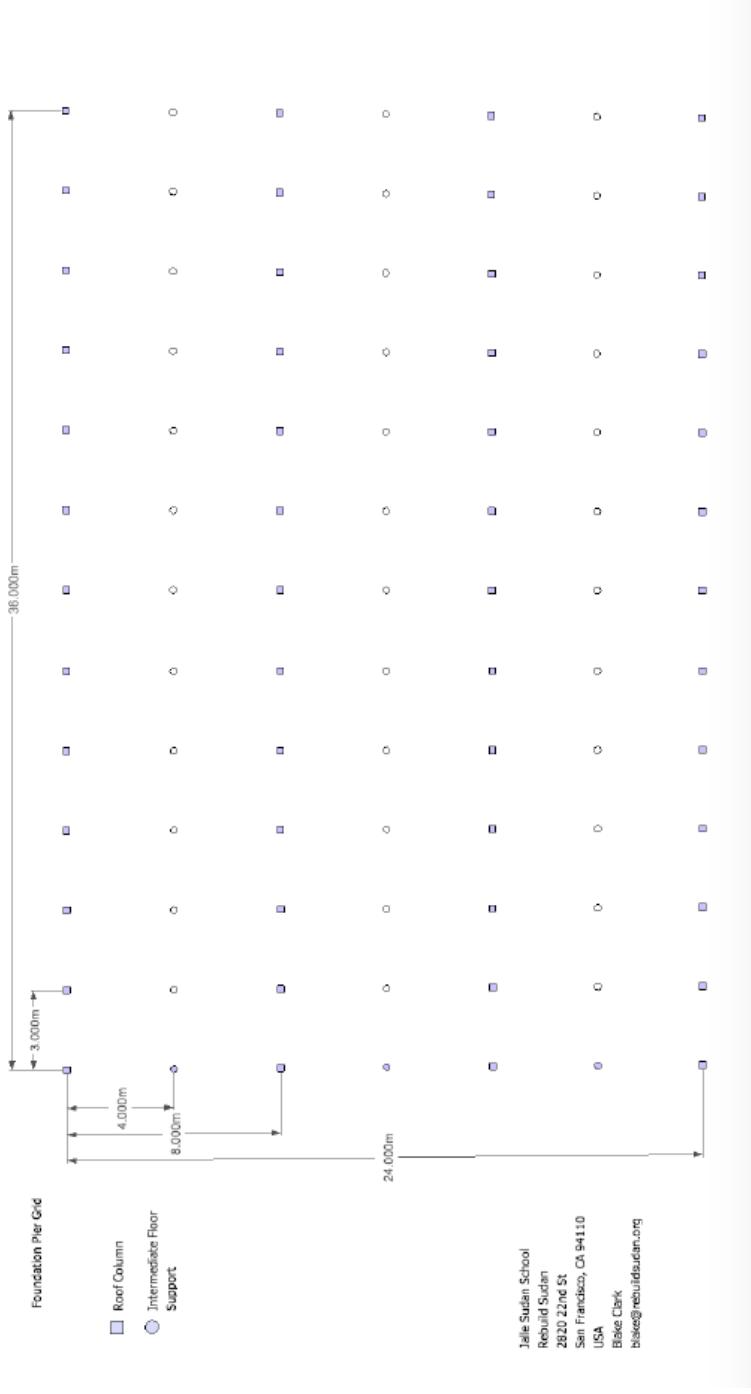


3D Wall Layout

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PLANNED DIMENSIONS:

The following is an excerpt from an email by the project manager in 2010:

The foundation was not installed properly, and the original dimensions were not followed. None the less, I am including these for your reference:

Overall dimensions: 36 meters x 24 meters

Column spacing: 3 meters on center x 8 meters on center

Outer walls: 3.5 meters above grade

Center peak: 7 meters above grade

Floor decking 1 meter above grade

Roof overhangs: 2 meters (outer walls) 70cm (clearstory)

We are planning a deep pier foundation that we will supply. To keep costs in line, the design calls for 91 piers arranged in a 3 meter x 4 meter grid. (see rendering attached)

The sub-floor is steel decking. The finished floor will be wood or composite to save weight - we will not be pouring a concrete slab over the deck.

The current design calls for using modified indigenous materials for walls. This might change, however, we do not need the estimate to include walls at this time.