


**ENVIRONMENTAL AND SOCIAL IMPACT STATEMENT
FOR
THE PROPOSED ESTABLISHMENT OF GIRLS SECONDARY SCHOOL AT PLOT 1,
BLOCK AC AT MANCHALI VILLAGE, MANCHALI WARD, CHAMWINO DISTRICT IN
DODOMA REGION**



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EXECUTIVE SUMMARY

Introduction

The Government of United Republic of Tanzania (URT) in collaboration with the World Bank has prepared the Secondary Education Quality Improvement Project (SEQUIP). The objectives of SEQUIP are to increase access to secondary education, provide responsive learning environments for girls and improve completion of quality secondary education for girls and boys.

In summary, activities under SEQUIP will be structured into four main components:

Component 1: Empowering Girls through Secondary Education and Life Skills

Creating Safe Schools: Implementation of the Safe Schools Program including:

This will involve trained school guidance and counseling teachers; students' life skills training through girls' and boys' clubs by the guidance and counseling teachers; In-service training of secondary school teachers on the teacher code of conduct and gender sensitive pedagogical approaches; Training of school heads and School Boards on GBV, safe school issues etc.; School and classroom monitoring system for early identification of and intervention on girls at risk of drop out; and Community-based mechanism for safe passage to school.

Promoting Girls' Completion of Secondary Education through Quality Alternative Education Pathways including:

Setting up an ICT-enabled system for tracking girls dropping out at national and district level to provide key information for AEP planning and implementation; Alternative Education Centers and LGAs undertaking local outreach activities to out-of-school girls in the community. This will include activities such as AEP center-organized community meetings, information via local radio, flyers and brochures,

Enhancing access to Alternative Education Pathways through (i) expansion of the network of AEP centers; and (ii) tuition fee subsidies for vulnerable girls; A quality package for strengthening student learning in Alternative Education Pathways will also be implemented; Environmental and Social Management Framework –Tanzania - Secondary Education Quality Improvement Project (SEQUIP)

Component 2: Digitally-Enabled Effective Teaching and Learning

Effective Teaching and Learning ; Minimum package of critical teaching and learning resources for all schools: This package consists of an adequate number of textbooks and teacher guides in core subjects (English, Math and Sciences); Equitable, gender-balanced teacher deployment to schools; In-service teacher training/continuous professional development (CPD) to improve classroom teaching practice for secondary English, Mathematics and Science teachers ; Evaluate student learning in lower secondary to provide opportunities for remedial use: to allow for targeted early intervention to prevent girl dropout due to learning difficulties

Digitally-enabled Teaching of Math Sciences and English: Development of an ICT in Education Strategy and plan for secondary education and digital content and connectivity package to facilitate the teaching of English, Mathematics and Science in phases.

Component 3: Reducing Barriers to Girls' Education through Facilitating Access to Secondary Schools

Expansion of the secondary school network to substantially reduce the distance to secondary schools through an expansion of the secondary school network, especially in

rural areas. SEQUIP will disburse project funding on the basis of the number of schools in each LGA meeting minimum infrastructure standards

Support upgrading existing secondary schools with the minimum infrastructure package (number of classrooms/students, adequate WASH facilities; multi-purpose science labs, electricity, etc.) with the objective is that at least 50 per cent of all existing schools in all LGAs will meet the minimum standards set.

Component 4: Technical Assistance, Impact Evaluation and Project Coordination Environmental and Social Management Framework –Tanzania - Secondary Education Quality Improvement Project (SEQUIP)

SEQUIP will be jointly implemented by the Ministry of Education, Science and Technology (MoEST) and the President's Office, Regional Administration and Local Government (PO-RALG).

Tansheq Limited, a NEMC registered environmental consulting firm with **Reg.No:NEMC/EIA/0034**, the offices located at House No. 83 Wakulima/Ngano Rd, Hananasif Estate and P.O. Box 31517 Dar es Salaam, has been contracted by Po-RALG as Implementing Supporting Team (IST).

Project Description

The Project will apply the Environmental and Social Standards (ESSs), as a requirement for the Bank financing. The Government has prepared this Environmental and Social Management Framework (ESMF) for the application of the following Environmental and Social Standards: Assessment and Management of Environmental and Social Risks and Impacts

The proposed project site is administratively located at Manchali village, Manchali ward in Chamwino- District- Dodoma Region and is bordered by individual owned farm to the East and South, Manchali Primary School to the South and residential houses to the North and West.

Accessibility

Manchali is the name of a ward of Chamwino District in Dodoma Region. During the census held in 2012, the ward had about 10,485 human populations which comprised 5,492 female and 4,993 males. The dominant economic activities in this ward are farming and livestock keeping.

Proposed site can be easily accessed by using T3 Morogoro- Dodoma trunk road. Also T5 Dodoma - Iringa trunk road as well as Central railway passes in Chamwino District. The project is located about 1km from the trunk road and it will need construction of access road.

Project Description

The school construction and design will consist of a required infrastructure package based on the school construction and maintenance strategy (e.g. number of classrooms/students, adequate WASH facilities, especially important for girls; multi-purpose science labs, electricity, etc.). The construction package will involve the following buildings;

Classrooms

The classrooms are designed following Education Bulletin number 1 of 2007 that directs capacity of each classroom level, 30 students for advance and 40 students for ordinary level.

However, schedule of materials indicates each classroom will be having capacity of 40 students.

Construction will be undertaken in two phases. The first phase will involve construction of 12 classrooms within six blocks followed by the second phase that will involve the construction of 6 classrooms which will be of 3 different designs (2 classrooms with office, 2 classrooms with toilet and a 2 classrooms block). The proposed project development will adhere to the fire and rescue force directives for public premises.

The Education Global Practice Africa Region report prepared by World Bank provides the following directives; Student classroom ratios of 50:1 or less, student to functioning latrine ratio of 25:1 for girls and 30:1 for boys, at least one multipurpose science laboratory, student textbook ratios in mathematics and science subjects of 1:1, teacher: teacher guide availability of 2:1.

Laboratories

Education Bulletin number 1 of 2007 explain the capacity and set up of laboratory building for each level is 40 students, The scheduling of materials will adhere the bulletin as the following laboratory rooms will be constructed;

- Physics and geography lab
- Chemistry and biology lab,
- ICT room which is to be constructed in the second phase, and
- Domestic science

Administration block

The bulletin indicate for the school having capacity of 1000 student plus need to have not less than 40 teachers excluding other staffs such as school bursar, secretary etc. The administrative building will be constructed as an elevated building whereas only one (1) building will be constructed.

Toilets

The proposed toilet facility will comprise of one block with 16 holes to be constructed standalone as scheduling shows with estimates of one (1) hole for twenty (20) people, nevertheless, some of classrooms will be having sanitary rooms as designed, dormitory, and dining hall will also be having sanitary rooms.

The development of sanitary facilities is necessary to ensure the surrounding environment is well-managed and ensuring social well-being and practical operation of the school since human dignity is directly linked to access of safety and hygienic sanitation.

Dining hall

The Dining Hall is a pivotal gathering space on School's campus and is emblematic of The Family Boarding School ideal. The school will be having enough dinning space to all students since it is a boarding school thus meal will be served. According to the designs of the dining hall, it has the capacity of 2000 students.

Staff houses

The teachers' houses are designed to attract teachers out to the countryside, as well as to increase teachers morally to perform their duties unlike if they are coming far from the school. The design considers the staff house to have one (1) master bedroom, two (2) bedrooms/ one (1) master bedroom, three (3) bedrooms with Public toilet, Sitting room/dining, Kitchen and Store. Four (4) of the staff houses will be constructed.

Dormitories

Dormitories are places where students stay. The student housing must also aim to provide healthy and acoustically pleasant environments for the protection, comfort, and productivity of the students. The dormitories are designed as per provided to meet the SEQUIP objectives having a capacity to accommodate 120 students. For phase one five (5) buildings will be constructed while for phase two four (4) buildings.

Library

The library is important because it affects cultures, it affects innovation, and it affects individuals. Because of all this, library architecture has the responsibility to enhance these effects by providing a knowledge center that is inspirational and conducive to good communication and teaching interactions.

According to designs, the library to be constructed will accommodate 52 students for readings and the computer learning room will accommodate 8 students.

Sick bay

A sick bay provides a dedicated space for students who may feel unwell or require immediate medical attention. It will serve as a primary point of care within the school premises, allowing for timely assessment and treatment of minor illness or injuries.

Incinerator

This will provide safe and efficient area of disposing waste specifically biomedical waste such as used sanitary pads, medical supplies and other potentially hazardous materials.

Other components that will be constructed within school compounds area are Playgrounds, Water tunnel, Water tank (hippo) and its pillars), Manhole and gully trap, Walkway & Paving.

Project activities

Main activities of the project include preconstruction, Construction, Operations, and decommissioning.

Mobilization phase/Pre-Construction Activities

The mobilization phase of the project, which is estimated to take average of maximum three months, will entail the following activities:

- Establishment of construction of camps, material and equipment storage areas, materials processing yards, including sanitation facilities. The following activities will be involved during establishment of the camp.
 - Bush clearing.
 - Construction of Material and equipment storage areas
 - Construction of sanitation facilities
 - Installation of electrical infrastructure
 - Installation of water and wastewater infrastructure
- Identification of naturally-occurring material borrow sites (sand, fill, gravel borrow and quarry sites),
- Identification of sources of water for domestic and construction works

Construction Phase

The construction phase of the project, which is estimates to take 12 month for each of the phase one and will encompass following major activities:

- Earth works to facilitate widening and re-alignment of the road. Earth works will entail the following activities:
 - a) Clearing and grubbing (clearing of vegetation, including trees).
- Extraction of naturally occurring construction materials. This will include:
 - b) Excavation and transport of natural sand, gravel, and sub-base materials to construction sites
 - c) Stone quarrying (including blasting), crushing and transport of crushed aggregates to construction sites
 - d) Transport and handling of fuel, lubricants etc. from their sources to the project site
- Transport of construction materials from source to site such as roof, steel, woods, nails, rope

Operation phase

The maintenance activities of the Overall, SEQUIP will contribute to increasing total enrolment in secondary school by 1.8 million students and increase the number of girls graduating from both secondary schools and alternative secondary education pathways.

Decommissioning Phase

After completion of construction, all the utilities which were used shall be reverted to the Municipal Director who will decide on their future use. The main activities during demobilization phase will engross the following:

- Collection and disposal of storage facilities such as pallets, packing, boxes
- Collection and disposal of construction materials and waste such as waste oil, sewage, solid waste (plastics, wood, metal, papers, etc.) at the workshop, site office etc. to authorized dumpsite
- Restoration of material borrows areas to safer condition

Project Cost

Total Project Cost is four billion Tanzanian shillings

Legal Framework

Relevant sectorial and cross–sectorial policies that provide directives on how projects should be operated

In/on concerned natural resources and sensitive ecosystems are:

- i. The National Energy Policy, 2015
- ii. Education and training policy, 2014
- iii. The National Environmental Policy, 2021
- iv. The Occupational Health And Safety Policy 2009
- v. The National Employment Policy, 2008
- vi. The National Research And Development Policy, 2010
- vii. The National Biotechnology Policy, 2010

Key legislation, which PO-RALG must adhere to during implementation of this project, includes:

- I. The Education Act, Cap.353.
- II. The Law Of The Child Act, Cap. 13 R.E 2019
- III. The Engineers Registration Act, Cap 63
- IV. The Architects And Quantity Surveyors Act, Cap 267
- V. The Workers Compensation Act, Cap 263
- VI. The Persons With Disabilities Act, Cap 183
- VII. The Occupier Liability Act, Cap 64
- VIII. The standard Act, Cap. 130
- IX. The Environmental Management Act, Cap 191
- X. The Water Resources Management Act, Cap 331
- XI. The Forest Act, Cap 323 R.E 2022
- XII. The Electricity Act, Cap 131
- XIII. The Local Government (District Authorities) Act, Cap,287
- XIV. The Local Government (Urban Authorities) Act, Cap,288
- XV. The Fire And Rescue Force (Safety Inspection And Certificates) Regulations, 2008 As Amended In 2017
- XVI. The Fire And Rescue Force (Fire Precautions In Buildings) Regulations, 2015
- XVII. The Environmental Management (Control And Management Of Electrical And Electronic Equipment Waste) Regulations, 2021

Stakeholder Involvement and Participation

The Consultants identified organizations, groups, and individuals considered to be key stakeholders that

Might be impacted by the project components or have influence on the project.

- Region Academic Officer, (RAO),
- District Executive Director (DED) in Chamwino District and District Environmental Officer (DEMO), DSEO, As DE
- Ward officials including VEO at Manchali village and WEO of Manchali ward
- OSHA

Stakeholders Opinions and Concerns

The stakeholder consultations identified both positive opinions and negative concerns. Stakeholders had positive opinions of the project in terms of:

- Education opportunities to the specific project area and surrounding communities
- Rising of Machali Ward's economy as a result of population increase

Stakeholders were concerned about:

- During project implementation, citizens of the specific ward and Tanzanians as whole should be given priority in terms of employment opportunities.

Environmental and Social Impacts

The following impacts were identified in the various project development stages such as mobilization and construction, operational as well as decommissioning stage. These impacts were as follows:

Mobilization/Construction Stage:

- Loss/disturbance of biodiversity and threatened species

- Atmospheric emissions from engines of vehicles
- Dust and noise pollution from mobilization vehicles.
- Public health hazards and safety from construction of supportive infrastructure.
- Land disturbance.
- Roads accidents of the moving vehicles

Operation Stage:

- Disruption of air quality from emissions of exhaust and fugitive gases
- Disturbance to surrounding communities due to increased noise levels
- Aesthetic degradation, environmental pollution and outbreak of diseases and injuries due to improper management of surrounding hazardous and non-hazardous solid waste materials
- General health and safety impacts
- Increased population density

Socio – Economic Aspects:

- A more educated workforce in the country
- Decrease in unemployment rates
- Increase in income levels resulting to benefit to the government from taxes provided
- Women empowerment
- A more balanced and diverse demographic landscape with improved gender representation and opportunities for women in the respective regions and country

Decommissioning Stage:

- Abandoned infrastructure.
- Unemployment.
- Loss of revenue to the government

Enhancement of Positive Socio-Economic Impacts:

- Employment and training especially during construction
- Increased income/revenue/induced development.
- Increased income by utilization of local resources.
- Support to local social services and livelihood.

Project Alternatives Analysis

Different options were considered for the project. Analysis of alternatives compares reasonable alternatives to the proposed project site, technology, design, and operation in terms of their potential environmental and social impacts; the feasibility of mitigating these impacts; their capital and recurrent costs; their suitability under local conditions; and their institutional, training, and monitoring requirements.

It also states the basis for selecting the particular project designs proposed and justifies recommended emission levels and approaches to pollution prevention and abatement.

Alternatives considered for this project were the following

- a) No-Go alternative,
- b) Design and technological considerations
- c) Location alternative
- d) Energy alternative

- e) Water alternative

Environmental and Social Management Plan

The Environmental Impact Assessment for the proposed construction of Regional Girls Secondary School has identified a number of impacts that are likely to arise during construction and operation stage of the proposed project.

The EIA has examined bio-physical, socio-economic and cultural effects of the proposed activity from site clearance, school construction and the school operation.

The real benefits of the proposed project can result only if the risks of the identified adverse impacts are minimized. This can be accomplished through implementation of adequate preventive and mitigation measures by formulating policies to cover them accordingly.

Environmental Management Policy

This will ensure that Project management and staffs are carrying out their activities with the highest regard to the natural environment and sustainable utilization of environmental resources therein. The policy should therefore cover the following, among other issues:

- Ensure that all Project activities operate within legal requirements of all relevant national legislation
- That there are continuous environmental improvement and performance through monitoring of Project activities;
- Ensure that utilization of natural resources is optimal with measures in place to ensure resource availability for future generation;
- Awareness creation to the surrounding community regarding sustainable utilization of natural resources, protection of sensitive ecosystems and bio-diversity maintenance for communal livelihood; and
- Balancing between natural resource use, environmental conservation and economic development.

Occupational Health and Safety Policy

It is developed for this project so as enable establishment of appropriate measures that ensure that the health, safety and welfare of all users is cared for as well as the health requirements of the local community in which the project is located. The policy should highlight on the following, among others:

- Medical examination of workers;
- Sanitation in the Project area;
- Proper liquid and solid waste management and disposal;
- Emergency preparedness;
- Fire safety;
- Necessity and availability of personal protective equipment
- Risk minimization of accidental damage to the community and environment

Community Relations Policy

The Local Community Policy is developed by management of the Project to ensure that the management of the project develops and maintains sound relations with all stakeholders on mutual respect and active partnership. The policy should highlight on ways the management should:

- Work with the local community and relevant government departments and agencies to achieve sustainability of the project;
- Come up with ways of enhancing information flow from management to the community and Project stakeholders, and vice versa;
- Community capacity building; and
- Active engagement of the local community in all Project activities that impact on the local community.

With regard to environmental management during the pre-construction, construction, operation and decommissioning phase of the project, the principal responsibilities of each party as described below. For certain aspects of the programme, assistance will be needed from the Local Government Authorities and the NEMC (mainly in the form of guidance and advice and in project monitoring).

Environmental Monitoring Plan

This report contains a detailed plan to monitor the implementation of mitigation measures and the impacts of the project during its execution. This plan includes a cost estimate for carrying out the proposed monitoring plan.

Cost Benefit Analysis and Resources Evaluation

Environmental cost benefit analysis is assessed in terms of the negative and positive impacts. Furthermore, the analysis is considering whether the impacts are mitigable and the costs of mitigating the impacts are reasonable. As it has been mentioned in Chapters 7 and 8, the potential benefits of the project, in terms of economic advancement and social benefit are substantial.

The environmental impacts are reasonably mitigable. So to mitigate negative impacts, when compared to the required data are relatively small.

Social Cost Benefit Analysis

The benefits from project development can be judged in terms of employment, social welfare, education development, infrastructure development and the local economy (wages, goods and services). Thus, there will be a substantial spread of the benefit within the community through the provision of food, accommodation and other regular services to the employees and students.

Furthermore, the upgrading, development and maintenance of local infrastructure are benefits that will extend far beyond the project's scope and lifetime.

Decommissioning

Decommissioning is the last phase of project life. It involves terminating project activities and operations and rehabilitating site to or close to its original state. It is anticipated that the project shall continue as long as there is a demand for a project, however, individual components of the project shall be decommissioned as need be.

Conclusion

The project will have both positive and negative impact to the environment and the local communities along it. Measures have been proposed to enhance impacts which are positive to the environment and the local people.

For those impacts that are negative, mitigation measures have been proposed to avoid or abate them to the extent possible for the purpose of maximizing benefits of the school project and minimizing detriments of the project intervention to the communities.

Overall, the project shall act as a catalyst for positive change in the surrounding communities by improving education, infrastructure and social well-being, and by involving and engaging the local residents, the project can have a lasting impact and contribute to the overall development of the region.

ACKNOWLEDGEMENT

PO-RALG extends its heartfelt appreciation to the World Bank group for their positive support in creating an enabling environment for young girls to pursue their education in every possible way.

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Lastly, we would like to acknowledge and sincerely appreciate the hard work and dedication of the staff at Tansheq Limited, without whom this project would not have been possible.

ACRONYMS AND ABBREVIATIONS

ADB	African Development Bank
AEP	Alternative Education Program
AIDS	Acquired Immune Deficiency Syndrome
AOI	Area of Interest
APHA	American Public Health Association
ARAP	Abbreviated Resettlement Action Plan
BOD	Biological Oxygen Demand
BS	British Standard
CBOs	Community Based Organisations
CDP	Community Development Program
CH ₄	Methane
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
COD	Chemical Oxygen Demand
CPD	Continuous Professional Development
dB	Decibels
DC	District Commissioner
DED	District Executive Director
DEMO	District Environment Management Officer
DEO	District Education Officer
DMD	Disaster Management Department
DOE	Director Of Environment
DP	Development Partner
DRC	Democratic Republic of Congo
EBRD	European Bank for Reconstruction and Development
EIA	Environment Impact Assessment
EIS	Environmental Impact Statement
EMA	Environmental Management Act
EMP	Environmental Management Plan
EPFIs	Equator Principle Financial Institutions
ESCP	Environmental and Social Commitment Plan

ESDP	Education Sector Development Plan
ESF	Environment and Social Framework
EIS	Environment and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environment and Social Management Plant
ESS	Environment and Social Standards
EU	European Union
FI	Financial Intermediaries
FYDP	Five Year Development Plan
GBV	Gender Based Violence
GCA	Game Controlled Areas
GCLA	Government Chemistry Laboratory Authority
GCS	Geographic Coordinate System
GDP	Gross Domestic Product
GIIP	Good International Industry Practices
GS Pipe	Galvanized steel
HIPC	Heavily Indebted Poor Country
HIV	Human Immunodeficiency Virus
ICT	Information and Communications Technology
IFC	International Finance Institution
IPF	Investment Project Financing
ISO	International Organization for Standardization
IST	Implementing Supporting Team
IUCN	International Union for Conservation of Nature
LGAs	Local Government Authorities
LPG	Liquefied Petroleum Gas
m	meter
MoEST	Ministry of Education, Science and Technology
NAPA	National Adaptation Programme Of Action
NEMC	National Environment Management Council
NEP	National Environment Policy
NESC	National Environmental Standards Compendium
NGOs	Non-Governmental Organisations

NO _x	Oxides of Nitrogen
NSGRP	National Strategy for Growth and Reduction of Poverty
O	Oxygen
O ₃	Ozone
OHS	Occupational Health and Safety
OIP	Other Interested Parties
OP	Operational Policy
OPC	Ordinary Portland Cement
OSHA	Occupational Safety and Health Authority
OSPAR	Oil Spill Prevention Administration And Response
PAP	Project Affected People
PDO	Project Development Objectives
pH	Potential of Hydrogen
PLONOR	Pose Little Or No Risk
PM	Particulate Matters
PoRALG	President office, Regional Administration and Local Government
PPE	Personal Protective Equipment
ppm	Parts per million
PVC	Polyvinyl Chloride
RAO	Region Academic Officer
RAP	Resettlement Action Plan
RAS	Region Administrative Secretary
RC	Region Commissioner
RCDO	Regional Community Development Officer
REMO	Region Management Officer
REO	Region Education Officer
SEP	Stakeholder Engagement Plan
SEQUIP	Secondary Education Quality Improvement Project
SIA	Social Impact Assessment
SO ₂	Sulfur dioxide
TANESCO	Tanzania Electric Supply Company
TBS	Tanzania Bureau of Standards

TDV	Tanzania Development Vision
ToR	Terms of Reference
TSP	Total Suspended Particulates
TZS	Tanzania Standards
URT	United Republic of Tanzania
US EPA	United State Environmental Protection Agency
VEC	Valued Environmental Component
VEO	Village Executive Officer
VG	Vulnerable Group
VOCs	Volatile Organic Compounds
WASH	Water Sanitation and Hygiene
WB	World Bank
WBMS	World Bureau of Metal Statistics
WEO	Ward Executive Officer
WHO	World Health Organization
WSSA	Water Supply and Sanitation Authority

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CHAPTER ONE

INTRODUCTION

1.1 Background

The Government of the United Republic of Tanzania (URT) in co-operation with the World Bank developed the Secondary Education Quality Improvement Project (SEQUIP). The objectives of SEQUIP are to increase access to secondary education, provide responsive learning environments for girls and in result, improve completion of quality secondary education for girls and boys.

Although access to and completion of primary education has improved over the last decade and substantial progress has been made in secondary education, secondary student enrolment rates of girls and boys are still very low in Tanzania compared to other East African countries.

The share of secondary students of the relevant school age population enrolled was only 28 percent in 2018, compared to 68 percent in Kenya, despite the recent enrolment surge. Secondary school attendance was 28 percent for girls and 27 percent for boys. The three main challenges in secondary education are:

- (i) Access to and completion of quality secondary education for girls and boys;
- (ii) A safe, supportive learning environment to keep girls in school longer and delay early marriage; and
- (iii) Effective and clear Alternative Education Pathways (AEP) to enable girls and boys who drop out of lower secondary school, for various reasons including early pregnancy, to finish the lower secondary education cycle and enter upper secondary schools.

The proposed project intends at enhancing the secondary education through delivery point's improvement by increasing access to secondary education, provide responsive learning environments for girls and improve completion of quality secondary education for girls and boys.

The implementing Government Agencies are Ministry of Education, Science and Technology (MoEST) and the President's Office – Regional Administration and Local Government (PO-RALG). Both Ministries are responsible for implementation of school-level education activities through the Local Government Authority (LGA).

One of the key components to be implemented through SEQUIP is facilitating access to secondary schools and bringing schools closer to communities. The project plans to support construction of 1000 new schools and rehabilitation of additional facilities at existing secondary schools. The project will specifically have the following components.

- Component 1: Empowering Girls Through Secondary Education and Life Skills
- Component 2: Digitally Enabled Effective Teaching and Learning
- Component 3: Reducing Barriers to Girls' Education through Facilitating Access to Secondary Schools
- Component 4: Project Coordination, Monitoring and Evaluation

The Secondary Education Quality Improvement Project (SEQUIP) will focus on enabling young girls to continue their secondary education despite social and economic barriers. More generally, SEQUIP will improve the completion of quality, learner-friendly secondary education for girls and boys. In 2018, 1,025,629 girls and 965,242 boys attended lower secondary school.

However, in the same year, a further 134,000 children, half of whom were girls, qualified to continue their schooling but were unable to because of lack of spaces in government secondary schools. Drop-out rates are high for both boys and girls with a quarter of students leaving before they complete their lower secondary schooling.

In 2017, about 5,500 girls were not able to continue with their secondary education due to adolescent pregnancy and early motherhood. SEQUIP will contribute to addressing these key challenges by:

- (i) Creating a gender sensitive, learner-friendly school environment through investing in supportive structures in the school and community including trained school guidance counsellors, stronger links with the community through Parent Teacher Associations and life skills training.
- (ii) Supporting female students to avoid dropping out of secondary school due to pregnancy through measures that include:
 - (a) Encouraging community awareness of risks for girls;
 - (b) Supporting safe passage and reducing the distance to schools to lower the risks of gender-based violence on the way to and from school; and supporting girls who become pregnant to access recognized, quality Alternative Education Pathways (AEPs) to obtain lower secondary certification and continue with upper secondary education or post-secondary education.
 - (c) Improving the quality of secondary school teaching and learning environments through the hiring of additional qualified teachers in core subjects and providing textbooks in core subjects.
 - (d) Increasing the number of secondary school spaces through the construction of new classrooms that meet minimum infrastructure standards and supporting the expansion of the school network to bring schools closer to communities.
 - (e) Using innovative digital technology to facilitate mathematics and science teaching and improve learning.

These SEQUIP interventions are aligned with the Government's Education Sector Development Plan (ESDP) (2016/17–2020/21) and related strategies. SEQUIP design also draws on lessons learned from previous and ongoing World Bank and Development Partner (DP) support to education in Tanzania.

Overall, SEQUIP will contribute to increasing total enrolment in secondary school by 1.8 million students and increase the number of girls graduating from both secondary schools and alternative secondary education pathways.

Over its lifetime, the Project will directly benefit about 6.5 million new and existing secondary school students, including 3.2 million girls. 1 SEQUIP will help more girls' transition from lower to upper secondary education, including girls who had to leave lower secondary government schools due to pregnancy.

1.2 Objectives of the study

- a. To establish before a decision is taken by any person, authority, corporate body or unincorporated body including the Government and local government authorities intending to undertake or authorize the undertaking of any activity impacts that may likely or to a significant extent affect the environment or have environmental effects on those activities;

- b. To promote the implementation of the Act and all laws and decision making process through which the goal and objective in paragraph (a) may be realized;
- c. To encourage the development of procedure for information exchange, notification and consultation between organs and persons when a proposed activity is likely to have significant environmental effects on trans boundary or an environment bordering regions, districts, municipalities, towns and villages;
- d. To ensure that environmental considerations are explicitly addressed and incorporated into the development decision making process;
- e. To anticipate and avoid, minimize or offset the adverse significant biophysical, social and other relevant effects of development proposal;
- f. To protect the productivity and capacity of natural systems and the ecological processes which maintain their functions; and
- g. To promote development that is sustainable and optimizes resources use and management opportunities.

1.3 Project Objectives

The Program's objective is to increase access to secondary education, provide responsive learning environments for girls and improve completion of quality secondary education for girls and boys. The project interventions will:

- (i) Create a safe, gender sensitive and learner-friendly school environment,
- (ii) Provide good quality alternative education opportunities for secondary school drop-outs including young mothers,
- (iii) Improve the quality of secondary education by improving teacher skills, reducing class sizes and providing adequate teaching and learning materials,
- (iv) Use innovative digital technology to improve mathematics and science teaching and;
- (v) Increase access to secondary education by providing more schools closer to the homes of children. Over the project's lifetime, 6.5 million children (3.1 million girls) will benefit from project interventions and an additional 900,000 children are expected to successfully complete their secondary education.

A need and evidence-based approach will be used in identification and selecting locations and schools that will benefit

1.4 Scope of the Study

According to Environment Management Act of 2004, and its Environmental Impact Assessment and Audit Regulation of 2005 objectives for carrying out EIA include:

- To ensure that environmental considerations are explicitly addressed and incorporated into the decision-making process, with the aim to anticipate and avoid, minimize, or offset the adverse significant biophysical and social effects of the proposed project; and to protect the capacity of natural systems and ecological processes to maintain their functions.
- To promote development that is sustainable and optimizes resources use and management opportunities.

1.5 Land requirement for the project

Land is public property and rights to the land are issued in the form of residential leases and certificates of rights to occupancy. The construction of new schools in Chamwino district will require enough land. Site selection will be important in minimizing the extent of resettlement

including of informal land owners and or users who were present in an area prior to the selection of a site for a school.

The proposed land at Manchali village is owned by the village government through Manchali primary school. As per construction directives from PO-RALG, specific land size requirement for school construction is The proposed project site is administratively located at Manchali village, Manchali ward in Chamwino- District- Dodoma Region and is bordered by individual owned farm to the East and South, Manchali Primary School to the South and residential houses to the North and West.

1.5.1 Accessibility

Manchali is the name of a ward of Chamwino District in Dodoma Region. During the census held in 2012, the ward had about 10,485 human populations which comprised 5,492 female and 4,993 males. The dominant economic activities in this ward are farming and livestock keeping.

Proposed site can be easily accessed by using T3 Morogoro- Dodoma trunk road. Also T5 Dodoma - Iringa trunk road as well as Central railway passes in Chamwino District. The project is located about 1km from the trunk road and it will need construction of access road.

25. However, the proposed site for this project has a total of 24 acres.

1.6 Study Approach

The approach to this exercise was structured to cover the requirements under the Environment Impact Assessment and Audit Regulations, 2005. It involved largely an understanding of the project background, the preliminary designs and the implementation plan as well as commissioning.

In addition, baseline information was obtained through physical investigation of the project site areas, desktop studies, and public consultations with members of the community in the project areas, survey, photography, and discussions with the project Proponent.

The methodology used in this study follows specific procedures and guidelines set by the EIA & Audit Regulations of 2005. The study adopted the following approach: The process for Conducting Impact Assessment is closely related to the flowchart in Figure 0-1.

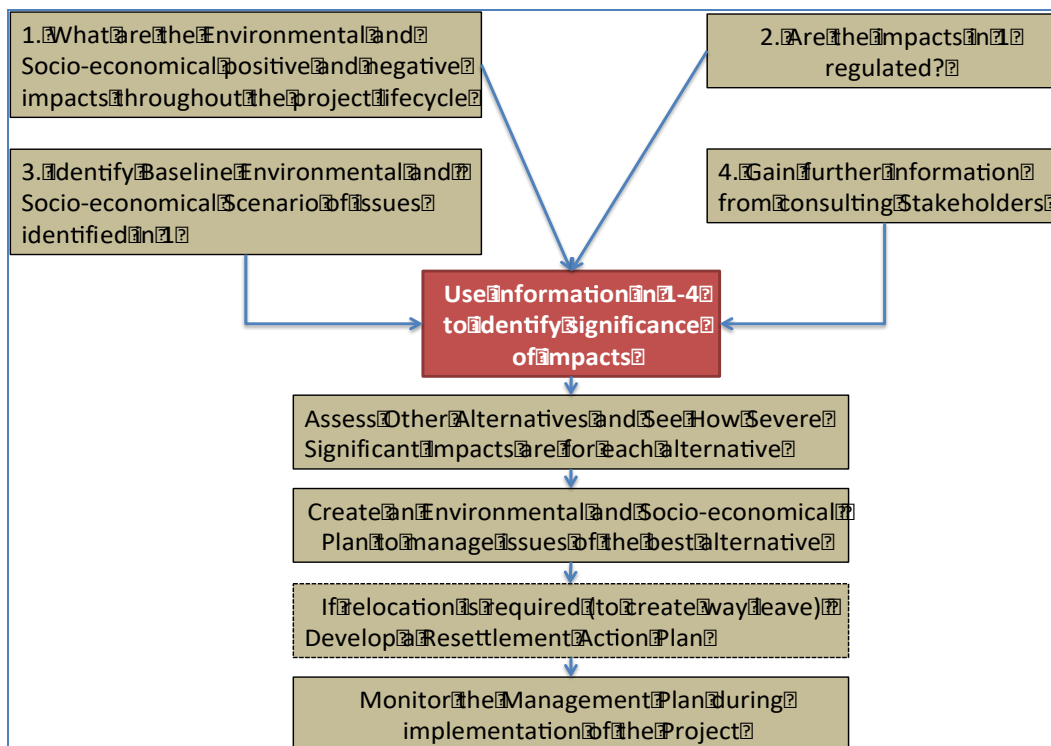


Figure 0-1: Impact Assessment Process

1.7 Study Methodology

Information for this study was collected by utilizing different methodologies that included literature review through which all available literature on the project and its background was reviewed; fieldwork; in which field sites were visited and studied, consultations with stakeholders including the National Environment Management Council (NEMC), Government agencies responsible for the environment and natural resources as well as OSHA, Fire, etc.; Chamwino District, and local council leaders and the relevant community members.

1.7.1 Field Studies

Field visits were essentially carried out in order to fully realize the scope of the project, the biophysical environment specific to the location and the socio-economic conditions in the project area. All relevant accessible areas were visited. The study team used the fieldwork to conduct interviews with stakeholders and also to collect information on the state of the environment. Information collected includes physical and biological environment, socio-economic environment trends and project designing and components. Other information was

appraised through key informants' interviews and experts' observations. Also field studies were aided by the use of camera and GIS to easy collection of spatial data.

1.7.2 Stakeholder Consultations

Broad consultations were conducted involving different institutions and key stakeholders as identified under "Methodology" above. The concerns of each group have been addressed in this report.

1.7.3 Baseline Data and Information

A review of the available information on the project was carried out in order to gain a basic understanding of construction components and its operation. This was accomplished through:

- Literature Review-study team went through different documents including those from previous school construction conducted in Tanzania and other parts of the world.
- Interviews were carried out with institutions, professionals and NGO based associations associated with, and/or affected by the project in Dodoma,

1.7.4 Physical, Biological, Socio-economic and Cultural Conditions

This involved collection of the baseline data and information at the project core areas, immediate vicinity and area of influence which was mainly done from primary and secondary sources at Dodoma and Dar es Salaam; identifying physical components and aspect involves in the project, identifying and assessing biological aspects that may have interactions with the school construction, assessing socio-economic aspects in relation to the proposed survey and assessing cultural and community interaction aspects.

Primary data were collected based on interviews and discussions with key informants, various central and local level governments based institutions, officials, the community, CBOs, NGOs and local resource users. Socio-economic and bio- physical surveys were conducted including sourcing secondary data from various Government department reports and previous studies as well as in situ observation using dedicated equipment for air, noise, water and vibration data collection.

1.7.5 Policy, Legal and Institutional Framework

During the study, the team was able to identify different relevant Government policies, legislations and regulations; international treaties and agreements, and by-laws which guide the proposed activities. All legal documents were reviewed for appropriate sections relevant to the school construction. This was done in order to make a very strong inter coordination

between policy, legal and institutional framework with the proposed project and all other trans-boundary agreements.

1.8 Study Team

The study team was comprised of Environmental, social and GIS professionals who include a Team Leader who is Senior Environment Expert, and other members of team as illustrated in the table below:

Table 0-1: Study Experts

S / N	Experts	Specialty	Signatures
5.	Eng. Gwakisa Mwakyusa	Senior Environment expert	
6.	Mr. Lusako Raphael	Senior Environment expert	
7.	Eng. Anamary Philemon	Monitoring and Waste Management Expert	
8.	Mr. Erick Gagalla	Environmental expert	
Other Experts Involved in the Study			
	Nyasaila Nyakia	Sociologist	
	Veronica Msolla	Environmental Officer	
	Asia Abibu	Environmental Officer	
	Jerusalem Mwaipopo	Environmental Engineer	
	Joachim Marawiti	Environment and GIS Expert	

1.8.1 Developing an Environmental Management Plan

This report recommends feasible and cost-effective measures to prevent or reduce any significant negative impacts to levels that are acceptable. This involves:

- Estimating the impacts and costs of those measures, and of the institutional and training requirements to implement them,

- Preparing a management plan including proposed work programs, budget estimates, schedules, staffing and training requirements, and other necessary support services to implement the mitigating measures,
- A management plan also covering the decommissioning phase of the project,

1.8.2 Developing an Environmental Monitoring Plan

This report contains a detailed plan to monitor the implementation of mitigation measures and the impacts of the project during its execution. This plan includes a cost estimate for carrying out the proposed monitoring plan.

1.9 Content of the Report

This report is designed to meet the requirements of Regulation 18 of Environmental Impact Assessment and Audit Regulations (United Republic of Tanzania, 2005) and as per the process of conducting EIS. This introductory chapter is followed by the subsequent chapters as detailed in Table 0-2.

Table 0-2: Content of the Report

Chapter	Description
1. Introduction	Overview and objective of the study, methodology and outline of the report
2. Project Background and Description;	<p>This chapter describes:</p> <ul style="list-style-type: none"> • The executing entities of the project and their respective roles in the project • The project's geographic location, preferably illustrated with appropriate maps • Summary of the project (project objective(s), expected results/outcomes, outputs and main activities • Implementation arrangements.
3. Policy, Administrative and Legal Framework;	Describe the policy, legal and administrative framework within which the project takes place and identify any laws and regulations that pertain to environmental and social matters relevant to the project. This includes regulations about environmental and/or social impact assessments to which the project must adhere as well as laws implementing host country obligations under international law. If applicable. Where pertinent, consider legal frameworks for promoting gender equality. Flag any areas where the project might fall short on compliance.
4. Baseline Existing Conditions; or	The main purpose of this section of the EIS report is to provide an understanding of current environmental and social conditions that form the baseline against which project impacts can be predicted and measured during project implementation. For moderate-risk projects that require only a partial EIS and no scoping study, this section also provides an opportunity to substantiate the results of the ESMS screening by confirming potential impacts and/or identifying other potential impacts.
5. Stakeholder Identification and Analysis	<p>The purpose of the stakeholder identification and analysis is to understand potential impacts on stakeholders and to clarify who should be involved in the EIS process and how. This should be able to elaborate:</p> <ul style="list-style-type: none"> • stakeholders' interests in and expectations from the project; • how they might influence the project (positively or negatively);

Chapter	Description
	<ul style="list-style-type: none"> • a first appraisal or estimation of how their livelihoods could be impacted by the project (positively or negatively); and • How they should be involved in the EIS based on the information in the three items above.
6. Assessment of Impacts and Identification of Alternatives	<p>This step is the heart of the EIS; it itemizes and describes the identified impacts, makes predictions in terms of their probability, and assesses their significance. When analyzing the risks not only direct impacts should be taken into consideration but also indirect impacts such as inadvertent knock-on effects or cumulative effects that materialize through interaction with other developments, impacts occurring at the project site or within the project's wider area of influence and impacts triggered over time</p> <p>The purpose of the analysis of alternatives is to identify other options, including not implementing the project, to achieve the project objectives and compare their impacts with the original proposal. This step is required only for high-risk projects where the identified impacts are very significant.</p>
7. Impacts Management or Environmental Mitigation Measures	A main output of the EIS process is a strategy for managing risks and mitigating impacts. The identification of mitigation measures is done in consultation with affected groups and is guided by the mitigation hierarchy. The mitigation hierarchy implies that all reasonable attempts must first be made to avoid negative social or environmental impacts. If avoidance is not possible without challenging the conservation objective of the project, measures should be taken to minimize the impacts to acceptable levels and address remaining residual impacts with adequate and fair compensation measures.
8. Environmental and Social Management Plan	This is a risk management strategy is documented in an Environmental and Social Management Plan (ESMP) that describes: the mitigation measures developed during the EIS, an implementation schedule and required resources and responsibilities. The technical and operational feasibility, cultural adequacy and sustainability of proposed measures must be demonstrated as well as requirements for capacity building and institutional strengthening, where relevant.
9. Environmental and Social Monitoring Plan	The ESMP should also indicate how the measures designed to avoid impacts will be monitored for effectiveness.
10. Resource Evaluation or Cost Benefit Analysis	This chapters intends to internalize all costs associated with management of environmental and social impacts while comparing with the benefits which could be derived from implementation of the project
11. Decommissioning;	How decommissioning of the project shall be affected and restoration of the site
12. Summary and Conclusions	An overview of the study as well as conclusion from experts regarding the findings
13. References	List of all sources of information used in the report
14. Appendices	Detailed descriptions which are important for the study but cannot be included in the main body

CHAPTER TWO

2 PROJECT BACKGROUND DESCRIPTION

2.1 Background

The Project Development Objectives (PDOs) is to increase access to secondary education, provide responsive learning environments for girls and improve completion of quality secondary education for girls and boys. SEQUIP will contribute to addressing key challenges to girls and boys accessing education and this school will definitely target girls for their studying excel. The project aims to reduce distance to government target: 3km (or 45 minutes)

The project will contribute to increasing the total number of students in secondary education including Alternative Education Pathways (AEP) by 250,000. It will directly benefit about 1.8 million secondary school students, including 920,000 girls, 95% of whom are enrolled in lower secondary. SEQUIP will help more girls' transition from lower to upper secondary education, as girls are underrepresented at this level

2.2 Project Location and Accessibility

The proposed project site is administratively located at Manchali village, Manchali ward in Chamwino- District- Dodoma Region and is bordered by individual owned farms to the East and South and human settlements to the North and West. Manchali is one of the wards in Chamwino District in Dodoma Region, Tanzania.

Proposed site can be easily accessed by using T3 Morogoro – Dodoma trunk road which is located about 1km from the project site. Therefore, the project shall include construction of access road.

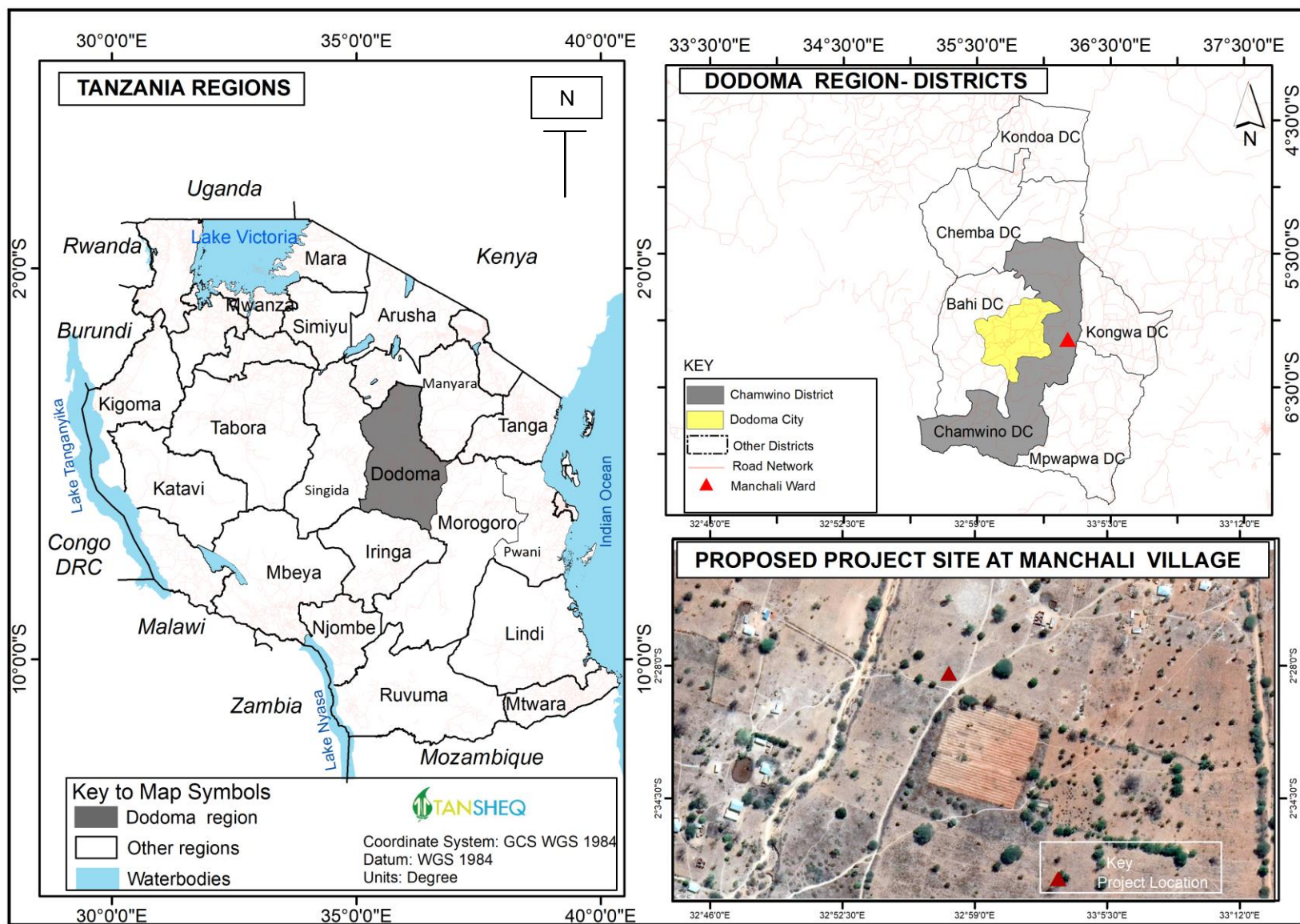


Figure 2-1: The proposed project location (Source, Tansheq, 2022)

2.3 Current Situation in vicinity proposed site

2.3.1 Proposed site

The proposed site is within mixed agricultural areas and it is the Greenfield site as it is not disturbed and no any development within the site.

2.3.2 Surroundings

The proposed area for school construction is surrounded by agricultural fields to the East and South, Manchali primary school to the South and residential houses to the North and West. Residential houses are located at the distance of 200m from the project area.



Figure 2-2: Scenery of the project site

2.4 Project Planning and Design

The school design consists of required infrastructure package based on the school construction and maintenance strategy (e.g. number of classrooms/students, adequate WASH facilities, especially important for girls; multi-purpose science labs, electricity, etc). In Dodoma region school will be having both ordinary and advanced level with student capacity between 1000 and 1100 students. The construction package will involve the following facilities:

2.4.1 Classrooms

The classrooms are designed following Education Bulletin number 1 of 2007 which directs capacity of each classroom level, 30 students for advance and 40 students for ordinary level. However schedule of materials indicating each classroom will be having capacity of 40 students. Construction will be undertaken in two phases. The first phase will involve construction of 12 classrooms within six blocks followed by the second phase which will involve the construction of six classrooms. The proposed project development will adhere to the fire and rescue force directives for public premises.

The Education Global Practice Africa Region report prepared by World Bank provides the following directives; Student classroom ratios of 50:1 or less, student to functioning latrine

ratio of 25:1 for girls and 30:1 for boys, at least one multipurpose science laboratory, student textbook ratios in mathematics and science subjects of 1:1, teacher: teacher guide availability of 2:1. Figure 0-1 showing the proposed classroom design.

2.4.2 Administration blocks

The bulletin indicates for the school having capacity of 1000 student plus need to have not less than 40 teachers excluding other staffs such as school bursar, secretary etc.

2.4.3 Laboratories

Education Bulletin number 1 of 2007 explain the capacity and set up of laboratory building for each level is 40 students, The scheduling of materials for Dodoma will adhere the bulletin as required the following laboratory rooms will be constructed

- Physics and geography lab
- Chemistry and biology lab,

2.4.4 Toilets

The toilet facility consists of one block with 16 holes to be built separately, as shown on the schedule; however, some classrooms, as well as the dormitory and dining hall, have sanitary rooms.

2.4.5 Generator

This will be alternative source of power at school and the incorporated premises such as staff quarters. One generator room with about 20kw capacity will be constructed.

2.4.6 Dining hall

The Dining hall is a pivotal gathering space on School's campus and is emblematic of The Family Boarding School ideal. The school will be having enough dinning space to all students since it is boarding school, meal will be served. According to the designs of the dining hall, it has the capacity of 2000 students.

2.4.7 Teachers' house

The teachers' houses were designed to attract teachers out to the countryside, as well as to increase teachers morally to perform their duties unlike if they are coming far from the school.

The design considers the staff house to have one (1) master bedroom, two (2) bedrooms with Public toilet, Sitting room/dining, Kitchen and Store.

2.4.8 Dormitories

These dormitories are the place where students stay. The student housing must also aim to provide healthy and acoustically pleasant environments for the protection, comfort, and productivity of the students.

2.4.9 Library

The library is important because it affects cultures, it affects innovation and it affects individuals. Because of all this, library architecture has the responsibility to enhance these effects by providing a knowledge center that is inspirational and conducive to good communication and teaching interactions. According to designs the library to be constructed will accommodate 52 students for reading and the computer learning room will accommodate 8 students.

Other components that will be constructed within school compounds area Water tunnel, Waste incinerators, Water tank (hippo) and its pillars), Manhole and gully trap, Walkway & Paving, playground, food store rooms, school shops and wall fence. Table 2-1 below show the summary of buildings that will be constructed.

Table 2-1: summary of buildings to be constructed

CONSTRUCTION			
No	Buildings	No. of Buildings	No. of rooms
First construction phase			
1	Building with 2 classrooms	2	4
2	Building with 2 classrooms and one office	3	6
3	Building with 2 classrooms and 2 toilets	1	2
4	Building with Physics laboratory and Geography room	1	2
5	Building with Chemistry and Biology laboratory	1	2
6	Administration Building	1	1
7	Toilet building for students (girls)	1	16
8	Generator Room	1	1
9	Dining Hall	1	1
10	Teacher's house (3 rooms)	1	
11	Teacher's house (2 in 1)	1	
12	Dormitories @ 120	5	
surrounding activities			
1	Water Tunnel (1050m)	1	1
2	Waste incinerators	1	1
3	Waste incinerators	2	2
4	Underground water storage tanks (32,000 liters)	2	2
5	Water tank (hippo) and its pillars)	2	2
6	Manhole and gully trap	1	
7	Walkway & Paving		
second construction phase			
1	building with 2 classrooms	2	4
2	Building with 2 classrooms and 1 office,	3	6
3	ICT Room	1	1
4	Library	1	1
5	Master's Houses (3 Rooms)	4	
6	Dormitories @ 120 Students	4	

2.5 Project Activities

The envisaged project activities can be broadly categorized in three phases as listed in **Error! Reference source not found.**

- Mobilization and Construction
- Operational phase
- Decommissioning phase

Table 2-2: Project activities

Project Phase	Activities
Mobilization Phase	<ul style="list-style-type: none">• Bush clearing.• Site levelling• Site marking• Temporary camp/shed for office• Construction of access road
Construction phase	<ul style="list-style-type: none">• Excavation of trenches for foundation• Alignment of blocks for Foundation• Concrete mixing• Setting up main door frame and other room door frames• Wall construction until window frame base• Setup ventilators for exhaust fans, bathroom ventilators if needed• Slabs formworks for Floors• Bar bending work for beams and roof• Electric pipes setup inside roof• Clear any blockage in the roof pipes• Laying electric pipes in the walls and setup electric boxes• Tiles laying on the floors and bathroom walls• Plastering of roof and walls indoors and outdoors• Finishing outside and plumbing work and tank• Painting• Electric wiring and switches setup• Compound wall/fence• Firefighting system installation• Water drainage system• Air cooling system installation
Operation phase	<ul style="list-style-type: none">• Teaching services• Movement within dormitories, classrooms, dinning, laboratory, offices and washrooms• Meeting and Conferences• Health. Safety and security as well as social issues.
Decommissioning phase	<ul style="list-style-type: none">• Expansion and maintenance

2.5.1 The mobilization phase of the project

The mobilization phase of the project, which is estimated to take average of one month and maximum three months, will entail the following activities:

- Establishment of construction of camp. The following activities will be involved during establishment of the camp;

- ✓ Design finalization
- ✓ Equipment and labor mobilization
- ✓ Workers/security temporarily house construction
- ✓ Bush clearing,
- ✓ Construction of Material and equipment storage areas,
- ✓ Construction of sanitation facilities,
- ✓ Installation of electrical infrastructure,
- ✓ Installation of water and wastewater infrastructure,
- ✓ Construction of access road
- Identification of sources of construction material (borrow pits and quarry sites),
- Identification of sources of water for domestic and construction works.

2.5.1.1 Materials Required During Mobilization Phase

The following materials will be required during mobilization phase of the project:

- Cement, sand, and aggregates for block and concrete works,
- Water for general construction works and dust abatement,
- Timber, galvanized iron sheets, paints, nails, etc. for roofing,
- Electrical works: conduits, cables, fittings,
- Cement, galvanized iron sheets, nails, fence wire, electrical and plumbing utilities will mainly be obtained from either Dar es Salaam, while sand, aggregates, and timber will be obtained locally.

2.5.1.2 Equipment Required During Mobilization Phase

The major equipments which will be required during mobilization phase of the project will include:

- Bulldozers/motor graders, excavators for site clearing, excavation, and grading of the storage facilities construction at site,
- Light duty vehicles and trucks for the transport of construction materials, small machines and staff,
- Water pumps, block making machines, stationery concrete mixers and trans mixers, etc. for making of blocks and concrete mixes for concrete works,
- Electric power generator(s).

2.5.1.3 Wastes Generated During Mobilization Phase

Mobilization phase of the project will generate the wastes shown in below Table 2-3

Table 2-3: Wastes likely to be generated During Mobilization Phase

Aspect	Solid Waste	Liquid Waste	Gaseous Waste
Site clearing and excavation	Earth, green cutting	None	Generation of air pollutants (dust)
Construction of foundation(s): block/concrete works	Concrete, blocks, hessian cement bags	Water slurry, wash-down water	None

Construction of the main Storage room	Cement bags, mortar, steel reinforcements, nails, timber, iron sheet wastes, etc.	Concrete slurry	Paint
Installation of electrical infrastructure	conduit pipes, cables	None	None
Installation of water infrastructure	PVC and GS pipes	None	None
Labor force	Plastic bottles/bags, food Wastes	Sanitary wastes	None
Servicing of construction equipment	Used batteries, used tyres, used metals parts, used oil and fuel filters, empty oil drums	Waste oil	None

2.5.1.4 Treatment and Disposal of Wastes Generated During Mobilization Phase

The treatment methods for the wastes generated during mobilization phase shall be based on re- using, re-cycling, burying, or burning, and on-site treatment.

- During site clearing, topsoil and green cutting shall be dispose of in old borrow pits or other areas approved by the Engineer
- Concrete and cement blocks wastes shall be disposed of in borrow pits during their reinstatement as approved by the Engineer.
- Metal wastes such as GS pipes, nails, reinforcement bars, and used equipment parts shall be disposed of by recycling. They will be collected and stored; until enough quantities are obtained before being disposed of by the Contractor. The metal scraps disposing companies shall be approved by the Engineer.
- Degradable materials such as paper cement bags and paper boxes shall be treated on-site by either controlled burning.
- Non degradable wastes such as plastic, PVC pipes, and plastic bottles shall be collected and transported and given freely to plastic factories where they will be recycled.
- Used batteries, empty metals drums, used oil filters shall be disposed of through approved disposing companies.
- Temporary pit latrines shall be constructed at active mobilization sites (campsites) for the disposal of sanitary wastes.

2.5.2 Construction Phase

The construction phase of the project, which is estimated to take 12 months for each of the phase one and will encompass following major activities:

- Earthworks to facilitate widening and re-alignment of existing road. Earthworks will entail the following activities:
 - a) Clearing and grubbing (clearing of vegetation, including trees).
- Extraction of occurring construction materials. This will include:
 - a) Excavation and transport of natural sand, gravel, and sub-base materials to construction sites
 - b) Stone quarrying (including blasting), crushing and transport of crushed aggregates to construction sites
 - c) Transport and handling of fuel, lubricants etc. from their sources to the project

site

- Transport of construction materials from their sources to the project site such as roof, steel, woods, nails, rope etc.

2.5.2.1 Materials Required During Construction Phase

During the project construction, the following materials as presented in Table 2-4 will be required

Table 2-4: Materials required During Construction Phase

No	Material	Usage	Possible Source
1.	Ordinary Portland Cement (OPC) and Pozollana Portland Cement (PPC)	For construction purposes.	Twiga cement (Dar es salaam), Tanga cement (Tanga), and Mbeya cement (Mbeya)
2.	Sand	Production of mortar and general concrete works	Stone crusher dust and sand pits (to be established by Contractors)
3.	Crushed aggregate	Concrete works (Structural works) and construction	Local available
4.	Steel Reinforcement bars	Reinforced concrete works construction of	Dar/imported
5.	Steel shutters and Form works	Concrete works	Dar
6.	Soft timber	Production of timber	Locally
7.	Nails	Nails for fixing timber formworks	Dar es salaam
8.	Water	Drinking, concrete works, dust suppression	Rivers, streams, DUWASA and boreholes

2.5.2.2 Wastes Generated During Construction Phase

The wastes generated during construction phase of the project will result from operation of construction and equipment maintenance. The wastes which will be generated during construction phase of the project are shown in Table 2-5.

Table 2-5: Wastes likely to be generated during Construction Phase

Aspect	Solid Waste	Liquid Waste	Gaseous Waste	Hazardous Waste
Operations of Campsite				
	Paper	Sanitary waste	-	-
	Litter	-	-	-
	Toner, cartridges	-	-	-
	Paper litter	Sanitary waste	-	-
	Plastic bottles/bags	-	-	-
	Aluminium cans	-	-	-
	Food wastes	-		

Aspect	Solid Waste	Liquid Waste	Gaseous Waste	Hazardous Waste
				Biohazard wastes (medical wastes)
Machinery and equipment Maintenance				
	Plastic and glass (containers), used tyre, metal (used parts), plastic and cable parts, used lead-acid batteries,	Waste oil and grease, battery acid (dilute sulphuric acid)	-	Gases that are compressed, liquefied, or dissolved under Pressure may be hazardous. Flammable liquids including oil,
	-	Lubricant, coolants (radiator fluid), hydraulic fluid, Waste water)	-	Lubricants, hydraulic fluid

2.5.2.3 Treatment and Disposal of Wastes Generated During Construction Phase

The treatment methods for the wastes generated during construction phase will depend on whether they are degradable, non-degradable, hazardous, or non-hazardous. Depending on the nature of the wastes, the wastes will either be re-used, re-cycles, buried, or burnt.

2.5.3 Operation phase

The maintenance activities of the Overall, SEQUIP will contribute to increasing total enrolment in secondary school by 1.8 million students and increase the number of girls graduating from both secondary schools and alternative secondary education pathways.

2.5.4 Decommissioning Phase

After completion of construction, all the utilities which were used shall be reverted to the District Director who will decide on their future use. The main activities during demobilization phase, will engross the following:

- Collection and disposal of storage facilities such as pallets, packing, boxes,
- Collection and disposal of construction materials and wastes such as waste oil, sewage, solid wastes(plastics, wood, metal, papers, etc.) at the workshop, site office etc. to authorized dumpsite,
- Restoration of material borrows areas to safer condition.

2.5.4.1 Materials Required During Demobilization Phase

Materials required during demobilization phase will include fuel for the operation of equipment, soils and tree seedlings for reinstatement of borrow pits. During this phase, labor, water, and energy will also be required.

2.5.4.2 Equipment Required During Demobilization Phase

The equipment required during demobilization phase will include vehicles and trucks for transport of wastes and remaining materials to be transported.

2.5.4.3 Wastes Generated During Demobilization Phase

The following wastes will be generated during demobilization phase of the project:

- Hazardous waste such as used lubricants (oil and grease), used lead-acid batteries, empty plastic bottles, etc.,
- Plastic and paper packing,
- Used equipment parts.

2.5.4.4 Treatment and Disposal of Wastes Generated During Demobilization Phase

The treatment methods for the wastes generated during construction phase will depend on whether they are degradable, non-degradable, hazardous, or non-hazardous. Depending on the nature of the wastes, the wastes will either be re-used, re-cycles, buried, or burnt.

2.5.4.5 Lifespan of the Project

The Project Lifecycle is the sequence of phases through which a project progresses. It includes initiation, planning, execution, and closure therefore this project will take 12 months.

2.5.4.6 Decommissioning of Individual Components of the Project

Individual components of the project may be rendered redundant due to wear and tear or become obsolete due to technological advancement.

These shall be removed after an environmental audit is conducted and a device appropriate environmentally friendly way (Environmental Management Plan, EMP) to deal with them. Emphasis shall be on repairing so that parts can be reused or recycled of materials from defunct components to salvage important metals.

2.6 Project Associated Facilities

The ESF define associated facilities as facilities that are not funded as part of the project and that would not have been constructed or expanded if the project did not exist and without which the project would not be viable. The SEQUIP school construction project has identified the following as associated facilities;

- Water connection
- Energy (electricity, gas or charcoal)
- Personal protective equipment (PPE)
- Access roads

2.6.1 Water supply system

The project will require water for different activities for the project. Water will be required for construction activities such as concrete works, earthworks, laying of some of the pavement layers, dust suppression, as well as for domestic purposes at the camps. The amount of water required during construction of the project estimated to be 18,000 litres per day.

During operation phase, Water will be used for domestic uses, cleaning and for sanitation which will depend on the number of the student to be admitted to school at the specific time. Water for construction works will be obtained from DUWASA and boreholes.

2.6.2 Power supply

The proposed project will source the electricity from the National grid (TANESCO). Also a standby generator will be installed. This will be used in case of main electricity interruption. Emission level of generation will be considered during installation to ensure low emission from generator.

It will necessitate Contractor to install dedicated diesel driven generators to supply power to site and for the operation of electrically operated equipment at work sites. Generator room will be constructed as source of power during project operation.

2.7 Environmental and Social Management Framework

The ESF instruments that have been prepared for SEQUIP incorporate measures for project site Selection and to ensure designs and school construction align with the ESF requirements.

It has been agreed that civil works will follow building standards acceptable to the World Bank and required under the ESF; taking into account structural safety, universal access, changes in the standard drawings, water source availability and quality, efficient use of materials (wood) to reduce pressure on natural resources, Water and Sanitation for Health (WASH) and solid waste management at the schools, among other risks identified as part of the due diligence process.

Site selection for school construction is very important to avoid possible direct and indirect environmental and social impacts and lack of water sources for construction and during operation.

2.7.1 Health and Safety

As the ESMF directives, the campaign has been conducted with the utmost regards for occupational health and safety requirements of local authorities, management system, and of recognized industry standards. As a rule, all activities that present a risk to employees, contractors, and or neighboring communities are planned and controls are implemented to limit exposure.

In addition, a Permit to Work system is in effect for risk-specific activities that are working at height. All EHS incidents, observations, near misses, etc. will be reported and investigated to prevent recurrence during construction phase and the proper way of reporting and registration during the operation phase will be employed as well. Regular emergency evacuation drills will be connected to test the training and response capacity of the workforce at the site during all phases of the project.

Occupational health and safety issues for further consideration in multi-storey office building construction and operation phases includes; Fire and collapse and Slippery

2.7.1.1 Fire

The project shall be designed, constructed, and operated according to standards for the prevention and control of fire hazards.

The most effective way of preventing fires is to avoid any source of fires in inside the building, store reasonable weight of equipment and instruments at the top floor of the building such as water storage tanks should designed according to the construction standards and considering building materials fire detector alarms should be placed in all buildings

2.7.1.2 Collapse

The result analysis showed that the major factors responsible for building collapse are usage of substandard building materials, non-involvement of relevant and qualified professionals, defective design, and poor maintenance culture Poor Workmanship/Supervision Natural Occurrences.

The remedies to mitigate the problems are but not limited to the professional bodies through their government regulatory bodies need to ensure effective monitoring to control quackery and ensure violators are punished, building and construction permit should be adhered, ensure the use of professional people during construction etc.

2.8 Project Cost

Total Project Cost is four billion Tanzanian shillings

CHAPTER THREE

3 POLICY, LEGAL, AND ADMINISTRATIVE FRAMEWORK

3.1 Introduction

The objective of this chapter is to describe the policy, legal and administrative framework within which the project takes place and identify any laws and regulations that pertain to environmental and social matters relevant to the project. This includes regulations about environmental and/or social impact assessments to which the project must adhere as well as laws implementing host country obligations under international law. Explain the requirements of any co-financing partners, if applicable. Where pertinent, take into account legal frameworks for promoting gender equality. Flag any areas where the project might fall short on compliance.

3.2 The Constitution of Tanzania, 1977-1995 (as revised)

The Constitution of the United Republic of Tanzania 1977 - 1995 (revised 1997) recognizes the basic rights and equality entitled, without any discrimination, protection, and equality of all persons before the law. The United Republic of Tanzania is committed to the conservation of the country's natural environment as is evident through the Constitution and various Mission Statements.

Article 11 (2): Every person has the right to access education, and every citizen shall be free to pursue education in a field of his choice up to the highest level according to his merits and ability.

Article 11 (3): The Government shall make efforts to ensure that all persons are afforded equal and sufficient opportunity to pursue education and vocational training in all levels of schools and other institutions of learning.

According to these statements the government of the United Republic of Tanzania has put more effort to ensure every citizen of Tanzania has a right to education by constructing girls' secondary school in Chamwino district, Dodoma region.

3.3 National Development Vision 2025

A Tanzanian who is born today will be fully grown up, will have joined the working population and will probably be a young parent by the year 2025. Similarly, a Tanzanian who has just joined the labour force will be preparing to retire by the year 2025.

What kind of society will have been created by such Tanzanians in the year 2025? What is envisioned is that the society these Tanzanians will be living in by then will be a substantially developed one with a high quality livelihood.

Abject poverty will be a thing of the past. In other words, it is envisioned that Tanzanians will have graduated from a least developed country to a middle income country by the year 2025 with a high level of human development. The economy will have been transformed from a low productivity agricultural economy to a semi-industrialized one led by modernized and highly productive agricultural activities which are effectively integrated and buttressed by supportive industrial and service activities in the rural and urban areas. A solid foundation for a competitive and dynamic economy with high productivity will have been laid. Consistent with this vision, Tanzania of 2025 should be a nation imbued with five main attributes;

- High quality livelihood.
- Peace, stability and unity.
- Good governance,
- A well-educated and learning society;
- A competitive economy capable of producing sustainable growth and shared benefits.

3.3 National Five-Year Development Plan 2021/22–2025/26

This third national five-year development plan (FYDP III) for the period 2021/2026 is a nationwide multi-sector document aiming at achieving the goals set in the national development vision 2025.

To increase the resilience of livelihoods to disasters, main interventions shall be:

- (i) strengthen environmental conservation and protection to mitigate adverse effects of climate change
- (ii) social development, including health and education, human settlements, clean and safe water, and environment, paying attention to equitable access, gender and people with disabilities
- (iii) strengthen sustainable use and management of oil and natural gas
- (iv) develop renewable energy sources for cooking to mitigate climate change
- (v) conserve marine and freshwater fisheries protected areas
- (vi) develop and implement strategies to combat poaching, illegal trade and illegal harvesting of wildlife, forest, bee and antiquities resources in the country
- (vii) promote biodiversity conservation;
- (viii) develop climate change adaptation and impacts mitigation measures and reduce land degradation;
- (ix) minimize environmental pollution and resultant adverse effects on the environment and human health;
- (x) establish programs and mechanisms for management, monitoring and assessment of water and wastewater quality
- (xi) Strengthen conservation and protection programs of water resources and water sources.

3.4 Relevant Policies

3.4.1 National Environmental Policy (2021)

The predominant governing Tanzania's environmental management are the National Environmental Policy (NEP) of 2021 and the Environmental Management Act (EMA) of 2004.

The NEP enables sectorial and cross-sectorial policy analysis to mainstream environmental considerations into all aspects of planning and development. The proponent will adhere to the policy through conducting EIA so as to conserve natural environment around the project site, which will help to minimize the occurrence of the environmental problems.

3.4.2 Cultural Policy, 1997

Section of the 3.2.1 of the Cultural Policy stipulates that "all land development shall be preceded by Cultural Resource Impact studies. Furthermore, Section 3.1.5 states that "mechanisms shall be established to enable the nation to identify, own and preserve national treasures e.g. art, objects, natural resources minerals as well as archaeological, paleontological and botanical remains".

Project proponent must abide with this policy during construction and operation phase in order to preserve indigenous culture.

3.4.3 Antiquities Policy of 2008

Antiquities Policy 2008 section defines Physical Cultural Resources as any tangible material that represent contemporary, historic, and pre-historic human life ways. Section 2. 1 of the Antiquities Policy points out that already discovered Physical Cultural Resources shall be preserved and conserved in the National Museum of Tanzania as stipulated in Museum Act of 1980. Furthermore, the Antiquities Policy of 2008 sections 4.2.1 to 6 elaborates on how stakeholders including government institutions, private sectors and the public should be involved in all activities of conservation and management of Physical Cultural Resources.

3.4.4 National Forest Policy, 1998

The overall goal of the National Forest Policy (1998) is to enhance the contribution of the forest sector to the sustainable development of Tanzania and the conservation and management of her natural resources for the benefit of present and future generations.

The Policy, among other aspects, recognizes the high value of forests due to the high potential for royalty collection, export, and tourism earnings as well as the recycling and sequestering of carbon and conservation of globally important biodiversity.

Furthermore, the policy emphasizes on biodiversity conservation; describes the importance of forest ecosystems for maintaining biodiversity and the threats to biodiversity. One of the main objectives envisaged in the policy focuses on ensured ecosystem stability through conservation of forest biodiversity, water catchments, and soil fertility.

3.4.5 National Water Policy, 2002

The main objective of the Policy is to develop a comprehensive framework for sustainable development and management of the nation's water resources. Specifically, on the environment the objective is to have a water management system that protects the environment, ecological system, and biodiversity. The policy emphasizes that water related activities will have to be planned to enhance or to cause least detrimental effects on the environment.

To protect ecological systems and biodiversity which, together, are important part of sustainable water resources system the policy provides a guide for determining water for the environment, in terms of quantity and quality, and levels, for both surface and groundwater resource.

The policy emphasizes the use of best available scientific information for both temporal and spatial water requirements to maintain the health and viability of riverine and estuary ecosystems, and associated flora and fauna. Public awareness on good land-use practices is insisted to contain the erosion problem.

3.4.6 National Energy Policy, 2015

The Policy, among others, focuses on utilization of various energy resources in a sustainable and environmentally friendly manner. The Policy recognizes that energy is a prerequisite for the proper functioning of all sub-sectors of the economy.

The Policy stresses the use of renewable and alternative energy sources such as wind, solar, mini hydropower generators and use of liquefied petroleum gas (LPG) as well as natural gas.

The use of alternative energy sources such as biogas, briquettes both for domestic and industrial uses is encouraged to minimize the use of charcoal and firewood to prevent massive deforestation.

3.4.7 National Health Policy, 2007

The overall objective of the National Health Policy, 2007 is to improve the health and well-being of all Tanzanians. In line with environmental health, Policy seeks to protect community health by enhancing sustainable environmental health.

The Policy emphasizes on community adherence to environmental health standards; Improvement of waste management systems including disposal of hospital wastes; educating health service providers on the importance of environmental health in their working areas; and putting in place laws and procedures for conservation and protection of the environment in the health sector.

3.4.8 Occupational Health and Safety Policy 2009

The main objectives of OHS Policy are to reduce the number of work-related accidents and diseases in Tanzania. This required the adoption and implementation of a culture to prevent OHS hazards by Government, Employers and Employees. The effective prevention of work - related accidents and ill- health will have enormous social and economic benefits.

These include improvements in productivity and competitiveness and the quality of life of the working population. The effective management of many safety hazards will contribute to improved levels of public health and safety.

The effective control at source in workplaces of hazardous substances will improve levels of public health and minimize environmental pollution the policy emphasizes on Sustainable safe and healthy working conditions and environment at all workplaces for the entire diversity of the workforce contributing to broad based economic growth.

3.4.9 National Water Policy, 2002

The main objective of the Policy is to develop a comprehensive framework for sustainable development and management of the nation's water resources. Specifically, on the environment the objective is to have a water management system that protects the environment, ecological system, and biodiversity. The policy emphasizes that water related activities would have to be planned to enhance or to cause least detrimental effects on the environment. To protect ecological systems and biodiversity which, together, are important part of sustainable water resources system the policy provides a guide for determining water for the environment, in terms of quantity and quality, and levels, for both surface and groundwater resource. The policy emphasizes the use of best available scientific information for both temporal and spatial water requirements to maintain the health and viability of riverine and estuary ecosystems, and associated flora and fauna. Public awareness on good land-use practices is insisted to contain the erosion problem.

3.4.10 National Land Policy, 1995

The National Land Policy of 1995 aims at developing a coherent and comprehensive framework that defines land tenure and enables proper management and allocation of land in urban and rural areas. Among other things, the Policy advocates the protection of land resources from degradation, for sustainable development.

The policy addresses several environmental issues such as land use planning, which take into consideration the land capability, ensures proper management of land resources, promotes resource sharing and multiple land use techniques in areas of conflicting land use, and involve community in resource management, land use and conflict resolution.

3.4.11 National Human Settlements Development Policy, 2000

The Policy stresses on the need for ensuring that human settlements are kept clean and pollution effects of solid and liquid wastes do not endanger the health of residents. The policy advocates for a set of environmental quality standards of gaseous emissions from industries and vehicles

3.4.12 The Construction Industry Policy (2003)

This policy promotes among other things, application of cost effective and innovative technologies and practices to support socio-economic development including utilities and ensure application of practices, technologies and products which are not harmful to both the environment and human health.

Chamwino District Council must use technologies and products not harmful to both the environmental and human health by providing feasible alternatives and appropriate mitigation measures.

3.4.13 The National HIV/AIDS Policy (2001)

The overall goal of this policy is to provide for a framework for leadership and coordination of the national multi-sectoral response to the HIV/AIDS pandemic.

This includes the formulation by all sectors of appropriate interventions which will be effective in preventing transmission of HIV/AIDS and other sexually transmitted infections, protecting and supporting vulnerable groups, and mitigating the social and economic impacts of HIV/AIDS. For project sustainability the project proponent will have to closely observe the above policy.

3.4.14 The National Employment Policy, 2008

The major aim of this policy is to promote employment mainly of Tanzania Nationals. Relevant sections of this policy are (i) 10, which lays down strategies for promoting employment and section 10.1 is particularly focusing on industry and trade sectors (ii) 10.6 which deals with employment of special groups i.e. women, youth, persons with disabilities and (iii) 10.8 which deals with the tendencies of private industries to employ expatriates even where there are equally competent nationals.

3.4.15 National Population Policy, 2006

The Policy recognizes the impacts of population growth on natural resources and environment. The policy goal is to prepare and implement coordinated urban, rural and regional development plans for rapid development in the country and to reduce the rate of rural-urban migration.

3.4.16 National Transport Policy, 2003

The main objective of this Policy is to enhance transport systems and promote environmental protection. The mission is to develop safe, reliable, effective, efficient and fully integrated transport infrastructure and operations that was to meet the needs of travel and transport by improving levels of services at lower costs. Ultimately, the development of a reliable transport network should drive human development in a manner that is economically and environmentally sustainable.

3.4.17 National Women and Gender Policy, 2000

The key objective of the Policy is to provide guidelines that will ensure that gender sensitive plans and strategies in all sectors and institutions are developed. While the Policy aims at establishing strategies to eradicate poverty, it emphasizes gender equality and equal opportunity for both men and women to participate in development undertakings and to value the role played by each member of society.

Specifically, this Policy advocates for opportunities for both men and women in projects including construction works and related activities, and for women to be involved at all levels of the project from planning to implementation.

On employment strategies for women, Section 30 of the Policy requires presence of equal employment opportunities between men and women depending on required qualifications at all level. In addition, there should be records of exact number of women and men at levels in order to assist monitoring and follow-ups, less bureaucratic special system in the provision of business licenses especially to women working in the informal sector.

The Client must adopt such an approach during all stages of the implementation of this project that is in line with the aims of this Policy.

3.4.18 The National Research and Development Policy, 2010

These policies focused on the promotion of the private sector as a major contributor to the national economy, singly or through public-private partnership. The increasingly globalized world requires nations to create an enabling environment that will facilitate active participation of the private sector in improving their respective economies.

3.4.19 Education and Training Policy 2014

This Education and Training Policy of 2014 is the result of the revitalization and finally the cancellation of the Education and Training Policy (1995), Policy on Vocational Education and Training (1996), Policy on National Higher Education (1999) and Information Technology Policy and Communication for Primary Education (2007).

The vision of this policy is having an educated Tanzanian with knowledge, skills, competencies, abilities and positive attitudes to be able to contribute in bringing about the development of the Nation.

The specific objectives of the Policy are to have:

- System, structures and flexible procedures to enable Tanzanians develop themselves in various ways in academic and professional streams;
- Education and training with quality standards recognized nationally, regionally and internationally;
- Availability of various educational opportunities and training in the country;
- Increase of human resources according to priorities of the Nation;
- Effective management and operation of education and training in the country;
- Sustainable education funding system and training in the country; and
- Education and training system based on issues cross

3.4.20 National Biotechnology Policy, 2020

The general objective of this policy is to ensure that Tanzania has the capacity and capability to capture the proven benefits arising from health, agriculture, industry and environmental applications of biotechnology while protecting and sustaining the safety of the community and the environment

3.5 Legal Framework

3.5.1 Environmental Management Act, Cap.191

The Environmental Management Act No. 20 of 2004 is the principal legislation governing environmental management in the country. The Environmental Management Act (EMA) recognizes "...the right of every citizen to a clean, safe and healthy environment, and the right of access to environmental resources for recreational, educational, health, spiritual, cultural and economic purposes."

Thus, the EMA "provides a legal framework for coordinating harmonious and conflicting activities by integrating those activities into overall sustainable environmental management systems by providing key technical support to Sector Ministries."

Section 81, subsection 1 in Part VI of the EMA requires a project proponent or developer to undertake an Environmental Impact Assessment (EIA) at his/her own cost prior to commencement or financing of a project or undertaking.

The EMA prohibits any development to be initiated without an Environmental Impact Assessment (EIA) Certificate. PO-RALG through undertaking this study complies with the requirement of the law.

3.5.2 The Education Act, Cap. 353

The act aims to provide a legal framework for the development, management, and regulation of education in Tanzania, with a focus on promoting quality education, inclusivity and equitable access for all.

The project complies with the act as it has ensured the designs and construction of the school facilities meet the standards and requirements specified for educational institutions such as providing adequate classrooms, laboratories, libraries and other necessary infrastructure to support the educational needs of the students.

Furthermore, the project aligns with the objectives of the act of “promoting gender equality” by constructing a girls secondary school thereby addressing gender differences in access to education and creating supportive and inclusive environment for girls to pursue their education.

3.5.3 Water Resource Management Act, Cap.331

The Water Resource Management Act 2009 is a new principal legislation dealing with the protection of water resources and control of water extraction for different uses.

According to section 39 (1) of this Act, owner or occupier of land on which any activity or process is or was performed or undertaken, or any other situation exists which causes has caused or is likely to cause pollution of a water source, shall take all reasonable measures to prevent any such pollution from occurring, continuing or recurring.

It is stated under section 39 (2) that a Basin Water Board may direct any person who fails to take the measures required under subsection (1) to:

- Commence taking measures before a given date;
- Diligently continue with those measures; and
- Complete the measures before a given date.

3.5.4 The Land Act, [Cap. 113 R. E. 2019]

The Land Act, provides basic legal requirements in relation to land other than village land (see Village Land Act, 1999 below), the management of land, settlement of disputes and related matters.

The following are some of the main principals of the Land Act:

- ❖ To recognize that all land in Tanzania is public land vested in the President as trustee on behalf of all citizens;
- ❖ To ensure that existing rights in and recognized long standing occupation or use of land are clarified and secured by the law;
- ❖ To facilitate an equitable distribution of and access to land by all citizens;
- ❖ To regulate the amount of land that any one person or corporate body may occupy or use;
- ❖ To ensure that land is used productively and that any such use complies with the principles of sustainable development;
- ❖ To consider that an interest in land has value and that value is taken into consideration in any transaction affecting that interest; and
- ❖ To pay full, fair and prompt compensation to any person whose right of occupancy or recognized long-standing occupation or customary use of land is revoked or otherwise interfered with to their detriment by the state under this Act or is acquired under the Land Acquisition Act;

It is the duty of the Government Department or the Ministry, local or public authority or corporate body that applied for the way leave to pay the compensation.

3.5.5 The Village Land Act, [Cap 114 R. E. 2019]

The Village Land Act, of 2019 provides for the management and administration of land and matters related thereto in specifically villages. The Village Land Act (in addition to the Land Act) have set clear procedures for compensation while acquiring Land from citizens.

3.5.6 The Land Acquisition Act [Cap 118 R. E.2019]

The Land Acquisition Act, of 1967 (as amended in 1968) stipulates matters pertaining to compensation under part two division b, Section 11 and Section 12. Section 13 address disputes that might arise due to land acquisition.

3.5.7 The Electricity Act, Cap.131

This Act main objective is to provide for the facilitation and regulation of generation, transmission, transformation, distribution, supply and use of electric energy, to provide for cross-border trade in electricity and the planning and regulation of rural electrification and to provide for related matters.

3.5.8 The Local Government (District Authorities) Act, Cap.287

The Local Government Acts of 2002 form an important legal basis for rural councils and rural authorities, which were reintroduced in the early 1980 and consist of Act No. 7 relating to District Authorities and Act No.8 relating to Urban Authorities.

These Acts establish and regulate district councils, township authorities and village authorities. Important provisions are the subdivision of districts into divisions and wards and the establishment of ward development committees along with procedures for implementation of schemes and programs at ward level.

Section 118 deals with protection and management of the environment in addition to the First Schedule (Section 118 (4)) of Act No. 7. The District Councils are hereby required to take necessary measures to control soil erosion and desertification; to regulate the use of poisonous and noxious plants, drugs or poisons, regulate and control the number of livestock; maintain forests, manage wildlife, ensure public health, and provide effective solid and liquid refuse management.

If construction commences it will be the Developers responsibility to obtain permission from the District Councils for the disposal of solid and liquid waste. In addition, District council will also oversee and regulate the use and prevent the misuse or waste of, or any interference with, water.

3.5.9 Occupational Health and Safety Act, Cap.297

The Occupational Health and Safety Act of 2003 deals with the regulation of health, safety, and welfare of workers. Some of the provisions of this Act are relevant to the project. The Act covers economic activities in constructions, agriculture, commerce, and offices. In case of occupational accidents/illness, it is the responsibility of the labour department in the ministry to ensure the victim get compensated by the insurer of the employer. Moreover, the victim may also claim for work-injury benefit should he/she be a member of a social security scheme.

The OSHA is of particular importance for contractors that construct the proposed facility, and they should be aware of their obligations regarding the workforce health and safety measures stipulated in this Act.

There are specific Safety procedures and guidelines to be followed by both workers and their respective employers to ensure a Safe and conducive working environment.

3.5.10 The Public Health Act, Cap.242

The Act provides for the promotion, conservation, and maintenance of public health with a view of ensuring comprehensive functional and sustainable public health services. The Act also prohibits discharges into a sewer or into drain that may cause malfunctioning of the drainage systems.

3.5.11 The Industrial and Consumer Chemicals (Management and Control) Act, Cap.182;

Comprehensive legislation on management and control of industrial and consumer chemicals. Divided into 6 parts. Part 1 contains preliminary provisions. Part 2 deals with administration. Part 3 regulates control of production, importation, exportation, transportation, storage and dealing in chemicals. Part 4 provides for management of industrial and consumer chemicals. Part 5 contains financial, and Part 6 miscellaneous provisions.

Provisions for management of industrial and consumer chemicals which are of relevance to APT include

- Labelling and safe handling
- Chemical and chemical waste
- Disposal of chemical wastes
- Prevention and management of accidents
- Decommissioning of plants

3.5.12 The Employment and Labour Relation Act, (Cap.366 R.E 2019)

The act mandates that employers:

- Promote equal opportunity in employment and strive to eliminate discrimination in any employment policy or practice"
- Prohibits direct or indirect discrimination by employers, trade unions and employers' associations on several grounds, including gender, pregnancy, marital status or family responsibility, disability, HIV and AIDS, and age
- Requires employers to take "positive steps" to guarantee women and men the right to a safe and healthy environment.

The project will employ skilled and unskilled labour

3.5.13 The Fire and Rescue Force Act, Cap 427

An Act to provide for the better organization, administration, discipline and operation of Fire and Rescue Force, the project will be subjected to fire and rescue act compliance

3.5.14 Water Supply and Sanitation Act, Cap.272

It has provisions to ensure water quality by protecting water works and storage facilities against pollution. It gives mandate to LGA to enact by-laws of water supply and sanitation.

3.5.15 Disaster Management Act No. 7 of 2015

The Act establishes the Disaster Management Department (DMD), disaster risk management, and coordination mechanism for disaster prevention, mitigation, preparedness, response and recovery.

The primary function of DMD is to coordinate of disaster management activities in the country. It seeks to ensure that appropriate response systems, procedures and resources are in place to assist those afflicted in times of disaster.

DMD is also in charge to coordinate disaster preparedness efforts and activities in order to minimize the adverse effects of hazards through effective precautionary measures and to ensure timely appropriate and efficient organization and delivery of emergency.

3.5.16 The HIV and AIDS (Prevention and Control) Act, Cap 431

The HIV/AIDS prevention and control Act (Act No. 28/08) Cap 431, calls for prevention, treatment, care, support and control of HIV and AIDS for promotion of public health in general. It also calls for appropriate treatment, care and support by using available resources to people living with or at risk of HIV and AIDS and to provide for related matters.

3.5.17 The Land Use Planning Act, Cap. 116;

The Act provides for the procedures for preparation, administration and enforcement of land use plans; to repeal the National Land Use Planning Commission and to provide for related matters. Clearly the Act has distinctive authorities of land use planning in Tanzania laid down with their functions and powers. The power vested to authorities which give them teeth to bite is to enforce approved land use plans including taking defaulters to court of law.

Appropriate local Community Societies will plan the project surrounding areas as per the requirement of the Act and regulations.

3.5.18 The Contractors Registration Act, Cap.235;

This Act requires Contractors at any site to abide by labour laws, and occupational health and safety regulations in construction industries. Furthermore, in the execution of the work, the Contractors are obliged to supply materials necessary for the work, and are authorized to exercise control over the type, quality and material used during Construction

3.5.19 The Law of the child act, cap 13 R.E 2019

This act aims to protect and promote the rights and welfare of children in Tanzania. By establishing a girls' secondary school, the project contributes directly to the realization of the Act's objectives.

The National Child Act recognizes the importance of education in the development of children. The construction of a girls' secondary school aligns with this principle by providing a safe and conducive learning environment specifically tailored to the needs of girls. It ensures that girls in the Dodoma region have access to quality education, empowering them to achieve their full potential.

Furthermore, the act emphasizes the elimination of gender disparities and discrimination against girls. The project addresses this objective by focusing on girls' education, bridging the gender gap and promoting gender equality. By providing equal opportunities for education, the construction of the school contributes to breaking down barriers and creating a more inclusive society.

Additionally, the National Child Act emphasizes the protection of children's rights, including their right to safety, health, and well-being. The construction of a dedicated girls' secondary school ensures that girls have a secure and protected learning environment. It takes into account the specific needs and vulnerabilities of girls, creating a space where they can thrive academically, socially, and emotionally.

The project involving the construction of a girls' secondary school in the Dodoma region aligns with the National Child Act, Cap. 13 R.E of 2019. It promotes the rights and welfare of children by providing quality education, addressing gender disparities, and ensuring the safety and well-being of girls. By implementing this project, Tanzania takes a significant step towards realizing the objectives set forth in the National Child Act.

3.5.20 Engineers Registration Act, Cap 63;

The Act oversees the process of registration of engineers in Tanzania. The engineering registration Act is overseen by the Engineers Registration Board. The Board has been given the responsibility of monitoring and regulating engineering activities and the conduct of the engineers and engineering consulting firms in Tanzania through registration of engineers and engineering consulting firms. Under the law, it is illegal for an engineer or an engineering firm to practice the profession if not registered with the Board.

The Board has also been given legal powers and has the obligation to withdraw the right to practice from registered engineers if found guilty of professional misconduct or professional incompetence. Registration with the Board is, thus, a license to practice engineering in Tanzania.

Engineering is among the noble professions that have the privilege and responsibility of self-regulation. The Board has worked out a Code of Ethics which aims at regulating the engineering activities and conduct of engineers and engineering consulting firms. The Code thus forms the basis and framework for responsible professional practice as it prescribes standards of conduct to be observed by engineers and engineering consulting firms. The Code is based on broad tenets of truth, honesty and trustworthiness, respect for human life and welfare, fairness, openness, competence and accountability; engineering excellence, protection of the environment and sustainable development.

The Proponent and its Contractors and subcontractors will make use of engineers during construction and operation phases so as to meet the requirement of the law.

3.5.21 The Architects and Quantity Surveyors Act, Cap.267;

Similarly require architects and quantity surveyors (QS) to be registered with the Board before practicing. Institutions shall make sure that this law is obeyed.

3.5.22 Workers' Compensation Act, Cap.263

This is an Act which emphasis compensation to employees for disablement or death caused by or resulting from injuries or diseases sustained or contracted in the course of

employment; to establish the Fund for administration and regulation of workers compensation and to provide for related matter.

The PO-RALG must ensure that this Act come into force during the operation of the project since promotes job security by helping employees recover and return to work, while emphasizing the importance of workplace safety and prevention measures.

3.5.23 The Persons with Disabilities Act, Cap 183

This legislation aims to promote inclusivity and equal opportunities for individuals with disabilities in Tanzania, in implementing this project it becomes crucial to consider the accessibility and accommodation needs of students and staff with disabilities.

The Act ensures that the school's design and infrastructure comply with accessibility standards, providing features like ramps, handrails, wheelchair-accessible entrances, and appropriate restroom facilities. Moreover, the Act mandates the provision of special educational services, assistive devices, and reasonable accommodations for students with disabilities, allowing them to fully participate in the educational experience.

The project should comply with the principles of the Persons with Disabilities Act into the construction of the girls' secondary school in order to promote inclusivity, enables equal access to education, and fosters a supportive environment for all students, including those with disabilities.

3.5.24 The Standards Act, Cap 130

This Act aims at the promotion of specifications of commodities and services, re-establish the Tanzania Bureau of Standards (TBS), the designated national standards authority established under the TBS Act 1975 and repealed by this act. TBS is responsible for developing all kinds of national standards, including environmental standards.

The Standards Act has established National Environmental Standards Compendium (NESC) which is a collection of various standards prepared at different times and recognized by EMA 2004. NESC is divided into three parts. Part 1 comprises of standards that require compulsory compliance. Compulsory standards are categorized as generic or specific. Specific standards cover those industries with peculiar effects to the environment while other industries without a specific standard for Tolerance Limits of Emissions discharge including water quality, discharge of effluent into water, air quality, control of noise and vibration pollution, sub-sonic vibrations, soil quality, control of noxious smells, light pollution, and electromagnetic waves and microwaves

Part 2 of NESC contains those standards that may be implemented on voluntary basis. These include guideline standards, codes of practice, and other such standards that may not necessarily be directly enforced, but whose results are implied in some legal requirements. One of such standards include the Environmental Management Systems (EMS) standards, like TZS 701/ISO 14001 whose compliance specifications include the relevant legal requirements. Part 2 thus has important requirements for companies and developers who wish to demonstrate their commitment to sustainable development by way of self-regulation mechanism. On the other hand, some companies or developers may be compelled to follow these standards because of requirements from mother companies and for other various reasons like certification requirements by environment friendly banks or tenders. Part 2 also includes standards used in evaluating environmental performance.

Part 3 has the requisite test methods that should be followed when testing for compliance. The test methods included are referred to in at least one of the specification standards appearing under Part 1. Although it is not stated in the Act, in the absence of national standards, project proponents are encouraged to use international standards such as those of the World Health Organisation (WHO), World Bank, British Standards (BS), European Union (EU), American Public Health Association (APHA), United States Environmental Protection Agency (US EPA) etc. Standards set by the relevant sectors, which also make use of the international standards, are also applicable. Such standards include the environmental standards set under the Mining (Environmental Management and Control) Regulations, 1999. Relevant national environmental standards include:

- TZS 860: 2005 Municipal and Industrial Wastewaters – General Tolerance Limits for Municipal and Industrial Wastewaters: This standard provides permissible limits of important environmental parameters such as BOD, COD, pH, colour, temperature range, total suspended solids and turbidity. It also gives permissible limits of a range of inorganic and organic components. All effluents discharged from the project will need to comply with these specifications.
- TZS 845:2005 Air Quality – Specification: This standard gives permissible emission limits of sulphur oxides, carbon monoxide, hydrocarbons (as total organic carbon), dust, nitrogen oxides and lead. The emissions from earth moving equipment, power generation plant and other will include SO₂, CO, dust and NO_x; as such the project will have to observe these limits.
- TZS 983:2007 Air Quality - Vehicular Exhaust Emissions Limits: This standard is mainly derived from EU Directives 96/69/EC, 91/542/EEC and 97/24/EC. This Tanzania Standard gives permissible limits of some common substances found in exhaust emissions of motor vehicles, namely carbon monoxides, suspended particulate matter (PM), oxides of nitrogen, and hydrocarbons. The standard covers all types of vehicles namely, passenger cars, light commercial vehicles, heavy-duty vehicles, and two and four strokes motorcycles and scooters. In order to carry out quarrying activities and processing operations, the project will operate a fleet of heavy duty and light vehicles in addition to hiring other vehicular equipment. As such, the project will need to observe the provisions of these standards.
- TZS 932:2006: Acoustics - General Tolerance Limits for Environmental Noise: This standard focuses on urban environmental noise, and does not cover occupation environment. In the absence of other standards, it may be used to give indication of permissible noise levels in factory/workshop environment.
- TZS 789:2003 - Drinking (potable) water – Specification: This standard prescribes the quality requirements for drinking water other than packaged drinking water. It does not cover the requirements for natural mineral water. It prescribes the quality requirements for drinking water distributed in the food industry, domestic and catering purposes. It applies to bacteriological, biological, virological, physical, chemical and radiological quality criteria. It is intended also to community piped water supplies i.e. those water systems serving cities, municipalities and townships, community standpipes and wells and drinking water distributed by tankers.

3.5.25 The Occupier Liability Act, Cap 64

The Occupier Liability Act establishes the legal framework for determining the duty of care that an occupier owes to individuals who enter their premises. In the context of the school construction project, the act would be relevant in establishing the liability and responsibility of the parties involved in ensuring the safety of the premises.

Under the Occupier Liability Act, the organization or individuals responsible for the construction project would be considered occupiers of the premises during the construction phase. As occupiers, they have a legal duty to ensure that the construction site is reasonably safe for anyone who enters or may be affected by it. This includes the duty to take appropriate measures to prevent potential hazards, provide warnings where necessary, and maintain proper safety standards.

SEQUIP aligns with the Occupier Liability Act, Cap 64, as it emphasizes the legal responsibility of the occupiers to ensure the safety of the premises during construction and operation. Adhering to the provisions of the act will help mitigate risks and safeguard the well-being of all individuals associated with the school

Once the project is completed and operational, the Act will continue to be applicable. The school administration will become the occupiers of the premises, and they will have a duty of care towards the students, staff, and visitors. This duty involves maintaining the premises in a safe condition, addressing any potential hazards promptly, and implementing necessary safety protocols.

3.6 National Regulations

3.6.1 The Environmental Impact Assessment and Audit Regulations 2005 as amended 2018

The EMA outlines principles for management, impact and risk assessments, prevention and control of pollution, waste management, environmental quality standards, public participation, compliance, and enforcement. It assigns environmental management responsibilities to sector ministries and their departments and agencies, including regional and local authorities.

A National Environmental Advisory Committee advises all sectoral ministries, while the Minister of Environment has the power to approve or disapprove projects on environmental grounds. The key administrative responsibilities for environmental management in Tanzania rest with the Minister of Environment under the Vice President's Office.

However, environmental performance—that is, setting environmental standards and quality levels—also depends directly on the devolved responsibilities to key sector ministries in charge such as mining, transportation, agriculture, water, energy, natural resources, and tourism.

The National Environmental Management Council (NEMC), under the Vice President's Office, is the command-and-control agency in charge of environmental compliance, while the President's Office Regional Administration and Local Government (PO-RALG) is responsible for coordinating the implementation of all governing policies, acts, and regulations regarding environmental conservation at the local government authorities (LGAs) and monitoring the performance of LGAs. Sector ministries are responsible for ensuring that all activities are carried out in an environmentally sustainable manner

3.6.2 Other Environmental Regulations

Other environmental regulations, which are enshrining environmental standards and crucial for implementation of environmental management plans, include:

3.6.3 Environmental Management (Air Quality Standards) Regulation, 2007:

Gives permissible emission limits of sulphur oxides, carbon monoxide, hydrocarbons (as total organic carbon), dust, nitrogen oxides and lead. The standard is used as criteria in the evaluation of impact significance

3.6.4 Environmental Management (Soil Quality Standards) Regulation, 2007;

The objectives of the Soil Quality Standards Regulations are to set baseline parameters on soil limits for soil contaminations; enforce minimum soil quality standards prescribed by the National Environmental Standards Committee; prescribe measures designed to maintain, restore and enhance the sustainable productivity of the soil; prescribe minimum soil quality standards to maintain, restore and enhance the inherent productivity of the soil in the long term; enforce minimum soil standards prescribed by the National Environmental Standards Committee for such purposes as agricultural practices.

3.6.5 Environmental Management (Water Quality Standards) Regulation, 2007;

The objectives of the Water Quality Standards Regulations are to protect human health and conserve the environment; enforce minimum water quality standards prescribed by the National Environmental Standards Committee; enable the National Environmental Standards Committee to determine water usage for purposes of establishing environmental quality standards and values for each usage; and ensure all discharges of pollutants take account of the ability of the receiving waters to accommodate contaminants without detriment to the uses specified for the waters concerned.

3.6.6 Environmental Management (Control of Ozone Depleting Substances) Regulation, 2007;

The objectives of the Regulations for Control of Ozone Depleting Substances are to eliminate the production and consumption of ozone depleting substances in accordance with the phase out schedule of the Montreal

Protocol; to regulate the production, import, export, trade, disposal and use of ozone depleting substances and its products; to control and monitor the amount of ozone depleting substances entering or leaving the United Republic of Tanzania; to provide a system of data collection that will facilitate compliance with relevant reporting requirements under the protocol;

- To promote measures, strategies, programmes, incentives, equipment and technologies in favour of the use of ozone friendly substances,
- Products and equipment in line with national obligation specified by the Montreal Protocol; and to facilitate the link between the National Ozone Unit and the Ozone Secretariat of the Protocol.

3.6.7 Environmental Management (Biosafety) (Amendment) Regulations, 2015 (G.N. No. 41 of 2015);

These Regulations, made under sections 69 and 230(2)(o) of the Environmental Management, concern the import, export, deliberate release, confined use, contained use, transit and placing on the market of Genetically Modified Organisms (GMOs) and their products.

The Regulations implement in Tanzania provisions of the Cartagena Protocol of Biosafety. They designate the Ministry responsible for environment as the National Biosafety Focal Point for purposes of the Protocol and define its functions.

3.6.8 The Environmental Management (Hazardous Waste Control and Management) Regulation, 2021;

These regulations are specifically designed to control and manage hazardous waste to protect human health and the environment. The regulations require adherence to proper handling, storage, transportation, treatment, and disposal methods for hazardous materials such as chemicals, paints, solvents, and other potentially harmful substances.

The regulations promotes the responsible management of hazardous waste, including the use of eco-friendly alternatives, proper labeling and storage, and appropriate training for staff involved in handling these materials.

Contractor should comply with the regulations to ensure the implementation of appropriate measures to prevent pollution, minimize risks to human health, and safeguard the local ecosystem which will contributes to a safe and sustainable educational environment.

3.6.9 Environmental Management (Solid Waste Management) Regulation, 2009 as amended in 2016.

These regulations aim to establish guidelines for the effective management and disposal of solid waste to protect public health and the environment.

The regulations emphasize the adoption of sustainable waste management practices, including waste reduction, recycling, and proper disposal methods. The project should incorporate waste management infrastructure such as waste bins, recycling facilities, and composting areas within the school premises.

It also necessitates raising awareness among students, staff, and the community about the importance of responsible waste disposal and the benefits of recycling.

The contractor and PIT must comply with the regulations so as to promote a clean and healthy environment, reduces environmental pollution, and encourages a culture of waste reduction and recycling.

3.6.10 Environmental Management (Quality Standards for Controlling Noise and Vibrations Pollution) Regulation, 2007:

Focuses on urban environmental noise, and does not cover occupation environment. In the absence of other standards it may be used to give indication of permissible noise levels in factory/workshop environment.

3.6.11 The Environmental Management (Control and Management of Electrical and Electronic Equipment Waste) Regulations, 2021

These regulations are put in place to address the proper handling, disposal, and management of electrical and electronic waste (e-waste) to protect the environment and public health.

The regulations require adherence to environmentally responsible practices, including the proper disposal and recycling of electrical and electronic equipment. This ensures that any obsolete or damaged equipment, such as computers, printers, and other electronic devices, is managed in an environmentally friendly manner, minimizing the negative impact on the ecosystem.

Contractor should comply with regulations to ensure that the project promotes sustainable practices, reduces e-waste pollution, and contributes to the overall environmental well-being.

3.6.12 The Fire and Rescue Force (Fire Precautions in Buildings) Regulations, 2015

These regulations are designed to ensure the safety of occupants in buildings by establishing fire safety measures and standards. In the context of the school project, adherence to these regulations becomes imperative to create a secure learning environment.

The construction process must incorporate fire safety features such as fire-resistant materials, adequate emergency exits, fire alarm systems, and fire extinguishers in strategic locations throughout the school building, also the regulations emphasize the need for proper fire escape routes, clear signage, and training on evacuation procedures for students and staff.

Contractor should comply with the requirements and be equipped with the necessary fire safety measures, reducing the risk of fire-related incidents and safeguarding the well-being of all occupants.

3.6.13 The Fire and Rescue Force (Safety Inspection and Certificates) Regulations, 2008 As Amended In 2017

These regulations establish the legal framework for ensuring fire safety standards in buildings, including educational institutions. According to the regulations, a safety inspection must be conducted during the construction phase to assess compliance with fire safety standards.

This inspection verifies that the building materials, electrical systems, fire protection measures, and emergency exits meet the required safety codes. The project management team and contractors must ensure that all construction activities adhere to these regulations to minimize the risk of fire incidents.

Upon completion of the construction, the school will need to obtain a fire safety certificate, which is issued after a final inspection by the Fire and Rescue Force. This certificate serves as confirmation that the school's premises comply with the necessary fire safety standards and have adequate fire prevention and protection measures in place. It signifies that the building is safe for occupancy and that appropriate fire safety protocols have been implemented.

The regulations also require periodic inspections and renewal of the fire safety certificate to ensure ongoing compliance with fire safety standards. The school administration will be

responsible for regularly reviewing and updating their fire safety measures to maintain a safe environment for students, staff, and visitors.

Contractor and PIT should comply with these regulations ensures that the construction and operation of the school prioritize fire safety and provide a secure environment for all occupants.

3.6.14 The Land (Compensation Claims) Regulations 2001

The Land Regulations 2001 were promulgated in terms of the Land Act, Act No. 4 of 1999 sections 12 & 179. The form of compensation is stipulated in Section 10 (1) of the Land Regulations 2001. Furthermore, the Regulations list the entities that are eligible for compensation and/or resettlement. If the person does not agree with the amount or method of payment or is dissatisfied with the time taken to pay compensation, he /she may apply to the High Court.

The High Court shall determine the amount and method of payment and determine any additional costs for inconveniences incurred

3.7 World Bank Environmental and Social Framework

3.7.1 World Bank Environmental and Social Standards

The World Bank's Environmental and Social Framework sets out the Bank's commitment to sustainable development, through a Bank Policy and a set of Environmental and Social standards that are designed to support Borrowers' projects, with the aim of ending extreme poverty and promoting shared prosperity.

The E&S Framework comprises of: (1) Vision for Sustainable Development, which sets out the Bank's aspirations regarding environmental and social sustainability; (2) The World Bank Environmental and Social Policy for Investment Project Financing, which sets out the mandatory requirements that apply to the Bank; and (3) The Environmental and Social Standards, together with their Annexes, which set out the mandatory requirements that apply to the Borrower and projects.

The World Bank Environmental and Social Policy for Investment Project Financing sets out the requirements that the Bank must follow regarding projects it supports through Investment Project Financing. The Environmental and Social Standards set out the requirements for Borrowers relating to the identification and assessment of environmental and social risks and impacts and mitigation measures associated with projects supported by the Bank through Investment Project Financing.

The E&S standards are expected to: (a) support Borrowers in achieving good international practice relating to environmental and social sustainability, (b) assist Borrowers in fulfilling their national and international environmental and social obligations; (c) enhance non-discrimination, transparency, participation, accountability and governance; and (d) enhance the sustainable development outcomes of projects through ongoing stakeholder engagement.

The ten ESSs as per the WB ESF are: ESS 1: Assessment and Management of Environmental and Social Risks and Impacts; ESS 2: Labor and Working Conditions; ESS 3: Resource Efficiency and Pollution Prevention and Management; ESS 4: Community Health and Safety; ESS 5: Land Acquisition, Restrictions on Land Use and Involuntary

Resettlement; ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources; ESS 7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities; ESS 8: Cultural Heritage; ESS 9: Financial Intermediaries; and ESS 10: Stakeholder Engagement and Information Disclosure. Given the nature of activities of this project, with the exception of ESS 9: Financial Intermediaries almost all the ESSs will be relevant.

3.7.2 Project Classification According to the World Bank ESF

According to the WB ESF, The Bank will classify all projects (including projects involving Financial Intermediaries (FIs)) into one of four classifications: **High Risk, Substantial Risk, Moderate Risk or Low Risk.**

In determining the appropriate risk classification, the Bank takes into account relevant issues, such as the type, location, sensitivity, and scale of the project; the nature and magnitude of the potential environmental and social risks and impacts; and the capacity and commitment of the Borrower (including any other entity responsible for the implementation of the project) to manage the environmental and social risks and impacts in a manner consistent with the ESSs.

Other areas of risk may also be relevant to the delivery of environmental and social mitigation measures and outcomes, depending on the specific project and the context in which it is being developed. These could include legal and institutional considerations; the nature of the mitigation and technology being proposed; governance structures and legislation; and considerations relating to stability, conflict or security.

The Bank will disclose the project's classification and the basis for that classification on the Bank's website and in project documents. The Bank will review the risk classification assigned to the project on a regular basis, including during implementation, and will change the classification where necessary, to ensure that it continues to be appropriate. Any change to the classification will be disclosed on the Bank's website.

3.7.3 Other World Bank Instruments

Error! Reference source not found. summarizes the Environmental and Social Standards (ESSs) that project entities responsible for the project implementation will apply during entire project cycle.

Table 3-1: The World Bank Environmental and Social Standards (ESS) Applicable to Project and Associated Instruments

S/N	The Environmental and Social Standards (ESS)	Purpose/Objectives	Reason for its Application in the Project
1.	ESS1: Assessment and Management of Environmental and Social Risks and Impacts	<p>Identification of adverse impacts and respective mitigation measures</p> <p>Enable screen and follow-up of remedies achieved through application of prevention, mitigation and compensation measures</p> <p>Enable allocation of responsibilities and resources to implement required mitigation measures</p>	Sets out the Region's responsibilities for assessing, managing and monitoring environmental and social risks and impacts associated with each stage of a project supported by the Bank through Investment Project Financing (IPF), in order to achieve environmental and social outcomes consistent with the Environmental and Social Standards (ESSs).
	ESS2: Labour and Working Conditions	<p>Ensure the healthy and safe working environment during projects implementation.</p> <p>Ensure the provision of fair working conditions.</p>	Recognizes the importance of employment creation and income generation in the pursuit of poverty reduction and inclusive economic growth. Developer can promote sound worker-management relationships and enhance the development benefits of a project by treating workers in the project fairly and providing safe and healthy working conditions.
	ESS3: Resource Efficiency and Pollution Prevention and Management	<p>To promote the sustainable use of resources including energy, water and raw materials.</p> <p>To avoid or minimize generation of hazardous and non-hazardous wastes.</p>	Recognizes that economic activity and urbanization often generate pollution to air, water, and land, and consume finite resources that may threaten people, ecosystem services and the environment at the local, regional, and global levels. This ESS sets out the requirements to address resource efficiency and pollution prevention and management throughout the project life cycle.
	ESS4: Community Health and Safety	To manage potential risks to the community during construction and operation of school infrastructures.	Addresses the health, safety, and security risks and impacts on project-affected communities and the corresponding responsibility of the developer to avoid or minimize such risks and impacts, with particular

S/N	The Environmental and Social Standards (ESS)	Purpose/Objectives	Reason for its Application in the Project
			attention to people who, because of their circumstances, may be vulnerable
	ESS5: Land Acquisition, Restriction on Land Use	To avoid or minimize involuntary resettlement and to avoid forced eviction	Involuntary resettlement should be avoided. Where involuntary resettlement is unavoidable, it was minimized and appropriate measures to mitigate adverse impacts on displaced persons (and on host communities receiving displaced persons) was carefully planned and implemented.
	ESS6: Biodiversity Conservation and Sustainable Management of Living Resources	The SEQUIP project will avoid adverse impacts on biodiversity, habitats and ecosystem services. When avoidance of adverse impacts is not possible, the Borrower will implement measures to minimize adverse impacts and restore biodiversity in accordance with the mitigation hierarchy provided in ESS1 and with the requirements of the ESS6.	Recognizes that protecting and conserving biodiversity and sustainably managing living natural resources are fundamental to sustainable development and it recognizes the importance of maintaining core ecological functions of habitats, including forests, and the biodiversity they support. ESS6 also addresses sustainable management of primary production and harvesting of living natural resources and recognizes the need to consider the livelihood of project-affected parties, including Indigenous Peoples, who's access to, or use of, biodiversity or living natural resources may be affected by implementation of the project.
	ESS 7: Sub-Saharan Historically Underserved Traditional Local Communities	To enable VGs to participate in project activities while taking care of their sociocultural interests and hindrances	Ensures that the development process fosters full respect for the human rights, dignity, aspirations, identity, culture, and natural resource-based livelihoods of Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities. ESS7 is also meant to avoid adverse impacts of projects on Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities, or when

S/N	The Environmental and Social Standards (ESS)	Purpose/Objectives	Reason for its Application in the Project
			avoidance is not possible, to minimize, mitigate and/or compensate for such impacts.
	ESS8: Cultural Heritage	<p>To enhance conservation of cultural heritage in both forms; tangible and intangible cultural heritage.</p> <p>To conserve ecological and socially sensitive places from possible impacts of project implementation.</p>	Recognizes that cultural heritage provides continuity in tangible and intangible forms between the past, present and future. ESS8 sets out measures designed to protect cultural heritage throughout the project life cycle.
	ESS9: Financial Intermediaries	<p>To set out how the FI will assess and manage environmental and social risks and impacts associated with the subprojects it finances</p> <p>To promote good environmental and social management practices in the subprojects the FI finances.</p>	<p>Recognizes that strong domestic capital and financial markets and access to finance are important for economic development, growth and poverty reduction.</p> <p>FIs are required to monitor and manage the environmental and social risks and impacts of their portfolio and FI subprojects, and monitor portfolio risk, as appropriate to the nature of intermediated financing. The way in which the FI will manage its portfolio will take various forms, depending on a number of considerations, including the capacity of the FI and the nature and scope of the funding to be provided by the FI.</p>
	ESS10: Stakeholder Engagement and Information Disclosure	<p>To develop a systematic approach to stakeholder engagement to develop good relationships and gather their views on issues that could affect them.</p> <p>To provide stakeholders with a mechanisms through which to raise grievances.</p>	Recognizes the importance of open and transparent engagement between developer and project stakeholders as an essential element of good international practice. Effective stakeholder engagement can improve the environmental and social sustainability of projects, enhance project acceptance, and make a significant contribution to successful

S/N	The Environmental and Social Standards (ESS)	Purpose/Objectives	Reason for its Application in the Project
			project design and implementation.

3.8 Other World Bank Instruments Applicable for SEQUIP

Environmental and Social Framework - Guidance Notes for Borrowers¹¹; The World Bank has developed several Guidance Notes to ensure the governments (borrowers) comply with the World Bank Environmental and Social Standards. These guidance are public documents that be accessed in the World Bank website¹².

3.9 International Agreements, Conventions and Treaties

Tanzania has ratified or acceded to a large number of international treaties and conventions. Among those the following are relevant to the project.

3.9.1 UNFCCC/Kyoto Protocol

The Kyoto Protocol is an international treaty, which extends the 1992 United Nations Framework Convention on Climate Change (UNFCCC) that commits parties to reduce greenhouse gases emissions, based on the premise that

- (a) Global warming exists; and
- (b) Man-made CO₂ emissions have caused it.

Tanzania has implemented the UNFCCC since 1996 and has been undertaking climate change studies (implemented by the Division of Environment under the Vice President's Office) since 1992. Tanzania recognized the need for greater awareness of climate change and stated that a comprehensive awareness programme was planned.

The main challenge facing the country is a need to balance accelerated economic growth with a more efficient management of the environment and use of natural resources to ensure sustainability and address the climate change issue. In 2007 the Tanzania Vice President's Office, Division of Environment, produced the National Adaptation Programme of Action (NAPA).

3.9.2 The 1989 Basel Convention

On Control of Trans-Boundary Movements of Hazardous Wastes and their Disposal. The project shall adhere to both Bamako and Basel conventions to ensure that the ships do not bring into the country hazardous wastes by strictly abiding to the cargo declaration formalities.

3.9.3 Convention against Discrimination in Education (1960) ratified by United Republic of Tanzania in 1978-12-08

Article 2 (a) of convention stated the establishment or maintenance of separate educational systems or institutions for pupils of the two sexes, if these systems or institutions offer equivalent access to education, provide a teaching staff with qualifications of the same standard as well as school premises and equipment of the same quality, and afford the opportunity to take the same or equivalent courses of study.

3.9.4 Convention on the Rights of the Child, 1989

The Convention recognize the right of the child to education and with a view to achieving this right progressively and on the basis of equal opportunity. Where in Article 28(1) (a) of the convention stated that “Make primary education compulsory and available free to all”.

Also this convention emphasizes in international cooperation in education sector stated in Article 28 (3) promote and encourage international cooperation in matters relating to education, in particular with a view to contributing to the elimination of ignorance and illiteracy throughout the world and facilitating access to scientific and technical knowledge and modern teaching methods.

3.9.5 Convention on the Rights of Persons with Disabilities, 2006

Article 28 (2) (a) of the convention emphasizes the right of persons with disabilities to education which stated “Persons with disabilities are not excluded from the general education system on the basis of disability, and that children with disabilities are not excluded from free and compulsory primary education, or from secondary education, on the basis of disability”.

3.9.6 International Covenant on Economic, Social and Cultural Rights, 1966

Article 13 (2)(a) of this convention emphasizes that “Primary education shall be compulsory and available free to all; and Article (2)(b) Secondary education in its different forms, including technical and vocational secondary education, shall be made generally available and accessible to all by every appropriate means, and in particular by the progressive introduction of free education”.

3.9.7 Universal Declaration of Human Rights, 1948

Article 26 of this declaration states that “Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages. Elementary education shall be compulsory. Technical and professional education shall be made generally available and higher education shall be equally accessible to all on the basis of merit”.

3.10 Sustainable Development Goals (SDGs)

The Sustainable Development Goals (SDGs) are a set of global goals for fair and sustainable health at every level from planetary biosphere to local community. The aim is to end poverty, protect the planet and ensure that all people enjoy peace and prosperity, now and in the future. The **Error! Reference source not found.** below shows the Sustainable development goals which are relevant to this project

Table 3-2: Sustainable Development Goals (MDGs)

Goal	Target
Goal 1: End poverty in all its form everywhere	Target 1.1 By 2030, eradicate extremely poverty to all people everywhere, currently measured as people living on less than \$ 1.25 a day Target 1.4 By 2030, ensure that all women and men, in a particular the poor and the vulnerable have equal rights to economic resources, as well as access to basic services, ownership and control over land and other form of property, inheritance natural resources, appropriate new technology and financial services include microfinance

Goal	Target
Goal 3: Ensure health lives and promote for all at all stage	Target 3.5. Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol.
Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunity for all	<p>Target 4.1 By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and Goal-4 effective learning outcomes</p> <p>Target 4.5 By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations</p>
Goal 5 : Achieve gender equality and empower all women and girls	<p>Target 5.1 End all forms of discrimination against all women and girls everywhere</p> <p>Target 5.2 Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation</p>
Goal 6: Ensure access to water and sanitation to all	<p>Target 6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all</p> <p>Target 6.2 By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations</p>
Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all.	Target 7.1 By 2030, ensure universal access to affordable, reliable and modern energy services
Goal 13: Take urgent to combat climate change and its impact	<p>Target 13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries</p> <p>Target 13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning</p>
Goal 14: Conserve and sustainably use of oceans, seas and marine resources	Target 14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution
Goal 15: Sustainable manage forest, combat, desertification, halt reserve land degradation, halt biodiversity loss	<p>Target 15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally</p> <p>Target 15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a</p>

Goal	Target
	land degradation-neutral world

3.11 Institutional Framework

Authorities, institutions and sectors directly or indirectly related to the project development have been identified geographically by political boundaries as well as through regulations, institutional mandates and structures. These entities are adequately consulted in the EIS process as prescribed through the institutional framework for environmental management.

The relevant institution for handling EIA requirements is the NEMC with input from the District Environment Management Committees; Ward Committees and Street Committees. According to the EMA of 2004 the institutional set-up for environmental management from a national level to village level includes:

- Minister Responsible for Environment;
- Director of Environment (DOE);
- National Environmental Management Council (NEMC);
- Sector Ministries;
- Regional Secretariats;
- Local Government Authorities, District, and Town Councils;
- Township, Village, Ward; Neighborhood (Kitongoji); and Street (Mtaa).

The DOE and NEMC are the main regulatory bodies for environmental management in Tanzania whilst the other sector ministries and agencies, play an important role in implementing and enforcing environmental decree. The environmental management functions of each institution are outlined in the Environmental Management Act.

3.11.1 Minister Responsible for Environment

The Minister is overall responsible for matters relating to environment and in that respect be responsible for articulation of policy guidelines necessary for the promotion, protection and sustainable management of environment in Tanzania.

The Minister may issue general guidelines to the Sector Ministries, Government Departments, the Council, National Environment Advisory Committee, City, Municipal or District Environmental Management Committee, agency or any other public or private institution necessary for the purposes of implementation of or giving effect to the provisions of EMA.

The Minister may designate and shall, where appropriate, direct any of the before mentioned institutions and within specified time, to perform any function or do any activity or desist from performing any function or doing any activity as a result of which the environment or part of it is or may be seriously endangered or detrimentally affected.

3.11.2 Director of Environment (DOE)

The DOE heads the Office of the Division (Directorate) of Environment under the Office of the Vice President and is responsible for coordination, monitoring and assessment of various environmental activities.

The DOE is responsible to coordinate various environment management activities being undertaken by other agencies and promote the integration of environment considerations into development policies, plans, programmes, strategies, projects and undertake strategic

environmental assessment with a view to ensuring the proper management and rational utilization of environmental resources on a sustainable basis for the improvement of the quality of human life in Tanzania.

3.11.3 National Environment Management Council (NEMC)

The object and purpose for which the Council is established is to undertake enforcement, compliance, review and monitoring of environmental impact assessment and in that regard, shall facilitate public participation in environmental decision making, exercise general supervision and coordination over all matters relating to the environment assigned to the Council, under the EMA or any other written law.

The Director General of NEMC is appointed by the President. The Council and the Board of Directors consist of:

- A Chairperson appointed by the President;
- The Director of Environment;
- Seven members appointed by the Minister; and
- The Secretary to the Council (Director General).

3.11.4 Sector Ministries

An environmental sector sits within each Ministry. The duties of the sector include:

- Responsibility for ensuring compliance by the sector Ministry with the requirements of this Act;
- Responsibility for ensuring all environmental matters contained in other written law falling under sector ministry are implemented and report of their implementation is submitted to the Director of Environment; and
- Liaising with the Director of Environment and the Council on matters involving environment and all matters with respect to which cooperation or shared responsibility is desirable or required under this Act.

3.11.5 Regional Secretariats

The Regional Secretariat is responsible for co-ordination of all advice on environmental management in their respective regions and liaison with the Director of Environment and the Director- General on the implementation and enforcement of this Act.

The Regional Secretariats are headed by a Regional Environment Management Expert. The expert is responsible for advising the local authorities on matters related to the implementation and enforcement of the EMA.

Furthermore, the expert links the region with the Director of Environment and Director General of NEMC.

3.11.6 Local Government Authorities

A local government Environmental Management Officers are designated or appointed at each City, Municipal, District and Town Council. The responsibilities of the Environmental Management Officers among others, include:

- Ensuring enforcement of EMA;
- Advising the Environment Management Committee on all matters relating to environment;

- Promoting environmental awareness relating to protection of the environment and the conservation of natural resources;
- Gathering and managing information on the environment and the utilization of natural resources;
- Preparing periodic reports on the state of the environment;
- The preparation, review and approval of environmental impact assessments for local investment by-laws on environmental management and on sector specific activities related to environment; and reporting to the Director of Environment and the Director General on the implementation of the EMA.
- The Environment Management Committee is responsible for functions set out under the Local Government Act. In addition, they perform functions as prescribed by the EMA and they may be assigned by the Minister to carry out directives related to the promotion and enhancement of sustainable management of the environment.

The Township Environment Management Committees are responsible for:

The proper management of the environment in respect of the area in which they are established;

- ❖ Performing duties as assigned under EMA or by the Minister or Council;
- ❖ Carrying out directives given by the Minister to promote and enhance sustainable management of the environment; and
- ❖ Performing any functions as set out under the Local Government (District) Authorities Act.

3.11.7 Ward/Mtaa/Kitongoji Level

The District Council designates an Environment Management Officer for each administrative area of a township, ward, village, kitongoji (neighbourhood/hamlet) and mtaa (street).

The Environmental Management Officers are responsible for coordinating all functions and activities related to the protection of environment within their designated areas.

CHAPTER FOUR

4 BASELINE CONDITIONS

4.1 Introduction

The purpose of this Chapter is to provide a brief description of the environment in the project site which could potentially be affected by positive and negative impacts of the project discussed in Chapter 2. Impacts of lesser importance were screened out during scoping phase to ensure that the EIS is focused on the potentially significant impacts.

The process of environmental baseline investigations included the combination of some/all the following tasks:

- An appropriate combination and balance of desktop studies, field surveys, site information collection and technical consultation with stakeholders.
- Consideration of all available documentary records, research papers and other relevant information.
- Use of recognized survey and analysis techniques.
- Identification and provision of appropriate (preferably quantitative) descriptions of the baseline environmental conditions.
- Identification of key environmental features that may enhance, constrain, or limit the direction and rate of environmental change.
- Explanation of links, interactions, and dependencies between environmental components.
- Verification of desktop and other information by systematic field surveys.
- Acknowledgement of the implications of gaps and limitations in information and data.

4.2 Project Core Area and Accessibility

This project will be implemented in Dodoma region, Chamwino district in Manchali ward at Manchali village. Dodoma Region is sited at the centre of Tanzania Mainland. Its location attracts the Tanzania Government to establish its Capital in Dodoma Municipality. The Region is located south of the equator between latitudes 6° 57' and 3° 82' and between longitudes 36° 26' and 35° 26' east of Greenwich.

It borders Manyara in the North, Iringa in the South, Singida in the West and Morogoro in the East. It is accessible from Manyara through Babati and Kateshi in Manyara Region; Dar es Salaam and Pwani through Morogoro and Tabora, Shinyanga and Mwanza through Manyoni in Singida Region. All the Roads are accessible throughout the year.

Chamwino District is one of the seven districts of the Dodoma Region of Tanzania which is located at latitude 06° 05' 55" South of Equator and longitude 36° 02' 17" East of Greenwich. Other districts are Dodoma, Bahi, Chemba, Kongwa, Kondoa and Mpwapwa.

Chamwino districts borders Chemba district in the North, Manyara Region, Mpwapwa and Kongwa Districts in the East, Iringa Region in the South and Singida Region, Bahi and Dodoma Districts in the West. According to 2012 Human National Population Census, the district had 330,543 human populations. Chamwino District is accessible by tarmac Trunk roads T3 from Morogoro – Dodoma, T5 from Iringa – Dodoma as well as Central and Standard Gauge Railways.

4.3 General Conditions

4.3.1 Current Uses and Activities at the Proposed Project Site

The proposed 24 acres land area which is proposed for school construction at Manchali village is an agricultural farm owned by Manchali Primary School. However, currently there is no agricultural activities proceeding in the area, hence it is characterized by grasses and scattered Baobab trees as shown in Figure 4-1



Figure 4-1: Economic activities at proposed area

4.3.2 Displacement and Relocation

No people or activities shall be relocated to leave right way for school construction as no human settlements or activities were found in the project location during site visit.

4.3.3 Neighboring Residences (Location and Distance from the Proposed Project)

The location is surrounded by farms in the east, school and farms in the south and residential houses in the north and west. The project is located about 200m from residential houses and 400m from the school.



Figure 4-2: Surroundings for the proposed area

4.4 Socioeconomic Baseline

4.4.1 Background

A development envelope (Area of Interest - AOI) is situated at Manchali Village, Manchali Ward, Chamwino District in Dodoma Region. Details of the study area for the Social Impact Assessment (SIA) are presented in Figure 4-1.

Table 4-1: Study Areas for the EIS

Study Area	Definition	Areas included for this project
Site-specific study area	Area likely to experience impacts associated with project infrastructure and activities	The project footprint, excluding the access roads, etc. (to be defined at the conclusion of the scoping phase)
Local study area	Areas likely to experience impacts related to population influx, etc.	The neighboring settlements in Manchali ward and Manchali Village
Regional study area	Area likely to experience economic impacts of the project	Chamwino district (since most of the development envelope falls within this district). This is set against the backdrop of Dodoma Region and Tanzania as a whole

4.4.2 Administrative Set up

The proposed project falls under Manchali village headed by Village Executive Officer (VEO) and village chairperson, in Manchali ward headed by ward executive officer (WEO) and ward council, in Chamwino Districts headed by District commissioner (DC) and District Executive director (DED) in Dodoma region under Region Administrative Secretary (RAS). Dodoma region has 7 districts, 8 councils, 29 divisions, 209 wards, 199 streets and 607 villages.

4.4.3 Demographic Condition

Dodoma Region is one of 31 administrative regions of the United Republic of Tanzania located in the Central part of Tanzania Mainland. The region has 7 and 9 councils covering

an area of 41,311 square kilometers. The region have a population of 3,085,625 (2022 population census) with a regional GDP of TZS 4,740,639 Million and a per capita income of TZS 1,826,417 Million in year 2021, contributing 3.09 percent to the national income.

The region is strategically located in the Central Corridor Development Zone of East Africa which runs from South of the Lake Victoria Region through Dodoma to Dar Es Salaam Port.

Table 4-2: population distribution in Dodoma Region

Projected Population 2017			
District Council	Male	Female	Total Population
Kondoa District Council	119,115	114,677	233,792
Mpwapwa District Council	163,464	175,054	338,518
Kongwa District Council	165,589	178,385	343,975
Dodoma City Council	221,369	234,666	456,035
Bahi District Council	117,600	128,358	245,958
Chemba District Council	130,483	131,084	261,567
Kondoa Town Council	32,377	33,119	65,496
Chamwino District Council	176,310	190,491	366,801
Total	1,126,309	1,185,833	2,312,141

Source: Projected from National Population Census, 2012

4.4.4 Ethnic Composition

The dominant ethnic groups in Dodoma Region are Gogo, Rangi and Taturu. Other small ethnic groups are Sandawe, Barbaig, Hadzabe, Kimbu, Sangu, Mang'ati, Maasai, Wairaq, Watatoga and Wasandawe.

The Maasai and Wairaqi depend on pastoral activities and are found in all districts while Watatoga who are found in the North-western part of Kondoa district are hunters and honey collectors. Maasai, Manga'ati and Watatoga are termed as indigenous people as per ESS7.

4.4.5 Economic Activities

The dominant economic activities in Dodoma region are agricultural production (84%) and livestock keeping. Other activities are service works, shop and stall sales (5.3%), craft and related works (3.3), technicians, associate professional (3.0%) and street vending (1.7%).

4.4.5.1 Agriculture

Agriculture is the major economic activity in Dodoma Region which employed about 84% of people.

In 2014/15 farming season, 53.7% of regional arable land (897,888hectares) was utilized for crop production whereby Kongwa District Council had the highest proportion of land utilization with 72.6% of its arable land being cultivated, followed by Kondoa District Council (71.41%), Dodoma Municipal Council (67.3%), Chamwino District Council (61.4%) and Bahi (43.5%), while Mpwapwa and Chemba district councils utilized only 30.7% and 23.5% of their arable land respectively.

Farmers in Dodoma Region practiced both commercial and subsistence farming. The major grown crops are fruits (grapes, mango, papaya, guava, baobab, tamarind and dates), staple food crops (maize, sorghum, millet, rice, pulses, cassava, potatoes, banana and plantains) and horticulture (spinach, amaranths, tomatoes, Chinese, cabbage, egg plant, bell pepper and carrots).

The region practiced both rain fed and irrigation farming. The region has about 123,739 hectares potential for irrigation farming due to its geographical location, topography and ecological conditions. The largest potential area for irrigation farming is found in Chamwino District (68.2%) followed by Bahi District (15.7%) while the smallest potential area is found in Kondoa District with 1.0%. The major crops irrigated are paddy and vegetables.

4.4.5.2 Livestock

Livestock keeping in Dodoma region is the second practiced economic activity. The climate and environmental conditions are favorable for livestock keeping. Also, availability of local breeds which are highly resistance to diseases.

The region has two industries which process livestock products and export to Oman, Morocco, Iraq and Vietnam. The most important type of livestock kept is beef and dairy cattle, indigenous cattle, sheep, goat, broiler and layers chicken, indigenous poultry and pig.

Table 4-3: Livestock Distribution in Dodoma Region from 2012 - 2018

TYPE OF LIVESTOCK	NUMBER OF LIVESTOCK FOR FIVE YEARS					
	2012/2013	2013/2014	2014/2015	2015/2016	2016 / 2017	2017/2018
Beef cattle	210,851	211,554	212,666	224,671	242,363	242,376
Dairy cattle	3,974	4,222	4,044	2,855	3,622	3,679
Indigenous cattle	1,535,116	1,321,502	1,317,797	1,385,180	1,536,996	1,513,449
Goats	808,712	749,953	792,946	827,843	899,100	859,080
Sheep	377,467	259,564	274,181	308,080	342,310	325,603
Broilers	21,281	23,906	27,173	26,525	24,135	22,122
Layers	27,136	27,320	30,078	43,351	47,557	47,440
Indigenous poultry	1,941,333	1,784,189	1,873,331	1,983,887	1,965,277	1,966,409
Pigs	83,709	96,101	105,544	105,388	74,984	108,239

Source: Dodoma Regional Commissioner's Office, 2019

4.4.5.3 Forestry and Honey Production

Dodoma is home to some of the largest Miombo forests in Africa. Natural forest reserves of the region covers a total of 220,989 hectares equivalent to 5.44 percent of total 4,131,100 hectares land area. These natural forest reserves are located largely in Chamwino (100,391 hectares), Kondoa (37,199 hectares), Bahi (28,058 hectares), Mpwapwa (22,958 hectares), Kongwa (11,883 hectares) and Chemba (20,500 hectares).

The region has adequate land area for beekeeping and favorable weather condition and availability of Miombo forests. Beekeeping sectors in Dodoma Region is dominated by small-scale beekeepers with a total of 525,846 local bee hives and 38,943 modern bee hives between 2011 – 2015 periods.

4.4.5.4 Wildlife

Dodoma Region has a distinctive wildlife ecosystem areas that comprises Swagaswaga game reserve, Rudi forest reserve, Nyalumba mountain ranges, Kidolea game reserve and

Chinene forest reserve which host, Elephant, Giraffe, Buffalo, Zebra, Thomson Gazelle, Lion, Hyena, Rabbit, Wild dog, Antelope, Dikdik, Monkey, Nsha, Leopard, Amphibians, Reptiles, birds etc.

4.4.5.5 Tourism

Tourism is among of developing sectors in Dodoma Region's economy. The main natural tourists attractions available in Dodoma region are Swagaswaga game reserve, Rudi forest reserve, Nyalumba mountain ranges, Kidolea forest reserves, Mkugunero game reserve as well as presence of traditions and cultures of Sandawe, Barbeig, Rangi, Gogo and Burunge tribes, traditional dancing and clothing, traditional food and poison and traditional hunting and gathering.

Other tourism attractions are parliament and state house, University of Dodoma, rock paints in Chemba district, and Elephant sunk, Kolo antiquities, slavery caravan route e.t.c.

4.4.5.6 Fisheries

The major fishing area in Dodoma region is Mtera dam. Also fishing farming in this region is practiced. The major fish farms available include Dabora dam, Munguri dam, Bicha dam as well as traditional fishing in Mrijo natural dam, Kimacha natural dam, Lake Sulunga and Bubu River. In 2015, the region had 1,186 fishing licenses, 1,844 fishermen and 758 registered fishing vessels and a total of 162,496 tons of fish caught which valued at TZS 544.7 million.

4.4.5.7 Mining

Mining is one of the major economic activities of Dodoma Region. Mineral types available in Dodoma Region are copper, nickel, manganese, silica, enstatite, scapolite, spessartine garnet, mariallite, gypsum, quartz, limestone, gold, uranium, building materials and green tormaline. However, mining in Dodoma region is dominated by small scale extractions of building materials in Mpwapwa, Chamwino and Bahi district councils, such as stones and sand minerals.

4.4.5.8 Industry and Trade

Dodoma Region industrial sector is dominated by small and medium scale industries for agro-processing industries, fishing and manufacturing of different products.

In 2015, the region had 1,482 small industries whereby 877 industries were maize milling, 202 industries were sunflower oil processing mills, 167 industries were carpentry workshops, 120 industries were welding workshops, 68 industries were services industry and garages, 36 industries were involved in food processing and the remaining 12 industries were involved in timber processing as well as 7 medium scale industries for grain milling, foam mattress, meat processing, civil construction and iron sheet which were located in Dodoma city.

4.4.6 Economic infrastructure

Economic infrastructure is very vital for any economic development to take place. Growth in agricultural and industrial production, trade, national defence, administration and even

political integration all depend on efficient and smooth operation of communication, transport and energy resources

In 2016, Dodoma region had 5,712 kms of road network which is made up of 797.9 kms region roads, 3,098kms feeder roads, 1,495.5 kms district or urban roads and 320.5kms trunk roads which are passable throughout the year. Tarmac roads cover 501kms, gravel roads 1565.2kms and earth roads 3,568.5kms.

The region has one airport located in Dodoma City and two airstrips located in Chemba and Kondoa districts as well as central and standard gauge railways

Internet and communication services are available in the region such as 3 television stations (Dodoma TV Cable, Maneno TV Cable, FCN TV), local televisions (ITV, TBC, Chanel Ten and TBC), 10 radio stations and 6 mobile communication companies such as Tigo, Vodacom, Airtel, Zantel, Halotel and TTCL).

4.4.7 Cultural Heritage

There is cultural inheritance, archeological and historical site in Dodoma Region such as Kolo antiquities, Slavery caravan route, Shaban Robert reading garden and house, first cattle trough in East Africa built by Germany in colonial era, Chief Mazengo homestead, Elephant sunk, rock paints, freedom fighter camp, graves of freedom fighters, historical state house of Chamwino, traditional dance of Gogo, tradition and culture of Sandawe, Barbeig, Rangi, Gogo, Burunge tribes, traditional clothes, food and poison as well as traditional hunting and gathering.

4.4.8 Health Status

The vision of the health sector is to raise the health and well-being of the people, especially those who are more at risk of being affected by diseases by promoting and strengthening the system of providing health services that will meet the needs of the people. In 2016, Dodoma region had 9 hospitals, 40 health centers and 321 which are managed by government, religious institutions and private groups.

The region has been experiencing deficiency of health practitioners and medicines which have led avoidable loss of people's' lives through avoidable diseases. The major common diseases in Dodoma Region are Clinical AIDS, Pneumonia, Malaria, Tuberculosis, Skin diseases, UTI, Diarrhea e.tc.

4.4.9 Education Status

Dodoma region had 745 primary shoools with 63,302 enrolments, 227 secondary schools with 19,476 enrolments and 26 technical colleges and higher learning institutions in 2016 which are operated by the government, religious institutions and private actors.

Classrooms are among the facilities that create conducive environment for students to have quality education. In 2016, Dodoma region had a shortage of 336 classrooms whereby Kondoa DC had the highest shortage of classrooms with 31.4%, followed by Dodoma MC (24.9%), Bahi DC (23.3%), Chemba DC (22.9%), Kongwa DC (20.2%) and Chamwino DC (15.2%), while Kondoa TC had lowest shortage (12.2%) for secondary education

4.4.10 Sources of Energy

Energy supply is vital for the provision of power to facilitate operation of the other sectors. The level of affluence of a society depends on its dependence on supplies of energy to fuel industry, modern lifestyles and transportation. Indeed, modern development cannot continue to rely on wood and other bio-fuels, so it is necessary to use added amounts of fossil fuels and hydropower.

The, main sources of energy in the district include firewood, charcoal and gas for cooking and electricity, kerosene and solar for lighting. However, for cooking purposes, firewood is the most dominant source followed by charcoal, gas and electricity.

Electricity from TANESCO grid is mainly used in urban areas and at village centers. It is of disadvantage that, the most dominant source of energy for cooking is firewood which is not environmentally friendly energy as it contributes towards deforestation of the area.

4.4.11 Sanitation and water supply

Dodoma Urban Water Supply & Sewerage Authority is the water authority in Dodoma region. The region had 897,113 people served with water. In 2016, the region had a total of 1,139 water sources, including rainwater tanks (299), boreholes (358), shallow wells (268), and dams (80) and 134 surface water. To improve community participation in water utilization and management, the region has established 94 community water supply organizations

4.4.12 Waste Management

Refuse disposal is the discharging or destroying of garbage, sewage, or other waste matter or its transformation into something useful or innocuous. The disposal of human excreta and household refuse are of prime importance in rendering the environment around household compounds safe from contamination.

In Dodoma region pit latrines are the most popular excreta disposal structures although flush toilets also do exist to some extent. For household waste the use of refuse bins in towns to facilitate collection by a centralized system is often supplemented by refuse pits even in urban areas.

For rural areas it is the refuse pit that is popular where action is taken to collect and dispose household garbage, otherwise it is collected and disposed of by throwing it within or outside the household compound.

4.4.12.1 Liquid Waste Management

The existing sewerage services cover few of sewerage disposal facilities in Dodoma Region particularly in urban areas. The sewerage system mainly serves educational institutions and several commercial and residential facilities.

4.5 Physical- Geographical Environment

4.5.1 Climate and meteorological conditions

Dodoma Region is mostly semi-arid due to low and erratic rainfall. Rainfall is the main vital climatic factor. The region receives single rainy season between November/December and

April/May periods. Total rainfall in Dodoma region ranges from 500mm to 800mm per annum with high geographical, seasonal and annual variations basing on agro-ecological zones.

The temperature in the region vary according to altitude but generally range from about 15°C in July to 30°C during October. Moreover, temperature variations are observed between day and night and may be very high with hot reaching up to 35°C in afternoons and chilly going down up to 10°C at nights and mornings.

4.5.2 Geological Conditions

4.5.2.1 Landscape

Dodoma Region is located in the northern part of the central plateau of Tanzania which has elevations ranging from 1200m above level. Surrounding the region on all sides except the south-eastern boundary with a major scarp of up to 180 meters high is the eastern part of the Great Rift Valley. Topographically Dodoma Region forms part of the central plateau of Eastern Africa extended from Ethiopia in the north to the Transvaal in the south.

The north-west part of the region is characterized by number of mountain chains. In the north- west there is the Mbulu plateau with more than 1600m above sea level, while the Masai steppe within the regional boundaries covers approximately 3,500sq.km and is considered to be the driest part of the region. In the Mbulu plateau there are two distinct mountain ranges, one running through the north- east of the region. These are the Kiborian-Ukaguru Mountains with heights of 2,000 meters or more above their surroundings and the Wata plateau and the Usagara mountain chains.

The other mountain chain in the Mbulu plateau is the Chenene mountain chain which bisects Dodoma Region into northern and southern parts. These chains exceed 200 meters above their surroundings. They are steep sloped with table top like summits, and are surrounded by low-lying relatively flat areas with depressions which are water-logged during rain seasons, having a tendency to salinity because of their limited outflow and are locally known as Mbuga. The western part of Dodoma Region is occupied by a vast internal drainage basin such as the Bahi depression known as Mbuga.

4.6 Biological Environment

4.6.1 Flora and Fauna

The dominant vegetations found in Dodoma region is bush or thickets which found in uplands area. There is also wetland vegetation which includes wooded grassland and a dense impenetrable deciduous thicket of multi-steamed shrubs known as “Itigi thicket” which occupies the southern part of Bahi District. Itigi thicket is formed wherever the natural vegetation has been removed by agricultural, grazing and fire activities and remaining mainly with bushes and acacia mixed with short- lived annual grasses and herbs.

Depression, which is seasonally inundated *mbugas* (areas with impended drainage) support grasses to form grasslands and sometimes a mixture of grasses and woody plant. These consist of covers of trees whose crown is more or less tough to form light but mainly continuous canopies over ground covers of grasses and shrubby plants.

Generally, vegetation of Dodoma Region is of Miombo type, and most of the hill ranges, steep slopes and protected forest reserves are covered with large woody plants, which form good watershed protective covers.

The dominant fauna species found in the region are Elephant, Giraffe, Buffalo, Zebra, Thomson Gazelle, Lion, Hyena, Rabbit, Wild dog, Antelope, Dikdik, Monkey, Nsha, Leopard, Amphibians, Reptiles, birds etc.

4.6.2 Air Quality within the Project Area

4.6.2.1 Ambient air quality data

The consulting team conducted the actual monitoring of air quality at the project site using an Aeroqual Outdoor Air Quality Test Kit. This is a complete outdoor air monitoring kit for the measurement of criteria air pollutants and VOCs.

Features Aeroqual's proven Series 500 portable monitor with interchangeable sensor heads, measuring particulate matter (PM_{2.5}, PM₁₀), four gas pollutant gas sensors (NO₂, O₃, CO, VOCs), and a combined temperature and relative humidity sensor.

Suitable for use during wide area air quality surveys, personal exposure monitoring, and as part of a short-term fixed monitoring network. The equipment and collected data are shown in **Error! Reference source not found.** respectively.



Figure 4-3: Ambient Air Quality Monitoring equipment used at the project

4.6.3 Description of Sources and levels of project emission

Heavy construction is a source of dust emissions that may have substantial temporary impact on local air quality. Emissions during the construction of a building are associated with land clearing, ground excavation, cut and fill operations (i.e., earth moving), and construction of a particular facility itself. The analysis of the environment in quality of air gases is shown in Table 4-4

Table 4-4: Ambient Air Quality data measured from different station in the vicinity of the project site

LOCATION	CO ppm	NO ₂ ppm	O ₃ ppm	VOC ppm	SO ₂ ppm	PM _{2.5} ppm	PM ₁₀ ppm

LOCATION	CO ppm	NO ₂ ppm	O ₃ ppm	VOC ppm	SO ₂ ppm	PM _{2.5} ppm	PM ₁₀ ppm
Project Site	0.00	0.033	0.00	0.00	0	0.001	0.001
Monitoring Station a	0.00	0.015	0	0.00	0	0.012	0.010
Monitoring Station b	0.00	0.011	0	0.00	0	0.004	0.003
Monitoring Station c	0.00	0.013	0	0.00	0	0.000	0.004
Monitoring Station d	0.00	0.06	0	0.05	0.01	0.002	0.002
Tanzania Standard [TZS 845:2005]	20	0.1	0.0	10	0.05	0.05- 0.08	0.05- 0.116

All data monitored were below standards with low detectable level so are of no significant. However, the data measured will be used for monitoring project intrusion during project implementation so as to trace how the project has affected the air quality.

4.7 Noise and Vibration

The noise and vibration survey was conducted in terms of the provisions of International Finance Corporate Guidelines of 2007 (The measurement and rating of environmental noise with respect to annoyance and to speech communication) as well as Environmental Management (Noise and Vibration Standards) Regulations of 2015.

The following instruments were used in the noise and vibration survey as they are displayed in

- Sound Level meter – Lutron SL 4033SD Class 1;
- Free field microphone – Electric Condenser Microphone; and
- Sound Calibrator (94/114dB) – SC – 942.
- Vibration meter – VB8206SD

On taking measurements, the meter was set to the “A” weighed measurement scale, which enables the meter to respond in the same manner as the human ear. The “A” scale is applicable for workplace compliance testing, environmental measurement, and workplace design and law enforcement.

For, noise measurement the meter was held approximately 1.5 m above the ground surface and at least 0.5 m away from hard reflecting surfaces such as walls. A set of four readings were taken per point for averaging. The equipment used and data collected are shown in Table 4-5.



Figure 4-4: Noise meter used to collect data on the project site

Table 4-5: Results on Noise and Vibration levels within the project site

Station Name	Noise Level [dBA]	Vibration [mm/s]
Project Site	43	1.6
Monitoring Station a	44	1.5
Monitoring Station b	36	1.4
Monitoring Station c	34	0.7
Monitoring Station d	35	0.9
Tanzanian Standards (TZS: [1471: 2015])	60-70	5

The noise and vibration level survey was executed during the day on the 30rd September 2022 at 1200hrs. In this survey, 06:00 to 22:00 represented the daytime period and 22:00 to 06:00 the night time.

The Noise level was measured over a representative sampling period, exceeding 30 minutes at a point for different location in the vicinity of the proposed site.

CHAPTER FIVE

5 STAKEHOLDERS IDENTIFICATION AND INVOLVEMENT

5.1 Introduction

This chapter describes the main stakeholders that have been identified and contacted to date as well as their main concerns regarding the proposed development.

ESS10: Stakeholder Engagement and Information Disclosure pinpoint the involvement of stakeholder in the project sustainability

Stakeholder engagement is an inclusive process conducted throughout the project life cycle. Where properly designed and implemented, it supports the development of strong, constructive, and responsive relationships that are important for successful management of a project's environmental and social risks. Stakeholder engagement is most effective when initiated at an early stage of the project development process, and is an integral part of early project decisions and the assessment, management, and monitoring of the project's environmental and social risks and impacts

Stakeholders are identified as “those people and institutions that have an interest in the successful design, implementation and sustainability of the project and will either be negatively, positively or not at all impacted by the proposed development”. Section 89 of the Environmental Management Act (EMA, 2004) provides directives on public participation and its importance to EIS. Furthermore, section 17 of the EIA Regulations provides details and procedures for public participation in the EIS process.

Stakeholder participation aims to involve processes whereby all those with a stake in the outcome of a project actively participate in decisions on planning and management. Stakeholders may share information and knowledge, and contribute to the project, to enhance the success of the project and hence ultimately their own interest.

5.2 Stakeholder Engagement Process

The Constitution of United Republic of Tanzania recognizes the sovereignty of the people and that people possess the power to guide development within their areas either directly or indirectly. The public should therefore be involved in the evaluation process because the Environment Management Act (2004) demands it to be so.

The main objectives of the stakeholder engagement process are to:

- Inform the stakeholders about the proposed project and provide opportunities for influencing/amending the plans;
- Collect stakeholders' views on the proposed project including potential positive/negative impacts the stakeholders may associate with the project
- Get an idea of Stakeholders' preferred approaches to implementation of the project;
- Get local knowledge on any sensitive areas within the project area of influence (physical, environmental, cultural or proposed facilities); and
- Get expert advice on land use/ area zoning, water availability and supply, power and road infrastructure

Stakeholder consultation is initiated mainly during the scoping phase as various stakeholders are identified and then proceed throughout the EIA process. There are different levels of public participation. Table 5-1 shows the categories of public participation according to the goals.

Table 5-1: Levels of Public Participation

LEVELS OF PUBLIC PARTICIPATION GOALS	
Inform	To provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or solutions.
Consult	To obtain public feedback for decision-makers on analysis, alternatives and/or decisions.
Involve	To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered in decision-making processes.
Collaborate	To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution.
Empower	Inclusion of the public in the decision-making processes.

The team put in place a stakeholder engagement process, which helps to:

- Identify and involve all potentially affected stakeholders
- Generate a good understanding of the project amongst those that was affected
- Identify issues early in the project cycle that may pose a risk to the environment, project or its stakeholders
- Ensure that mitigation measures are appropriate (implementable, effective, and efficient)
- Establish a system for long-term communication between the project and communities that is of benefit to all parties.

The primary goal of the Stakeholder Engagement Process is to ensure **transparency and involvement** of individuals, groups and organizations affected by and/or interested in the project (to be called as stakeholders) in assessing and managing the potential environmental and social impacts of the project, and to provide relevant, timely and accessible information in an appropriate and understandable format (e.g., Project Information Document).

We discuss the different steps to be taken in the next sections. The process was reported in the stakeholder engagement plan.

The **Stakeholder Engagement Plan** is the public document, which presents plans for stakeholder engagement, consultation, and disclosure, and is to be updated for each phase of the project. Parts of the report need to be published through EIS (public involvement and disclosure). The main purpose of this document is to:

- Define the consultation approach for stakeholders,
- set up a process to address public views and/or concerns,
- Identify resources and responsibilities for implementation and monitoring of the consultation program, and
- Set up a grievance mechanism for local stakeholders.

It consists of the following information:

- Introduction (project information, project program, summary of potential environmental and social impacts);
- National and international requirements;
- Consultation undertaken to date;
- Stakeholders.
- Disclosure of information and public consultation.
- Grievance management;
- Resources and responsibilities;

- Reporting; and
- Annexes: comment/complaint form; complaint action form

The purpose of the **SEP** is to engage with organisations and people who may be affected by the project(s) or who may be interested in the Project, as mentioned above. Each stakeholder will need a different level of engagement. Throughout the process, we will make clear the level for the respective stakeholder and take the necessary steps.

5.3 Stakeholder

Stakeholders are individuals or groups who are affected or likely to be affected by the project (project affected parties PAP) and who may have an interest in the project and/or the ability to influence its outcome, either positively or negatively (other interested parties OIPs).

The identification of stakeholders under project will be based on (a) their roles and responsibilities; (b) possible influence/interest on the project; and (c) their circumstances they may be disadvantaged or vulnerable in different ways from each other. Stakeholders' analysis involves identifying the stakeholder groups that are likely to affect or be affected by proposed project components and sorting them according to the potential impact the activities will have on them.

The preliminary stakeholder analysis has identified the various interests of stakeholder groups and the influence these groups may have on the project. The analysis also shaped the design of stakeholder consultation events and how to engage them. Stakeholders' interest is determined based on the extent to which they may be involved in implementing elements of the project, likelihood in being impacted (positively or negatively) or in which they may benefit from components

5.4 Stakeholder Identification and Consultation

Tansheq team started with stakeholder consultations in September 2022. The below bullets capture the process undertaken to date:

- Introductory meeting with RC (Region Commissioner) RAS, (Region Administrative Secretary) Region Education Officer, (REO), REMO,(Region Environment Management Officer)
- District Executive Director (DED) in Chamwino, DEO, DEMO
- Initial meeting with village government, Ward officials including WEO at Manchali, Manchali ward
- Meeting with communities around the proposed project area.

Each representative had an opportunity to state their understanding of what is proposed, and they fully support the project and said that they welcomed the team to undertake the requisite study.

5.4.1 Institutional Stakeholders

Institutional stakeholders were identified based on their involvement in decisions that might affect the proposed development or the stakeholder.

The Institutional stakeholders include:

- Ministry of Home Affairs (Tanzania Fire and Rescue Force- Dodoma Office)
- Ministry of Labour and Employment (Occupational Safety and Health Authority, OSHA- Dodoma Office)
- Government Chemist Laboratory Authority (GCLA- Dodoma Office)

- Regional Government Regional Commissioner (RC- Dodoma) RAS, (Region administrative Secretary) and District Commissioner (DC-Chamwino); and
- Local Government (Manchali Ward/ Manchali Villages).

5.4.2 Other Stakeholders

Individual stakeholders refer to those occupying, owning, living, or working within the AOI and surroundings that may be impacted upon resulting from project implementation.

They include:

- Landowners
- Farm owners
- Residents/house owners affected village.

5.5 Main Concerns and Comments of Stakeholders

The comprehensive list of all stakeholders consulted and concerns and comments from the consultation process raised by stakeholder to date are in

Table 5-2: Stakeholder Consultation Views

Name of Stakeholders	Place	Dates	Comments, views and concerns from the stakeholders	Proponet response
Gift Kyando(REO)	Dodoma	30/09/2022	<ul style="list-style-type: none"> It is very important to follow all the procedures for project implementation including preliminary study. Dodoma region has been prepared to implement the said projects 	<ul style="list-style-type: none"> All procedures for project implementation including environment, safety and social will be adhered during project implementation
Mr. Sospeter Langiboli (SLO)	Chamwino District	30/09/2022	<ul style="list-style-type: none"> Chamwino district officials are positively with the project and they are waiting for implementations 	<ul style="list-style-type: none"> The project will be implemented involving Chamwino District officials
Madam Mariam L. Mvinile (WEO)	Manchali ward	30/09/2022	<ul style="list-style-type: none"> They are waiting for the project to begin and they will give maximum cooperation 	<ul style="list-style-type: none"> The project will be implemented by involving Manchali ward officials
Tulinagwe Ngonile (DEO)	Chamwino DC	30/09/2022	<ul style="list-style-type: none"> They know about the project and they are already for the implementation 	<ul style="list-style-type: none"> The project will be implemented involving Chamwino District officials
Mr. Gidion Godwine (EMO)	Chamwino DC	30/09/2022	<ul style="list-style-type: none"> They know about the project and they are already for implementation 	
Madam Yustina Amo (DEMO)	Chamwino DC	30/09/2022	<ul style="list-style-type: none"> They know about the project and they are already for the implementation 	
Madam Zaina T Msangi (DCDO)	Chamwino DC	30/09/2022	<ul style="list-style-type: none"> They are aware about the project and they are ready for implementation 	
Eng. Simon H Mlay (DE)	Chamwino DC	30/09/2022	<ul style="list-style-type: none"> On behalf of the Dodoma officials, they only waiting the 	

Name of Stakeholders	Place	Dates	Comments, views and concerns from the stakeholders	Proponet response
			project to start.	
Gaston Dyanka (DAO)	Chamwino DC	30/09/2022	<ul style="list-style-type: none"> They know about the project and they are already for the implementation 	<ul style="list-style-type: none">
Mr. Tarimo Walburga	Chamwino DC	30/09/2022	<ul style="list-style-type: none"> They know about the project and they are already for the implementation 	
Mr. Alfas M Chikizo (Chairman)	Manchali village	30/09/2022	<ul style="list-style-type: none"> They know about the project and they are already for the implementation They are willing to give some portion of Manchali Primary School land for school construction. 	<ul style="list-style-type: none"> The project will be implemented involving Manchali village officials
Mr. Nasson M Mtundu (ward Councillor)	Manchali Ward.	30/09/2022	<ul style="list-style-type: none"> The project will accelerate township in their villages 	<ul style="list-style-type: none"> The project will be implemented involving Manchali ward
Mr. Peter A Gwase	HOS Manchali	30/09/2022	<ul style="list-style-type: none"> The project has been delayed for so long and they are curious, for the same 	<ul style="list-style-type: none"> The project will be implemented involving Manchali village official
Madam Zauda H Iddy (school Head Teacher)	Manchali Primary school	30/09/2022	<ul style="list-style-type: none"> They are aware about the project and they will give maximum support to the project 	<ul style="list-style-type: none"> The project will be implemented involving Manchali school officials and other relevant stakeholders
Mr. Ladislaus J. Loboto(VEO)	Manchali B village	30/09/2022	<ul style="list-style-type: none"> They love the project and they wish to start very soon 	<ul style="list-style-type: none"> The project will be implemented involving Manchali village official

Name of Stakeholders	Place	Dates	Comments, views and concerns from the stakeholders	Proponet response
Manchali villagers	Mancahali village (Chamwino)	30/09/2022	<ul style="list-style-type: none"> • They are aware of the project, they have been waiting for it from 2020 • They are curious waiting for the project because it will boost village development, growth of small businesses and large businesses such as food vending and renting of the houses • They appreciate the decision ,made by government of Tanzania to allocated this schools in their area 	The project will be implemented involving Manchali village official
Salum Mwendapole OHI	OSHA-DODOMA	<ul style="list-style-type: none"> • Proponent must ensure safety and health of workers during the project implementation • The project will ensure the provision of better education for the children to comply with safety and health Act No.5 of 2003 	The proponent will ensure the project comply with OSHA Act, 2003	The project will be implemented adhering to the conditions provided by OSHA

Name of Stakeholders	Place	Dates	Comments, views and concerns from the stakeholders	Proponet response
Reginal Mkalawa	TANESCO-DODOMA	28/4/2023	Electrical installation must be 3 phase Ensure that surrounding communities benefit the project	Electrical installation will be 3 phase Surrounding communities will be given priority in job opportunities
INSP MAPOSA KILAVI	FIRE AND RESCUE FORCE	3/05/2023	Project must follow fire safety requirement Project must install firefighting system	The project must adhere all requirement from Fire



Table 5-3: Consultation and site visit in Manchali village

5.6 Way Forward

Issues raised by stakeholders shall be assessed on their genuineness and included in environmental and social impacts assessment. During the Environmental and Social Impact Assessment process, all stakeholders including public and community participated accordingly. All issues raised during consultation will be detailed responded in the stakeholder engagement plan.

From the consultations, it can be concluded that people are positive about the project as it will generate more employment, enhance business opportunities, education development and social development.

CHAPTER SIX

6 ASSESSMENT OF IMPACTS AND IDENTIFICATION OF ALTERNATIVES

6.1 Introduction

This section includes expected environmental and social impact assessment during the entire lifecycle of the school construction project. Methods used for impact assessment, as well as quantitative and qualitative criteria were developed to unify and standardize the assessment system, which ensures the objectivity of the assessment. Impact assessment methodology preparation was based on the recommendations of the World Bank and other International Financial Institutions (EBRD, IFC, and ADB).

The following scheme will be used for environmental and social impact assessment of the planned activities:

Step I: Determination of basic impact types

Determination of the impact is based on general analysis of activities, which may be important for these types of projects. This is incorporated in Chapter 2 in Page.

Step II: Study of the environmental baseline – search and analysis of the existing information

Analysis of the socioeconomic and environmental status quo of the project affected. This shall also involve identification of the receptors, which are expected to be affected by the planned activities, determination of sensitivity of the receptors

Step III: Characterization and assessment of the impact

Impact character, probability, significance other characteristic determination by considering the sensitive receptors, description of the expected changes in the environment and assessment of their significance. This is covered in this Chapter.

Step IV: Determination of the mitigation measures

Significant impact mitigation, prevention, or compensating measure determination. This is detailed in subsequent Chapter 7.

Step V: Residual impact assessment

Determination of the expected value of change in the environment after implementation of the mitigation measures

Step VI: Monitoring and management strategy development

Monitoring the effectiveness of the mitigation measures is needed to ensure, that the impact must not exceed the predetermined values, effectiveness of the mitigation measures must be confirmed, or the necessity of the corrective measures must be identified.

Table 6-1 : Sources, Receptors and Magnitude of Environmental Impact all Planned Phases

Receptor \ Phase	Construction	Operation	Maintenance	Decommissioning
Air				
Soil				
Water				
Flora				
Fauna				
Protected area				
Landscape & visual impact				

Land ownership				
Infrastructure				
Traffic flow				
Cultural heritage				
Socioeconomic				

Key

Negative	Positive
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Table 6-1 gives information about sources, receptors and magnitude of environmental impact for construction and operation phase of the proposed school structures.

6.2 Impact Receptors and their Sensitivity

Implementation of the works may cause such qualitative and quantitative characteristic changes of socioeconomic, physical and biological resources in the impact area, such as:

- Socioeconomic baseline
- Air quality and acoustic background of the environment.
- Soil stability and quality.
- Capacity and quality of surface and groundwater.
- Visual changes of the landscapes.
- Flora and fauna baseline.

The population, which may be impacted by the planned activity, includes people living, working, or involved in other activities (e.g., vocation, travel) nearby the designed facility. Facility staff is considered as a potential sensitive receptor.

Receptor sensitivity is related to the impact volume and ability of the receptor to counteract the change or restore after the change, as well as with its relative ecological, social, or economic value.

6.2.1 Impact Characterization

To estimate environmental impact major impact factors are identified for mobilization, commissioning, decommissioning, and demobilization phases. Anticipated impact is assessed according to the following classification:

- **Character** – positive or negative, direct, or indirect.
- **Magnitude** - insignificant, low, medium, high or very high.
- **Likelihood** – low, medium, or high risk.
- **Impact area** – working site, project area or region.
- **Duration** – short, mid, or long-term.
- **Reversibility** – reversible or irreversible.

That is, for both project phases and for each potential impact has been determined anticipated alteration of environment and its character, area and duration of impact, reversibility, and likelihood of occurrence; based on this information has been defined significance.

Some impact types were estimated quantitatively. Assessment of impact on environmental elements is based on relevant environmental quality standards, whenever appropriate. If qualitative assessment was impossible impact was estimated based on its characteristics and elaborated criteria

The criteria applied for environmental and social impact assessment is given in the **Error! Reference source not found.** They are developed only for those receptors, which may experience significant changes.

6.2.2 Impact No. 1: Atmospheric Air Quality

6.2.2.1 Impact Description

This impact occurs in all phases of the project, i.e., mobilization, commissioning, construction, and decommissioning.

6.2.2.1.1 Mobilization and Commissioning Phases

Activities of mobilization and commissioning phase, which are causing impact, arise from emissions associated with stationary sources and vehicles – typically dust, Sulphur dioxide (SO₂) and oxides of nitrogen (NO_x).

Combustion related emissions (such as NO_x, SO₂, CO, and dust) will occur from stationary sources (generators) and vehicles; this can affect ambient air quality. But considering that works are temporary, and the infrastructure facilities will be supplied with energy via existing networks, which will reduce the necessity of diesel generators use to minimum, impact, should not be significant.

Dust distribution will be related to vehicles movement. Mechanical dust removal may take place by wind, or by temporary suspension of the vehicles.

6.2.3 Impact Characterization

Impact is expected during mobilization, commissioning, and decommissioning phases. Emissions related to mobilization may affect population of Manchali Village.

Table 6-2: Impact Characterization

Characterization \ Phase	Mobilization, Commissioning and Decommissioning	Operation/ construction.
Character	Direct Negative	Direct Negative
Magnitude	Medium	Low
Likelihood	High risk	High risk
Impact area	Manchali ward	Manchali ward
Duration	During mobilization and commissioning (2-4 months)	During operation (3-5 month)
Reversibility	Reversible	Reversible

Based on Table 6-2 the impact of dust shall be of **medium significance** during mobilization and commissioning and **low significance** during construction.

6.3 Impact No. 2: Noise Pollution

6.3.1 Impact Description

The effect of noise is highly subjective, and limits are designed to ensure that nuisance effects are minimal. Some people will consider lower sound levels to be a nuisance, while others will consider higher sound levels to not be a nuisance. There tends to be less

perception of nuisance by people who are financially or otherwise involved in the project or have some other incentive.

Most international noise limits incorporate an absolute or “flat” limit that is applicable when the background noise is low, as well as a “background plus” limit to account for the masking effect of the background noise, requiring the noise to be no more than a margin, typically 5 dB(A), above background noise.

The noise effects of the proposed project development must be determined by the local circumstances, such as terrain and wind direction, and other site-specific factors. A typical (subjective) comparison of indicative noise levels is given in Table 6-3 and an indication of noise levels.

Table 6-3: Comparison of indicative noise levels

Indicative Noise Level in dB (A)	
Threshold of pain	140
Jet aircraft at 150m	105
Pneumatic drill at 150m	95
Truck at 30mph at 100m	65
Busy general office	60
Car at 40mph at 100m	55
Rural night-time background	20-40
Quiet bedroom	20

Table 6-4 provides a summary of sources of noise during the project activities and their consequences.

Table 6-4: Summary of Source, Impacts and Consequences of Noise in all Project Phases

Phase	Source	Impacts	Consequences
Construction Grading, earthworks & construction of the structures, clean-up, and revegetation	Grader or bulldozer [about 85 dB(A)] Heavy-duty or medium-duty trucks	Noise level increase to the area about 80 to 90dBA	<ul style="list-style-type: none"> Hearing impairment is typically defined as a decrease in the threshold of hearing. Severe hearing deficits may be accompanied by tinnitus (ringing in the ears) difficulty in falling asleep; and Awakenings and alterations of sleep stages or depth Disturbance/Shifting of ecological system for animals living in the area Speech interference incapable of being understood during conversation
Operation	construction	The Sound level of the rigs ranged from 85dBA to a peak noise level of 105dBA when measured at 30m	
Decommissioning		Noise level increase to the area about 80 to 90dBA	

6.3.1.1 Construction Phase

The following activities have the potential to give rise to noise impacts during the construction phase:

- Grading and building of structures.

The noise impacts associated with each of the above are provided in table 6.4 the impacts to the area will be medium to the nearest farmhouses (locally) and the sources of noise will be vehicles and machines for excavating and clearing the area. The impacts will be unavoidable and with some of significance; this will be mitigated by using Personal Protective Equipment for casual workers and personnel and chosen equipment must be well checked on noise levels to reduce it to the lowest level.

Table 6-5: Noise Impacts during the Construction Phase

Impact		Nature	Intensity	Extent	Duration	Probability	Confidence	Significance
Grading and building of access roads	Before Mitigation	Neutral	Medium	Local	Short-term	Highly probable	High	Medium
	After Mitigation	Neutral	Medium	Local	Short-term	Highly probable	High	Medium
earthworks & construction	Before Mitigation	Neutral	Medium	Local	Short-term	Highly probable	High	Medium
	After Mitigation	Neutral	Low	Local	Short-term	Probable	High	Low

6.3.1.2 Operational Phase

During the operational phase where the school is functioning, two aspects are important when considering potential noise impacts of a project:

- The increase in the noise level; and
- The overall noise level produced,

6.3.1.3 Decommissioning Phase

The following activities have the potential to give rise to noise impacts during the decommissioning phase:

- Removal of infrastructure; and
- Rehabilitation of areas.

The potential noise impacts identified for the decommissioning phase of the project are set out in table 6.5. The impact during the removal of infrastructure will be of neutral consequences although some of the mitigation measures will still be employed.

The impacts will be unavoidable and with some of significance, this will be mitigated by using Personal Protective Equipment for casual workers and personnel's and chosen equipment must be well checked on noise levels to reduce it to the lowest level. This will last until the end of the project though a small portion of area (nearby) will be affected by noise.

Table 6-6: Noise Impact Assessment during the Decommissioning Phase

Impact		Nature	Intensity	Extent	Duration	Probability	Conf.	Significance
Removal of infrastructure	Before Mitigation	Neutral	Medium	Local	Long-term	Highly probable	High	Medium
	After Mitigation	Neutral	Low	Local	Long-term	Probable	High	Low
Rehabilitation of areas	Before Mitigation	Neutral	Medium	Local	Long-term	Highly probable	High	Medium
	After Mitigation	Neutral	Low	Local	Long-term	Probable	High	Low

6.3.2 Assessment of compliance with limits

To assess compliance with a noise limit, it will, in general, be necessary to consider the average of several measurements. The noise levels measured should be within the standards as indicated in the Baseline.

6.3.2.1 Impact Characterization

The environment noise of the area surrounding by the proposed project is rural settings which is according to Standards is 55dBA and the existing noise levels at proposed site were below the guidelines for Rural Settings.

No significant noise impacts are expected during the Decommissioning Phase of the proposed project. This impact is expected to be Very Low and of short duration. At the end of the proposed project the noise levels within and around the site are expected to return to that existed prior to the operations. Therefore, no residual or latent noise impacts are expected.

6.4 Impact No. 3: Visual/Aesthetic Pollution

6.4.1 Impact Description

Visual elements comprise the aesthetic quality of an area. For example, structure with notable elevation, non-blending colours, shape or texture may degrade the visual quality of an area. Due to the fact that the area is not a tourist and recreational destination, project structures stand out in contrast to the surrounding environment might not create an eyesore. At night, the use of lighting may make contrasts more apparent.

6.4.2 Impact Characterization

According to Oberholzer (2005) a visual 'trigger' means a characteristic of either the receiving environment or the proposed project which indicates that visibility and aesthetics are likely to be key issues and may require a visual impact assessment.

The following potential visual indicators have been identified that could trigger a visual impact assessment based on the nature of the receiving environment and the nature of the project (Oberholzer 2005):

Table 6-7: The Potential Visual Indicators Identified That Could Trigger a Visual Impact Assessment Based on the Nature of the Receiving Environment

The Nature of the Receiving Environment	Presence in or Near AOI
Areas with protection status, such as national parks or nature reserves	No
Areas with proclaimed heritage sites or scenic routes	No
Areas with intact wilderness qualities, or pristine ecosystems	No
Areas with intact or outstanding rural or townscape qualities	No
Areas with a recognized special character or sense of place	Yes
Areas lying outside a defined urban edge line	Yes
Areas with sites of cultural or religious significance	Yes
Areas of important tourism or recreation value	Yes
Areas with important vistas or scenic corridors	Yes
Areas with visually prominent ridgelines or skylines	Yes

Table 6-8: The Potential Visual Indicators Identified that Could Trigger a Visual Impact Assessment Based on the Nature of the Project

The Nature of the Project	Potential Project Aspect of
High intensity type projects including large-scale infrastructure	Yes
A change in land use from the prevailing use	Yes
A use that is in conflict with an adopted plan or vision for the area	No
A significant change to the fabric and character of the area	Yes
A significant change to the townscape or streetscape	No
Possible visual intrusion in the landscape	Yes
Obstruction of views of others in the area	No

Based on the information above and the assessment of significant done in Table 6-9. The fair conclusion is that Impact is of **low significance** and the impact is not **cumulative** due to lack of other eyesore activities within the project area.

Table 6-9: Characterization of Visual Impact

Characterization	Phase	Commissioning	Operation/ construction
Character		Direct Negative	Direct Negative
Magnitude		Medium	Medium (especially during the night)
Likelihood		Low risk	Low
Impact area		Manchali Village	Manchali Village
Duration		During commissioning (1 month)	During operation (3 month)
Reversibility		Reversible	Reversible

6.5 Impact no. 4: Soil Pollution

6.5.1 Impact Description

Impact to soil is caused by leakages of hydrocarbons, waste (solid and waste water) and disposal of lubricant during servicing of vehicles. The impact is bound to happen during mobilization and operational phase of the project.

6.5.2 Impact Characterization

Impact characterization shall be based on the criteria detailed in Table 6-10.

Table 6-10: Impact Assessment Criteria on Soil

Category	Destruction of the fertile soil layer	Soil/Ground Pollution
Very low	Less than 3% of the project area has been destroyed for ever	Soil/ground background conditions have changed unnoticeably
Low	3%-10% of the project area has been destroyed for ever	The concentration of pollutants has increased by less than 25%, but less than the permitted value, 6 months will be needed for the soil/ground quality restoration
Medium	10%-30% of the project area has been destroyed forever	The concentration of pollutants has increased by 25-100%, but less than the permitted value, 612 months will be needed for the soil/ground quality restoration
High	30-50% of the project area has been destroyed forever; small areas are damaged outside of the project area, re-cultivation of which is possible after completion of the project activities	The concentration of pollutants has increased by more than 100%, or exceeds the permitted value, 12 years will be needed for the soil/ground quality restoration
Very high	More than 50% of the project area has been damaged or destroyed; small areas are damaged outside of the project area, re-cultivation of which is possible after completion of the project activities	The concentration of pollutants has increased by more than 100%, or exceeds the permitted value, more than 2 years will be needed for the soil/ground quality restoration

Soil pollution is considered likely, rated **moderate significance** due to the possible regional scale impact and possible longer length of time over which the impact may be felt.

6.6 Impact No. 5: Surface Water Pollution

Oil spoilage, chemicals and detergents will be used and stored within the storage room and building premises. Pollution also could be created by poor planning, management and designing of waste water and sewage disposal system during the construction and operation phases.

Experience has shown that excessive rainfall can result into the overflow of sewerage system that causes devastative environmental impacts on the land and surface water. The following mitigation measures are recommended to be considered during the project execution:

The extent of this impact is localized; however its intensity is low. It is likely that the impact will occur. The impact can be highly improved/eliminated with mitigation. Therefore, based on the criteria above, the impact is negative and of Low significance.

6.6.1 Impact Assessment Methodology

Assessment of impact is as detailed in Table 6-11.

Table 6-11: Surface Water Impact Assessment Criteria

Category	Water Quality Deterioration
Very low	Background concentration of the substances and water turbidity has invisibly changed
Low	Concentration or turbidity of the water has changed by less than 50%, but does not exceed maximum permissible concentration
Medium	Concentration or turbidity of the water has changed by 50-100%, but does not exceed maximum permissible concentration
High	Concentration or turbidity of the water has changed by more than 100%, or exceeded maximum permissible
Very high	Concentration or turbidity of the water has changed by more than 200% and exceeded maximum permissible concentration

The impact of pollution and sediment at the nearby water bodies is thus considered, **minor significance** because the effects will be experienced only for short-term and at local scale, affecting valuable resources in the immediate area of activity. This impact will occur during construction phase and decommissioning phase

6.7 Impact no. 6: Impact on Terrestrial and Aquatic Ecology

This impact can occur throughout the project life span but high level of these impacts will occur during construction and decommissioning phases. This impact can be referred as Habitant deteriorations

6.7.1 Impact Assessment Methodology

For terrestrial and aquatic impact assessment, qualitative criteria can be introduced for the following categories:

- Habitat integrity, where expected loss or fragmentation, reduce of potential capacity of ecosystem and impact on natural corridor are expected;
- Behavior of species, where the changes due to visual impacts, noise and emissions are estimated, also, impact on reproduction, coupling, daily or seasonal migration, activity and mortality is assessed;
- Habitat/species recovery abilities; and
- Protected habitats, protected areas, protected landscapes and nature sites.

For the assessment of importance of ecological impact following criteria was used:

- Probability, intensity, scope and duration of impact, which determines volume of impact;
- Sensitivity of habitats towards direct impacts or changes caused by impacts;
- Recovery ability of habitats and species;
- Summary of Potential Environmental and Social Impact of Project by Phases is detailed in Table 6-12.

Table 6-12: Potential Environmental and Social Impact of Project by Phases

Activity	Receptor	Impact Source	Description of Impact
Preparatory works <ul style="list-style-type: none"> • Arrangement of construction site including water supply, sanitation and power supply • Parking of materials and special equipment • Material delivery and stocking. 	<ul style="list-style-type: none"> • Atmospheric air • Soil • Water • Flora • Fauna • Infrastructure • Population and personnel 	<ul style="list-style-type: none"> • Diesel generators • Personnel • Produced waste 	<ul style="list-style-type: none"> • Emission of dust and exhaust due to transportation • Emissions of diesel generators • Dust produced by ground works • Noise and vibration (machinery) • Noise (personnel) • Soil pollution (spilt fuel/oils, waste) • Soil tramping due to traffic • Damage of topsoil • Temporary change of land ownership type • Water pollution by split fuel/oils, sediments and waste (whenever construction operations occur next to surface waters) • Damage, clearance and tramping of vegetation (direct impact) • Damage of vegetation due to emissions, fuel/oil spills (indirect impact) • Fauna disturbance by personnel and vehicles • Impact of electric transmission line /electromagnetic field on fauna and other receptors (personnel, population) • Impact on downstream fauna due to surface water pollution throughout construction operations • Impact of electric transmission line /electromagnetic field on fauna and other receptors (personnel, population) • Wastes – solid, liquid • Possible traumatism of personnel during works • Impact on infrastructure (e.g. road cover)
Road arrangement rehabilitation	<ul style="list-style-type: none"> • Atmospheric air • Soil • Water • Flora • Fauna • Infrastructure 	<ul style="list-style-type: none"> • Vehicle movement. • Personnel • Produced waste 	<ul style="list-style-type: none"> • Emission of dust and exhaust due to transportation • Emissions of diesel generators • Dust produced by ground works • Noise and vibration (machinery) • Noise (personnel) • Soil pollution (spilt fuel/oils, waste) • Soil tramping due to traffic

Activity	Receptor	Impact Source	Description of Impact
	<ul style="list-style-type: none"> • Cultural heritage • Population and personnel 		<ul style="list-style-type: none"> • Damage of topsoil • Soil (slope) stability risk • Change of land ownership type during construction of new roads • Water pollution by split fuel/oils, sediments and waste (whenever construction operations occur next to surface waters) • Damage, clearance and tramping of vegetation (direct impact) during construction of road segments • Damage, clearance and tramping of vegetation (direct impact) during construction of road segments • Damage of vegetation due to emissions, fuel/oil spills (indirect impact) • Fauna disturbance by personnel and machinery • Impact on traffic flow • Temporary restriction of traffic due to road rehabilitation activities • Possible traumatism of personnel during works • Disturbance due to landscape alteration • Impact on downstream ichthyofauna due to surface water pollution throughout construction operations • Opportunity to employ local population for construction operations or associated service (positive effect)
Construction phase	Atmospheric air	<ul style="list-style-type: none"> • Vehicle • Building machinery • Diesel generators 	<ul style="list-style-type: none"> • Dust and exhaust • Welding aerosols
	Soil	<ul style="list-style-type: none"> • Vehicle building machinery • Diesel generators • Ground works • Waste 	<ul style="list-style-type: none"> • Soil tramping by traffic and building machinery • Soil pollution (split fuel/oils, wastes including liquid ones) • Impact on soil stability • Topsoil damage • Temporary and permanent change of landownership type
	Water	<ul style="list-style-type: none"> • Vehicle/building machinery 	<ul style="list-style-type: none"> • Water pollution (split fuel/oils, wastes including liquid ones) • Stream flow obstruction alteration of hydrological regime

Activity	Receptor	Impact Source	Description of Impact
		<ul style="list-style-type: none"> • Ground works • Waste 	
	Flora and Fauna	<ul style="list-style-type: none"> • Vehicle/building machinery • Personnel 	Direct impact (collision, disturbance) Temporary and permanent fragmentation of habitats Noise and vibration
	Population and personnel	Vehicle/building machinery	<ul style="list-style-type: none"> • Dust and exhaust • Noise • Disturbance due to landscape alternation • Possible traumatism of personnel during works • Opportunity to employ local population for construction operations or associated service (positive effect)
Operation	Soil	Waste	Soil pollution in case of improper waste management
	Water	Waste	Water pollution in case of improper waste management
	Flora	Spillway/water intake Substation	Impact on floodplain vegetation/fauna during floods or water shallowness Cleaning area from vegetation cover during maintenance works
	Fauna		Possible impact on fish migration Noise Electromagnetic field
	Population and personnel		Noise Electromagnetic field Possible traumatism of personnel during works
Maintenance service/repairs	Impact of maintenance services /repairs will depend on specifics and volume of work and operation area. Possible impact of maintenance service will be similar to those of similar activities done during construction		
Decommissioning	There are two possible options: 1. Conservation – in this case all the existing structures are to be preserved. Territory should be enclosed and protected. 2. Decommissioning – in this case all the infrastructure and equipment should be dismantled, wastes removed/land filled, tunnel closed and territory cultivated. Though after lifespan period usually instead of liquidation the system is thoroughly rehabilitated and the object continues operation. In case of decommissioning proper acting plan should be worked out. Anticipated impact will be similar to the potential impact of construction. Special attention should be paid to waste management including hazardous wastes.		

Activity	Receptor	Impact Source	Description of Impact
	Cultivation plan for the area should be designed.		

6.8 General Principals of EIS Methodology

This section includes expected environmental and social impact assessment during construction and operation process of school in Dodoma. Methods used for impact assessment, as well as quantitative and qualitative criteria were developed to unify and standardize the assessment system, which ensures the objectivity of the assessment. Impact assessment methodology preparation was based on the recommendations of the World Bank and other International Financial Institutions (EBRD, IFC, and ADB).

In the quantitative criteria are used environmental quality indicators introduced by **Tanzania and IFC/WB** for various environmental bodies (air, water, soil, etc). Wherever qualitative indicators are not preset for environmental factors (e.g. impact to ecosystems or population), the quantitative criteria are introduced analyzing the background data and considering value and sensitivity of impact recipients. If an impact cannot be estimated in quantitative terms, the qualitative criteria are developed envisaging international practices.

Impact on natural and social environment has been assessed in accordance with the determined criteria. During the assessment, special attention was paid to the impact which has been considered as significant in the given conditions.

In order to assess expected changes in natural and social environment, it is necessary to collect and analyze the information about the current situation in the project impact area. The volume of the expected changes is determined on the basis of obtained information, impact recipient objects – receptors would be identified and their sensitivity will be assessed, which is necessary for determining the importance of the impact. After determining the significance of the impact its acceptability is determined, alternative options with less negative impact, necessity of mitigation measures and mitigation measures themselves.

6.8.1 Impact Receptors and their Sensitivity

Implementation of the works may cause such qualitative and quantitative characteristic changes of physical and biological resources in the impact area, such as:

- Air quality and acoustic background of the environment;
- Soil stability and quality;
- Capacity and quality of surface and groundwater;
- Visual changes of the landscapes;
- Amount of habitats, flora and fauna;
- Historical archaeological values of the study area; etc.

The population, which may be impacted by the planned activity, includes people living, working or involved in other activities (e.g. vocation, travel) nearby the designed facility. Facility staff is considered as a potential sensitive receptor.

Receptor sensitivity is related to the impact volume and ability of the receptor to counteract the change or restore after the change, as well as with its relative ecological, social or economic value.

Table 6-13: Terrestrial and Aquatic Ecology Impact Assessment Criteria

Range	Category	Impact on habitat integrity	Impact on behavior of species	Restoration ability of habitats/species	Impact on protected habitats
1	Very low	Insignificant impact on habitat integrity	No changes in behavior, death of small mammal/fish species of no importance is anticipated, no danger of invasive species spreading	Fully restored after re-cultivation works (<1 year)	No impact on protected areas of national or international importance
2	Low	Noticeable impact on low value habitat integrity, including loss of 10-20 ha land habitat	Changes in behavior can be detected using standard methods. Death of less valuable species of small mammals/fishes is expected. No danger of invasive species.	Restoration in 2 years after re-cultivation works	Temporary, short-term, small impact on protected areas of national or international importance, which will not cause long-term ecological integrity violation
3	Medium	Noticeable impact on integrity of habitats, reduction of valuable habitats, loss of less valuable lands (20 50 ha)	Changes in behavior of valuable species can be detected using standard methods, death of less valuable species, invasive species are expected	Restoration in 2-5 years after Recultivation works	Small impact on protected areas of national or international importance, but ecosystem will be restored within 3 years
4	High	Decrease of protected or locally important habitats, loss of 50-100 ha of less valuable habitats	Changes in behavior of valuable species can be detected using standard methods, death of valuable animal species is expected, invasive species spread	Restoration in 5-10 years after Re-cultivation works	Impact on protected areas of national or international importance is expected, mitigation measures will help to restore ecosystem, which will take around 5 years
5	Very high	Decrease of protected or locally important habitats or loss of >100 ha of less valuable habitats	Changes in behavior of valuable species can be detected using standard methods, death of valuable animal species is expected, invasive species spread	Restoration in more than 10 years after Re-cultivation works	Impact on protected areas of national or international importance is expected.

- Defensive and ecological value of impact receptors, such as species, populations, communities, habitats, landscapes and ecosystem;
- Impacts on protected receptors are high impacts.

Established criteria for assessment of ecological system impacts are given in the Table 6-13.

6.8.2 Impact on Flora

This impact may happen in mobilization, commissioning, operation and decommissioning phase and may be direct (damage, loss) and indirect (emission) loss will involve the loss of plant habitants.

Activities of bush clearing on a proposed area, will result on massive cutting of different plant species, may damage the vegetation cover of the area. Project related impact on flora could be reduced with right organization/management of the works and via implementing corresponding mitigation measures.

This impact is considered, **medium significance** because the effects will be experienced only for short-term and at local scale, affecting valuable resources in the immediate area of activity. The impact is not cumulative as there are no other similar activities in the area.

6.8.3 Impact on Fauna

Mobilization, commissioning, and decommissioning phases are related to temporal disturbance of fauna and possible migration from areas of influence. These may affect animal biodiversity as follows:

- Vibration and noise levels will increase, plants will be covered with dust, which will affect feeding base for vertebrate and invertebrate species;
- Concern factors will increase for birds and bats living near the project area
- Cutting plants on some locations will destroy whereabouts of animals, this will especially affect bats, which live mainly in trees near the forest and snakes. Destruction of such trees will cause decrease of number of bats; number of plants and trees within the project to be cut is relatively not big;

Having said that, direct (collision/damage, fragmentation of habitats and destruction) and indirect (migration due to noise/vibration, emissions and etc) impacts are expected. Sources of impacts are: Transport; Machinery; and people.

This impact is considered, **medium significance** because the effects will be experienced only for short-term and at local scale, affecting valuable resources in the immediate area of activity. The impact is not cumulative as there are no other similar activities in the area and it can happen during mobilization and construction phases of the project.

6.8.4 Impact Assessment Methodology

Impact on District Council landfills and sewage systems/treatment facilities as a result of project implementation is assessed here, which is connected to increase of their loading. The impact depends on the type and capacity of the formed wastes.

Table 6-14: Impact assessment criteria associated with the waste management

Range	Category	Description
1	Very low	Insignificant increase of load on the household/operational waste District landfill/waste recycling facility
2	Low	Increase of load up to 10% on the household/operational waste District landfill/waste recycling facility
3	Medium	Increase of load from 10-50% on the household/operational waste District landfill/waste recycling facility, landfill expansion is not necessary
4	High	Increase of load from 50-100% on the household/operational waste District landfill/waste recycling facility, landfills expansion or arrangement of the new landfill may be necessary
5	Very high	Increase of load with more than 100% on the household/operational waste District landfill/waste recycling facility, landfills expansion or arrangement of the new landfill is necessary

6.8.5 Impact Description

Waste management measure must be implemented, to minimize generation of the waste during activities (mobilization, commissioning, and decommissioning), increase their recycling and reuse to maximum and finally, to dispose waste at appropriate locations.

Responsible person should be appointed for implementation of these measures, who will control temporary and final waste disposal processes and will keep the register. Among non-hazardous waste the following are likely to be generated:

- Waste due to vegetation clearance;
- Polyethylene waste (packaging/sealing materials);
- Ferrous and nonferrous scrap metal;
- Domestic waste, etc.

Household waste will be collected in adequately labelled lidded containers. Domestic waste will be delivered to the domestic waster utilization landfill. Waste generated will be delivered to Chamwino District landfill. Generation of following types and volumes of hazardous waste is expected during implementation of project activities:

- Paint residues and cans under paints;
- Residues of fuels and lubricants;
- Oil filters from machinery and vehicle;
- Used rubber tires;

Soil/ground polluted with petroleum hydrocarbons due to accidental oil spills – volume depends on spill scale.

Hazardous waste generated shall be transported to the temporary storage facility by waste management personnel of a contractor using special vehicles (waste should be removed as accumulated, but at least once per three days interval). Final waste management measures (taking put of temporary storage, neutralization, utilization, and disposal) should be carried out by correspondingly licensed contractor. Adoption of registering mechanism of such waste is a must.

Violation of rules of above-mentioned waste management may cause a number of negative impacts on different environmental receptors, for example:

- Incorrect waste management (dumping into water, littering on the adjacent territory) may cause pollution of soil and water, as well as deterioration of sanitary conditions and negative visual changes;
- Disposition of scrap metal on the improper area, May lead to a road barricading and negative impact on traffic flows and etc.

Therefore, it is necessary to implement waste management rules. Hazardous waste management measures are given in the regulation for management of hazardous waste.

This impact is considered, **medium significance** because the effects will be experienced only for short-term and at local scale, affecting valuable resources in the immediate area of activity. The impact is not cumulative as there are no other similar activities in the area.

6.9 Impact No 8: Cultural Heritage Impacts

The potential impacts of the Project to indigenous heritage values during the construction phase are:

- Indirect contamination to indigenous heritage sites due to run-off, unintentional spills, erosion of contaminated soil and dust.
- Indirect contamination to indigenous heritage sites due to contamination of groundwater and surface water flows because of clearing, spills, run-off and contamination.
- Ground disturbance resulting in disturbance of known or unknown indigenous sites of significance; and
- Impact on indigenous landscape and cultural value.

6.9.1 Impact No. 9: Socioeconomic Impacts

6.9.1.1 Impact Assessment Methodology

During socioeconomic impact assessment both, negative and positive impacts are considered. Three category schemes are used for assessment of such impacts – low impact, medium impact, and high impact. See assessment criteria in Table 6-15.

Table 6-15: Criteria for Socioeconomic Impact Assessment

Category	Socioeconomic impact
Low	<ul style="list-style-type: none"> • Short-term restriction of resources' and infrastructure accessibility, which will not affect income of local population; long-term negative impact on economic activity of local population also is not expected; • Short-term deterioration of living quality of local population, which will not result in long-term negative impact • No impact on health • Insignificant impact on safety • Long-term, although easy adoptable impact on environment; • Increase of local population by 1% due to migration □
Medium	<ul style="list-style-type: none"> • Short-term restriction of resources' and infrastructure accessibility, which will affect lifestyle of population for a short period of time, although this will not have long-term negative impact on economic activity of local population; • Short-term deterioration of living quality, which will not result in long-term negative impact; • Certain impact on health is expected, but mortality risk will not increase; • Certain safety related risks are expected; • Complaints regarding some impacts are expected; • Increase of population by 10-30% due to migration
High	<ul style="list-style-type: none"> • Some resources and infrastructure becomes unavailable for local population, due to which they have to change their lifestyle and this brings by long term negative impact on their economic activity; • Significant deterioration of local population life quality; • Significant impact on health, resulting in high mortality risk; • Certain safety related risks are expected • Corrupt deals regarding employment and nepotism are expected • Population constantly complains about impacts, resulting in conflict situations between population and staff • Local population increased by more than 30% due to migration, creating unacceptable cultural environment for local population, creation of new settlements is expected

6.9.2 Description of Impact

6.9.2.1 Health and Safety

During the activities (mobilization, commissioning, decommissioning, and demobilization) some health and safety related risks (for population and personnel) are expected. Impacts could be:

- Direct (e.g.: accidents, power stroke, falling from heights, injuries from mobilization and demobilization, commissioning and decommissioning); and
- Indirect (emissions, increased acoustic background, climate change, contamination of water and soil).

Social risks are also related to health and safety, namely risk of infectious diseases' spread (including AIDS and STDs). This risk is related to migration of personnel during all phases of the project. Appropriate preventive measures must be implemented. Considering, that most of personnel will be local population, this risk is minimum.

Population health and safety risks related to movement of transport would not be high, as for transportation operations only existing roads will be used and some footpaths might require to be widened to accommodate passage of wide loads.

6.9.2.2 Demographic Changes

Basically, residents will be employed both for all phases of the project. Correspondingly, no important demographic changes are expected at any stage of the project implementation.

6.9.2.3 Contribution to Economy

The positive impact of local population employment is also noteworthy. Also, due to influx of foreigners in the area, the hospitality and catering industry might experience a boom as requirement for good quality hospitality and catering establishment shall be required.

Publishing of the research report resulting from the project activities, might increase popularity of project area to scientific and academic communities hence might significantly increase influx of people with disposable income.

6.9.2.4 Road Damage, Traffic Load, Limited Movement

At present, the technical condition of roads is satisfying. Road damage is expected due to intense transport movement especially during mobilization and demobilization phases.

Less impact is expected on operation phase, namely during repair maintenance works, as traffic of heavy machinery will be less. To reduce the impact to minimum, proper planning of work sequences is important. During works and especially after, all damaged sections of roads must be rehabilitated and restored to their original condition.

Mitigation measures will reduce the impact even more, namely: routes must be predefined, which will limit use of roads in settled areas

Impacts on traffic flows on operation phase are very low and may be assessed as insignificant.

6.9.3 Impact Assessment

Table 6-16: Socioeconomic Impact

Impact and Impact Sources	Impact Recipients	Description and Assessment of Residual Impact
Mobilization/Commissioning/Decommissioning and Demobilization Phase		
Health deterioration and safety risks: Direct (e.g.: accidents, power stroke, falling from heights, traumatism, injuries from equipment, etc.); and Indirect (emissions, increased acoustic background, climate change, contamination of water and soil).	Personnel and local population	Direct or indirect impact. Duration – mobilization, commissioning, decommissioning and demobilization phases Certain impact on health and safety related risks <u>Significance:</u> Medium, considering implementation of mitigation measures very low
Changes in demography: Migration; Construction of settlements and migration of foreigners.	Local Population	Direct negative Increase of migration is not expected. <u>Significance:</u> low
Contribution to economy and employment Stimulation/development of catering/hospitality business and its satellites business activities Establishment of work places Increased budget receipts	Regional economics, including project activities and other businesses, local population	Direct positive temporary impact A number of impacts will be long-term (e.g. improvement of infrastructure) Increase of employment, income and budget receipts. Improved infrastructure <u>Significance:</u> High
Damage of road cover Movement of heavy machinery Intensification of traffic Movement of any machinery Limitation of movement Blocking roads for safe works	Local Infrastructure, population	Direct negative, duration – project activities phase Road infrastructure usage can be limited. Complaints expected from local population <u>Significance:</u> medium, considering implementation of mitigation measures low
Construction Phase		
Health deterioration and safety risks: Direct (e.g.: accidents, power stroke, falling from heights, traumatism, injuries from project activities, etc); and Indirect (emissions, increased acoustic background, climate change, contamination of water and soil).	Mainly personnel involved in operation phase, as well as local population	Direct or indirect. Long-term impact. Impact on health is less expected. Safety related risks are insignificant. <u>Significance:</u> Low considering implementation of mitigation measures – very low

Impact and Impact Sources	Impact Recipients	Description and Assessment of Residual Impact
Contribution to economy and employment and improve in tourism Stimulation/development of hospitality/catering business and its satellite business activities Creation of new job opportunities Increased budgetary income.	State economic conditions, local production and population	Direct positive, temporary impact improvement of infrastructure which will improve living conditions for local population and promote country's economic development <u>Significance:</u> high 20 people will be employed during operation phase <u>Significance:</u> low
Damage of road cover Movement of heavy machinery required for maintenance/repairing works Intensification of traffic Movement of any machinery Limitation of Movement Not anticipate	Local Infrastructure population	Direct negative, impact Due to arranging of diversion pipeline impact may be long-term. Otherwise impact duration is maintenance works <u>Significance:</u> low, considering implementation of mitigation measures – very low

6.10 Residual Impact

The impacts that remain once mitigation has been put in place will be described as residual impacts adversely affect one or more environmental and social receptors. The identified residual negative impacts were subjected to a critical assessment and review and ensure that they meet the residual impacts acceptability threshold.

The assessment of impacts was conducted in the identified categories these categories were subjected to all stages of project development from mobilisation, construction, operation, and decommissioning (where applicable).

The identified residual impacts are presented with respect to the specific development stage as derived from the interaction matrices. Table below presents the identified residual impacts.

Table 6-17: Identified Residual Impacts

N	Stage	Nature	
		Positive	Negative
1	Mobilization		<ul style="list-style-type: none"> Biodiversity loss Habitat loss and/or alteration Habitat fragmentation
2	Construction		<ul style="list-style-type: none"> Change in landscape and aesthetics
3	Operation	<ul style="list-style-type: none"> Employment creation Provision of education Minimization of vulnerability to 	

		girls	
4	Decommissioning		<ul style="list-style-type: none"> • Loss of employment

6.11 Impact No. 10: Cumulative Impact(s)

For this approach, cumulative impacts as impacts that are cumulative over space and time resulting from a combination of effects arising from one or several actions. According to Magrini (1990), cumulative impacts are impacts acting together to affect the environment. A cumulative impact is one deriving from combination or interaction with other impacts or chains of impacts from one or more individual projects within the same environmental system.

SEQUIP project is implemented under series of works and in phases therefore cumulative impacts will occur, these cumulative impacts include:

- Loss and creation of job opportunity
- Creating expectation in the community
- Generating tax revenue
- Increase of pressure on the provision of public services
- Changes in land value and increase in the collection of property taxes
- Changes in noise level,
- Changes in air quality

6.12 Ergonomics impacts

Ergonomics is the way you use your body to work and fitting the job or task to you to reduce your risk of injury. These musculoskeletal injuries develop slowly over time and occur in the soft tissues of your body like the nerves, tendons, muscles, ligaments and joints.

Generally, the greater the exposure to a single risk factor or combination of risk factors, the greater the probability of an ergonomic injury or illness, also called Work-Related Musculoskeletal Disorders (WMSD). The big three ergonomic risk factors are

- Force (how much you lift/push/pull),
- Repetition (how often you perform the task), and
- Posture (body position).

Other potential ergonomic risk factors include vibration, contact stress, sustained exertions, and cold temperatures. Examples of these injuries are low back strain, carpal tunnel syndrome, and tendonitis. These injuries are called musculoskeletal disorders or MSDs.

This impact is likely to occur to all phases of the project cycle, mobilization, implementation and decommissioning phases

6.12.1 Activity Risk Assessment

Risk Assessments are elaborated for all tasks performed at the work fronts, detailing the steps and frequency of the task, the known hazards and the appropriate precautionary measures,

procedures/work releases, controls, environmental and industrial hygiene methods, collective and personal protective equipment to minimize or eliminate hazards.

The purpose of the Risk Assessment is to make it a routine to verify the safety items before the start of any activities, assisting with the detection and prevention of risks of accidents and with task planning. Table 6.17 show the risk assessment criteria

Table 6-18: Risk Assessment

N	Impact & Aspect Description	Nature	Magnitude	Extension	Duration	Significance of Impact	Probability of Occurrence	Risk
1	Mobilization/ Construction phase							
	Emission of exhaust and fugitive gases (Result from vehicle movements)	Indirect	High	DIA	Short-term	Moderate	Definite	Significant Risk
	Noise and Vibration (will be resulted from vehicle movement, equipment and machine use)	Direct	High	I/A	Short-term	Moderate	Definite	Significant Risk
	Loss/disturbance of biodiversity due to site clearance	Direct	Low	DIA	Long-term	Minor	Definite	Low Risk
	Conflict due to land ownership	Indirect	Medium	DIA	Short-term	Major	Probable	Low Risk
	Public Health and Hazard (emissions of air contaminants to the environment and performance of heavy duties)	Direct	High	RI/A	Long-term	Major	Probable	Significant Risk
	Safety of the Workers (performance of heavy duties)	Direct	High	DIA	Short-term	Major	Definite	Significant Risk
	Employment Opportunities (Activities will require manpower)	Direct	High	RI/A	Short-term	Major	Definite	Negligible Risk
	Waste Generation (Solid and Liquid Waste) (will be generated from site clearance, sanitary facilities, canteen and building construction)	Direct	High	DIA	Short-term	Major	Definite	Significant Risk
2	Construction phase							
	Noise and Vibration (will be generated from welding and vehicle movement)	Direct	Medium	DIA	Short-term	Minor	Definite	Significant Risk
	Emission of exhaust and fugitive gas (will be emitted from vehicle)	Direct	Low	DIA	Short-term	Minor	Probable	Low Risk
	Safety of the Workers (performance of heavy duties)	Direct	High	DIA	Short-term	Moderate	Probable	Significant Risk
	Public Health and Hazard (emissions of air contaminants to the environment and	Indirect	Medium	I/A	Short-term	Moderate	Low	Low Risk

N	Impact & Aspect Description	Nature	Magnitude	Extension	Duration	Significance of Impact	Probability of Occurrence	Risk
	performance of heavy duties)							
	Waste Generation (Solid and Liquid Waste) (will be generated from sanitary facilities, canteen)	Direct	Medium	DIA	Short-term	Moderate	Definite	Significant Risk
	Employment Opportunities (Activities will require manpower)	Direct	High	RIIA	Short-term	Major	Definite	Negligible Risk
3	Operation Phase							
	Air Pollution (will be caused from vehicles, machines and cementing)	Direct	High	RIIA	Long-term	Moderate	Definite	Significant Risk
	Noise and Vibration will be resulted from hydro-testing, coating, cementing and external blasting)	Direct	Low	IIA	Long-term	Major	Definite	Significant Risk
	Waste Management (Solid and Liquid) (scrap metals, Waste water from cement line and sanitary facilities)	Direct	High	DIA	Long-term	Major	Definite	Significant Risk
	Spread of Diseases due to social interaction	Indirect	Low	NIA	Long-term	Major	Probable	Significant Risk
	Road accidents due to the transportation of raw materials and goods	Indirect	Low	RIIA	Long-term	Moderate	Probable	Significant Risk
	Health and Safety due to construction activities	Direct	High	DIA	Long-term	Major	Probable	Significant Risk
	Employment and training (construction activities need manpower and different training to be conducted on occupational health and safety issues)	Direct	High	RIIA	Long-term	Major	Definite	Negligible Risk
	Change in attitudes/ behavior due to the increase of income	Direct	Medium	IIA	Short-term	Minor	Probable	Low Risk
4	Decommissioning phase							
	Abandoned infrastructure due to close down of the factory	Indirect	Medium	DIA	Long-term	High	Probable	Low Risk
	Loss of revenue to both government and the	Direct	High	NIA	Long-	High	Probable	High Risk

N	Impact & Aspect Description	Nature	Magnitude	Extension	Duration	Significance of Impact	Probability of Occurrence	Risk
	owner of the plant				term			
	Unemployment	Direct	High	RIIA	Long-term	High	Probable	High Risk
	Solid Waste	Indirect	Low	DIA	Short-term	High	Probable	Significant Risk

CHAPTER SEVEN

7 CONSIDERATION of ALTERNATIVES

7.1 Introduction

The EMA EIA regulations of 2005 require that alternatives be identified during the scoping process. An important function of the Scoping Phase is to screen alternatives to derive a list of feasible alternatives that need to be assessed in further detail in the EIS Phase. The environmental impact statement shall contain an assessment of impacts of the identified alternatives.

According to the EMA EIA regulations, analysis of alternatives includes project site, design and technologies and reasons for preferring the proposed site, design, and technologies. An alternative can be defined as a possible course of action, in place of another, that would meet the same purpose and need.

7.2 Project Site Alternative

The selection criteria for the location depend on the availability/ease access and ownership of the proposed land parcel for Dodoma region. In that regards various economic considerations which include the feasibility of the project in terms of financial and technical perspectives have been considered to select the project location.

Furthermore, the location shall not require demolition of property (houses and other infrastructure) to pave way for the construction and accessibility of the project site. Alternatives analysis in this project considered the following:

- f) No-Go alternative,
- g) Design and technological considerations
- h) Location

7.2.1 No-Go alternative

The assessment of alternatives must always include the “no-go” option as a baseline against which all other alternatives must be measured. The option of not implementing the activity must always be assessed and to the same level of detail as the other feasible and reasonable alternatives.

The no-go will see the status quo activities persist without the construction on the proposed site. The “no-go” option is taken to be the existing rights on the property, and this includes all the duty of care and other legal responsibilities that apply to the owner of the property.

7.2.2 Design and technological consideration

The schools design will consider several aspects which were previously not part of the school design system. The current design which will be implemented will utilize the standardized updated design from the MoE which will be customized when implemented.

The designed prepared so far are prototypes to be utilized in specific site in this case the Dodoma Girls Secondary schools, the utilization of prototype will involve the fit in exercise to include all experts in the respective district.

7.2.3 Location

The selection of project location was conducted prior to conducting EIS this has been identified as a limitation in this study however the same was conducted utilizing a checklist developed by the clients safeguard team in the same line for projects which were not developed the consulting has a chance of raising issues for alternation of the selected site.

CHAPTER EIGHT

8 ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES

8.1 Introduction

The following sections describe measures that shall be followed by the contractor/ project implementing team to ensure that the anticipated environmental and social impacts are avoided, abated, or remediated.

This layout the systematic plans packaged as the environmental management plan (EMP). The goal of the EMP developed is to address the key impacts identified in the preceding Chapter as well as setting the relevant policies and actions plans needed to achieve an environmentally sound and sustainable project venture.

Table 8-1: Impact Mitigation Measures

Approach	Example
Avoid	Change of route or site details, to avoid important ecological or archaeological features
Replace	Regenerate similar habitat of equivalent ecological value in different location
Reduce	Filters, precipitators, noise barriers, dust, enclosures, visual screening, wildlife corridors, and changed time of activities
Restore	Site restoration after construction
Compensate	Relocation of displaced communities, facilities for the affected communities, financial compensation for the affected individuals etc.

These mitigation measures will be incorporated into an Environmental Management Plan (EMP) to facilitate implementation during the planning, construction, operational and decommissioning phases. The EMP forms part of the final EIS, as such its forms part of the authorization and thus its implementation will become binding on the project applicant and any contractors, should this project be authorized.

The EMPs for the project should consist of the following:

- Management Policies;
- Management Plans; and
- Decommissioning Plan

8.1.1 Environmental Management Policy

The environmental policy developed should be one that enables project implementers and Project management and sustainable utilization of environmental resources therein. The policy should therefore cover the following, among other issues:

- Ensure that all Project activities operate within legal requirements of all relevant national legislation covered in Chapter Four;
- That there are continuous environmental improvement and performance through monitoring of Project activities;
- Ensure that utilization of natural resources is optimal with measures in place to ensure resource availability for future generation;

- Awareness creation to the surrounding community regarding sustainable utilization of natural resources, protection of sensitive ecosystems and bio-diversity maintenance for communal livelihood; and
- Balancing between natural resource use, environmental conservation, and economic development.

8.1.2 Occupational Health and Safety Policy

The Occupational Health and Safety Policy developed for the Project should enable establishment of appropriate measures that ensure that the health, safety and welfare of all users is cared for as well as the health requirements of the local community in which the project is located. The policy should highlight on the following, among others:

- Medical examination of workers;
- Sanitation in the Project area;
- Proper liquid and solid waste management and disposal;
- Emergency preparedness;
- Fire safety;
- Necessity and availability of personal protective equipment
- Safety measures for cold storage equipment;
- Appropriate safety and rescue equipment are availed to Project users;
- Risk minimization of accidental damage, community, and environment; and
- Training in safety.

Preventive and protective measures should be introduced according to the following order of priority:

- Eliminating the hazard by removing the activity from the work process. Examples include substitution with less hazardous chemicals, using different manufacturing processes, etc;
- Controlling the hazard at its source through use of engineering controls. Examples include local exhaust ventilation, machine guarding, acoustic insulating, etc;
- Minimizing the hazard through design of safe work systems and administrative or institutional control measures. Examples include job rotation, training safe work procedures, lock-out and tag-out, workplace monitoring, limiting exposure or work duration, etc.
- Providing appropriate personal protective equipment (PPE) in conjunction with training, use, and maintenance of the PPE.

8.1.3 Local Community Policy

The Local Community Policy are developed by management of the Project to ensure that the management of the project develops and maintains sound relations with its all users and the local community on mutual respect and active partnership. The policy should highlight on ways the management should:

- Work with the local community and relevant government departments and agencies to achieve sustainability of the project;
- Come up with ways of enhancing information flow from management to the community and Project users, and vice versa;
- Active engagement of the local community in all Project activities that impact on the local community.

8.2 Coordination and Review of the EMP

The EMP forms the basis for environmental management on site. Based on the results of the performance assessment and review process, the EMP may be modified as the project progresses.

Modifications will only be permitted by the District Environmental Officer. Changes to the EMP will only be allowed:

- a) If alternative measures with equal or improved outcomes have been identified after the compilation of the report.
- b) Prior to non-compliance, therefore requiring pro-active evaluation.

8.3 Reporting

In addition to all reporting requirements identified in the EMP, records shall be kept by the District Environmental Officer of all monitoring results, monitoring reports, incident records, audit reports and management reviews. Minutes of all environmental project meetings shall be submitted to the Environmental officer.

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Table 8-2: Summary of Environmental and Social Management Plans

Aspects/Impacts, Mitigation and Management Actions	Target Level	Responsibility	Estimate (TZS)
Environmental Social Health and Safety: General			
<p>Obligatory environmental social health and safety induction (training programme) for all personnel (well locations, suppliers). Induction materials delivered in written format and/or verbally with defined procedures, work instructions and responsibilities on key themes/project aspects:</p> <ul style="list-style-type: none"> • Contents of ESMP, H&S Policy etc; • Use of PPE, fire facilities, good site practices and housekeeping; • Sound waste management (handling/clean-up of contaminating spills, storage, use and disposal of hazardous materials/wastes); • Economic, social and cultural sensitivities and values at project primary impact locations, areas in vicinity and area of influence; • Interactions with the resident local community; • Community awareness-raising (Information and Communication) programme - for various stakeholders and project affected parties and groups. 	<ul style="list-style-type: none"> • Local authorities and communities have been notified; • All legally required permits have been acquired. • Workers' PPE comply with good practice • Appropriate signposting of the sites will inform workers of key rules and regulations to follow. 	RAS, REO, RAO, DED, DEO, DEMO, SEQUIP zonal Coordinators, hired local contractor/ fundi	30,000,000
Impact No. 1: Air Pollution– General			
<ul style="list-style-type: none"> • Combustion of solid waste on the territories of site and camps is prohibited; • A speed limit for trucks should be observed; • Prohibit of work without Personal Protective Equipment (masks, respirators) in the dusty work areas; • There will be no excessive idling of construction vehicles at sites • The surrounding environment shall be kept free of garbage and solid waste (clay) to minimize dust. 	EMA Regulation on Air Quality (2010)	RAS, REO, RAO, DED, DEO, DEMO, SEQUIP zonal Coordinators, hired local contractor/ fundi	10,000,000
Impact No. 2: Noise (From Equipment, Vehicles and Activities)			
<ul style="list-style-type: none"> • Noise will be limited to restricted times agreed to in the permit 	EMA Regulation on Environmental Noise	RAS, REO, RAO, DED, DEO, DEMO, SEQUIP	1,000,000 for PPEs

Aspects/Impacts, Mitigation and Management Actions	Target Level	Responsibility	Estimate (TZS)
<ul style="list-style-type: none"> Machinery and equipment undergo regular inspection/maintenance; fitted with silencers and mufflers, use of noise insulation. Personal Protective Equipment: provide and enforce use by all personnel working in noisy zones; Provide education to crew about noise-sensitive aquatic life; Limit noise generating activities, 	(2010)	zonal Coordinators, hired local contractor/fundi	
Impact No. 3: Visual and Aesthetic Impacts			
<ul style="list-style-type: none"> Maintenance and packaging wastes: incineration or disposal or recycling should be done at appropriate location Lighting shall be maintained at minimum necessary to fulfil operational and safety requirements during project activities 	As minimum visual/aesthetic impacts as possible	RAS, REO, RAO, DED, DEO, DEMO, SEQUIP zonal Coordinators, hired local contractor/fundi	1,000,000 for waste management
Impact No. 4: Soil Pollution			
<ul style="list-style-type: none"> Inspection and preventive maintenance of equipment should be undertaken as per schedule to limit spillage of oils; and carried out at approved workshop (service station); Restriction of refueling/maintenance of the machinery/equipment on the sites. In case of urgent need, these activities should be carried out at least 60 m away from the water, with consideration of certain mitigation measures for preventing the spills (and consequently soil/water contamination); Control of the fuel/oil storage and usage rules; Proper waste management. Waste collection and temporal storing on the special allocated area; Restriction of machinery and equipment washing on the territory; In case of fuel/oil spill, localization of the spilled material and immediate cleaning of the contaminated area. Personnel should be provided with appropriate means (adsorbents, shovels, etc.) and personal security equipment; Contaminated soil and ground for further remediation should 	EMA Regulation on Soil Quality Standard, 2010	RAS, REO, RAO, DED, DEO, DEMO, SEQUIP zonal Coordinators, hired local contractor/fundi	15,000,000

Aspects/Impacts, Mitigation and Management Actions	Target Level	Responsibility	Estimate (TZS)
<ul style="list-style-type: none"> be taken out from the territory by the contractor holding an appropriate permit on these activities; Cleaning the territory and re-cultivation after completion of the project activities; and In case of fuel/oil spill, cleaning of the territory and withdrawal of the contaminated soil and ground for further remediation. 			
Impact No. 5: Surface Water Pollution			
<ul style="list-style-type: none"> Maintenance/repair work, change of oil or lubricant: carried out at approved workshop (service station) Inspection and preventive maintenance of equipment: undertaken regularly. 	EMA Regulation on Surface Water Quality (2010) (Turbidity, pH and TDS)	RAS, REO, RAO, DED, DEO, DEMO, SEQUIP zonal Coordinators, hired local contractor/fundi	18,000,000
Impact No. 6.: Potential Impact on Terrestrial and Aquatic Ecology			
<ul style="list-style-type: none"> Use existing local paths and roads during mobilization and demobilization; Tree cutting and vegetation clearance should be kept to minimum (wherever possible, All recognized natural habitats, wetlands and protected areas in the immediate vicinity of the activity will not be damaged or exploited, all staff will be strictly prohibited from hunting, foraging, logging or other damaging activities. Adjacent wetlands and streams shall be protected from construction site run-off with appropriate erosion and sediment control feature to include by not limited to hay bales and silt fences There will be no unlicensed borrow pits, quarries or waste dumps in adjacent areas, especially not in protected areas 	Avoid all sensitive ecology as much as possible Maintain operations within planned sites.	RAS, REO, RAO, DED, DEO, DEMO, SEQUIP zonal Coordinators, hired local contractor/fundi	10,000,000
Impact No. 7: Waste Discharge and Disposal (General and Hazardous Waste)			
<ul style="list-style-type: none"> Waste collection and disposal pathways and sites will be identified for all major waste types expected from all activities; Domestic Solid waste will be collected and disposed 	EMA Regulation on Waste Management and Hazardous Waste Management	RAS, REO, RAO, DED, DEO, DEMO, SEQUIP zonal Coordinators, hired local contractor/fundi	15,000,000

Aspects/Impacts, Mitigation and Management Actions	Target Level	Responsibility	Estimate (TZS)
<p>properly in accordance with Local Government Authority directives;</p> <ul style="list-style-type: none"> The records of waste disposal will be maintained as proof for proper management as designed. Waste management must be conducted by properly trained personnel who will undertake training periodically; Hazardous waste must be removed from project site by the contractor having corresponding permission for the mentioned activity; Waste disposal is allowed only in hermetic packages, which must have proper labeling. Site vehicles and machinery will be washed only in designated areas where runoff will not pollute natural surface water bodies. 	2021	fundu	
Impact No 7.1: Waste Management,			
<ul style="list-style-type: none"> Temporary small collection block to be constructed for storage of solid waste while waiting for contractor vehicle to come for disposal purposes in weekly basis Make sure that sorting of waste materials is done at the source before taking them to the temporary collection point Routine monitoring of solid waste generation sources and records the data. All waste associated with electronic equipment will be segregated and handled over to the registered company for disposing or recycling. 	Environmental Management (Solid Waste Management) Regulations, 2009	RAS, REO, RAO, DED, DEO, DEMO, SEQUIP zonal Coordinators, hired local contractor/fundu	10,000,000
Impact No. 8: Cultural Heritage			
<ul style="list-style-type: none"> Ensure that provisions are put in place so that any cultural artifacts or other possible “chance finds” encountered during field works are noted and registered, secured, responsible officials contacted, and further activities delayed or modified to account for such finds. 	Proper preservation of cultural artefacts	RAS, REO, RAO, DED, DEO, DEMO, SEQUIP zonal Coordinators, hired local contractor/fundu	12,000,000
Impact 9.1: Socioeconomic Impacts (General Health and Safety)			

Aspects/Impacts, Mitigation and Management Actions	Target Level	Responsibility	Estimate (TZS)
<ul style="list-style-type: none"> • Prepare emergency response plan for all kind of emergencies such as well blowout; fire and explosions, hazardous gas etc; • Corresponding warning, prohibiting and directing signboards must be arranged at the operational areas for personnel and local population, for health and safety purpose; • While working on height personnel must be secured with special ropes and locking carabineers; • Maximal implementation of safety rules during execution of transport operations; • Roads, passing through settlements, must be restricted during transport operations as much as possible; • HIV/AIDS Awareness Training; • Personnel medical insurance; • Procedures and guidelines: operations, certified operation equipment, work procedures. Inspections and Maintenance system; • Use trained/qualified and competent personnel: operators, mechanics, supervisors; • Personal Protective Equipment (PPE), reasonable working hours, safe working conditions and facilities; • In-house health and safety manual /guidelines; • Emergency Response Equipment and Procedures (especially for fire, drowning and snake bites); • Registering of discontent/complaints from the local community, if any, and proper response. 	<p>Zero incidents and accidents Zero new cases of HIV and Zero discrimination</p>	<p>RAS, REO, RAO, DED, DEO, DEMO, SEQUIP zonal Coordinators, hired local contractor/ fundi</p>	<p>10,000,000</p>
Impact 9.2: Socioeconomic Impact (Traffic and Pedestrian Safety)			
<ul style="list-style-type: none"> • Signposting, warning signs, barriers and traffic diversions: site will be clearly visible and the public warned of all potential hazards • Traffic management system and staff training, especially for site access and near-site heavy traffic. Provision of safe 	<p>Zero incidents and accidents</p>	<p>RAS, REO, RAO, DED, DEO, DEMO, SEQUIP zonal Coordinators, hired local contractor/ fundi</p>	<p>15,000,000</p>

Aspects/Impacts, Mitigation and Management Actions	Target Level	Responsibility	Estimate (TZS)
<p>passages and crossings for pedestrians where construction traffic interferes.</p> <ul style="list-style-type: none"> Adjustment of working hours to local traffic patterns, e.g. avoiding major transport activities during rush hours or times of livestock movement Active traffic management by trained and visible staff at the site, if required for safe and convenient passage for the public. Ensuring safe and continuous access to office facilities, shops and residences during all phases of the project 			
Impact 9.3: Socioeconomic Impacts (Infrastructure)			
<ul style="list-style-type: none"> Road rehabilitation during preparatory works – positive factor; All the damaged road objects must be rehabilitated after completion of works and it should have restored to their initial condition; Ensure minimal disturbance of the population/passenger movement during road rehabilitation; Ensure maximum limitation of machinery movement on public roads; Employ well qualified drivers (Class C for large vehicles and Class D for small vehicles and training certificates from approved driving schools); Due diligence on vehicles to ensure they are roadworthy (road safety sticker) and comprehensive insurance; Zero tolerance of drugs and alcohol use for drivers and all staff during working hours; and Population will be informed about time and period of mobilization and demobilization of large equipment. 	Infrastructure in same or better condition as before the project	RAS, REO, RAO, DED, DEO, DEMO, SEQUIP zonal Coordinators, hired local contractor/fundi	15,000,000
Impact 9.4: Socioeconomic Impact (Employment)			
<ul style="list-style-type: none"> Employ locals for most of unspecialized labour Procure local for most consumables available within the district 	Local procurement and Local employment	RAS, REO, RAO, DED, DEO, DEMO, SEQUIP zonal Coordinators,	10,000,000

Aspects/Impacts, Mitigation and Management Actions	Target Level	Responsibility	Estimate (TZS)
<ul style="list-style-type: none"> Manage local expectations by not overpromising Registering of discontent/complaints from the local community, if any, and proper response. 		hired local contractor/fundi	
Impact 9.5: Socioeconomic Impact (Land Leasing)			
<ul style="list-style-type: none"> Researching and clarifying site ownership Ensuring owners are paid rental fees before accessing site Notification of owners of commencement of works, if required prepare and sign a works completion handover protocol Notification of owners of all activities and any site damages Notification of owners of termination of works, if required prepare and sign a works completion handover protocol 	Lack of grievances	RAS, REO, RAO, DED, DEO, DEMO, SEQUIP zonal Coordinators, hired local contractor/fundi	15,000,000
Ergonomics impacts			
<ul style="list-style-type: none"> Use a buddy system or the proper lifting device to carry heavy loads. To the extent feasible, use your legs to push up and lift the load, not the upper body or back. Do not twist the body during a lift - step to one side or the other to turn. Design work activities so employees do not have to work on their knees. If the job requires it, use knee pads. Avoid repeatedly twisting the hands and wrists. Provide proper hand tools that are designed to keep the hand and wrist in a comfortable, neutral position. Avoid stretching or unnecessary stress to do overhead work where possible. For example, adjust scaffolds to the appropriate working height and use a lifting device to hold drywall or other material in place for overhead work. 	Zero incidence	RAS, REO, RAO, DED, DEO, DEMO, SEQUIP zonal Coordinators, hired local contractor/fundi	12,000,000

CHAPTER NINE

9 ENVIRONMENTAL AND SOCIAL MONITORING PLAN

9.1 Introduction

Environmental Management Plan (EMP) intends to set forth “environmental and social conditions” that are to be abided by the proponent. It aims at ensuring effective implementation of the proposed mitigation measures

The Project requires regular monitoring and auditing of key environmental, health and safety indicators to:

- assess the overall performance of the project;
- to comply with local environmental, health and safety legislation; and
- Benchmark its project with other similar construction projects for improved management.

Key environmental parameters of concern with the operation of such a project are:

- water consumption,
- energy consumption; and
- solid and liquid waste handling;

Additionally, the following social parameters need to be keenly monitored to ensure benefits to the community and its sustainability:

- Health status of workers;
- Employment opportunities to local community; and
- Corporate Social responsibility programs.

With these factors in mind, there are a need to put in place elaborate and sound environmental management system and mechanisms of monitoring on a continuous basis the environmental performance of the Project. Undertaking monitoring and auditing of key environmental parameters and putting in place of all approved recommendation of the environmental management plan and conditions of the EIA license achieved, this Monitoring undertaken are both active and reactive.

With increased urban development come the challenges of waste handling and disposal. The monitoring programme developed must consider possible impacts of solid waste disposal. All wastes emanating from the Project and its disposal must be monitored to ensure no environmental nuisance or degradation arises.

9.2 Parameters are Monitored

Monitoring involves measuring, observing, recording and evaluation of physical, socioeconomic and ecological variables within the project area and the neighborhood. This may include the following:

Table 9-1: Recommended Environmental and Social Monitoring Plan

Phase	Potential Impacts	Parameters to be Monitored	Target Level/Standard	Monitoring Area	Monitoring Frequency	Responsibility	Estimated Cost
Mobilization and Construction Phase	<i>Atmospheric Air Pollution</i> due to emissions of exhaust and fugitive gases	SO ₂ , NO _x , CO ₂ , CO, Particulate matter (TSP, PM ₁₀ , PM _{2.5})	CO-4.5g/kWh NO _x -1.1 g/kWh HC-8.0 g/kWh PM-0.612 g/kWh Smoke 0.15g/m	Established Monitoring Point	Before commissioning and once every three months	Chamwino District Council under PO-RALG along with the contractor	2,000,000
	Communication interference, stress, fatigue impairment due to increased noise levels from construction vehicles and machinery	Noise and vibration level	As minimum emission as possible	Established Monitoring Point	Once Every three months	Chamwino District Council under PO-RALG along with the contractor	1,000,000
	Loss of biodiversity (both Flora and Fauna)	Biodiversity	As minimum disturbance as possible	Project area	Before commissioning and once every three months	Chamwino District Council under PO-RALG	N/A
	Injuries and fatal accidents due to occupational health and safety issues	Incident and accident register	As minimum emission as possible	Project site	Once Every six months	Contractor along with Chamwino District Council under PO-RALG	3,000,000
	Waste generation	Waste disposal Inspection of amount of waste not contained in	Zero waste	Transfer stations and disposal areas	Monthly	Chamwino District Council under PO-RALG	2,000,000

Phase	Potential Impacts	Parameters to be Monitored	Target Level/Standard	Monitoring Area	Monitoring Frequency	Responsibility	Estimated Cost
		specified collection containers/skips				along with the contractor	
Operation Phase	Disruption of air quality and effect on human health due to emissions of exhaust and fugitive gases	SO ₂ , NO _x , CO ₂ , CO, Particulate matter (TSP, PM ₁₀ , PM _{2.5})	TZS 845:2005 Air Quality – Specification; TZS 983:2007 Air Quality - Vehicular Exhaust Emissions Limits	Established Monitoring Area	Once every six months	Chamwino District Council under PO-RALG	1,000,000
	Noise emissions	dBA	Noise and Vibration Levels Regulations (United Republic of Tanzania, 2011) 45 dBA (Leq) Day and 35 dBA (Leq) Night and baseline of 50dBA (Leq)	Established Monitoring Area	Once every six months	Chamwino District Council under PO-RALG and School Administration	1,000,000
	Waste Generation	Waste disposal Inspection of amount of waste not contained in specified collection containers/skips	Zero Waste	Transfer stations and disposal areas	Monthly	School administration and Chamwino District Council under PO-RALG	3,000,000
	Employment Opportunity	Employees	Local procurement and Local employment	Number of Employees	Quarterly	Chamwino District Council under PO-RALG	N/A
	General Health and Safety	Accident and incident register	Zero incidents and accidents	School compound	Once every six months	School Administration	2,000,000

Phase	Potential Impacts	Parameters to be Monitored	Target Level/Standard	Monitoring Area	Monitoring Frequency	Responsibility	Estimated Cost
	hazards					along with Chamwino District Council under PO-RALG	
Decommissioning phase	Injuries and fatal accident	Accident and incident register	Zero accident	Project area	Monthly	Chamwino District Council under PO-RALG	2,000,000
	Unemployment	NSSF remittance	All employees	School Compound	Once every year	Chamwino District Council under PO-RALG	N/A

9.3 Environmental Health and Safety Auditing

Annual Environmental Health and Safety Audits should be carried out as provided for in the Environmental (Impact Assessment and Audit) Regulations of 2005. The Audits serve to confirm the efficacy and adequacy of the Environmental Management Plan. The audits should include but not limited to the following:

- Air, soil, and water pollution
- Waste generation, management and disposal;
- Resources utilization
- Occupational Health and Safety
- Traffic Safety;
- Monitoring and

Views and comments from neighbors and progress in implementation of Environmental Health and Safety Management Plan.

9.4 Awareness and education

The project proponent with collaboration with contractor or local workers shall encourage environmental awareness among his fore men before and during implementation of the project. The education will include:

- Provide copies of the EMP and discuss its contents with all construction foremen and workers
- Discuss techniques and answer questions about erosion and pollution control at regular site safety meetings
- Demonstrate proper housekeeping methods
- Inform the workers of actions to take in the event of spill of hazardous materials (oil, fuel, bitumen, concrete, etc.)
- Post signature key locations reminding workers how to properly store construction materials, handle and dispose of toxic wastes, wash water, and similar instructions
- Remind workers of fines, penalties that may be levied against the project by the local permitting agencies control environmental destruction is not adhered to

CHAPTER TEN

10 RESOURCE EVALUATION/COST BENEFIT ANALYSIS

10.1 Introduction

This chapter documented the cost/impacts of the project to Dodoma region and the degree to which they can be substantially mitigated. Cost-benefit analysis is normally done in the framework of feasibility study of an activity.

The aim of cost-benefit analysis is to inform the project developer to make a decision on: whether it makes economic sense to continue with the project; whether the chosen option is a cost-effective alternative; and the estimate of the size of a project. For this project, the costs will include: capital expenditures; operating and maintenance costs; staff costs; materials; research and development; and environment, health and other social costs.

Benefits may include: build on the achievements of previous projects in the education sector which have supported quality improvements. It will support the expansion of the secondary school network in order to substantially reduce travel distances by bringing secondary schools closer to children's homes through an expansion of the secondary school network. Construction will be guided by a minimum infrastructure package based on the School Construction and Maintenance Strategy and minimum construction standards aligned with the Projects Environmental and Social Framework.

10.2 Environmental Cost and Benefit Analysis

Environmental cost benefit analysis is assessed in terms of the negative and positive impacts. Furthermore, the analysis is considering whether the impacts are mitigable and the costs of mitigating the impacts are reasonable. As it has been mentioned in Chapters 7 and 8, the potential benefits of the project, in terms of economic advancement and social benefit are substantial.

Total project investment cost is TZS 4 billion in this regards monitoring costs which are less are more less than project costs, therefore this project is resourceful viable.

The environmental impacts are reasonably mitigable. So to mitigate negative impacts, when compared to the required data are relatively small.

10.3 Effect on the Local Community

The benefits from project development can be judged in terms of employment, social welfare, education development, and the local economy (wages, goods and services). Thus, there will be a substantial spread of the benefit within the community through the provision of food, accommodation and other regular services to the employees and students.

10.4 Infrastructure Development

The upgrading, development and maintenance of local infrastructure are benefits that will extend far beyond the project's scope and lifetime. Also, during operation of the project there will be storage rooms and temporally office that will be constructed with engineering standards at the site especially at Machali Village nearby or within project area

10.5 Advantages for the Broader Community and Country

The earnings of the project will in the final analysis it will contribute the following,

- Creating a gender sensitive, learner-friendly school environment through investing in supportive structures in the school and community including trained school guidance counselors, stronger links with the community through Parent Teacher Associations and life skills training.
- Supporting female students to avoid getting pregnant and dropping out of secondary school through measures that include
 - Encouraging community awareness of risks for girls; and
 - Supporting safe passage and reducing the distance to schools to reduce the risks of gender-based violence on the way to school.
 - Supporting girls who become pregnant to access recognized, quality Alternative Education Pathways (AEPs)
- To obtain lower secondary certification and continue with upper secondary education or post-secondary education.
- Improving the quality of secondary school teaching and learning environments through the hiring of additional qualified teachers in core subjects and providing textbooks in core subjects.
- Increasing the number of secondary school spaces through the construction of new classrooms that meet minimum infrastructure standards and supporting the expansion of the school network to bring schools closer to communities.
- Using innovative digital technology to facilitate mathematics and science teaching and improve learning

CHAPTER ELEVEN

11 DECOMMISSIONING PLAN

11.1 Introduction

Decommissioning is the last phase of project life. It involves terminating project activities and operations and rehabilitating site to or close to its original state. It is anticipated that the project shall continue as long as there is a demand for a project, however, individual components of the project shall be decommissioned as need be.

11.2 Components

This decommissioning plan presents a conceptual framework on how the Project can be demolished if need. The plan takes into consideration on how materials and equipment, support infrastructure and land on which the buildings are standing on can be handled.

11.3 Disposal/Demolition of Project Storage Buildings

Decommissioning of project shall only involve dismantling of the temporary office and store room that will be constructed during construction phase.

11.4 Considerations

- All employees involved in the decommissioning and demobilization exercises must have proper protective gear throughout;
- Decommissioning and demobilization activities should be done during day time only unless it's an emergency;
- Waste resulting must be disposed at designated waste disposal sites;
- All relevant lead agencies must be involved in the exercise; and
- Emergency services such as first aid and ambulance services must be on standby in case of any eventualities.

CHAPTER TWELVE

12 CONCLUSION AND RECOMMENDATIONS

12.1 Conclusion

This EIS report provide description of the proposed project, presents a concept project description and has acknowledged a number of issues pertaining to the operation of Project. The issues/ impacts have been assessed and described in some detail to gain an adequate understanding of possible environmental effects of the project in order to formulate mitigation measures in response to negative aspects, which have emerged.

The project shall have massive benefit to the scientific community and human race as a whole as it shall enable development of a deterministic model of climate change.

Given the nature and location of the development, the conclusion is that the potential impacts associated with the proposed development are of a nature and extent that can be reduced, limited and eliminated by the application of appropriate mitigation measures.

The key findings of the EIS study conducted by Tansheq Limited are as follows:

- The Project Development Objectives (PDOs) are to increase access to secondary education, provide responsive learning environments for girls and improve completion of quality secondary education for girls and boys. SEQUIP will contribute to addressing key challenges to girls and boys accessing education and this school will target girls for their studying excel. The project aims to reduce distance to government target: 3km (or 45 minutes)
- The project will contribute to increasing the total number of students in secondary education including Alternative Education Pathways (AEP) by 250,000. It will directly benefit about 1.8 million secondary school students, including 920,000 girls, 95% of whom are enrolled in lower secondary. SEQUIP will help more girls' transition from lower to upper secondary education, as girls are underrepresented at this level

12.2 Recommendations

The Project should systematically manage environmental as well as health and issues so as to ensure sustainability and attainment of overall goal of the project. This can only be achieve if the ESMP and the Monitoring Plan developed hereinwhithin is properly adhered to and improved upon whenever shortcomings are identified.

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- United Republic of Tanzania, Occupation Health and Safety Act (2003)
- United Republic of Tanzania, Public Health Ordinance 1955

APPINDIXES

APPENDIX I: CERTIFICATE OF OCCUPANCY OF THE PROPOSED AREA FOR SCHOOL CONSTRUCTION

THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF LANDS, HOUSING AND HUMAN SETTLEMENTS DEVELOPMENT

Telephone: 026 2322185

Fax: 026 2320029

Email:

In reply please quote:

Ref. No. LR/DOM/T/



REGISTRAR OF TITLES

P. O. Box 1062,

DODOMA.

27-7-2023

TO: CHAMWINO DISTRICT COUNCIL
P.O. Box 1126
DODOMA

TITLE No. 86556 - DLR L.O No. 1496877
PLOT No. 1 BLOCK No. AC LOCATION MANCHALI MAKULU
CHAMWINO DISTRICT

I have the honor to enclose herewith duplicate of the certificate of Title Numbered as above please.

cc. LAND DIVISION

JULIANA NGONYANI
SEN. ASST. REGISTRAR OF TITLES

Date of Issue:

Title Number: 86556 - DLR

TITLE No: 86556-DLR
 REGISTERED ON: 21-7-23
 AT: 12:00 PM
 Senior Asst. Registrar of Titles

Land Form No. 22

TANGANYIKA STAMP DUTY ACT
 Stamp Duty Shs: 100/- Paid
 On Original Receipt No: 923198190238207
 of: 12-2-2023
 Stamp Duty Officer

TANGANYIKA STAMP DUTY ACT
 Stamp Duty Shs: 900/- Paid
 Receipt No: 923198190238207
 of: 12-2-2023
 Stamp Duty Officer

THE UNITED REPUBLIC OF TANZANIA

THE LAND ACT, 1999
 (NO 4 OF 1999)

CERTIFICATE OF OCCUPANCY
 (Under Section 29)

The 21st day of July

Title No. 86556-DLR
 L.O.No. 1496877
 CHW/LD/9790

two thousand and Twenty three

THIS IS TO CERTIFY that CHAMWINO DISTRICT COUNCIL of Post Office Box 1126 DODOMA (hereinafter called "the Occupier") is entitled to the Right of Occupancy (hereinafter called "the Right") in and over the land described in the Schedule hereto (hereinafter called "the Land") for a term of Ninety nine (99) years from the first day of July, Two thousand and twenty three according to the true intent and meaning of the Land Act and subject to the provisions thereof and to any regulations made thereunder and to any enactment in substitution therefore or amendment thereof and to the following special conditions:

1. The Occupier having paid rent up to the thirtieth day of June, 2024 shall thereafter pay rent of shillings Five thousand (5,000/=) only a year in advance on the first day of July in every year of the term without deduction PROVIDED that the rent may be revised by the Commissioner for Lands.
2. The Occupier shall:-
 - (i) Be responsible for the protection of all beacons on the land throughout the term of the Right. Missing beacons will have to be re-established at the occupier's expenses as assessed by the Director responsible for Surveys and Mapping.
 - (ii) Do everything necessary to preserve the environment and protect the soil and prevent soil erosion on the land and do all things which may be required by the authorities responsible for the environment and to achieve such objective.

- (iii) Plant, maintain, protect and preserve or conserve not less than five trees on the land within thirty six months from the day of commencement of the Right. The occupier may plant fruit or wood trees depending on the climatic conditions of such land or as it can be directed by planning authority and shall ensure such trees are kept, maintained or replaced throughout of such Right of Occupancy.
 - (iv) Erect on the Land buildings (hereinafter called "the buildings") in permanent material designed for use in accordance with the condition of the Right and which conform to the building line (if any) decided by **CHAMWINO DISTRICT COUNCIL** (hereinafter called "the authority").
 - (v) Within **six months** from commencement of the rights submit to the Authority such plans for buildings(including block plans showing the position of the buildings) such as drawings, elevations and specifications of them as will satisfy the Authority and as are in accordance with the building conditions.
 - (vi) Within six months from the date of notification by the Authority of approval of the plans and specifications, begin building on the land in accordance with the building conditions.
 - (vii) Complete the buildings according to the plans and specifications so that they ready for use and occupation within thirty six months from the date of commencement of the rights.
 - (viii) At all times during the term of the Right have on the land building as approved by the Authority and maintain them in good order and repair to the satisfaction of the Commissioner for Lands (hereinafter called "the Commissioner").
 - (ix) Not erect or commence to erect on the land any building except in accordance with building plans and specifications which shall have been first approved by the Authority as here in before provided.
3. **USER:**
The land and the buildings to be erected thereon shall be maintained and the same shall be used for **Secondary School** purposes; **Use Group 'K' Use class (c)** as defined in the Urban Planning (Use Groups and Use Classes) Regulations, 2018.
4. The Occupier shall not assign the right within three years of the date hereof without the prior approval of the Commissioner.
5. The Occupier shall deliver to the Commissioner notification of disposition in prescribed form before or at the time the disposition is carried out together with the payment of all premia. Taxes and dues prescribed in connection with that disposition.
6. The President may revoke the right for good cause or in public interest.

CHAMWINO DISTRICT

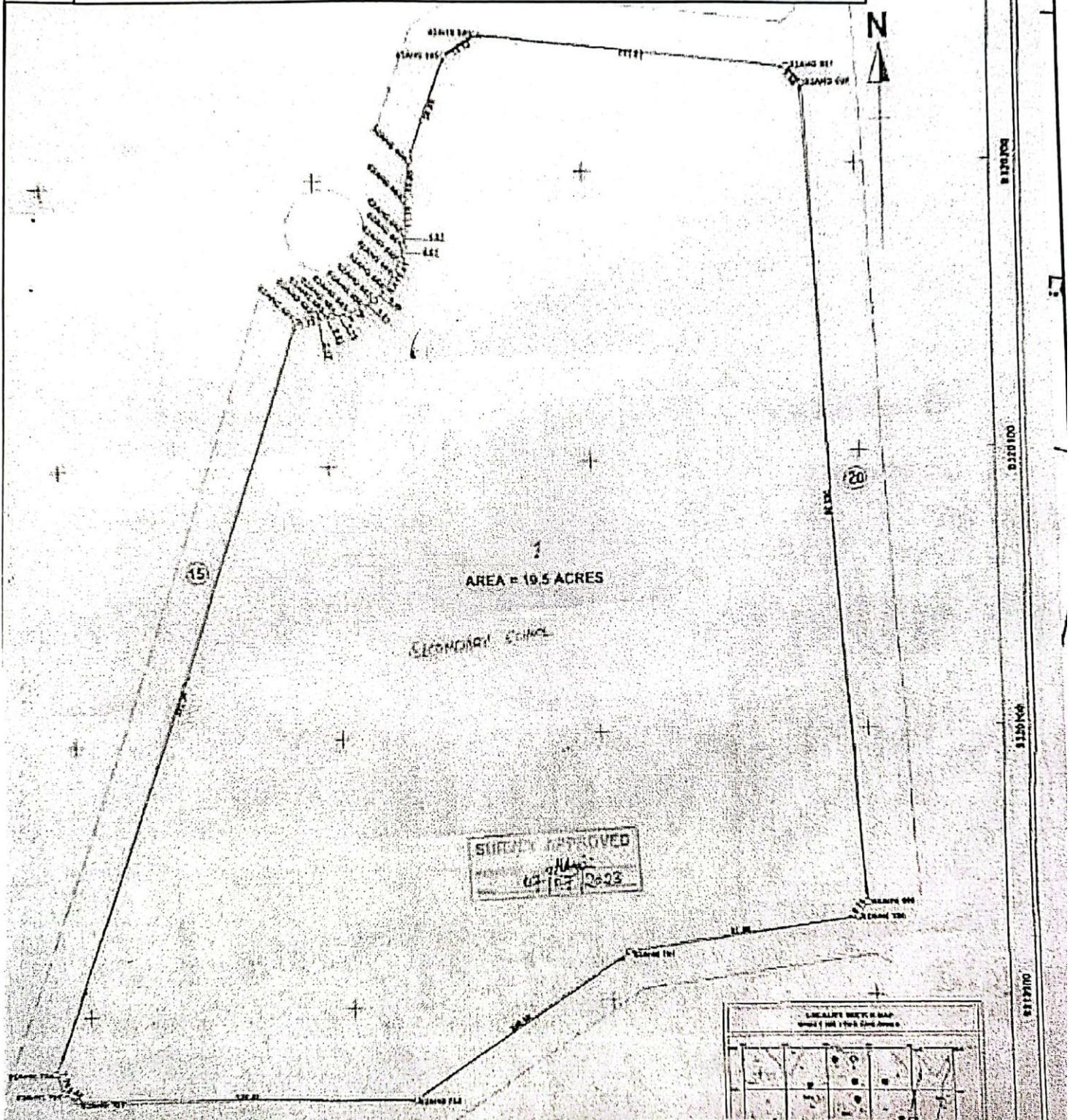
LOCATION.....MANCHALI-MAKULU

BLOCK "1"

PLOT No.....AC

L.O. No.....1496877

AREA.....19.5 ACRES



The issue of this plan implies no guarantee or admission of Title by the Government

This plan prepared in accordance with the Registered Plan No 181660 is approved for the purpose of the Land Registration Ordinance
 Director of Survey and Mapping..... Date 17 July 2023
 Ministry of Lands, Housing and Human Settlement Development Dodo

SCHEDULE


ALL that Land known as Plot No. 1 Block 'AC' situated at Manchali Makulu in Chamwino District containing Nineteen point five (19.5) acres only shown for identification only edged red on the plan attached to this Certificate and defined on the registered Survey Plan Numbered 181660 deposited at the office of Director for Surveys and Mapping at Dar es Salaam.


GIVEN under my hand and my official seal the day and year first above written.


ASST. COMMISSIONER FOR LANDS

I, the within named CHAMWINO DISTRICT COUNCIL hereby accept the terms and conditions contained in the foregoing Certificate of Occupancy.

SEALED with the common seal of
CHAMWINO DISTRICT COUNCIL
in our presence this...17... day of02.....2023

Name: Dr. Semisi H. MASHAHO
Signature: 
Postal Address: 1126 Dodoma
Qualification: CEO

Name: EDSON JERAA SWEET
Signature: 
Postal Address: 1126 Dodoma
Qualification: CHAIRMAN

JAMHURI YA MUUNGANO WA TANZANIA

Mkoa wa Dodoma

OFISI YA RAIS

13 TAWALA ZA MIKOA NA SERIKALI ZA MITAA

Anwani ya Simu REGCOM Simu:
+026 2324343/2324384
Nukushi:0262320046/2320121
Barua pepe : ras@dodoma.go.tz
Unapojibu tafadhali taja:



Ofisi ya Mkuu wa Mkoa,
Jengo la Mkapa
2 Barabara ya Hospitali,
S.L.P. 914,
41103 DODOMA.

Kumb. Na. EDP. 16 VOL. V/74

27 Disemba, 2020


Katibu Mkuu,
Ofisi ya Rais,
Tawala za Mikoa na Serikali za Mitaa,
Mji wa Serikali Mtumba,
Mtaa wa TAMISEMI,
S.L.P 1923,
41185 DODOMA.

**YAH: KUTAMBUA MAENEO VA KUJENGA SHULE ZA SEKONDARI ZA
KITAIFA KWA WASICHANA KATIKA KILA MKOA KUPITIA
MRADI WA SEQUP**

Tafadhali rejea kichwa cha habari hapo juu.

Hii inarejea barua yako yenye Kumb. Na. DA. 291/297/06/61 ya tarehe 16 Novemba, 2020 kuhusu somo tajwa hapo juu. Napenda kuwasilisha kuwa Mkoa wa Dodoma tayari umebainisha eneo la ujenzi huo katika Wilaya ya Chamwino lenye ukubwa wa ekari ishirini na tato (25) na linakidhi vigezo vyote vilivyoelekezwa kwenye barua yako. Ufafanuzi zaidi wa eneo hilo umeoneshwa kwenye viambatisho kwa rejea na hatua.

Ninawasilisha kwa taarifa na maelekezo yako kwa hatua na ninakushukuru kwa ushirikiano daima.


Maduka P. Kessy
KATIBU TAWALA MKOA
DODOMA

Nakala:- Mkurugenzi Mtendaji,
Halmashauri ya Wilaya,
S.L.P. 1126,
DODOMA



JAMHURI YA MUUNGANO WA TANZANIA
OFISI YA RAIS
TAWALA ZA MIKOA NA SEHIKALI ZA FINITAA
YA WILAYA YA CHAMWINO



Unapojibu tafadhali taja:

Kumb. Na.CDC/ED.20/14/1/19

18 Desemba, 2020

Îç3tibu Tawala Mkoa, Ofisi
ya Mkuu wa Mkoa, Jengo
la Mkapa,
2 Barabara ya Hospitali,
S.L.F. 914,
41103 DODOMA.

YAM: ENEO LA UJENZI WA SHULE YA SEKONDARI YA XITAIFA KWA
WASICHAM A KATIKA HALMASHAURI YA WILAYA YA CHAMWINO KUPITIA
MRADI WA SEQUIP

14 Somo tajwa hapo juu lahusika pamoja na barua
Kumb.Na. ED.20/14/1/1 4ya tarehe 30 Novemba, 2020.

2. Kwa kuzingatia maelekezo yaliyotolewa katika barua tajwa, Halmashauri ya Wilaya ya Chamwino imefanikiwa kupata eneo la Ujenzi wa Shule ya Sekondari ya Kitaifa kwa Wasichama karr a ifuatavyo:-
 - (i) Eneo lina ukubwa wa Ekari ishifini na tano (25).
 - (ii) Eneo lipo katika Kijiji cha Chamwino lkr>lu kilichopu kz>[u yu Chamwino.
 - (iii) Eneo ha(ina mgogoro wowote wa Kijamii au wa Mazingira.
 - (iv) Eneo linafikika kirahisi kwa usafiri wa barabara kutoka pande zote za Nchi.
 - (v) Huduma za Afya, Maji na Umeme zinapatikana kwa Kariibu.
3. Pamoja na barua hii nimeambatisha Muhtasofi Wt3 KikEio Cha Serikali ya Kijiji ulioridhía matumizi ya eneo pamoja na Ramani ya eneo.

Naomba kuwasilisha kwa hatua zako muhimu.

A.H. Masasi,
Mkurugenzi Mtendaji wa Halmashauri.

S.L.P. 1126, Chamwino - Dodoma, Simu(02C)29C1511 Nukushi: (026)2961511, Barua pepe:ded@chamwinadc.go.tz
TOVUTI:www.chamwinadc.go.tz

Nakala: Katibu Mkuu,
Ofisi ya Rais,
14.1 Tawala za Mikoa

na Serikali za Mitaa (TAMISEMI),
Mji wa Serikali — Mtumba,

14.2 S.L.P. 1923,

DODOIVIA.

Katibu Tawala Wilaya,
Ofisi ya Mkuu wa Wilaya,
S.L.P. 278,
CHAMWINO - DODOMA.

LIALMASHAURI YA WILAYA YA CHAMWINO

OFISI YA NITENDAJI
KIJJI CHA CI-IANIWJNO
S.L.P 112G
CHAMWINO.
14/12/ 2020

MKURUGENZI MTENDAJI
H/ WILAYA YA CHAMWINO
S.L.P 1126 DODOMA.
K.K

AFISA MTENDAJI WA KATA
KATA YA CHAMWINO
S. L.P 1226
CHAMWINO

YAI-I: KUKUTUMIA MUJITASANI WA KIKAO CHA DHARURA CHA SERJKALI
YA KIJJI CHA, TAREHE 14/12/2020.

Rejea kicha elma barua lvii hapo juu.

Napenda ku tumia mulitasari wa kikao cha serikali ya kijiji cha Chamwino, tarehe
14/12/ 2020.

Katika kikao licho kulikuvva na ajenda 04 zifuatazo.

1: UFUNGUZI WA KIKAO.

2: UJENZI WA SHULE YA SEKONDARI YA WASICHANA TUPU KATIKA ENEO
LA SHULE YA MSINGI CHAMWINO.

3: KUFUNGA KIKAO.

Naambatanisha na muhtasari wa nikutano mkuu kwenye borua hii.

Naomba ku wasilisha.

DIANDIWA D. MATAGI

AFISA MTENDAJI
KIJJI CHA CHAMWINO
TAREHE 14/12/2020

HALMASHAURI YA WIL YA YA CHAMWINO

MUH TASARI WA KIKAO CI IA DHAPURA CHA SERIKALI YA KIJJI U NA CHAMWINO.

MAHALI: OFISI YA MWENYEKITI WA KIJJI.

MUDA : 11:00 ASUBUHI HADI 13:15 C» NA

TAREHE: 1 J12./2020

A ENDA ZA KIKAO

1; KUFUNGUWA KIKAO

2: UJENZI WA SHULE YA SEKONDARI YA WASICHANA TUPU KATIKA ENDO LA SHULE YA MSINGI CHAMWINO

3: KUFUNGA KIKAO.

MUHT.01.14/1J2020: KUFUNGUWA KIKAO

Mwenyekiti WU kikao ndugu, Peter K. Simba alifungua kikao kwa kuivakaribisha ivajumbe kwenye kikao na kuwasilukuru kwa kufika. OOO Wakuti, alitamka kufunguliwa kwa kikao saa 11:00asubuli.

MUHT.02.14/12/2020: UJENZI WA SHULE YA SEKONDARI YA WASICHANA TUPU KATIKA ENDO LA SHULE YA MSINGI CHAMWINO.

Mwenyekiti wa kijiji ndg Peter K. Simba alitoa taarifa ya kina ambapo kutimbe kutoka ngazi za kata kuwa kuanza ujenzi wa shule ya Sekondari ya wasichana ambapo shule hiyo inatikiwa kujengwa hapa chaniwino, pia alisema baada ya kupata taarifa hizo kwa kushirikiana na Mh. Diwani ndg. Joseph Seganje walianjua kuwapeleka wataalamu kwenye eneo la shule ya msingi chaniwino kwani katika shule hiyo kuna eneo kubwa sana ambalo linaweza kabisa kujengwa shule hiyo ya sekondari.

Baada ya maelezo hayo mwenyekiti wa kijiji aliwaasa wajumbe kuwa shule iko kwere ushindani mkubwa hiyo kizitakiwa kuwa to yuri kutoa eneo lenye Ekari 25 na eneo kutokuwa na mgogoro wowote basi fursa hiyo itacenda Sellemi anabao laaitakuwa @a mgogoro, hivyo kama kijiji kwa kushirikiana na viongozi pitnoja na

wajumbe ni jukumu letu kuhakikisha kuwa shule imajengwa chamwino na sio kukubali fursa iondoke chamwino.

Mwenyekiti wa kijiji alitoa nafasi kwa MEK ili na yeye achangie agenda, MEK kwanza alishukuru kwa kupewa nafasi lakini pia alipongeza serikali kwa kuona kuwa kuna umuhimu wa kuleta shule ya sekondari ya wasichana, MEK aliongeza kwa kusema endapo wajumbe wataridhia kutoa eneo hilo basi watakuwa wamefanya jambo la maana na lenye umuhimu mkubwa sana kwani shule ina faida kubwa sana kwa jamii yetu na kingine shule hii inajengwa na serikali hivyo gharama zote ni za serikali na shule hiyo ikijengwa ni kuanzia kidato cha kwanza hadi kidato cha sita, hivyo hii fursa ni vyema tuishike kwa nguvu ili fursa isitupite.

Pia shule hiyo itasaidia kupunguza changamoto mbalimbali hasa wingi wa wanafunzi katika chumba cha darasa na kuwawezasha wanafunzi kuwa na uelewa mzuri kwani kutakuwa na madarasa ya kutosha na hakutakuwa na mlundikano wa wanafunzi.

Kwa maelezo hayo mwenyekiti wa kijiji pia alitoa nafasi kwa mkuu wa shule ya msingi chamwino nae achangie agenda iliyopo mezani, mwalimu alishukuru kwa kupewa nafasi na kasema hayuoko mbali na MEK kwani malezeo aliyoyatoa yupo sahihi kabisa. Pia mwalimu aliendesa mbali zaidi kwa kusema mradi huu wa kujenga shule hauhitaji sehemu ambayo imezungukwa na watu mbalimbali ila kwa eneo la shule ya msingi chamwino ni sehemu sahihi kabisa kwan hakuna muingiliano wa watu wengi na nisehemu tulivu ambapo kwa shule hiyo inayotakwa kujengwa ni pazuri mno na eneo linafaa kwa matumizi hayo, hivyo nay eye anaunga mkono hoja lakini pia alishauri wajumbe hii ni fursa kwa jamii yetu basi ni vyema tukachangamkia hii fursa ili ibaki kwenye kijiji chetu.

Mwenyekiti wa kijiji alitoa nafasi kwa wajumbe ili waweze kuchangia agenda.

Mjumbe 01, nimepokea mradi na kama kijiji eneo la ekari 25 tunalo katika shule ya msingi chamwino na hilo eneo ni mali ya kijiji hivyo linafaa kabisa katika matumizi hayo ya ujenzi wa shule ya sekondari.

kwani unafaida kwa jamii ya sasa na hata vizazi vijavyo hivyo basi nashauri ni vyema hatua nyingine zifate kwa uharaka ili tusije tukakosa huo mradi, kwahiyo eneo la shule ya msingi naafiiki hizo heka zitolewe ili shule ijengwe.

Mjumbe 02, ujumbe mzuri sana na mradi nimepokea na kama kijiji maeneo tunayo na eneo lililopendekezwa naaunga mkono hoja kwani ni eneo zuri sana na linafaa, ila cha muhimu ni sisi wajumbe kushirikiana na viongozi ili mradi ubaki kwenye kijiji chetu.

Mj 03; **radi mkuri na tuii tij.1 1 11 111 na 111)•ja luktulao hoj».

Wajumbe wote mawazo yalikuwa sawa, hivyo walibariki eneo hilo ambalo lilichaguliwa kwaajili ya ujenzi wa sekondari na eneo ambalo limeteuliwa ni la shule ya msingi chamwino litumike katika ujenzi huo ili watoto wao wapate elimu bora na pia kuwepo na maendeleo katika kijiji.

MUHT.03.14/12/2020.KUFUNGA IYI It At I

Mwenyekiti wa kikao alifunga kikao kwa kuwashukuru wajumbe Kwa utulivu na michango yao. Alisisitiza kutekelezwa kwa maazimio haraka iwezekanavyo. Kikao kilifungwa mnamo saa 13:15mchana.

KATIBU

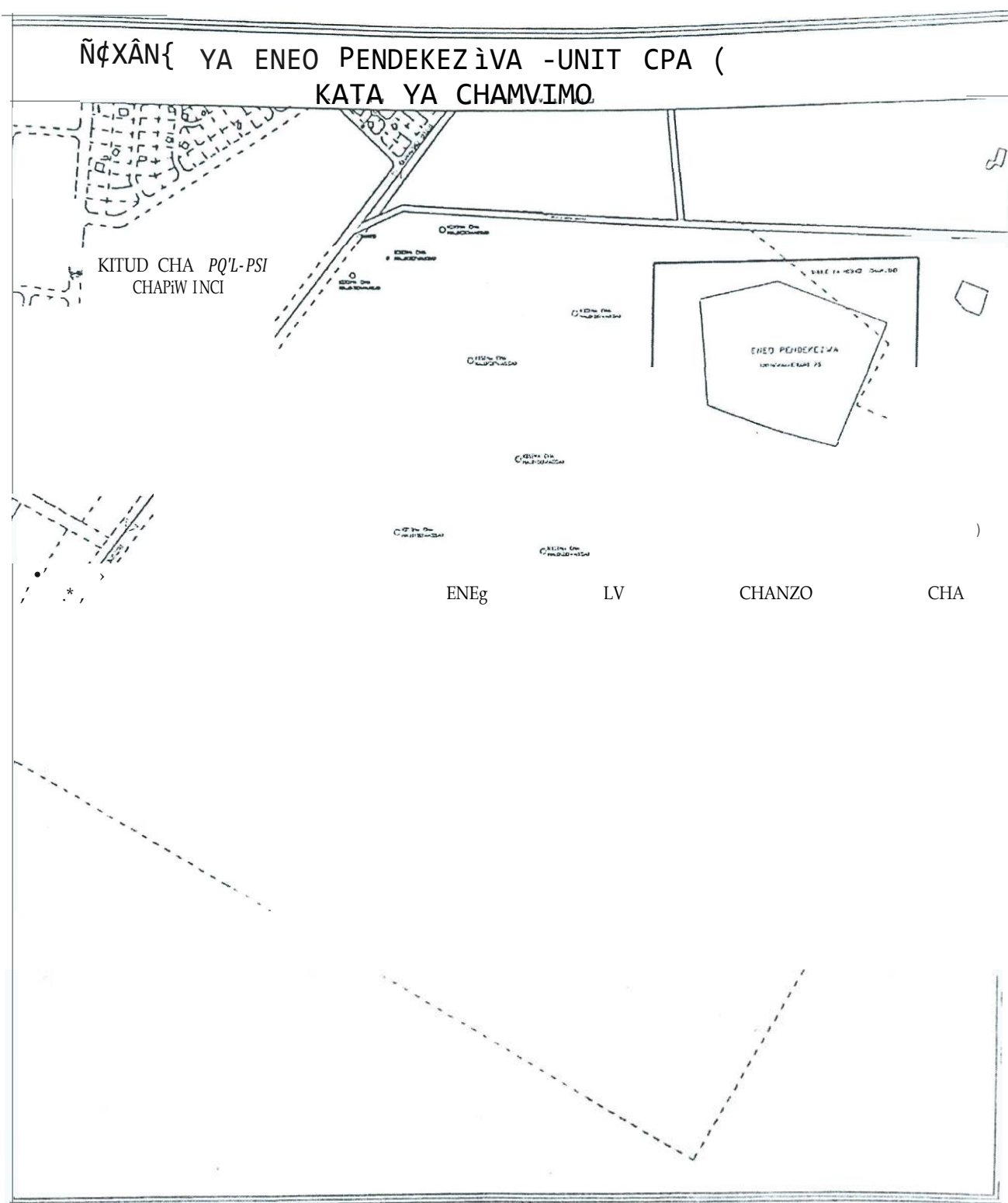
.....
BLANDINA D. MATAGI

MWENYEKITI

.....
PETER K. SJL'I 8A


MAHURURIO YA WAJUMBE WA SIKIJI CHA CHAMUSIM
 AGENDA KUU LGENZI WA SHULE YA SECONDARI
 TB. 14.12.2020 KIKAO CHA DHARURA.

STINA KAMILI	CHED	NA. SIMBA	SAMITHI
1. PETER K. SIMBA	M/KITI	0687440868	P. Simba
2. Blandina D. Alangi	VED	0712857819	B. Alangi
3. Pius P. Mungu	MJUMBE	0755631768	P. Mungu
4. RAYMOND M. Mungu	MJUMBE	0694325980	R. Mungu
5. RICHARD M. Mungu	MJUMBE	0718369977	R. Mungu
6. JANE M. Mungu	- II -	0755391429	J. Mungu
7. RICHARD V. Mungu	- II -	0687151761	R. Mungu
8. ISAYA - A. TOZILI	"	0783606572	I. Tozili
9. DAUDI K. CHISIMBA	"	0673343596	D. Chisimba
10. CHARLES L. NYANDU	- II -	0658111036	C. Nyandu
11. RICHARD CKIOTO	- II -	0764537355	R. Ckioto
12. EUSEBIUS H. CHEDIGO	- II -	0713269166	E. Chedigo
13. GABRIEL MUNGU	- II -	0762383159	G. Mungu
14. ANDERSON MUNGU	- II -	0757335105	A. Mungu
15. JAMES KIFARU	M/M - CHAMUSIM	0762228210	J. Kifaruru
16. CATHERINE G. CHILONGANI	AER	0786260524	C. Chilongani
17. ELIZABETH MUNGU	MJUMBE	0769881396	E. Mungu




APPENDIX III: LIST OF THE STAKEHOLDERS CONSULTED

[illegible]



TAN SHEQ

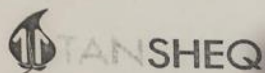


TAMISEMI

SEQUIP – ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT

Location MACHALI - VILLAGE - DODOMA Date 30/07/2022

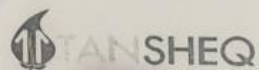
S/N	Name/ Jina	Title/ Cheo	Contacts/ Mawasiliano	Signature/ Sahihi
45	51 WILIAN. M. WZOL	H/KIJITJI	0743982475	L. WZOL
46	52 HOQAHA L. LEMOKHA	m/h/kiji	0620827868	H.lemokha
47	53 DAMALISI. C. MCHINGA	m/h/kiji	0759666947	D. mchinga
48	54 PENDO. M. LUBELEJ	M/H/kiji	0692203722	P. LUBELEJE
49	55 DAMALISI M. SUMSUM	m/h/kiji	0654207112	D. sum-sum
50	56 NEEMA R. EZELI	M/H/kiji	0622746558	N. EZELI



SEQUIP - ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT

Location: MANCHALI - CHAMWINO - DOBOMA Date: 30/09/2022

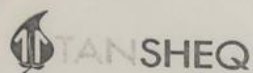
S/N	Name/ Jina	Title/ Cheo	Contacts/ Mawasiliano	Signature/ Sahihi
34	YUSTO CHALESY MASENHA	MWANANCHI	—	P. MASENHA
35	WILISONI MWAHIKA LEMBA	MWANANCHI	0654147843	W. Lemba
36	JOYCE MHANDO	MWANANCHI	0768643027	J. mhandu
37	Richard - G. Wamui	Mwananchi	0743-297810	R. Wamui
38	WILISONI CHILALA	CHUMWANAICH	—	W. Chilala
39	MOSI MALABA	MWANANCHI	—	MALABA
40	DIKISONI MODUMBA MUBEZ	MWANANCHI	—	M. Mubez
41	MAZENDO CHILANGAZI	MWANANCHI	—	M. Chilangazi
42	GRES MBELESELO	MWANANCHI	—	G. Mbeleselo
43	LIZABETH NYHANGA	MWANANCHI	—	E. Nyhanga
44	JONAS MASAKA	MWANANCHI	—	A. MASAKA



SEQUIP - ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT

Location: MANCHALI - CHAMWINO - DOBOMA Date: 30/09/2022 - VILLAGES

S/N	Name/ Jina	Title/ Cheo	Contacts/ Mawasiliano	Signature/ Sahihi
12	ALDO MALEKA	Nyumba	0678200515	A. Maleka
13	NOEL M MPALI	Nyumba	0710 365583	N. Mpalu
14	YOHANA M. MWENDI	MWANANCHI	0755-091471	Y. Mwendi
15	JOHN D. MBEZI	M/H/KISISI	0464569933	J. Mbezi
16	RICHARD L. MANYIKA	MWANANCHI	0767029134	R. Manyika
17	DENESI MKWAI	MWANANCHI	0765612080	D. Mkwai
18	FESTO MASENHA	MWANANCHI	—	F. Masen
19	JOJI MIBANTIKA	MWANANCHI	—	J. Mibantika
20	LISA MAHALA	MWANANCHI	0718374926	L. Mahala
21	JONAS MAHANGE	MWANANCHI	0713467811	J. Mahange
22	STANLEY G. WAMUI	MWANANCHI	0755049500	S. Wamui



SEQUIP - ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT

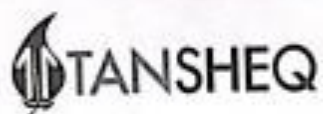
Location MANCINI VILLAGE - CHAMUSCA Date 28/09/2023

S/N	Name/ Jina	Title/ Cheo	Contacts/ Mawasiliano	Signature/ Sahihi
1	ALFASI M. CHIKOZA	M/KITI	0754 097288	Alfasi
2	NASSON M. MUMUNDU	DIWANI	0754560061	Nasson
3	NABIA R. MWINILE	CEO	0757403982	Nabia
4	PETER A. GWAZI	HQS-MANALI SFC	0716547959	Peter
5	ZAUDA H. IDDY	MWAZI MUKUMBA	0675909027	Zauda
6	CADISLAUS J. LOBOLO	VED MANCINI B	06594645925	Cadislau
7	HAMISI E. TOGA	M/KITI - CHAMUSCA	0747827312	Hamisi
8	LEAH M. MAKUMBO	M/HI KITIJI	0714890594	L. Makumbo
9	REBECCA M. CHAWALA	" "	0656361756	R. Chawala
10	SHEPHERD LEOMA	M/KITI KITIJI	0619667271	Shepherd
11	THELESIA M. MUKUMBA	M/HI KITIJI	0712470787	Thelesia



SEQUIP - ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT

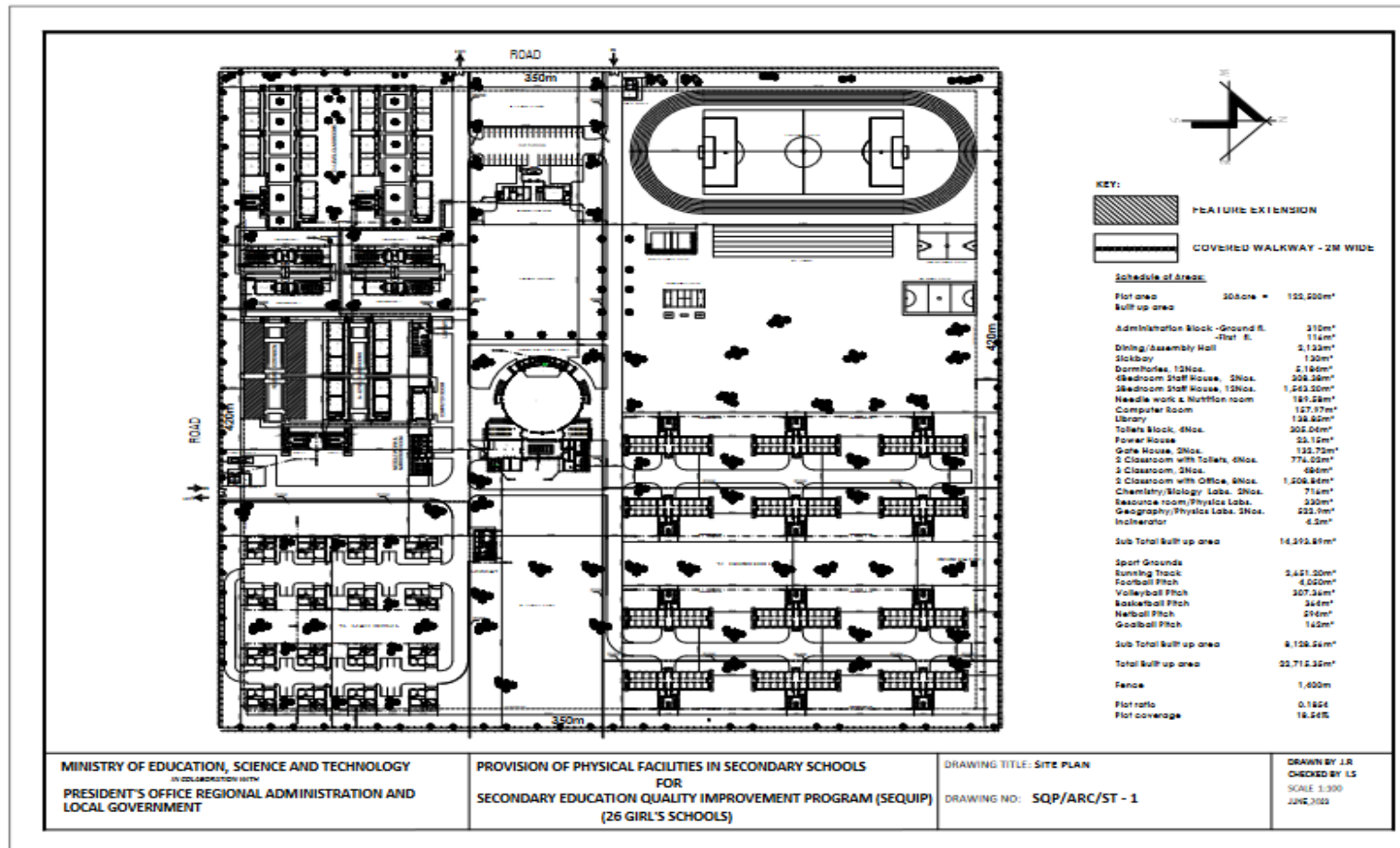
SN	Name/ Jina	Title/ Jina	Contacts/ Mawasiliano	Date/ Tarehe	Signature/ Sahihi
1	Salim Mwandawale OHJ (OHJ)		077386661	28/09/23	Salim



SEQUIP - ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT

SN	Name/Jina	Title/Uina	Contact/Mawasiliano	Date/Tarhe	Signature/Sahini
1.	NG'AMARSA 3 KILAYO	OC- LEGAL	0717-158255	04/05/2023	NKulama
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					

APPENDIX IV: SITE LAYOUT PLAN



APPENDIX V: GEOTECHNICAL SURVEY INFORMATION

2.0 TAARIFA YA UMEME

NA.	AINA YA HUDUMA	CHANZO*	UMBALI	MAELEZO
2.1	Grid ya Taifa wa 3 phase	√	500 M	UMEME ULISHA FIKA SHULENI

3.0 TAARIFA YA MAJI SAFI NA MAJI TAKA

NA.	AINA YA HUDUMA	CHANZO*	UMBALI	MAELEZO
3.1	Maji Safi	√	3KM	YAPO
3.2	Mamlaka ya Maji (RUWASA)	√		YAPO
3.3	Kisima kirefu (Borehole)√	X		HAKUNA
3.4	Kisima kifupi (Shallow Well)	X		HAKUNA
3.5	Vyanzo vingine	X		HAKUNA

4.0 TAARIFA YA UDONGO. MIMEA NA UWANDA

4.1	AINA YA UWANDA WA ENEO (TOPOGRAPHIC)	TAMBARARE	MIUNUKO YA WASTANI	MILIMA	ENEO LA MAJI MAJI	BONDE
		√	√	x	x	√
4.2	AINA YA ARDHI	MCHANGA	MFINYANZI	BLACK COTTON SOIL		
		√	X	x		
4.3	Kwa kulingana na taarifa hizi, eneo linalo pendekezwa litakufaa kwa ujenzi wa jengo la ghorofa	NDIO	HAPANA			
		√	X			

5.0 TAARIFA YA HUDUMA ZILIZOPO JIRANI

NA.	AINA YA HUDUMA	UMBALI	MAELEZO
5.1	Barabara kuu	✓	M 500
5.2	Hospitali / Zahanati	✓	KM 4
5.3	MkongowaTaifa	✓	M 500

6.0 TAARIFA YA HALI YA HEWA

6.1	HALI YA HEWA	JOTO/BARIDI BARIDI YA WASTANI	MOVUA WASTANI	MAELEZO
				MOVUA ZA WASTANI WA MILIMITA (MM) 350-500 KWA MWAKA

7.0 TAARIFA ZA UPATIKANAJI WA VIFAA VYA UJENZI (LOCAL MATERIALS)

7.1	VIFAA VYA UJENZI	MATOFALI YA KUCHOMWA	MBAO NGUMU	MBAO LAINI
		✓	x	✓

TANBIHI:

*Weka alama ✓ kuonesha kuwepo au alama ✗ kuonesha kutokuwepo kwa aina ya huduma husika

8.0 Ainisha changamoto ambazo watekelezaji wanahisi watakumbana nazo wakati wa utekelezaji wa mradi huu

- upatikanaji wa vifaa vya ujenzi ✓
- Upatikanaji wa maji ✓



9.0 Bainisha mikakati watayotumia kutatua hizo changamoto

- kununua vifaa vingi ili visafirishwe kwa pamoja ✓
- kuhamasisha jamii ishiriki kuchota maji ✗
- Kuelimisha jamii kuhifadhi vyanzo vya maji vilivyopo. ✓

MAONI:

Uongozi katika ngazi zote utashiriki kufanikisha kazi/zoezi hili.

APPINDEX VI: CONSULTATION WITH FIRE AND TANESCO

SEQUIP – ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT
Stakeholder consultation

Institution/Organization TANESCO Region DODOMA
 Date 28/04/2003
 District DODOMA TOWN

The Government of the United Republic of Tanzania (URT) in co-operation with the World Bank developed the Secondary Education Quality Improvement Project (SEQUIP). The objectives of SEQUIP are to increase access to secondary education, provide responsive learning environments for girls and in result, improve completion of quality secondary education for girls and boys.

SN	QUESTION AND RESPONSE
1.	Do you know the proposed/undertaking project? If yes, how <u>Yes I proposed to Make Electrical Installation Must be in Three phase (3P)</u>
2.	What is the importance of involving your organization/institution in this project? <u>We get better Education for future generation.</u>
3.	What impact do you expect from this project (Negative and Positive) <u>The society which near the project may Educate through this project by sending children to get education through project.</u>
4.	What are your concerns/comments on the undertaking <u>The people who near this project gets profit of electricity.</u>
5.	What are your suggestions and advice for the project implementation team in order to make it environmental and social friendly <u>to ensure that this project must make provision to</u>

**THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF HOME AFFAIRS
FIRE AND RESCUE FORCE**

Telephone: ZIMAMOTO DODOMA
Telephone: +0262321339
Telefax: 0252321339
Email: dodoma@frf.go.tz



The Regional Fire Officer
Fire and Rescue Force
P. O. Box 17019
DODOMA

Ref. No.BCD.130/150/01'A'/ 70

03rd May, 2023.

TANSHEQ
P. O. Box 31517,
DAR ES SALAAM

**RE: FIRE REPORT FOR ENVIRONMENTAL AND SOCIAL IMPACT ASSESMENT
AND SUBMISSION OF DRAWINGS FOR PROPOSED CONSTRUCTION OF
REGIONAL GIRLS SECONDARY SCHOOL AT MANCHALI VILLAGE, MANCHALI
WARD, CHAMWINO DISTRICT IN DODOMA REGION.**

(The Fire and Rescue Force Act No. 14, 2007 and Fire Precaution in Buildings Regulations, 2015)
Reference is being made to the above-mentioned project.

The Fire and Rescue Force have received your letter requesting advice on the Environmental Impact assessment of above-mentioned project. Fire and Rescue advice, you the following procedure before construction commence.

In order FRF to give the appropriate recommendation on fire safety precaution and measures, would like you to submit architectural and fire protection plans layout, Fire safety recommendation can be provided regarding to the uses of a particular building, size and height of the building. those details tends to be obtained in architectural drawings, fire protection plan and site layout.

Therefore, The Fire and Rescue Force would like you to submit architectural and fire protection plans for the detail's safety recommendations, which contains the following information: -

❖ FIRE SAFETY REQUIREMENT

1. Standard of Electrical wiring and equipment
2. Location of Emergency Information Panel
3. Provision of Warning Signs

4. Calculation of exit width and minimum number of exits (For the building office)
5. All fire escape routes shall be colored in green and the direction of travel to a safe area shall be indicated by arrows drawn at short interval along the route
6. All firefighting equipment to be highlighted in red

❖ **FIRE DETECTION AND MANUALLY ACTIVATED FIRE ALARM SYSTEM CONNECTED TO CONTROL PANEL (In Office building)**

- a) General arrangement plan, layout and outline drawing, dimensional detail drawings, position plans and section installation details, including location of detection points and zones
- b) Cabling diagrams, block diagrams, termination diagrams and zoning schedules

❖ **SPRINKLER SYSTEM (Power Station – Automatic fire suppression system it can be FM 200, CO2 Extinguishing agent or water mist)**

- a) Dimensional drawings, giving sprinkler spacing, distance from walls to sprinklers and size of pipes
- b) Key plan
- c) Drawing grid
- d) Section of building including height of the highest sprinkler
- e) Type and size of control valve
- f) Number, type, size, and temperature rating of sprinklers per valve
- g) Reference to symbols used
- h) Type of pipe and size
- i) Distance of sprinkler deflector from roof or ceiling
- j) Hydraulic calculations, also design points marked in drawing
- k) Location of manual call points and sounders.

❖ **FIRE FIGHTING SYSTEM & OTHER IMPORTANT SAFETY REQUIREMENTS**

- i. Position and size of water supply tanks and pumps for firefighting purposes
- ii. Position and type of flammable liquid and gas installation
- iii. Type of sealing materials for horizontal and vertical openings
- iv. Standard used for designing all active and passive fire Protection systems.
- v. Position of fire hydrant at the main vehicular entrance
- vi. Position of hose reels and diameter of pipe
- vii. Position, size and type of fire extinguishers

Lastly FRF Remind that, you're supposed to submit mentioned drawings and you are not allowed to start any construction activities without approval for fire Engineering

Plans (The Fire and Rescue Force Act No. 14, 2007 and Fire Precaution in Buildings Regulations, 2015), Hence Fire safety prevention and measures starts from Plan designing Stage of the premises, during construction and after Construction.

Thanks


M. A. Ngata- SF

For: REGIONAL FIRE OFFICER
FIRE AND RESCUE FORCE - DODOMA

APPINDEX VII: EMERGENCY RESPONSE AND PREPAREDNESS PLAN

1.0 Introduction

The purpose of this emergency Response and preparedness Plan is to adequately save lives and avoid injuries safeguard property and records and also establish procedures, responsibilities, resources and an organizational chain of response to emergency cases occurring within school compound. This plan will be handling man-made or natural events including fire, hazardous material, chemicals, medical injuries and earthquake, etc.

1.1 Emergences Response Procedures

1.1.1 Fire Emergences

Students, staff, visitors, and members of the school community are kindly requested to remain vigilant and promptly report any signs or evidence of fire within the school premises. It is essential to observe and identify the following indicators:

- I. Smoke:**
 - Report any sight or smell of smoke, regardless of its source or location within the school buildings or surrounding areas.
 - Pay attention to areas where smoke may accumulate, such as stairwells, restrooms, or utility rooms.
- II. Burning smell:**
 - Take note of any unusual or strong burning odors that may indicate a fire.
 - Report any such smell, even if there is no visible smoke or flames.
- III. Abnormal heating of any material or machines:**
 - Be observant of any objects, equipment, or machinery that exhibit abnormal or excessive heat.
 - Report any instances where materials or devices feel unusually hot to the touch.

The swift detection and reporting of potential fire incidents are crucial for ensuring the safety and security of everyone within the school. All members of the school community are encouraged to remain alert and immediately inform the designated authorities or the emergency response team upon discovering any of these fire-related signs or evidence. Remember, early detection and timely reporting can help prevent the escalation of fire hazards and facilitate prompt response and evacuation procedures if necessary.

1.1.1.1 Fire response Plan (for Large Fires)

- I. Use emergency communication systems to notify the Emergency Coordinator/Supervisor immediately of the fire's location.
- II. Ensure that doors in large buildings open outwardly to facilitate easier movement of people outside the building.
- III. Activate the nearest fire alarm within the premises to alert others of the emergency.
- IV. If safe to do so, rescue any person in immediate danger and move them to a place of safety.
- V. If someone's clothing is on fire, cover them with fire blankets. If fire blankets are not available, use water from showers or other sources to extinguish the flames.
- VI. Proceed to the nearest exit and evacuate the building area using the nearest available exit.
- VII. Close doors behind you to contain any smoke and prevent the fire from spreading further within the building.
- VIII. Proceed to the designated assembly area and do not re-enter the building until it has been deemed safe to do so by emergency personnel.
- IX. If you are unable to exit the room, try to prevent smoke from entering by using available materials to block gaps under doors or windows.
- X. Make efforts to draw attention to your location if you are trapped. Use a phone, window, or call for help to alert others. Remember, smoke inhalation is a significant danger in fires.
- XI. Only attempt to use a fire extinguisher if the fire is small and you have been properly trained to operate it safely.

- XII. If you have any doubts about operating the fire extinguisher or if the fire extinguishing attempts are ineffective, evacuate immediately from the building.
- XIII. Call the firefighting crew or emergency services (e.g., dial 911) immediately for professional assistance.

1.1.2 Chemical and Hazardous Material Spills

This section covers important information for emergence involving the release of chemical or hazardous substance that could harm people health and environmental.

- Train laboratory staff and science teachers in proper safety protocols.
- Establish clear guidelines for reporting accidents or injuries.
- Implement procedures for quickly and safely evacuating students from the laboratory area.
- Designate staff members responsible for administering first aid and contacting emergency medical services, if necessary.

1.1.3 Medical Emergencies

- I. Remain calm and focus on ensuring the safety and well-being of all individuals involved, without compromising your own safety.
- II. Immediately seek help by contacting the designated emergency phone number for the clinic and inform the Supervisor or appropriate personnel.
- III. Provide the necessary First Aid services to the injured person(s) as trained and within your capabilities.
- IV. Avoid moving an injured person unless they are in immediate danger of further harm. Stabilize the person and wait for medical professionals to assess the situation.
- V. Alert personnel in adjacent areas of any potential hazards to their safety, such as fire explosions, chemical contamination, or civil disturbances.
- VI. If a person's clothing is on fire, cover them with a fire blanket if available. If not, instruct them to roll on the floor to extinguish the flames. If showers are immediately available, use them to douse the person with water.
- VII. If chemicals have entered the eye, promptly flush the affected eye with plenty of water for at least 15 minutes, ensuring to wash the eyeball and inner surface of the eyelid.
- VIII. If necessary, transport the injured person(s) to the nearest dispensary or hospital. If an ambulance is not readily accessible, utilize the available means of transportation to ensure timely medical attention.

1.2 Resources and Equipment

1.2.1 First Aid Kits

In the school area, each designated area will be equipped with a First Aid Kit, which will be stored in a readily accessible location for emergency team members. These kits will contain essential first aid items that can be used before seeking further medical assistance at the clinic.

To maintain the effectiveness of the First Aid Kits, the clinic staff and/or Office Supervisor will conduct regular inspections to ensure that the items are in good condition and have not expired. This includes checking the integrity of the packaging, verifying the expiration dates of medications and perishable items, and replenishing any used or depleted supplies

1.2.3 Fire Extinguisher

To ensure the safety of the school compound, fire extinguishers will be strategically placed in all buildings, including classrooms, dormitories, laboratories, the dining hall, and offices. These fire extinguishers will be regularly inspected to ensure they are operational and ready for use.

A yearly inspection will be conducted to verify the functionality and condition of each fire extinguisher. Trained personnel or a designated fire safety team will perform these inspections, checking for any

signs of damage, ensuring that pressure gauges are within the recommended range, and confirming that safety seals are intact. If any issues are identified during the inspection, immediate maintenance or replacement of the fire extinguisher will be arranged.

1.2.5 Alarms

The school's alarm system serves as a crucial tool for emergency notification. In the event of an emergency, all students, staff, visitors, and contractors are required to respond promptly and gather at the designated assembly point once the alarm is activated. The safety and well-being of everyone within the school compound are of utmost importance, and this response protocol ensures a swift and organized evacuation or response to any potential threat or emergency situation. By adhering to this procedure, we can maintain a secure environment and effectively practice our emergency preparedness measures.

1.3 Accident / Incident Reporting Obligation

- All incidents/accidents must be reported
- Notify the department responsible, Safety Managers and Environmental personnel if the accident/ Incident have led into Environmental impacts
- Report all incidents and accidents using an incidents/ Accident form to ensure that corrective measures are in place to prevent re occurrence in future
- The filled incident and Accident form will be signed off when all corrective is already done.

1.4 Responsibilities

1.4.1 Workers and Students

- Workers and Students are responsible to ensure that all incidents or suspicious situations are reported immediately
- When fire alarm signal has sounded or shout for fire, workers and students are required to immediately evacuate the buildings and if possible, knocking on their neighbor doors and while saying **EMERGENCY GET OUT!**
- Familiarize with the Emergency Response Plan
- Familiarize with the signs **EXIT, EMERGENCY EXIT, ASSEMBLY POINT**
- Observe the fire warning sign such as **DO NOT SMOKE, FIRE**
- To know where the assembly point is it

1.4.2 Office Supervisor/ Emergency Coordinator

Emergency Coordinator or office Supervisor will be responsible to responsible the rescue team (Fire crew, first aiders and emergency response team) during emergencies cases
To identify OHS training needs depending upon the existing requirement

1.4.3 District Secondary Education Officer

- To provide recourses to implement Emergency Preparedness Plan

1.4.4 Emergency Respond Team

- To quickly respond and evacuate the facility within the designated timeframe and follow all other procedures as listed in the emergency plan.
- Know where emergency and first aid equipment are found in the building (s) and how to use such equipment.
- Know the Emergency number and understand how the chain of command works.
- Known Emergency numbers and understand how the chain of command works

1.5 Trainings Programs



- Workers and Students will be trained depending upon the Training needs of each section
- Occupational Health, Safety and Environmental meeting will be held in month basis to ensure that issues from department are communicated and managed according
- Key personnel will be trained on evacuation procedures, use of fire Equipment's, first aid procedure etc.
- Notices indicting contact details for first aiders or appointed persons, the emergence contact number and where the first – aid box is must be posted at the site

1.6 Emergence Contact Detail

Table 1.1 List of Emergency Contacts

S/N	Organisation	CONTACT
1.	Chamwino District Executive Director	
2.	Chamwino District Secondary Education Officer	
3	Fire and Rescue Office	
4	TANESCO	
5	Manchali Ward Executive Officer	
7	District hospital	

**NON-TECHNICAL EXECUTIVE SUMMARY
FOR
THE PROPOSED ESTABLISHMENT OF GIRLS SECONDARY SCHOOL AT MANCHALI
VILLAGE, MANCHALI WARD, CHAMWINO DISTRICT IN DODOMA REGION**

PROPONENT	
	<p>The Permanent Secretary President's Office Regional Administration and Local Government (PORALG) P. O. Box 1923 Dodoma, Tanzania Telephone: +255 262 321 234 Email: ps@tamisemi.go.tz</p>
SUBMITTED TO:	PREPARED BY:
<p>The National Environment Management Council (NEMC), Central Zone P. O. BOX 2724 Dodoma — Tanzania Email: nemcdodoma@nemc.or.tz Telephone: +255 262963859 Direct Line: +255 262963860</p>	 <p>Plot No. 83, Wakulima Road, Hananasif Estate P. O. Box 31517, Dar es Salaam. Phone: +255735100105 E-mail: info@tansheq.co.tz Web: www.tansheq.co.tz</p>

EXECUTIVE SUMMARY

Introduction

The Government of United Republic of Tanzania (URT) in collaboration with the World Bank has prepared the Secondary Education Quality Improvement Project (SEQUIP). The objectives of SEQUIP are to increase access to secondary education, provide responsive learning environments for girls and improve completion of quality secondary education for girls and boys. In summary, activities under SEQUIP will be structured into four main components:

Component 1: Empowering Girls through Secondary Education and Life Skills

1.1 Creating Safe Schools: Implementation of the Safe Schools Program including:

- i. Trained school guidance and counselling teachers;
- ii. Students' life skills training through girls' and boys' clubs by the guidance and counselling teachers; In-service training of secondary school teachers on the teacher code of conduct and gender sensitive pedagogical approaches;
- iii. Training of school heads and School Boards on GBV, safe school issues etc.;
- iv. School and classroom monitoring system for early identification of and intervention on girls at risk of drop out; and
- v. Community-based mechanism for safe passage to school.

1.2 Promoting Girls' Completion of Secondary Education through Quality Alternative Education Pathways including:

- i. Setting up an ICT-enabled system for tracking girls dropping out at national and district level to provide key information for AEP planning and implementation.
- ii. Alternative Education Centers and LGAs undertaking local outreach activities to out-of-school girls in the community which will include activities such as AEP center-organized community meetings, information via local radio, flyers and brochures.
- iii. Enhancing access to Alternative Education Pathways through (i) expansion of the network of AEP centers; and (ii) tuition fee subsidies for vulnerable girls.
- iv. A quality package for strengthening student learning in Alternative Education Pathways will also be implemented
- v. Environmental and Social Management Framework –Tanzania - Secondary Education Quality Improvement Project (SEQUIP)

Component 2: Digitally Enabled Effective Teaching and Learning

2.1 Effective Teaching and Learning

- i. Minimum package of critical teaching and learning resources for all schools: This package consists of an adequate number of textbooks and teacher guides in core subjects (English, Math and Sciences).
- ii. Equitable, gender-balanced teacher deployment to schools
- iii. In-service teacher training/continuous professional development (CPD) to improve classroom teaching practice for secondary English, Mathematics and Science teachers
- iv. Evaluate student learning in lower secondary to provide opportunities for remedial use: to allow for targeted early intervention to prevent girl dropout due to learning difficulties

2.2 Digitally-enabled Teaching of Math Sciences and English:

- i. Development of an ICT in Education Strategy and plan for secondary education.

- ii. Digital content and connectivity package to facilitate the teaching of English, Mathematics and Science in phases.

Component 3: Reducing Barriers to Girls' Education through Facilitating Access to Secondary Schools

Expansion of the secondary school network to substantially reduce the distance to secondary schools through an expansion of the secondary school network, especially in rural areas. SEQUIP will disburse project funding on the basis of the number of schools in each LGA meeting minimum infrastructure standards

Support upgrading existing secondary schools with the minimum infrastructure package (number of classrooms/students, adequate WASH facilities; multi-purpose science labs, electricity, etc.) with the objective is that at least 50 percent of all existing schools in all LGAs will meet the minimum standards set.

Component 4: Technical Assistance, Impact Evaluation and Project Coordination Environmental and Social Management Framework –Tanzania - Secondary Education Quality Improvement Project (SEQUIP). SEQUIP will be jointly implemented by the Ministry of Education, Science and Technology (MoEST) and the President's Office, Regional Administration and Local Government (PO-RALG).

Tansheq Limited, a NEMC registered environmental consulting firm with registration No. **NEMC/EIA/0034** with offices at House No. 83 Wakulima/Ngano Rd, Hananasif Estate and P.O. Box 31517 Dar es Salaam, has been contracted by Po-RALG as Implementing Supporting Team (IST).

Project Location and Accessibility

The project area is located at Manchali Village, Manchali Ward, and Chamwino District in Dodoma Region. Proposed site can be easily accessed by using T3 Morogoro- Dodoma trunk road. Also T5 Dodoma - Iringa trunk road as well as Central railway passes in Chamwino District. The project is located about 1km from the trunk road and it will need construction of access road.

Project Description

The school construction and design will consist of a required infrastructure package based on the school construction and maintenance strategy (e.g. number of classrooms/students, adequate WASH facilities, especially important for girls; multi-purpose science labs, electricity, etc.). The construction package will involve the following buildings;

Classrooms

The classrooms are designed following Education Bulletin number 1 of 2007 that directs capacity of each classroom level, 30 students for advance and 40 students for ordinary level. However, schedule of materials indicates each classroom will be having capacity of 40 students.

Construction will be undertaken in two phases. The first phase will involve construction of 12 classrooms within six blocks followed by the second phase that will involve the construction of 6 classrooms which will be of 3 different designs (2 classrooms with office, 2 classrooms with toilet and a 2 classrooms block).The proposed project development will adhere to the fire and rescue force directives for public premises.

The Education Global Practice Africa Region report prepared by World Bank provides the following directives; Student classroom ratios of 50:1 or less, student to functioning latrine ratio of 25:1 for girls and 30:1 for boys, at least one multipurpose science laboratory, student textbook ratios in mathematics and science subjects of 1:1, teacher: teacher guide availability of 2:1.

Laboratories

Education Bulletin number 1 of 2007 explain the capacity and set up of laboratory building for each level is 40 students, The scheduling of materials will adhere the bulletin as the following laboratory rooms will be constructed;

- Physics and geography lab
- Chemistry and biology lab,
- ICT room which is to be constructed in the second phase, and
- Domestic science

Administration block

The bulletin indicate for the school having capacity of 1000 student plus need to have not less than 40 teachers excluding other staffs such as school bursar, secretary etc. The administrative building will be constructed as an elevated building whereas only one (1) building will be constructed.

Toilets

The proposed toilet facility will comprise of one block with 16 holes to be constructed standalone as scheduling shows with estimates of one (1) hole for twenty (20) people, nevertheless, some of classrooms will be having sanitary rooms as designed, dormitory, and dining hall will also be having sanitary rooms.

The development of sanitary facilities is necessary to ensure the surrounding environment is well-managed and ensuring social well-being and practical operation of the school since human dignity is directly linked to access of safety and hygienic sanitation.

Dining hall

The Dining Hall is a pivotal gathering space on School's campus and is emblematic of The Family Boarding School ideal. The school will be having enough dinning space to all students since it is a boarding school thus meal will be served. According to the designs of the dining hall, it has the capacity of 2000 students.

Staff houses

The teachers' houses are designed to attract teachers out to the countryside, as well as to increase teachers morally to perform their duties unlike if they are coming far from the school. The design considers the staff house to have one (1) master bedroom, two (2) bedrooms/ one (1) master bedroom, three (3) bedrooms with Public toilet, Sitting room/dining, Kitchen and Store. Four (4) of the staff houses will be constructed.

Dormitories

Dormitories are places where students stay. The student housing must also aim to provide

healthy and acoustically pleasant environments for the protection, comfort, and productivity of the students. The dormitories are designed as per provided to meet the SEQUIP objectives having a capacity to accommodate 80 students. For phase one five (5) buildings will be constructed while for phase two four (4) buildings.

Library

The library is important because it affects cultures, it affects innovation, and it affects individuals. Because of all this, library architecture has the responsibility to enhance these effects by providing a knowledge center that is inspirational and conducive to good communication and teaching interactions.

According to designs, the library to be constructed will accommodate 52 students for readings and the computer learning room will accommodate 8 students.

Sick bay

A sick bay provides a dedicated space for students who may feel unwell or require immediate medical attention. It will serve as a primary point of care within the school premises, allowing for timely assessment and treatment of minor illness or injuries.

Incinerator

This will provide a safe and efficient means of disposing waste specifically biomedical waste such as used sanitary pads, medical supplies and other potentially hazardous materials.

Other components that will be constructed within school compounds area are Playgrounds, Water tunnel, Water tank (hippo) and its pillars), Manhole and gully trap, Walkway & Paving.

Project activities

15 Main activities of the project include preconstruction, Construction, Operations, and decommissioning.

Mobilization phase/Pre-Construction Activities

The mobilization phase of the project, which is estimated to take average of maximum three months, will entail the following activities:

- Establishment of construction of camps, material and equipment storage areas, materials processing yards, including sanitation facilities. The following activities will be involved during establishment of the camp.
 - Bush clearing.
 - Construction of Material and equipment storage areas
 - Construction of sanitation facilities
 - Installation of electrical infrastructure
 - Installation of water and wastewater infrastructure
- Identification of naturally-occurring material borrow sites (sand, fill, gravel borrow and quarry sites),
- Identification of sources of water for domestic and construction works

Construction Phase

The construction phase of the project, which is estimated to take 12 months for each of the phase one and will encompass following major activities:

- Earth works to facilitate widening and re-alignment of the road. Earth works will entail the following activities:
 - e) Clearing and grubbing (clearing of vegetation, including trees).
- Extraction of naturally occurring construction materials. This will include:
 - f) Excavation and transport of natural sand, gravel, and sub-base materials to construction sites
 - g) Stone quarrying (including blasting), crushing and transport of crushed aggregates to construction sites
 - h) Transport and handling of fuel, lubricants etc. from their sources to the project site
- Transport of construction materials from source to site such as roof, steel, woods, nails, rope

Operation phase

The maintenance activities of the Overall, SEQUIP will contribute to increasing total enrolment in secondary school by 1.8 million students and increase the number of girls graduating from both secondary schools and alternative secondary education pathways.

Decommissioning Phase

After completion of construction, all the utilities which were used shall be reverted to the Municipal Director who will decide on their future use. The main activities during demobilization phase, will engross the following:

- Collection and disposal of storage facilities such as pallets, packing, boxes
- Collection and disposal of construction materials and waste such as waste oil, sewage, solid waste (plastics, wood, metal, papers, etc.) at the workshop, site office etc. to authorized dumpsite
- Restoration of material borrows areas to safer condition

Project Cost

Total Project Cost is four billion Tanzanian shillings

Legal Framework

Relevant sectorial and cross-sectorial policies that provide directives on how projects should be operated

In/on concerned natural resources and sensitive ecosystems are:

- The National Energy Policy, 2015
- Education and training policy, 2014
- The National Environmental Policy, 2021
- The Occupational Health And Safety Policy 2009
- The National Employment Policy, 2008
- The National Research And Development Policy, 2010
- The National Biotechnology Policy, 2010

Key legislation, which PO-RALG must adhere to during implementation of this project, includes:

- The Education Act, Cap.353.
- The Law Of The Child Act, Cap. 13 R.E 2019
- The Engineers Registration Act, Cap 63
- The Architects And Quantity Surveyors Act, Cap 267
- The Workers Compensation Act, Cap 263
- The Persons With Disabilities Act, Cap 183
- The Occupier Liability Act, Cap 64
- The standard Act, Cap. 130
- The Environmental Management Act, Cap 191
- The Water Resources Management Act, Cap 331
- The Forest Act, Cap 323 R.E 2022
- The Electricity Act, Cap 131
- The Local Government (District Authorities) Act, Cap,287
- The Local Government (Urban Authorities) Act, Cap,288
- The Fire And Rescue Force (Safety Inspection And Certificates) Regulations, 2008 As Amended In 2017
- The Fire And Rescue Force (Fire Precautions In Buildings) Regulations, 2015
- The Environmental Management (Control And Management Of Electrical And Electronic Equipment Waste) Regulations, 2021

Stakeholder Involvement and Participation

The Consultants identified organizations, groups, and individuals considered to be key stakeholders that

Might be impacted by the project components or have influence on the project.

- Region Academic Officer, (RAO),
- District Executive Director (DED) in Chamwino District and District Environmental Officer (DEMO), DSEO, As DE
- Ward officials including VEO at Manchali village and WEO of Manchali ward
- Meeting with villagers around in the proposed project area.

Stakeholders Opinions and Concerns

The stakeholder consultations identified both positive opinions and negative concerns. Stakeholders had positive opinions of the project in terms of:

- Education opportunities to the specific project area and surrounding communities
- Rising of Manchali Ward's economy as a result of population increase

Environmental and Social Impacts

The following impacts were identified in the various project development stages such as mobilization and construction, operational as well as decommissioning stage. These impacts were as follows:

Mobilization/Construction Stage:

- Loss/disturbance of biodiversity and threatened species
- Atmospheric emissions from engines of vehicles
- Dust and noise pollution from mobilization vehicles.
- Public health hazards and safety from construction of supportive infrastructure.
- Land disturbance.
- Roads accidents of the moving vehicles

Operation Stage:

- Disruption of air quality from emissions of exhaust and fugitive gases
- Disturbance to surrounding communities due to increased noise levels
- Aesthetic degradation, environmental pollution and outbreak of diseases and injuries due to improper management of surrounding hazardous and non-hazardous solid waste materials
- General health and safety impacts
- Increased population density

Socio – Economic Aspects:

- A more educated workforce in the country
- Decrease in unemployment rates
- Increase in income levels resulting to benefit to the government from taxes provided
- Women empowerment
- A more balanced and diverse demographic landscape with improved gender representation and opportunities for women in the respective regions and country

Decommissioning Stage:

- Abandoned infrastructure.
- Unemployment.
- Loss of revenue to the government

Enhancement of Positive Socio-Economic Impacts:

- Employment and training especially during construction
- Increased income/revenue/induced development.
- Increased income by utilization of local resources.
- Support to local social services and livelihood.

Project Alternatives Analysis

Different options were considered for the project. Analysis of alternatives compares reasonable alternatives to the proposed project site, technology, design, and operation in terms of their potential environmental and social impacts; the feasibility of mitigating these impacts; their capital and recurrent costs; their suitability under local conditions; and their institutional, training, and monitoring requirements.

It also states the basis for selecting the particular project designs proposed and justifies recommended emission levels and approaches to pollution prevention and abatement.

Alternatives considered for this project were the following

- i) No-Go alternative,
- j) Design and technological considerations
- k) Location alternative
- l) Energy alternative
- m) Water alternative

Environmental and Social Management Plan

The Environmental Impact Assessment for the proposed construction of Regional Girls Secondary School, has identified a number of impacts that are likely to arise during construction and operation stage of the proposed project.

The EIA has examined bio-physical, socio-economic and cultural effects of the proposed activity from site clearance, school construction and the school operation.

The real benefits of the proposed project can result only if the risks of the identified adverse impacts are minimized. This can be accomplished through implementation of adequate preventive and mitigation measures by formulating policies to cover them accordingly.

Environmental Management Policy

This will ensure that Project management and staffs are carrying out their activities with the highest regard to the natural environment and sustainable utilization of environmental resources therein. The policy should therefore cover the following, among other issues:

- Ensure that all Project activities operate within legal requirements of all relevant national legislation
- That there are continuous environmental improvement and performance through monitoring of Project activities;
- Ensure that utilization of natural resources is optimal with measures in place to ensure resource availability for future generation;
- Awareness creation to the surrounding community regarding sustainable utilization of natural resources, protection of sensitive ecosystems and bio-diversity maintenance for communal livelihood; and
- Balancing between natural resource use, environmental conservation and economic development.

Occupational Health and Safety Policy

It is developed for this project so as enable establishment of appropriate measures that ensure that the health, safety and welfare of all users is cared for as well as the health requirements of the local community in which the project is located. The policy should highlight on the following, among others:

- Medical examination of workers;
- Sanitation in the Project area;
- Proper liquid and solid waste management and disposal;
- Emergency preparedness;
- Fire safety;
- Necessity and availability of personal protective equipment
- Risk minimization of accidental damage to the community and environment

Community Relations Policy

The Local Community Policy are developed by management of the Project to ensure that the management of the project develops and maintains sound relations with all stakeholders on mutual respect and active partnership. The policy should highlight on ways the management should:

- Work with the local community and relevant government departments and agencies to achieve sustainability of the project;
- Come up with ways of enhancing information flow from management to the community and Project stakeholders, and vice versa;
- Community capacity building; and
- Active engagement of the local community in all Project activities that impact on the local community.

With regard to environmental management during the pre-construction, construction, operation and decommissioning phase of the project, the principal responsibilities of each party as described below. For certain aspects of the programme, assistance will be needed from the Local Government Authorities and the NEMC (mainly in the form of guidance and advice and in project monitoring).

Environmental Monitoring Plan

This report contains a detailed plan to monitor the implementation of mitigation measures and the impacts of the project during its execution. This plan includes a cost estimate for carrying out the proposed monitoring plan.

Cost Benefit Analysis and Resources Evaluation

Environmental cost benefit analysis is assessed in terms of the negative and positive impacts. Furthermore, the analysis is considering whether the impacts are mitigatable and the costs of mitigating the impacts are reasonable. As it has been mentioned in Chapters 7 and 8, the potential benefits of the project, in terms of economic advancement and social benefit are substantial.

The environmental impacts are reasonably mitigatable. So to mitigate negative impacts, when compared to the required data are relatively small.

Social Cost Benefit Analysis

The benefits from project development can be judged in terms of employment, social welfare, education development, infrastructure development and the local economy (wages, goods and services). Thus, there will be a substantial spread of the benefit within the community through the provision of food, accommodation and other regular services to the employees and students.

Furthermore, the upgrading, development and maintenance of local infrastructure are benefits that will extend far beyond the project's scope and lifetime.

Decommissioning

Decommissioning is the last phase of project life. It involves terminating project activities and operations and rehabilitating site to or close to its original state. It is anticipated that the project shall continue as long as there is a demand for a project, however, individual components of the project shall be decommissioned as need be.

Conclusion

The project will have both positive and negative impact to the environment and the local communities along it. Measures have been proposed to enhance impacts which are positive to the environment and the local people.

For those impacts that are negative, mitigation measures have been proposed to avoid or abate them to the extent possible for the purpose of maximizing benefits of the school project and minimizing detriments of the project intervention to the communities.

Overall, the project shall act as a catalyst for positive change in the surrounding communities by improving education, infrastructure and social well-being, and by involving and engaging the local residents, the project can have a lasting impact and contribute to the overall development of the region.

MUHTASARI

UTANGULIZI

Serikali ya Jamhuri ya Muungano wa Tanzania (JMT) kwa kushirikiana na Benki ya Dunia wameandaa Mradi wa Kuboresha Ubora wa Elimu ya Sekondari. Lengo la mradi huu ni kuongeza upatikanaji wa elimu ya sekondari, kutoa mazingira bora ya kujifunzia kwa wasichana na kuboresha uhitimu wa elimu ya sekondari kwa wasichana na wavulana. Kwa ufupi, Mradi huu umejumuishwa katika sehemu kuu nne:

Sehemu ya 1: Kuwawezesha Wasichana kupitia Elimu ya Sekondari na Ujuzi wa Maisha

1.1 Kuunda Shule Salama: Kutekeleza Programu ya Shule Salama ikiwa ni pamoja na:

- i. Walimu wa ushauri;
- ii. Mafunzo ya stadi za maisha kwa wanafunzi kupitia klabu za wasichana na wavulana zitakazoendeshwa na walimu wa ushauri; Mafunzo ya walimu wa shule za sekondari kuhusu kanuni za tabia na njia za ufundishaji zenye kuzingatia usawa wa kijinsia;
- iii. Mafunzo ya viongozi wa shule na Bodi za Shule kuhusu Ukosefu wa usawa wa kijinsia, masuala ya shule salama nk.
- iv. Mfumo wa ufuatiliaji wa shule na darasa kwa kutambua mapema na kuingilia kati kwa wasichana waliohatarini kuacha shule; na
- v. Mfumo wa jamii kwa ajili ya njia salama ya kufika shuleni.

1.2 Kuchochea Uhitimu wa Wasichana wa Elimu ya Sekondari kupitia Njia za Elimu Mbadala Bora, ikiwa ni pamoja na:

- i. Kuweka mfumo ulio na teknolojia ya habari na mawasiliano wa kufuatilia wasichana wanaoacha shule kwa kiwango cha kitaifa na wilaya ili kutoa taarifa muhimu kwa ajili ya kupanga na utekelezaji wa Programu ya Elimu Mbadala.
- ii. Vituo vya Elimu Mbadala na Halmashauri za Wilaya kufanya shughuli za kuwafikia wasichana ambao hawako shuleni katika jamii, ambazo zitajumuisha shughuli kama vile mikutano ya jamii iliyoandaliwa na vituo vya Programu ya Elimu Mbadala, taarifa kupitia redio za ndani, vipeperushi na brosha.
- iii. Kuongeza upatikanaji wa Programu za Elimu Mbadala kupitia (i) upanuzi wa mtandao wa vituo vya Programu ya Elimu Mbadala; na (ii) ruzuku ya ada ya masomo kwa wasichana walio katika mazingira hatarishi.
- iv. Pia kuwepo kwa mfuko wa ubora wa kuimarisha ufunzaji kwa wanafunzi katika Programu za Elimu Mbadala

v. Mfumo wa Usimamizi wa Mazingira na Jamii - Tanzania - Mradi wa Kuboresha Ubora wa Elimu ya Sekondari

Sehemu ya 2: Ufundishaji na Ujifunzaji Ulionaswa Kwa Kutumia Teknolojia

2.1 Ufundishaji na Ujifunzaji Uliofaa

- i. Vifurushi vya chini vya rasilimali muhimu za kufundishia na kujifunzia kwa shule zote: Kifurushi hiki kinajumuisha vitabu vya kutosha na miongozo ya walimu katika masomo ya msingi (Kiingereza, Hisabati na Sayansi).
- ii. Upangaji wa walimu wenye usawa na usawa wa kijinsia katika shule.
- iii. Mafunzo ya walimu katika utumishi/ukufunzi wa kitaaluma
- iv. Kuimarisha mazoezi ya ufundishaji darasani kwa walimu wa Kiingereza, Hisabati na Sayansi katika shule za sekondari.
- v. Kuchunguza ujifunzaji wa wanafunzi katika elimu ya sekondari ya chini ili kutoa fursa za matumizi ya marekebisha: ili kutoa fursa ya kuingilia kati kwa lengo la kuzuia wasichana kuacha shule kutokana na ugumu wa kujifunza.

2.2 Ufundishaji kwa Kutumia Teknolojia ya Mawasiliano na Habari katika Hisabati, Sayansi na Kiingereza:

- i. Kuandaa Mkakati na mpango wa Teknolojia ya Habari na Mawasiliano katika Elimu ya Sekondari.
- ii. Kifurushi cha maudhui ya kidijitali na huduma za mawasiliano kufanikisha ufundishaji wa Kiingereza, Hisabati na Sayansi kwa awamu.

Sehemu ya 3: Kupunguza Vizuizi vya Elimu ya Wasichana kwa Kurahisisha Upatikanaji wa Shule za Sekondari Upanuzi wa mtandao wa shule za sekondari ili kupunguza umbali kwa kiasi kikubwa kwa shule za sekondari kwa njia ya kupanua mtandao wa shule za sekondari, hasa katika maeneo ya vijijini.

Mradi huu utatoa ufadhili wa mradi kulingana na idadi ya shule katika kila Halmashauri inayokidhi viwango vya miundombinu ya chini kusaia kuboresha shule za sekondari zilizopo na mpango wa miundombinu ya chini (idadi ya madarasa/wanafunzi, miundombinu ya kutosha; maabara za sayansi za shughuli mbalimbali, umeme, nk.) kwa lengo la kuhakikisha kuwa angalau asilimia 50 ya shule zote zilizopo katika Halmashauri zote zinakidhi viwango vya chini vilivyowekwa.

Sehemu ya 4: Msaada wa Kiteknolojia, Tathmini ya Athari, na Ushirikiano wa Mradi Mfumo wa Usimamizi wa Mazingira na Jamii – Tanzania - Mradi wa Kuboresha Ubora wa Elimu ya Sekondari. Mradi huu utatekelezwa kwa pamoja na Wizara ya Elimu, Sayansi na Teknolojia na Ofisi ya Rais, Tawala za Mikoa na Serikali za Mitaa (TAMISEMI).

Tansheq Limited, kampuni ya inayojishughulisha na ushauri elekezi wa mazingira iliyosajiliwa na Baraza la Taifa la Uhifadhi na Usimamizi wa Mazingira, yenye Namba za Usajili **NEMC/EIA/0034** ofisi zake katika mkoa wa Dar es Salaam , S.L.P 31517, Dar es Salaam, imeingia mkataba na TAMISEMI kwa ajili ya utekelezaji wa kufanya tathmini ya Athari ya Mazingira.

Eneo la Mradi na ufikiaji:

Eneo la mradi liko katika Kijiji cha Manchali, Kata ya Manchali, Wilaya ya Chamwino katika Mkoa wa Dodoma. Eneo lililopendekezwa litafikiwa kwa kutumia barabara ya Morogoro – Dodoma, Dodoma Iringa na pia kwa reli ya kati ambayo inapita Chamwino

Maelezo ya Mradi:

Ujenzi na ubunifu wa shule utajumuisha mfuko wa miundombinu uliohitajika kulingana na mkakati wa ujenzi na matengenezo ya shule (k.m. idadi ya madarasa/wanafunzi, miundombinu ya maji inayotosha, hasa muhimu kwa wasichana; maabara ya sayansi ya matumizi mbalimbali, umeme, nk.). Mfuko wa ujenzi utahusisha majengo yafuatayo.

Madarasa

Madarasa yameundwa kufuatana na Kanuni za Elimu namba 1 ya mwaka 2007 ambazo zinaelekeza uwezo wa kila darasa, wanafunzi 30 kwa darasa la juu na wanafunzi 40 kwa darasa la kawaida. Hata hivyo, ratiba ya vifaa inaonyesha kila darasa litakuwa na uwezo wa wanafunzi 40.

Ujenzi utafanyika kwa awamu mbili. Awamu ya kwanza itahusisha ujenzi wa madarasa 12 katika majengo sita, ikifuatiwa na awamu ya pili ambayo itahusisha ujenzi wa madarasa 6 ambayo yatakuwa na miundo tofauti (madarasa 2 yatakuwa na ofisi, madarasa 2 yatakuwa na choo, na majengo 2 ya madarasa). Maendeleo ya mradi yaliyopendekezwa yatazingatia maelekezo ya idara ya zimamoto na uokoaji kwa majengo ya umma.

Maabara

Kanuni za Elimu namba 1 ya mwaka 2007 inaelezea kuwa uwezo na muundo wa majengo ya maabara kwa kila ngazi ni wanafunzi 40. Ratiba ya vifaa itazingatia kanuni hiyo na maabara zifuatazo zitajengwa:

- Maabara ya Fizikia na Jiografia
- Maabara ya Kemia na Biolojia
- Chumba cha Teknolojia ya Habari na Mawasiliano ambayo itajengwa katika awamu ya pili.

Jengo la Utawala

Kanuni inaonyesha kuwa shule yenye uwezo wa wanafunzi 1000 au zaidi inapaswa kuwa na walimu wasiopungua 40 bila kuhesabu wafanyakazi wengine kama mhasibu wa shule, katibu, nk. Jengo la utawala litajengwa kama jengo lililoinuliwa ambapo jengo moja tu litajengwa.

Vyoo

Muundo wa choo uliopendekezwa utajumuisha jengo moja lenye mashimo 16 ambalo litajengwa kama jengo huru na kila shimo moja kwa watu ishirini (20). Vyoo vingine vitajengwa kwenye majengo ya madarasa, mabweni na sehemu ya chakula.

Maendeleo ya miundombinu ya vyoo ni muhimu kuhakikisha mazingira yanayozunguka yanadhibitiwa vizuri na kuhakikisha ustawi wa kijamii na uendeshaji wa shule kwa kuwa utu wa binadamu unahusiana moja kwa moja na upatikanaji wa vyoo salama na safi.

Chumba cha Chakula

Chumba cha chakula ni nafasi muhimu ya kukusanyika kwenye eneo la shule na ni ishara ya wazo la Shule ya Bweni kama familia. Shule itakuwa na nafasi ya kutosha ya chakula kwa wanafunzi wote kwa kuwa ni shule ya bweni hivyo chakula kitahudumiwa. Kulingana na muundo wa chumba cha chakula, kinaweza kuhudumia wanafunzi 2000.

Nyumba za wafanyakazi

Nyumba za walimu zimeundwa ili kuwavutia walimu kuishi vijijini, pamoja na kuongeza motisha kwa walimu kutekeleza majukumu yao kuliko wakija kutoka mbali na shule. Muundo unazingatia kuwa nyumba za wafanyakazi zitakuwa na vyumba vitatu vya kulala / vyumba vinne vya kulala vyenye choo cha umma, sebule/jiko, chumba cha kulia na ghala. Nyumba nne (4) za wafanyakazi zitajengwa.

Mabweni

Mabweni ni sehemu ambapo wanafunzi wanakaa. Makazi ya wanafunzi lazima pia yalenge kutoa mazingira yenye afya na sauti nzuri kwa ulinzi, faraja, na ufanisi wa wanafunzi. Mabweni yameundwa kulingana na malengo ya mradi na kwa uwezo wa kuhifadhi wanafunzi 80. Katika awamu ya kwanza, majengo matano (5) yatajengwa, wakati katika awamu ya pili, majengo manne (4) yatajengwa.

Maktaba

Maktaba ni muhimu kwa sababu inaathiri utamaduni, inaathiri ubunifu, na inaathiri watu binafsi. Kwa sababu ya hayo yote, usanifu wa maktaba una wajibu wa kuimarisha athari hizi kwa kutoa kituo cha maarifa ambacho kinatoa hamasa na kinafaa kwa mawasiliano bora na mwingiliano wa kufundisha.

Kulingana na miundo, maktaba itakayojengwa itakuwa na uwezo wa kuhudumia wanafunzi 52 kwa ajili ya kusoma, na chumba cha kujifunzia kompyuta kitakachohudumia wanafunzi 8.

Chumba cha huduma za afya

Chumba cha Huduma za Afya kwa Wanafunzi Wagonjwa hutoa nafasi maalum kwa wanafunzi ambao wanaweza kujisikia vibaya au wanahitaji huduma ya matibabu ya haraka. Itatumika kama kituo kikuu cha huduma ndani ya eneo la shule, kuruhusu tathmini na matibabu ya wakati unaofaa kwa magonjwa madogo au majeraha.

Kichomea taka

Kichomea taka hiki kitatoa njia salama na yenye ufanisi ya kuharibu taka, hasa taka za kitabibu kama vile pedi zilizotumika, vifaa vya matibabu, na vifaa vingine hatari.

Vipengele vingine vitakavyojengwa ndani ya eneo la shule ni Maeneo ya Kuchezea, Mtaru wa Maji, Tangi la Maji (Tangi la maji 'hippo' na nguzo zake), Mfereji wa Maji, Njia za Kutembelea.

Shughuli za Mradi

Shughuli kuu za mradi zinajumuisha maandalizi kabla ya ujenzi, ujenzi, uendeshaji, na kufunga mradi..

Uhamasishaji wa Mradi

Maandalizi kabla ya ujenzi, ambayo yanakadiriwa kuchukua muda wa kati ya miezi mitatu, yatajumuisha shughuli zifuatazo:

- Kuanzishwa kwa kambi za ujenzi, maeneo ya kuhifadhi vifaa, maeneo ya usindikaji vifaa, pamoja na miundombinu ya vyoo. Shughuli zifuatazo zitahusika wakati wa kuanzisha kambi:
 - Kufyeka vichaka.
 - Ujenzi wa maeneo ya kuhifadhi vifaa .
 - Ujenzi wa miundombinu ya vyoo.
 - Ufungaji wa miundombinu ya umeme.
 - Ufungaji wa miundombinu ya maji na maji taka.
- Kutambua maeneo ya asili ambapo vifaa vinaweza kupatikana (kama vile mchanga, kifusi, na jiwe kutoka kwenye machimbo),
- Kutambua vyanzo vya maji kwa ajili ya matumizi ya kazi za ujenzi.

Hatua ya Ujenzi

Hatua ya ujenzi ya mradi, ambayo inakadiriwa kuchukua miezi 12 kwa kila awamu ya kwanza, itajumuisha shughuli kuu zifuatazo:

- Kusafisha eneo la Mradi
- Kupata
- Kupata vifaa vya ujenzi. Hii itajumuisha:
 - i) Kusafirisha vifaa vya ujenzi kutoka chanzo hadi eneo la ujenzi kama vile bati, chuma, mbao, misumari, kamba, nk.

Hatua ya Uendeshaji

Shughuli za matengenezo za mradi huu zitasaidia kuongeza idadi ya wanafunzi wanaojiandikisha katika shule za sekondari kwa wanafunzi milioni 1.8 na kuongeza idadi ya wasichana wanaohitimu katika shule za sekondari na njia mbadala za elimu ya sekondari.

Hatua ya ukamilishaji wa mradi

Baada ya kukamilika kwa ujenzi, vifaa vyote vilivyotumiwa vitarejeshwa kwa Mkurugenzi wa Manispaa ambaye atachukua uamuzi juu ya matumizi yao ya baadaye. Shughuli kuu wakati wa hatua ya kufuta ni pamoja na yafuatayo:

- Kukusanya na kuharibu vituo vya kuhifadhi kama paleti, makasha ya ufungaji.
- Kukusanya na kuharibu vifaa vya ujenzi na taka kama mafuta yaliyotumika, maji taka, taka ngumu (plastiki, mbao, metali, karatasi, nk) katika karakana, ofisi ya eneo, nk. hadi dampo lililoidhinishwa.
- Kurudisha maeneo ya kukopa vifaa katika hali salama.

Gharama za Mradi

Gharama Jumla ya Mradi ni shilingi bilioni nne za Tanzania

Mfumo wa Kisheria

Sera za sekta husika na za mseto ambazo zinatoa maelekezo juu ya jinsi miradi inavyopaswa kuendeshwa katika/au kuhusiana na rasilimali za asili na mazingira yanayohitaji tahadhari ni:

- Sera ya Taifa ya Nishati, 2015
- Sera ya Elimu na Mafunzo, 2014
- Sera ya Taifa ya Mazingira, 2021
- Sera ya Afya na Usalama Kazini, 2009
- Sera ya Taifa ya Ajira, 2008
- Sera ya Taifa ya Utafiti na Maendeleo, 2010
- Sera ya Taifa ya Bioteknolojia, 2010

Sheria muhimu ambazo TAMISEMI lazima zichukue kuzingatia wakati wa utekelezaji wa mradi huu ni pamoja na:

- Sheria ya Elimu, Sura 353.
- Sheria ya Mtoto, Sura 13 R.E 2019
- Sheria ya Usajili wa Wahandisi, Sura 63
- Sheria ya Wakandarasi na Wasanifu Majengo, Sura 267
- Sheria ya Fidia kwa Wafanyakazi, Sura 263
- Sheria ya Watu Wenye Ulemavu, Sura 183
- Sheria ya Dhima ya Wenyeji, Sura 64
- Sheria ya Viwango, Sura 130
- Sheria ya Usimamizi wa Mazingira, Sura 191
- Sheria ya Usimamizi wa Maliasili za Maji, Sura 331
- Sheria ya Misititu, Sura 323 R.E 2022
- Sheria ya Umeme, Sura 131
- Sheria ya Serikali za Mitaa (Mamlaka za Wilaya) Sura, 287
- Sheria ya Serikali za Mitaa (Mamlaka za Miji) Sura, 288
- Kanuni za Jeshi la Zimamoto na Uokoaji (Uangalizi na Vyeti vya Usalama) za 2008 Kama Zilivyorekebishwa Mwaka 2017
- Kanuni za Jeshi la Zimamoto na Uokoaji (Kinga dhidi ya Moto katika Majengo) za 2015
- Kanuni za Usimamizi wa Mazingira (Kudhibiti na Kusimamia Taka za Vifaa vya Umeme na Umeme) za 2021

Wadau Mbalimbali wa Mradi

Mshauri Eleke waligundua mashirika, vikundi, na watu binafsi wanaofikiriwa kuwa wadau muhimu ambao wanaweza kuathiri vipengele vya mradi au kuwa na ushawishi kwenye mradi.

- Afisa Elimu wa Mkoa,
- Mkurugenzi Mtendaji wa Wilaya ya Chamwino na Afisa wa Mazingira wa Wilaya, na Afisa Elimu wa Wilaya.
- Maafisa wa Kata ikiwa ni pamoja na Afisa Mtendaji wa Kijiji cha Manchali na Afisa wa Elimu wa Kata ya Manchali
- Mkutano na wanakijiji katika eneo lililopendekezwa la mradi.

Maoni na mapendekezo ya wadau yamegawanyika katika vipengele vifuatavyo

- Fursa za elimu kwa eneo maalum la mradi na jamii zinazozunguka
- Kuongezeka kwa uchumi wa Kata ya Manchali kutokana na ongezeko la idadi ya watu Wadau walikuwa na wasiwasi kuhusu:

Athari za Mazingira na Kijamii

Athari zifuatazo ziligunduliwa katika hatua mbalimbali za maendeleo ya mradi kama vile hatua ya kukusanya nguvu na ujenzi, hatua ya uendeshaji, na hatua ya kufuta. Athari hizi ni kama ifuatavyo:

Hatua ya Uhamasishaji/Ujenzi:

- Kupotea/kuvurugwa kwa viumbe hai na spishi zilizo hatarini
- Uzalishaji wa gesi angahewa kutoka kwenye injini za magari
- Uchafuzi wa vumbi na kelele kutokana na magari yanayokusanya nguvu
- Hatari za afya ya umma na usalama kutokana na ujenzi wa miundombinu inayosaidia mradi
- Kuvuruga ardhi
- Ajali za barabarani za magari yanayohamia

Hatua ya Uendeshaji:

- Kuvuruga ubora wa hewa kutokana na uzalishaji wa gesi chafu na gesi hatarishi
- Kuvuruga jamii zinazozunguka kutokana na ongezeko la viwango vya kelele
- Uharibifu wa mandhari, uchafuzi wa mazingira na kuzuka kwa magonjwa na majeraha kutokana na usimamizi mbaya wa taka ngumu na taka zisizo na hatari zinazozunguka
- Athari za kiafya na usalama kwa ujumla
- Ongezeko la wingi wa watu

Masuala ya Kiuchumi na Kijamii:

- Nguvu kazi iliyosoma zaidi nchini
- Kupungua kwa viwango vya ukosefu wa ajira
- Kuongezeka kwa viwango vya mapato ambavyo vitawanufaisha serikali kupitia kodi zinazolipwa
- Kuwawezesha wanawake
- Mandhari bora na tofauti zaidi ya demografia na uwakilishi bora wa jinsia na fursa kwa wanawake katika mikoa na nchi husika

Hatua za kukamilika kwa Mradi

- Miundo mbinu ambayo haijatumika tena.
- Ukosefu wa ajira.
- Kupoteza mapato kwa serikali

Kuimarisha Athari Chanya za Kiuchumi na Kijamii:

- Ajira na mafunzo hasa wakati wa ujenzi
- Kuongezeka kwa mapato/ukuaji wa mapato/maendeleo ya kusababisha.
- Kuongezeka kwa mapato kupitia matumizi ya rasilimali za ndani.
- Kusaidia huduma za kijamii na maisha ya watu katika eneo la asili.

Uchambuzi wa Njia Mbadala

Chaguzi tofauti zilizingatiwa kwa ajili ya mradi. Uchambuzi wa chaguzi unalinganisha chaguzi zinazoweza na eneo la mradi lililopendekezwa, teknolojia, muundo, na uendeshaji kwa mtazamo wa athari zake za mazingira na kijamii; uwezekano wa kupunguza athari hizo; gharama zake za mtaji na za kawaida; ufaa wake chini ya hali za ndani; na mahitaji yake ya taasisi, mafunzo, na ufuatiliaji.

Pia inaelezea msingi wa kuchagua muundo maalum wa mradi uliopendekezwa na kuthibitisha viwango vya uzalishaji vilivyopendekezwa na njia za kuzuia na kupunguza uchafuzi.

Njia Mbadala zilizozingatiwa kwenye Mradi huu ni kama Zifuatazo

- a) Hakuna Mbadala
- b) Teknolojia Mbadala
- c) Eneo Mbadala
- d) Nishati Mbadala
- e) Maji Mbadala

Mpango wa Usimamizi wa Mazingira Na Jamii

Tathmini ya Athari za Mazingira kwa ujenzi uliopendekezwa wa Shule ya Upili ya Wasichana ya Kikanda, imetambua idadi ya athari zinazoweza kutokea wakati wa ujenzi na hatua za uendeshaji za mradi uliopendekezwa.

Tathmini ya Athari za Mazingira imechunguza athari za kibiolojia, za kiuchumi na kitamaduni za shughuli zilizopendekezwa kuanzia kuondoa eneo, ujenzi wa shule, na uendeshaji wa shule hiyo.

Faida halisi za mradi uliopendekezwa zinaweza kutokea tu ikiwa hatari za athari hasi zilizotambuliwa zitapunguzwa. Hii inaweza kufanikiwa kupitia utekelezaji wa hatua za kuzuia na kupunguza kwa kutosha kwa kutunga sera za kuzifunika ipasavyo.

Sera ya Usimamizi wa Mazingira

Hii itahakikisha kuwa uongozi wa mradi na wafanyakazi wanatekeleza shughuli zao kwa kuzingatia mazingira ya asili na matumizi endelevu ya rasilimali za mazingira katika eneo husika. Sera hii inapaswa kufunika mambo yafuatayo, pamoja na masuala mengineyo:

- Kuhakikisha kuwa shughuli zote za Mradi zinaendeshwa kwa kuzingatia mahitaji ya kisheria ya sheria za kitaifa zinazohusiana na mazingira.
- Kuhakikisha kuboresha na kufuatilia kwa muda mrefu utendaji na matokeo ya mazingira kupitia ufuatiliaji wa shughuli za Mradi.
- Kuhakikisha matumizi bora ya rasilimali za asili na kuweka hatua za kuhakikisha upatikanaji wa rasilimali kwa vizazi vijavyo.
- Kuhamasisha jamii ya jirani kuhusu matumizi endelevu ya rasilimali za asili, ulinzi wa mazingira hatarishi na uhifadhi wa bioanuwai kwa maisha ya pamoja ya jamii.
- Kupata usawa kati ya matumizi ya rasilimali za asili, uhifadhi wa mazingira na maendeleo ya kiuchumi.

Sera ya Afya na Usalama Kazini:

Imeandaliwa kwa mradi huu ili kuwezesha kuanzishwa kwa hatua sahihi ambazo zinahakikisha afya, usalama na ustawi wa watumiaji wote unazingatiwa pamoja na mahitaji ya afya ya jamii ya eneo ambapo mradi unapatikana. Sera inapaswa kuzingatia mambo yafuatayo, miongoni mwa mambo mengine:

- Uchunguzi wa matibabu kwa wafanyakazi;
- Usafi katika eneo la Mradi;
- Usimamizi na utupaji sahihi wa maji taka na taka ngumu;
- Tayari kwa dharura;
- Usalama wa moto;
- Umuhimu na upatikanaji wa vifaa binafsi vya kinga
- Kupunguza hatari ya uharibifu wa bahati mbaya kwa jamii na mazingira

Sera ya Mahusiano na Jamii

Sera za Mahusiano na Jamii za Jamii zinaandaliwa na uongozi wa Mradi ili kuhakikisha kuwa uongozi wa mradi unajenga na kuendeleza mahusiano ya kuaminiana na wadau wote kwa msingi wa kuheshimiana na ushirikiano wa pande zote. Sera inapaswa kuelezea njia ambazo uongozi unapaswa:

- Kufanya kazi na jamii ya eneo na idara na mashirika husika ya serikali kufikia endelevu ya mradi;
- Kuja na njia za kuboresha mtiririko wa habari kutoka kwa uongozi kwenda kwa jamii na wadau wa Mradi, na kinyume chake;
- Uwezo wa jamii; na
- Kuhusisha jamii ya eneo katika shughuli zote za Mradi ambazo zinaathiri jamii ya eneo.

Kuhusu usimamizi wa mazingira wakati wa hatua za kabla ya ujenzi, ujenzi, uendeshaji, na kufuta mradi, majukumu makuu ya kila upande kama yalivyoielezwa hapo chini. Kwa baadhi ya vipengele vya mpango huo, msaada utahitajika kutoka kwa Mamlaka za Serikali za Mitaa na Baraza la Taifa la Uhifadhi na Usimamizi wa Mazingira (kwa kutoa mwongozo na ushauri na kufuatilia mradi).

Mpango wa Ufuatiliaji wa Mazingira

Ripoti hii ina mpango uliokamilika wa kufuatilia utekelezaji wa hatua za kupunguza na athari za mradi wakati wa utekelezaji wake. Mpango huu unajumuisha makisio ya gharama za kutekeleza mpango wa ufuatiliaji uliopendekezwa.

Uchambuzi wa Gharama na Faida

Uchambuzi wa gharama na faida za mazingira unahusisha kutathmini athari hasi na chanya. Zaidi ya hayo, uchambuzi unazingatia ikiwa athari hizo zinaweza kuzuiwa na gharama za kuzuiwa kwa athari hizo ni za kufaa. Kama ilivyotajwa katika Sura 7 na 8, faida za uwezekano wa mradi, kwa maendeleo ya kiuchumi na faida za kijamii ni kubwa.

Athari za mazingira zinaweza kuzuiwa kwa kiasi kikubwa. Kwa hivyo, kuzuiwa kwa athari hasi, ikilinganishwa na data inayohitajika, ni ndogo.

Uchambuzi wa Faida za Jamii

Faida za maendeleo ya mradi zinaweza kuhukumiwa kwa kutazama ajira, ustawi wa kijamii, maendeleo ya elimu, maendeleo ya miundombinu, na uchumi wa ndani (mshahara, bidhaa na huduma). Kwa hivyo, kutakuwa na mgawanyiko mkubwa wa faida katika jamii kupitia utoaji wa chakula, malazi na huduma nyingine za kawaida kwa wafanyakazi na wanafunzi.

Zaidi ya hayo, kuboresha, kuendeleza na kudumisha miundombinu ya ndani ni faida ambazo zitaendelea zaidi ya wigo na muda wa mradi.

Kumalizika/Kufungwa kwa mradi

Kufuta ni hatua ya mwisho ya maisha ya mradi. Inahusisha kusitisha shughuli na uendeshaaji wa mradi na kurejesha eneo hadi hali yake ya awali au karibu na hali yake ya awali. Inatarajiwa kuwa mradi utaendelea muda mrefu kama kuna mahitaji ya mradi, hata hivyo, sehemu za kipekee za mradi zitafutwa kama inavyohitajika.

Mwisho

Mradi huu utakuwa na athari chanya na hasi kwa mazingira na jamii za eneo linalopitiwa. Hatua zimependekezwa ili kuongeza athari chanya kwa mazingira na watu wa eneo hilo.

Kwa athari zinazoweza kuwa hasi, hatua za kupunguza madhara zimependekezwa ili kuepuka au kupunguza kwa kiwango kikubwa iwezekanavyo madhara ya kuingilia kati kwa jamii.

Kwa ujumla, mradi huu utakuwa kama kichocheo cha mabadiliko chanya katika jamii za karibu kwa kuboresha elimu, miundombinu, na ustawi wa kijamii, na kwa kushirikisha wakazi wa eneo hilo, mradi huu unaweza kuwa na athari endelevu na kuchangia katika maendeleo ya jumla ya eneo hilo.

APPINDEX IX: SCHEDULE OF MATERIALS AND ARCHITECTURAL DRAWINGS

SCHEDULE OF MATERIALS

THE UNITED REPUBLIC OF TANZANIA



PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

PROPOSED STANDARD DRAWINGS FOR SEQUIP

Schedule of Materials & Labour for Two Classroom Block – Gable
Type

PROJECT AREA

TANZANIA MAINLAND

Ministry of Education, Science and
Technology,
Government City - Mtumba,
AFYA Street,
P.O Box 10,
40479 DODOMA.

President's Office,
Regional Administration,
& Local Government
Government City - Mtumba
TAMISEMI Street,
P. O. Box 1923,
41185 DODOMA.

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
	<u>MATERIALS</u>				
A	<u>SUB-STRUCTURE -PROVISIONAL</u>				
1	<u>Strip Foundation - Grade 15 Plain</u>				
	Aggregate (3/4")	10	M ³		
	Sand	5	M ³		
	Cement-50kgs -(42.5)	49	Bags		
2	<u>Foundation Walls</u>				
	6" Cement & Sand block -Minimum Strength 3.5 MPa	1,036	No		
	Sand	3	M ³		
	Cement -50kgs (42.5)	17	Bags		
	<u>ALTERNATIVE TO FOUNDATION WALL</u>				
	** If stone is applicable, then blockwork is not applicable.				
	Therefore Engineer must confirm to the Tenderer which item to be priced (Blockwork or Stone) depending on availability and suitability of building materials.				
	Stone, complete with its cement and sand mortar (1:4)	18	M ³		
3	<u>Moram, Hardcore & Site sterilization</u>				
	Moram (4.5m ³ lorry)	8	Trips		
	Hardcore 200mm thick - (4.5m ³ lorry)	7	Trips		
	Sand	5	M ³		
	Aldrin solution or other and equal approved (1000mls)	2	Bottle		
4	<u>Oversite Concrete 100mm thick - 15 grade ,Ground Beam and base column - 20 grade</u>				
	DPM	155	M ²		
	Cement -50kgs (42.5)	115	Bags		
	Aggregates (1/2")	19	M ³		
	Sand	10	M ³		
	Reinforcement - 12mm diameter high tensile 460N/mm2	35	PC'S		
	Reinforcement - 8mm diameter high tensile 460N/mm2	33	PC'S		
	Binding Wire - 1kg	8	Kgs		
	A252 Mesh 200 x 200x 6.16kg/m2	4	PC'S		
	Timber 1" X 10 " (5.2m long)	15	PC'S		
	Timber 2" X 2"(5.2m long)	10	PC'S		
	Nails-4"	8	Kgs		
	Nails-3"	8	Kgs		
	Supporting props - 3m	5	PC'S		
	SUB-TOTAL SUBSTRUCTURE				

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
B.	<u>SUPERSTRUCTURE</u>				
1	<u>Walls & Ring beam</u>				
	6" Cement & Sand block (Minimum Strength 3.5 MPa) - 230mm	2,190	No		
	6" Cement & Sand block (Minimum Strength 3.5 MPa) - 150mm	198	No		
	DPC (30m long)	1	Roll		
	Sand	11	M ³		
	Cement-50kgs (42.5)	72	Bags		
	Aggregates (1/2")	4	M ³		
	Reinforcement - 12mm diameter high tensile 460N/mm ²	25	PC'S		
	Reinforcement - 8mm diameter high tensile 460N/mm ²	27	PC'S		
	Binding Wire - 1kg	8	Kg		
	Timber 1" X 10" to Sides (5.2m long)	18	PC'S		
	Timber 1" X 5" (Plates)(5.2m long)	4	PC'S		
	Timber 2" X 2"(5.2m long)	10	PC'S		
	Supporting Props - 3m	15	PC'S		
	SUB-TOTAL SUPER STRUCTURE				
	ALTERNATIVE TO BLOCKWORK WALL				
	<i>** If brickwork is applicable, then blockwork is not applicable.</i>				
	<i>Therefore Engineer must confirm to the Tenderer which item</i>				
	<i>to be priced (Blockwork or brickwork) depending on availability</i>				
	<i>and suitability of building materials. Note that: Strictly do not</i>				
	<i>use stretcher bond when using bricks, the acceptable</i>				
	<i>bond is either Flemish or English or header.</i>				
	230mm thick One brick wall	158	m ²		
	150mm thick One brick wall	22	m ²		
C.	<u>ROOF STRUCTURE & COVERING</u>				
1	<u>Roof Structure - Provisional</u>				
	Timber 2" X 3" Purlins	50	PC'S		
	Timber 2" X 4" King Post, wall plate and struts	70	PC'S		
	Timber 2" X 6" Rafter and Tie beam	55	PC'S		
	Fascia board 1" X 10" -ref. Semi Hardwood (5.2m long)	14	PC'S		
	Nails -5"	50	Kgs		
	Nails -4"	30	Kgs		
	Nails -3"	20	Kgs		
	16mm diameter bolt, 500mm long	28	Pc's		
	NOTE: The above softwood timber structure should be pressure impregnated treated				
2	<u>Roof Covering</u>				
	28 G Resincoated Iron sheet size 900x3000mm long	103	PC'S		
	Hips/Ridge and valley - 28 G resin coat - 3m	8	PC'S		
	Aluminium Roofing Nails	23	Packet		
			C/F		

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
			B/F		
3	<u>Gutter's</u>				
	Upvc 100mm half round (6m long)-5"	7	PC'S		
	Upvc 75mm diameter down pipe; Class B	2	PC'S		
	PVC outlet	2	PC'S		
	Gutter support bracket	32	PC'S		
	PVC bend 90'	2	PC'S		
	PVC bend 45'	4	PC'S		
	Gutter Clamp 3"	28	PC'S		
	Connector/reducer	8	PC'S		
	Connector outer	2	PC'S		
	Corner Inner	2	PC'S		
	SUB-TOTAL ROOF STRUCTURE & COVERING				
D.	<u>CEILING</u>				
	Gypsum board -9mm thick	56	PC'S		
	Plain Cornice (8ft)	40	PC'S		
	Screw 1.25" 500pcs/box	3	Box		
	Gypsum powder -25kg	11	Bags		
	Fiber tape (90m)	1	Roller		
	Treated softwood Timber 2" X 2" (3.6m)	102	PC'S		
	Nails 4"	20	Kgs		
	Nails 3"	25	Kgs		
	SUB-TOTAL FOR CEILING				
E.	<u>DOOR</u>				
1	<u>40mm thick hardwood Panelled door shutter</u>				
	820 x 2100mm high	2	PC'S		
2	<u>45 x 145mm Frames (hardwood),Varnish</u>				
	900 x 2500 mm high frame	2	PC'S		
	5mm thick clear glass to Vents	1	m2		
	16mm diameter burglar bars -12m	1	Pcs		
	Brush 3"	3	Pcs		
	Sand paper (msasa) No.80	3	LM		
	Clear Varnish - 4Litres	1	TIN		
	Thinner for Varnish	3	Litres		
3	<u>Ironmongeries</u>				
	Mortice lock Three lever	2	No		
	Brass hinges - 100mm	3	Pairs		
	SUB-TOTAL FOR DOORS				
F.	<u>WINDOWS</u>				
	<u>Aluminium sliding Window comprising 100mm x 1.2mm thick standard aluminium profile ex-china/Turkey infill with 5mm thick glass complete with mosquito proofing panel, including all accessories, ironmongeries, cutting and pinning lugs</u>				
	1500 X 1500mm high	10	PC'S		
	SUB-TOTAL FOR WINDOWS				

JUNE 2023 (REVISED 1) Page/4 PO - RALG/MoEST

JUNE 2023 (REVISED I) Page/5 PO - RALG/MoEST

JUNE 2023 (REVISED I) Page/6 PO - RALG/MoEST

ARCHITECTURAL DRAWINGS

CLASSROOM BLOCK

ARCHITECTURAL DRAWING

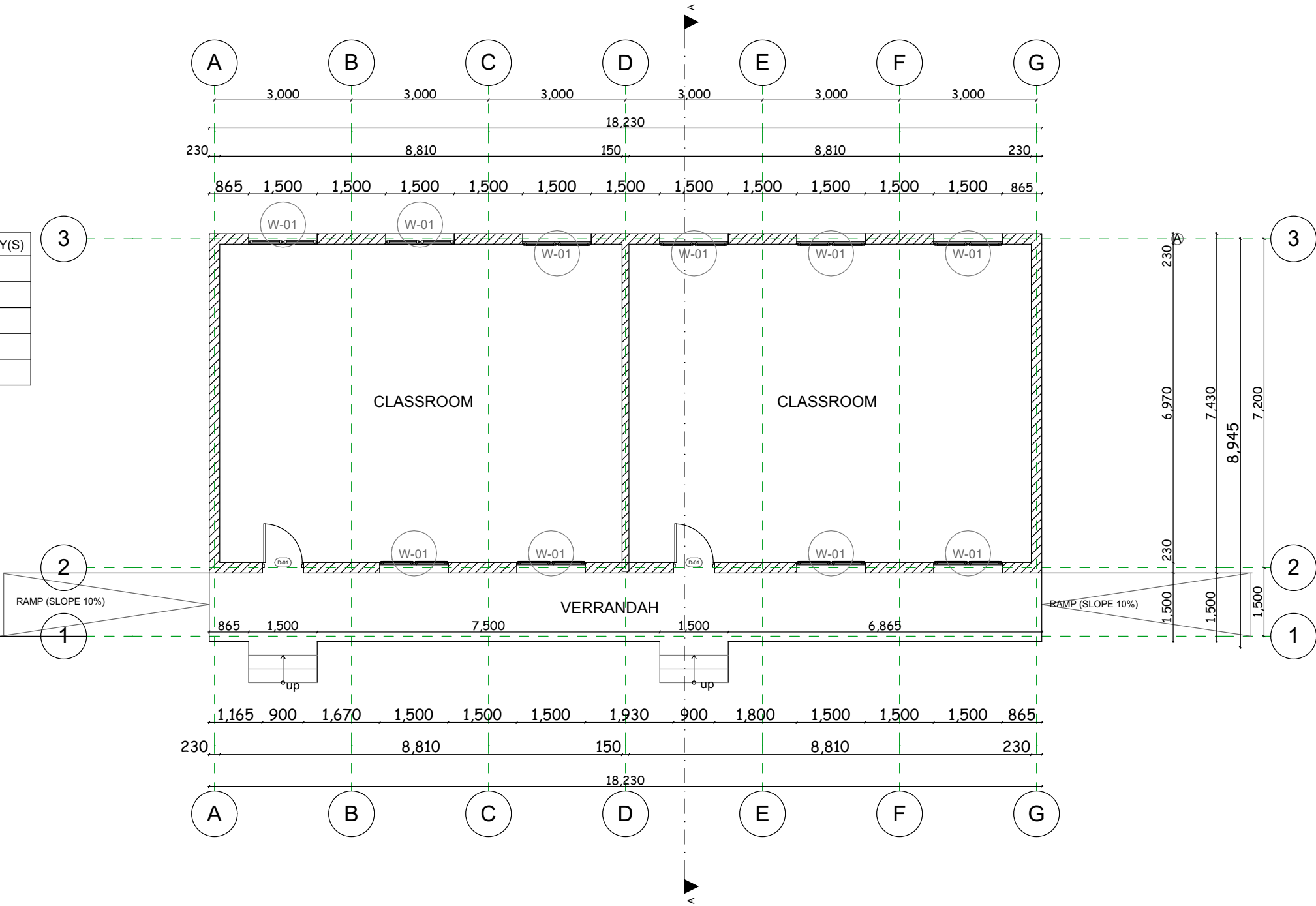
2- Classroom Block only -Gable

JUNE 2023

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY <i>IN COLLABORATION WITH</i> PRESIDENT'S OFFICE REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT	PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS FOR SECONDARY EDUCATION QUALITY IMPROVEMENT PROGRAM	DRAWING TITLE: 2- CLASSROOMS BLOCK - GABLE DRAWING NO: ARC/2CRG/00	Date	June, 2023
			Drawn by	IAS
			Checked by	JR
			Scale	To fit

WINDOW SCHEDULE

WINDOW TYPE	HEIGHT x WIDTH	QUANTITY(S)
W 01	1500mm x 1500mm	10
TOTAL		10
DOOR SCHEDULE		
D 1	2500mm x 900mm	2
TOTAL		2



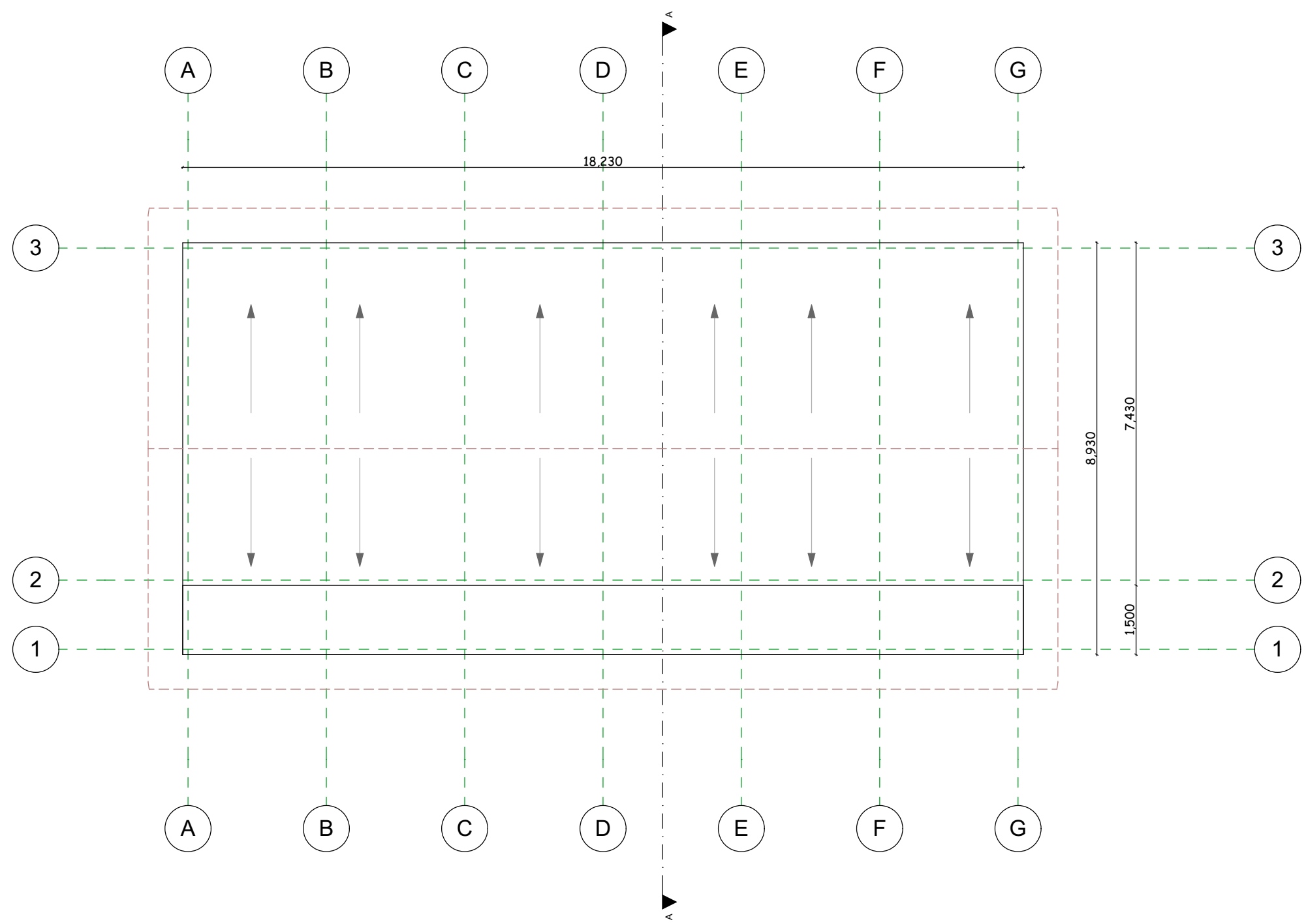
TOTAL FLOOR AREA = 163 SQM

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PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS
FOR
SECONDARY EDUCATION QUALITY IMPROVEMENT PROGRAM

DRAWING TITLE: 2- CLASSROOMS BLOCK GABLED
FLOOR PLAN
DRAWING NO: ARC/2CRG/01

Date	June, 2023
Drawn by	IAS
Checked by	JR
Scale	To fit



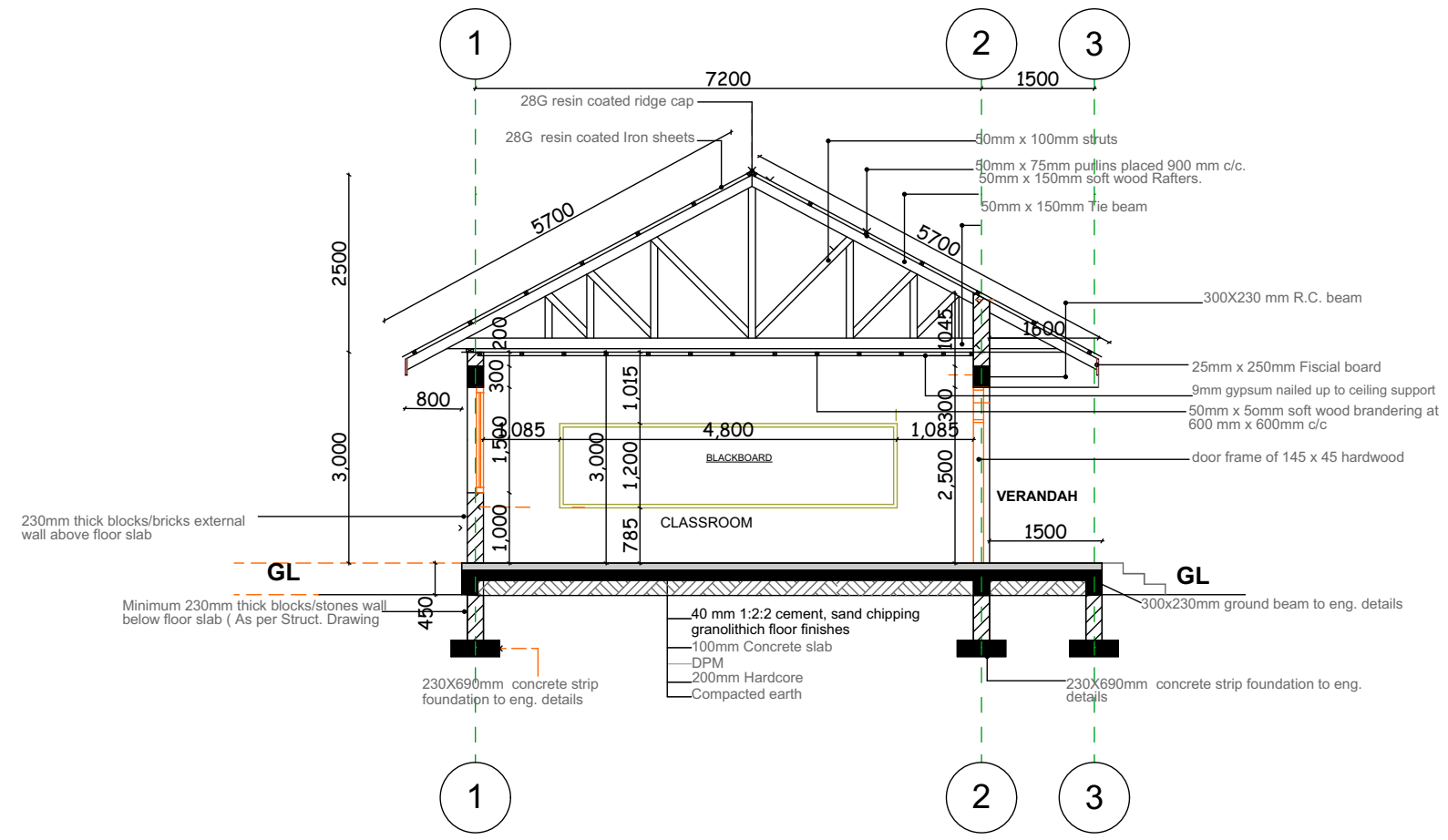
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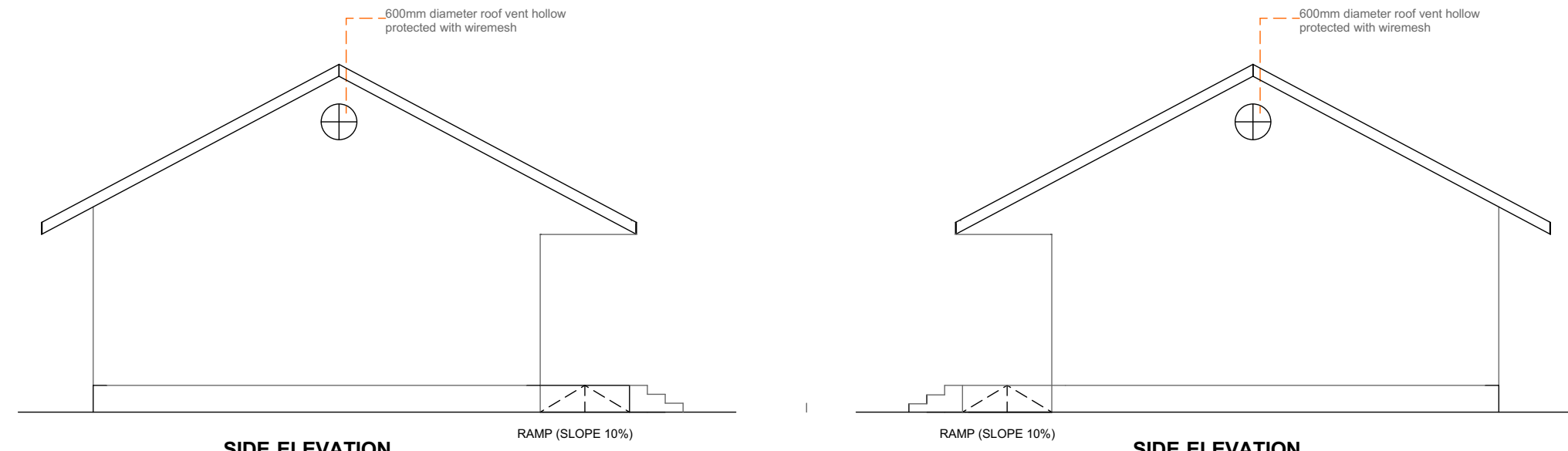
DRAWING TITLE: 2- CLASSROOMS BLOCK GABLED

ROOF PLAN GABLE
DRAWING NO: ARC/2CRG/02

Date	June, 2023
Drawn by	IAS
Checked by	JR
Scale	To fit



TYPICAL SECTION

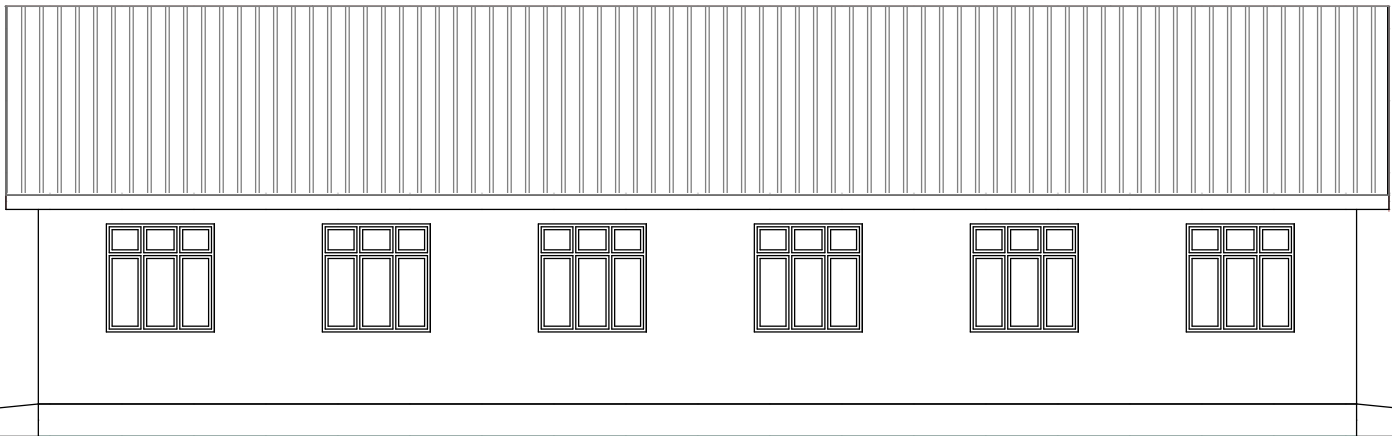


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LOCAL GOVERNMENT

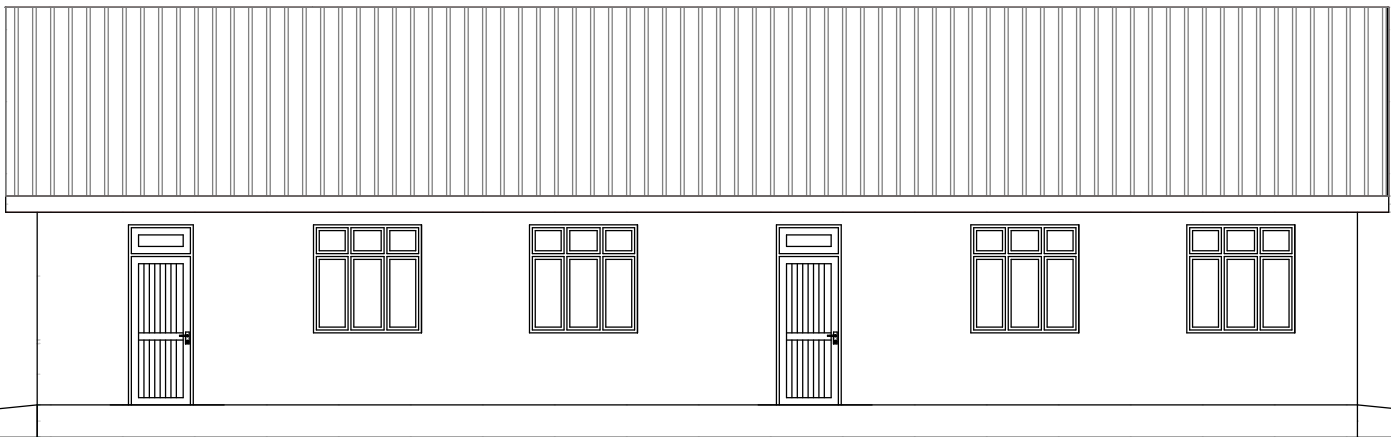
PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS
FOR
SECONDARY EDUCATION QUALITY IMPROVEMENT PROGRAM

DRAWING TITLE: 2-CLASSROOMS BLOCK GABLED
TYPICAL SECTION
- SIDE ELEVATIONS
DRAWING NO: ARC/2CRG/03

Date	June, 2023
Drawn by	IAS
Checked by	JR
Scale	To fit



REAR ELEVATION



FRONT ELEVATION

REVISED 1

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LOCAL GOVERNMENT**

**PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS
FOR
SECONDARY EDUCATION QUALITY IMPROVEMENT PROGRAM**

PROPOSED 2- CLASSROOMS BLOCK GABLED

DRAWING TITLE:
ELEVATIONS GABLE
DRAWING NO: ARC/2CRG/04

Date	June, 2023
Drawn by	IAS
Checked by	JR
Scale	To fit

THE UNITED REPUBLIC OF TANZANIA



PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

PROPOSED STANDARD DRAWINGS FOR SEQUIP

Schedule of Materials & Labour for Administration Block (Girl's
National Schools)

PROJECT AREA

TANZANIA MAINLAND

Ministry of Education, Science and
Technology,
Government City - Mtumba,
AFYA Street,
P.O Box 10,
40479 DODOMA.

President's Office,
Regional Administration,
& Local Government
Government City - Mtumba
TAMISEMI Street,
P. O. Box 1923,
41185 DODOMA.

MoEST/PO - RALG

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
5	<u>30m³ Oversight Concrete 100mm thick - 15 grade) + Ground Beam and column 34m³ - 20 grade</u>				
	DPM	303	M ²		
	Cement -50kgs (42.5)	324	Bags		
	Aggregates (1/2")	60	M ³		
	Sand	29	M ³		
	Reinforcement - 16mm diameter high tensile 460N/mm2	187	PC'S		
	Reinforcement - 8mm diameter high tensile 460N/mm2	100	PC'S		
	Timber 1" X 10" (5.2m long)	12	PC'S		
	Timber 2" X 2" (5.2m long)	10	PC'S		
	Nails-4"	20	Kg		
	Nails-3"	30	Kg		
	Supporting props (3m)	40	PC'S		
	SUB-TOTAL SUBSTRUCTURE				
B.	<u>SUPERSTRUCTURE</u>				
1	<u>Walls (451m²), Ring beam(35m³), Columns(12m³) & slab (14m³)</u>				
	6" Cement & Sand block - Minimum Strength 3.5 MPa	4,060	No		
	DPC (20m long)	10	Roll		
	Sand	46	M ³		
	Cement-50kgs (42.5)	434	Bags		
	Aggregates (1/2")	54	M ³		
	Reinforcement - 16mm diameter high tensile	205	PC'S		
	Reinforcement - 12mm diameter high tensile	130	PC'S		
	Reinforcement - 10mm diameter high tensile	3	PC'S		
	Reinforcement - 8mm diameter	250	PC'S		
	Binding Wire - 25kg	5	Roll		
	Timber 1" X 10" to Sides (5.2m long)	82	PC'S		
	Timber 1" X 5" (Plates)(5.2m long)	20	PC'S		
	Timber 2" X 2" (3.5m)	20	PC'S		
	Supporting Props (3m)	80	PC'S		
	SUB-TOTAL SUPER STRUCTURE				
	ALTERNATIVE TO BLOCKWORK WALL				
	<i>** If brickwork is applicable, then blockwork is not applicable. Therefore Engineer must confirm to the Tenderer which item to be priced (Blockwork or brickwork) depending on availability and suitability of building materials. Note that: Strictly do not use stretcher bond when using bricks, the acceptable bond is either Flemish or English or header.</i>				
	<u>Brickwork</u>				
	230mm thick One brick wall	451	m ²		

[illegible]

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
D.	<u>CEILING</u>				
	Gypsum board -9mm thick	99	PC'S		
	Plain Cornice (2.5m)	80	PC'S		
	Screw 1.25" 500pcs/box	5	Box		
	Gypsum powder 25kg	24	Bags		
	Fibre tape (90m)	4	Roller		
	Treated softwood Timber 2" X 2"	5,682	ft		
	Nails 4"/3' (50Kg per Bag)	1	Bags		
	SUB-TOTAL FOR CEILING				
E.	<u>DOOR</u>				
1	<u>40mm thick hardwood paneled door shutter</u>				
	900 x2200mm high door	18	pc's		
	800 x2200mm high	1	pc's		
	800 x2200mm high	4	pc's		
2	<u>45 x 145mm Frames (hardwood),Varnish & Glass</u>				
	900 x2750mm high door including transome	18	pc's		
	800 x 2750mm high	1	pc's		
	800 x2100mm high	4	pc's		
	Brush 3"and 2.5"	4	pc's		
	Sand paper (msasa) No.80	8	LM		
	Clear Varnish - 4Litres	4	TIN		
	Thinner for Varnish	6	Litres		
3	<u>IronMongeries</u>				
	Mortice lock Three lever	19	No		
	Mortice lock Two lever	4	No		
	Heavy Dutty Door closer	19	No		
	5mm thick clear glass for vent to doors	10	m ²		
	25 x 30mm thick timber beads	56	m		
	Brass hinges - 100mm	34.50	Pairs		
	SUB-TOTAL FOR DOORS				

F.	<u>WINDOWS</u>				
1	<u>Aluminium sliding Window comprising 100mm x 1.2mm thick standard aluminium profile ex-china/Turkey infill with 5mm thick glass complete with mosquito proofing panel, including all accessories, ironmongries, cutting and pinning lugs</u>				
	Overallsie 2750 x 1750mm high	11	No		
	Overallsie 1500 x 1750mm high	9	No		
	Overall size 1500x 650 mm high	4	No.		

[illegible]

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
J.	<u>ELECTRICAL & AIRCONDITIONING INSTALLATION</u>				
	Single fluorescent fitting Complete,	37	No		
	Double switch socket	22	No		
	Main switch 4way,3PH with integral RCD 100A/300mA	1	No		
	NB: Wiring cables shall be copper have a minimum cross section area of 1.5sqmm and shall comply with an appropriate British or Harmonized standard for either thermoplastic or thermosetting insulated electric cables.				
	Single core wire 1.5sqmm - Red	4	Roll		
	Single core wire 1.5sqmm - Black	4	Roll		
	Single core wire 1.5sqmm -green	4	Roll		
	Single core wire 2.5sqmm - red	2	Roll		
	Single core wire 2.5sqmm -Black	2	Roll		
	Single core wire 2.5sqmm green	2	Roll		
	Single core wire 4sqmm -Red	20	M		
	Single core wire 4sqmm -Black	20	M		
	Single core wire 4sqmm -Green	20	M		
	Ceiling fan National or other equal	12	PC's		
	3gang 1 way switch	1	No		
	1gang 1 way switch	5	No		
	2gang 1 way switch	11	No		
	1gang 2 way switch	1	No		
	4gang 1 way switch	1	No		
	DP switch 20A	3	No		
	Cooker control unit 45A	1	No		
	Ceiling light complete with energy saver 18W	6	No		
	Earth rod approved copper 16mm not less than 1200mm	2	No		
	Earth wire 4sqmm	20	M		
	Metal box twin	25	No		
	Metal box single	29	No		
	Junction box	50	No		
	Conduit pipe	250	PC's		
	Elbow	40	PC's		
	Conduit coupling	70	PC's		
	Round cover	60	PC's		
	Round box	10	PC's		
	Fine screw	2	Packet		
	12U rack cabinate,complete with accessories	1	PC		
	Patch panel cat 6 24 port	1	PC		
	Switch port 24	1	No		
	Dual Face plate RJ45 CAT 6	13	No		
	plastic clips 22mm	4	BOX		
	Cat 6 UTP Cable (300m)	1	Roll		
	TV switch	2	PCS		
	Handdrier	3	No		
2	<u>Air Conditioning</u>				
	18000BTU,LG A.C or other equal with all necessary accessories	1	No		
	TOTAL FOR ELECTRICAL & A.C INSTALLATION				

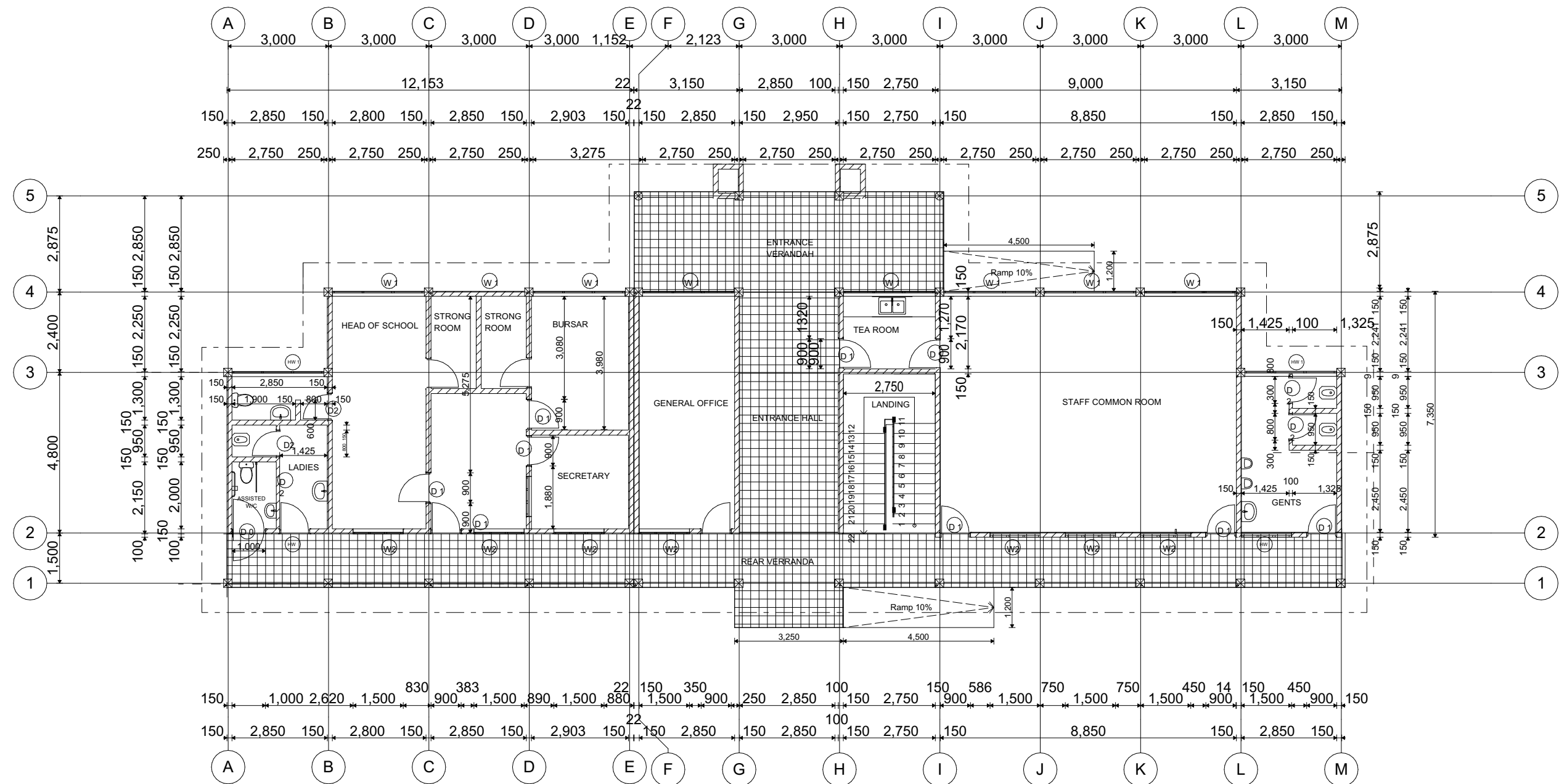
MoEST/PO - RALG

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
	<u>Sewage</u>				
	PIPING (uPVC PIPE)				
	100mm Dia	18	PCS		
	50mm Dia	4	PCS		
	40mm Dia	8	PCS		
	32mm Dia	8	PCS		
	Elbows	48	PCS		
	Bend	31	PCS		
	Bracket	36	PCS		
	Filter	13	PCS		
	<u>Fittings</u>				
	100mm Dia Y-Tee	6	PCS		
	50mm Dia Y-Tee	7	PCS		
	100mm Dia Inspection Tee	5	PCS		
	50mm Dia Inspection Tee	5	PCS		
	<u>Socket</u>				
	110mm Dia	12	PCS		
	50mm Dia	8	PCS		
	40mm Dia	8	PCS		
	32mm Dia	6	PCS		
	<u>90° Elbow</u>				
	110mm	5	PCS		
	50mm	4	PCS		
	40mm	5	PCS		
	32mm	3	PCS		
	<u>45° Elbow</u>				
	110mm	7	PCS		
	50mm	4	PCS		
	40mm	5	PCS		
	32mm	6	PCS		
	<u>Reducing Bush</u>				
	50mm/40mm	9	PCS		
	40mm/32mm	6	PCS		
	<u>Reducing Socket</u>				
	50mm/40mm	8	PCS		
	40mm/32mm	9	PCS		
	<u>Rain Water</u>				
	Piping (uPVC PIPE)				
	100mm Dia	20	PCS		

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
	100mm Dia Floor gully including all fittings.	10	PCS		
	Elbow	30	PCS		
	Bend	24	PCS		
	Bracket	16	PCS		
	Filter	4	PCS		
	<u>Sanitary Fittings</u>				
	White Vitreous China Floor Standing Back to Wall Rimless Water Closet	2	pcs		
	White Vitreous China SQUATTING PAN with TRAP as any approved equivalent with Dimenions 510mm x 410mm , complete with 9Litres Wall mounted Push Type flush tank	8	pcs		
	Bib Cock with Jet Spray or its equivalent approved	10	pcs		
	1000mm x 600mm Vanity Mirror	5	pcs		
	White Vitreous ChinaWall Hung Wash Hand Basin with Half Pedestal and quarter turn faucet as manufactured by any manufacturer approved with gurantee	5	pcs		
	100mm x 100mm PVC Floor Drain with Cover	6	pcs		
	Soap dispenser with Holder CERA or its equivalent approved	5	pcs		
	Wall Hung Urinal Bowl with push button flashing Valve or its approved equivalent	4	pcs		
	Timber / Ceramic Urinal separator	5	pcs		
	Stainless Steel FRANKE Nouveau Single Kitchen Sink Single bowl / Single drainer Kitchen Sink with dimensions 460mm x 800mm complete with basket strainer and all other accessories	1	pcs		
	Max Sink Sink Mixer Swivel Spout Chrome	1	pcs		
	Toilet Paper Holder	10	pcs		
	<u>Portable fire Extinguishers</u>				
	CO2, 9ltrs bottle as manufactured by NAFFCO or equal approved.	3	pcs		
	CO2, 9kg bottle as manufactured by NAFFCO or equal approved.	3	pcs		
	TOTAL FOR PLUMBING INSTALLATION				

[illegible]

***TWO STOREY ADMINISTRATION BLOCK
ARCHITECTURAL DRAWING***

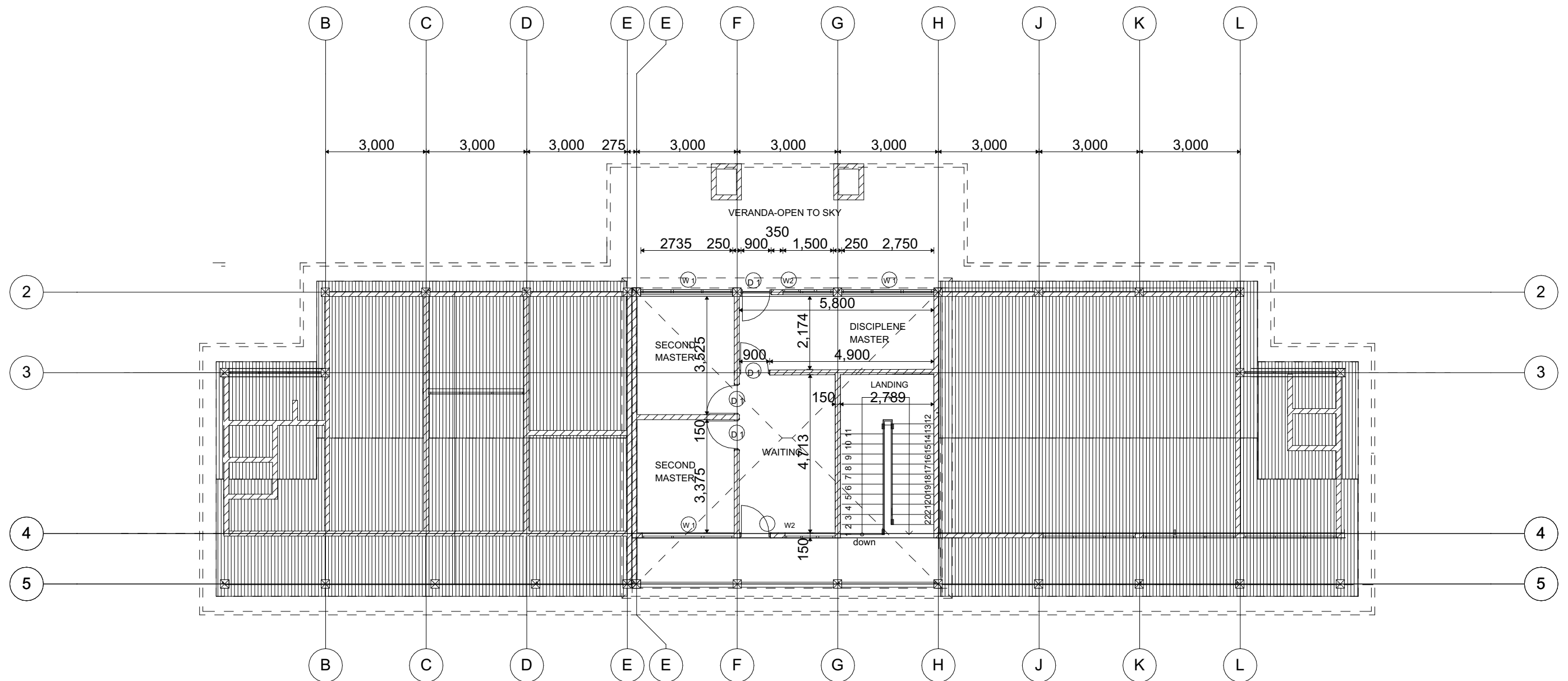


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FOR
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DRAWING TITLE
ADMINISTRATION BLOCK
GROUND FLOOR PLAN - REVISED 2023
DRAWING NO.
SQP/ARC/ADM/01

DRAWN BY I.S
CHECKED BY C.L, H.N, & N.L
SCALE 1:200
June, 2023



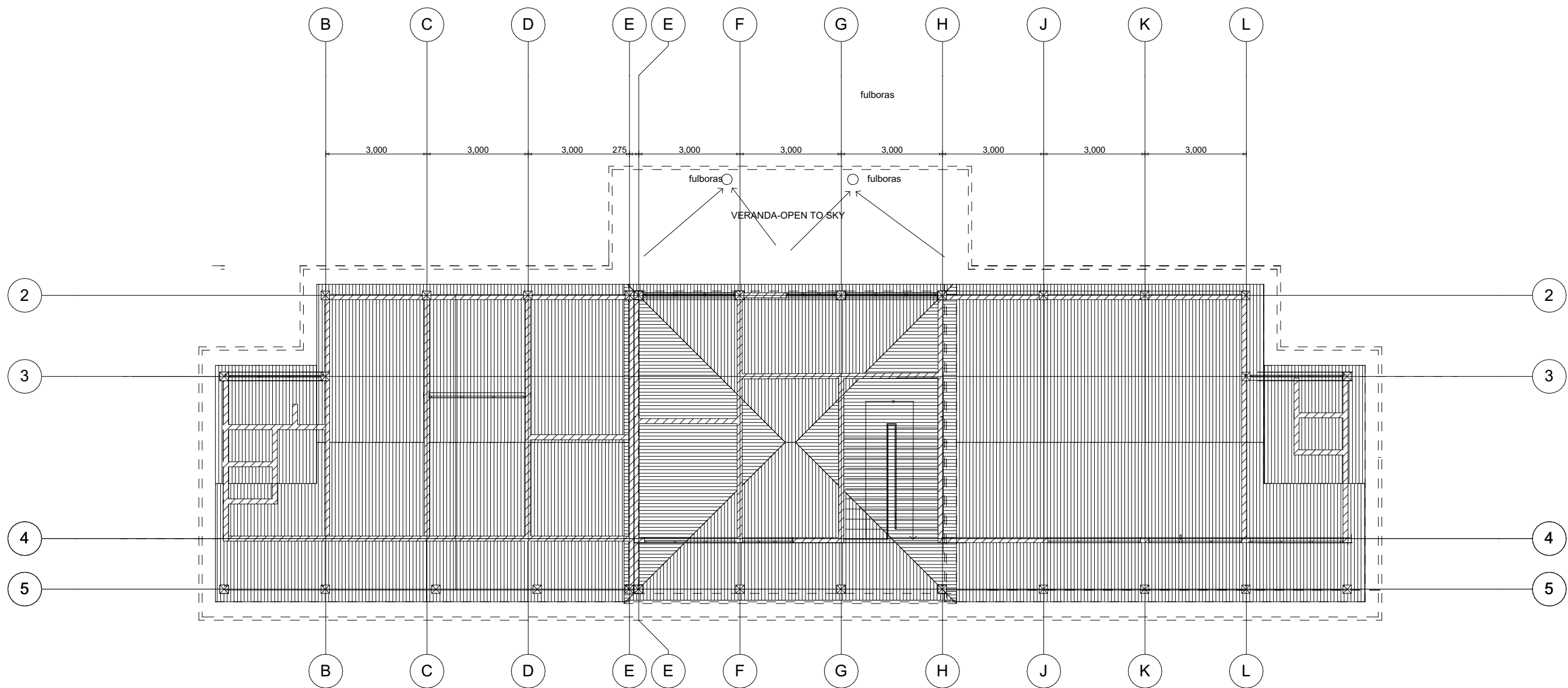
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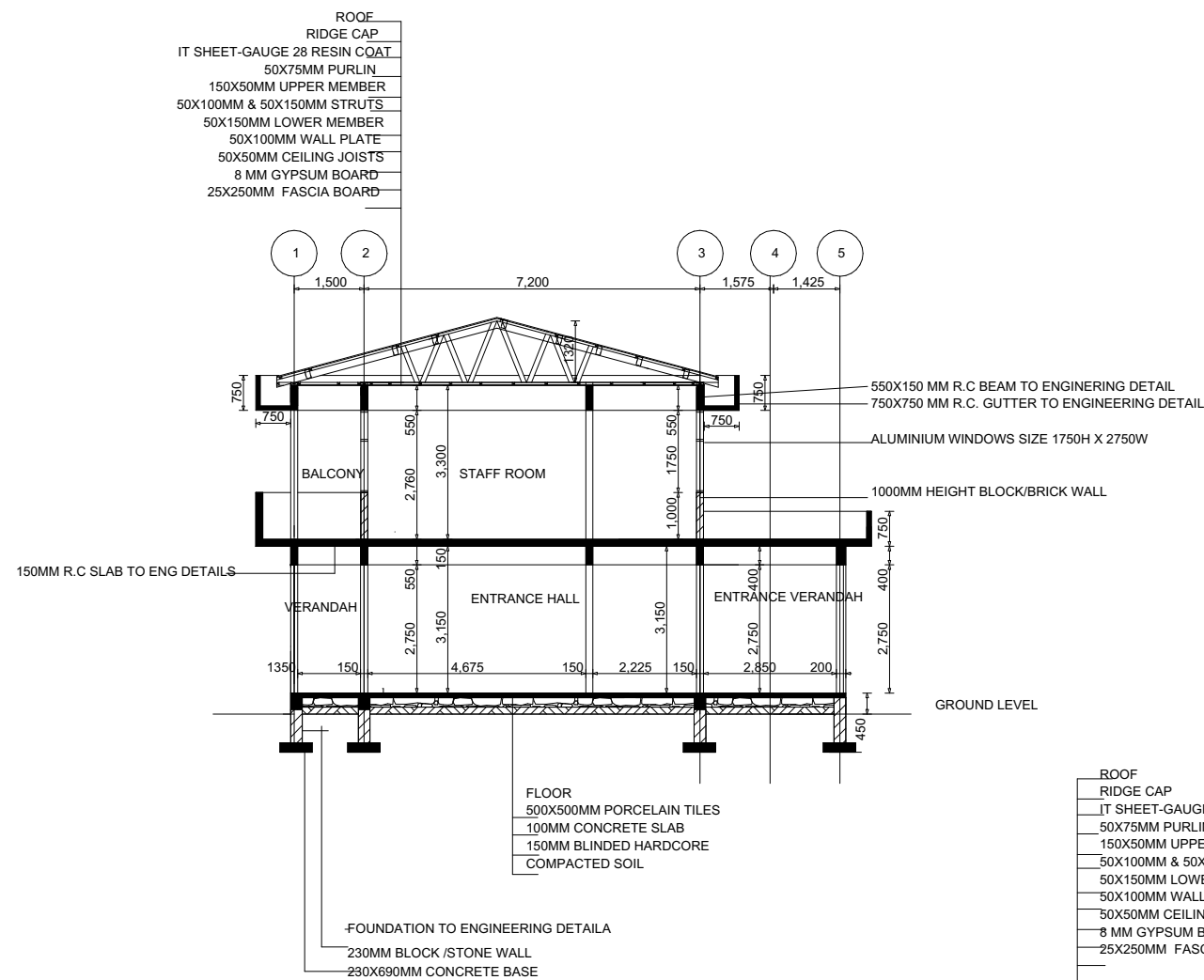
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PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS
FOR
SECONDARY EDUCATION QUALITY IMPROVEMENT PROGRAM

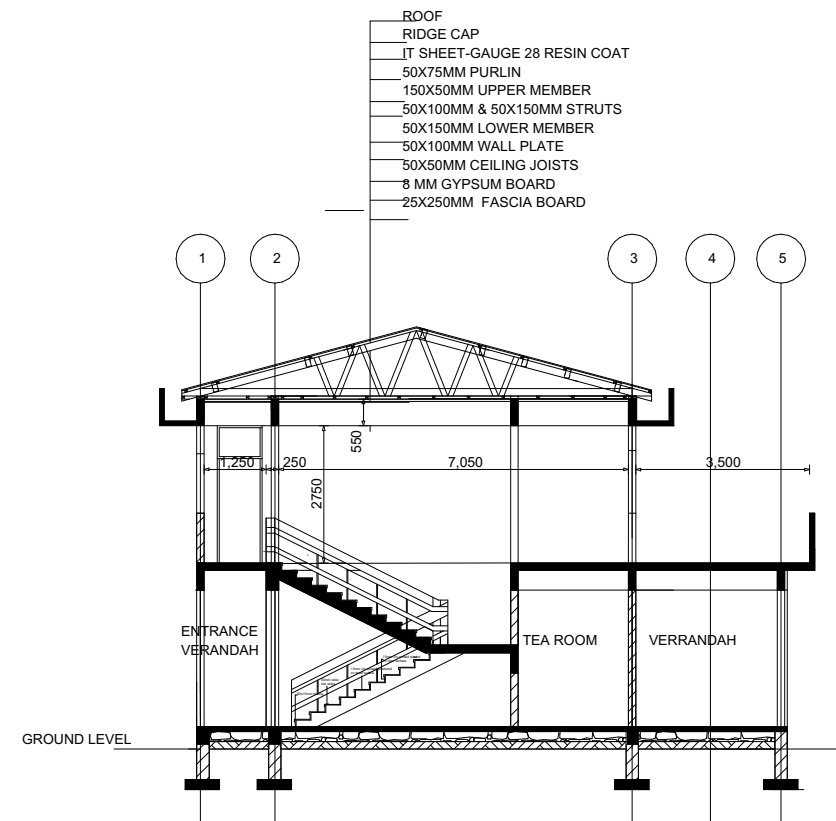
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ADMINISTRATION BLOCK
FIRST FLOOR PLAN - REVISED 2023
DRAWING NO.
SQP/ARC/ADM/02

DRAWN BY I.S
CHECKED BY C.I, H.N, & N.L
SCALE 1:200
June, 2023

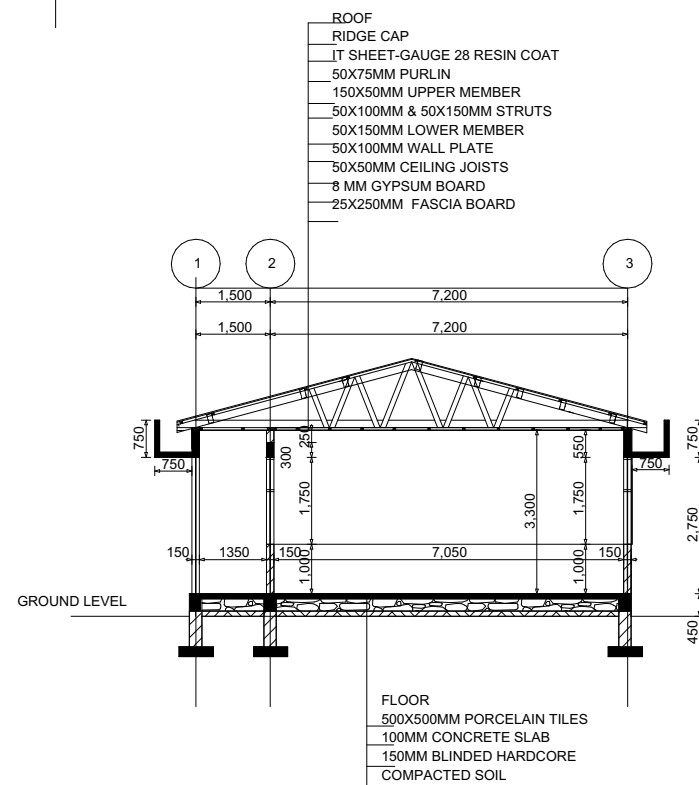




SECTIONS THROUGH ENTRANCE HALL



SECTIONS THROUGH STAIRCASE



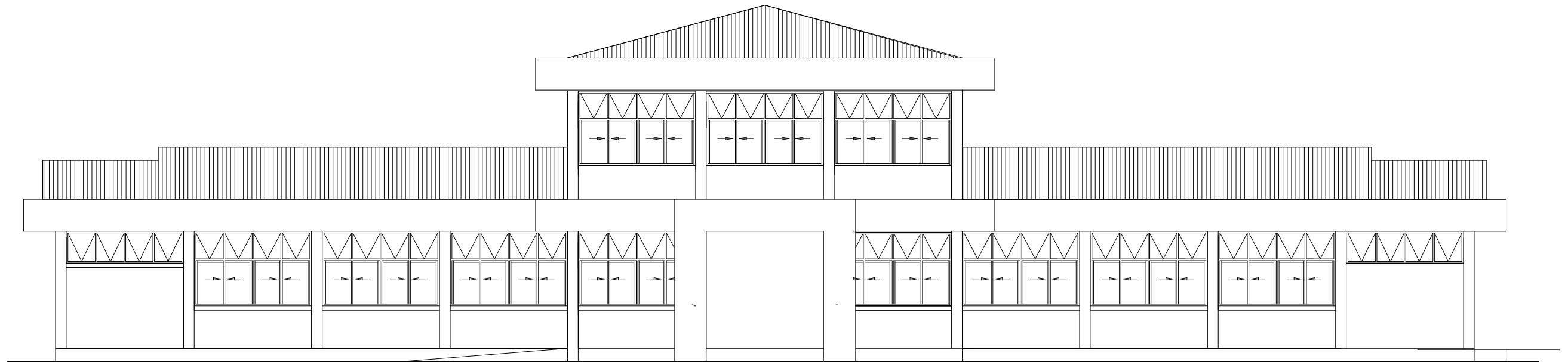
SECTIONS THROUGH SINGLE STOREY PART

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PRESIDENT'S OFFICE REGIONAL ADMINISTRATION AND
LOCAL GOVERNMENT

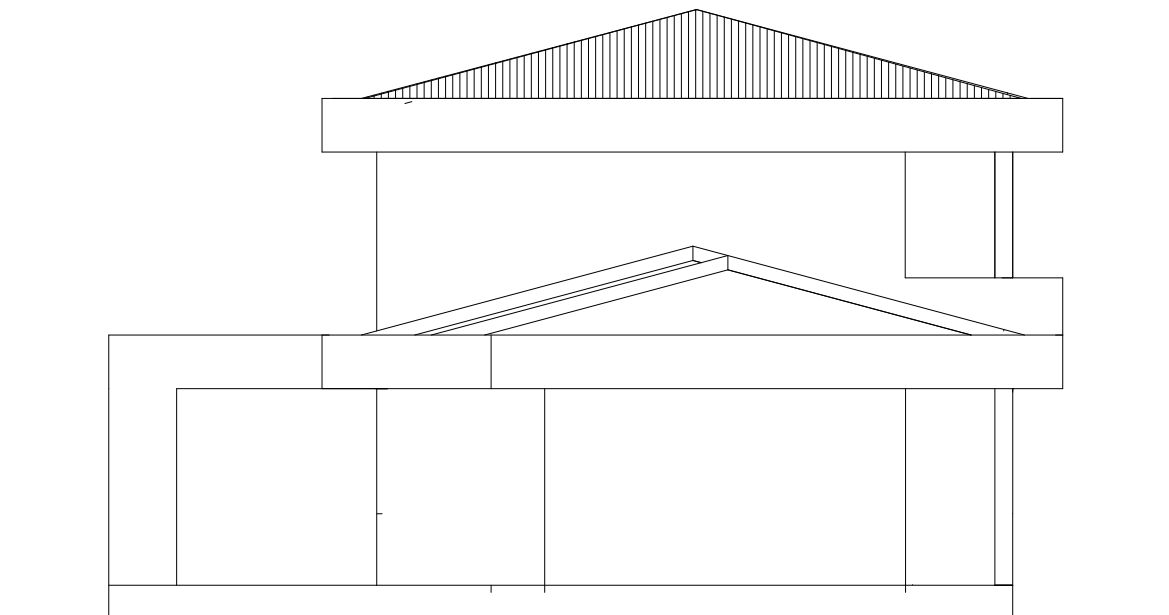
PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS
FOR
SECONDARY EDUCATION QUALITY IMPROVEMENT PROGRAM

DRAWING TITLE
ADMINISTRATION BLOCK
SECTIONS - REVISED 2023
DRAWING NO.
SQP/ARC/ADM/04

DRAWN BY I.S
CHECKED BY C.L, H.N, & N.L
SCALE 1:200
June, 2023



FRONT ELEVATION



TYPICAL SIDE ELEVATION

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY
IN COLLABORATION WITH
**PRESIDENT'S OFFICE REGIONAL ADMINISTRATION AND
 LOCAL GOVERNMENT**

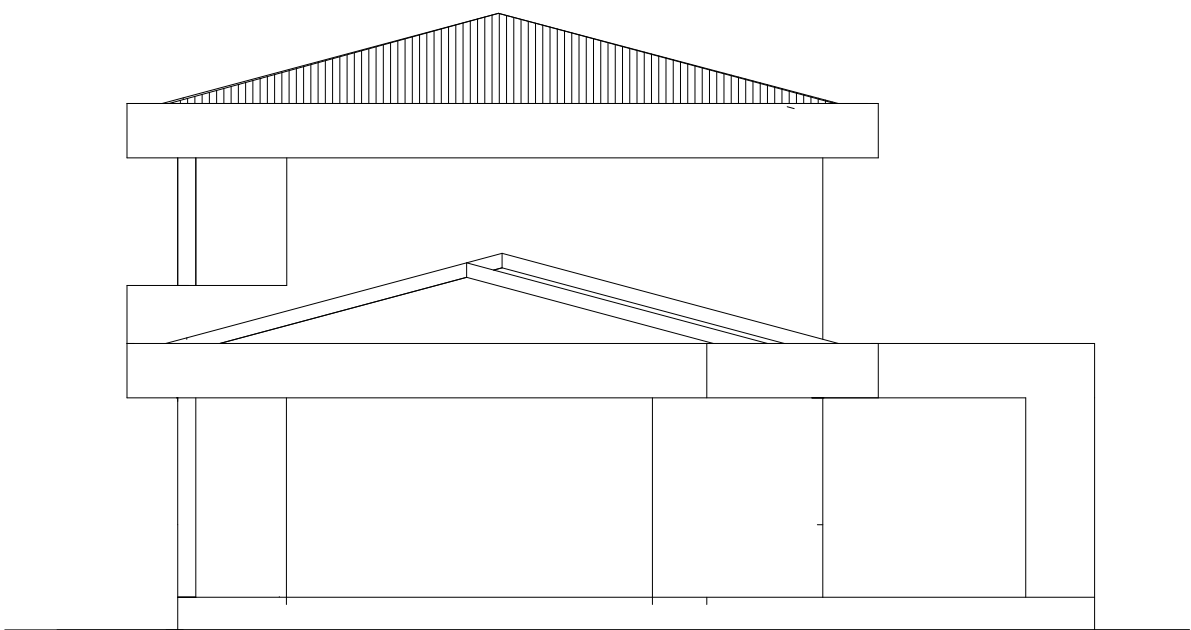
**PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS
 FOR
 SECONDARY EDUCATION QUALITY IMPROVEMENT PROGRAM (SEQUIP)**

DRAWING TITLE **ADMINISTRATION BLOCK
 FRONT AND SIDE ELEVATION-REVIED 2023**
 DRAWING NO. **SQP/ARC/ADM/05**

DRAWN BY I.S
 CHECKED BY C.I, H.N, & N.L
 SCALE 1;200
 June,2023



REAR ELEVATION



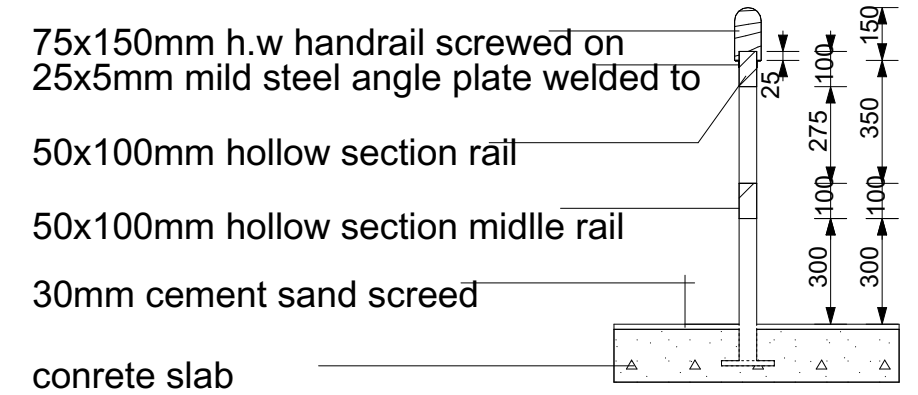
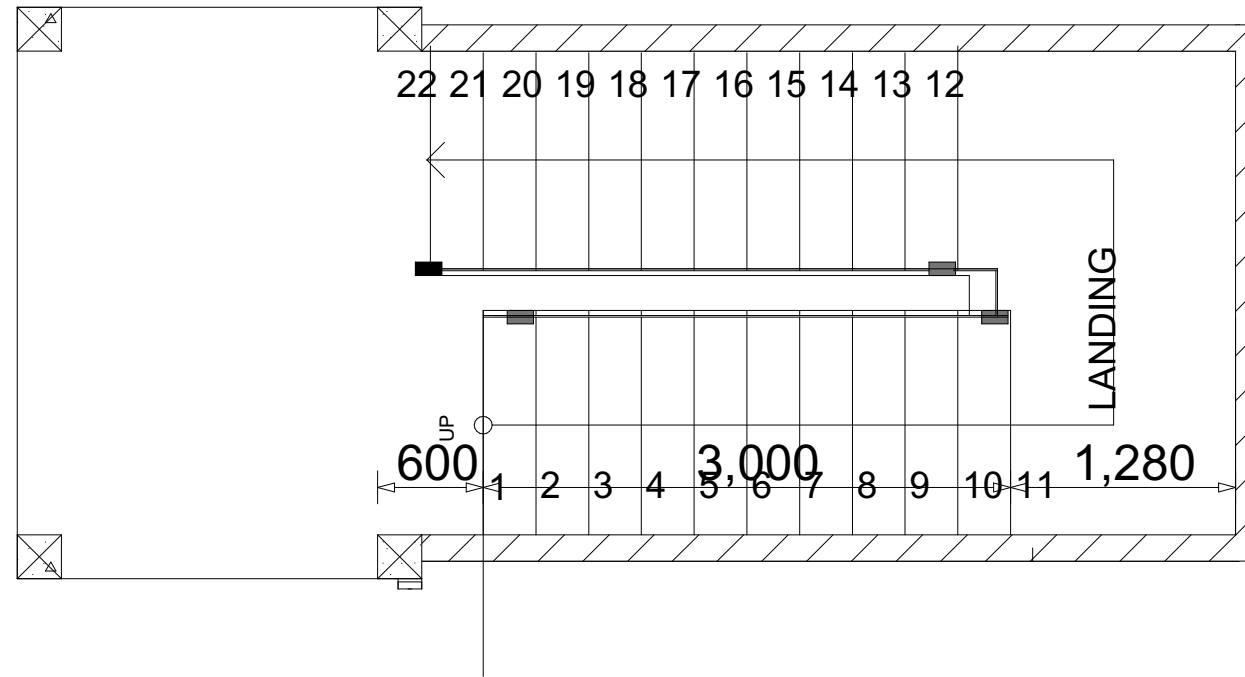
TYPICAL SIDE ELEVATION

MINISTRY OF EDUCATION,SCIENCE AND TECHNOLOGY
IN COLABORATION WITH
**PRESIDENT'S OFFICE REGIONAL ADMINISTRATION AND
LOCAL GOVERNMENT**

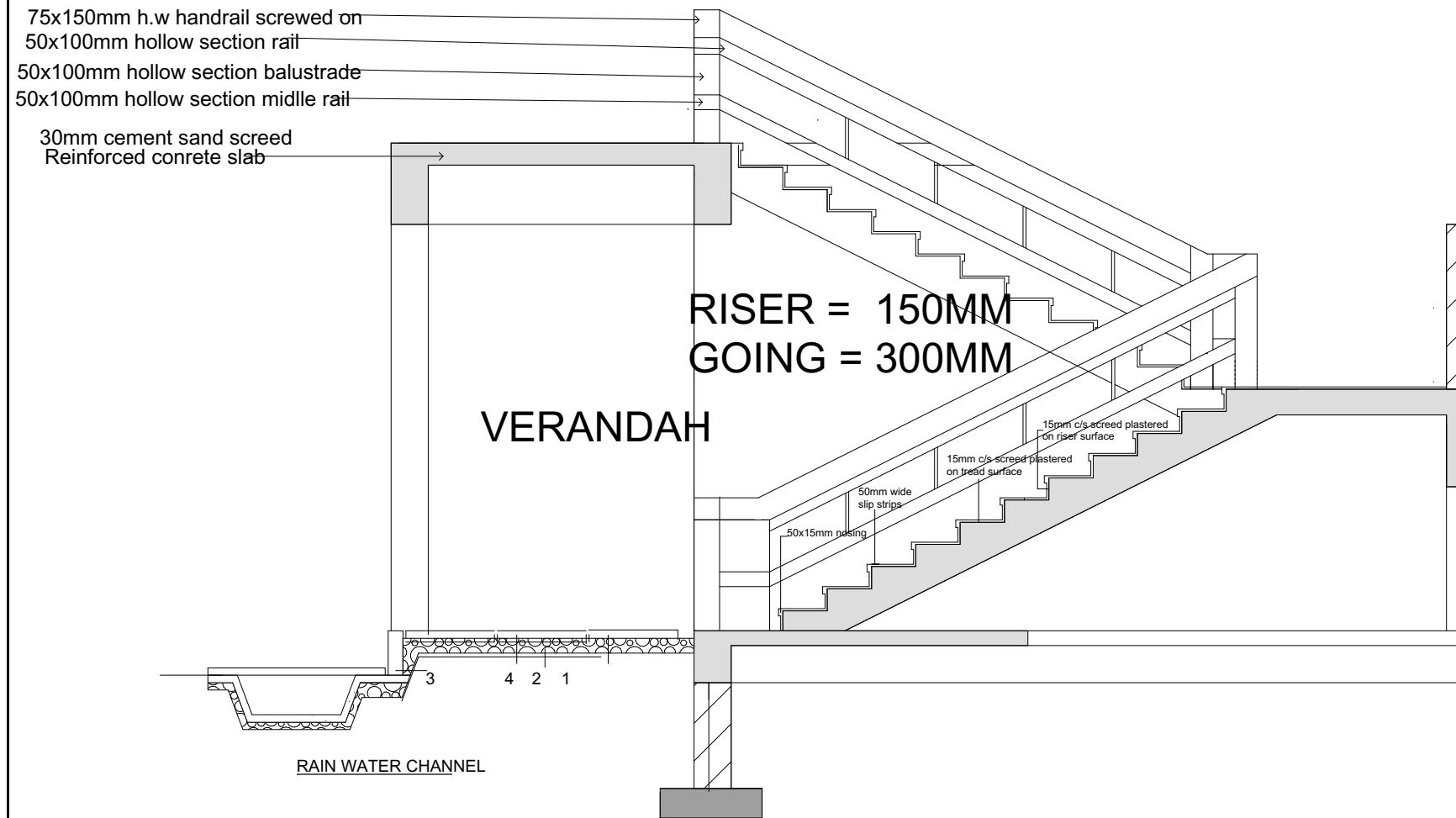
**PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS
FOR
SECONDARY EDUCATION QUALITY IMPROVEMENT PROGRAM (SEQUIP)**

DRAWING TITLE **ADMINISTRATION BLOCK
REAR AND SIDE ELEVATION _REVISED 2023**
DRAWING NO. **SQP/ARC/ADM/06**

DRAWN BY I.S
CHECKED BY C.I, H.N, & N.L
SCALE 1;200
June,2023



SECTION B-B



SCHEDULE OF MATERIALS

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
	<u>MATERIALS</u>				
A	<u>SUB-STRUCTURE -PROVISIONAL</u>				
1	<u>Strip Foundation - Grade 15 Plain (28m³)</u>				
	Aggregate (3/4")	28	M ³		
	Sand	13	M ³		
	Cement-50kgs (42.5)	112	Bags		
2	<u>Foundation Walls (81m²)</u>				
	6" Cement & Sand block - Minimum Strength 3.5 MPa	2,130	No		
	Sand	7	M ³		
	Cement -50kgs (42.5)	36	Bags		
	<u>ALTERNATIVE TO FOUNDATION WALL</u>				
	<u>** If stone is applicable, then blockwork is not applicable.</u>				
	<u>Therefore Engineer must confirm to the Tenderer which</u>				
	<u>item to be priced (Blockwork or stone) depending</u>				
	<u>on availability and suitability of building materials.</u>				
	Stone, complete with its cement and sand mortar (1:4)	35	M ³		
3	<u>Moram, Hardcore & Site sterilization</u>				
	Moram (4.5m ³ lorry)	14	Trips		
	Hardcore (4.5m ³ lorry) - 200mm thick	14	Trips		
	Sand	16	M ³		
	Aldrin solution or other and equal approved (1000mls)	3	Bottle		
4	<u>Oversite Concrete 100mm thick - 15 grade ,Ground Beam and base- 20 grade</u>				
	DPM	333	M ²		
	Cement -50kgs (42.5)	216	Bags		
	Aggregates (1/2")	40	M ³		
	Sand	20	M ³		
	Reinforcement - 12mm diameter high tensile 460N/mm2	58	PC'S		
	Reinforcement - 8mm diameter high tensile 460N/mm2	56	PC'S		
	A252 Mesh 200 x 200x 6.16kg/m2	4	PC'S		
	Timber 1" X 10" (5.2m long)	46	PC'S		
	Timber 2" X 2"	20	PC'S		
	Nails-4"	40	Kgs		
	Nails-3"	45	Kgs		
	Supporting props (3m)	30	PC'S		
	<u>SUB-TOTAL SUBSTRUCTURE</u>				

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
B.	<u>SUPERSTRUCTURE</u>				
1	<u>Walls Ring beam & Columns</u>				
	6"Cement & Sand block-Minimum Strength 3. 5 MPa	3,500	No		
	DPC (30m long, 1m wide)	2	Roll		
	Sand	18	M ³		
	Cement-50kgs (42.5)	138	Bags		
	Aggregates (1/2")	8	M ³		
	Reinforcement - 12mm diameter high tensile	62	PC'S		
	Reinforcement - 8mm diameter high tensile	61	PC'S		
	Binding Wire - 25kg	1	Roll		
	<i>Re use substructure formwork</i>				
	Timber 1" X 10" to Sides (5.2m long)	10	Pc's		
	Timber 1" X 5" (Plates) (5.2m long)	11	Pc's		
	Timber 2" X 2" (3.5m)	20	Pc's		
	Supporting props (3m)	20	Pc's		
	SUB-TOTAL SUPER STRUCTURE				
	<i>ALTERNATIVE TO BLOCKWORK WALL</i>				
	<i>** If brickwork is applicable, then blockwork is not applicable. Therefore Engineer must confirm to the Tenderer which item to be priced (Blockwork or brickwork) depending on availability and suitability of building materials. Note that: Strictly do not use stretcher bond when using bricks, the acceptable bond is either Flemish or English or header.</i>				
	<u>Brickwork</u>				
	230mm thick One brick wall	190	m ²		
	150mm thick One brick wall	90	m ²		
C.	<u>ROOF STRUCTURE & COVERING</u>				
1	<u>Roof Structure - Provisional - 5.2 m</u>				
	Timber 2 " X 3" Purlins	70	Pc's		
	Timber 2" X 4" Struts and wall plates	98	Pc's		
	Timber 2" X 6" Rafter, King post and Tie beam	95	Pc's		
	Fascia board 1" X 10" -ref. Semi Hardwood (5.2m long)	17	Pc's		
	Nails -5"	50	Kgs		
	Nails -4"	30	Kgs		
	Nails -3"	30	Kgs		
	16mm diameter mild steel bolt including nuts 500mm long	46	No		
	<u>NOTE:</u> The above softwood timber structure should be pressure impregnated treated				

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
2	<u>Roof Covering</u>				
	28 G Resincoated Iron sheet	410	M ²		
	Ridge - 28 G - 3m long	12	PC'S		
	Roofing Nails	41	Packet		
3	<u>Gutter's</u>				
	Upvc 100mm half round (6m long)-5"	12	PC'S		
	Upvc 100mm diameter down pipe; Class B	4	PC'S		
	PVC outlet	8	PC'S		
	PVC bend 90'	8	PC'S		
	PVC bend 45'	8	PC'S		
	Gutter Clamp 3"	32	PC'S		
	Connector/reducer	8	PC'S		
	Connector outer	8	PC'S		
	Corner Inner	8	PC'S		
	SUB-TOTAL ROOF STRUCTURE & COVERING				
D.	<u>CEILING</u>				
	Gypsum board -9mm thick (288m ²)	100	PC'S		
	Plain Cornice	65	PC'S		
	Screw 1.25" 500pcs/box	4	Box		
	Gypsum powder -	13	Bags		
	Fiber tape (90m)	3	Roller		
	Treated softwood Timber 2" X 2" - 5.2M Long	190	PC'S		
	Nails 4"	28	Kgs		
	Nails 3"	45	Kgs		
	SUB-TOTAL FOR CEILING				
E.	<u>DOOR</u>				
1	<u>40mm thick hardwood Matchboarded door shutter</u>				
	1500 x2100mm high double door	2	PC'S		
	900 x2100mm high	6	PC'S		
	750 x 1500mm high	2	PC'S		
2	<u>Frames (hardwood) & Varnish</u>				
	1500 x 2500mm high double door	2	PC'S		
	1000 x 2500mm high	6	PC'S		
	750 x 1500mm high	2	PC'S		
	Brush 3"	4	Pcs		
	Sand paper (msasa) No.80	4	LM		
	Clear Varnish - 4Litres	2	TIN		
	Thinner for Varnish	3	Litres		
3	<u>Ironmongeries - ref Union</u>				
	Mortice lock Three lever	8	No		
	Barrel bollt	2	No		
	Brass hinges - 100mm	15	Pairs		
	SUB-TOTAL FOR DOORS				

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
F.	<u>WINDOWS</u>				
1	<u>Aluminium sliding Window comprising 100mm x 1.2mm thick standard aluminium profile ex-china/Turkey infill with 5mm thick glass complete with mosquito proofing panel, including all accessories, ironmongeries, cutting and pinning lugs</u>				
	Overall size 1500x1500mm high	22	No		
2	<u>25 x 4mm thick flat bar grill painted red-oxide with 25 x 25mm square pipes frame and all necessary accessories</u>				
	Overall size 1500x1500mm high	22	No		
3	<u>25 X 25mm square pipe grill painted red-oxide with all necessary accessories</u>				
	1500 x 750mm high - door to gas chamber	2	PC'S		
	SUB-TOTAL FOR WINDOWS				
G.	<u>FINISHING</u>				
1	<u>Terrazo Floor finishing (1:1:1.5)</u>				
	Sand	5	M ³		
	Cement-50kgs (42.5R)	116	Bags		
	White Chipping	2	M3		
	Black Chipping	2	M3		
	Pink Chipping	2	M3		
	Red Chipping	2	M3		
	Terrazo colour (user's selection) - 25Kg	6	Bags		
	Concrete nails - 1"	4	Packet		
	Tina, Polish & Hardina for terrazo	2	Set		
	Strips	356	M		
2	<u>Wall Finishing 15mm thick (1:4)</u>				
	Sand	9	M ³		
	Cement-50kgs (42.5)	55	Bags		
	White cement - 40kg	8	Bags		
	Gypsum powder	15	Bags		
	Sand paper Msasa No.120	1	Roll		
3	<u>Service Trench</u>				
	Sand	2	M ³		
	Cement-50kgs (42.5)	20	Bags		
	Aggregates (1/2")	4	M ³		
	50 x 50 mm mesh	11	PC'S		
	SUB-TOTAL FOR FINISHING				

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
H.	<u>PAINTING & DECORATION</u>				
	Emulsion Paint - 20 LTRS	13	buckets		
	Weather guard Paint - 20 LTRS	4	buckets		
	Washable paint -20 LTRS	5	buckets		
	Primer paint -20 LTRS	2	buckets		
	Solvent - 5LTRS	2	TIN		
	Brush 3"	6	Pcs		
	Roller	6	Pcs		
	Gloss paint-4LTR	2	TIN		
	Bitumen paint - 4Litres	4	TIN		
	SUB-TOTAL FOR PAINTING & DECORATION				
J.	<u>ELECTRICAL INSTALLATION</u>				
	Single fluorescent fitting Complete	30	No		
	Double switch socket	20	No		
	Main switch 6way,1PH with integral RCD 100A/300mA	1	No		
	NB: Wiring cables shall be copper have a minimum cross section area of 1.5sqmm and shall comply with an appropriate British or Harmonized standard for either thermoplastic or thermosetting insulated electric cables.				
	Single core wire 1.5sqmm - Brown	3	Roll		
	Single core wire 1.5sqmm - Black	3	Roll		
	Single core wire 1.5sqmm -green	3	Roll		
	Single core wire 2.5sqmm - Brown	2	Roll		
	Single core wire 2.5sqmm	2	Roll		
	Single core wire 2.5sqmm green	2	Roll		
	Ceiling fan National or other equal	14	PC's		
	3gang 1way switch	4	No		
	1gang 1way switch	3	No		
	2gang 1 way switch	2	No		
	4gang 1 way switch	1	No		
	DP switch 20A	1	No		
	Earth rod approved copper 16mm not less than	2	No		
	Earth wire 4sqmm	15	M		
	Metal box twin	20	No		
	Metal box single	11	No		
	Junction box	30	No		
	Conduit pipe	100	Pc's		
	Elbow	30	Pc's		
	Conduit coupling	20	Pc's		
	Round cover	50	Pc's		
	Round box	10	Pc's		
	Fine screw	1	Packet		
	Smoke ditector	2	No		
	plastic clips 22mm	3	Box		
	SUB-TOTAL FOR ELECTRICAL INSTALLATION				

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
K.	<u>PLUMBING AND GAS INSTALLATIONS</u>				
	<u>Water Distribution System</u>				
	<u>PPR Pipes</u>				
	40mm Dia	4	Pcs		
	32mm Dia	6	Pcs		
	25mm Dia	9	Pcs		
	20mm Dia	14	Pcs		
	15mm Dia	19	Pcs		
	12mm Dia Flexible Pipe	29	Pcs		
	<u>Valves</u>				
	40mm Dia	4	Pcs		
	32mm Dia	9	Pcs		
	20mm Dia	17	Pcs		
	15mm Dia	9	Pcs		
	15mm Dia Angle Valves	29	Pcs		
	<u>Reducing Bush</u>				
	Ø40 / 32mm	4	Pcs		
	Ø40 / 25mm	4	Pcs		
	Ø40 / 20mm	3	Pcs		
	Ø40 / 15mm	3	Pcs		
	Ø32 / 25mm	11	Pcs		
	Ø32 / 20mm	9	Pcs		
	Ø32 / 15mm	10	Pcs		
	Ø25 / 20mm	16	Pcs		
	Ø25 / 15mm	8	Pcs		
	Ø20 / 15mm	10	Pcs		
	<u>90° Plain Elbow</u>				
	Ø40mm	3	Pcs		
	Ø32mm	3	Pcs		
	Ø25mm	5	Pcs		
	Ø20mm	21	Pcs		
	Ø15mm	31	Pcs		
	<u>90 Adaptor elbow (Female)</u>				
	Ø15mm	33	Pcs		
	<u>90 Adaptor elbow (Male)</u>				
	Ø15mm	10	Pcs		
	<u>T Plain</u>				
	Ø40mm	4	Pcs		
	Ø32mm	7	Pcs		
	Ø25mm	9	Pcs		
	Ø20mm	24	Pcs		

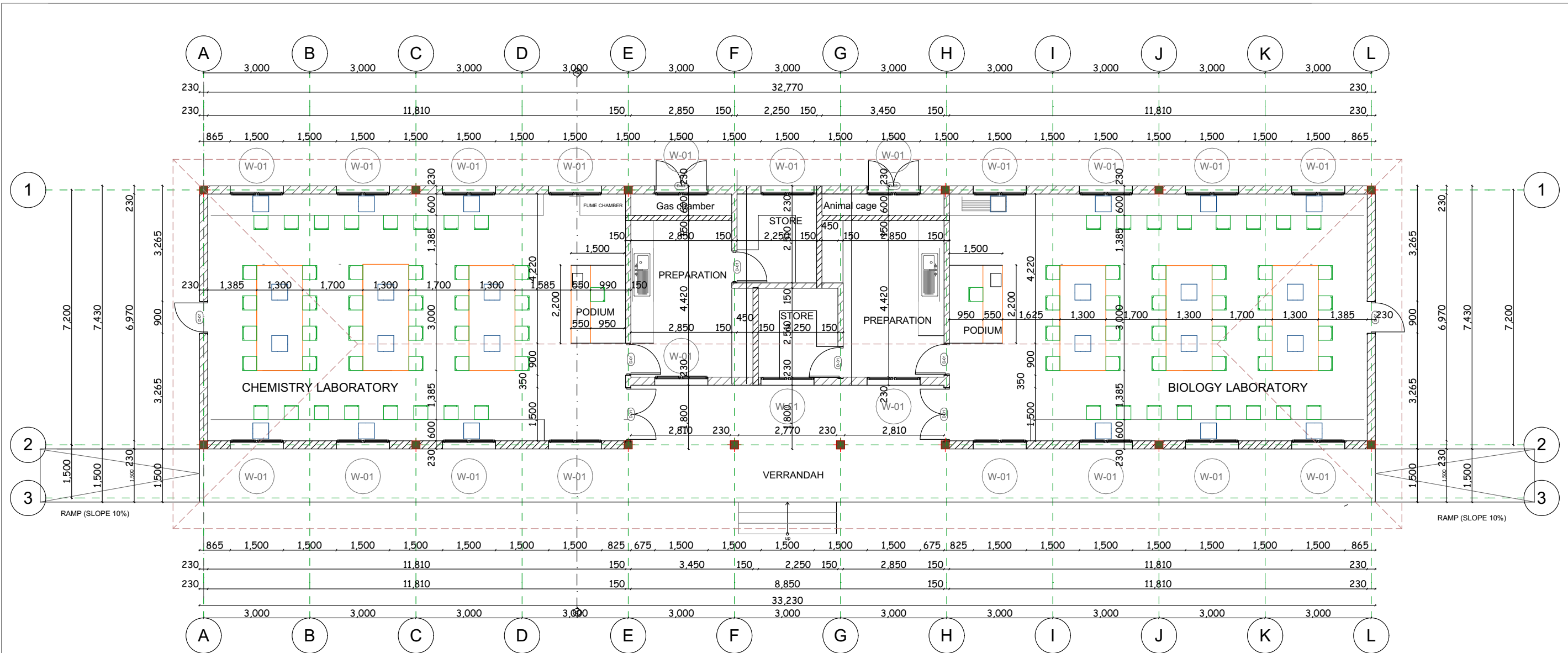
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ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
	<u>Sanitary Installation</u>				
	350x 350x 200mm durapipe S&LP vulcathene sink or equal and approved type 604/1 complete with 38mm BSP Waste outlet type 504 and ant-siphon bottle trap type W561 with plug and chain Assemblies type 508	32	Pcs		
	Mild Steel/Copper pipes				
	12mm Dia	25	Pcs		
	Valves				
	12mm Dia	20	Nos.		
	Pressure Gauges				
	12mm Dia	4	Nos.		
	Gas Cylinder				
	Gas cylinder complete with double stage LPG regulator. Manifold with complete flexible and cylinder adoptors, proper signages and standing, 15 kg Butane/ propane	2	Nos.		
	Gas Taps				
	LPG deck or other equal approved mounted double outlet faucet gas tap. Body should be solid brass coated with high gloss epoxy powder resistant to most chemicals.	30	Nos.		
	<u>Fittings</u>				
	Non-Return Valves	64	No		
	Strainer	58	No		
	Ball valve	61	No		
	Socket	48	No		
	Reducer	60	No		
	Elbow	57	No		
	Tee	57	No		
	Pipe work support	28	No		
	Breeding set	44	No		
	Oxyacetylene gas	4	No		
	Fumes wood				
	Fume wood complete with all accessories as per engineer specification	3	No		
	<u>Chemical Disposal</u>				
	Emergency eye wash sink (VL2201) with two streams with ABS bowl fixed at side worktop	2	PCS		
	Dilution recovery trap type W612 complete with fixing accessories	2	PCS		
	<u>Portable fire extinguisher</u>				
	CO2, 9ltrs bottle as manufactured by NAFFCO or equal approved.	2	Nos		
	CO2, 9kg bottle as manufactured by NAFFCO or equal approved.				
	Fire Blankets	2	Nos		
	SUB-TOTAL PLUMBING AND GAS INSTALLATION				

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	<u>GENERAL SUMMARY</u>				AMOUNT
					TZS
	<u>CHEMISTRY AND BIOLOGY BLOCK</u>				
A.	SUB-STRUCTURE -PROVISIONAL				
B.	SUPERSTRUCTURE				
C.	ROOF STRUCTURE & COVERING				
D.	CEILING				
E.	DOOR				
F.	WINDOWS				
G.	FINISHING				
H.	PAINTING & DECORATION				
J.	ELECTRICAL INSTALLATION				
K.	PLUMBING AND GAS INSTALLATION				
L.	GULLY TRAP AND NEUTRALIZATION CHAMBER				
	TOTAL BUILDING MATERIALS CARRIED TO GENERAL SUMMARY				
	<u>ADD:</u>				
	LABOUR COST CARRIED TO GENERAL SUMMARY : (Improve and Fill the respective Labour form)				
	Note:				
	i. Refer attached specification and number of Furniture(s) for Chemistry & Biology Laboratory				
	ii. Refer General Summary for: Preliminary, Transportation and Supervision Costs				
	iii. Preliminary cover the following item:				
	- Setting out working tools, Equipments, Temporary toilets, water for the works, Scaffolding,				
	- Power for the works, Security, store, Materials test and signboard.				
	iv. Supervision cost depend on guideline of the project				
	v. Installation of Ceiling Fan is an option, depend on whether condition of specific area .				

ARCHITECTURAL DRAWINGS



WINDOW SCHEDULE		
WINDOW TYPE	HEIGHT x WIDTH	QUANTITY(S)
W 01	1500mm x 1500mm	22
TOTAL		22
DOOR SCHEDULE		
D 1	900mm x 2500mm	6
D 2	1500mm x 2500mm	2
D 3	7500mm x 1500mm	2
TOTAL		

TOTAL FLOOR AREA = 298 SQM

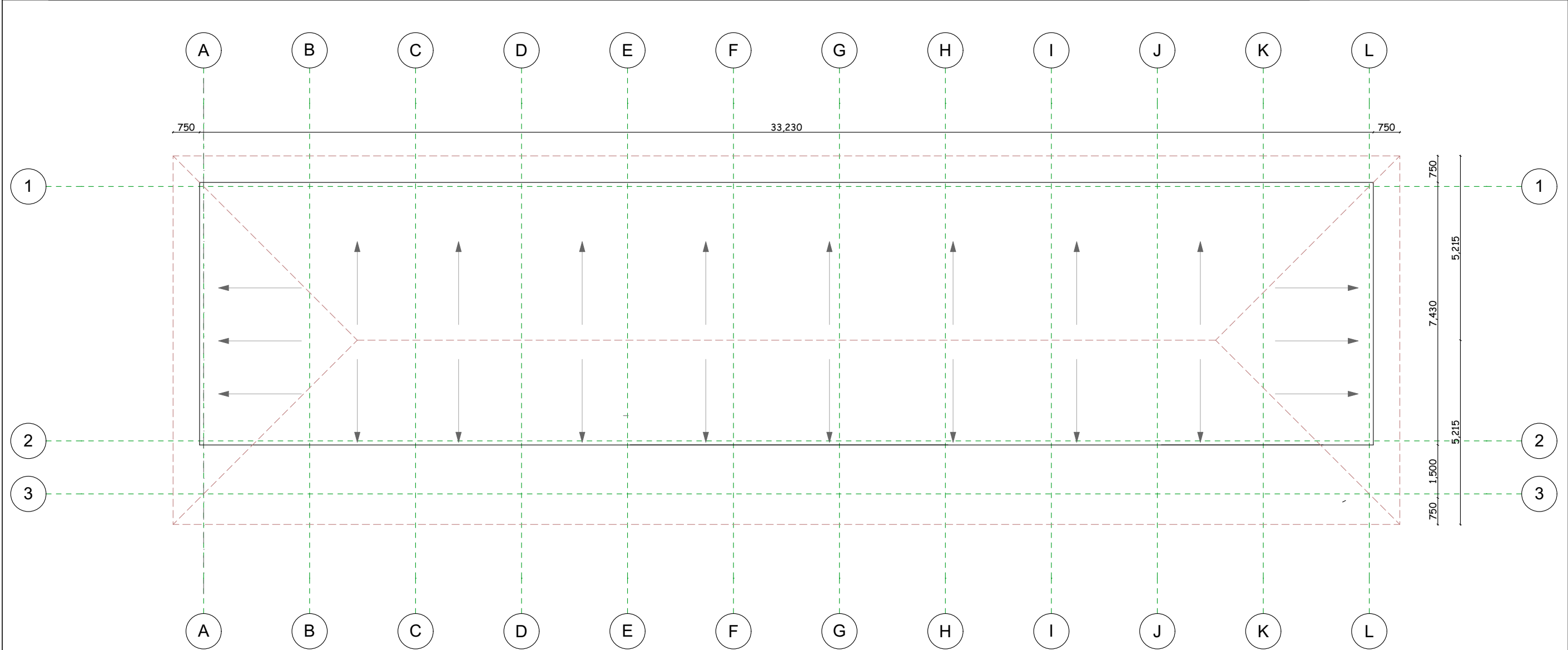
MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY
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PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS
FOR
SECONDARY EDUCATION QUALITY IMPROVEMENT PROGRAM

DRAWING TITLE:CHEMISTRY & BIOLOGY BLOCK

FLOOR PLAN
DRAWING NO: ARC/CHB/LAB/01

Date	June,2023
Drawn by	IAS
Checked by	JR
Scale	To fit

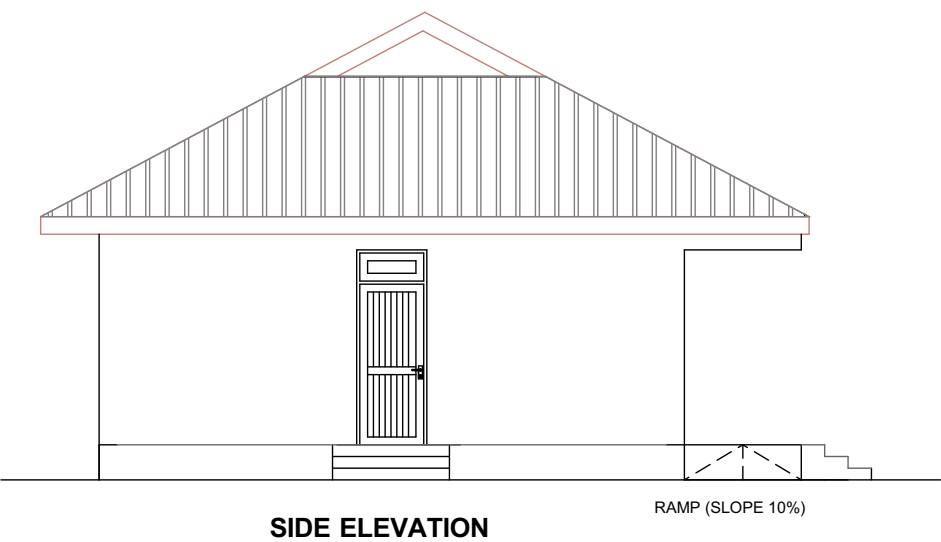


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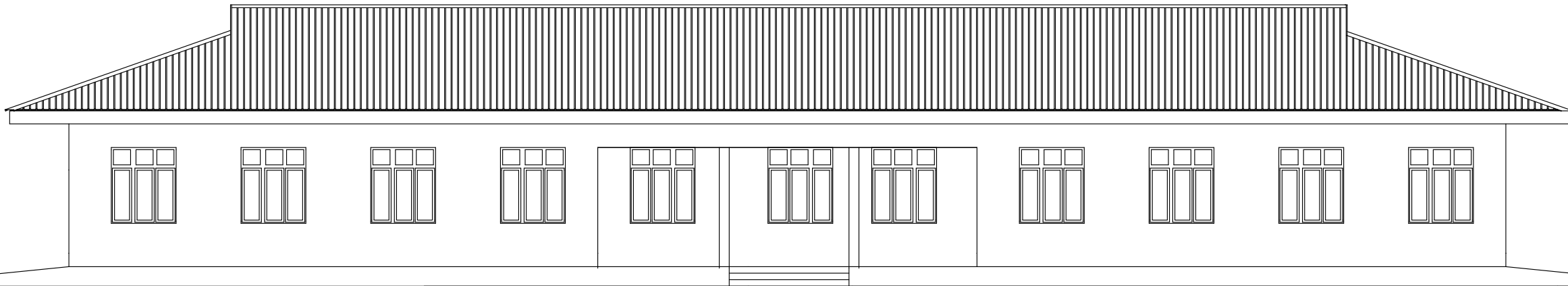
PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS
FOR
SECONDARY EDUCATION QUALITY IMPROVEMENT PROGRAM

DRAWING TITLE: CHEMISTRY & BIOLOGY BLOCK
ROOF PLAN
DRAWING NO: ARC/CHB/LAB/02

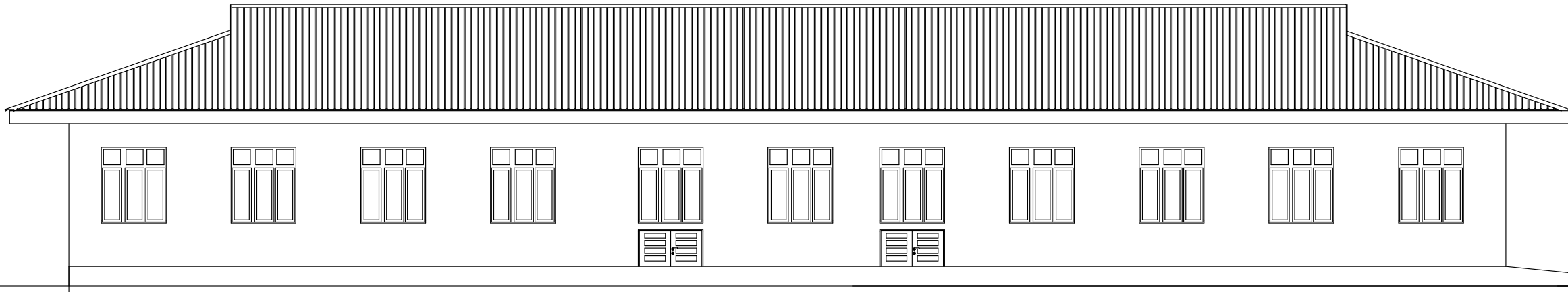
Date	June, 2023
Drawn by	IAS
Checked by	JR
Scale	To fit



MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY <i>IN COLLABORATION WITH</i> PRESIDENT'S OFFICE REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT	PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS FOR SECONDARY EDUCATION QUALITY IMPROVEMENT PROGRAM	DRAWING TITLE:CHEMISTRY & BIOLOGY BLOCK TYPICAL SECTION - SIDE ELEVATIONS DRAWING NO: ARC/CHB/LAB/03	Date	June, 2023
			Drawn by	IAS
			Checked by	JR
			Scale	To fit



FRONT ELEVATION



REAR ELEVATION

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY
IN COLLABORATION WITH
**PRESIDENT'S OFFICE REGIONAL ADMINISTRATION AND
LOCAL GOVERNMENT**

**PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS
FOR
SECONDARY EDUCATION QUALITY IMPROVEMENT PROGRAM**

DRAWING TITLE:CHEMISTRY & BIOLOGY BLOCK
ELEVATIONS
DRAWING NO: ARC/CHB/LAB/04

Date	June, 2023
Drawn by	IAS
Checked by	JR
Scale	To fit

SCHEDULE OF MATERIALS

THE UNITED REPUBLIC OF TANZANIA



PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

PROPOSED STANDARD DRAWINGS FOR SEQUIP

Schedule of Materials & Labour for Library Block – Gable Type

PROJECT AREA

TANZANIA MAINLAND

Ministry of Education, Science and
Technology,
Government City - Mtumba,
AFYA Street,
P.O Box 10,
40479 DODOMA.

President's Office,
Regional Administration,
& Local Government
Government City - Mtumba
TAMISEMI Street,
P. O. Box 1923,
41185 DODOMA.

JUNE, 2023

MOEST/PO-RALG

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
	<u>MATERIALS</u>				
A	<u>SUB-STRUCTURE -PROVISIONAL</u>				
1	<u>Strip Foundation - Grade 15 Plain</u>				
	Aggregate (3/4")	12	M ³		
	Sand	6	M ³		
	Cement-50kgs (42.5)	60	Bags		
2	<u>Foundation Walls</u>				
	6" Cement & Sand block - Minimum Strength 3.5 MPa	1,300	No		
	Sand	4	M ³		
	Cement -50kgs (42.5)	22	Bags		
	<u>ALTERNATIVE TO FOUNDATION WALL</u>				
	** If stone is applicable, then blockwork is not				
	applicable. Therefore Engineer must confirm to the Tenderer				
	which item to be priced (Blockwork or Stone) depending on				
	availability and suitability of building materials.				
	Stone, complete with its cement and sand mortar (1:4)	21	M ³		
3	<u>Moram, Hardcore & Site sterilization</u>				
	Moram (4.5m ³ lorry)	8	Trips		
	Hardcore 200mm thick - (4.5m ³ lorry)	7	Trips		
	Sand	6	M ³		
	Aldrin solution or other and equal approved (1000mls)	2	Bottle		
4	<u>Oversite Concrete 100mm thick - 15 grade ,Ground Beam - 20 grade</u>				
	DPM	162	M ²		
	Cement -50kgs	110	Bags		
	Aggregates (1/2")	18	M ³		
	Sand	9	M ³		
	Reinforcement - 12mm diameter high tensile 460N/mm2	30	PC'S		
	Reinforcement - 8mm diameter high tensile 460N/mm2	31	PC'S		
	A252 Mesh 200 x 200x 6.16kg/m2	4	PC'S		
	Binding Wire - 25kg	1	Roll		
	Timber 1" X 10 " (5.2m long)	25	PC'S		
	Timber 2" X 2"(5.2m long	8	PC'S		
	Nails-4"	25	Kgs		
	Nails-3"	20	Kgs		
	Supporting Props - 3m	15	PC'S		
	SUB-TOTAL SUBSTRUCTURE				

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
B.	<u>SUPERSTRUCTURE</u>				
1	<u>Walls & Ring beam</u>				
	6" Cement & Sand block - Minimum Strength 3.5 MPa	1,801	No		
	DPC (30m long, 1m wide)	1	Roll		
	Sand	8.0	M ³		
	Cement-50kgs (42.5)	60	Bags		
	Aggregates (1/2")	4	M ³		
	Reinforcement - 12mm diameter high tensile 460N/mm ²	25	PC'S		
	Reinforcement - 8mm diameter high tensile 460N/mm ²	24	PC'S		
	Binding Wire - 25kg	1	Roll		
	Timber 1" X 10" to Sides (5.2m long)	18	PC'S		
	Timber 1" X 5" (Plates) (5.2m long)	4	PC'S		
	Timber 2" X 2" (5.2m long)	12	PC'S		
	Supporting Props - 3m	15	PC'S		
	SUB-TOTAL SUPER STRUCTURE				
	<u>ALTERNATIVE TO BLOCKWORK WALL</u>				
	<i>** If brickwork is applicable, then blockwork is not applicable.</i>				
	<i>Therefore Engineer must confirm to the Tenderer which item to be priced (Blockwork or brickwork) depending on availability and suitability of building materials. Note that: Strictly do not use stretcher bond when using bricks, the acceptable bond is either Flemish or English or header.</i>				
	230mm thick One brick wall	116	m ²		
	150mm thick One brick wall	17	m ²		
C.	<u>ROOF STRUCTURE & COVERING</u>				
1	<u>Roof Structure - Provisional - 5.2 M</u>				
	Timber 2 " X 3" Purlins	40	Pcs		
	Timber 2" X 6" Rafter and Tie beam	56	Pcs		
	Timber 2 " X 4" Struts, wall plates	60	Pcs		
	Fascia board 1" X 10" -ref. Semi Hardwood (5.2m long)	11	PC'S		
	Nails -5" & 4"	45	Kgs		
	Nails -3"	40	Kgs		
	16mm diameter bolt, 500mm long	26	Kgs		
	<u>NOTE:</u> The above softwood timber structure should be pressure impregnated treated				
2	<u>Roof Covering</u>				
	28 G Resincoated Iron sheet	210	M ²		
	Aluminium Roofing Nails	15	Packet		
	Ridge - 28 G resin coat (3m long)	7	PC'S		

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
3	<u>Gutter's (PVC)</u>				
	Upvc 100mm half round (6m long)-5"	7	PC'S		
	Upvc 75mm diameter down pipe; Class B	3	PC'S		
	PVC outlet	4	PC'S		
	Gutter support bracket	18	PC'S		
	PVC bend 90'	4	PC'S		
	PVC bend 45'	4	PC'S		
	Gutter Clamp 3"	16	PC'S		
	Connector/reducer	4	PC'S		
	Connector outer	4	PC'S		
	Corner Inner	4	PC'S		
	SUB-TOTAL ROOF STRUCTURE & COVERING				
D.	<u>CEILING</u>				
	Gypsum board -9mm thick	58	PC'S		
	Plain Cornice (8ft)	55	PC'S		
	Screw 1.25" 500pcs/box	2	Box		
	Gypsum powder	9	Bags		
	Fiber tape (90m)	1	Roller		
	Treated softwood Timber 2" X 2" (5.2m)	104	Pcs		
	Nails 4"	20	Kgs		
	Nails 3"	25	Kgs		
	SUB-TOTAL FOR CEILING				
E.	<u>DOOR</u>				
1	<u>40mm thick hardwood Panelled door shutter</u>				
	900 x 2100mm high door	2	PC'S		
2	<u>Frames (hardwood) & Varnish</u>				
	900 x 2500mm high	2	PC'S		
	Brush 3"	2	Pcs		
	Sand paper (msasa) No.80	1	LM		
	Clear Varnish - 4Litres	1	TIN		
	Thinner for Varnish	1	Litres		
3	<u>Ironmongeries - ref Union</u>				
	Mortice lock Three lever	2	No		
	Brass hinges - 100mm	3.0	Pairs		
	SUB-TOTAL FOR DOORS				

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
F.	<u>WINDOWS</u>				
1	<u>Aluminium sliding Window comprising 100mm x 1.2mm thick standard aluminium profile ex-china/Turkey infill with 5mm thick glass complete with mosquito proofing panel, including all accessories, ironmongeries, cutting and pinning lugs</u>				
	1500 X 1500mm high	11	PC'S		
2	<u>25 x 4mm thick flat bar grill painted red-oxide with 25 x 25mm square pipes frame and all necessary accessories</u>				
	1500 X 1500mm high	11	PC'S		
	SUB-TOTAL FOR WINDOWS				
G.	<u>FINISHING</u>				
1	<u>Floor finishing</u>				
	Sand	7.0	m3		
	Cement-50kgs (42.5)	47	Bags		
	Marley flex PVC tiles with size 300 x 300 x 2.5mm thick(4.5m2 per Box)	36	Box		
	Skirting (600 mm long; 25No/Box)	10	Box		
	Grout (1kg/packet)	5	Packet		
	Spacer	2	Packet		
	Marley Solvent (250ML)	2	Bags		
2	<u>Wall Finishing 15mm thick (1:4)</u>				
	Sand	8	M ³		
	Cement-50kgs (42.5)	47	Bags		
	White cement - 40kg	4	Bags		
	Gypsum powder - 25kg	7	Bags		
	SUB-TOTAL FOR FINISHING				
H.	<u>PAINTING & DECORATION</u>				
	Emulsion Paint - 20 LTRS	6	buckets		
	Weather guard Paint - 20 LTRS	2	buckets		
	Washable paint -20 LTRS	3	buckets		
	Primer paint -20 LTRS	1	buckets		
	Solvent - 5LTRS	2	TIN		
	Brush 3"	4	Pcs		
	Roller	3	Pcs		
	Gloss paint-4LTR	1	TIN		
	Oil paint -4LTR	1	TIN		
	Bitumen paint - 4Litres	1	TIN		
	SUB-TOTAL FOR PAINTING&DECORATION				

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
J.	<u>ELECTRICAL INSTALLATION</u>				
	Single fluorescent fitting Complete	22	No		
	Double switch socket	11	No		
	Main switch 6way,1PH with integral RCD 100A/300mA	1	No		
	NB: Wiring cables shall be copper have a minimum cross section area of 1.5sqmm and shall comply with an appropriate British or Harmonized standard for either thermoplastic or thermosetting insulated electric cables.				
	Single core wire 1.5sqmm - Brown	1	Roll		
	Single core wire 1.5sqmm - Black	1	Roll		
	Single core wire 1.5sqmm - Green	1	Roll		
	Single core wire 2.5sqmm - Brown	1	Roll		
	Single core wire 2.5sqmm - Black	1	Roll		
	Single core wire 2.5sqmm - Green	1	Roll		
	Ceiling fan National or other equal	12	PC's		
	3gang 1way switch	4	No		
	1gang 1way switch	1	No		
	2gang 1 way switch	3	No		
	4gang 1 way switch	2	No		
	DP switch 20A	1	No		
	Earth rod approved copper 16mm not less than 1200mm	1	No		
	Earth wire 4sqmm	15	M		
	Metal box twin	11	No		
	Metal box single	8	No		
	Junction box	15	No		
	Conduit pipe	60	PC's		
	Elbow	15	PC's		
	Conduit coupling	10	PC's		
	Round cover	20	PC's		
	Round box	5	PC's		
	Fine screw	1	Packet		
	Data socket	3	No		
	CAT 6 UTP cable (300m)	1	box		
	Smoke detector	2	No		
	plastic clips 22mm	2	Box		
	SUB-TOTAL FOR ELECTRICAL INSTALLATION				

	<u>GENERAL SUMMARY</u>				AMOUNT -TZS
	<u>LIBRARY BLOCK</u>				
A.	SUB-STRUCTURE -PROVISIONAL				
B.	SUPERSTRUCTURE				
C.	ROOF STRUCTURE & COVERING				
D.	CEILING				
E.	DOOR				
F.	WINDOWS				
G.	FINISHING				
H.	PAINTING & DECORATION				
J.	ELECTRICAL INSTALLATION				
	TOTAL BUILDING MATERIALS CARRIED TO GENERAL SUMMARY				
	<u>ADD:</u>				
	LABOUR COST CARRIED TO GENERAL SUMMARY : (Improve and Fill the respective Labour form)				
	Note:				
	i. Refer attached specification and number of Furniture(s) for Library Block				
	ii. Refer General Summary for: Preliminary, Transportation and Supervision Costs				
	iii. Preliminary cover the following item:				
	- Setting out working tools, Equipments, Temporary toilets, water for the works, Scaffolding,				
	- Power for the works, Security, store, Materials test and signboard.				
	iv. Supervision cost depend on guideline of the project				
	v. Installation of Ceiling Fan is an option, depend on whether condition of specific area .				

ARCHITECTURAL DRAWINGS

LIBRARY BLOCK

ARCHITECTURAL DRAWING

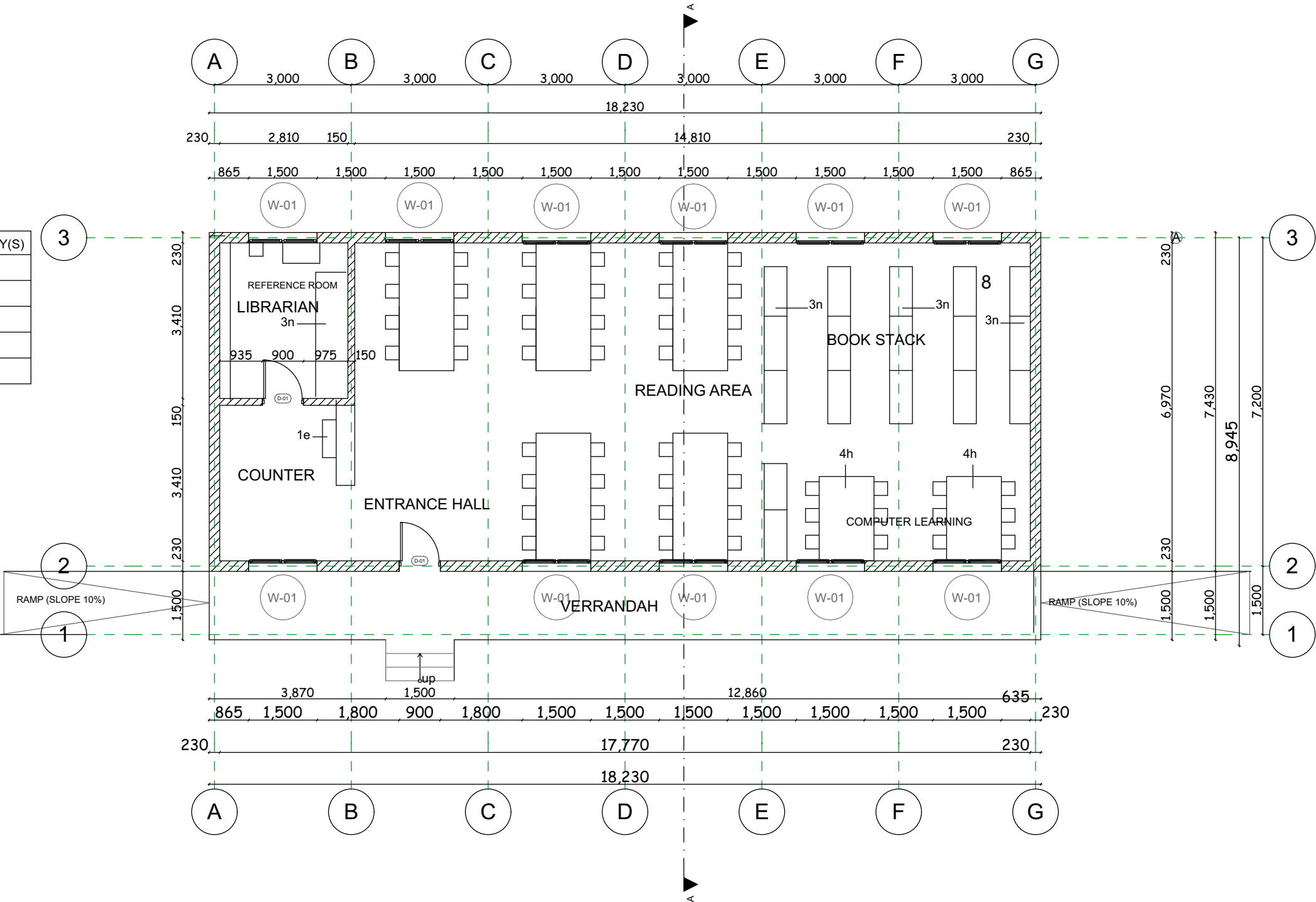
Library Block -Gable

JUNE 2023

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY <i>IN COLLABORATION WITH</i> PRESIDENT'S OFFICE REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT	PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS FOR SECONDARY EDUCATION QUALITY IMPROVEMENT PROGRAM	DRAWING TITLE: LIBRARY BLOCK- GABLE DRAWING NO: ARC/LBR/00	Date	June, 2023
			Drawn by	IAS
			Checked by	JR
			Scale	To fit

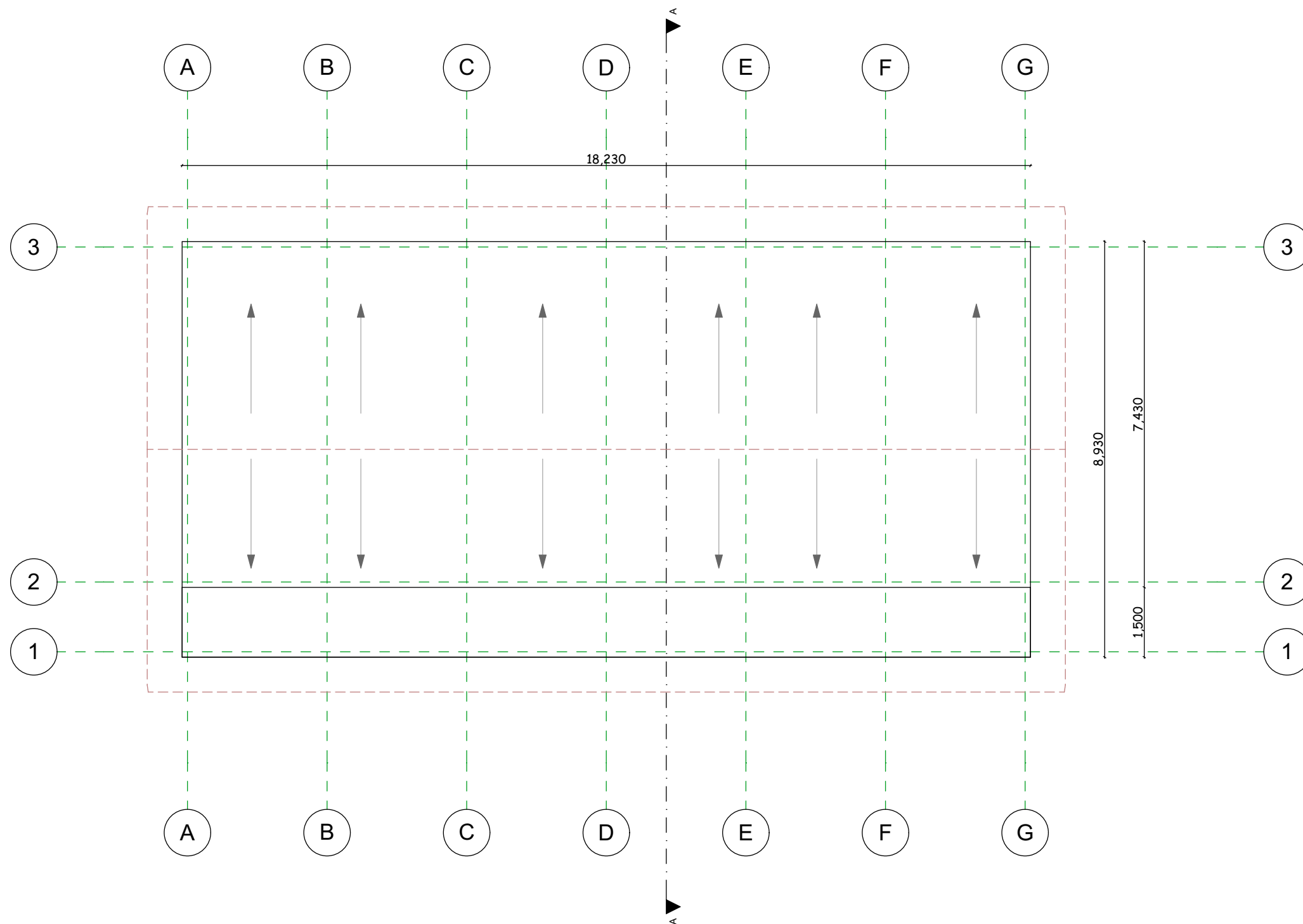
WINDOW SCHEDULE

WINDOW TYPE	HEIGHT x WIDTH	QUANTITY(S)
W 01	1500mm x 1500mm	11
TOTAL		11
DOOR SCHEDULE		
D 1	2500mm x 900mm	2
TOTAL		2



TOTAL FLOOR AREA = 163 SQM

FURNITURES		
KEY	ITEM	NO
1e	cardex cabinet	1
2k	pinboard	4
2x	work bench	1
2w	work bench	2
3g	book case	2
3n	library shelf	36
3r	shelves unit	1
4a	single desk	40
4h	general tables	2
4k	counter section	1
5a	general chair	54
7b	book trolley	1



MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY
IN COLLABORATION WITH
PRESIDENT'S OFFICE REGIONAL ADMINISTRATION AND
LOCAL GOVERNMENT

PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS
FOR
SECONDARY EDUCATION QUALITY IMPROVEMENT PROGRAM

DRAWING TITLE: PROPOSED LIBRARY BLOCK GABLED
ROOF PLAN
DRAWING NO: ARC/LBR/02

Date	June, 2023
Drawn by	IAS
Checked by	JR
Scale	To fit



MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY
IN COLLABORATION WITH
**PRESIDENT'S OFFICE REGIONAL ADMINISTRATION AND
LOCAL GOVERNMENT**

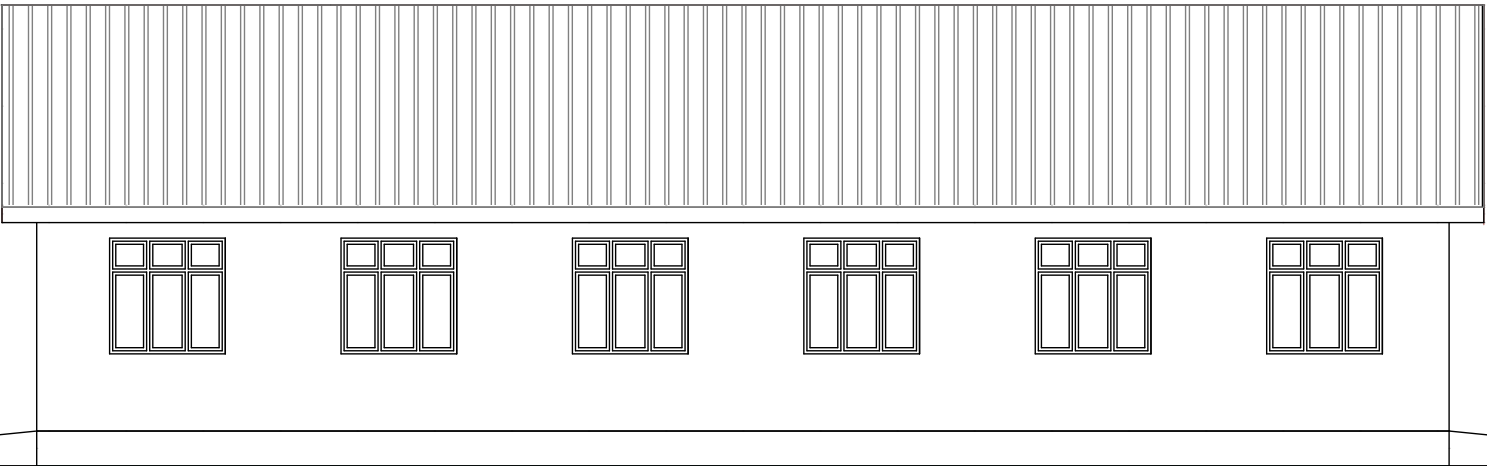
PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS FOR SECONDARY EDUCATION QUALITY IMPROVEMENT PROGRAM

DRAWING TITLE: LIBRARY BLOCK GABLED

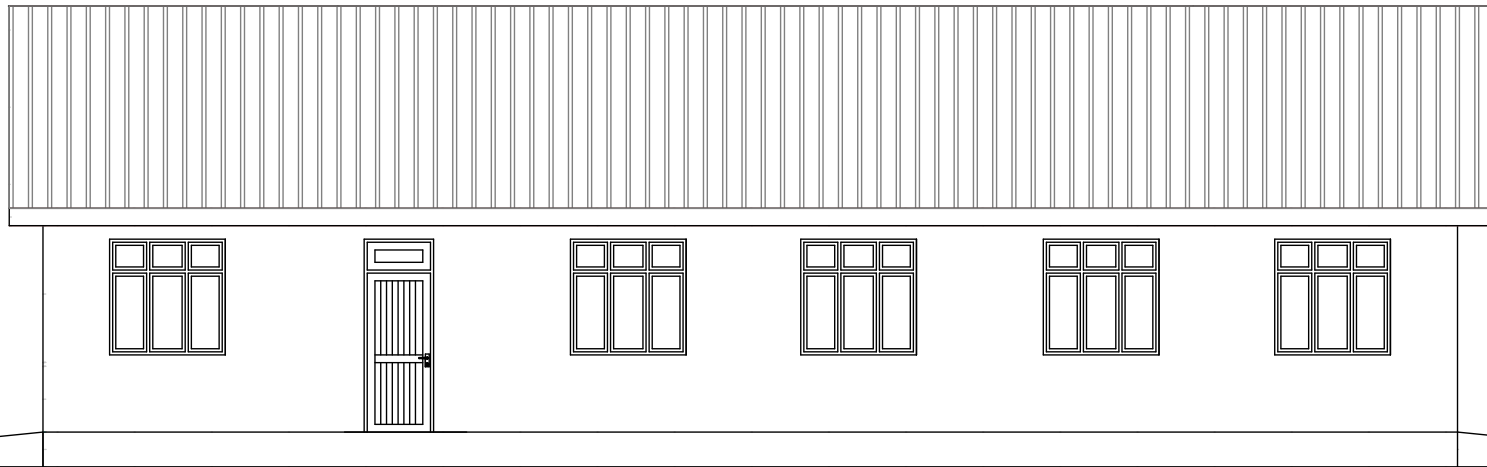
TYPICAL SECTION - SIDE ELEVATIONS

DRAWING NO: ARC/LBR/03

Date	June, 2023
Drawn by	IAS
Checked by	JR
Scale	To fit



REAR ELEVATION



FRONT ELEVATION

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY
IN COLLABORATION WITH
**PRESIDENT'S OFFICE REGIONAL ADMINISTRATION AND
LOCAL GOVERNMENT**

**PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS
FOR
SECONDARY EDUCATION QUALITY IMPROVEMENT PROGRAM**

PROPOSED LIBRARY BLOCK GABLED

DRAWING TITLE: LIBRARY BLOCK GABLED

ELEVATIONS

DRAWING NO: ARC/LBR/04

Date	June, 2023
Drawn by	IAS
Checked by	JR
Scale	To fit

THE UNITED REPUBLIC OF TANZANIA



PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

PROPOSED STANDARD DRAWINGS FOR SEQUIP

Schedule of Materials & Labour for 80 Students Dormitory Block

PROJECT AREA

TANZANIA MAINLAND

Ministry of Education, Science and
Technology,
Government City - Mtumba,
AFYA Street,
P.O Box 10,
40479 DODOMA.

President's Office,
Regional Administration,
& Local Government
Government City - Mtumba
TAMISEMI Street,
P. O. Box 1923,
41185 DODOMA.

JUNE, 2023

MOEST/PO-RALG

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
	<u>MATERIALS</u>				
A	SUB-STRUCTURE -PROVISIONAL				
1	<u>Strip Foundation - Grade 15 Plain</u>				
	Aggregate (3/4")	38	M ³		
	Sand	19	M ³		
	Cement-50kgs (42.5)	188	Bags		
2	<u>Foundation Walls</u>				
	6" Cement & Sand block - Minimum Strength 3.5 MPa	3,570	No		
	Sand	12.0	M ³		
	Cement-50kgs (42.5)	60	Bags		
	<u>ALTERNATIVE TO FOUNDATION WALL</u>				
	** If stone is applicable, then blockwork is not applicable.				
	Therefore Engineer must confirm to the Tenderer which				
	item to be priced (Blockwork or Stone) depending on				
	availability and suitability of building materials				
	Stone, complete with its cement and sand mortar (1:4)	59	M ³		
3	<u>Moram, Hardcore & Site sterilization</u>				
	Moram average depth 150mm (4.5m ³ lorry)	14	Trips		
	Hardcore 200mm thick (4.5m ³ lorry)	19	Trips		
	Sand	21	M ³		
	Aldrin solution or equal -1000mls	3	Bottles		
4	<u>Oversite Concrete (100mm thick - 15 grade) & Ground Beam - 20 grade, Steps, Ramps</u>				
	DPM	412	M ²		
	Cement-50kgs (42.5)	342	Bags		
	Aggregates (1/2")	51	M ³		
	Sand	26	M ³		
	Reinforcement - 12mm diameter high tensile 460N/mm ²	105	PC'S		
	Reinforcement - 8mm diameter high tensile 460N/mm ²	114	PC'S		
	Binding wire -25Kg	3	Roll		
	A252 Mesh 200 x200x6.16kg/m ²	4	PC'S		
	20mm styrofoam comprehensive materials (1200x2400mm)	5	PC'S		
	Timber 1" X 8" (5.2m long)	80	PC'S		
	Timber 2" X 2" (3.5m long)	20	PC'S		
	Nails-4"	20	Kgs		
	Nails-3"	20	Kgs		
	Supporting props	15	PC'S		
	SUB-TOTAL SUBSTRUCTURE				

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
B.	SUPERSTRUCTURE				
1	<u>Walls & Ring beam & Columns</u>				
	6" Cement & Sand block - Minimum Strength 3.5 MPa	7,650	No		
	DPC (30m long), 1m wide	3	Roll		
	Sand	37	M ³		
	Cement-50kgs (42.5)	274	Bags		
	Aggregates (1/2")	11	M ³		
	Reinforcement - 12mm diameter high tensile 460N/mm ²	75	PC'S		
	Reinforcement - 8mm diameter high tensile 460N/mm ²	65	PC'S		
	Binding Wire (use balance of substructure)	1	Roll		
	20mm styrofoam compressive materials	9	PC'S		
	Timber 1" X 8" to Sides (5.2m long)	30	PC'S		
	Timber 1" X 6" (5.2m long Plates)	9	PC'S		
	Timber 2" X 2" (3.5m long)	15	PC'S		
	Supporting Props (3m)	15	PC'S		
	SUB-TOTAL SUPER STRUCTURE				
	ALTERNATIVE TO BLOCKWORK WALL				
	<i>** If brickwork is applicable, then blockwork is not applicable.</i>				
	<i>Therefore Engineer must confirm to the Tenderer which item</i>				
	<i>to be priced (Blockwork or brickwork) depending on availability</i>				
	<i>and suitability of building materials. Note that: Strictly do not</i>				
	<i>use stretcher bond when using bricks, the acceptable</i>				
	<i>bond is either Flemish or English or header.</i>				
	230mm thick One brick wall	225	m ²		
	150mm thick One brick wall	500	m ²		
C.	ROOF STRUCTURE & COVERING				
1	<u>Roof Structure - Provisional -5.2m long</u>				
	Timber 2 " X 3" Purlins	115	Pcs		
	Timber 2" X 4" King Post, wall plate and struts	195	Pcs		
	Timber 2" X 6" Rafter and Tie beam	193	Pcs		
	Fascia board 1" X 10" (5.2m long)	23	PC'S		
	Nails -5"	80	Kgs		
	Nails -4"	70	Kgs		
	Nails -3"	50	Kgs		
	16mm diameter bolt, 500mm long	80	Kgs		
	NOTE: The above softwood timber structure should be pressure impregnated treated				
		C/F			

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
		B/F			
2	<u>Roof Covering</u>				
	28 G Resincoated Iron sheet	630	M ²		
	Hips/Ridge and valley - 28 G resin coat	38	PC'S		
	Aluminium Roofing Nails	63	Packet		
	SUB-TOTAL ROOF STRUCTURE & COVERING				
D	<u>CEILING</u>				
	Gypsum board -9mm thick	145	PC'S		
	Plain Cornice (8ft)	123	PC'S		
	Gypsum Screw 1" 800pcs/box	11	Box		
	Gypsum powder	6	Bags		
	Fibre tape-90m	3	Pcs		
	Treated softwood Timber 2" X 2" (5.2m)	340	Pcs		
	Nails 4"	40	Kgs		
	Nails 3"	45	Kgs		
	SUB-TOTAL FOR CEILING				
E	<u>DOOR</u>				
1	<u>40mm thick hardwood paneled door shutter</u>				
	1420 x 2100mm high double door shutter	4	PC'S		
	920 x 2100mm high	3	PC'S		
	920 x 1820mm high	1	PC'S		
	720 x 1820mm high	9	PC'S		
2	<u>Frames (hardwood),Varnish, Glass & Burglar bar</u>				
	1500 x 2500mm high frame for double door (D1)	4	PC'S		
	1000 x 2500mm high door frame	3	PC'S		
	1000 x 1820mm high door frame	1	PC'S		
	800 x 1820mm high	9	PC'S		
	5mm thick clear glass to Vents	5	M ²		
	16mm barglar bars to door vent (12m)	3	Pcs		
	Brush 3"	2	Pcs		
	Sand paper (msasa) No.80	5	LM		
	Clear Varnish - 4Litres	1	TIN		
	Thinner for Varnish -1Litres	1	Litres		
3	<u>IronMongeries</u>				
	Mortice lock Three lever	8	No		
	barrel bolt with indicator bolts	9	No		
	Brass hinges - 100mm	31.5	Pairs		
	Wood Screw	1	Box		
	SUB-TOTAL FOR DOORS				

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
F	WINDOWS				
1	<u>Hardwood casement windows /Aluminium sliding Window comprising 100mm x 1.2mm thick standard aluminium profile ex-china/Turkey infill with 5mm thick glass complete with mosquito proofing panel, including all accessories, ironmongeries, cutting and pinning lugs</u>				
	1500 X 1500mm high	20	No		
	2200 X 750mm high	5	No		
	SUB-TOTAL FOR WINDOWS				
G	FINISHING				
1	<u>Floor finishing 500x500x 10mm Porcelain Floor Tiles including bedding 30mm thick cement and sand</u>				
	Sand	20	m3		
	Cement-50kgs (42.5)	125	Bags		
	500 X 500 X 10mm thick- Non-slippery porcelain floor tiles - (1.75 sqm/Box)	250	Box		
	Epoxy - Grout (1kg/packet)	25	Bucket		
	Spacer	10	Packet		
	Skirting (600mm long; 25/Box)	20	Box		
2	<u>Wall Finishing</u>				
	Sand	36	M ³		
	Cement-50kgs (42.5)	215	Bags		
	White cement - 50kg	8	Bags		
	Gypsum powder	32	Bags		
	250 x 400mm x 9mm thick ceramic wall tiles (1.5Sqm/Box)	88	Box		
	Epoxy - Grout (1kg/packet)	15	Packet		
	Spacer	6	Packet		
	Sand paper Msasa No.120	10.0	m		
	SUB-TOTAL FOR FINISHING				
H	PAINTING & DECORATION				
	Emulsion Paint - 20 LTRS	15	buckets		
	Weather guard Paint - 20 LTRS	4	buckets		
	Washable paint -20 LTRS	6	buckets		
	Primer paint -20 LTRS	1	buckets		
	Solvent - 5LTRS	1	TIN		
	Brush 3"	3	Pcs		
	Roller	3	Pcs		
	Gloss paint-4LTR	2	TIN		
	Bitumen paint - 4Litres	6	TIN		
	SUB-TOTAL FOR PAINTING&DECORATION				

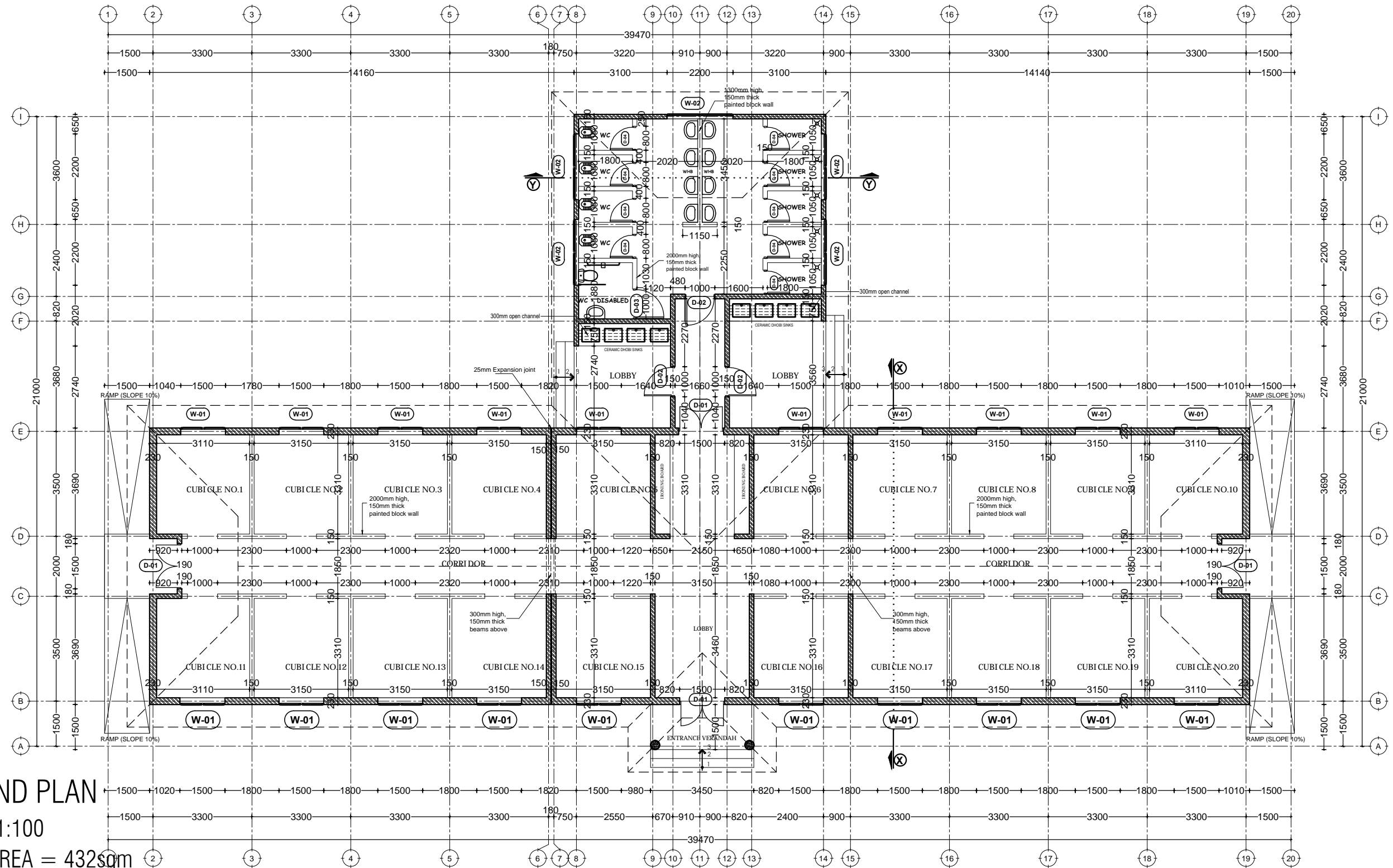
ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
J	<u>PLUMBING AND ENGINEERING INSTALLATIONS:</u>				
	Western type low level W.C suite vitreous china to B.S 3402	1	No		
	White vitreous china Asian type size 450x530x210mm	4	No		
	Disabled toilets with HWB, grab rails, mixer, floor drainer and all necessary accessories	1	No		
	White vitreous china wash hand basin (HWB), size 750x440x200mm complete .	8	No		
	80mm Diameter high quality plastic floor drain trap built in concrete bed	8	No		
	600 x 900 x 6mm thick looking mirror	8	No		
	150mm long toilet roll holder (Ceramic), plugged and screwed to blockwall	5	No		
	20mmØ Chromium plated towel single rail, 600mm long	5	No		
	Shurtuff (Douche spray) 13mm diameter X 1000mm long flexible hose metal braided hose	5	No		
1	<u>COLD WATER INSTALLATION:</u>				
	<u>Pipes and fittings:</u>				
	25mmØ communication pipe HDPE to trench	70	m		
	Ditto; tee	8	No		
	Ditto; elbow	14	No		
	Ditto; male connector	8	No		
	32mmØ pipe to trench	32	m		
	Extra; elbow	5	No		
	Ditto; nipple MM	20	No		
	Ditto; nipple FF	20	No		
	Ditto; union	10	No		
	Ditto; reducing connector 32Ø × 25Ø	20	No		
	Ditto; reducing connector 25Ø × 19Ø	20	No		
	Ditto; nipple MM	20	No		
	Ditto; reducing connector 25Ø × 19Ø	8	No		
	Ditto; nipple MM	20	No		
	Ditto; reducing connector 19Ø × 13Ø	20	No		
	13mm diameter pipe in blockwall chase BS 1010 or 1212	40	m		
	Ditto; elbow.	50	No		
	Ditto; tee.	18	No		
	Extra: nipple MM	24	No		
	Extra: nipple FF	24	No		
	Ditto; union	24	No		
2	<u>WASTE AND VENT PIPES:</u>				
	<u>UPVC pipes;Class 'C:</u>				
	38mmØ; chase in block in concrete slab.	24	m		
	Extra; Equal tee	20	No		
	Extra; plain elbow	15	No		
	Extra; plugged elbow	15	No		

MoEST/PO-RALG

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
K.	ELECTRICAL INSTALLATION				
	<u>80 STUDENTS DORMITORY</u>				
	Single fluorescent fitting Complete	34	No		
	Double switch socket	4	No		
	Main switch 8way, 1PH with integral RCD 100A/300mmA ABB other equal approved	1	No		
	NB: Wiring cables shall be copper have a minimum cross section area of 1.5sqmm and shall comply with an appropriate British or Harmonized standard for either thermoplastic or thermosetting insulated electric cables.				
	Single core wire 1.5sqmm - Red /Brown	3	Roll		
	Single core wire 1.5sqmm - Black	3	Roll		
	Single core wire 1.5sqmm -green	3	Roll		
	Single core wire 2.5sqmm - red/Brown	1	Roll		
	Single core wire 2.5sqmm - black	1	Roll		
	Single core wire 2.5sqmm green	1	Roll		
	1 gang 1 way switch	27	No		
	Ceiling light complete with energy saver/LED 11w	1	No		
	Earth rod approved copper 16mm not less than 1200mm	2	No		
	Earth wire 4sqmm	30	M		
	Metal box twin	4	No		
	Metal box single	27	No		
	Junction box	40	No		
	Conduit pipe	180	PC's		
	Elbow	60	PC's		
	Conduit coupling	40	PC's		
	Round cover	50	PC's		
	Round box	9	PC's		
	Fine screw	2	PACKET		
	plastic clips 22mm	4	BOX		
	Bulk head light fitting	9	PCS		
	SUB-TOTAL FOR ELECTRICAL INSTALLATION				

<u>GENERAL SUMMARY</u>				AMOUNT
				TZS
<u>DOMITORY BLOCK --- 80 STUDENTS</u>				
A.	SUB-STRUCTURE -PROVISIONAL			
B.	SUPERSTRUCTURE			
C.	ROOF STRUCTURE & COVERING			
D.	CEILING			
E.	DOOR			
F.	WINDOWS			
G.	FINISHING			
H.	PAINTING & DECORATION			
J.	PLUMBING AND ENGINEERING INSTALLATIONS:			
K.	ELECTRICAL INSTALLATION			
TOTAL BUILDING MATERIALS CARRIED TO GENERAL SUMMARY				
<u>ADD:</u>				
LABOUR COST CARRIED TO GENERAL SUMMARY : (Improve and Fill the respective Labour form)				
Note:				
i. Refer attached specification and number of Furniture(s) for 80 Students Dormitory Block				
ii. Refer General Summary for: Preliminary, Transportation and Supervision Costs				
iii. Preliminary cover the following item:				
- Setting out working tools, Equipments, Temporary toilets, water for the works, Scaffolding,				
- Power for the works, Security, store, Materials test and signboard.				
iv. Supervision cost depend on guideline of the project				
v. Installation of Ceiling Fan is an option, depend on whether condition of specific area .				

ARCHITECTURAL DRAWINGS

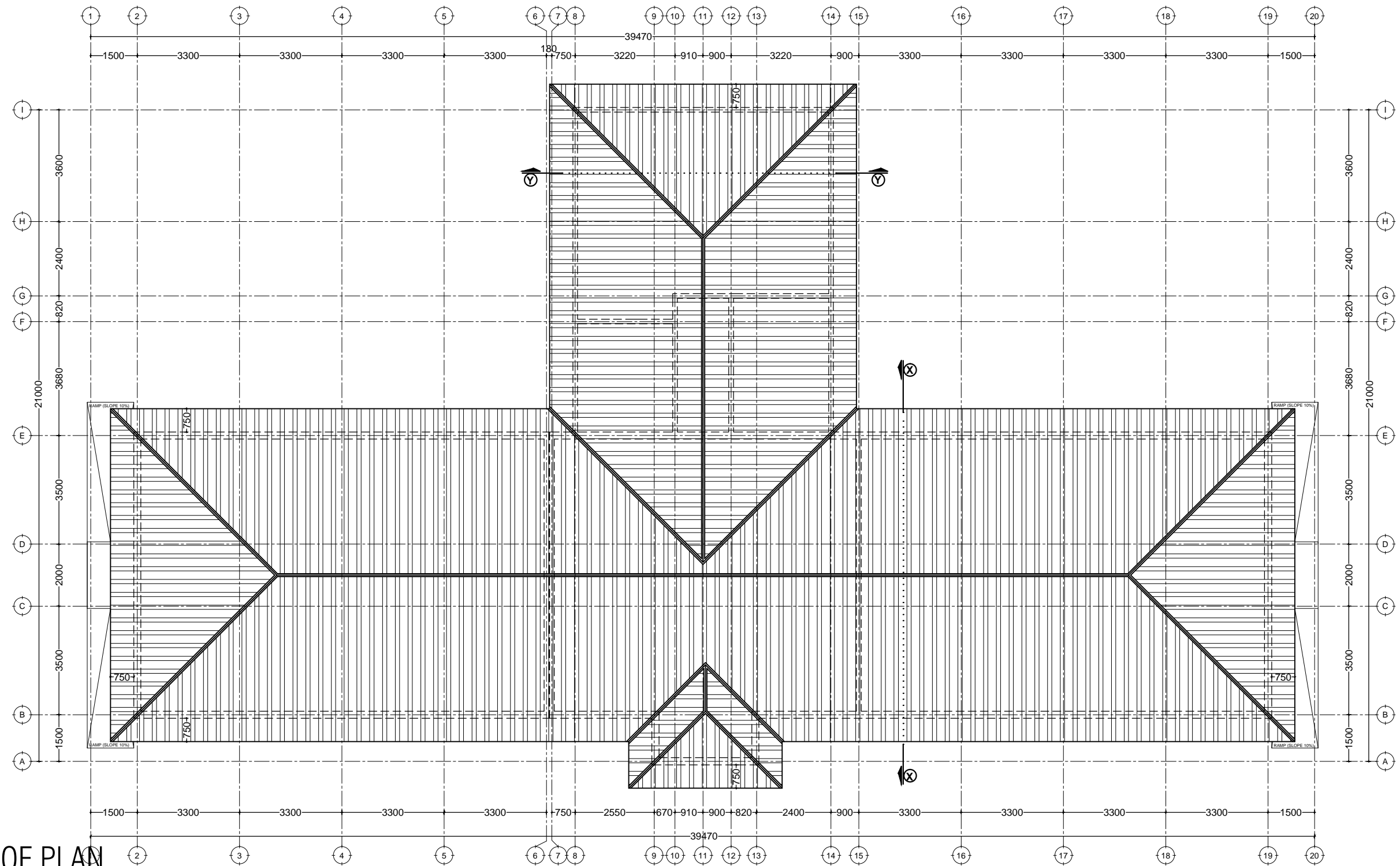


MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY
 IN COLABORATION WITH
 PRESIDENT'S OFFICE REGIONAL ADMINISTRATION AND
 LOCAL GOVERNMENT

PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS
 FOR
 SECONDARY EDUCATION QUALITY IMPROVEMENT PROGRAM (SEQUIP)

DRAWING TITLE: **80 STUDENTS DORMITORY**
FLOOR PLAN
 DRAWING NO: **SQP/ARC/DORM - 1/06**

DRAWN BY J.R
CHECKED BY I.S
 SCALE 1;100
 JUNE,2023



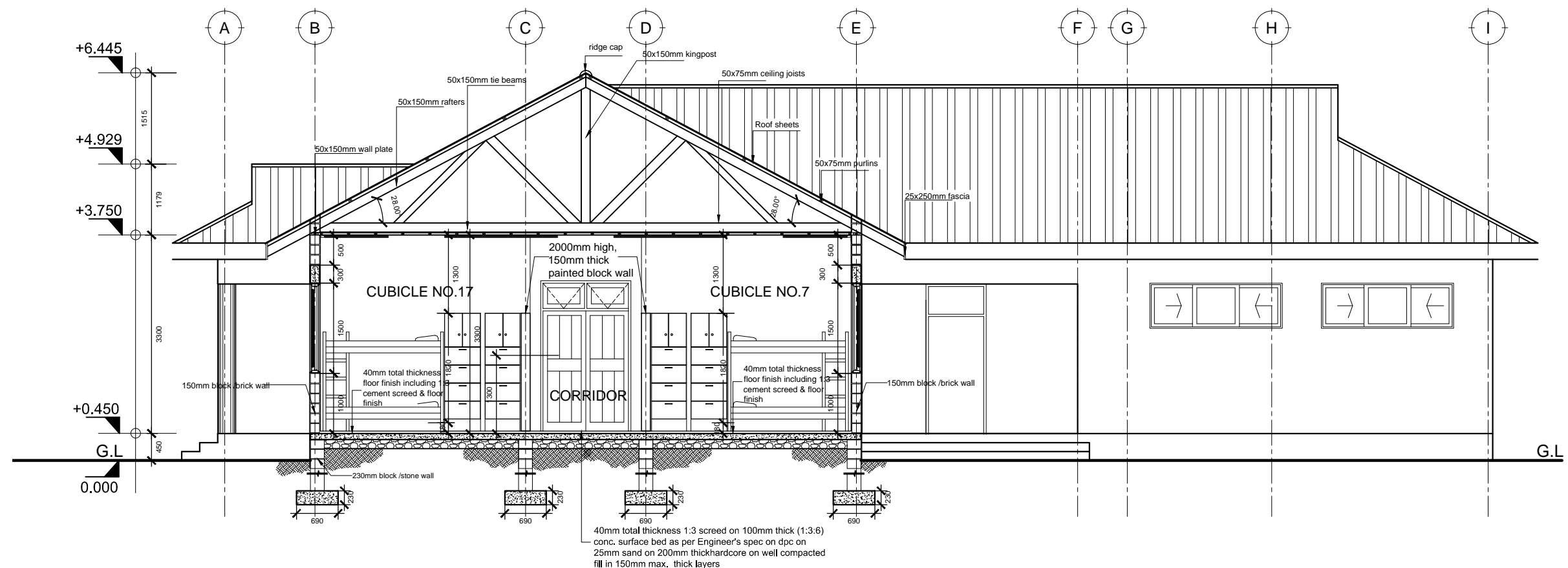
ROOF PLAN
SCALE: 1:100

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LOCAL GOVERNMENT

PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS
FOR
SECONDARY EDUCATION QUALITY IMPROVEMENT PROGRAM (SEQUIP)

DRAWING TITLE: **80 STUDENTS DORMITORY**
ROOF PLAN
DRAWING NO: **SQP/ARC/DORM - 2/06**

DRAWN BY J.R
CHECKED BY I.S
SCALE 1;100
JUNE,2023



SECTION Y:Y
SCALE: 1:75

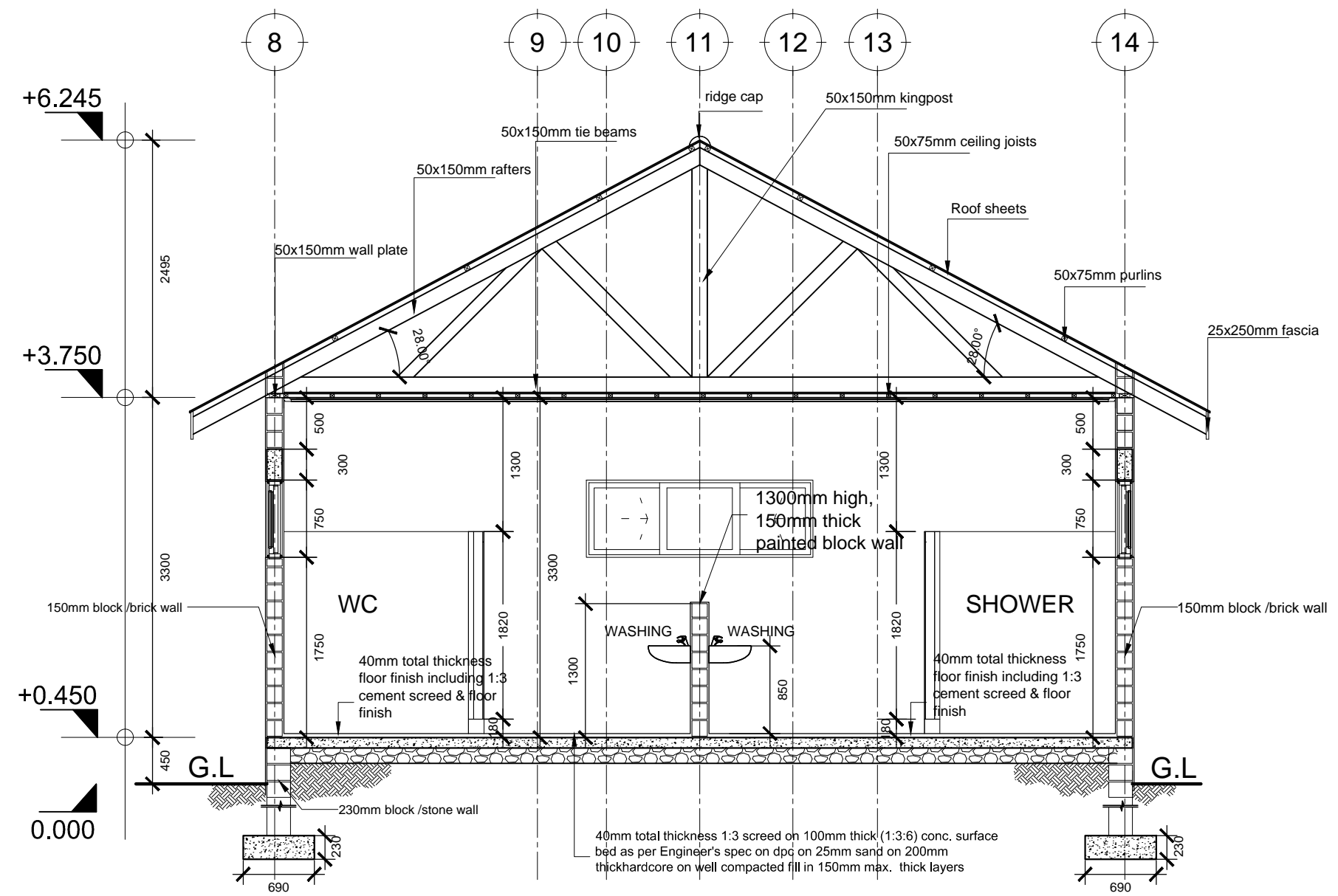
MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY
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LOCAL GOVERNMENT

PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS
FOR
SECONDARY EDUCATION QUALITY IMPROVEMENT PROGRAM (SEQUIP)

DRAWING TITLE: **80 STUDENTS DORMITORY**
SECTION Y:Y
DRAWING NO: **SQP/ARC/DORM - 3/06**

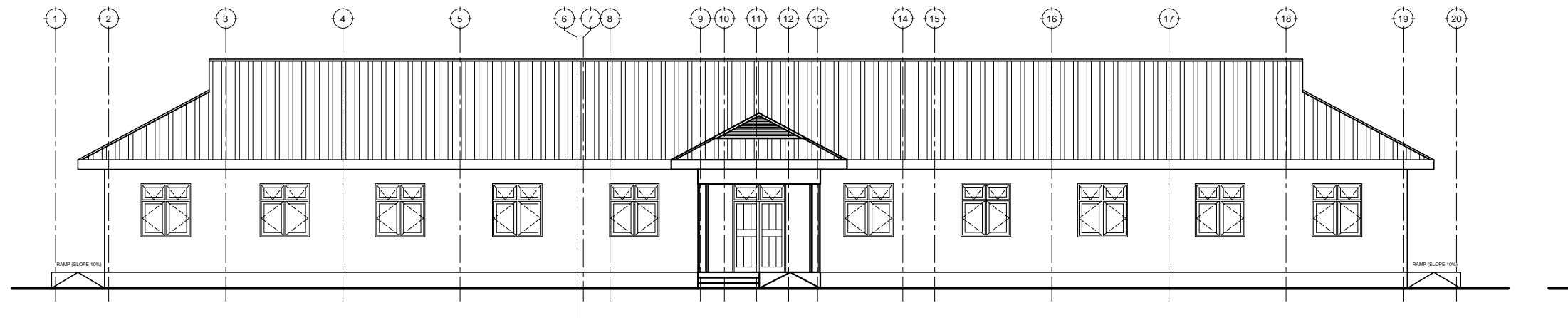
DRAWN BY J.R
CHECKED BY I.S
SCALE 1;75
JUNE,2023

DOOR & WINDOW SCHEDULE			
NO.	WIDTH	HEIGHT	TOTAL
D1	1500mm	2500mm	4
D2	1000mm	2500mm	3
D3	1000mm	1820mm	1
D4	800mm	1820mm	9
W1	1500mm	1500mm	20
W1	2200mm	750mm	5

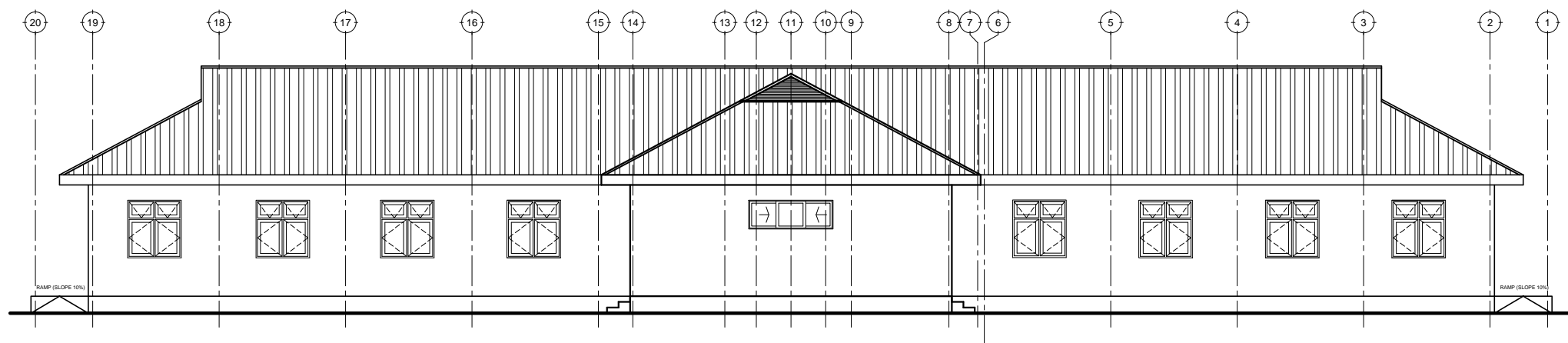


SECTION X:X
SCALE: 1:50

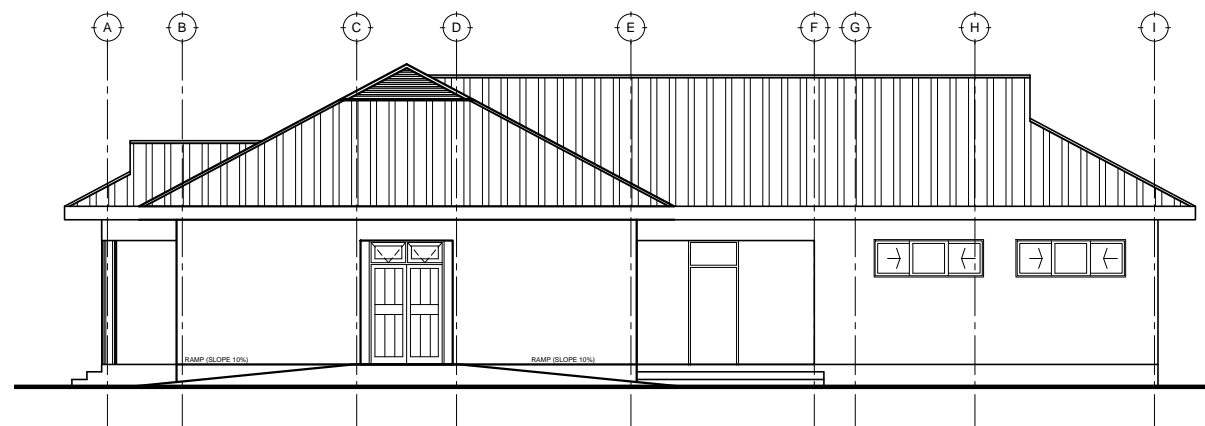
MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY <i>IN COLABORATION WITH</i> PRESIDENT'S OFFICE REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT	PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS FOR SECONDARY EDUCATION QUALITY IMPROVEMENT PROGRAM (SEQUIP)	DRAWING TITLE: 80 STUDENTS DORMITORY	DRAWN BY J.R CHECKED BY I.S SCALE 1;50 JUNE,2023
		SECTION X:X DRAWING NO: SQP/ARC/DORM - 4/06	



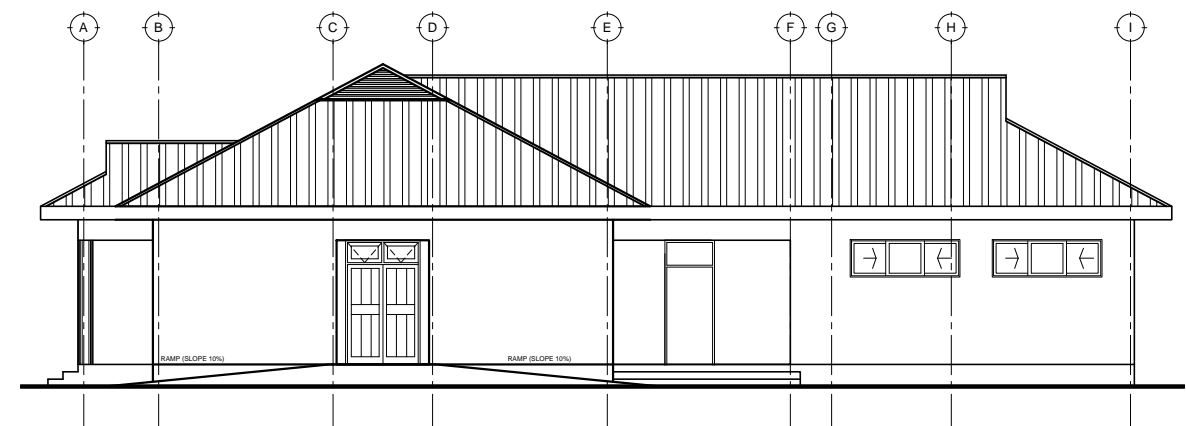
FRONT ELEVATION



FRONT ELEVATION



RIGHT SIDE ELEVATION



RIGHT SIDE ELEVATION

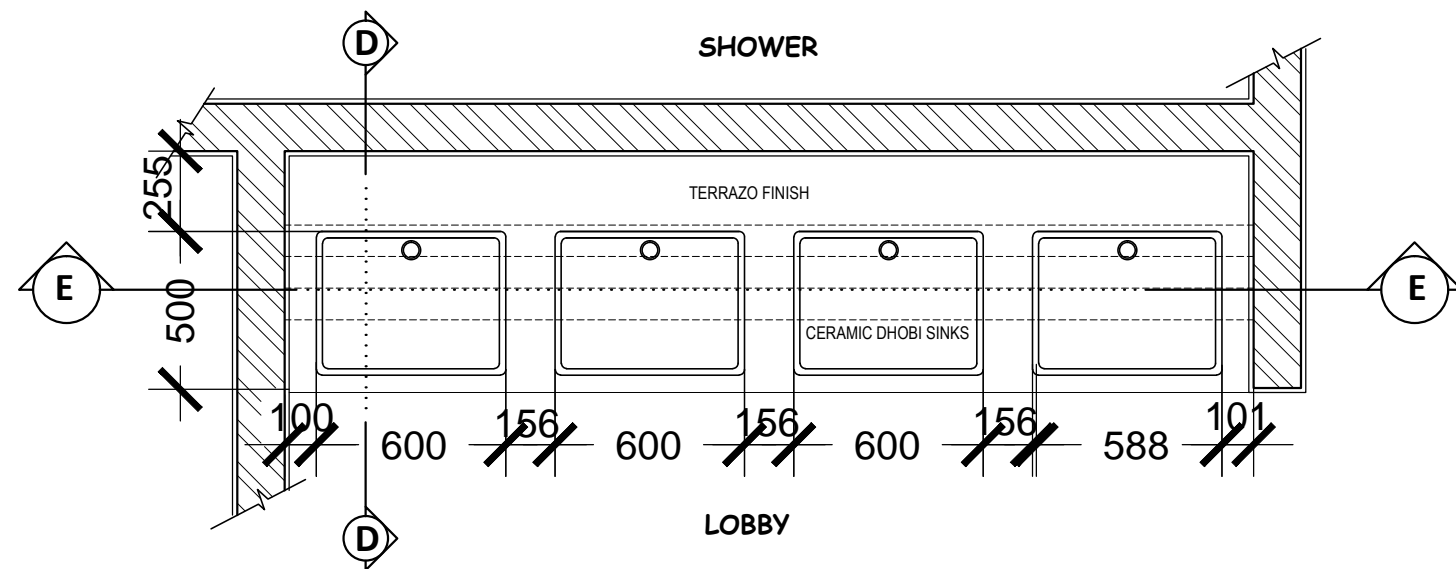
ELEVATIONS
SCALE: 1:100

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY
IN COLABORATION WITH
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LOCAL GOVERNMENT**

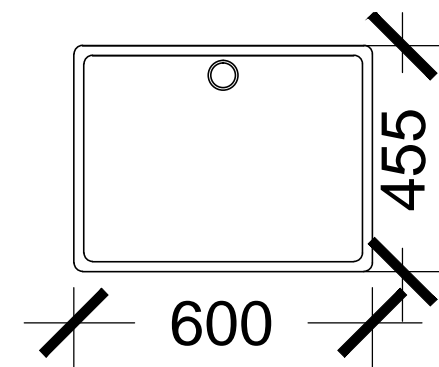
PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS
FOR
SECONDARY EDUCATION QUALITY IMPROVEMENT PROGRAM (SEQUIP)

DRAWING TITLE: **80 STUDENTS DORMITORY**
ELEVATIONS
DRAWING NO: **SQP/ARC/DORM - 5/06**

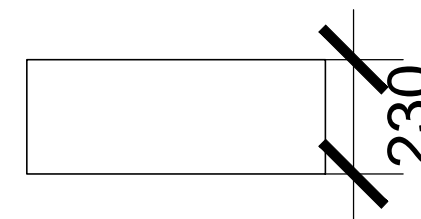
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SCALE 1;50
JUNE,2023



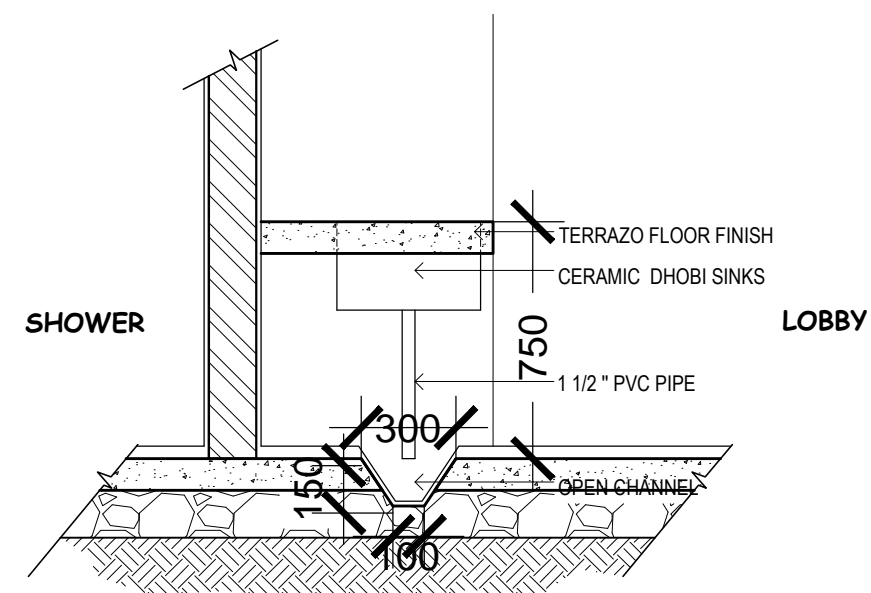
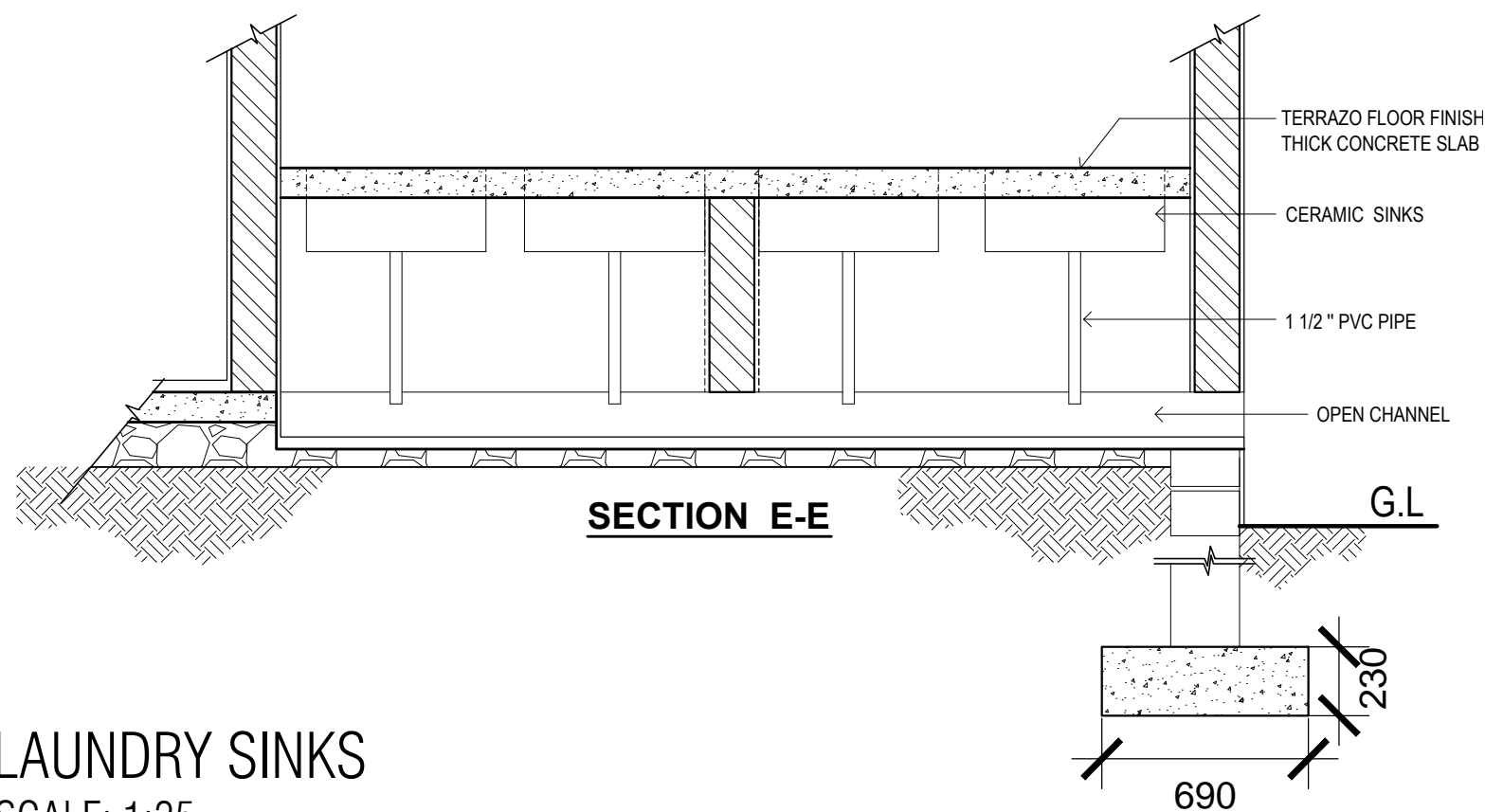
LAUNDRY SINKS LAYOUT PLAN



SINK PLAN



SINK ELEVATION



LAUNDRY SINKS
SCALE: 1:25

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY
IN COLABORATION WITH
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LOCAL GOVERNMENT

PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS
FOR
SECONDARY EDUCATION QUALITY IMPROVEMENT PROGRAM (SEQUIP)

DRAWING TITLE: **80 STUDENTS DORMITORY**
LAUNDRY SINKS LAYOUT
DRAWING NO: **SQP/ARC/DORM - 6/06**

DRAWN BY J.R
CHECKED BY I.S
SCALE 1;25
JUNE,2023

THE UNITED REPUBLIC OF TANZANIA



PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

PROPOSED STANDARD DRAWINGS FOR SEQUIP

Schedule of Materials & Labour for Dinning Hall

PROJECT AREA

TANZANIA MAINLAND

Ministry of Education, Science and
Technology,
Government City - Mtumba,
AFYA Street,
P.O Box 10,
40479 DODOMA.

President's Office,
Regional Administration,
& Local Government
Government City - Mtumba
TAMISEMI Street,
P. O. Box 1923,
41185 DODOMA.

JUNE, 2023

MOEST/PO-RALG

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
	<u>MATERIALS</u>				
A	<u>SUB-STRUCTURE -PROVISIONAL</u>				
1	<u>Strip Foundation - Grade 15 Plain (79m³)</u>				
	Aggregate (3/4")	79	M ³		
	Sand	40	M ³		
	Cement-50kgs (42.5)	356	Bags		
2	<u>Foundation Walls (457m²)</u>				
	6" Cement & Sand block - Minimum Strength 3.5 MPa	6,398	No		
	Sand	20	M ³		
	Cement -50kgs (42.5)	107	Bags		
3	<u>Moram, Hardcore & Site sterilization</u>				
	Moram (4.5m ³ lorry)	144	Trips		
	Hardcore 150mm thick - (4.5m ³ lorry)	72	Trips		
	Sand	108	M ³		
	Aldrin solution or other and equal approved (1000mls)	15	Bottle		
4	<u>Blinding(4m³) 50mm thick -grade 10, Oversight Concrete (216m³) 100mm thick - 15 grade ,Ground Beam column and base column (95m³) - 25 grade</u>				
	DPM	2,162	M ²		
	Cement -50kgs (42.5)	1,737	Bags		
	Aggregates (1/2")	299	M ³		
	Sand	149	M ³		
	Reinforcement - 16mm diameter high tensile 460N/mm ²	368	PC'S		
	Reinforcement - 8mm diameter high tensile 460N/mm ²	361	PC'S		
	Binding Wire - 25kg	6	Roll		
	Timber 1" X 10 " (5.2m long)	82	PC'S		
	Timber 2" X 2"	35	PC'S		
	Marine plywood 12mm thick size 2400 x 1200mm	50	PC'S		
	Nails-4"--- 45KG Per Bags	3	Bags		
	Nails-3"	2	Bags		
	20 mm styropol compressive expansion joint material or other equal and approved	24	PC'S		
	Supporting props 3m	80	PC'S		
	SUB-TOTAL SUBSTRUCTURE				
B.	<u>SUPERSTRUCTURE</u>				
1	<u>Walls (902m²), beam, roof beam & Columns (146m³)</u>				
	6" Cement & Sand block - Minimum Strength 3.5 MPa	14,661	No		
	Louver Block /Vent block	765	No		
	DPC (30m long, 1m wide)	8	Roll		
	Sand	135	M ³		
	Cement-50kgs (42.5)	1,554	Bags		
	Aggregates (1/2")	122	M ³		
	Reinforcement - 16mm diameter high tensile 460N/mm ²	599	PC'S		
	Reinforcement - 8mm diameter high tensile 460N/mm ²	673	PC'S		

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
	Binding Wire - 25kg	10	Roll		
	Timber 1" X 10" to Sides (5.2m long)	80	PC'S		
	Timber 1" X 5" (Plates)	42	PC'S		
	Timber 2" X 2"	75	PC'S		
	Marine plywood 12mm thick size 2400 x 1200mm	131	PC'S		
	Steel supporting scaffolding(6m high) including accessories	52	PC'S		
	Supporting Props	120	PC'S		
	20 mm styropol compressive expansion joint material or other equal and approved	12	PC'S		
	SUB-TOTAL SUPER STRUCTURE				
C.	<u>ROOF STRUCTURE & COVERING</u>				
1	<u>Roof Structure - Provisional</u>				
	Timber 2 " X 3" Purlins (5.2m long)	145	PC'S		
	Timber 2" X 4" wall plate and struts(5.2m long)	155	PC'S		
	Timber 2" X 6" Rafter and Bottom beam (5.2m long)	166	PC'S		
	Fascia board 1" X 10" -ref. Semi Hardwood (5.2m long)	30	PC'S		
	Nails -5"	50	Kgs		
	Nails -4"	60	Kgs		
	Nails -3"	40	Kgs		
	16mm diameter bolt, 750mm long	376	PC'S		
	12mm diameter bolt, with and including nuts and washer	94	PC'S		
	300x150x3mm mild steel plate	94	PC'S		
	150x50x3mm mild steel plate	141	PC'S		
	NOTE: The above softwood timber structure should be pressure impregnated treated				
2	<u>Steel Structure - Provisional</u>				
	76.1 x 5.0 x 8.8 kg/m steel top and bottom chord (6m)	240	PC'S		
	48.3 x 5.0 x 5.3kg/m steel structural internal members(6m)	270	PC'S		
	33.7 x 4.0 x 2.9kg/m steel structural longitudinal tie (6m)	24	PC'S		
	150x 50 x 2x2mm Z -Purlin	780	m		
	150 x 120 x60x 10mm thick mild steel plate	38	PC'S		
	300 x 250 x10mm thick mild steel plate	38	PC'S		
	195 x 100 x75 x 10mm thick mild steel plate	38	PC'S		
	10mm thick mild steel plate with internal diameter 600mm	1	PC'S		
	200 x 400 x10mm thick mild steel plate	38	PC'S		
	75 x 80 x 6mm thick mild steel plate	532	PC'S		
	20mm Diameter Black bolts with nuts and washers	228	PC'S		
	16mm Diameter Anchor bolts 750mm long	152	PC'S		
	12mm diameter bolt, with and including nuts and washer	2,128	PC'S		
	100x80x6mm mild steel plate	532	PC'S		
3	<u>Roof Covering</u>				
	28G Resin coated Iron sheet	2,078	M ²		
	28 G Resin coated Roof ridge/Valley	20	PC'S		
	Aluminium Roofing Nails/Hooks	100	Packet		

JUNE, 2023 (REVISED I) Page/3 MoEST/PO-RALG

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
2	<u>Frames (hardwood) & Varnish</u>				
	2000 x 2700mm high	6	PC'S		
	1800 x 2700mm high	9	PC'S		
	1850 x 2700mm high	1	PC'S		
	1200 x 2700mm high	2	PC'S		
	1000 x 2700mm high	3	PC'S		
	900 x 2700mm high	17	PC'S		
	800 x 2700mm high	21	PC'S		
	Brush 3"	20	Pcs		
	Sand paper (msasa) No.80	25	LM		
	Clear Varnish - 4Litres	2	TIN		
	Thinner for Varnish	2	Litres		
3	<u>Ironmongeries</u>				
	Mortice lock Three lever	35	No		
	Mortice indicator lock set two lever	21	No		
	Brass hinges - 100mm	111	Pairs		
	SUB-TOTAL FOR DOORS				
F.	<u>WINDOWS</u>				
1	<u>Aluminium sliding Window comprising 100mm x 1.2mm thick standard aluminium profile ex-china/Turkey infill with 5mm thick glass complete with mosquito proofing panel, including all accessories, ironmongeries, cutting and pinning lugs</u>				
	2000 X 1500mm high	3	PC'S		
	1500 X 1500mm high	5	PC'S		
	1500 X 2700mm high	26	PC'S		
	1500 X 1400mm high	26	PC'S		
	1800 X 2700mm high	4	PC'S		
	900 x 1030mm high	6	PC'S		
	1500 x 1200mm high	2	PC'S		
	2000 x 2700mm high	5	PC'S		
	900 x 2700mm high	1	PC'S		
	2000 x 1200mm high	2	PC'S		
	600 x 900mm high	1	PC'S		
	1500 x 1200mm high	4	PC'S		
	1200 x 2700mm high	1	PC'S		
	2000 X 1500mm high	1	PC'S		
	4530 x 2700mm high	1	PC'S		
	4520 x 2700mm high	1	PC'S		
	Fixed windows/High Level window				
	1800 x 1200mm high	10	PC'S		
	2000 x 1200mm high	6	PC'S		
	1200 x 1200mm high	2	PC'S		
	900 x 1200mm high	17	PC'S		
	1000 x 1200mm high	3	PC'S		

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
2	<u>25 x 4mm thick flat bar grill painted red-oxide with 25 x 25mm square pipes frame and all necessary accessories</u>				
	2000 X 1500mm high	3	PC'S		
	1500 X 1500mm high	5	PC'S		
	1500 X 2700mm high	26	PC'S		
	1500 X 1400mm high	26	PC'S		
	1800 X 2700mm high	4	PC'S		
	900 x 1030mm high	6	PC'S		
	1500 x 1200mm high	2	PC'S		
	2000 x 2700mm high	5	PC'S		
	900 x 2700mm high	1	PC'S		
	2000 x 1200mm high	2	PC'S		
	600 x 900mm high	1	PC'S		
	1500 x 1200mm high	4	PC'S		
	1200 x 2700mm high	1	PC'S		
	2000 X 1500mm high	1	PC'S		
	4530 x 2700mm high	1	PC'S		
	4520 x 2700mm high	1	PC'S		
	High level grills				
	1800 x 1200mm high	10	PC'S		
	2000 x 1200mm high	6	PC'S		
	1200 x 1200mm high	2	PC'S		
	900 x 1200mm high	17	PC'S		
	1000 x 1200mm high	3	PC'S		
	SUB-TOTAL FOR WINDOWS				
G.	<u>FINISHING</u>				
1	<u>Floor finishing</u>				
	<u>Bedding/Backing; cement sand and Chipping (1:2:2); to steel finishing</u>				
	50mm Thick granolithic floor screed steel trowelling to smooth finishing				
	Sand	35	M ³		
	Cement-50kgs (42.5)	672	Bags		
	Chipping	36	M ³		
2	<u>Tiles finishing</u>				
	Sand	7	M ³		
	Cement-50kgs (42.5)	46	Bags		
	400 X400 X 8mm thick - Non-slippery porcelain floor tiles - (1.92sqm/Box)	83	Box		
	Grout (1kg/packet)	10	Packet		
	Spacer	4	Packet		

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ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
	<u>MATERIALS</u>				
K	<u>ELECTRICAL INSTALLATION & AIR CONDITION</u>				
	<u>DINNING/ASSEMBLY HALL</u>				
	Single fluorescent fitting 4 FT Complete	29	No		
	High bay lighting complete with 18w LED bulb	29	No		
	LED fluorescent fitting 60mm cassette type	0	No		
	Twin switch socket floor mounted	0	No		
	Twin switch socket	22	No		
	Hand drier 40W	6	No		
	Single switch socket	0	No		
	Main switch 6way,TPN with integral RCD 100A/300mA	1	No		
	NB: Wiring cables shall be copper have a minimum cross section area of 1.5sqmm and shall comply with an appropriate British or Harmonized standard for either thermoplastic or thermosetting insulated electric cables.				
	Single core wire 1.5sqmm - Red	9	Roll		
	Single core wire 1.5sqmm - Black	9	Roll		
	Single core wire 1.5sqmm -green	9	Roll		
	Single core wire 2.5sqmm - red	5	Roll		
	Single core wire 2.5sqmm -Black	5	Roll		
	Single core wire 2.5sqmm green	5	Roll		
	Single core wire 4sqmm -Red	30	M		
	Single core wire 4sqmm -Black	30	M		
	Single core wire 4sqmm -Green	30	M		
	16sqmm, urmoured cable	0	M		
	Ceiling fan National or other equal	16	PC's		
	3gang one way switch	2	No		
	1gang 1way switch	17	No		
	2gang 1way switch	6	No		
	Cable tray 150 x3000mm	70	PC		
	DP switch 20A	6	No		
	Cooker control unit 45A	1	No		
	Ceiling light complete with energy saver 18W	21	No		
	Earth rod approved copper 16mm not less than 1200mm	4	No		
	Earth wire 4sqmm	60	M		
	Metal box twin	22	No		
	Metal box single	31	No		
	Junction box	20	No		
	Conduit pipe	320	PC's		
	Elbow	120	PC's		
	Conduit coupling	120	PC's		
	Round cover	2	PACKET		
	Round box	16	No		
	Fine screw	2	PACKET		
	TV socket	1	No		
	Smoke ditector	0			
	plastic clips 22mm	6	Box		
	Bulk head light fitting	16	PCS		
	SUB-TOTAL FOR ELECTRICAL INSTALLATION				

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
L.	PLUMBING AND SANITARY INSTALLATION				
	<u>WATER DISTRIBUTION SYSTEM</u>				
	<u>PPR Pipes</u>				
	50mm Dia	29	Pcs		
	40mm Dia	11	Pcs		
	32mm Dia	18	Pcs		
	25mm Dia	46	Pcs		
	20mm Dia	36	Pcs		
	15mm Dia	93	Pcs		
	12mm Dia Flexible Pipe	64	Nos.		
	VALVES				
	50mm Dia	2	Nos.		
	40mm Dia	6	Nos.		
	32mm Dia	14	Nos.		
	20mm Dia	9	Nos.		
	15mm Dia	26	Nos.		
	15mm Dia Angle Valves	84	Nos.		
	20mm Dia WATER TAPE WITH STOP COCK/PUSH COCK	58	Nos.		
	REDUCING BUSH				
	Ø50 / 40mm	2	Nos.		
	Ø50 / 32mm	3	Nos.		
	Ø50 / 25mm	8	Nos.		
	Ø50 / 20mm	2	Nos.		
	Ø50 / 15mm	2	Nos.		
	Ø40 / 32mm	3	Nos.		
	Ø40 / 15mm	4	Nos.		
	Ø32 / 25mm	8	Nos.		
	Ø32 / 20mm	5	Nos.		
	Ø32 / 15mm	6	Nos.		
	Ø25 / 20mm	189	Nos.		
	Ø25 / 15mm	68	Nos.		
	Ø20 / 15mm	58	Nos.		
	90° PLAIN ELBOW				
	Ø50mm	8	Nos.		
	Ø40mm	8	Nos.		
	Ø32mm	17	Nos.		
	Ø25mm	33	Nos.		
	Ø20mm	22	Nos.		
	Ø15mm	66	Nos.		
	90 ADAPTOR ELBOW (Female)				
	Ø15mm	84	Nos.		
	90 ADAPTOR ELBOW (Male)				
	Ø15mm	18	Nos.		
	T PLAIN				
	Ø50mm	8	Nos.		
	Ø40mm	8	Nos.		
	Ø32mm	17	Nos.		
	Ø25mm	33	Nos.		
	Ø20mm	22	Nos.		

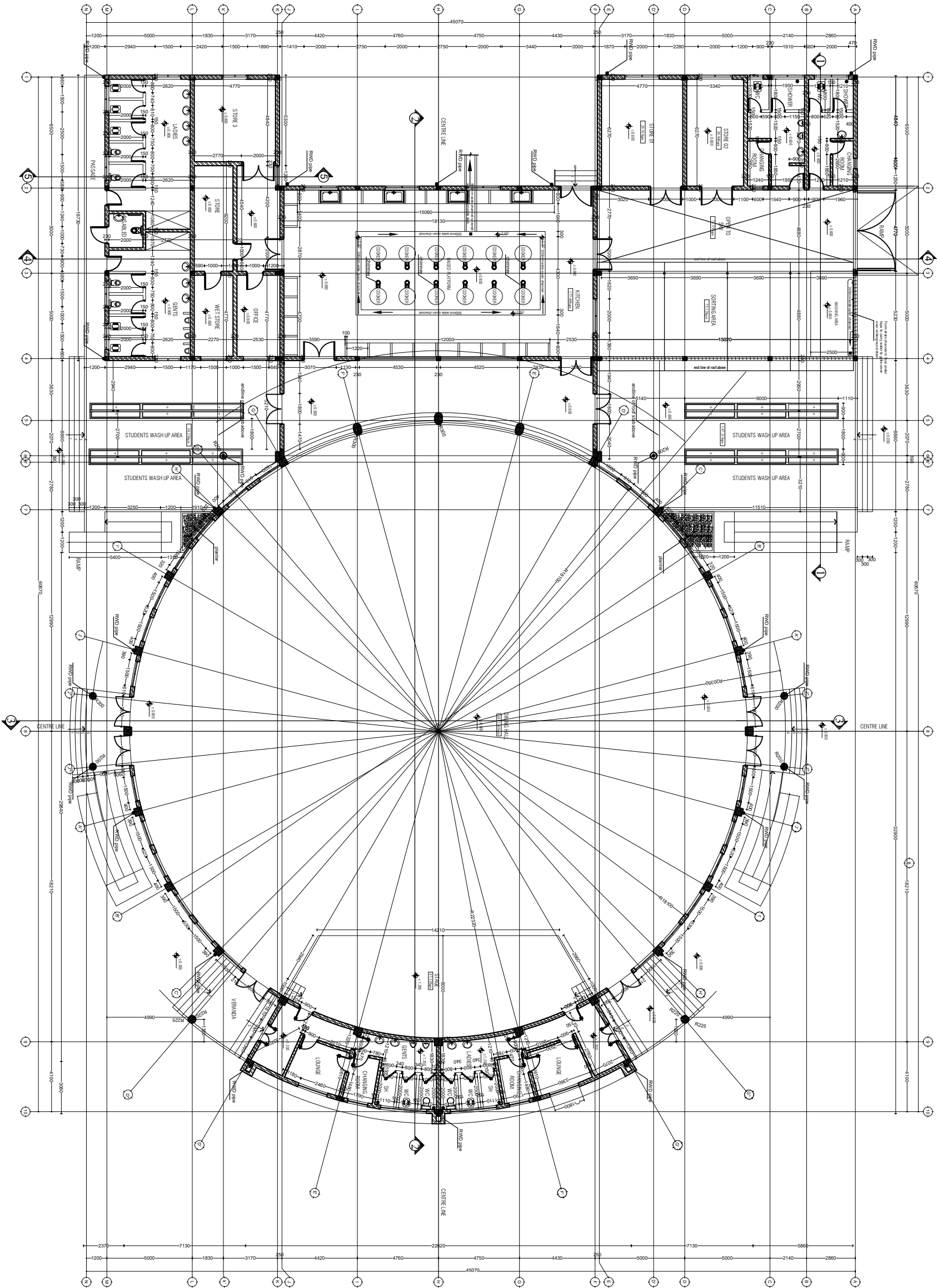
ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
	SOCKET				
	Dia. 15mm	186	Nos.		
	Dia. 20mm	72	Nos.		
	Dia. 25mm	92	Nos.		
	Dia. 32mm	28	Nos.		
	Dia. 40mm	16	Nos.		
	Dia. 50mm	58	Nos.		
	SEWARAGE				
	PIPING (uPVC PIPE)				
	150mm Dia	22	Pcs		
	100mm Dia	36	Pcs		
	50mm Dia	23	Pcs		
	40mm Dia	36	Pcs		
	32mm Dia	48	Pcs		
	Elbows, Bends Connector traps etc to suite the above installation.		Item		
	FITTINGS				
	100mm Dia Y-Tee	46	Nos.		
	50mm Dia Y-Tee	28	Nos.		
	100mm Dia Inspection Tee	18	Nos.		
	50mm Dia Inspection Tee	39	Nos.		
	SOCKET				
	150mm Dia Socket	44	Nos.		
	110mm Dia Socket	72	Nos.		
	50mm Dia Socket	46	Nos.		
	40mm Dia Socket	21	Nos.		
	32mm Dia Socket	21	Nos.		
	90° ELBOW				
	110mm	17	Nos.		
	50mm	16	Nos.		
	40mm	6	Nos.		
	32mm	10	Nos.		
	45° ELBOWS				
	110mm	24	Nos.		
	50mm	18	Nos.		
	40mm	11	Nos.		
	32mm	13	Nos.		
	REDUCING BUSH				
	50mm/40mm	20	Nos.		
	40mm/32mm	20	Nos.		
	REDUCING SOCKET				
	50mm/40mm	10	Nos.		
	40mm/32mm	16	Nos.		

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
	EXTERNAL SEWERAGE				
	Construction of Manhole of internal dimension 600 x 600mm, depth to invert level not exceeding 0.5m with medium duty cast iron frame and cover.	10	Nos.		
	Ditto but with Size 800mm x 800mm	8	Nos.		
	Allow for Gully trap, size 150 x 150mm	20	Nos.		
	Construction of Grease Trap of internal dimension 2,500 x 1,500mm, depth to invert level not exceeding 0.5m with medium duty cast iron frame and cover.	1	Nos.		
	RAIN WATER HARVESTING SYSTEM				
	RAIN WATER				
	Piping (uPVC PIPE)				
	100mm Dia	36	Pcs		
	100mm Dia Floor gully including all fittings.	36	Pcs		
	Elbows, bend, brackets, filters and all other fittings		Item		
	SANITARY FITTINGS				
	White Vitreous China Floor Standing Back to Wall Rimless Water Closet as manufactured by CERA or equivalent approved	6	Pcs		
	White Vitreous China SQUATTING PAN with TRAP as manufactured by CERA or approved equivalent with Dimenions 510mm x 410mm	9	Pcs		
	Wall mounted Push Type flush tank as manufactured by KARIBA or equivalent with 4.5 Litres Volume	9	Pcs		
	Overhead Brass Shower with Pressure Balance Valve as manufactured by CERA or equivalent approved	4	Pcs		
	CERA Bib Cock with Jet Spray or its equivalent approved	38	Pcs		
	1000mm x 600mm Vanity Mirror	6	Pcs		
	White Vitreous ChinaWall Hung Wash Hand Basin with Half Pedestal and quarter turn faucet as manufactured by CERA or its equivalent	14	Pcs		

JUNE, 2023 (REVISED I) Page/11 MoEST/PO-RALG

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ARCHITECTURAL DRAWINGS

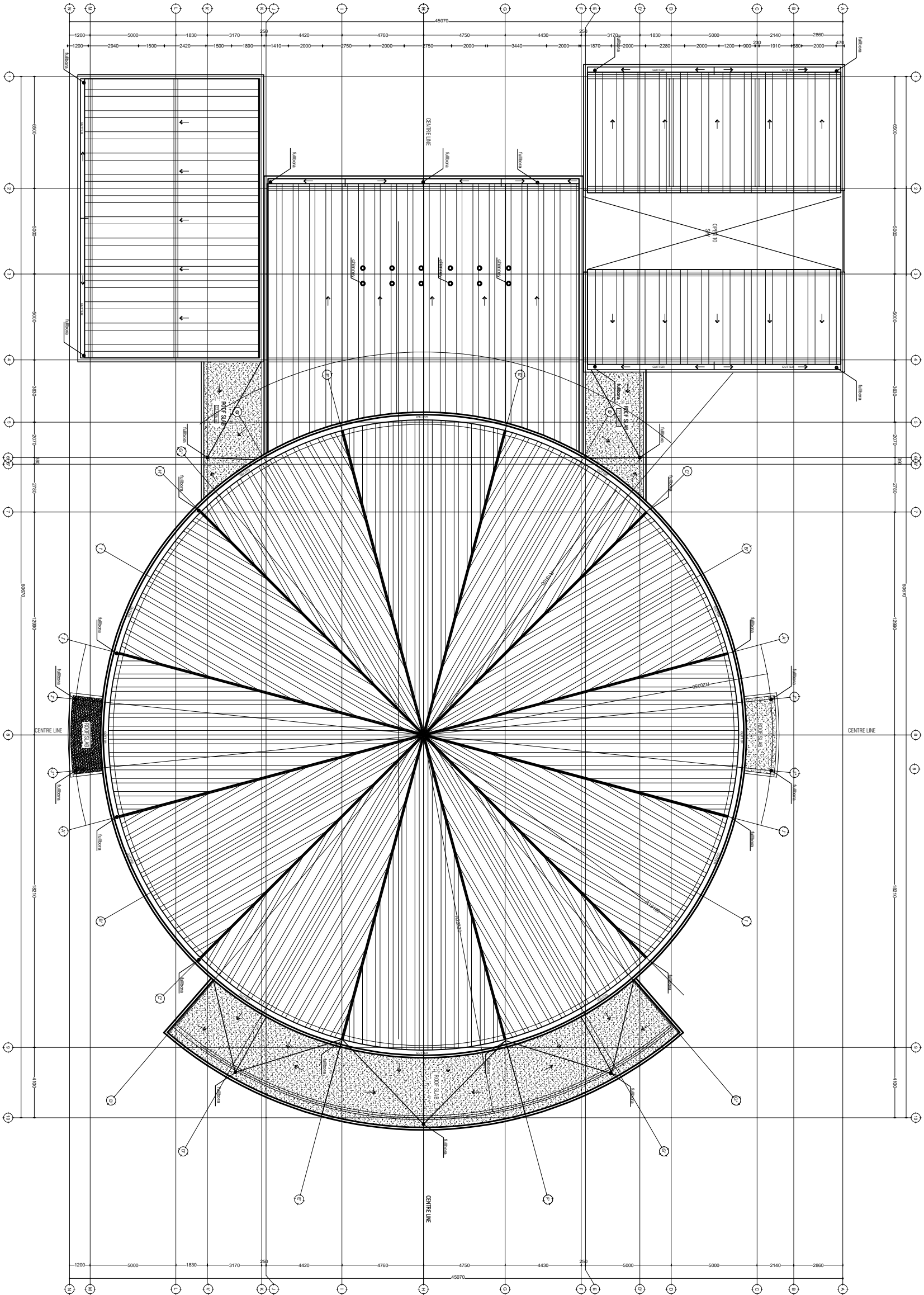


MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY
IN COLLABORATION WITH
PRESIDENT'S OFFICE REGIONAL ADMINISTRATION AND
LOCAL GOVERNMENT

PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS
FOR
SECONDARY EDUCATION QUALITY IMPROVEMENT PROGRAM (SEQUP)

DRAWING TITLE
DINING HALL FLOOR PLAN
DRAWING NO.
SQP/DW/01

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SCALE 1:200
JUNE 2023

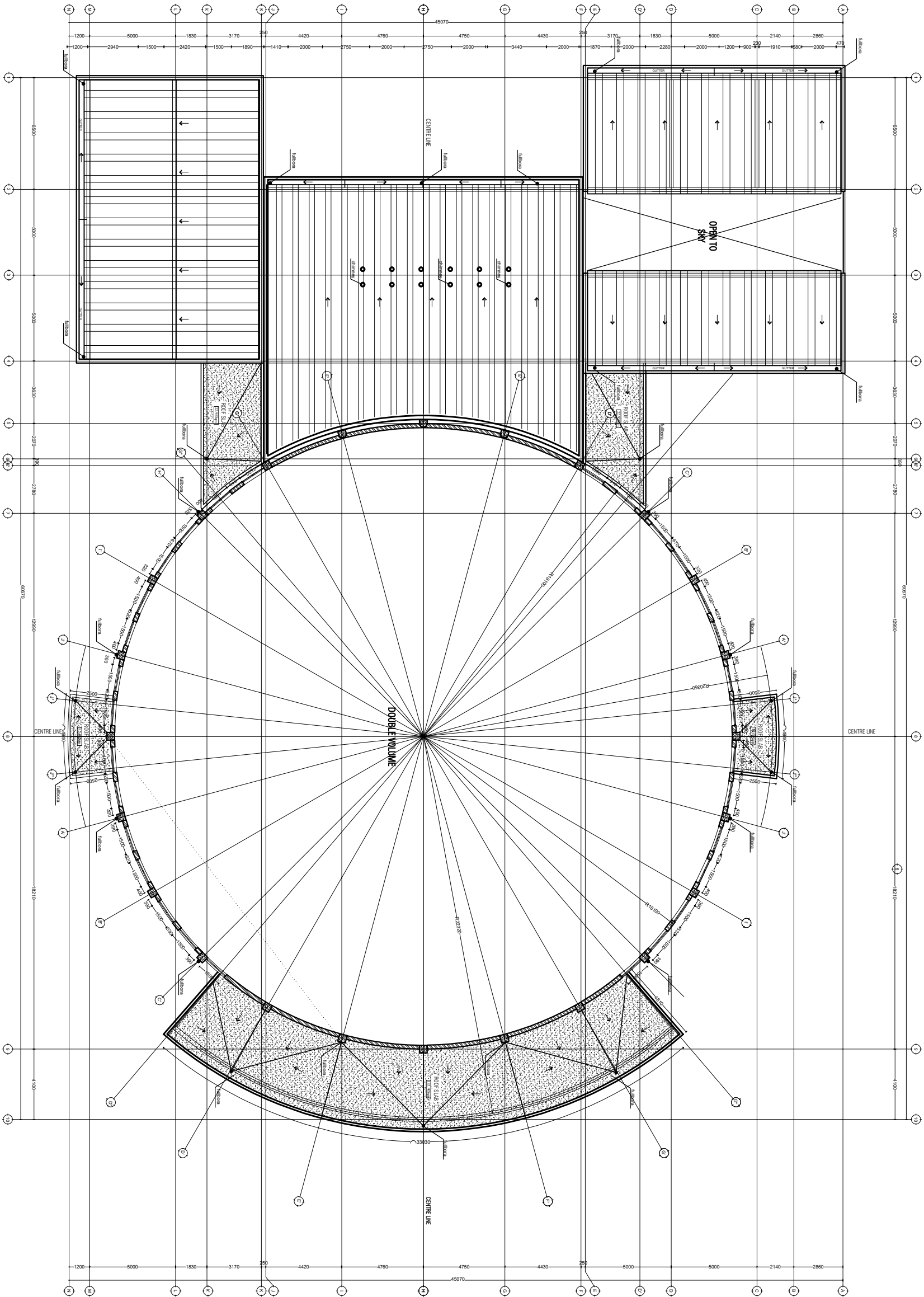


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PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS
FOR
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DRAWING TITLE
DINING HALL ROOF PLAN 2
DRAWING NO.
SQP/DW/03

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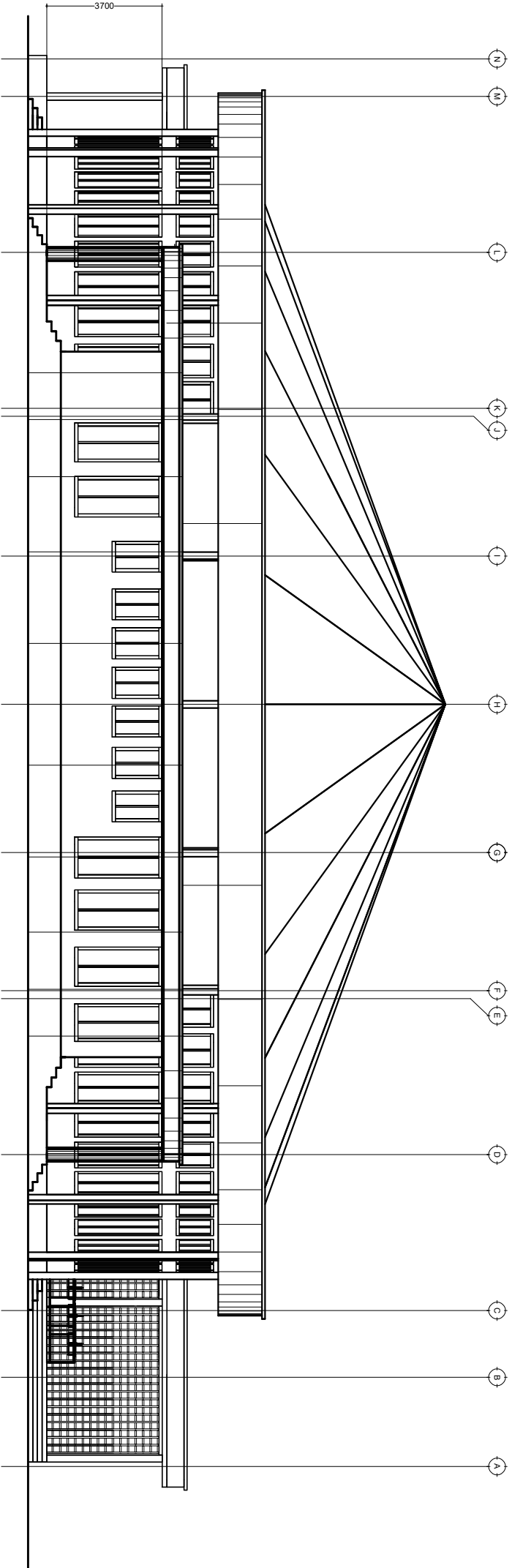


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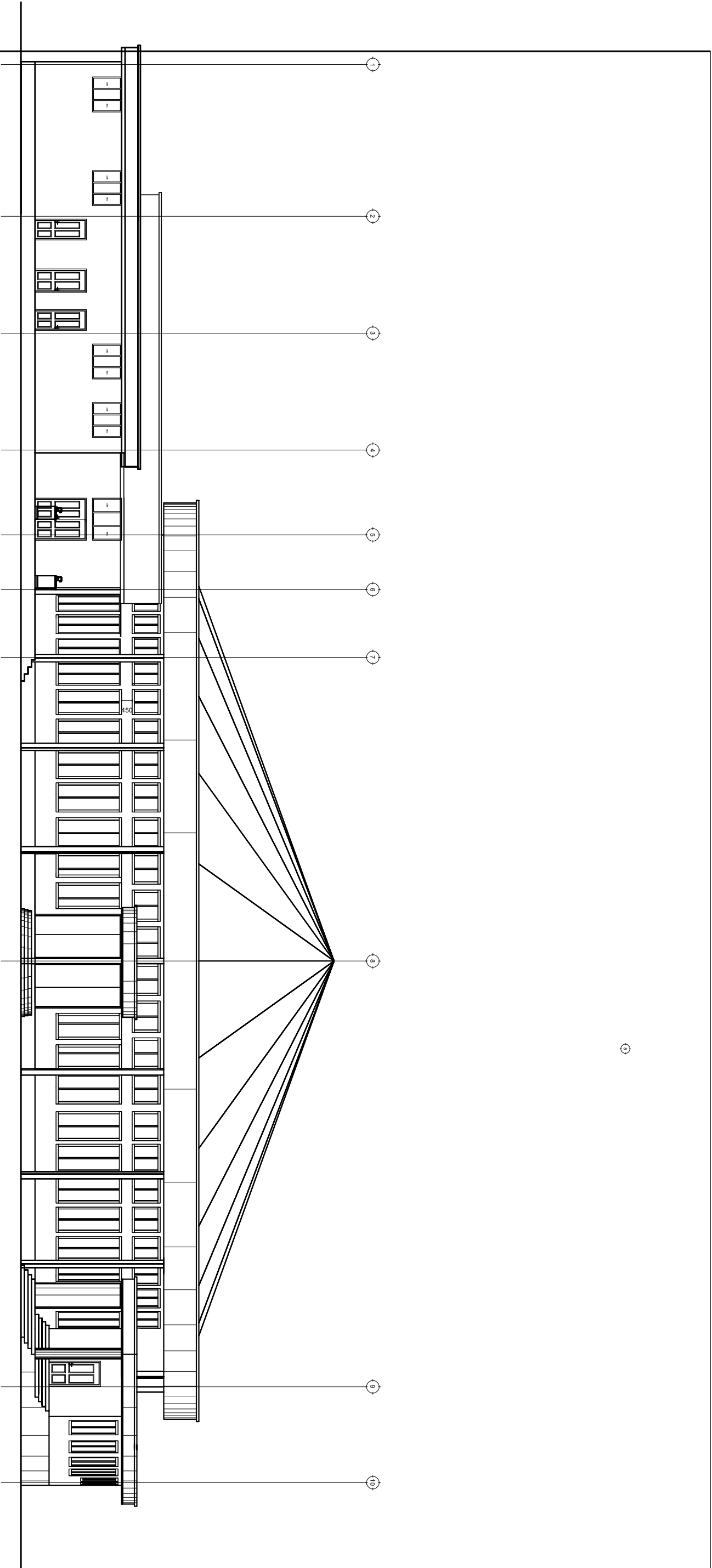
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DINING HALL ROOF PLAN - 1
DRAWING NO.
SQP/DW/02

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FRONT ELEVATION

MINISTRY OF EDUCATION,SCIENCE AND TECHNOLOGY <small>IN COLLABORATION WITH</small> PRESIDENT'S OFFICE REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT	PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS FOR SECONDARY EDUCATION QUALITY IMPROVEMENT PROGRAM (SEQUIP)	
	DRAWING TITLE DINING HALL FRONT ELEVATION	DRAWN BY J.R CHECKED BY I.S, H.N. & R.M SCALE 1:200 JUNE,2023



LEFT SIDE ELEVATION

MINISTRY OF EDUCATION,SCIENCE AND TECHNOLOGY
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LOCAL GOVERNMENT

PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS
FOR
SECONDARY EDUCATION QUALITY IMPROVEMENT PROGRAM (SEQUIP)

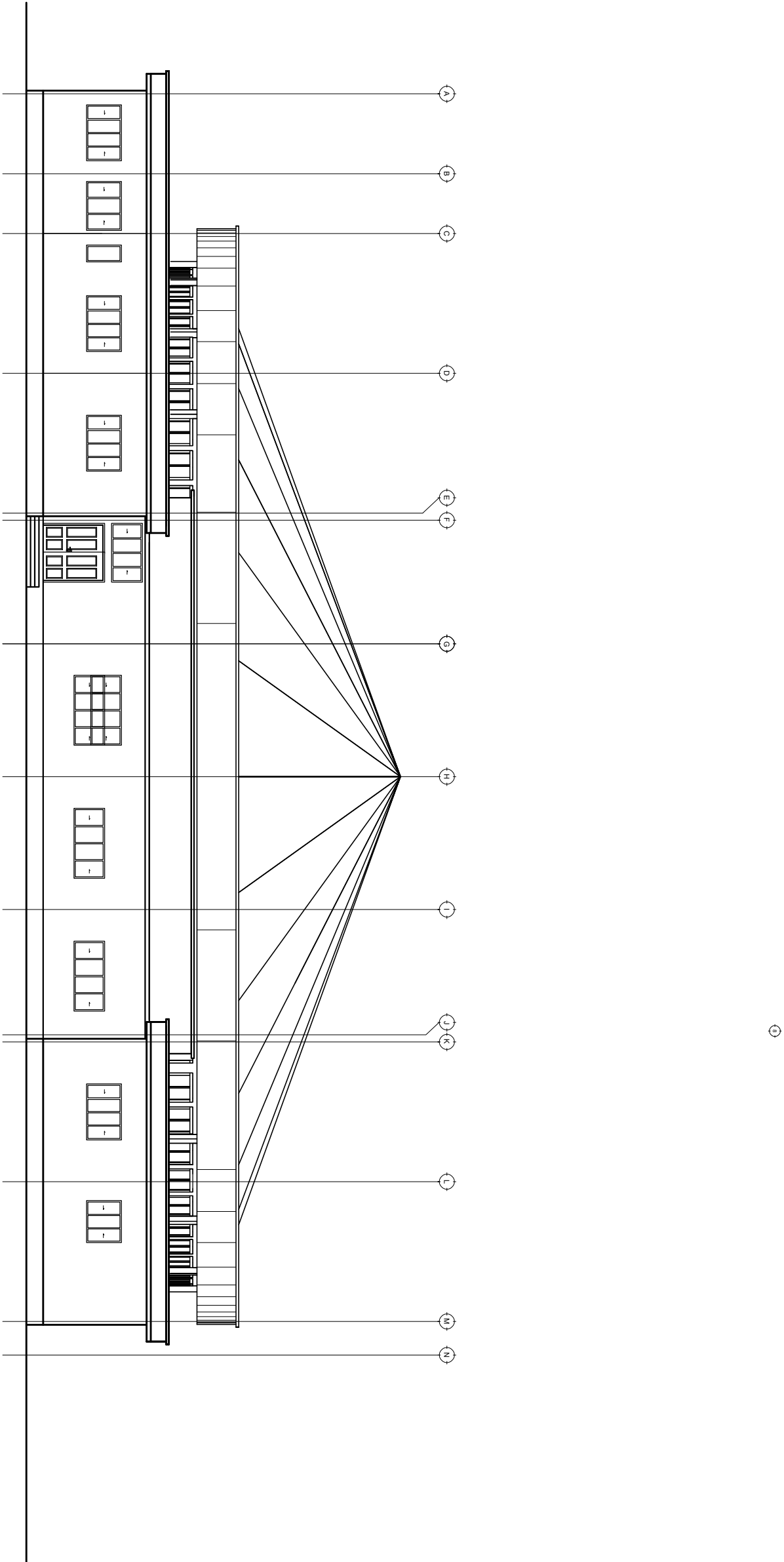
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DINING HALL LEFT ELEVATION

DRAWING NO.

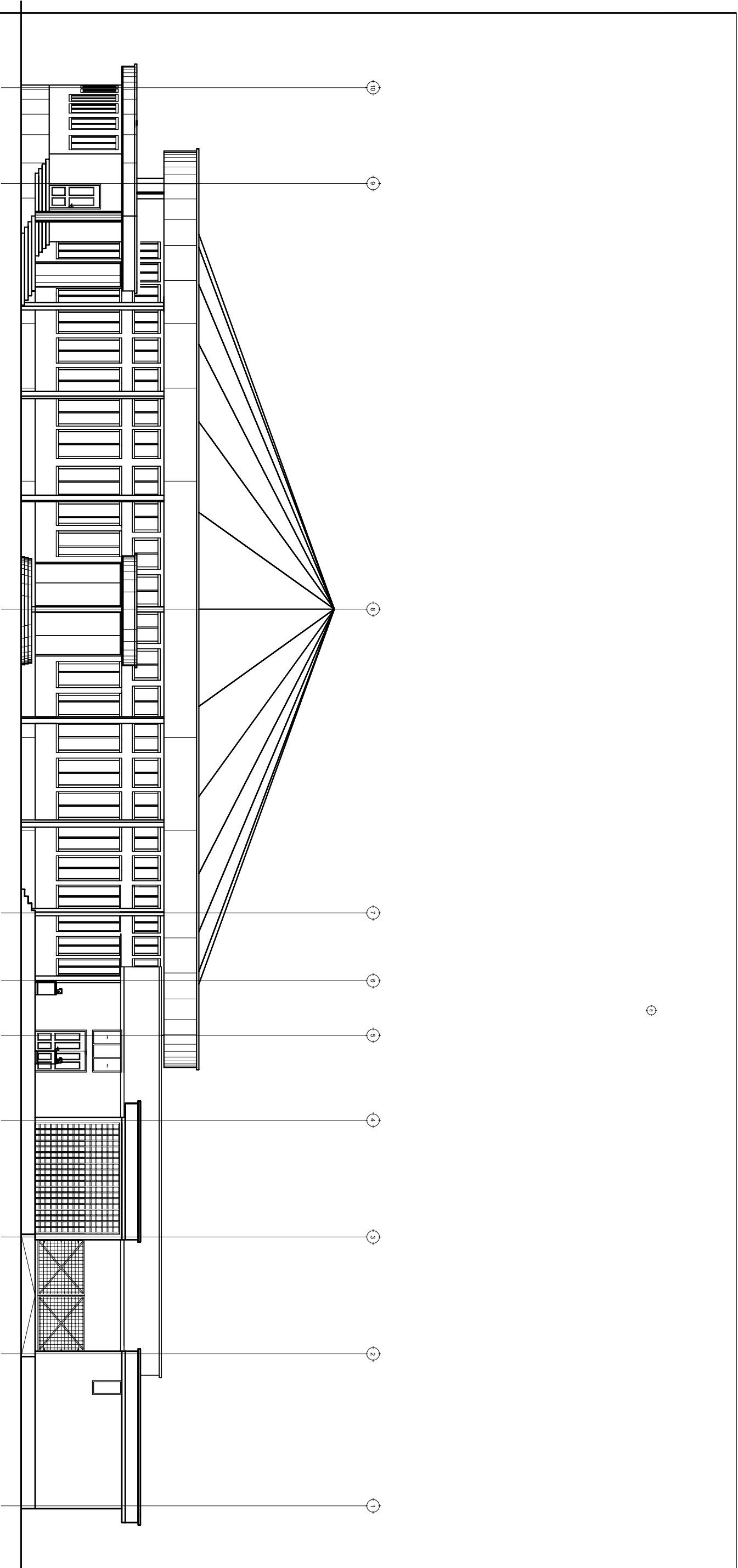
SQP/DW/08

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JUNE,2023



REAR ELEVATION

MINISTRY OF EDUCATION,SCIENCE AND TECHNOLOGY <i>IN COLLABORATION WITH</i> PRESIDENT'S OFFICE REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT	PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS FOR SECONDARY EDUCATION QUALITY IMPROVEMENT PROGRAM (SEQUIP)	DRAWING TITLE DINING HALL REAR ELEVATION	DRAWN BY J.R CHECKED BY I.S, H.N. & R.M SCALE 1:200 JUNE,2023
	DRAWING NO. SQP/DW/06		



RIGHT SIDE ELEVATION

MINISTRY OF EDUCATION,SCIENCE AND TECHNOLOGY <i>IN COLLABORATION WITH</i> PRESIDENT'S OFFICE REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT	PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS FOR SECONDARY EDUCATION QUALITY IMPROVEMENT PROGRAM (SEQUIP)	DRAWING TITLE	DINING HALL RIGHT ELEVATION	DRAWN BY J/R CHECKED BY I.S, H.N. & R.M SCALE 1:200 JUNE,2023
	DRAWING NO.	SQP/DW/07		

THE UNITED REPUBLIC OF TANZANIA



PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

PROPOSED STANDARD DRAWINGS FOR SEQUIP

Schedule of Materials & Labour for Sickbay

PROJECT AREA

TANZANIA MAINLAND

Ministry of Education, Science and
Technology,
Government City - Mtumba,
AFYA Street,
P.O Box 10,
40479 DODOMA.

President's Office,
Regional Administration,
& Local Government
Government City - Mtumba
TAMISEMI Street,
P. O. Box 1923,
41185 DODOMA.

JUNE, 2023

MOEST/PO-RALG

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
	<u>MATERIALS</u>				
A	SUB-STRUCTURE -PROVISIONAL				
1	<u>Strip Foundation - Grade 15 Plain (14m³)</u>				
	Aggregate (3/4")	9	M ³		
	Sand	5	M ³		
	Cement-50kgs (42.5)	56	Bags		
2	<u>Foundation Walls</u>				
	6" Block - Cement & Sand	1,456	No		
	Sand	5	M ³		
	Cement -50kgs (42.5)	37	Bags		
	<u>ALTERNATIVE TO FOUNDATION WALL</u>				
	<i>** If stone is applicable, then blockwork is not applicable. Therefore Engineer must confirm to the Tenderer which item to be priced (Blockwork or stone) depending on availability and suitability of building materials.</i>				
	Stone, complete with its associated mortar etc	30	M ³		
3	<u>Moram, Hardcore & Site sterilization</u>				
	Moram (4.5m ³ lorry)	8	Trips		
	Hardcore 150mm thick - (4.5m ³ lorry)	5	Trips		
	Sand	4	M ³		
	Aldrin solution or other and equal approved (1000mls)	2	Bottle		
4	<u>Oversite Concrete 100mm thick - 15 grade ,Ground Beam - 20 grade</u>				
	DPM	126	M ²		
	Cement -50kgs (42.5)	90	Bags		
	Aggregates (1/2")	15	M ³		
	Sand	8	M ³		
	Reinforcement - 12mm diameter high tensile 460N/mm2	38	PC'S		
	Reinforcement - 8mm diameter high tensile 460N/mm2	35	PC'S		
	Timber 1" X 10 " (5.2m long)	8	PC'S		
	Timber 2" X 2"(3.5m)	5	PC'S		
	Nails-4"	15	Kgs		
	Nails-3"	10	Kgs		
	Supporting props (3m)	12	PC'S		
	SUB-TOTAL SUBSTRUCTURE				

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
B.	<u>SUPERSTRUCTURE</u>				
1	<u>Walls & Ring beam</u>				
	6" Block - Cement & Sand	2,400	No		
	DPC (30m long, 1m wide)	2	Roll		
	Sand	13	M ³		
	Cement-50kgs (42.5)	94	Bags		
	Aggregates (1/2")	5	M ³		
	Reinforcement - 12mm diameter high tensile 460N/mm ²	32	PC'S		
	Reinforcement - 8mm diameter high tensile 460N/mm ²	30	PC'S		
	Binding Wire -1kg	3	PC'S		
	Timber 1" X 10" to Sides (5.2m long)	7	PC'S		
	Timber 1" X 5" (Plates)	5	PC'S		
	Timber 2" X 2" (3.5m)	5	PC'S		
	Supporting Props 3m	5	PC'S		
	SUB-TOTAL SUPER STRUCTURE				
	<u>ALTERNATIVE TO BLOCKWORK WALL</u>				
	<i>** If brickwork is applicable, then blockwork is not applicable. Therefore Engineer must confirm to the Tenderer which item to be priced (Blockwork or brickwork) depending on availability and suitability of building materials. Note that: Strictly do not use stretcher bond when using bricks, the acceptable bond is either Flemish or English or header.</i>				
	<u>Brickwork</u>				
	230mm thick One brick wall	256	m ²		
C.	<u>ROOF STRUCTURE & COVERING</u>				
1	<u>Roof Structure - Provisional</u>				
	Timber 2" X 3" Purlins	480	ft		
	Timber 2" X 4" Struts	861	ft		
	Timber 2" X 6" Rafter, Kingpost and Tie beam	717	ft		
	Fascia board 1" X 10" -ref. Semi Hardwood (5.2m long)	11	PC'S		
	Nails -5"	25	Kgs		
	Nails -4"	20	Kgs		
	Nails -3"	15	Kgs		
	16mm diameter bolt, 500mm long	26	Pc's		
	<u>NOTE:</u> The above softwood timber structure should be pressure impregnated treated				

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
2	<u>Roof Covering</u>				
	28G resin coated Iron sheet	192	M ²		
	Ridge - 28 G	6	PC'S		
	Aluminium Roofing Nails	19	Packet		
3	<u>Gutter's</u>				
	Upvc 100mm half round (6m long)-5"	6	PC'S		
	Upvc 75mm diameter down pipe; Class B	4	PC'S		
	PVC outlet	8	PC'S		
	PVC bend 90'	8	PC'S		
	PVC bend 45'	8	PC'S		
	Gutter support bracket	8	PC'S		
	Gutter Clamp 3"	32	PC'S		
	Connector/reducer	8	PC'S		
	Connector outer	8	PC'S		
	Corner Inner	8	PC'S		
	SUB-TOTAL ROOF STRUCTURE & COVERING				
D.	<u>CEILING</u>				
	Gypsum board -9mm thick	40	PC'S		
	Plain Cornice (2.5m)	33	PC'S		
	Screw 1.25" 500pcs/box	4	Box		
	Gypsum powder - kg	7	Bags		
	Fibre tape (90m)	1	Roller		
	Treated softwood Timber 2" X 2" - 3.5m	1,320	ft		
	Nails 4"	15	Kgs		
	Nails 3"	27	Kgs		
	SUB-TOTAL FOR CEILING				

E.	<u>DOOR</u>				
1	<u>40mm thick hardwood paneled door shutter</u>				
	920 x2100mm high	6	PC'S		
	720 x2100mm high	4	PC'S		
2	<u>45 x 145mm Frames (hardwood),Varnish & Glass</u>				
	1000 x 2500mm high frame	6	PC'S		
	800 x 2500mm high frame	4	PC'S		
	Brush 3"	3	Pcs		
	5mm thick clear glass to Vents	3.0	M ²		
	13 X15 mm glass beads	21	M		
	Sand paper (msasa) No.80	5	LM		
	Clear Varnish - 4Litres	2	TIN		
	Thinner for Varnish	5	Litres		
3	<u>IronMongerries - ref Union</u>				
	Mortice lock Three lever	6	No		
	Mortice lock set - Two lever with indicator bolt	4	No		
	Brass hinges - 100mm	15.0	Pairs		
	SUB-TOTAL FOR DOORS				

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
F.	<u>WINDOWS</u>				
1	<u>Aluminium sliding Window comprising 100mm x 1.2mm thick</u>				
	1500 X 1500mm high	8	PC'S		
	1500 X 600mm high	2	PC'S		
2	<u>25 x 4mm thick flat bar grill painted red-oxide with 25 x 25mm square pipes frame and all necessary accessories</u>				
	1500 X 1500mm high -Dispensing, room	1	PC'S		
	1500 X 1500mm high -Injection room	1	PC'S		
	1500 X 1500mm high -Consulting room	1	PC'S		
	900 X 2500mm high High level to doors	3	PC'S		
	SUB-TOTAL FOR WINDOWS				
G.	<u>FINISHING</u>				
	Sand - (Lorry 4.5M3)	6	m3		
	Cement-50kgs	38	Bags		
	500 X 500 X 8mm thick - Non-slippery porcelain floor tiles - (1.75sqm/Box)	75	Box		
	Grout (1kg/packet)	8	Packet		
	Spacer	3	Packet		
	Skirting (600mm long; 25/Box)	6	Box		
2	<u>Wall Finishing (404m²) -15mm thick (1:4)</u>				
	Sand	11	M ³		
	Cement-50kgs (42.5)	61	Bags		
	White cement - 40kg	4	Bags		
	Gypsum powder - 25kg	13	Bags		
	Sand paper Msasa No.120	1	Roll		
	SUB-TOTAL FOR FINISHING				
H.	<u>PAINTING & DECORATION</u>				
	Emulsion Paint - 20 LTRS	6	buckets		
	Weather guard Paint - 20 LTRS	2	buckets		
	Washable paint -20 LTRS	4	buckets		
	Primer paint -20 LTRS	2	buckets		
	Solvent - 5LTRS	2	TIN		
	Brush 3"	4	Pcs		
	Roller	3	Pcs		
	Gloss paint-4LTR	1	TIN		
	Bitumen paint - 4Litres	2	TIN		
	SUB-TOTAL FOR PAINTING&DECORATION				

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ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
	<u>PLUMBING AND SANITARY INSTALLATIONS</u>				
	WATER DISTRIBUTION SYSTEM				
	PPR Pipes				
	25mm Dia	4	PCS		
	20mm Dia	8	PCS		
	15mm Dia	14	PCS		
	12mm Dia Flexible Pipe	19	PCS		
	VALVES				
	25mm Dia	2	PCS		
	20mm Dia	3	PCS		
	15mm Dia	9	PCS		
	15mm Dia Angle Valves	23	PCS		
	20mm Dia WATER TAPE WITH STOP COCK/PUSH COCK	1	PCS		
	REDUCING BUSH				
	Ø25 / 20mm	4	PCS		
	Ø25 / 15mm	5	PCS		
	Ø20 / 15mm	11	PCS		
	90° PLAIN ELBOW				
	Ø25mm	8	PCS		
	Ø20mm	14	PCS		
	Ø15mm	18	PCS		
	90 ADAPTOR ELBOW (Female)				
	Ø15mm	28	PCS		
	90 ADAPTOR ELBOW (Male)				
	Ø15mm	9	PCS		
	T PLAIN				
	Ø25mm	8	PCS		
	Ø20mm	11	PCS		
	Ø15mm	14	PCS		
	SOCKET				
	Dia. 15mm	26	PCS		
	Dia. 20mm	12	PCS		
	Dia. 25mm	5	PCS		
	SEWARAGE				
	PIPING (uPVC PIPE)				
	100mm Dia	12	PCS		
	50mm Dia	5	PCS		
	40mm Dia	5	PCS		
	32mm Dia	5	PCS		
	Elbows	46	PCS		
	Bend	28	PCS		
	Bracket	35	PCS		
	Filter	17	PCS		
	FITTINGS				
	100mm Dia Y-Tee	6	PCS		
	50mm Dia Y-Tee	6	PCS		

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
	100mm Dia Inspection Tee	8	PCS		
	50mm Dia Inspection Tee	9	PCS		
	SOCKET				
	110mm Dia	12	PCS		
	50mm Dia	8	PCS		
	40mm Dia	8	PCS		
	32mm Dia	6	PCS		
	90° ELBOW				
	110mm	5	PCS		
	50mm	4	PCS		
	40mm	5	PCS		
	32mm	3	PCS		
	45° ELBOWS				
	110mm	7	PCS		
	50mm	4	PCS		
	40mm	5	PCS		
	32mm	6	PCS		
	REDUCING BUSH				
	50mm/40mm	9	PCS		
	40mm/32mm	6	PCS		
	REDUCING SOCKET				
	50mm/40mm	8	PCS		
	40mm/32mm	9	PCS		
	<u>SANITARY FITTINGS</u>				
	White Vitreous China SQUATTING PAN with TRAP as manufactured by with Dimenions 510mm x 410mm , complete with flush tank 9litres	3	PCS		
	Overhead Brass Shower with Pressure Balance Valve	1	PCS		
	Overhead Shower with Single Lever Faucet Mixer	1	PCS		
	Bib Cock with Jet Spray or its equivalent approved	3	PCS		
	1000mm x 600mm Vanity Mirror	5	PCS		

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	<u>GENERAL SUMMARY</u>				AMOUNT -TZS
	<u>SICKBAY BLOCK</u>				
A.	SUB-STRUCTURE -PROVISIONAL				
B.	SUPERSTRUCTURE				
C.	ROOF STRUCTURE & COVERING				
D.	CEILING				
E.	DOOR				
F.	WINDOWS				
G.	FINISHING				
H.	PAINTING & DECORATION				
J.	ELECTRICAL INSTALLATION				
K.	PLUMBING INSTALLATION				
	TOTAL BUILDING MATERIALS CARRIED TO GENERAL SUMMARY				
	<u>ADD:</u>				
	LABOUR COST CARRIED TO GENERAL SUMMARY : (Improve and Fill the respective Labour form)				
	Note:				
	i. Refer attached specification and number of Furniture(s) for Sick bay				
	ii. Refer General Summary for: Preliminary, Transportation and Supervision Costs				
	iii. Preliminary cover the following item:				
	- Setting out working tools, Equipments, Temporary toilets, water for the works, Scaffolding,				
	- Power for the works, Security, store, Materials test and signboard.				
	iv. Supervision cost depend on guideline of the project				
	v. Installation of Ceiling Fan is an option, depend on whether condition of specific area .				

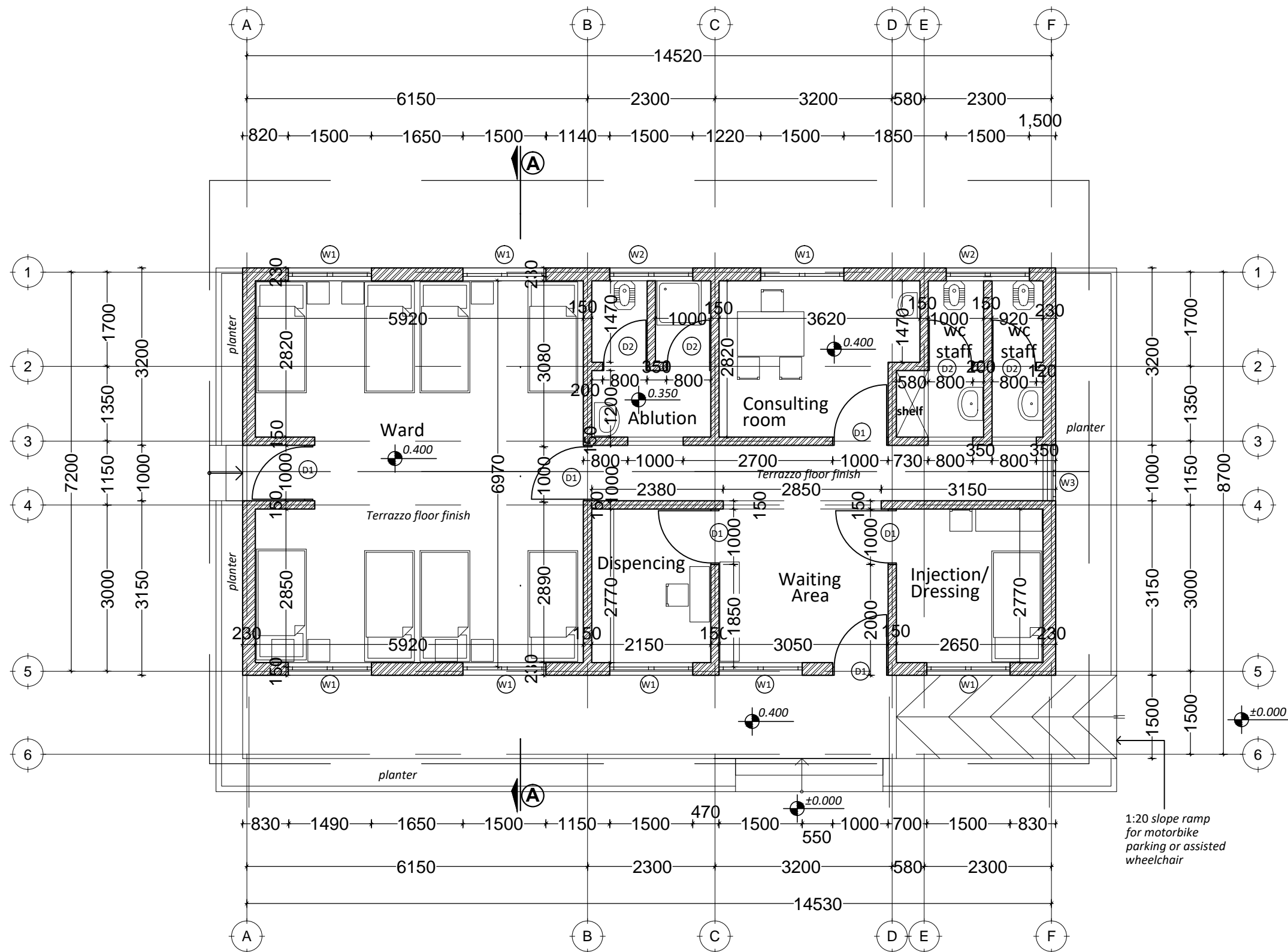
ARCHITECTURAL DRAWINGS

SICK BAY

ARCHITECTURAL DRAWING

JUNE 2023

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GROUND PLAN

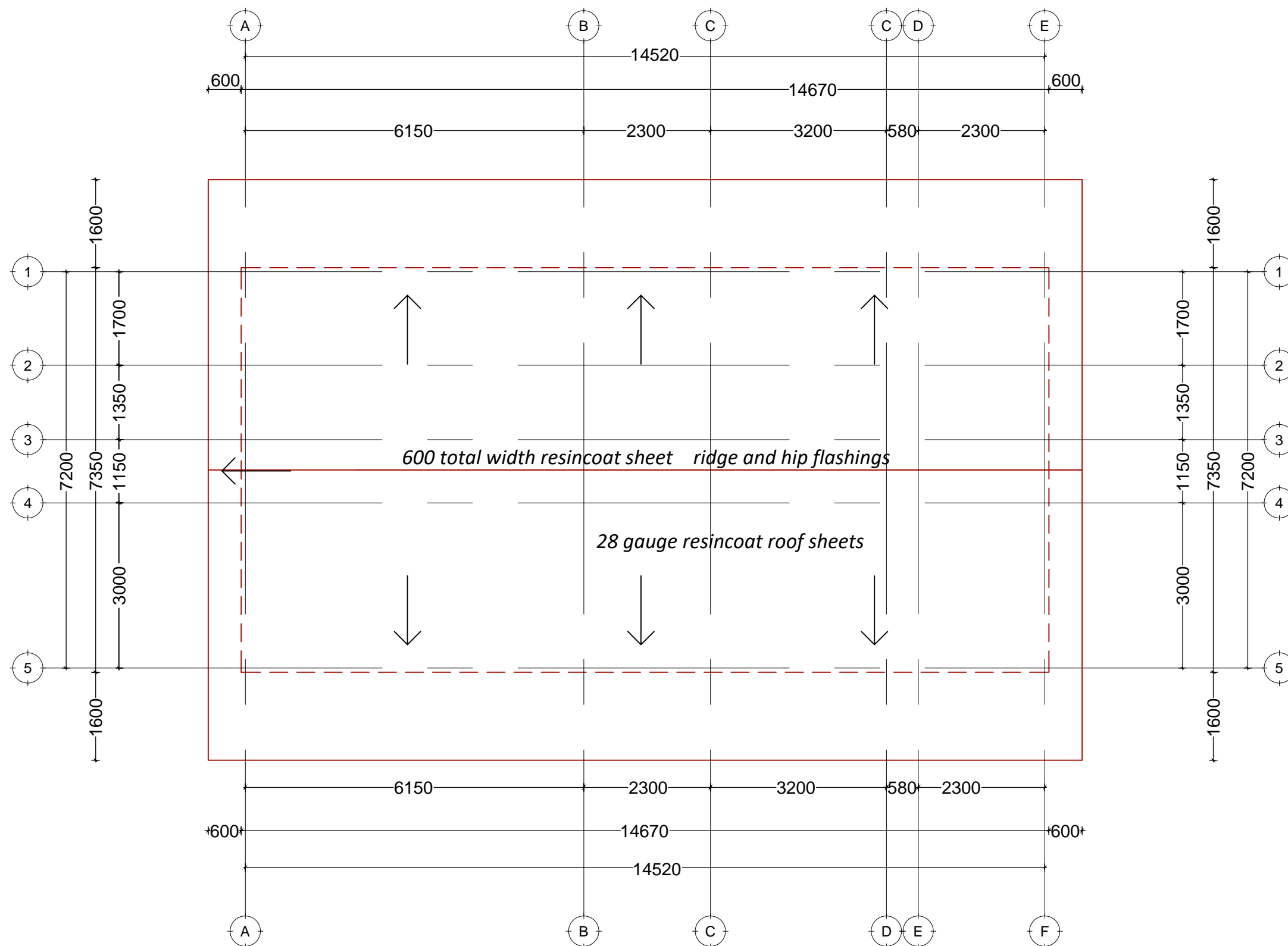
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LOCAL GOVERNMENT (PO - RALG)

PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS
FOR
SECONDARY EDUCATION QUALITY IMPROVEMENT PROGRAM (SEQUIP)

DRAWING TITLE SICK BAY
GROUND PLAN
DRAWING NO. SQP/ARC/SB/02

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JUNE, 2023



ROOF PLAN

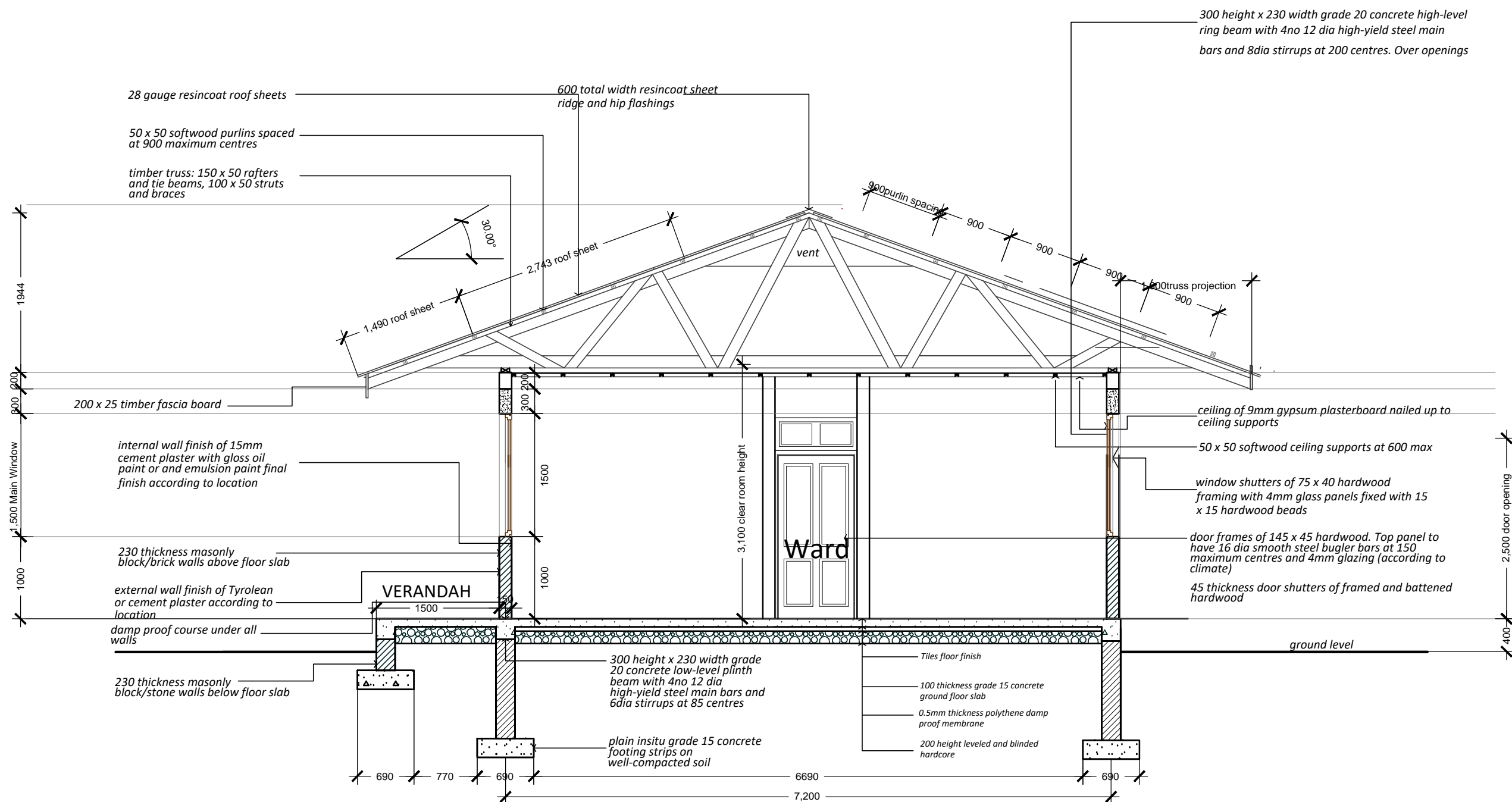
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DRAWING TITLE SICK BAY
ROOF PLAN
DRAWING NO. SQP/ARC/SB/03

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SECTION A-A

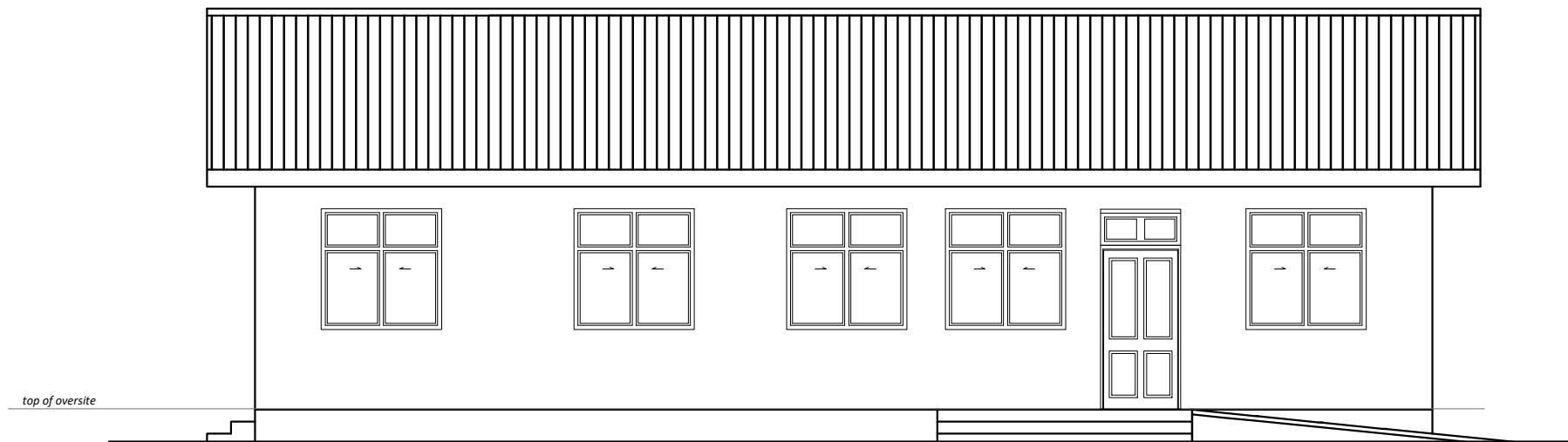
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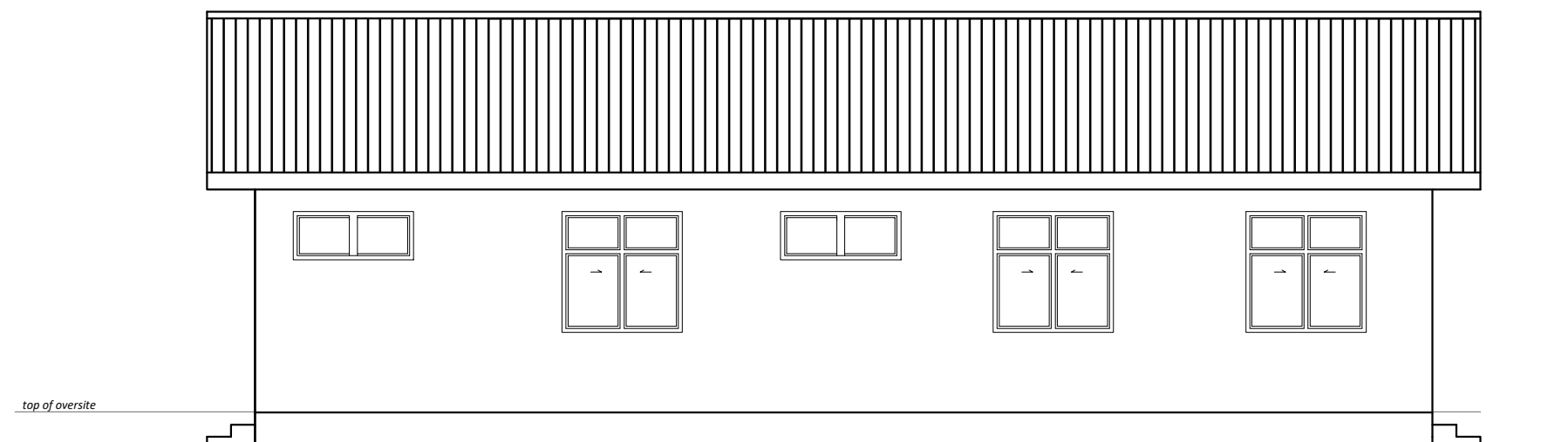
PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS
FOR
SECONDARY EDUCATION QUALITY IMPROVEMENT PROGRAM (SEQUIP)

DRAWING TITLE **SICK BAY
SECTION**
DRAWING NO. **SQP/ARC/SB/04**

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JUNE, 2023



front elevation



rear elevation

ELEVATIONS

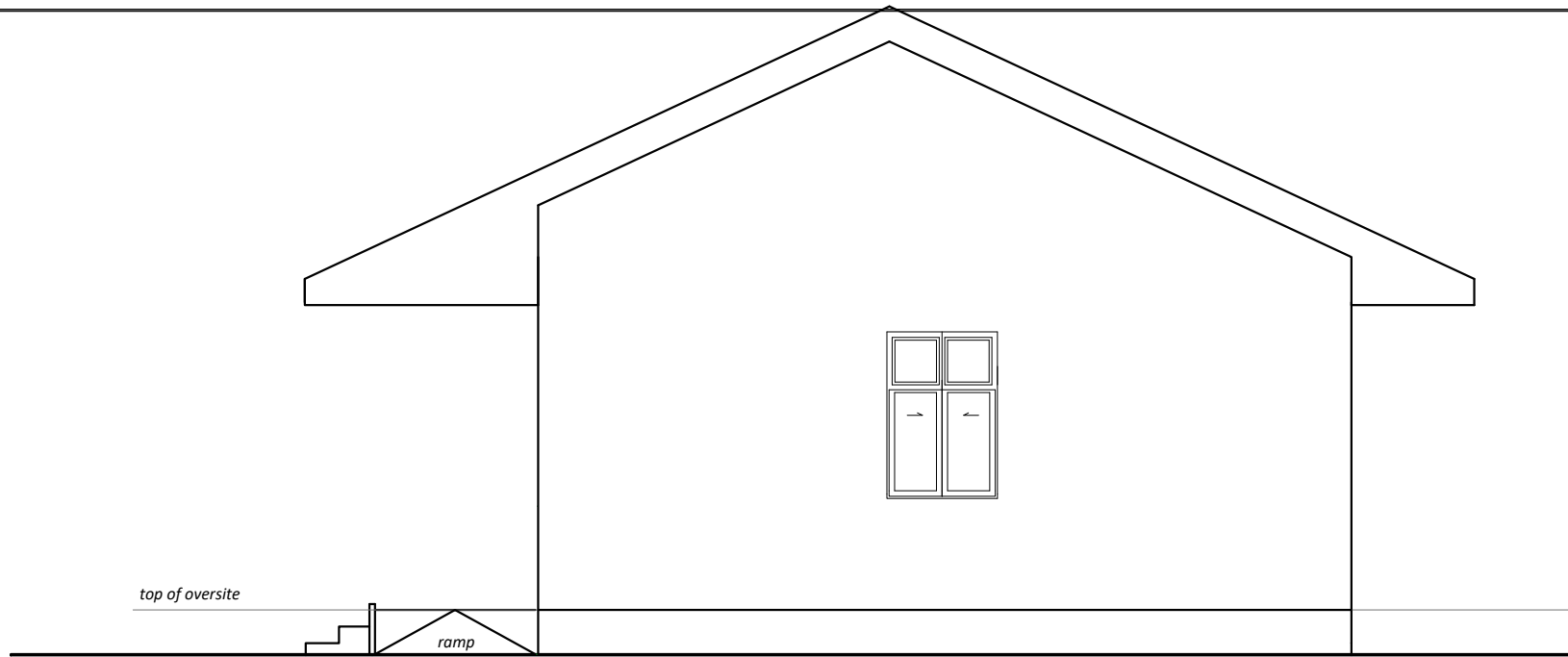
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MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY (MoEST)
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DRAWING TITLE **SICK BAY
ELEVATIONS**
DRAWING NO. **SQP/ARC/SB/05**

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JUNE, 2023



right side elevation



left side elevation

ELEVATIONS

BLDG NO. 3

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PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS
FOR
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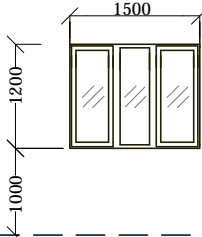
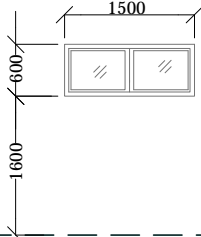
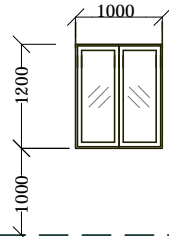
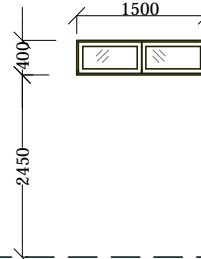
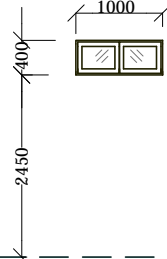
DRAWING TITLE **SICK BAY
ELEVATIONS**
DRAWING NO. **SQP/ARC/SB/06**

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SCALE 1:200
JUNE, 2023

SCHEDULE OF FINISHES

S/N	ELEMENTS	LOCATION	BASE FINISH	FINAL FINISH
1	WALLS	External walls	15mm thick cement and sand plaster ratio (1:3)	2-coat bitumen paint to all plinth
			24mm 2-coat Tyrolean rendering	Colour in Tyrolean mix above the plinth level
		Internal walls and Verandah	15mm thick cement and sand plaster ratio (1:3)	1 coat white cement skim,1 emulsion under coat, 2 coats gloss oil paint up to dado line 1500 above the ground
				1 coat white cement skim,1 emulsion under coat, 2 coats acrylic emulsion 1500 above the Dado line
		Internal walls toilets	15mm thick cement and sand plaster ratio (1:3)	Ceramic wall tiles up to dado line 1800 above the ground
				1 coat white cement skim,1 emulsion under coat, 2 coats acrylic emulsion 1800 above the Dado line
2	FLOORS	External Floors	30mm thick cement and sand plaster ratio (1:4) bedding	Non slippery porcelain floor tiles
		Internal Floors	30mm thick cement and sand plaster ratio (1:4) bedding	
3	CEILING	In 1 storey building (timber roof structure)	9mm thick Gypsum ceiling; fixed to brandering using screws including joint tapes gypsum powder.	Prepare and apply 1 undercoat and 2 finishing coats of Emulsion paint

WINDOW SCHEDULE

LOCATION	Refer to Ground Plan			Refer to Ground Plan			Refer to Ground Plan			Refer to Ground Plan			Refer to Ground Plan						
	Type: W-01			Type: W-01			Type: W-03			Type: High level window			Type: High level window						
ELEVATION																			
Reference/ Location	Ground Floor	Nos. 8	Total Req.8	Ground Floor	Nos. 2	Total Req.2	Ground Floor	Nos. 1	Total Req.1	Ground Floor	Nos. 10	Total Req.10	Ground Floor	Nos. 3	Total Req.3				
	First Floor	Nil		First Floor	Nil		First Floor	Nil		First Floor	Nil		First Floor	Nil					
Specification and Finishes.	Casement window frame145mm x 45mm Mkongo hardwood frames polished fixed glazed panes with 5mm thick clear glass including all necessary accessories, ironmongery, cutting and pinning lugs and bedding frame in cement mortar			Casement window frame145mm x 45mm Mkongo hardwood frames polished fixed glazed panes with 5mm thick clear glass including all necessary accessories, ironmongery, cutting and pinning lugs and bedding frame in cement mortar			Casement window frame145mm x 45mm Mkongo hardwood frames polished fixed glazed panes with 5mm thick clear glass including all necessary accessories, ironmongery, cutting and pinning lugs and bedding frame in cement mortar			Casement window frame145mm x 45mm Mkongo hardwood frames polished fixed glazed panes with 5mm thick clear glass including all necessary accessories, ironmongery, cutting and pinning lugs and bedding frame in cement mortar			Casement window frame145mm x 45mm Mkongo hardwood frames polished fixed glazed panes with 5mm thick clear glass including all necessary accessories, ironmongery, cutting and pinning lugs and bedding frame in cement mortar						

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY (MoEST)
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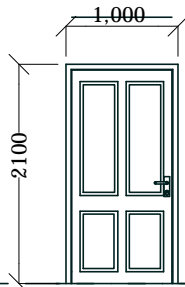
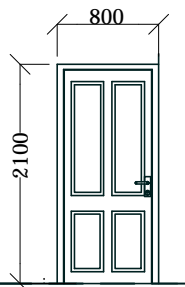
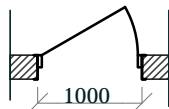
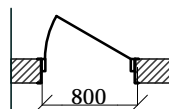
PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS
FOR
SECONDARY EDUCATION QUALITY IMPROVEMENT PROGRAM (SEQUIP)

DRAWING TITLE **SICK BAY
WINDOW SCHEDULE**

DRAWING NO. **SQP/ARC/SB/08**

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SCALE 1:200
JUNE,2023

DOOR SCHEDULE

LOCATION	Refer to Ground to Fifth Floor Plan			Refer to Ground to Fifth Floor Plan		
	Type D-01			Type D-02		
ELEVATION						
PLAN						
Reference/ Location	Ground Floor	Nos. 6	Total Req.6	Ground Floor	Nos. 4	Total Req.4
	First Floor	Nil		First Floor	Nil	
Specification and finishes	<p>Iron mongery: 3pairs 150mm long brass butt hinges 1nos. 3 lever UNION mortice lockset complete - 2nos. UNION rubber door stoppers 38mm dia.</p> <p>Specifications: 40mm thick;1000mm x 2500mm high Mkongo hardwood panelled door comprising of 125mm wide stiles and top rail; 180mm wide bottom rail; polished 3 coats of polyurethane varnish.</p> <p>145mm x 45mm Mkongo hardwood frames polished 3 coats of polyurethane varnish</p>			<p>Iron mongery: 3pairs 150mm long brass butt hinges 1nos. 3 lever UNION mortice lockset complete</p> <p>Specifications: 40mm thick;900mm x 2500mm high Mkongo hardwood panelled door comprising of 125mm wide stiles and top rail; 180mm wide bottom rail; polished 3 coats of polyurethane varnish.</p> <p>145mm x 45mm Mkongo hardwood frames polished 3 coats of polyurethane varnish</p>		

MINISTRY OF EDUCATION,SCIENCE AND TECHNOLOGY (MoEST)
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PRESIDENT'S OFFICE REGIONAL ADMINISTRATION AND
LOCAL GOVERNMENT (PO - RALG)

PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS
FOR
SECONDARY EDUCATION QUALITY IMPROVEMENT PROGRAM (SEQUIP)

DRAWING TITLE
**SICK BAY
DOOR SCHEDULE**

DRAWING NO. **SQP/ARC/SB/09**

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SCALE 1;200
JUNE,2023

SCHEDULE OF MATERIALS

THE UNITED REPUBLIC OF TANZANIA



PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

PROPOSED STANDARD DRAWINGS FOR SEQUIP

Schedule of Materials & Labour for 16 Stances Toilet Block (Girl's
National Schools)

PROJECT AREA

TANZANIA MAINLAND

Ministry of Education, Science and
Technology,
Government City - Mtumba,
AFYA Street,
P.O Box 10,
40479 DODOMA.

President's Office,
Regional Administration,
& Local Government
Government City - Mtumba
TAMISEMI Street,
P. O. Box 1923,
41185 DODOMA.

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
	<u>MATERIALS</u>				
A	<u>SUB-STRUCTURE -PROVISIONAL</u>				
1	<u>Strip Foundation - Grade 15 Plain (5.43M3)</u>				
	Aggregate (3/4")	6	M ³		
	Sand	3	M ³		
	Cement-50kgs (42.5)	22	Bags		
2	<u>Foundation Walls (37m2)</u>				
	6" Cement & Sand block - Minimum Strength 3.5 MPa	512	No		
	Sand	2	M ³		
	Cement -50kgs (42.5)	9	Bags		
	<u>ALTERNATIVE TO FOUNDATION WALL</u>				
	<u>** If stone is applicable, then blockwork is not applicable.</u>				
	<u>Therefore Engineer must confirm to the Tenderer</u>				
	<u>which item to be priced (Blockwork or Stone) depending</u>				
	<u>on availability and suitability of building materials.</u>				
	Stone, complete with its cement and sand mortar (1:4)	10	M ³		
3	<u>Moram, Hardcore & Site sterilization (12M3)</u>				
	Moram (4.5m ³ lorry)	3	Trips		
	Hardcore 150mm thick (4.5m ³ lorry)	4	Trips		
	Sand	2	M ³		
	Aldrin solution or other and equal approved (1000mls)	1	Bottle		
4	<u>Oversite Concrete 100mm thick - 15 grade 7.3M3 and Ground Beam - 20 grade (4m3)</u>				
	Cement -50kgs (42.5)	51	Bags		
	Aggregates (1/2")	12	M ³		
	Sand	6	M ³		
	Reinforcement - 12mm diameter high tensile 460N/mm2	18	PC'S		
	Reinforcement - 8mm diameter high tensile 460N/mm2	15	PC'S		
	A252 Mesh 200 x200x6.16kg/m2	1	PC'S		
	Timber 1" X 8" (5.2m long)	10	PC'S		
	Timber 2" X 2"	6	PC'S		
	Nails-4"	10	Kg		
	Nails-3"	10	Kg		
	Supporting props (3m)	10	PC'S		
	SUB-TOTAL SUBSTRUCTURE				

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
B.	<u>SUPERSTRUCTURE</u>				
1	<u>Walls & Ring beam</u>				
	6" Cement & Sand block - Minimum Strength 3.5 MPa	1,908	No		
	Sand	13	M ³		
	Cement-50kgs (42.5)	54	Bags		
	Aggregates (1/2")	3	M ³		
	Reinforcement - 12mm diameter high tensile 460N/mm ²	16	PC'S		
	Reinforcement - 8mm diameter high tensile 460N/mm ²	12	PC'S		
	Binding Wire	5	Kg		
	Timber 1" X 10" to Sides (5.2m long) - re use of sunstructure	0	PC'S		
	Timber 1" X 5" (Plates)-	4	PC'S		
	Timber 2" X 2" (3.5m)	10	PC'S		
	Supporting Props	8	PC'S		
	SUB-TOTAL SUPER STRUCTURE				
	<u>ALTERNATIVE TO BLOCKWORK WALL</u>				
	<i>** If brickwork is applicable, then blockwork is not applicable.</i>				
	<i>Therefore Engineer must confirm to the Tenderer which item</i>				
	<i>to be priced (Blockwork or brickwork) depending on availability</i>				
	<i>and suitability of building materials. Note that: Strictly do not</i>				
	<i>use stretcher bond when using bricks, the acceptable</i>				
	<i>bond is either Flemish or English or header.</i>				
	150mm thick One brick wall	212	m ²		
C.	<u>ROOF STRUCTURE & COVERING</u>				
1	<u>Roof Structure - Provisional</u>				
	Timber 2" X 3" Purlin	320	ft		
	Timber 2" X 4" Struts	103	ft		
	Timber 2" X 6" Rafter, and Tie beam	459	ft		
	Timber 2" X 4" Wall plate	126	ft		
	Fascia board 1" X 10" (5.2m long)	9	PC'S		
	Nails -4" & 3"	20	Kg		
	16mm Anchor Bolts, 250mm long	14	Nr.		
	12mm diameter bolts with washer and nuts	7	Nr.		
	20mm diameter of bolts	7	Nr.		
	150 x 150 x 100x3mm mild steel plate	7	Nr.		
	<u>NOTE:</u> The above softwood timber structure should be				
2	<u>Roof Covering</u>				
	28G Resin coated Iron sheet	100	M ²		
	Hips/Ridge and valley - 28 G resin coated	4	PC'S		
	Roofing Nails	5	Packet		

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
3	<u>Gutter's</u>				
	Upvc 100mm half round (6m long)-5"	5	PC'S		
	Upvc 100mm diameter down pipe; Class C	3	PC'S		
	PVC outlet	4	PC'S		
	Gutter support bracket	7	PC'S		
	PVC bend 90'	4	PC'S		
	PVC bend 45'	4	PC'S		
	Gutter Clamp 3"	12	PC'S		
	Connector/reducer	3	PC'S		
	Connector outer	4	PC'S		
	Corner Inner	4	PC'S		
	SUB-TOTAL ROOF STRUCTURE & COVERING				
D.	<u>CEILING</u>				
	Gypsum board -9mm thick	26	PC'S		
	Plain Cornice (2.5m)	30	PC'S		
	Screw 1.25" 500pcs/box	2	Box		
	Gypsum powder - 25kg	5	Bags		
	Fibre tape (90m)	1	Roller		
	Treated softwood Timber 2" X 2"	848	ft		
	Nails 4"/3'	20	kg		
	PVC pipe class B; 100mm diameter venti pipe 3m	1	PC'S		
	SUB-TOTAL FOR CEILING				
E.	<u>DOOR</u>				
1	<u>40mm thick hardwood paneled door shutter</u>				
	920 x 2100mm high door	3	pc's		
	720 x 2100mm high	15	pc's		
2	<u>Frames (hardwood),Varnish & Glass</u>				
	1000 x2750mm high	3	pc's		
	800 x2200mm high	15	pc's		
	Brush 3"and 2.5"	5	pc's		
	Sand paper (msasa) No.80	8	LM		
	Clear Varnish - 4Litres	2	TIN		
	Thinner for Varnish	6	Litres		
3	<u>IronMongeries</u>				
	Mortice lock Three lever	3	No		
	Mortice lock Two lever with indicator bolts	15	No		
	Brass hinges - 100mm	27	Pairs		
	SUB-TOTAL FOR DOORS				

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
F.	<u>WINDOWS</u>				
	<u>25 x 4mm thick flat bar grill painted red-oxide with 25 x 25mm square pipes frame and all necessary accessories</u>				
	Overall size 900 x 500 mm high	22	No.		
	SUB-TOTAL FOR WINDOWS				
G.	<u>FINISHING</u>				
1	<u>Terrazo Floor finishing (78m2)</u>				
	Sand	1	M ³		
	Cement-50kgs (42.5)	35	Bags		
	Chipping White	1	M3		
	Red chipping	1	M3		
	Pink chipping	1	M3		
	Black	1	M3		
	Terrazo colour (user's selection)	2	Bags		
	Concrete nail 1"	3	Packet		
	Tina, Polish,& Hardina for Terrazo	2	Set		
	2mm thick plastic Strips	96	M		
2	<u>Wall Finishing -15mm thick (1:4)</u>				
	400 x 250mm ceramic Wall tiles	96	Box		
	Grouts (20Pkt per Box)	2	Box		
	Sand	14	M ³		
	Cement-50kgs (42.5)	50	Bags		
	White cement - 40kg	10	Bags		
	Gypsum powder -25kg	10	Bags		
	Sand paper Msasa No.120	10	m		
	SUB-TOTAL FOR FINISHING				
H.	<u>PAINTING & DECORATION</u>				
	Emulsion Paint - 20 LTRS	15	buckets		
	Weather guard Paint - 20 LTRS	2	buckets		
	Washable paint -20 LTRS	2	buckets		
	Primer paint -20 LTRS	2	buckets		
	Solvent - 5LTRS	2	TIN		
	Brush 3"	3	Pcs		
	Roller	3	Pcs		
	Gloss paint-4LTR	2	TIN		
	Bitumen paint - 4Litres	2	TIN		
	SUB-TOTAL FOR PAINTING&DECORATION				

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
J.	<u>INCINERATOR</u>				
	Fire brick 65 X 110X230mm	270	Nr.		
	Fire cement	9	Bag		
	Burnt brick 65 x 110x230mm	1,000	Nr.		
	Clay soil	2	M3		
	Sand	5	M ³		
	Cement-50kgs (42.5)	30	Bags		
	Agregates 1/2'	5	M3		
	Lime 25kg	3	Bags		
	450 x 200mm Peeping door mildsteel complete as per drawing	1	Nr.		
	Steel metal door size 800 x 600mm high ditto	1	Nr.		
	450 x 150mm mild steel pipe for Ashes filter ditto	1	Nr.		
	Mild steel Flue cover (Flexible openable)	1	Nr.		
	200mm diameter metal Chimney Pipe 7m high including cover	1	Nr.		
	SUB-TOTAL FOR INCINERATOR				
A.	<u>ELECTRICAL INSTALLATION</u>				
	Single fluorescent fitting Complete	7	No		
	NB: Wiring cables shall be copper have a minimum cross section area of 1.5sqmm and shall comply with an appropriate British or Harmonized standard for either thermoplastic or thermosetting insulated electric cables				
	Single core wire 1.5sqmm - Red	0.5	Roll		
	Single core wire 1.5sqmm - Black	0.5	Roll		
	Single core wire 1.5sqmm -green	0.5	Roll		
	1gang 1way switch	1	No		
	2gang 1way switch	2	No		
	Junction box	20	No		
	Conduit pipe	100	PC's		
	Elbow	30	PC's		
	Conduit coupling	20	PC's		
	Round cover	36	PC's		
	Round box	16	PC's		
	Fine screw	2	Packet		
	plastic clips 22mm	3	Box		
	SUB-TOTAL ELECTRICAL				

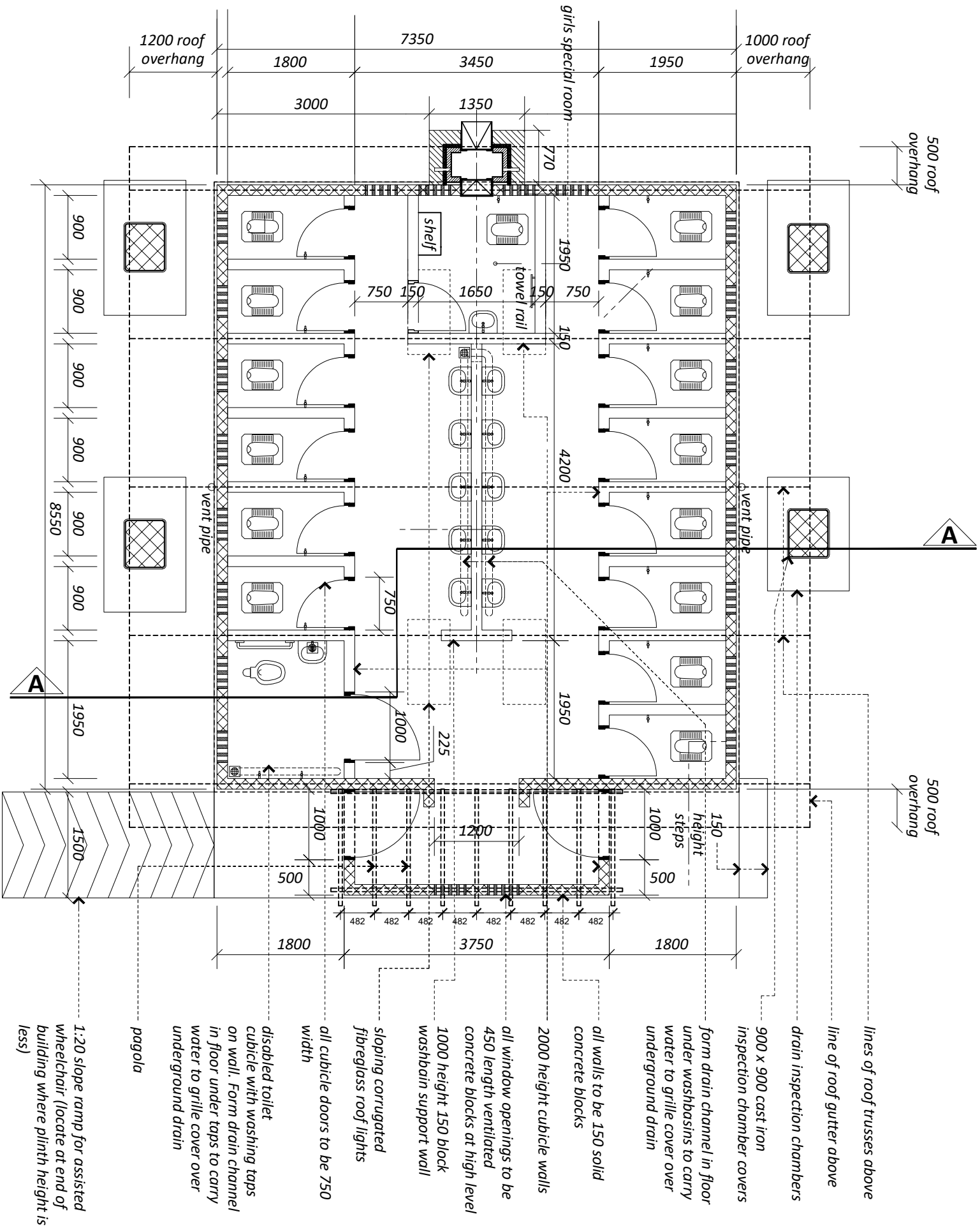
ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
K	<u>PLUMBING AND SANITARY INSTALLATION</u>				
	WATER DISTRIBUTION SYSTEM				
	PPR Pipes				
	40mm Dia	4	pcs		
	32mm Dia	13	pcs		
	25mm Dia	8	pcs		
	20mm Dia	3	pcs		
	15mm Dia	19	pcs		
	12mm Dia Flexible Pipe	30	pcs		
	VALVES				
	40mm Dia	4	pcs		
	32mm Dia	9	pcs		
	20mm Dia	14	pcs		
	15mm Dia	10	pcs		
	15mm Dia Angle Valves	41	pcs		
	20mm Dia water tape with stopcock/push	18	pcs		
	REDUCING BUSH				
	Ø40 / 32mm	8	pcs		
	Ø40 / 25mm	6	pcs		
	Ø40 / 20mm	2	pcs		
	Ø40 / 15mm	2	pcs		
	Ø32 / 25mm	9	pcs		
	Ø32 / 20mm	9	pcs		
	Ø32 / 15mm	43	pcs		
	Ø25 / 20mm	23	pcs		
	Ø25 / 15mm	17	pcs		
	Ø20 / 15mm	29	pcs		
	90° PLAIN ELBOW				
	Ø40mm	6	pcs		
	Ø32mm	6	pcs		
	Ø25mm	9	pcs		
	Ø20mm	22	pcs		
	Ø15mm	62	pcs		
	90 ADAPTOR ELBOW (Female)		pcs		
	Ø15mm	55	pcs		
	90 ADAPTOR ELBOW (Male)				
	Ø15mm	14	pcs		

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
	T PLAIN				
	Ø40mm	6	pcs		
	Ø32mm	36	pcs		
	Ø25mm	14	pcs		
	Ø20mm	24	pcs		
	SOCKET				
	Dia. 15mm	88	pcs		
	Dia. 20mm	29	pcs		
	Dia. 25mm	21	pcs		
	Dia. 32mm	38	pcs		
	Dia. 40mm	14	pcs		
	SEWARAGE				
	PIPING (uPVC PIPE)				
	150mm Dia	4	pcs		
	100mm Dia	9	pcs		
	50mm Dia	13	pcs		
	40mm Dia	13	pcs		
	32mm Dia	12	pcs		
	Elbows, Bends Connector traps etc to suite the above installation.				
	FITTINGS				
	100mm Dia Y-Tee	24	pcs		
	50mm Dia Y-Tee	14	pcs		
	100mm Dia Inspection Tee	12	pcs		
	50mm Dia Inspection Tee	9	pcs		
	SOCKET				
	150mm Dia	8	pcs		
	110mm Dia	21	pcs		
	50mm Dia	11	pcs		
	40mm Dia	17	pcs		
	32mm Dia	19	pcs		
	90° ELBOW				
	110mm	12	pcs		
	50mm	12	pcs		
	40mm	10	pcs		
	32mm	12	pcs		
	45° ELBOWS				
	110mm	10	pcs		
	50mm	12	pcs		
	40mm	9	pcs		
	32mm	9	pcs		
	REDUCING BUSH				
	50mm/40mm	78	pcs		
	40mm/32mm	78	pcs		

Page/8

	<u>GENERAL SUMMARY</u>				AMOUNT -TZS
	<u>TOILET BLOCK</u>				
A.	SUB-STRUCTURE -PROVISIONAL				
B.	SUPERSTRUCTURE				
C.	ROOF STRUCTURE & COVERING				
D.	CEILING				
E.	DOOR				
F.	WINDOWS				
G.	FINISHING				
H.	PAINTING & DECORATION				
J	INCINARATOR				
K	ELECTRICAL INSTALLATION				
L.	PLUMBING AND GAS INSTALLATION				
	TOTAL BUILDING MATERIALS CARRIED TO GENERAL SUMMARY				
	<u>ADD:</u>				
	LABOUR COST CARRIED TO GENERAL SUMMARY : (Improve and Fill the respective Labour form)				
	Note:				
	i Refer General Summary for: Preliminary, Transportation and Supervision Costs				
	ii. Preliminary cover the following item:				
	- Setting out working tools, Equipments, Temporary toilets, water for the works, Scaffolding,				
	- Power for the works, Security, store, Materials test, levelling, holdings and removal of rubbish.				
	iii. Supervision cost depend on guideline of the specific project				

ARCHITECTURAL DRAWINGS



floor plan

BLDG NO. 10

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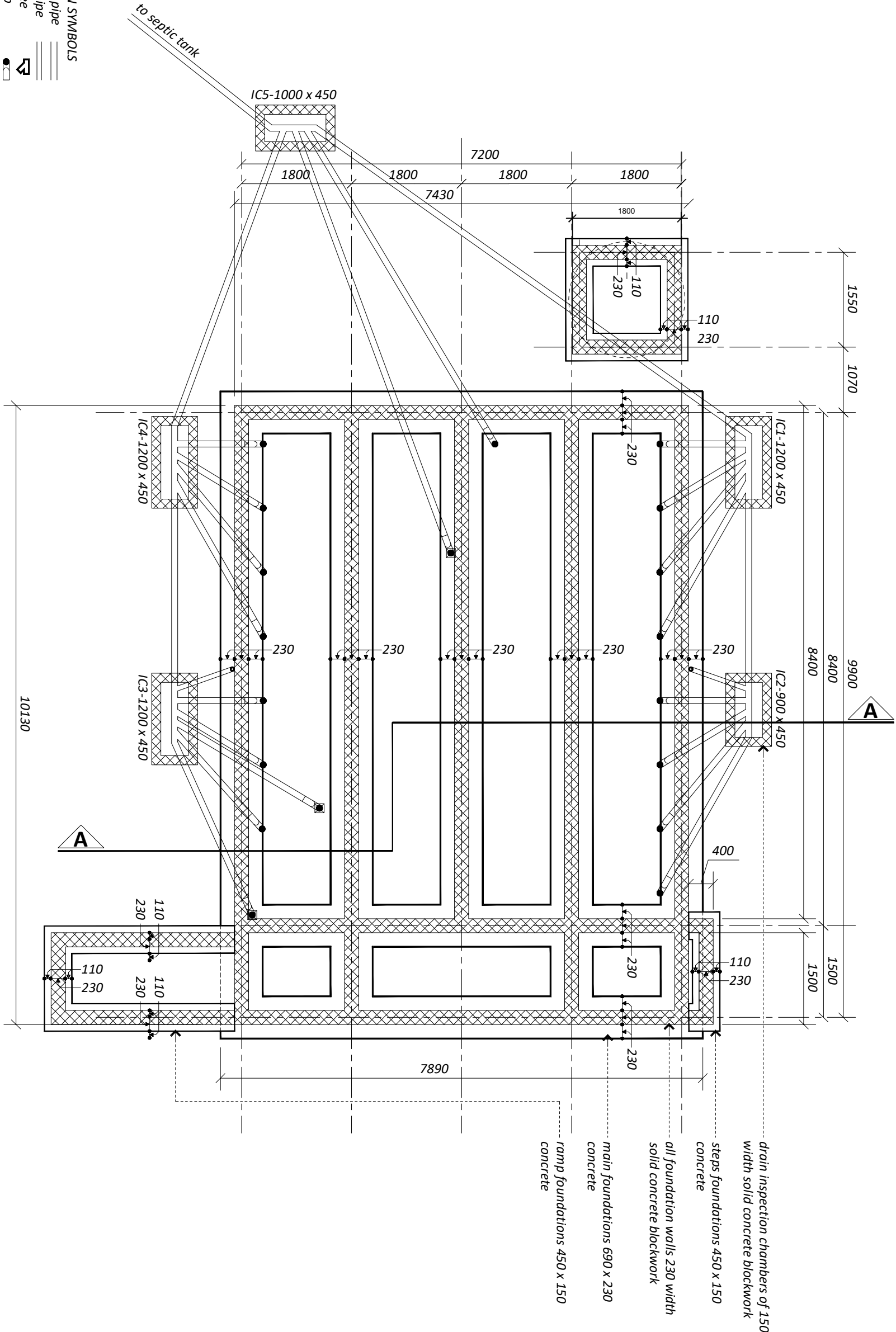
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FOR
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DRAWING TITLE
FLOOR PLAN
DRAWING NO.
SQP/ARC/TLT/02

DRAWN BY J.R.
CHECKED BY I.S.
SCALE 1:200
JUNE, 2023

- KEY TO DRAIN SYMBOLS
- 100 dia drain pipe
 - 75 dia drain pipe
 - 100 dia 45° tee
 - 100 dia P-trap
 - 75 dia P-trap
 - 75 dia vent pipe
 - floor drain grille cover

foundation plan



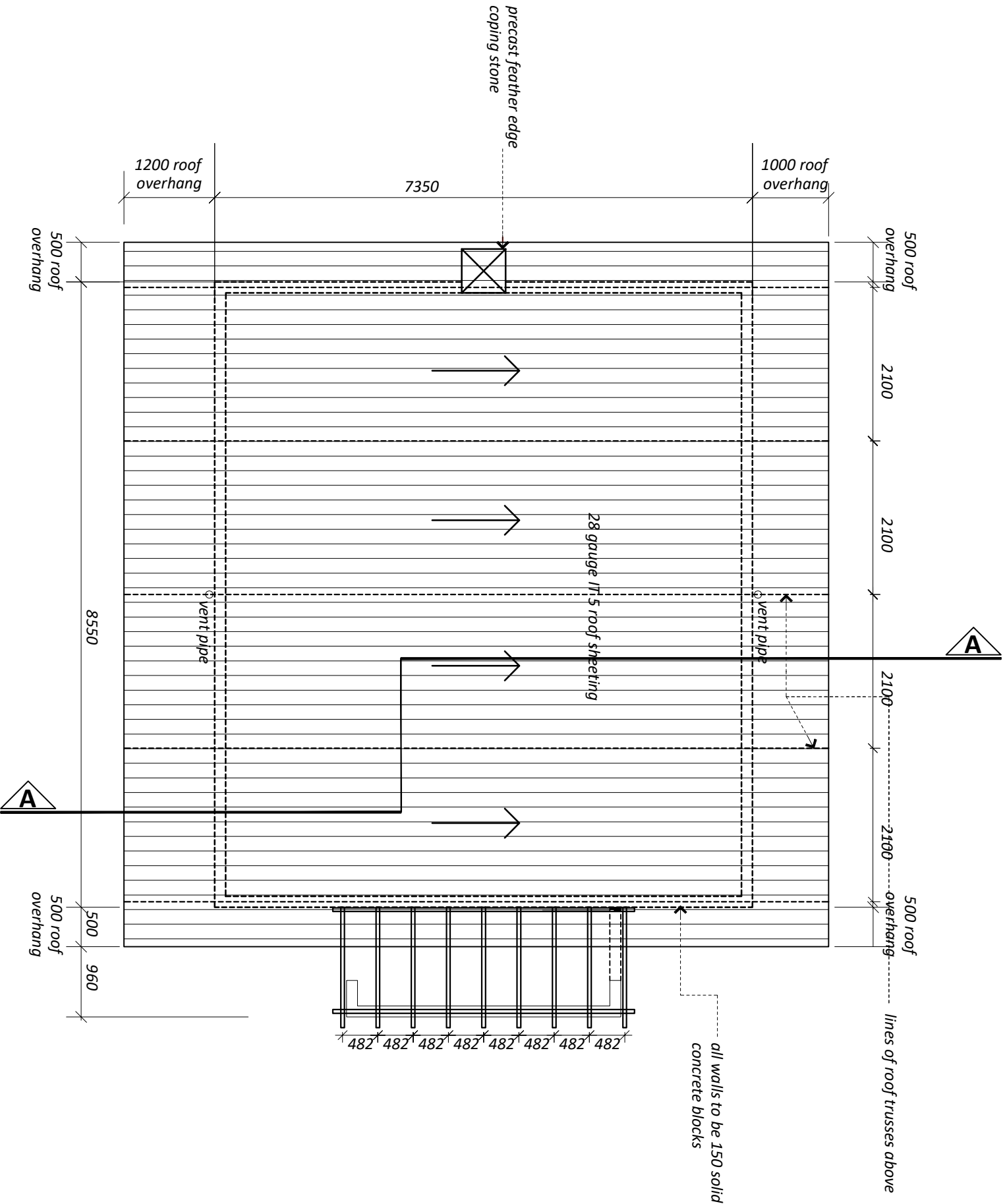
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LOCAL GOVERNMENT

PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS
FOR
SECONDARY EDUCATION QUALITY IMPROVEMENT PROGRAM (SEQUIP)

DRAWING TITLE
PIPED WATER TOILET FOR 320 GIRLS
FOUNDATION PLAN
DRAWING NO.
SQP/ARC/TLT/04

DRAWN BY J.R.
CHECKED BY I.S.
SCALE 1:200
JUNE, 2023



roof plan

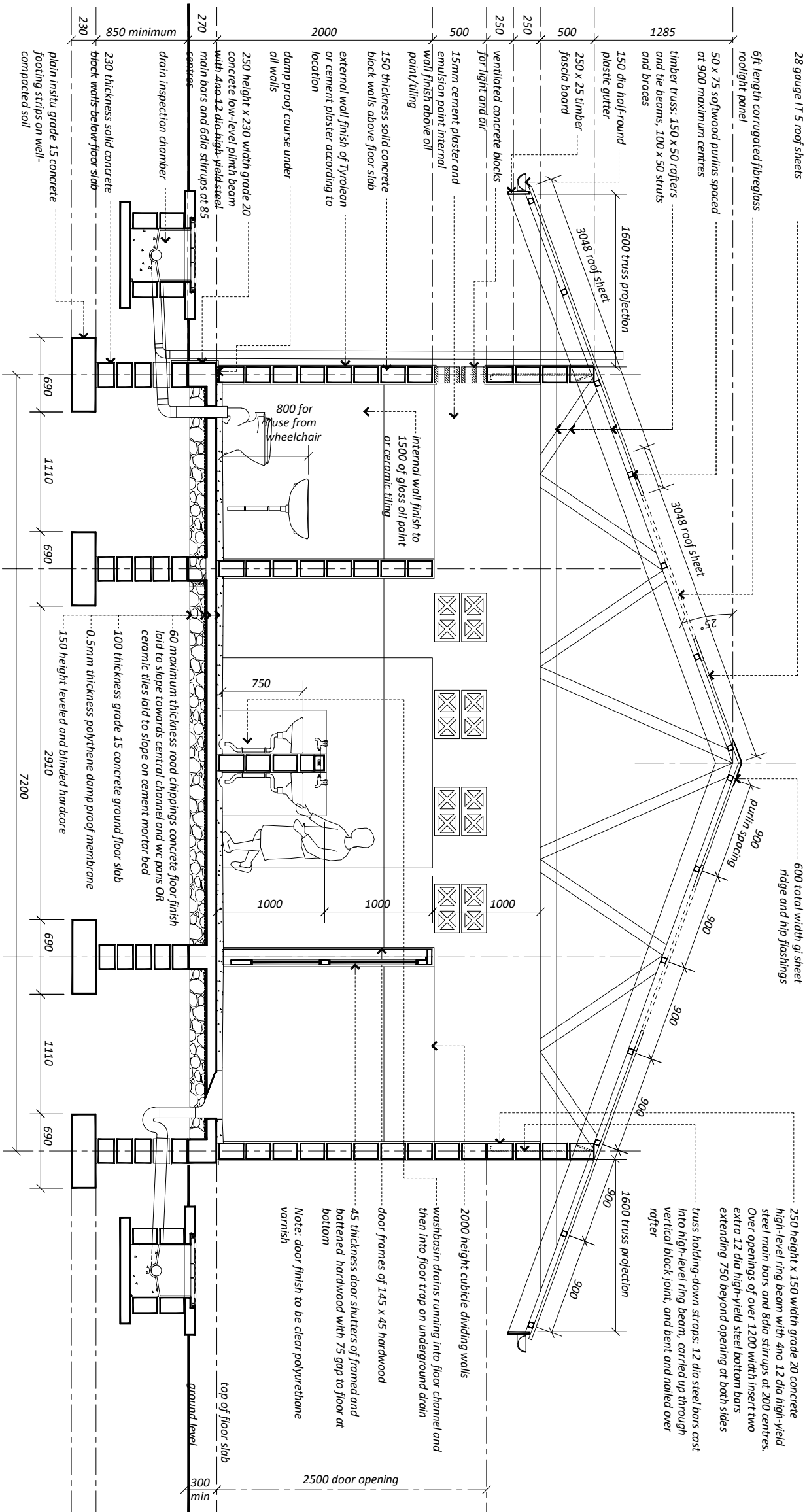
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MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY
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PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS
FOR
SECONDARY EDUCATION QUALITY IMPROVEMENT PROGRAM (SEQUP)

DRAWING TITLE
DRAWING NO.
ROOF PLAN
SQP/ARC/TLT/03

DRAWN BY J.R.
CHECKED BY I.S.
SCALE 1:200
JUNE, 2023



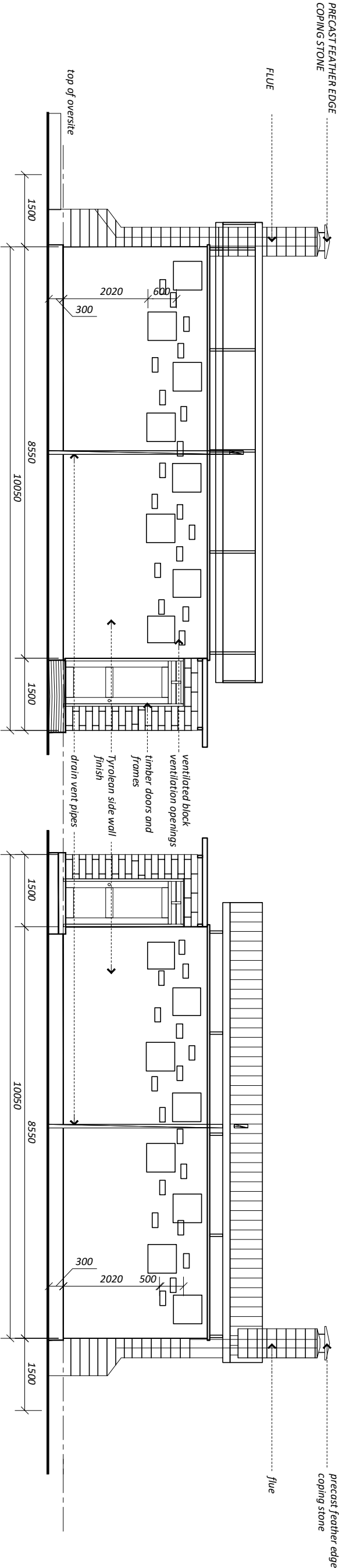
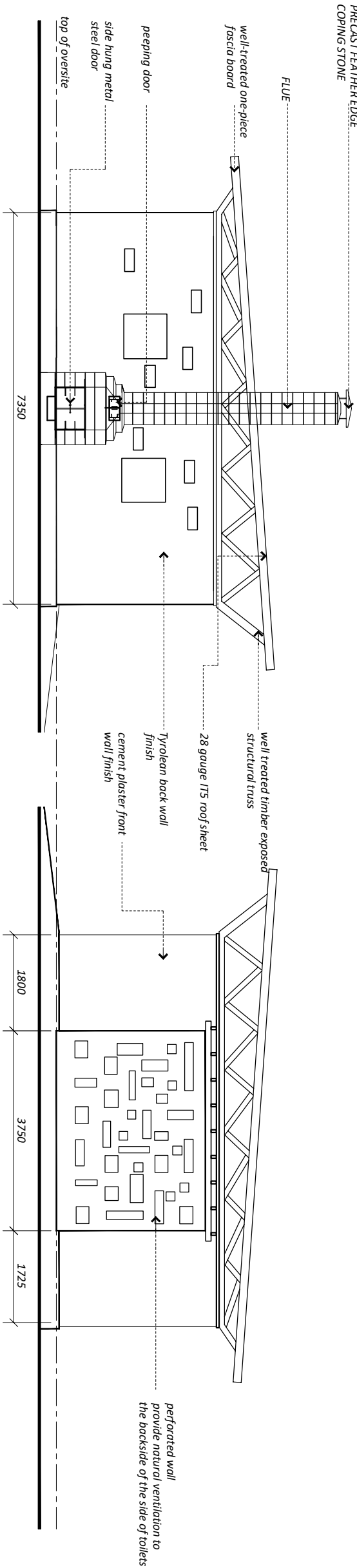
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IN COLLABORATION WITH
**PRESIDENT'S OFFICE REGIONAL ADMINISTRATION AND
LOCAL GOVERNMENT**

PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS FOR SECONDARY EDUCATION QUALITY IMPROVEMENT PROGRAM (SEQUIP)

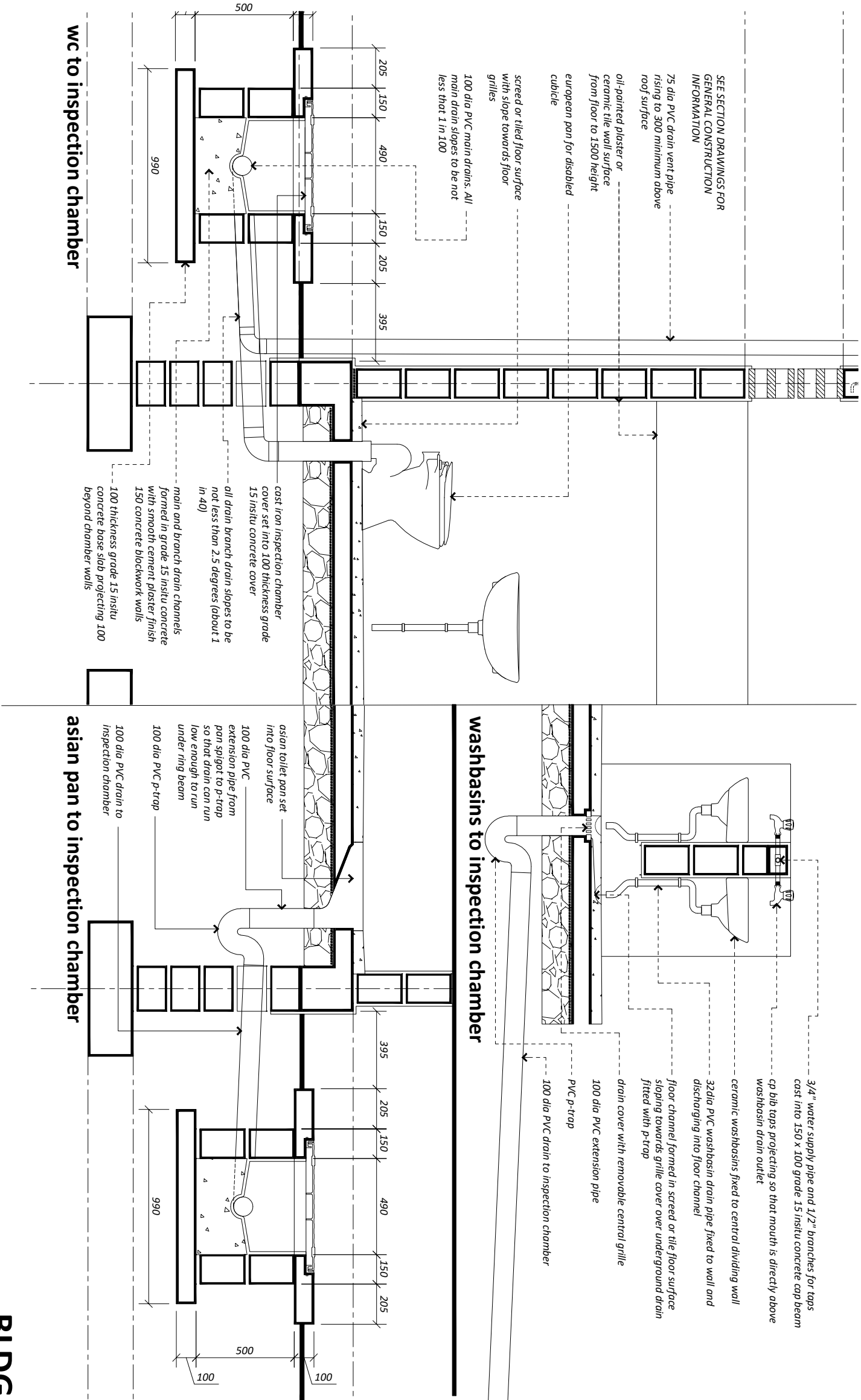
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SECTION
DRAWING NO. **SQP/ARC/TLT/05**

DRAWN BY J.R.
CHECKED BY I.S.
SCALE 1:200
JUNE, 2023



BLDG NO. 10

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY IN COLLABORATION WITH PRESIDENT'S OFFICE REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT	PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS FOR SECONDARY EDUCATION QUALITY IMPROVEMENT PROGRAM (SEQUIP)	DRAWING TITLE PIPED WATER TOILET FOR 320 GIRLS ELEVATIONS DRAWING NO. SQP/ARC/TLT/06	DRAWN BY J.R CHECKED BY I.S SCALE 1:200 JUNE, 2023



BLDG NO. 10

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY
IN COLLABORATION WITH
PRESIDENT'S OFFICE REGIONAL ADMINISTRATION AND
LOCAL GOVERNMENT

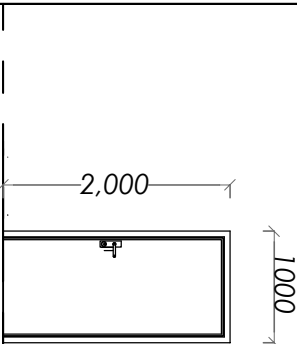
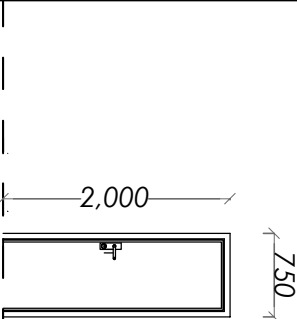
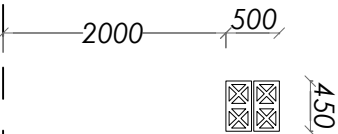
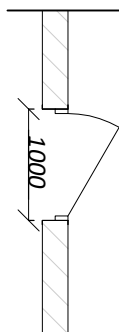
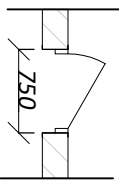
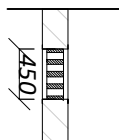
PROVISION OF PHYSICAL FACILITIES IN SECONDARY SCHOOLS
FOR
SECONDARY EDUCATION QUALITY IMPROVEMENT PROGRAM (SEQUIP)

DRAWING TITLE
DETAILS
DRAWING NO.
SQP/ARC/TLT/07

DRAWN BY J.R.
CHECKED BY J.S
SCALE 1:200
JUNE, 2023

DOOR AND WINDOW SCHEDULE

WINDOW SCHEDULE

LOCATION	Refer to Ground to Fifth Floor Plan	Refer to Ground to Fifth Floor Plan	Refer to Ground Plan
	Type D-01	Type D-02	Type W-01
ELEVATION			
PLAN			
Reference/ Location	Ground Floor	Nos. 3	Total Req.3
	First Floor	Nil	
Specification and finishes	Iron mongery: 5 pairs 150mm long brass butt hinges 3 nos. 3 lever UNION mortice lockset complete - 3 nos. 150mm long aluminium flush bolts		Total Req.15
	Specifications: 40mm thick;1000mm x 2000mm high Mkonggo hardwood panelled door comprising of 125mm wide stiles and top rail; 180mm wide bottom rail; polished 3 coats of polyurethane varnish.		
	145mm x 45mm Mkonggo hardwood frames polished 3 coats of polyurethane varnish top light provide 6mm clear glass, 16mm m.s horizontal ioxide bars with 50mm x 25mm hardwood beads		
Reference/ Location	Ground Floor	Nos. 15	Total Req.22
	First Floor	Nil	
Specification and finishes	Iron mongery: 23pairs 150mm long brass butt hinges 15nos. 3 lever UNION mortice lockset complete - 15nos. 150mm long aluminium flush bolts		Total Req.22
	Specifications: 40mm thick;750mm x 2000mm high Mkonggo hardwood panelled door comprising of 125mm wide stiles and top rail; 180mm wide bottom rail; polished 3 coats of polyurethane varnish.		
	145mm x 45mm Mkonggo hardwood frames polished 3 coats of polyurethane varnish top light provide 6mm clear glass, 16mm m.s horizontal ioxide bars with 50mm x 25mm hardwood beads		
Ventilated concrete blocks bedded and jointed in cement/sand mortar. Finished with one under coat and two full coats of oil paint			

door & window schedule

BLDG NO. 10

SCHEDULE OF FINISHES

S/N	ELEMENTS	LOCATION	BASE FINISH	FINAL FINISH
1	WALLS	External walls toilets	15mm thick cement and sand plaster ratio (1:3)	2-coat bitumen paint to all plinth
			24mm 2-coat Tyrolean rendering	Colour in Tyrolean mix above the plinth level
			Nil	Nil
		Internal walls and Verandah		Nil
		Internal walls toilets	15mm thick cement and sand plaster ratio (1:3)	1 coat white cement skim, 1 emulsion under coat, 2 coats gloss oil paint above the ground
2	FLOORS	External Floors toilets	Nil	300 x 300 x 8mm thick Non Slipery Ceramic floor tiles bedded to cement and sand base mortar (1:4) ; and jointing with grouting
		Internal Floors toilets		
3	REINFORCED STRUCTURE	External Columns	Nil	Nil
		Internal Columns and all beams	Nil	Nil
		In 2 storey building (Concrete slab ceiling)	Nil	Nil
4	CEILING	In 1 storey building (timber roof structure)	Nil	Nil
		Eave ceiling	Nil	Nil
5	STAIRS & RAMPS	handrails and brackets	Nil	Nil

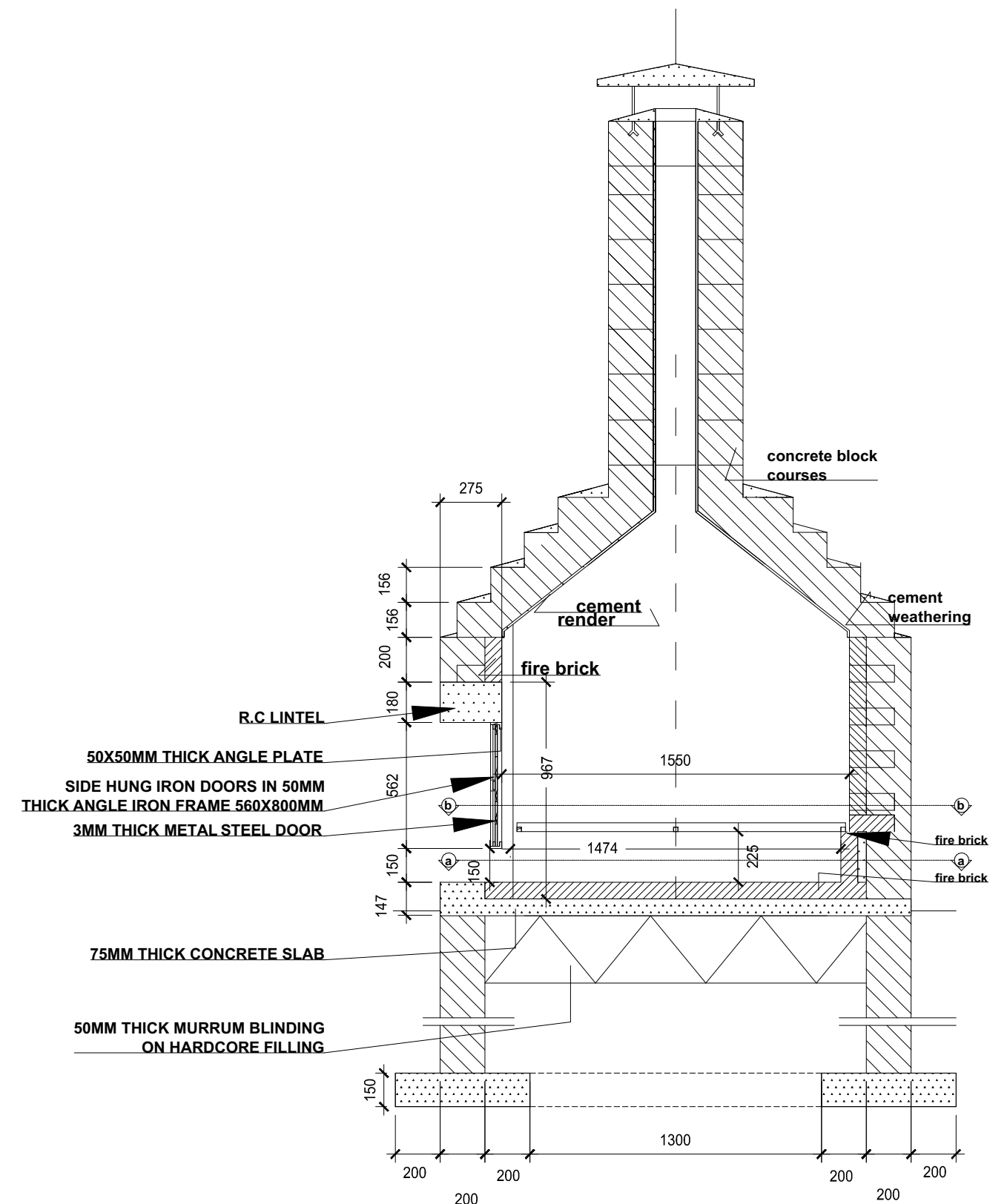
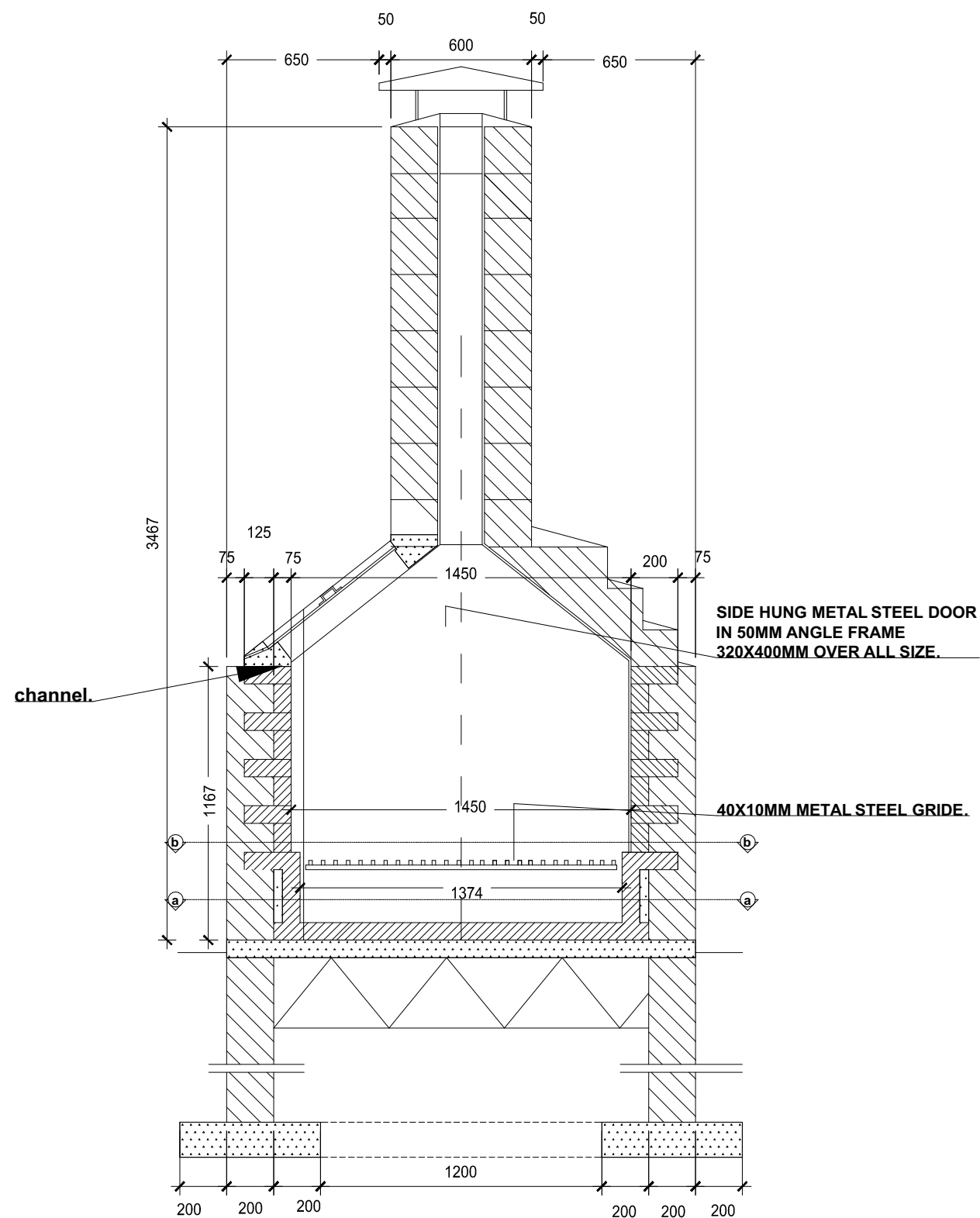
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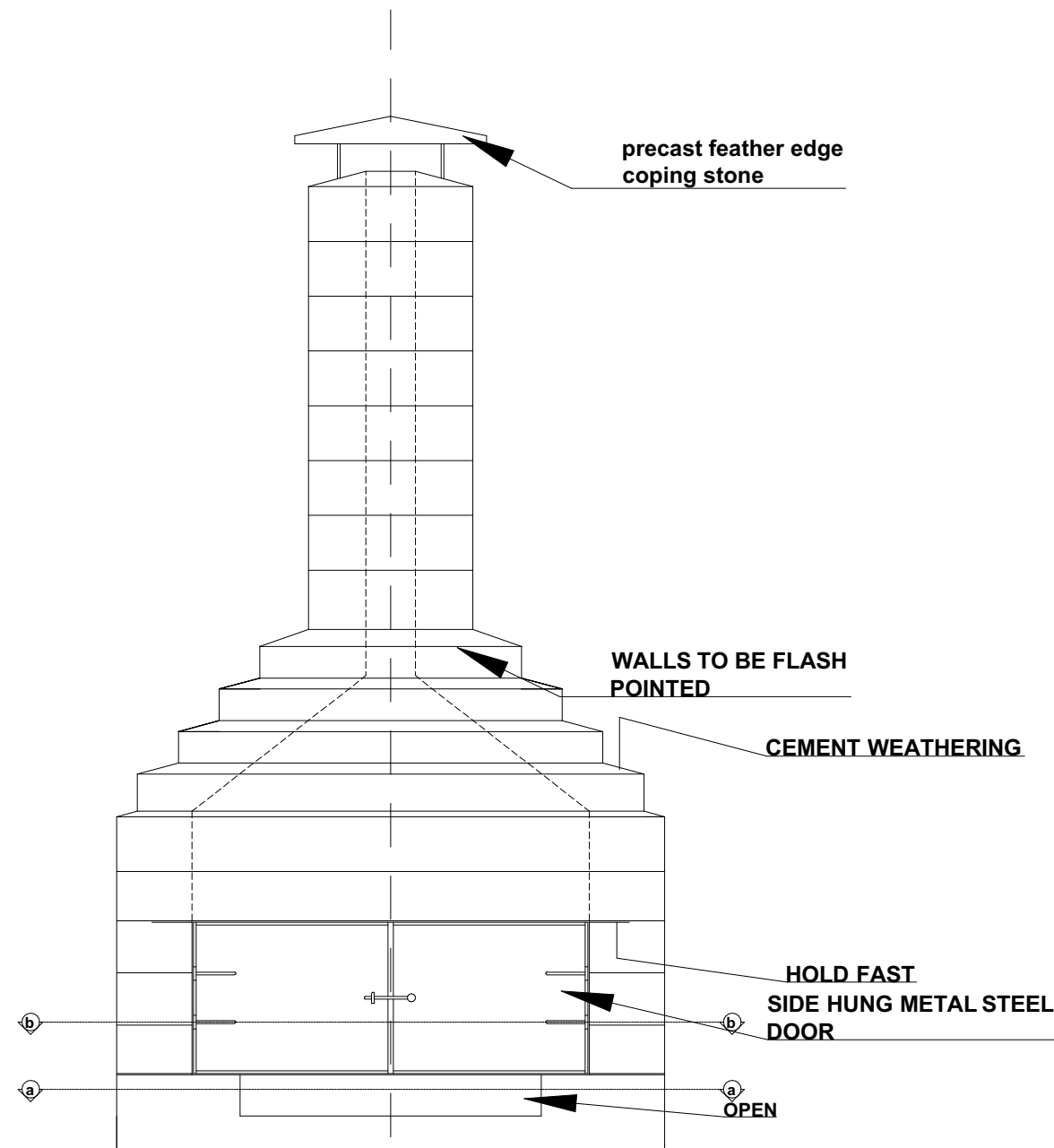
ARCHITECTURAL DRAWINGS

Drawing Print Set for

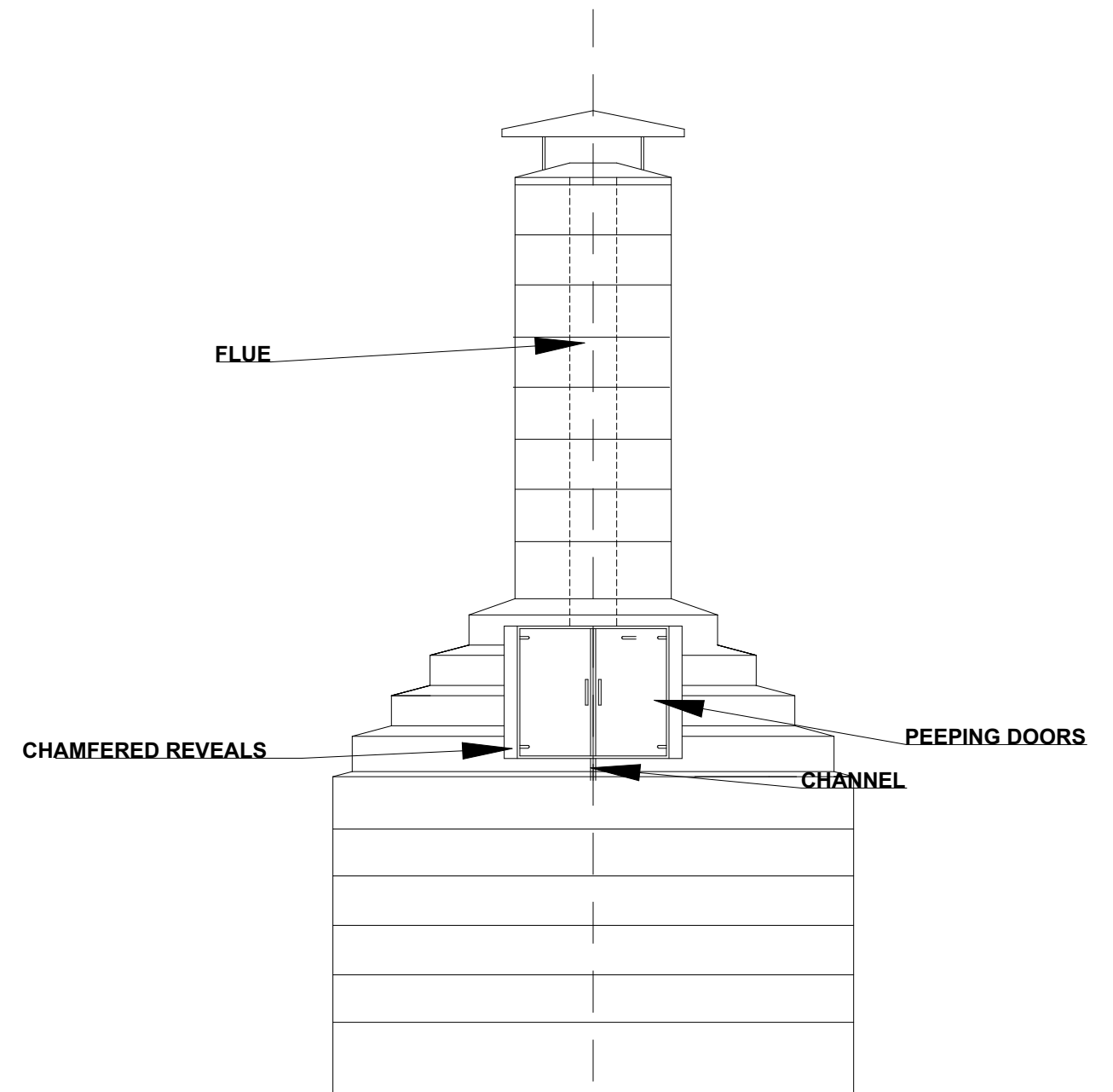
INCINERATOR

JUNE; 2023

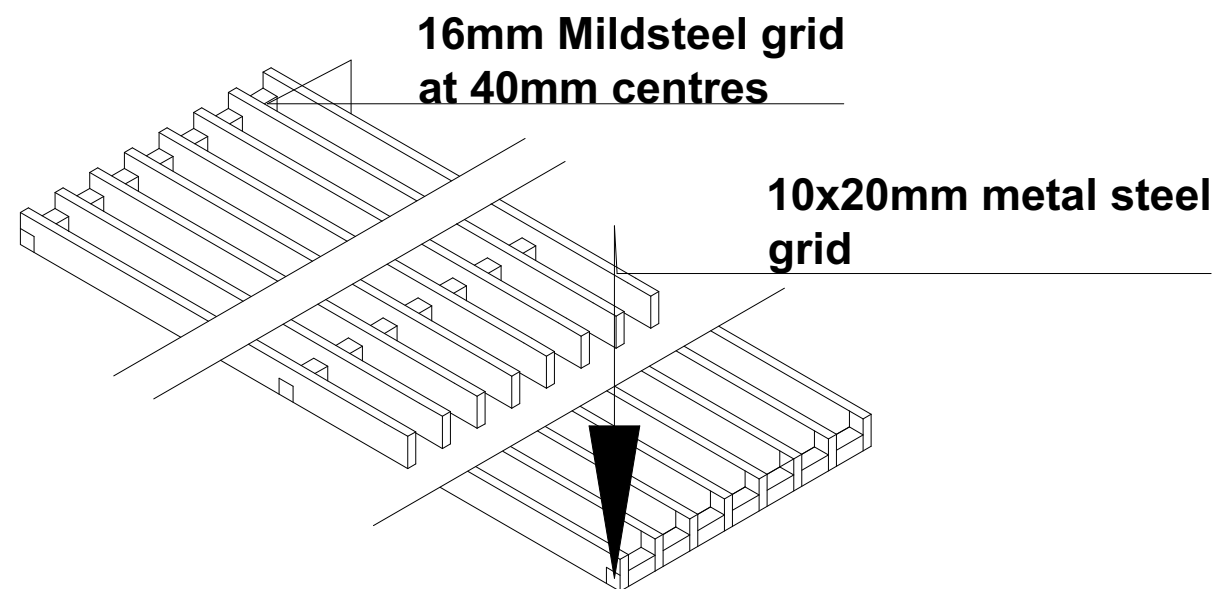
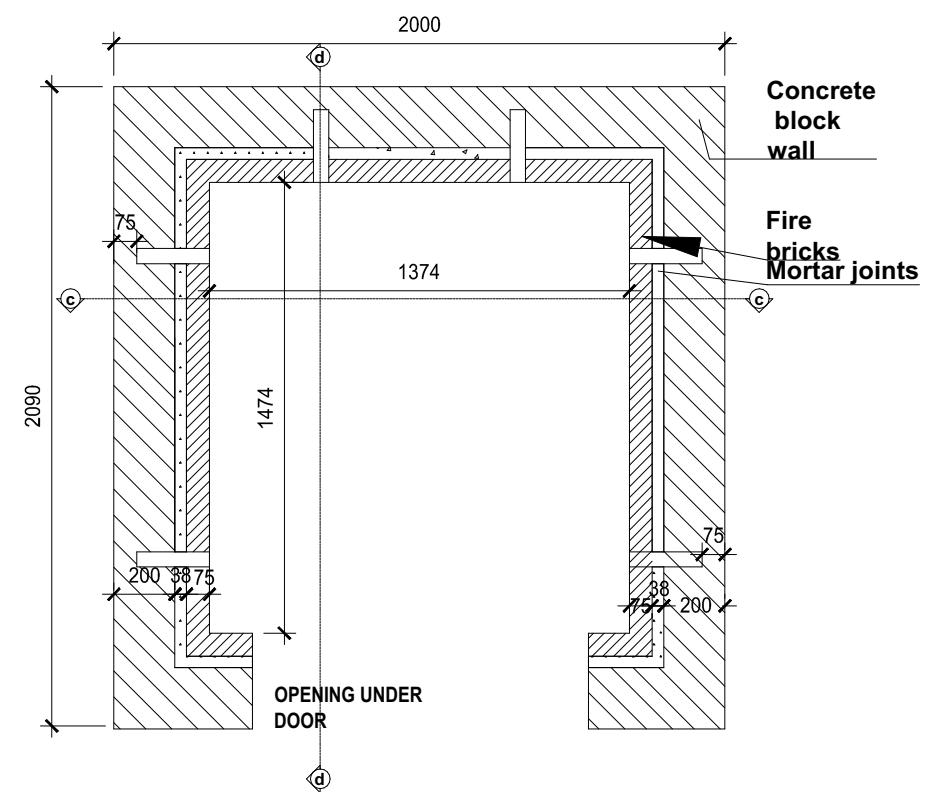
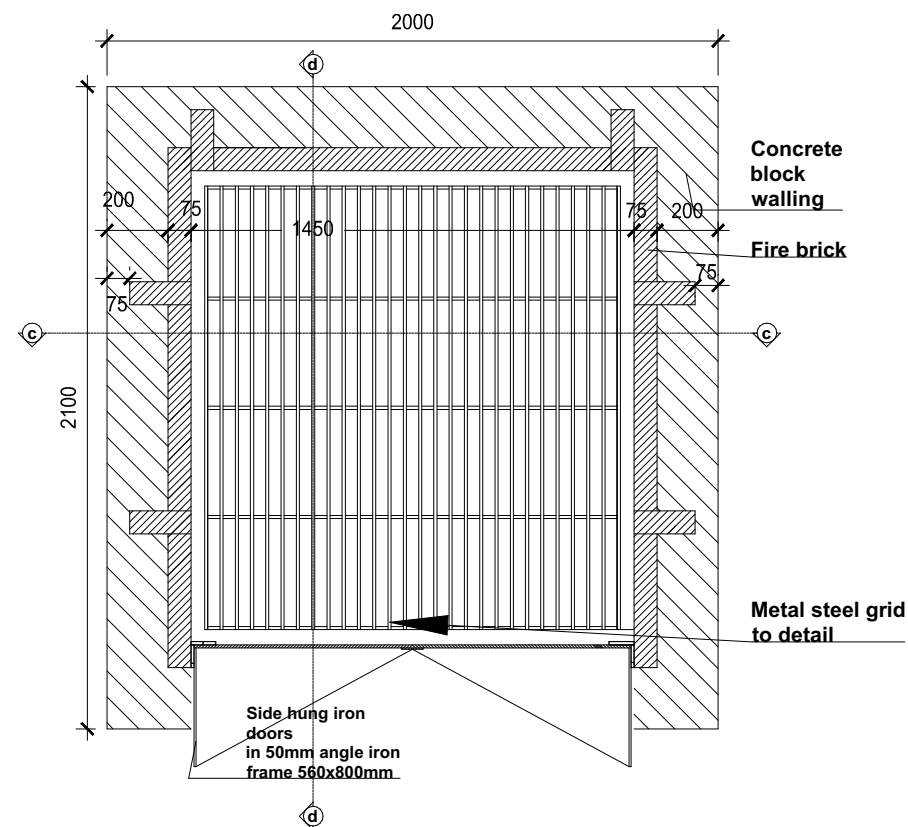




front elevation



back elevation



SCHEDULE OF MATERIALS

THE UNITED REPUBLIC OF TANZANIA



PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

PROPOSED STANDARD DRAWINGS FOR SEQUIP

Schedule of Materials & Labour for Incinerator

PROJECT AREA

TANZANIA MAINLAND

Ministry of Education, Science and
Technology,
Government City - Mtumba,
AFYA Street,
P.O Box 10,
40479 DODOMA.

President's Office,
Regional Administration,
& Local Government
Government City - Mtumba
TAMISEMI Street,
P. O. Box 1923,
41185 DODOMA.

JUNE, 2023

MOEST/PO-RALG

SCHEDULE OF MATERIALS FOR THE CONSTRUCTION OF INCINERATOR

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
	<u>MATERIALS</u>				
A	SUB-STRUCTURE -PROVISIONAL				
1	<u>Strip Foundation - Grade 15 Plain</u>				
	Aggregate (3/4")	0.5	M3		
	Sand	0.45	M3		
	Cement-50kgs(42.5)	2	Bags		
2	<u>Foundation Walls</u>				
	6" Cement & Sand block - Minimum Strength 3.5 MPa	70	No		
	Sand	1	M3		
	Cement -50kgs	5	Bags		
3	<u>Moram, Hardcore & Site sterilization</u>				
	Moram (4.5m3 lorry)	1	M3		
	Hardcore (4.5m3 lorry)	1	Trips		
	Adrian 0.5% solution applied at a rate of 7 liters per square meter- 500mls	1	Bottle		
4	<u>Concrete work - Grade 20</u>				
	Cement -50kgs(42.5)	27	Bags		
	Aggregates (1/2")	2	M3		
	Sand	1	M3		
	Reinforcement - 12mm diameter high tensile 460N/mm2	1	PC'S		
	Reinforcement - 8mm diameter high tensile 460N/mm2	1	PC'S		
	Timber 1" X 8" (3.6m long)	3	PC'S		
	Timber 2" X 2" (3.6m long)	2	PC'S		
	Nails-4"	1	Kgs		
	Nails-3"	1	Kgs		
	Supporting props	3	PC'S		
5	<u>Blocks. Fire Bricks & Ring beam & Metal works</u>				
	6" Cement & Sand block - Minimum Strength 3.5 MPa	80	No		
	Sand	1	M3		
	Cement-50kgs(42.5)	5	Bags		
	Fire bricks 230mm x 115 x 75mm thick	320	pcs		
	Refractory fire cement	3	bag		
	Refractory fire clay 25kg @ bag	1	bag		
	Chimney shaft stainless steel rolled plate 4mm thick. 7.7 ft length	1	Pcs		
	Steel rods Stainless steel for grate fabrication 12mm thick @ 4m length	2	Pcs		

[illegible]