

# MWITURIA SECONDARY SCHOOL ACCOMMODATION FACILITIES PROJECT

## BILLS OF QUANTITIES

ITEM No.	DESCRIPTION	KSHS
	<p><b><u>CLASS A : GENERAL ITEMS</u></b></p> <p><b><u>PARTICULAR PRELIMINARIES</u></b></p> <p><b>A DESCRIPTION OF THE WORKS</b>  The Works to be carried out under this Contract involves the the Construction of:  <b>LOT1: 64 Bed Capacity Dormitory</b>  <b>LOT2: 10,800 Litres Capacity Septic Tank</b>  <b>LOT3: Teacher's Quarters Block</b>  <b>LOT4: Completion of an incomplete Dormitory (Half-way done)</b></p> <p><b>B MEASUREMENTS</b>  In the event of any discrepancies arising between the Bills of Quantities and the actual Works, the Site measurements shall generally take precedence. However, such discrepancies between any Contract documents shall immediately be referred to the PROJECT MANAGER in accordance with Clause 22 of the Conditions of Contract. The discrepancies shall then be treated as a Variation and shall be dealt with in accordance with Clause 22 of the said conditions.</p> <p><b>C LOCATION OF THE SITE</b>  The Site of the proposed Works is at Mwituria Secondary School in Laikipia County. The Contractor is advised to visit the Site and familiarize himself with the nature and position of the Site. No Claims arising from the Contractor's failure to do so will be entertained.</p> <p><b>D SIGNING OF THE TENDER DOCUMENTS</b>  The Bidder shall append his/her signature and /or the Company's rubberstamp on each and every page of the Tender Document. The Form of Tender shall be signed personally by the Bidder or by a duly authorised representative.</p> <p><b>E VALUE ADDED TAX (VAT)</b>  The Contractor's attention is drawn to the Legal Notice in the Finance Act part 3 Section 21(b) operative from 1<sup>st</sup> September 1993 which requires payment of VAT on all Contracts. The Tenderer is required to compute the amount of VAT after the sub-total including Prime Cost and Provisional Sums as indicated in the Summary Page of this Bills of Quantities. Any Tenderer who does not price for VAT manner will be considered to be non-responsive.</p> <p><b>F PAYMENTS</b>  Reference to be made to the "Payment Schedule"</p>	
<b>Carried to collection</b>		

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	<b><u>CLASS A : GENERAL ITEMS</u></b>	
<b>A</b>	<b>PREVENTION OF ACCIDENTS, DAMAGES OR LOSSES</b> The Contractor is notified that these Works are to be carried out on a restricted Site where the Client is going on with other normal activities. The Contractor is thus instructed to take reasonable care in the execution of the Works as to prevent accidents, damage or loss and disruption of activities being carried out by the Client.	
<b>B</b>	<b>PRICING RATES</b> The Tenderer shall include for all costs in executing the whole of Works, including transport. All to comply with the said Conditions of Contract.	
<b>C</b>	<b>PRICING RATES</b> The Tenderer shall include for all costs in executing the whole of Works, including transport. All to comply with the said Conditions of Contract.	
<b>D</b>	<b>URGENCY OF THE WORKS</b> The Contractor is notified that these " Works are urgent" and should be completed within the period stated in these Particular Preliminaries.	
<b>E</b>	<b>SECURITY</b> The Contractor shall allow for providing adequate security for the Works and the Workers in the course of execution of this Contract. No claim will be entertained from the Contractor for not maintaining adequate security for both the Works and the Workers.	
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A	<p><b><u>PARTICULARS OF INSERTIONS TO BE MADE IN APPENDIX TO THE CONTRACT AGREEMENT</u></b></p> <p>The following are the insertions to be made in the appendix to the Contract Agreement:</p> <p><b>Period of Final Measurement:</b> 1 Months from Practical Completion</p> <p><b>Defects Liability Period:</b> 3 Months from Practical Completion</p> <p><b>Date for Possession:</b> To be agreed with the Project Manager</p> <p><b>Date for Completion:</b> 12 Weeks from Date of Possession</p> <p><b>Liquidated and Ascertained Damages:</b> At the rate of Kshs. 10,000/- per Week or part thereof</p> <p><b>Period of Interim Certificates:</b> As per the Payment Schedule</p> <p><b>Period of Honouring Certificates:</b> 30 days</p> <p><b>Percentage of Certified Value Retained:</b> 10%</p> <p><b>Limit of Retention:</b> 10%</p>	

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	<b><u>CLASS A : GENERAL ITEMS</u></b>	
	<b><u>GENERAL PRELIMINARIES</u></b>	
<b>A</b>	<p><b>PRICING ITEMS OF PRELIMINARIES AND PREAMBLES</b></p> <p>Prices will be inserted against Items of Preliminaries in the Contractor's priced Bills of Quantities and Specifications</p> <p>The Contractor shall be deemed to have included in his Prices or Rates the various Items in the Bills of Quantities or Specifications for all costs involved in complying with all the requirements for the proper execution of the whole of the Works in the Contract.</p>	
<b>B</b>	<p><b>ABBREVIATIONS</b></p> <p>Throughout these Bills, units of measurement and terms are abbreviated and shall be all the requirements for the proper execution of the whole of the Works in the Contract.</p> <p>C.M            Shall mean Cubic Metre</p> <p>S.M            Shall mean Square Metre</p> <p>L.M            Shall mean Linear Metre</p> <p>MM            Shall mean Millimetre</p> <p>Kg             Shall mean Kilogramme</p> <p>Nr.            Shall mean Number</p> <p>Prs            Shall mean Pairs</p> <p>B.S            Shall mean the British Standard Specification published by the British Standards Institution, 2 Park Street, London W.I., England</p> <p>Ditto          Shall mean the whole of the preceding description except as qualified in description in which it occurs</p> <p>m.s           Shall mean 'measured separately'</p>	

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	<b><u>GENERAL PRELIMINARIES</u></b>	
<b>A</b>	<p><b>INSURANCE</b></p> <p>The Contractor shall insure as required in Clause 30 of the Conditions of Contract. No payment on account of the work executed will be made to the Contractor until he has satisfied the Project Manager's inspection. either by production of an Insurance Policy or and Insurance Certificate that the provision of the foregoing Insurance Clauses have been complied with in all respects. Thereafter the Project Manager shall from time to time ascertain that the premiums are duly paid up by the Contractor who shall if called upon to do so, produce the receipted premium renewals for the Project</p>	
<b>B</b>	<p><b>ALTERATIONS TO BILLS, PRICING ETC.</b></p> <p>Any unauthorised alteration or qualification made to the text of the Bills of Quantities may cause the Tender to be disqualified and will in any case be ignored.</p>	
<b>C</b>	<p><b>REMOVAL OF RUBBISH</b></p> <p>Allow for the removal of rubbish and debris from the Buildings and Site as it accumulates. At the completion of the Works, remove all plant, scaffolding and unused materials.</p>	
<b>D</b>	<p><b>CONTRACTOR'S SUPERINTENDENCE/SITE AGENT</b></p> <p>The Contractor shall constantly keep on the Works a literate English speaking Agent or Representative, competent and experienced in the kind of work involved who shall give his whole time to the superintendence of the Works. Such Agent or Representative shall receive on behalf of the Contractor all instructions from the Project Manager and such directions shall be deemed to have been given to the Contractor in accordance with the Conditions of Contract.</p>	

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ITEM No.	DESCRIPTION	UNIT	QTY	RATE	KSHS
	<b><u>BILL No.1: 64 BED CAPACITY DORMITORY</u></b>				
	<b><u>CLASS E: EARTHWORKS</u></b>				
	<u>Excavations shall include for strutting, shuttering, stabilizing excavated surfaces and keeping excavations free of general surface water bailing out, pumping or other means</u>				
<b>I E4</b>	<b><u>Excavation for Foundation</u></b>				
IE411	Excavate oversite average 150mm deep to remove vegetable soil	SM	340		
IE322	Excavate from the reduced level maximum depth 0.25 - 0.5m for Slab foundation	CM	60		
	<u>Excavate in material other than top soil, rock or artificial hard material for foundation trenches 600mm wide</u>				
IE321	Maximum depth not exceeding 0.25m	CM	40		
	<u>Ditto:</u> But to 32No.Column Bases 1200mm x 1200mm x 300mm	CM	6		
IE322	Maximum depth 0.25 - 0.5m	CM	40		
	<u>Ditto:</u> But to 32No.Column Bases 1200mm x 1200mm x 300mm	CM	6		
<b>Carried to collection</b>					

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	<b><u>BILL No.1: 64 BED CAPACITY DORMITORY</u></b>				
	<b><u>CLASS E: EARTHWORKS</u></b>				
<b>I E4</b>	<b><u>Excavation for Foundation(Contd.)</u></b>				
IE323	Maximum depth 0.5 - 1.0m	CM	50		
	<u>Ditto:</u> But to 32No.Column Bases 1200mm x 1200mm x 300mm	CM	8		
IE324	Maximum depth 1.0 - 2.0m From the finished Trench level for 32No.Column Bases 1200 x 1200 x 300mm deep	CM	7		
<b>I E5</b>	<b><u>Excavation Ancillaries</u></b>				
	<b><u>Disposal of excavated material</u></b> <u>Approved material shall be retained for backfilling and unsuitable material shall be disposed tip as directed by the Engineer</u>				
IE531	Top Soil	CM	50		
IE532	Material other than top soil, rock or artificial hard material	CM	233		
<b>I E6</b>	<b><u>Filling</u></b>				
	<b><u>Hardcore</u></b>				
E647	300mm thick Hardcore, well placed and compacted 2 layers	CM	65		
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	<b><u>CLASS E: EARTHWORKS</u></b>				
I E6	<b><u>Filling</u></b>				
	<b><u>Approved Murram</u></b>				
IE645	Place and Compact approved Murram maximum 50mm thick	SM	215		
	<u>Ditto: But to Foundation Footing</u>				
	Return, Fill and Ram selected excavated material as directed by the Engineer	CM	120		
	Chemical Anti-Termite Treatment(Gladiator) the Compacted Murram	SM	215		
	<b><u>CLASS F: IN SITU CONCRETE</u></b>				
	<u>Provide and place Concrete</u>				
IF5	<b><u>Mass Concrete strength Grade 15/20</u></b>				
IF511.1	50mm thick blinding to Strip Footing	CM	8		
IF511.2	Ditto but to Column Bases	CM	3		
F6	<b><u>Vibrated Reinforced Concrete strength Grade 20/20</u></b>				
IF621	100mm thick Floor Slab	CM	30		
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	<b><u>BILL No. I: 64 BED CAPACITY DORMITORY</u></b>				
	<b><u>CLASS F: IN SITU CONCRETE (Contd.)</u></b>				
IF622	300mm thick Column Footings	CM	14		
IF662	200mm x 300mm deep Ring beams	CM	14		
	<b><u>IF6 Vibrated Reinforced Concrete strength Grade 20/20</u></b>				
F652	200mm x 200mm x 4000mm high Columns	CM	5		
	<b><u>CLASS G: CONCRETE ANCILLIARIES</u></b>				
	<b><u>Formwork rough finish</u></b>				
IG241	Plane vertical - sides of Floor slab	SM	10		
IG242	Plane vertical - sides of Column Footings	SM	50		
IG243	Ring beams 200mm x 300mm deep	SM	110		
IG282	Plane vertical - sides of Columns n.e. 4m high	SM	105		
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	<b><u>BILL No.1: 64 BED CAPACITY DORMITORY</u></b>				
	<b><u>CLASS G: CONCRETE ANCILLIARIES (Contd.)</u></b>				
IG563	A 142 Fabric Mesh Reinforcement to BS 4483 in Concrete Slab 100mm thick, Nominal mass 3 - 4 Kg/m <sup>2</sup>	SM	290		
	<b><u>Reinforcement</u></b>				
	<b><u>Bars: Mild Steel hot rolled to BS 4449</u></b>				
IG512.1	Nominal size 8mm to Ring Beam	Kg	230		
IG512.2	Ditto but to Column Rings	Kg	160		
	<b><u>Bars: High Yield Tensile Steel twisted to BS 4449</u></b>				
IG524.1	Nominal size 12mm to Ring Beam	Kg	800		
IG524.2	Ditto but to Columns	Kg	1140		
IG524.3	But to Strip Footing	Kg	1400		
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	<b><u>BILL No.1: 64 BED CAPACITY DORMITORY</u></b>				
	<b><u>CLASS O: TIMBER</u></b>				
	<b><u>Softwood Components</u></b>				
	<i>Provide and fix the following approved items of Sawn Cypress Grade 2, Pressure Impregnated with all leads and lifts complete etc. for Roofing</i>				
	<b><u>Main Roof</u></b>				
10114.1	150 x 50mm Rafters	LM	160		
10114.2	Ditto but to Hips	LM	90		
10114.3	150 x 50mm Tie Beams	LM	125		
10115.1	100 x 50mm Purlins	LM	365		
10115.2	Ditto but to Hips	LM	60		
10112	150 x 50mm King Posts	LM	35		
10111	Ditto but to Hips	LM	5		
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	<b><u>BILL No.1: 64 BED CAPACITY DORMITORY</u></b>				
	<b><u>CLASS O: TIMBER (Contd.)</u></b>				
IO112.1	100 x 50mm Struts & Ties	LM	230		
IO112.2	150 x 50mm Collar Splices	LM	30		
	<b><u>Wall Plate</u></b>				
	<u>Secured with 12mm diameter Anchor Bolt 300mm long at 1mc/c cast in Concrete Ring Beam(m/s)</u>				
IO114.1	100 x 50mm Wall Plate	LM	90		
IO114.2	Ditto but to Entrance Porch	LM	8		
	<b><u>Main Roof</u></b>				
IO114.3	200 x 25mm Fascia Boards	LM	90		
	<b><u>Entrance Porches</u></b>				
IO112.1	75 x 50mm Rafters	LM	15		
IO112.2	75 x 50mm Tie Beams	LM	10		
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	<b><u>BILL No.1: 64 BED CAPACITY DORMITORY</u></b>				
	<b><u>CLASS O: TIMBER (Contd.)</u></b>				
	<b><u>Entrance Porches</u></b>				
IO112.3	75 x 50mm King Posts	LM	2		
IO112.4	75 x 50mm Struts & Ties	LM	5		
IO112.5	75 x 50mm Collars	LM	3		
IO112.6	250 x 25mm Fascia Boards	LM	20		
	<b><u>Main Roof</u></b>				
	<b><u>Fittings and Fastenings</u></b>				
IO51	Straps	Nr	20		
IO54	Bolts	Nr	300		
<b>Carried to collection</b>					

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	<b><u>BILL No. I: 64 BED CAPACITY DORMITORY</u></b>				
	<b><u>CLASS U: BRICKWORK, BLOCKWORK AND MASONRY</u></b>				
IU5	<b><u>Stone Masonry</u></b>				
	<i>Provide and place approved Stone Masonry bedded in Cement:Sand(1:3) mortar with 25mm wide Hoop Iron at alternate courses</i>				
	<b><u>Sub-structure</u></b>				
	<i>Natural Quarry Stone Walling:200mm thick</i>				
IU521.1	Foundation Walling	SM	245		
	<b><u>Super-structure</u></b>				
	<i>Machine Dressed Natural Quarry Stone Walling</i>				
IU511	Ablution Walls 150mm thick	SM	65		
IU521	Main Walls 200mm thick	SM	390		
	<b><u>CLASS V: PAINTING</u></b>				
	<b><u>Oil Paint</u></b>				
IV333	<i>Prepare and Apply Three Coats of First Grade Oil Paint to Plastered Wall Surfaces at an an angle exceeding 60° to the horizontal</i>				
	<b><u>Internally</u></b>				
IV333.1	Skirting 100mm high	SM	10		
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	<b><u>BILL No. I: 64 BED CAPACITY DORMITORY</u></b>				
	<b><u>CLASS V: PAINTING (Contd.)</u></b>				
	<b><u>Oil Paint</u></b>				
IV333.2	Below Window Level 800mm high	SM	90		
	<b><u>Emulsion Paint</u></b>				
IV533	<u>Prepare and Apply Three Coats of First Grade Silk Vinyl Emulsion Paint to: Plastered Wall Surfaces at an an angle exceeding 60° to the horizontal</u>				
	<b><u>Internally</u></b>				
IV533.1	Above Window Level 800mm high	SM	185		
IV533.2	Ditto but to Weatherguard Paint externally	SM	215		
	<u>Prepare and Apply Three Coats of First Grade Silk Vinyl Emulsion Paint to: Timber Surfaces of width not exceeding 300mm</u>				
	<b><u>Externally</u></b>				
IV526	Fascia Boards	LM	110		
Carried to collection					

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	<b><u>BILL No. I: 64 BED CAPACITY DORMITORY</u></b>				
	<b><u>CLASS W: WATERPROOFING</u></b>				
IWI36	Provide and Place an approved Damp Proof Course	LM	250		
	<b><u>Roofing</u></b>				
	<b><u>Sheet Metal</u></b>				
IW321.1	Pre-painted Green Galvanized Iron Sheets 30 gauge	SM	370		
IW321.2	Ditto but to Entrance Porches	SM	20		
IW321.3	Provide and fix Ridge Capping to match Item W321	LM	55		
IW321.4	Ditto but to Entrance Porches	LM	6		
IW326.1	Provide and fix Gutter to match Item W321	LM	90		
IW326.2	Ditto but to Entrance Porches	LM	6		
IW324	Provide and fix Down Pipe to match Item W324.2	LM	50		
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	<b><u>BILL No.1: 64 BED CAPACITY DORMITORY</u></b>  <b><u>CLASS Z: SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS</u></b>  <b><u>Windows, Doors and Glazing</u></b>  <u>Rate to include Supply of Materials/Fittings, Fixing and/or Drilling, Cutting of associated Works and Painting with 3 Coats of Paint</u>  <b><u>Doors</u></b>  <u>Rate to include Frames, Hinges, Locks, Handles, Stoppers and Fixing in accordance with the Specifications</u>				
IZ313.1	Hardwood Panel Double Shutter Door 1600 x 2400 c/w Fanlight	Nr	4		
IZ313.2	Ordinary semi-solid Flush Door size 900 x 2000mm	Nr	20		
	<b><u>Windows</u></b>  <u>Rate to include 4mm thick Glazing</u>  <b><u>Steel Casement Windows</u></b>				
IZ321.1	Window size 1500 x 1500mm (W1)	Nr	16		
IZ321.2	Window size 400 x 800mm (W2)	Nr	20		
IZ162	Pelmet Boxes 1900mm (L) x 200mm (W) c/w Curtain Rods to match Item No. Z321.1	Nr	16		
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	<b><u>CLASS Z: SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS</u></b>				
	<b><u>Surface Finishes</u></b>				
IZ411	Cement/Sand 20mm Screed on Floors	SM	273		
IZ413.1	Cement/Sand 20mm Plaster on Internal Walls	SM	625		
IZ413.2	Cement/Sand 20mm Plaster on External Walls	SM	210		
IZ415.1	Cement/Sand 20 x 100mm high Skirting on Internal Walls	LM	160		
IZ415.2	Cement/Sand 20 x 600mm high Plinth on External Walls	LM	90		
	<b><u>Piped Building Services</u></b>				
	<u>Rate to include Supply of Materials/Fittings, Fixing and/or Drilling, Cutting of associated Works, Testing and Commissioning</u>				
	<u>Internally</u>				
IZ53.1	AsianToilets	Nr	10		
IZ53.2	Toilet Cistern (High Level) 16 Litres	Nr	10		
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	<b><u>Piped Building Services (Contd.)</u></b>				
	<u>Internally</u>				
IZ53.3	Flexible Tubes ½"	Nr	10		
IZ53.4	Shower Roses Heads ½"	Nr	10		
IZ53.5	Waste Inspection Tee 4"	Nr	2		
IZ53.6	Bib Taps ¾"	Nr	16		
IZ53.7	Gulley Trap (4-Way) 4"	Nr	20		
IZ53.8	Bottle Trap 2"	Nr	8		
IZ53.9	Waste Inspection Tee 2"	Nr	8		
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	<b><u>CLASS Z: SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS</u></b>				
	<b><u>Piped Building Services (Contd.)</u></b>				
	<u>Internally</u>				
IZ53.10	Waste Plain Tee 2"	Nr	4		
IZ53.11	Waste Pipe 2"	Nr	8		
IZ53.12	Waste Plain Tee 4"	Nr	12		
IZ53.13	Waste Vent Cap 4"	Nr	2		
IZ53.14	Automatic Flushing Cistern (16 Litres)	Nr	2		
IZ53.15	Waste Plain Elbows 2"	Nr	4		
IZ53.16	Gate Valves ¾"	Nr	10		
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	<b><u>Piped Building Services (Contd.)</u></b>				
	<u>Internally</u>				
IZ53.17	PPR Pipe 25mm	Nr	12		
IZ53.18	PPR Pipe 32mm	Nr	14		
IZ53.19	PPR Male Adaptors 25mm x ¾"	Nr	20		
IZ53.20	PPR Male Adaptors 20mm x ½"	Nr	10		
IZ53.21	PPR Reducing Elbows 25mm x ½"	Nr	10		
IZ53.22	PPR Reducing Sockets 32mm x 20mm	Nr	10		
IZ53.23	PPR Plain Tees 25mm	Nr	10		
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	<b><u>Piped Building Services (Contd.)</u></b>				
	<u>Internally</u>				
IZ53.24	PPR Plain Tees 32mm	Nr	8		
IZ53.25	PPR Plain Elbows 25mm	Nr	10		
IZ53.26	PPR Female Elbow Adaptors ¾" x 25mm	Nr	10		
IZ53.27	GI Pipe ¾"	Nr	2		
IZ53.28	GI Bend ¾"	Nr	10		
IZ53.29	GI Reducing Socket ¾" x ½"	Nr	10		
IZ53.30	GI Nipple ½"	Nr	10		
<b>Carried to collection</b>					

# MWITURIA SECONDARY SCHOOL ACCOMMODATION FACILITIES PROJECT

## BILLS OF QUANTITIES

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	KSHS
	<b><u>BILL No. I: 64 BED CAPACITY DORMITORY</u></b>  <b><u>CLASS Z: SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS</u></b>  <b><u>Piped Building Services (Contd.)</u></b>  <u>Internally</u>  IZ53.31 "Twyford Hindustan" vitreous China Hand Wash Basin fixed on semi-concealed brackets c/w two "Bricon" Chromium plated Bib Taps size 500 x 400mm  <b><u>Dhobi Sink</u></b>  <u>Rate to include Supply, Installation and Wastewater Disposal as directed by the Engineer</u>  Provide 2No. Dhobi Sinks c/w 5No. Bib Taps each at the Bathrooms  Wastewater System to include External Plumbing Services, Fittings and Fixtures outside the Building, Inspection Chambers, Manholes associated Pipework as directed by the Engineer.  <u>Externally</u>  Allow for connection to the existing Water line  Allow for connection to the existing Water line	Nr	2		
		SUM			
		SUM			
		SUM			
		SUM			
		SUM			
Carried to collection					

**MWITURIA SECONDARY SCHOOL ACCOMMODATION FACILITIES PROJECT**

**BILLS OF QUANTITIES**

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	KSHS
	<p><b><u>CLASS Z: SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS</u></b></p> <p><b><u>Cabled Building Services</u></b></p> <p><i>Supply, Instal, Test and Commissionthe following Electrical Materials/Fittings</i></p> <p><b><u>LIGHTING POINTS</u></b></p> <p><i>Lighting Point wired in 3 x 1.5mm<sup>2</sup> SC-PVC-CU Cables drawn in 20mm diameter HG PVC Conduits concealed inside Walls c/w all neccesary accessories excluding Switches and Fittings for:</i></p>				
IZ772.1	One Way Switching	Nr	20		
IZ772.2	Two Way Switching	Nr	2		
	<i>5A Moulded Ivory Switch Plates as 'Crabtree' or other equal and approved as follows:</i>				
IZ772.3	One Gang One Way	Nr	12		
IZ772.4	Two Gang One Way	Nr	4		
IZ772.5	Two Gang Two Way	Nr	2		
<b>Carried to collection</b>					



# MWITURIA SECONDARY SCHOOL ACCOMMODATION FACILITIES PROJECT

## BILLS OF QUANTITIES

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	KSHS
	<b><u>CLASS Z: SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS</u></b>				
	<b><u>LIGHTING FITTINGS</u></b>				
	<i>Light Fittings c/w fixed accessories and Lamps as follows:</i>				
I Z781.1	1200mm l x 36W Flourescent Batten Fitting of slim cross-section with clip-on cover plate and adjustable end cap system as <i>Thorn Popular Pack Batten</i> or approved equivalent	Nr	19		
I Z781.2	60W Ball Fitting	Nr	20		
	<b><u>SOCKET OUTLETS &amp; POWER POINTS</u></b>				
I Z784.1	Socket Outlet Point comprising wiring in 3 x 2.5mm <sup>2</sup> SC-PVC-CU Cables concealed in 20mm diameter HG PVC Conduits	Nr	2		
I Z784.2	13A 2 Gang Switching Moulded Socket Outlet Plate as <i>Crabtree</i> or approved equivalent	Nr	2		
	<b><u>CONSUMER UNIT/DISTRIBUTION BOARD</u></b>				
I Z781.1	12 Way SP/N Consumer Unit flush mounted on Wall c/w 100A SP/N Integral Isolator as <i>Crabtree</i> or approved equivalent	Nr	1		
Carried to collection					

# MWITURIA SECONDARY SCHOOL ACCOMMODATION FACILITIES PROJECT

## BILLS OF QUANTITIES

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	KSHS
	<b><u>CLASS Z: SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS</u></b>				
	<b><u>CONSUMER UNIT/DISTRIBUTION BOARD (Contd.)</u></b>				
	<i>Single Pole Miniature Circuit Breakers to fit into the above Consumer Unit as follows:</i>				
IZ781.2	10A SP	Nr	8		
IZ781.3	30A SP	Nr	2		
IZ781.4	Blanking Plate	Nr	6		
	<b><u>SUB-MAINS CABLES</u></b>				
IZ714	2 x 25mm <sup>2</sup> + 10mm <sup>2</sup> Single Core Copper Cables drawn inside HG Conduits	LM	80		
IZ781.1	Standard Cable Loop-in Box made in 14 Gauge Galvanized Steel Sheet	Nr	2		
IZ781.2	Cut-Out c/w SP 80A HRC Fuses	Nr	3		
IZ781.3	Single Tarrif Meter Box made from 14 Gauge SWG Galvanized Steel Sheet c/w Bonding Screw and viewing Glass	Nr	1		
<b>Carried to collection</b>					

**MWITURIA SECONDARY SCHOOL ACCOMMODATION FACILITIES PROJECT**

**BILLS OF QUANTITIES**

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	KSHS
	<p><b><u>CLASS Z: SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS</u></b></p> <p><b><u>SUB-MAINS CABLES (Contd.)</u></b></p> <p>Electrical Earthing comprising 6.00mm<sup>2</sup> Single Core Copper Cables drawn inside HG Conduits, 1500mm long Copper Electrode c/w Clamp and Precast Concrete Inspection Pit with Cover</p>	ITEM	I		
Carried to collection					

# MWITURIA SECONDARY SCHOOL ACCOMMODATION FACILITIES PROJECT

## BILLS OF QUANTITIES

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	KSHS
	<b><u>BILL No.2: SEPTIC TANK</u></b>				
	<b><u>CLASS F: INSITU CONCRETE</u></b>				
	<i>Provide and place as directed</i>				
	<b><u>Mass Concrete Class 15/20</u></b>				
2F511	Concrete Class 15/20 in 50mm blinding layer	CM	1		
2F511.1	Ditto but to Inlet and Outlet M.H.	CM	0.1		
2F511.2	Concrete in 100mm Scum Baffle	CM	1		
2F511.3	Base Concrete - Soak Pit	CM	0.2		
	<b><u>Vibrated Reinforced Concrete Class 20/25</u></b>				
2F622	Base Concrete - Septic Tank (4.9 x 3.5 x 0.15m)	CM	3		
2F631.1	Roof Slab - Septic Tank	CM	3		
2F631.2	Roof Slab 150mm thick - Inlet and Outlet M.H.	CM	0.1		
Carried to collection					

**MWITURIA SECONDARY SCHOOL ACCOMMODATION FACILITIES PROJECT**

**BILLS OF QUANTITIES**

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	KSHS
	<b><u>BILL No.2: SEPTIC TANK</u></b>				
	<b><u>CLASS F: INSITU CONCRETE (Contd.)</u></b>				
2F622	Base Concrete 100mm thick - Inlet and Outlet Chamber	CM	0.1		
2F631	Soak Pit Cover 1.8m diameter	CM	0.5		
	<b><u>CLASS G: CONCRETE ANCILLARIES</u></b>				
	<i>Provide and fix Shutterin, including Propping Strutting</i>				
	<b><u>Vertical Formwork - Rough Finish</u></b>				
2G142.1	Sides of 150mm Septic Tank Base	SM	3		
2G142.2	Sides of 150mm Inlet and Outlet Chamber Base	SM	1		
2G142.3	Sides of 120mm Roof Slab	SM	2		
2G142.4	Sides of 120mm Soak Pit Cover Slab	SM	1		
	<b><u>Vertical Formwork - Fair Finish</u></b>				
2G242	Walls of the 100mm thick Scum Baffle	SM	12		
<b>Carried to collection</b>					

# MWITURIA SECONDARY SCHOOL ACCOMMODATION FACILITIES PROJECT

## BILLS OF QUANTITIES

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	KSHS
	<b><u>BILL No.2: SEPTIC TANK</u></b>				
	<b><u>CLASS G: CONCRETE ANCILLARIES (Contd.)</u></b>				
	<b><u>Reinforcement</u></b>				
	<i>Provide and fix high tensile Steel Reinforcement to SRN127 including Cutting, Bending, Propping with Spacers and Tying</i>				
	<b><u>Roof Slab</u></b>				
2G523.1	D10 Bars to Roof Slab	Kgs	40		
2G523.2	Ditto but to Scum Baffle Walls	Kgs	30		
2G522	D8 to Soak Pit Cover Slab	Kgs	20		
2G524	D12 Bars to Roof Slab	Kgs	65		
	<b><u>CLASS I: PIPEWORK</u></b>				
	<i>Includes:Provision, Laying Jointing of Pipes, Excavating and Backfilling</i>				
2I513	PVC Pipes, nominal bore n.e. 200mm in Trenches 1.5m	SUM	1		
Carried to collection					

# MWITURIA SECONDARY SCHOOL ACCOMMODATION FACILITIES PROJECT

## BILLS OF QUANTITIES

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	KSHS
	<b><u>BILL No.2: SEPTIC TANK</u></b>				
	<b><u>CLASS I: PIPEWORK (Contd.)</u></b>				
	<i>Includes: Provision, Laying Jointing of Pipes, Excavating and Backfilling</i>				
	<b><u>Concrete Manhole Covers</u></b>				
2K252.1	Precast Concrete: Area below 0.5m <sup>2</sup>	Nr	2		
2K252.2	Ditto but to Soak Pit	Nr	1		
	<b><u>CLASS J: PIPEWORK</u></b>				
	<b><u>Fittings &amp; Valves</u></b>				
	<b><u>Manhole Inlet &amp; Outlet</u></b>				
2J421	<b><u>Manhole Inlet &amp; Outlet</u></b>				
	PVC Waste Pipes, nominal bore n.e. 200mm	SUM	1		
Carried to collection					

# MWITURIA SECONDARY SCHOOL ACCOMMODATION FACILITIES PROJECT

## BILLS OF QUANTITIES

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	KSHS
	<b><u>BILL No.2: SEPTIC TANK</u></b>				
	<b><u>CLASS U: BRICKWORK,BLOCKWORK AND MASONRY</u></b>				
	<b><u>Stone Masonry</u></b>				
	<i><u>Provide and place approved Stone Masonry bedded in Cement:Sand 1:3 Mortar as directed by the Engineer</u></i>				
2U522	Circular Masonry Wall of Soak Pit 0.6m high	SM	45		
2U511	Block Walling - Inlet and Outlet Chamber	SM	4		
2U521	Block Walling - Septic Tank	SM	32		
	<b><u>CLASS Z: SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS</u></b>				
	<b><u>Surface Finishes</u></b>				
	<i><u>30mm thick Waterproof,both internally &amp; externally for all Walls</u></i>				
2Z411	Cement/Sand Screed on Floors	SM	13		
2Z413.1	Cement/Sand Plaster on Internal & Walls of Septic Tank	SM	27		
2Z413.2	Ditto but to Inlet & Outlet Chambers	SM	3		
<b>Carried to collection</b>					



# MWITURIA SECONDARY SCHOOL ACCOMMODATION FACILITIES PROJECT

## BILLS OF QUANTITIES

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	KSHS
	<b><u>BILL No.3: TEACHER'S QUARTERS</u></b>				
	<b><u>CLASS E: EARTHWORKS</u></b>				
	<u>Excavations shall include for strutting, shuttering, stabilizing excavated surfaces and keeping excavations free of general surface water bailing out, pumping or other means</u>				
<b>3 E4</b>	<b><u>Excavation for Foundation</u></b>				
3E41.1	Excavate oversite average 150mm deep to remove vegetable soil	SM	40		
3E322	Excavate from the reduced level maximum depth 0.25 - 0.5m for Slab foundation	CM	14		
	<u>Excavate in material other than top soil, rock or artificial hard material for foundation trenches 600mm wide</u>				
3E321.1	Maximum depth not exceeding 0.25m	CM	5		
3E321.2	Ditto but to 6No.Column Bases 800mm x 800mm x 200mm	CM	1		
3E322.1	Maximum depth 0.25 - 0.5m	CM	14		
3E322.2	Ditto but to 6No.Column Bases 800mm x 800mm x 200mm	CM	1		
<b>Carried to collection</b>					

# MWITURIA SECONDARY SCHOOL ACCOMMODATION FACILITIES PROJECT

## BILLS OF QUANTITIES

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	KSHS
	<b><u>BILL No.3: TEACHER'S QUARTERS</u></b>				
	<b><u>CLASS E: EARTHWORKS</u></b>				
<b>3 E4</b>	<b><u>Excavation for Foundation(Contd.)</u></b>				
3E323.1	Maximum depth 0.5 - 1.0m	CM	10		
3E323.2	Ditto but to 6No.Column Bases 800mm x 800mm x 200mm	CM	2		
3E324	Maximum depth 1.0 - 2.0m From the finished Trench level for 32No.Column Bases 1200 x 1200 x 300mm deep	CM	1		
<b>3 E5</b>	<b><u>Excavation Ancillaries</u></b>				
	<b><u>Disposal of excavated material</u></b>				
	<i>Approved material shall be retained for backfilling and unsuitable material shall be disposed tip as directed by the Engineer</i>				
3E531	Top Soil	CM	6		
3E532	Material other than top soil, rock or artificial hard material	CM	38		
<b>3 E6</b>	<b><u>Filling</u></b>				
	<b><u>Hardcore</u></b>				
3E647	300mm thick Hardcore, well placed and compacted 2 layers	CM	8		
	<b><u>Approved Murram</u></b>				
3E645	Place and Compact approved Murram maximum 50mm thick	SM	2		
<b>Carried to collection</b>					

# MWITURIA SECONDARY SCHOOL ACCOMMODATION FACILITIES PROJECT

## BILLS OF QUANTITIES

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	KSHS
	<b><u>BILL No.3: TEACHER'S QUARTERS</u></b>				
	<b><u>CLASS E: EARTHWORKS</u></b>				
3 E6	<b><u>Filling</u></b>				
	<b><u>Approved Murram</u></b>				
	<u>Ditto: But to Foundation Footing</u>				
	Return, Fill and Ram selected excavated material as directed by the Engineer	CM	10		
	Chemical Anti-Termite Treatment(Gladiator) the Compacted Murram	SM	30		
	<b><u>CLASS F: IN SITU CONCRETE</u></b>				
	<u>Provide and place Concrete</u>				
3F5	<b><u>Mass Concrete strength Grade 15/20</u></b>				
3F511.1	50mm thick blinding to Strip Footing	CM	1		
3F511.2	Ditto but to Column Bases	CM	1		
F6	<b><u>Vibrated Reinforced Concrete strength Grade 20/20</u></b>				
3F621	100mm thick Floor Slab	CM	4		
3F622	200mm thick Column Footings	CM	1		
3F662	200mm x 250mm deep Ring beams	CM	2		
Carried to collection					

# MWITURIA SECONDARY SCHOOL ACCOMMODATION FACILITIES PROJECT

## BILLS OF QUANTITIES

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	KSHS
	<b><u>BILL No.3: TEACHER'S QUARTERS</u></b>				
	<b><u>CLASS F: IN SITU CONCRETE (Contd.)</u></b>				
<b>3F6</b>	<b><u>Vibrated Reinforced Concrete strength Grade 20/20</u></b>				
3F652	200mm x 200mm x 3700mm high Columns	CM	1		
	<b><u>CLASS G: CONCRETE ANCILLIARIES</u></b>				
	<b><u>Formwork rough finish</u></b>				
3G241	Plane vertical - sides of Floor slab	SM	3		
3G242	Plane vertical - sides of Column Footings	SM	2		
3G243	Ring beams 200mm x 250mm deep	SM	12		
3G282	Plane vertical - sides of Columns n.e. 4m high	SM	18		
3G563	A 142 Fabric Mesh Reinforcement to BS 4483 in Concrete Slab 100mm thick, Nominal mass 3 - 4 Kg/m <sup>2</sup>	SM	33		
	<b><u>Reinforcement</u></b>				
	<b><u>Bars: Mild Steel hot rolled to BS 4449</u></b>				
3G512.1	Nominal size 8mm to Ring Beam	Kg	42		
3G512.2	Ditto but to Column Rings	Kg	34		
<b>Carried to collection</b>					

# MWITURIA SECONDARY SCHOOL ACCOMMODATION FACILITIES PROJECT

## BILLS OF QUANTITIES

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	KSHS
	<b><u>BILL No.3: TEACHER'S QUARTERS</u></b>				
	<b><u>CLASS G: CONCRETE ANCILLIARIES (Contd.)</u></b>				
	<b><u>Reinforcement</u></b>				
	<b><u>Bars: High Yield Tensile Steel twisted to BS 4449</u></b>				
3G524.1	Nominal size 12mm to Ring Beam	Kg	62		
3G524.2	Ditto but to Columns	Kg	63		
3G524.3	But to Strip Footing	Kg	95		
	<b><u>CLASS O: TIMBER</u></b>				
	<b><u>Softwood Components</u></b>				
	<i><u>Provide and fix the following approved items of Sawn Cypress Grade 2, Pressure Impregnated with all leads and lifts complete etc. for Roofing</u></i>				
3O114.1	100 x 50mm Rafters	LM	30		
3O114.3	100 x 50mm Tie Beams	LM	20		
3O115.1	75 x 50mm Purlins	LM	60		
3O112	100 x 50mm King Posts	LM	5		
<b>Carried to collection</b>					

# MWITURIA SECONDARY SCHOOL ACCOMMODATION FACILITIES PROJECT

## BILLS OF QUANTITIES

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	KSHS
	<b><u>BILL No.3: TEACHER'S QUARTERS</u></b>				
	<b><u>CLASS O: TIMBER (Contd.)</u></b>				
30112.1	100 x 50mm Struts & Ties	LM	16		
30112.2	100 x 50mm Collar Splices	LM	10		
	<b><u>Wall Plate</u></b>				
	<u>Secured with 12mm diameter Anchor Bolt 300mm long at 1mc/c cast in Concrete Ring Beam(m/s)</u>				
30114.1	100 x 50mm Wall Plate	LM	25		
30114.3	200 x 25mm Fascia Boards	LM	30		
Carried to collection					

# MWITURIA SECONDARY SCHOOL ACCOMMODATION FACILITIES PROJECT

## BILLS OF QUANTITIES

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	KSHS
	<b><u>BILL No.3: TEACHER'S QUARTERS</u></b>				
	<b><u>CLASS U: BRICKWORK, BLOCKWORK AND MASONRY</u></b>				
3U5	<b><u>Stone Masonry</u></b>				
	<i>Provide and place approved Stone Masonry bedded in Cement:Sand(1:3) mortar with 25mm wide Hoop Iron at alternate courses</i>				
	<b><u>Sub-structure</u></b>				
	<i>Natural Quarry Stone Walling:200mm thick</i>				
3U521.1	Foundation Walling	SM	35		
	<b><u>Super-structure</u></b>				
	<i>Machine Dressed Natural Quarry Stone Walling</i>				
3U521	Walls 200mm thick	SM	71		
<b>Carried to collection</b>					

# MWITURIA SECONDARY SCHOOL ACCOMMODATION FACILITIES PROJECT

## BILLS OF QUANTITIES

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	KSHS
	<b><u>BILL No.3: TEACHER'S QUARTERS</u></b>				
	<b><u>CLASS V: PAINTING</u></b>				
	<b><u>Oil Paint</u></b>				
3V333	<u>Prepare and Apply Three Coats of First Grade Oil Paint to Plastered Wall Surfaces at an an angle exceeding 60° to the horizontal</u>				
	<b><u>Internally</u></b>				
3V333.1	Skirting 100mm high	SM	3		
	<b><u>Emulsion Paint</u></b>				
	<u>Prepare and Apply Three Coats of First Grade Silk Vinyl Emulsion Paint to: Plastered Wall Surfaces at an an angle exceeding 60° to the horizontal</u>				
	<b><u>Internally</u></b>				
3V533.1	Above Skirting Level	SM	90		
	<u>Prepare and Apply Three Coats of First Grade Matt Emulsion Paint to Ceiling Surfaces at an an angle exceeding 60° to the horizontal</u>				
3V533.2	Ditto but to Weatherguard Paint externally	SM	65		
	<u>Prepare and Apply Three Coats of First Grade Silk Vinyl Emulsion Paint to: Timber Surfaces of width not exceeding 300mm</u>				
	<b><u>Externally</u></b>				
3V526	Fascia Boards	LM	30		
<b>Carried to collection</b>					



# MWITURIA SECONDARY SCHOOL ACCOMMODATION FACILITIES PROJECT

## BILLS OF QUANTITIES

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	KSHS
	<b><u>BILL No.3: TEACHER'S QUARTERS</u></b>				
	<b><u>CLASS W: WATERPROOFING</u></b>				
3W136	Provide and Place an approved Damp Proof Course	LM	35		
	<b><u>Roofing</u></b>				
	<b><u>Sheet Metal</u></b>				
3W321.1	Pre-painted Green Galvanized Iron Sheets 30 gauge	SM	42		
3W321.2	Provide and fix Ridge Capping to match Item W321	LM	7		
3W326	Provide and fix Gutter to match Item W321	LM	14		
3W324	Provide and fix Down Pipe to match Item W324.2	LM	12		
	<b><u>Windows, Doors and Glazing</u></b>				
	<u>Rate to include Supply of Materials/Fittings, Fixing and/or Drilling, Cutting of associated Works and Painting with 3 Coats of Paint</u>				
	<b><u>Doors</u></b>				
	<u>Rate to include Frames, Hinges, Locks, Handles, Stoppers and Fixing in accordance with the Specifications</u>				
3Z313	T Door 2000 x 850mm	Nr	1		
3Z323	Steel Casement Door 2000 x 850mm	Nr	1		
Carried to collection					

**MWITURIA SECONDARY SCHOOL ACCOMMODATION FACILITIES PROJECT**

**BILLS OF QUANTITIES**

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	KSHS
	<b><u>BILL No.3: TEACHER'S QUARTERS</u></b>				
	<b><u>CLASS Z: SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS</u></b>				
	<b><u>Windows, Doors and Glazing (Contd.)</u></b>				
	<b><u>Windows</u></b>				
	<i>Rate to include 4mm thick Glazing</i>				
	<b><u>Steel Casement Windows</u></b>				
3Z321.1	Window size 900 x 1000mm (W1)	Nr	2		
3Z162	Pelmet Boxes 1400mm (L) x 200mm (W) c/w Curtain Rods to match Item No. Z321.1	Nr	2		
<b>Carried to collection</b>					

# MWITURIA SECONDARY SCHOOL ACCOMMODATION FACILITIES PROJECT

## BILLS OF QUANTITIES

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	KSHS
	<b><u>BILL No.3: TEACHER'S QUARTERS</u></b>				
	<b><u>CLASS Z: SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS</u></b>				
	<b><u>Surface Finishes</u></b>				
3Z411	Cement/Sand 20mm Screed on Floors	SM	30		
3Z413.1	Cement/Sand 20mm Plaster on Internal Walls	SM	90		
3Z413.2	Cement/Sand 20mm Plaster on External Walls	SM	65		
3Z415.1	Cement/Sand 20 x 100mm high Skirting on Internal Walls	LM	30		
3Z415.2	Cement/Sand 20 x 600mm high Plinth on External Walls	LM	20		
	<b><u>Cabled Building Services</u></b>				
	<u>Supply, Instal, Test and Commissionthe following Electrical Materials/Fittings</u>				
	Allow for Connection of Electrical Power to the Building as directed by the Engineer	SUM			
<b>Carried to collection</b>					

# MWITURIA SECONDARY SCHOOL ACCOMMODATION FACILITIES PROJECT

## BILLS OF QUANTITIES

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	KSHS
	<b><u>BILL No.4: DORMITORY - COMPLETION</u></b>				
	<b><u>CLASS E: EARTHWORKS</u></b>				
	<i>Excavations shall include for strutting, shuttering, stabilizing excavated surfaces and keeping excavations free of general surface water bailing out, pumping or other means</i>				
<b>4 E4</b>	<b><u>Excavation for Foundation</u></b>				
4E41.1	Excavate oversite average 150mm deep to remove vegetable soil	SM	230		
4E322	Excavate from the reduced level maximum depth 0.25 - 0.5m for Slab foundation	CM	86		
	<i>Excavate in material other than top soil, rock or artificial hard material for foundation trenches 600mm wide</i>				
4E321.1	Maximum depth not exceeding 0.25m	CM	23		
4E321.2	Ditto but to 24No.Column Bases 1200mm x 1200mm x 300mm	CM	9		
4E322.1	Maximum depth 0.25 - 0.5m	CM	23		
4E322.2	Ditto but to 24No.Column Bases 1200mm x 1200mm x 300mm	CM	9		
<b>Carried to collection</b>					

# MWITURIA SECONDARY SCHOOL ACCOMMODATION FACILITIES PROJECT

## BILLS OF QUANTITIES

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	KSHS
	<b><u>BILL No.4: DORMITORY - COMPLETION</u></b>				
	<b><u>CLASS E: EARTHWORKS</u></b>				
<b>4 E4</b>	<b><u>Excavation for Foundation(Contd.)</u></b>				
4E323.1	Maximum depth 0.5 - 1.0m	CM	45		
4E323.2	Ditto but to 32No.Column Bases 1200mm x 1200mm x 300mm	CM	18		
4E324	Maximum depth 1.0 - 2.0m From the finished Trench level for 32No.Column Bases 1200 x 1200 x 300mm deep	CM	11		
<b>4 E5</b>	<b><u>Excavation Ancillaries</u></b>				
	<b><u>Disposal of excavated material</u></b> <u>Approved material shall be retained for backfilling and unsuitable material shall be disposed tip as directed by the Engineer</u>				
4E531	Top Soil	CM	34		
4E532	Material other than top soil, rock or artificial hard material	CM			
<b>4 E6</b>	<b><u>Filling</u></b>				
	<b><u>Hardcore</u></b>				
4E647	300mm thick Hardcore, well placed and compacted 2 layers	CM	50		
	<b><u>Approved Murram</u></b>				
4E645	Place and Compact approved Murram maximum 50mm thick	SM	162		
<b>Carried to collection</b>					

# MWITURIA SECONDARY SCHOOL ACCOMMODATION FACILITIES PROJECT

## BILLS OF QUANTITIES

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	KSHS
	<b><u>BILL No.4: DORMITORY - COMPLETION</u></b>				
	<b><u>CLASS E: EARTHWORKS</u></b>				
4 E6	<b><u>Filling</u></b>				
	<b><u>Approved Murram</u></b>				
	<u>Ditto: But to Foundation Footing</u>				
	Return, Fill and Ram selected excavated material as directed by the Engineer	CM	170		
	Chemical Anti-Termite Treatment(Gladiator) the Compacted Murram	SM	162		
	<b><u>CLASS F: IN SITU CONCRETE</u></b>				
	<u>Provide and place Concrete</u>				
4F5	<b><u>Mass Concrete strength Grade 15/20</u></b>				
4F511.1	50mm thick blinding to Strip Footing	CM	6		
4F511.2	Ditto but to Column Bases	CM	2		
4F6	<b><u>Vibrated Reinforced Concrete strength Grade 20/20</u></b>				
4F621	100mm thick Floor Slab	CM	23		
4F622	300mm thick Column Footings	CM	11		
4F662	200mm x 300mm deep Ring beams	CM	9		
<b>Carried to collection</b>					

# MWITURIA SECONDARY SCHOOL ACCOMMODATION FACILITIES PROJECT

## BILLS OF QUANTITIES

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	KSHS
	<b><u>BILL No.4: DORMITORY - COMPLETION</u></b>				
	<b><u>CLASS F: IN SITU CONCRETE (Contd.)</u></b>				
4F6	<b><u>Vibrated Reinforced Concrete strength Grade 20/20</u></b>				
4F652	200mm x 200mm x 4000mm high Columns	CM	4		
	<b><u>CLASS G: CONCRETE ANCILLIARIES</u></b>				
	<b><u>Formwork rough finish</u></b>				
4G241	Plane vertical - sides of Floor slab	SM	7		
4G242	Plane vertical - sides of Column Footings	SM	35		
4G243	Ring beams 200mm x 300mm deep	SM	121		
4G282	Plane vertical - sides of Columns n.e. 4m high	SM	77		
4G563	A 142 Fabric Mesh Reinforcement to BS 4483 in Concrete Slab 100mm thick, Nominal mass 3 - 4 Kg/m <sup>2</sup>	SM	191		
	<b><u>Reinforcement</u></b>				
	<b><u>Bars: Mild Steel hot rolled to BS 4449</u></b>				
4G512.1	Nominal size 8mm to Ring Beam	Kg	251		
4G512.2	Ditto but to Column Rings	Kg	100		
<b>Carried to collection</b>					

# MWITURIA SECONDARY SCHOOL ACCOMMODATION FACILITIES PROJECT

## BILLS OF QUANTITIES

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	KSHS
	<b><u>BILL No.4: DORMITORY - COMPLETION</u></b>				
	<b><u>CLASS G: CONCRETE ANCILLIARIES (Contd.)</u></b>				
	<b><u>Reinforcement</u></b>				
	<b><u>Bars: High Yield Tensile Steel twisted to BS 4449</u></b>				
4G524.1	Nominal size 12mm to Ring Beam	Kg	494		
4G524.2	Ditto but to Columns	Kg	401		
4G524.3	But to Strip Footing	Kg	790		
	<b><u>CLASS O: TIMBER</u></b>				
	<b><u>Softwood Components</u></b>				
	<i><u>Provide and fix the following approved items of Sawn Cypress Grade 2. Pressure Impregnated with all leads and lifts complete etc. for Roofing</u></i>				
4O114.1	150 x 50mm Rafters	LM	110		
4O114.2	Ditto but to Hips	LM	90		
4O114.3	150 x 50mm Tie Beams	LM	85		
4O114.4	Ditto but to Hips	LM	85		
<b>Carried to collection</b>					



# MWITURIA SECONDARY SCHOOL ACCOMMODATION FACILITIES PROJECT

## BILLS OF QUANTITIES

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	KSHS
	<b><u>BILL No.4: DORMITORY - COMPLETION</u></b>				
	<b><u>CLASS O: TIMBER (Contd.)</u></b>				
4O115.1	100 x 50mm Purlins	LM	265		
4O115.2	Ditto but to Hips	LM	60		
4O112	150 x 50mm King Posts	LM	25		
4O111	Ditto but to Hips	LM	5		
4O112.1	100 x 50mm Struts & Ties	LM	155		
4O112.2	Ditto but to Hips	LM	55		
4O112.3	150 x 50mm Collar Splices	LM	25		
	<b><u>Wall Plate</u></b>				
	<u>Secured with 12mm diameter Anchor Bolt 300mm long at 1mc/c cast in Concrete Ring Beam(m/s)</u>				
4O114.1	100 x 50mm Wall Plate	LM	70		
4O114.2	Ditto but to Entrance Porch	LM	8		
Carried to collection					

# MWITURIA SECONDARY SCHOOL ACCOMMODATION FACILITIES PROJECT

## BILLS OF QUANTITIES

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	KSHS
	<b><u>BILL No.4: DORMITORY - COMPLETION</u></b>				
	<b><u>CLASS O: TIMBER (Contd.)</u></b>				
4O114.3	200 x 25mm Fascia Boards	LM	70		
	<b><u>Entrance Porches</u></b>				
4O112.1	75 x 50mm Rafters	LM	15		
4O112.2	75 x 50mm Tie Beams	LM	10		
4O112.3	75 x 50mm King Posts	LM	2		
4O112.4	75 x 50mm Struts & Ties	LM	5		
4O112.5	75 x 50mm Collars	LM	3		
4O112.6	250 x 25mm Fascia Boards	LM	20		
	<b><u>Fittings and Fastenings</u></b>				
4O51	Straps	Nr	10		
4O54	Bolts	Nr	200		
<b>Carried to collection</b>					

# MWITURIA SECONDARY SCHOOL ACCOMMODATION FACILITIES PROJECT

## BILLS OF QUANTITIES

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	KSHS
	<b><u>BILL No.4: DORMITORY - COMPLETION</u></b>				
	<b><u>CLASS U: BRICKWORK, BLOCKWORK AND MASONRY</u></b>				
4U5	<b><u>Stone Masonry</u></b>				
	<i>Provide and place approved Stone Masonry bedded in Cement:Sand(1:3) mortar with 25mm wide Hoop Iron at alternate courses</i>				
	<b><u>Sub-structure</u></b>				
	<i>Natural Quarry Stone Walling:200mm thick</i>				
4U521.1	Foundation Walling	SM	191		
	<b><u>Super-structure</u></b>				
	<i>Machine Dressed Natural Quarry Stone Walling</i>				
4U521	Main Walls 200mm thick	SM	265		
	<b><u>CLASS V: PAINTING</u></b>				
	<b><u>Oil Paint</u></b>				
4V333	<i>Prepare and Apply Three Coats of First Grade Oil Paint to Plastered Wall Surfaces at an an angle exceeding 60° to the horizontal</i>				
	<b><u>Internally</u></b>				
4V333.1	Skirting 100mm high	SM	17		
4V333.2	Below Window Level 800mm high	SM	140		
Carried to collection					

# MWITURIA SECONDARY SCHOOL ACCOMMODATION FACILITIES PROJECT

## BILLS OF QUANTITIES

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	KSHS
	<b><u>BILL No.4: DORMITORY - COMPLETION</u></b>				
	<b><u>CLASS V: PAINTING (Contd.)</u></b>				
	<b><u>Emulsion Paint</u></b>				
4V533	<u>Prepare and Apply Three Coats of First Grade Silk Vinyl Emulsion Paint to: Plastered Wall Surfaces at an an angle exceeding 60° to the horizontal</u>				
	<b><u>Internally</u></b>				
4V533.1	Above Window Level 800mm high	SM	283		
	<u>Prepare and Apply Three Coats of First Grade Matt Emulsion Paint to Ceiling Surfaces at an an angle exceeding 60° to the horizontal</u>				
	<b><u>Externally</u></b>				
4V533.1	Weatherguard Paint	SM	191		
	<u>Prepare and Apply Three Coats of First Grade Silk Vinyl Emulsion Paint to: Timber Surfacesof width not exceeding 300mm</u>				
	<b><u>Externally</u></b>				
4V526	Fascia Boards	LM	72		
Carried to collection					

# MWITURIA SECONDARY SCHOOL ACCOMMODATION FACILITIES PROJECT

## BILLS OF QUANTITIES

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	KSHS
	<b><u>BILL No.4: DORMITORY - COMPLETION</u></b>				
	<b><u>CLASS W: WATERPROOFING</u></b>				
4W136	Provide and Place an approved Damp Proof Course	LM	107		
	<b><u>Roofing</u></b>				
	<b><u>Sheet Metal</u></b>				
4W321.1	Pre-painted Green Galvanized Iron Sheets 30 gauge	SM	274		
4W321.2	Ditto but to Entrance Porches	SM	20		
4W321.3	Provide and fix Ridge Capping to match Item W321	LM	45		
4W321.4	Ditto but to Entrance Porches	LM	6		
4W326.1	Provide and fix Gutter to match Item W321	LM	72		
4W326.2	Ditto but to Entrance Porches	LM	6		
4W324	Provide and fix Down Pipe to match Item W324.2	LM	50		
<b>Carried to collection</b>					

# MWITURIA SECONDARY SCHOOL ACCOMMODATION FACILITIES PROJECT

## BILLS OF QUANTITIES

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	KSHS
	<b><u>BILL No.4: DORMITORY - COMPLETION</u></b>  <b><u>CLASS Z: SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS</u></b>  <b><u>Windows, Doors and Glazing</u></b>  <i>Rate to include Supply of Materials/Fittings, Fixing and/or Drilling, Cutting of associated Works and Painting with 3 Coats of Paint</i>  <b><u>Doors</u></b>  <i>Rate to include Frames, Hinges, Locks, Handles, Stoppers and Fixing in accordance with the Specifications</i>				
4Z313.1	Hardwood Panel Double Shutter Door 1600 x 2400 c/w Fanlight	Nr	2		
	<b><u>Windows</u></b>  <i>Rate to include 4mm thick Glazing</i>  <b><u>Steel Casement Windows</u></b>				
4Z321.1	Window size 1500 x 1500mm (W1)	Nr	16		
4Z321.2	Window size 1500 x 300mm (W2)	Nr	2		
4Z162	Pelmet Boxes 1900mm (L) x 200mm (W) c/w Curtain Rods to match Item No. Z321.1	Nr	16		
Carried to collection					

# MWITURIA SECONDARY SCHOOL ACCOMMODATION FACILITIES PROJECT

## BILLS OF QUANTITIES

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	KSHS
	<b><u>BILL No.4: DORMITORY - COMPLETION</u></b>				
	<b><u>CLASS Z: SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS</u></b>				
	<b><u>Surface Finishes</u></b>				
4Z411	Cement/Sand 20mm Screed on Floors	SM	182		
4Z413.1	Cement/Sand 20mm Plaster on Internal Walls	SM	385		
4Z413.2	Cement/Sand 20mm Plaster on External Walls	SM	145		
4Z415.1	Cement/Sand 20 x 100mm high Skirting on Internal Walls	LM	200		
4Z415.2	Cement/Sand 20 x 600mm high Plinth on External Walls	LM	65		
	<b><u>Piped Building Services</u></b>				
	<i><u>Rate to include Supply of Materials/Fittings, Fixing and/or Drilling, Cutting of associated Works, Testing and Commissioning</u></i>				
	Allow for Connection of Water to the Buiding as directed by the Engineer	SUM	I		
	Allow for Connection of Waste Water to the Buiding as directed by the Engineer	SUM	I		
<b>Carried to collection</b>					

**MWITURIA SECONDARY SCHOOL ACCOMMODATION FACILITIES PROJECT**

**BILLS OF QUANTITIES**

ITEM No.	DESCRIPTION	UNIT	QTY	RATE	KSHS
	<b><u>BILL No.4: DORMITORY - COMPLETION</u></b>  <b><u>CLASS Z: SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS</u></b>  <b><u>Cabled Building Services</u></b>  <u>Supply, Instal, Test and Commissionthe following Electrical Materials/Fittings</u>  Allow for Connection of Electrical Power to the Buiding as directed by the Engineer	SUM	I		
Carried to collection					



# MWITURIA SECONDARY SCHOOL ACCOMMODATION FACILITIES PROJECT

## BILLS OF QUANTITIES

Bill No.	DESCRIPTION	KSHS
1	Carried to Collection Page 6 to 27	
2	Carried to Collection Page 28 to 32	
3	Carried to Collection Page 33 to 43	
	Less Amounts already Paid (V.A.T Excl.)	
	Amount now Quoted (V.AT. Excl.)	
4	Carried to Collection Page 44 to 56	
<b>TOTAL</b>		
<b>Add 16% V.A.T</b>		
<b>GRAND TOTAL</b>		

Amount in words: Kenya Shillings.....

.....

Tenderer's Signature.....

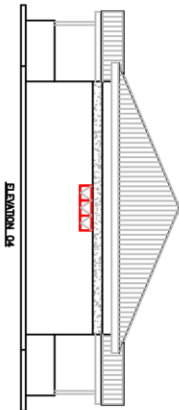
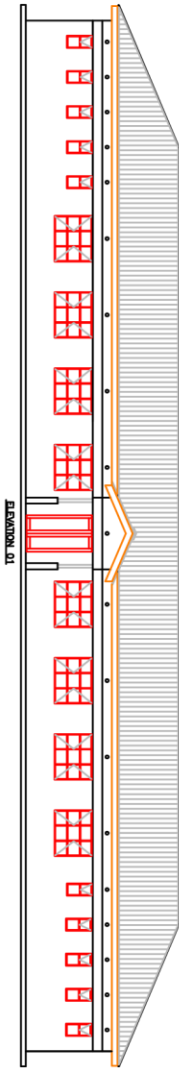
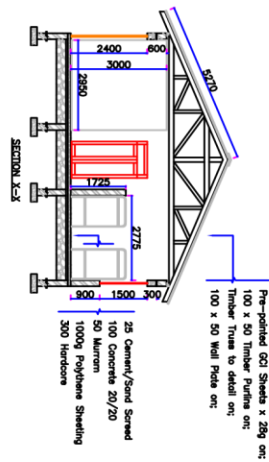
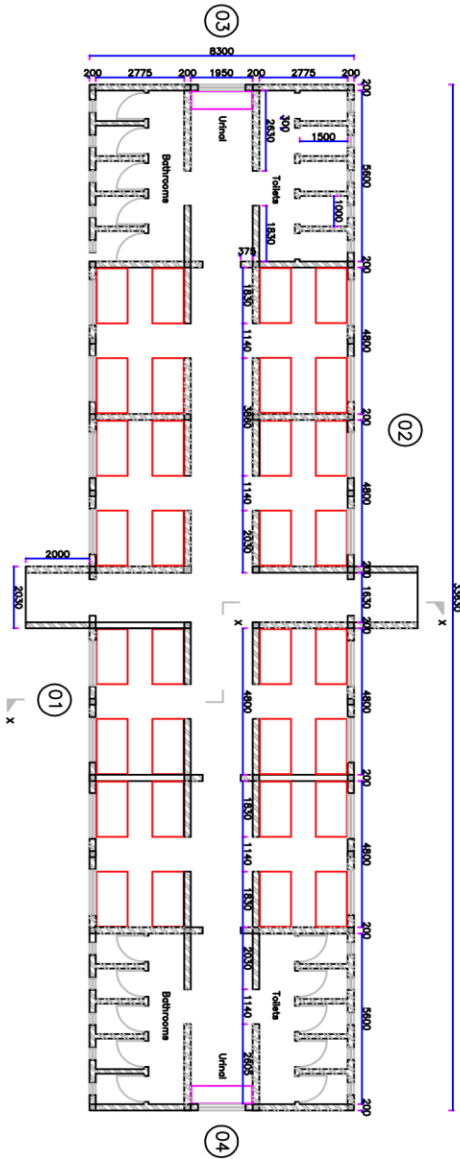
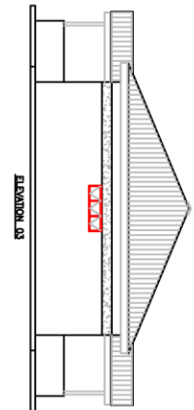
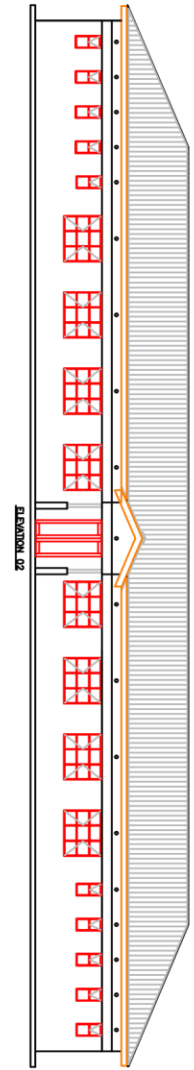
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Date: .....

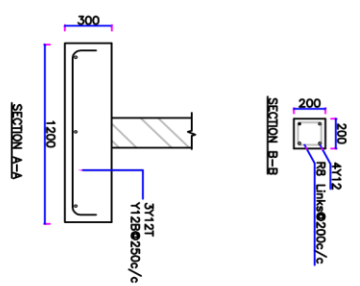
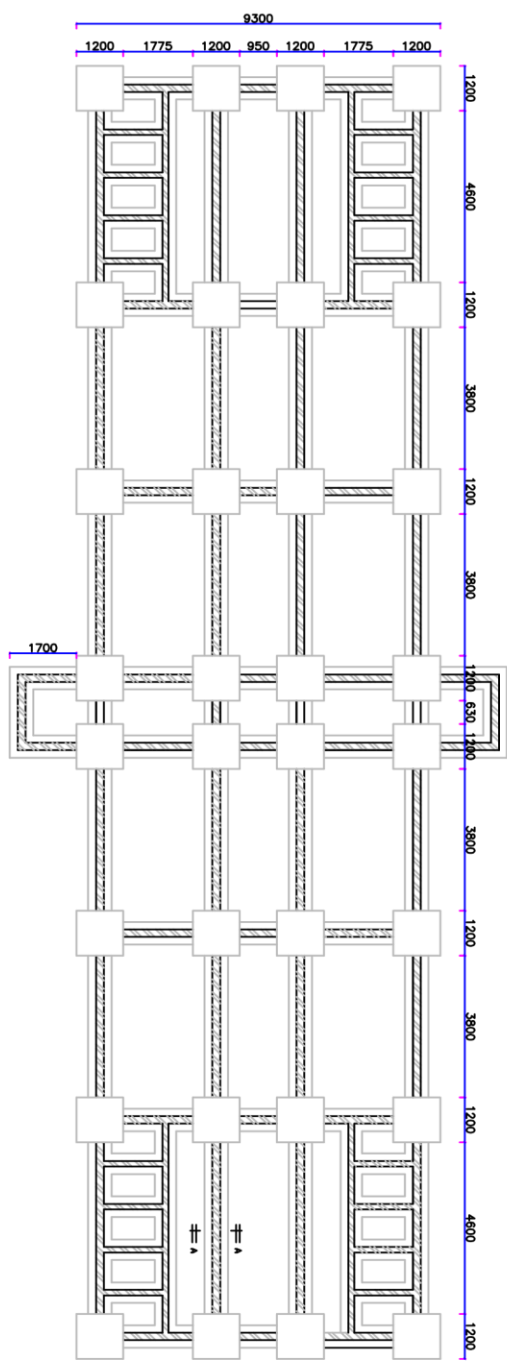
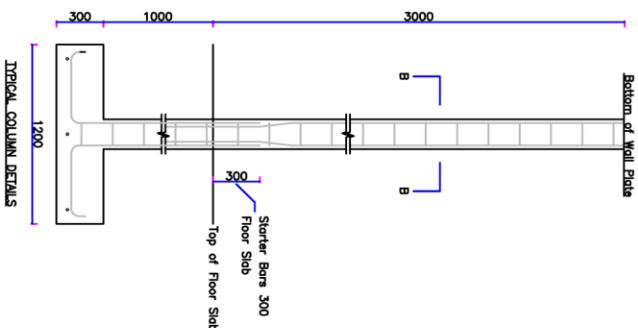
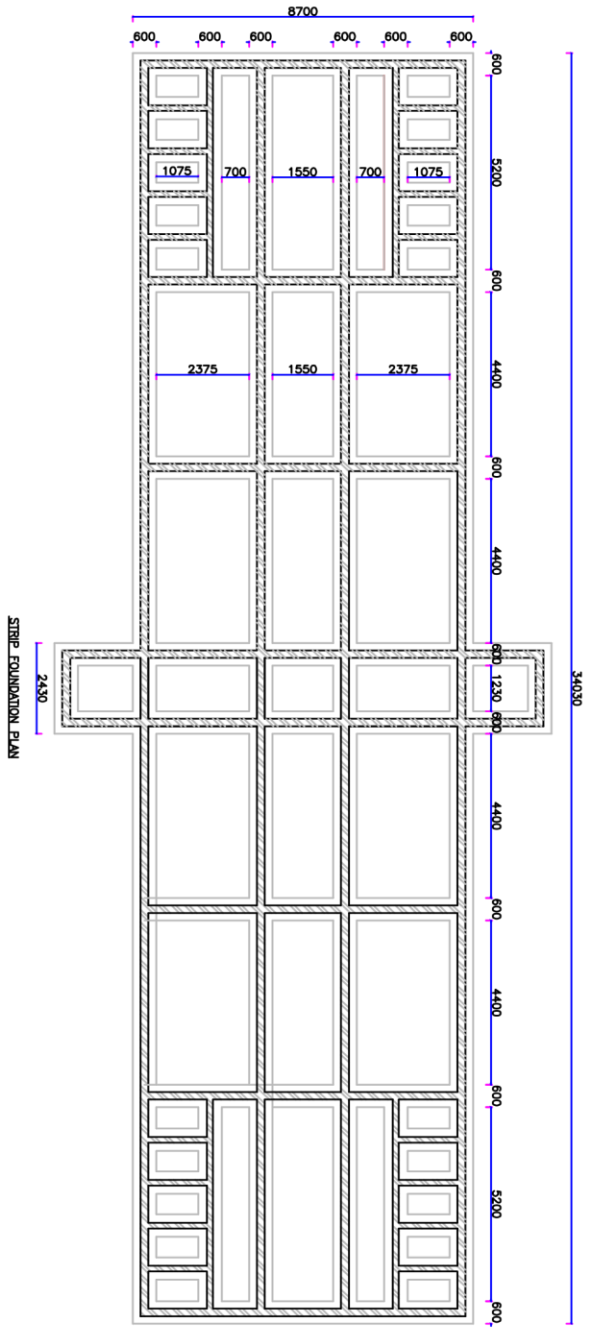
Witness Signature: .....

Address.....

Date: .....



Project:	Mwituna Secondary School Accommodation Facilities	Project Location:	Mwituna Secondary School	Design:	J. Ngeso	Checked:		Title:	Plans, Elevations & Sections	Status:	Drp. No.: 1.1 of 5
				Drawn:	J. Ngeso	Approved:				Scale:	N.T.S
										Date:	April 2020

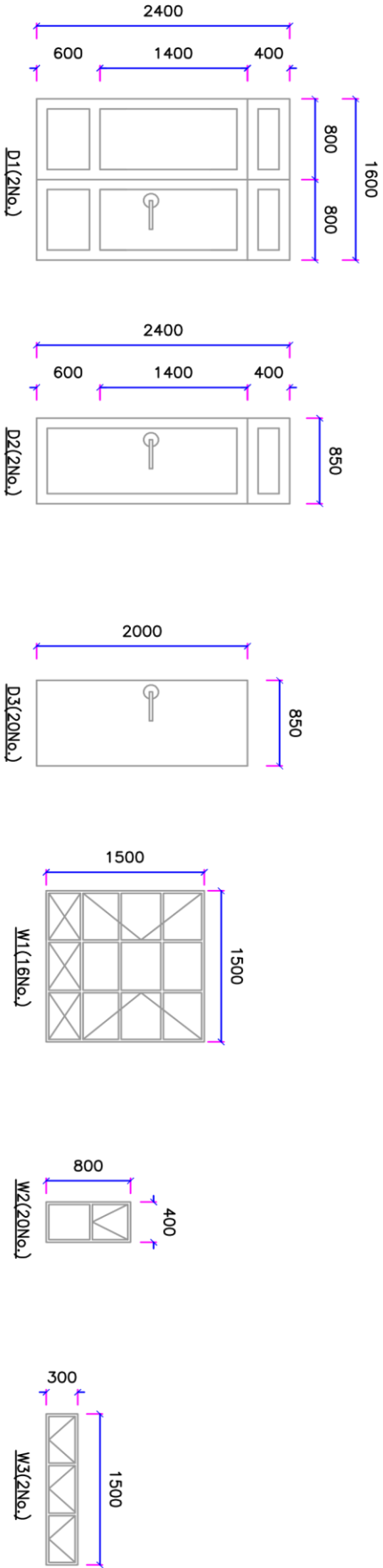


Project:	Mwituna Secondary School Accommodation Facilities	Project Location:	Mwituna Secondary School	Design:	J. Ngesso	Checked:		Title:	Foundation Plans & Column Details	Status:		Drg. No.:	Lot 1.2 of 5
				Drawn:	J. Ngesso	Approved:				Scale:	N.T.S	Date:	April 2020



## DOORS SCHEDULE

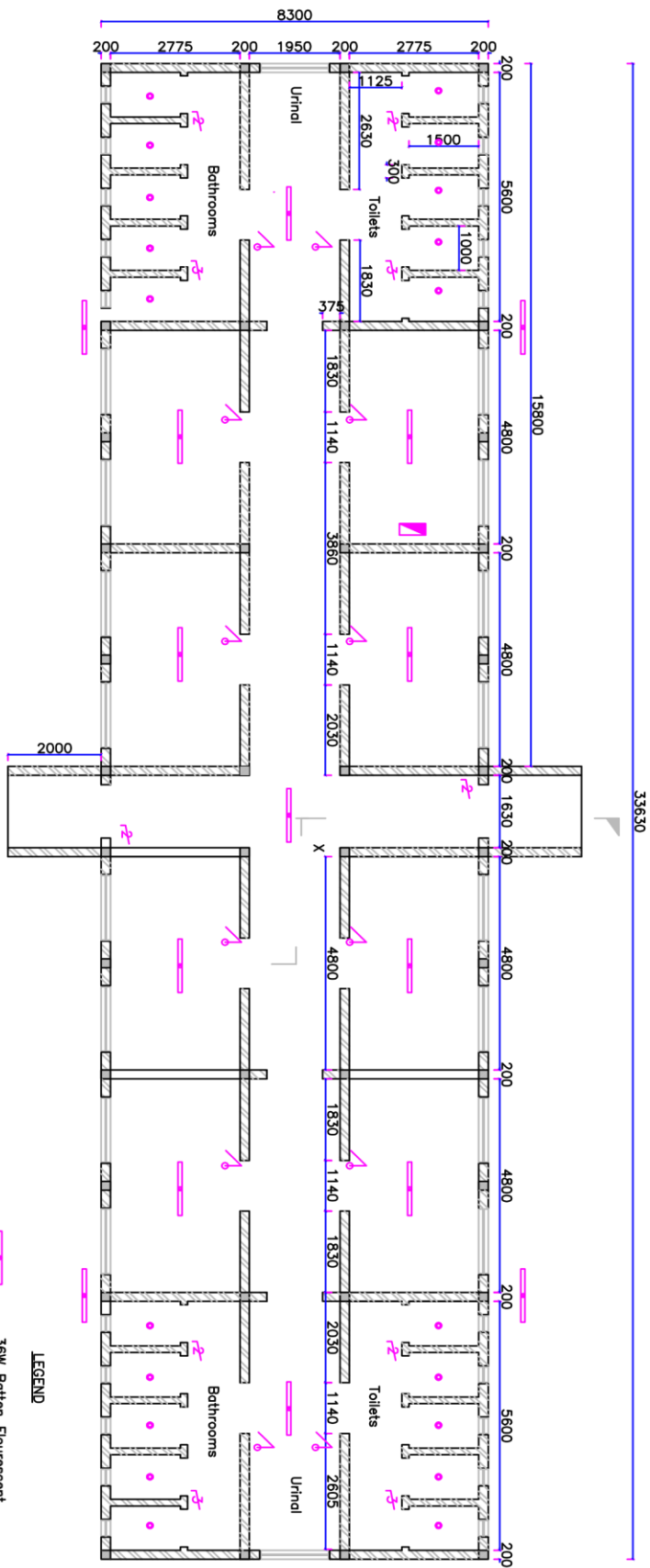
TYPE	L	SIZE	H	QTY	GLAZING	DESCRIPTION
D1	1600	x	2400	2	Clear 4mm	Hardwood Mahogany Pannelled,Flash Light 400
D2	850	x	2400	2	Clear 4mm	Hardwood Mahogany Pannelled,Flash Light 400
D3	850	x	2100	2	Nil	Solid Core Flush



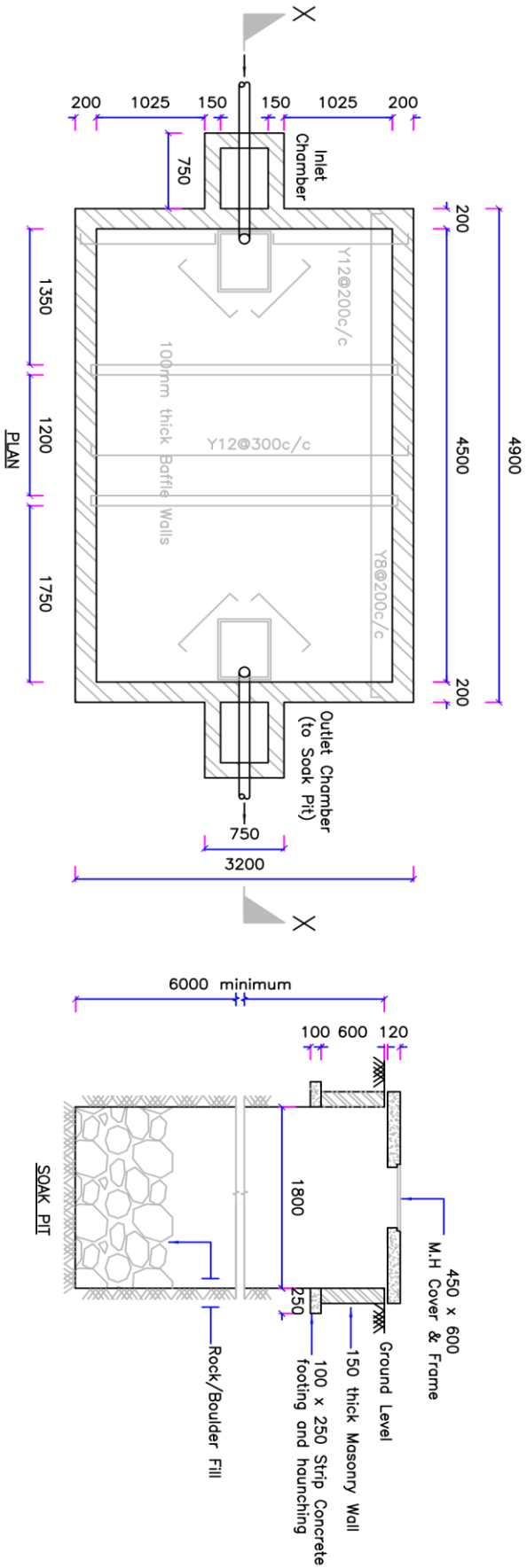
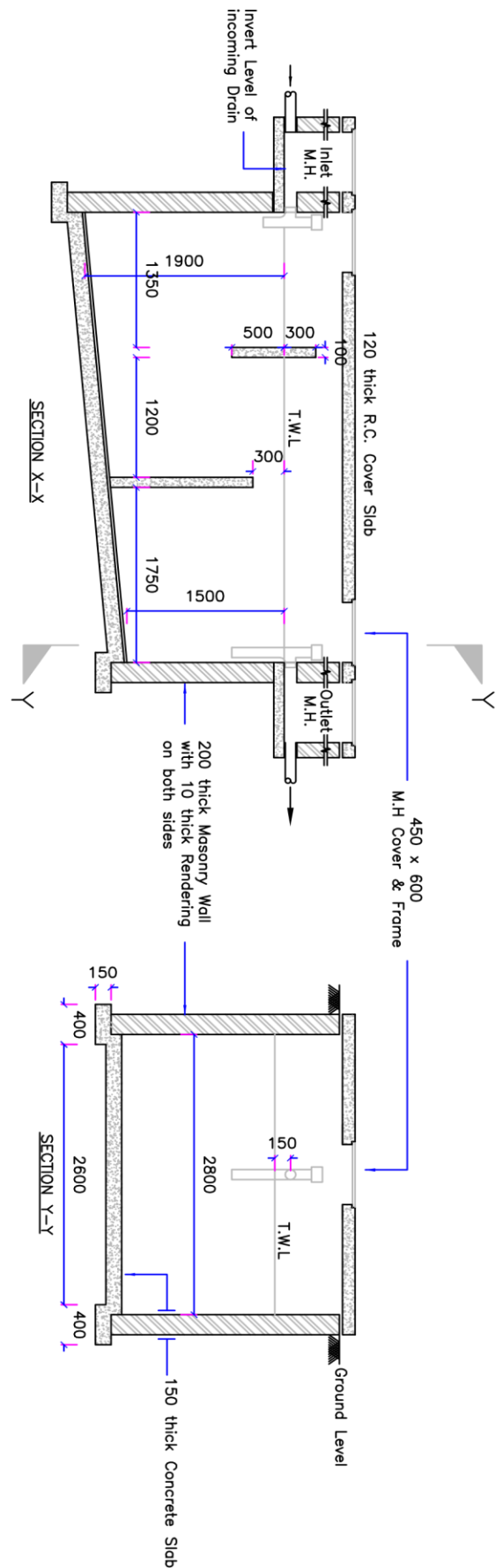
## WINDOWS SCHEDULE

TYPE	L	SIZE	H	QTY	GLAZING	DESCRIPTION
W1	1500	x	1500	16	Clear 4mm	Steel Casement,Double Shutter
W2	400	x	800	20	Obscure 4mm	Steel Casement,Top Hang
W3	1500	x	300	2	Obscure 4mm	Steel Casement,Top Hang

<b>Project:</b> Mwitumba Secondary School Accommodation Facilities	<b>Project Location:</b> Mwitumba Secondary School	<b>Design:</b> J. Ngeso	<b>Checked:</b>	<b>Title:</b> Windows & Doors Schedule	<b>Status:</b>	<b>Drg.No.:</b> 1.4 of 5
	<b>Drawn:</b> J. Ngeso		<b>Approved:</b>		<b>Scale:</b> N.T.S	<b>Date:</b> April 2020



<b>Project:</b> Mwitumba Secondary School Accommodation Facilities	<b>Project Location:</b> Mwitumba Secondary School	<b>Design:</b> J. Ngeso	<b>Checked:</b>	<b>Title:</b> Electrical Installation/Fittings	<b>Status:</b>	<b>Drig.No.:</b> 1.5 of 5
		<b>Drawn:</b> J. Ngeso	<b>Approved:</b>		<b>Scale:</b> N.T.S	<b>Date:</b> April 2020



**Project:** Mwitumba Secondary School Accommodation Facilities

**Project Location:** Mwitumba Secondary School

**Design:** J. Ngeso

**Drawn:** J. Ngeso

**Checked:**

**Approved:**

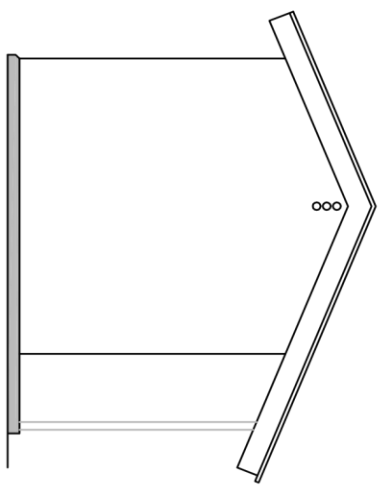
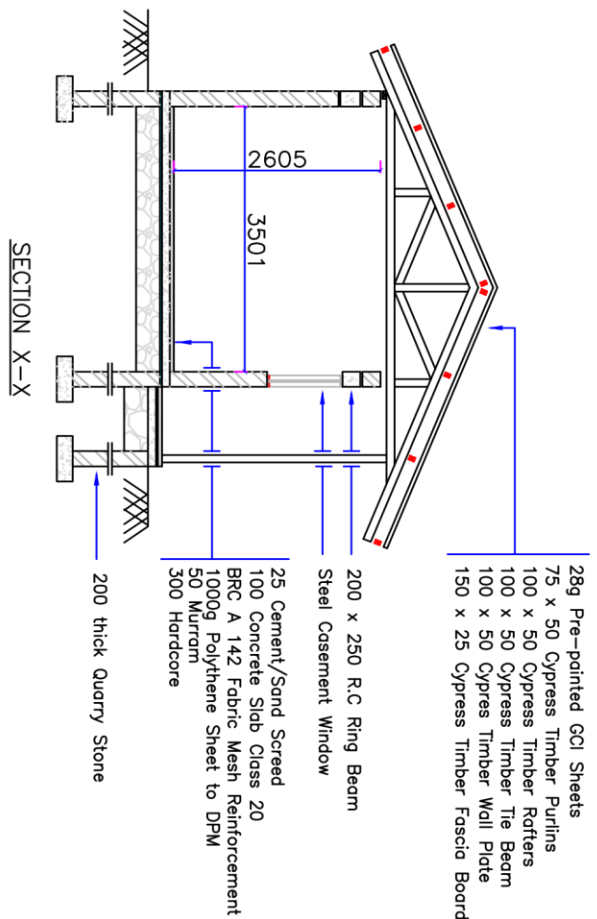
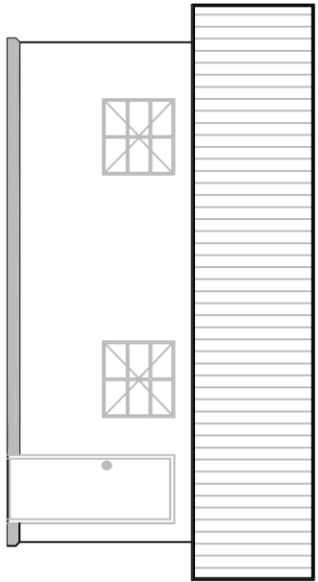
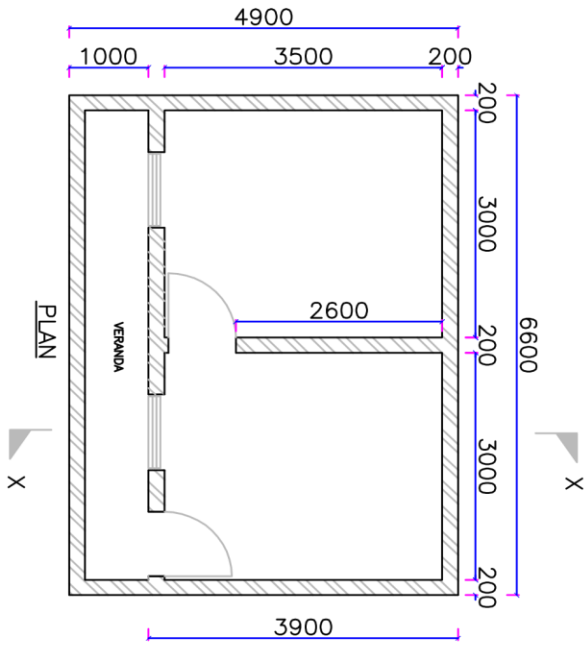
**Title:** Septic Tank & Soak Pit Details

**Status:**

**Scale:** N.T.S

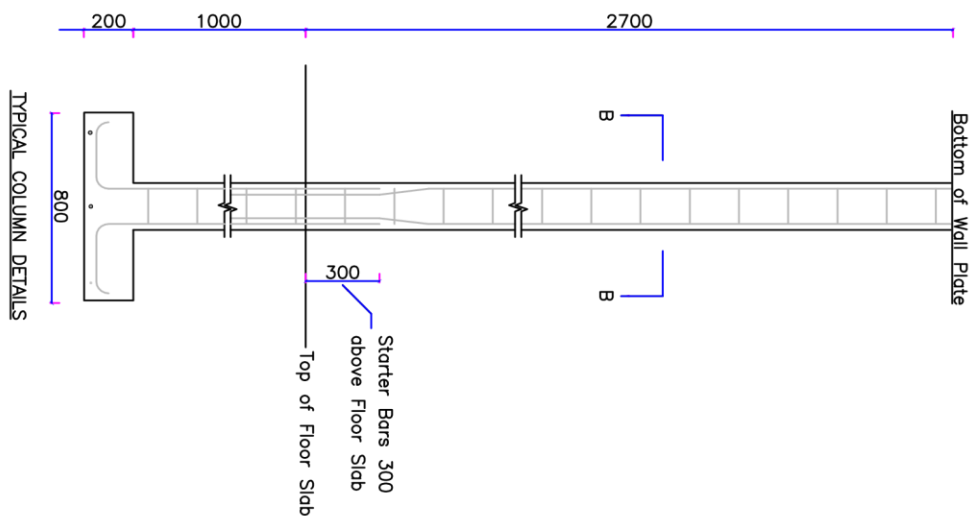
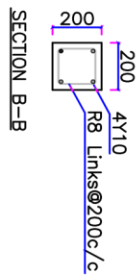
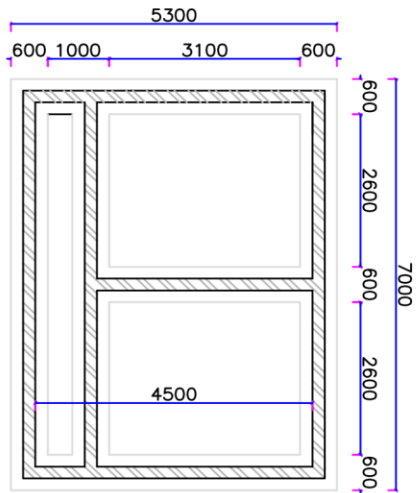
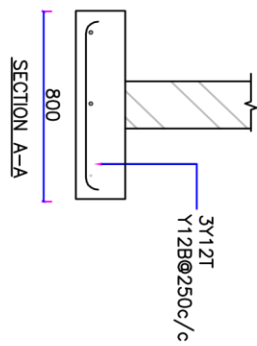
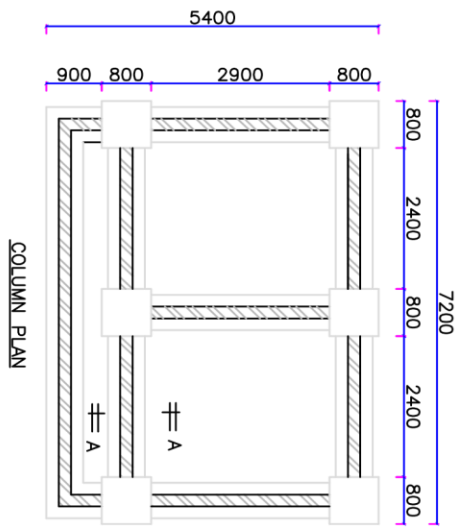
**Drig.No.:** 2.1 of 1

**Date:** April 2020

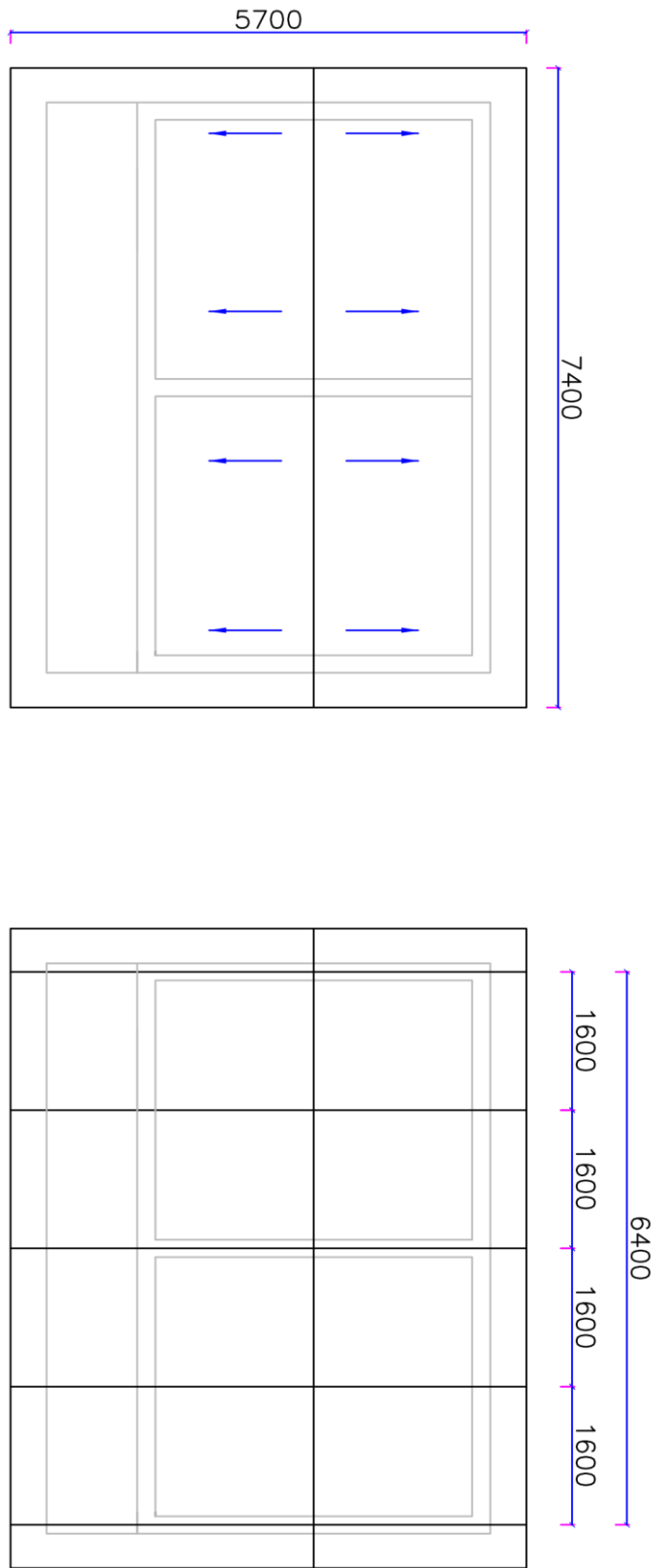


Project: Mwituri Secondary School Accommodation Facilities	Project Location: Mwituri Secondary School	Design: J. Ngaso	Checked:	Title: Plans, Elevations & Sections	Status:	Drg. No.: 3.1 of 4
Drawn: J. Ngaso	Approved:				Scale: N.T.S	
						Date: April 2020



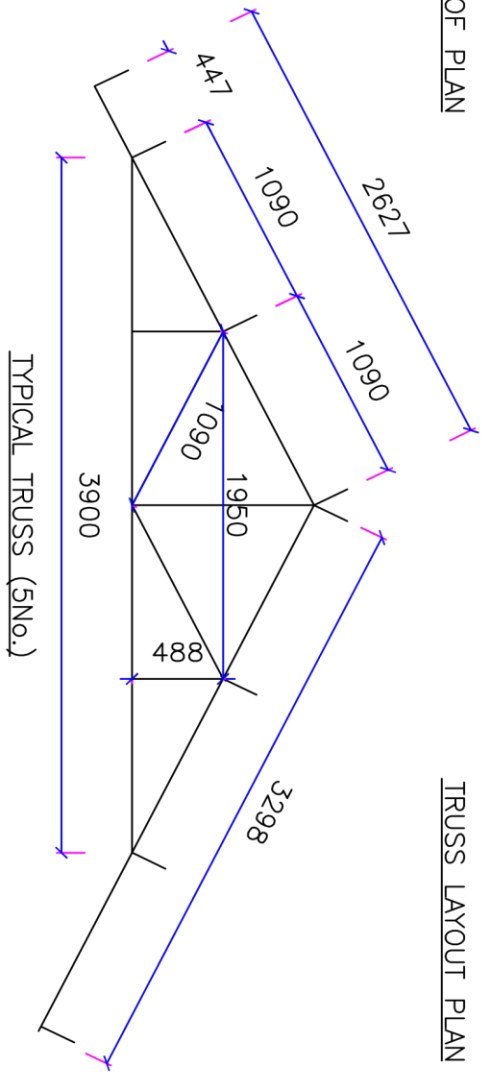


Project: Mmitura Secondary School Accommodation Facilities	Project Location: Mmitura Secondary School	Design: J. Ngeso	Checked:	Title: Foundation Plans & Column Details	Status:	Drg. No.: 3.2 of 4
	Drawn: J. Ngeso	Approved:				
					Scale: N.T.S	Date: April 2020



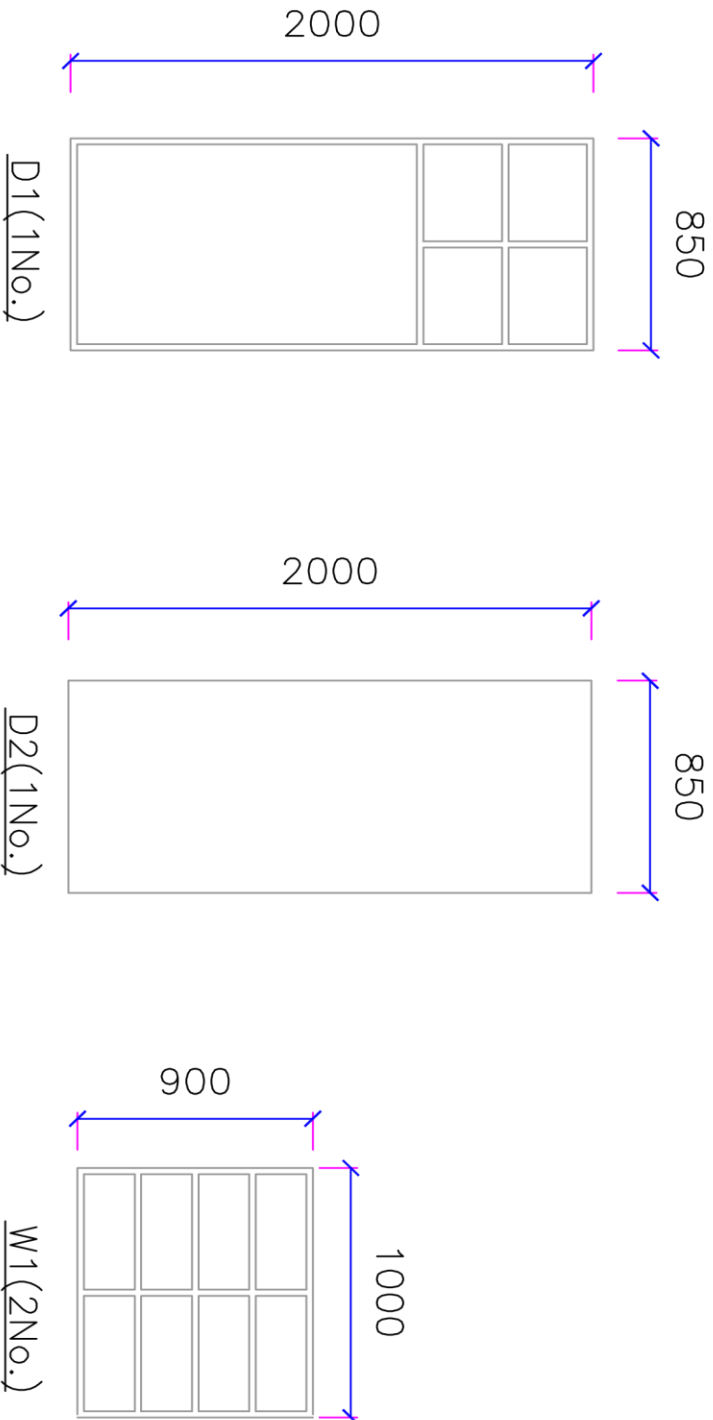
ROOF PLAN

TRUSS LAYOUT PLAN



TYPICAL TRUSS (5No.)

Project: Mwituri Secondary School Accommodation Facilities	Project Location: Mwituri Secondary School	Design: J. Ngeso	Checked:	Title: Roof & Truss Details	Status:	Drg.No.: 3.3 of 4
Drawn: J. Ngeso	Approved:				Scale: N.T.S	
				Date: April 2020		



### DOORS & WINDOWS SCHEDULE

TYPE	L	SIZE	H	QTY	GLAZING	DESCRIPTION
D1	850	x	2000	1	Clear 4mm	Steel Caement, Pannelled, Burglar Proof
D2	850	x	2000	1	Clear 4mm	T Door, Hardwood Timber
W1	1000	x	900	2	Clear 4mm	Steel Casement, Double Shutter, Weldmesh Reinforced

**Project:** Mwituna Secondary School Accommodation Facilities

**Project Location:**  
Mwituna Secondary School

**Design:** J. Ngesso  
**Drawn:** J. Ngesso

**Checked:**  
**Approved:**

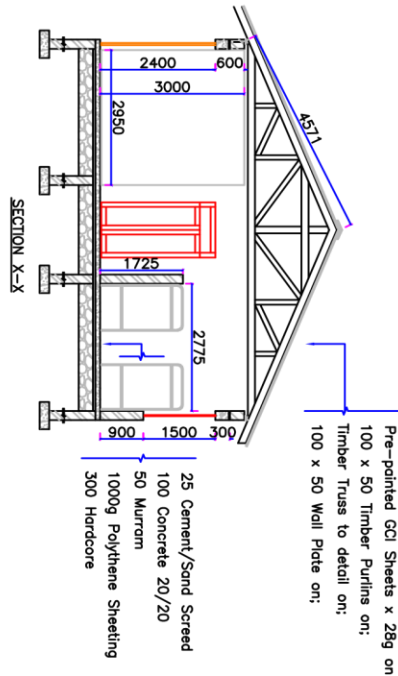
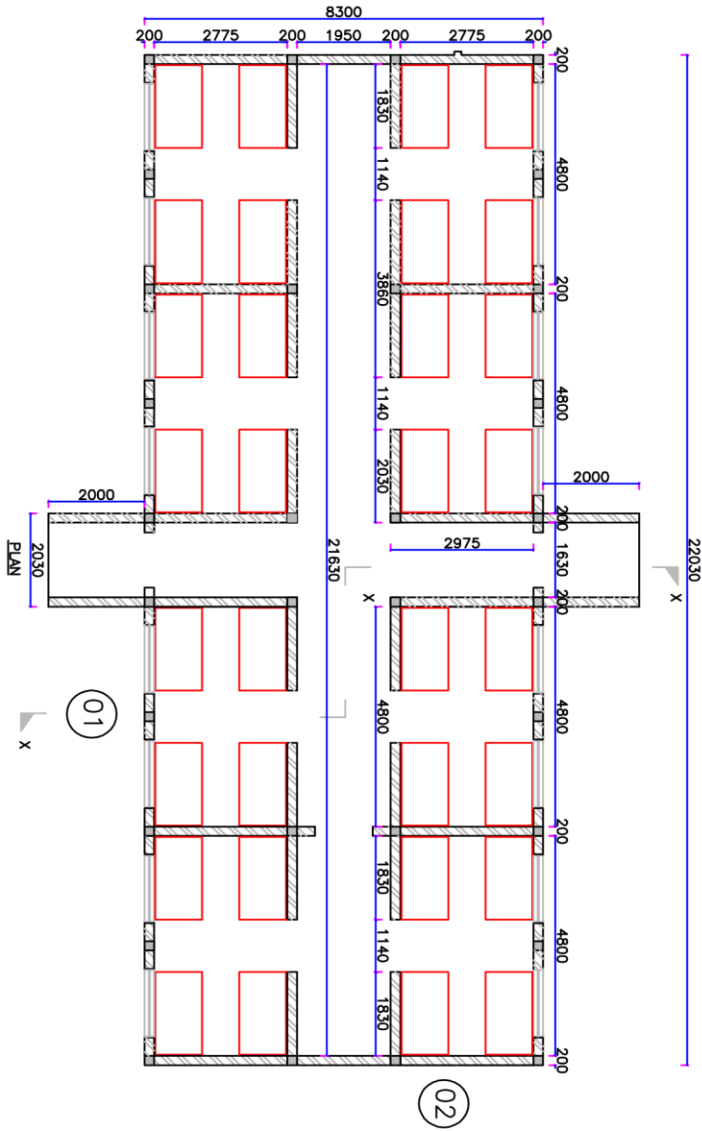
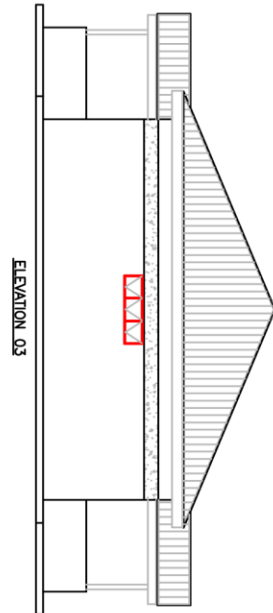
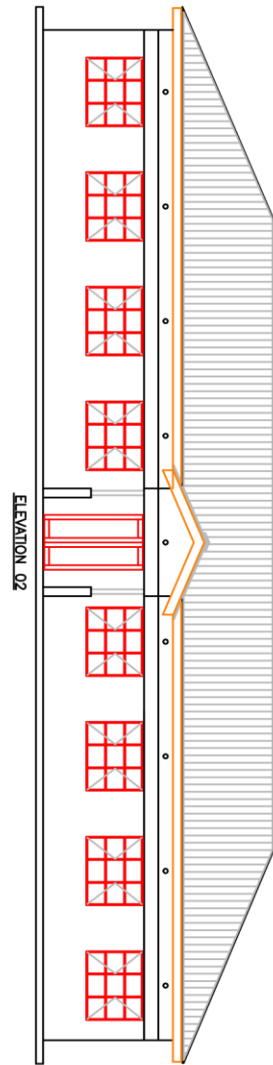
**Title:**  
Windows & Doors Schedule

**Status:**

**Scale:** N.T.S

**Dwg. No.:** 3.4 of 4

**Date:** April 2020



Project: Mwitumba Secondary School Accommodation Facilities

Project Location: Mwitumba Secondary School

Design: J. Ngeso

Drawn: J. Ngeso

Checked:

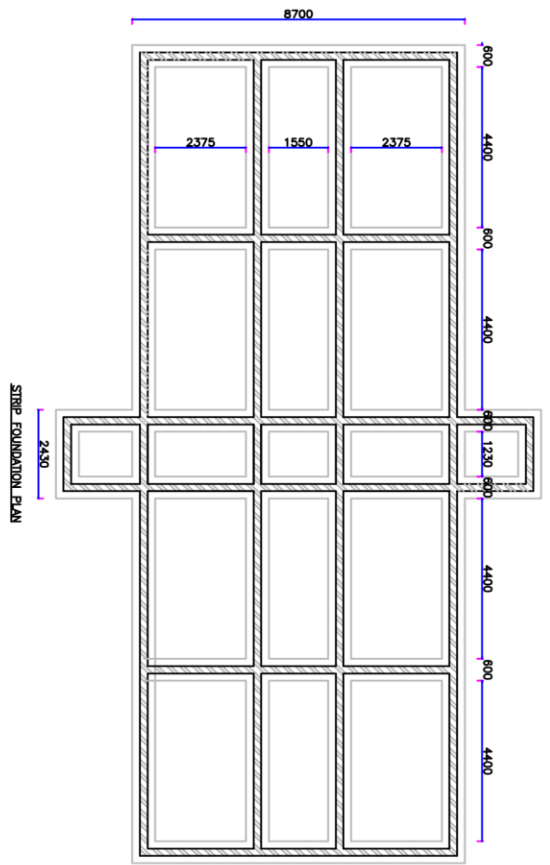
Approved:

Title: Plans, Elevations & Sections

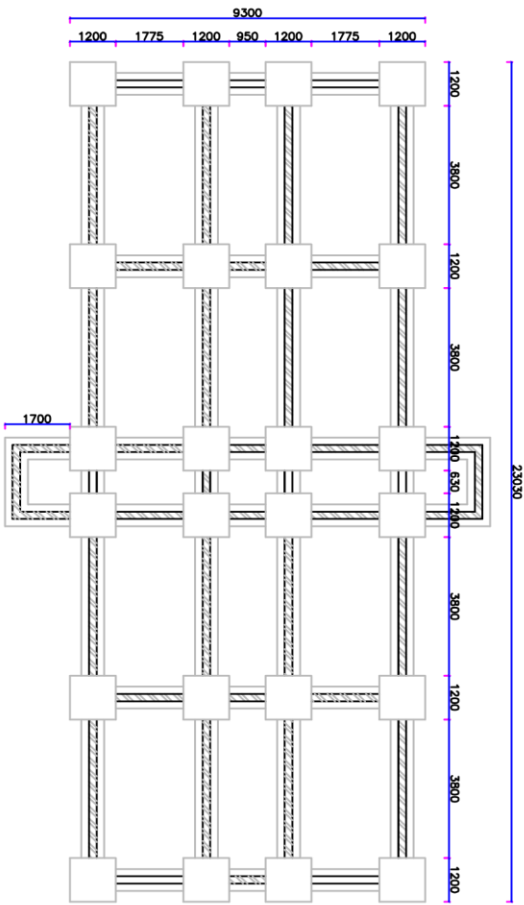
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Scale: N.T.S.

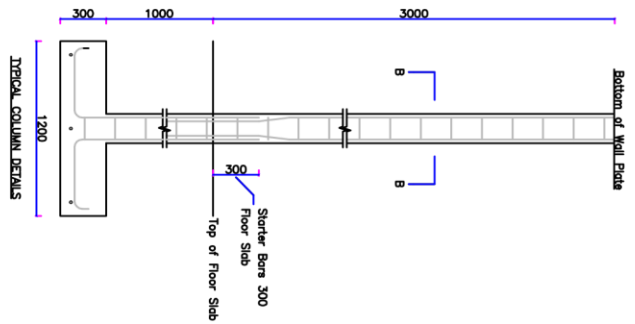
Date: April 2020



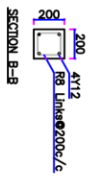
STRIP FOUNDATION PLAN



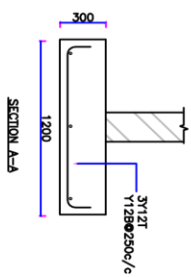
COLUMN BASES LAYOUT PLAN



TYPICAL COLUMN DETAILS



SECTION B-B



SECTION A-A

Project: Mmitura Secondary School Accommodation Facilities

Project Location: Mmitura Secondary School

Design: J. Ngeso

Drawn: J. Ngeso

Checked:

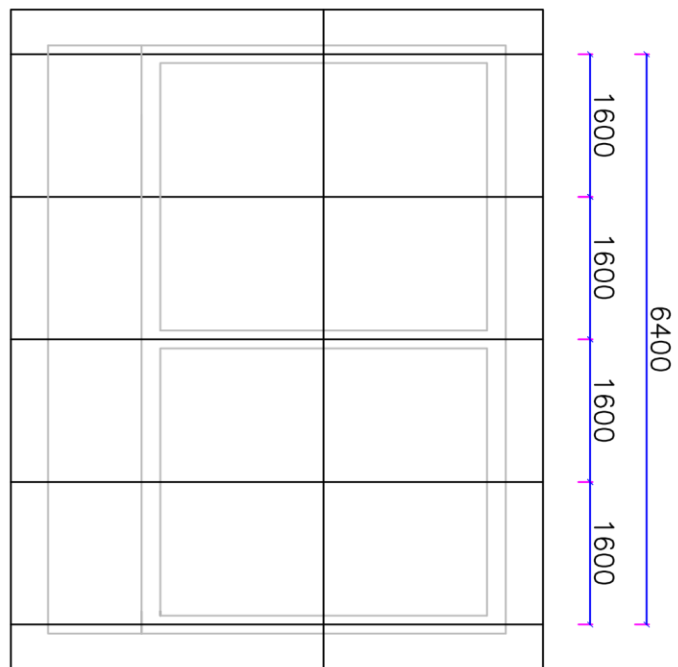
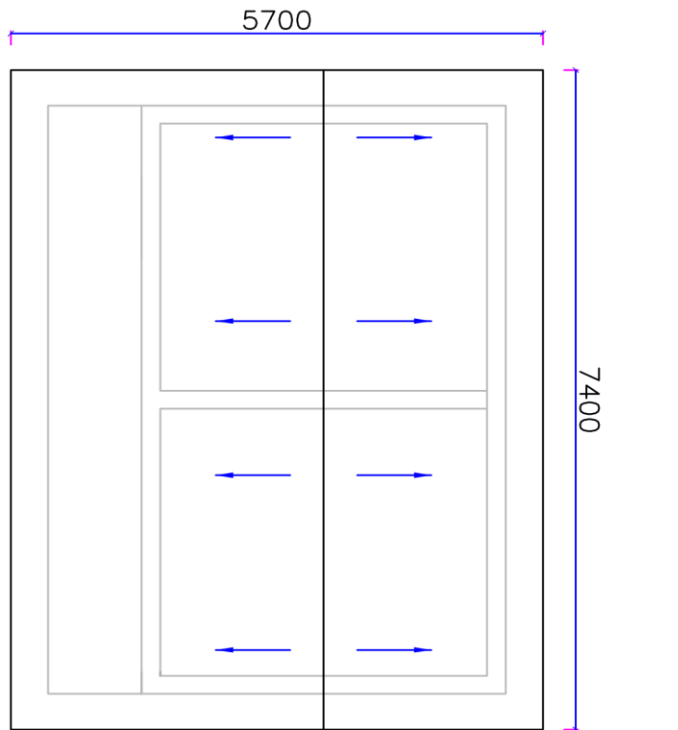
Approved:

Title: Foundation Plans & Column Details

Status: 4.2 of 4

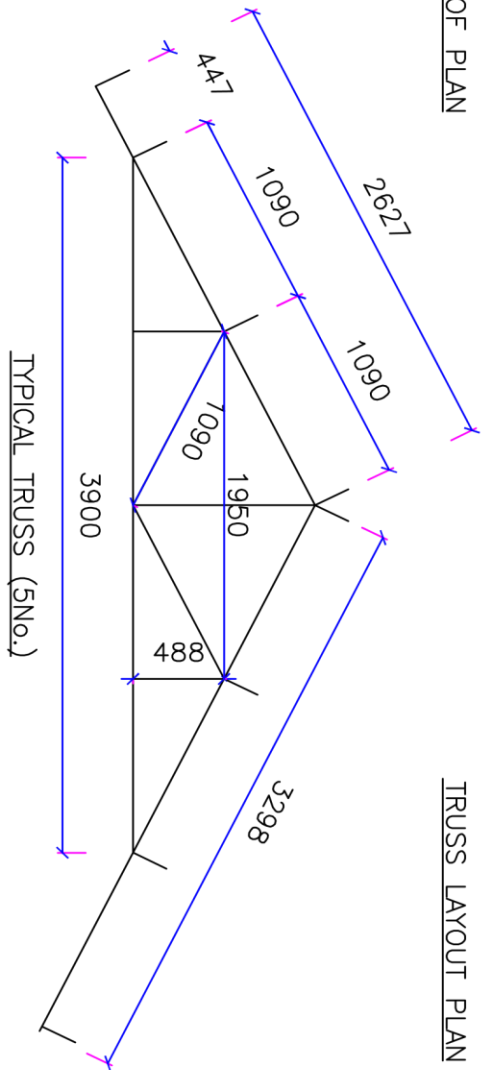
Scale: N.T.S.

Date: April 2020



ROOF PLAN

TRUSS LAYOUT PLAN



Project: Mwitumba Secondary School Accommodation Facilities

Project Location: Mwitumba Secondary School

Design: J. Ngeso

Drawn: J. Ngeso

Checked:

Approved:

Title: Roof & Truss Details

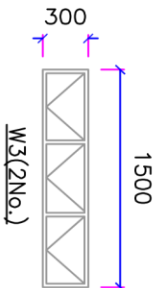
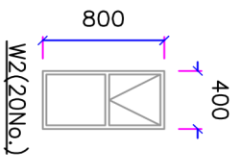
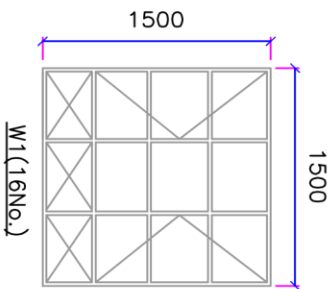
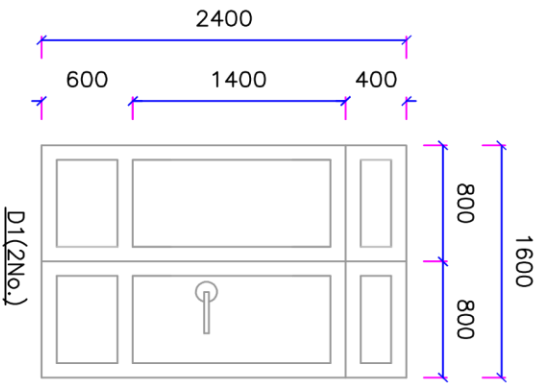
Status: 3.3 of 4

Scale: N.T.S

Date: April 2020

### DOORS SCHEDULE

TYPE	L	SIZE	H	QTY	GLAZING	DESCRIPTION
D1	1600	x	2400	2	Clear 4mm	Hardwood Mahogany Pannelled,Flash Light 400



### WINDOWS SCHEDULE

TYPE	L	SIZE	H	QTY	GLAZING	DESCRIPTION
W1	1500	x	1500	16	Clear 4mm	Steel Casement,Double Shutter
W2	1500	x	300	2	Obscure 4mm	Steel Casement,Top Hang

<b>Project:</b> Mmiturua Secondary School Accommodation Facilities	<b>Project Location:</b> Mmiturua Secondary School	<b>Design:</b> J. Ngeso	<b>Checked:</b>	<b>Title:</b> Windows & Doors Schedule	<b>Status:</b>	<b>Dwg.No.:</b> 4.4 of 4
		<b>Drawn:</b> J. Ngeso	<b>Approved:</b>		<b>Scale:</b> N.T.S	<b>Date:</b> April 2020