

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

ITEM NO.	DESCRIPTION	QTY	UNIT	AMOUNT	RATE
	<p><b><u>SPECIFICATIONS AND BILLS OF QUANTITIES FOR INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE, ROOF TOP WATER TANKS,SOLAR WATER HEATING SYSTEMS AND FIRE FIGHTING EQUIPMENTS INSTALLATIONS TO THE PROPOSED CONSTRUCTION AND COMPLETION OF 1NO. OFFICE BLOCK FOR THE KILIFI COUNTY ASSEMBLY:</u></b></p> <p><b><u>BILL NO.01--(MAIN OFFICE BUILDING):</u></b></p> <p><b><u>ELEMENT NO. 1 (INTERNAL PLUMBING):</u></b></p> <p><i>Supply, deliver and install pipes, tubing and fittings as described and shown on the drawings. The pipes shall be CPVC pipes where exposed to adverse weather conditions and all conforming to the current European standards for CPVC installations and to the Engineers Approval. Pipe jointing shall be by use of electric coupling or other equal and approved method, Rates must allow for all metal/plastic threaded adaptors where required for the connection of sanitary fixtures, valves, sockets, sliding and fixed joints support raceways, isolating sheaths, elastic materials, expansion arms and bends cross overs, couplings, clippings, connectors, joints etc. as required in the running legths of pipe work and also where necessary, for pipe fixing clips, holder bats plugged and screwed for the proper and satisfactory functioning of the system. The pipes will be pressure tested before the plastering of wall commences and as per the manufactures recommended testing pressures</i></p>				
	TOTAL CARRIED TO COLLECTION				

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<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<b><u>ELEMENT NO 1 (CONT'D):</u></b>				
	<b><u>CPVC Pipes</u></b>				
<b>A</b>	15mm diameter pipework in wall chase	<b>52</b>	<b>LM</b>		
<b>B</b>	20mm ditto	<b>46</b>	<b>LM</b>		
<b>C</b>	25mm ditto	<b>60</b>	<b>LM</b>		
<b>D</b>	32mm ditto	<b>48</b>	<b>LM</b>		
<b>E</b>	40mm ditto	<b>44</b>	<b>LM</b>		
<b>F</b>	50mm ditto	<b>60</b>	<b>LM</b>		
<b>G</b>	65mm ditto	<b>24</b>	<b>LM</b>		
<b>H</b>	75mm ditto	<b>36</b>	<b>LM</b>		
	<b><u>Sockets</u></b>				
<b>I</b>	15mm diameter socket	<b>14</b>	<b>No.</b>		
<b>J</b>	20mm ditto	<b>15</b>	<b>No.</b>		
<b>K</b>	25mm ditto	<b>16</b>	<b>No.</b>		
<b>L</b>	32mm ditto	<b>13</b>	<b>No.</b>		
<b>M</b>	40mm ditto	<b>12</b>	<b>No.</b>		
<b>N</b>	50mm ditto	<b>16</b>	<b>No.</b>		
<b>O</b>	65mm ditto	<b>7</b>	<b>No.</b>		
<b>P</b>	75mm ditto	<b>10</b>	<b>No.</b>		
	<b><u>Bends/Elbow</u></b>				
<b>Q</b>	15mm diameter bends	<b>12</b>	<b>No.</b>		
<b>R</b>	20mm diameter bends	<b>6</b>	<b>No.</b>		
	<b>TOTAL CARRIED TO COLLECTION</b>				

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<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<b><u>ELEMENT NO 1 (CONT'D):</u></b>				
	<b><u>Bends/Elbow cont'd</u></b>				
<b>A</b>	25mm ditto	<b>3</b>	<b>No.</b>		
<b>B</b>	32mm ditto	<b>3</b>	<b>No.</b>		
<b>C</b>	40mm ditto	<b>2</b>	<b>No.</b>		
<b>D</b>	50mm ditto	<b>4</b>	<b>No.</b>		
<b>E</b>	65mm ditto	<b>2</b>	<b>No.</b>		
<b>F</b>	75mm ditto	<b>1</b>	<b>No.</b>		
	<b><u>Tees</u></b>				
<b>G</b>	15mm diameter equal tees	<b>10</b>	<b>No.</b>		
<b>H</b>	20mm diameter equal tees	<b>10</b>	<b>No.</b>		
<b>I</b>	25mm ditto	<b>6</b>	<b>No.</b>		
<b>J</b>	32mm ditto	<b>2</b>	<b>No.</b>		
<b>K</b>	40mm ditto	<b>4</b>	<b>No.</b>		
<b>L</b>	50mm ditto	<b>4</b>	<b>No.</b>		
<b>M</b>	65mm ditto	<b>2</b>	<b>No.</b>		
	<b><u>Reducers</u></b>				
<b>N</b>	20x 15mm diameter reducer	<b>12</b>	<b>No.</b>		
<b>O</b>	25x 20mm ditto	<b>12</b>	<b>No.</b>		
<b>P</b>	32x25mm ditto	<b>10</b>	<b>No.</b>		
<b>Q</b>	40x32mm ditto	<b>2</b>	<b>No.</b>		
<b>R</b>	50x32mm ditto	<b>2</b>	<b>No.</b>		
<b>S</b>	50x40mm ditto	<b>2</b>	<b>No.</b>		
<b>T</b>	65x50mm ditto	<b>2</b>	<b>No.</b>		
	<b>TOTAL CARRIED TO COLLECTION</b>				

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EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<b><u>ELEMENT NO 1 (CONT'D);</u></b>				
	<b><u>Threaded Fittings</u></b>				
<b>A</b>	15mm male/female threaded 90° Bend/Elbow	<b>81</b>	<b>No.</b>		
<b>B</b>	15mm diameter CPVC Adaptors	<b>14</b>	<b>No.</b>		
<b>C</b>	20mm ditto	<b>12</b>	<b>No.</b>		
<b>D</b>	32mm ditto	<b>5</b>	<b>No.</b>		
<b>E</b>	40mm diameter CPVC Adaptors	<b>2</b>	<b>No.</b>		
<b>F</b>	50mm ditto	<b>3</b>	<b>No.</b>		
<b>G</b>	65mm ditto	<b>3</b>	<b>No.</b>		
<b>H</b>	75mm ditto	<b>3</b>	<b>No.</b>		
<b>I</b>	15mm diameter G.I. Nipple	<b>8</b>	<b>No.</b>		
<b>J</b>	25mm ditto	<b>12</b>	<b>No.</b>		
<b>K</b>	32mm ditto	<b>4</b>	<b>No.</b>		
<b>L</b>	40mm ditto	<b>4</b>	<b>No.</b>		
	<b><u>Valves</u></b>				
<b>M</b>	25mm diameter approved medium pressure screw down full way non-rising stem wedge gate valve to BS 5154 PN 20 for series B rating,with wheel and head jopints to steel tubing and complete with round male threaded transion fittings.The gate valve to be as PEGLER or approved equivalent.	<b>5</b>	<b>No.</b>		
<b>N</b>	32mm ditto	<b>2</b>	<b>No.</b>		
<b>O</b>	40mm ditto	<b>2</b>	<b>No.</b>		
<b>P</b>	50mm ditto	<b>2</b>	<b>No.</b>		
<b>Q</b>	65mm ditto	<b>2</b>	<b>No.</b>		
	<b>TOTAL CARRIED TO COLLECTION</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
<b>A</b>	<p><b><u>ELEMENT NO 1 (CONT'D);</u></b></p> <p><b><u>Water Storage Tank;</u></b>  Supply, deliever and install vertical close end plastic moulded tank of capacity 4,000 Litre (Size 1670 diameter x 2060mm high).The tank to be assembled complete with cover and having screwed connections for inlet, outlet and overflow, 32mm medium pressure ball valve, drain pipes and any other necessary item for its proper functioning. The tank shall be mounted on a flat roof slab and shall be as Model 'ROTO' or other equal and approved.</p>	<b>8</b>	<b>ITEM</b>		
	<b>TOTAL CARRIED TO COLLECTION</b>				
	<p><b><u>Summary of collection</u></b>  <b>Internal plumbing</b></p> <p><b>Totals Brought Down From Above</b></p> <p><b>Totals Brought Forward From MECH/2</b></p> <p><b>Totals Brought Forward From MECH/3</b></p> <p><b>Totals Brought Forward From MECH/4</b></p>				
	<b>TOTAL INTERNAL PLUMBING CARRIED FORWARD TO BILL NO. 1 SUMMARY PAGE</b>				

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EQUIPMENT INSTALLATIONS**

ITEM NO.	DESCRIPTION	QTY	UNIT	AMOUNT	RATE
	<p><b><u>ELEMENT NO. 2</u></b></p> <p><b><u>SANITARY FITTINGS</u></b>  Supply,deliver,install,test and commission the following sanitary appliances complete with all the accessories including all connections to the services,waste,jointing to water supply,overflows,supports and all plugging and screwing to walls and floors.  <u>Note.</u>  (i). All sanitary fittings shall be in approved colour.  (ii). The model and Ref. No. Indicated is only a guide to the type and quality of fittings.  (iii). Equivalent and Approved models may be acceptable</p> <p><b><u>Close Couple Water Closet Suite:</u></b>  Close Couple Water Closet Suite comprising of Low level water closet in approved colour complete with W.C. bowl,'p'or's' trap connector,heavy duty matching plastic seat and cover with metal top fixed to (chrome plated) hinges and secured to floor or wall and complete with horizontal outlet to BS 3402 with 7.5Litre valveless Ceramic Cistern and fittings including siphon,15mm diameter side inlet ball valves,20mm diameter side overflow,plastic flush bend,inlet connection,and chrome-plated lever.The water closet suite to be as Model 'DURAVIT' or other approved equivalent.</p> <p><b><u>Mirrors.</u></b>  610 X 610mm X 6mm thick polished plate silver backed with beveled edges mirror fixed with clear silicon to 100 x 25mm thick wrot mahogany molded framing in 4 labors plugged to wall using 4No. Wall plugs with 75mm long stainless steel screws, painted in three coats polyurethane varnish all to approval</p>				
A		25	No		
B		25	No.		
	<b>TOTAL CARRIED TO COLLECTION</b>				

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EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<b><u>ELEMENT NO 2 (CONT'D):</u></b>				
<b>A</b>	<b><u>Executive Close Couple Water Closet Suite:</u></b> Executive Close Couple Water Closet Suite comprising of Low level water closet in approved colour complete with W.C. bowl,'p'or's' trap connector,heavy duty matching plastic seat and cover with metal top fixed to (chrome plated) hinges and secured to floor or wall and complete with horizontal outlet to BS 3402 with 7.5Litre valveless Ceramic Ciseren and fittings including siphon,15mm diameter side inlet ball valves,20mm diameter side overflow,plastic flush bend,inlet connection,and chrome-plated lever.The water closet suite to be as 'DURAVIT' or other approved equivalent.	<b>18</b>	<b>No</b>		
<b>B</b>	<b><u>Wash Hand Basin(WHB)</u></b> Elegantly Stylish Inset type Wash Hand Basin suitable for mounting on counter size 510x420mm with one tap holes and chain stay hole,32 mm diameter chrome-plated pop up chain waste,chrome plated bottle trap(32mm 'P' trap) with 75mm seal.The wash hand basin to be as Model 'Twyfords -England' Sola 510'or equal and approved. The basin to be complete with 15mm diameter (C.P) pillar tap type 211.15 star cobra or other approved equivalent.	<b>13</b>	<b>No</b>		
<b>C</b>	Ditto but 'Vanity Type' and size 400mm diameter x 250mm deep ditto	<b>12</b>	<b>No.</b>		
<b>D</b>	<b><u>Soap Dish</u></b> Semi recessed built in soap in Vitreous China of size;305x150mm in approved colour as Twyfords or equal and approved	<b>4</b>	<b>No.</b>		
<b>E</b>	<b><u>Toilet Brush &amp; Holder:</u></b> Twyfords England' Free Standing Toilet Brush & with brush and Holder and to approved catalogue;	<b>47</b>	<b>No.</b>		
	<b>TOTAL CARRIED TO COLLECTION</b>				

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<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<b><u>ELEMENT NO 2 (CONT'D):</u></b>				
<b>A</b>	<p><b><u>Toilet Unit Set for Disabled</u></b>            Disabled persons Water Closet and Wash Hand Basin Facility            Wheel chair accessible W.C facility Comprising of the following:-            (i)Close coupled W.C with 7.5 litre cistern with ottom inlet and overflow.The bowl shall e of size 375 x 560 x 420mm high.The owl and cistern shall be manufactured from vitreous china complying with B.S 3402.The unit shall be complete with valveless cistern fitting including syphon,15mm side inlet ballvalve,20mm diameter side overflow,plastics flush bend,inlet connector and reversible metallic chrome plated cistern lever.There shall also be a heavy duty seat(25mm high) and cover with chrome plated metal hinges,toilet roll holder,900 x 450 x 6mm thick mirror and Robe hook.</p> <p>(ii)Semi pedestal wall mounted W.H.B of size 600 x 500 x 545mm high with flexible connectors to waste taps.The basin shall be manufactured from vitreous china complying with B.S 3402.It shall have one L/H tap hole with 15mm chrome plated lever action pillar tap,chrome plated waste with height adjustable trap,pedestal and wall fixing bolts.</p> <p>(iii)Hinged support rail with toilet roll holder 770mm long manufactured in nylon coated aluminium and mounted on a wall fixing plate size 230x100mm,4No. 600mm grab rails with covered wall plates.The set shall be as Twyfords-England-DOC.M wheelchair accessible W.C facility or approved equivalent.</p>	<b>4</b>	<b>SET</b>		
<b>B</b>	<p><b><u>Toilet Roll Holder</u></b>            Semi recessed toiler roll holder in vitreous China of size 165x165mm in approved colour as Twyfords or other approved equivalent</p>	<b>47</b>	<b>No.</b>		
	<b>TOTAL CARRIED TO COLLECTION</b>				



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<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<b><u>ELEMENT NO 2 (CONT'D):</u></b>				
<b>A</b>	<p><b><u>Soap Dispenser:</u></b> Mediclinics'Wall mounted soap dispenser with a capacity of about one litre having a press action soap release mechanism complete with fixing screws,inluding allowing for initial soap supply as STARMIX or other approved equivalent.</p>	<b>25</b>	<b>No.</b>		
<b>B</b>	<p><b><u>Hand Driers</u></b> Automatic hand drier in approved colour,operating on an infra-red automatic sensing system with heating element,safety cut-out complete with a 30 seconds safety timer,plastic rawl plugs and fixing screws.The hand drier to have a heating capacity of 2.1kw and performance flow rate of 135cfm(3.83m3/min.) and to be of size 270x264x143mm deep.It shall have a noise level below 72.5dBA at 1.5m.it shall be Model 'Heatrae Sadia' or other approved equivalent.</p>	<b>25</b>	<b>No.</b>		
<b>C</b>	<p><b><u>Flexible Tubing</u></b> 15mm diameter x 300mm longg flexible connectors complete with Integral chrome plated angle valve for connecting the Sanitary fitting to water supply.To be as Model 'Cobra' or other equal and approved.</p>	<b>71</b>	<b>No.</b>		
<b>D</b>	<p><b><u>Urinal Set</u></b> Urinal system comprising of 1No. Ceramic '<b>DURAVIT</b>' urinal bowl and division or equal and approved complete with doomed waste fitting all to approval, Exposed push button-Type Urinal Flush Valve for 3/4" top spud urinals as '<b>COBRA</b>' or other approved equivalent including fixing to wall with steel screws brackets and accessories for proper functioning of the set</p>	<b>22</b>	<b>SET</b>		
	<b>TOTAL CARRIED TO COLLECTION</b>				

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	<b><u>ELEMENT NO 2 (CONT'D);</u></b>				
<b>A</b>	<p><b><u>Shower Fittings</u></b>  Concealed shower fitting consisting of 15mm diameter stainless steel riser pipe to connect to concealed shower stop cock,cold water and hot water swivel/adjustable shower rose,stainless steel shower arm and stop cock, approved Shower Mixer Unit and all other necessary accessories and fittings.The shower fittings to be as 'Bricon Aztec'or other equal and approved</p>	<b>4</b>	<b>ITEM</b>		
<b>B</b>	<p><b><u>Single Bowl,Single Drainer Kitchen Sink;</u></b>  18SWG Single Bowl,Single Drainer, stainless steel kitchen sink suitable for mounting on counter of size 1000x600mm as manufactured by ASL or equal and approved.The bowl size to be 430x420x 300mm deep complete with chrome plated 40mm waste fittings,plugs,chain stays,overflow,1No. 15mm diameter stainless steel bib tap as 'Cobra Model',Chrome plated bottle trap with 75mm deep seal and chain waste fitting.To be also installed complete with approved Sink Mixer Unit.</p>	<b>4</b>	<b>No.</b>		
<b>C</b>	<p>Ditto but Double Bowl, Double Drainer and bowl size 2800x600mm</p>	<b>1</b>	<b>No.</b>		
<b>D</b>	<p><b><u>Robe Hook;</u></b>  Robe Hook in Satin Aluminium to be mounted by concealed screws to wall wedges.To be as 'Twyfords England' spectrum 2000 accessories or equal and approved</p>	<b>5</b>	<b>No.</b>		
<b>E</b>	<p><b><u>Towel Rail</u></b>  Stainless steel 20mm diameter x 800mm long approved Towel rail and brackets as one piece,plugged and screwed into the wall.The fitting shall be as Twyfords England or other equal and approved</p>	<b>4</b>	<b>No.</b>		
	<b>TOTAL CARRIED TO COLLECTION</b>				

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ITEM NO.	DESCRIPTION	QTY	UNIT	AMOUNT	RATE
	<p><u>ELEMENT NO 2 (CONT'D);</u></p> <p><u>Summary of collection</u> Sanitary Fittings</p> <p>Totals Brought Forward From MECH/6</p> <p>Totals Brought Forward From MECH/7</p> <p>Totals Brought Forward From MECH/8</p> <p>Totals Brought Forward From MECH/9</p> <p>Totals Brought Forward From MECH/10</p>				
	<p><b>TOTAL SANITARY FITTINGS CARRIED FORWARD TO BILL NO. 1 SUMMARY PAGE</b></p>				

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<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<b><u>ELEMENT NO.03:</u></b>				
	<b><u>FOUL DRAINAGE</u></b> Supply,deliver and install the following UPVC,MUPVC,soil and waste systems,respectively to B.S 5255 with fittings fixed Key Terrain High Grade Golden Brown and Grey UPVC soil and waste pipe and jointing in accordance with manufacture's printed instructions and manufactured by reputable manufacturers.Tenderers must allow in their pipework prices for all the couplings,clippingsconnectors,joints,e.t.c as required in the running lengths of pipework and also where necessary,for pipe fixing clips,holder bats plugged and screwed for the proper and satisfactory functioning of the system				
	<b><u>INTERNAL</u></b>				
<b>A</b>	40mm diameter grey UpVC waste pipe in wall chase.	<b>44</b>	<b>LM</b>		
<b>B</b>	40mm condensate drain ditto but in concrete slab - all provisional	<b>200</b>	<b>LM</b>		
<b>C</b>	50mm ditto	<b>54</b>	<b>LM</b>		
<b>D</b>	100mm diameter ditto but boxed on wall surface	<b>84</b>	<b>LM</b>		
<b>E</b>	50mm diameter grey soil vent pipe	<b>18</b>	<b>LM</b>		
<b>F</b>	100mm diameter ditto	<b>126</b>	<b>LM</b>		
	<b><u>Extra overtubing for:-</u></b>				
<b>G</b>	40mm diameter UPVC bend.	<b>22</b>	<b>No.</b>		
<b>H</b>	40 x100mm diameter boss conector.	<b>23</b>	<b>No.</b>		
<b>I</b>	50x100mm ditto	<b>13</b>	<b>No.</b>		
<b>J</b>	50x100mm diameter stainless steel floor trap and grating	<b>26</b>	<b>No.</b>		
	<b>TOTAL CARRIED TO COLLECTION</b>				

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<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<b><u>ELEMENT NO 3 (CONT'D);</u></b>				
	<b><u>Extra overtubing for cont'd</u></b>				
<b>A</b>	100mm diameter floor drain ditto	<b>5</b>	<b>No.</b>		
<b>B</b>	100mm diameter UPVC equal tee	<b>22</b>	<b>No</b>		
<b>C</b>	100mm diameter WC connector	<b>54</b>	<b>No.</b>		
<b>D</b>	100mm diameter Weathering slate Apron	<b>7</b>	<b>No.</b>		
	<b>TOTAL CARRIED TO COLLECTION</b>				
	<b><u>Summary of collection</u></b> <b>Foul Drainage</b>  <b>Totals Brought Down From Above</b>  <b>Totals Brought Forward From MECH/12</b>				
	<b>TOTAL FOUL DRAINAGE CARRIED FORWARD TO BILL NO. 1 SUMMARY PAGE</b>				

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	<p><b><u>ELEMENT NO. 4:</u></b></p> <p><b><u>Sterilization and Testing;</u></b></p> <p><b>A</b> Allow for sterilization and flushing out of entire cold water installation with chlorine to the Engineer's Satisfaction</p> <p><b>B</b> Ditto for setting to work and testing the whole of the plumbing and drainage installation works both during progress and at completion to the satisfaction of the Project Manager</p>	<p><b>1</b></p> <p><b>1</b></p>	<p><b>ITEM</b></p> <p><b>ITEM</b></p>		
	<p><b>TOTAL STERILIZATION &amp; TESTING CARRIED FORWARD TO BILL NO. 1 SUMMARY PAGE</b></p>				

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	<b><u>ELEMENT NO. 5:</u></b>				
	<b><u>BUILDERS WORK IN CONNECTION WITH INTERNAL PLUMBING AND DRAINAGE;</u></b>				
	<b><u>Holes;</u></b>				
<b>A</b>	Make a hole through 100mm thick coral block wall for small pipe and make good disturbed areas	<b>16</b>	<b>No.</b>		
<b>B</b>	Ditto but 200mm thick and for large ditto	<b>54</b>	<b>No.</b>		
	<b><u>Boxing;</u></b>				
<b>C</b>	Allow for boxing out in concrete floor slab to create opening for laying of WC bowl and fittings during concreting	<b>1</b>	<b>ITEM</b>		
	<b><u>Pipe Sleeves;</u></b>				
<b>D</b>	Allow for cross over of pipe sleeves in suspended floor slab and columns during concreting	<b>1</b>	<b>ITEM</b>		
	<b>TOTAL BUILDERS WORK CARRIED FORWARD TO BILL NO. 1 SUMMARY PAGE</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<p><b><u>ELEMENT NO.6:</u></b></p> <p><b><u>SOLAR WATER HEATING</u></b></p> <p><b><u>SOLAR INSTALLATION</u></b>  <b><u>The hot water system shall consist of a solar hot water system with auxiliary electrical heating elements for use during periods of low solar intensity</u></b></p> <p>A hybrid indirect loop solar hot water system consisting of an efficient Solar Collector with an area of about 4m<sup>2</sup> and a hot water cylinder with minimum capacity of 300 litres. The cylinder shall be fabricated from 6mm thick mild steel plate and hot dipped galvanized after manufacture, it shall have polythene foam insulation of minimum thickness 50mm which shall have a thermostatically controlled element of 3KW minimum. The cylinder shall be installed in the ceiling void. the package shall also incorporate a pressure relief/ safety valve, gate valve and anon return all size 20mm. it shall be as SUNRAY systems of Australia or an approved equivalent</p> <p><b><u>Pipework;</u></b>  <b><u>The following CPVC pipework for hot water supply:-</u></b></p>				
<b>A</b>		<b>4</b>	<b>ITEM</b>		
<b>B</b>	15mm diameter pipework in wall chase	<b>40</b>	<b>LM</b>		
<b>C</b>	20mm Ditto	<b>32</b>	<b>LM</b>		
<b>D</b>	25mm ditto	<b>20</b>	<b>LM</b>		
<b>E</b>	32mm ditto	<b>8</b>	<b>LM</b>		
<b>F</b>	40mm ditto	<b>4</b>	<b>LM</b>		
	<b>TOTAL CARRIED TO COLLECTION</b>				



**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<b><u>ELEMENT NO 6 (CONT'D);</u></b>				
	<b><u>Sockets;</u></b>				
<b>A</b>	15mm diameter socket	<b>11</b>	<b>NO</b>		
<b>B</b>	20mm ditto	<b>9</b>	<b>NO</b>		
<b>C</b>	25mm ditto	<b>6</b>	<b>NO</b>		
<b>D</b>	32mm ditto	<b>3</b>	<b>NO</b>		
<b>E</b>	40mm ditto	<b>2</b>	<b>NO</b>		
	<b><u>Thermal Insulation</u></b>				
<b>F</b>	Allow for mm thick themal insulation in on the general surfaces of the above described pipework and extra overs	<b>1</b>	<b>ITEM</b>		
	<b>TOTAL CARRIED TO COLLECTION</b>				
	<b><u>Summary of collection</u></b>				
	<b>Solar Water Heating</b>				
	<b>Totals Brought Down From Above</b>				
	<b>Totals Brought Forward From MECH/16</b>				
	<b>TOTAL SOLAR WATER HEATING CARRIED FORWARD TO BILL NO. 1 SUMMARY PAGE</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

ITEM NO.	DESCRIPTION	QTY	UNIT	AMOUNT	RATE
	<p><b><u>ELEMENT NO.7:</u></b></p> <p><b><u>FIRE FIGHTING AND PROTECTION SERVICES:</u></b>  Supply,deliver and install the following fire fighting equipment in positions indicated on the contract drawings or as shall be instructed by the Engineer.Tenderers during pricing should allow for all fittings,jointings,couplings,including unions and clamps,where necessary for the proper functioning of the installation.</p> <p><b><u>Hose Reel Installation:</u></b></p> <p><b><u>Hose reels.</u></b>  25mm diameter x 30M long swinging type hose reel complete with delivery hose,nozzle,mild steel feed pipe,isolation valve,guide,bracket and all other accessories as ANGUS FIRE ARMOUR or other equal and approved.</p> <p><b><u>Hose Reel Fire Tank:</u></b>  Supply, deliever and install vertical close end plastic moulded tank of capacity 1900 Litre(Size 1300 diameter x 1530mm high).The tank to be assembled complete with cover and having screwed connections for inlet, outlet and overflow, 32mm medium pressure ball valve, drain pipes and any other necessary item for its proper functioning. The tank shall be mounted on a flat roof slab and shall be as Model 'ROTO' model or equal and approved.</p> <p><b><u>Pipework (G.I)</u></b>  20mm diameter medium grade galvanized mild steel supply pipe</p> <p>25mm ditto</p>	<p align="center"><b>5</b></p> <p align="center"><b>1</b></p> <p align="center"><b>6</b></p> <p align="center"><b>6</b></p>	<p align="center"><b>No.</b></p> <p align="center"><b>No.</b></p> <p align="center"><b>LM</b></p> <p align="center"><b>LM</b></p>		
	<b>TOTAL CARRIED TO COLLECTION</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<b><u>ELEMENT NO 7 (CONT'D);</u></b>				
	<b><u>Pipework (G.I) cont'd</u></b>				
<b>A</b>	32mm Ditto	<b>6</b>	<b>LM</b>		
<b>B</b>	40mm Ditto	<b>6</b>	<b>LM</b>		
<b>C</b>	50mm Ditto	<b>6</b>	<b>LM</b>		
<b>D</b>	65mm Ditto	<b>36</b>	<b>LM</b>		
	<b><u>Sockets</u></b>				
<b>E</b>	20mm diameter socket	<b>2</b>	<b>No.</b>		
<b>F</b>	25mm ditto	<b>2</b>	<b>No.</b>		
<b>G</b>	32mm Ditto	<b>2</b>	<b>No.</b>		
<b>H</b>	40mm Ditto	<b>2</b>	<b>No.</b>		
<b>I</b>	50mm Ditto	<b>2</b>	<b>No.</b>		
<b>J</b>	65mm Ditto	<b>7</b>	<b>No.</b>		
	<b><u>Bends/Elbows</u></b>				
<b>K</b>	20mm diameter (G.I) bend	<b>1</b>	<b>No.</b>		
<b>L</b>	25mm ditto	<b>1</b>	<b>No.</b>		
<b>M</b>	32mm Ditto	<b>1</b>	<b>No.</b>		
<b>N</b>	40mm Ditto	<b>1</b>	<b>No.</b>		
<b>O</b>	50mm Ditto	<b>1</b>	<b>No.</b>		
	<b><u>Tees</u></b>				
<b>P</b>	25mm diameter equal tee	<b>1</b>	<b>No.</b>		
<b>Q</b>	32mm ditto	<b>1</b>	<b>No.</b>		
<b>R</b>	40mm ditto	<b>1</b>	<b>No.</b>		
<b>S</b>	50mm ditto	<b>1</b>	<b>No.</b>		
	<b>TOTAL CARRIED TO COLLECTION</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<b><u>ELEMENT NO 7 (CONT'D);</u></b>				
	<b><u>Reducers</u></b>				
<b>A</b>	25x20mm diameter G.I. Reducer	<b>2</b>	<b>No.</b>		
<b>B</b>	32x20mm ditto	<b>1</b>	<b>No</b>		
<b>C</b>	32x25mm ditto	<b>1</b>	<b>No</b>		
<b>D</b>	40x20mm Ditto	<b>1</b>	<b>No</b>		
<b>E</b>	40x32mm Ditto	<b>1</b>	<b>No</b>		
<b>F</b>	50x20mm ditto	<b>1</b>	<b>No.</b>		
<b>G</b>	50x40mm ditto	<b>1</b>	<b>No.</b>		
	<b><u>Nipples</u></b>				
<b>H</b>	20mm (G.I) nipple	<b>10</b>	<b>No.</b>		
	<b><u>Painting</u></b>				
<b>I</b>	Prepare prime and apply two coats of gloss oil paint - RED - on the general surfaces of the above described supply pipe	<b>1</b>	<b>ITEM</b>		
	<b>TOTAL CARRIED TO COLLECTION</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<b><u>ELEMENT NO.7 CONT'D:</u></b>				
	<b><u>Supply,deliver and install the following fire fighting equipments on positions indicated on the contract drawings or as shall be instructed by the Engineer</u></b>				
	<b><u>Portable Fire Extinguisher</u></b>				
<b>A</b>	9Kg cartridge type general purpose portable dry powder fire extingusher fully charged or equal and approved.	<b>5</b>	<b>No.</b>		
	<b><u>Carbon dioxide Gas Fire Extinguisher</u></b>				
<b>B</b>	5kg carbon dioxide gas portale fire extingusher complete with pressure gauge,initial charge and mounting brackets	<b>5</b>	<b>No.</b>		
	<b><u>Dry Chemical Powder</u></b>				
<b>C</b>	6kg dry chemical powder portable fire extingusher complete wth pressure gauge,initial charge and mounting brackets.	<b>5</b>	<b>No.</b>		
	<b><u>Testing</u></b>				
<b>D</b>	Allow for the Signage for fire exits and fire instructions all as described in the particular specifications and to the Project Enginneer's Approval.	<b>20</b>	<b>ITEM</b>		
	<b><u>Signage</u></b>				
<b>E</b>	Testing the whole fire fighting equipments to leave in sound working condition and to the Engineer's satisfaction	<b>5</b>	<b>ITEM</b>		
	<b>TOTAL CARRIED TO COLLECTION</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<b><u>ELEMENT NO.7 CONT'D:</u></b>				
	<b><u>DRY RISER INSTALLATION:</u></b>				
	<b><u>Pipe Work</u></b>				
<b>A</b>	100mm diameter Galvanised Mild steel (Class c) Standard Dry Riser pipe with a single outlet every floor.The test pressure of the Riser shall be 10Bar and shall be installed in a Fire Resistant Enclosure or shaft	<b>30</b>	<b>LM</b>		
	<b><u>Extra Over Tubing For:-</u></b>				
<b>B</b>	65mm diameter Landing Valve and consisting of a double BS Instantaneous female outlet	<b>5</b>	<b>No.</b>		
<b>C</b>	65mm diameter Gate Valve as Peglar or other equal and approved equivalent	<b>5</b>	<b>No.</b>		
<b>D</b>	100mm diameter Air Valve	<b>1</b>	<b>No.</b>		
<b>E</b>	25mm diameter Drain Down Valve	<b>1</b>	<b>No.</b>		
<b>F</b>	65mm diameter 2-Way Inlet Breaching	<b>1</b>	<b>No.</b>		
<b>G</b>	100x65mm diameter (G.I)Reducer	<b>5</b>	<b>No.</b>		
<b>H</b>	65mm diameter (G.I) Nipple	<b>5</b>	<b>No.</b>		
<b>I</b>	65mm diameter (G.I) Socket	<b>5</b>	<b>No.</b>		
	<b><u>Riser Inlet Cabinet</u></b>				
<b>J</b>	900mm wide x 900mm deep x900mm high Steel Riser Inlet Cabinet wth glazed door and having a breakable door to facilitate urgent fire service connection	<b>1</b>	<b>ITEM</b>		
	<b><u>Riser Enclosure</u></b>				
<b>K</b>	Allow for approved Fire resistant Riser Enclosure	<b>1</b>	<b>ITEM</b>		
	<b>TOTAL CARRIED TO COLLECTION</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

ITEM NO.	DESCRIPTION	QTY	UNIT	AMOUNT	RATE
A	<p><b><u>ELEMENT NO.7 CONT'D:</u></b></p> <p><b><u>Testing</u></b>                      Allow for testing the Dry Riser Installation both during progress and at completion to Engineer's satisfaction and to leave in sound working condition</p>	1	ITEM		
<b>TOTAL CARRIED TO COLLECTION</b>					
<p><b><u>Summary of collection</u></b>  <b>Fire Fighting</b></p> <p><b>Totals Brought Down From Above</b></p> <p><b>Totals Brought Forward From MECH/18</b></p> <p><b>Totals Brought Forward From MECH/19</b></p> <p><b>Totals Brought Forward From MECH/20</b></p> <p><b>Totals Brought Forward From MECH/21</b></p> <p><b>Totals Brought Forward From MECH/22</b></p>					
<b>TOTAL FIRE FIGHTING CARRIED FORWARD TO BILL NO. 1 SUMMARY PAGE</b>					

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

ITEM NO.	DESCRIPTION	QTY	UNIT	AMOUNT	RATE
	<b><u>BILL NO. 1(MAIN OFFICE BUILDING) SUMMARY PAGE :-</u></b>				
	TOTAL INTERNAL PLUMBING BROUGHT FORWARD FROM MECH/5				
	TOTAL SANITARY FITTINGS BROUGHT FORWARD FROM MECH/11				
	TOTAL FOUL DRAINAGE BROUGHT FORWARD FROM MECH/13				
	TOTAL TESTING BROUGHT FORWARD FROM MECH/14				
	TOTAL BUILDERS WORK BBROUGHT FORWARD FROM MECH/15				
	TOTAL SOLAR WATER HEATING BROUGHT FORWARD FROM MECH/17				
	TOTAL FIRE FIGHTING BROUGHT FORWARD FROM MECH/23				
	<b>TOTAL FOR BILL NO. 1 CARRIED FORWARD TO MECHANICAL WORKS SUMMARY PAGE</b>				



**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

ITEM NO.	DESCRIPTION	QTY	UNIT	AMOUNT	RATE
	<b><u>BILL NO.02-TOILET BLOCK:</u></b>				
	<b><u>ELEMENT NO. 1 (INTERNAL PLUMBING)</u></b>				
	<i>Supply, deliver and install pipes, tubing and fittings as described and shown on the drawings. The pipes shall be CPVC pipes where exposed to adverse weather conditions and all conforming to the current European standards for CPVC installations and to the Engineers Approval. Pipe jointing shall be by use of electric coupling or other equal and approved method, Rates must allow for all metal/plastic threaded adaptors where required for the connection of sanitary fixtures, valves, sockets, sliding and fixed joints support raceways, isolating sheaths, elastic materials, expansion arms and bends cross overs, couplings, clippings, connectors, joints etc. as required in the running lengths of pipe work and also where necessary, for pipe fixing clips, holder bats plugged and screwed for the proper and satisfactory functioning of the system. The pipes will be pressure tested before the plastering of wall commences and as per the manufactures recommended testing pressures</i>				
	<b><u>CPVC Pipes</u></b>				
<b>A</b>	15mm diameter pipework in wall chase	<b>8</b>	<b>LM</b>		
<b>B</b>	20mm ditto	<b>8</b>	<b>LM</b>		
<b>C</b>	25mm ditto	<b>4</b>	<b>LM</b>		
<b>D</b>	32mm ditto	<b>4</b>	<b>LM</b>		
	<b>TOTAL CARRIED TO COLLECTION</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<b><u>ELEMENT NO.1 CONT'D:</u></b>				
	<b><u>Sockets</u></b>				
<b>A</b>	15mm diameter socket	<b>3</b>	<b>No.</b>		
<b>B</b>	20mm ditto	<b>3</b>	<b>No.</b>		
<b>C</b>	25mm ditto	<b>2</b>	<b>No.</b>		
<b>D</b>	32mm ditto	<b>2</b>	<b>No.</b>		
	<b><u>Bends/Elbow</u></b>				
<b>E</b>	15mm diameter bends	<b>7</b>	<b>No.</b>		
<b>F</b>	20mm ditto	<b>2</b>	<b>No.</b>		
<b>G</b>	25mm ditto	<b>2</b>	<b>No.</b>		
<b>H</b>	32mm ditto	<b>1</b>	<b>No.</b>		
	<b><u>Tees</u></b>				
<b>I</b>	15mm diameter equal tees	<b>2</b>	<b>No.</b>		
<b>J</b>	20mm ditto	<b>3</b>	<b>No.</b>		
<b>K</b>	25mm ditto	<b>3</b>	<b>No.</b>		
	<b><u>Reducers</u></b>				
<b>L</b>	20x 15mm diameter reducer	<b>5</b>	<b>No.</b>		
<b>M</b>	25x20mm ditto	<b>3</b>	<b>No.</b>		
<b>N</b>	32x25mm ditto	<b>2</b>	<b>No.</b>		
	<b><u>Threaded Fittings</u></b>				
<b>O</b>	15mm male/female threaded 90° Bend/Elbow	<b>12</b>	<b>No.</b>		
<b>P</b>	20mm diameter CPVC Adaptors	<b>8</b>	<b>No.</b>		
<b>Q</b>	32mm ditto	<b>2</b>	<b>No.</b>		
	<b>TOTAL CARRIED TO COLLECTION</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<b><u>ELEMENT NO.1 CONT'D:</u></b>				
<b>A</b>	20mm diameter G.I. Nipple	<b>8</b>	<b>No.</b>		
<b>B</b>	25mm ditto	<b>4</b>	<b>No.</b>		
<b>C</b>	32mm ditto	<b>2</b>	<b>No.</b>		
	<b><u>Valves</u></b>				
<b>D</b>	20mm diameter approved medium pressure screw down full way non-rising stem wedge gate valve to BS 5154 PN 20 for series B rating,with wheel and head jopints to steel tubing and complete with round male threaded transion fittings.The gate valve to be as Model PEGLAR or approved equivalent.	<b>2</b>	<b>No.</b>		
<b>E</b>	32mm ditto	<b>1</b>	<b>No.</b>		
	<b><u>Water Storage Tank:</u></b>				
<b>F</b>	Supply, deliever and install vertical close end plastic moulded tank of capacity 4,000 Litre (Size 1670 diameter x 2060mm high).The tank to be assembled complete with cover and having screwed connections for inlet, outlet and overflow, 32mm medium pressure ball valve, drain pipes and any other necessary item for its proper functioning. The tank shall be mounted on a flat roof slab and shall be as Model 'ROTO' or other equal and approved.	<b>1</b>	<b>ITEM</b>		
	<b>TOTAL CARRIED TO COLLECTION</b>				
	<b><u>Summary of collection</u></b>				
	<b>Internal Plumbing</b>				
	<b>Totals Brought Down From Above</b>				
	<b>Totals Brought Forward From MECH/25</b>				
	<b>Totals Brought Forward From MECH/26</b>				
	<b>TOTAL INTERNAL PLUMBING CARRIED FORWARD TO BILL NO. 2 SUMMARY PAGE</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

ITEM NO.	DESCRIPTION	QTY	UNIT	AMOUNT	RATE
A	<p><b><u>ELEMENT NO.2</u></b></p> <p><b><u>SANITARY FITTINGS</u></b>  Supply,deliver,install,test and commission the following sanitary appliances complete with all the accessories including all connections to the services,waste,jointing to water supply,overflows,supports and all plugging and screwing to walls and floors.</p> <p><b><u>Note.</u></b>  (i). All sanitary fittings shall be in approved colour.  (ii). The model and Ref. No. Indicated is only a guide to the type and quality of fittings.  (iii). Equivalent and Approved models may be acceptable</p> <p><b><u>Close Couple Water Closet Suite;</u></b>  Close Couple Water Closet Suite comprising of Low level water closet in approved colour complete with W.C. bowl,'p'or's' trap connector,heavy duty matching plastic seat and cover with metal top fixed to (chrome plated) hinges and secured to floor or wall and complete with horizontal outlet to BS 3402 with 7.5Litre valveless Ceramic Cistern and fittings including siphon,15mm diameter side inlet ball valves,20mm diameter side overflow,plastic flush bend,inlet connection,and chrome-plated lever.The water closet suite to be as Model 'DURAVIT' or other approved equivalent.</p>	5	No		
	<p><b><u>Soap Dispenser;</u></b>  Mediclinics'Wall mounted soap dispenser with a capacity of about One Litre having a press action soap release mechanism complete with fixing screws,including allowing for initial soap supply as STARMIX or other approved equivalent.</p>	2	No.		
	<b>TOTAL CARRIED TO COLLECTION</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

ITEM NO.	DESCRIPTION	QTY	UNIT	AMOUNT	RATE
	<b><u>ELEMENT NO.2 CONT'D:</u></b>				
<b>A</b>	<b><u>Wash Hand Basin(WHB)</u></b> Elegantly Stylish Inset type Wash Hand Basin suitable for mounting on counter size 510x420mm with one tap holes and chain stay hole,32 mm diameter chrome-plated pop up chain waste,chrome plated bottle trap(32mm 'P' trap) with 75mm seal.The wash hand basin to be as Model 'Twyfords -England' Sola 510'or equal and approved. The basin to be complete with 15mm diameter (C.P) pillar tap type 211.15 star cobra or other approved equivalent.	<b>2</b>	<b>No</b>		
<b>B</b>	<b><u>Toilet Roll Holder</u></b> Semi recessed toiler roll holder in vitreous China of size 165x165mm in approved colour as Twyfords or other approved equivalent	<b>5</b>	<b>No.</b>		
<b>C</b>	<b><u>Mirrors.</u></b> 610 X 610mm X 6mm thick polished plate silver backed with beveled edges mirror fixed with clear silicon to 100 x 25mm thick wrot mahogany molded framing in 4 labors plugged to wall using 4No. Wall plugs with 75mm long stainless steel screws, painted in three coats polyurethane varnish all to approval	<b>2</b>	<b>No.</b>		
<b>D</b>	<b><u>Tissue Dispenser:</u></b> Approved Wall mount Tissue Dispenser	<b>1</b>	<b>No.</b>		
<b>E</b>	<b><u>Flexible Tubing</u></b> 15mm diameter x 300mm longg flexible connectors complete with Integral chrome plated angle valve for connecting the Sanitary fitting to water supply.To be as Cobra or equal and approved.	<b>7</b>	<b>No.</b>		
	<b>TOTAL CARRIED TO COLLECTION</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<b><u>ELEMENT NO.2 CONT'D:</u></b>				
<b>A</b>	<p><b><u>Urinal Set</u></b> Urinal system comprising of 1No. Ceramic 'DURAVIT' urinal bowl and division or equal and approved complete with doomed waste fitting all to approval, Exposed push button-Type Urinal Flush Valve for 3/4" top spud urinals as 'COBRA' or other approved equivalent including fixing to wall with steel screws brackets and accessories for proper functioning of the set</p>	<b>4</b>	<b>SET</b>		
<b>B</b>	<p><b><u>Shower Fittings</u></b> Concealed shower fitting consisting of 15mm diameter stainless steel riser pipe to connect to concealed shower stop cock,cold water swivel/adjustable shower rose,stainless steel shower arm and stop cock and all other necessary accessories and fittings.The shower fittings to be as 'Bricon Aztec'or other equal and approved</p>	<b>2</b>	<b>ITEM</b>		
<b>C</b>	<p><b><u>Soap Dish</u></b> Semi recessed built in soap in Vitreous China of size;305x150mm in approved colour as Twyfords or equal and approved</p>	<b>2</b>	<b>No.</b>		
<b>D</b>	<p><b><u>Towel Rail</u></b> Stainless steel 20mm diameter x 800mm long approved Towel rail and brackets as one piece,plugged and screwed into the wall.The fitting shall be as Twyfords England or other equal and approved</p>	<b>2</b>	<b>No.</b>		
<b>E</b>	<p><b><u>Toilet Brush &amp; Holder;</u></b> Twyfords England' Free Standing Toilet Brush &amp; with brush and Holder and to approved catalogue;</p>	<b>5</b>	<b>No.</b>		
	<b>TOTAL CARRIED TO COLLECTION</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<p><b><u>ELEMENT NO.2 CONT'D:</u></b></p> <p><b><u>Summary of collection</u></b>  <b>Sanitary Fittings</b></p> <p><b>Totals Brought Forward From MECH/28</b></p> <p><b>Totals Brought Forward From MECH/29</b></p> <p><b>Totals Brought Forward From MECH/30</b></p>				
	<p><b>TOTAL SANITARY FITTINGS CARRIED FORWARD TO BILL NO. 2 SUMMARY PAGE</b></p>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<b><u>ELEMENT NO.03;</u></b>				
	<b><u>FOUL DRAINAGE</u></b> Supply,deliver and install the following UPVC,MUPVC,soil and waste systems,respectively to B.S 5255 with fittings fixed Key Terrain High Grade Golden Brown and Grey UPVC soil and waste pipe and jointing in accordance with manufacture's printed instructions and manufactured by reputable manufacturers.Tenderers must allow in their pipework prices for all the couplings,clippingsconnectors,joints,e.t.c as required in the running lengths of pipework and also where necessary,for pipe fixing clips,holder bats plugged and screwed for the proper and satisfactory functioning of the system				
	<b><u>INTERNAL</u></b>				
<b>A</b>	40mm diameter grey UpVC waste pipe in wall chase.	<b>12</b>	<b>LM</b>		
<b>B</b>	50mm ditto but boxed in concrete floor slab	<b>6</b>	<b>LM</b>		
<b>C</b>	100mm diameter ditto but boxed on wall surface	<b>6</b>	<b>LM</b>		
<b>D</b>	100mm diameter grey soil vent pipe	<b>6</b>	<b>LM</b>		
	<u>Extra overtubing for:-</u>				
<b>E</b>	40mm diameter UPVC bend.	<b>5</b>	<b>No.</b>		
<b>F</b>	40 x100mm diameter boss conector.	<b>3</b>	<b>No.</b>		
<b>G</b>	50x100mm diameter stainless steel floor trap and grating	<b>2</b>	<b>No.</b>		
<b>H</b>	100mm diameter floor drain ditto	<b>1</b>	<b>No.</b>		
<b>I</b>	100mm diameter UPVC equal tee	<b>6</b>	<b>No</b>		
	<b>TOTAL CARRIED TO COLLECTION</b>				



**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<b><u>ELEMENT NO.3 CONT'D:</u></b>				
<b>A</b>	100mm diameter WC connector	<b>5</b>	<b>No.</b>		
<b>B</b>	100mm diameter Weathering slate Apron	<b>1</b>	<b>No.</b>		
	<b>TOTAL CARRIED TO COLLECTION</b>				
	<u>Summary of collection</u> <b>Foul Drainage</b>  <b>Totals Brought Down From Above</b>  <b>Totals Brought Forward From MECH/32</b>				
	<b>TOTAL FOUL DRAINAGE CARRIED FORWARD TO BILL NO. 2 SUMMARY PAGE</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<p><b><u>ELEMENT NO. 4</u></b></p> <p><b><u>Sterilization and Testing;</u></b></p> <p><b>A</b> Allow for sterilization and flushing out of entire cold water installation with chlorine to the Engineer's Satisfaction</p> <p><b>B</b> Ditto for setting to work and testing the whole of the plumbing and drainage installation works both during progress and at completion to the satisfaction of the Project Manager</p>	<p><b>1</b></p> <p><b>1</b></p>	<p><b>ITEM</b></p> <p><b>ITEM</b></p>		
	<b>TOTAL TESTING CARRIED FORWARD TO BILL NO. 2 SUMMARY PAGE</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

ITEM NO.	DESCRIPTION	QTY	UNIT	AMOUNT	RATE
	<p><b><u>ELEMENT NO. 5;</u></b></p> <p><b><u>BUILDERS WORK IN CONNECTION WITH INTERNAL PLUMBING AND DRAINAGE;</u></b></p> <p><b><u>Holes;</u></b></p> <p><b>A</b> Make a hole through 100mm thick coral block wall for small pipe and make good disturbed areas</p> <p><b>B</b> Ditto but 200mm thick and for large ditto</p> <p><b><u>Boxing;</u></b></p> <p><b>C</b> Allow for boxing in walls for cover to waste pipe</p>	<p></p> <p><b>6</b></p> <p><b>10</b></p> <p><b>1</b></p>	<p></p> <p><b>No.</b></p> <p><b>No.</b></p> <p><b>ITEM</b></p>		
	<p><b>TOTAL BUILDERS WORK CARRIED FORWARD TO BILL NO. 2 SUMMARY PAGE</b></p>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<b><u>ELEMENT NO.6</u></b>				
	<b><u>FIRE FIGHTING:</u></b>				
	<b><u>Supply,deliver and install the following fire fighting equipments on positions indicated on the contract drawings or as shall be instructed by the Engineer</u></b>				
	<b><u>Portable Fire Extinguisher</u></b>				
<b>A</b>	9Kg cartridge type general purpose portable dry powder fire extingusher fully charged or equal and approved.	<b>1</b>	<b>No.</b>		
	<b><u>Carbon dioxide Gas Fire Extinguisher</u></b>				
<b>B</b>	5kg carbon dioxide gas portale fire extingusher complete with pressure gauge,initial charge and mounting brackets	<b>1</b>	<b>No.</b>		
	<b><u>Dry Chemical Powder</u></b>				
<b>C</b>	6kg dry chemical powder portable fire extingusher complete wth pressure gauge,initial charge and mounting brackets.	<b>1</b>	<b>No.</b>		
	<b><u>Testing</u></b>				
<b>D</b>	Allow for the Signage for fire exits and fire instructions all as described in the particular specifications and to the Project Enginneer's Approval.	<b>1</b>	<b>ITEM</b>		
	<b><u>Signage</u></b>				
<b>E</b>	Testing the whole fire fighting equipments to leave in sound working condition and to the Engineer's satisfaction	<b>3</b>	<b>ITEM</b>		
	<b>TOTAL FIRE FIGHTING CARRIED FORWARD TO BILL NO. 2 SUMMARY PAGE</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

ITEM NO.	DESCRIPTION	QTY	UNIT	AMOUNT	RATE
	<b><u>BILL NO. 2(TOILET BLOCK) SUMMARY PAGE :-</u></b>				
	<b>TOTAL INTERNAL PLUMBING BROUGHT FORWARD FROM MECH/27</b>				
	<b>TOTAL SANITARY FITTINGS BROUGHT FORWARD FROM MECH/31</b>				
	<b>TOTAL FOUL DRAINAGE BROUGHT FORWARD FROM MECH/33</b>				
	<b>TOTAL TESTING BROUGHT FORWARD FROM MECH/34</b>				
	<b>TOTAL BUILDERS WORK BROUGHT FORWARD FROM MECH/35</b>				
	<b>TOTAL FIRE FIGHTING BROUGHT FORWARD FROM MECH/36</b>				
	<b>TOTAL FOR BILL NO. 2 CARRIED FORWARD TO MECHANICAL WORKS SUMMARY PAGE</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

ITEM NO.	DESCRIPTION	QTY	UNIT	AMOUNT	RATE
<b>BILL NO.03-(STAFF HOUSE BLOCK);</b>					
<b><u>ELEMENT NO. 1 (INTERNAL PLUMBING)</u></b>					
<i>Supply, deliver and install pipes, tubing and fittings as described and shown on the drawings. The pipes shall be CPVC pipes where exposed to adverse weather conditions and all conforming to the current European standards for CPVC installations and to the Engineers Approval. Pipe jointing shall be by use of electric coupling or other equal and approved method, Rates must allow for all metal/plastic threaded adaptors where required for the connection of sanitary fixtures, valves, sockets, sliding and fixed joints support raceways, isolating sheaths, elastic materials, expansion arms and bends cross overs, couplings, clippings, connectors, joints etc. as required in the running lengths of pipe work and also where necessary, for pipe fixing clips, holder bats plugged and screwed for the proper and satisfactory functioning of the system. The pipes will be pressure tested before the plastering of wall commences and as per the manufactures recommended testing pressures</i>					
<b><u>CPVC Pipes</u></b>					
A	15mm diameter pipework in wall chase	8	LM		
B	20mm ditto	8	LM		
C	25mm ditto	4	LM		
<b>TOTAL CARRIED TO COLLECTION</b>					

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<b><u>ELEMENT NO.1 CONT'D:</u></b>				
	<b><u>Sockets</u></b>				
<b>A</b>	15mm diameter socket	<b>3</b>	<b>No.</b>		
<b>B</b>	20mm ditto	<b>3</b>	<b>No.</b>		
<b>C</b>	25mm ditto	<b>2</b>	<b>No.</b>		
	<b><u>Bends/Elbow</u></b>				
<b>D</b>	15mm diameter bends	<b>4</b>	<b>No.</b>		
<b>E</b>	20mm ditto	<b>2</b>	<b>No.</b>		
<b>F</b>	25mm ditto	<b>1</b>	<b>No.</b>		
	<b><u>Tees</u></b>				
<b>G</b>	15mm diameter equal tees	<b>1</b>	<b>No.</b>		
<b>H</b>	20mm ditto	<b>2</b>	<b>No.</b>		
<b>I</b>	25mm ditto	<b>1</b>	<b>No.</b>		
	<b><u>Reducers</u></b>				
<b>J</b>	20x 15mm diameter reducer	<b>4</b>	<b>No.</b>		
<b>K</b>	25x20mm ditto	<b>1</b>	<b>No.</b>		
	<b><u>Threaded Fittings</u></b>				
<b>L</b>	15mm male/female threaded 90° Bend/Elbow	<b>4</b>	<b>No.</b>		
<b>M</b>	15mm diameter PPR-M Adaptors	<b>2</b>	<b>No.</b>		
<b>N</b>	20mm ditto	<b>2</b>	<b>No.</b>		
<b>O</b>	25mm ditto	<b>2</b>	<b>No.</b>		
<b>P</b>	15mm diameter G.I. Nipple	<b>2</b>	<b>No.</b>		
<b>Q</b>	20mm ditto	<b>2</b>	<b>No.</b>		
<b>R</b>	25mm ditto	<b>2</b>	<b>No.</b>		
	<b>TOTAL CARRIED TO COLLECTION</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<b><u>ELEMENT NO.1 CONT'D:</u></b>				
<b>A</b>	<b><u>Valves</u></b> 15mm diameter approved medium pressure screw down full way non-rising stem wedge gate valve to BS 5154 PN 20 for series B rating,with wheel and head jopints to steel tubing and complete with round male threaded transion fittings.The gate valve to be as PEGLER or approved equivalent.	<b>1</b>	<b>No.</b>		
<b>B</b>	25mm ditto	<b>2</b>	<b>No.</b>		
<b>C</b>	<b><u>Water Storage Tank:</u></b> Supply, deliever and install vertical close end plastic moulded tank of capacity 4,000 Litre (Size 1670 diameter x 2060mm high).The tank to be assembled complete with cover and having screwed connections for inlet, outlet and overflow, 32mm medium pressure ball valve, drain pipes and any other necessary item for its proper functioning. The tank shall be mounted on a flat roof slab and shall be as Model 'ROTO' or other equal and approved.	<b>1</b>	<b>ITEM</b>		
	<b>TOTAL CARRIED TO COLLECTION</b>				
	<b><u>Summary of collection</u></b> <b>Internal Plumbing</b>  <b>Totals Brought Down From Above</b>  <b>Totals Brought Forward From MECH/38</b>  <b>Totals Brought Forward From MECH/39</b>				
	<b>TOTAL INTERNAL PLUMBING CARRIED FORWARD TO BILL NO. 3 SUMMARY PAGE</b>				



**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

ITEM NO.	DESCRIPTION	QTY	UNIT	AMOUNT	RATE
A	<p><b><u>ELEMENT NO.2</u></b></p> <p><b><u>SANITARY FITTINGS</u></b>  Supply,deliver,install,test and commission the following sanitary appliances complete with all the accessories including all connections to the services,waste,jointing to water supply,overflows,supports and all plugging and screwing to walls and floors.</p> <p><b><u>Note.</u></b>  (i). All sanitary fittings shall be in approved colour.  (ii). The model and Ref. No. Indicated is only a guide to the type and quality of fittings.  (iii). Equivalent and Approved models may be acceptable</p> <p><b><u>Close Couple Water Closet Suite;</u></b>  Close Couple Water Closet Suite comprising of Low level water closet in approved colour complete with W.C. bowl,'p'or's' trap connector,heavy duty matching plastic seat and cover with metal top fixed to (chrome plated) hinges and secured to floor or wall and complete with horizontal outlet to BS 3402 with 7.5Litre valveless Ceramic Cistern and fittings including siphon,15mm diameter side inlet ball valves,20mm diameter side overflow,plastic flush bend,inlet connection,and chrome-plated lever.The water closet suite to be as Model 'DURAVIT' or other approved equivalent.</p>	1	No		
B	<p><b><u>Soap Dispenser;</u></b>  Mediclinics'Wall mounted soap dispenser with a capacity of about One Litre having a press action soap release mechanism complete with fixing screws,including allowing for initial soap supply as STARMIX or other approved equivalent.</p>	1	No.		
	<b>TOTAL CARRIED TO COLLECTION</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<b><u>ELEMENT NO.2 CONT'D:</u></b>				
<b>A</b>	<p><b><u>Wash Hand Basin(WHB)</u></b> Elegantly Stylish Inset type Wash Hand Basin suitable for mounting on counter size 510x420mm with one tap holes and chain stay hole,32 mm diameter chrome-plated pop up chain waste,chrome plated bottle trap(32mm 'P' trap) with 75mm seal.The wash hand basin to be as Model 'Twyfords -England' Sola 510'or equal and approved. The basin to be complete with 15mm diameter (C.P) pillar tap type 211.15 star cobra or other approved equivalent.</p>	<b>2</b>	<b>No</b>		
<b>B</b>	<p><b><u>Toilet Roll Holder</u></b> Semi recessed toiler roll holder in vitreous China of size 165x165mm in approved colour as Twyfords or other approved equivalent</p>	<b>1</b>	<b>No.</b>		
<b>C</b>	<p><b><u>Mirrors.</u></b> 610 X 610mm X 6mm thick polished plate silver backed with beveled edges mirror fixed with clear silicon to 100 x 25mm thick wrot mahogany molded framing in 4 labors plugged to wall using 4No. Wall plugs with 75mm long stainless steel screws, painted in three coats polyurethane varnish all to approval</p>	<b>1</b>	<b>No.</b>		
<b>D</b>	<p><b><u>Single Bowl,Single Drainer Kitchen Sink;</u></b> 18SWG Single Bowl,Single Drainer, stainless steel kitchen sink suitable for mounting on counter of size 1000x600mm as manufactured by ASL or equal and approved.The bowl size to be 430x420x 300mm deep complete with chrome plated 40mm waste fittings,plugs,chain stays,overflow,1No. 15mm diameter stainless steel bib tap as 'Cobra Model',Chrome plated bottle trap with 75mm deep seal and chain waste fitting.To be also installed complete with approved Sink Mixer Unit.</p>	<b>1</b>	<b>No.</b>		
	<b>TOTAL CARRIED TO COLLECTION</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<b><u>ELEMENT NO.2 CONT'D:</u></b>				
<b>A</b>	<b><u>Flexible Tubing</u></b> 15mm diameter x 300mm longg flexible connectors complete with Integral chrome plated angle valve for connecting the Sanitary fitting to water supply.To be as Cobra or equal and approved.	<b>3</b>	<b>No.</b>		
<b>B</b>	<b><u>Shower Fittings</u></b> Concealed shower fitting consisting of 15mm diameter stainless steel riser pipe to connect to concealed shower stop cock,cold water swivel/adjustable shower rose,stainless steel shower arm and stop cock and all other necessary accessories and fittings.The shower fittings to be as 'Bricon Aztec'or other equal and approved	<b>1</b>	<b>ITEM</b>		
<b>C</b>	<b><u>Soap Dish</u></b> Semi recessed built in soap in Vitreous China of size;305x150mm in approved colour as Twyfords or equal and approved	<b>1</b>	<b>No.</b>		
<b>D</b>	<b><u>Towel Rail</u></b> Stainless steel 20mm diameter x 800mm long approved Towel rail and brackets as one piece,plugged and screwed into the wall.The fitting shall be as Twyfords England or other equal and approved	<b>1</b>	<b>No.</b>		
<b>E</b>	<b><u>Toilet Brush &amp; Holder:</u></b> Twyfords England' Free Standing Toilet Brush & with brush and Holder and to approved catalogue;	<b>1</b>	<b>No.</b>		
	<b>TOTAL CARRIED TO COLLECTION</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<p><b><u>ELEMENT NO.2 CONT'D:</u></b></p> <p><b><u>Summary of collection</u></b>  <b>Sanitary Fittings</b></p> <p><b>Totals Brought Forward From MECH/41</b></p> <p><b>Totals Brought Forward From MECH/42</b></p> <p><b>Totals Brought Forward From MECH/43</b></p>				
	<p><b>TOTAL SANITARY FITTINGS CARRIED FORWARD TO BILL NO. 3 SUMMARY PAGE</b></p>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<b><u>ELEMENT NO.03:</u></b>				
	<b><u>FOUL DRAINAGE</u></b> Supply,deliver and install the following UpVC,MUpVC,soil and waste systems,respectively to B.S 5255 with fittings fixed Key Terrain High Grade Golden Brown and Grey UPVC soil and waste pipe and jointing in accordance with manufacture's printed instructions and manufactured by reputable manufacturers.Tenderers must allow in their pipework prices for all the couplings,clippingsconnectors,joints,e.t.c as required in the running lengths of pipework and also where necessary,for pipe fixing clips,holder bats plugged and screwed for the proper and satisfactory functioning of the system				
	<b><u>INTERNAL</u></b>				
<b>A</b>	40mm diameter grey UpVC waste pipe in wall chase.	<b>6</b>	<b>LM</b>		
<b>B</b>	50mm ditto but boxed in concrete floor slab	<b>3</b>	<b>LM</b>		
	<b><u>Extra overtubing for:-</u></b>				
<b>C</b>	40mm diameter UpVC inspection bend	<b>3</b>	<b>No.</b>		
<b>D</b>	50x100mm diameter stainless steel floor trap and cover grating	<b>2</b>	<b>No.</b>		
<b>E</b>	100mm diameter floor drain ditto	<b>1</b>	<b>No.</b>		
<b>F</b>	100mm diameter UpVC Inspection bend	<b>1</b>	<b>No</b>		
<b>G</b>	100mm diameter WC connector	<b>5</b>	<b>No.</b>		
<b>H</b>	100mm diameter weathering slate and apron	<b>1</b>	<b>No.</b>		
<b>I</b>	100mm diameter Vent Cowl	<b>1</b>	<b>No.</b>		
	<b>TOTAL FOUL DRAINAGE CARRIED FORWARD TO BILL NO. 3 SUMMARY PAGE</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<p><b><u>ELEMENT NO. 4</u></b></p> <p><b><u>Sterilization and Testing;</u></b></p> <p><b>A</b> Allow for sterilization and flushing out of entire cold water installation with chlorine to the Engineer's Satisfaction</p> <p><b>B</b> Ditto for setting to work and testing the whole of the plumbing and drainage installation works both during progress and at completion to the Engineer's satisfaction</p>	<p><b>1</b></p> <p><b>1</b></p>	<p><b>ITEM</b></p> <p><b>ITEM</b></p>		
	<b>TOTAL TESTING CARRIED FORWARD TO BILL NO. 3 SUMMARY PAGE</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<p><b><u>ELEMENT NO. 5;</u></b></p> <p><b><u>BUILDERS WORK IN CONNECTION WITH INTERNAL PLUMBING AND DRAINAGE;</u></b></p> <p><b><u>Holes</u></b></p> <p><b>A</b> Make a hole through 100mm thick coral block wall for small pipe and make good disturbed areas</p> <p><b>B</b> Ditto but 200mm thick and for large ditto</p>	<p></p> <p align="center"><b>2</b></p> <p align="center"><b>4</b></p>	<p></p> <p align="center"><b>No.</b></p> <p align="center"><b>No.</b></p>		
	<b>TOTAL TESTING CARRIED FORWARD TO BILL NO. 3 SUMMARY PAGE</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<b><u>ELEMENT NO.6</u></b>				
	<b><u>FIRE FIGHTING;</u></b> <b><u>Supply,deliver and install the following fire fighting equipments</u></b> <b><u>on positions indicated on the contract drawings or as shall be</u></b> <b><u>instructed by the Engineer</u></b>				
	<b><u>Portable Fire Extinguisher</u></b>				
<b>A</b>	9Kg cartridge type general purpose portable dry powder fire extinguisher fully charged or equal and approved.	<b>1</b>	<b>No.</b>		
	<b><u>Carbon dioxide Gas Fire Extinguisher</u></b>				
<b>B</b>	5kg carbon dioxide gas portale fire extinguisher complete with pressure gauge,initial charge and mounting brackets	<b>1</b>	<b>No.</b>		
	<b><u>Dry Chemical Powder</u></b>				
<b>C</b>	6kg dry chemical powder portable fire extinguisher complete wth pressure gauge,initial charge and mounting brackets.	<b>1</b>	<b>No.</b>		
	<b><u>Testing</u></b>				
<b>D</b>	Allow for the Signage for fire exits and fire instructions all as described in the particular specifications and to the Project Enginneer's Approval.	<b>3</b>	<b>ITEM</b>		
	<b><u>Signage</u></b>				
<b>E</b>	Testing the whole fire fighting equipments to leave in sound working condition and to the Engineer's satisfaction	<b>1</b>	<b>ITEM</b>		
	<b>TOTAL FIRE FIGHTING CARRIED FORWARD TO BILL NO. 3 SUMMARY PAGE</b>				



**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

ITEM NO.	DESCRIPTION	QTY	UNIT	AMOUNT	RATE
	<b><u>BILL NO. 3(STAFF HOUSE BLOCK) SUMMARY PAGE :-</u></b>				
	TOTAL INTERNAL PLUMBING BROUGHT FORWARD FROM MECH/40				
	TOTAL SANITARY FITTINGS BROUGHT FORWARD FROM MECH/44				
	TOTAL FOUL DRAINAGE BROUGHT FORWARD FROM MECH/45				
	TOTAL TESTING BROUGHT FORWARD FROM MECH/46				
	TOTAL BUILDERS WORK BBROUGHT FORWARD FROM MECH/47				
	TOTAL FIRE FIGHTING BROUGHT FORWARD FROM MECH/48				
	<b>TOTAL FOR BILL NO. 3 CARRIED FORWARD TO MECHANICAL WORKS SUMMARY PAGE</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
<b><u>BILL NO.04-(GATE &amp; SECURITY BLOCK):</u></b>					
<b><u>ELEMENT NO. 1 (INTERNAL PLUMBING)</u></b>					
<i>Supply, deliver and install pipes, tubing and fittings as described and shown on the drawings. The pipes shall be CPVC pipes where exposed to adverse weather conditions and all conforming to the current European standards for CPVC installations and to the Engineers Approval. Pipe jointing shall be by use of electric coupling or other equal and approved method, Rates must allow for all metal/plastic threaded adaptors where required for the connection of sanitary fixtures, valves, sockets, sliding and fixed joints support raceways, isolating sheaths, elastic materials, expansion arms and bends cross overs, couplings, clippings, connectors, joints etc. as required in the running lengths of pipe work and also where necessary, for pipe fixing clips, holder bats plugged and screwed for the proper and satisfactory functioning of the system. The pipes will be pressure tested before the plastering of wall commences and as per the manufactures recommended testing pressures</i>					
<b><u>CPVC Pipes</u></b>					
<b>A</b>	15mm diameter pipework in wall chase	<b>8</b>	<b>LM</b>		
<b>B</b>	20mm ditto	<b>4</b>	<b>LM</b>		
<b>C</b>	25mm ditto	<b>4</b>	<b>LM</b>		
<b><u>Sockets</u></b>					
<b>D</b>	15mm diameter socket	<b>3</b>	<b>No.</b>		
<b>E</b>	20mm ditto	<b>2</b>	<b>No.</b>		
<b>F</b>	25mm ditto	<b>2</b>	<b>No.</b>		
<b>TOTAL CARRIED TO COLLECTION</b>					

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<b><u>ELEMENT NO.1 CONT'D:</u></b>				
	<b><u>Bends/Elbow</u></b>				
<b>A</b>	15mm diameter bends	<b>1</b>	<b>No.</b>		
<b>B</b>	25mm ditto	<b>1</b>	<b>No.</b>		
	<b><u>Tees</u></b>				
<b>C</b>	15mm diameter equal tees	<b>2</b>	<b>No.</b>		
<b>D</b>	20mm ditto	<b>1</b>	<b>No.</b>		
	<b><u>Reducers</u></b>				
<b>E</b>	20 x 15mm diameter reducer	<b>4</b>	<b>No.</b>		
<b>F</b>	25x20mm ditto	<b>1</b>	<b>No.</b>		
	<b><u>Threaded Fittings</u></b>				
<b>G</b>	15mm male/female threaded 90°bend/Elbow	<b>4</b>	<b>No.</b>		
<b>H</b>	20mm diameter PPR-M Adaptors	<b>2</b>	<b>No.</b>		
<b>I</b>	25mm ditto	<b>2</b>	<b>No.</b>		
<b>J</b>	20mm diameter G.I. Nipple	<b>2</b>	<b>No.</b>		
<b>K</b>	25mm ditto	<b>2</b>	<b>No.</b>		
	<b><u>Valves</u></b>				
<b>L</b>	20mm diameter approved medium pressure screw down full way non-rising stem wedge gate valve to BS 5154 PN 20 for series B rating,with wheel and hand jopints to steel tubing and complete with round male threaded transion fittings.The gate valve to be as PEGLER or approved equivalent.	<b>1</b>	<b>No.</b>		
<b>M</b>	25mm ditto	<b>2</b>	<b>No.</b>		
	<b>TOTAL CARRIED TO COLLECTION</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

ITEM NO.	DESCRIPTION	QTY	UNIT	AMOUNT	RATE
A	<p><b><u>ELEMENT NO.1 CONT'D:</u></b></p> <p><u>Water Storage Tank;</u> Supply, deliever and install vertical close end plastic moulded tank of capacity 4,000 Litre (Size 1670 diameter x 2060mm high).The tank to be assembled complete with cover and having screwed connections for inlet, outlet and overflow, 32mm medium pressure ball valve, drain pipes and any other necessary item for its proper functioning. The tank shall be mounted on a flat roof slab and shall be as Model 'ROTO' or other equal and approved.</p>	1	ITEM		
	<b>TOTAL CARRIED TO COLLECTION</b>				
	<p><b><u>Summary of collection</u></b> <b>Internal Plumbing</b></p> <p><b>Totals Brought Down From Above</b></p> <p><b>Totals Brought Forward From MECH/50</b></p> <p><b>Totals Brought Forward From MECH/51</b></p>				
	<b>TOTAL INTERNAL PLUMBING CARRIED FORWARD TO BILL NO. 4 SUMMARY PAGE</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

ITEM NO.	DESCRIPTION	QTY	UNIT	AMOUNT	RATE
	<p><b><u>ELEMENT NO.2:</u></b></p> <p><b><u>SANITARY FITTINGS:</u></b>  Supply,deliver,install,test and commission the following sanitary appliances complete with all the accessories including all connections to the services,waste,jointing to water supply,overflows,supports and all plugging and screwing to walls and floors.</p> <p><b><u>Note.</u></b>  (i). All sanitary fittings shall be in approved colour.  (ii). The model and Ref. No. Indicated is only a guide to the type and quality of fittings.  (iii). Equivalent and Approved models may be acceptable</p> <p><b><u>Close Couple Water Closet Suite:</u></b>  Close Couple Water Closet Suite comprising of Low level water closet in approved colour complete with W.C. bowl,'p'or's' trap connector,heavy duty matching plastic seat and cover with metal top fixed to (chrome plated) hinges and secured to floor or wall and complete with horizontal outlet to BS 3402 with 7.5Litre valveless Ceramic Cistern and fittings including siphon,15mm diameter side inlet ball valves,20mm diameter side overflow,plastic flush bend,inlet connection,and chrome-plated lever.The water closet suite to be as Model 'DURAVIT' or other approved equivalent.</p> <p><b><u>Soap Dispenser:</u></b>  Mediclinics'Wall mounted soap dispenser with a capacity of about One Litre having a press action soap release mechanism complete with fixing screws,including allowing for initial soap supply as STARMIX or other approved equivalent.</p>				
<b>A</b>		<b>1</b>	<b>No</b>		
<b>B</b>		<b>1</b>	<b>No.</b>		
	<b>TOTAL CARRIED TO COLLECTION</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

ITEM NO.	DESCRIPTION	QTY	UNIT	AMOUNT	RATE
	<b><u>ELEMENT NO.2 CONT'D:</u></b>				
<b>A</b>	<b><u>Wash Hand Basin(WHB)</u></b> Elegantly Stylish Inset type Wash Hand Basin suitable for mounting on counter size 510x420mm with one tap holes and chain stay hole,32 mm diameter chrome-plated pop up chain waste,chrome plated bottle trap(32mm 'P' trap) with 75mm seal.The wash hand basin to be as Model 'Twyfords -England' Sola 510'or equal and approved. The basin to be complete with 15mm diameter (C.P) pillar tap type 211.15 star cobra or other approved equivalent.	<b>2</b>	<b>No</b>		
<b>B</b>	<b><u>Toilet Roll Holder</u></b> Semi recessed toilet roll holder in vitreous China of size 165x165mm in approved colour as Twyfords or other approved equivalent	<b>2</b>	<b>No.</b>		
<b>C</b>	<b><u>Mirrors.</u></b> 610 X 610mm X 6mm thick polished plate silver backed with beveled edges mirror fixed with clear silicon to 100 x 25mm thick wrot mahogany molded framing in 4 labors plugged to wall using 4No. Wall plugs with 75mm long stainless steel screws, painted in three coats polyurethane varnish all to approval	<b>2</b>	<b>No.</b>		
<b>D</b>	<b><u>Tissue Dispenser;</u></b> Approved Wall mount Tissue Dispenser	<b>1</b>	<b>No.</b>		
<b>E</b>	<b><u>Flexible Tubing</u></b> 15mm diameter x 300mm longg flexible connectors complete with Integral chrome plated angle valve for connecting the Sanitary fitting to water supply.To be as Cobra or equal and approved.	<b>4</b>	<b>No.</b>		
<b>F</b>	<b><u>Toilet Brush &amp; Holder;</u></b> Twyfords England' Free Standing Toilet Brush & with brush and Holder and to approved catalogue;	<b>1</b>	<b>No.</b>		
	<b>TOTAL CARRIED TO COLLECTION</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<p><b><u>ELEMENT NO.2 CONT'D:</u></b></p> <p><b><u>Summary of collection</u></b>  <b>Sanitary Fittings</b></p> <p><b>Totals Brought Forward From MECH/53</b></p> <p><b>Totals Brought Forward From MECH/54</b></p>				
	<p><b>TOTAL SANITARY FITTINGS CARRIED FORWARD TO BILL NO. 4 SUMMARY PAGE</b></p>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<b><u>ELEMENT NO.03;</u></b>				
	<b><u>FOUL DRAINAGE</u></b> Supply,deliver and install the following UPVC,MUPVC,soil and waste systems,respectively to B.S 5255 with fittings fixed Key Terrain High Grade Golden Brown and Grey UPVC soil and waste pipe and jointing in accordance with manufacture's printed instructions and manufactured by reputable manufacturers.Tenderers must allow in their pipework prices for all the couplings,clippingsconnectors,joints,e.t.c as required in the running lengths of pipework and also where necessary,for pipe fixing clips,holder bats plugged and screwed for the proper and satisfactory functioning of the system				
	<b><u>INTERNAL</u></b>				
<b>A</b>	40mm diameter grey UpVC waste pipe in wall chase.	<b>6</b>	<b>LM</b>		
<b>B</b>	50mm ditto but boxed in concrete floor slab	<b>3</b>	<b>LM</b>		
	<b><u>Extra overtubing for:-</u></b>				
<b>C</b>	40mm diameter UpVC inspection bend	<b>2</b>	<b>No.</b>		
<b>D</b>	50x100mm diameter stainless steel floor trap and cover grating	<b>2</b>	<b>No.</b>		
<b>E</b>	100mm diameter UpVC Inspection bend	<b>2</b>	<b>No</b>		
<b>F</b>	100mm diameter WC connector	<b>2</b>	<b>No.</b>		
<b>G</b>	100mm diameter weathering slate and apron	<b>1</b>	<b>No.</b>		
<b>H</b>	100mm diameter Vent Cowl	<b>1</b>	<b>No.</b>		
	<b>TOTAL FOUL DRAINAGE CARRIED FORWARD TO BILL NO. 4 SUMMARY PAGE</b>				



**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<p><b><u>ELEMENT NO. 4</u></b></p> <p><b><u>Sterilization and Testing;</u></b></p> <p><b>A</b> Allow for sterilization and flushing out of entire cold water installation with chlorine to the Engineer's Satisfaction</p> <p><b>B</b> Ditto for setting to work and testing the whole of the plumbing and drainage installation works both during progress and at completion to the satisfaction of the Project Manager</p>	<p><b>1</b></p> <p><b>1</b></p>	<p><b>ITEM</b></p> <p><b>ITEM</b></p>		
	<b>TOTAL TESTING CARRIED FORWARD TO BILL NO. 4 SUMMARY PAGE</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<b><u>ELEMENT NO. 5;</u></b>				
	<b><u>BUILDERS WORK IN CONNECTION WITH INTERNAL PLUMBING AND DRAINAGE;</u></b>				
	<b><u>Holes;</u></b>				
<b>A</b>	Make a hole through 100mm thick coral block wall for small pipe and make good disturbed areas	<b>2</b>	<b>No.</b>		
<b>B</b>	Ditto but 200mm thick and for large ditto	<b>4</b>	<b>No.</b>		
	<b><u>Boxing;</u></b>				
<b>C</b>	Allow for boxing in walls for cover to waste pipe	<b>2</b>	<b>ITEM</b>		
	<b>TOTAL TESTING CARRIED FORWARD TO BILL NO. 4 SUMMARY PAGE</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

ITEM NO.	DESCRIPTION	QTY	UNIT	AMOUNT	RATE
	<p><b><u>ELEMENT NO.6:</u></b></p> <p><b><u>FIRE FIGHTING:</u></b></p> <p><b><u>Supply,deliver and install the following fire fighting equipments on positions indicated on the contract drawings or as shall be instructed by the Engineer</u></b></p> <p><b><u>Portable Fire Extinguisher</u></b></p> <p>A 9Kg cartridge type general purpose portable dry powder fire extingusher fully charged or equal and approved.</p> <p><b><u>Carbon dioxide Gas Fire Extinguisher</u></b></p> <p>B 5kg carbon dioxide gas portale fire extingusher complete with pressure gauge,initial charge and mounting brackets</p> <p><b><u>Dry Chemical Powder</u></b></p> <p>C 6kg dry chemical powder portable fire extingusher complete wth pressure gauge,initial charge and mounting brackets.</p> <p><b><u>Testing</u></b></p> <p>D Allow for the Signage for fire exits and fire instructions all as described in the particular specifications and to the Project Enginneer's Approval.</p> <p><b><u>Signage</u></b></p> <p>E Testing the whole fire fighting equipments to leave in sound working condition and to the Engineer's satisfaction</p>				
	<b>TOTAL FIRE FIGHTING CARRIED FORWARD TO BILL NO. 4 SUMMARY PAGE</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

ITEM NO.	DESCRIPTION	QTY	UNIT	AMOUNT	RATE
	<b><u>BILL NO. 4(GATE &amp; SECURITY BLOCK) SUMMARY PAGE :-</u></b>				
	TOTAL INTERNAL PLUMBING BROUGHT FORWARD FROM MECH/52				
	TOTAL SANITARY FITTINGS BROUGHT FORWARD FROM MECH/55				
	TOTAL FOUL DRAINAGE BROUGHT FORWARD FROM MECH/56				
	TOTAL TESTING BROUGHT FORWARD FROM MECH/57				
	TOTAL BUILDERS WORK BBROUGHT FORWARD FROM MECH/58				
	TOTAL FIRE FIGHTING BROUGHT FORWARD FROM MECH/59				
	<b>TOTAL FOR BILL NO. 4 CARRIED FORWARD TO MECHANICAL WORKS SUMMARY PAGE</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

ITEM NO.	DESCRIPTION	QTY	UNIT	AMOUNT	RATE
	<b><u>BILL NO. 5-(GYMNASIUM):</u></b>				
	<b><u>ELEMENT NO. 1 (INTERNAL PLUMBING)</u></b>				
	<i>Supply, deliver and install pipes, tubing and fittings as described and shown on the drawings. The pipes shall be CPVC pipes where exposed to adverse weather conditions and all conforming to the current European standards for CPVC installations and to the Engineers Approval. Pipe jointing shall be by use of electric coupling or other equal and approved method, Rates must allow for all metal/plastic threaded adaptors where required for the connection of sanitary fixtures, valves, sockets, sliding and fixed joints support raceways, isolating sheaths, elastic materials, expansion arms and bends cross overs, couplings, clippings, connectors, joints etc. as required in the running legths of pipe work and also where necessary, for pipe fixing clips, holder bats plugged and screwed for the proper and satisfactory functioning of the system. The pipes will be pressure tested before the plastering of wall commences and as per the manufactures recommended testing pressures</i>				
	<b><u>CPVC Pipes</u></b>				
A	15mm diameter pipework in wall chase	8	LM		
B	20mm ditto	8	LM		
C	25mm ditto	4	LM		
D	32mm ditto	4	LM		
<b>TOTAL CARRIED TO COLLECTION</b>					

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<b><u>ELEMENT NO.1 CONT'D:</u></b>				
	<b><u>Sockets</u></b>				
<b>A</b>	15mm diameter socket	<b>3</b>	<b>No.</b>		
<b>B</b>	20mm ditto	<b>3</b>	<b>No.</b>		
<b>C</b>	25mm ditto	<b>2</b>	<b>No.</b>		
<b>D</b>	32mm ditto	<b>2</b>	<b>No.</b>		
	<b><u>Bends/Elbow</u></b>				
<b>E</b>	15mm diameter bends	<b>6</b>	<b>No.</b>		
<b>F</b>	20mm ditto	<b>2</b>	<b>No.</b>		
<b>G</b>	25mm ditto	<b>1</b>	<b>No.</b>		
<b>H</b>	32mm ditto	<b>1</b>	<b>No.</b>		
	<b><u>Tees</u></b>				
<b>I</b>	20mm diameter equal tees	<b>2</b>	<b>No.</b>		
<b>J</b>	25mm ditto	<b>2</b>	<b>No.</b>		
	<b><u>Reducers</u></b>				
<b>K</b>	20x 15mm diameter reducer	<b>3</b>	<b>No.</b>		
<b>L</b>	25x20mm ditto	<b>1</b>	<b>No.</b>		
<b>M</b>	32X25mm ditto	<b>1</b>	<b>No.</b>		
	<b><u>Threaded Fittings</u></b>				
<b>N</b>	15mm male/female threaded 90° Bend/Elbow	<b>5</b>	<b>No.</b>		
<b>O</b>	15mm diameter CPVC Adaptors	<b>2</b>	<b>No.</b>		
<b>P</b>	20mm ditto	<b>2</b>	<b>No.</b>		
<b>Q</b>	32mm ditto	<b>2</b>	<b>No.</b>		
	<b>TOTAL CARRIED TO COLLECTION</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<b><u>ELEMENT NO.1 CONT'D:</u></b>				
	<b><u>Threaded fittings cont'd</u></b>				
<b>A</b>	15mm diameter G.I. Nipple	<b>4</b>	<b>No.</b>		
<b>B</b>	20mm ditto	<b>2</b>	<b>No.</b>		
<b>C</b>	32mm ditto	<b>2</b>	<b>No.</b>		
	<b><u>Valves</u></b>				
<b>D</b>	15mm diameter approved medium pressure screw down full way non-rising stem wedge gate valve to BS 5154 PN 20 for series B rating,with wheel and head jopints to steel tubing and complete with round male threaded tranision fittings.The gate valve to be as PEGLER or approved equivalent.	<b>1</b>	<b>No.</b>		
<b>E</b>	20mm ditto	<b>1</b>	<b>No.</b>		
<b>F</b>	32mm ditto	<b>1</b>	<b>No.</b>		
	<b><u>Water Storage Tank;</u></b>				
<b>G</b>	Supply, deliever and install vertical close end plastic moulded tank of capacity 4,000 Litre (Size 1670 diameter x 2060mm high).The tank to be assembled complete with cover and having screwed connections for inlet, outlet and overflow, 32mm medium pressure ball valve, drain pipes and any other necessary item for its proper functioning. The tank shall be mounted on a flat roof slab and shall be as Model 'ROTO' or other equal and approved.	<b>1</b>	<b>ITEM</b>		
	<b>TOTAL CARRIED TO COLLECTION</b>				





**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

ITEM NO.	DESCRIPTION	QTY	UNIT	AMOUNT	RATE
A	<p><b><u>ELEMENT NO.2</u></b></p> <p><b><u>SANITARY FITTINGS</u></b>  Supply,deliver,install,test and commission the following sanitary appliances complete with all the accessories including all connections to the services,waste,jointing to water supply,overflows,supports and all plugging and screwing to walls and floors.</p> <p><b><u>Note.</u></b>  (i). All sanitary fittings shall be in approved colour.  (ii). The model and Ref. No. Indicated is only a guide to the type and quality of fittings.  (iii). Equivalent and Approved models may be acceptable</p> <p><b><u>Close Couple Water Closet Suite;</u></b>  Close Couple Water Closet Suite comprising of Low level water closet in approved colour complete with W.C. bowl,'p'or's' trap connector,heavy duty matching plastic seat and cover with metal top fixed to (chrome plated) hinges and secured to floor or wall and complete with horizontal outlet to BS 3402 with 7.5Litre valveless Ceramic Cistern and fittings including siphon,15mm diameter side inlet ball valves,20mm diameter side overflow,plastic flush bend,inlet connection,and chrome-plated lever.The water closet suite to be as Model 'DURAVIT' or other approved equivalent.</p>	1	No		
B	<p><b><u>Soap Dispenser;</u></b>  Mediclinics'Wall mounted soap dispenser with a capacity of about One Litre having a press action soap release mechanism complete with fixing screws,including allowing for initial soap supply as STARMIX or other approved equivalent.</p>	1	No.		
	<b>TOTAL CARRIED TO COLLECTION</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<b><u>ELEMENT NO.2 CONT'D:</u></b>				
<b>A</b>	<p><b><u>Wash Hand Basin(WHB)</u></b> Elegantly Stylish Inset type Wash Hand Basin suitable for mounting on counter size 510x420mm with one tap holes and chain stay hole,32 mm diameter chrome-plated pop up chain waste,chrome plated bottle trap(32mm 'P' trap) with 75mm seal.The wash hand basin to be as Model 'Twyfords -England' Sola 510'or equal and approved. The basin to be complete with 15mm diameter (C.P) pillar tap type 211.15 star cobra or other approved equivalent.</p>	<b>2</b>	<b>No</b>		
<b>B</b>	<p><b><u>Toilet Roll Holder</u></b> Semi recessed toiler roll holder in vitreous China of size 165x165mm in approved colour as Twyfords or other approved equivalent</p>	<b>1</b>	<b>No.</b>		
<b>C</b>	<p><b><u>Mirrors.</u></b> 610 X 610mm X 6mm thick polished plate silver backed with beveled edges mirror fixed with clear silicon to 100 x 25mm thick wrot mahogany molded framing in 4 labors plugged to wall using 4No. Wall plugs with 75mm long stainless steel screws, painted in three coats polyurethane varnish all to approval</p>	<b>2</b>	<b>No.</b>		
<b>D</b>	<p><b><u>Flexible Tubing</u></b> 15mm diameter x 300mm longg flexible connectors complete with Integral chrome plated angle valve for connecting the Sanitary fitting to water supply.To be as Cobra Model or other equal and approved.</p>	<b>3</b>	<b>No.</b>		
<b>E</b>	<p><b><u>Towel Rail</u></b> Stainless steel 20mm diameter x 800mm long approved Towel rail and brackets as one piece,plugged and screwed into the wall.The fitting shall be as Twyfords England or other equal and approved</p>	<b>1</b>	<b>No.</b>		
	<b>TOTAL CARRIED TO COLLECTION</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<b><u>ELEMENT NO.2 CONT'D:</u></b>				
<b>A</b>	<b><u>Shower Fittings</u></b> Concealed shower fitting consisting of 15mm diameter stainless steel riser pipe to connect to concealed shower stop cock,cold water swivel/adjustable shower rose,stainless steel shower arm and stop cock and all other necessary accessories and fittings.The shower fittings to be as 'Bricon Aztec'or other equal and approved	<b>1</b>	<b>ITEM</b>		
<b>B</b>	<b><u>Soap Dish</u></b> Semi recessed built in soap in Vitreous China of size;305x150mm in approved colour as Twyfords or equal and approved	<b>1</b>	<b>No.</b>		
<b>C</b>	<b><u>Toilet Brush &amp; Holder;</u></b> Twyfords England' Free Standing Toilet Brush & with brush and Holder and to approved catalogue;	<b>1</b>	<b>No.</b>		
	<b>TOTAL CARRIED TO COLLECTION</b>				
	<b><u>Summary of collection</u></b> <b>Sanitary Fittings</b>  <b>Totals Brought Down From Above</b>  <b>Totals Brought Forward From MECH/65</b>  <b>Totals Brought Forward From MECH/66</b>				
	<b>TOTAL SANITARY FITTINGS CARRIED FORWARD TO BILL NO. 5 SUMMARY PAGE</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<b><u>ELEMENT NO.03:</u></b>				
	<b><u>FOUL DRAINAGE</u></b> Supply,deliver and install the following UpVC,MUpVC,soil and waste systems,respectively to B.S 5255 with fittings fixed Key Terrain High Grade Golden Brown and Grey UPVC soil and waste pipe and jointing in accordance with manufacture's printed instructions and manufactured by reputable manufacturers.Tenderers must allow in their pipework prices for all the couplings,clippingsconnectors,joints,e.t.c as required in the running lengths of pipework and also where necessary,for pipe fixing clips,holder bats plugged and screwed for the proper and satisfactory functioning of the system				
	<b><u>INTERNAL</u></b>				
<b>A</b>	40mm diameter grey UpVC waste pipe in wall chase.	<b>6</b>	<b>LM</b>		
<b>B</b>	50mm ditto but boxed in concrete floor slab	<b>6</b>	<b>LM</b>		
	<b><u>Extra overtubing for:-</u></b>				
<b>C</b>	40mm diameter UpVC inspection bend	<b>2</b>	<b>No.</b>		
<b>D</b>	50x100mm diameter stainless steel floor trap and cover grating	<b>3</b>	<b>No.</b>		
<b>E</b>	100mm diameter floor drain ditto	<b>3</b>	<b>No.</b>		
<b>F</b>	100mm diameter UpVC Inspection bend	<b>1</b>	<b>No</b>		
<b>G</b>	100mm diameter WC connector	<b>1</b>	<b>No.</b>		
<b>H</b>	100mm diameter weathering slate and apron	<b>1</b>	<b>No.</b>		
<b>I</b>	100mm diameter Vent Cowl	<b>1</b>	<b>No.</b>		
	<b>TOTAL FOUL DRAINAGE CARRIED FORWARD TO BILL NO. 5 SUMMARY PAGE</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<p><b><u>ELEMENT NO. 4</u></b></p> <p><b><u>Sterilization and Testing;</u></b></p> <p><b>A</b> Allow for sterilization and flushing out of entire cold water installation with chlorine to the Engineer's Satisfaction</p> <p><b>B</b> Ditto for setting to work and testing the whole of the plumbing and drainage installation works both during progress and at completion to the satisfaction of the Project Manager</p>	<p><b>1</b></p> <p><b>1</b></p>	<p><b>ITEM</b></p> <p><b>ITEM</b></p>		
	<b>TOTAL TESTING CARRIED FORWARD TO BILL NO. 5 SUMMARY PAGE</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<p><b><u>ELEMENT NO. 5;</u></b></p> <p><b><u>BUILDERS WORK IN CONNECTION WITH INTERNAL PLUMBING AND DRAINAGE;</u></b></p> <p><b><u>Holes</u></b></p> <p><b>A</b> Make a hole through 100mm thick coral block wall for small pipe and make good disturbed areas</p> <p><b>B</b> Ditto but 200mm thick and for large ditto</p>	<p></p> <p align="center"><b>4</b></p> <p align="center"><b>4</b></p>	<p></p> <p align="center"><b>No.</b></p> <p align="center"><b>No.</b></p>		
	<p><b>TOTAL BUILDERS WORK CARRIED FORWARD TO BILL NO. 5 SUMMARY PAGE</b></p>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<p><b><u>ELEMENT NO.6:</u></b></p> <p><b><u>SOLAR WATER HEATING:</u></b></p> <p><b><u>SOLAR INSTALLATION</u></b>  <b><u>The hot water system shall consist of a solar hot water system with auxiliary electrical heating elements for use during periods of low solar intensity</u></b></p> <p>A hybrid indirect loop solar hot water system consisting of an efficient Solar Collector with an area of about 4m<sup>2</sup> and a hot water cylinder with minimum capacity of 300 litres. The cylinder shall be fabricated from 6mm thick mild steel plate and hot dipped galvanized after manufacture, it shall have polythene foam insulation of minimum thickness 50mm which shall have a thermostatically controlled element of 3KW minimum. The cylinder shall be installed in the ceiling void. the package shall also incorporate a pressure relief/ safety valve, gate valve and anon return all size 20mm. it shall be as SUNRAY systems of Australia or an approved and equivalent</p> <p><b><u>Pipework;</u></b>  <b><u>The following Medium duty galvanised Mild Steel pipework for hot water supply;-</u></b></p>				
<b>A</b>		<b>1</b>	<b>ITEM</b>		
<b>B</b>	15mm diameter pipework in wall chase	<b>8</b>	<b>LM</b>		
<b>C</b>	20mm ditto	<b>8</b>	<b>LM</b>		
<b>D</b>	25mm ditto	<b>4</b>	<b>LM</b>		
<b>E</b>	32mm ditto	<b>4</b>	<b>LM</b>		
	<b>TOTAL CARRIED TO COLLECTION</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<b><u>ELEMENT NO.6 CONT'D:</u></b>				
	<b><u>Sockets</u></b>				
<b>A</b>	15mm diameter socket	<b>3</b>	<b>No.</b>		
<b>B</b>	20mm ditto	<b>3</b>	<b>No.</b>		
<b>C</b>	25mm ditto	<b>2</b>	<b>No.</b>		
<b>D</b>	32mm ditto	<b>2</b>	<b>No.</b>		
	<b><u>Bends/Elbow</u></b>				
<b>E</b>	15mm diameter bends	<b>6</b>	<b>No.</b>		
<b>F</b>	20mm ditto	<b>2</b>	<b>No.</b>		
<b>G</b>	25mm ditto	<b>1</b>	<b>No.</b>		
<b>H</b>	32mm ditto	<b>1</b>	<b>No.</b>		
	<b><u>Tees</u></b>				
<b>I</b>	20mm diameter equal tees	<b>2</b>	<b>No.</b>		
<b>J</b>	25mm ditto	<b>2</b>	<b>No.</b>		
	<b><u>Reducers</u></b>				
<b>K</b>	20x 15mm diameter reducer	<b>3</b>	<b>No.</b>		
<b>L</b>	25x20mm ditto	<b>1</b>	<b>No.</b>		
<b>M</b>	32X25mm ditto	<b>1</b>	<b>No.</b>		
	<b><u>Threaded Fittings</u></b>				
<b>N</b>	15mm male/female threaded 90° Bend/Elbow	<b>5</b>	<b>No.</b>		
<b>O</b>	15mm diameter CPVC Adaptors	<b>2</b>	<b>No.</b>		
<b>P</b>	20mm ditto	<b>2</b>	<b>No.</b>		
<b>Q</b>	32mm ditto	<b>2</b>	<b>No.</b>		
	<b>TOTAL CARRIED TO COLLECTION</b>				



**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<b><u>ELEMENT NO.6 CONT'D:</u></b>				
<b>A</b>	15mm diameter G.I. Nipple	<b>4</b>	<b>No.</b>		
<b>B</b>	20mm ditto	<b>2</b>	<b>No.</b>		
<b>C</b>	32mm ditto	<b>2</b>	<b>No.</b>		
	<u>Valves</u>				
<b>D</b>	15mm diameter approved medium pressure screw down full way non-rising stem wedge gate valve to BS 5154 PN 20 for series B rating,with wheel and hand jopints to steel tubing and complete with round male threaded tranision fittings.The gate valve to be as PEGLAR or approved equivalent.	<b>1</b>	<b>No.</b>		
<b>E</b>	20mm ditto	<b>1</b>	<b>No.</b>		
<b>F</b>	32mm ditto	<b>1</b>	<b>No.</b>		
	<u>Water Storage Tank:</u>				
<b>G</b>	Supply, deliever and install vertical close end plastic moulded tank of capacity 4,000 Litre (Size 1670 diameter x 2060mm high).The tank to be assembled complete with cover and having screwed connections for inlet, outlet and overflow, 32mm medium pressure ball valve, drain pipes and any other necessary item for its proper functioning. The tank shall be mounted on a flat roof slab and shall be as Model 'ROTO' or other equal and approved.	<b>1</b>	<b>ITEM</b>		
	<b>TOTAL CARRIED TO COLLECTION</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<p><b><u>ELEMENT NO.6 CONT'D:</u></b></p> <p><b><u>Summary of collection</u></b>  <b>Solar Water Heating</b></p> <p><b>Totals Brought Forward From MECH/71</b></p> <p><b>Totals Brought Forward From MECH/72</b></p> <p><b>Totals Brought Forward From MECH/73</b></p>				
	<p><b>TOTAL SOLAR WATER HEATING CARRIED FORWARD TO BILL NO. 5 SUMMARY PAGE</b></p>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<b><u>ELEMENT NO.6</u></b>				
	<b><u>FIRE FIGHTING;</u></b>				
	<b><u>Supply,deliver and install the following fire fighting equipments on positions indicated on the contract drawings or as shall be instructed by the Engineer</u></b>				
	<b><u>Portable Fire Extinguisher</u></b>				
<b>A</b>	9Kg cartridge type general purpose portable dry powder fire extingusher fully charged or equal and approved.	<b>1</b>	<b>No.</b>		
	<b><u>Carbon dioxide Gas Fire Extinguisher</u></b>				
<b>B</b>	5kg carbon dioxide gas portale fire extingusher complete with pressure gauge,initial charge and mounting brackets	<b>1</b>	<b>No.</b>		
	<b><u>Dry Chemical Powder</u></b>				
<b>C</b>	9.0Litre Water Carbon dioxide (WCo2) fire extingusher complete wth pressure gauge,initial charge and mounting brackets.	<b>1</b>	<b>No.</b>		
	<b><u>Testing</u></b>				
<b>D</b>	Allow for the Signage for fire exits and fire instructions all as described in the particular specifications and to the Project Enginneer's Approval.	<b>3</b>	<b>ITEM</b>		
	<b><u>Signage</u></b>				
<b>E</b>	Testing the whole fire fighting equipments to leave in sound working condition and to the Engineer's satisfaction	<b>1</b>	<b>ITEM</b>		
	<b>TOTAL FIRE FIGHTING CARRIED FORWARD TO BILL NO. 5 SUMMARY PAGE</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

ITEM NO.	DESCRIPTION	QTY	UNIT	AMOUNT	RATE
	<b><u>BILL NO. 5(GYMNASIUM) SUMMARY PAGE :-</u></b>				
	<b>TOTAL INTERNAL PLUMBING BROUGHT FORWARD FROM MECH/64</b>				
	<b>TOTAL SANITARY FITTINGS BROUGHT FORWARD FROM MECH/67</b>				
	<b>TOTAL FOUL DRAINAGE BROUGHT FORWARD FROM MECH/68</b>				
	<b>TOTAL TESTING BROUGHT FORWARD FROM MECH/69</b>				
	<b>TOTAL BUILDERS WORK BBROUGHT FORWARD FROM MECH/70</b>				
	<b>TOTAL SOLAR WATER HEATING BROUGHT FORWARD FROM MECH/74</b>				
	<b>TOTAL FIRE FIGHTING BROUGHT FORWARD FROM MECH/75</b>				
	<b>TOTAL FOR BILL NO. 5 CARRIED FORWARD TO MECHANICAL WORKS SUMMARY PAGE</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<b><u>BILL NO.6-EXTERNAL WORKS(ALL PROVISIONAL);</u></b>				
	<b><u>Excavations</u></b>				
<b>A</b>	Excavate trench in soil/murram for drainage pipes not exceeding 1200mm deep ,lay pipe,part return in,fill ram and surplus cart away	<b>202</b>	<b>LM</b>		
	<b><u>External Drainage</u></b>				
<b>B</b>	100mm diameter medium duty GOLDEN BROWN UpVC waste pipe laid and jointed in trench	<b>196</b>	<b>LM</b>		
<b>C</b>	160mm ditto	<b>12</b>	<b>LM</b>		
<b>D</b>	200mm ditto	<b>6</b>	<b>LM</b>		
	<b><u>Masonry Gulley Trap</u></b>				
<b>E</b>	Construct Masonry Gulley Trap size 200x200x300mm deep and concrete cover,including all excavations and disposal	<b>5</b>	<b>No.</b>		
	<b><u>Manholes/Inspection Chambers</u></b>				
<b>F</b>	Construct inspection chamber size 600 x 450mm and averaging 750mm deep constructed in 100mm thick concrete base(1:3:6), approved 150mm block sides rendered all around in cement and sand (1:4).It shall have an approved heavy duty cast iron cover and frame as manufactured by E.A Foundry works,Including all necessary excavations,disposal and form work.	<b>35</b>	<b>No.</b>		
	<b>TOTAL BILL NO. 6 CARRIED FORWARD TO MECHANICAL WORKS SUMMARY PAGE</b>				

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>AMOUNT</b>	<b>RATE</b>
	<p><b><u>BILL NO.7:</u></b></p> <p><b><u>PROVISIONAL SUMS:</u></b>  <b><u>The following Provisional Sum to be Spend upon issuance of Instructions before and/or during progress of work for Engineer's Project Management Expenses.</u></b></p>				
<b>A</b>	<p>Provide a Provisional Sum of Kenya Shillings Five Hundred Thousand (Kshs. 500,000.00) only for Engineers Supervision and Contract Administration Expenses</p>	<b>1</b>	<b>ITEM</b>	500000	500,000.00
	<p><b><u>The following Provisional Sum to be Spend upon measurements on completion and priced in accordance with the rates contained in these Bills of Quantities or prorata thereto or deducted in whole if not required.</u></b></p>				
<b>B</b>	<p>Provide a Provisional Sum of Kenya Shillings Two Million, (Kshs.2,000,000.00) only for Contingencies</p>	<b>1</b>	<b>ITEM</b>	2000000	2,000,000.00
	<p><b>TOTAL BILL NO. 7 CARRIED FORWARD TO MECHANICAL WORKS SUMMARY PAGE</b></p>				2,500,000.00

**INTERNAL PLUMBING,SANITARY FITTINGS,DRAINAGE,SOLAR WATER HEATING SYSTEMS FIRE FIGHTING  
EQUIPMENT INSTALLATIONS**

ITEM NO.	DESCRIPTION	QTY	UNIT	AMOUNT	RATE
	<b><u>MECHANICAL WORKS SUMMARY PAGE :-</u></b>				
	PRELIMINARIES BROUGHT FORWARD PAGE G-6				
	TOTALS BILL NO.1 BROUGHT FORWARD FROM MECH/24				
	TOTALS BILL NO.2 BROUGHT FORWARD FROM MECH/37				
	TOTALS BILL NO.3 BROUGHT FORWARD FROM MECH/49				
	TOTALS BILL NO.4 BROUGHT FORWARD FROM MECH/60				
	TOTALS BILL NO.5 BROUGHT FORWARD FROM MECH/76				
	TOTALS BILL NO.6 BROUGHT FORWARD FROM MECH/77				
	TOTALS BILL NO. 7 BROUGHT FORWARD FROM MECH/78				2,500,000.00
	<b>SUBTOTALS</b>				
	<b>ADD 16% V.A.T</b>				
	<b>GRAND TOTAL TENDER SUM</b>				
	<b>AMOUNT OF TENDER SUM IN WORDS KENYA SHILLINGS</b>				
	.....				
	.....				
	.....				
	<b>NAME AND ADDRESS OF CONTRACTOR.....</b>				
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	.....				
	<b>DATE.....SIGNATURE.....</b>				
	...				
	<b>NAME AND ADDRESS OF WITNESS.....</b>				
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