DEPARTMENTOFQUANTITYSURVEYING.ESTIMATINGANDBUDGETINGFOR THE PROPOSED MEDIUM SCALE BUILDING.

(ACASEOFSTUDYOFANESTIMATEANDBUDGETFORPROPOSEDFOUR(4) BEDROOM DUPLEX FOR DR.MUHAMMED BASHIR KOLAWOLE AT NO. 25, ONILETE QUARTERS, IWO, OSUN STATE)

BY
ND/23/QTS/FT/0007
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ODLND23QTS0002
ODLND23QTS0001
ND/23/QTS/FT/0008
ND/23/QTS/PT/0020
ND/23/QTS/PT/00021

SUBMITTEDTO
THE DEPARTMENT OF QUANTITY SURVEYING INSTITUTE OF ENVIRONMENTALSTUDIES(IES)KWARASTATEPOLYTECHNICILORIN, KWARA STATE

INPARTIAL FULFILMENT OFTHEREQUIREMENT FORTHEAWARD OF NATIONALDIPLOMA(ND)INDEPARTMENTOFQUANTITYSURVEYING.

JULY, 2025.

CERTIFICATION

This is to certify that , ABDULGANIYU WALIYAT, OGUNDEJI BOLUWATIFE EMMANUEL, MOHAMMED MOHAMMED BABA, HUSSAIN ABDULAZEEZ OMOTOSHO,SHITTUKHALID,AKINOLAABDULLAHIOLADIPUPO,UTHMANBELLO,

Have successfully completed the practical project work in partial fulfillment and requirement for Award ofNational Diploma in Quantity Surveying department, Institute ofenvironmental studies, Kwara state polytechnic, Ilorin.

QS. KAREEM AZEEZ BOLAKALE **DATE**

(ProjectSupervisor)

QS.SIDIQLATEEF **DATE**
(HEADOFDEPARTMENT)

EXTERNALEXAMINER **DATE**
QSZAKARIMAHMUDTSARAGI

STUDENT **DATE**

DEDICATION

This project work is dedicated to Almighty God for seeing me through my stay in Kwara State Polytechnic and it also dedicated to my Parents.

ACKNOWLEDGEMENT

My profound gratitude goes to God forgiving me the privilege to complete this course, and particular my project successfully despite all the obstacles in my path.

My appreciate goes to my parent, and everyone who are in support from one way or the other.

My appreciation goes to my project supervisor QS AZEEZ KAREEM BOLAKALE despite his tight schedule still found us precious time to go through my taking off sheet andwrite up,abigthanks toall ourlecturersand non-academic staffmay Allahblessand reward you all abundantly.

A big thanks to my Parent, Mr. and Mrs. ABDULGANIYU may you never lack in life, it's my innermost prayer that you all reap the fruit of your labour.

ABDULGANIYU WALIYAT

ND/23/QTS/FT/0007

TABLEOFCONTENT

ABSTRACT

This project focuses on preliminary activities that led to preparation of draft Bill of quantity for proposed four Bedroom Duplex Building located at no 25, Onilete Quarter Iwo Osun State Meanwhile, this is to prepare pre-constructional cost on any proposed project and understanding the process of site investigation and to understand the Construction Company/ industry.

CHAPTER ONE

INTRODUCTION

BACKGROUNDOFTHESTUDY

The construction industry in Nigeria came into prominence after the attainment of independencein1960andsincethentheindustryhaswitnessedalotofgrowthespecially inthe last rebuild thenations particularly thewar affected are brought construction of on Since there was so much to do then and the number of construction firms available were few many construction companies were hurriedly setup to construction projects. The construction industry is very important in the economic development of any nation especially in an expanding economic like Nigeria. Aibinu and jasboro (2002) affirmed that even through it contribute less than the manufacturing of often services; the sector has continued to occupy an important position in the structure of the Nigeria economy. The contribution improved efficiency in the industry by means improving the estimate andbudgetofaproject,thereforeeffortsyearstowardimprovingonestimateandbudget.

DESCRIPTIONWORK

The site for the proposed residential building has a total gross area of 620 square meters out of which approximately 180 square meter is used for the proposed building the elevation drawing reveal the total height of the building including walls to be approximately a meters high. Meanwhile all windows are made of aluminium pivoted slidingwindow jammed in aluminiumframe and the doors are purposely made tosuitthe building. Wiring is to be in full conduct while foundation is to be strip foundation

structurally strength is to be provided to the building (columns, slab limited etc.) with high reinforcement bar of 16, 12 and 1Ommn diameter size so as to enhance the stability of the building.

AIMOFTHE PROJECT

The aim of the study is to estimate and budget for a proposed four (4) bedroom duplexfor Dr. Muhammed Bashir Kolawole which is located at No. 25, Onilete quarters, Iwo, Osun state.

OBJECTIVESOFTHEPROJECT

1. Tounderstandbillpreparation
2. Todetermine theeffectof sitelocation.

SCOPEOFTHEPROJECT

The scope of the project is to prepare an un-priced bill of quantity for a proposed residential building.

LIMITATIONOFTHEPROJECT

Thedifficultiesencounteredintheprojectarea follow:

i. Unavailableofdetailedworking drawing
ii. Liabilitytocarryoutscientific analysis
iii. Difficultiesinacquiringsomeimportantplantsandmaterialrequiredforthe building project.

DEFINITIONSOFTERMS

Numbers of terms and register will be used in this project. These have different meaning to different people but the meaning that would be adopted for this terms and registers will be discussed as follows.

1. **BUDGIETING:**Thisisatargetedfinancialstatementdocumentofthelossofa proposed construction project.
2. **ESTIMATING:**Thisisaprocessbywhichroughorgeneralideaonthecostof an items work or project is been workout.
3. **PRIMECOST:Prime costisthe amountincludedinabillofquantitiesfor** Worktobe carriedoutbynominated sub-contractor.
4. **PROVISIONAL SUM:** Provisional sum is the stated in the bill of quantities for work which the extent is not known during the preparation of contract document, the sum will later be adjusted according to the extent and value of the work.
5. **CONTINGENCY SUM:** This is the sum allowed to cover unforeseen expenses. it is altered only with the consent of the architect or engineer.
6. **PRELIMINARY ITEM**: These are items that meant for smooth execution of a project and it is also a cost significant to a look in question in contain the list of temporaries work required for the smooth execution of the project.
7. **TENDER:** This is an offer to execute a given project at a certain amount of money and at a specify period of time.
8. **ABSTRACTSHEET:**Thisisatabulated sheetthatisusedincollectingsimilar

CHAPTERTWO

The proposed plot for the residential building has a total area of 620 square meters which appeared to be rectangular in plan shape after the placements of the bench mark try the Surveyor. It comprises many under growth bushes and needed to be cleared away from site

Howeveranaccess roadpasses bytoanadjacentbuildingdepartment,henceaccessibility is convenience.

Conclusivelythisproposed plot/siteislocatedatNo.25,Oniletequarters,Iwo,Osunstate.

CHARACERISTICSOF THESITELOCATION

The proposed site is characterized with the following features and identifies Location: The site located within the permanent site of located at No. 25, Onilete quarters, Iwo, Osun state.

Accessibility: The siteislocated atthebackofoff willspringschool.

NATUREOFLAND

The ground is assumed to be relatively firm ground water level Is well below the foundation French, so there is no need for special foundation.

AVAILABILITYPROMIXIMITYTORESOURCES

Availability of construction resources simply means the extent of convenience out which the resources can be located in the market or at the selling point. While proximity to resource means the closeness of the materials/resources to the proposed site land, the construction resources include the following:

PLANTS:

All necessary plant needed for this proposed is readily available here in osun Township Such plant include bulldogger, scraper, electric generator, concerto mixer, vibrator compacting machine etc.

MATERIALS:

The whole materials necessary for this project is much available here in Ilorin metropolis regardless the price to other part of the country (Lagos) where the cost of materials is relatively low in comparing with the material available in Osun township.

However, almost the material needed for smooth executive of this proposed project is a little bit remote from the site of work this substantial amount is to be set for the transportation of material which will eventually increase cost in general.

LABOUR:

Human resources that necessitate the smooth execution of this proposed project is which available here in osun Township especially the clerk of worker such as the trade men (all kind) and the labourers. Apparently they all have to be transported to the site on daily basisbutbetweena shortdistance havingcommencingon theproject, labourers andtrade men emanate to the site from all nearly villages for employment.

Purpose therefore availability and proximity of labours is of no problem to the smooth execution of the project.

EXTENTOFPRELIMINARIES REQUIREMENT

In general, preliminaries items are to be given consideration and provision for any proposed project since it is the items which are band to describe the requirement peculiar to job in question and they are cost significant in smooth execution of any project the preliminaries required of this proposed is as listed below:

1. Temporary Fencing: the contractor must allow for providing all necessary temporary fences, hoarding, staying, casting e.t.c. necessary to protest andintruder and also to resist the worker from making away with the materials belonging to the project.
2. Drawing: all drawing tracking. Photo prints ctc are the sole property of the architect and all drawings must be returned back to the architect on thecompletion of the work.

3. Electricity: allow for providing all temporary lighting and power for the work, payingfeesandcharges;clearingawayandmakinggoodgroundatcompletion.
4. Telephone:allowfortheprovisioninstallation,maintenancepaymentoffeesand charges for the use of telephones on site.
5. Records:allowforkeepingbooks,costthebooksaccountandothersdocument record as necessary.
6. WatchingandLighting: provisionof allnecessary guidesday andnight.
7. Supervision Offer: allowing for supervising officers such as the architect, engineering and including ant person acting in the intact of the client.
8. Protectionof Work:allow forprotect somespecial section ofwork throughout the whole project period so as to reduce damage.
9. First aid Box: the contractor must to provide on site and allow for provision of firstaid box soas totreat any ofhis workers or employees happened to be injured on the site.
10. Trespass and Damage: the contractor shall prevent any trespass on the adjoining owner's property.
11. Prime Sum: provision of allowance must be made for the sum of money meant to pay for works or services done by nominated sub-contractors of publiccorporation undertaking job.
12. Scaffolding: allowance must be made for providing scaffolding to support the v workers at the upper part of the building and provision for removal.

13. Provision Sum: the sum must be incorporated in the bill of quantity (BOQ) for certain type of work the extent cannot be determined not until it been executed.
14. Site Accommodation: provision of suitable water proof offices for workers and hoarding materials.
15. DamagedtoMain:thecontractorisresponsibleforanydamagetoallelectricityin water etc crossing or adjacent to the site.
16. Progress Photography: the contractor should provide a set of progress photography's each month throughout the duration of the work.
17. Coveringup Work:thecontractor mustgiveat leastseven clear days' noticetothe architects before covering work in foundation and in some other section of work so as to comply with the specification set

CHAPTERTHREE

METHODOLOGY

For any perfect preparation of Bill of Quantities (BOQ), the following processes are involved.

3.0TAKING-OFFPROCESS

Taking off quantities refers to the operation of reading or scaling off the dimension from drawingan enteringtheminarecognizedand acceptablemanner ondimensionpaper itis the first step in a preparation of bill of quantities. Before taking off operation can commence, it is practice to study the drawing carefully, raising quarries to obtain information not contained in the drawing.

Queries are usually addressed to the Architect or the engineer through a quarry sheet is shown below:

DELIGHTPARTNERSHIP REGISTEREDQUANTITYSURVEYOR	
Project	
Query	Reply

Where the drawing is of complex nature, it is preferable to use coloured pencil to distinguish walls of varying thickness.

It is important tonote the time spent in studying the drawing willbe compensated whenthe takingoff process iscommenced; thisistrue, sincethe picture ofthedrawing is within the take-off imagination.

When obtaining dimension from drawing figured dimension are to be preferred to scaling the dimension where possible as prints are not always true to scale. Plenty of space should be left between each item of measurement so that additional item can be slipped in between original item if it is subsequently found necessary again such space will make the work more readable and neat.

In recording each item in the taking-off sheet, it is convenient that the take-off in the following sequence.

In order to appreciate taking-off a lot better, a fuller explanation of the above are given below:

- Wastecalculation
- Dimension
- Description

WasteCalculation

Thiscanbewritteneitheraboveorbelowthedescription.Wastecalculationisnecessary in respect of all dimensions except in the following cases.

a. Whenasealedorfigureddimensioncanbetransferreddirectfromthedrawingtothe dimension paper.

b. Whenadimensionhasbeenderivedfromapreviouswaste dimension.

C.Whena dimensionhasbeencopied froma previousdimension.Expectfor the

above, the preliminary calculation should be set down carefully and accurately on the waste no matter how simple or trivial the calculation may seem, so that can be independently checked during squaring. This procedure often saves deals of trouble at a later stage when one is determine how certain dimension were obtained

			LENGTH 15. 500 5, 000 25.00 5, 000 15.50 25. 000

			WIDTH 10,000 5. 500 15, 500

Thewastecalculationaboveisconfinedtotheimaginarywastecolumnontherighthand- side of the description column

Dimension

After rounding-off to the nearest 10mm (Clause A 3.2) the result obtained from waste calculation are transferred to the dimension column in the above example, the figures to be transferred after rounding off are 25.00 and 15.50.

In the figuring down dimension, it is important to confirm to the length, width, dept rule laid down in clause A4.1 of SMM as shown:

	25.00 15.50		

So also, it is important that the figured dimension should represent the actualwork configuration, as this is an aid to the interpretation of the taking off by the worker up.

Description

Therearemanywaysofinsertingonthedimensionsheet,themostacceptablehowever, is a description which commerce on the same level with its first dimension.

Thelowestfigureinthewasteshouldbeatleastonelineabovethefirstinthedimension is not cramped with the waste calculation.

Theaboveexamplebelowshowhowthewastecalculations,thedimensionanddescription should be arranged in dimension paper.

			LENGTH 15, 500 5, 000 5, 000 25,000 10, 000 5,500 15, 500
	25.00 15.50		

Framingof Description

Inframinganitemdescriptiontobeinsertedinthedimensionsheetthetakeroffshould be guided by the following

a. Theinformationcontained inthe drawing
b. SMMRule
c. WhatobtaininPractice
d. Brevityand ambiguityofthe statement
e. Priceabilityofthestatement

THEARTINTAKINGOFF

Thebasisprocedureintakingoffoperationhasbeenhighlightedinthepreviussection, but it has the following issues unanswered.

a. Howtocancelwrongintonationduringtakingoff operation

b. Howtodemarcateanitemofmeasurementfromanother.

C.Whattodo ifdimension stringout-runadimension column.

d. Whattodoiftwo descriptionsapplytoadimensionorstringsofdimension

e. Howtoavoiddescriptionrepetition,andsoon,thesepointare brieflydescribed.

NILING

Niling is the method of cancelling wrong information during taking-off process. Nilling may be done in the three compartment of taking-off process i.e. on waste calculation on figured dimension (S`) and on figured description.

The answer to any waste calculation required deletion will haveword

NIL" written on it.

			1.805 3.417 3.457 8.670 1.805 3.417 3.459 8.679

DIMENSION

Individual or string dimension may be nilled following the standard convention for individual dimension, the world "NTL" is written in the squaring column opposite the lowest figure on the offending dimension.

String dimension requiring to be cancelled required arrows terminating in two horizontal lines. The word NiI" written between the two horizontal lines.

Theexamplesshowhowindividualandstringdimensionarenilled.

In The above example, the first, third and last dimension one still valid. At the squaring stage, these dimensions will be squared out in the space provided. It should be noted that the issue of squaring column for purpose of nilling prevent any accidental squaring of wrong dimension.

DESCRIPTION

Nillingdimensionassociatedwithadescriptionwithadescriptionnilliciesthedescription. When the dimension rate relates to two or more description connected by adding on: and only one of the descriptions is not required. The nilling is done by crossing with oblique line or by a wave line ending linseraphs, the method, or beside the lower seraph for the second method.

	3.60 3.00 4.50 3.60	50mmcementandsandsereed (1:4mix)andprepared andnil apply2coatemulsionpainton Nillasbestorceilingpoint nil.	

BRACKETING

The example given above introduced the concept of bracket and ending on. A bracket is used to demarcate one item measurements from another when"

a. Morethanone dimensionappliedtoadescription

b. Morethan onedescriptionapplied toadimension

In practice however, it has become the norms to bracket every item of measurement. From the given example, a bracket consist of a straight vertical line over ruling theprinted line dividing the description column from the squaring column, which terminateat two horizontal seraphs top and bottom of the measurement.

ANDINGON

In thelastexample,thedescriptionsappliedtothefigure dimensionalthoughone ofthem was eventually nilled.Thethree description were connected together bymeans of ampers and figure, thus and this method of connecting two or more description is known as adding on; it is used when description re related to a common dimension (S).

CHANGEOFCOLUMN

When the dimension strings outrun a dimension;the remaining dimension will be written inthenextdimensioncolumn.However the nextphrase ofthedescription isrepeatedand this is following by '.....as before described.

	3,40 5.47 4.50 3.60		200mm h/c filling		16.75 3.50		200mm h/cas Before Described

Also, when a new column is required for adding-on, the previous dimension figureddown afresh against the description remaining.

	3.60 3.00 4.50 3.60	50mmcementandsand creed (l:4mix)and12mm Cementandsandrendering (1:6nus)on horizontal soffit		3.60 3.00 4.50 3.60	Prepareand apply2coatsof Emulsiononas bestisceiling Soffits

Notice: the method of bracketing in the method, the first example and indicate that the dimension is continued to the next column.

DEDUCTION

Deduction technique is very important in the art of measurement it is a method of subtracting excess of qualities in a measured item during working up. When on item requiresitsqualitiestoreduced,theworddeductshouldcommencethedescription.When the deduction description is below the measured item the word "Deduct Ditto" is sufficient. When it is on a fresh column, the word ‘deduct’ is followed by the first phrase of the description, and followed by "....."as before described.

	26.00 16.00 S.00 2.00 3.55 0.50 8.05		Fabricmeshreinforcementlaid flat with no allowance for laps -Ddtditto

WORKINVOLVED INTAKINGOFF

On receiving the drawing from the Architect it is not advisable to commence on taking-off immediately. The surveyor should start certain preliminaries work which include.

- It is advisable to colour some points of the drawing to clarify construction or the whole if not coloured.
- Thedrawingshouldbecarefullystudiesforcertainperiodof time.
- Visitation to the site is more advantageous for the taker-off, so as to ascertain site conditions, it clears up uncertainty point and quite usually create new ones which is to be solved.

ORDEROFTAKING-OFF

The order of taking-off a list of work giving, it should be understood, however, that the number of work to be measured will depend on the type of structure. So that some work will be added or omitted order of taking-off includes;

- Worksectionorder
- Elementorder
- Operational
- Tradeorder

FINALPOINTONTAKING-OFF

To produce a good billof quantity, the taker-off should at the commencement and during the process of taking-off consider, the following crucial point;

- Contractheading
- Additionalnote on drawing
- Numbering
- SignPost
- QueryLest
- ReferencetoDrawing

ABSTRACTINGPROCESS

After the squaring process, the next process is abstracting. This is entered in a specially ruled sheet. The sheet is ruled with series of vertical lines that are space about 25mmapart and one usually of A3 size in width. Each abstract sheet is headed with the job

reference, sheet number and work section, and possible the subsection of the work to which the abstracted dimension refer. The abstract sheet may be divided into worksection or element. Following the manner adopted in the standard method ofmeasurement and the format the final bill of quantities will take.

The items are well spaced in theabstract sheet and should beentered in thesame order as they appear in the Bill of Quantities.

Description are usually spread are two columns. The dimensions are entered in the left hand column, which any deductions are entered on the right hand column. The total quantity of each items arc reduced to its recognized unit of measurement.

It is a good practice to prefix the abstract sheet with C,S.L or No, denoting the items as cubic, super, linear or enumerated. The reduce risk of error arising with regard to unit or quantities.

The order of abstracting is to commence with cubic, item, followed by supper, Incur and finally enumerated items. Also labour items should proceed labour and materials, smaller items proceeding larger ones and cheaper items proceeding the more expensive items. Notehowdeductiononetransferredtobetherighthandcolumnandthefinalreductionof the quantity.

BILLOFQUANTITIES

Bill of Quantities which contains a complete analysis of labour, materials and plant required, contained, outlined and depicted in the Architect's drawing and accurately

representingthework tobeexecuted,anobtainingthecost ofaproject before itiserected.

THEPURPOSEOFABILLOFQUANTITIES

Thesupplyeachcontractorwithinformationwhichwillenabledhimtotenderonthe same basis as his competitors.

- Toprovidea detailedlistofeveryservice tobe performed.
- Todescribeinadditiontoanydescriptioninthespecificationthequantityofthe work and the method of carrying it out.
- Tobecomeacontractor documentwhichwill:
- Beusedextensivelythroughoutthebuildingoperationforthecompilationof interim valuation, certificate and the final account
- Serveasaschedule onwhichallvariationinthe workmaybe valued.
- Preventdisputeastowhatisand thatisnotincludedinthecontractprice, and the value for any work or labour which has been omitted.
- It can be used for the furtherance of cost investigation and cost planning information.

Theadvantagesofabillofquantitieshardlyneeded tobeemphasizedandwithoutitnone of the essential services (listed 1-5 above) in relation to building contract can be carried out effectively.

COMPOSITIONANDPREPARATIONOFBILLOF QUANTITIES

Fortheproductionofa goodbillofquantitiesthe followingessentialpartmustbe noted,

1. Asubstantialknowledgeofbuildingconstructionandserviceisabsolutelynecessaryfor

without this, the interpretation of the drawing would be impossible.

2. Accuracyinmeasuringwhichalsoinclude neatness insetting out.

3. Athoroughknowledgeofwritingdescriptioninconciseandlucidterms,thereby

translating the drawing in to words.

STAGESOFBILLOFQUANTITIES

Thereare four districtstagesinthepreparationofa billof quantities

- Takingoff
- Squaring
- Abstractingworkingup
- Bill

Conclusively, to produce a standard and acceptable bill of quantities all the above discussion in the chapter mustbecarefullydealtwith.However,inthecourseof thisstudytheworksectionorder wasadoptedwhilethe bill was prepared in an element format. The reason is that it is the best order for pricing and making enquiries. Also it is suitable in the cost analysis purpose and post contract management lastly, is the best understanding off the taker-off.

PROPOSED

FOUR (4) BEDROOM DUPLEX

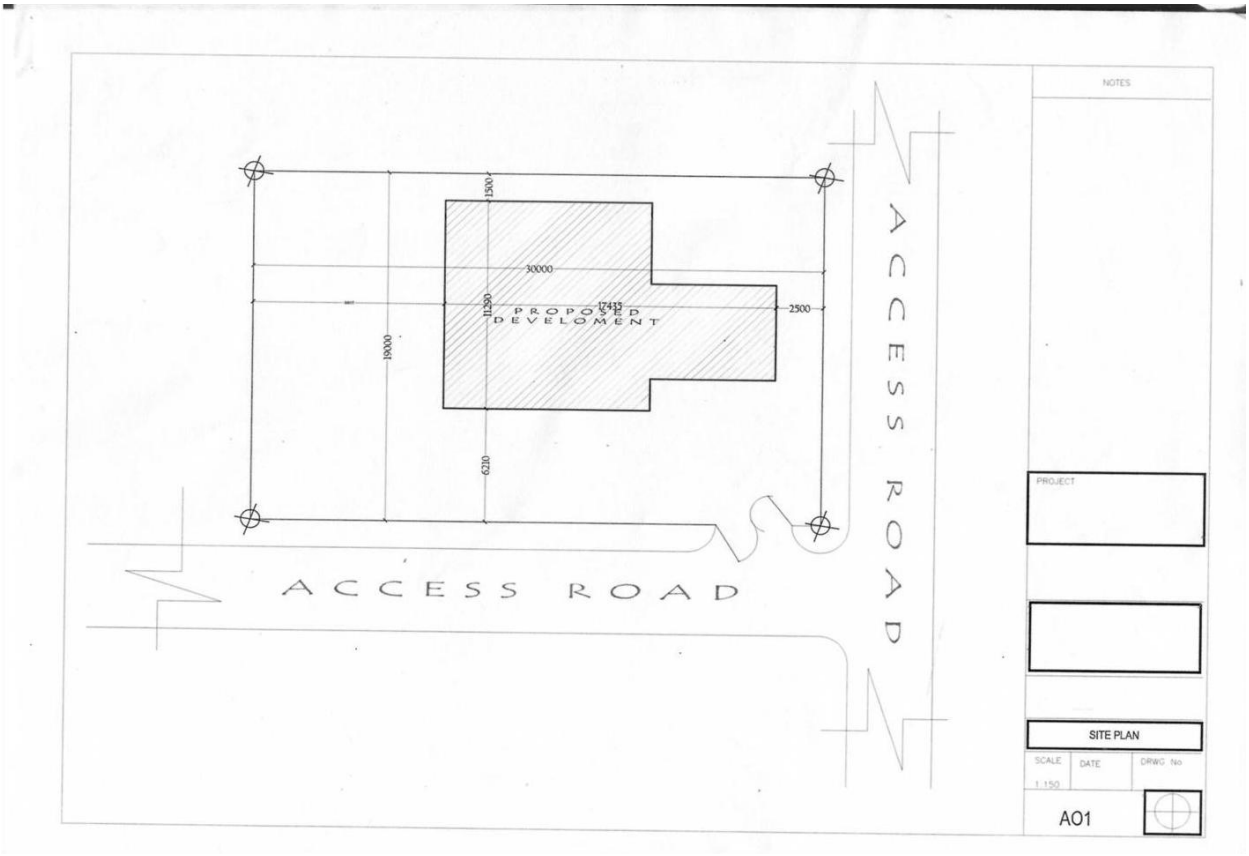
FOR

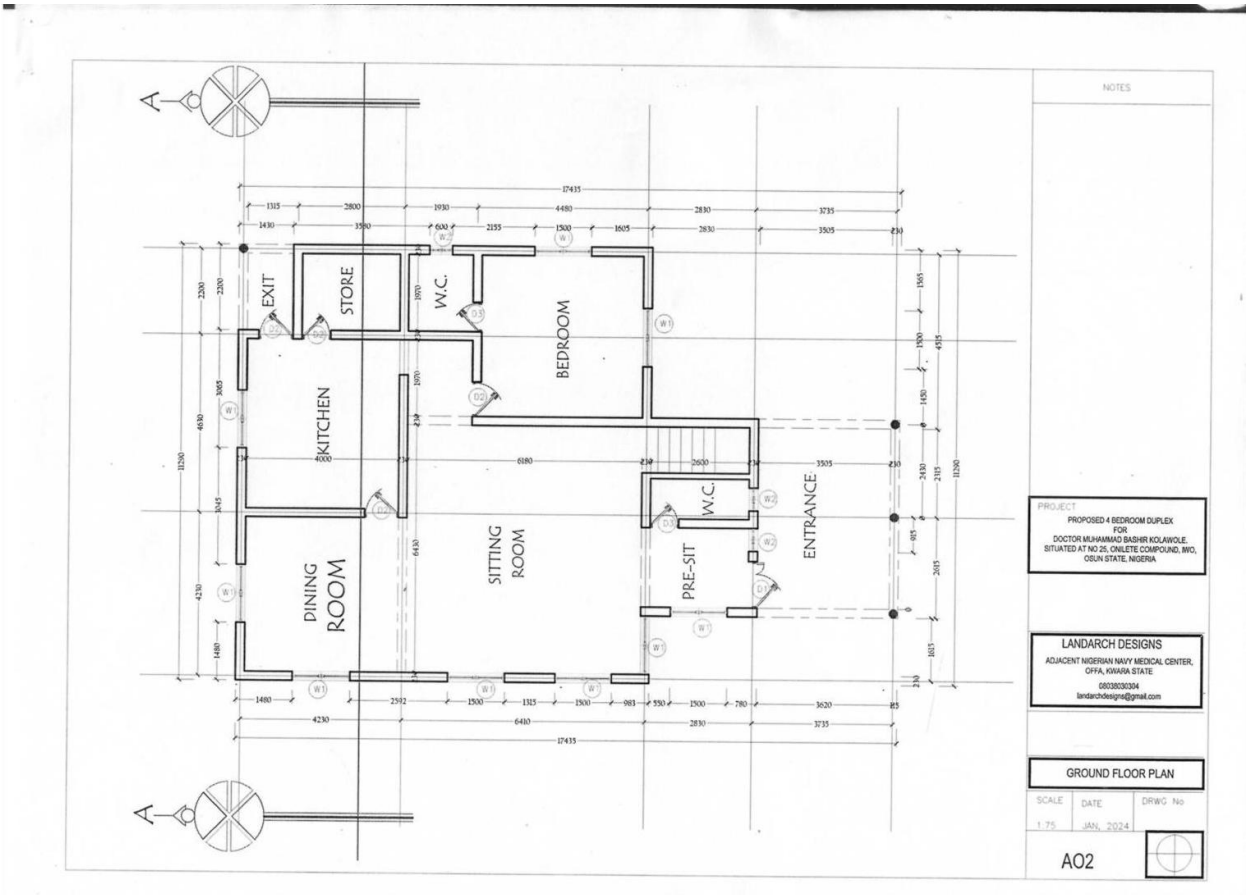
MUHAMMAD BASHIR KOLAWOLE

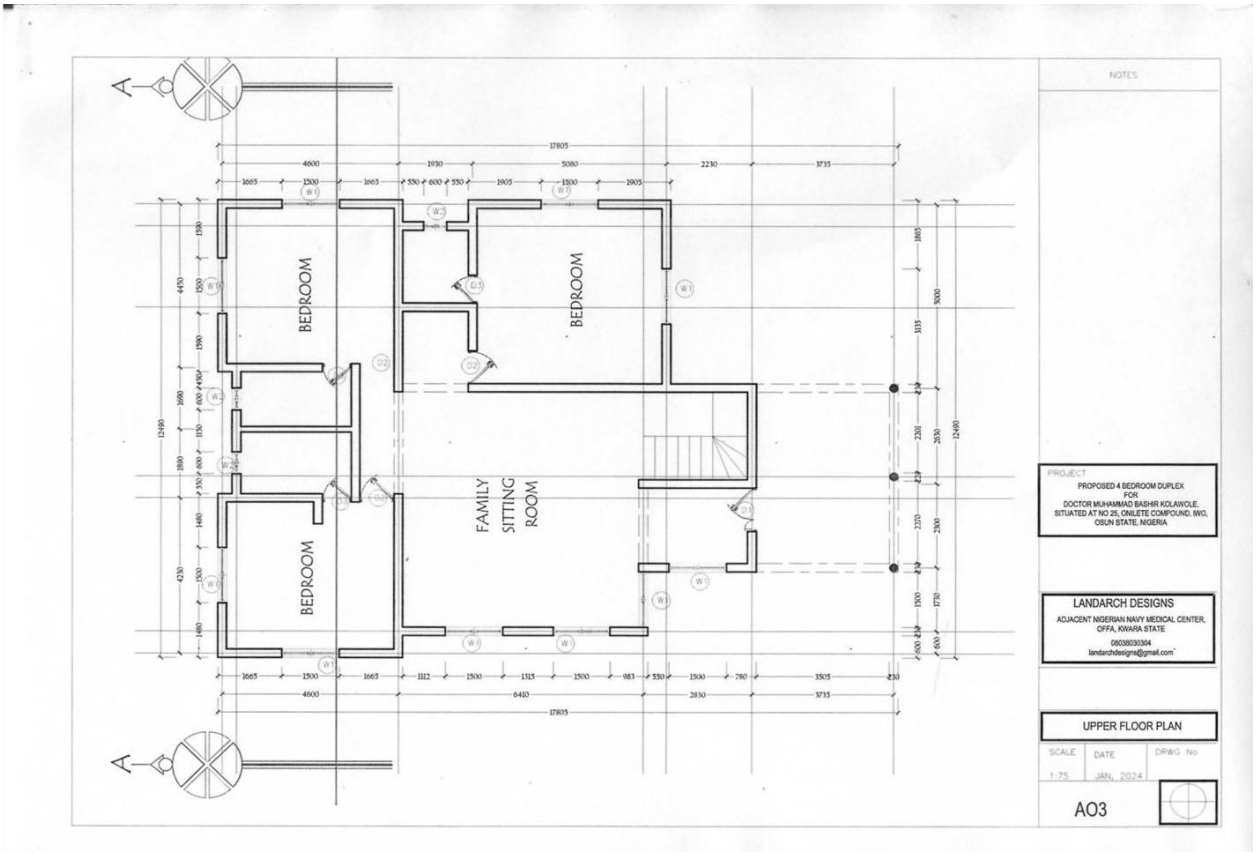
NO 25, ONILETE COMPOUND, IWO.
OSUN STATE, NIGERIA

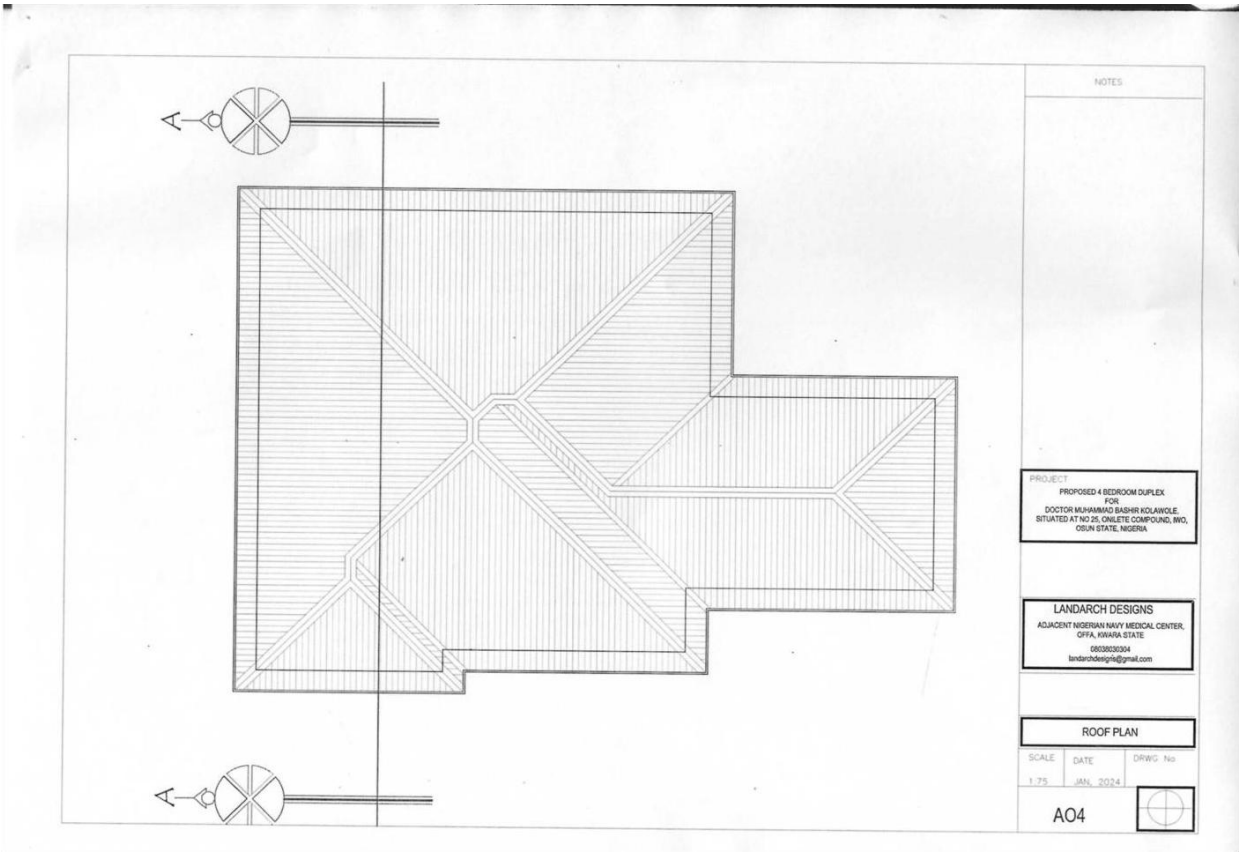
JANUARY, 2024

PRODOUCED BY
LANDARCH DESIGNS
ADJACENT NIGERIAN NAVY MEDICAL
CENTER, OFFA. KWARA STATE
08038030304
landarchdesigns@gmail.com


NOTES
1500
30000
11250
17433
PROPOSED
DEVELOMENT
2500
19000
6210
ACCESS ROAD
ACCESS ROAD
PROJECT
SITE PLAN
SCALE
1:150
DATE
DRWG No
A01


NOTES
EXIT
STORE
W.C.
BEDROOM
KITCHEN
DINING ROOM
SITTING ROOM
PRE-SIT
W.C.
ENTRANCE
PROJECT
PROPOSED 4 BEDROOM DUPLEX
FOR
DOCTOR MUHAMMAD BASHIR KOLAWOLE.
SITUATED AT NO 25, ONILETE COMPOUND, IWO,
OSUN STATE, NIGERIA
LANDARCH DESIGNS
ADJACENT NIGERIAN NAVY MEDICAL CENTER,
OFFA, KWARA STATE
08038030304
landarchdesigns@gmail.com
GROUND FLOOR PLAN
SCALE
1:75
DATE
JAN, 2024
DRWG No
A02


BEDROOM
BEDROOM
BEDROOM
FAMILY SITTING ROOM
NOTES
PROJECT
PROPOSED 4 BEDROOM DUPLEX
FOR
DOCTOR MUHAMMAD BASHIR KOLAWOLE.
SITUATED AT NO 25, ONILETE COMPOUND, IWO,
OSUN STATE, NIGERIA
LANDARCH DESIGNS
ADJACENT NIGERIAN NAVY MEDICAL CENTER,
OFFA, KWARA STATE
08038030304
landarchdesigns@gmail.com
UPPER FLOOR PLAN
SCALE
1:75
DATE
JAN, 2024
DRWG No
AO3


A
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NOTES
PROJECT
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DOCTOR MUHAMMAD BASHIR KOLAWOLE.
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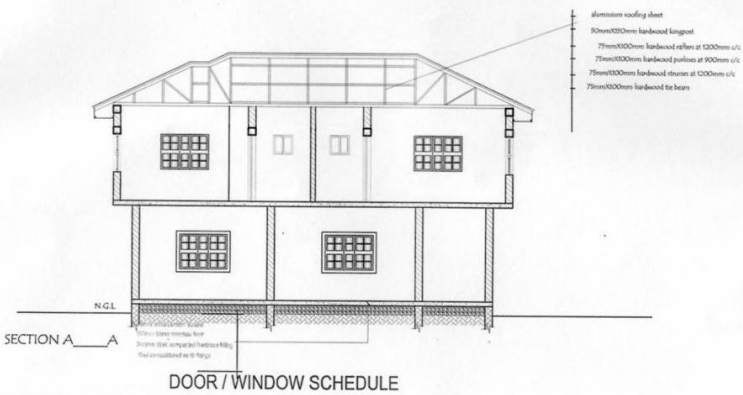
OSUN STATE, NIGERIA
LANDARCH DESIGNS
ADJACENT NIGERIAN NAVY MEDICAL CENTER,
OFFA, KWARA STATE
08038030304
landarchdesigns@gmail.com
ROOF PLAN
SCALE
1:75
DATE
JAN, 2024
DRWG No
A04



SECTION A____A

DOOR / WINDOW SCHEDULE

Profile					
Symbol	D1	D2	D3	W1	W2
No Required	2	7	5	19	6
Descriptions	well designed iron steel door fixed to manufacturer's details	well designed iron steel door fixed to manufacturer's details	well designed iron steel door fixed to manufacturer's details	aluminium sliding windows fixed to manufacturer's details	

NOTES

PROJECT
PROPOSED 4 BEDROOM DUPLEX
FOR
DOCTOR MUHAMMAD BASHIR KOLAWOLE.
SITUATED AT NO 26, OMLETE COMPOUND, IWO,
OSUN STATE, NIGERIA

LANDARCH DESIGNS
ADJACENT NIGERIAN NAVY MEDICAL CENTER,
OFFA, KWARA STATE
08038030304
landarchdesigns@gmail.com

SECTION & SCHEDULE

SCALE	DATE	DRWG No
NTS	JAN, 2024	

AO5

NOTES

PROJECT
PROPOSED 4 BEDROOM DUPLEX
FOR
DOCTOR MUHAMMAD BASHIR KOLAWOLE,
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OSUN STATE, NIGERIA

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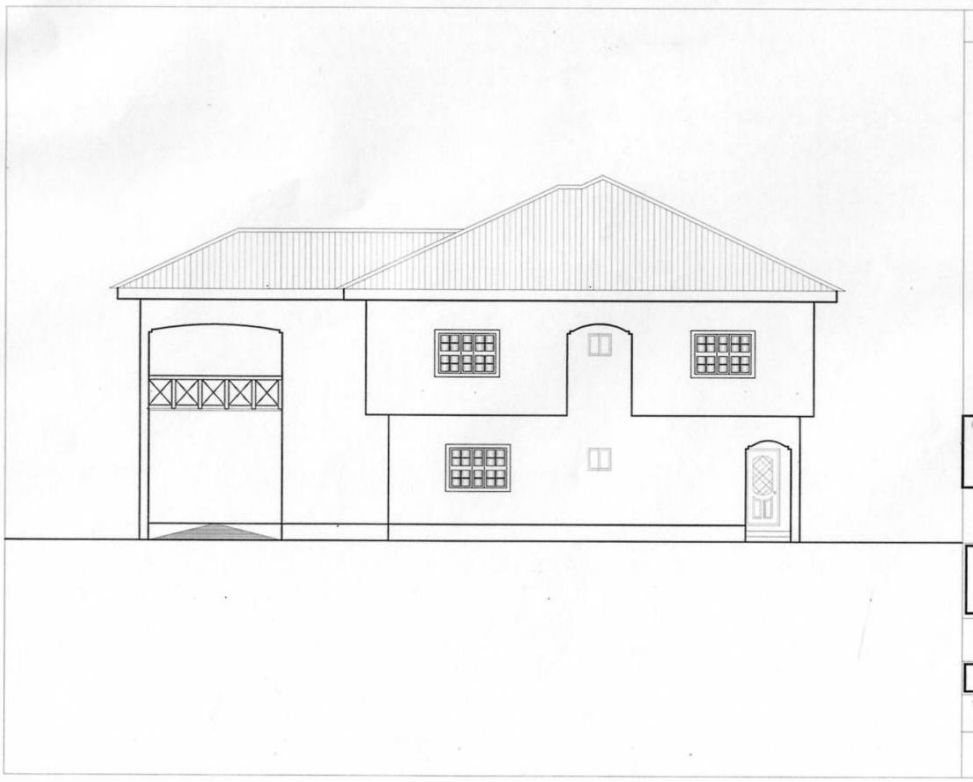
ADJACENT NIGERIAN NAVY MEDICAL CENTER,
OFFA, KWARA STATE
08038030304
landarchdesigns@gmail.com

FRONT VIEW

SCALE	DATE	DRWG No
1:50	JAN, 2024	

AO6



NOTES

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ADJACENT NIGERIAN NAVY MEDICAL CENTER,
OFFA, KWARA STATE
08038030304
landarchdesigns@gmail.com

SIDE VIEW

SCALE	DATE	DRWG No
1:75	JAN, 2024	

A07

NOTES

PROJECT
PROPOSED 4 BEDROOM DUPLEX
FOR
DOCTOR MUHAMMAD BASHIR KOLAWOLE,
SITUATED AT NO 25, ONILETE COMPOUND, IWO,
OSUN STATE, NIGERIA

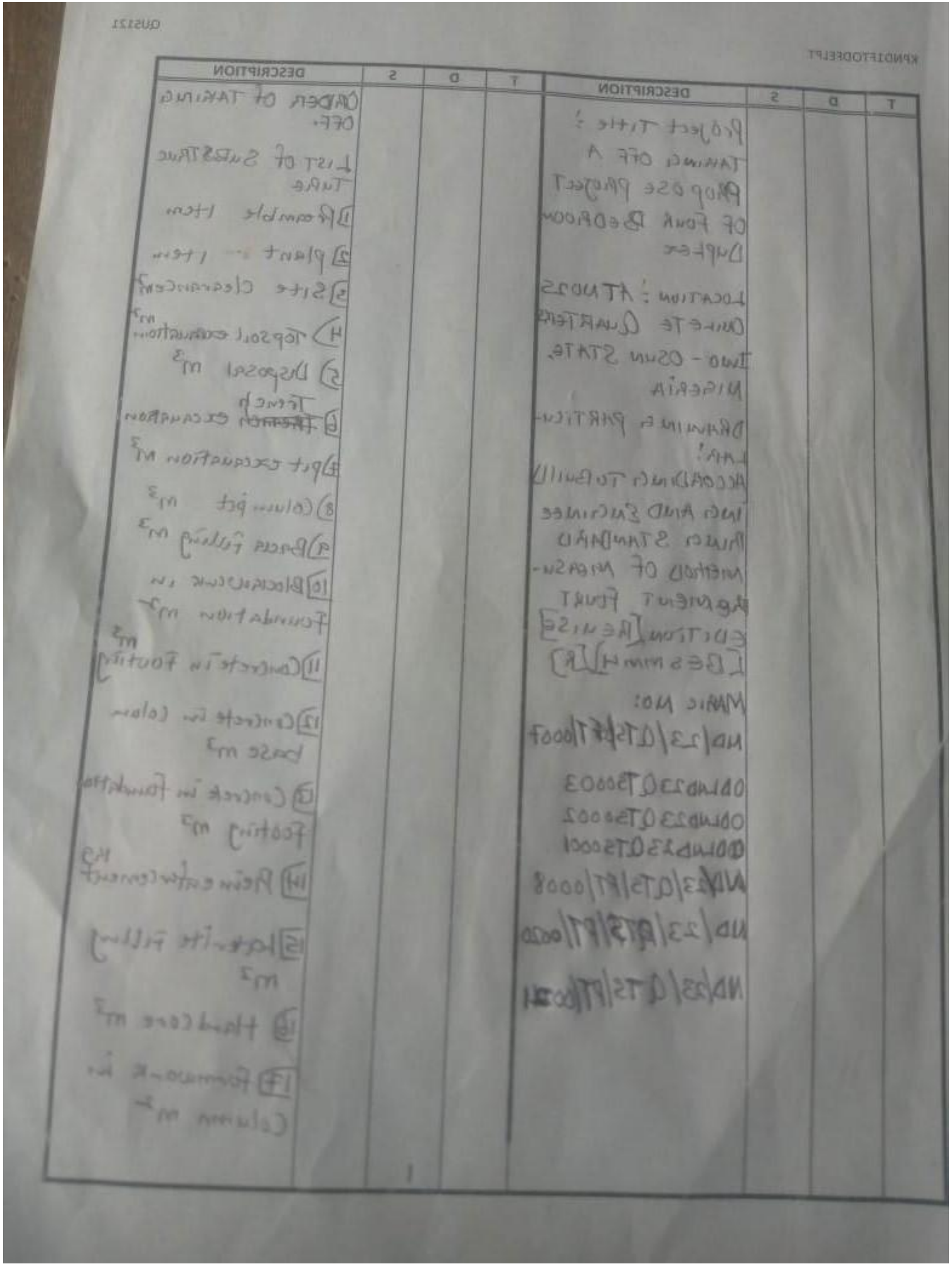
LANDARCH DESIGNS
ADJACENT NIGERIAN NAVY MEDICAL CENTER,
OFFA, KWARA STATE
08038030304
landarchdesigns@gmail.com

BACK VIEW

SCALE	DATE	DRWG No
1:50	JAN, 2024	

A08


NOTES
PROJECT
HAJIYA ZAINAB JIBRIL
SITUATED AT
OSUN STATE, NIGERIA
KADUNA
SIDE VIEW
SCALE
DATE
DRWG No
1:75
AO9

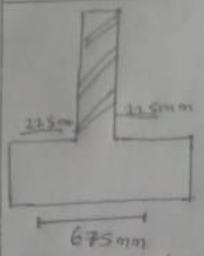

DESCRIPTION S D T
Project Title: Taking off a propose project of four bedroom duplex
Location: ATU025 Owode Quarters Iwo - Osun State, Nigeria
Drawing particular: According to building and engineering standard method of measurement fourth edition [Revised] [BESMM4 (R)]
Matric No:
Order of taking off.
List of substructure
1) Preamble item
2) Plant item
3) Site clearance m2
4) Topsoil excavation m2
5) Disposal m3
6) Trench excavation m3
7) Pit excavation m3
8) Column pit m3
9) Back filling m3
10) Blockwork in foundation m2
11) Concrete in footing m3
12) Concrete in column base m3
13) Concrete in foundation footing m3
14) Reinforcement kg
15) Laterite filling m3
16) Hardcore m3
17) Formwork in column m2

KPND1FTODFELPT

T	D	S	DESCRIPTION	T	D	S	DESCRIPTION
			18 Formwork to edges of Oversite m				Preamble
			19 Earthwork Support m²		Item		
			20 Surface Treatment m²				Plant
			21 DAMPproofing membrane m²				Allow for bringing Site all plant require and subsequently removal of plants from site for all Section of work
			22 B.R.C fabric mesh m²		Item		
			23 Oversite Concretem m³				
			1-1 FINISHING m²				Site clearance m²
			1·1 External rendering				30,000 mm, 15,000 mm
			1·2 Decorating				L 30000 W 15,000
			1·3 External painting		30.00		CL-site of bushes and
					15.00	4560.0	trees strip grass up their root
							[1·5 ! 4·1-0]
							450.00m²
				2			

OUS121

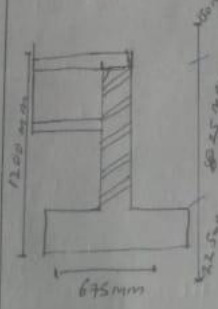
KPND1FTODFEUFT

T	D	S	DESCRIPTION
			Top soil Excavation m²
			
			Fdn width = 675
			less
			L 17.435 W 11,290
			Add Spread 2/225 450 450 17,885 11,740
17.89			Excavate veg top soil
11.74		210.27	dp 150mm thick and dispose of site
			[1.5.200]
			210.27 m²
			Disposal m³
			Disposal of excavate material 150mm dp. P soil avg. dp n.e 200mm non horizontal material maze

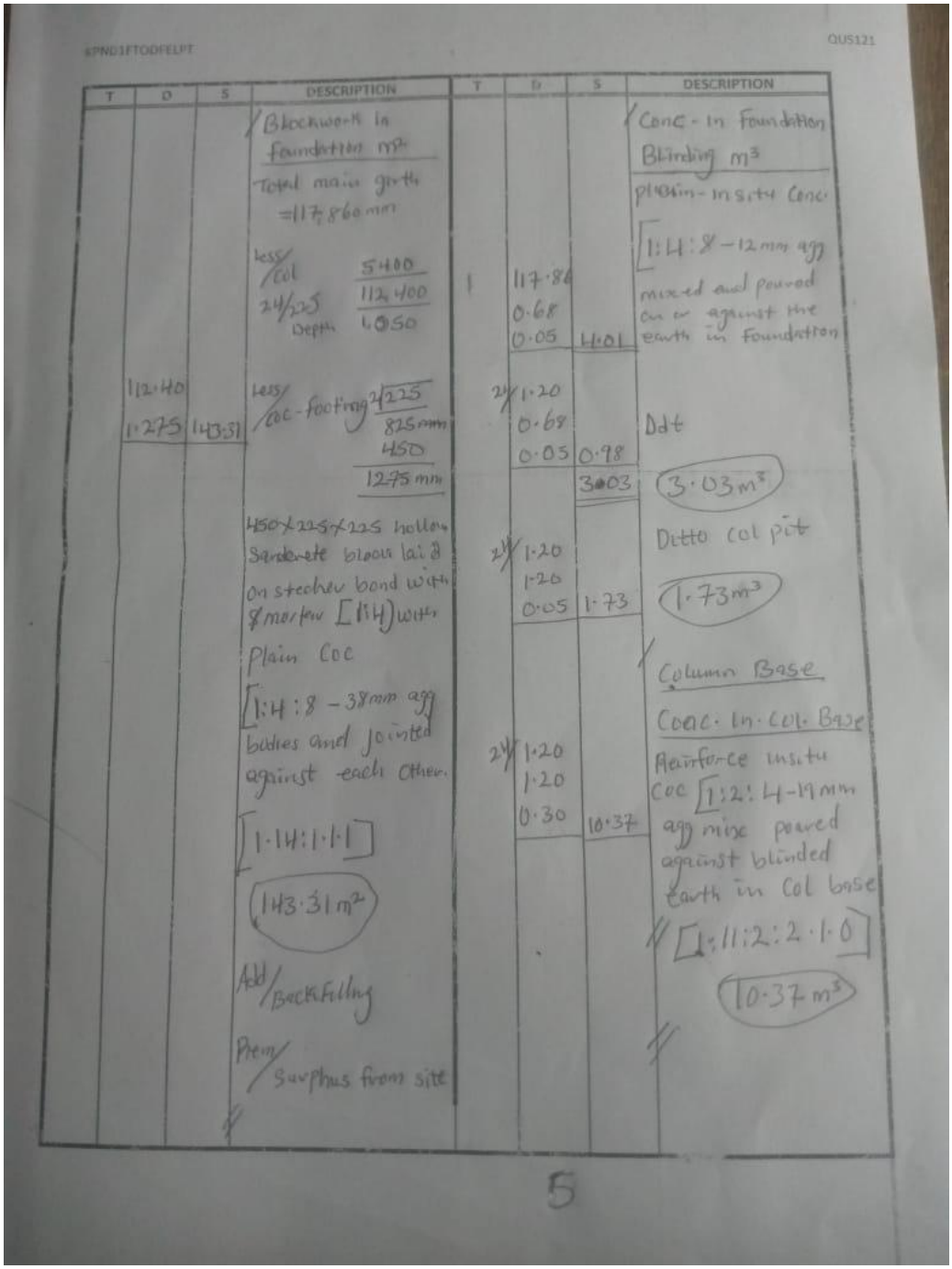
T	D	S	DESCRIPTION
	17.89		distance 150mm away from site
	11.74		[1.5.7.31.0]
	0.15	31.50	31.50 m³
			Trench Excavation m³
			main girth
			L = 17.435
			W = 11,290
			2/28725
			57,450 mm
			less Cover
			4/2/1/2/225 900
			56,550mm
			Internal girth
			Horizontal
			6,180
			4,250
			2570
			2/1700
			2/4000
			3/2600 = 32,200
			Vertical
			6H30 4,050
			H.170
			3/1970
			H.400
			4000
			2155
			L.155 = 29230mm

3

KPND1FTODFELPT QUS121

T	D	S	DESCRIPTION
			Total external girth Horizontal = 32,200 Vertical = 29,230 Total internal = 66,430mm External girth = 56550m Internal girth = 66,430mm Total main girth 177860mm
			
			Less Topsoil 1200 / 150 / 1,050mm
			Excavat of fdn trench 1.2m dp starting from strip level max depth 2m dp ctr way site
117.86			
0.68			
1.05	12.75		[1.5 : 6 . 1 . 0]
			Add Backfilling
			Item Surplus from Site
24 1.20			
0.60			Dit
1.05	20.56		column Pit
	7.81		(7.81m²)

T	D	S	DESCRIPTION
			Pit excavation m³
			
			Ne reduce from the structural drawing = 2 Hdr
			depth = 1500
			Less Top Soil 150
			1350 mm
24 1.20			Excavate fdn pit (width) 0.30m - max
1.20			depth 1.00m Commencing
1.35	46.66		from Site level
			[1.5.6.1.1.0]
			Add Backfilling 9.b.d
			Item Surplus from site (46.66m³)
4			

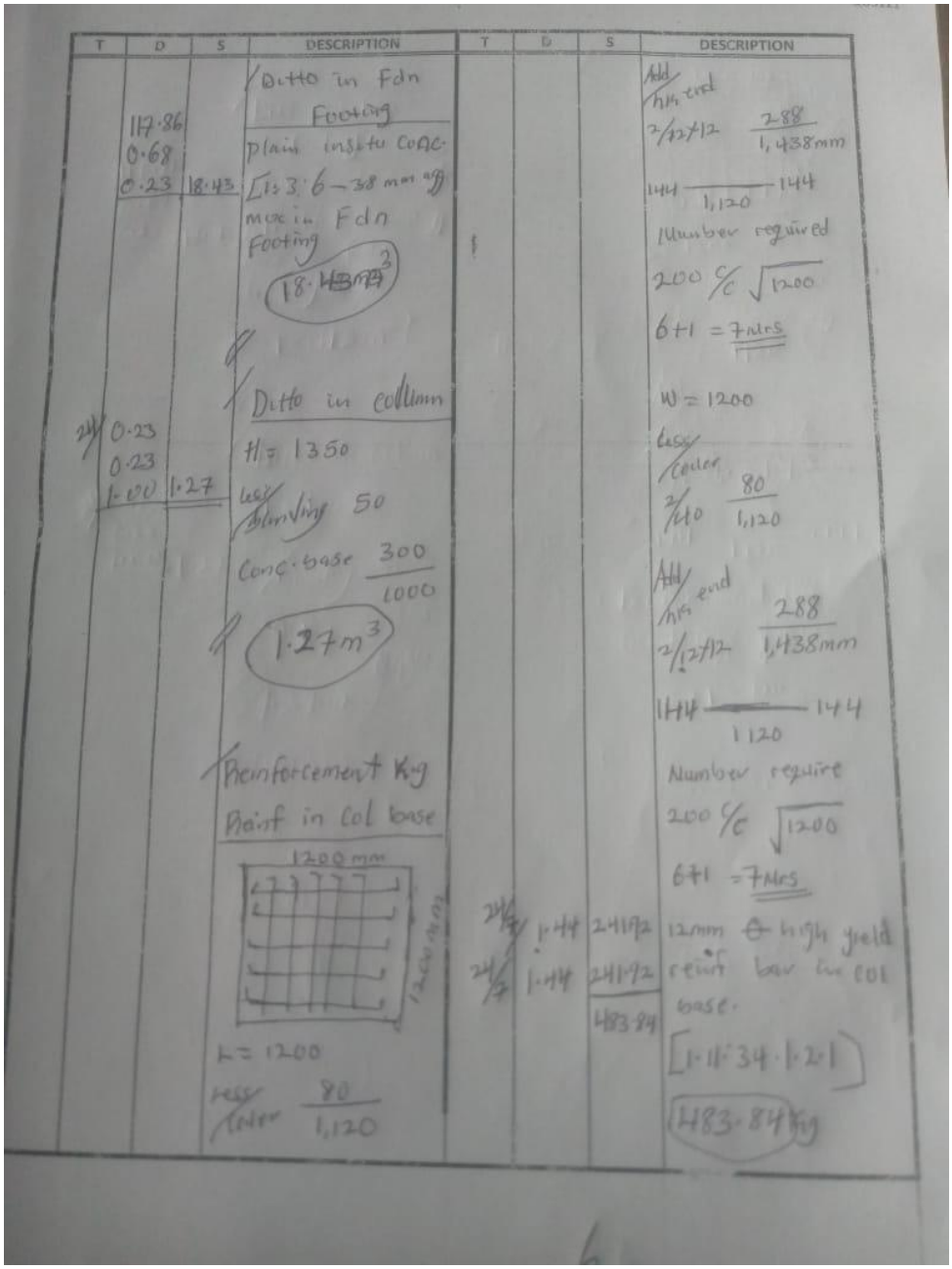


6PND1FTODFELPT QUS121

T	D	S	DESCRIPTION
			Blockwork in Foundation m³
			Total main girth = 117.86 m
			less Col 5.400
			24/225 112.400
			Depth 4.950
	112.40		less Coc-footing 24/225
			825 mm
			450
	1.275	143.31	1275 mm
			450×225×225 hollow Sandcrete blocks laid on stretcher bond with & mortar [1:4] with Plain Coc [1:4:8 – 38mm agg bodies and jointed against each other. [1:14:1:1]
			143.31 m²
			Add/Backfilling
			Prem/Surplus from site

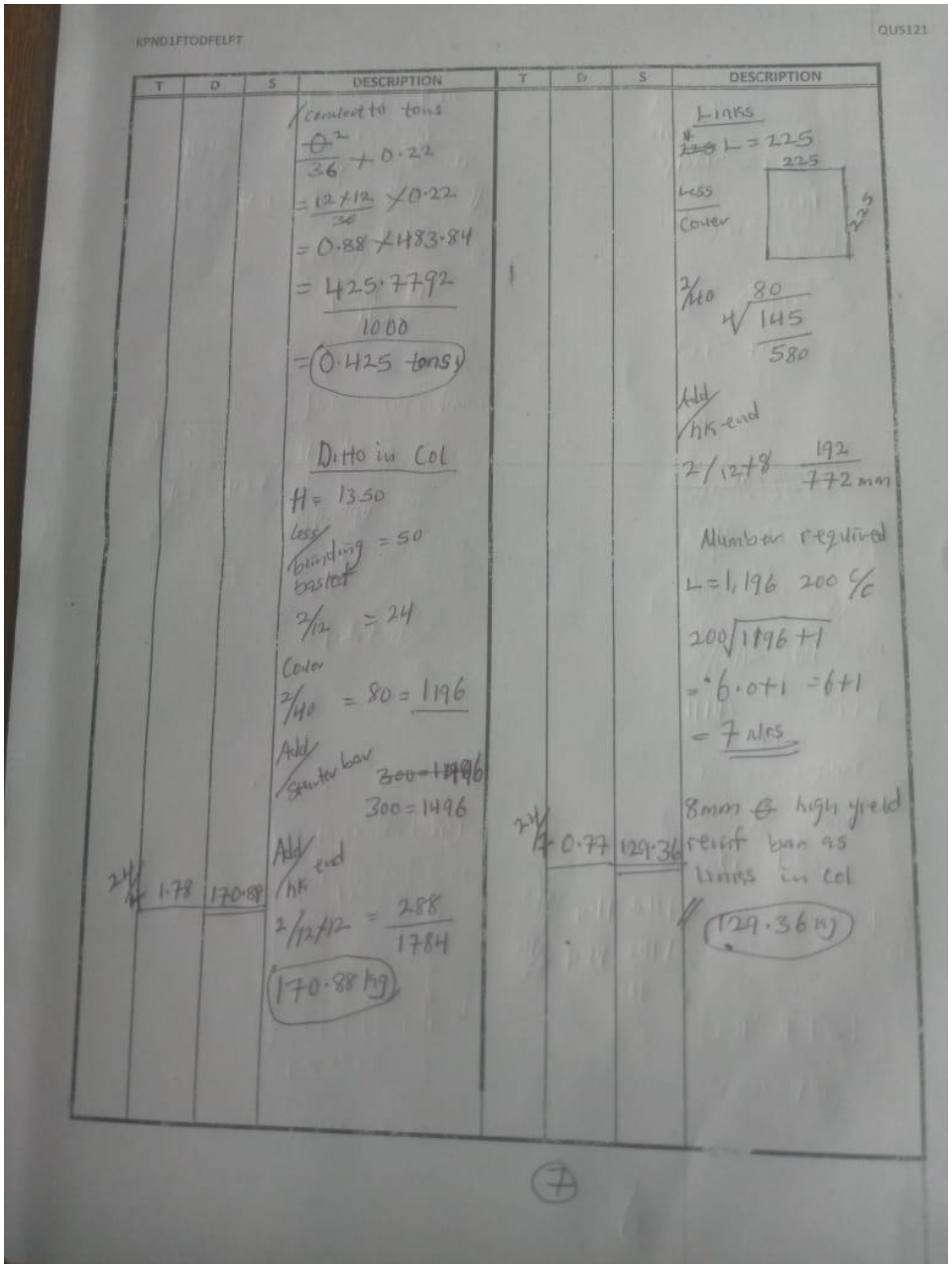
T	D	S	DESCRIPTION
			Conc-in Foundation Blinding m³
			plain-in situ Conc. [1:4:8 – 12mm agg mixed and poured on or against the earth in Foundation
1	117.86		
	0.68		
	0.05	4.01	
24	1.20		
	0.68		Ddt
	0.05	0.98	
		3.03	3.03 m³
24	1.20		Ditto col pit
	1.20		
	0.05	1.73	1.73 m³
			Column Base
			Conc. in Col. Base
24	1.20		Reinforce insitu
	1.20		Coc [1:2:4-19mm
	0.30	10.37	agg mix poured against blinded earth in Col base
			[1:11:2:2·1·0]
			10.37 m³

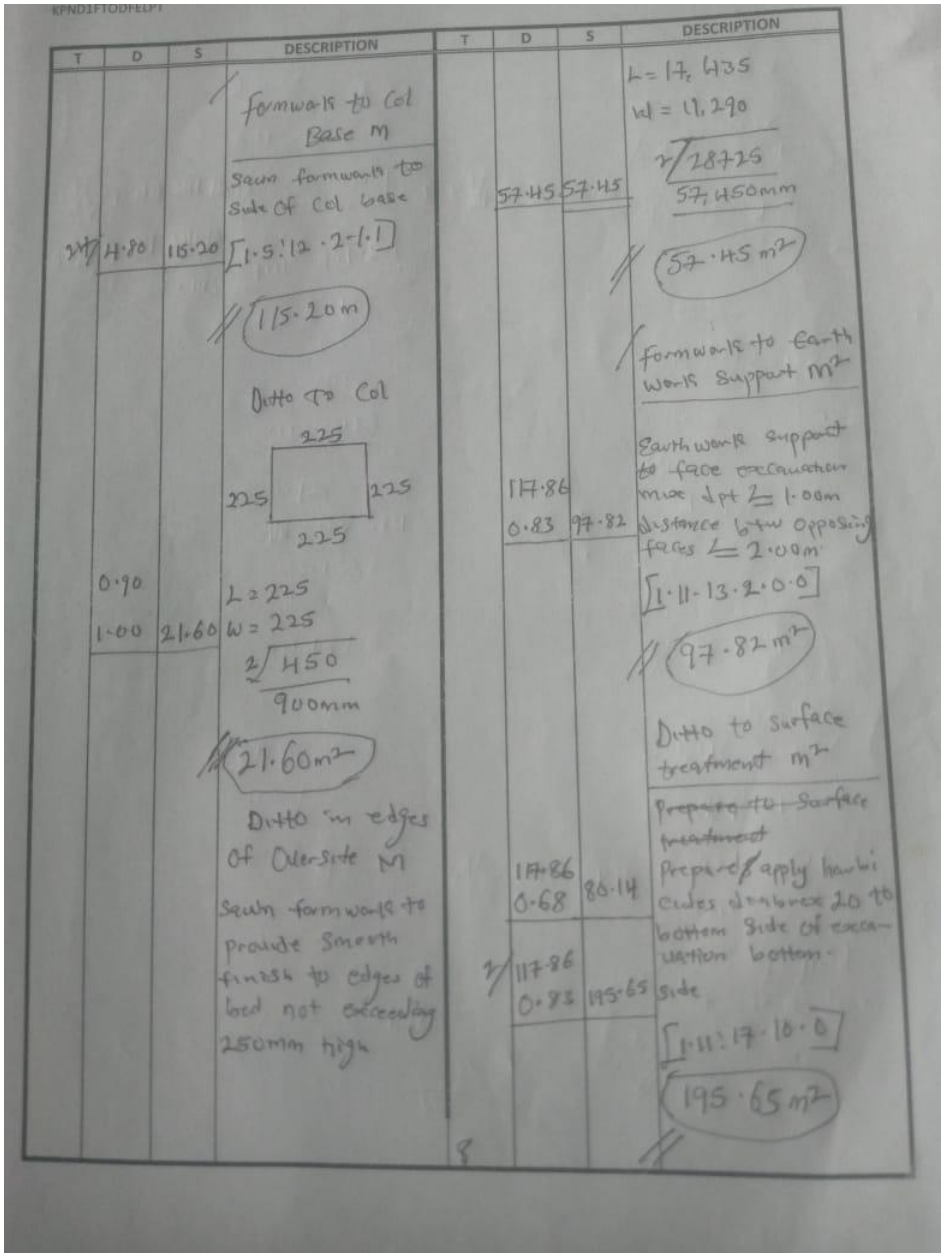
5



T	D	S	DESCRIPTION
			Ditto in Fdn
			Footing
	117·86		Plain insitu Conc.
	0·68		
	0·23	18·43	L = 3·6 − 38 mm aff
			max in Fdn
			Footing
			18·43 m³
			Ditto in column
24	0·23		H = 1350
	0·23		
	1·00	1·27	less blinding 50
			Conc. base 300/1000
			1·27 m³
			Reinforcement Kg
			Reinf in Col base
			1200 mm
			L = 1200
			less Cover 80/1,120

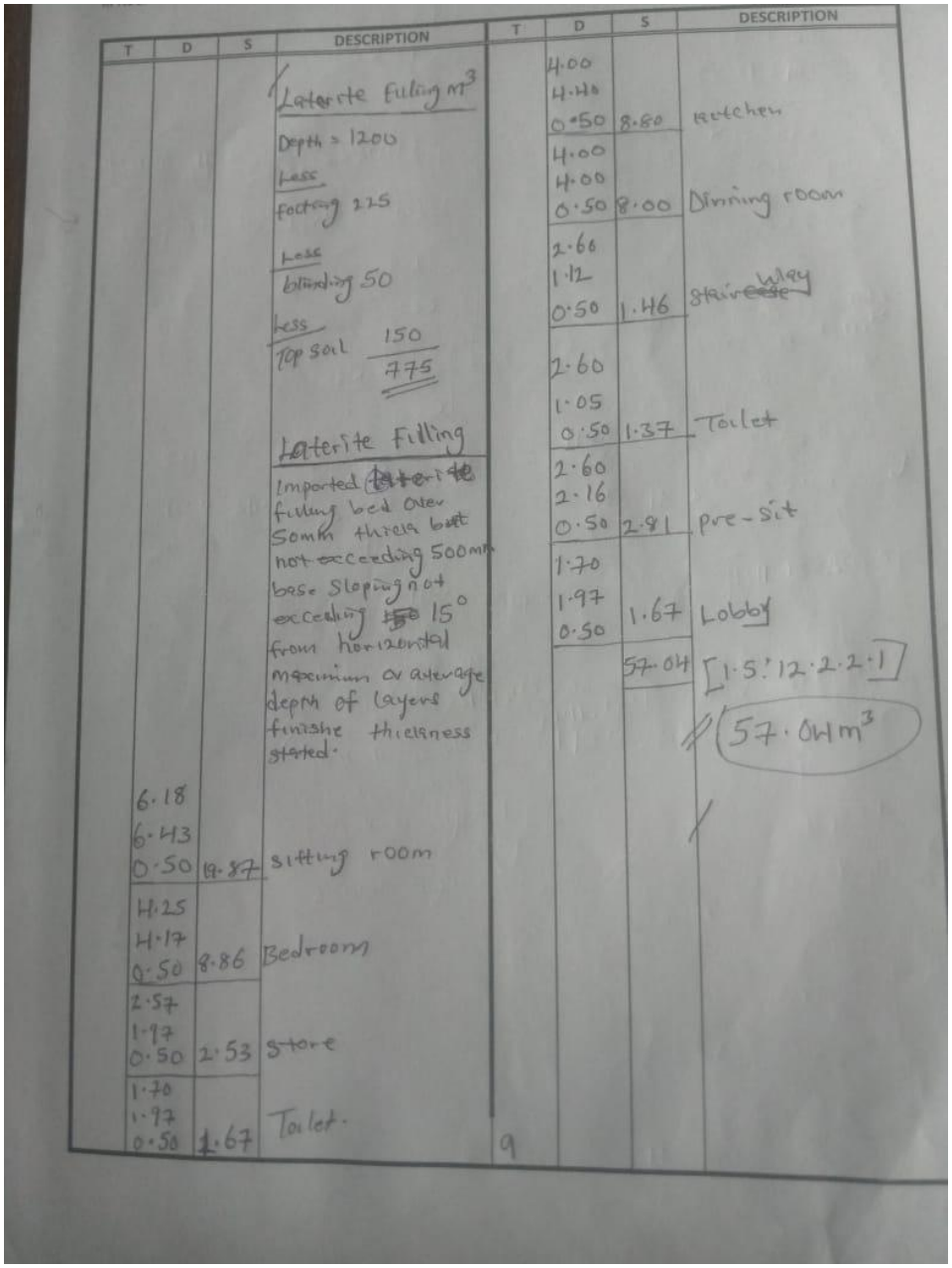
T	D	S	DESCRIPTION
			Add hks end
			2/12×12 288/1,438mm
			144 — 144 / 1,120
			Number required
			200 c/c √1200
			6+1 = 7 Nos
			W = 1200
			less Cover 2/40 80/1,120
			Add hks end 2/12×12 288/1,438mm
			144 — 144 / 1120
			Number require
			200 c/c √1200
			6+1 = 7 Nos
24	1·44	24·72	12mm Θ high yield
24	1·44	24·72	reinf bar in col
		483·84	base.
			[1·11·34·1·21]
			483·84 kg


KPND1FTODFELPT
QUS121
T
D
S
DESCRIPTION
Convert to tons
0.22
Ditto in Col
H = 13.50
Less Blinding = 50
Cover
Add Starter bar
Add hk end
170.88 kg
Links
L = 225
Less Cover
Add hk end
Number required
L = 1,196 200 c/c
8mm ϕ high yield
reinf bar as
links in col
129.36 kg



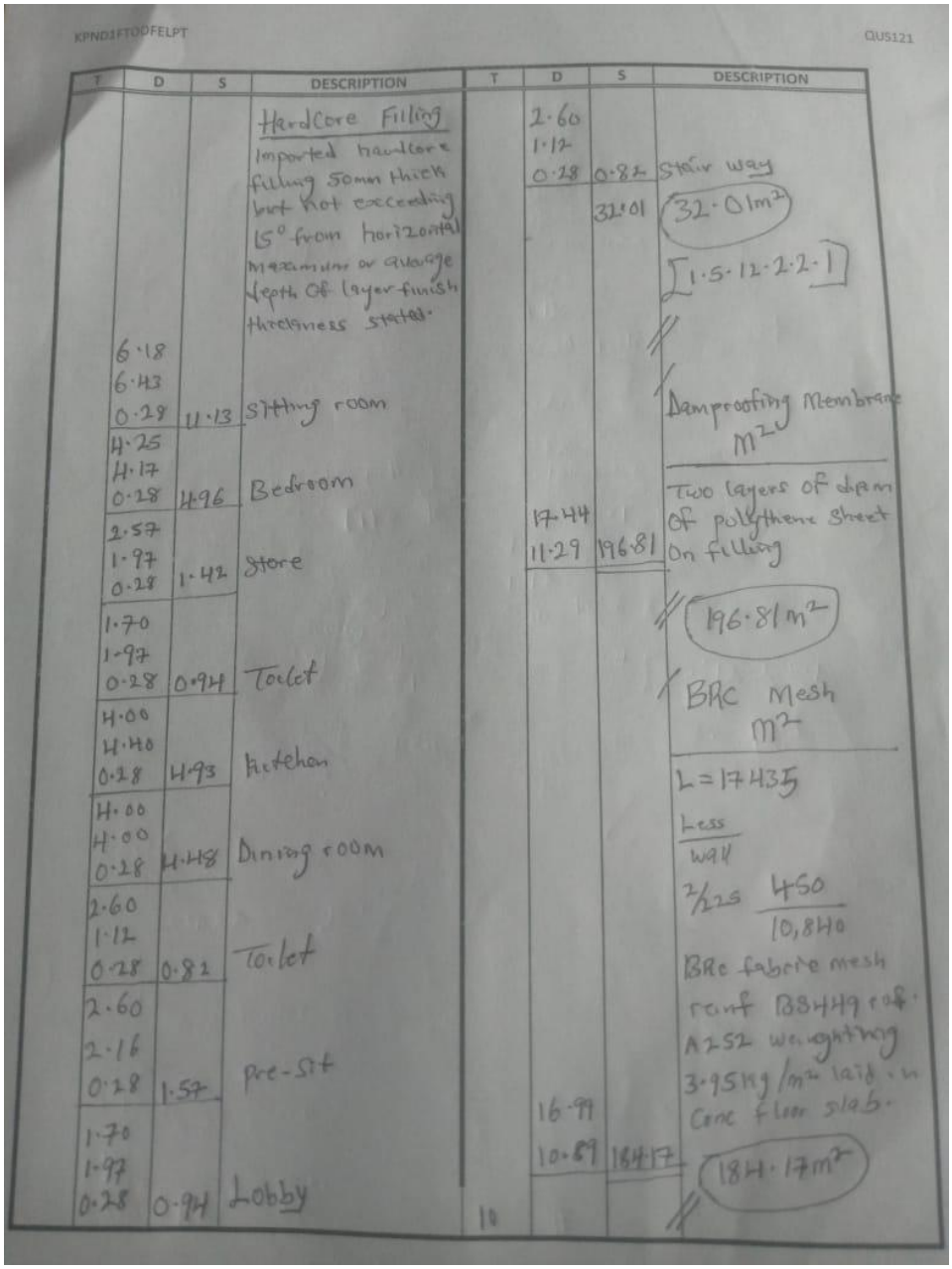
T	D	S	DESCRIPTION
			formwork to Col Base M
			Seun formwork to Side of Col base
2	4.80	15.20	[1.5:12.2-1.1]
			115.20m
			Ditto To Col
			225
			225 225
			225
	0.90		L=225
	1.00	21.60	W=225
			2 450
			900mm
			21.60m²
			Ditto in edges of Overside M
			Seun formwork to provide Smooth finish to edges of bed not exceeding 250mm high

T	D	S	DESCRIPTION
			L=17,435
			W=11,290
			2 28725
			57,450mm
	57.45	57.45	57.45m²
			formwork to Earth Work Support m²
			Earth work support to face excavation max dpt ≤ 1.00m
	17.86		distance b/tw opposing faces ≤ 2.00m
	0.83	97.82	[1.11-13.2.0.0]
			97.82m²
			Ditto to surface treatment m²
			~~Preparing to Surface treatment~~
	17.86		Prepare/apply hawbi cubes drabrex 20 to
	0.68	80.14	bottom side of excavation bottom side
2	17.86		
	0.83	195.65	[1.11:17.10.0]
			195.65m²



T	D	S	DESCRIPTION
			Laterite Filling m^3
			Depth = 1200
			Less
			footing 225
			Less
			blinding 50
			Less
			Top soil 150
			775
			Laterite Filling
			Imported laterite filling bed over 50mm thick but not exceeding 500mm base Sloping not exceeding 15° from horizontal maximum or average depth of layers finished thickness stated.
	6.18		
	6.43		
	0.50	19.87	sitting room
	11.25		
	11.17		
	0.50	8.86	Bedroom
	2.57		
	1.97		
	0.50	2.53	store
	1.70		
	1.97		
	0.50	1.67	Toilet.

T	D	S	DESCRIPTION
	4.00		
	4.40		
	0.50	8.80	kitchen
	4.00		
	4.00		
	0.50	8.00	Dining room
	2.66		
	1.12		
	0.50	1.46	staircase/way
	2.60		
	1.05		
	0.50	1.37	Toilet
	2.60		
	2.16		
	0.50	2.81	pre-sit
	1.70		
	1.97		
	0.50	1.67	Lobby
		57.04	[1.5.12.2.2.1]
			57.04m³



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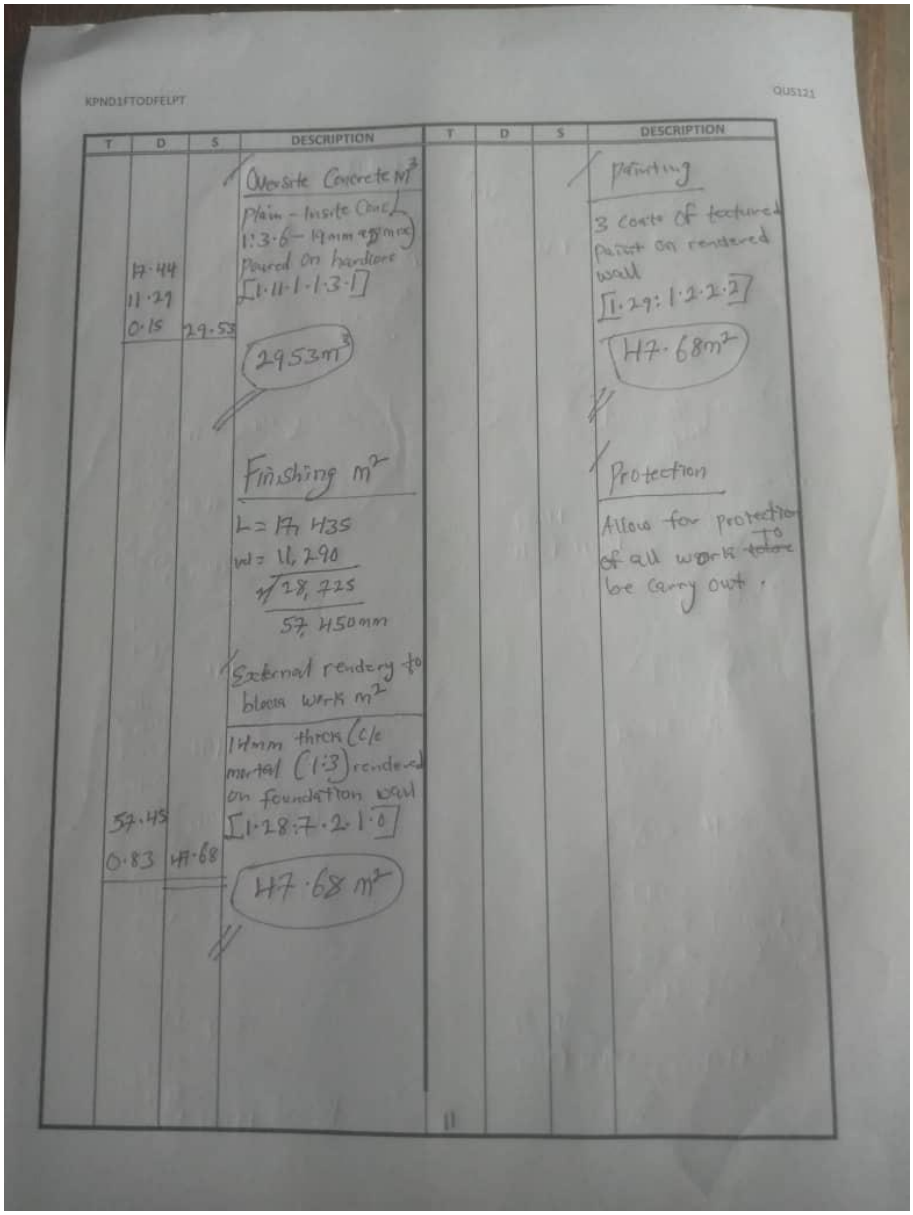
T	D	S	DESCRIPTION
			Hardcore Filling
			Imported hardcore filling 50mm thick but not exceeding 15° from horizontal measured as average depth of layer finish thickness stated.
	6.18		
	6.43		
	0.28	11.13	Sitting room
	4.25		
	4.17		
	0.28	4.96	Bedroom
	2.57		
	1.97		
	0.28	1.42	Store
	1.70		
	1.97		
	0.28	0.94	Toilet
	4.00		
	4.40		
	0.28	4.93	Kitchen
	4.00		
	4.00		
	0.28	4.48	Dining room
	2.60		
	1.12		
	0.28	0.82	Toilet
	2.60		
	2.16		
	0.28	1.57	Pre-Sit
	1.70		
	1.97		
	0.28	0.94	Lobby
10			

T	D	S	DESCRIPTION
	2.60		
	1.12		
	0.28	0.82	Stair way
		32.01	32.01m²
			[1.5.12.2.1]
			Damproofing Membrane m²
			Two layers of 1200 gauge of polythene sheet on filling
	17.44		
	11.29	196.81	
			196.81m²
			BRC Mesh m²
			L = 17435
			Less wall
			2/125 450 10,840
			BRC fabric mesh reinf BS4449 ref. A252 weighting 3.95kg/m² laid in Conc floor slab.
	16.99		
	10.89	184.17	
			184.17m²

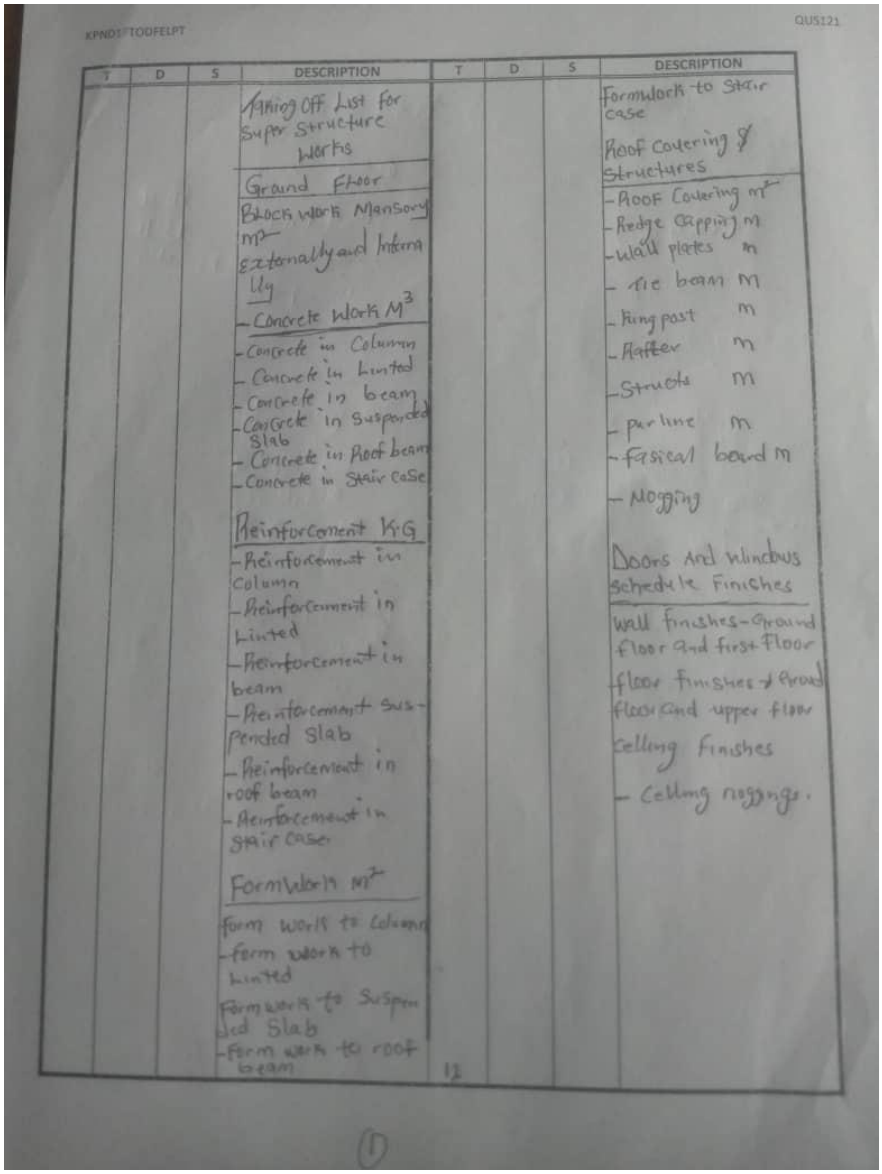


KPND1FTODFELPT

QUS121

T	D	S	DESCRIPTION
			Onsite Concrete m^3
			Plain - Insite Conc 1:3:6 - 19mm aggregate) Poured on hardcore [1·11·1·1·3·1]
	17·44		
	11·27		
	0·15	29·53	
			29.53m³
			Finishing m^2
			L = 17, 435
			W = 16, 290
			28, 725
			57, 450mm
			External rendery to block work m^2
			14mm thick c/c mortal (1:3) rendered on foundation wall [1·28·7·2·1·0]
	57.45		
	0·83	47·68	
			47·68 m^2

T	D	S	DESCRIPTION
			painting
			3 coats of textured paint on rendered wall [1·29: 1·2·2·2]
			47·68m²
			Protection
			Allow for protection of all work to be carry out.



KPND1TOOFELPT

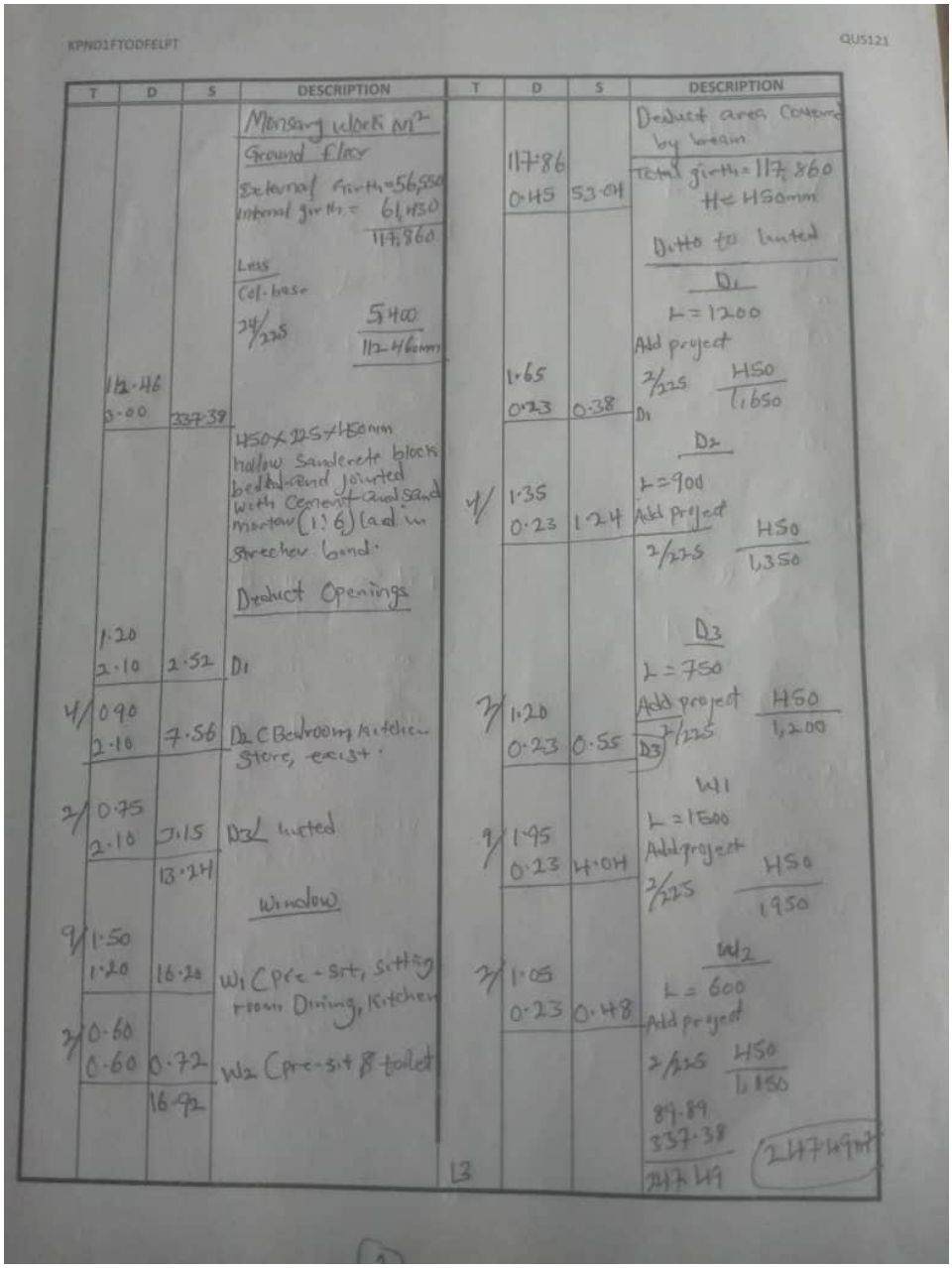
QUS121

T	D	S	DESCRIPTION
			Taking Off List for Super Structure Works
			Ground Floor
			Block work Masonry m^2 externally and internally
			- Concrete Work M^3
			- Concrete in Column
			- Concrete in Lintel
			- Concrete in beam
			- Concrete in Suspended Slab
			- Concrete in Roof beam
			- Concrete in Stair case
			Reinforcement KG
			- Reinforcement in Column
			- Reinforcement in Lintel
			- Reinforcement in beam
			- Reinforcement Suspended Slab
			- Reinforcement in roof beam
			- Reinforcement in Stair case
			Formwork M^2
			form work to Column
			- form work to Lintel
			Formwork to Suspended Slab
			- Form work to roof beam

T	D	S	DESCRIPTION
			Formwork to Stair case
			Roof Covering & Structures
			- Roof Covering m^2
			- Ridge Capping m
			- Wall plates m
			- Tie beam m
			- King post m
			- Rafter m
			- Struts m
			- purline m
			- Fasical board m
			- Nogging
			Doors And Windows schedule Finishes
			Wall finishes - Ground floor and first Floor
			floor finishes - Ground floor and upper floor
			Ceiling Finishes
			- Ceiling noggings.

12

(1)



KPND1FTODFELPT QUS121

T	D	S	DESCRIPTION
			Masonry work M²
			Ground Floor
			External girth = 56,550
			Internal girth = 61,450
			117,860
			Less
			Col. base
			24/225 5,400
			112,460mm
	112.46		
	3.00	337.39	
			450×225×450mm hollow sandcrete blocks bedded and jointed with Cement: sand mortar (1:6) laid in Stretcher bond.
			Deduct Openings
	1.20		
	2.10	2.52	D1
4/	0.90		
	2.10	7.56	D2 C Bedroom, Kitchen Store, exist.
2/	0.75		
	2.10	3.15	D3 L lusted
		13.24	
			Window
9/	1.50		
	1.20	16.20	W1 C Pre-sit, sitting room, Dining, Kitchen
2/	0.60		
	0.60	0.72	W2 C Pre-sit & toilet
		16.92	

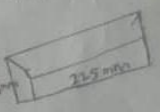
T	D	S	DESCRIPTION
			Deduct area covered by beam
	117.86		Total girth = 117,860
	0.45	53.04	H = 450mm
			Ditto to lusted
			D1
			L = 1200
			Add project
	1.65		2/225 450 / 1,650
	0.23	0.38	D1
			D2
4/	1.35		L = 900
	0.23	1.24	Add project
			2/225 450 / 1,350
			D3
			L = 750
2/	1.20		Add project 450 / 1,200
	0.23	0.55	D3 2/225
			W1
			L = 1500
9/	1.95		Add project
	0.23	4.04	2/225 450 / 1950
			W2
2/	1.05		L = 600
	0.23	0.48	Add project
			2/225 450 / 1,150
			89.89
			337.39
L3			247.49 (247.49m²)

T	D	S	DESCRIPTION
			Conc - in Lintel
			
			Reinforced in-situ Conc [1:2:4] to Lintel
	1.65		D1
	0.23		
	0.23	0.17	L = 1200 1200
			Add Project 450
			2/225 1,650
4/	1.35		D2
	0.23		L = 900
	0.23	0.29	Add project
			2/225 450
			1,350
			D3
2/	1.20		L = 750
	0.23		
	0.23	0.12	Add project
			2/225 450
			1,200
			W1
			L = 1500
9/	1.95		
	0.23		Add project
	0.23	0.92	2/225 450
			1,950

T	D	S	DESCRIPTION
			W2
2/	1.03		L = 600
	0.23		
	0.23	0.81	Add project
			2/225 450
			1,050
			[1·1 2·1·2·2]
			//
			// Reinforcement in Lintel
			Ground floor 1 12mm ⌀ high yell reinforcement bar in lintel
			D1
			L = 1,650
			Less
			2 cover 80
4/	1.85	7.4	2/40 1,570
			Add hook
			2/12/12 288
			1858
			Door 2
			L = 1350
4/4	1.56	24.86	Less
			2 Cover 80
			1270
			Add hook end
			2/12/12 288
			1,558
14			

(3)

T	D	S	DESCRIPTION
			Door 3
			Less L = 1,200
			1 Cover
			2/40 80
			1820
			Add-his end
			2/225 288
2/4	1.41	11.28	1408
			W1
			L = 1,950
			Less
9/4	2.16	77.76	1 Cover 80
			2/40 1870
			Add his end
			2/12/17 288
			2158
			W2
			L = 1,050
			Less
3/4	1.26	15.12	1 Cover 80
			2/40 970
			Add his end 288
			1,258
			136.42 kg
			Cement to tons
			42/36 × 0.22
			12+42/36 × 0.23
			= 0.88
			0.88 + 136.42
			= 120.05

T	D	S	DESCRIPTION
			120.05
			1000
			= 0.120 tons
			// (1.11 · 33 · 1.0)
			/ Form Work To Kirbed
			Seam treated formwork to Seals and Soffit of kirbed to gravelled floor dimension 225mm × 225mm
			
2/	1.20		
	0.23	0.55	Side
	1.20		
	0.23	0.28	Soffit — Groundfloor 1
4/2/	0.90		
	0.23	1.60	Side
4/	0.90		
	0.23	0.83	Soffit — Ground floor 2
2/2	0.75		
	0.23	0.69	Side
2/	0.75		
	0.23	0.35	Soffit — Groundfloor 3

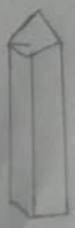
(A)

KPND1FTODFELPT

QUS121

T	D	S	DESCRIPTION
			Windows
9/2	1·50	6·21	
	0·23		side
9/	1·50	3·11	
	0·23		soffit
2/2	0·60	0·55	
	0·23		side
2/	0·60	0·75	
	0·23		soffit
		14·92	[1·11:13·2·0·0]
			Ground floor W1
			Ground floor W2
			S/stirrup in Lintel
			L = 225
			Less Cover 80
			2/40
			580
			Add hk ea 240
			2/12/20 820
			No required
9/	0·82	7·3	D1
			200√1570 = 7·85+1 = 9nos
7/4	0·82	40·14	D2
			200√1270 = 6·35+1 = 7nos
7/2	0·12	11·48	D3
			200√1128 = 5·64+1 = 7nos

T	D	S	DESCRIPTION
			W1
			200√1770 = 9·55+1 = 10nos
10/	0·82	73·8	200√970 = 9·35+1 = 10nos
			W2
6/2	0·82	9·84	200√970 = 4·85+1 = 6nos
			[1·11:33·1·4·0]
			0·12556
			[142·68 kg]
			36 + 0·22
			12+12 / 36 + 0·22
			= 0·88 + 142·68
			= 125·56 / 1000
			= 0·12556 tons
			[1·11:33·1·4·0]
			Concrete Work m³
			Col.



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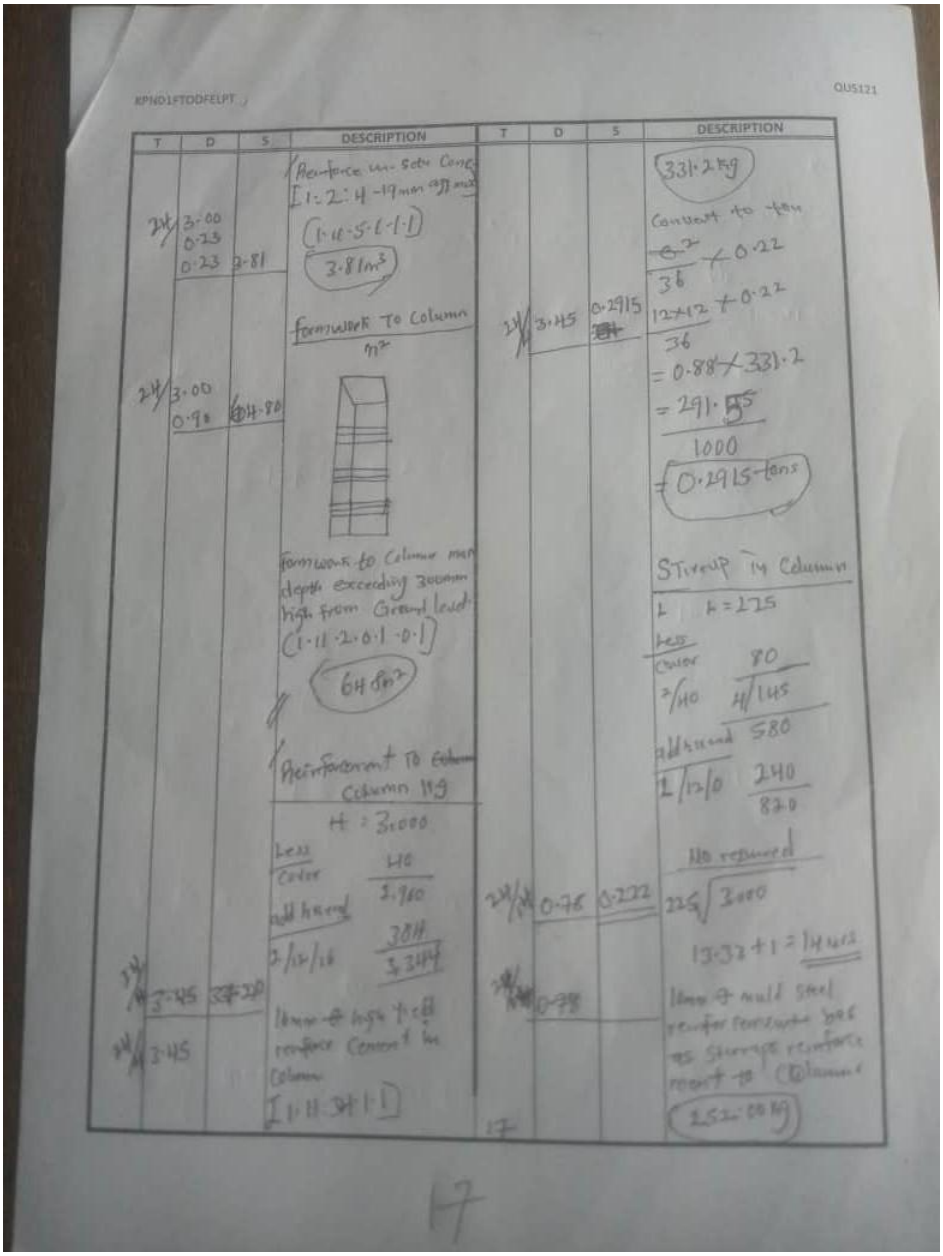
16



T	D	S	DESCRIPTION
			Reinforce in-Situ Conc [1:2:4 - 19mm agg mix] (1·4·5·1·1·1) 3·81m³
24	3·00		
	0·23		
	0·23	7·81	
			formwork To Column m²
24	3·00		
	0·90	64·80	
			formwork to Column max depth exceeding 300mm high from Ground level (1·11·2·0·1·0·1) 64·8m²
			Reinforcement To Column Column HG H = 3,000
			Less Cover 40
			add hooks 3,960
			2/12/16 304
			3,344
24	3·45	37·20	16mm ϕ high Tensile reinforce Cement in Column [1·11·34·1·1]
24	3·45		

T	D	S	DESCRIPTION
			331·2kg
			Convert to ton
			36 × 0·22
24	3·45	0·2915	12×12 × 0·22
			36
			= 0·88 × 331·2
			= 291·55
			1000
			= 0·2915 tons
			Stirrup in Column
			L L = 275
			Less Cover 80
			2/10 4/145
			add hook 580
			2/12/0 240
			820
			No required
24	0·76	0·222	225 √ 3000
			13·32 + 1 = 14 nos
			16mm ϕ mild steel reinforcement bar as Stirrup reinforcement in Column
			252·00 kg
17			

17

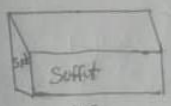
T	D	S	DESCRIPTION
			Cement to tones
			= ~~0.22~~
			252.00kg
			~~0²~~ / 36 × 0.22
			12.72 / 36 × 0.22
			= 0.88
			= 0.88 × 252.00
			= 221.76 / 1000
			0.222 tons
			Concrete in Beam m³
			Total grith = 117.860
			1250 × 450
			Add project
			2/225 450
117.86			Reinforce in-situ Con. to
0.23			beam (1:1:2:1.2)
0.45	12.11		12.11 m³

T	D	S	DESCRIPTION
			Reinforcement to Beam No 9
			
			total girth L = 117.860
			Links Cover 80 / 117.80
			2/40
			Add lapping 14.000 / 10/1000 / 127.780
			Add bris end
4	128.16		2/12/16 3.84 / 128.164
		0.451	
			16mm ϕ high tensile steel as reinforcement in beam
			512.64 kg
			Convert to ton
			~~0²~~ / 36 × 0.22
			12.72 / 36 × 0.22
			= 0.88 × 512.64
			= 451.1232 / 1000
			0.451 ton
			(1·11·33·1·4·0)

18

18

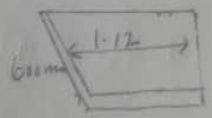
T	D	S	DESCRIPTION
			STIRRUP in Beam
			L=450 W=225
			Less Cover
			2/40 80 / 370 — 80 / 145
			370+145=515
			3/515 = 1030
			Add hook end
			2/12/10 — 240 / 1,270
			No required for beam
			Total length for beam
640	1.27	0.7153	200√127,780
			638.941 = 640nos
			10mm ϕ high yield
			Stirrups bar at 200mm
			C/c to beam.
			1·11·33·1·4·0
			812.8 Kg
			Convert to ton
			02/36 + 0.22
			= 1242/88 + 0.22
			= 0.88 + 812.8
			= 715.3 / 1000
			= 0.7153 tons
			1·11·33·1·4·0

T	D	S	DESCRIPTION
			Form Works To Beam m²
			
	117.86		450
	1·13	133.18	450
			225
			1125
			Sawn treated formwork to side and soffit of beam max thickness L 225
			(1·11·33·1·4·0)
			133.18m²
			Concrete in Suspended Slab m³
	17.44		
	11.29		
	0.15	29.53	(1·12·2·2·1)
			29.53m³

T	D	S	DESCRIPTION
			Reinforcement In Sus Pended Slab Kg
			L = 17435 W 11290
			less Conc Cover
			2/10 80/17355 80/11710
			Add hks end
			2/12/16 384/17,739 11,594
			No required
			200√17355
58	17·36	1006·88	=86·7741 = 88Nos
88	11·59	1011·92	W
		0·90371	No required
			200√16,210
			= 56·0571 = 58Nos
			1026·94 kg
			Convert to ton
			0² + 0·22 / 36
			12+12 + 0·22 / 36
			= 0·88 + 1026·94
			= 903·71 / 1000
			= 0·90371 tons

T	D	S	DESCRIPTION
			Formwork TO Sus Pended Slab
2	17·44	34·88	Sawn treated formwork to the sides and soffit of Conc in suspended slab.
2	11·29	22·58	
		57·46	Sub
	17·44		
	11·29	196·81	Soffit
		254·27	(1·11·13·2·0·01)
			254·27 m²
			Stair case
			Concrete work m³

Stair case Banding



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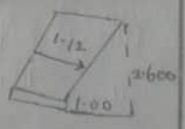
T	D	S	DESCRIPTION
			
			using pythagoras theorem
			$h^2 = (2.600)^2 + (1.000)^2$
			$h^2 = (6.76) + (1.000)$
			$h^2 = 7.76$
			$h = \sqrt{7.76}$
2	2.79		$h = 2.79$
	1.12		
	0.18	1.12	waist
2/18/12	1.12		
	0.30		
	0.15	091	Riser
	1.12		
	0.60		
	0.30	0.20	landing
		2.23	

plain in situ Concrete reinforce in Sloping angle of (1:2:4) 20 mm agg mix poured to Stair Case 1.11:4-1.7-2)

$2.23 m^2$

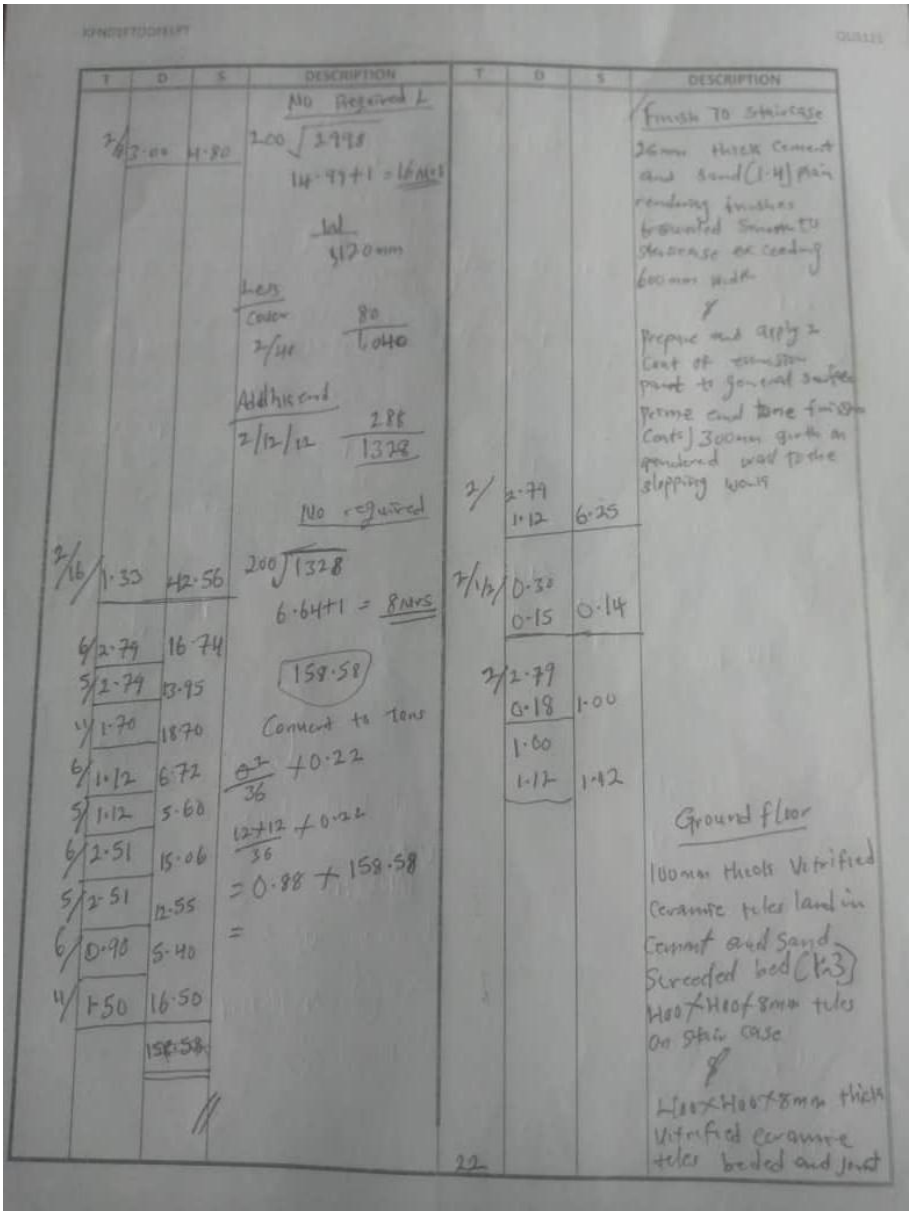
T	D	S	DESCRIPTION
2/18	1.12	H0.32	formwork to staircase
			Step
			Sawn formwork to side of riser width = 1500 mm
			Ditto to waist
2/2/	2.79	11.16	Sawn formwork to side of waist width 175 m
2/	2.79		
	1.00	5.58	Ditto to side of landing with 150mm
2	2.79		
	1.12	6.23	soffit
			Sawn formwork to soffit of waist
	1.12		
	1.00	1.12	soffit of landing
		6+H1	(6H.H1 m

Reinforcement in Stair Case

12 mm ~~Ø~~ high yield strangh steel bar in staircase

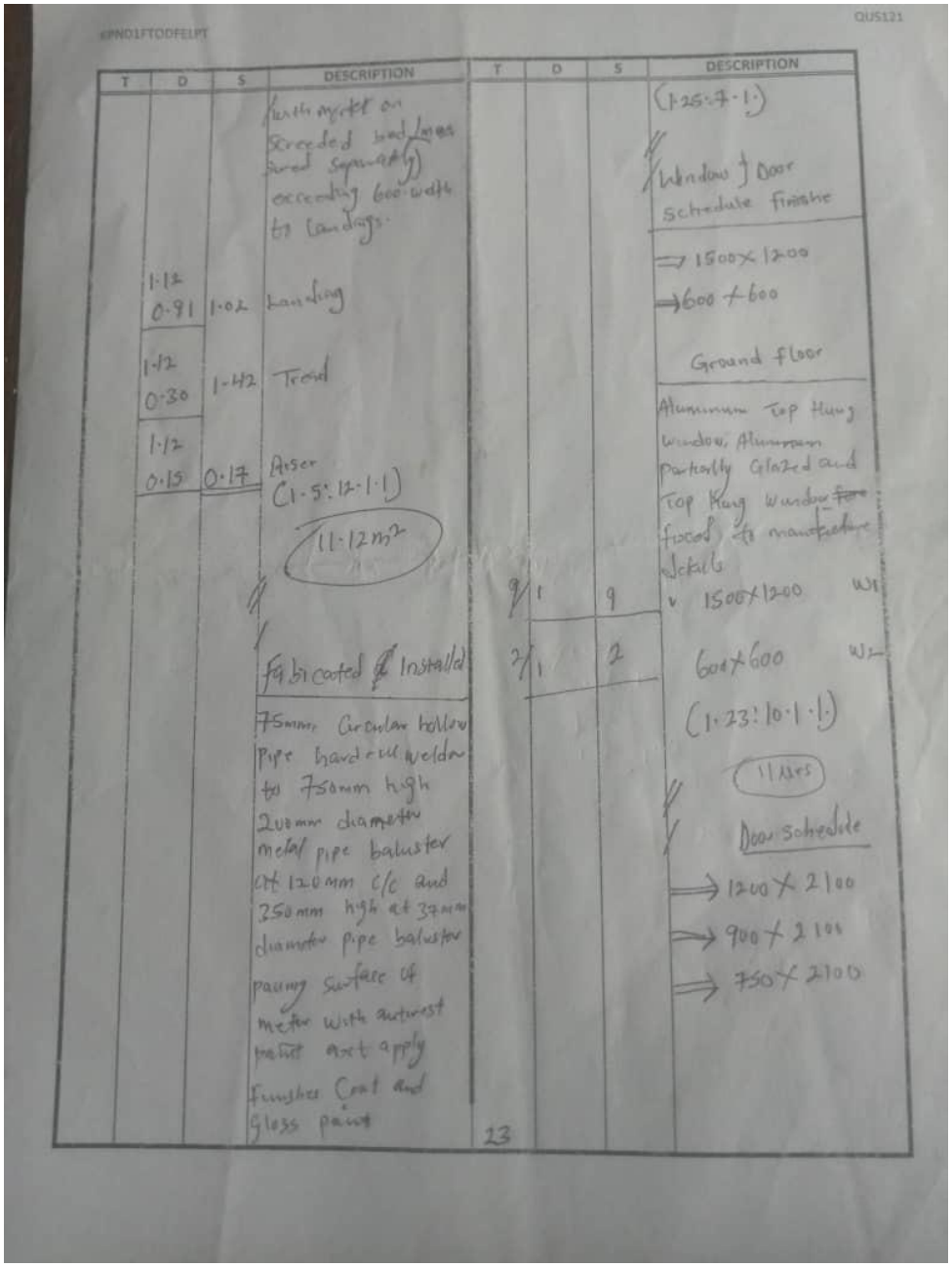
L = 2790 mm

Less Cover	
2/10	80
	2,710
Add hooked	288
2/12/12	2998



T	D	S	DESCRIPTION
			No Required L
2/	3.00	41.80	200 ⟌ 2798
			14·97+1 = 16Nos
			Wal
			5170mm
			Less
			Cover 80
			2/40 1040
			Additional
			2/12/12 288
			1328
			No required
2/16/	1·33	42·56	200 ⟌ 1328
			6·64+1 = 8Nos
6/	2·79	16·74	
5/	2·79	13·95	158·58
4/	1·70	18·70	Connect to tons
6/	1·12	6·72	07/36 +0·22
5/	1·12	5·60	
6/	2·51	15·06	12+12/36 +0·22
5/	2·51	12·55	= 0·88 + 158·58
6/	0·90	5·40	=
4/	1·50	16·50	
		158·58	

T	D	S	DESCRIPTION
			Finish To Staircase
			36mm thick Cement and Sand (1:4) Plain rendering finishes to worked Surface to Staircase exceeding 600mm width
			Prepare and apply 2 Coat of emulsion paint to general surface prime coat and one finish Coats) 300mm girth on plastered wall to the slopping work
2/	2·79		
	1·12	6·25	
2/13/	0·30		
	0·15	0·14	
2/	2·79		
	0·18	1·00	
	1·00		
	1·12	1·42	
			Ground floor
			100mm thick Vitrified Ceramic tiles laid in Cement and Sand Screeded bed (1:3) H00 x H00 of 8mm tiles on Stair case
			H00 x H00 x 8mm thick Vitrified ceramic tiles bedded and joint
22			



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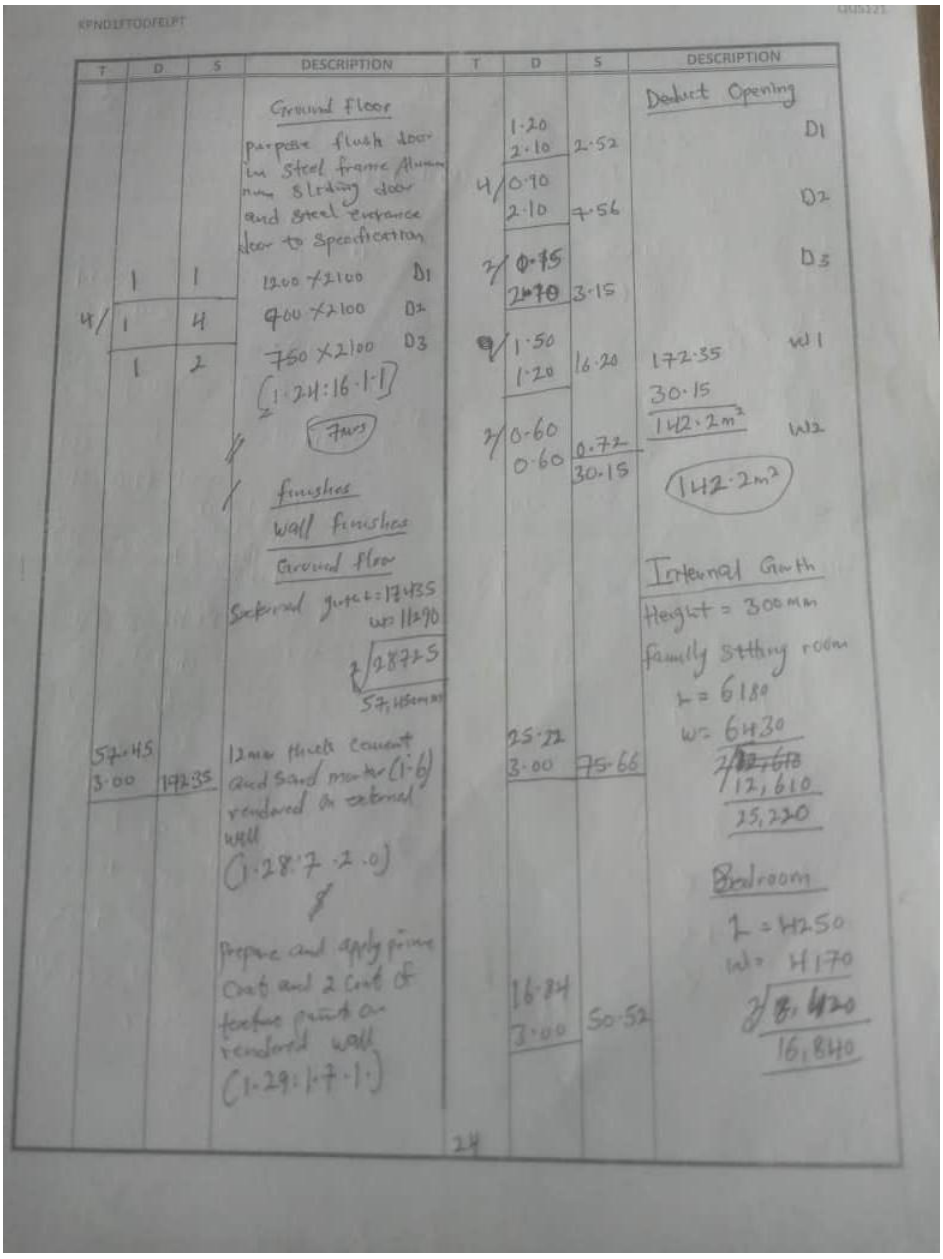
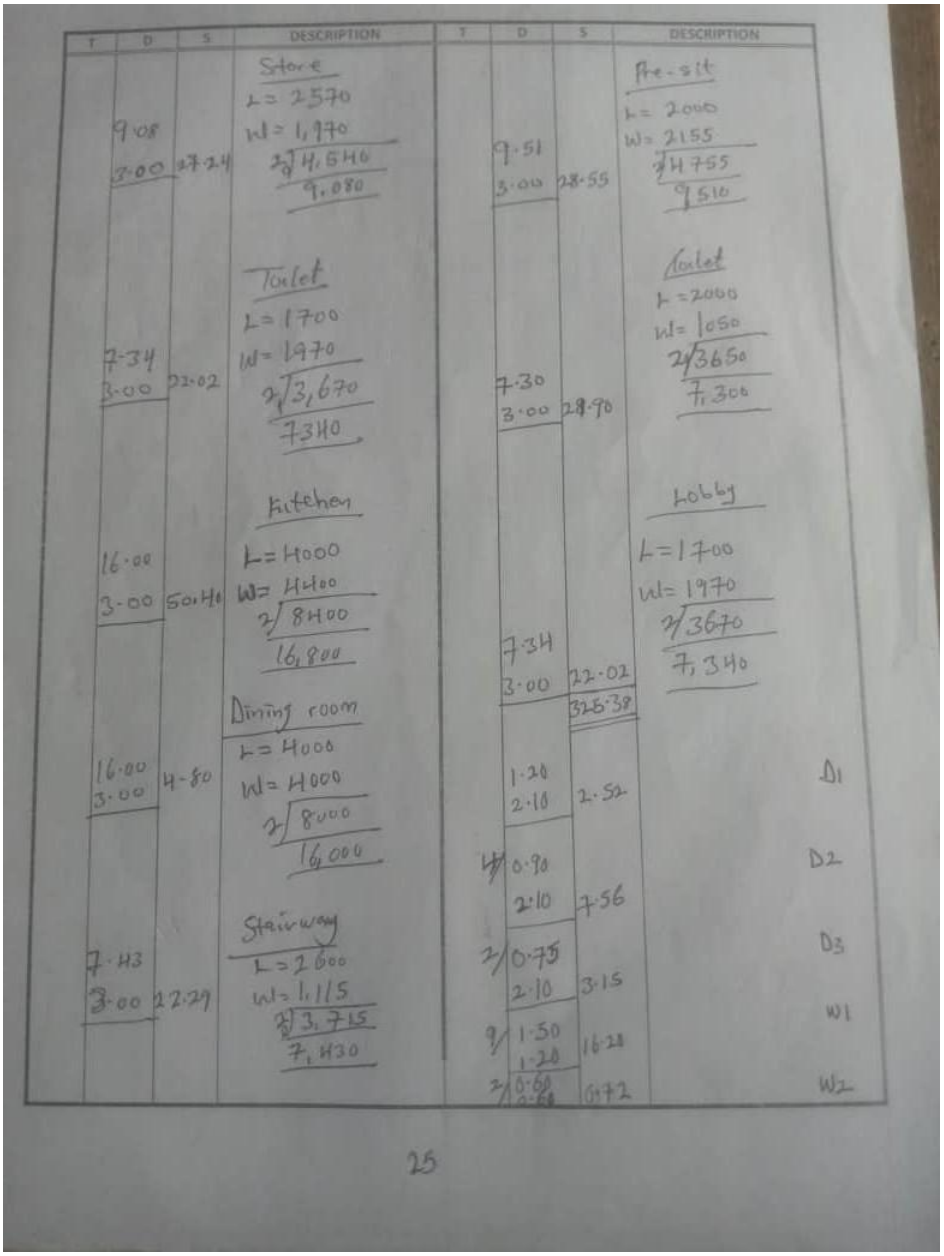
T	D	S	DESCRIPTION
			(with mortar on screeded wall/floor laid separately) exceeding 600 wide to landings.
	1.12 0.91	1.02	Landing
	1.12 0.30	1.42	Tread
	1.12 0.15	0.17	Riser (1.5:12·1·1)
			11.12m²
			Fabricated & Installed
			75mm Circular hollow Pipe handrail welded to 75mm high 200mm diameter metal pipe baluster c/c 120mm c/c and 250mm high at 37mm diameter pipe baluster passing surface of meter with antirust paint and apply finishes Coat and Gloss paint
			23

T	D	S	DESCRIPTION
			(1.25:7·1·)
			Window } Door Schedule finishe
			⇒ 1500×1200
			⇒ 600×600
			Ground floor
			Aluminum Top Hung window, Aluminum partially Glazed and Top Hung window ~~for~~ fixed) to manufacture details
9	1	9	1500×1200 W1
2	1	2	600×600 W2
			(1.23:10·1·1·)
			11 Nos
			Door Schedule
			⇒ 1200×2100
			⇒ 900×2100
			⇒ 750×2100



T	D	S	DESCRIPTION
			Ground Floor
			purpose flush door in Steel frame Aluminium sliding door and Steel entrance door to Specification
	1	1	1200 × 2100 D1
4/	1	4	900 × 2100 D2
	1	2	750 × 2100 D3
			(1·24 : 16 · 1·1)
			Fwrs
			finishes
			Wall finishes
			Ground Floor
			External finish: 17435 W: 11290
			28725
			57, 450 m²
57·45			
3·00		172·35	12mm thick cement and sand mortar (1:6) rendered on external wall
			(1·28·7 · 2 · 0)
			prepare and apply prime Coat and 2 Coat of texture paint on rendered wall
			(1·29 : 1·7 · 1·)

T	D	S	DESCRIPTION
			Deduct Opening
	1·20		D1
	2·10	2·52	
4/	0·90		D2
	2·10	7·56	
	0·75		D3
2/	2·70	3·15	
	1·50		W1
9/	1·20	16·20	172·35
			30·15
			142·2m² W2
	0·60		
2/	0·60	0·72	
		30·15	142·2m²
			Internal Girth
			Height = 300mm
			family sitting room
			L = 6180
			W = 6430
			12,610
			25,220
			Bedroom
			L = 4250
			W = 4170
			8,420
			16,840
	25·22		
	3·00	75·66	
	16·84		
	3·00	50·52	



T	D	S	DESCRIPTION
			Store
			L = 2570
	9.08		W = 1,770
	3.00	27.24	2 | 4,540
			9,080
			Toilet
			L = 1700
	7.34		W = 1970
	3.00	22.02	2 | 3,670
			7340
			Kitchen
	16.00		L = 4000
	3.00	50.40	W = 4400
			2 | 8400
			16,800
			Dining room
			L = 4000
	16.00		W = 4000
	3.00	4.80	2 | 8000
			16,000
			Stairway
	7.43		L = 2600
	3.00	22.29	W = 1,115
			3 | 3,715
			7,430

T	D	S	DESCRIPTION
			Re-sit
			L = 2000
			W = 2155
	9.51		2 | 4755
	3.00	28.55	9,510
			Toilet
			L = 2000
			W = 1050
			2 | 3650
	7.30		7,300
	3.00	28.90	
			Lobby
			L = 1700
			W = 1970
			2 | 3670
	7.34		7,340
	3.00	22.02	
		325.38	
D1	1.20		
	2.10	2.52	
D2	0.90		
	2.10	1.89	
D3	0.75		
	2.10	3.15	
W1	1.50		
	1.20	16.20	
W2	0.60		
		0.72	

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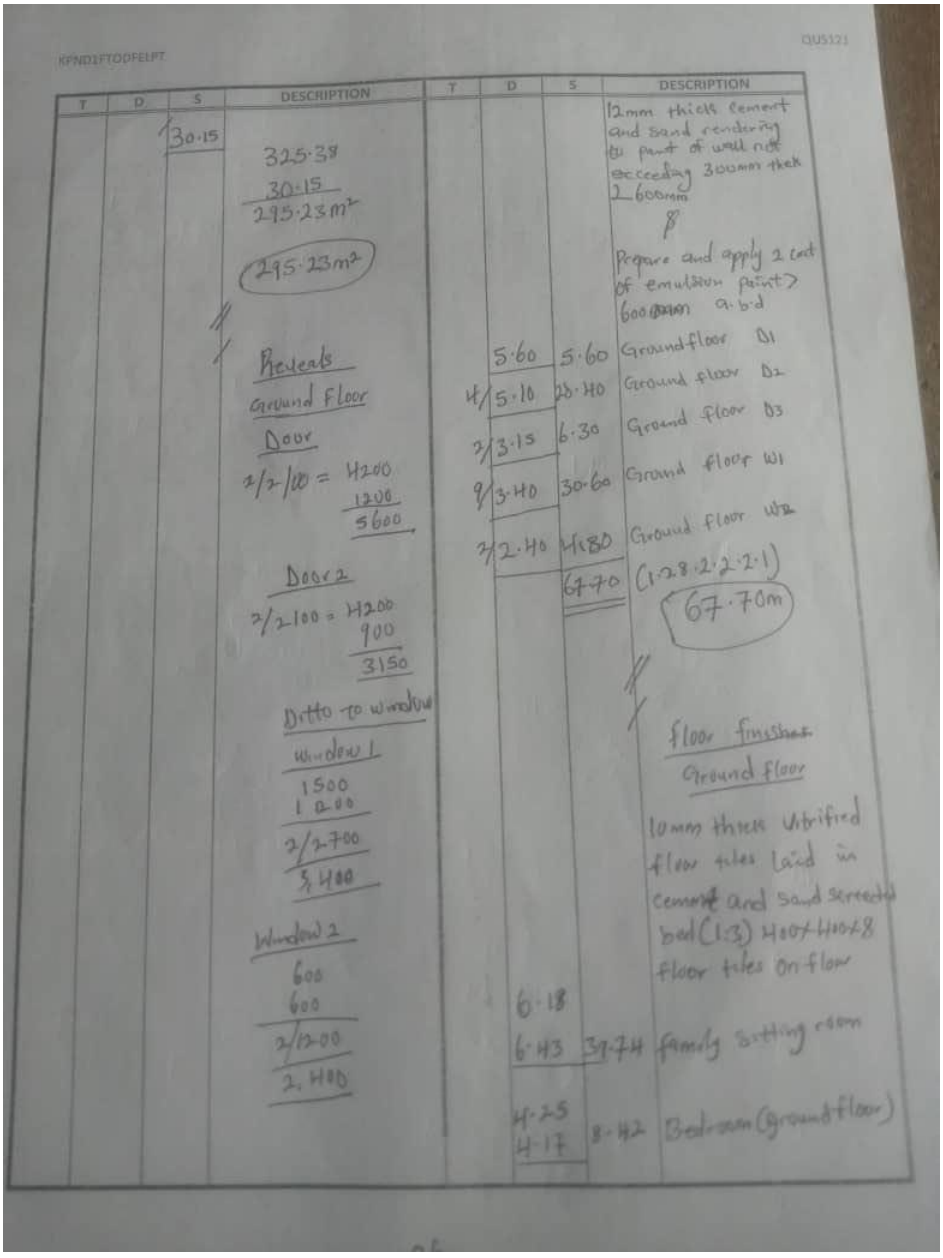

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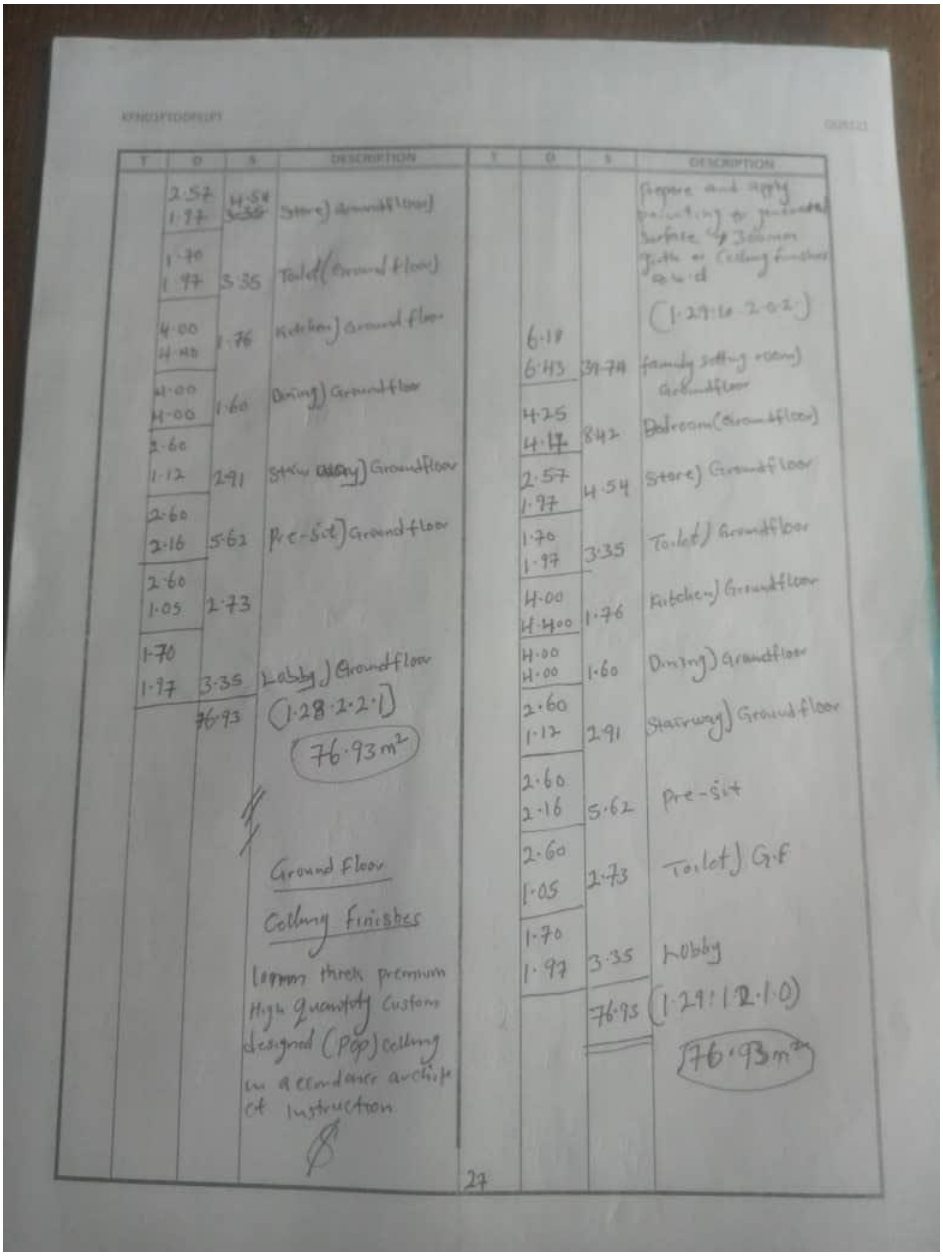
T	D	S	DESCRIPTION
		30.15	
			325.38
			30.15
			295.23m²
			295.23m²
			Reveals
			Ground Floor
			Door
			2/2/100 = H200
			1200
			5600
			Door 2
			2/2100 = H200
			900
			3150
			Ditto to window
			window 1
			1500
			1200
			2/2700
			5,400
			Window 2
			600
			600
			2/1200
			2,400

T	D	S	DESCRIPTION
			12mm thick cement and sand rendering to part of wall not exceeding 300mm thick 2600mm
			β
			Prepare and apply 2 coat of emulsion paint> 600 a.b.d
	5.60	5.60	Ground floor D1
4/	5.10	20.40	Ground floor D2
2/	3.15	6.30	Ground floor D3
9/	3.40	30.60	Ground floor W1
3/	2.40	H180	Ground floor W2
		67.70	(1.28.2.2.2.1)
			67.70m
			floor finishes
			Ground floor
			10mm thick vitrified floor tiles laid in cement and sand screeded bed (1:3) H80x H80x8 floor tiles on flow
	6.18		
	6.43	39.74	family sitting room
	4.25		
	4.17	8.42	Bedroom (Ground floor)



T	D	S	DESCRIPTION
	2.57 1.97	4.54	Store) Groundfloor
	1.70 1.97	3.35	Toilet (Ground floor)
	4.00 4.00	1.76	Kitchen) Ground floor
	4.00 4.00	1.60	Dining) Groundfloor
	2.60 1.12	2.91	Stairway) Groundfloor
	2.60 2.16	5.62	Pre-Sit) Groundfloor
	2.60 1.05	2.73	
	1.70 1.97	3.35	Lobby) Groundfloor
		76.93	(1.28.2.2.1)

76.93 m²

Ground Floor

Ceiling Finishes

Layman three premium High quantity Custom designed (POP) ceiling in accordance architect Instruction

T	D	S	DESCRIPTION
			Figure and apply painting to internal surface by 3 coat on plaster or ceiling finishes as it
			(1.29.1.2.2.)
	6.18 6.43	39.74	family sitting room) Groundfloor
	4.25 4.17	842	Bedroom (Groundfloor)
	2.57 1.97	4.54	Store) Groundfloor
	1.70 1.97	3.35	Toilet) Groundfloor
	4.00 4.00	1.76	Kitchen) Groundfloor
	4.00 4.00	1.60	Dining) Groundfloor
	2.60 1.12	2.91	Stairway) Groundfloor
	2.60 2.16	5.62	Pre-Sit
	2.60 1.05	2.73	Toilet) G.F
	1.70 1.97	3.35	Lobby
		76.93	(1.29.1.2.1.0)

76.93 m²

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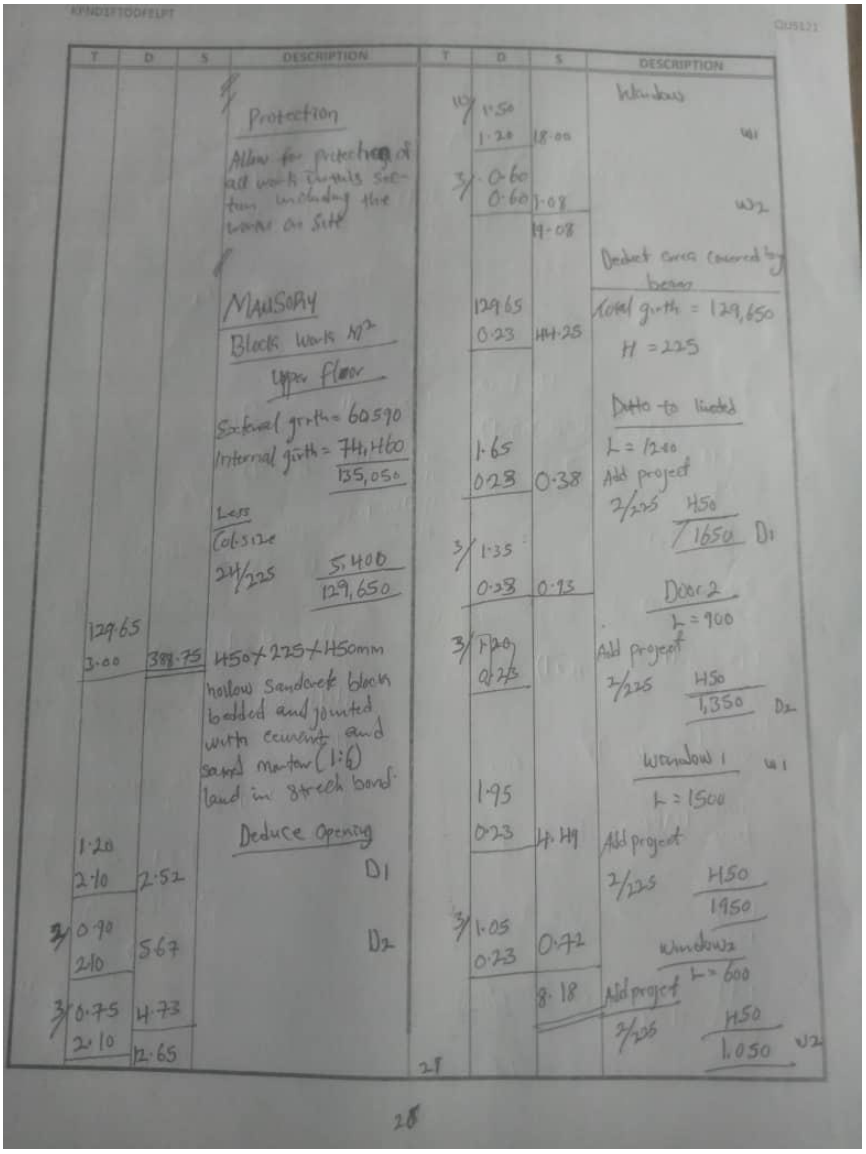

T	D	S	DESCRIPTION
			Protection
			Allow for protecting all work in this section including the work on Site
			MASONRY
			Block Work N° 2
			Upper floor
			External girth = 60590
			Internal girth = 74,460
			135,050
			Less
			Col. size
			24/225 5,400
			129,650
129·65			
3·00		388·95	450×225×450mm hollow Sandcrete blocks bedded and jointed with cement and sand mortar (1:6) laid in stretch bond.
			Deduce Opening
1·20			
2·10		2·52	D1
3/ 0·90			
2·10		5·67	D2
3/ 0·75		4·73	
2·10		12·65	

T	D	S	DESCRIPTION
			Windows
W1/	1·50		
	1·20	18·00	W1
3/	0·60		
	0·60	1·08	W2
		19·08	
			Deduct area covered by beam
	129·65		Total girth = 129,650
	0·23	144·25	H = 225
			Ditto to lintel
	1·65		L = 1200
	0·23	0·38	Add project
			2/225 450
			1650 D1
3/	1·35		
	0·23	0·93	Door 2
			L = 900
3/	F20		Add project
	0·23		2/225 450
			1,350 D2
			Window 1 W1
	1·95		L = 1500
	0·23	4·49	Add project
			2/225 450
			1950
3/	1·05		
	0·23	0·72	Window 2
			L = 600
		8·18	Add project
			3/225 450
			1,050 W2

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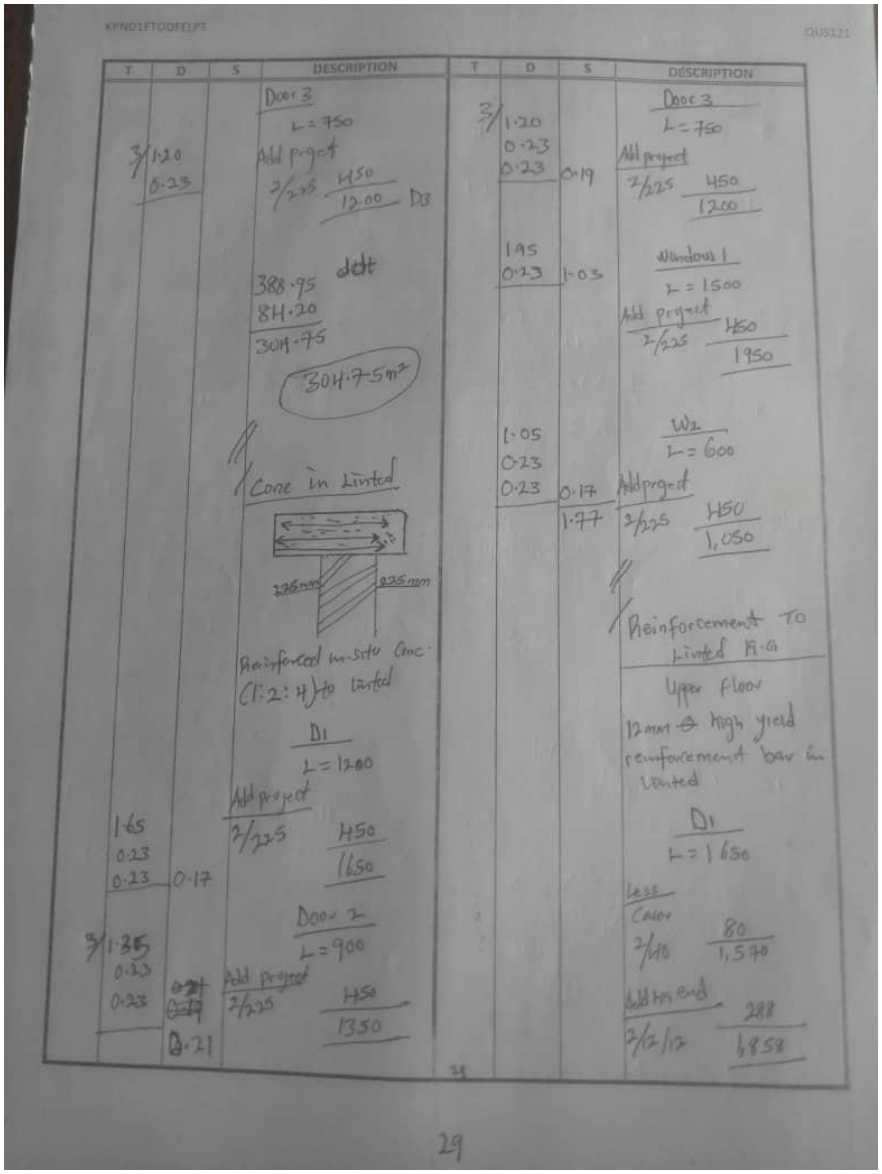

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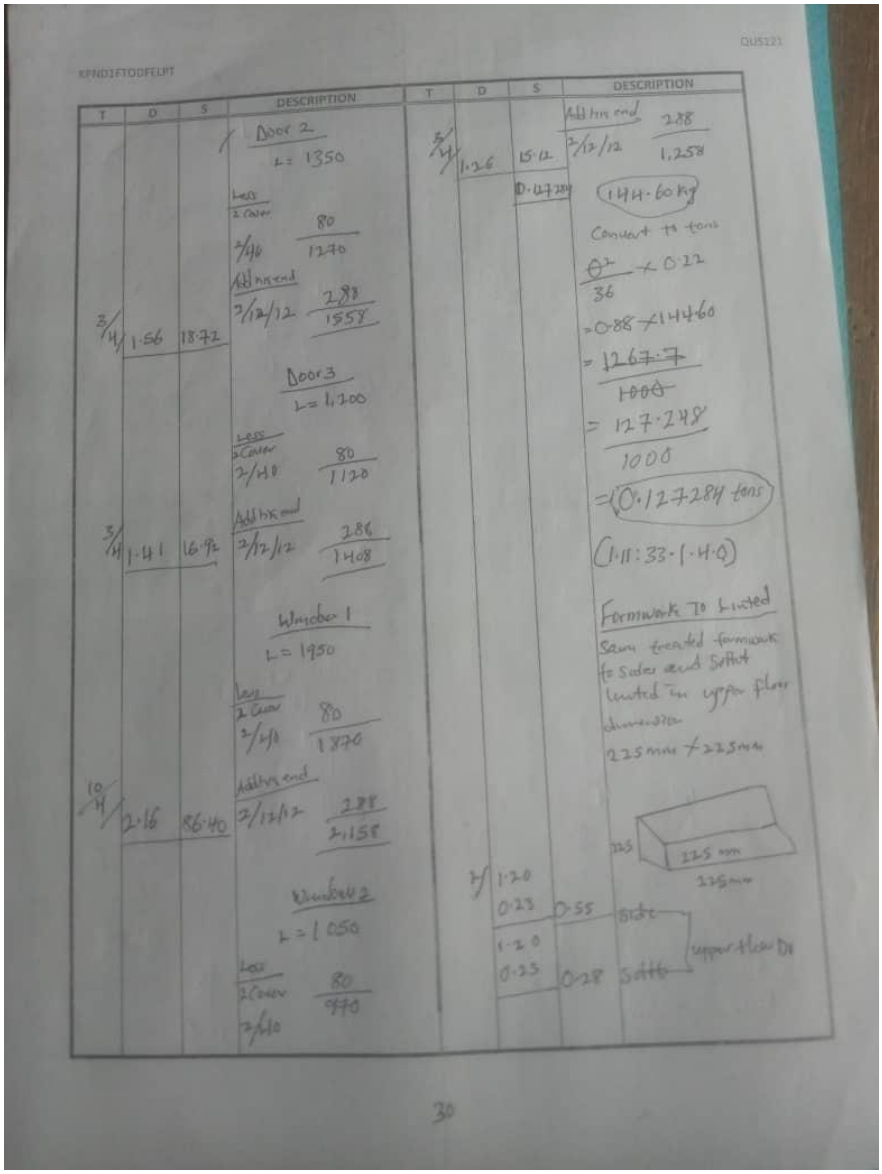
T	D	S	DESCRIPTION
			Door 3
			L = 750
3	1·20		
	0·23		
			Add proj-ct
			2/225 450
			1200 D3
			388·75 ddt
			84·20
			304·75
			304·75m²
			Core in Linted
			225mm 225mm
			Reinforced in-site Conc·
			Cl:2:4) to Linted
			D1
			L = 1200
			Add project
1·65			2/225 450
0·23			1650
0·23		0·17	
			Door 2
3 1·35			L = 900
0·23			Add project
0·23		~~0·21~~ ~~0·17~~	2/225 450
		0·21	1350

T	D	S	DESCRIPTION
3	1·20		Door 3
	0·23		L = 750
	0·23	0·19	Add project
			2/225 450
			1200
	1·95		
	0·23	1·03	Windows 1
			L = 1500
			Add project
			2/225 450
			1950
	1·05		W2
	0·23		L = 600
	0·23	0·17	Add proj-ct
		1·77	2/225 450
			1,050
			Reinforcement TO
			Linted R·C
			Upper floor
			12mm ~~Ø~~ high yield
			reinforcement bar in
			Lanted
			D1
			L = 1650
			Less
			Cover
			2/10 80
			1,570
			Add ment
			2/2/12 288
			1858

29



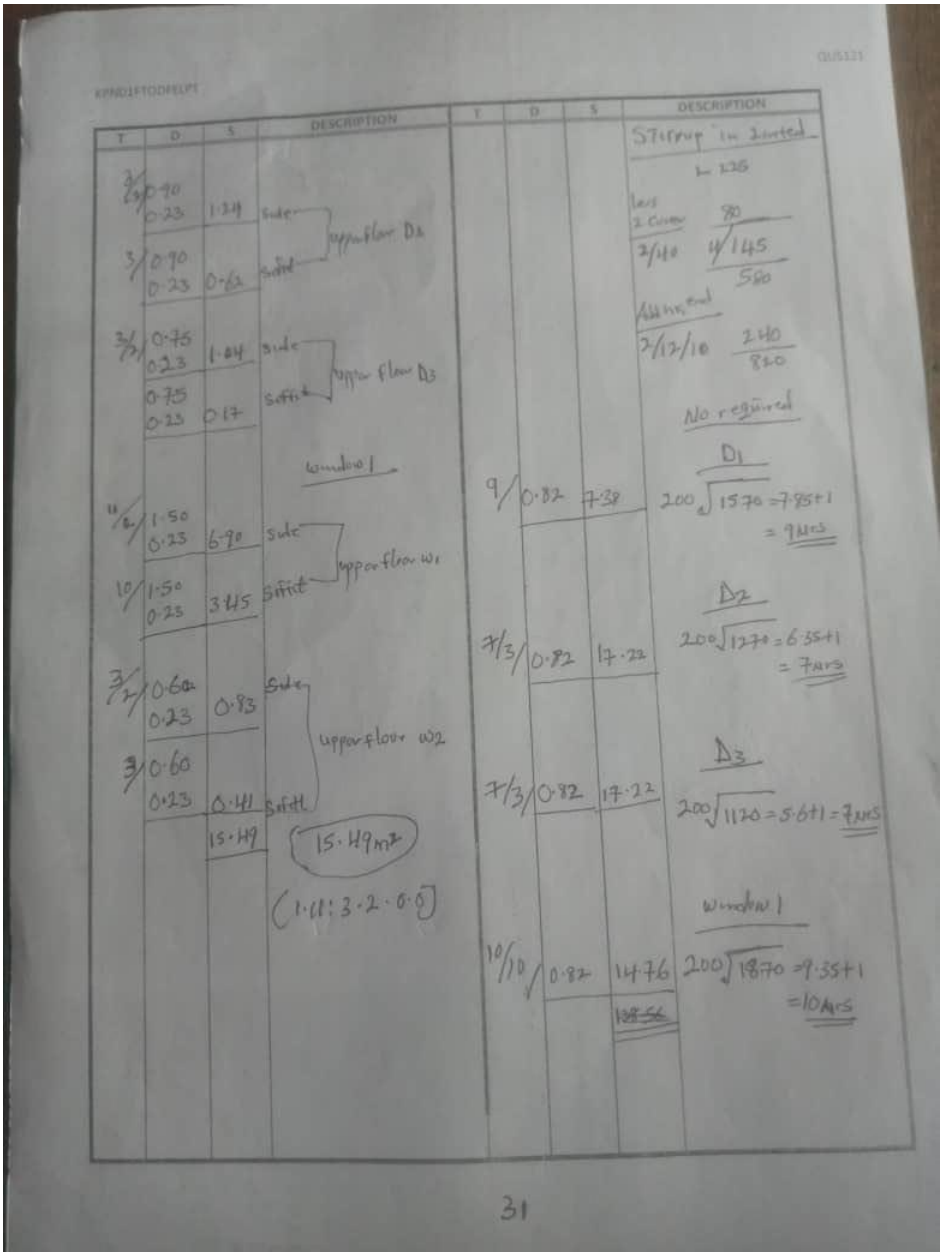
KFND1FTODFELPT

QUS121

T	D	S	DESCRIPTION
			Door 2
			L = 1350
			Less 2 Cover
			2/40 80
			1270
			Add hk end
			2/12/12 288
3/H	1.56	18.72	1558
			Door 3
			L = 1,200
			Less 2 Cover
			2/40 80
			1120
			Add hk end
3/H	1.41	16.92	2/12/12 288
			1408
			Window 1
			L = 1950
			Less 2 Cover
			2/40 80
			1870
			Add hk end
10/H	2.16	86.40	2/12/12 288
			2,158
			Window 2
			L = 1050
			Less 2 Cover
			2/40 80
			970

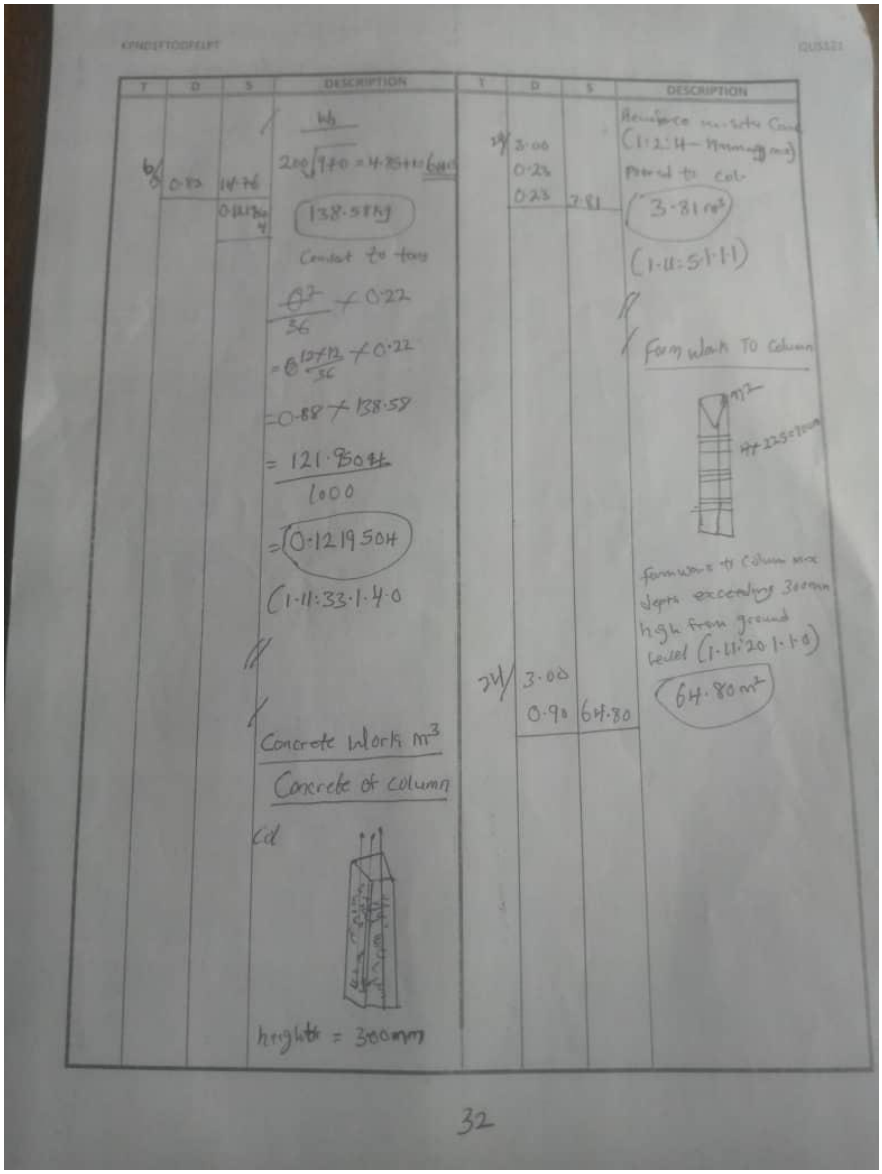
T	D	S	DESCRIPTION
			Add hk end
3/H	1.26	15.12	2/12/12 288
			1,258
		0.47304	(14H·60 kg)
			Convert to tons
			60 / 36 × 0.22
			= 0.88 × 144.60
			= 127.248 / 1000
			= (0.127284 tons)
			(1:11:33·1·H·0)
			Formwork To Lintel
			Sawn treated formwork to Soffit and Soffit Lintel in upper floor dimension 225 mm × 225 mm
			225 mm 225 mm 225 mm
2/	1.20		
	0.23	0.55	Side
	1.20		upper floor D1
	0.23	0.28	Soffit

30



T	D	S	DESCRIPTION
2/3	0.90		
	0.23	1.24	Side
3	0.90		
	0.23	0.62	Soffit
			upper floor D2
3/3	0.75		
	0.23	1.04	side
	0.75		
	0.23	0.17	soffit
			upper floor D3
			window 1
11/2	1.50		
	0.23	6.90	side
10	1.50		
	0.23	3.45	Soffit
			upper floor w1
3/2	0.60		
	0.23	0.83	Side
3	0.60		
	0.23	0.41	Soffit
		15.49	
			upper floor w2
			15.49m²
			(1.11:3.2.0.8)

T	D	S	DESCRIPTION
			Stirrup in 2mmtd
			L 226
			less 2 Cover 80
			2/40 4/145
			580
			Allowed
			2/12/10 240
			820
			No required
			D1
9/	0.82	7.38	200√1570 = 7.85+1
			= 9Nos
			D2
7/3/	0.82	17.22	200√1270 = 6.35+1
			= 7Nos
			D3
7/3/	0.82	17.22	200√1170 = 5.6+1 = 7Nos
			window 1
10/10/	0.82	14.76	200√1870 = 9.35+1
			= 10Nos
		~~18.56~~	



T	D	S	DESCRIPTION
			Wb
			200 | 770 = 4.85++ 6nos
b/	0.83	14.76	
			138.58kg
			Constant to four
			07/56 + 0.22
			= 0.12/56 + 0.22
			= 0.88 + 138.58
			= 121.80kg / 1000
			= 0.12195OH
			C1:11:33:1:4:0
			Concrete Work m³
			Concrete of column
Cd			height = 300mm

T	D	S	DESCRIPTION
			Reinforce ready mix Concrete (1:2:4 — Nominal mix) poured to col.
2/	3.00		
	0.23		
	0.23	7.81	3.81 m³
			(1:11:5:1:11)
			Form work TO Column
			m2
			Ht 2350mm
			formwork to Column not depth exceeding 300mm high from ground level (1:11:20 1:1:0)
24/	3.00		
	0.90	64.80	64.80 m²

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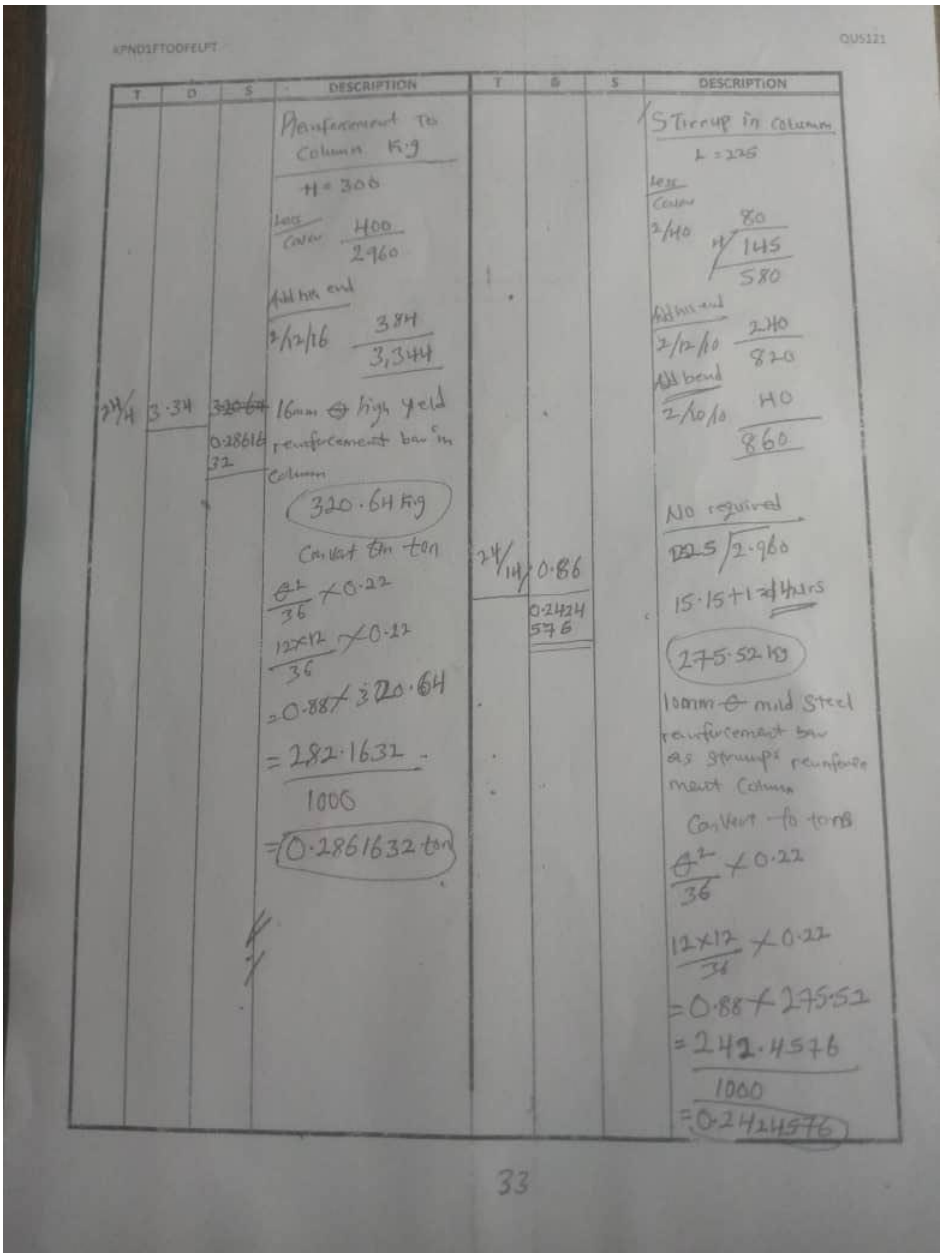

KPND1FTOOFEUFT

QUS121

T	D	S	DESCRIPTION
			Reinforcement To Column Kig
			H = 300
			less Cover 400 / 2960
			Add hk end
			2/12/16 384 / 3,344
24/4	3.34	~~320.64~~ 0.28616 32	16mm ⌀ high yeld reinforcement bar in Column
			320.64 Kg
			Convert to ton
			$\frac{d^2}{36} \times 0.22$
			$\frac{12 \times 12}{36} \times 0.22$
			$= 0.88 \times 320.64$
			$= \frac{282.1632}{1000}$
			$= 0.2861632$ ton

T	D	S	DESCRIPTION
			Stirrup in Column
			L = 225
			less Cover 2/40 80 / H 145 / 580
			Add hk end 2/12/10 240 / 820
			90 bend 2/10/10 HO / 860
			No required 225 / 2.960
			15.15 + 1 = 4 hrs
24/14	0.86	0.2424 576	275.52 kg
			10mm ⌀ mild Steel reinforcement bar as Stirrups reinforcement Column
			Convert to tons
			$\frac{d^2}{36} \times 0.22$
			$\frac{12 \times 12}{36} \times 0.22$
			$= 0.88 \times 275.52$
			$= \frac{242.4576}{1000}$
			$= 0.2424576$

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KPND1FTOOFELFT

QUS121

T	D	S	DESCRIPTION
			Concrete in Roof Beam m^3
			Total girth = 129650
	129.65		
	0.23		
	0.23	6.82	
			Reinforced insitu Conc to roof beam
			(1.11:2.1.2.2)
			6.82 m^3
			Reinforcemat to Roof beam kg
			Total girth
			L = 129,650
			Less
			2 Cover 80
			2/40 129,570.
			Add lapping 10/1000 19,000
			139,570
			Add hook end 2/12/16 384
			139,954

T	B	S	DESCRIPTION
4	139.75	0.492 624	16mm ⌀ high tensile Steel as reinforcement in beams
			559.80kg
			Convert to tons
			$\frac{\Theta^2}{36} \times 0.22$
			$\frac{12^2}{36} \times 0.22$
			$= 0.88 \times 559.80$
			$= \frac{492.624}{1000}$
			= 0.492624 tons
			(1.11:33.1.4.0)
			Stirrup in roof Beam
			L = 225 W = 225
			Less
			Cover
			2/40 $\frac{80}{145}$ $\frac{80}{145}$
			145 + 145 = 290
			2/290 = 580
			Add hook end 2/12/10 240
			820

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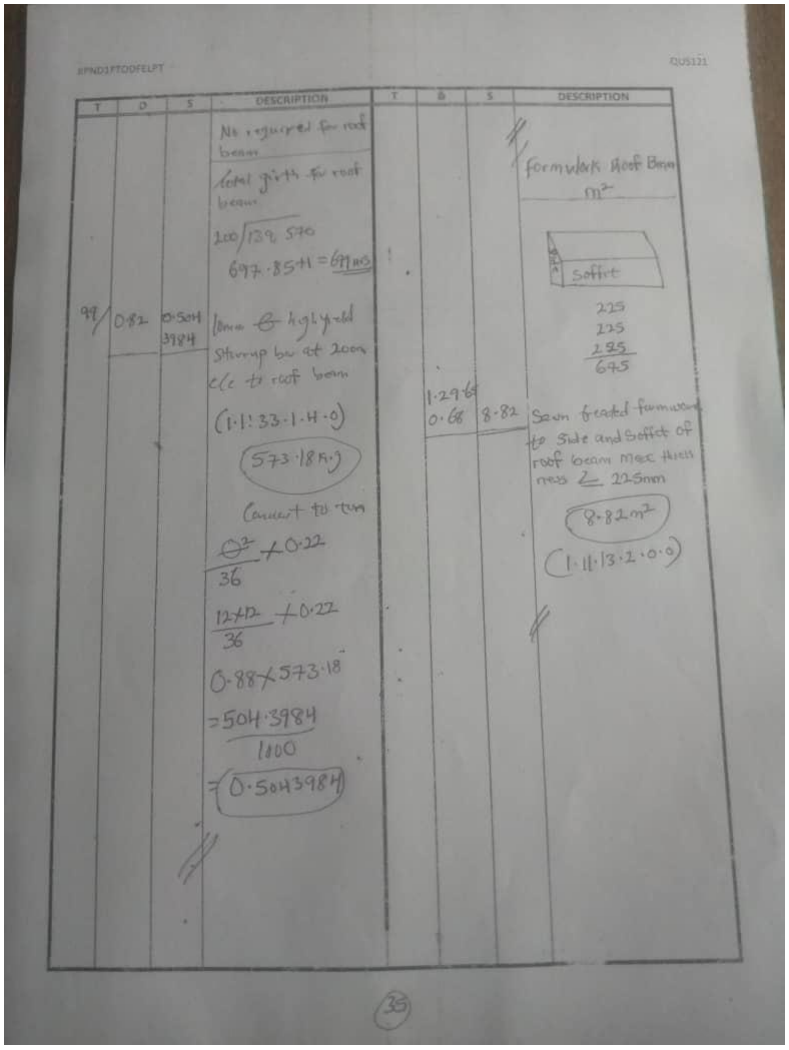


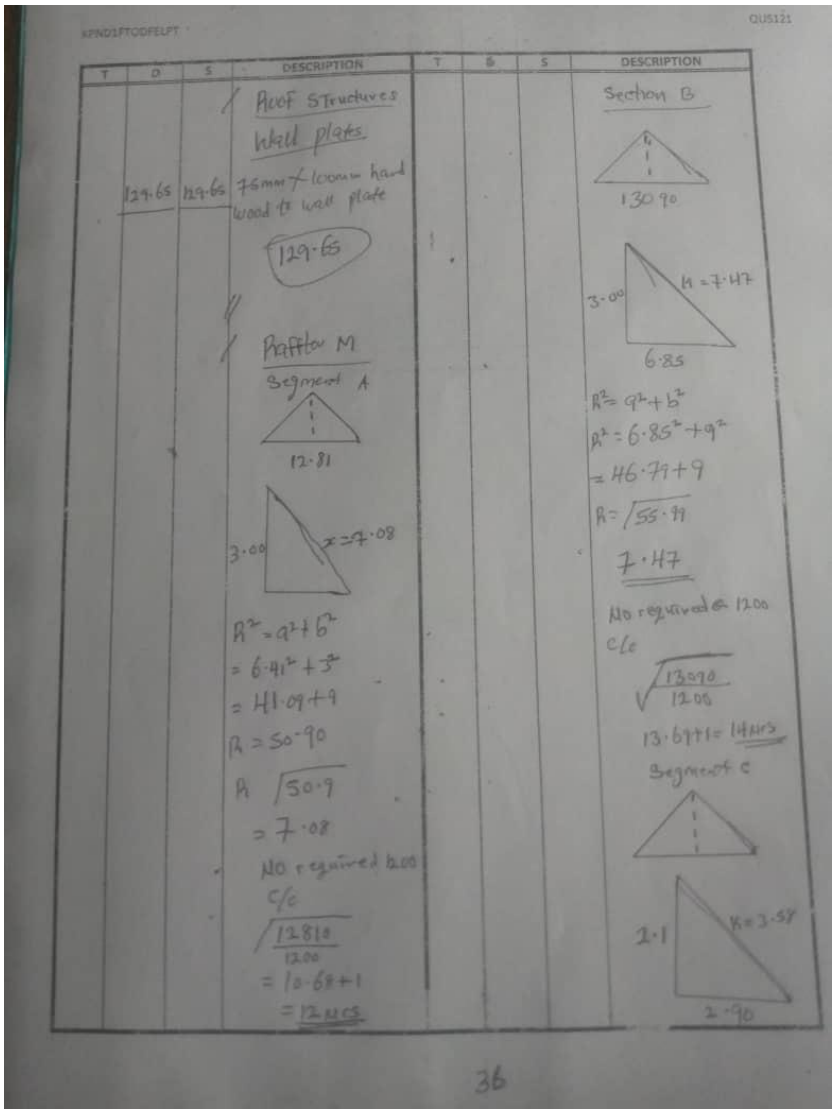
#PND1FTODFELPT

QUS121

T	D	S	DESCRIPTION
			No required for roof beam
			total girth of roof beam
			200 | 139 570
			697.85+1 = 699 nos
99	0.82	0.504 3984	16mm ϕ high yield Stirrup bar at 200m c/c to roof beam
			(1.1.33.1.H.0)
			573.18 R.)
			Convert to ton
			$\frac{0^2}{36}$ + 0.22
			$\frac{12+12}{36}$ + 0.22
			0.88 × 573.18
			= 504.3984 / 1000
			= 0.504 3984

T	B	S	DESCRIPTION
			formwork Roof Beam m²
			Soffit
			225
			225
			225
			675
1	2.96		
0.68		8.82	Sawn treated formwork to side and Soffit of roof beam Max thickness ≤ 225mm
			8.82 m²
			(1.11.13.2.0.0)

35



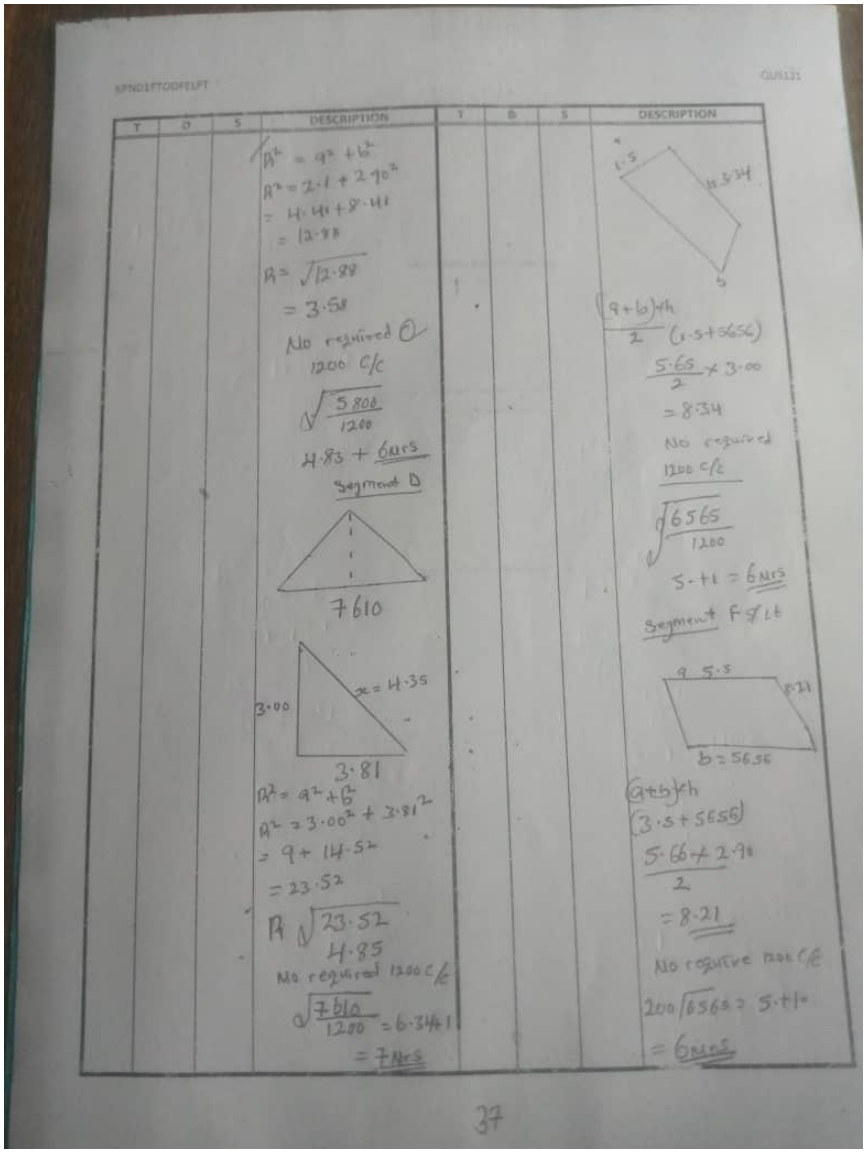
KPND1FTOOFEUFT

QUS121

T	D	S	DESCRIPTION
			Roof Structures
			Wall plates.
129.65	129.65		75mm x 100mm hard wood to wall plate
			129.65
			Rafter M
			Segment A
			12.81
			3.00 x = 7.08
			$R^2 = a^2 + b^2$
			$= 6.41^2 + 3^2$
			$= 41.09 + 9$
			$R = 50.90$
			$\sqrt{50.9}$
			$= 7.08$
			No required @ 1200 c/c
			$\frac{12810}{1200}$
			$= 10.68 + 1$
			$= 12$ NOS

T	B	S	DESCRIPTION
			Section B
			13090
			3.00, H = 7.47, 6.85
			$R^2 = a^2 + b^2$
			$R^2 = 6.85^2 + a^2$
			$= 46.79 + 9$
			$R = \sqrt{55.79}$
			7.47
			No required @ 1200 c/c
			$\sqrt{\frac{13090}{1200}}$
			$13.6771 = 14$ NOS
			Segment C
			2.1, H = 3.58, 2.90

36



KFND1FTODFELPT

GUS121

T	D	S	DESCRIPTION
			$A^2 = a^2 + b^2$ $A^2 = 2.1 + 2.70^2$ $= 4.41 + 8.41$ $= 12.88$ $A = \sqrt{12.88}$ $= 3.58$ No required 0 1200 C/C $\sqrt{\frac{5808}{1200}}$ $4.83 + 6$ Nrs Segment D 7610 3.00 $x = 4.35$ 3.81 $A^2 = a^2 + b^2$ $A^2 = 3.00^2 + 3.81^2$ $= 9 + 14.52$ $= 23.52$ $A \sqrt{23.52}$ 4.85 No required 1200 C/C $\sqrt{\frac{7610}{1200}} = 6.3461$ $= 7$ Nrs

T	B	S	DESCRIPTION
			1.5 3.34 5 $\frac{(a+b)h}{2}$ $(1.5+5.65)$ $\frac{5.65}{2} \times 3.00$ $= 8.34$ No required 1200 C/C $\sqrt{\frac{6565}{1200}}$ $5.41 = 6$ Nrs Segment F & L 9 5.5 5.21 $b = 56.56$ $(a+b)h$ $(3.5+56.56)$ $\frac{5.66 + 2.91}{2}$ $= 8.21$ No required 1200 C/C $200\sqrt{6569} = 5.41$ $= 6$ Nrs

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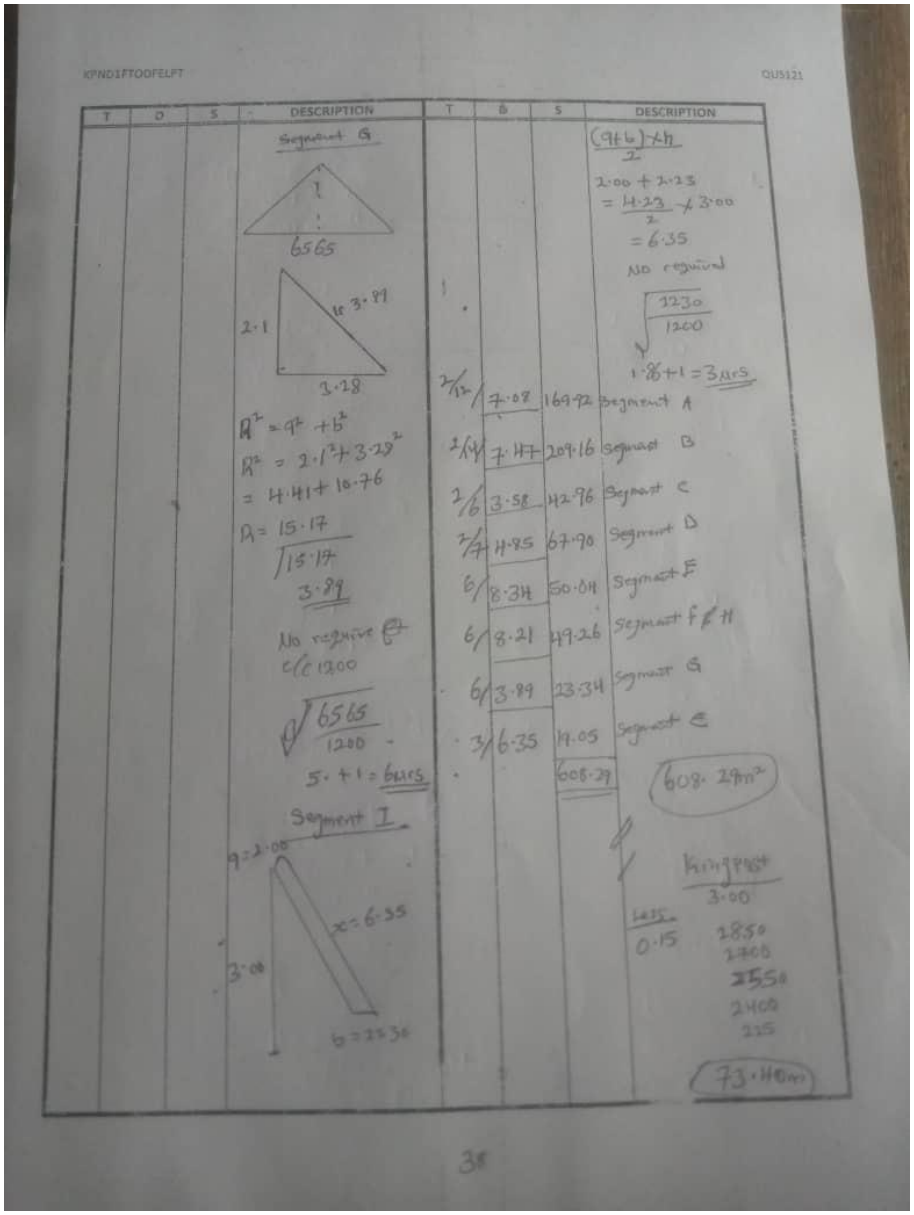

KPND1FTOOFELFT

QUS121

T	D	S	DESCRIPTION
			Segment G
			6565
			2·1
			3·28
			$R^2 = q^2 + b^2$
			$R^2 = 2.1^2 + 3.28^2$
			$= 4.41 + 10.76$
			$R = 15.17$
			15·17
			3·89
			No required
			c/c 1200
			6565 / 1200
			5 + 1 = 6 bars
			Segment I
			9 = 2·00
			x = 6·35
			3·00
			b = 2·30

T	B	S	DESCRIPTION
			(9+6) × h / 2
			2·00 + 2·23
			= 4·23 / 2 × 3·00
			= 6·35
			No required
			1230 / 1200
			1·88 + 1 = 3 bars
2/12	7·08	169·92	Segment A
2/14	7·47	209·16	Segment B
2/6	3·58	42·96	Segment C
2/7	4·85	67·90	Segment D
6/	8·34	50·04	Segment E
6/	8·21	49·26	Segment F & H
6/	3·89	23·34	Segment G
3/	6·35	19·05	Segment e
		608·29	608·29 m²
			Height
			3·00
			Less
			0·15
			2850
			2700
			2550
			2400
			225
			73·140 m

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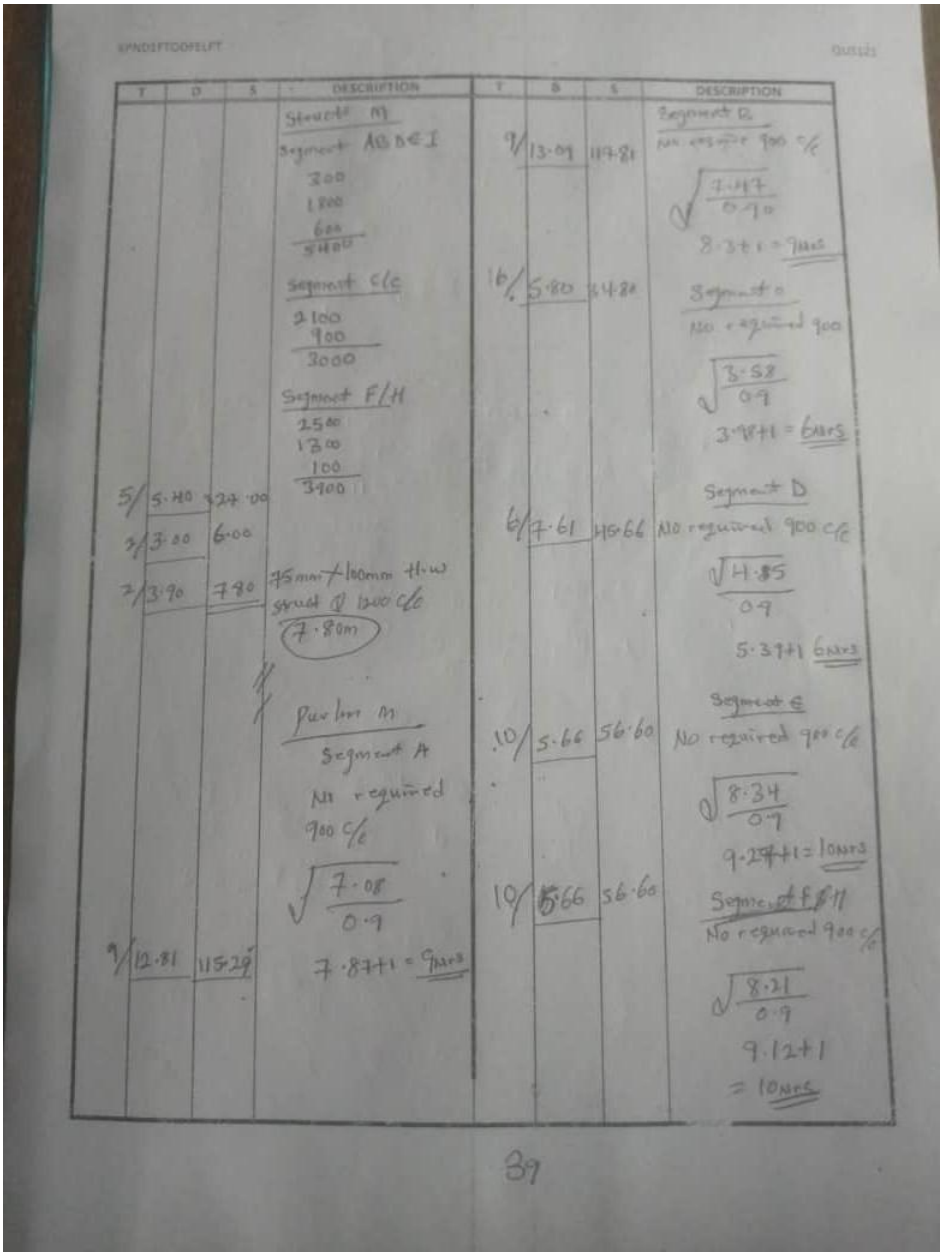

T	D	S	DESCRIPTION
			Structure M
			Segment A B C I
			200
			1800
			600
			5400
			Segment C/E
			2100
			900
			3000
			Segment F/H
			2500
			1300
			100
			3900
5/	5.40	327.00	
3/	3.00	6.00	
2/	3.90	7.80	75 max / 100mm thick strut @ 1200 c/c
			(7.80m)
			Pavilion M
			Segment A
			Nil required
			900 c/c
			$\sqrt{\frac{7.08}{0.9}}$
9/	12.81	115.29	7.87+1 = 9NOS

T	D	S	DESCRIPTION
			Segment B
9/	13.09	117.81	Nil required 900 c/c
			$\sqrt{\frac{7.47}{0.9}}$
			8.3+1 = 9NOS
16/	5.80	92.80	Segment G
			Nil required 900
			$\sqrt{\frac{3.58}{0.9}}$
			3.98+1 = 6NOS
			Segment D
6/	7.61	45.66	Nil required 900 c/c
			$\sqrt{\frac{4.85}{0.9}}$
			5.39+1 6NOS
			Segment E
10/	5.66	56.60	Nil required 900 c/c
			$\sqrt{\frac{8.34}{0.9}}$
			9.27+1 = 10NOS
10/	5.66	56.60	Segment F & H
			Nil required 900 c/c
			$\sqrt{\frac{8.21}{0.9}}$
			9.12+1
			= 10NOS

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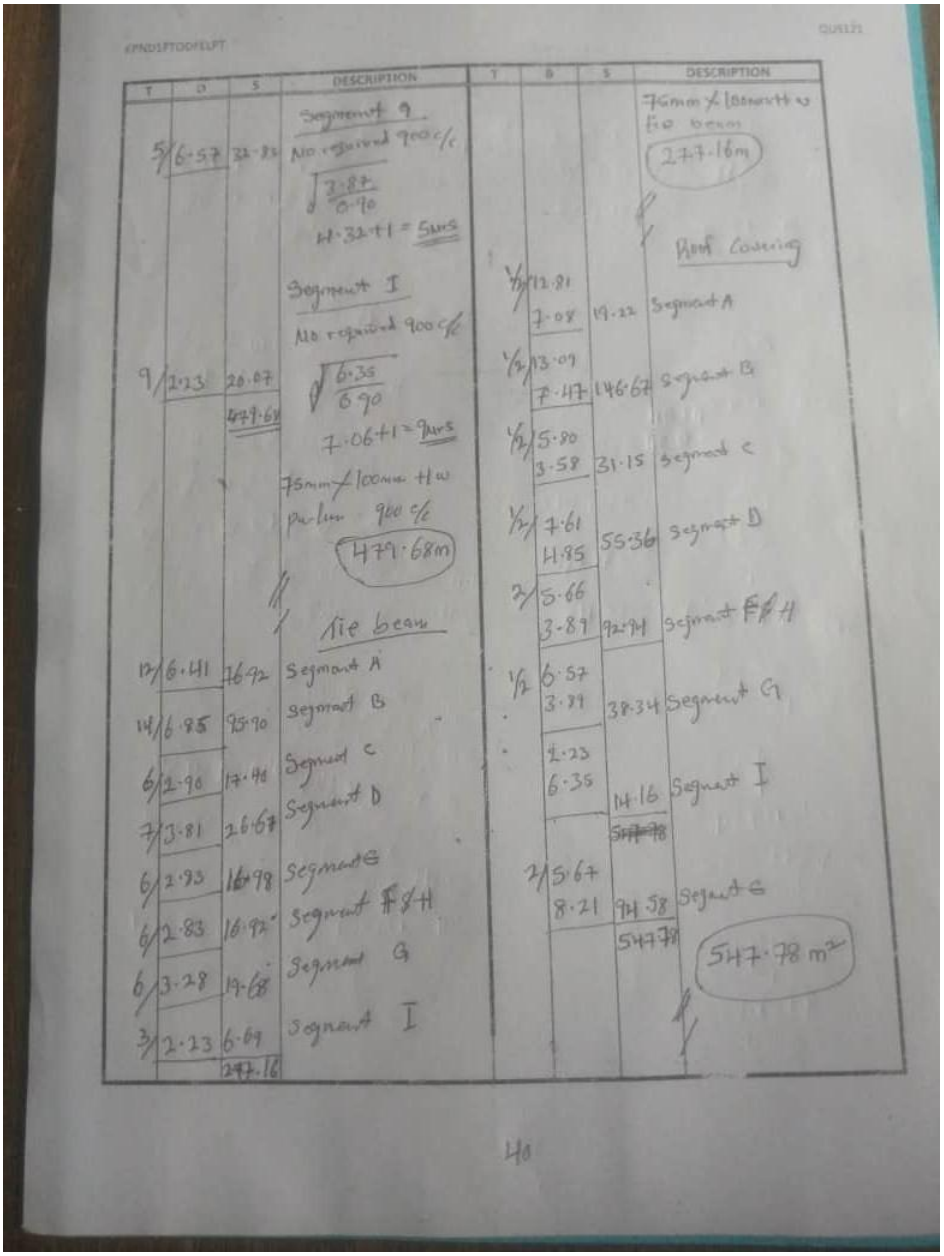
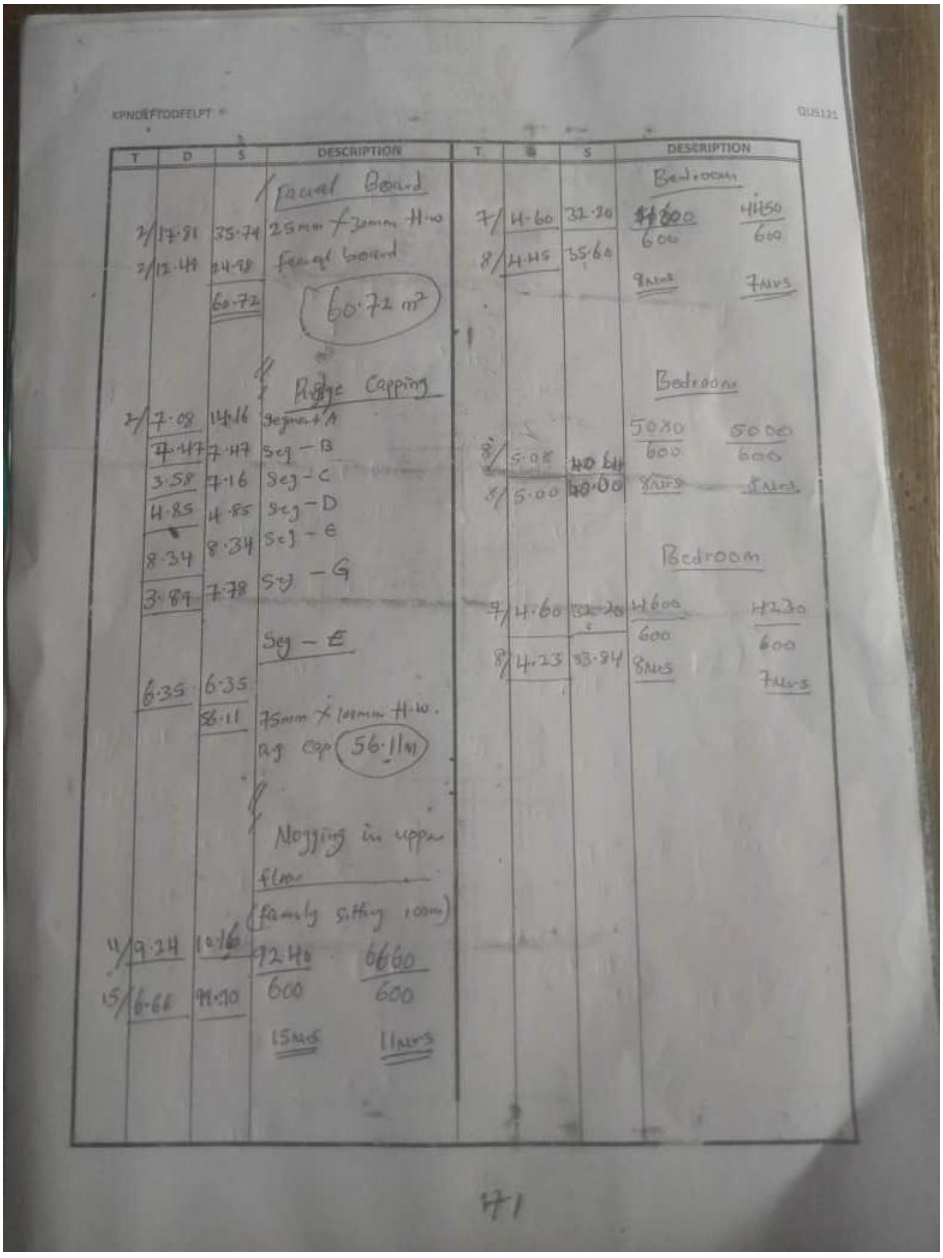


T	D	S	DESCRIPTION
			Segment 9
5/	6.57	32.85	No required 900 c/c
			2.87 / 0.90
			11.32+1 = 5nos
			Segment I
			No required 900 c/c
9/	2.23	20.07	6.35 / 6.90
		447.63	7.06+1 = 9nos
			75mm x 100mm thk w pa-lim 900 c/c
			479.68m
			Tie beam
12/	6.41	76.92	Segment A
14/	6.85	95.90	Segment B
6/	2.90	17.40	Segment C
7/	3.81	26.67	Segment D
6/	2.93	16.98	Segment E
6/	2.83	16.98	Segment F & H
6/	3.28	19.68	Segment G
3/	2.23	6.69	Segment I
		297.16	

T	B	S	DESCRIPTION
			75mm x 100mm thk w fio beam
			277.16m
			Roof Covering
1/2	12.81		
	7.08	19.22	Segment A
1/2	13.09		
	7.47	146.67	Segment B
1/2	5.80		
	3.58	31.15	Segment C
1/2	7.61		
	11.85	55.36	Segment D
2/	5.66		
	3.89	92.94	Segment F & H
1/2	6.57		
	3.89	38.34	Segment G
	2.23		
	6.35		
		14.16	Segment I
		547.78	
2/	5.67		
	8.21	94.58	Segment E
		547.78	
			547.78 m²

40

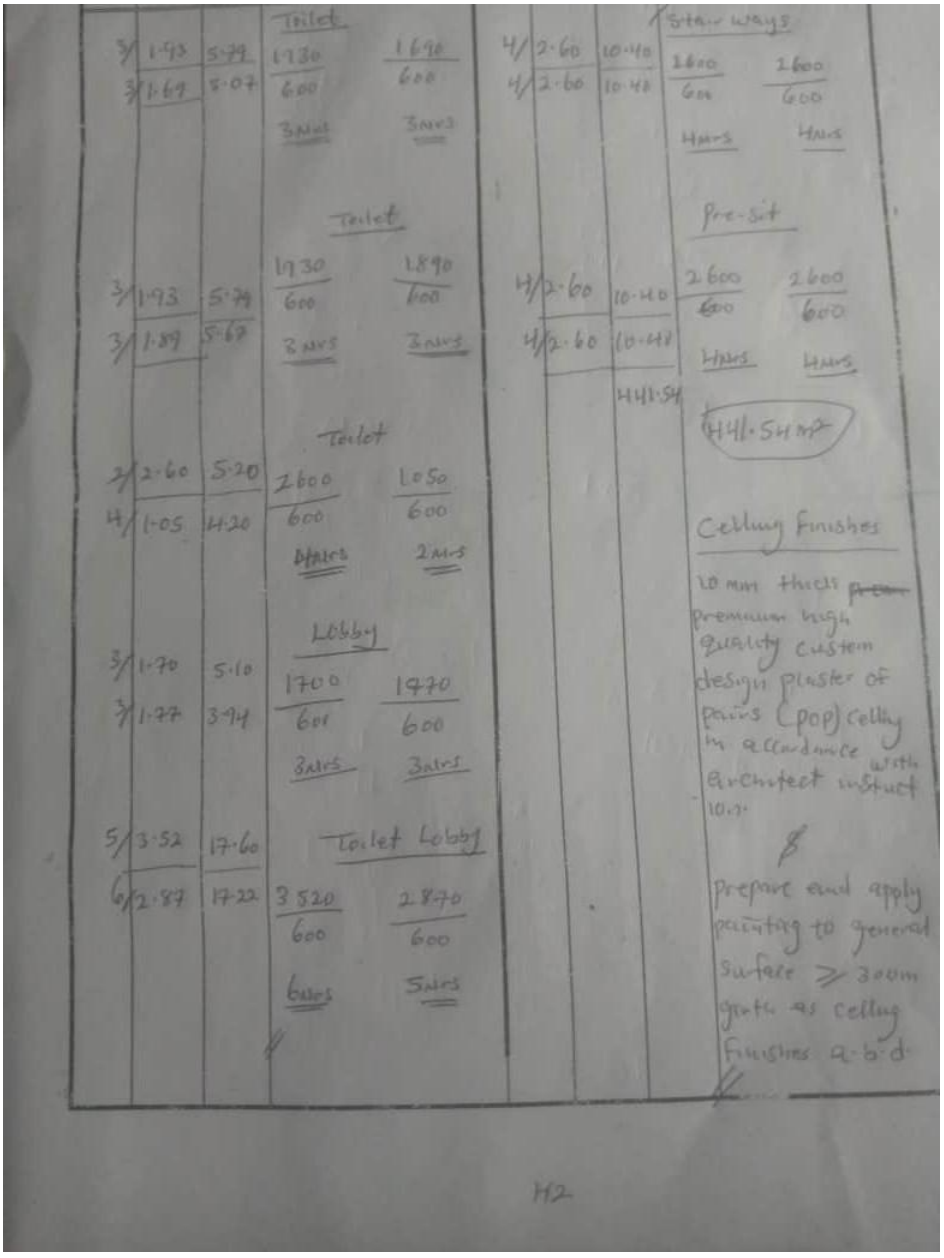


KPNDEFTODFELPT

T	D	S	DESCRIPTION
			Facial Board
2	17.81	35.74	25mm x 2mm H.w
2	12.44	24.98	facial board
		60.72	60.72 m²
			Ridge Capping
2	7.08	14.16	Segment A
	7.47	7.47	Seg - B
	3.58	7.16	Seg - C
	4.85	4.85	Seg - D
	8.34	8.34	Seg - E
	3.89	7.78	Seg - G
			Seg - E
	6.35	6.35	
		56.11	75mm x 100mm H.w.
			ag cap (56.11m)
			Nogging in upper
			floor
			(family sitting room)
11	9.24	10.16	7246 6660
15	6.66	99.90	600 600
			15nos 11nos

T	D	S	DESCRIPTION
			Bedroom
7	4.60	32.20	4600 4450
			600 600
8	4.45	35.60	8nos 7nos
			Bedroom
8	5.05	40.40	5050 5000
8	5.00	40.00	600 600
			8nos 8nos
			Bedroom
7	4.60	32.20	4600 4230
			600 600
8	4.23	33.84	8nos 7nos

471



Toilet

3/	1.93	5.79	1730 / 600	1690 / 600
3/	1.69	5.07	3 NOS	3 NOS

Toilet

3/	1.93	5.79	1730 / 600	1890 / 600
3/	1.89	5.67	3 NOS	3 NOS

Toilet

3/	2.60	5.20	2600 / 600	1050 / 600
4/	1.05	4.20	4 NOS	2 NOS

Lobby

3/	1.70	5.10	1700 / 600	1470 / 600
3/	1.77	3.94	3 NOS	3 NOS

Toilet Lobby

5/	3.52	17.60	3520 / 600	2870 / 600
6/	2.87	17.22	6 NOS	5 NOS

Stair ways

4/	2.60	10.40	2600 / 600	2600 / 600
4/	2.60	10.40	4 NOS	4 NOS

Pre-Sit

4/	2.60	10.40	2600 / 600	2600 / 600
4/	2.60	10.41	4 NOS	4 NOS

441.54

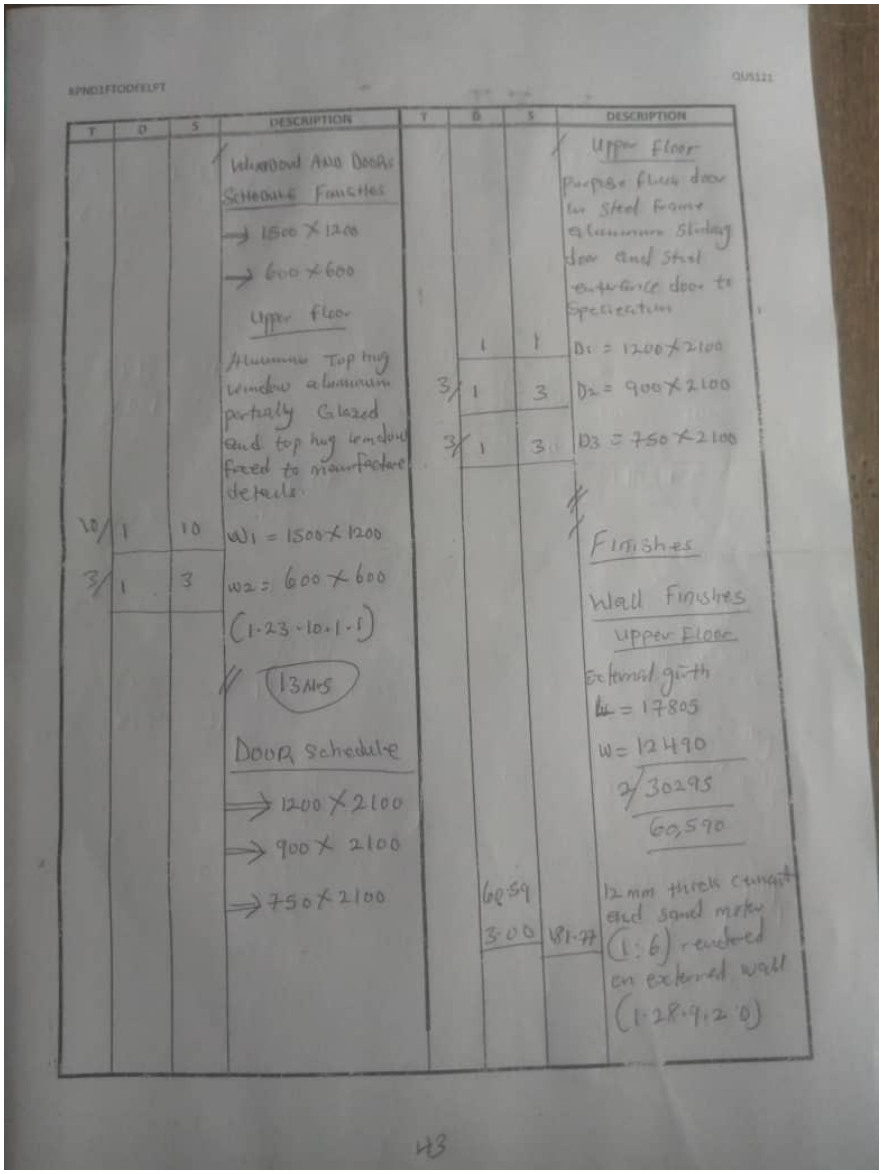
441.54 M2

Ceiling Finishes

10 mm thick premium high quality custom design plaster of paris (POP) ceiling in accordance with Architect instruct 10.1.

Prepare and apply painting to general surface ≥ 300m girth as ceiling finishes a.b.d.

M2



T	D	S	DESCRIPTION
			Lebanon And Doors Schedule Finishes
			→ 1500 × 1200
			→ 600 × 600
			Upper floor
			Aluminum Top hung window aluminum partially Glazed and top hung window freed to manufacture details.
10/	1	10	W1 = 1500 × 1200
3/	1	3	W2 = 600 × 600
			(1·23 · 10 · 1 · 1)
			// 13 NOS
			Door schedule
			→ 1200 × 2100
			→ 900 × 2100
			→ 750 × 2100

T	D	S	DESCRIPTION
			// Upper floor
			Purpose flush door in steel frame aluminum sliding door and steel entrance door to specification
	1	1	D1 = 1200 × 2100
3/	1	3	D2 = 900 × 2100
3/	1	3	D3 = 750 × 2100
			// Finishes
			Wall Finishes
			Upper Floor
			External girth = 17805
			W = 12490
			2/30295
			60,590
	60·59		12 mm thick cement and sand mortar
	3·00	181·77	(1:6) rendered on external wall
			(1·28 · 9 · 2 · 0)

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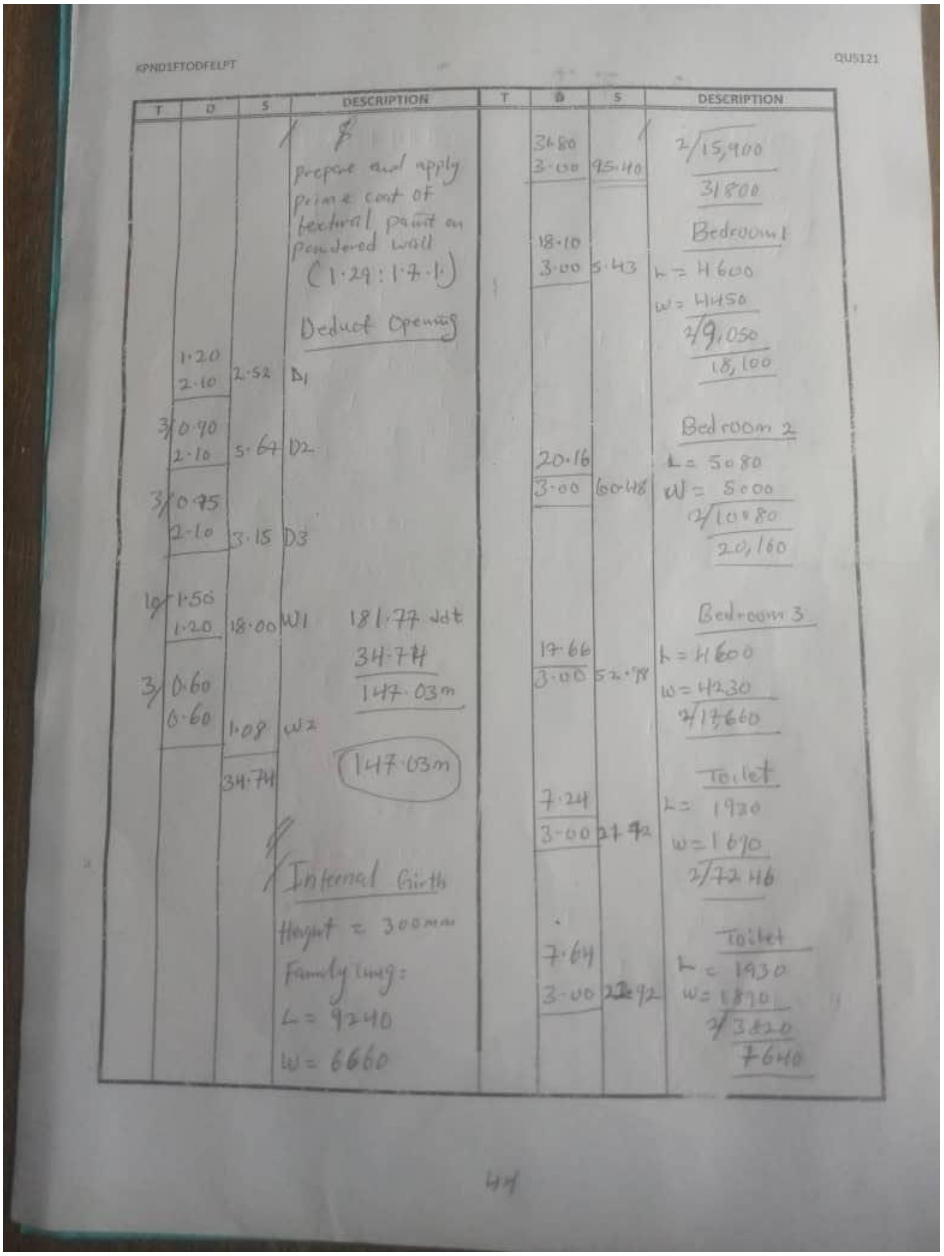
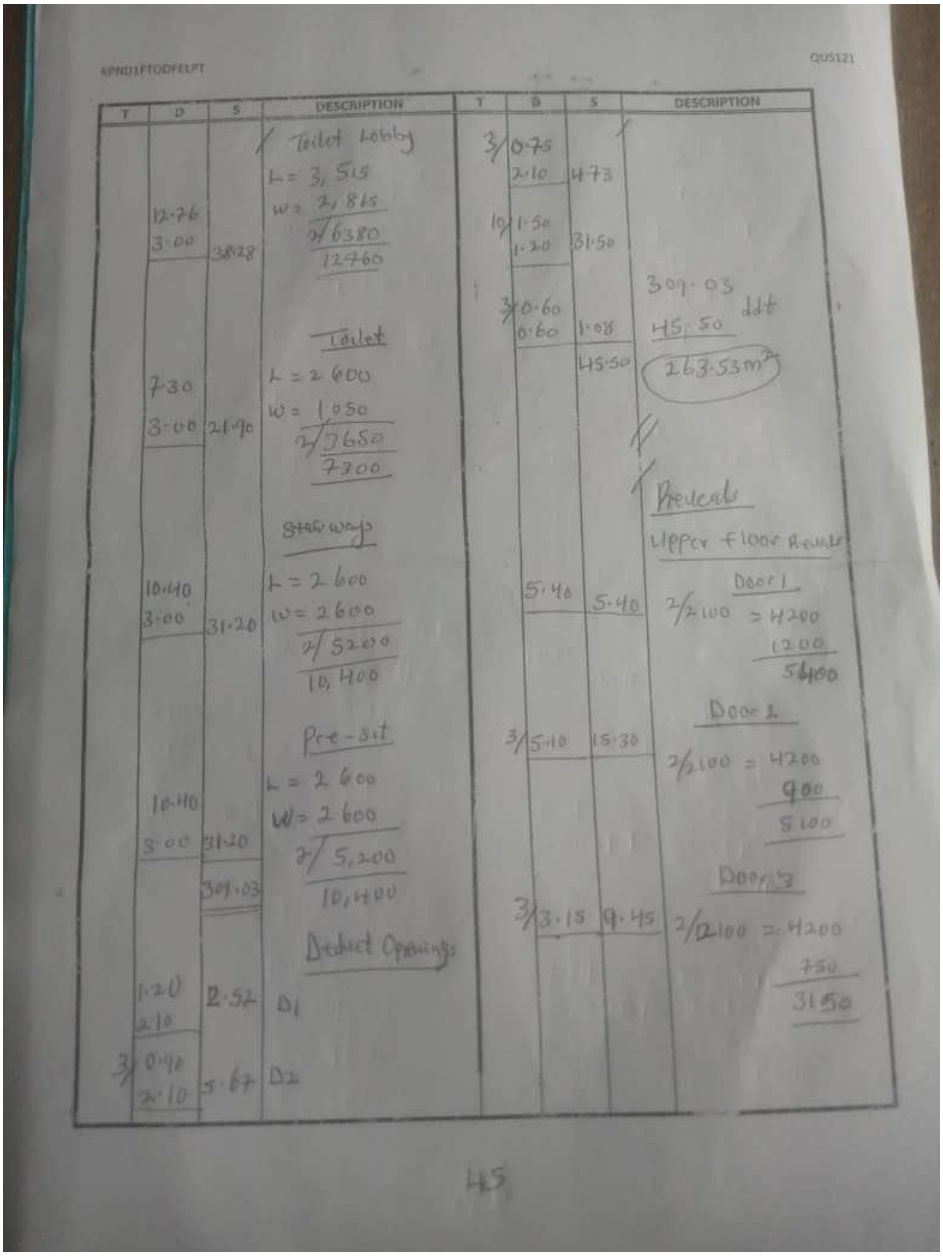


KPND1FTODFELPT QUS121

T	D	S	DESCRIPTION
			8
			prepare and apply prime coat of textural paint on rendered wall (1.29 : 1.7 : 1)
			Deduct Opening
	1.20		
	2.10	2.52	D1
3/	0.90		
	2.10	5.67	D2
3/	0.75		
	2.10	3.15	D3
10/	1.50		
	1.20	18.00	W1
3/	0.60		
	6.60	1.08	W2
		34.74	
			181.77 sqt
			34.74
			147.03m
			(147.03m)
			Internal Girth
			Height = 300mm
			Family Living:
			L = 9240
			W = 6660

T	D	S	DESCRIPTION
	31.80		
	3.00	95.40	
			2/15,900
			31800
			Bedroom 1
	18.10		
	3.00	54.3	L = 4600
			W = 4450
			2/9,050
			18,100
			Bedroom 2
	20.16		L = 5080
	3.00	60.48	W = 5000
			2/10080
			20,160
			Bedroom 3
	17.66		L = 4600
	3.00	52.98	W = 4230
			2/17660
			Toilet
	7.24		L = 1920
	3.00	21.72	W = 1670
			2/3246
			Toilet
	7.64		L = 1930
	3.00	22.92	W = 1870
			2/3820
			7640

44



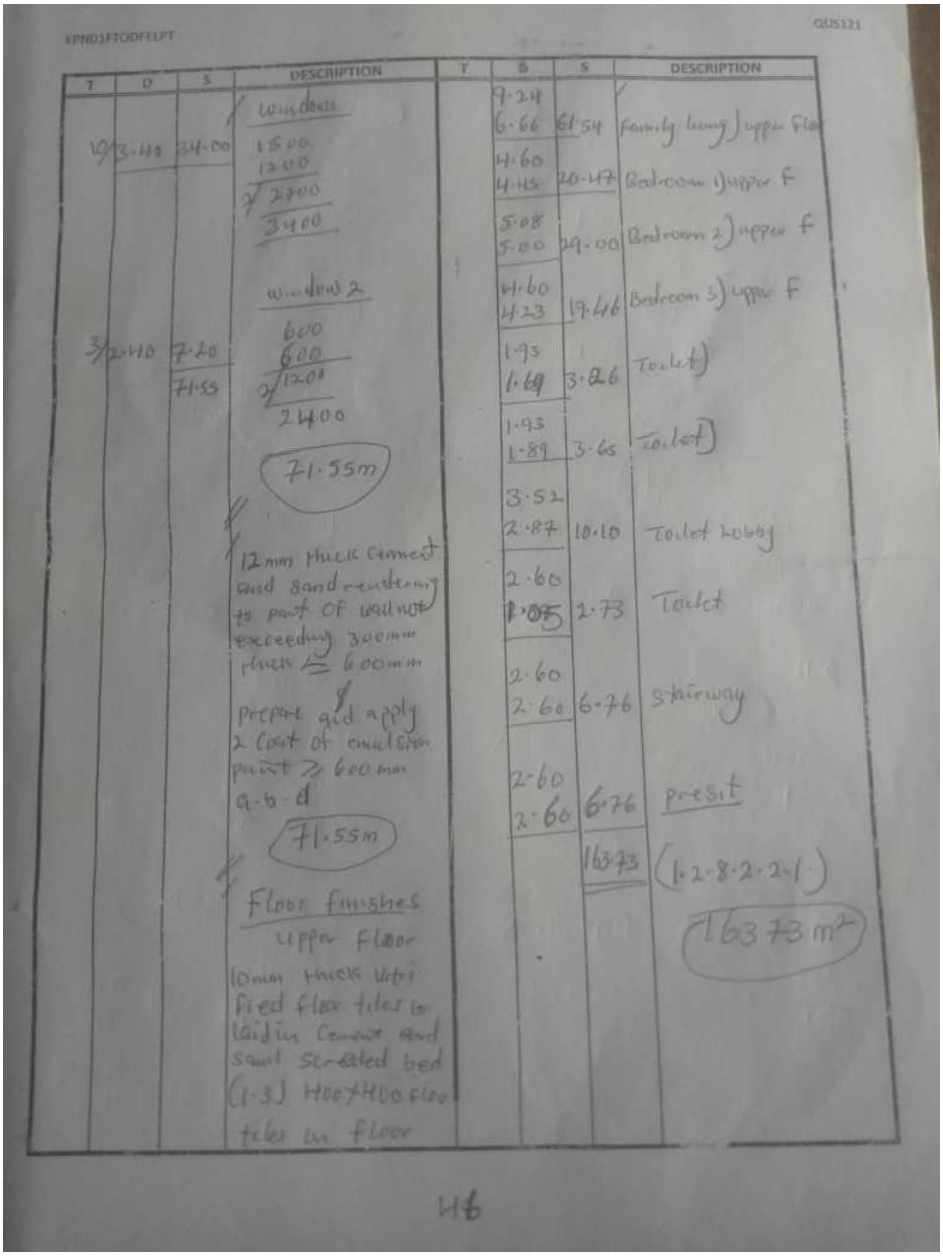
KPND1FTODFELPT

QUS121

T	D	S	DESCRIPTION
			Toilet Lobby
			L = 3, 515
			W = 2, 865
	12.76		2/6380
	3.00	38.28	12760
			Toilet
	7.30		L = 2 600
			W = 1 050
	3.00	21.90	2/3650
			7300
			Stair way
	10.40		L = 2 600
	3.00	31.20	W = 2600
			2/5200
			10, 400
			Pre-Sit
	10.40		L = 2 600
	3.00	31.20	W = 2 600
			2/5,200
		309.03	10,400
			Deduct Openings
	1.20	2.52	D1
	2.10		
3	0.90	5.67	D2
	2.10		

T	D	S	DESCRIPTION
3	0.75		
	2.10	4.73	
10	1.50		
	1.20	31.50	
3	0.60		
	0.60	1.08	
		45.50	
			309.03
			45.50 dd
			263.53m²
			Precast
			Upper Floor Precast
	5.40	5.40	Door 1
			2/2100 = 4200
			1200
			5400
			Door 2
3	5.10	15.30	2/2100 = 4200
			900
			5100
			Door 3
3	3.15	9.45	2/2100 = 4200
			750
			3150

45



KPND1FTODFELPT

QUS121

T	D	S	DESCRIPTION
			Windows
19	3.40	34.00	1500
			1200
			2700
			3400
			window 2
			600
3	2.40	7.20	600
		71.55	1201
			2400
			71.55m
			12mm thick cement and sand rendering to part of wall not exceeding 300mm thick = 600mm
			prepare and apply 2 Coat of emulsion paint = 600 mm a.b.d
			71.55m
			Floor finishes
			upper Floor
			10mm thick vitrified floor tiles to laid in Cement and sand screeded bed (1:3) 400x400 floor tiles in floor

T	B	S	DESCRIPTION
	7.24		
	6.66	61.54	Family living) upper Flo
	4.60		
	4.45	20.47	Bedroom 1) upper F
	5.08		
	5.00	29.00	Bedroom 2) upper F
	4.60		
	4.23	19.46	Bedroom 3) upper F
	1.93		
	1.69	3.26	Toilet)
	1.93		
	1.89	3.65	Toilet)
	3.52		
	2.87	10.10	Toilet Lobby
	2.60		
	1.05	2.73	Toilet
	2.60		
	2.60	6.76	Stairway
	2.60		
	2.60	6.76	presit
		163.73	(1.2.8.2.2.1.)
			163.73 m²

46

BILLS OF QUANTITIES FOR THE PROPOSED PROJECT OF FOUR BEDROOM DUPLEX AT ONI 25, ONILETE QUARTER'S IKO OSUN STATE

ABSTRACTING SHEET

SUBSTRUCTURE (ALL ~~PROVISIONAL~~)

EXCAVATION AND EARTH WORK

Item		
	Plants	
	Allow for brining into site all plant required and subsequently removal of the plant from site for all section of work	
	Item	(
	Allow for maintainmy On Site all neccessary plants.	
	Item	
m^2	Site preparation	
	Clear site of bushes and tress Strup grass up their root	
	450.00m^2	450m^2
		42

m^2	Top soil Excavation	
	Excavate Vegetable top Soil average deep 150mm thick and dispose of site	
	210.27m^2	210m^2
m^3	Disposal	
	Deposite and excavate material 150mm deep top soil average deep n.e 200mm non harzadous material max distanle 150m away from site	
	31.50m^3	32m^3
m^3	Trench Excavation	
	Excavation of foundation trench 1.2m deep starting from strip level max depth n.e 2m deep off away from site	
	7.81m^3	8m^3

m³ Pit Excavation

Excavate foundation pit width >0.30m max depth >1.00m Commencing from strip level

46.66m³ (47m³)

m² BLOCKWORK

450x225x225mm hollow Sandcrete block laid on stretcher bond with C&S mortar (1:4) with plain Conc. (1:4:8-38mm agg bedded and jointed against each other

93.34m² (93.34m²)

m³ CONCRETE

Concrete in Foundation

Plain-Insitu Concrete (1:4:8-21mm agg mixed and poured on or against the earth in foundation

3.03m³ (3.03m³)

m³ Concrete in pit

Plain-Insitu Concrete (1:4:8-21mm agg mixed and poured on or against the earth in foundation

1.73m³ (2m³)

m³ Concrete in Column base

Reinforced in-situ Conc (1:2:4-19mm agg mix poured on or against blinded earth in Column base

10.37m³ (10.37m³)

Kg REINFORCEMENT

Reinforcement in Column base

12mm Θ high yield reinforcement bar in Column base

483.8Kg x 0.888

429.65Kg

(430Kg)

Kg Reinforcement in Column

12mm Θ high yield reinforcement bar in Column base

170.88 x 0.888

151.74kg

(152Kg)

Kg Stirrup

8mm Θ high yield reinforcement bar as stirrup in Column.

129.36 x 0.394

50.97

(51Kg)

43

m

FORM WORK

Form work to Column base

Sawn formwork to Sides of Column base exceeding 300mm high

115.20m

115.20m

m²

Form work to Colums

Sawn form work to sides of Column not exceeding 225mm thick

21.60m²

22m²

m

Form work to edges of block

Sawn form-work to provide Smooth finish to edges of bed not exceeding 250mm high

57.45m

58m

Form work to Earth work Support

Earth work support to fales of excavation max depth ≤ 1.00m distanle btw opposing fales ≤ 2.00m

97.82m²

98m²

44

SURFACE TEATMENT

Prepare & apply herbricide diedrex 20 to bottom & Side of excavation

195.65m²

196m³

Laterite Filling

Imported laterite filling bedover 50mm thick but not exceeding 500mm deep Slopping not exceeding 15° from horizontal maximum or average depth of layers finish. thickness stated.

57.04

57.04m³

Hard Core filling

Imported lateriate filling bedover 50mm thick but not exceeding 500mm deep Slopping not exceeding 15° from horizontal maximum or average depth of layers finish thickness stated.

32.01

32.01m³

Damproofing membance

Two layers of d.p.m of polythin sheet on filling

197.81m²

197.81m²

m²

BRC Fabric Mesh

BRC Fabric mesh reinforcement BS449 ref. A252 weighting 3.95kg lm^2 laid in Conc. floor Slab

184.17 (184.17m^2)

m³

Oversite Concrete

Plain - In Situ Concrete (1:3:6-19mm agg mix) poured on hardcore

29.53m^3 (30m^3)

m²

FINISHING

External Rendering to block

14mm thick (cl S mortar (1:3) rendered on foundation wall

47.68m^2 (48m^2)

m²

Painting

3 Coats of textured paints on rendered wall

47.68m^2 (48)

PROTECTION

Allow For protecting all work to be Carryout.

(Item)

45

SUPER STRUCTURE

GROUND FLOOR

Block work

450X225X225mm hollow Sandcrete block bedd and jointed with Cement and Sand mortar (1:6) laid in stretcher bond.

247.49m² (248m²)

Concrete in Lintel

Reinforced in-situ Concrete (1:2:4) to Lintel

1.63m³ (2m³)

Renforcement in Lintel

12mm ⌀ high yield reinforcement bar in Lintel

136.52 X 0.888

121.23 (121.23kg)

Form work to lintel

Sawn treated form work to sides and soffit of Lintel in ground floor dimension 225mm X225mm

14.06m² (15m²)

Kg

STIRRUP IN LINTEL

10mm ⌀ high yield reinforcement bar as stirrup to lintel

142.68kg (143kg)

m³

CONCRETE

Concrete to Column

Reinforced in-situ - Conc. [1:2:4 - 19mm agg mix] poured to Columns

3.81m³ (4m³)

Form work to Column

Form-work to Column max depth exceeding 3000m high from ground level

64.8m² (65m²)

Renforcement to Column

16mm ⌀ high yield reinforcement bar in Column

331.2kg

X 1.578

522.63kg (523kg)

46

Kg

Stirrup to Column

10mm ⌀ mild steel reinforcement bar as stirrups reinforcement to Column

252.00 × 0.616

155.23kg

155.23kg

m^3

CONCRETE

Concrete in beam

Reinforced In-situ Concrete to beam

12.11m^3

12.11m^3

Kg

Reinforcement to beam

16mm ⌀ high tensile steel as reinforcement in beam

512.64 × 1.578 = 808.95

80.9kg

Stirrup to beam

10mm ⌀ high yield stirrups bar at 200m c/c to beam

812.88 × 0.616

500.68

501kg

m^2

Form work to beam

Sawn treated formwork to side and soffit of beam max thickness ≤ 225

133.18m^2

134m^2

m^3

CONCRETE

Concrete in Suspended Slab

plain - In-situ Concrete C1:3:6 -19mm agg mix] poured on reinforcement bar

29.53m^3

30m^3

Reinforcement in suspended slab

16mm ⌀ high yield reinforcement bar to suspended slab

2.03 × 1.578

3.20kg

3.20kg

Formwork to Suspended Slab

Sawn treated form work to the sides and ~~soffit of~~ Conc. in Suspended Slap

254.27m^2

254.27m^2

47

WINDOW SCHEDULE FINISHES

Aluminum Top Hung window, Aluminum partially Glazed and top Hung window fixed to manufacture details

Size 1500 X 1200

(19NOS)

Aluminum Top Hung window, Aluminum partially Glazed and top Hung window fixed to manufacture details

Size 600X 600

(2NOS)

DOOR SCHEDULE FINISHES

Purpose flush door in steel fram Aluminum sliding door and steel entrance door to Specification

1200X 2100

(1NOS)

Purpose Flush door in steel fram Aluminum Sliding door and steel entrance door to Specification 900X 2100

(4NOS)

Purpose flush door in steel fram Aluminum sliding door and steel entrance door to Specification 750X 2100

(2NOS)

REVEALS

12mm thick Cement and sand rendering to part of wall not exceeding 300mm thick < 600mm

Prepare and apply 2Coat of emulsion paint > 600mm girth

67.70m (68m)

FINISHES

Wall Finishes

12mm thick Cement and sand Mortar (1:6) rendered on External wall.

142.2m² (142.2m²)

painting

prepare and apply prime Coat and 2Coat of textural paint on rendered wall

142.2m² (142.2m²)

m2 INTERNAL FINISHING

12mm thick Cement and Sand Mortar (1:6) rendered on Internal wall 295.23 (295.23m²)

m² Painting

Prepare and apply prime Coat and 2 Coat of textural paint On rendered wall

295.23m² (295.23m²)

m² FLOOR FINISHES

10mm thick Vitrified floor tiles laid in Cement and Sand Screeded (1:3) 400×400×8 Floor tiles on floor

76.93m² (77m²)

m² CEILING FINISHES

Ground floor

10mm thick premium ~~High~~ quality Custom designed plaster of paris (POP) Ceiling in accordance with architect instruction

76.93m² (77m²)

49

PROTECTION

Allow for protection of all work in this Section including the workes on Site

Item

m³

BLOCK WORK

UPPER FLOOR

450 X 225 X 450mm hollow Sandcrete block bedded and jointed with Cement and Sand mortar (1:6) laid in Stretcher bond.

304.75m² (305m²)

m²

CONCRETE

Concrete in lintel

Reinforced in-situ Concrete (1:2:4) to lintel

1.77m² (2m²)

Kg

REINFORCEMENT

Reinforcement in lintel

12mm ⌀ high yield reinforcement bar in lintel

144.6kg X 0.888

128.40 (128.40kg)

Kg

Stirrup

10mm ⌀ high yield reinforcement bar stirrup to lintel

138.58Kg X 0.616

85.36kg (85.36kg)

FORMWORK

Formwork to lintel

Sawn treated formwork to sides and soffit of lintel in upper floor dimension 225mm X 225mm

15.49m² (16m²)

m³

CONCRETE

Concrete in Column

Reinforced in-situ Concrete (1:2:4 - 19mm agg max)

3.81m³ (4m³)

FORMWORK

Formwork to Column

Sawn Form work to Column d max depth exceeding 300m high from Ground level.

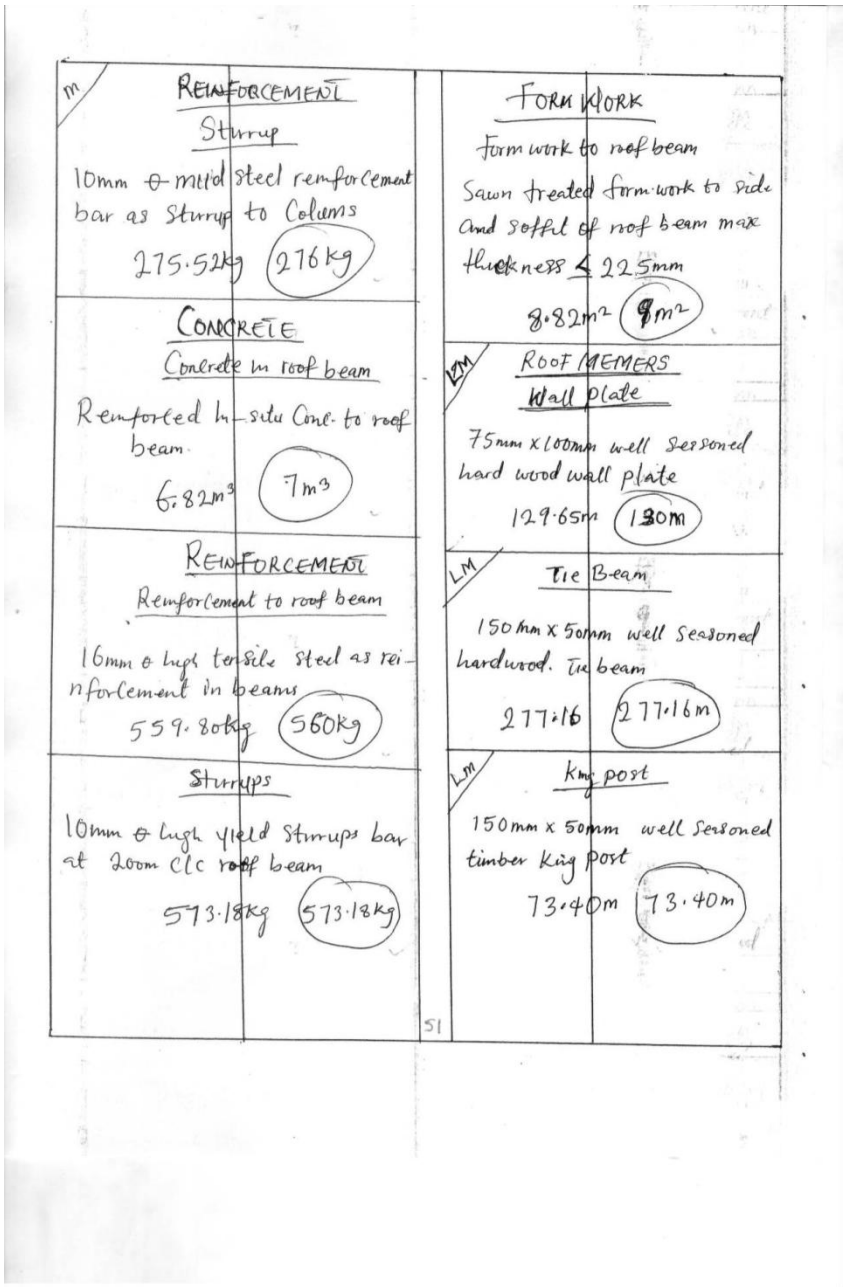
64.80m² (65m²)

REINFORCEMENT

Reinforcement to Column

16 mm ⌀ high yield reinforcement bar in Colum 320.64kg

(321kg)



m

REINFORCEMENT

Stirrup

10mm ϕ mild steel reinforcement bar as Stirrup to Colums

275.52kg (276kg)

CONCRETE

Concrete in roof beam

Reinforced in-situ Conc. to roof beam.

6.82m³ (7m³)

REINFORCEMENT

Reinforcement to roof beam

16mm ϕ high tensile steel as reinforcement in beams

559.80kg (560kg)

Stirrups

10mm ϕ high yield Stirrups bar at 200m c/c roof beam

573.18kg (573.18kg)

FORM WORK

Form work to roof beam

Sawn treated form work to side and soffit of roof beam max thickness ≤ 225mm

8.82m² (9m²)

LM

ROOF MEMERS

Wall plate

75mm x 100mm well seasoned hard wood wall plate

129.65m (130m)

LM

Tie Beam

150mm x 50mm well seasoned hardwood. Tie beam

277.16 (277.16m)

Lm

King post

150mm x 50mm well seasoned timber king post

73.40m (73.40m)

51

m

Structs

100mm x 50mm well seasoned treated hardwood timber structs at 1200 c/c

7.80m (8m)

m²

Roof Covering

0.7 guage long span aluminium roofing sheet fixed to roof Covering

547.78m² (548m²)

m²

Rafter

150mm x 150mm well seasoned hardwood Rafter 1200 c/c

608.29m² (608.29m²)

NOGGINS

External Noggins

60x60mm Noggins treated hard wood

761.2m

Internal nogging

60x60mm noggins treated hardwood

441.54m² (442m²)

Lm

Purlins

75mm x 100mm hardwood timber purlin

20.07 (20m)

Lm

Ridge Capping

150mm x 150mm hardwood timber ridge capping

56.11m (56.11m)

CEILING FINISHES

UPPER FLOOR

10mm thick premium high quality Custom designed plaster of paris (POP) Ceiling in all Ordance with architect instruction

441.59 (442m²)

Lm

Fascial board

300mm x 25mm hardwood fascial board

60.72m (61m)

52

WINDOW AND DOORS SCHEDULE

UPPER FLOOR

Aluminium Top Hung window

Aluminium partially Glazed and top Hung window fixed to manufacture details

1.500X1.200 (10NO) 600X600 (3N)

DOORS

purpose flush door in steel frame aluminium Sliding door and steel entrance door to Specification

1200X2100 (1NO)

900X900 (3NOS)

750X2100 (3NOS)

FINISHES

EXTERNAL

12 mm thick Cement and Sand mortar (1:6) rendered on External wall

Prepare and apply prime coat and Coat of textural paint on rendered wall (147.03m)

53

INTERNAL

12mm thick Cement and Sand mortar (1:6) rendered on Internal wall

Prepare and apply prime Coat and Coat of textural Paint on rendered wall

263.53m² (264m²)

REVEALS

12 mm thick Cement and Sand rendering to part of Wall not exceeding 300mm thick < 600m 71.55m (72m)

Pantry

Prepare and apply 2 Coat of emulsion paint > 600mm a.b.d

71.55m (72m)

m²

FLOOR FINISHES

UPPER FLOOR

10mm thick Vitrified floor tiles laid in Cement and Sand screeded bed (1:3) 400X 400X 8mm floor tiles on floor

163.73m² (164m²)

Item

PROTECTION

Allow for protection of all work in this Section including the works on Site

Item

54

ANUNPRICEDBILLOFQUANTITIESFORPROPOSEDFOUR(4)BEDROOMDUPLEX FOR Dr. MUHAMMED BASHIR KOLAWOLE

Item	Description	Qty	Unit	Rate	Amount
	ELEMENTNR				
	SUB-STRUCTUREFORPROVISIONAL)				
A	**PLANT**		Item		
B	**Maintenance**				
	Allowanceformaintenanceofallplantinthissection		Item		
	ExcavationandEarthwork				
C	Clearsallbushes,shrubs,undergrowthandgrubup Rootsincludingcuttingdownsmalltreesanddisposed off-Site	450	m^2		
D	Excavatevegetabletopsoilaveragedepth150mmdeep	210	m^2		
E	Disposeandexcavatematerial150mmdeeptopsoilaverage deep n.e 200mm non harzadous material max. distance 150mmawayfromsite	32	m^3		
F	Excavatetrenchstartingfromoriginalgroundlevel Maximumdepthnotexceeding1.5m	8	m^3		
	PitExcavation				
G	Excavatefoundation pitexcavation depth>0.30maximum 5mdepth>1350commencingfromstriplevel	47	m^3		

	Earthworksupport				
H	Earthworksupporttofacesofexcavationmaxdepth1.00m distancebetweenopposingfaces2.00m	98	m^2		
	Hardcorefilling				
J	300mmapprovedhardcorefillingmakinguplevels depositedandcompactedin300mm layers	32	m^3		
K	Dittotolateritefilling150mmthick	57	m^2		

Item	Description	Qty	Unit	Rate	Amount
	LevelingandCompacting				
A	Levelandcompactbuttoofexcavationofreceiveconcrete	100	m^2		
B	**SurfaceTreatment**				
	Prepareandapplyherbicidesattermitesolutiontosurface And sides of excavation	198	m^3		
C	**Concretework**				
	Plainconcrete(1:10)at				
	50mminblinding	3	m^3		
	Reinforceintoconcrete(1:2:4)in:-				
D	DittoinColumnbase	10	m^3		
E	Rienforedinsituconcrete1:2:4mix19mmaggincolumn Base poured against the earth	2	m^3		
F	Bed(oversiteconcrete)	30	m^3		
	95				
	PAGE2TOCOLLECTION				

Item	Description	Qty	Unit	Rate	Amount
	Plaininsituconcrete(1:3:6–19mm)Aggregatein:-				
	Foundation concrete not exceeding 230mm thick	3	m^3		
A	**Reinforce**				
	High tensile rod reinforcement to national industrialstandard'1988'purchasedinstandardLengthcut andbent on site in:				
	12mm diameter in column base	430	Kg		
B	12mmdiametercolumnincolumn	152	Kg		
C	8mmdiameterstirrupsincolumn	51	Kg		
D					
	Formwork				
	Formworktoproducesmoothsurfacetobeandfoundation				
	Sidesofcolumnbasesplainverticalheight300m Sides of columns	115	m^2		
E	Toedgesofbednotexceeding250m	22	m^2		
F	**BlockWork**	58	m^2		
G	450 x 230 x 230mm hollow sandcrete block approved manufacturer laid in stretcher bond keyed both edges in cementandsandmortarincludefillinghollowwithweak concrete	93	m^2		
F	Dittodampproofmembrane	197	m^2		
	PAGE3TOCOLLECTION				

Item	Description	Qty	Unit	Rate	Amount
	Finishing				
	CementandSand(1:4mix)in:-				
A	14mmthickrenderingonblockworkexternally	48	m^2		
B	Prepareandapplyprimecoatand3coatsoftexturepaint on rendered wall	48	m^2		
C	**PAGE4SUB-STRUCTURECARRIEDTO SUMMARY**				

Item	Description	Qty	Unit	Rate	Amount
	SUPER STRUCTURE				
	ELEMENT				
	NR2FRAMEWORKGENERAL				
A	**LY**		Item		
	The contractoris refused to all architectural andstructural Drawingsfordetailsofthisnatureandcontextofthework To be executed in this section				
	Plant				
B	Allow forbringing in to and removing from it all Necessaryplantsrequiredforthissectionofwork				
	ConcreteWorks				
	Vibrated reinforced in situ concrete(1:2:4–19mmaggregate)fieldaroundreinforcement(bothmeasuredseparately) in:-				
		4			
C	Column	12	m^3m		
D	Reinforcedinsituconcretetoisolatedbeammaximum Thickness not exceeding		3		
		2			
E	Lintel	30	m^3m		
F	Inslab		3		
G	**Reinforcement**				
	HightensileandreinforcementtoNIS11/1988asbefore described	523	Kg		
A	12diameterincolumn	809	Kg		
B	12mmdiameterinbeam				

C	12mmhightensileyieldreinforcementbarlaidstraightand bent in lintel	121	Kg		
D	16mmhightensileyieldreinforcementbarlaidstraightand bent in slab				
E	10mmdiameterlinkincolumn	155	Kg		
F	10mm diameter link in beam	501	Kg		
G	10mm diameter link in lintel	143	Kg		
H	10mm diameter link in slab				
	Formwork				
	Sawntreatedformworktoproducesmoothsurfaceto:				
A	Sidesofcolumn to beam	65	m^2		
B	Inlintel(externalandinternal) to	134	m^2		
C	suspended slab	15	m^2		
D	Toedgesofslab	254	m^2		
	PAGE10CARRIEDTOSUMMARY				

Item	Description	Qty	Unit	Rate	Amount
	ELEMENTNR3				
	EXTERNALANDINDUSTRIALWALLS				
	ConcreteWorks				
	Vibrated reinforced in situ concrete(1:2:4–19mm)aggregatefilledintoformworkandwellpacked				
A	Reinforcedinsituconcereteasbeforedescribedincoping	2	m^3		
	Formwork				
	Sawnformworktoproducesmoothsurface to:-				
B	Sawnformworktosidesandsoftofcoping	22	m^2		
	Blockwork				
	Hollowsandcreateblocknormalsize450mmx230mm				
C	230walls	385	m^2		
	PAGE3BLOCKWORKTOSUMMARY				

Item	Description	Qty	Unit	Rate	Amount
	ELEMENTNR4				
	STAIRHALL				
	ConcreteWorks				
	Reinforcedinsituconcrete1:2:419mmagg.Mixin sloppywork≤300mmthickinstaircasepouredagainst ≥150				
		2	m^2		
A	Staircase				
	Finishestostaircase				
	25mmthickcementandsand(1:4)plainrenderingfinishes Trowelledsmoothtostaircaseexceeding600mmwidth				
	Prepareandapply2costofemulsionpainton:-				
	300mmgirthonrenderedwalltothesloppingwork				
	Formwork				
		11	m^2		
B	**Sawnformworktoproducesmoothsurface to:-**				
	Toallstaircase				
		11	m^2		
	Reinforcement				
	12mmreinforcementbarlaidstraightinstairandbent toNIS11/1988asbeforedescribe				
		64	m^2		
	Tostairhall				
C	Linkandstirrupstostairhall				
	PAGE4STAIRHALLTOSUMMARY	141	kg		
D					

Item	Description	Qty	Unit	Rate	Amount
	ELEMENTNR5				
	ROOFCOVERING&STRUCTURE				
	0.55mmcorruptedcolourfinishlongspanaluminumroofing sheet laid at shop end and sides lap nailed inpurlins				
	Roofcovering	548	m^2		
A	Ridgecappingnotexceeding600mm width	56	m		
	Roofcarcassing				
	50x150mm hardwood after50	608	m		
C	x 75mm hard wood purlin	21	m		
D	50x150mm hardwood struts	8	m		
E	50 x 150mmhard wood king post	73	m		
F	50 x 150mm hard wood tie beam	277	m		
G	75x100mmhardwoodwallplate 25	130	m		
H	x 300mm fasicia board	61	m		
J	60mmx60mm noggins externally	761	m		
M	60mmx60mmnogginsinternally	442	m		
N	25x300mmridgeboard	56	m		
P	**PAGE7ROOFCOVERINGANDSTRUCTURETO SUMMARY**				

Item	Description	Qty	Unit	Rate	Amount
	ELEMENT				
	NR5WINDOWANDDOOR				
	WINDOWS				
	Supplyandfixaluminumglazedslidingwindowwithaluminum frame and top light to aluminum frame				
A	1500x1200mm	19	Nr		
B	600x600mm	2	Nr		
	DOORS				
C	1200X2100mmpurposelymadealuminiumframed security door	1	Nr		
D	900x2100mmpurposelymadealuminiumframedpanel door	4	Nr		
E	750x2100mmpolishedhardwoodflushdoor	2	Nr		
	PAGE8DOORANDWINDOWTOSUMMARY				

Item	Description	Qty	Unit	Rate	Amount
	ELEMENTNR6 **MECHANICALINSTALLATION**				
A	AllowaPCsumofN.....formechanical	Sum			
B	Allowforprofits				
C	Allowforattendance				
	PROVISIONALSUM				
A	Allowforprovisionalsum N.....for builder'swork	sum			
	104				
	PAGE9SERVICESCARRIEDTOSUMMARY				

Item	Description	Qty	Unit	Rate	Amount
	ELEMENTNR7				
	FLOORWALLANDCELLINGINTERNALANDEXTERNAL WORK				
	FLOOR				
	50mmtickcementandsand(1:6mix) beds				
A	400x400x10mmglazedvertifiedfloortiles	77	m^2m		
B	1:4Concretemixonfloorbedwellcompactedtoreceive tiles	77	2		
	WALLFINISHING				
	(1:4mix)cementandsand				
C	12mmthickrenderingonblockwallinternalandexternal	437	m^2		
	CEILINGGROUNDFLOOR				
E	10mmthickpremiumhighqualitycustomdesignedPlaster of Paris (POP) ceiling in accordance with architect instruction	77	m^2		
	PAGE10FLOORWALLANDCEILINGFINISHING TO SUMMARY				

Item	Description	Qty	Unit	Rate	Amount
	ELEMENTNR8				
	PAINTINGANDDECORATION				
	Internally				
	Prepareandapply2costofemulsionpainton:-				
A	WallInternally	295	m^2		
	Externally				
	Prepareandapply2coat6ofemulsionpainton:-				
B	Wallexternally	142	m^2		
	PAGE11FINISHINGCARRIEDTOSUMMARY				

Item	Description	Qty	Unit	Rate	Amount
	ELEMENTNR9				
A	BRCwiremesh	185	m^2		
B	Metal work		Nr		
C	Metal surface		m^2		
D	Grill panels		Nr		

ESLEMENTNR	ITEMS	PAGE	AMOUNT
A	**SUB-STRUCTURE**	1-4	
B	**FRAMEWORKGENERALLY**	5	
C	**EXTERNALANDINTERNALWALL**	6	
D	**STAIRHALL**	7	
E	**ROOFCOVERING&STRUCTURE**	8	

F G H J	**DOORANDWINDOW** **SERVICE** **FINISHING(FLOOR,WALL& DECORATION)** **FINISHING(PAINTING& DECORATION)** **PAGE13MAINBUILDINGCARRY TO GENERALSUMMARY**	9 10 11 12	

GENERALSUMMARY		
	PRELIMINARIES **MAINBUILDING** **EXTERNALWORKS:(allowaprovisionalsum of two hundred and fifty thousand Naira for septic tank and soak away including inspection chambers as directed).** **SUBTOTAL1** **CONTINGENCIES** **SUBTOTAL2** **ADDVAT7.5%** **ESTIMATEDTOTALCOSTCARRIEDTO TENDER** **GS/HALL/001**	

CHAPTERFIVE

SUMMARY,CONCLUSIONAND RECOMMENDATION

SUMMARY

The abandonment of several building project in the located at No. 25, Onilete quarters, Iwo, Osun state. which is believed to because by in adequate pre-project planning and budget, gives raise for the need to estimate and budget for a medium scale building project located at No. 25, Onilete quarters, Iwo, Osun state.

In achieving this aims, a site review was given through during the site investigation no scientific test was carried out but the school was assured fim and well vegetated and protected from degradation.

After the site visit and investigation, a bill of quantities for the propose medium scale building was prepared using the site preparation process of taking-off of clement in the drawing provided, by broking down the dimensions of each item in the dimension sheet.

Then, the absent in process, where the collecting of similar measured items, collected from the squared imensions of the taking-offsheet is grouped together and ready for the bill of quantities.

When the taking-off of measurements and the obstructing process were completed, the mainandfinalbillofquantitiesfor theproposedprojectwasthenconstructionof building.

CONCLUSION

Inconclusion,weobservedthatestimatingandbudgetingforamediumsscalebuilding project is very important because:

1. Itenablesallcontractorstendingforacontracttopriceonexactlythesame information with a minimum of efforts.
2. Itprovidesabasisforthevaluationofvariationwhishoftenoccurduringthe progress of the work.

3. It serves asguidelineforanyonethe contractors.

4. Fullydescribedandaccuratelyreportthequantityoftheworktobecarriedout.

5. Afteritemsarebeingpriced,itprovidedagoodbasisforananalysiswhich subsequently will be of use future contracts in cost planning work.

RECOMMENDATIONS

It is submitted that adequate planning comprehensive pre-project planning, comprehensive brief from the client guided by feasibility and viability studies should be embarked upon before the commencement of any project and to capitall, a proper and carefully calculated estimate must be made to adequately budge a substantial amount before the start of any project.

In viewof theabove,itisrecommendedthat:

1. Before the commencement of any project, a site visit and investigation should be carried out i.e. the site should be subjected to scientific analysis, analysis like the 5001 bearing capacity test, ground water table test, and topographic survey.
2. The natural of site must be critically analyzed proximity and availability of resources, plants and manpower (Artisans are labourers) to the site must be put in to considerations during the site visit and investigation.
3. For a project to be adequately financed, it is recommended that, the quantity surveyor should be well equipped with adequate design information drawing of theprojectenablehimtake-offabstract,prepareacomprehensivebillofquantities which will be used for the budgeting of the project in view.

REFERENCES

BuildingandEngineeringStudentand MethodofMeasurements(BESMM4)