

DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI



TENDER DOCUMENT

TITLE OF THE JOB

**STRENGTHENING OF DOW COLLEGE OF
PHARMACY AT OJHA CAMPUS, DUHS, KARACHI**

**NIT # DUHS/P&D/2018/9692
DATED: DECEMBER 20, 2018**

**OFFICE OF PROJECT DIRECTOR PLANNING & DEVELOPMENT
DOW UNIVERSITY OF HEALTH SCIENCES,
BABA-E-URDU ROAD, BESIDES CIVIL HOSPITAL, KARACHI
TEL / FAX # 021-99216065
E-MAIL: rahim.khan@duhs.edu.pk**

SUBJECT: STRENGTHENING OF DOW COLLEGE OF PHARMACY AT OJHA CAMPUS, DUHS, KARACHI

To,

THE PROJECT DIRECTOR

Planning & Development Department,
Dow University of Health Sciences, Karachi.

1. Having examined the tender documents including Instructions to Bidders, Bidding Data, and Conditions of Contract, Specifications, Drawings and Bill of Quantities for the execution of the above-named work, we/I, the undersigned, offer to execute and complete the work and remedy any defects therein in conformity with the Conditions of Contract, Specifications, Drawings, Bill of Quantities for the sum of Rs. _____ (Rupees _____) or such other sum as may be ascertained in accordance with the said conditions.

2. We/I understand that all the Appendices attached hereto form part of this bid.

3. As security for due performance of the undertakings and obligations of this bid, we/I submit herewith a bid security in the amount of Rupees _____ (Rs. _____) drawn in your favour or made payable to **Dow University of Health Sciences (DUHS)** and valid for a period of _____ days beginning from the date, bid is opened.

4. We/I undertake, if our bid is accepted, to commence the works and to complete the whole of the works comprised in the contract within the time stated in Appendix-A to Bid.

5. We/I agree to abide by this bid for the period of 90 days from the date fixed for opening the same and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

6. Unless and until a formal Agreement is prepared and executed, this bid, together with your written acceptance thereof, shall constitute a binding contract between us.

7. We do hereby declare that the bid is made without any collusion, comparison of figures or arrangement with any other bidder for the works.

8. We understand that you are not bound to accept the lowest or any bid you may receive.

9. We undertake, if our/my bid is accepted, to execute the Performance Security referred to in Clause 10 of Conditions of Contract for the due performance of the Contract.

10. We confirm, if our bid is accepted, that all partners of the joint venture shall be liable jointly and severally for the execution of the Contract and the composition or the constitution of the joint venture shall not be altered without the prior consent of the procuring agency.

In the capacity of _____duly authorized to sign Bids for and on behalf of
Dated this _____day of _____2019

Signature: _____

(Name of Tenderer in Block Capitals)

(Seal)

Address: _____

Witness:

Signature: _____

Name: _____

Address: _____

Occupation: _____

APPENDIX-A TO TENDER

1	Amount of Performing Security	2.5% of the Contract price. Total amount including performance security and retention money deducted from bills 5% of contract price stated in Letter of Acceptance.
2	Time for Furnishing Programme (Commencement of Work)	Within _____ days from the date of receipt of Letter of Acceptance.
5	Time of Commencement	Within 10 days from the date of receipt of Project Director's Notice to Commence, This shall be issued after signing of Contract Agreement.
6	Time of Completion of Works	18 Months days from the date of Notice to Commence.
7	Amount of Liquidity Damages/ Delay Damages / Penalties	0.1% per day of Contract Price for the work remains un-commenced and un-completed after due date up to maximum of 10% of Contract price and after that termination of contract after 07days notice.
8	Defect Liability Period/ Period of Maintenance	90 days from the effective date of Taking over/ Completion Certificate.
9	Percentage of Retention Money	5% of the amount of the Interim/Running Payment Certificate.
10	Limit of Retention Money	5% of Contract Price stated in Letter of Acceptance.

**Signature of Contractor /Seal of Firm
Authorized representative of Firm**

INSTRUCTIONS TO TENDERS

- a) Project Director Planning & Development, Dow University of Health Sciences, calls tenders for the “**STRENGTHENING OF DOW COLLEGE OF PHARMACY AT OJHA CAMPUS, DUHS, KARACHI**” with the bill of quantities attached here to be submitted by or before 11:00 A.M on **24-01-2019**. Tenders cost will not be reimbursed for any cost of any kind whatsoever incurred in connection with the preparations and submission of their tenders.
- b) The tender for the each work should be in the sealed envelope bearing name of the work / contractor / firm clearly marked and addressed to Project Director Planning & Development, Dow University of Health Sciences, Karachi.
- c) The tender may be delivered in person or sent by registered mail so as to reach on or before the date and time stated above. Any tender received after the stipulated time will not be considered regardless of the cause of delay.
- d) All tender are invited to the present for the opening of the tender in **24-01-2019** at 11:30 A.M. The name of each tenderer and his total contract price only will be read aloud and recorded.
- e) Any tender/tenders without earnest money will not be entertained. Earnest money of the awarding firm may be return after successful completion of work. If the supplier fails to commence or complete the awarded work within the stipulated time his/her work order will be cancelled as per rule and earnest money shall also be forfeited.
- f) Detailed particulars of the work / works can be seen in the Project Director Office on any working day during the office hours.
- g) Tender shall be made in the form supplied therefore, with all items and blanks properly filled in. all data and figures and the signature of persons signing the tender shall be in ink. The completed BOQ should be without interlineations, alterations or erasures but if these are necessary to correct errors made by the tenderer, person(s) signing the tender shall initial them. Conditional tenders will not accepted.
- h) All unit prices filled in the schedule of quantities shall be firm. The unit prices against each item of work and estimate amount and all other data called for shall be given.
- i) All prices quoted shall be deemed to include all costs of performing the works, including labour, material, income tax, duties, octori charges, royalties permit etc. and no claim whatsoever shall be accepted in case of escalation any or all prices entered in rate of bid.
- j) The actual sum to be paid to the contractor whose tender is accepted shall be determined by measuring the work actually done or supplying/repairing the actual number of items in accordance with the work order and valuing it al the rate or prices by the contractor in the tender.

- k) "In-case of discrepancy between the unit price and amount entered for any item in the schedule of quantities, the unit price will be taken as correct and the amount will be adjusted accordingly when the tender is being examined".
- l) 10 % security deposit will be deducted from each bill on the paid amount of the contract, which will be returned after maintenance period of 03 months.
- m) The tender must be signed in each and every page by a person(s) authorized to do so.
- n) The site can be visited on any working day during the office hours.
- o) "Engineer" means the Project Director Planning & Development of the University or any other Engineer appointed by him.
- p) The earnest money will be forfeited in case the contractor fails to commence the work within 10 days' time after issue of work order or left the work incomplete after commencement and during execution.
- q) The Competent Authority reserve the right to reject any or all the tenders, increase or decrease the scope of work or divide item of work among bidders.
- r) That the Contractor shall be responsible to keep in good condition the premises of the University and shall not damage any property belonging to student of the University and incase of any loss damage caused by the contractors or its employee to any property of the compensate and or indemnify the university or the student as the case may be.

PROJECT DIRECTOR
Planning & Development Department
Dow University of Health Sciences, Karachi

DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI
DIRECTORATE OF PLANNING & DEVELOPMENT

TERMS & CONDITIONS

1. The work / supply is required within 10 Days from the date of letter of Commencement/award.
2. Inspection: ***Nominated Inspection Committee will make Inspection of Work.***
3. In case of late delivery @ 0.1% per day will be charged on bid amount deducted from the bill, but not more than 10% of contract value.
4. Quantities shown in the quotation are approximate and no claim shall be entertained for quantities of executed being 30% more or less than those entered in the BOQ.
5. All prices will include all costs of performing the works including labour, material, Income Tax, GST, Octroi Charges, royalties & transportation etc., as mentioned in BOQ.
6. No subletting of all or any part of work will be allowed at any cost / reasons.
7. The supplier will see the site / sample before quoting the rates.
8. Store will be delivered at Dow University of Health Sciences, Karachi.
9. Central Stores and Inspection Officer will issue inspection certificate after inspection through Inspection Committee.
10. If the work / supply is not found according to the specification and samples provided, will be rejected at risk and cost of the manufacturer and in case the manufacturer fails to work / supply the order, the firm will be black listed.
11. Payment:
 - 11.1 The Actual sum to be paid shall be determined by quantifying / measurements of items actually supplied valuing it at the rates/prices quoted in the approved quotations.
 - 11.2 10% security deposit will be retained from each bill upto a period of six months from the date of supply of order.
 - 11.3 Part payment against part supply can be allowed.
12. Request letter for issuance of tender documents should be supported with (valid).
 - a. Copy of GST, SST & NTN registration Certificate and PEC Registration in appropriate category C2 with the following codes BC01 – BC02 – CE01 – CE04 – CE09 – CE10 – EE01 – EE02 – EE04 – EE06 – EE07 – EE08 – EE11 – ME01 – ME02 – ME03 – ME06. **(MANDATORY)**
 - b. Copies of all relevant Certificate/Authorization letter must be attached (where required) mentioned with Tender Enquiry.
13. The bidder must have done at least five (05) contracts of similar nature and magnitude “Similar nature means Construction of Building preferable at educational institutes and hospitals” (Please submit copy of PO/Contract Agreement/Notification of Award). Comply with specifications mentioned in bidding documents.
14. The Bidder should not have been barred of any of provincial or federal Govt. Deptt Agency, organization or autonomous body or private sector organization anywhere in Pakistan. (Submission of undertaking on 100/- legal stamp paper). All the proposed reports should be well known for its quality, performance and reliability.

15. The bidder must have turnover/sales exceeding **400 Million** in PKR annually in any of last three years (Submission of Audited Annual Reports or reputable Bank confirmation letter.
16. Latest income Tax Certificate (NTN), valid GST Registration Certificate and valid SRB registration.

PROJECT DIRECTOR
Planning & Development Department
Dow University of Health Sciences, Karachi

**STRENGTHENING OF DOW COLLEGE OF PHARMACY AT
OJHA CAMPUS, DUHS, KARACHI**

ABSTRACT

S. No.	Item of Work	Amount
1	CIVIL WORK	
2	INTERNAL WATER SUPPLY & SANITARY WORK	
3	ELECTRICAL WORK	
4	FIRE FIGHTING & FIRE ALARAM SYSTEM	
5	HVAC SYSTEMS	
TOTAL AMOUNT RS.		

S #.	DESCRIPTION	QUANTITY	RATE	UNIT	AMOUNT
1	<u>DIVISION 1. EARTH WORKS</u>				
1.1	Excavation in foundation of buildings, bridges and other structures as per required section, including dag belling, dressing filling around structure with excavated earth watering ramming & compacting in all respects as per specifications provided and instruction given by the Engineer Incharge. Lead up to 300 Feet & lift up to 6 feet.	22,900		/Cft	
1.2	Earth Filling, watering and reaming with old earth in plinth, depression and where ever required laid in 300 mm layer wall watered, consolidated and compacted with mechanical means complete as per drawings and as directed by the Consultants.	8,890		/Cft	
1.3	Earth Filling with offsite material (brought from outside source) in plinth, depression and where ever required laid in 300 mm layer wall watered, consolidated and compacted with mechanical means complete as per drawings and as directed by the Consultants.	21,730		/Cft	
1.4	Providing and Spraying pesticide solution of approved manufactured inside building line in 3 - stages i.e. in trenches, on floor base & all wood work etc, using "Agenda" or equivalent of Jaffer Brothers Water mixed solution.	13,135		/Sft	
2	<u>DIVISION 2. CEMENT CONCRETE WORK</u>				
2.1	Cement Concrete Plain including placing compacting, finishing and curing complete (including screening and washing of crush bajri) without form work. etc complete in all respect as per specifications provided and instructions given by the Engineer Incharge.				
i	a) CC (1:4:8) below foundations/P. Beams.(6" thick)	1,100		/Sft	
ii	b) CC (1:3:6) below Plinth beams(Cast in SITU)	1,370		/Cft	
2.2	Stone pitching hand packed with surface leveled off to the correct section with hammer dressed stones (size 100-150 mm) and filling voids with crush ash under foundation, compacting with compactor etc complete in all respects as per specifications provided and instruction given by the Engineer Incharge.	13,135		/Sft	
2.3	Designing & Planning the contractor will hire a professional, qualified architecture and designer for engaging the services for preparing the detailed drawings, structural drawings, shop drawings for execution purpose and other services. The designer must be got approved from Project Director. the detailed invoices for such services may be acknowledged to PD office for further payments to contractor accordingly	34000.00		P/sft	
3	<u>DIVISION 3, R.C.C WORKS</u>				
3.1	providing and laying R.C.C Class "C"(1:2:4 having a minimum crushing strength of 1500 P.S.I after 28 days), using 6mm to 18mm sizes graded crushed aggregate and fine aggregate including approved quality form work and its removal, all operations of vibrating, leveling, consolidating, curing and cube / cylinder lab tests of pouring material at 07 days & 28 days etc. complete in all respect as per specifications and drawings and approval of Engineer Incharge. This rate dose not includes the cost of steel bars and its erection which will be paid separately.				

<p>a) Footings</p> <p>(S.R. Cement) (3,000 Psi)</p> <p>(Green Seal 100 (400 gms/bag) or equivalent.)</p>	4,850	/Cft
<p>b) Column (upto +2'-0")</p> <p>(S.R. Cement) (4,000 Psi)</p> <p>(Green Seal 100 (400 gms/bag) or equivalent.)</p>	550	/Cft
<p>c) Lift Walls (upto Plinth)</p> <p>(S.R. Cement) (4,000 Psi)</p> <p>(Green Seal 100 (400 gms/bag) or equivalent.)</p>	70	/Cft
<p>d) Plinth Beam</p> <p>(S.R. Cement) (3,000 Psi)</p>	2,200	/Cft
<p>e) Columns (in Suer Structure)</p> <p>(O.P. Cement) (4,000 Psi)</p>	3,480	/Cft
<p>f) Beams</p> <p>(O.P. Cement) (3,000 Psi)</p>	9,410	/Cft
<p>g) Slabs</p> <p>(O.P. Cement) (3,000 Psi)</p> <p>i) 6" thick</p>	13,515	/Sft
<p>ii) 7" thick</p>	9,650	/Sft
<p>iii) 8" thick</p>	7,145	/Sft
<p>iv) 9" thick</p>	1,350	/Sft
<p>v) 10" thick</p>	2,400	/Sft
<p>vi) 4" thick (Stepped Slab)</p>	2,100	/Sft
<p>h) <u>Stairs</u> steps, waiste, landings,</p> <p>(O.P. Cement) (3,000 Psi)</p>	1,130	/Cft
<p>i) O.H. Water Tanks & U.G. Water Tanks</p> <p>i) Bottom Slab (8" thick)</p> <p>(O.P. Cement) (3,000 Psi)</p> <p>(Green Seal 100 (400 gms/bag)</p>	271	/Cft
<p>ii) Walls (8" thick)</p> <p>(O.P. Cement) (3,000 Psi)</p> <p>(Green Seal 100 (400 gms/bag)</p>	508	/Cft

	iii) Top Slab (7" thick) (O.P. Cement) (3,000 Psi)	237	/Cft
3.2	Fabrication of Deformed Steel Bars, reinforcement for cement concrete work i/c cutting, bending, laying in proper position, making joints & fastenings etc complete. This rate include cost of binding wire, over lapping, extra wastage, laboratory testing of steel and removing rust from bars. (Grade 60, Minimum Yield Strength 60000Lbs / P.S.I)	230	Ton
4	<u>DIVISION 4. MASONRY</u>		
4.1	<u>Ordinary Block Masonry</u> Providing and laying Class "D"1:3:6 cement concrete Solid Block Masonry wall 4" to 8" in thickness and above set in 1:6 cement sand moter in ground floor superstructure i/c racking of joints and curing etc complete. (Minimum crushing strength 1300-ibs/P.s.i)		
a.	8" thick wall	27200.00	/Sft
b.	6" thick wall	2100.00	/Sft
5	<u>DIVISION 5. METALS</u>		
5.1	<u>M.S Railing for Staircase</u> Providing, and fixing M.S Railing for main staircase using 1/2" x 1/2" M.S. Pipe as approved (3 no) horizontally and 1" dia M.S. Pipe as approved" vertical Pipe embedded to R.C.C. Steps/beam at every third steps, fixing with 1/2" thick M.S. plate with M.S bolts and M.S cover and on top hand rail using M.S 2" dia pipe as approved shall be screwed into vertical Pipe, etc. complete as per drawing and as directed by the Consultants.		
i.	Main Staircase Railing	156.00	/Sft
ii.	Emergency Staircase Railing	368.00	/Sft
iii.	Lobby Railing	177.81	/Sft
iv.	Open Court Railing	389.00	/Sft
6	<u>DIVISION 6. THERMAL AND</u>		
	<u>MOISTURE PROTECTION</u>		
6.1	<u>Roofing Treatment</u>		
i	BITU-POLE Treatment to plastered or exposed Concrete Surface under foundation to be buried in trench as directed by Engineer Incharge	11746.00	/Sft
ii	Cement Concrete Plain including placing compacting, finishing and curing complete (including screening and washing of crush bajri) without form work. etc complete in all respects as per specifications provided and instructions given by the Engineer Incharge 4" THICK Ratio 1:4:8 (CLASS 'E') (Under Floor Using S.R Cement)	3523.00	/Cft
iii	Preparing surface and fixing jamboline membrane for water proofing with adhesive chemical over roof etc complete in all respects as per directives of Engineer Incharge (R.A.A)		
6.2	<u>2" Thick Sheet</u> <u>Dam proofing and Waterproofing</u> Preparing surface and Applying water proofing chemical 1st primary coat of 26 AC 10155 chemical and then heavy rich coat With canavas cloth and in last two coats of same chemical etc complete in all respects as per directives of Engineer incharge.(R.A.A)	11746.00	/Sft
		1860.00	/Sft

7	<u>DIVISION 7. DOOR, WINDOW</u>			
7.1	<u>Entrance Door</u> Providing and fixing entrance door comprising of door frame 9" x 2" thick using best quality Oak wood frame, fixed with required Nos. of hold fast minimum 2" wide and 1/4" thick (not less than 3" in length), properly fixed in block wall, having 1 1/2" thick solid Oak wood Fixed glazed panel door shutter with 8mm thick glass panel as per design, including fixing 2 1/2"x 3/4" thick solid Oak wood architrave on both side of the door, fixing approved quality hardware's, hinges, tower bolts, locks, door closer etc. including applying clear lacquer polish finish complete as per details/ drawing and as directed by the Consultants. (lock and door closer upto Rs. 3500/- each)			
i.	Door Type ED - size 8'-0" x 7'-0"	1.00		/No.
ii.	Fixed Glazing	104.00		/Sft
7.2	<u>Flush Door</u>			
i.	<u>Door Shutter</u> M/ Fixing Russian Partal Wood Door Shutter 1-1/2" thick paneled or partially glazed with frost glass i/c including hold fasts, Brass fittings like hinges, iron tower bolts, handle and cleats with cord etc, complete as per instructions of Engineer Incharge Paneled or paneled and glazed or fully glazed 1-1/2" thick.	2163.00		/Sft
ii.	<u>Door Chowkat</u> Providing and fixing G.I. sheet chowkats of 18 gauge for doors i/c pouring C.C. 1:2:4 inside chowkat etc: complete in all respect.	2422.96		/Rft
7.3	<u>Fixed Glazing.</u> S/F in Position Aluminums channels framing (60mm x 30 mm) for fixed glass glazing of Alcop made (of approved make and design) with 8 mm thick tinted tempered glass glazing (Belgium) etc complete in all respects as per directives of Engineer In charge (Prime! Chawla or Equivalent)	963.00		/Sft
7.4	<u>Windows</u> S/F in Position Aluminums channels framing (100mm x 40 mm) for sliding windows & ventilator with collar of Alcop made (of approved make and design) with 5 mm thick tinted glass glazing (Belgium) and aluminum fly screen channel including handles stoppers & locking arrangements etc complete in all respects as per directives of Engineer In charge (Prime/ Chawla or Equivalent)	2028.38		/Sft
8	<u>DIVISION 8. FINISHES</u>			
8.1	<u>Ordinary Plaster</u> Cement Plaster in Ratio 1 :4 (13 mm Thick) i/c floating coat of cement in proper design and profile on walls, beams & columns etc complete in all respects as per specifications and drawings and approval of Engineer incharge			
i.	<u>Ordinary Plaster</u> Cement Plaster in Ratio 1:6 (15 mm Thick) i/c floating coat of cement in proper design & profile on walls/beams & columns .This rate also i/c providing expanded metal at the joint of R.C.C. members and block masonry where as required etc complete in all respects as per 'specifications and drawings and approval of Engineer Incharge.	81447.00		/Sft
i.	<u>External Plaster</u>	23934.00		/Sft

	Cement Plaster in Ratio 1:4 (18 mm Thick) i/c floating coat of cement in proper design and profile on Roof Ceilings etc complete in all respects as per specifications and drawings and approval of Engineer Incharge			
8.2	<u>Parapet Wall Coping</u> Providing and laying 4" x 2 " Parapet wall coping in cement plaster with paint finish etc. complete as per drawing and as directed by the Consultants.	915.00	/Rft	
8.3	<u>CC Flooring</u> Cement Concrete Plain including placing compacting, finishing and curing complete (including screening and washing Of crush bajri) without form work. etc complete in all respects as per Specifications provided and instructions given by the Engineer Incharge			
i.	Ratio 1:3:6 (CLASS "D") (Under Floor)	9546.00	/Sft	
	<u>Porcelain Tile Flooring</u>			
8.4	Providing and fixing Printed Granite Porcelain Tiles Flooring (24"x24"x1/2" or above) jointed in white cement and laid over bed of 1"to 2" thick grey cement concrete bed in ratio 1:2:14 i/c washing /filling of joints with white cement etc: complete in all respect (Imported Premium Quality costing Rs 2000 per meter or above)			
a.	Tile Size - 24" X 24"	14860.00	/Sft	
b.	Tile Size - 12" X 24"	3212.00	/Sft	
c.	Tile Size - 12" X 12"	618.00	/Sft	
d.	Bathroom Wall Tile Size - 12" X 12"	4629.00	/Sft	
e.	Bathroom Floor Tile Size - 12" X 12"	1608.00	/Sft	
8.5	<u>Carpet Tile Flooring</u> Providing and installation floor of machine made nylon carpet tile of approved make with color and design. Complete in all respects as directed by the consultants. Basic price shall be Rs. 240.00 per sqft	8,487.00	/Sft	
8.6	<u>Wooden Flooring</u> Provide & install in line and level wooden floor (heavy commercial) / of approved make i/c rubber underlay, wood edge detail as per drawing ,etc complete in all respect or as directed by the consultants. Basic price shall be Rs. 220.00 per Sq.ft	1,059.00	/Sft	
8.7	<u>Porcelain Skirting</u> Providing and fixing skirting of porcelain tiles of approved color and shade with cement mortar 1:2 over 3/4" thick mortar 1:4 filling joints with matching grout of approved supplier i/c curing and finishing etc complete in all respects.	3247.00	/Rft	
8.8	<u>Wooden Skirting</u> Providing and fixing wooden skirting 1/2" thick of heavy commercial / Pak Carpet /other equivalent with nails / screws / glue / cutting, fitting and finishing, complete in all respects.	163	/Rft	
8.9	<u>Granite on Stair</u> Providing and laying 3/4 inch th. (Pre-Polished) best quality granite bevelled edges on staircase treads having 2" wide unpolished strip, laid over concrete base over 56mm thick concrete base (1:6) complete in all respect as per detail/drawing and as directed by the Consultants. Basic price shall be Rs. 600.00 per sqft			

	i.	Entrance Steps	289.00		/Sft
	ii.	Entrance Riser	169.00		/Sft
	iii.	Main (Staircase Steps) 6'-0" x 1'-0"	40.00		/No.
	iv.	Main (Staircase Riser) 6'-0" x 0'-6"	43.00		/No.
	v.	Main Staircase Landing	297.00		/Sft
	vi.	Emergency (Staircase Steps) 6'-0" x 1'-0"	67.00		/No.
	vii.	Emergency (Staircase Riser) 6'-0" x 0'-6"	73.00		/No.
	viii.	Emergency Staircase Landing	518.00		/Sft
8.10		<u>Granite Vanity Top</u> Providing and laying 3/4" thick best quality (pre-polished) local granite vanity top having 3/4" half round bull nosing to be laid over 3/4" thick cement sand base (1:4) over concrete pre-cast slab, including the cost of granite cutting as per vanity size and shape, complete as per drawing and as directed by the Consultants. Basic price shall be Rs. 600.00 per sqft			
8.11		(Vanity top)	243.00		/Sft
8.12		<u>Paint Work</u>			
	i.	<u>Matt Enamel Paint</u> Applying 3 Coats of Silk Matt Finishing with primary coat and preparing base surface and filling Where as required as per requirement of Architecture Drawings and specifications etc complete in all respects as per directives of Engineer Incharge.	53800.00		/Sft
	ii.	<u>Weather Shield Paint</u> P/Applying 3 Coats of Whether Shield Paint of superior quality i/c preparing base surface and fining etc complete in all respects as per directives of Engineer In charge	23934.00		/Sft
9		<u>DIVISION 9. SUSPENDED CEILINGS</u>			
9.1		<u>Gypsum board ceiling</u> Supplying and fixing False Ceiling of gypsum sheet (4' 0"-X 2' -0" imported) in panels including making frame work of imported Aluminum 'T' Channels	23,742.00		/Sft
9.2		<u>Gypsum Tile Ceiling</u> Providing and fixing suspended ceiling using size: 24"x 24"x 1/2" thick (from Iqbal sons, Thermec or Protector) tapered edge gypsum board sheets as per sample approved including suspension systems with groves, attachment devices, hangers, edge moldings, trim clips and trimming any extra hangers as required, including making provision for light fixtures, A/C diffusers, smoke detectors etc. as per detail / drawing. Standard Specification.	6,570.00		/Sft
9.3		<u>Wooden Light Pelmet.</u> Provide and install in position Wooden Light Pelmet 6" wide x 6" ht , consisting of 1/2" thick MDF board with 1" x 1" rough wood Frame with approved polish finish fixed in Partition and required area including cutting light fixture area as shown drawing including all hardware's, wastage, etc. complete in all respect.	1,205.00		/Rft
9.4		<u>Oak Ply Rafters</u> Providing, making and fixing Rafter 4" thick having 1/2" thick MDF all side with 1. 7/16" x 1-1/2" or as per required wooden frame with solignum 1/8" thick Oak wood ply rafters with approved polish finish fixed with nuts and bolts on walls and adjacent gypsum ceiling including applying lacquer polish finish, using approved quality hardware, glue, nails etc. complete as per requirement of Architecture Drawings and specifications etc complete in all respects as per directives of Engineer In charge.			
	i.	Rafters Size: 4" x 4" Solid Oak wood	67.00		Rft

S.No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
A	<u>TOILET FITTINGS & ACCESSORIES</u>				
1	Providing & fixing English Commode with Seat Cover Including Flushing cistern, C.P Extensions etc complete in all Respects (Porta / Marachi or Equivalent) (Classic Model)	Nos.	24		
2	Providing & fixing ORISA W.C (23" Clear flushing rim) i/c flushing cistern, Concealed "T" Stop cock Nylon tube etc: complete in all respect (PORTA/MARACHI OR EQUIVALENT)	Nos.	1		
3	Providing & fixing Urinal including flushing cistern, tee stop cock etc complete in all respects (Porta / Marachi or Equivalent) (Classic Model)	Nos.	9		
4	Providing & fixing Wash Basin size 24" x 18" with wash basin mixture, pedestal tee Stop Cock and nylon connection etc complete in all respects (Porta/Marachi or Equivalent) (Classic Model)	Nos.	24		
5	Providing & fixing Stainless Steel Size i/c C.P Waste, P.V.C West Pipe, Bolt Kit etc complete in all respects. (Superior quality and heavy gauge)				
a)	Size 24" x 20" (Only Single Bowl)	Nos.	3		
b)	Size 48" x 20" Double bowl with Trey	No.	2		
6	Fixing, testing & commissioning of water cooler set approved make including all fittings such as cold water filter System and drain, etc. complete in all respect.)	Nos.	6		
7	Supplying / Fixing White glazed labortary sink bowl of approved made and design (Standard Size) sa per Standard Requirement i/c bolt kit brackets , c.p waste and waste pipe etc complete in all respects				
a)	Single bowl single drain	Nos.	22		
8	Toilet Accessories Providing and fixing toilets room accessories including fixing with Rawal plug of approved quality complete in all respect.				
i)	Providing & Fixing Chrome Brass Towel Rail Complete with brackets fixing on Wooden cleats with 1" long c.p brass screws.(Superior Quality)	Nos.	8		
ii)	Providing & Fixing soap tray of made plastic of Superior Quality and design with fine finishing with c.p screws etc. complete	Nos.	14		
iii)	Providing & Fixing C.P Brass Toilet Paper Holder of standard size with chrome plated brass bracket complete (Similar to twyfords design No. 1108) (Superior Quality)	Nos.	24		

	iv) Providing & Fixing Hydraulic Hand Dryer of approved Make & Design (Imported)	Nos.	6		
	v) Providing & Fixing C.P Brass Double Bib cock with Muslim shower (MASTER / SONEX OR EQUIVALENT)	Nos.	30		
	vi) Providing & Fixing C.P Coat Hanger of Superior quality and design with fine finishing with c.p screws etc. complete.	Nos.	60		
	B <u>WATER SUPPLY SYSTEM</u> <u>Polypropylene Piping For Water Supply</u> <u>cold,Hot,& Return Water Supply System</u>				
52./58	providing & fixing of PE-80 (Polyethylene-Flex) sui gas pipes with alt required molded fittings of PE-80, jointing pipe with approved method, testing , excavating trench in existing external soil, laying pipe, refilling the trench compaction etc complete in all respects as per specifications and instructions provided by the Engineer In charge.				
	i) 1/2" dia (20mm)	RFT	100		
	ii) 3/4" dia (25mm)	RFT	1100		
	iii) 1" dia (32mm)	RFT	845		
	iv) 1-1/4" dia (40mm)	RFT	470		
	v) 1-1/2" dia (50mm)	RFT	355		
	vi) 2" dia (63mm)	RFT	260		
	vii) 3" dia (75mm)	RFT	60		
2	Providing & fixing of PE-80 (Polyethylene T-Fiex) Gate Valve with brass threads, jointing with already laid pipe by approved method, testing etc complete in all respects as per specifications and instructions provided by the Engineer Incharge.				
	i) 1/2" dia (20mm)	Nos.	5		
	ii) 3/4" dia (25mm)	Nos.	6		
	iii) 1" dia (32mm)	Nos.	35		
	iv) 1-1/4" dia (40mm)	Nos.	7		
	v) 1-1/2" dia (50mm)	Nos.	8		
	vi) 2" dia (63mm)	Nos.	6		
	vii) 3" dia (75mm)	Nos.	3		
3	Providing & fixing foot valve				
	i) 1-1/4" dia (40mm)	Nos.	1		
4	Providing & fixing check valve				
	i) 2" dia (63mm)	Nos.	2		
5	Providing & fixing gate valve				
	3" dia (75mm)	Nos.	3		
6	Providing & fixing float valve				
	i) 1" dia.	Nos.	1		
7	Fixing, testing & commissioning water supply pump with electrical mortar @50/60 gpm & 80/100 ft. with water controller panel.				
		Nos.	2		

8	Providing & fixing C.I. Cover for under ground tank & over head tank 24" x 24" size. & Ghoose neck size dia-4" 2-Nos Rs.16,000 size dia-3" 2-Nos Rs.9,000/	Nos.	4		
9	Providing and fixing of Gas Geyser of approved and Design (35 Liters) with imported pilot and necessary fittings by approved method, testing etc complete in all respects as per specifications and instructions provided by the Engineer Incharge				
	50 gal. Capacity	Nos.	2		
10	Fixing, testing & commissioning Hot water supply circulation pump with electrical @20/30 gpm & 100/140 ft. with gate valves sockets, tees, elbow, bends, reducers, plugs and union etc. supported on complete in all respect etc.	Nos.	1		
11	Fixing, testing & commissioning Boosting pump with electrical mortar 50 gpm 50-60 psi head.	Job	1		
C	<u>SOIL, WASTE, VENT & RAIN WATER SYSTEM</u>				
	-				
1	Providing and fixing U.P.V.C. Pipe 4" dia grade-I (AGM or equivalent) including all fittings such bends tees etc with cutting pipe up to required length, fitting with collars, clamps and rubber solvent. This rate also includes making holes in walls, plinth, floor and roof for fixing pipe and making good in C.C 1:2:4. Testing pressure head 200 feet.				
i)	2" dia	RFT	60		
ii)	3" dia	RFT	90		
iii)	4" dia	RFT	1785		
2	Providing and fixing U.P.V.C. pipe 4" dia grade-I (A.G.M.or equivalent) including cutting, fitting with collars. clamps and rubber solvent. This rate also includes making holes in waus, plinth, floor and roof for fixing pipe and making good in c.c. 1:2:4. Testing pressure head 200 feet.				
i)	3" dia	Nos.	3		
ii)	4" dia	Nos.	9		
3	Providing and fixing U.P.V.C. Floor. Trap 6"x2" or 6"x3" dia i/c Steel floor Jali grade-I (Dadex or equivalent) including cutting, fitting with collars, clamps and rubber solvent. This rate also includes making holes in walls, plinth, floor and roof for fixing pipe and making good in CC 1:2:4. Testing pressure head 200 feet.				
i)	3" dia	Nos.	78		
4	Providing and fixing UPVC floor clean out of approved design with S.S. cap including requisite number of holes in wall plinth or floor for pipe connection and making good the same as necessary to the structure complete including gasket and clamp complete.				
i)	3" dia	Nos.	8		

ii)	4" dia	Nos.	50		
5	Providing & fixing rain water spot/Grating as per drawing				
i)	4" dia	Nos.	8		
D	<u>EXTERNAL SEWERAGE & MANHOLES</u>				
1	Providing and laying Of UPVC Pipe of class 'B' suitable for external drainage work buried in ground under roads crossing as per specification with excavating trench for laying of pipe, bricks, warning tape, and back filling with new and fresh sand (4" below pipe and sides with leveling stacks), compaction and plugging of pipe ends etc complete in all respect as shown on drawing provided and as per directives of Engineer In charge.				
i)	4" dia	RFT	100		
ii)	6" dia	RFT	250		
iii)	8" dia	RFT	150		
iv)	10" dia	RFT	150		
2	Construction manhole or inspection chamber for the required dia of circular sewer and 3'-0" (900 mm) depth with walls (6" thick) of C.C Plain ratio 1:3:6 cement plastered 1:3 1/2" thick Inside of walls and 1" (25mm) thick over benching and h canal i/c fitting C.I manhole cover with frame of clear opening (1'-2' x 1., 1/2' (457x457 mm) of 1.75 Cwt. (88.9 kg) embedded in plain C.C 1:2:4 and fixing 1" (25 mm) C/C duly painted etc. complete as per specification and drawings provided by Engineer Incharge.				
i)	18"X18" SIZE (cover 18" x 18")	Nos.	6		
ii)	24"X24" SIZE (cover 18" x 18")	Nos.	6		
iii)	30"X30" SIZE (cover 24" x 24")	Nos.	1		
iv)	30"X30" SIZE (cover 24" x 24")	Nos.	1		
3	Construction and installation of gully trap including C.I. Covers, frames, excavation, C.C. wall internal plaster inlet outlet connection pipe.				
i)	10"X10" SIZE	Nos.	10		
4	Fixing testing & commissioning s.s submersible pump for sump Pit waste water drainage total discharge of 20 gpm & 18 ft. head including float switch, water proof Cable gate, check valve control Panel including all complete fitting screwing as necessary to the structure.	Nos.	1		
5	Providing & fixing hose Bib for garden 3/4" size	Nos.	10		
E	NATURAL GAS				

1	Providing G.I pipes of approved standard company with fittings such as tee, bend, socket, elbow .union & clamps where as required etc i/c threading ,fixing cutting & fitting complete with & i/c the cost of earth excavation up to required depth and laying pipe in to the trench and refilling the trench i/c painting two coats of bitumen with hessian cloth after cleaning the pipe etc complete and testing with water to a pressure head of 200 feet and handling				
i)	1/2" dia	RFT	130		
ii)	3/4" dia	RFT	110		
iii)	1" dia	RFT	300		
ii)	1-1/4" dia	RFT	60		
2	Providing and fixing gas cocks of approved quality of gas company including all accessories complete in all respects.				
i)	1/2" dia	Nos.	25		
TOTAL					

S.No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
A	<u>FIRE FIGHTING SYSTEM.</u>				
1	Supply and installation of fire hose Reel single with out landing cabinet Stainless Steel including rubber hose pipe,prv 1-1/2" fire connection valve with chain nozzle, quid, gate valve, frontbreakable lock, and all other accessories complete in all respects as per draw drawings, specification and instructions of Engineer Incharge. Type FHCR. (36"x48" size 1-1/2" diax100 ft hose pipe) Right Door Style.	Nos.	6		
2	Supply and installation of fire extinguishers complete in all respects as per drawings, specifications and instructions of Engineer, Incharge.				
a)	Type Fx (6 kg. Dry wed Chemical Powder)	Nos.	3		
b)	Type Fx (6 kg. Dry Powder)	Nos.	43		
c)	Type trolley (50 kg. Dry Chemical Powder)	Nos.	1		
3	LED SUSPENDED EXIT SIGN The MPI Light is a decorative, suspended, LED illuminated escape route and direction sign.	Nos.	23		
4	Fire safety systems and equipment – emergency lighting , The first stage of installing emergency escape lighting is consultation and design. The designer, responsible person and fire risk assessor should meet and decide where the escape lighting is required and mark up a plan showing the areas to be covered, the type (power supply), mode of operation, facilities and duration.				
5	Water Motor Alarm & Gong easily installed. As illustrated in the figure below, a ¾" (19mm) support pipe of appropriate length runs through the wall supporting the pelton wheel body on the inside wall surface and the gong assembly on the exterior wall surface the entire assembly can be secured and aligned by simply screwing the body onto the support washer & pipe connection.	Nos.	48		
6	Supply and installation of two ways - roof manifold 2-1/2" size each outlet with quick connection, blankcap with chain, 3" size inlet connection, complete in all respects as per drawings, specifications and instruction of Engineer Incharge. With auto air vent pipe connection.	Nos.	8		
a)	Type TW	Nos.	2		
7	Fire Department Connection (FDC) the Technical Committee for NFPA 14 added the requirement for one 2 ½ inch inlet per every 250 gallons per minute (gpm), but this requirement lacks supporting scientific documentation, so there was a need to conduct flow testing to determine the amount of water that is possible to flow into an FDC inlet & check valve 3" size inlet connection, Complete in all respects				
		Nos.	1		
B	<u>FIRE FIGHTING M.S PIPING SYSTEM</u>				
1	MS Sch-40 seamless pipes including all specials, fitting flanges, coupling, masking plates, bends, tees, clamps, supports and hangers, sleeves, masking plates chiseling, cutting holes, making good excavation backfilling where required, painting and protection treatment etc. Complete in all respects.				
i)	4" dia (100mm)	RFT	180		
ii)	3" dia (75mm)	RFT	320		

iii)	2-1/2" dia (65mm)	RFT	110		
iv)	2" dia (50mm)	RFT	80		
v)	1" dia (25mm)	RFT	5		
2	Providing Fixing testing & commissioning fire pump set for discharge of 250 gpm & 200 ft. head including switch, gate, check valve control Panel including all complete fitting all as necessary to the Hose Reel System, Electric Pump Set, Diesel Pump Set, Jockey Pump, Gate Valve, Flexible Coupling, Non Return Valve, Ball Valve, Suction Manifold, Delivery Manifold, Pressure Gauge, Pressure Switch, Pressure Vessel, Union with pipe header. Complete in all respects. one set	Nos.	1		
3	Providing Fixing testing & commissioning fire Pressure Boosting pump set for discharge of 250 gpm & 200 ft. head including switch, gate, check valve control Panel Pressure Vessel, Union with pipe header. Complete in all respects. one set	Nos.	1		
	Fire detection and alarm systems for buildings. Specification equipment Fire detection and fire alarm devices for dwellings. smoke alarms All equipment, devices, cables, Fire Protection Signaling Systems (fire alarm and emergency communications systems) control equipment operation shall be such due to wiring or power supply peration of any other initiating Complete in all respects. (Electrical works in scope)	Nos.	25		
TOTAL					

S.No	Description	Unit	Qty.	Rate	Amount
1.0	<u>Lighting, Fan & Small Power Point Wiring</u>				
1.1	Supply, Installation, testing & commissioning circuit wiring from DB to switch board including wiring between switch on the same circuit with I-C PVC insulated wires 2x2.5 sq.mm +1x1.5 sq.mm as ECC in 25 mm dia PVC conduit concealed in wall column / ceiling, etc including conduit accessories complete in all				
a)	Circuit wiring from Distributing Circuit with 2-1/1 . 38 (3/ . 036) PVC insulated wire in 25mm (1") PVC conduit fitted (Maximum length of circuit from D.B to Switch Board should be 180 Rft)	Nos.	35		
b)	Wiring for light fan or call bell point with 1.5 sq.mm single core, PVC insulated wire copper conductor wire in 3/4" dia PVC conduit recessed in the wall column, roof etc. including 1 sq.mm single core PVC insulated wire as ECC as required.	Nos.	310		
c)	Wiring for two way light point with 1.5 sq.mm single core, PVC insulated wire in 3/4" dia PVC conduit recessed in the wall column, roof etc. including 1 sq.mm single core PVC insulated wire as ECC as required.	Nos.	650		
1.2	supply , installation. testing & commissioning of wiring for light point from switch board to point with 3x1.5sqmm wires in 25 mm dia PVC conduit complete in all respect				
a)	2 x 1C - 2.5sqmm + 1 x 1C - 2.5mm ² for 5A, switch sockets.	Nos.	110		
b)	3 x1C - 2.5mm ² for point to point.	Nos.	256		
c)	2 x 1C - 2.5sqmm + 1 x 1C - 2.5mm ² for 13A, switch sockets.	Nos.	20		
d)	2 x 1C - 2.5sqmm + 1 x 1C - 2.5mm ² for 13A, Point to Point	Nos.	75		
1.3	Supply, installation, testing & commissioning of wiring for light point to point With 3x1.5 sq .mm .wires in 25mm dia PVC conduit , complete in all respect.				
a)	Back Box for single outlet.	Nos.	300		
1.4	Providing & fixing 10Amps polycarbonate flame retardant One way Switch with fancy gang plate fixed on die fabricated powder coated metal board recessed in wall or column including connection as required (E31/2/3A Clipsal Make)				
a)	One gang.	Nos.	16		
b)	Two gang (TWO SWITCH PLATE)	Nos.	40		
c)	Three gang	Nos.	22		
d)	Four gang	Nos.	17		

e)	Five gang	Nos.	18		
1.5	Providing & fixing 10Amps polycarbonate flame retardant 2-pin switch socket unit (Universal) with fancy gang plate fixed on dia fabricated powder coated metal board recessed in wall or column including connection as required (E-15U Clipsal Make)				
a)	5A-3pin switch socket outlet.	Nos.	220		
b)	15A-3pin switch socket outlet.	Nos.	150		
c)	13 A, flat pin switch socket outlet.	Nos	88		
2.0	<u>PVC Pipes / Pull Boxes</u>	-			
2.1	Following size of PVC conduit with accessories embed in wall / floor / ceiling or surface installed.				
a)	1" dia.	Mtr.	1,100		
b)	1-1/4" dia.	Mtr.	800		
c)	1-1/2" dia.	Mtr.	500		
2.2)	Supply & installation of galvanized sheet steel floor / wall pull box with brass earth terminal with barriers for cable crossing including all fixing accessories as per drawings & specifications of following sizes.				
a)	100 x 100 x 50mm	Nos.	15		
3.0	<u>Lighting Fixtures & Fans</u>				
3.1	Providing & Laying of following sizes of 3-1/2 core PVC insulated & PVC sheathed 600/1000 volt grade with standard copper conductor unarmoured L.T cable in existing all kind of conduit or cable duct as per Approved specification as required				
Note:	Florescent / PLC lamps shall be colour 83 / 84or equivalent.				
a)	Celling Mounted LED Down Light with 1x 12 W lamps and tinted glass with hanging arrangement from ceiling as per drawing.	Nos.	745		
b)	Surface Mounted LED Down Light 12W.	Nos.	30		
c)	Planter Light IP65 8W.	Nos.	6		
d)	Step Light 1x3W.	Nos.	15		
e)	LED Panel Light 1x28W.	Nos.	6		
f)	Providing & fixing basic batten, surface type, fitting complete with TLD 1x12W with day light lamp starter, electronic ballast philips cat. (TMS015/136 L.E.D)	Mtr.	400		
g)	Providing & fixing 2'-0" X 2'-0" Fancy False ceiling circo fan (imported) of approved mark and design etc complete in all respects as per directives of Engineer incharge.	Nos.	100		

h)	Providing & fixing LED fancy light with 18 watts bulb and 12"x12" fancy bracket of approve mark and design etc complete in all respects as per directives of Engineer incharge.	Nos.	30		
i)	Exhaust fan 6"/8" dia.	Nos.	6		
4.0 <u>Switchgear & Earthing</u>					
4.1	Supply, installation & connection of the following DBs with all mounting accessories as per specifications & drawings, complete in all respect. (To be wall mounted, surface or flush as required)				
a)	ATS / AMF	No.	1		
b)	MDB	No.	1		
c)	DB-G	No.	1		
d)	DB-F	No.	1		
e)	DB-S	No.	1		
f)	DB-UPS-1	No.	1		
g)	DB-UPS-2	No.	1		
h)	DB-UPS-3	No.	1		
4.2	Providing and prepare Earth Pit with 3 meter long, 20mm dia copper rod type electrode for earthing system at the end of every circuit directly driven to ground to obtain earth resistance not more than 3 ohm including 2 x 16 sq mm single core PVC Insulated wire or 2 x 16sq mm bare copper conductor in 50 mm die G.I pipe, from earth rod to llighting pole. Inspection pit 380 x 380 x 460mm deep (min) with heavy duty C.I cover, appropriate size of upvc conduit for leads . complete as per detail drawing & instruction of consultant. providing as built drawings, test reports documents to Employer / Consultant representative . etc Complete in all respects	Nos.	4		
4.3	Supply & installation of the following PVC insulated earthing conductors in 25mm dia. PVC pipe schedule 'D' from earth pit to respective equipment as per drawing and specifications. (length subject to as per site conditions)				
a)	1 x IC - 70mm ² PVC cables.	Mtr	150		
5.0 <u>Power Cables</u>					
5.1	Supply, installation & connection of the following PVC insulated copper power cables clipped to surface with cleats raceway or on already installed cable tray / trunking / PVC pipe as per drawings & specifications. insulated copper power cables clipped to suface with cleats raceway or on already installed cable tray / trunking / PVC pipe as per drawing & specifications.				

a)	3.5 Core 300 sq.mm + ECC 1 x 70 sq.mm (Cable Length as per Size)	Mtr.	150		
b)	4 Core 16 sq.mm + ECC 1 x 16 sq.mm (Cable Length as per Size)	Mtr.	110		
c)	4 Core 10 sq.mm + ECC 1 x 10 sq.mm (Cable Length as per Size)	Mtr.	75		
6.0	<u>Telephone & Data System</u>				
6.1	Supply & installation of following 0.6mm dia. shielded telephone cables in 25 mm dia PVC conduit.				
a)	Cat - 5	Mtr.	1,350		
b)	Telephone cable 10 pair.	Mtr.	50		
6.2	Supply & installation of following boards as per drawings fabricated from 16SWG sheet steel powder coated box with hinged covered door.				
a)	Telephone Junction Box with. (2 x 25 pair punch block) tag block.	Nos.	3		
6.3	Supply & installation of following telephone outlets (i/o + Face Plate) with back box.(Hussain make)				
a)	RJ-11 for telephone system.	Nos.	88		
b)	RJ-45 for Data system.	Nos.	88		
6.4	Supply & installation of Cat-6 giga speed cable 3M / clipsal make for data system in 25 mm dia PVC conduit.	Mtr.	1,600		
6.5	Supply & installation of following UPS/stabilizer with all installation accessories MG Make.				
a)	UPS 5 KVA	Nos.	3		
6.6	Following CAT-6, Patch Panels equipped with RJ-45 I/Os for Data communication system with rear cable organizer including all labeling and all mounting accessories. Complete in all respects.				
a)	24-port CAT-6 patch panel for data	Nos.	3		
6.7	Front Cable Organizer for Voice & Data patch panels / wiring blocks with complete labeling and dressing for incoming cable management.				
		Nos.	3		
6.8	Following CAT-6 , factory certified patch cords of specified color having RJ-45 connectors at both ends for Data communication .				
a)	3 meter long.	Nos.	10		

b)	1 meter long.	Nos.	10		
6.9	Supply and installation of 42U Floor Mounted Communication Rack. suitable for installation of servers, switches and related equipment etc. Complete with vertical cable managers. Rack shall be equipped with power distribution units (PDUs) with at least 5 imported power sockets etc. Complete in all respects.	No.	1		
6.10	Testing and commissioning of all above items termination and connectivity at both ends, including submission of detailed test report from the Principals.	job	1		
7.0	<u>Fire Alarm System</u>				
7.1	Supply, installation and connection of conventional type Fire Alarm control panel flush mounted complete with all accessories, back up battery, indication lamps, internal buzzer, etc. Number of zones to be as indicated on the drawing. (12-Zone Panel).	No.	1		
7.2	Supply, installation and connection of photo-electric type smoke detectors as per drawing.	Nos.	130		
7.3	Same as item 8.2 but heat detector.	Nos.	2		
7.4	Supply, installation and connection of conventional manual break glass stations with LED indication as per drawing.	Nos.	12		
7.5	Supply, installation and connection of fire alarm sounders as per specifications & drawing.	Nos.	12		
7.6	Wiring of smoke, heat detectors, manual break glass & Fire alarm sounders with 2C x 1.5sq.mm PVC insulated copper wires in PVC conduit for surface installation complete with all accessories, etc. up to fire alarm control panel including termination.	Job.	1		
7.7	Power supply to Fire Alarm Control Panel from DB UPS-1, wired with 3C x 2.5mm ² PVC insulated cable in PVC conduit as.	Job.	1		
7.8	Testing and commissioning of Fire Alarm System by authorized local representative of the manufacturer.	Job.	1		
8.0	<u>Miscellaneous Items</u>				
8.1	Submitt shop drawings	Job.	1		
8.2	Submitt As-Built drawings.	Job.	1		
				TOTAL	

S.NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1.0	Variable Refrigerant Flow (VRF) - Multi Split Units Supply, installation, testing and commissioning of T3 inverter compressor based Variable Refrigerant Flow (VRF) high EER/COP Type Units with Refrigerant (R 410a (Nominal Capacity as per AHRI Standard Outdoor Conditions 35Deg. C / 24 Deg. C (DB/WB) and Indoor 27 Deg. C / 19 Deg. C (DB / WB) as shown on the drawings, as specified in drawing and as per technical specifications including thermostat, Controls, and Control cable & accessories, and all needed material required for installation and to the satisfaction of the Engineer/Client.				
a)	VRF Condensing Units (Coated Fins)				
i)	CU-01 (G. Floor) Nominal Cooling Capacity 32.0 TR (40 HP)	Nos.	1		
ii)	CU-02 (F. Floor) Nominal Cooling Capacity 41.6 TR (52 HP)	Nos.	1		
iii)	CU-03 (S. Floor) Nominal Cooling Capacity 48.0 TR (60 HP)	Nos.	1		
iv)	CU-04 (All Floors) Nominal Cooling Capacity 44.8 TR (56 HP)	Nos.	1		
b)	VRF Indoor Units				
i)	Wall Mounted Type, Nominal Cooling Capacity 1.0 TR	Nos.	30		
ii)	Wall Mounted Type, Nominal Cooling Capacity 1.5 TR	Nos.	1		
iii)	Ceiling Cassette Type, Nominal Cooling Capacity 1.5 TR	Nos.	14		
iv)	Ceiling Cassette Type, Nominal Cooling Capacity 2.0 TR	Nos.	16		
v)	Ceiling Cassette Type, Nominal Cooling Capacity 2.5 TR	Nos.	20		
vi)	Ceiling Cassette Type, Nominal Cooling Capacity 3.0 TR	Nos.	6		
vii)	Ceiling Cassette Type, Nominal Cooling Capacity 4.0 TR	Nos.	1		
c)	Y-Branches				
i)	Y-Branches of Different Types & Sizes, as per selection requirement	Lot	1		
d)	Remote Controllers				
i)	Wired Remote Controller (Thermostat)	Nos.	56		
ii)	Wireless Remote Controller	Nos.	31		
iii)	Central Remote Controller (Touch Screen)	Nos.	1		
2.0	Fresh/Exhaust Fans Supply, installation and commissioning of Fresh / Exhaust Air Fans as shown on the drawings, type and data as specified in equipment schedule/BOQ and as per technical specifications including power wiring & accessories, and all needed material required for installation and to the satisfaction of the Engineer/Client.				
i)	TEF-01 to TEF-06 (Toilet Exhaust Fan) Axial Type (960 RPM Max.) 700 CFM @ 0.6 ESP	Nos.	6		
ii)	PEF-01 - PEF-02 (Pantry Exhaust Fan) Propeller Metallic Body (600 CFM) Free Discharge	Nos.	2		
iii)	FAF-01- FAF-02 (Fresh Air Fan) Cabinet Type 3500 CFM @ 1.0" ESP	Nos.	2		

<p>3.0</p>	<p>Refrigerant Piping Supply & Installation of Seamless Copper Type ACR/MED conforming to ASTM B280 piping complete with applicable ASTM Standards fittings , long radius bend, Traps, Drier Filter, Flare, sight glass, unions, other specialties et., including, hanger support, with min. 13mm Close Cell Foam Insulation complete with shielded Aluminum / copper Communication cable/wire of adequate size & type as per equipment manufacturer's recommendations from outdoor to indoor complete in all respect as described in specifications, schedules and drawings, and to the satisfaction of the Client, the sizes and length to be calculated as per manufacturer recommendation and site requirement, complete in al respect, and to the satisfaction of Engineer/Client.</p> <p>i) Dia 1/4" ii) Dia 3/8" iii) Dia 1/2" iv) Dia 5/8" v) Dia 3/4" vi) Dia 7/8" vii) Dia 1-1/8" viii) Dia 1-3/8" ix) Dia 1-5/8"</p>	<p>Rft Rft Rft Rft Rft Rft Rft Rft Rft</p>	<p>1 1 800 1000 900 300 300 100 550</p>		
<p>4.0</p>	<p>Condensate Drain Piping Supply and installation of uPVC Class 'D' Condensate Drain Piping with min. 1/2" thick Close Cell Foam Insulation where pipe expose to the atmosphere insulation shall be provided with min. 3/4" thick insulation and weather proof coating and wrapping, including U-trap, complete in all respect to the nearest drain channel (or otherwise drain drains to be terminated properly) as shown on the drawings and as specified in technical specifications including all labor, material, accessories, complete in respect and to the satisfaction of the Engineer/Client. the sizes and length to be calculated as per site requirement, subjected to engineers approval.</p> <p>i) Dia 3/4" ii) Dia 1" iii) Dia 1-1/2" iv) Dia 2"</p>	<p>Rft Rft Rft Rft</p>	<p>100 1100 600 200</p>		
<p>5.0</p>	<p>Air Devices: Supply and installation of Air Devices, as shown on the drawings and as specified in technical specifications including all labor, material and accessories, complete in all respect and to the satisfaction of the Engineer/Client.</p> <p>i) Supply Air Round Diffusers with Damper Dia. 12" ii) Disc Valve with Damper (Toilet Exhaust) Dia 4" ii) Volume Control Dampers Volume Control Dampers iii) Fresh Air Louvers (Removable Heavy duty frame with wire mesh & Bird screen) 48" x 48"</p>	<p>Nos. Nos. Sq. Ft. Nos.</p>	<p>15 36 20 1</p>		

<p>6.0</p>	<p>iv) Exhaust Air Louvers (Removable Heavy duty frame with wire mesh & Bird screen) 48" x 48"</p> <p>Duct Work: Supply, fabrication and installation of Sheet Metal machine fabricated Duct Work as shown on the drawings and as per technical specifications including all labor, material, accessories, tees, plenum, transition pieces, splitter dampers, special duct test holes, duct access doors, air deflector, as where required complete in all respect and to the satisfaction of the Engineer/Client.</p>	<p>Nos.</p>	<p>1</p>		
<p>7.0</p>	<p>i) GI Duct Work (Prime Quality) 20 Gauge (Openable Ref. Pipe ii) Tray) (30" x 6") 20 Gauge (Openable Ref. Pipe iii) Tray) (24" x 6") 20 Gauge (Openable Ref. Pipe iv) Tray) (12" x 6")</p> <p>Duct Insulation: Supply and installation of Fiberglass Duct Insulation including aluminum foil Kraft paper and 08oz canvas cloth, Non Flammable adhesive as shown on the drawings and as per technical specifications including all labor, material and accessories required for insulation work complete in all respect and to the satisfaction of the Engineer/Client.</p>	<p>Sq. Ft. Rft. Rft. Rft.</p>	<p>3000 90 100 70</p>		
<p>8.0</p>	<p>i) 1.5" Thick Fiberglass Insulation 16 Kg/m3.</p> <p>Motor Control Center Supply and installation of Motor Control Center with DOL/ starter, indicators, Auto Switch, change over switch (From Normal to Emergency Mode, for each Outdoor Unit separately) and other safety devices as per IP565 Enclosure Box with Canopy complete Work as shown on the drawings and as specified in technical specifications including all labor, material, accessories, complete in all respect and to the satisfaction of the Engineer/Client.</p>	<p>Sq. Ft.</p>	<p>1</p>		
<p>9.0</p>	<p>i) MCC - 01 ii) MCC -02</p> <p>Electrical Wiring Supply and installation of electrical/ control wiring complete with conduit complete with cable tray connection between MCC to indoor and outdoor unit to make operative units as shown on the drawings and as specified in technical specifications including all labor, material, accessories, complete in all respect and to the satisfaction of the Engineer/Client.</p>	<p>No. No.</p>	<p>1 1</p>		
<p>10.0</p>	<p>Foundation and Support Supply and installation of CC Foundation and Steel Brackets Supports for AC units as required by the Architech based on unit location as shown on the drawings and as specified in technical specifications including all labor, material, accessories, complete in all respect and to the satisfaction of the Engineer/Client.</p>	<p>Lot</p>	<p>1</p>		
<p>11.0</p>	<p>Shop Drawings</p>	<p>Lot</p>	<p>1</p>		
<p>12.0</p>	<p>As Built Drawings</p>	<p>Set</p>	<p>3</p>		
<p>12.0</p>		<p>Set</p>	<p>3</p>		

