



THE SHAIKH AYAZ UNIVERSITY,
SHIKARPUR



**CONSTRUCTION OF GUEST HOUSE FOR
THE PROJECT TITLED “PROVISION OF
MISSING FACILITIES FOR THE SHAIKH
AYAZ UNIVERSITY SHIKARPUR”**

BILLS OF QUANTITIES

April, 2022

**CONSTRUCTION OF GUEST HOUSE FOR THE SHAIKH AYAZ UNIVERSITY
SHIKARPUR**

DETAILED ESTIMATE

SUMMARY OF COST

Rates Based on Composite Schedule of Rate (GENERAL-2012) Sindh

Sr. No.	DESCRIPTION	AMOUNT
1.	CIVIL WORKS	
a	Cost of Schedule Items	25,849,994
b	Add Premium Above or Below	
c	Add Premium Above or Below	
d	Cost of Non-Schedule Items	
	TOTAL OF CIVIL WORKS - A	
2.	PUBLIC HEALTH WORKS	
a	Cost of Schedule Items	1,333,772
b	Add Premium Above or Below	
c	Cost of Non-Schedule Items	
	TOTAL OF PHE WORKS - B	
3.	ELECTRIC WORKS	
a	Cost of Schedule Items	2,391,563
b	Add Premium Above or Below	
c	Cost of Non-Schedule Items	
	TOTAL OF ELECTRICAL WORKS - C	
	TOTAL (A+B+C)	
	5% SST	
	GRAND TOTAL	

CONTRACTOR

CONSTRUCTION OF GUEST HOUSE FOR THE SHAIKH AYAZ UNIVERSITY SHIKARPUR

DETAILED ESTIMATE

CIVIL WORKS

Rates Based on Composite Schedule of Rate (GENERAL-2012) Sindh

Sr. No.	Item No.	Description of Item	Unit	Qty	Rate	Amount
1	C-1/18(b)	Excavation in foundation of Building Bridges and other structures including dagbelling dressing,refilling around structure with excavated earth Watering and ramming lead upto 5 ft in Ordinary Soil.	%0Cft	24069.32	3176.25	76,450.18
2	C-18/92	Providing Anti -termmite treatment by spraying /sprinkling /spreading Neptachlar 0.5% Emulsion as an overall pre - construction treatment in slab type construction under the slab and along attached perches or entrances etc, complete as per directions of Engineer Incharge.	P.Sft	21040.51	9.74	204,934.57
3	C-4/5(i)	Cement concrete plain including placing compacting, finishing and curing, complete (including screening and washing at stone aggregate without for all shuttering.(Mix 1:4:8)	%Cft	2029.32	11288.75	229,084.86
4	C-4/6 a-i	R.C work in roof slab, beams columns rafts, lintels and other structural members laid in situ or precast laid in position complete in all respects (I) Ratio (1 : 2: 4) 90 Lbs.cement 2 Cft. Sand 4 Cft. Shingle 1/8" to 1/4" gauge. (Foundation)	P.Cft	7663.52	337.00	2,582,606.24
5	C-4/6 a-i	R.C work in roof slab, beams columns rafts, lintels and other structural members laid in situ or precast laid in position complete in all respects (I) Ratio (1 : 2: 4) 90 Lbs.cement 2 Cft. Sand 4 Cft. Shingle 1/8" to 1/4" gauge. (Ground Floor)	P.Cft	5078.49	337.00	1,711,451.13
6	C-4/6 a-i +6 (d)	R.C work in roof slab, beams columns rafts, lintels and other structural members laid in situ or precast laid in position complete in all respects (I) Ratio (1 : 2: 4) 90 Lbs.cement 2 Cft. Sand 4 Cft. Shingle 1/8" to 1/4" gauge. (First Floor)	P.Cft	3802.12	349.10	1,327,320.09
7	C-4/6 a-i +6 (d)	R.C work in roof slab, beams columns rafts, lintels and other structural members laid in situ or precast laid in position complete in all respects (I) Ratio (1 : 2: 4) 90 Lbs.cement 2 Cft. Sand 4 Cft. Shingle 1/8" to 1/4" gauge. (Second Floor)	P.Cft	981.79	361.20	354,622.55
8	C-4/6 b-i + c	Precast reinforced cement concrete in columns, beams lintels stair cases, shelves, etc. (I) Ratio 1 : 2: 4 including erecting and fixing in position precast cement concrete or stone slab in roofs or Lintels, etc, lift upto 20 feet including all charges. (Terrace Railing)	P.Cft	342.72	351.55	120,483.22
9	C-4/6 a-ii	Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- Type B (nominal mix 1: 1.5: 3) UPL	P.Cft	1031.36	349.00	359,944.64
10	C-4/6 a-ii	Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- Type B (nominal mix 1: 1.5: 3) G.F	P.Cft	1406.4	349.00	490,833.60
11	C-4/6 a-ii +6 (d)	Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- Type B (nominal mix 1: 1.5: 3) F.F	P.Cft	1172.31	361.10	423,321.14

Sr. No.	Item No.	Description of Item	Unit	Qty	Rate	Amount
12	C-4/6 a-ii +6 (d)	Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- Type B (nominal mix 1: 1.5: 3) S.F	P.Cft	56.61	373.20	21,126.85
13	C-4/8(b)	Fabrication of mild steel reinforcement for cement concrete including cutting,bending, laying in position, making joints and fastenings including cost of binding wire (also includes removal of rust from bars.) Using Tor bars	P.Cwt	1411.81	5001.70	7,061,450.08
14	C-5/4-l(e)	Pacca brick work in foundation and plinth in cement sand mortar 1:6.	%Cft	7282.21	11948.36	870,104.67
15	C-1/21	Filling, watering and ramming earth in floors with surplus earth from foundation lead upto one chain and lift upto 5 feet.	%0Cft	8023.11	1512.50	12,134.95
16	C-1/22	Filling, watering and ramming earth under floor with new earth (Excavated from outside) lead upto one chain and lift upto 5 feet.	%0Cft	33065.86	3630.00	120,029.07
17	C-5/5-l(d)	Pacca brick work in Ground Floor cement, sand mortar Ratio 1:5	%Cft	7505.32	12902.08	968,342.39
18	C-5/5-l(c)	Pacca brick work in Ground Floor cement, sand mortar Ratio 1:4	%Cft	97.01	13227.41	12,831.91
19	C-5/5-l(d) + 6	Pacca brick work in First Floor cement, sand mortar Ratio 1:5	%Cft	5653.02	13340.71	754,153.00
20	C-5/5-l-c + 6	Pacca brick work in First Floor cement, sand mortar Ratio 1:4	%Cft	415.42	13666.04	56,771.46
21	C-5/5-l(d) + 6	Pacca brick work in Second Floor cement, sand mortar Ratio 1:5	%Cft	192.3	13915.46	26,759.43
22	C-9/12(b)	Cement plaster 1:5 upto 12' height:- b) ½" (13 mm) thick. (Internal) Ground Floor	%Sft	11428.85	2241.80	256,211.96
23	C-9/12(b)+29	Cement plaster 1:5 upto 12' height:- b) ½" (13 mm) thick. (Internal) First Floor	%Sft	10827.33	2382.77	257,990.37
24	C-9/12(b)+29	Cement plaster 1:5 upto 12' height:- b) ½" (13 mm) thick. (Internal) Second Floor	%Sft	401.63	2523.74	10,136.10
25	C-9/12(c)	Cement plaster 1:5 upto 12' height:- b) ¾" (20 mm) thick. (Internal) Ground Floor	%Sft	4931.24	2678.50	132,083.26
26	C-9/12(c)+29	Cement plaster 1:5 upto 12' height:- b) ¾" (20 mm) thick. (Internal) First Floor	%Sft	5670.11	2819.47	159,867.05
27	C-9/11(c)	Cement plaster 1:4 Ground Floor upto 12' height:- c) ¾" (20 mm) thick. (External)	%Sft	7063.5	3015.76	213,018.21
28	C-9/11(c)+29	Cement plaster 1:4 First Floor upto 12' height:- c) ¾" (20 mm) thick. (External)	%Sft	6073.59	3156.73	191,726.84
29	C-9/11(c)+29	Cement plaster 1:4 Second Floor upto 12' height:- c) ¾" (20 mm) thick. (External)	%Sft	2927.08	3297.70	96,526.32
30	C-9/10(a)	Cement plaster 3/8" thick under soffit or R.C.C. roof slab only upto 12' height ratio 1:3. Ground Floor	%Sft	3339.85	2225.12	74,315.67
31	C-9/10(a)+29	Cement plaster 3/8" thick under soffit or R.C.C. roof slab only upto 12' height ratio 1:3. First Floor	%Sft	2704.17	2366.09	63,983.10
32	C-9/10(a)+29	Cement plaster 3/8" thick under soffit or R.C.C. roof slab only upto 12' height ratio 1:3. Second Floor	%Sft	237.03	2507.06	5,942.48
33	C-9/24(c)	Distempering:- New surface:- three coats	%Sft	39540.21	1079.65	426,895.88
34	C-9/(38.A+38.B)	Preparing the surface and painting with weather coat l/c rubbing the surface with rubbing brick / sand Paper, filling the voids with chalk/ plaster of Paris and then painting with weather coat of approved make:- three coats	%Sft	11961.86	2567.95	307,174.58

Sr. No.	Item No.	Description of Item	Unit	Qty	Rate	Amount
35	C-5/29	Supplying and filling sand under floor and plugging in walls.	%Cft	2801.33	1141.25	31,970.18
36	C-4/2	Dry rammed brick or stone ballast 1 1/2" to 2" gauge.	%Cft	2659.69	3327.50	88,501.18
37	C-8/74	Providing & fixing cement paving blocks flooring having size of 197 x 97 x 80 (mm) of city / quddra / cobble shape with pigmented having strength b/w 5000 psi to 8500 psi l/c filling the joints with hill sand and laying in specified manner / pattern and design etc: complete.	P.Sft	1119.96	248.17	277,940.47
38	C-4/5(f)	Cement concrete plain including placing compacting, finishing and curing, complete (including screening and washing at stone aggregate without for all shuttering.(Mix 1:2:4)	%Cft	2284.14	14429.25	329,584.27
39	C-8/16-c	Providing and laying 2" thick topping cement concrete (1:2:4) including Surface finishing and dividing into panels:	%Sft	1895.67	3275.50	62,092.67
40	C-7/5	Single layer of tiles 9" x4 1/2" x 2" laid over 4" earth 1" mud plaster without Bhoosa grouted with cement sand 1:3 on top of R.C.C slab provide with 34 Lbs. Bitumen coating sand blinded.	%Sft	6928.35	5628.97	389,994.81
41	C-7/18	Khuras on roof 2'x2'x6" (600 x 600 x 150 mm)	Each	14	358.68	5,021.52
42	C-10/59	First class Sheesham wood wrought framed and fixed in place including chowkhats hold fasts, tower bolts, chocks, cleats, handles card with hooks and cost of nails and screws, etc. panelled or panelled and glazed or fully glazed 1-1/2" thick.	P.Sft	917.49	662.24	607,598.58
43	C-10/19-(A)-ii	Providing and fixing sliding bolt to doors.Iron sliding bolt 12" long.(a) Panelled or panelled and glazed or fully glazed 2" thick.	Each	46	222.23	10,222.58
44	C-10/21	Providing and fixing, approved quality mortice lock.	Each	40	1786.13	71,445.20
45	C-11/5-(c)	Preparing surface and painting of doors and windows any type, (including edges).Three Coats.	%Sft	1620.78	2116.41	34,302.35
46	C-18/83(a)	Supplying & fixing in position Aluminium channels framing for hinged doors or Alcop made with 5 mm thick tinted glass glazing (Belgium) and Alpha (Japan) locks l/c handles, stoppers etc. (a) Deluxe model (White)	P.Sft	244.8	1450.76	355,146.05
47	C-18/84(a)	Supplying & fixing in position Aluminium channels framing for sliding windows & ventilators of Alcop made with 5 mm thick tinted glass glazing (Belgium) & Aluminium fly screen l/c handles stoppers & locking arrangement etc. complete. (a) Deluxe model (White).	P.Sft	1062.33	1592.69	1,691,962.37
48	C-17/26	Supplying & fixing in position iron/steel grill of 3/4" x 1/4" size flat iron of approved design including painting 3 coats etc. complete (weight not to be less than 3.7 Lbs./Sq . Foot of finished grill).	P.Sft	1062.33	180.50	191,750.57
49	C-18/69(a)	Damp Proof course with cement sand Ratio (1: 2) mixed with dampo b) 1-1/2" thick	%Sft	8.95	1934.82	173.17
50	C-7/13	Two coats of bitumen laid hot using 34 Lbs for % Sft. Ober roof and blinded with sand at one Cft. Per % Sft.	%Sft	965.4	1887.40	18,220.96
51	C-7/38	Providing and laying single per layer of polythene sheet 0.13 mm thick for water proffing as per specification and instructions of Engineer incharge.	P.Sft	14822.1	10.70	158,596.47
52	C-4/7(ii)	Extra cost due to use of Hi Bond Pre-packaged Polymer Modified mortar (DHPMM) as an admixture in concrete mix for increasing durability, to be used in concreting, flooring, block/ brick/ stone masonry or plastering as % by weight of cement.	P.Kg	1983.11	459.80	911,833.98

Sr. No.	Item No.	Description of Item	Unit	Qty	Rate	Amount
53	C-4/11	Providing and fixing ornamental cement jalli 2" thick (1 : 2 : 4) without steel.	P.Sft	1293.45	226.02	292,345.57
O.H.W.T						
1	C-4/6 a-i +6 (d)	R.C work in roof slab, beams columns rafts, lintels and other structural members laid in situ or precast laid in position complete in all respects (I) Ratio (1 : 2: 4) 90 Lbs.cement 2 Cft. Sand 4 Cft. Shingle 1/8" to 1/4" gauge. (Second Floor)	P.Cft	439.78	361.20	158,848.54
2	C-4/6 a-ii +6 (d)	Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- Type B (nominal mix 1: 1.5: 3) S.F	P.Cft	49.73	373.20	18,559.24
3	C-4/8(b)	Fabrication of mild steel reinforcement for cement concrete including cutting,bending, laying in position, making joints and fastenings including cost of binding wire (also includes removeal of rust from bars.) Using Tor bars	P.Cwt	32.64	5001.70	163,255.49
Total of SOR Items						25,849,994.05

CONSTRUCTION OF GUEST HOUSE FOR THE SHAIKH AYAZ UNIVERSITY SHIKARPUR

DETAILED ESTIMATE

CIVIL WORKS

Rates Based on Composite Schedule of Rate (GENERAL-2012) Sindh

Sr. No.	Item No.	Description of Item	Unit	Qty	Rate	Amount
1	NSI	Providing and laying false ceiling comprising of 5/8" thick plaster of paris sheet of required size in approved design with one line of 6" wide niche all around , hanging with Copper wire (16 SWG) duly enriched with POP and flaxen i/c thecost of making space for rope light /screws/jute/making holes for lights and rawal plugs including paint complete in all respects as approved and directed by the Incharge.	P.Sft	5099.37		
2	NSI	Providing and applying wall putty (Kansai or equivalent) two coats on plastered surface to prepare the surface even and smooth complete in all respect as approved and directed by the Engineer Incharge.	P.Sft	79080.42		
3	NSI	Providing and laying Porcelain tiles flooring 24"x24"x3/8" light polished SB laid in cement over 3/4" thick cement sand mortar (1:2) i/c filling joints in white cement or matching pigment complete in all respect. (MASTER or Equivalent)	P.Sft	8397.58		
4	NSI	Providing and laying Porcelain tiles skirting/ dado 24"x4"x3/8" light polished SB laid in cement over 3/4" thick cement sand mortar (1:2) i/c filling joints in white cement or matching pigment complete in all respect. (MASTER or Equivalent)	P.Sft	1385.79		
5	NSI	Providing and laying Ceramic Matt Tiles Texture Light color for flooring size 12"x26"x3/8" laid over 3/4" thick cement sand mortar (1:2) i/c filling joints in white cement and matching pigment i/c cutting charges complete in all respect as approved & directed by the Engineer/ Incharge. (Premium Quality Tile, Equivalent)	P.Sft	957.78		
6	NSI	Providing and laying Ceramic Matt Tiles Texture Light color for skirting / dado size12"x26"x3/8" laid over 3/4" thick cement sand mortar (1:2) i/c filling joints in white cement and matching pigment i/c cutting charges complete in all respect as approved & directed by the Engineer/ Incharge. (Premium Quality Tile, Equivalent)	P.Sft	3609.27		
7	NSI	Providing and fixing 3/4" thick Boticina Marble full width area above 2 Sft laid in white cement matching pigment 3/4" thick cement sand mortar (1:2) i/c filling joints in white cement & matching pigment,including Polished and making gola on exposed edges complete in all respect as approved by the Engineer/ Incharge.(Stairs, Podium, Vanity)	P.Sft	2026.29		
8	NSI	Providing and fixing UPVC Doors 38mm thickness i/c deluex matching color UPVC frame matt or glossy finish having color (white-Gray-Marble Gray-Oak Wood- Dard Oak Wood, Coffee Wood Honey Pine Wood-Mahagony-Marry Gold-Chocolate Brown-Honey Dew) i/c all accessories i/c mortice locks complete in all respect as approval by the Engineer Incharge.	P.Sft	374.85		
9	NSI	Providing and fixing SS railing 2'-6" height, 2" dia SS pole 16 SWG at 4 ft c/c, 2" dia SS 16 SWG pipe on top, 3 no. 3/4" dia SS 16 SWG horizontal pipe from pole to pole, buffing and polishing complete in all respect including the cost of base plate, base plate cap, rawl bolt etc. as per approval of Engineer/ Incharge.	P.Rft	339.15		

CONSTRUCTION OF GUEST HOUSE SHAIKH AYAZ UNIVERSITY SHIKARPUR

DETAILED ESTIMATE

PUBLIC HEALTH WORKS

Rates Based on Composite Schedule of Rate (GENERAL-2012)

SR. NO.	ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (RS)	AMOUNT (RS)
		SANITARY FIXTURES AND FITTINGS				
1	SOR(Water supply & Sewerage (Ch 1/5)	Providing and fixing European type white glazed earthen ware wash down W.C. pan complete with and i/c the cost of white/black plastic seat (Best quality) and lid with C.P.brass hineges and buffers, 3 gallons white glazed earthen ware low level foushing cistern with siphon fitting 1-1/2" dia white porcelain enamelled fluish bend 3/4" dia and making requiste number of holes in walls, plinth and floor for pipe connections and making good in cement concrete 1:2:4. (Master, Sonex, Porta)	Each	21.00	11,477.40	241,025.40
2	SOR(Water supply & Sewerage (Ch 1/19-c)	Providing and fixing steel sinks stainless local make complete with cast iron or wrought iron brackets 6 inches built in wall, 1-1/2" c.p bubber plug chrome plated brass chain, 1-1/2" c.p brass waste, with 1-1/2" P.V.C. waste pipe & making requiste number of holes in wall, plinth & floor for pipe connection & making good in cement concrete 1:2:4. (c) Steel sink stainless sized 33" x 18" local make (Standard pattern) (Master or Equivalent)	Each	1.00	5,712.30	5,712.30
3	SOR(Water supply & Sewerage (Ch 6/19 (a)	Providing and fixing CP Muslim shower with double bib cock & ring pipe etc complete. (Master, Sonex, or Equivalent)	Each	21.00	3,432.00	72,072.00
4	SOR(Water supply & Sewerage (Ch 2/5)	Providing and fixing soap tray earthen ware with c.p screws etc.complete.	Each	21.00	497.20	10,441.20
5	SOR(Water supply & Sewerage (Ch 2/1 (iii-b)	Providing and fixing chrome plated brass towel rail complete with brackets fixing with 1" long c.p brass screws. (iii) Towel Rail 24" long (b) 3/4" dia round or square (Superior Quality)	Each	21.00	1,082.95	22,741.95
6	SOR(Water supply & Sewerage (Ch 2/2 (b)	Providing and fixing c,p brass toilet paper holder of standard size with chrome plated brass brackets complete (Similar to twyford's design No 1108) (b) Superior Quality	Each	21.00	1,071.40	22,499.40
7	SOR(Water supply & Sewerage (Ch 1/22	Providing and fixing (1/2") dia, lead connection complete with a (1/2") dia brass stop cock, two brass nuts & lining jointed to lead pipe with plumber wiped solder joints (1/2" lead pipe to be of not less than 4lbs per lineal yard. (Master, Sonex, or Equivalent)	Each	65.00	689.70	44,830.50
8	SOR(Water supply & Sewerage (Ch 10/1 (i)	Providing and fixing 6" x 4" C.C gully trap with 4" outlet complete with 4" thick 1:2:4 C.C for bed & 1/2" thick cement plaster (1:3) to the karb. C.I grating 6" x 6' C.I cover and frame 12" x 12" (inside) etc complete. Earthan ware glazed Gully trap 6" x 6" x 4" with C.I cover & Frame.	Each	7.00	1,220.67	8,544.69
9	SOR (PHE works) Part-B (II) A-2	Providing and laying R.C.C. pipe & collors of class "B" and fixing in trench i/c cutting,fitting and jointing with maxphalt composition and cement mortar (1:1) i/e. testing with water to a head of 22.5 meter or 76 ft. (e) 310mm (12") i/d	P.Rft	500.00	543.75	271,875.00

SR. NO.	ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (RS)	AMOUNT (RS)
10	SOR (PHE works) Part-B (III) A-1	Excavation for pipeline in trechches, and pits in soft soils i/c trimming and dressing sides to true alignment and shape levelling of beds of trenches to correct level and grade, cutting joint and holes and disposal of surplus earth within a one chain as directed by engineer incharge.Providing fence guards, lights, flags and temperory crossings for non-vehicular traffic where ever required lift upto 5ft. (1.52 m) and lead upto one chain (30.5 m).	1000 Cft	4,500.00	3,600.00	16,200.00
11	Ch/1/13 (d)	Earth work compaction (Soft, ordinary or hard soil). (d) Ramming earth work (All types of soil).	1000 Cft	4,500.00	453.75	2,041.88
12	Ch/1/9 (a)	Rehandling of earth work. (a) Lead upto a single throw of Kassi, Phawrah or a = Shovel.	1000 Cft	4,500.00	756.25	3,403.13
13	SOR(Water supply & Sewerage (Ch 6/4 (iv)	Providing and fixing full way gun metal peet/gate valve with wheels, threaded or flabged ends with rubber washing.(iv) 1-1/4" (Light pattern) (Kitz. Audco or Equivalent)	Each	8.00	337.92	2,703.36
14	SOR(Water supply & Sewerage (Ch 6/4 (v)	Providing and fixing full way gun metal peet/gate valve with wheels, threaded or flabged ends with rubber washing.(v) 1-1/2" (Light pattern) (Kitz. Audco or Equivalent)	Each	8.00	695.42	5,563.36
		MANHOLE				
15	VI-B (ii) P (1)	Constructing manhole or inspection chamber for the required diameter of circular sewer and 3'-6" (1067 mm) depth waith walls of BB in cement sand mortar 1:3 cement plastered 1:3, 1/2" thick. Inside of walls and 1" (25 mm) thick over benching and channel i/c fixing C.I manhole cover with frame of clear opening 1-1/2' x 1-1/2' (457 x 457mm) of 1.75 cwt. (88.9 Kg) embaded in plain C.C 1:2:4 and fixing 1"(25mm) dia MS steps 6" (150 mm) wide projecting 4" (102mm) from the face of wall at 12" (305mm) C/C duly painted etc. Complete as per Standard specification and drawing.	Job	10.00	14,748.00	147,480.00
16	SOR (Water supply & Sanitary works) Ch 1-13	Providing & fixing 22"x 16" lavatory basin in white glazed earthen ware complete with & i/c the cost of W.I or C.I cantilever brackets 6 inches built into walls, painted white in 2 coats after a primary coat of red lead paint, a pair of 1/2" rubber plug & chrome brass waste of approved pattern 1-1/4" dia malleable iron or CP brass trap, malleable iron or brass unions and making requisite number of holes in walls plinth and floor for pipe connection &making good in cement concrete 1:2:4 (Foreign or Equivalent) (Master, Sonex, or Equivalent)	Each	22.00	6,237.00	137,214.00
17	SOR (Water supply & Sanitary works) Ch 6-14 (b)	Providing and fixing, wash hand basin mixture of superior quality with CP head 1/2' dia. (Master, Sonex, or Equivalent)	Each	23.00	3,179.00	73,117.00
18	SOR (Water supply & Sanitary works) Ch 1-20	Providing and fixing 6" x 2" or 6" x 3" C.I floor trap of the approved selt cleaning design with a C.I screwed down grating without a vent arm complete with & i/c making requisite number of holes in walls, plinth & floor for pipe connections & making good cement concrete 1:2:4.	Each	75.00	2,042.43	153,182.25
19	SOR (Water supply & Sanitary works) Ch 1-26 (b)	Providing and fixing 24"x 18" bavelled edge mirror of belgium glass complete with 1/8' thick hard board and c.p screws fixed to wooden pleat. (Superior Quality)	Sft	21.00	2,376.00	49,896.00
		VALVES				

SR. NO.	ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (RS)	AMOUNT (RS)
20	SOR (Water supply & Sanitary works) Ch 6-5	Providing and fixing handle valves (China) 16bars or equivalent complete in all respects as approved by the engineer incharge.				
	ii	3/4 inch	Each	16.00	271.92	4,350.72
	i	1/2 inch	Each	12.00	200.42	2,405.04
21	SOR (Water supply & Sanitary works) Ch 6-6 (iv)	Providing, fixing and testing PPRC ball valve 32mm , (with unsoldered copper ball) made to B.B.S 1212.	Each	4.00	510.84	2,043.36
22	SOR (Water supply & Sanitary works) Ch 6-6 (v)	Providing, fixing and testing PPRC ball valve 40mm , (with unsoldered copper ball) made to B.B.S 1212.	Each	6.00	573.70	3,442.20
23	SOR (Water supply & Sanitary works) Ch 4-1	Providing G.I Pipes, specials, and clamps etc. including fixing cutting & fitting complete with and l/c the cost of breaking through walls and roof, making good etc. Painting two coats after cleaning the pipe etc. with white zink paint with pigment to match the color of the building and testing with water to a pressure head of 200 feet and handling.				
	v	1-1/2" dia G.I pipe	Rft	90.00	188.97	17,007.30
	vi	2" dia G.I pipe	Rft	60.00	233.00	13,980.00
Total of SOR ITEMS						1,333,772.03

CONSTRUCTION OF GUEST HOUSE SHAIKH AYAZ UNIVERSITY SHIKARPUR

DETAILED ESTIMATE

PUBLIC HEALTH WORKS

Rates Based on Composite Schedule of Rate (GENERAL-2012)

SR. NO.	ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (RS)	AMOUNT (RS)
1	NSI	UPVC Multi Floor Trap (110x75mm) including strainer; making required number of connections; breaking concrete or masonry work & then making it good; etc. of approved make. (Master, Sonex, or Equivalent)	Each	15.00		
2	NSI	Providing, Fixing Dadex Class D or equivalent UPVC clean out with cover making requisite number of holes in walls, plinth or floor for pipe connection and making good the same as necessary to the structure complete including, rubber gasket and clamp. (Dadex, Popular or Equivalent)	Each	4.00		
3	NSI	Providing and fitting "P" trap:ii) 10 cm (4") glazed.	Each	21.00		
4	NSI	Providing and fixing Wall Shower complete in all respects as approved by the Engineer incharge. (Master, Sonex, or Equivalent)	Each	21.00		
5		WATER SUPPLY PIPES AND FITTINGS				
		P/F Polypropylene Random copolymer (PPRC) PN-20 pipe with fusion / threaded joints including the cost of all specials/ accessories i.e elbow, bend, sockets etc. (Popular /Beta or equivalent) complete in all respect.				
	i	1 1/2" (40 mm) dia.	Rft	160.00		
	ii	1" (25 mm) dia.	Rft	360.00		
	iii	2" (50 mm) dia.	Rft	210.00		
	iv	3/4" (20 mm) dia.	Rft	770.00		
6		SOIL, WASTE, VENTILATING PIPES & FITTINGS				
		Providing , fixing and testing UPVC Nikasi type "B" with solution of same quality make including the cost of all specials/ accessories i.e elbow, bend, sockets etc. (Popular/Beta or equivalent) complete in all respect.				
	i	100 mm (4") dia.	Rft	530.00		
	ii	80 mm (3") dia.	Rft	550.00		
		GAS GESYER				
7	NSI	Providing and Fixing Sui Gas Geyser 50 gallon capacity comprising of internal tank of G.I sheet 14-SWG and External M.S sheet 22-SWG covering with proper foot rests dully enamel painted, 4" thick heigh density glass wool insulation with proper warranty with thermostat temperature gauge including fixing and making connection at site etc. complete in all respects as approved by the Engineer Incharge. (Ambassador/Firex/Exquire)	No	2.00		
8	NSI	Providing and fixing Gate valve 1 bars, RUV(itly) or equivalent complete in all respects as approved by the Engineer incharge.	Each	2.00		

SR. NO.	ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (RS)	AMOUNT (RS)
9	NSI	Providing and fixing Gate valve 2 bars, RUV(itly) or equivalent complete in all respects as approved by the Engineer incharge.	Each	4.00		
Total of Non SOR ITEMS						

CONSTRUCTION OF GUEST HOUSE FOR THE SHAIKH AYAZ UNIVERSITY SHIKARPUR

DETAILED ESTIMATE

ELECTRICAL WORKS

Rates Based on Composite Schedule of Rate (GENERAL-2012) Sindh

Sr. No.	Item No.	Description	Unit	Qty	Unit Rate (Rs.)	Total Amount (Rs.)
		<u>DISTRIBUTION BOARDS</u>				
		Supply at site, fabrication, installation, testing and commissioning of Distribution Board (DB) , made of sheet steel 16 SWG, degreased and derusted, with 2 coats of antirust paint, 2 coats of powder coated paint of approved colour, protection classification IP-44, totally enclosed indoor floor mounting cubicle type in free standing design, with hinged door, handle including cost of all auxiliaries, internal wiring, designation lables on MCCBS, grounding bar suitable for system Voltage 440 V, 50 Hz, 3 Phase and neutral bus bars of 99.9% electrolytic copper, including cost of cable terminal blocks wiring from breakers, brass cable glands, all accessories complete in all respects metion in BOQ or not required for performing completely. All incoming and outgoing breakers shall be accessible only by opening the front door having further M.S. sheet cover gaskets shall also be provided where necessary. Panel should be compeltely made in certified factory. ie PEL, Green T & D, Mazcorp engineering or equivalent a per instructions by engineer incharge				
		All MCCBs shall be suitable to operate without any derating at 40°C ambient temperature and shall be of one make only. The sides of MDB shall also have louvers at bottom and top on sides of panel for hot air exhaust, wire mesh etc. The back of the panel shall be lockable door instead of bolted and shall conform to single line diagram. item should be of ABB, Schneider or equivalent as per instructions by engineer incharge				
		<u>Main Distribution Board</u>				
		<u>INCOMMING</u>				
	ELECT SH-X(208)	Providing and fixing circuit breaker 125,150,200 & 225 amps TP(XS-225NS) on prepared board as required.	Per No.	1	25541	25,541
	ELECT SH-XV(273)	Providing and fixing of current transformer of ration 300/5 amps (round) RLC-30 as required or as per instructed as EI.	Per No.	3	1686	5,058
	ELECT SH-XVI(285)	Providing and fixing voltmeter size 96/96mm 500 volt as required and as instruction of EI.	Per No.	3	999	2,997
	ELECT SH-X(203)	Providing and fixing circuit breaker 6,10,15,20,30,40,50 & 63 amps SP(TB-5S) on prepared board as required.	Per No.	3	916	2,748
		<u>OUTGOING</u>				
	ELECT SH-X(203)	Providing and fixing circuit breaker 6,10,15,20,30,40,50 & 63 amps SP(TB-5S) on prepared board as required.	Per No.	40	916	36,640
	ELECT SH-X(207)	Providing and fixing circuit breaker 15,20,30,40,50, 75 & 100 amps TP(XS-100NS) on prepared board as required.	Per No.	4	9226	36,904
		<u>DISTRIBUTION BOARD DB-Lighting GF, FF</u>				
		<u>INCOMMING</u>				
	ELECT SH-X(207)	Providing and fixing circuit breaker 15,20,30,40,50, 75 & 100 amps TP(XS-100NS) on prepared board as required.	Per No.	2	9226	18,452
	ELECT SH-XV(269)	Providing and fixing of current transformer of ration 60/5 amps (round) RLC-30 as required or as per instructed as EI.	Per No.	6	1191	7,146
	ELECT SH-XVI(285)	Providing and fixing voltmeter size 96/96mm 500 volt as required and as instruction of EI.	Per No.	6	999	5,994
	ELECT SH-X(203)	Providing and fixing circuit breaker 6,10,15,20,30,40,50 & 63 amps SP(TB-5S) on prepared board as required.	Per No.	6	916	5,496
		<u>OUTGOING</u>				
	ELECT SH-X(203)	Providing and fixing circuit breaker 6,10,15,20,30,40,50 & 63 amps SP(TB-5S) on prepared board as required.	Per No.	41	916	37,556
	ELECT SH-X(207)	Providing and fixing circuit breaker 15,20,30,40,50 & 60 amps TP(XES-100CB(CS)) on prepared board as required.	Per No.	2	5521	11,042
		<u>DISTRIBUTION BOARD DB-FF Power</u>				

Sr. No.	Item No.	Description	Unit	Qty	Unit Rate (Rs.)	Total Amount (Rs.)
		INCOMING				
	ELECT SH-X(207)	Providing and fixing circuit breaker 15,20,30,40,50, 75 & 100 amps TP(XS-100NS) on prepared board as required.	Per No.	1	9226	9,226
	ELECT SH-XV(270)	Providing and fixing of current transformer of ration 100/5 amps (round) RLC-30 as required or as per instructed as EI.	Per No.	3	1191	3,573
	ELECT SH-XVI(285)	Providing and fixing voltmeter size 96/96mm 500 volt as required and as instruction of EI.	Per No.	3	999	2,997
	ELECT SH-X(203)	Providing and fixing circuit breaker 6,10,15,20,30,40,50 & 63 amps SP(TB-5S) on prepared board as required.	Per No.	3	916	2,748
		OUTGOING				
	ELECT SH-X(203)	Providing and fixing circuit breaker 6,10,15,20,30,40,50 & 63 amps SP(TB-5S) on prepared board as required.	Per No.	30	916	27,480
	ELECT SH-X(207)	Providing and fixing circuit breaker 15,20,30,40,50 & 60 amps TP(XES-100CB(CS)) on prepared board as required.	Per No.	1	5521	5,521
1		WIRING IN CONCEALED CONDUITS				
i)		Distribution board to Switch				
		Wiring of light circuit from Distribution Board to switch,with Three nos. single core 2.5 Sqmm PVC insulated 450/750 volts grade stranded copper conductor cables in concealed PVC conduits (conduits partly shared) including PVC conduit, and conduit accessories etc. Cable should be of Newage, Fast cable, Universal cables or equivalent and conduit should be of Dadex, Turkplast, Easyfit or equivalent as per instructions by engineer incharge				
a	ELECT SH-I(24)	Providing and laying (main or Sub Main Pvc insulated with 3-7.29 copper conductor in 3/4" dia PVC conduit recessed in the wall or column as required.	Rmtr	805	294.00	236,670
ii)		Switch to light point				
		Wiring from switch to light or fan point with 3 nos. single core 1.5 Sqmm PVC insulated 450/750 Volts grade stranded copper conductor cables in concealed PVC conduit including PVC conduit, Conduit accessories,etc.(conduit partly shared).				
a	ELECT SH-II(124)	Wiring of Light and fan point with 3.29 Pvc insulated wire in 20mm (3/4") dia PVC conduit recessed in the wall or column as required.	Per/Point	155	1,130.00	175,150
		Point to point wiring				
b	ELECT SH-I(22)	Providing and laying (main or Sub Main Pvc insulated with 3-3.29 copper conductor in 3/4" dia PVC conduit recessed in the wall or column as required.	Rmtr	3010	220.00	662,200
iii)		Switch to Switch				
		Wiring from switch to switch with 3 nos. single core 2.5 Sqmm PVC insulated 450/750 Volts grade stranded copper conductor cables in concealed PVC conduit including PVC conduit, Conduit accessories,etc.(conduit partly shared).				
a	ELECT SH-I(24)	Providing and laying (main or Sub Main Pvc insulated with 3-7.29 copper conductor in 3/4" dia PVC conduit recessed in the wall or column as required.	Rmtr	600	294.00	176,400
iv)		Distribution board to General Purpose (5A/13A) socket				
		Wiring of circuit from Distribution Board to 5A/13A ,230Volts with 3 nos. single core 2.5 Sqmm PVC insulated 450/750 Volts graded , 2&3 pin switched socket, stranded copper conductor cables in concealed PVC conduit, including conduit accessories, etc(conduit partly shared)				
a	ELECT SH-I(24)	Providing and laying (main or Sub Main Pvc insulated with 3-7.29 copper conductor in 3/4" dia PVC conduit recessed in the wall or column as required.	Rmtr	1200	294.00	352,800
v)		Socket to Socket				
		Wiring from 5 Amps, 2&3 pin socket to socket with 3 nos. single core 2.5 Sqmm PVC insulated 450/750 Volts grade solid or stanerd copper conductor cables in concealed PVC conduit including PVC conduit,Conduit accessories, etc complete. (conduit partly shared)				

Sr. No.	Item No.	Description	Unit	Qty	Unit Rate (Rs.)	Total Amount (Rs.)
a	ELECT SH-I(24)	Providing and laying (main or Sub Main Pvc insulated with 3-7.29 copper conductor in 3/4" dia PVC conduit recessed in the wall or column as required.	Rmtr	456	294.00	134,064
vi)		Distribution board to 20Amps socket				
		Wiring of circuit from distribution board to 20A, 230Volts, DP switch with 3 or 5 nos. single core 6 Sqmm PVC insulated 450/750 Volts grade stranded copper conductor cables in concealed PVC conduit including PVC conduit, Conduit accessories, etc (conduit partly shared for A/Cs)				
a	ELECT SH-I(26)	Providing and laying (main or Sub Main Pvc insulated with 3-7.44 copper conductor in 1" dia PVC conduit recessed in the wall or column as required.	Rmtr	870	468.00	407,160
Total of SOR Items						2,391,563

CONSTRUCTION OF GUEST HOUSE FOR THE SHAIKH AYAZ UNIVERSITY SHIKARPUR

DETAILED ESTIMATE

ELECTRICAL WORKS

Rates Based on Composite Schedule of Rate (GENERAL-2012) Sindh

Sr. No.	Item No.	Description	Unit	Qty	Unit Rate (Rs.)	Total Amount (Rs.)
1		DISTRIBUTION BOARDS				
		Supply at site, fabrication, installation, testing and commissioning of Distribution Board (DB) , made of sheet steel 16 SWG, degreased and derusted, with 2 coats of antirust paint, 2 coats of powder coated paint of approved colour, protection classification IP-44, totally enclosed indoor floor mounting cubicle type in free standing design, with hinged door, handle including cost of all auxiliaries, internal wiring, designation lables on MCCBS, grounding bar suitable for system Voltage 440V, 50 Hz, 3 Phase and neutral bus bars of 99.9% electrolytic copper, including cost of cable terminal blocks wiring from breakers, brass cable glands, all accessories complete in all respects metion in BOQ or not required for performing completely. All incoming and outgoing breakers shall be accessible only by opening the front door having further M.S. sheet cover gaskets shall also be provided where necessary. Panel should be compeltely made in certified factory. ie PEL, Green T & D, Mazcorp engineering or equivalent ass per instructions by engineer incharg				
		All MCCBs shall be suitable to operate without any derating at 40°C ambient temperature and shall be of one make only. The sides of MDB shall also have louvers at bottom and top on sides of panel for hot air exhaust, wire mesh etc. The back of the panel shall be lockable door instead of bolted and shall conform to single line diagram. item should be of ABB, Schneider or equivalent as per instructions by engineer incharge				
		Main Distribution Board				
		INCOMING				
		03 No Digital Ammeter scaled 0-300 Amps of appropriate sizes.				
		03 Nos. R-Y-B indication lamps.				
		05 Nos.copper bus bars 225 Ampere,three phase,Earth and Netural for distrubitions with appropriate size DB BOX				
		02 Nos Phase Rotation/failure, (adjustable under/over voltage threshold),50/60Hz, 0.1~10 Sec Delay, 380~500V				
		02 No Thermostatically controlled 230 Volts robust exhaust fans 6"/8" dia. to be installed on front of MDB for hot air exhaust including cost of thermostat ON-OFF switches wire mesh and all necessary accessories / wiring, complete in all respects.	Job	1		
		DISTRIBUTION BOARD DB-Lighting GF, FF				
		INCOMING				
		03 No Digital Ammeter scaled 0-500 Amps of appropriate sizes.				
		03 Nos. R-Y-B indication lamps.				
		05 Nos.copper bus bars 40Ampere,three phase,Earth and Netural for distrubitions with appropriate size DB BOX	Job	2		
		DISTRIBUTION BOARD DB-FF power				
		INCOMING				
		03 No Digital Ammeter scaled 0-500 Amps of appropriate sizes.				

Sr. No.	Item No.	Description	Unit	Qty	Unit Rate (Rs.)	Total Amount (Rs.)
		03 Nos. R-Y-B indication lamps.				
		05 Nos.copper bus bars 150 Ampere,three phase,Earth and Natural for distrubitions with appropriate size DB BOX	Job	1		
		Each Bus bar is 300*12*2 mm.				
2		LIGHT FIXTURES				
i)		Supply, installation, testing and commissioning of following light fittings, ceiling, recessed,wall mounted as per specified fixture. Complete with internal wiring, Grounding terminal , driver complete in all respects. Lights should be of Phillips, ledvance or equivalent				
ii)		14 Watt 4t luxline LED wall/Ceiling mounted Light Fixture, IP-22 rated	No.	4		
iii)		20 Watt LED Light Fixture surface/recessed mounted, IP-22 rated	No.	193		
iv)		15 Watt (Warm) LED Light Fixture surface/recessed mounted, IP-22 rated	No	41		
v)		15 Watt (White) LED Light Fixture surface/recessed mounted, IP-22 rated	No.	23		
vi)		10 Watt LED Light Fixture surface/recessed mounted, IP-22 rated	No.	42		
3		MISCELLANEOUS FITTINGS				
		Supply, installation, testing & commissioning of Ceiling/ Exhaust fan. The ceiling/exhaust fan shall comprise circular fan metallic/ plastic body, metallic fan blades, down rod (if necessary) of suitable dia & length, AC capacitor, internal wiring, terminals all installation & operational accessories as per tender specifications, as per site requirements and as per instructions by the Engineer. make GFC, Pak Fan, Royal Fan or approved equivalent.				
i)		12 " outer dia exhaust fan with plastic body,fan blades and louvers	No.	22		
ii)		Providing and Fixing of brass ceiling fan 56" (good quality)	No.	31		
iii)		Providing and Fixing of brass bracket fan 18" (good quality)	No.	1		
4		WIRING ACCESSORIES				
		Supply at site, installation, testing and commissioning of the following wiring accessories, complete in all respects. Made of TJ, Legrand or approved equivalent.				
i)		10 Amps, 250Volts one way, One gang light control switches including appropriate size concealed Plastic back box.	No.	3		
ii)		10 Amps, 250Volts one way, Two gang light control switches including appropriate size concealed Plastic back box.	No.	23		
iii)		10 Amps, 250Volts one way, Three gang light control switches including appropriate size concealed Plastic back box.	No.	4		
iv)		10 Amps, 250Volts one way, Four gang light control switches including appropriate size concealed Plastic back box.	No.	26		
v)		10 Amps, 250Volts one way, Six gang light control switches including appropriate size concealed Plastic back box.	No.	4		
vi)		15 Amps, 250Volts, universal 5 in 1 switched socket unit including appropriate size Plastic back box.	No.	93		
vii)		20 Amps Double Pole(DP) switch with neon indication lamp complete including appropriate size Plastic back box.	No.	28		

Sr. No.	Item No.	Description	Unit	Qty	Unit Rate (Rs.)	Total Amount (Rs.)
viii)		45 Amps Double Pole(DP) switch with neon indication lamp complete including appropriate size Plastic back box.	No.	1		
xi)		Fan Dimmer 250 watt with switch including appropriate size Plastic back box. with all associated accessories.	No.	31		
x)		Appropriate size of plastic body fan box and ceiling fan rod 24" in length	Nos	31		
		MS BAR for hanging Ceiling fan	Nos	31		
5		LT CABLES				
		Supply at site, installation, testing and commissioning of PVC insulated armoured copper conductor cable 600 / 1000 Volt grade (or otherwise mentioned in cable description) in prelaidd conduits / trenches to be installed as per routes shown on drawings including cost of all necessary materials, connections, identification tags, cables lugs properly crimped at both ends for the following sizes complete in all respects. Actual length of cables to be installed shall be practically measured at site by the Contractor, duly authenticated by the Engineer before placing the order with the manufacturer, however, approximate length of cables are shown herewith. Payments shall be made as per actual length installed. Cable should be of Newage, Fast cable, Universal cables or equivalent and conduit should be of Dadex, Turkplast, Easyfit or equivalent as per instructions by engineer incharge				
		Providing and laying (main or Sub Main) Pvc insulated, Pvc sheated with 4 core copper conductor 600/1000 volts size 16mm ²	Rmtr	100		
		Providing and laying (main or Sub Main) Pvc insulated, Pvc sheated with 4 core copper conductor 600/1000 volts size 35mm ²	Rmtr	50		
		Providing and laying (main or Sub Main) Pvc insulated, Pvc sheated with 4 core copper conductor 600/1000 volts size 120mm ²	Rmtr	100		
6		GROUNDING SYSTEM				
i)		GROUNDING cable				
		Supply and erection of single core PVC insulated, PVC sheathed copper conductor, 660/1100 volts grade cable, in prelaidd G.I. pipe/M.S. conduits/PVC pipe/G.I. wire/trenches, etc (rate for cable only):- 19/1.32 mm (19/0.052")	rmtr	30		
		Supply and erection of single core PVC insulated, PVC sheathed copper conductor, 660/1100 volts grade cable, in prelaidd G.I. pipe/M.S. conduits/PVC pipe/G.I. wire/trenches, etc (rate for cable only):- 6 mm sq (7/0.044")	rmtr	100		
		Supply and erection of single core PVC insulated, PVC sheathed copper conductor, 660/1100 volts grade cable, in prelaidd G.I. pipe/M.S. conduits/PVC pipe/G.I. wire/trenches, etc (rate for cable only):- 16 mm sq (7/0.064")	rmtr	50		
ii)		Plate type earthing				
		Providing & fixing of Plate type Earthing commpressed with execveted hole 6"up 63 feet,GI pipe 2"(50mm)with Tees , Sockets , Endcap of 60 (RFT) Copper Plate of 1/2"x 2"x 48", 2x 70mmsq S/Core copper bare conductor 125 (Rft) Earth Connection Point of 1200 x 50 x 50mm (L x W x T) Inspection Pit of 300 x 300 x 450 mm (L x W x D) completed with all respect	No.	1		

Sr. No.	Item No.	Description	Unit	Qty	Unit Rate (Rs.)	Total Amount (Rs.)
iii)		Grounding Connection Point				
		Supply of Grounding connecting points consisting of copper plate 300mm long x50mm wide x 6mm thick to be installed, complete with fixing arrangement, brass nuts bolts, washers, lugs, 12.5mm dia. holes to facilitate connections of Incoming copper strips / copper conductors.	Nos.	1		
iv)		Testing and commissioning				
		Testing and commissioning of the earthing system in the presence of site engineer with electronic devices such as megger etc, making so report with after approximating 3 time testing and the grounding ohm must be less than or upto 3 ohms	Nos.	1		
7		CIVIL WORKS				
i)		Trench (for LT Cable)				
		Labour for excavation and refilling of trench 12" wide, 24" deep 9" sand compaction below and above in preinstalled PVC pipes, ramming watering all necessary material, labour etc, complete in all respect. Actual length of the trench shall be as per site condition and paid accordingly however approximate length of trench is given.	R.Mtr	100		
ii)		Manhole For LT Cable Pulling (If Required)				
		Construction of manholes to facilitate pulling of cables in trench or conduit as shown on drawing, manholes shall be of the size 24" x 24" x 30" deep with 9" thick wall with cement mortar, internal plaster 1:4, 100mm thick RCC cover for manhole, including cost of all accessories / materials, complete in all respects. (Tentative number of manholes have been provided, however payment shall be made as per actual and as per quantity requirement)	Nos.	1		
iii)		Conduit				
		Supply and erection of PVC pipe for wiring recessed in walls, including inspection boxes, pull boxes, hooks, cutting jharries, and repairing surface, etc., complete with all specials, conduit should be of Dadex, Turkplast, Easyfit or equivalent as per instructions by engineer incharge.				
	i)	20 mm i/d	R.Mtr	50		
	ii)	25 mm i/d	R.Mtr	500		
8		CCTV System				
i		Camera Cable				
		Supply, installation, Testing and commissioning of CAT 6a UTP CABLE IN PVC PIPE Ø 1"; MEASUREMENT IN METERS complete in all respects.including cost of conduit and its accesories installing arrangment, making jurries in wall and repairment of wall. Made of D-Link or equivalent approved by engineer incharge	R.Mtr	390		
9		DATA NETWORKING SYSTEM				
C-I-06		Data Network point				

Sr. No.	Item No.	Description	Unit	Qty	Unit Rate (Rs.)	Total Amount (Rs.)
a		Wiring for each data/computer point with UTP, 4 pair Cat 6a (500 Mhz) Network Cable supports (10 Giga) laid in PVC Conduit , with pure copper conductor PVC insulated PVC sheathed including cost of Single Shutter Face palte with UTP Cat-6a Keystone Jack with Back Box to be installed on walls, from Data Cabinet to Computer Points, PVC conduit & Cable tray. including cost of conduit and its accesories installing arrangement, making jurries in wall and repairment of wall. cable should be made of D-link(NCB-6AUGRYR-305) or equivalent & conduit should be of Dadex, Turkplast, Easyfit or equivalent as per instructions by engineer incharge.	Points	28		
		Networking Switch				
a		Supply, installation testing and commisiong of 24 port layer 2 network switch 10/100/1000 MBPS with 04 giga SFP uplink ports, switching capacity 56 GBPS, rack mounted to be instaled in data cabinit, complete in all respect. Make cisico / HP / D-Link or equivalent (specification as per dgs-1210-28p) as per instructions by Engineer Incharge	Nos.	1		
b		Supply, installation, testing and commisioning of 24 port POE switch of following specification 24 × 100 Mbps PoE ports, and 2 × 1000 Mbps combos. IEEE 802.3at/af standard. IEEE 802.3, IEEE 802.3u and IEEE 802.3x standard. High priority ports. 8-core power supply. Upstream port link aggregation. Up to 250 m transmission distance. 6 KV surge protection for PoE ports. PoE power management. 100 Mbps network access make dahua DH-PFS4226-24ET-240 or equivalent as per instructions by engineer incharge	Nos	1		
C-I-07		Data Cabinets				
		Supply at site, installation, testing and commissioning of data cabinet of approximate size as mentioned below, powder coated, having lockable glass door at front, 2 exhaust fans on top, suitable for under mentioned patch panels, consisting of the following data points to be terminated on modular patch panel, including cost of power bus bar, suitable for Cat. 6a cables patch guides, patch cords for Data points, all necessary accessories / materials for active and passive equipment. The data cabinet shall be complete in all respects including cost of all necessary materials / accessories required for proper functioning for the data cabinet. Data cabinet shall be installed after obtaining necessary permission from the computer specialist of the Client. made of Matrix, d-link or equivalent as per instructions by site engineer				
a		Data Cabinet 6U 368 x 570 x 390 mm Wall Mounted Imported made of M.S sheet,Powder Coated, having lockable glass door at front,double section , fans on top,to accomodate UTP Cat-6a, 24 port patch panel, UTP Cat-6a Patch Cords 1 meter length, Cable Manager, OFDF, Six socket Power distribution Unit.	Nos.	1		
b		Supply, installation, testing and commisioning of DATA RACK 27U 600x 800; PREFORATED; 01x FIX, 01x SLIDING TRAYS; 04 FANS; 1x 06 WAY ALL PDU;, complete in all respects.	Nos.	1		

Sr. No.	Item No.	Description	Unit	Qty	Unit Rate (Rs.)	Total Amount (Rs.)
C-I-08		Patch Panel				
a		Supply, installation, testing and commissioning of PATCH PANEL 24 PORT Fully LOADED WITH Cat-6 I/Os SUITABLE FOR CAT-VI UTP CABLE; RACK MOUNT , complete in all respects.made of D-Link(NPP-C61BLK241)	Nos.	2		
C-I-09		Cable Manager				
a		Supply, installation, testing and commissioning of MS CABLE MANAGER/ORGANISER RACK MOUNT , complete in all respects. 19"1U Metal cable Management with rings. Made of D-Link(NCM-M01) or equivalent approved by site engineer	Nos.	2		
C-I-10		Faceplate				
a		Supply, installation, testing and commissioning of single Faceplate Accepts Two Keystone Jacks with Shutter & ID Plate- 86*86 mm - White Colour - Square with Cat6 UTP 180° Punch Down Keystone Jack - White Colour and Back Box for Dual Shutter Face/Plate. Plastic(D35xH85xW85 CM), complete in all respects. made of D-Link(NFP-0WHI21)+(NKJ-C6WHI1B21) or equivalent as per instructions by site engineer	Nos.	28		
C-I-11		Fiber Optic Cable				
		Supply at site, installation, testing and commissioning of the following Fiber Optic Cables to be installed in conduits, cable trays and dura duct including cost of all necessary accessories/ materials complete in all respect including cost of conduit and its accesories installing arrangement, making juries in wall and repairment of wall. Cable should be made of D-Link or equivalent & conduit should be of Dadex, Turkplast, Easyfit or equivalent as per instructions by engineer incharge.				
a)		12 Core Multimode (50/125um) OM2 Unitube Armoured Outdoor Fiber Cable - HDPE Sheath in meters D-Link(NCB-FM500-AUHD-12)	R.Mtr	50		
C-I-12		Patch Cord				
		Supply, installation, testing and commissioning of LC-SC Multimode (50/125um) OM2 Duplex Patch Cord,3m, complete in all respects. Made of Dlink (NCB-FM50D-LCSC-3) or equivalent as per instructions by site engineer	Nos.	28		
C-I-13		6 port PDU				
		Supply, installation, testing and commissioning of 6 PORT IEC PDU, (6) IEC C19 OUTPUT & (1)IEC C20 INPUT PLUG 16A 240V PDU made of BayLan, serveredge or equivalent approved by site engineer	Nos.	2		
C-I-14		Television point				
		Supply at site, installation, testing & commissioning of Wiring for each Television point with coaxial cable RG-6 1.0 MM (BLACK) CU CLAD, in 1" dia conduit partly shared, Network Cable pure copper conductor PVC insulated PVC sheathed including cost of Jack with Back Box to be installed on Walls, from booster to Television Points on walls, complete in all respect including cost of conduit and its accesories installing arrangement, making juries in wall and repairment of wall. cable should be made of D-link or equivalent & conduit should be of Dadex, Turkplast, Easyfit or equivalent as per instructions by engineer incharge.	Nos	23		
C-I-15		Faceplate				

Sr. No.	Item No.	Description	Unit	Qty	Unit Rate (Rs.)	Total Amount (Rs.)
i		Supply, installation, testing and commissioning of faceplate SINGLE SHUTTER/PORT WITH 1 gang tv outlet & BACK BOX , complete in all respects. Made of legrand or equivalent as per instructions by site engineer	Nos.	23		
		SECTION - N				
10		<u>Fire Alarm System</u>				
		Supply, installation, testing and commissioning of following items as per drawings, specifications, & instructions of the Engineer, complete in all respect, all item should be of Gent by honeywell, ETON uk or approved equivalent as per instructions by the Engineer as required.				
C-N-01		<u>Manual Call Point</u>				
		Supply, install testing and commsiong of manual call point RESET type with allied components with full functionality as per specification of manufacturer / drawing with proper staff and tools and plants etc.Input Source Zone signal Address Coding dip switch Operating Voltage 26V DC Alarm Current 6mA Quiescent Current 850µA Ambient Temperature 0°C ~ +50°C Material Fire-proof plastic	Each	4		
C-N-02		<u>Smoke Detector</u>				
		Supply, install testing and commsiong of Addressable Optical Smoke Detectors incorporating a with in the housing of the detector. Sensing of the detector shall be adjustable via software between 0-90 seconds.Address Coding Binary Alarm Current DC26V 6mA Standby Current DC26V 850µA Sensitivity Setting Comply to EN54 Ambient Temperature 0°C ~ +50°C Material Fire-proof plastic	Each	35		
C-N-03		<u>Heat Detector</u>				
		Supply, install testing and commsiong of Low profile intelligent analogue addressable multi sensor with combined optical thermal sensors in a single housing with dual LED for 360 deg. viewing and mounting base. Address Coding Binary Alarm Current DC26V 6mA Standby Current DC26V 850µA Sensitivity Setting Comply to EN54 Thermal Setting 58°C Ambient Temperature 0°C ~ +50°C Material Fire-proof plastic	Each	1		
C-N-04		<u>Sounder</u>				

Sr. No.	Item No.	Description	Unit	Qty	Unit Rate (Rs.)	Total Amount (Rs.)
		Supply, install testing and commsiong of Intelligent analogue addressable Loop powered sounder with flasher and red body and wall mounting base.Input Source Zone signal Address Coding Binary dip switch Operating Voltage 26.5V DC Standby Current Under 850µA Alarm Current Under 8mA Sound Output 90 ±4dB at 1 meter Sounder Output 2.3~3.4KHz Ingress Protection IP65 Ambient Temperature -20°C ~ +50°C Ambient Humidity 10% ~ 95% Material Fire-proof plastic	Each	4		
C-N-05		FACP				
		Supply, install, testing and commsiong of Addressable FACP. Each loop can connect up to 250 addressable devices. Maximum networking are 32 loops and total addressable points are 8000. Large LCD screen (40 x 15 lines) allows more events to be displayed on the same screen. Power 220V AC 50/60Hz *Others also available Battery Capacity 24V DC 4Ah Charging Voltage, Current 26V DC 100~400mA *With auto adjustment function Zone Voltage, Current 26.5V DC 340mA System Capacity 250 devices/1 loop *Expandable for site requirement Exterior Resistance Round-trip under 40Ω Transmitting Method Digital series transmitting Accumulation Time 0~40 seconds Main Sound 85dB @1M Material 1.6mm steel plate	Each	2		
C-N-06		Cable				
		Supply, install testing and commsiong of 2 x 2.5 mmsq shielded drain wire, 30 minutes fire resistance,red, LPCB approved, BS 7629-1/2008, BS 5839-1 standard in 25 mm dia pvc conduit complete in all respects including cost of conduit and its accesories installing arrangement, making jurries in wall and repairment of wall .(Newage, Pakistan Cable, Fast or approved equivalent). conduit should be of Dadex, Turkplast, Easyfit or equivalent as per instructions by engineer incharge.	Rmtr	940		
C-N-07		Programming, Testing and Commissioning				
		Programming, Testing and Commissioning of Complete system by authorized certified company complete in all respects as per instructions of the Engineer.	Job	1		
C-N-08		Fire Extinguishers				
		Supply & installation of 1 x 6kg DCP CO2 Fire Extinguishers installed as per instructions of Cleint, complete with wall hanging and mounting arrangement complete in all respects. Complete in all respect as per instructions by site engineer	Nos.	4		
Total of Non-SOR Items						