



THE SHAIKH AYAZ UNIVERSITY,
SHIKARPUR



**CONSTRUCTION OF VICE CHANCELLOR
RESIDENCE FOR THE PROJECT TITLED
“PROVISION OF MISSING FACILITIES FOR
THE SHAIKH AYAZ UNIVERSITY
SHIKARPUR”**

BILLS OF QUANTITIES

April, 2022

**CONSTRUCTION OF VC RESIDENCE AT 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	10,443,192
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	705,358
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	602,611
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 VC RESIDENCE AT 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)	Excavtion in foundation of Building Bridges and other structures including dagbelling dressing,refilling around structrure with excavated earth Watering and ramming lead upto 5 ft in Ordinary Soil.	%0Cft	6842.04	3176.25	21,732
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	10782.64	9.74	105,023
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	2036.32	11288.75	229,875
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	1238.16	337.00	417,260
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	2493.56	337.00	840,330
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	1622.57	349.10	566,439
7	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	224.1	349.00	78,211
8	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	282.33	349.00	98,533
9	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	151.76	361.10	54,801
10	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	364.06	5001.70	1,820,919
11	C-5/4-l(e)	Pacca brick work in foundation and plinth in cement sand mortar 1:6.	%Cft	4412.57	11948.36	527,230
12	C-1/21	Filling, watering and ramming earth in floors with surplus earth from foundation lead upto one chain and lift jupto 5 feet.	%0Cft	2280.68	1512.50	3,450

Sr. No.	Item No.	Description of Item	Unit	Qty	Rate	Amount
13	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	22154.37	3630.00	80,420
14	C-5/5-l(d)	Pacca brick work in Ground Floor cement, sand mortar Ratio 1:5	%Cft	2582.47	12902.08	333,192
15	C-5/5-l(c)	Pacca brick work in Ground Floor cement, sand mortar Ratio 1:4	%Cft	210.8	13227.41	27,883
16	C-5/5-l(d) + 6	Pacca brick work in First Floor cement, sand mortar Ratio 1:5	%Cft	1982.92	13340.71	264,536
17	C-5/5-l-c + 6	Pacca brick work in First Floor cement, sand mortar Ratio 1:4	%Cft	252.16	13666.04	34,460
18	C-9/12(b)	Cement plaster 1:5 upto 12' height:- b) ½" (13 mm) thick. (Internal) Ground Floor	%Sft	5273.61	2241.80	118,224
19	C- 9/12(b)+29	Cement plaster 1:5 upto 12' height:- b) ½" (13 mm) thick. (Internal) First Floor	%Sft	4135.33	2382.77	98,535
20	C-9/12(c)	Cement plaster 1:5 upto 12' height:- b) ¾" (20 mm) thick. (Internal) Ground Floor	%Sft	4909.98	2678.50	131,514
21	C- 9/12(c)+29	Cement plaster 1:5 upto 12' height:- b) ¾" (20 mm) thick. (Internal) First Floor	%Sft	3988.96	2819.47	112,468
22	C-9/11(c)	Cement plaster 1:4 Ground Floor upto 12' height:- c) ¾" (20 mm) thick. (External)	%Sft	4739.75	3015.76	142,939
23	C- 9/11(c)+29	Cement plaster 1:4 First Floor upto 12' height:- c) ¾" (20 mm) thick. (External)	%Sft	3899.46	3156.73	123,095
24	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	3381.16	2225.12	75,235
25	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	2113.74	2366.09	50,013
26	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	8639.21	2567.95	221,851
27	C-9/24(c)	Distempering:- New surface:- three coats	%Sft	22981.25	1079.65	248,117
28	C-5/29	Supplying and filling sand under floor and plugging in walls.	%Cft	1341.21	1141.25	15,307
29	C-4/2	Dry rammed brick or stone ballast 1 1/2" to 2" gauge.	%Cft	1427.33	3327.50	47,494
30	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	1031.73	14429.25	148,871
31	C-8/16-c	Providing and laying 2" thick topping cement concrete (1:2:4) including Surface finishing and dividiing into panels:	%Sft	1077.11	3275.50	35,281
32	C-8/75	Providing & fixing glass strips 4 mm for flooring upto 1" depth l/c fixing in flooring with cement in specified pattern & design.	P.Sft	430.84	11.16	4,808
33	C-7/18	Khuras on roof 2'x2'x6" (600 x 600 x 150 mm)	Each	9	358.68	3,228
34	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	317.73	662.24	210,414
35	C-18/83(a)	Supplying & fixing inposition 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	81.6	1450.76	118,382

Sr. No.	Item No.	Description of Item	Unit	Qty	Rate	Amount
36	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	14	222.23	3,111
37	C-10/21	Providing and fixing, approved quality mortice lock.	Each	14	1786.13	25,006
38	C-11/5-(c)	Preparing surface and painting of doors and windows any type, (including edges).Three Coats.	%Sft	635.46	2116.41	13,449
39	C-18/84(a)	Supplying & fixing in position Aluminium channels framing for slidding 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	846.6	1592.69	1,348,371
40	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	846.6	180.50	152,811
41	C-18/69(a)	Damp Proof course with cement sand Ratio (1: 2) mixed with dampo b) 1-1/2" thick	%Sft	48.25	1934.82	934
42	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	290.03	1887.40	5,474
43	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	6197.6	10.70	66,314
44	C-8/71	Providing & fixing cement paving blocks flooring having size of 197 x 97 x 60 (mm) of city / quddra / cobble shape with natural colours, 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	3908.64	199.77	780,829
45	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	2953.79	5628.97	166,268
46	C-4/6-(b-i) + c	Precast reinforced cement concrete in columns, beams lintels stair cases, shelves, etc. Ratio 1:2:4 and erecting and fixing in position precast cement concrete or stone slab in roofs or Lintels, etc, lift upto 20 feet including all charges.	P.Cft	237.12	351.55	83,360
47	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	544.89	459.80	250,540
48	C-4/11	Providing and fixing ornamental cement jalli 2" thick (1 : 2 : 4) without steel.	P.Sft	123.08	226.02	27,819
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	152.24	361.20	54,989.09
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	2.68	373.20	1,000.18

Sr. No.	Item No.	Description of Item	Unit	Qty	Rate	Amount
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 removal of rust from bars.) Using Tor bars	P.Cwt	10.3	5001.70	51,517.51
4	C-5/5-I(d) + 6	Pacca brick work in Second Floor cement, sand mortar Ratio 1:5	%Cft	9.56	13915.46	1,330.32
Total of SOR Items						10,443,192

CONSTRUCTION OF VC RESIDENCE AT 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	821.52		
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	22981.25		
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	2937.29		
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	280.27		
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	570.24		
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	1479.66		
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)	P.Sft	306.93		
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	142.8		

CONSTRUCTION OF VC RESIDENCE AT THE 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 l/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	5.00	11,477.40	57,387.00
2	SOR(Water supply & Sewerage (Ch 1/2-A ii))	Providing and Fixing squatting type white glazed earthen ware w.c pan with front fresh inlet & complete with including the cost of flushing cistern with internal fitting and flush pipe with bend and making requisite number of holes in walls plinth & floor for pipe connection and making good in cement concrete 1:2:4. (A) W.C pan 23" & low level earthen ware flush tank 3 gallons. (ii) with 4" dia white glazed earthen ware trap and plastic thumble. (Master, Sonex, Porta)	Each	2.00	5,772.80	11,545.60
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 requisite 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	2.00	5,712.30	11,424.60
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	7.00	3,432.00	24,024.00
4	SOR(Water supply & Sewerage (Ch 2/5))	Providing and fixing soap tray earthen ware with c.p screws etc.complete. (Master, Sonex, or Equivalent)	Each	7.00	497.20	3,480.40
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	3.00	1,082.95	3,248.85
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 twyforads design No 1108) (b) Superior Quality	Each	7.00	1,071.40	7,499.80
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 wipid solder joints (1/2" lead pipe to be of not less than 4lbs per lineal yard. (Master, Sonex, or Equivalent)	Each	25.00	689.70	17,242.50

SR. NO.	ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (RS)	AMOUNT (RS)
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	5.00	1,220.67	6,103.35
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	400.00	543.75	217,500.00
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	3,600.00	3,600.00	12,960.00
11	Ch/1/13 (d)	Earth work compaction (Soft, ordinary or hard soil). (d) Ramming earth work (All types of soil).	1000 Cft	3,600.00	453.75	1,633.50
12	Ch/1/9 (a)	Rehandling of earth work. (a) Lead upto a single throw of Kassi, Phawrah or a = Shovel.	1000 Cft	3,600.00	756.25	2,722.50
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	6.00	337.92	2,027.52
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	6.00	695.42	4,172.52
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	7.00	6,237.00	43,659.00
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	11.00	3,179.00	34,969.00

SR. NO.	ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (RS)	AMOUNT (RS)
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 self 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	24.00	2,042.43	49,018.32
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	7.00	2,376.00	16,632.00
		VALVES				
21	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	6.00	271.92	1,631.52
	i	1/2 inch	Each	4.00	200.42	801.68
22	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	2.00	510.84	1,021.68
23	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	4.00	573.70	2,294.80
24	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	70.00	188.97	13,227.90
	vi	2" dia G.I pipe	Rft	50.00	233.00	11,650.00
Total of SOR ITEMS						705,358.04

CONSTRUCTION OF VC RESIDENCE AT THE 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	10.00		
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	7.00		
4	NSI	Providing and fixing Wall Shower grohe concealed or equivalent complete in all respects as approved by the Engineer incharge. (Master, Sonex, or Equivalent)	Each	3.00		
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	110.00		
	ii	1" (25 mm) dia.	Rft	180.00		
	iii	2" (50 mm) dia.	Rft	80.00		
	iv	3/4" (20 mm) dia.	Rft	400.00		
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	260.00		
	ii	80 mm (3") dia.	Rft	230.00		
		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	1.00		
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 VC RESIDENCE AT 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 as 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(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(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.	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
		<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.	36	916	32,976
	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.	3	5521	16,563
1		<u>WIRING IN CONCEALED CONDUITS</u>				
i)		<u>Distribution board to Switch</u>				
		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	300	294.00	88,200
ii)		<u>Switch to light point</u>				

Sr. No.	Item No.	Description	Unit	Qty	Unit Rate (Rs.)	Total Amount (Rs.)
		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	88	1,130.00	99,440
		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	400	220.00	88,000
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	180	294.00	52,920
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	224	294.00	65,856
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)				
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	120	294.00	35,280
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	224	468.00	104,832
Total of SOR Items						602,611

CONSTRUCTION OF VC RESIDENCE AT 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		<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 as 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>INCOMING</u>				
		03 No Digital Ammeter scaled 0-500 Amps of appropriate sizes.				
		03 Nos. R-Y-B indication lamps.				
		05 Nos.copper bus bars 100 Ampere,three phase,Earth and Natural for distributions with appropriate size DB BOX	Job	1		
		Each Bus bar is 300*12*2 mm.				
2		<u>LIGHT FIXTURES</u>				
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				
iii)		20 Watt LED Light Fixture surface/recessed mounted, IP-22 rated	No.	96		
iv)		15 Watt (Warm) LED Light Fixture surface/recessed mounted, IP-22 rated	No	29		
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.	11		
3		<u>MISCELLANEOUS FITTINGS</u>				

Sr. No.	Item No.	Description	Unit	Qty	Unit Rate (Rs.)	Total Amount (Rs.)
		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)		Providing and Fixing of brass ceiling fan 56" (good quality)	No.	13		
ii)		12 " outer dia exhaust fan with plastic body, fan blades and louvers	No.	9		
4		WIRING ACCESSORIES				
		Supply at site, installation, testing and commissioning of the following wiring accessories, complete in all respects. Made of T.J, Legrand or approved equivalent.				
ii)		10 Amps, 250Volts one way, Two gang light control switches including appropriate size concealed Plastic back box.	No.	9		
		10 Amps, 250Volts one way, Three gang light control switches including appropriate size concealed Plastic back box.	No.	7		
iv)		10 Amps, 250Volts one way, Four gang light control switches including appropriate size concealed Plastic back box.	No.	7		
v)		10 Amps, 250Volts one way, Six gang light control switches including appropriate size concealed Plastic back box.	No.	7		
xi)		15 Amps, 250Volts, universal 5 in 1 switched socket unit including appropriate size Plastic back box.	No.	36		
xii)		20 Amps Double Pole(DP) switch with neon indication lamp complete including appropriate size Plastic back box.	No.	14		
xiii)		45 Amps Double Pole(DP) switch with neon indication lamp complete including appropriate size Plastic back box.	No.	1		
xiv)		Fan Dimmer 250 watt with switch including appropriate size Plastic back box. with all associated accessories.	No.	13		
xv)		Appropriate size of plastic body fan box and ceiling fan rod 24" in length	Nos	13		
		MS BAR for hanging Ceiling fan	Nos	13		
5		GROUNDING SYSTEM				
i)		GROUNDING cable				
		Supply and erection of single core PVC insulated, PVC sheathed copper conductor, 660/1100 volts grade cable, in prelaid G.I. pipe/M.S. conduits/PVC pipe/G.I. wire/trenches, etc (rate for cable only):- 16 mm sq (7/0.064")	rmtr	30		
ii)		Plate type earthing				
		Providing & fixing of Plate type Earthing compressed with execveted hole 6"up 63 feet,G.I 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		
iv)		Testing and commissioning				

Sr. No.	Item No.	Description	Unit	Qty	Unit Rate (Rs.)	Total Amount (Rs.)
		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		
6		<u>LT CABLES</u>				
		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 35mm ²	Rmtr	50		
7		<u>CIVIL WORKS</u>				
	i)	<u>Trench (for LT Cable)</u>				
		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	50		
	ii)	<u>Manhole For LT Cable Pulling (If Required)</u>				
		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.	3		
	iii)	<u>Conduit</u>				
		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	90		
	ii)	25 mm i/d	R.Mtr	20		
8		<u>CCTV System</u>				
	i	<u>Camera Cable</u>				

Sr. No.	Item No.	Description	Unit	Qty	Unit Rate (Rs.)	Total Amount (Rs.)
		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	120		
9		<u>DATA NETWORKING SYSTEM</u>				
i		<u>Data Network point</u>				
		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 arrangment, 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	6		
ii		<u>Networking Switch</u>				
		Supply, installation, testing and commisioning of TP-Link 8-Port Gigabit Easy Smart Switch with 4-Port PoE (TL-SG108PE) 8 10/100/1000Mbps ports provide instant large file transfers <ul style="list-style-type: none"> • Equipped with 4 802.3af PoE ports with up to 15.4W for each port • Supports PoE power up to 55W for all PoE ports • IEEE 802.3x flow control provides reliable data transfers as per instructions by Engineer Incharge 	Nos	1		
iii		<u>Faceplate</u>				
a		Supply, installation, testing and commisioning 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.	6		
iv		<u>Wifi Access Points</u>				
		Supply at site, installation, testing and commissioning of the instant access point for Wifi(Enterprise),including wifi connection with the supplier 1 device as wifi and other as router for first floor making the job complete in all respects.	Job	1		
v		<u>Television point</u>				

Sr. No.	Item No.	Description	Unit	Qty	Unit Rate (Rs.)	Total Amount (Rs.)
		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 boster to Television Points on walls, complete in all respect including cost of conduit and its accesories installing arrangement, making jurries 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	4		
vi		Faceplate				
		Supply, installation, testing and commisioning 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.	4		
vii		Telephone				
		Supply at site, installation, testing & commissioning of Wiring for each Telephone point with 5 pair telephone cable , in 1" dia conduit partly shared, solid plain copper conductors, solid PVC insulation, conductors twisted together in pairs, overall PVC sheath, conductor resistance (Max @ 200C) 97.8ohms/km, capacitance Unbalanced (Max) 500pF/500m, insulation resistance (Min @ 200C): 50Mohms/km including cost of Keystone Jack with Back Box to be installed on Walls, from Junction box to Telephone Points on walls, complete in all respect. 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	4		
viii		Faceplate				
		Supply, installation, testing and commisioning of faceplate SINGLE SHUTTER/PORT WITH 1x RJ-11 I/O & BACK BOX , complete in all respects. Made of TJ, legrand or equivalent as per instructions by engineer incharge	Nos.	4		
Total of Non-SOR Items						