

BQQ FOR RENOVATION OF WASHROOMS OF PRCL

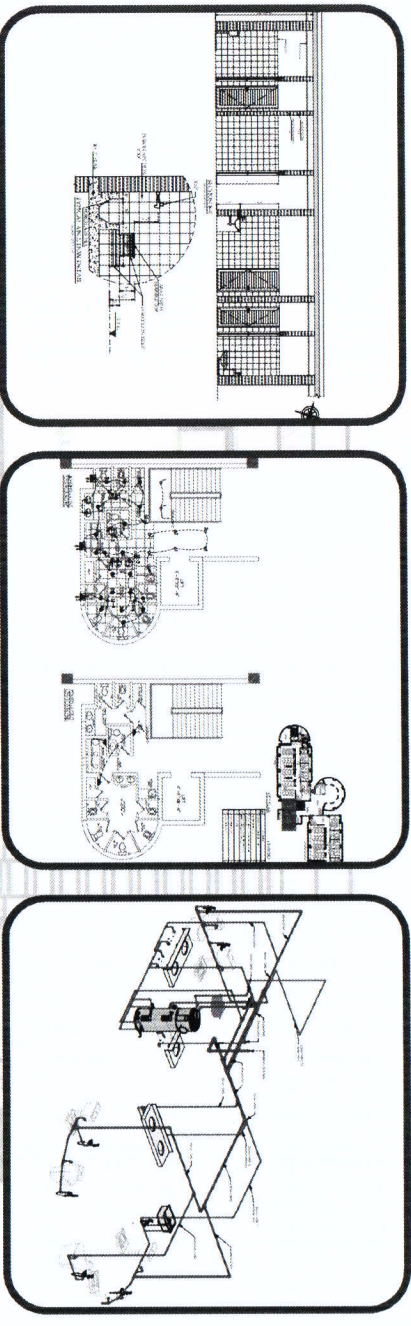
DECEMBER-2023



PakRe

PAKISTAN REINSURANCE COMPANY LIMITED

**ENGINEERING CONSULTANCY SERVICES FOR RENOVATION OF
PRCL OFFICE BUILDING AT KARACHI**



ENGINEERING CONSULTANCY SERVICES PUNJAB (PVT) LTD.

A Premier Engineering Consultancy Firm Owned by Government of the Punjab



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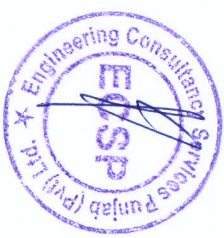
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RENOVATION OF WASH ROOM AT PRCL TOWER KARACHI
ENGINEERING CONSULTANCY SERVICES PUNJAB (PVT) LTD (ECSP)

TROPICAL TOILETS
BILL OF QUANTITIES
SUMMARY OF COST

(Composite Schedule of Rates 2022 Government of Sindh)

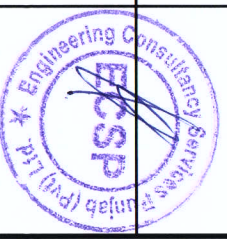
SR.NO	DESCRIPTION	AMOUNT (RS)	AMOUNT (RS)
Schedule items			
1	CIVIL WORKS		
2	PUBLIC HEALTH WORKS		
3	ELECTRICAL WORKS		
	Sub total		
Non-schedule items			
4	CIVIL WORKS		
5	PUBLIC HEALTH WORKS		
6	ELECTRICAL WORKS		
7	Fire Alarm System		
	Sub total		
	Grand Summary of Cost:		



RENOVATION OF WASH ROOM AT PRCL TOWER KARACHI
ENGINEERING CONSULTANCY SERVICES PUNJAB (PVT) LTD (ECSP)
TROPICAL TOILETS
BILL OF QUANTITIES
CIVIL WORK

COMPOSITE SCHEDULE OF RATES 2022 ENFORCED FROM 7TH JULY 2022

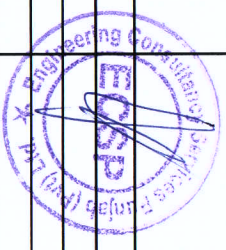
Sr.No	Items, No	Description	Qty.	Unit	Rate	Amount (Rs.)
1	4/2	Dry rammed brick or stone ballast 1 1/2" to 2" (gauge)	3,507.37	Cft		
2	4/5 f	Cement concrete plain including placing compacting, finishing and curing, comlete (including screening and washing at stone aggregate without shuttering. Ratio 1:2:4	1,203.60	Cft		
3	4/6 ai	Reinforced cement concrete work including all labour and material except the cost of steel reinforcement and its labour for bending and binding which will be paid separately. This rate also includes all kinds of forms moulds, lifting, centering, shuttering and curing. (including screening and washing of shingle. a) R.C.C work in roof slab, beams, column, rafts, lintels and other structural members laid in situ or precast laid in position complete in all respects. j) Ratio 1 : 2: 4 90 Lbs of cement, 2 Cft sand and 4 Cft shingle 1/8" to 3/4" gauge	117.99	Cft		
4	4/8 a	Fabrication of deformed 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. a) Deformed bar	294.98	Kg		
5	4/24	Providing and laying 1 : 3 : 6 cement concrete solid block masonry wall above 6" in thickness set in 1 : 6 cement sand mortar in ground floor superstructure including raking out joints and curing etc. complete.	3,209.47	Cft		
6	5/29	Supplying and filling sand under floor and plugging in walls.	1,753.69	Cft		
7	8/25	Laying glazed tiles 1/4" thick floor of approved color & size jointing in white cement and laid over 1:2 cement sand mortar 3/4" thick including grouting with matching color and finishing	1,516.59	Sft		
8	8/24	Laying glazed tiles 1/4" thick dado of approved color & size jointing in white cement and laid over 1:2 cement sand mortar 3/4" thick including grouting with matching color and finishing.	8,643.60	Sft		
9	8/28 i	Laying Afghan Ziarat white marble flooring fine dressed on the surface without winding set in lime mortar 1:2 including rubbing and polishing of the joints. (only kitchen shelf & vanity) (i) (a) 3/4" thick marble. (only kitchen shelf & vanity)	162.80	Sft		
10	8/28 iv	Laying Super Botisina, Crème, Badal or Black Marble 12"x12" / 12"x24" fine dressed on the surface without winding set in lime mortar 1:2 including rubbing and polishing of the joints. (a) 3/4" thick marble. (only abluion area)	559.35	Sft		
11	8/28 ix	Providing & Laying Full Body Porcelain Tile in Flooring or Facing of Approved Design Set in Gry Cement Motor 1:2 or of 3/4" Thickness I/C Washing & Joints With White Cement Slurry Using Colour Pigment for matching complete as per Spacification. (ix) 24"x24"x5/16"	5,649.00	Sft		
12	9/10	Cement plaster 1:3 upto 12' height. (b) 1/2" thick.	11,875.50	Sft		



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TROPICAL TOILETS
BILL OF QUANTITIES
CIVIL WORK

COMPOSITE SCHEDULE OF RATES 2022 ENFORCED FROM 7TH JULY 2022

Sr.No	Items.No	Description	Qty.	Unit	Rate	Amount (Rs.)
13	9/41 a	Preparing the surface and painting with plastic emulsion paint of approved make l/c rubbing the surface with sand Paper, filling the voids with chalk / plaster of paris and then painting etc. complete. A) 1st Coat	11,875.50	Sft		
	b	2nd & subsequent coat.	11,875.50	Sft		
14	10/9	Providing and fixing in position doors, windows and ventilators of first class deodar wood frames, and 1-3/4" thick commercial ply veneer shutters of first class deodar skeleton (Solid Door) and commercial ply wood (3 ply) on both sides includinghold fasts, hinges, iron tower bolts, handles and cleats with cord and one Mortice lock and hooks.	102.90	Sft		
15	17/29	Providing and fixing G.I frames /Choukhats of size 7" x 2" or 4 1/2" x 3" for door using 20 gauge G.I sheet l/c welded hinges and fixing at site with necessary hold fasts, filling with cement sand slurry of ratio 1:6 and repairing the jambs. The cost also i/c all carriage , tools and plants used in making and fixing.	720.30	Rft		
16	18/116	Providing and fixing in position UPVC channels framing for Door of unplasticized polyvinyl chloride (UPVC) with fly screen in/c handles stoppers looking arrangement etc complete Deluxe model etc complete as per direction Engineer /Incharge.	793.80	Sft		
17	2/13.	Dismantling brick work in lime or cement mortar.	1,108.80	Cft		
18	2/19 c	Dismantling cement concrete plain 1 : 2: 4:	2,314.87	Cft		
19	2/53.	Removing cement or lime plaster.	2,493.86	Sft		
20	2/55.	Dismantling glazed or encaustic tiles etc.	16,599.65	Sft		
Total Schedule Cost:-						
1	NS-1	Providing and Fixing Laminated Gypsum sheet false ceiling consisting of size 2' x 2' x 1/2" thick with metal suspension consisting of galvanized steel furring channels, splices, hangers, adjustment clips and approved paint work etc. complete in all respects, as per drawings or as approved by the Consultant.	1,607.25	Sft		
2	NS-1	Providing and Fixing Laminated Gypsum sheet false ceiling consisting of size 2' x 2' x 1/2" thick with metal suspension consisting of galvanized steel furring channels, splices, hangers, adjustment clips and approved paint work etc. complete in all respects, as per drawings or as approved by the Consultant. (Floors)				
		11th Floor	5,143.00	Sft		
		12th Floor	5,143.00	Sft		
		13th Floor	6,131.00	Sft		
		14th Floor	6,065.00	Sft		
Total Non-Schedule Cost:-						

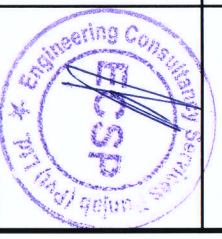


**RENOVATION OF WASH ROOM AT PRCL TOWER KARACHI
ENGINEERING CONSULTANCY SERVICES PUNJAB (PVT) LTD (ECSP)**

**TROPICAL TOILETS
BILL OF QUANTITIES
PLUMBING WORK**

COMPOSITE SCHEDULE OF RATES 2022 ENFORCED FROM 7TH JULY 2022

Sr.No	Item	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
PLUMBING FIXTURES AND FITTINGS						
1	1/2b i, vol III, Part III,	Providing and fixing squatting type white glazed earthen ware W.C. pan with front flush 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 & making good in cement concrete 1:2:4. (Foreign Quality)(19 inch)	No.	15		
2	1/4, vol III, Part III,	Providing and fixing European type white glazed earthen ware wash down W.C. pan complete with & including the cost of white/ black plastic seat (Best quality) and lid with C.P. brass hinges best quality and buffers 3 gallons white glazed earthen ware low level flushing cistern with siphon fitting 1½ " dia white porcelain enameled flush bend dia and making requisite number of holes in walls, plinth & floor for pipe connection & making good in cement concrete 1:2:4 (Foreign Quality)	No.	16		
3	1/7, vol III, Part III,	Providing and fixing flat black lipped from urinal basin (of not less than 17" in height) of white glazed earthen ware complete with & including the cost of 1 gallon C.I. automatic flushing cistern with fittings, a pot cock C.I. or W.I. brackets standard flush pipe with fitting standard waste pipe (enameled iron) connection complete and making requisite number of holes in walls, plinth & floor for pipe connection & making good in cement concrete 1:2:4. (Foreign or equivalent)	No.	2		
4	1/19a, vol III, Part III,	Providing and fixing steel sinks stainless local bt make complete with cast iron or wrought iron LINA ALVH brackets 6 inches built into wall, 1- 1/2" rubber plug and chrome plated brass chain 1- 1/2" C.P. brass waste wwith 1-1/2" P.V.C. waste pipe & making requisite number of holes in walls, plinth & floor for pipe connection & making good in cement concrete 1:2:4				
		(a) Steel sink stainless sized 40"x20" local make (Standard Pattern)	Each	4		
5	1/20, vol III, Part III,	Providing & 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 with or 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	48		
6	1/21, vol III, Part III,	Providing and fixing a C.I. trap with 4" dia inlet and 4" dia outlet of the approved self cleaning design with a C.I. grating with or without a vent arm including cost of making requisite number of holes in walls, plinth & floor for pipe connection & making good in cement concrete 1:2:4.	Each	92		

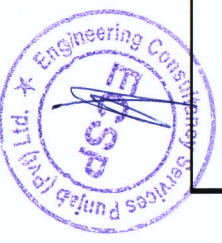


RENOVATION OF WASH ROOM AT PRCL TOWER KARACHI
ENGINEERING CONSULTANCY SERVICES PUNJAB (PVT) LTD (ECSP)

TROPICAL TOILETS
BILL OF QUANTITIES
PLUMBING WORK

COMPOSITE SCHEDULE OF RATES 2022 ENFORCED FROM 7TH JULY 2022

Sr.No	Item	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
7	2/1, vol III, Part III,	Providing and fixing chrome plated brass towel rail Complete with brackets fixing on wooden cleats with 1" long C.P brass screws.				
	2/1 b, vol III, Part III,	(iii) Towel rail 24" long (b) 3/4" dia round or square (Superior Quality)	Each	12		
8	2/2 b, vol III, Part III,	Providing and fixing approved quality CP brass toilet paper holder of standard size with chrome plated brass brackets complete (similar to twofold design No. 1108) (Superior Quality)				
		(b) Superior Quality	Each	32		
9	2/3 a, vol III, Part III,	Providing & fixing 24"x18" bavelled edge mirror of Belgium glass completed with 1/8" thick hard -and C.P. screws fixed to wooden cleats (Standard pattern).				
		(Standard pattern).	Each	20		
10	2/5, vol III, Part III,	Providing and fixing soap tray of superior quality and design with fine finishing with C.P. screws etc. complete	Each	20		
11	6/2b, vol III, Part III,	Supplying & fixing in position C.P Bib cock. (b) 1/2" dia C.P bib cock, Standard pattern.	Each	24		
12	6/12 a, vol III, Part III,	S/Fixing concealed tee-stop cock of superior quality with CP head 1/2" dia	Each	56		
13	6/14 a, vol III, Part III,	Supplying & Fixing wash hand basin mixer of superior quality with CP head 1/2" dia	Each	32		
14	6/17 vol III, Part III,	Supplying & fixing Sink mixture cock of superior quality with C.P. head etc. complete	Each	4		
15	6/19 a, vol III, Part III,	Supplying & fixing C.P Muslim Shower with double Bib cock & ring Pipe etc complete.	Each	40		
16	10/1 ai, vol III, Part III,	Providing & 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.				
		C.C Gully Trap 6" x 6" x 4" C.I Cover and Frame	Each	30		

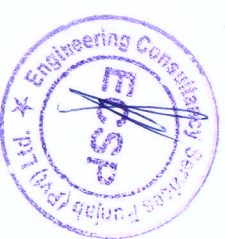


RENOVATION OF WASH ROOM AT PRCL TOWER KARACHI
ENGINEERING CONSULTANCY SERVICES PUNJAB (PVT) LTD (ECSP)

TROPICAL TOILETS
BILL OF QUANTITIES
PLUMBING WORK

COMPOSITE SCHEDULE OF RATES 2022 ENFORCED FROM 7TH JULY 2022

Sr.No	Item	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
	D	Providing, Laying and Jointing PVC pipes with 'Z' joints.				
17	II/D-3, vol III, Part II,	Providing, Laying uPVC Pressure Pipes of Class 'D' (equivalent make) fixing in trench i/c cutting, fitting and jointing with 'Z' joint with one rubber ring i/c testing with water to a head 122 meter or 400 ft	Rft	640		
		c) 50 mm (2" dia)	Rft	500		
		e) 80 mm (3" dia)	Rft	1740		
		f) 100 mm (4" dia)	Rft	820		
		h) 150 mm (6" dia)	Rft	200		
		i) 200 mm (8" dia)	Rft			
	A	(I) EARTH WORK (FOR PIPE LINES).				
18	II/A-, vol III, Part II,	Excavation for pipe line in trenches, 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 holes and disposal of surplus earth within a one chain as directed by Engineer Incharge. Providing fence guards, lights, flags and temporary crossings for non-vehicular traffic where ever required lift upto 5 ft. (1.52m) and lead upto one chain (30.5m).	Cft.	3825		
19	1/21	Filling watering and ramming earth under floor with surplus earth excavated from foundation lead upto one chain and lift upto 5 feet.	Cft.	3825		
	O	STANDARD MANHOLES				
20	II/O-1, vol III, Part II,	Construction manhole or inspection chamber for the required diameter of circular sewer and 3'-6" (1067mm) depth with walls of B.B in cement mortar (1:3) 1/2" thick inside of walls and 1" thick over benching and channels i/c fixing C.I manhole cover with frame of clear opening 1-1/2"x1-1/2" of 1.75 cwt (88.9 kg) embedded in plain C.C 1:2:4 and fixing 1" dia MS steps 6" wide projecting 4" from the face of wall at 12" c/c duly painted etc. complete as per drawing and standard specification.	Each	30		
	a	4" to 12" dia 2'x 2 x 3'-6"	Each	30		
Total Schedule Cost:-						

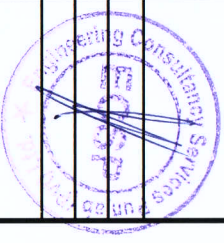


RENOVATION OF WASH ROOM AT PRCL TOWER KARACHI
ENGINEERING CONSULTANCY SERVICES PUNJAB (PVT) LTD (ECSP)

TROPICAL TOILETS
BILL OF QUANTITIES
PLUMBING WORK

COMPOSITE SCHEDULE OF RATES 2022 ENFORCED FROM 7TH JULY 2022

Sr.No	Item	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
21	NS-1	Providing/fixing Dual Electric and Gas water heater (Geyser) comprising of tank of 14 SWG, GI sheet and external cover of 22 SWG MS sheet, insulated with 4" thick high density glass wool, imported thermostat i/c electric rod, safety valve (Ambassador / Canon) i/c cost of accessories & making connection complete in all respect as approved and directed by Engineer Incharge				
		Incharge				
		50 gallon capacity	No.	4		
22	NS-2	Providing and fitting glazed earthen ware wash hand basin / vanity 56x40 cm (22"x16") made of Faisal/Sonex / Master best quality or equivalent complete in all respect as approved and directed by the Engineer Incharge	Each	20		
23	NS-3	Providing and fixing CP heavy duty brass Ball valve with CP handle of specified diameter made of KITZ Japan or equivalent complete in all respect as approved and directed by the Engineer Incharge	Each	16		
24	NS-4	Providing, fixing, joining and testing Polypropylene Random Copolymer (PPRC) PN20 pressure pipe for cold and hot water as per DIN 8077-8078, PN 20 for pipes and DIN 16962, PN 25 for fittings (polyfusion welded joints) inside building including fittings and specials (sockets, tees, elbows, bends, crosses, reducers, adaptor, plugs and union etc.) supported on walls or suspended from roof slab or run in chases including pipe hangers, supports, cutting and making good the chases and holes complete in all respects	Rft	1800		
		ii (3/4") 25 mm	Rft	750		
		iii (1") 32 mm	Rft	600		
		iv (1-1/4") 40 mm	Rft	460		
		v (1-1/2") 50 mm	Rft	1400		
		vi (2") 63 mm	Nos	24		
25	NS-6	SS Floor Clean Out Dia 4", Supply and Fixing.				
26	NS-7	Booster Pump Set 55GPM 30Psi, Single phase with Motor The cost of connection charges, Control Valves, Check Valves, Pressure Sensor, PVC pipes etc complete in all respect as approved and directed by the Engineer Incharge.	Nos	1		
27	NS-8	U-Pvc Vent Cap of specific Dia. Supply and Fixing	Nos	2		
		4"	Nos	2		
		6"	Nos			
28	NS-9	Providing and Laying (MAIN or SUB MAIN)PVC Insulated with size 3-7/0.29 copper conductor, complete in all respect. Make Allied Cable, GM Cable, Newage Cable or equivalent	Rft	50		
Total Non-Schedule Cost:-						

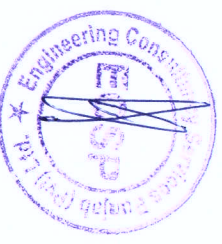


RENOVATION OF WASHROOMS OF PRCL TOWER AT KARACHI
ENGINEERING CONSULTANCY SERVICES PUNJAB (PVT) LTD (ECSP)

ELECTRICAL WORKS
BILL OF QUANTITIES

COMPOSITE SCHEDULE OF RATES 2022 ENFORCED FROM 7TH JULY 2022

ITEM NO.	MRS Ref.	DESCRIPTION	QTY.	UNIT	RATE (Rs.)	AMOUNT (Rs.)
1		Cu/PVC, 250/400 Cable				
a	Vol-III, Part-V, Sr#: 23	Supply and erection of three core PVC insulated, PVC sheathed copper conductor. 250/440 volts, PVC insulated with size 3-3/.036 copper conductor Make: Allied, GM cables, Newage or equivalent	306.15	Rft		
2		Flush Type Switches				
a	VOL-III, Part-V Sr#188	Providing & fixing one way SP 10/15amp switch surface type	34.46	Each		
3		Flush Type Switches				
	VOL-III, Part-V Sr#188	Providing & fixing three pin 10/15amp plug & socket	12.92	Each		
TOTAL COST						
4		Lighting Fixtures				
	NON-SCHEDULE LE	Supply , installation, connecting and testing of lighting fixtures surface/Ceiling mounted or to be fixed in the false ceiling, complete in all respect. Manufactured by: Phillips, Thorn, NVC or equivalent				
a		Down Light 750 Lumens, 8W	124.92	Each		
b		Vanity Light 700 lumens, 7W	23.08	Each		
c		Down Light 750 Lumens, 12W	30.15	Each		
5	NON-SCHEDULE LE	Providing and fixing Plastic body 12 " dia Copper winded Exhaust fan with louver and shutter made of Asia, Royal, Pak fans, GFC or equivalent. i/c the cost of necessary cable and hardware for connection from ceiling rose complete as approved and directed by Engineer In charge.	13.85	Each		
TOTAL COST						



RENOVATION OF WASHROOMS OF PRCL TOWER AT KARACHI
ENGINEERING CONSULTANCY SERVICES PUNJAB (PVT) LTD (ECSPT)
FIRE ALARM SYSTEM - Cost Estimate

ITEM NO.	MRS Ref.	DESCRIPTION	QTY.	UNIT	RATE (Rs.)	AMOUNT (Rs.)
1		CABLE For FIRE PUMP Supply and erection of copper conductor cables for service connection, in prelaid pipe/G.I. wire/trenches, etc. (rate for cable only) 3C x 35 mm sq Estimated cable remeasurebale at site Make: Allied Cables, GM Cables, NewAge or equivalent				
2		FIRE ALARM SYSTEM MFACP (6 Loop Panel) Supply, installation and commissioning of Addressable Fire Alarm Control Panel of 6-Loop having maximum. The FACP shall be self powered with built in 12V batteries for 24 Hrs. backup with charging unit. • 10" touch screen (800 x 600 pixels) • double controller for redundancy purpose • 2 channels for communication with functional modules • up to 99 controllers in one distributed fire alarm panel Including detection modules containing 3 x 2 loops with max 250 devices, including detection line voltage converter, I/O modules with 4 potential-free relay output, 4 potential outputs, full line monitoring, 2 or 3-state monitoring, programmable fail-safe function, Elements must be enclosed in cabinet dedicated for installation of functional modules, power suppliers and batteries, including battery containers dedicated for batteries, including nodes interface, including assembly frames, brackets, power supply units, complete in all respect. It can be programmed using Windows based software for peripheral devices like display unit, printers. Make: Bosch, Polon Alfa, Notifier or equivalent Note: • It will be installed at ground floor to operate the fire alarm system of whole building. • Fire Alarm System will be integrated with Fire Fighting System and Elevators • Hard wire (communication cable) will connected from other FACP's to MFACP	1	Each		
b	NON-SCHED ULE	Provision of Fire Fighting pump cable connection with Main Panel complete in all respect. FACP (2 Loop Panel) Supply, installation and commissioning of Addressable Fire Alarm Control Panel of 2-Loop having maximum. The FACP shall be self powered with built in 12V batteries for 24 Hrs. backup with charging unit. • 10" touch screen (800 x 600 pixels) • double controller for redundancy purpose • 2 channels for communication with functional modules • up to 99 controllers in one distributed fire alarm panel Including detection modules containing 2 loops with max 250 devices, including detection line voltage converter, I/O modules with 2 potential-free relay output, 2 potential outputs, full line monitoring, 2 or 3-state monitoring, programmable fail-safe function, Elements must be enclosed in cabinet dedicated for installation of functional modules, power suppliers and batteries, including battery containers dedicated for batteries, including nodes interface, including assembly frames, brackets, power supply units, complete in all respect. It can be programmed using Windows based software for peripheral devices like display unit, printers. • Hard wire from FACP on 11th will be connected with Main FACP on ground floor • Fire Alarm System will be integrated with Fire Fighting System and Elevators Make: Bosch, Polon Alfa, Notifier or equivalent	1	Job		
c	NON-SCHED ULE					



d	SMOKE DETECTOR	Supply and installation of Addressable Photoelectric Smoke Detector with double sensor (IR, UV), soft addressing, programmable parameters, low current consumption, automatic drift compensation, built-in short circuit isolator and approved from EN 54-7, EN 54-17 Standard Make: Bosch, Polon Alfa, Notifier or equivalent	89	Each		
e	HEAT DETECTOR	Supply and installation of Addressable Photoelectric Heat Detector with soft addressing, programmable temperature class, low current consumption, built-in short circuit isolator and approved from EN 54-5 Standard. Make: Bosch, Polon Alfa, Notifier or equivalent	5	Each		
f	MULTI DETECTOR	Supply and installation of Addressable Multi-Sensor with double smoke detector (IR, UV), double heat sensor, soft addressing, programmable parameters, low current consumption, automatic drift compensation, built-in short circuit isolator and approved from EN 54-5, EN 54-7, EN 54-17 Standard. Make: Bosch, Polon Alfa, Notifier or equivalent	14	Each		
g	MANUAL CALL POINT	Supply and installation of Addressable Resettable Manual Call Point with flush mounting and LED Indication on front side, wall mounting with assembling frame, soft addressing, low current consumption, built-in short circuit isolator and approved shall be from EN 54-11 (type B) Standard Make: Bosch, Polon Alfa, Notifier or equivalent	10	Each		
h	SOUNDER	Supply and installation of Addressable Electronic Loop Sounder with soft addressing, 3 sound patterns, 3 power options (24VDC, 9VDC and 220VAC), Sound level : 85dB, built-in short circuit isolator and will be approved from EN 54-3 and sounder is IP protection rated to IP21 Make: Bosch, Polon Alfa, Notifier or equivalent	10	Each		
i	FIRE ALARM CABLE	Supply, Installation and commissioning of wiring with specified Fire Resistant Shielded Cable of required size from respective DB to Fire Alarm FACP (Fire Alarm Control Panel) in prelaid conduit/duct. Conductor Type: Annealed Solid Copper (IEC/EN 60228) Insulation: Fire Resistant Silicon Rubber (EN 50363-1, BS 7655 E12) Core Colors: Blue/Red, Grey/Yellow, Green/Brown, White/Black - VDE 0815 Lay-up: 4 pairs laid up to a bundle, bundles identified by spiral numbered or colored polyester tape, bundles laid up in layers. (Two pairs laid up as a star quad) Separator: PET Foil Flame Barrier: Fiber Glass Tape Screen: Al-PET Foil Outer Sheath: HFFR (EN 50290-2-27), RAL 2004 - Orange (other colors upon request) Insulation Resistance: 200 M.Ω.km Make Pysmian, Fast cables, Kablo (Turkey) or equivalent as approved and directed by the Engineer in charge. 2C,1.5mm2	2950	Rft		
3	Lighting Fixtures	Supply , installation, connecting and testing of lighting fixtures surface/Ceiling mounted or to be fixed in the false ceiling, complete in all respect. Manufactured by: Phillips, Thom, Sylvania or equivalent Emergency Exit Sign Light (Pictogram) Termination: 4-Pole Terminal Block Driver - Integral or Remote: Integral Power Consumption (W): 2 Operating Temp. (Min/Max): 0°C to 25°C. Correlated Colour Temp. : 6000/7000 Battery Duration: 3 Hours IP Rating: 20				
a	NON-SCHED ULE	Emergency Light (3 hours backup) Power: 2x3W Operating Temp. (Min/Max) 0°C to 40°C Correlated Colour Temp. : 6500 Battery Type: NiCd IP rating: 20	50	Each		
b	SCHED ULE	Emergency Light (3 hours backup) Power: 2x3W Operating Temp. (Min/Max) 0°C to 40°C Correlated Colour Temp. : 6500 Battery Type: NiCd IP rating: 20	34	Each		



c	Emergency Light (3 hours backup) Power: 3W Operating Temp. (Min/Max) 0°C to 40°C Driver - Integral or Remote: Remote Lumens: 190 IP rating: 40	21	Each		
4	Cu/PVC, 250/400 Cable Supply and erection of three core PVC insulated, PVC sheathed copper conductor, 250/440				
a	NON-SCHEDULE ULÉ vols. PVC insulated with size 3-3/.036 copper conductor Make: Allied, GM cables, Newage or equivalent	1836	Rft		
TOTAL COST					

