PROJECT : Upgrading of Mosquito Mass Rearing Facility (CY 2019)
LOCATION : PNRI Compound, Commonwealth Avenue, Diliman, Quezon City
OWNER : Philippine Nuclear Research Institute (PNRI)
SUBJECT : DETAILED COST ESTIMATE

Item No.	ITEM/DESCRIPTION	QTY	UNIT	MATERIAL COST		LABOR COST		ESTIMATED	MARK-UPS IN PERCENT			TOTAL MARK-UP		VAT	TOTAL	TOTAL	UNIT
				UNIT COST	TOTAL COST	UNIT COST	TOTAL COST	DIRECT COST	CONT.	OCM	PROFIT	%	VALUE		INDI. COST	COST	COST
A	**GENERAL REQUIREMENTS**																
1	Mobilization/Demobilization (Manpower, tools & equipments	1	lot														
2	Bonds/Insurance	1	lot														
3	Temporary Facilities	1	lot														
4	As-Built plan	1	lot														
5	Project Billboard	1	lot														
	Sub-total																
B	**ARCHITECTURAL AND CIVIL WORKS**																
B.1	**CONCRETE AND MASONRY WORKS:**																
B.1.1	**Installation of new 6" thk CHB Perimeter walls and**																
	interior partition walls w/ roof beam & lintel beam																
	plastered finish inside and outside																
1	Chipping of existing concrete floor & column	1	lot														
2	6" x 8" x 16" CHB	3,341	pcs														
3	10mmØ x 6.00m def. bar	193	pcs														
4	Portland cement	383	bags														
5	White sand	45	cu.m														
6	3/4" Crashed gravel	3	cu.m														
7	16mmØ x 6.00m def. bar	24	pcs														
8	G.A 16 G.I Wire	6	kgs														
9	1/2" x 4' x 8' ordinary plywood	5	pcs														
10	Asstd. Coco lumber	500	bd.ft														
11	12mmØ x 6.00m def. bar	18	pcs														
12	Asstd. C.W Nail	5	kgs														
1.2	**Concrete topping of existing concrete floor**																
	(3" thk and 2" thk)																
1	Portland cement	106	bag														
2	White sand	10	cu.m														
3	Concrete Plaster Bond	10	gal.														
4	(4" x 4") 1/8"Ø x 4' x 8' Steel Matting (Conference,	41	pcs														
	receiving area and laboratory)																

1.3	**Installation of Ceramic floor & wall tiles**																
A.	**Wash area:**																
1	(0.60m x 0.60m) Ceramic floor tiles (Non-skid)	24	pcs														
2	(0.60m x 0.60m) Ceramic wall tiles white	67	pcs														
3	ABC Tile adhesive	9	bag														
4	Portland cement	9	bag														
5	Ready fix adhesive	3	gal														
6	Solid brass thread nosing	2	pcs														
7	Tox w/ screw	10	pcs														
8	Epoxy A and B	1	lit														
9	ABC Tile grout	4	kgs														
B.	**Conference room & receiving area:**																
1	(60cm x 60cm) Ceramic floor tile (Non-skid)	100	pcs														
2	ABC Tile adhesive	10	bags														
3	Portland cement	10	bags														
4	Solid Brass thread nosing (2" x 8ft)	3	pcs														
5	Tox w/ screw	30	pcs														
6	Epoxy A and B	1	lit														
7	ABC Tile grout	4	kgs														
C.	**Comfort room & Shower room:**																
1	(60cm x 60cm) Ceramic Floor tile (Non-skid)	24	pcs														
2	(60cm x 60cm) Ceramic Wall tile (Marble design)	128	pcs														
3	ABC Tile adhesive	15	bags														
4	Portland cement	15	bags														
5	Ready fix adhesive	3	gal														
6	ABC Tile grout	6	kgs														
1.4	**Provision of Reinf. concrete table**																
A.	**Concrete table tiled finish w/ cabinet below:**																
1	Portland cement	20	bags														
2	White sand	3	cu.m														
3	3/4" Crashed gravel	1	cu.m														
4	1/4" thk 4' x 8' ordinary plywood	2	pcs														
5	Asstd. Coco lumber	60	bd.ft														
6	C.W nail	2	kgs														
7	(60cm x 60cm) Synthetic white granite tiles	45	pcs														
8	(70cm x 40cm) PVC Door w/ jamb w/ handle, stainless steel	11	pcs														
	hinges and magnetic lock																

9	6" x 8" x 16" ordinary CHB'	56	pcs														
10	12mmØ x 6.00m def. bar	14	pcs														
11	G.A 16 G.I Wire	1	kg														
12	Chipping works	1	lot														
13	Stainless steel tile trim	6	pcs														
14	ABC Tile adhesive	5	bags														
15	4"Ø concrete cutter blade	1	pc														
16	ABC Tile grout	2	kgs														
B.	**Concrete table tiles finish with stainless steel sink**																
1	Portland cement	18	bags														
2	White sand	3	cu.m														
3	3/4" Crashed gravel	1	cu.m														
4	1/4" thk 4' x 8' ordinary plywood	1	pc														
5	Asstd. Coco lumber	50	bd.ft														
6	(60cm x 60cm) Synthetic whtite granite tiles	45	pcs														
7	Stainless steel tile trim	6	pcs														
8	6" x 8" x 16" ordinary CHB'	32	pcs														
9	12mmØ x 6.00m def. bar	14	pcs														
10	G.A 16 G.I Wire	1	kg														
11	Chipping works	1	lot														
12	ABC Tile adhesive	5	bags														
13	ABC Tile grout	2	kgs														
14	Stainless steel sink (+/-) 0.45m x (+/-) 0.60m x (+/-) 0.25m)	4	set														
	G.A 18 type 304 w/ stainless steel stairner																
15	Stainless steel big goose type faucet "Pozzi"	4	set														
16	Stainless steel P-trap w/ clean out	4	pcs														
17	Stainless steel Flexible pipe	4	pcs														
18	Stainless steel angle valve	4	pcs														
19	Epoxy A and B	1	lit														
1.5	**Provision of Reinf. Concrete open canal**																
1	Chipping/demolition of concrete flooring	1	lot														
	(equipment rental) including disposal																
2	Excavation	1.7	cu.m														
3	Portland cement	9	bags														
4	White sand	1	cu.m														
5	3/4" Crashed gravel	2	cu.m														
6	12mmØ x 6.00m def. bar	11	pcs														
7	10mmØ x 6.00m def. bar	6	pcs														
8	G.A 16 G.I wire	2	kgs														
9	Asstd. Coco lumber	133	bd.ft														

10	1/4" x 4' x 8' ordinary plywood	4	pcs														
11	1" x 1" x 3/16" x 20' stainless steel angle bar	6	pcs														
12	Stainless steel welding rod	1	kg														
1.6	**Concreting of enrty porch**																
1	Portland cement	2	bags														
2	White sand	0.2	cu.m														
3	3/4" Crashed gravel	0.25	cu.m														
4	10mmØ x 6.00m def. bar	4	pcs														
1.7	**Provision of lintel beams and reinf. Concrete canopy**																
1	16mmØ x 6.00m def. bar	7	pcs														
2	Portland cement	3	bags														
3	White sand	0.2	cu.m														
4	3/4" Crashed gravel	0.25	cu.m														
5	1/2" x 4' x 8' ordinary plywood	2	pcs														
6	Asstd. Coco lumber	40	bd.ft														
7	10mmØ x 6.00m def. bar	4	pcs														
8	G.A 16 G.I Wire	1	kg														
1.8	**Provison of septic tank**																
1	6" x 8" x 16" ordinary CHB	270	pcs														
2	Portland cement	38	bags														
3	White sand	5	cu.m														
4	12mmØ x 6.00m def. bar	36	pcs														
5	G.A 16 G.I wire	2	kgs														
6	1/2" x 4' x 8' ordinary plywood	1	pc														
7	Asstd. Coco lumber	20	bd.ft														
8	C.W Nail and Concrete nail	2	kgs														
9	4"Ø PVC wye "Neltex"	3	pcs														
10	4"Ø PVC clean out	3	pcs														
11	3/4" crashed gravel	2	cu.m														
12	4"Ø x 10' S-1000 PVC pipe	1	pc														
13	Excavation	9	cu.m														
2. 0	**Carpentry works**																
2.1	**Interior Ceiling**																
1	10mm thk Gypsum board ceiling w/ 1" x 2" metal furring	92	sq.m														
	frame @0.30m O.C w/ 10mmØ plain round bar hanger																
	support @0.80m O.C																
2	2' x 2' white acoustic board w/ 1" x 1" metal t-runner	33.6	sq.m														
	white powder coated w/ G.A 16 hangers																
3	5.5mm thk Fiber cement board w/ 1" x 2" metal furring	8.3	sq.m														
	frame @0.30m O.C w/ 10mmØ plain round bar hanger																
	support w/ w-clip & corrying channel support																
2.2	**Exterior Ceiling**																

1	5.5mm thk Ficem board w/ 1" x 2" metal furring frame	66	sq.m														
	@0.30 O.C w/ carrying channel and metal hanger																
	support @0.80m O.C																
2.3	**Conference Table (8 Seater)**	1	set														
	HPL Laminated Finish w/ 3/8" thk Bronze glass on top																
2.3	**Fabrication and installation cabinets**																
1	(1.40m x 0.61m x 0.30) wooden Hanging cabinet	1	lot														
	w/ aluminum glass door																
2	(0.70m x 0.61m x 0.30m) wooden Hanging cabinet	1	lot														
	w/ aluminum glass door	5	pcs														
3	(0.70m x 0.80m) PVC door w/ jamb	1	pc														
3. 0	**Doors and Windows**																
A.	**Doors**																
1	(2.10m x 2.10m) Double action glass door 12mm thk	1	set														
	tempered glass frameless door (D1)																
2	(2.10m x 2.10m) Double action steel door w/ jamb	1	set														
	w/ push plate and kick plate stainless steel																
	fire rated w/ foam insullation (D2)																
2.1	"Stanley" Foot bolt	1	set														
2.2	"Stanley" Head bolt	1	set														
2.3	"Yale" Door lockset stainless steel	1	set														
2.4	"Stanley" Floor hinge (Heavy duty)	2	set														
3	(2.10m x 2.10m) Double action steel door w/ jamb	1	set														
	w/ push plate and kick plate stainless steel																
	fire rated w/ foam insullation, 6mm thk																
	clear viewing glass (D3)																
3.1	"Stanley" Foot bolt	1	set														
3.2	"Stanley" Head bolt	1	set														
3.3	"Yale" Door lockset stainless steel	1	set														
3.4	"Stanley" Floor hinge (Heavy duty)	2	set														

4	(0.80m x 2.10m) laminated wooden door (HPL w/ louver	3	set														
	and jamb w/ 4 - heavy duty stainless steel hinges (D4)																
4.1	"Yale" stainless steel door lockset	3	set														
4.2	"Yale" heavy duty door closer	3	set														
5	(0.90m x 2.10m) steel door w/ jamb w/ 10mm thk clear	1	set														
	viewing glass, fire rated w/ foam insullation (D5)																
5.1	3 1/2" x 3 1/2" stainless steel hinges	4	pcs														
5.2	"Yale" stainless steel door lockset	1	set														
5.3	"Stanley" heavy duty door closer	1	set														
	aluminum with 1/4" thk broung glass																
B.	**Windows**																
1	(1.20m x 2.40m) Aluminum powder coated white frame	1	set														
	sliding window w/ 6mm thk bronze glass & sliding mosquito																
	screen "analok aluminum" w/ complete accessories																
	(locally made aluminum) (W1)																
2	(0.90m x 2.40m) Aluminum powder coated white frame	3	set														
	sliding window w/ 6mm thk bronze glass & sliding mosquito																
	screen "analok aluminum" w/ complete accessories																
	(locally made aluminum) (W2)																
3	(0.90m x 2.40m) Aluminum powder coated white frame	1	set														
	sliding window w/ 6mm thk bronze glass & sliding mosquito																
	screen "analok aluminum" w/ complete accessories																
	(locally made aluminum) (W3)																
4	(1.20m x 0.60m) Aluminum powder coated white frame	1	set														
	sliding window w/ 6mm thk bronze glass & sliding mosquito																
	screen "analok aluminum" w/ complete accessories																
	(locally made aluminum) (W4)																
5	(0.60m x 0.60m) Aluminum powder coated white frame	3	set														
	sliding window w/ 6mm thk bronze glass & sliding mosquito																
	screen "analok aluminum" w/ complete accessories																
	(locally made aluminum) (W5)																
4. 0	**Structural & metal works**																
A.	**Fabrication of steel tubular ceiling ventillation**																
1	(0.40m x 2.40m) 3/4" x 3/4" x 1.20mm thk tubular ceiling	4	set														
	ventillation w/ 1/4" x 1/4" G.I screen inside																
	(Painted 3 coats epoxt paint)																
2	(0.40m x 1.50m) 3/4" x 3/4" x 1.20mm thk	4	set														
	ventillation w/ 1/4" x 1/4" G.I screen inside																
	(Painted 3 coats epoxt paint)																

B.	**Installation of angular bar ceiling support**																
1	2" x 2" x 3/16" x 20' Angular bar	24	pcs														
2	Welding rod	6	kgs														
3	Red oxide paint	1	gal														
4	Turco rust converter	1	gal														
C.	**Fabrication of stainless steel box strainer and**																
	steel gratings																
1	1" x 1" x 1.5mm x 20' Square tubular stainless steel pipe	1	pc														
2	(1/4" x 1/4" x G.A 16 x 1.00m) Stainless steel screen wire	1	m														
3	Stainless steel welding rod	4	kgs														
4	4"Ø Cutting disc	2	pcs														
5	1" x 1/4" x 20' Stainless steel flat bar	4	pcs														
6	1/2"Ø x 20' Stainless steel round bar	14	pcs														
7	4"Ø Grinding disc	4	pcs														
5. 0	**Plumbing works**																
5.1	**Waterline**																
1	1"Ø x 10' PPR Pipe "Mega green or equivalent"	12	pcs														
2	Asstd. 1"Ø PPR Fittings	1	lot														
3	1"Ø PPR Brass gate valve	2	pcs														
4	1/2"Ø x 10'PPR Pipe "Mega green or equivalent"	15	pcs														
5	Asstd. 1/2"Ø PPR Fittings	1	lot														
6	1/2"Ø PPR brass gate valve	4	pcs														
7	Teflon tape	10	pcs														
8	Stainless steel hose bibb "Pozzi"	3	pcs														
5.2	**Sewerline**																
1	2"Ø x 10' S-1000 Neltex PVC Pipe or equal	15	pcs														
2	3"Ø x 10' S-1000 Neltex PVC Pipe or equal	4	pcs														
3	4"Ø x 10' S-1000 Neltex PVC Pipe or equal	14	pcs														
4	Asstd. 2"Ø PVC Fittings	1	lot														
5	Asstd. 3"Ø PVC Fittings	1	lot														
6	Asstd. 4"Ø PVC Fittings	1	lot														
7	Neltex PVC Cement	3	lit														
8	Epoxy A and B	1	lit														
5.3	**Toilet Fixtures and Accessories**																
1	Pozzi brand package water closet and lavatory stand type	2	set														
	with complete accessories (Model pissano X-A 1PCK																
	AAC - P4 4273-962) White porcelain w/ stainless steel																
	Soap holder & Paper holder																
2	Pozzi brand lavatory stand type model Pissano X-A	1	set														
3	Towel bar stainless steel "Pozzi"	1	pc														

4	Floor drain (4" x 4") stainless "Pozzi"	3	pcs														
5	Telephone shower w/ faucet "Stainless steel" Pozzi	1	set														
6	2 layer hanging glass shelve w/ stainless steel	1	set														
	frame (KASCH) Brand																
7	Clothes hook (5 hook) stainless steel	1	pc														
8	Stainless steel bidet "Pozzi brand"	2	set														
9	Water closet double angle valve "Stainless steel"	2	pcs														
10	Stainless steel soap holder	1	pc														
11	Shower Water Heater w/ Accessories (Panasonic Brand)	1	pc														
12	Flexible Hose w/ Fittings and Nozzle	6	mts														
C.	**Painting works:**																
1	Painting of exterior concrete walls, columns and	189	sq.m														
	beam (3 coats)																
2	Painting of Exterior ceiling (3 coats)	62	sq.m														
3	Painting of Interior Concrete walls, columns and beams	379	sq.m														
	including interior partition wall (3 coats)																
4	Painting of Interior ceiling (3 coats)	100	sq.m														
5	Painting of laboratory flooring using (Self-Leveling Epoxy	77	sq,m														
	1.50mm THK) Badge Brand																
6	Repainting of fascia board (2 coats)	23	sq.m														
7	Surface preparation of new interior & exterior concrete																
	walls including new concrete partition walls using skim																
	coat powder																
7.1	Skim coat powder (ABC BRAND)	37	bags														
7.2	Asstd. Sand paper (12" x 12") "JAPAN"	120	pcs														

D.	**Repair of existing flooring of entomology bldg.**																
1	(0.60m x 0.60m) Synthetic granite floor tile	20	pcs														
2	ABC Tile adhesive	2	bags														
3	Portland cement	2	bags														
4	Removal of floor tiles & chipping works	1	lot														
5	Tile grout	2	kg														
	ARCHITECTURAL & CIVIL WORKS Sub-total																
C	**ELECTRICAL WORKS**																
C.1	**Supply and installation of Electrical Panelboard and its feederline from the electrical room located at the Entomology Building to the Mosquito Rearing Facility**																
1.1	Panelboard, 160A, 3P, 230V 30 KAIC, Main CB, Industrial Type with Branches Circuit Breaker: 4 sets 40A, 3P, 230V CB, Bolt-on Type, 3 sets 30A, 2P, 230V CB, Bolt-on Type, 5 sets 20A, 2P, 230V CB, Bolt-on Type, 5 sets 15A, 2P, 230V CB, Bolt-on Type	1	lot														
1.2	160A, 230V, 3P, Industrial Type Circuit Breaker, 30 KAIC	1	set														
1.3	80 mm diameter Rigid Steel conduit (RSC) pipe	2	pcs.														
1.4	80 mm diameter RSC elbow	2	pcs.														
1.5	80 mm diameter RSC coupling	2	pcs.														
1.6	Pullboxes pre-painted with cover (400mmx400mmx400mm) with concrete pedestal (3 units)	1	lot														
1.7	80 mm diameter uPVC pipe	22	pcs.														
1.8	80 mm diameter uPVC elbow	6	pcs.														
1.9	60 mm^2 THHN/THWN Cable	225	m														
1.10	30 mm^2 THHN/THWN Cable	75	m														
1.11	Miscellaneous (bus bars for the installation of 160A, 230V, 3P Industrial type CB)	1	lot														
	Sub-total																
C.2	**Supply and installation of distribution circuits**																
1	8.0 mm^2 THHN/THWN wire	2	rolls														
2	5.5 mm^2 THHN/THWN wire	180	m														
3	3.5 mm^2 THHN/THWN wire	4	rolls														
4	2.0 mm^2 THHN/THWN wire	2	rolls														
5	15 mmØ RSC pipe	71	pcs.														
6	15 mmØ RSC elbow	10	pcs.														
7	15 mmØ RSC coupling	63	pcs.														
8	15 mmØ RSC locknut and bushing	142	pcs.														
9	15 mmØ uPVC pipe	32	pcs.														
10	15 mmØ uPVC adapter with locknut	43	pcs.														
11	20 mmØ uPVC pipe	30	pcs.														
12	20 mmØ uPVC adapter with locknut	12	pcs.														
13	4" Ø octagonal box with cover	46	pcs.														
14	2"x4" Utility Box	48	pcs.														
15	Duplex Convenience Outlet with ground, Weatherproof	3	pcs.														
16	Duplex Convenience Outlet with ground	18	pcs.														

17	Single Convenience Outlet with ground	5	pcs.														
18	Single pole switch with cover	5	pcs.														
19	2 Gang Switch with cover	1	pc.														
20	Pinlight, 6"Ø with 25W LED Bulb	10	sets														
21	Pinlight, 6"Ø with 12W LED Bulb	3	sets														
22	T-12 Aluminum Louver Recessed Type, 2 x 40W T12 600 x 1200 x 65mm Fluorescent Fixture	16	sets														
23	Industrial Type Exhaust Fan, 16" diameter with shutter	2	sets														
24	Mica tube, 1" diameter	10	m														
25	Timer Switch for lighting, 10A, 300V, Analog, Panasonic brand	1	set														
	Sub-total																
C.3	**Supply and installation of Fire Alarm System**																
1	3.5 mm^2 THHN/THWN wire	10	m														
2	15 mmØ uPVC pipe	14	pcs.														
3	15 mmØ uPVC adapter with locknut	24	pcs.														
4	4" Ø octagonal box with cover	12	pcs.														
	Sub-total																
C.4	**Supply and installation of CCTV System**																
1	4 11/16 x 4 11/16" square box	6	pcs.														
2	2"x4" Utility box	1	pc.														
3	15 mmØ uPVC pipe	2	pcs.														
4	15 mmØ uPVC adapter with locknut	2	pcs.														
5	20 mmØ uPVC pipe	21	pcs.														
6	20 mmØ uPVC adapter with locknut	12	pcs.														
7	20 mmØ metal connector	6	pcs.														
8	Duplex convenience outlet with cover	1	pc.														
	Sub-total																
	ELECTRICAL WORKS Sub-total																
	TOTAL																