## Department of Science and Technology PHILIPPINE TEXTILE RESEARCH INSTITUTE

## APPROVED AGENCY ESTIMATE (AAE)

## APPROVED AGEN PROJECT TITLE : SUPPLY OF LABOR, MATERIALS, TOOLS, EQUIPMENT, AND CONSTRUCTION OF PROJECT TITLED: REHABILITATION AND RETROFITTING OF NATURAL FIBER PROCESSING CENTER PHASE IV LOCATION : PTRI Compound, Bicutan Taguig City PROJECT DURATION : 240 CALENDAR DAYS

## SCOPE OF WORKS : BILL OF QUANTITIES

Item	1		Description	unlt	Qty	Material	Labor	Total Unit Cost	Total Amount
A	Repair a		Description of NFPC Extension Phase III	unit	QUY	watelidi	Lauui		TULALAITIUUTIL
	1.0	PRELIMINARIE	S						
		1.1	Site Preparation	lot	1				
		1.2	Mobilization and Demobilization	lot	1				
		1.3	Temporary Facilities	lot	1				
		1.4	Temporary Utilities	lot	1				
		1.5 1.6	Safety Tools and Requirements	lot	1				
		1.0	Site Management and Supervision Delivery and Equipments	lot lot	1				
			TOTAL	101					
	2.0	ARCHITECTUR							
	2.0	2.1	DOORS						
			D02: 1.6x2.1	set	1				
			D04B: 0.9x2.5	set	1				
			D05: 0.9x2.1 Wooden Flush	set	4				
			D6: 1.4x2.4 Wooden Louver	set	2				
	ļ		D06: 2.7x2.1	set	2				
			D07: 1.6x2.5	set	1				
			D08: 0.8x2.1 Painted Wooden Flush Door	set	3				
	-	2.2	D08b: 0.7x2.1 Painted Wooden Flush Door WINDOWS	set	5				
		£.£	W1: 1.8x1.5	set	1				
			W1B: 1.4x1.5	set	1				
			W2: 1.8x1.15	set	2				
			W4: 4.4x2.8	set	1				
			W5: 2.251x2.8	set	1				
			W7: 0.6x2.4	set	1				
			W8: 0.9x0.6	set	1				
		2.3	EXTERIOR AND INTERIOR CLADDING	hu.	055				
			WPC subtotal	lm	255				
		2.4	FLOOR FINSHING						
			30cmx60cm Wall Tiles Bathroom	m²	73.60				
			60cmx60cm Floor Tiles -Bathroom	m²	17.70				
			60cmx60cm Non Skid Exterior Floor	m²	111.80				
			60x60cm Vitrified Floor Tiles (Balcony and Fire Exit)	m²	337.75				
			60x60cm Semi Homogenous	m²	352.20				
			Epoxy Non Skid	m²	299.20				
			subtotal						
		2.5	CEILING		107.40				
			C01-Fire MR Gypsum C02-MR Gypsum	sq.m sq.m	181.30				
			C03 Ceiling Panel Board	sq.m	97.80				
			C04 Spandrel	sq.m	18.80				
			subtotal						
		2.6	PAINTING WORKS						
			Painting Exterior Wall	m²	1,681.60				
	I		Doors	m²	160.86				
			subtotal						
	3.0	STRUCTURAL	TOTAL						
	3.0	3.1	STRUCTURAL CONCRETE WORKS (Rebar and Concrete)						
	-	J.I	Slab RD	lot	1				
			3rd Floor Beams	lot	1				
	1		3rd Floor Stairs	lot	1				
			subtotal						
		3.2	FORMWORKS AND SCAFFOLDINGS						
			Beams	m²	200				
			Slabs	m²	185				
	<u> </u>		subtotal						
	10		TOTAL						
	4.0	FIRE PROTEC 4.1	TION WORKS Basic Fire Protection Materials and Method						
			Supply and installation of BI Pipes and fittings Sch. 40,	<u> </u>					
	1								
			including accessories, hangers, supports, markings, painting, and other miscellaneous item in acordance to the specification required to complete the system and make it operational.						
	1		100 mm diameter	Lm	24				
	1		80 mm diameter	Lm	24				
			65 mm diameter	Lm	18				
			50 mm diameter	Lm	42				
			40 mm diameter	Lm	24				
			32 mm diameter	Lm	12				
			25 mm diameter	Lm	204				

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4.3     SPRINKLER HEADS       3upply 3 installation of Sprikker heads including celling plates, wenches, escutchen plates and all other accessories required to complete the system     4.00       Upright (Quick Response) 155F     no.     4.00       Rendent (Quick Response) 155F     no.     6.4.00       Supply an installation of Floor Control valve Assembly     no.     2.00       80mm dia. Butterfly valve with Supprison value     no.     2.00       9     80mm dia. Butterfly valve with Supprison Value     no.     2.00       9     80mm dia. Butterfly valve with Supprison Value     no.     2.00       9     Pressure Gauge     no.     2.00       9     Sight Glass     no.     2.00       9     25mm dia. Test Valve     no.     2.00       9     25mm dia. Sight Glass     no.     2.00       9     25mm dia. Union w/ corrosion resistant onflice     no.     2.00       9     25mm dia. Union w/ corrosion resistant onflice     no.     2.00       9     Supply and installation of Fire Department Cononection     no.     1.		
4.3       SPRINKLER HEADS       Image: SPRINKLER HEADS       Image: Sprink Heads         Image: Supply & Installation of Spriker heads       Image: Sprink Heads       Image: Sprink Heads         Image: Sprink Heads       Image: Sprink Heads       Image: Sprink Heads       Image: Sprink Heads         Image: Sprink Heads       Image: Sprink Heads       Image: Sprink Heads       Image: Sprink Heads       Image: Sprink Heads         Image: Sprink Heads       Image: Sprink Heads       Image: Sprink Heads       Image: Sprink Heads       Image: Sprink Heads       Image: Sprink Heads         Image: Sprink Heads       Sprink Heads       Image: Sprink Heads		
Supply & Installation of Sprikler heads including ceiling plates, wranches, esoutcheon plates and all other accessories required to complete the system     no.     4.00       Urging II (Quick Response) 155F     no.     64.00       Sidewall (Standard Response) 155F     no.     64.00       Supply and installation of Floor Control Varke Assembly     no.     2.00       0     Supply and installation of Floor Control Varke Assembly     no.     2.00       0     Supply and installation of Floor Control Varke Assembly     no.     2.00       0     Pressure Gauge     no.     2.00       25mm dia. Stight Glass     no.     2.00       25mm dia. Sight Glass     no.     2.00       25mm dia. Sight Olass     no.     2.00       25mm dia. Sight Glass     no.     1.00       100 ndv corrosion resistant onfice     no.     1.00       100 ndv corrosion res		
incluiting ceiling plates, wenches, esoutcheon plates and all other accessories required to complete the system     no.     4.00       Upright (Cluck Response) 155F     no.     64.00       Studewall (Standard Response) 155F     no.     64.00       subtotal     no.     2.00       Bomm dia. Butterfly valve with Supervisory Switch     no.     2.00       Pressure Gauge     no.     2.00       Water Assembly     no.     2.00       Water Flow Switch     no.     2.00       Stopping Cluck Response) for Control Yalve Assembly     no.     2.00       Water Flow Switch     no.     2.00       Zemm dia. Stight Glass     no.     2.00       Stamporpres AND HOSES     No.     2.00       Subtotal     Image: Standard Stan	4.3	
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4.4     Supply and installation of Floor Control Valve Assembly     no.     2.00       80mm dia. Butterfly valve with Supervisory Switch     no.     2.00       Pressure Gauge     no.     2.00       Water Flow Switch     no.     2.00       25mm dia. Sight Glass     no.     2.00       25mm dia. Sight Class     no.     2.00       25mm dia. Section Drain Valve(GV)     no.     2.00       25mm dia. Section Drain Valve(GV)     no.     2.00       25mm dia. Union w/ corrosion resistant orifice     no.     2.00       25mm dia. Union w/ corrosion resistant orifice     no.     2.00       4.5     STANDPIPES AND HOSES     Image: Standard Standar		
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40mm x 30m rubber line cottonfire hose jacketed with chrome pin lug, threaded and 10lbs dry chemical type ABC portable fire extinguisher Surface mounted.     No.     3.00       subtotal     Image: Subtotal     Image: Subtotal       Image: Installation of ELECT. FIRE AND JOCKEY PUMPS C/W ALL     Image: Subtotal		
Iug, threaded and 10lbs dry chemical type ABC portable fire     NO.     3.00       extinguisher Surface mounted.		
A 6 INSTALLATION OF ELECT. FIRE AND JOCKEY PUMPS C/W ALL		
A 6 INSTALLATION OF ELECT. FIRE AND JOCKEY PUMPS C/W ALL	+ +	-
	4.6	
	<b>↓ ↓ ↓</b>	
FP-01, Vertical In-line, Rated cap 290 GPM, c/w controller, 78M no. 1.00		
TDH, 40 HP, 380V/3P/60Hz, UL Listed & FM Approved no. 1.00		
JP-01, Vertical In-line, 40 GPM, 82 M TDH, clw controller 7.5 HP, and 1 on	1 1	1
440V/3P/60Hz no. 1.00		
Valves and Accessories	+	
50 mm dia. Check Valve no. 1.00	+	
50 mm dia. Gate Valve(Isolation)         no.         2.00           100 mm dia. Check Valve         no.         1.00	+ +	
100 mm dia. Checky Valve no. 1.00	+ +	-
50 mm dia. Flexible Connector no. 2.00		
100 mm dia. Alarm Check Valve no. 1.00		
100 mm dia. Water Flow meter no. 1.00	$\square$	
100 mm dia. OS&Y Cate valve(Meter Control) no. 2.00	┥──┤────	
100 mm dia. Relief Valve         no.         1.00           Pressure Sensing line for Fire Pump and Jockey Pump         Item         1.00	+ +	+
subtotal	+ +	-
	1 1	1

				·	1

	5.0	ELECTRICAL	NORKE					
<del> </del>	5.0	5.1	POWER PANEL					
			Main Distribution Panel (750KVA, 4000AT 3Phase)(ACB)	assy	1			
			Branches: 2 - 400 AT/500AF, 3P					
			Power Panel 1 (PP1), 550KVA, 3Phase Main: (2000AT/2500AF, 3P) MCCB	assy	1			
			Branches: 1 - 300AT/400AF, 3P					
			1-250AT/300AF, 3P					
$ \longrightarrow $			1-1200AT/1500AF, 3P					
<u> </u>			1-100AT/150AF, 3P 3-30AT/100AF, 3P					
i – †			Power Panel 2 (PP2), 70KVA, 3Phase	assy	1			
			Main: (400AT/500AF, 3P) MCCB					
<b>—</b> ———————————————————————————————————			Branches: 1 - 100AT/200AF, 2P					
<u> </u>			1-200AT/300AF, 2P 2-space					
			LPA- (100AT/200AF,3P)	assy	1			
			Branches: 4-15AT/50AF, 2P	,				
			2-20AT/50AF, 2P					
			5-30AT/100AF, 2P 7-40AT/100AF, 2P					
			LPB- (200AT/300AF,3P)	assy	1			
			Branches: 5-60AT/100AF, 2P					
			1-40AT/100AF,2P					
			Power Panel 3 (PP3) 80KVA 3Phase Main: (400AT/500AF, 3P) MCCB	assy	1			
			Branches: 3-30AT/100AF, 3P					
			6-60AT/100AF, 3P					
			1-100AT/ 150AF, 3P					
		5.2	subtotal WIRING WORKS					
			500mm <sup>2</sup> THHN (R.Y.B.)	lm	600		 	
			50mm^2 THHN (G)	lm	600			
			200mm² THHN wire 50mm² THHN wire	lm Im	554 273			
			50mm² THHN wire 38mm² THHN wire	lm Im	136			
			30 mm² THHN wire	lm	132		 	
			22 mm² THHN wire	lm	46			
			14 mm² THHN wire 8.0 mm² THHN wire	lm Im	253 205			
i			5.5mm² THHN wire	rls	205			<u> </u>
			3.5mm² THHN wire	rls	85			
$ \longrightarrow $			Termination and Wiring Accessories	lot	1			
			Consumables subtotal	lot	1			
i — †		5.3	WIRING DEVICES					
			Single gang switch	set	11.00			
⊢			Two gang switch	set	9.00			
<u> </u>			Three gang switch Three way single gang switch	set set	6.00 6.00			
			Three way two gang switch	set	14.00			
			Three way three gang switch	set	4.00			
			Four way three gang switch	set	1.00			
			One gang convenience outlet Two gang convenience outlet	set set	3.00 98.00			
			Two gang convenience outlet WP	set	3.00			
			GFCI grounding type convenience outlet	set	6.00			
			SPO outlet 30 Amp	set	9.00			
			Floor Outlet subtotal	set	16.00			
		5.4	LIGHTING FIXTURES					
			2x9Watts Recessed Mounted Troffer 600x600 with Aluminum Reflect		78.00			
			18Watts Recessed Mounted Downlight 150mmØ with Glass Diffuser	set	75.00			
			18Watts Recessed Mounted Downlight 150mmØ with Glass Diffuser 18Watts Wall Mounted LED Fixtures with Reflector	set set	3.00			
			18Watts Wall Mounted LED Fixtures with Reflector	set	1.00			
			18Watts Wall Mounted LED Outdoor Luminaire	set	15.00			
			Lamp Post	set set	4.00			
			Hangers & Supports subtotal	561	1.00			
			TOTAL				 	
	6.0	MECHANICAL						
		6.1	GALVANIZED STEEL DUCT WORKS FRESH AIR DUCT (FAD)					
			FRESTAIR DUCT (FAD)	Sq. M	17.28			
			Ga. 26					
			Ga. 26 Ga. 24	Sq. M	14.4			
			Ga. 24 RETURN AIR DUCT (RAD)					
			Ga. 24 RETURN AIR DUCT (RAD) Ga. 26	Sq. M Sq. M	14.4 20.16			
			Ga. 24 RETURN AIR DUCT (RAD) Ga. 26 SUPPLY AIR DUCT (SAD)	Sq. M	20.16			
			Ga. 24 RETURN AIR DUCT (RAD) Ga. 26					
			Ga. 24 RETURN AIR DUCT (RAD) Ga. 26 SUPPLY AIR DUCT (SAD) Ga. 26 Ga. 24 EXHAUST AIR DUCT (EAD)	Sq. M Sq. M Sq. M	20.16 28.8 11.52			
			Ga. 24 RETURN AIR DUCT (RAD) Ga. 26 SUPPLY AIR DUCT (SAD) Ga. 26 Ga. 24 EXHAUST AIR DUCT (EAD) Ga. 26	Sq. M Sq. M Sq. M Sq. M	20.16 28.8 11.52 23.04			
			Ga. 24 RETURN AIR DUCT (RAD) Ga. 26 SUPPLY AIR DUCT (SAD) Ga. 26 Ga. 24 EXHAUST AIR DUCT (EAD) Ga. 26 Ga. 26 Ga. 24 Ga. 24	Sq. M Sq. M Sq. M Sq. M Sq. M	20.16 28.8 11.52			
			Ga. 24 RETURN AIR DUCT (RAD) Ga. 26 Ga. 26 Ga. 26 Ga. 24 EXHAUST AIR DUCT (EAD) Ga. 26 Ga. 24 Ga. 24 Ga. 24 Thermashield Duct Insulation, 25mm thk subtotal	Sq. M Sq. M Sq. M Sq. M	20.16 28.8 11.52 23.04 25.92			
			Ga. 24           RETURN AIR DUCT (RAD)           Ga. 26           SUPPLY AIR DUCT (SAD)           Ga. 26           Ga. 26           Ga. 27           EXHAUST AIR DUCT (EAD)           Ga. 26           Ga. 27           Thermashield Duct Insulation, 25mm thk           subtotal           Duct Devices and ancilliaries	Sq. M Sq. M Sq. M Sq. M Sq. M Sq. M	20.16 28.8 11.52 23.04 25.92 91			
			Ga. 24 RETURN AIR DUCT (RAD) Ga. 26 SUPPLY AIR DUCT (SAD) Ga. 26 Ga. 24 EXHAUST AIR DUCT (EAD) Ga. 26 Ga. 24 Thermashield Duct Insulation, 25mm thk subtotal Duct Devices and anciilliaries Supply Air Diffuser, 300 x 300/625 cfm	Sq. M Sq. M Sq. M Sq. M Sq. M Sq. M Sq. M no.	20.16 28.8 11.52 23.04 25.92 91 3.00			
			Ga. 24           RETURN AIR DUCT (RAD)           Ga. 26           SUPPLY AIR DUCT (SAD)           Ga. 26           Ga. 24           EXHAUST AIR DUCT (EAD)           Ga. 26           Ga. 26           Ga. 26           Thermashield Duct Insulation, 25mm thk           subtotal           Duct Devices and ancilliaries           Supply Air Diffuser, 300 x 300/625 cfm           Exhaust Ceiling Grille, 500 x 350/383 cfm	Sq. M Sq. M Sq. M Sq. M Sq. M Sq. M Sq. M no.	20.16 28.8 11.52 23.04 25.92 91 3.00 2.00			
			Ga. 24 RETURN AIR DUCT (RAD) Ga. 26 SUPPLY AIR DUCT (SAD) Ga. 26 Ga. 24 EXHAUST AIR DUCT (EAD) Ga. 26 Ga. 24 Thermashield Duct Insulation, 25mm thk subtotal Duct Devices and anciilliaries Supply Air Diffuser, 300 x 300/625 cfm	Sq. M Sq. M Sq. M Sq. M Sq. M Sq. M Sq. M no.	20.16 28.8 11.52 23.04 25.92 91 3.00			
			Ga. 24           RETURN AIR DUCT (RAD)           Ga. 26           SUPPLY AIR DUCT (SAD)           Ga. 26           EXHAUST AIR DUCT (EAD)           Ga. 26           Ga. 26           Ga. 26           Ga. 26           Ga. 26           Ga. 26           Ga. 27           Dest Devices and ancilliaries           Supply Air Diffuser, 300 x 300/625 cfm           Exhaust Ceiling Grille, 500 x 350/388 cfm           Fresh Air Grille, 350 x 200/360 cfm           Exhaust Ceiling Grille, 350 x 200/360 cfm           Exhaust Louver, 700 x 500/360 cfm           Exhaust Louver, 700 x 500/360 cfm	Sq. M Sq. M Sq. M Sq. M Sq. M Sq. M Sq. M Sq. M No. no. No. no. no.	20.16 28.8 11.52 23.04 25.92 91 3.00 2.00 1.00 1.00 1.00			
			Ga. 24           RETURN AIR DUCT (RAD)           Ga. 26           SUPPLY AIR DUCT (SAD)           Ga. 26           Ga. 24           EXHAUST AIR DUCT (EAD)           Ga. 26           Ga. 26           Ga. 26           Ga. 26           Ga. 26           Ga. 26           Ga. 27           Dest Devices and ancillaries           Supply Air Diffuser, 300 x 300/625 cfm           Exhaust Ceiling Grille, 350 x 200/380 cfm           Fresh Air Grille, 350 x 200/360 cfm           Exhaust Ceiling Grille, 350 x 200/360 cfm	Sq. M Sq. M Sq. M Sq. M Sq. M Sq. M Sq. M Sq. M No. no. no. no. no. no.	20.16 28.8 11.52 23.04 25.92 91 3.00 2.00 1.00 1.00 1.00 1.00	Image: Section of the sectio		
			Ga. 24           RETURN AIR DUCT (RAD)           Ga. 26           SUPPLY AIR DUCT (SAD)           Ga. 26           Ga. 27           Duct Devices and ancillaries           Supply Air Diffuser, 300 x 300/625 cfm           Exhaust Ceiling Grille, 350 x 200/380 cfm           Exhaust Ceiling Grille, 350 x 200/360 cfm           Exhaust Air Louver, 700 x 500/380 cfm           Exhaust Air Louver, 800 x 500/360 cfm           Fresh Air Guille, 350 x 200/360 cfm           Return Air Grille, 350 x 200/360 cfm	Sq. M Sq. M Sq. M Sq. M Sq. M Sq. M Sq. M Sq. M No. no. no. no. no. no. no. no.	20.16 28.8 11.52 23.04 25.92 91 3.00 2.00 1.00 1.00 1.00 1.00 1.00 1.00	Image: Section of the section of t		
			Ga. 24           RETURN AIR DUCT (RAD)           Ga. 26           SUPPLY AIR DUCT (SAD)           Ga. 26           Ga. 24           EXHAUST AIR DUCT (EAD)           Ga. 26           Ga. 26           Ga. 26           Ga. 26           Ga. 26           Ga. 26           Ga. 27           Dest Devices and ancillaries           Supply Air Diffuser, 300 x 300/625 cfm           Exhaust Ceiling Grille, 350 x 200/380 cfm           Fresh Air Grille, 350 x 200/360 cfm           Exhaust Ceiling Grille, 350 x 200/360 cfm	Sq. M Sq. M Sq. M Sq. M Sq. M Sq. M Sq. M Sq. M No. no. no. no. no. no. no.	20.16 28.8 11.52 23.04 25.92 91 3.00 2.00 1.00 1.00 1.00 1.00	Image: Section of the section of t		

		Supply Air Grille, 250 x 200/220 cfm	no.	2.00		
		Exhaust Air Louver, 700 x 500/440 cfm	no.	1.00		
		Fresh Air Louver, 800 x 500/360 cfm	no.	1.00		
		Fresh Air Louver, 1150 x 600/1875 cfm	no.	1.00		
		Fresh Air Louver, 800 x 600/380 cfm	no.	1.00		
		subtotal				
		TOTAL				
7.0	HAULING, CLE	ANING, AND DISPOSAL OF DEBRIS	lot	1.00		
		sub total				

INDIRECT COST

TOTAL COST

VALUE ADDED TAX

TOTAL PROJECT COST

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