

**PROGRAM OF WORK
BILL OF QUANTITIES**
ELEC 2019 - CAR - Baguio City

School : LOAKAN ELEMENTARY SCHOOL			Date: October 8, 2019			
School I.D : 136413			Budget Allocation: PHP 0.00			
Region : CAR			Engineering and Administrative Overhead: PHP 0.00			
Division : BAGUIO CITY			Approved Budget for the Contract: PHP 0.00			
Project Title :			Completion Period: 120 calendar days			
: UPGRADING OF ELECTRICAL SYSTEM			Minimum Required Manpower:			
			Electrical Engineer	Carpenter	Construction Foreman	
			Master Electrician	Mason		
Location : BAGUIO CITY			Minimum Required Equipment:			
			Hand Tools	Jackhammer	Dump Truck/Cargo Truck	
			Electrical Tools	Concrete Cutter	Knockout Puncher	
			Crimping Tools	Heat Gun/Torch	Various Power Tools	
ITEM NO.	Item Description	% of Total	Unit	Quantity	Total Cost	Remarks
	I. DIRECT COST					
	GENERAL REQUIREMENTS		lot	1.00		
	ELECTRICAL WORK		lot	1.00		
	CIVILWORKS		lot	1.00		
	TRANSFORMER		lot	1.00		
	METERING REQUIREMENT		lot	1.00		
	POWERHOUSE		lot	1.00		
	GENERATOR		lot	1.00		
	Sub-total					
	II. INDIRECT COST ___% of (I)					
	Overhead Expenses (___%)					
	Contingencies (___%)					
	Miscellaneous (___%)					
	Contractor's Profit (___%)					
	Sub-Total					
	III. TAX 5% of (I+II)					
	Sub-Total					
	IV. TOTAL CONSTRUCTION COST (I + II + III)					

Prepared by:

**PROGRAM OF WORK
DETAILED COST ESTIMATE**

PROJECT : UPGRADING OF ELECTRICAL SYSTEM
 SCHOOL : LOAKAN ELEMENTARY SCHOOL
 LOCATION : BAGUIO CITY
 OWNER : DEPARTMENT OF EDUCATION

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT COST		TOTAL COST		GRAND TOTAL
				MATERIAL	LABOR	MATERIAL	LABOR	
GENERAL REQUIREMENTS								
	Mobilization/Temporary Structures, Utilities and Services/Demobilization	lot	1.00					
	Safety and Health	lot	1.00					
	Project Billboard	lot	1.00					
	Fire Safety Inspection Certificate (FSIC)	lot	1.00					
	Fees for processing of electrical connections, CFEI, transformer testing & energization, preparation of Electrical Plans and all necessary documents required by BENECO	lot	1.00					
	Hauling cost	lot	1.00					
	Sub-total							
ELECTRICAL WORK								
	Steel Pullbox, 6"x 6"x 4", with complete accs.	sets	14.00					
	80.0mm ² THWN/THHN Copper Wire	m	110.00					
	22.0mm ² THWN/THHN Copper Wire	m	300.00					
	14.0mm ² THWN/THHN Copper Wire	m	1,900.00					
	UPVC Pipe 2", S-1000	pcs	305.00					
	RSC, 75 mmØ	pc	30.00					
	RSC, 100mmØ w/ Entrance Cap	pc	2.00					
	Adhesive Marker(color coded & properly labeled)	set	40.00					
	4"wide Underground Warning Tape	m	400.00					
	Heavy Duty Main Distribution Panel Box Center	pc	1.00					
	250A, 2P, Bolt On Circuit Breaker	pc	1.00					
	100A, 2P, Bolt On Circuit Breaker	pc	1.00					
	60A, 2P, Bolt On Circuit Breaker	pc	13.00					
	Manual Transfer Switch	lot	1.00					
	Misc. (Clamps, PVC Elbow, PVC Cement, etc)	lot	1.00					
	Weather proof 75 Watts LED perimeter lightings with complete wires, mounting bracket, and switching accessories. With motion sensor and Photo switch. (To be mounted on building structures)	set	5.00					
	Sub-total							
CIVILWORKS								
	Removal of Concrete Structures/Obstructions	cu.m.	15.09					
	Excavation	cu.m.	135.82					
	Backfilling & Compaction	cu.m.	24.96					
	Portland Cement	bags	542.00					
	Crushed Gravel, 3/4	cu.m.	86.00					
	Crushed Sand	cu.m.	51.00					
	12mm Diam. RSB	pcs	1,100.00					
	#16 G.I. Tie Wire	kg	24.00					
	Rough Lumber	bd.ft	800.00					
	Plywood, Ordinary 1/4"x 4'x 8'	pcs	200.00					
	ÇWN	kg	38.00					
	Sub-total							
TRANSFORMER								
	Transformer, Pole Type, 25 KVA, 22.86/13.2kV	set	1.00					
	Anchoring Assembly, F2-1	assy	1.00					
	Guying Assembly, E1-2	assy	1.00					
	Grounding Assembly, M2-1A	assy	1.00					
	Miscellaneous Assembly, M5-1(#2/0), M5-	assy	1.00					

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT COST		TOTAL COST		GRAND TOTAL
				MATERIAL	LABOR	MATERIAL	LABOR	
	Lightning Arrester, 24Kv, Ohio Brass	pc	1.00					
	Fuse Cut-Out, 23-27Kv, 100 Amps	pc	1.00					
	Fuse Link, 1A	pc	1.00					
	Bracket Mounting For Fco & La (27Kv)	pc	1.00					
	Conductor Bare Wire, # 4/7 CU	m	6.00					
	Pole, Concrete, 40' (Round)	pc	1.00					
	Pole, Plates	pc	1.00					
	Anchor Log, 5' Std.	pc	1.00					
	Anchor Rod, 5/8" X 7', Single Eye	pc	1.00					
	Bolt Machine, 5/8" X 12"	pcs	4.00					
	Bolt Thimble Eye, 5/8 X 12"	pc	1.00					
	Clamp Guy, 3-Bolt Hd	pcs	2.00					
	Clamp Hot Line #2/0	pc	1.00					
	Ground Rod, 5/8" X 10' Galvanized w/Clamp	pc	1.00					
	Ground Wire, # 5/16 Steel, 3 Strand	m	22.43					
	Guy Wire, 3/8" X 7 Strand	m	20.00					
	Nut, Lock 5/8"	pc	12.00					
	Washer Square, 4" X 4"	pc	15.00					
	Washer, 2 1/4" X 2 1/4"	pc	15.00					
	Connector Compression, YHO 150	pcs	2.00					
	Sub-total							
	METERING REQUIREMENT							
	KWHM, 1P, 2W, CL200, 240V, Form1S	set	1.00					
	Meter seal, plastic	pc	2.00					
	Equipments/Tools (10% of labor cost)	lot	1.00					
	Sub-total							
	POWERHOUSE							
	EARTHWORKS							
	STRUCTURE EXCAVATION	cu.m	4					
	CONCRETING WORKS	cu.m.	12.872					
	Portland Cement	bag	116					
	Crushed Gravel 3/4"	cu.m	13					
	Washed Sand	cu.m	7					
	REBAR WORKS							
	Deformed Round Bars, Grade 40	kg	176.93					
	G.I. Tie Wire	kg	4					
	FORM WORKS							
	Coco Lumber	bd.ft	128					
	Plywood Ordinary, 1/2"x4'x8'	pc	5					
	CWN, Assorted	kg	4					
	MASONRY WORKS	sq.m	44.2					
	CHB 4" thk	pcs	553					
	Portland Cement	cu.m	23					
	Washed Sand	cu.m	2					
	10mm x 6m RSB	kg	59					
	G.I. Tie Wire	kg	2					
	PLASTERING	cu.m.	88.4					
	Portland Cement	bag	30					
	Washed Sand	cu.m	3					
	DOORS AND WINDOWS							
	Aluminum Roll Up Door (2.5mx2.7m)	set	1					
	W-1 Aluminum Louver Type (1m x 0.5m)	set	1					
	W-2 Awning Window with grilles (1m x 0.3m)	set	1					
	ELECTRICAL WORKS							
	2 x 18 Watts LED lamp with luminaire surface type	set	3					
	2 - Gang Convenience Outlet wide series	set	2					
	3.5mm2 THHN Copper Wire	mtrs	100					
	Breaker 1 - 15AT, 2P CB, 1 - 20AT, 2P CB	assembly	1					
	1/2" PVC Pipe	pcs.	7					
	Octagonal Junction Box	pcs.	5					
	Utility Box	pcs.	3					
	1 - Gang Switch with LED indicator	pcs.	2					
	Miscellaneous	lot	1					
	PAINTING WORKS	sq.m.	104					
	Latex, Flat	gal	6.00					
	Masonry Putty	gal	2.00					
	Latex, Semi Gloss	gal	11.00					
	Acri Color	gal	5.00					
	OTHERS							
	Water Proofing (Cement) 5kgs/bag	bags	30					
	Sub-total							

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT COST		TOTAL COST		GRAND TOTAL
				MATERIAL	LABOR	MATERIAL	LABOR	
	GENERATOR							
	45 KVA Single Phase Silent Type Diesel Generator Set with complete accessories, Weather proof, outdoor type, 60Hz, 230V	set	1.00					
	Sub-total							
	DIRECT COST							
	INDIRECT COST ___% of (I)							
	TAX 5% of (I + II)							
	TOTAL CONSTRUCTION COST (I + II + III)							

Prepared by:

**PROGRAM OF WORK
BILL OF QUANTITIES**
ELEC 2019 - CAR - Baguio City

School : PINES CITY NATIONAL HIGHSCHOOL			Date: October 8, 2019			
School I.D : 305281			Budget Allocation:			
Region : CAR			Engineering and Administrative Overhead:			
Division : BAGUIO CITY			Approved Budget for the Contract:			
Project Title :			Completion Period: 120 calendar days			
: UPGRADING OF ELECTRICAL SYSTEM			Minimum Required Manpower:			
			Electrical Engineer	Carpenter	Construction Foreman	
			Master Electrician	Mason		
Location : BAGUIO CITY			Minimum Required Equipment:			
			Hand Tools	Jackhammer	Dump Truck/Cargo Truck	
			Electrical Tools	Concrete Cutter	Knockout Puncher	
			Crimping Tools	Heat Gun/Torch	Various Power Tools	
ITEM NO.	Item Description	% of Total	Unit	Quantity	Total Cost	Remarks
	I. DIRECT COST					
	GENERAL REQUIREMENTS		lot	1.00		
	ELECTRICAL WORK		lot	1.00		
	CIVILWORKS		lot	1.00		
	TRANSFORMER		lot	1.00		
	METERING REQUIREMENT		lot	1.00		
	POWERHOUSE		lot	1.00		
	GENERATOR		lot	1.00		
	Sub-total					
	II. INDIRECT COST ___% of (I)					
	Overhead Expenses (___%)					
	Contingencies (___%)					
	Miscellaneous (___%)					
	Contractor's Profit (___%)					
	Sub-Total					
	III. TAX 5% of (I+II)					
	Sub-Total					
	IV. TOTAL CONSTRUCTION COST (I + II + III)					

Prepared by:

**PROGRAM OF WORK
DETAILED COST ESTIMATE**

PROJECT : UPGRADING OF ELECTRICAL SYSTEM
 SCHOOL : PINES NATIONAL HIGHSCHOOL'
 LOCATION : BAGUIO CITY
 OWNER : DEPARTMENT OF EDUCATION

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT COST		TOTAL COST		GRAND TOTAL
				MATERIAL	LABOR	MATERIAL	LABOR	
GENERAL REQUIREMENTS								
	Mobilization/Temporary Structures, Utilities and Services/Demobilization	lot	1.00					
	Safety and Health	lot	1.00					
	Project Billboard	lot	1.00					
	Fire Safety Inspection Certificate (FSIC)	lot	1.00					
	Fees for processing of electrical connections, CFEI, transformer testing & energization, preparation of Electrical Plans and all necessary documents required by BENEKO	lot	1.00					
	Hauling cost	lot	1.00					
	Sub-total							
SERVICE LINE								
ELECTRICAL WORK								
	Steel Pullbox, 6"x 6"x 4", with complete accs.	sets	14.00					
	80.0mm ² THWN/THHN Copper Wire	m	100.00					
	30.0mm ² THWN/THHN Copper Wire	m	270.00					
	14.0mm ² THWN/THHN Copper Wire	m	1,500.00					
	UPVC Pipe 2, S-1000	pcs	200.00					
	RSC, 75 mmØ	pc	30.00					
	RSC, 100mmØ w/ Entrance Cap	pc	1.00					
	Adhesive Marker(color coded & properly labeled)	set	40.00					
	4"wide Underground Warning Tape	m	750.00					
	Heavy Duty Main Distribution Panel Box Center	pc	1.00					
	250A, 2P, Bolt On Circuit Breaker	pc	1.00					
	100A, 2P, Bolt On Circuit Breaker	pc	1.00					
	60A, 2P, Bolt On Circuit Breaker	pc	12.00					
	Manual Transfer Switch	lot	1.00					
	Misc. (Clamps, PVC Elbow, PVC Cement, etc)	lot	1.00					
	Weather proof 75 Watts LED perimeter lightings with complete wires, mounting bracket, and switching accessories. With motion sensor and Photo switch. (To be mounted on building structures)	set	7.00					
	Sub-total							
CIVILWORKS								
	Removal of Concrete Structures/Obstructions	cu.m.	8.42					
	Excavation	cu.m.	75.70					
	Backfilling & Compaction	cu.m.	14.60					
	Portland Cement	bags	282.00					
	Crushed Gravel, 3/4	cu.m.	47.00					
	Crushed Sand	cu.m.	28.00					
	10mm Diam. RSB	pcs	600.00					
	#16 G.I. Tie Wire	kg	21.00					
	Rough Lumber	bd.ft	1,300.00					
	Plywood, Ordinary 1/4"x 4'x 8	pcs	35.00					
	ÇWN	kg	38.00					
	Sub-total							
TRANSFORMER								
	Transformer, Pole Type, 25 KVA, 22.86/13.2kV	set	1.00					
	Anchoring Assembly, F2-1	assy	1.00					
	Guying Assembly, E1-2	assy	1.00					
	Grounding Assembly, M2-1A	assy	1.00					

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT COST		TOTAL COST		GRAND TOTAL
				MATERIAL	LABOR	MATERIAL	LABOR	
	Miscellaneous Assembly, M5-1(#2/0), M5-	assy	1.00					
	Lightning Arrester, 24Kv, Ohio Brass	pc	1.00					
	Fuse Cut-Out, 23-27Kv, 100 Amps	pc	1.00					
	Fuse Link, 1A	pc	1.00					
	Bracket Mounting For Fco & La (27Kv)	pc	1.00					
	Conductor Bare Wire, # 4/7 CU	m	6.00					
	Pole, Concrete, 40' (Round)	pc	1.00					
	Pole, Plates	pc	1.00					
	Anchor Log, 5' Std.	pc	1.00					
	Anchor Rod, 5/8" X 7", Single Eye	pc	1.00					
	Bolt Machine, 5/8" X 12"	pcs	4.00					
	Bolt Thimble Eye, 5/8 X 12"	pc	1.00					
	Clamp Guy, 3-Bolt Hd	pcs	2.00					
	Clamp Hot Line #2/0	pc	1.00					
	Ground Rod, 5/8" X 10' Galvanized w/Clamp	pc	1.00					
	Ground Wire, # 5/16 Steel, 3 Strand	m	23.34					
	Guy Wire, 3/8" X 7 Strand	m	20.00					
	Nut, Lock 5/8"	pc	10.00					
	Washer Square, 4" X 4"	pc	5.00					
	Washer, 2 1/4" X 2 1/4"	pc	10.00					
	Connector Compression, YHO 150	pcs	2.00					
	Sub-total							
	METERING REQUIREMENT							
	KWHM, 1P, 2W, CL200, 240V, Form1S	set	1.00					
	Meter seal, plastic	pc	2.00					
	Sub-total							
	POWERHOUSE							
	EARTHWORKS							
	STRUCTURE EXCAVATION	cu.m	4					
	CONCRETING WORKS	cu.m.	12.872					
	Portland Cement	bag	116					
	Crushed Gravel 3/4"	cu.m	13					
	Washed Sand	cu.m	7					
	REBAR WORKS							
	Deformed Round Bars, Grade 40	kg	176.93					
	G.I. Tie Wire	kg	4					
	FORM WORKS							
	Coco Lumber	bd.ft	128					
	Plywood Ordinary, 1/2"x4'x8'	pc	5					
	CWN, Assorted	kg	4					
	MASONRY WORKS	sq.m	44.2					
	CHB 4" thk	pcs	553					
	Portland Cement	cu.m	23					
	Washed Sand	cu.m	2					
	10mm x 6m RSB	kg	59					
	G.I. Tie Wire	kg	2					
	PLASTERING	cu.m.	88.4					
	Portland Cement	bag	30					
	Washed Sand	cu.m	3					
	DOORS AND WINDOWS							
	Aluminum Roll Up Door (2.5mx2.7m)	set	1					
	W-1 Aluminum Louver Type (1m x 0.5m)	set	1					
	W-2 Awning Window with grilles (1m x 0.3m)	set	1					
	ELECTRICAL WORKS							
	2 x 18 Watts LED lamp with luminaire surface type	set	3					
	2 - Gang Convenience Outlet wide series	set	2					
	3.5mm2 THHN Copper Wire	mtrs	100					
	Breaker 1 - 15AT, 2P CB, 1 - 20AT, 2P CB	assembly	1					
	1/2" PVC Pipe	pcs.	7					
	Octagonal Junction Box	pcs.	5					
	Utility Box	pcs.	3					
	1 - Gang Switch with LED indicator	pcs.	2					
	Miscellaneous	lot	1					
	PAINTING WORKS	sq.m.	104					
	Latex, Flat	gal	6.00					
	Masonry Putty	gal	2.00					
	Latex, Semi Gloss	gal	11.00					
	Acri Color	gal	5.00					
	OTHERS							
	Water Proofing (Cement) 5kgs/bag	bags	30					
	Sub-total							

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT COST		TOTAL COST		GRAND TOTAL
				MATERIAL	LABOR	MATERIAL	LABOR	
	GENERATOR							
	35 KVA Single Phase Silent Type Diesel Generator Set with complete accessories, Weather proof, outdoor type, 60Hz, 230V	set	1.00					
	Sub-total							
	DIRECT COST							
	INDIRECT COST ___% of (I)							
	TAX 5% of (I + II)							
	TOTAL CONSTRUCTION COST (I + II + III)							

Prepared by:

**PROGRAM OF WORK
BILL OF QUANTITIES**
ELEC 2019 - CAR - Baguio City

School : RIZAL ELEMENTARY SCHOOL			Date: October 8, 2019			
School I.D : 136404			Budget Allocation:			
Region : CAR			Engineering and Administrative Overhead:			
Division : BAGUIO CITY			Approved Budget for the Contract:			
Project Title :			Completion Period: 120 calendar days			
: UPGRADING OF ELECTRICAL SYSTEM			Minimum Required Manpower:			
			Electrical Engineer	Carpenter	Construction Foreman	
			Master Electrician	Mason		
Location : BAGUIO CITY			Minimum Required Equipment:			
			Hand Tools	Jackhammer	Dump Truck/Cargo Truck	
			Electrical Tools	Concrete Cutter	Knockout Puncher	
			Crimping Tools	Heat Gun/Torch	Various Power Tools	
ITEM NO.	Item Description	% of Total	Unit	Quantity	Total Cost	Remarks
	I. DIRECT COST					
	GENERAL REQUIREMENTS		LOT	1.00		
	ELECTRICAL WORK		LOT	1.00		
	CIVILWORKS		LOT	1.00		
	TRANSFORMER		LOT	1.00		
	METERING REQUIREMENT		LOT	1.00		
	POWERHOUSE		LOT	1.00		
	GENERATOR		LOT	1.00		
	Sub-total					
	II. INDIRECT COST ___% of (I)					
	Overhead Expenses (___%)					
	Contingencies (___%)					
	Miscellaneous (___%)					
	Contractor's Profit (___%)					
	Sub-Total					
	III. TAX 5% of (I+II)					
	Sub-Total					
	IV. TOTAL CONSTRUCTION COST (I + II + III)					

Prepared by:

**PROGRAM OF WORK
DETAILED COST ESTIMATE**

PROJECT : **UPGRADING OF ELECTRICAL SYSTEM**
 SCHOOL : RIZAL ELEMENTARY SCHOOL
 LOCATION : BAGUIO CITY
 OWNER : DEPARTMENT OF EDUCATION

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT COST		TOTAL COST		GRAND TOTAL
				MATERIAL	LABOR	MATERIAL	LABOR	
GENERAL REQUIREMENTS								
	Mobilization/Temporary Structures, Utilities and Services/Demobilization	lot	1.00					
	Safety and Health	lot	1.00					
	Project Billboard	lot	1.00					
	Fire Safety Inspection Certificate (FSIC)	lot	1.00					
	Fees for processing of electrical connections, CFEI, transformer testing & energization, preparation of Electrical Plans and all necessary documents required by BENEKO	lot	1.00					
	Hauling cost	lot	1.00					
	Sub-total							
SERVICE LINE								
ELECTRICAL WORK								
	Steel Pullbox, 6"x 6"x 4", with complete accs.	sets	14.00					
	80.0mm ² THWN/THHN Copper Wire	m	110.00					
	30.0mm ² THWN/THHN Copper Wire	m	250.00					
	14.0mm ² THWN/THHN Copper Wire	m	2,000.00					
	UPVC Pipe 2" , S-1000	pcs	400.00					
	RSC, 75 mmØ	pc	30.00					
	RSC, 100mmØ w/ Entrance Cap	pc	1.00					
	Adhesive Marker(color coded & properly labeled)	set	40.00					
	4"wide Underground Warning Tape	m	500.00					
	Heavy Duty Main Distribution Panel Box Center	pc	1.00					
	250A, 2P, Bolt On Circuit Breaker	pc	1.00					
	100A, 2P, Bolt On Circuit Breaker	pc	1.00					
	60A, 2P, Bolt On Circuit Breaker	pc	12.00					
	Manual Transfer Switch	lot	1.00					
	Misc. (Clamps, PVC Elbow, PVC Cement, etc)	lot	1.00					
	Sub-total							
CIVILWORKS								
	Removal of Concrete Structures/Obstructions	cu.m.	19.28					
	Excavation	cu.m.	173.58					
	Backfilling & Compaction	cu.m.	32.00					
	Portland Cement	bags	700.00					
	Crushed Gravel, 3/4	cu.m.	110.00					
	Crushed Sand	cu.m.	68.00					
	10mm Diam. RSB	pcs	1,500.00					
	#16 G.I. Tie Wire	kg	54.00					
	Rough Lumber	bd.ft	900.00					
	Plywood, Ordinary 1/4"x 4'x 8'	pcs	52.00					
	ÇWN	kg	38.00					
	Sub-total							
TRANSFORMER								
	Transformer, Pole Type, 25 KVA, 22.86/13.2kV	set	1.00					
	Anchoring Assembly, F2-1	assy	1.00					
	Guying Assembly, E1-2	assy	1.00					
	Grounding Assembly, M2-1A	assy	1.00					
	Miscellaneous Assembly, M5-1(#2/0), M5-	assy	1.00					
	Lightning Arrester, 24Kv, Ohio Brass	pc	1.00					

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT COST		TOTAL COST		GRAND TOTAL
				MATERIAL	LABOR	MATERIAL	LABOR	
	Fuse Cut-Out, 23-27Kv, 100 Amps	pc	1.00					
	Fuse Link, 1A	pc	1.00					
	Bracket Mounting For Fco & La (27Kv)	pc	1.00					
	Conductor Bare Wire, # 4/7 CU	m	6.00					
	Pole, Concrete, 40' (Round)	pc	1.00					
	Pole, Plates	pc	1.00					
	Anchor Log, 5' Std.	pc	1.00					
	Anchor Rod, 5/8" X 7', Single Eye	pc	1.00					
	Bolt Machine, 5/8" X 12"	pcs	4.00					
	Bolt Thimble Eye, 5/8 X 12"	pc	1.00					
	Clamp Guy, 3-Bolt Hd	pcs	2.00					
	Clamp Hot Line #2/0	pc	1.00					
	Ground Rod, 5/8" X 10' Galvanized w/Clamp	pc	1.00					
	Ground Wire, # 5/16 Steel, 3 Strand	m	20.19					
	Guy Wire, 3/8" X 7 Strand	m	14.00					
	Nut, Lock 5/8"	pc	10.00					
	Washer Square, 4" X 4"	pc	3.00					
	Washer, 2 1/4" X 2 1/4"	pc	1.00					
	Connector Compression, YHO 150	pcs	2.00					
	Sub-total							
	METERING REQUIREMENT							
	KWHM, 1P, 2W, CL200, 240V, Form1S	set	1.00					
	Meter seal, plastic	pc	2.00					
	Sub-total							
	POWERHOUSE							
	EARTHWORKS							
	STRUCTURE EXCAVATION	cu.m	4					
	CONCRETING WORKS	cu.m.	12.872					
	Portland Cement	bag	116					
	Crushed Gravel 3/4"	cu.m	13					
	Washed Sand	cu.m	7					
	REBAR WORKS							
	Deformed Round Bars, Grade 40	kg	176.93					
	G.I. Tie Wire	kg	4					
	FORM WORKS							
	Coco Lumber	bd.ft	128					
	Plywood Ordinary, 1/2"x4'x8'	pc	5					
	CWN, Assorted	kg	4					
	MASONRY WORKS	sq.m	44.2					
	CHB 4" thk	pcs	553					
	Portland Cement	cu.m	23					
	Washed Sand	cu.m	2					
	10mm x 6m RSB	kg	59					
	G.I. Tie Wire	kg	2					
	PLASTERING	cu.m.	88.4					
	Portland Cement	bag	30					
	Washed Sand	cu.m	3					
	DOORS AND WINDOWS							
	Aluminum Roll Up Door (2.5mx2.7m)	set	1					
	W-1 Aluminum Louver Type (1m x 0.5m)	set	1					
	W-2 Awning Window with grilles (1m x 0.3m)	set	1					
	ELECTRICAL WORKS							
	2 x 18 Watts LED lamp with luminaire surface type	set	3					
	2 - Gang Convenience Outlet wide series	set	2					
	3.5mm2 THHN Copper Wire	mtrs	100					
	Breaker 1 - 15AT, 2P CB, 1 - 20AT, 2P CB	assembly	1					
	1/2" PVC Pipe	pcs.	7					
	Octagonal Junction Box	pcs.	5					
	Utility Box	pcs.	3					
	1 - Gang Switch with LED indicator	pcs.	2					
	Miscellaneous	lot	1					
	PAINTING WORKS	sq.m.	104					
	Latex, Flat	gal	6.00					
	Masonry Putty	gal	2.00					
	Latex, Semi Gloss	gal	11.00					
	Acri Color	gal	5.00					
	OTHERS							
	Water Proofing (Cement) 5kgs/bag	bags	30					
	Sub-total							

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT COST		TOTAL COST		GRAND TOTAL
				MATERIAL	LABOR	MATERIAL	LABOR	
	GENERATOR							
	35 KVA Single Phase Silent Type Diesel Generator Set with complete accessories, Weather proof, outdoor type, 60Hz, 230V	set	1.00					
	Sub-total							
	DIRECT COST							
	INDIRECT COST ____% of (I)							
	TAX 5% of (I + II)							
	TOTAL CONSTRUCTION COST (I + II + III)							

Prepared by:

**PROGRAM OF WORK
BILL OF QUANTITIES**
ELEC 2019 - CAR - Baguio City

School : APOLINARIO MABINI ES			Date: October 8, 2019			
School I.D : 136403			Budget Allocation:			
Region : CAR			Engineering and Administrative Overhead:			
Division : BAGUIO CITY			Approved Budget for the Contract:			
Project Title :			Completion Period: 150 calendar days			
: UPGRADING OF ELECTRICAL SYSTEM			Minimum Required Manpower:			
			Electrical Engineer	Carpenter	Construction Foreman	
: BAGUIO CITY			Minimum Required Equipment:			
			Hand Tools	Jackhammer	Dump Truck/Cargo Truck	
: BAGUIO CITY			Electrical Tools			
			Concrete Cutter	Knockout Puncher		
: BAGUIO CITY			Crimping Tools			
			Heat Gun/Torch	Various Power Tools		
ITEM NO.	Item Description	% of Total	Unit	Quantity	Total Cost	Remarks
I. DIRECT COST						
	GENERAL REQUIREMENTS		lot	1.00		
	ELECTRICAL WORK		lot	1.00		
	CIVILWORKS		lot	1.00		
	TRANSFORMER		lot	1.00		
	METERING REQUIREMENT		lot	1.00		
	POWERHOUSE		lot	1.00		
	GENERATOR		lot	1.00		
	Sub-total					
II. INDIRECT COST ___% of (I)						
	Overhead Expenses (___%)					
	Contingencies (___%)					
	Miscellaneous (___%)					
	Contractor's Profit (___%)					
	Sub-Total					
III. TAX 5% of (I+II)						
	Sub-Total					
IV. TOTAL CONSTRUCTION COST (I + II + III)						

Prepared by:

**PROGRAM OF WORK
DETAILED COST ESTIMATE**

PROJECT : **UPGRADING OF ELECTRICAL SYSTEM**
 SCHOOL : APOLINARIO MABINI ES
 LOCATION : BAGUIO CITY
 OWNER : DEPARTMENT OF EDUCATION

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT COST		TOTAL COST		GRAND TOTAL
				MATERIAL	LABOR	MATERIAL	LABOR	
GENERAL REQUIREMENTS								
	Mobilization/Temporary Structures, Utilities and Services/Demobilization	lot	1.00					
	Safety and Health	lot	1.00					
	Project Billboard	lot	1.00					
	Fire Safety Inspection Certificate (FSIC)	lot	1.00					
	Fees for processing of electrical connections, CFEI, transformer testing & energization, preparation of Electrical Plans and all necessary documents required by BENEKO	lot	1.00					
	Hauling cost	lot	1.00					
	Sub-total							
ELECTRICAL WORK								
	Steel Pullbox, 6"x 6"x 4", with complete accs.	sets	21.00					
	80mm ² THWN/THHN Copper Wire	m	100.00					
	22.0mm ² THWN/THHN Copper Wire	m	1,620.00					
	14.0mm ² THWN/THHN Copper Wire	m	2,000.00					
	UPVC Pipe 2" dia., S-1000	pcs	700.00					
	RSC, 75 mmØ	pc	21.00					
	RSC, 100mmØ w/ Entrance Cap	pc	2.00					
	Adhesive Marker(color coded & properly labeled)	set	40.00					
	4"wide Underground Warning Tape	m	510.00					
	Heavy Duty Main Distribution Panel Box Center Main, 12 Branches with Grounding and Neutral Busbar	pc	1.00					
	250A, 2P, Bolt On Circuit Breaker	pc	1.00					
	100A, 2P, Bolt On Circuit Breaker	pc	1.00					
	60A, 2P, Bolt On Circuit Breaker	pc	20.00					
	Manual Transfer Switch	lot	1.00					
	Misc. (Clamps, PVC Elbow, PVC Cement, etc)	lot	1.00					
	Sub-total							
CIVILWORKS								
	Removal of Concrete Structures/Obstructions	cu.m.	35.89					
	Excavation	cu.m.	323.05					
	Backfilling & Compaction	cu.m.	62.75					
	Portland Cement	bags	830.00					
	Crushed Gravel, 3/4	cu.m.	160.00					
	Crushed Sand	cu.m.	85.00					
	10mm Diam. RSB	pcs	1,800.00					
	#16 G.I. Tie Wire	kg	86.15					
	Rough Lumber	bd.ft	200.00					
	Plywood, Ordinary 1/4"x 4'x 8	pcs	25.00					
	ÇWN	kg	10.00					
	Sub-total							
TRANSFORMER								
	Transformer, Pole Type, 25 KVA, 22.86/13.2kV	set	1.00					
	Anchoring Assembly, F2-1	assy	1.00					
	Guying Assembly, E1-2	assy	1.00					
	Grounding Assembly, M2-1A	assy	1.00					
	Miscellaneous Assembly, M5-1(#2/0), M5-	assy	1.00					
	Lightning Arrester, 24Kv, Ohio Brass	pc	1.00					
	Fuse Cut-Out, 23-27Kv, 100 Amps	pc	1.00					
	Fuse Link, 1A	pc	1.00					

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT COST		TOTAL COST		GRAND TOTAL
				MATERIAL	LABOR	MATERIAL	LABOR	
	Bracket Mounting For Fco & La (27Kv)	pc	1.00					
	Conductor Bare Wire, # 4/7 CU	m	6.00					
	Pole, Concrete, 40' (Round)	pc	1.00					
	Pole, Plates	pc	1.00					
	Anchor Log, 5' Std.	pc	1.00					
	Anchor Rod, 5/8" X 7", Single Eye	pc	1.00					
	Bolt Machine, 5/8" X 12"	pcs	5.00					
	Bolt Thimble Eye, 5/8 X 12"	pc	1.00					
	Clamp Guy, 3-Bolt Hd	pcs	2.00					
	Clamp Hot Line #2/0	pc	1.00					
	Ground Rod, 5/8" X 10' Galvanized w/Clamp	pc	1.00					
	Ground Wire, # 5/16 Steel, 3 Strand	m	24.61					
	Guy Wire, 3/8" X 7 Strand	m	26.00					
	Nut, Lock 5/8"	pc	1.00					
	Washer Square, 4" X 4"	pc	1.00					
	Washer, 2 1/4" X 2 1/4"	pc	1.00					
	Connector Compression, YHO 150	pcs	5.00					
	Sub-total							
	METERING REQUIREMENT							
	KWHM, 1P, 2W, CL200, 240V, Form1S	set	1.00					
	Meter seal, plastic	pc	2.00					
	Sub-total							
	POWERHOUSE							
	EARTHWORKS							
	STRUCTURE EXCAVATION	cu.m	4					
	CONCRETING WORKS	cu.m.	12.872					
	Portland Cement	bag	116					
	Crushed Gravel 3/4"	cu.m	13					
	Washed Sand	cu.m	7					
	REBAR WORKS							
	Deformed Round Bars, Grade 40	kg	176.93					
	G.I. Tie Wire	kg	4					
	FORM WORKS							
	Coco Lumber	bd.ft	128					
	Plywood Ordinary, 1/2"x4'x8'	pc	5					
	CWN, Assorted	kg	4					
	MASONRY WORKS	sq.m	44.2					
	CHB 4" thk	pcs	553					
	Portland Cement	cu.m	23					
	Washed Sand	cu.m	2					
	10mm x 6m RSB	kg	59					
	G.I. Tie Wire	kg	2					
	PLASTERING	cu.m.	88.4					
	Portland Cement	bag	30					
	Washed Sand	cu.m	3					
	DOORS AND WINDOWS							
	Aluminum Roll Up Door (2.5mx2.7m)	set	1					
	W-1 Aluminum Louver Type (1m x 0.5m)	set	1					
	W-2 Awning Window with grilles (1m x 0.3m)	set	1					
	ELECTRICAL WORKS							
	2 x 18 Watts LED lamp with luminaire surface type	set	3					
	2 - Gang Convenience Outlet wide series	set	2					
	3.5mm2 THHN Copper Wire	mtrs	100					
	4 Branches Panel Board with 1 - 40AT, 2P Main Breaker 1 - 15AT, 2P CB, 1 - 20AT, 2P CB	assembly	1					
	1/2" PVC Pipe	pcs.	7					
	Octagonal Junction Box	pcs.	5					
	Utility Box	pcs.	3					
	1 - Gang Switch with LED indicator	pcs.	2					
	Miscellaneous	lot	1					
	PAINTING WORKS	sq.m.	104					
	Latex, Flat	gal	6.00					
	Masonry Putty	gal	2.00					
	Latex, Semi Gloss	gal	11.00					
	Acri Color	gal	5.00					
	OTHERS							
	Water Proofing (Cement) 5kgs/bag	bags	30					
	Sub-total							
	GENERATOR							

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT COST		TOTAL COST		GRAND TOTAL
				MATERIAL	LABOR	MATERIAL	LABOR	
	45 KVA Single Phase Silent Type Diesel Generator Set with complete accessories, Weather proof, outdoor type, 60Hz, 230V	set	1.00					
	Sub-total							
	DIRECT COST							
	INDIRECT COST ____% of (I)							
	TAX 5% of (I + II)							
	TOTAL CONSTRUCTION COST (I + II + III)							

Prepared by:

**PROGRAM OF WORK
BILL OF QUANTITIES**
ELEC 2019 - CAR - Baguio City

School : BAGUIO CITY NATIONAL HIGH SCHOOL			Date: October 8, 2019			
School I.D : 136413			Budget Allocation:			
Region : CAR			Engineering and Administrative Overhead:			
Division : BAGUIO CITY			Approved Budget for the Contract:			
Project Title :			Completion Period: 150 calendar days			
: UPGRADING OF ELECTRICAL SYSTEM			Minimum Required Manpower:			
			Electrical Engineer	Carpenter	Construction Foreman	
			Master Electrician	Mason		
Location : BAGUIO CITY			Minimum Required Equipment:			
			Hand Tools	Jackhammer	Dump Truck/Cargo Truck	
			Electrical Tools	Concrete Cutter	Knockout Puncher	
			Crimping Tools	Heat Gun/Torch	Various Power Tools	
ITEM NO.	Item Description	% of Total	Unit	Quantity	Total Cost	Remarks
	I. DIRECT COST					
	GENERAL REQUIREMENTS		lot	1.00		
	ELECTRICAL WORK		lot	1.00		
	CIVILWORKS		lot	1.00		
	METERING REQUIREMENT		lot	1.00		
	GENERATOR		lot	1.00		
	Sub-total					
	II. INDIRECT COST ___% of (I)					
	Overhead Expenses (___%)					
	Contingencies (___%)					
	Miscellaneous (___%)					
	Contractor's Profit (___%)					
	Sub-Total					
	III. TAX 5% of (I+II)					
	Sub-Total					
	IV. TOTAL CONSTRUCTION COST (I + II + III)					

DETAILED COST ESTIMATE

PROJECT : **UPGRADING OF ELECTRICAL SYSTEM**
 SCHOOL : BAGUIO CITY NATIONAL HIGH SCHOOL
 LOCATION : BAGUIO CITY
 OWNER : DEPARTMENT OF EDUCATION

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT COST		TOTAL COST		GRAND TOTAL
				MATERIAL	LABOR	MATERIAL	LABOR	
GENERAL REQUIREMENTS								
	Mobilization/Temporary Structures, Utilities and Services/Demobilization	lot	1.00					
	Safety and Health	lot	1.00					
	Project Billboard	lot	1.00					
	Fire Safety Inspection Certificate (FSIC)	lot	1.00					
	Fees for processing of electrical connections, CFEI, transformer testing & energization, preparation of Electrical Plans and all necessary documents required by BENEKO	lot	1.00					
	Hauling cost	lot	1.00					
	Sub-total							
ELECTRICAL WORK								
	Steel Pullbox, 6"x 6"x 4", with complete accs.	sets	24.00					
	80.0mm ² THWN/THHN Copper Wire	m	180.00					
	50.0mm ² THWN/THHN Copper Wire	m	200.00					
	30.0mm ² THWN/THHN Copper Wire	m	200.00					
	22.0mm ² THWN/THHN Copper Wire	m	600.00					
	UPVC Pipe 2, S-1000	pcs	200.00					
	RSC, 75 mmØ	pc	30.00					
	RSC, 100mmØ w/ Entrance Cap	pc	1.00					
	Adhesive Marker(color coded & properly labeled)	set	40.00					
	4"wide Underground Warning Tape	m	750.00					
	Heavy Duty Main Distribution Panel Box Center Main, 24 Branches with Grounding and Neutral Busbar	pc	1.00					
	250A, 3P, Bolt On Circuit Breaker	pc	1.00					
	125A, 3P, Bolt On Circuit Breaker	pc	3.00					
	100A, 2P, Bolt On Circuit Breaker	pc	1.00					
	60A, 2P, Bolt On Circuit Breaker	pc	20.00					
	Manual Transfer Switch	lot	1.00					
	Misc. (Clamps, PVC Elbow, PVC Cement, etc)	lot	1.00					
	Sub-total							
CIVILWORKS								
	Removal of Concrete Structures/Obstructions	cu.m.	16.40					
	Excavation	cu.m.	264.47					
	Backfilling & Compaction	cu.m.	44.05					
	Portland Cement	bags	280.00					
	Crushed Gravel, 3/4	cu.m.	56.00					
	Crushed Sand	cu.m.	36.00					
	10mm Diam. RSB	pcs	320.00					
	#16 G.I. Tie Wire	kg	25.00					
	Rough Lumber	bd.ft	600.00					
	Plywood, Ordinary 1/4"x 4'x 8'	pcs	50.00					
	ÇWN	kg	38.00					
	Sub-total							
METERING REQUIREMENT								
	KWHM, 1P, 2W, CL200, 240V, Form1S	set	21.00					
	Meter, KWH, 3 Phase, Class 20, 240V, 3W, Form 9S, Electronic, Demand & Energy	set	3.00					
	Meter Box	set	24.00					
	Meter seal, plastic	pc	48.00					
	Sub-total							

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT COST		TOTAL COST		GRAND TOTAL
				MATERIAL	LABOR	MATERIAL	LABOR	
	GENERATOR							
	125 KVA 3 Phase Silent Type Diesel Generator Set with complete accessories, Weather proof, outdoor type, 60Hz, 230V	set	1.00					
	Sub-total							
	DIRECT COST							
	INDIRECT COST ___% of (I)							
	TAX 5% of (I + II)							
	TOTAL CONSTRUCTION COST (I + II + III)							

**PROGRAM OF WORK
BILL OF QUANTITIES
ELEC 2019 - CAR - BAGUIO**

School : JOAQUIN SMITH NATIONAL HIGHSCHOOL			Date: October 8, 2019			
School I.D : 325284			Budget Allocation: PHP 0.00			
Region : CAR			Engineering and Administrative Overhead: PHP 0.00			
Division : BAGUIO CITY			Approved Budget for the Contract: PHP 0.00			
Project Title :			Completion Period: 150 calendar days			
: UPGRADING OF ELECTRICAL SYSTEM			Minimum Required Manpower:			
			Electrical Engineer	Carpenter	Construction Foreman	
			Master Electrician	Mason		
Location : BAGUIO CITY			Minimum Required Equipment:			
			Hand Tools	Come Along Cable Puller	Hole Digger	
			Electrical Tools	Lineman's Belt		
ITEM NO.	Item Description	% of Total	Unit	Quantity	Total Cost	Remarks
	I. DIRECT COST					
	GENERAL REQUIREMENTS		lot	1.00		
ELECTRICAL UPGRADING						
	MAIN LINE / MAIN POST		lot	1.00		
	PROTECTION MEANS PER BUILDING (MOUNTED OUTSIDE THE BUILDING BEFORE ENTERING THE SERVICE ENTRANCE WIRE)		lot	1.00		
	IMPROVEMENT COVERED COURT LIGHTINGS		lot	1.00		
	SERVICE LINE FROM POST TO BUILDING		lot	1.00		
	Sub-total					
	II. INDIRECT COST ___% of (I)					
	Overhead Expenses (___%)					
	Contingencies (___%)					
	Miscellaneous (___%)					
	Contractor's Profit (___%)					
	Sub-Total					
	III. TAX 5% of (I+II)					
	Sub-Total					
	IV. TOTAL CONSTRUCTION COST (I + II + III)					

Prepared by:

**PROGRAM OF WORK
DETAILED COST ESTIMATE**

PROJECT : **UPGRADING OF ELECTRICAL SYSTEM**
 SCHOOL : JOAQUIN SMITH NATIONAL HIGHSCHOOL
 LOCATION : BAGUIO CITY
 OWNER : DEPARTMENT OF EDUCATION

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT COST		TOTAL COST		GRAND TOTAL
				MATERIAL	LABOR	MATERIAL	LABOR	
GENERAL REQUIREMENTS								
	Mobilization/Temporary Structures, Utilities and Services/Demobilization	lot	1.00					
	Safety and Health	lot	1.00					
	Project Billboard	lot	1.00					
	Fire Safety Inspection Certificate (FSIC)	lot	1.00					
	Fees for processing of electrical connections, CFEI, transformer testing & energization, preparation of Electrical Plans and all necessary documents required by BENECSO	lot	1.00					
	Clearing ROW of Primary and Secondary Line	lot	1.00					
	Hauling cost	lot	1.00					
	Sub-total							
MAIN LINE / MAIN POST								
	Pole, Steel, 30' (3.0mm)	pieces	14.00					
	Pole, Steel, 35' (3.0mm)	pieces	1.00					
	Block, Anchor, Concrete	pieces	14.00					
	Bolt, Oval Eye, 5/8" X 9"	pieces	30.00					
	Bolt, Oval Eye, 5/8" X 10"	pieces	30.00					
	Bolt, Machine, 5/8" X 10"	pieces	30.00					
	Bolt, Single Upset, 5/8" X 10"	piece	15.00					
	Bracket, Clevis Deadend without Spool	pieces	15.00					
	Clamp, Hot Line, #2 - #2/0 ACSR Main to #2 - #2/0	pieces	1.00					
	Clamp, Anchor Rod Bonding, Single Eye	pieces	13.00					
	Clamp, Loop Deadend, #1/0 ACSR	pieces	11.00					
	Clamp, Deadend Strain, #1/0 ACSR	pieces	11.00					
	Clamp, Guy Straight, 3 Bolt, Heavy Duty Steel	pieces	26.00					
	Clevis, Secondary Swinging without Spool	pieces	9.00					
	Conductor, Bare, ACSR #2, AWG 6/1	meters	1.00					
	Conductor, Bare, ACSR #2/0, AWG 6/1	meters	1500.00					
	Conductor, Insulated, ACSR #2, AWG 6/1 (600 V)	meters	4.00					
	Conductor, Insulated, ACSR #2/0, AWG 6/1 (600 V)	meters	1400.00					
	Connector, Compression, YHO 150, #3 - #1/0 ACSR Run To #6 - #2	pieces	30.00					
	Connector, Compression, YHD 300, #1/0 - #2/0 ACSR Run To #1/0 - #2/0	pieces	9.00					
	Connector, Ground Rod (Clamp) for 5/8" Steel Rod	pieces	9.00					
	Cutout, Fuse, Single-Shot, Polymer	piece	1.00					
	Cutout and Arrester Combination, Polymer	set	1.00					
	Hook, Guy	pieces	27.00					
	Insulator, Spool, 1-3/4", ANSI, Class 53 - 2	pieces	11.00					
	Insulator, Spool, 3", ANSI, Class 53 - 4	pieces	13.00					
	Insulator, Suspension, 6", Porcelain, Clevis Type	pieces	6.00					
	Link, Fuse, Universal, Bottom Head, Type K, 2 Amperes	piece	1.00					
	Meter, KWH, 1 Phase, Class 200, 2 W, 240 V, Socket Type, Electronic, Form 1S	piece	1.00					
	Nut, Lock, Mf Type, 5/8"	pieces	33.00					
	Rod, Anchor, Threaded, Single Eye, 5/8" X 7"	pieces	15.00					
	Rod, Armor, Preformed, #1/0 ACSR, Single Support	sets	15.00					
	Rod, Tapping, Preformed, #1/0 ACSR	sets	1.00					
	Rod, Ground Steel, Galvanized, 5/8" X 10'	pieces	4.00					

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT COST		TOTAL COST		GRAND TOTAL
				MATERIAL	LABOR	MATERIAL	LABOR	
	Lug, Terminal for #2 ACSR	pieces	6.00					
	Socket, Ringless, 200 Amperes, 4 Jaws	set	1.00					
	Transformer, Pole Type, Conventional, Amorphous, 37.5 KVA	unit	1.00					
	Washer, Square, Flat, 2-1/4" X 2-1/4" X 3/16", 13/16" Diameter Hole	pieces	18.00					
	Washer, Square, Flat, 4" X 4" X 1/2" with 7/8" Diameter Hole	pieces	16.00					
	Wire, Tie, Insulated, Soft, #4 AWG	feet	18.00					
	Wire, Tape, Armor, Aluminum Alloy, 0.5 " X 0.3"	feet	4.00					
	Wire, Grounding, Aluminum Alloy, 3 Strand, #4 AWG	feet	150.00					
	Wire, Guy, Steel, 3/8", 7 Strand	feet	250.00					
	Wire, Tape, Armor, Aluminum Alloy, 0.5 " X 0.3"	feet	6.00					
	Wire, Grounding, Aluminum Alloy, 3 Strand, #4 AWG	feet	191.32					
	Weather proof 75 Watts LED perimeter lightings with complete wires, mounting bracket, and switching accessories. With motion sensor and Photo switch	set	7.00					
	Sub-total							
PROTECTION MEANS PER BUILDING (MOUNTED OUTSIDE THE BUILDING BEFORE ENTERING THE SERVICE ENTRANCE WIRE)								
	Circuit Breaker Enclosure NEMA 3R	pcs	16.00					
	125A Molded Case Circuit Breaker, 2P	set	8.00					
	100A Molded Case Circuit Breaker, 2P	set	8.00					
	RSC Pipe 1 1/2" dia.	pcs	32.00					
	RSC Elbow 1 1/2" dia.	pcs	64.00					
	RSC Coupling 1 1/2" dia.	pcs	16.00					
	RSC Clamp with screw 1 1/2" dia.	pcs	32.00					
	RSC Locknut 1 1/2" dia.	pcs	20.00					
	RSC Bushing 1 1/2" dia.	pcs	20.00					
	38mm2 THHN Copper Wire	mtrs.	300.00					
	Service Entrance Cap 1 1/2" dia.	pcs	16.00					
	Sub-total							
IMPROVEMENT COVERED COURT LIGHTINGS								
	200W HIGH BAY LED LIGHT	set	10.00					
	Prefabricated Anchoring for HIGH BAY LED LIGHT	Assembly	10.00					
	6 Branches Panel Board with 40AT Centermain Circuit Breaker and 6 sets - 15 AT Circuit breaker, NEMA 3R Enclosure for covered court.	Assembly	1.00					
	3.5mm2 THHN Copper Wire Stranded	mtrs.	300.00					
	Scaffolding rentals	lot	1.00					
	Sub-total							
SERVICE LINE FROM POST TO BUILDING								
	#4 Insulated All Aluminum Conductor	m	600.00					
	PVC Pipe 25mm dia.	pcs	16.00					
	Service Cap 25mm	pcs	16.00					
	Double Rack Spool Insulator	set	16.00					
	Electrical Tape	pc	10.00					
	Rubber Tape	pc	8.00					
	Sub-total							
DIRECT COST								
INDIRECT COST % of (I)								
TAX 5% of (I + II)								
TOTAL CONSTRUCTION COST (I + II + III)								

Prepared by:

**PROGRAM OF WORK
BILL OF QUANTITIES**
ELEC 2019 - CAR - Baguio City

School : GUI SAD VALLEY NATIONAL HIGHSCHOOL			Date: October 8, 2019			
School I.D : 305282			Budget Allocation:			
Region : CAR			Engineering and Administrative Overhead:			
Division : BAGUIO CITY			Approved Budget for the Contract:			
Project Title :			Completion Period: 150 calendar days			
: UPGRADING OF ELECTRICAL SYSTEM			Minimum Required Manpower:			
			Electrical Engineer	Carpenter	Construction Foreman	
			Master Electrician	Mason		
Location : BAGUIO CITY			Minimum Required Equipment:			
			Hand Tools	Jackhammer	Dump Truck/Cargo Truck	
			Electrical Tools	Concrete Cutter	Knockout Puncher	
			Crimping Tools	Heat Gun/Torch	Various Power Tools	
ITEM NO.	Item Description	% of Total	Unit	Quantity	Total Cost	Remarks
	I. DIRECT COST					
	GENERAL REQUIREMENTS		lot	1.00		
	ELECTRICAL WORK		lot	1.00		
	CIVILWORKS		lot	1.00		
	TRANSFORMER		lot	1.00		
	METERING REQUIREMENT		lot	1.00		
	POWERHOUSE		lot	1.00		
	GENERATOR		lot	1.00		
	Sub-total					
	II. INDIRECT COST ___% of (I)					
	Overhead Expenses (___%)					
	Contingencies (___%)					
	Miscellaneous (___%)					
	Contractor's Profit (___%)					
	Sub-Total					
	III. TAX 5% of (I+II)					
	Sub-Total					
	IV. TOTAL CONSTRUCTION COST (I + II + III)					

Prepared by:

**PROGRAM OF WORK
DETAILED COST ESTIMATE**

PROJECT : UPGRADING OF ELECTRICAL SYSTEM
 SCHOOL : GUIPAD VALLEY NATIONAL HIGHSCHOOL
 LOCATION : BAGUIO CITY
 OWNER : DEPARTMENT OF EDUCATION

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT COST		TOTAL COST		GRAND TOTAL
				MATERIAL	LABOR	MATERIAL	LABOR	
GENERAL REQUIREMENTS								
	Mobilization/Temporary Structures, Utilities and Services/Demobilization	lot	1.00					
	Safety and Health	lot	1.00					
	Project Billboard	lot	1.00					
	Fire Safety Inspection Certificate (FSIC)	lot	1.00					
	Fees for processing of electrical connections, CFEI, transformer testing & energization, preparation of Electrical Plans and all necessary documents required by BENEKO	lot	1.00					
	Hauling cost	lot	1.00					
	Sub-total							
SERVICE LINE								
ELECTRICAL WORK								
	Steel Pullbox, 6"x 6"x 4", with complete accs.	sets	11.00					
	80.0mm ² THWN/THHN Copper Wire	m	150.00					
	50.0mm ² THWN/THHN Copper Wire	m	510.00					
	30.0mm ² THWN/THHN Copper Wire	m	520.00					
	14.0mm ² THWN/THHN Copper Wire	m	2,000.00					
	UPVC Pipe 2", S-1000	pcs	600.00					
	RSC, 75 mmØ	pc	30.00					
	RSC, 100mmØ w/ Entrance Cap	pc	2.00					
	Adhesive Marker(color coded & properly labeled)	set	40.00					
	4"wide Underground Warning Tape	m	750.00					
	Heavy Duty Main Distribution Panel Box Center Main, 12 Branches with Grounding and Neutral Busbar	pc	1.00					
	250A, 2P, Bolt On Circuit Breaker	pc	1.00					
	100A, 2P, Bolt On Circuit Breaker	pc	3.00					
	60A, 2P, Bolt On Circuit Breaker	pc	8.00					
	Manual Transfer Switch	lot	1.00					
	Misc. (Clamps, PVC Elbow, PVC Cement, etc)	lot	1.00					
	Weather proof 75 Watts LED perimeter lightings with complete wires, mounting bracket, and switching accessories. With motion sensor and Photo switch. (To be mounted on building structures)	set	7.00					
	Sub-total							
CIVILWORKS								
	Removal of Concrete Structures/Obstructions	cu.m.	21.28					
	Excavation	cu.m.	191.52					
	Backfilling & Compaction	cu.m.	39.32					
	Portland Cement	bags	760.00					
	Crushed Gravel, 3/4	cu.m.	120.00					
	Crushed Sand	cu.m.	75.00					
	10mm Diam. RSB	pcs	1,300.00					
	#16 G.I. Tie Wire	kg	43.80					
	Rough Lumber	bd.ft	200.00					
	Plywood, Ordinary 1/4"x 4'x 8	pcs	100.00					
	ÇWN	kg	10.00					
	Sub-total							
TRANSFORMER								
	Transformer, Pole Type, 25 KVA, 22.86/13.2kV	set	1.00					
	Anchoring Assembly, F2-1	assy	1.00					

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT COST		TOTAL COST		GRAND TOTAL
				MATERIAL	LABOR	MATERIAL	LABOR	
	Guying Assembly, E1-2	assy	1.00					
	Grounding Assembly, M2-1A	assy	1.00					
	Miscellaneous Assembly, M5-1(#2/0), M5-	assy	1.00					
	Lightning Arrester, 24Kv, Ohio Brass	pc	1.00					
	Fuse Cut-Out, 23-27Kv, 100 Amps	pc	1.00					
	Fuse Link, 1A	pc	1.00					
	Bracket Mounting For Fco & La (27Kv)	pc	1.00					
	Conductor Bare Wire, # 4/7 CU	m	6.00					
	Pole, Concrete, 40' (Round)	pc	1.00					
	Pole, Plates	pc	1.00					
	Anchor Log, 5' Std.	pc	1.00					
	Anchor Rod, 5/8" X 7', Single Eye	pc	1.00					
	Bolt Machine, 5/8" X 12"	pcs	4.00					
	Bolt Thimble Eye, 5/8 X 12"	pc	1.00					
	Clamp Guy, 3-Bolt Hd	pcs	2.00					
	Clamp Hot Line #2/0	pc	1.00					
	Ground Rod, 5/8" X 10' Galvanized w/Clamp	pc	1.00					
	Ground Wire, # 5/16 Steel, 3 Strand	m	20.14					
	Guy Wire, 3/8" X 7 Strand	m	22.10					
	Nut, Lock 5/8"	pc	10.00					
	Washer Square, 4" X 4"	pc	5.00					
	Washer, 2 1/4" X 2 1/4"	pc	5.00					
	Connector Compression, YHO 150	pcs	3.00					
	Sub-total							
	METERING REQUIREMENT							
	KWHM, 1P, 2W, CL200, 240V, Form1S	set	1.00					
	Meter seal, plastic	pc	2.00					
	Sub-total							
	POWERHOUSE							
	EARTHWORKS							
	STRUCTURE EXCAVATION	cu.m	4					
	CONCRETING WORKS	cu.m.	12.872					
	Portland Cement	bag	116					
	Crushed Gravel 3/4"	cu.m	13					
	Washed Sand	cu.m	7					
	REBAR WORKS							
	Deformed Round Bars, Grade 40	kg	176.93					
	G.I. Tie Wire	kg	4					
	FORM WORKS							
	Coco Lumber	bd.ft	128					
	Plywood Ordinary, 1/2"x4'x8'	pc	5					
	CWN, Assorted	kg	4					
	MASONRY WORKS	sq.m	44.2					
	CHB 4" thk	pcs	553					
	Portland Cement	cu.m	23					
	Washed Sand	cu.m	2					
	10mm x 6m RSB	kg	59					
	G.I. Tie Wire	kg	2					
	PLASTERING	cu.m.	88.4					
	Portland Cement	bag	30					
	Washed Sand	cu.m	3					
	DOORS AND WINDOWS							
	Aluminum Roll Up Door (2.5mx2.7m)	set	1					
	W-1 Aluminum Louver Type (1m x 0.5m)	set	1					
	W-2 Awning Window with grilles (1m x 0.3m)	set	1					
	ELECTRICAL WORKS							
	2 x 18 Watts LED lamp with luminaire surface type	set	3					
	2 - Gang Convenience Outlet wide series	set	2					
	3.5mm2 THHN Copper Wire	mtrs	100					
	Breaker 1 - 15AT, 2P CB, 1 - 20AT, 2P CB	assembly	1					
	1/2" PVC Pipe	pcs.	7					
	Octagonal Junction Box	pcs.	5					
	Utility Box	pcs.	3					
	1 - Gang Switch with LED indicator	pcs.	2					
	Miscellaneous	lot	1					
	PAINTING WORKS	sq.m.	104					
	Latex, Flat	gal	6.00					
	Masonry Putty	gal	2.00					
	Latex, Semi Gloss	gal	11.00					
	Acri Color	gal	5.00					
	OTHERS							
	Water Proofing (Cement) 5kgs/bag	bags	30					
	Sub-total							

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT COST		TOTAL COST		GRAND TOTAL
				MATERIAL	LABOR	MATERIAL	LABOR	
	GENERATOR							
	45 KVA Single Phase Silent Type Diesel Generator Set with complete accessories, Weather proof, outdoor type, 60Hz, 230V	set	1.00					
	Sub-total							
	DIRECT COST							
	INDIRECT COST ___% of (I)							
	TAX 5% of (I + II)							
	TOTAL CONSTRUCTION COST (I + II + III)							

Prepared by:

**PROGRAM OF WORK
BILL OF QUANTITIES**
ELEC 2019 - CAR - Baguio City

School : LUCBAN ELEMENTARY SCHOOL			Date: October 8, 2019			
School I.D : 136394			Budget Allocation: PHP 0.00			
Region : CAR			Engineering and Administrative Overhead: PHP 0.00			
Division : BAGUIO CITY			Approved Budget for the Contract: PHP 0.00			
Project Title :			Completion Period: 150 calendar days			
: UPGRADING OF ELECTRICAL SYSTEM			Minimum Required Manpower:			
			Electrical Engineer	Carpenter	Construction Foreman	
			Master Electrician	Mason		
Location : BAGUIO CITY			Minimum Required Equipment:			
			Hand Tools	Jackhammer	Dump Truck/Cargo Truck	
			Electrical Tools	Concrete Cutter	Knockout Puncher	
			Crimping Tools	Heat Gun/Torch	Various Power Tools	
ITEM NO.	Item Description	% of Total	Unit	Quantity	Total Cost	Remarks
	I. DIRECT COST					
	GENERAL REQUIREMENTS		LOT	1.00		
	ELECTRICAL WORK		LOT	1.00		
	CIVILWORKS		LOT	1.00		
	TRANSFORMER		LOT	1.00		
	METERING REQUIREMENT		LOT	1.00		
	POWERHOUSE		LOT	1.00		
	GENERATOR		LOT	1.00		
	Sub-total					
	II. INDIRECT COST ___% of (I)					
	Overhead Expenses (___%)					
	Contingencies (___%)					
	Miscellaneous (___%)					
	Contractor's Profit (___%)					
	Sub-Total					
	III. TAX 5% of (I+II)					
	Sub-Total					
	IV. TOTAL CONSTRUCTION COST (I + II + III)					

Prepared by:

**PROGRAM OF WORK
DETAILED COST ESTIMATE**

PROJECT : UPGRADING OF ELECTRICAL SYSTEM
 SCHOOL : LUCBAN ELEMENTARY SCHOOL
 LOCATION : BAGUIO CITY
 OWNER : DEPARTMENT OF EDUCATION

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT COST		TOTAL COST		GRAND TOTAL
				MATERIAL	LABOR	MATERIAL	LABOR	
GENERAL REQUIREMENTS								
	Mobilization/Temporary Structures, Utilities and Services/Demobilization	lot	1.00					
	Safety and Health	lot	1.00					
	Project Billboard	lot	1.00					
	Fire Safety Inspection Certificate (FSIC)	lot	1.00					
	Fees for processing of electrical connections, CFEI, transformer testing & energization, preparation of Electrical Plans and all necessary documents required by BENECO	lot	1.00					
	Hauling cost	lot	1.00					
	Sub-total							
SERVICE LINE								
ELECTRICAL WORK								
	Steel Pullbox, 6"x 6"x 4", with complete accs.	sets	20.00					
	80.0mm ² THWN/THHN Copper Wire	m	150.00					
	30.0mm ² THWN/THHN Copper Wire	m	400.00					
	22.0mm ² THWN/THHN Copper Wire	m	900.00					
	14.0mm ² THWN/THHN Copper Wire	m	2,400.00					
	UPVC Pipe 2, S-1000	pcs	550.00					
	RSC, 75 mmØ	pc	30.00					
	RSC, 100mmØ w/ Entrance Cap	pc	1.00					
	Adhesive Marker(color coded & properly labeled)	set	40.00					
	4"wide Underground Warning Tape	m	750.00					
	Heavy Duty Main Distribution Panel Box Center	pc	1.00					
	250A, 2P, Bolt On Circuit Breaker	pc	1.00					
	100A, 2P, Bolt On Circuit Breaker	pc	2.00					
	60A, 2P, Bolt On Circuit Breaker	pc	18.00					
	Manual Transfer Switch	lot	1.00					
	Misc. (Clamps, PVC Elbow, PVC Cement, etc)	lot	1.00					
	Sub-total							
CIVILWORKS								
	Removal of Concrete Structures/Obstructions	cu.m.	25.60					
	Excavation	cu.m.	230.42					
	Backfilling & Compaction	cu.m.	43.80					
	Portland Cement	bags	880.00					
	Crushed Gravel, 3/4	cu.m.	143.00					
	Crushed Sand	cu.m.	85.00					
	10mm Diam. RSB	pcs	1,888.00					
	#16 G.I. Tie Wire	kg	70.00					
	Rough Lumber	bd.ft	1,100.00					
	Plywood, Ordinary 1/4"x 4'x 8	pcs	70.00					
	ÇWN	kg	38.00					
	Sub-total							
TRANSFORMER								
	Transformer, Pole Type, 25 KVA, 22.86/13.2kV	set	1.00					
	Anchoring Assembly, F2-1	assy	1.00					
	Guying Assembly, E1-2	assy	1.00					
	Grounding Assembly, M2-1A	assy	1.00					
	Miscellaneous Assembly, M5-1(#2/0), M5-	assy	1.00					

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT COST		TOTAL COST		GRAND TOTAL
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	Fuse Link, 1A	pc	1.00					
	Bracket Mounting For Fco & La (27Kv)	pc	1.00					
	Conductor Bare Wire, # 4/7 CU	m	6.00					
	Pole, Concrete, 40' (Round)	pc	1.00					
	Pole, Plates	pc	1.00					
	Anchor Log, 5' Std.	pc	1.00					
	Anchor Rod, 5/8" X 7', Single Eye	pc	1.00					
	Bolt Machine, 5/8" X 12"	pcs	4.00					
	Bolt Thimble Eye, 5/8 X 12"	pc	1.00					
	Clamp Guy, 3-Bolt Hd	pcs	2.00					
	Clamp Hot Line #2/0	pc	1.00					
	Ground Rod, 5/8" X 10' Galvanized w/Clamp	pc	1.00					
	Ground Wire, # 5/16 Steel, 3 Strand	m	27.08					
	Guy Wire, 3/8" X 7 Strand	m	27.00					
	Nut, Lock 5/8"	pc	10.00					
	Washer Square, 4" X 4"	pc	10.00					
	Washer, 2 1/4" X 2 1/4"	pc	10.00					
	Connector Compression, YHO 150	pcs	2.00					
	Sub-total							
	METERING REQUIREMENT							
	KWHM, 1P, 2W, CL200, 240V, Form1S	set	1.00					
	Meter seal, plastic	pc	2.00					
	Sub-total							
	POWERHOUSE							
	EARTHWORKS							
	STRUCTURE EXCAVATION	cu.m	4					
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	W-1 Aluminum Louver Type (1m x 0.5m)	set	1					
	W-2 Awning Window with grilles (1m x 0.3m)	set	1					
	ELECTRICAL WORKS							
	2 x 18 Watts LED lamp with luminaire surface type	set	3					
	2 - Gang Convenience Outlet wide series	set	2					
	3.5mm2 THHN Copper Wire	mtrs	100					
	Breaker 1 - 15AT, 2P CB, 1 - 20AT, 2P CB	assembly	1					
	1/2" PVC Pipe	pcs.	7					
	Octagonal Junction Box	pcs.	5					
	Utility Box	pcs.	3					
	1 - Gang Switch with LED indicator	pcs.	2					
	Miscellaneous	lot	1					
	PAINTING WORKS	sq.m.	104					
	Latex, Flat	gal	6.00					
	Masonry Putty	gal	2.00					
	Latex, Semi Gloss	gal	11.00					
	Acri Color	gal	5.00					
	OTHERS							
	Water Proofing (Cement) 5kgs/bag	bags	30					
	Sub-total							

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT COST		TOTAL COST		GRAND TOTAL
				MATERIAL	LABOR	MATERIAL	LABOR	
	GENERATOR							
	45 KVA Single Phase Silent Type Diesel Generator Set with complete accessories, Weather proof, outdoor type, 60Hz, 230V	set	1.00					
	Sub-total							
	DIRECT COST							
	INDIRECT COST ___% of (I)							
	TAX 5% of (I + II)							
	TOTAL CONSTRUCTION COST (I + II + III)							

Prepared by:



BID BULLETIN NO. 1

TO : All bidders
 All concerned

FROM : 
FLORANTE E. VERGARA
 BAC Chairperson

PROJECT : Electrification of Un-Energized Schools and Modernization of Electrical Systems On-Grid Schools Under CY 2019 basic Educational Facilities Fund

For the information of all concerned:

ISSUES	AGREEMENTS
1. Experience and trainings of Lineman (12.1 (b)(ii.2) of Bid Data Sheet)	<ul style="list-style-type: none"> ➤ Should have 2 years experience ➤ Aside from TESTDA Accredited trainings, NEA Accredited trainings will be accepted/considered.
2. Project Engineers	<ul style="list-style-type: none"> ➤ Should be Electrical Engineer ➤ Civil Engineers are not required
3. Construction Foreman (experience) (12.1 (b)(ii.2) of Bid Data Sheet)	<ul style="list-style-type: none"> ➤ 2 years experience
4. Certification of non-slippage	<ul style="list-style-type: none"> ➤ For the ongoing projects only
5. PCAB License	<ul style="list-style-type: none"> ➤ Small B Category ➤ Similar Contract with experience should be 50% without similar contract is within the ARCC

Contact Numbers (Area Code: 074):

Office of the Regional Director 422-1318
 Fax 422-4074
 Office of the ARD 422-9590
 ICT Unit 422-1318
 Public Affairs Unit 422-1318
 Legal Unit 422-2214

Administrative Division 422-1804
 Cash Section 423-2215
 Payroll Section 424-3993
 Records Section 423-2213
 Supply Section 422-2198
 General Services Unit 422-1804

CLMD 422-7096
 LRMSD 422-0615
 ESSD 423-2218
 Finance Division 422-5155
 FTAD 424-5187

HRDD 422-9590
 NEAP-R 422-5500
 PPRD 422-9590
 QuAD 422-5187
 COA 422-7434

6. Site Inspection	<ul style="list-style-type: none"> ➤ Picture of the site with the school head or OIC/TIC or principal and the contractor is to be submitted. The person who will do the site inspection should be part of the organizational chart.
7. Soft copy in flash drive of (1) & (2) 13.1 (b) of Bid Data Sheet	<ul style="list-style-type: none"> ➤ Soft copy submitted should be the same as the hard copy. It should be in excel files.
8. Cash Flow	<ul style="list-style-type: none"> ➤ It will be per month
9. Submission of Bids	<ul style="list-style-type: none"> ➤ It shall be submitted to the BAC Secretariat at the Administrative Division at the time and date stated in the ITB and Bid docs
10. Terms of Payment	<ul style="list-style-type: none"> ➤ 15% mobilization (Equipment/materials should be available on site) ➤ 50% and 100% billing
11. Special Power of Attorney	<ul style="list-style-type: none"> ➤ Special Power of Attorney should be project based; It can be per lot or as one ➤ No need for SPA on the purchased of BID DOCS
12. Overhead (electrical wire)	<ul style="list-style-type: none"> ➤ Preferably "ROYU, PHELPS DODGE" ➤ Can submit other "BRAND" for Approval
13. Generator	<ul style="list-style-type: none"> ➤ There should be a pre-inspection before installation.
14. Transformer	<ul style="list-style-type: none"> ➤ It will be procured at BENEKO so as to avoid any problems regarding maintenance later (Buy-back scheme)

Date: November 20, 2019