



Republic of the Philippines
DEPARTMENT OF EDUCATION
 Cordillera Administrative Region
 Division Of Baguio City
 # 82 Military Cut- Off, Baguio City
 Tel. No. : (074) 442 - 7819



**PROGRAM OF WORK
 BILL OF QUANTITIES**
 ELEC 2020 - CAR - Baguio City - 04

School : RIZAL NATIONAL HIGHSCHOOL		Date:				
School I.D : 305276		Budget Allocation:				
Region : CAR		Engineering and Administrative Overhead:				
Division : BAGUIO CITY		Approved Budget for the Contract:				
Project Title :		Completion Period: 120 calendar days				
		Minimum Required Manpower:				
		Electrical Engineer Welder Carpenter				
		Master Electrician Construction Foreman				
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				
		Megger Tester				
ITEM NO.	Item Description	% of Total	Unit	Quantity	Total Cost	Remarks
	I. DIRECT COST					
	GENERAL REQUIREMENTS		lot	1.00		
	SERVICE LINE					
	ELECTRICAL WORK		lot	1.00		
	CIVILWORKS		lot	1.00		
	MANHOLE		lot	1.00		
	IMPROVEMENT OF COVERED COURT		lot	1.00		
	STREETLIGHT		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**

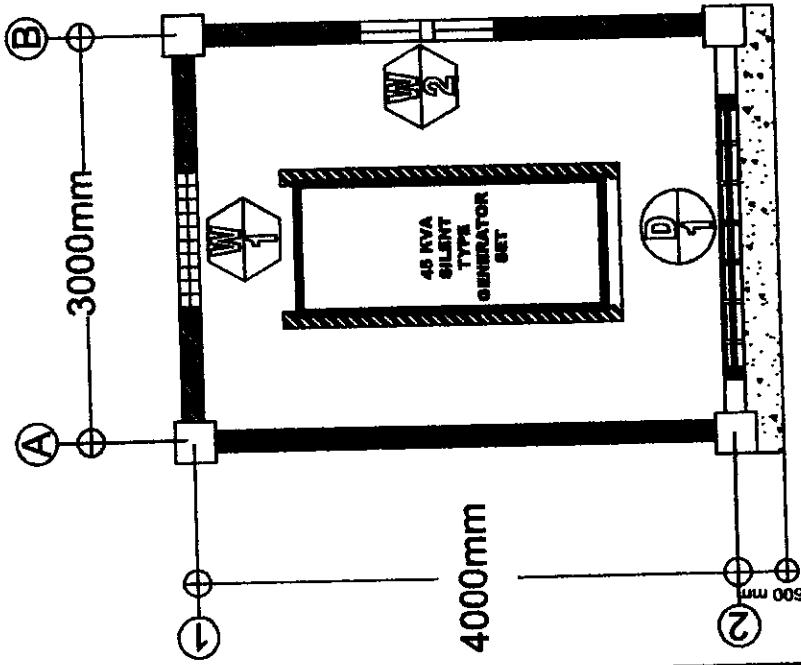
PROJECT : UPGRADING OF ELECTRICAL SYSTEM
SCHOOL : RIZAL NATIONAL HIGH SCHOOL
LOCATION : BAGUIO CITY
OWNER : DEPARTMENT OF EDUCATION

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					
	Preparation of Electrical Plans and Master Electrical Layout to be Signed and Sealed by PEE.	lot	1.00					
	Insulation Testing	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	5.00					
	THHN # 4	m	900.00					
	THHN # 2	m	160.00					
	THHN # 1/0	m	100.00					
	Electrical Conduit uPVC, 50mmØ	pcs	200.00					
	Electrical Conduit uPVC, 25mmØ	pcs	20.00					
	Adhesive Marker(color coded & properly labeled)	set	10.00					
	4"wide Underground Warning Tape	m	525.00					
	RSC Pipe Conduit, 50mmØ	pc	5.00					
	RSC Pipe Coupling, 50mmØ	pc	5.00					
	Heavy Duty Main Distribution Panel Box Center Main, 6 Branches with Grounding and Neutral Busbar	pc	1.00					
	175A, 2P, Bolt On Industrial Type Circuit Breaker	pc	1.00					
	100A, 2P, Bolt On Industrial Type Circuit Breaker	pc	6.00					
	Manual Transfer Switch	lot	1.00					
	Solderless Connector	pc	10.00					
	Liquid Tight Conduit, 50mmØ	m	100.00					
	Terminal Lugs # 4	pc	8.00					
	Terminal Lugs # 2	pc	2.00					
	Terminal Lugs #1/0	pc	2.00					
	Misc. (Clamps, PVC Elbow, PVC Cement, etc)	lot	1.00					
	Sub-total							
CIVILWORKS								
	Removal of Concrete Structures/Obstructions	cu.m.	41.60					
	Excavation	cu.m.	166.40					
	Backfilling & Compaction	cu.m.	20.80					
	Portland Cement	bags	210.00					
	Crushed Gravel, 3/4	cu.m.	44.13					
	Crushed Sand	cu.m.	11.21					
	12mm Diam. RSB	kgs	1,546.77					
	#16 G.I. Tie Wire	kg	23.00					
	Equipments/Tools (10% of labor cost)	lot	1.00					
	Sub-total							
MANHOLE								
	Removal of Concrete Structures/Obstructions	cu.m.	1.20					
	Excavation	cu.m.	6.60					
	Portland Cement	bags	60.00					
	Crushed Gravel, 3/4	cu.m.	12.00					
	Crushed Sand	cu.m.	6.00					
	12mm Diam. RSB	kgs	122.16					
	#16 G.I. Tie Wire	kg	6.00					
	Rough Lumber	bd.f.t	480.00					
	Plywood, Ordinary 1/4"x 4'x 8	pcs	24.00					
	CWN	kg	18.00					
	Sub-total							
IMPROVEMENT OF COVERED COURT								
	150W HIGH BAY LED LIGHT	set	6.00					
	Prefabricated Anchoring for HIGH BAY LED LIGHT	Assembly	6.00					
	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					
	Electrical Conduit uPVC, 25mmØ	pcs	12.00					
	RSC Pipe Conduit, 25mmØ	pcs	8.00					
	RSC Pipe Coupling, 25mmØ	pcs	8.00					
	3.5mm2 THHN Copper Wire Stranded	mtrs.	300.00					

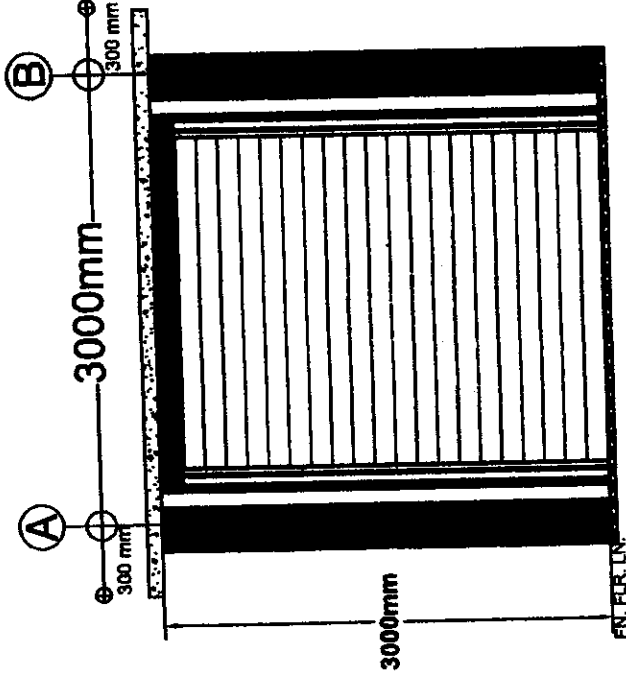
ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT COST		TOTAL COST		GRAND TOTAL
				MATERIAL	LABOR	MATERIAL	LABOR	
	Scaffolding rentals	lot	1.00					
	Sub-total							
	STREETLIGHT							
	Integrated Solar Streetlight Weatherproof 150Watts Light Output,250Watts solar panel output, with motion sensor and prefabricated mounting bracket	assy	4.00					
	Prefabricated 4"x2"x25 ft Lamp Post, Hot dipped galvanized with base plate anchored in a concrete pedestal	assy	4.00					
	Removal of Concrete Structures/Obstructions	cu.m.	0.80					
	Excavation	cu.m.	4.00					
	Portland Cement	bags	72.00					
	Crushed Gravel, 3/4	cu.m.	6.00					
	Crushed Sand	cu.m.	4.00					
	16mm Diam. RSB	kg	303.04					
	10mm Diam. RSB	kg	44.32					
	#16 G.I. Tie Wire	kg	4.00					
	Rough Lumber	bd.ft	160.00					
	Plywood, Ordinary 1/4"x 4'x 8	pcs	8.00					
	CWN	kg	9.00					
	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 (1.5m x 0.5m)	set	1					
	W-2 Awning Window with grilles (1m x 0.5m)	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					
	Acrl Color	gal	5.00					
	OTHERS							
	Water Proofing (Cement) 5kgs/bag	bags	30					
	Rubberized Floor paint	gallons	4					
	Sub-total							
	GENERATOR							
	45 KVA Silent Type Generator Set with complete accs., (specs is for approval of agency engineer	set	1.00					
	Sub-total							
	DIRECT COST							
	INDIRECT COST % of (I)							
	TAX 5% of (I + II)							
	TOTAL CONSTRUCTION COST (I + II + III)							

Prepared by:

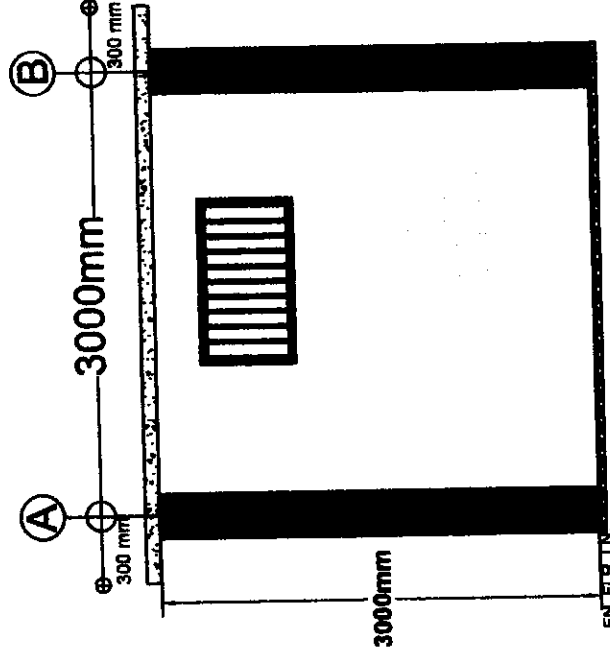
ANNEX "B"



1 FLOOR PLAN
A 1
DRAWN NOT TO SCALE



1 FRONT ELEVATION
A 2
DRAWN NOT TO SCALE



2 REAR ELEVATION
A 2
DRAWN NOT TO SCALE

REPUBLIC OF THE PHILIPPINES
DepEd
DEPARTMENT OF EDUCATION
EDUCATION FACILITIES DIVISION
12 MILITARY CITY, BAGUIO CITY

PREPARED BY:
JESTER S. CALIXTO
SENIOR TECHNICAL ASSISTANT I

RECOMMENDING APPROVAL:
SORAYA T. PAGULO
JUN - CHIEF, KUAD

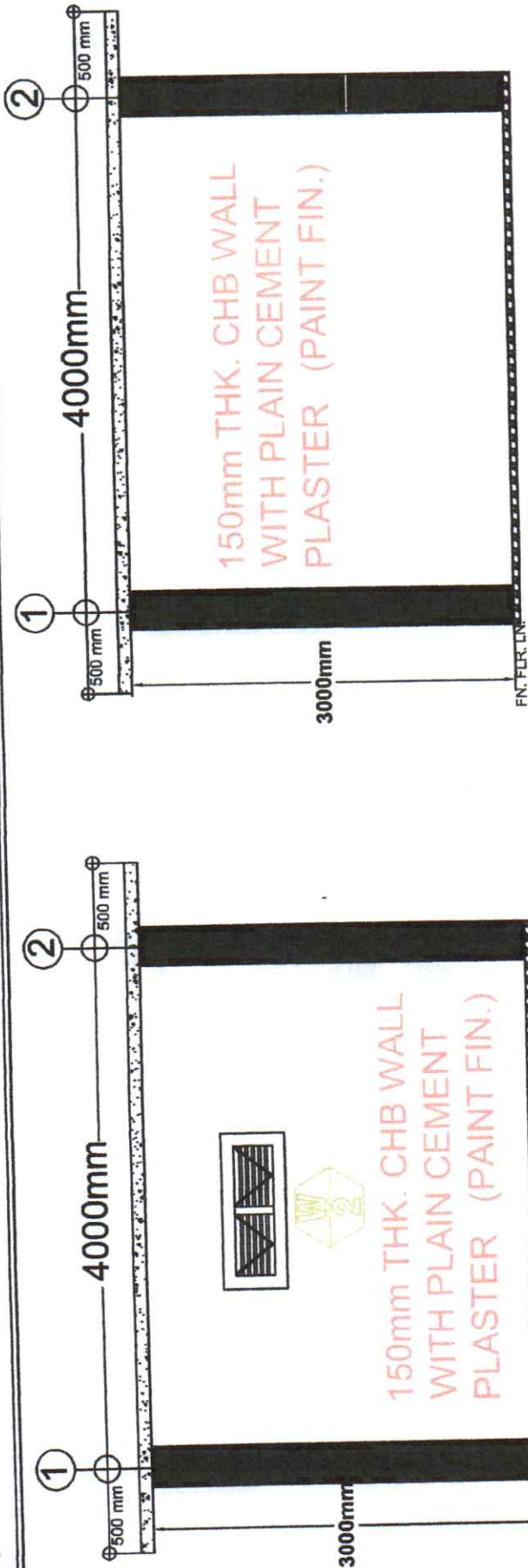
APPROVED BY:
MARIE CAROLYN B. VERANO, CESO V
HEAD OF PROVIDING ENTITY

PROJECT TITLE:
UPGRADING OF ELECTRICAL SYSTEM

OWNER:
DEPARTMENT OF EDUCATION - DIVISION OF BAGUIO

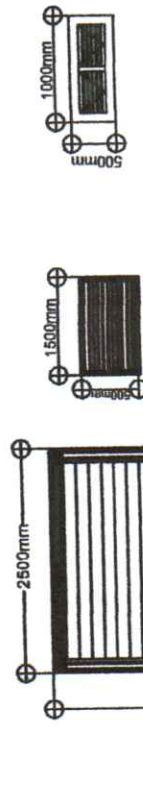
SHEET CONTENT:
FLOOR PLAN
FRONT ELEVATION
REAR ELEVATION

SHEET NO.:
A1 2



3 LEFT SIDE ELEVATION
NOT TO SCALE
DRAWN
A 2

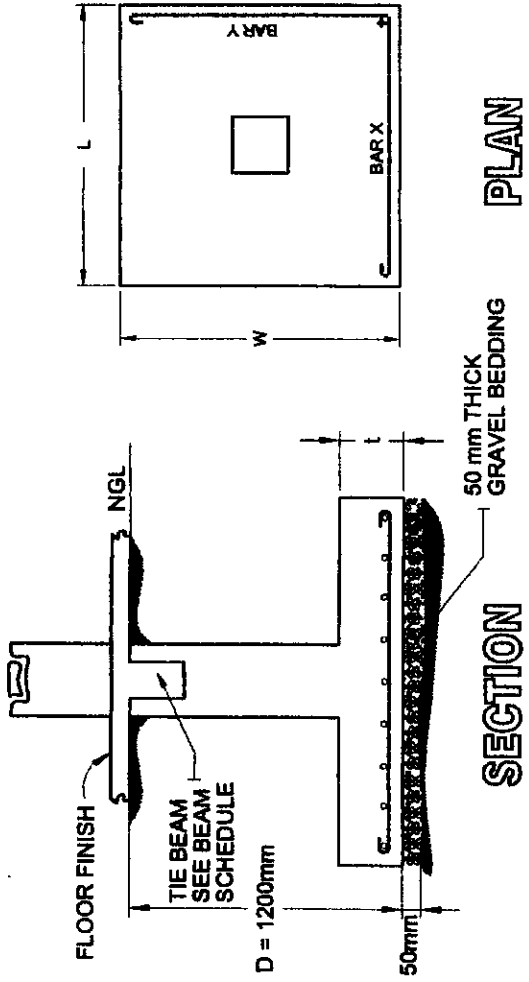
4 RIGHT SIDE ELEVATION
NOT TO SCALE
DRAWN
A 2



1 DOOR AND WINDOWS SCHEDULE
NOT TO SCALE
DRAWN
A 3

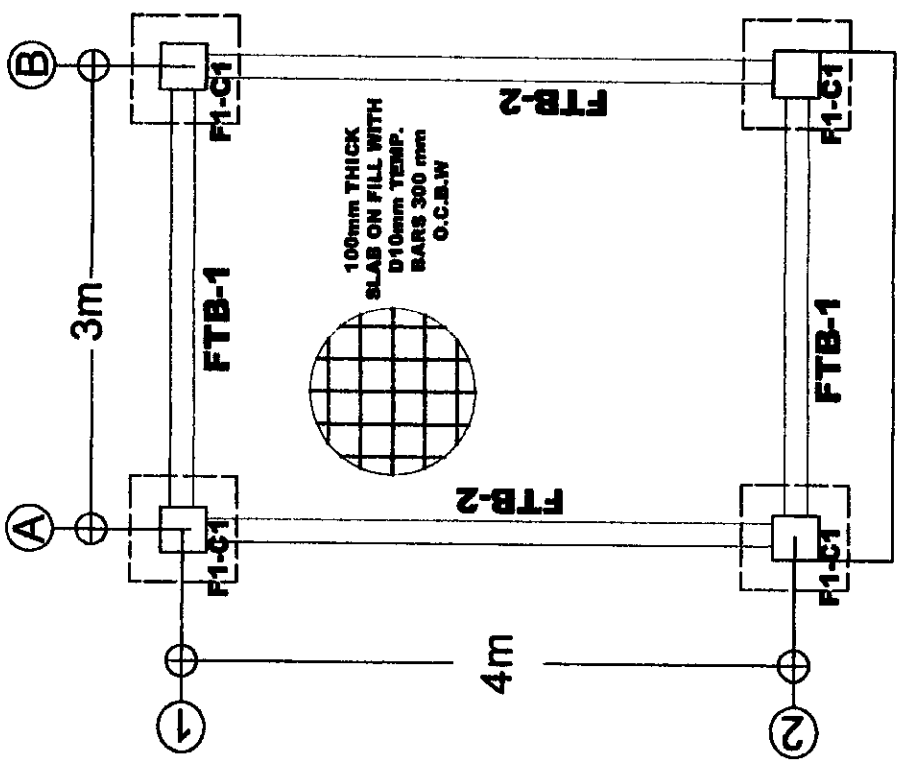
LABEL	DESCRIPTION	NO. OF SET	D1	W1	W2
	ALUMINUM ROLL UP DOOR	1 SET			
	ALUMINUM LOUVER TYPE WINDOW	1 SET			
	AWNING WINDOW	1 SET			

PREPARED BY: JESTER SETH B. CALIXTO SENIOR TECHNICAL ASSISTANT I		RECOMMENDING APPROVAL: SORAYA T. FACULO OIC - CHIEF, SQUAD		APPROVED BY: MARIE CAROLYN B. VERANO, CESO V HEAD OF PROVIDING ENTITY		PROJECT TITLE: UPGRADING OF ELECTRICAL SYSTEM		OWNER: DEPARTMENT OF EDUCATION - DIVISION OF BAGUIO		SHEET NO.: A2 / 2	
SHEET CONTENT: • LEFT SIDE ELEVATION • RIGHT SIDE ELEVATION • DOOR AND WINDOWS SCHEDULE											



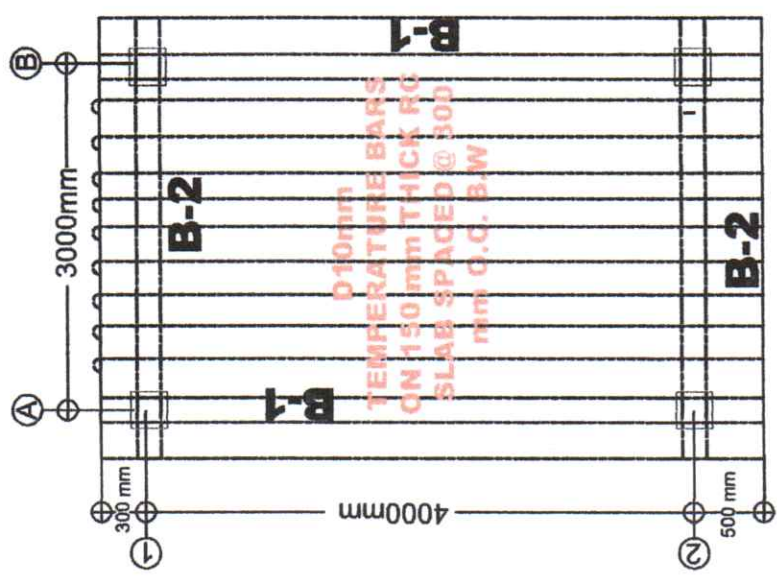
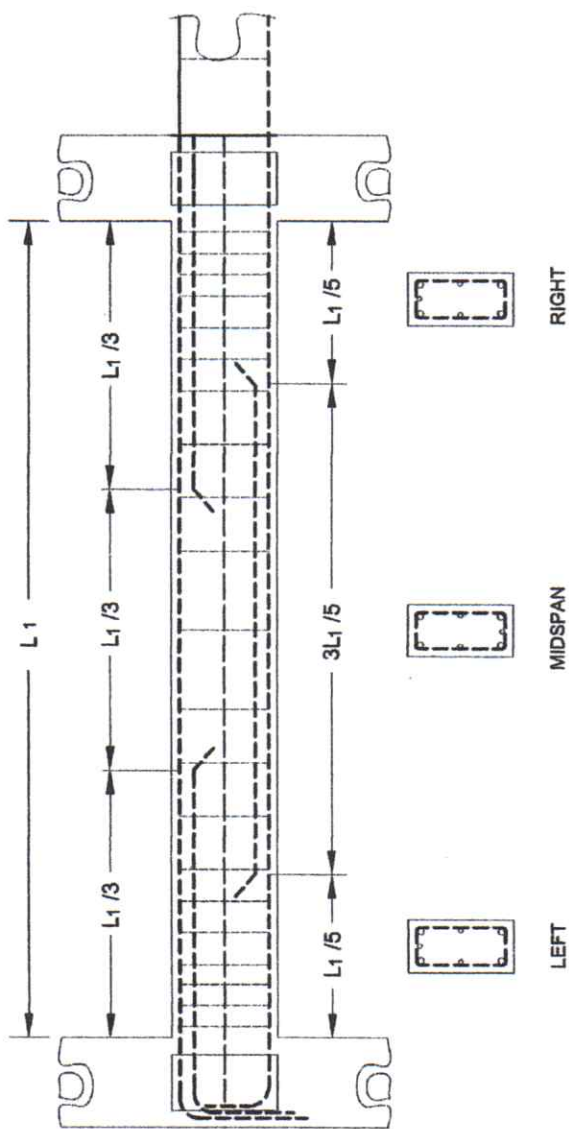
FOOTING SCHEDULE							
FOOTING MARK	FOOTING DIMENSIONS (mm)				REINFORCEMENT		REMARKS
	LENGTH (L)	WIDTH (W)	thickness (t)	DEPTH (D)	BAR X	BAR Y	
F-1	1000	1000	300	1200	8 - D16mm	8 - D16mm	SQUARE FOOTING

2 S 1
FOOTING DETAIL
DRAWN NOT TO SCALE



1 S 1
FOUNDATION PLAN
DRAWN NOT TO SCALE

REPUBLIC OF THE PHILIPPINES DepEd DEPARTMENT OF EDUCATION EDUCATION FACILITIES DIVISION 42 MILITARY CIRC. CRT. BAGOIO CITY	PREPARED BY: JESTER SETH B. CALIXTO SENIOR TECHNICAL ASSISTANT I	RECOMMENDING APPROVAL: SORAYA T. PACULO OIC - CHIEF, SOCD	APPROVED BY: MARIE CAROLYN B. VERANO, CESO V HEAD OF PROVINCIAL ENTITY	PROJECT TITLE: UPGRADING OF ELECTRICAL SYSTEM	OWNER: DEPARTMENT OF EDUCATION - DIVISION OF BAGOIO SHEET CONTENT: FOUNDATION PLAN FOOTING DETAIL PLAN	SHEET NO.: S1 3
---	---	--	---	---	---	-------------------------------------

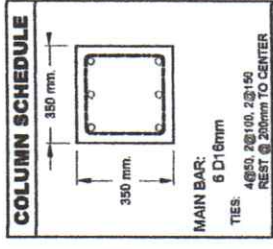


TEMPERATURE BARS
ON 150mm THICK RC
SLAB SPACED @ 300
mm O.C. B.W

BEAM SCHEDULE

BEAM MARK	BEAM DIMENSIONS		STEEL REINFORCEMENT								STIRRUPS D10 mm (UNLESS NOTED OTHERWISE)
			REBAR DIAMETER (mm)	LEFT		MIDSPAN		RIGHT			
	WIDTH (b,mm)	DEPTH (h,mm)		TOP	BOTT.	TOP	BOTT.	TOP	BOTT.		
B1	300	350	12	3	2	2	3	3	2	3@50, 4@100, 4@ 150 REST @200 TO CENTER	
B2	300	350	12	3	2	2	3	3	2		
TB	200	350	12	3	3	2	2	3	3		

2 SLAB DETAIL
DRAWN
S 2
NOT TO SCALE



1 BEAM SCHEDULE
DRAWN
S 2
NOT TO SCALE



PREPARED BY:
JESTER SETH B. CALIXTO
SENIOR TECHNICAL ASSISTANT I

RECOMMENDING APPROVAL:
SORASAT T. FACULO
JIC - CHIEF, SCOD

APPROVED BY:
MARIE CAROLYN B. VERANO, CESO V
HEAD OF PROCURING ENTITY

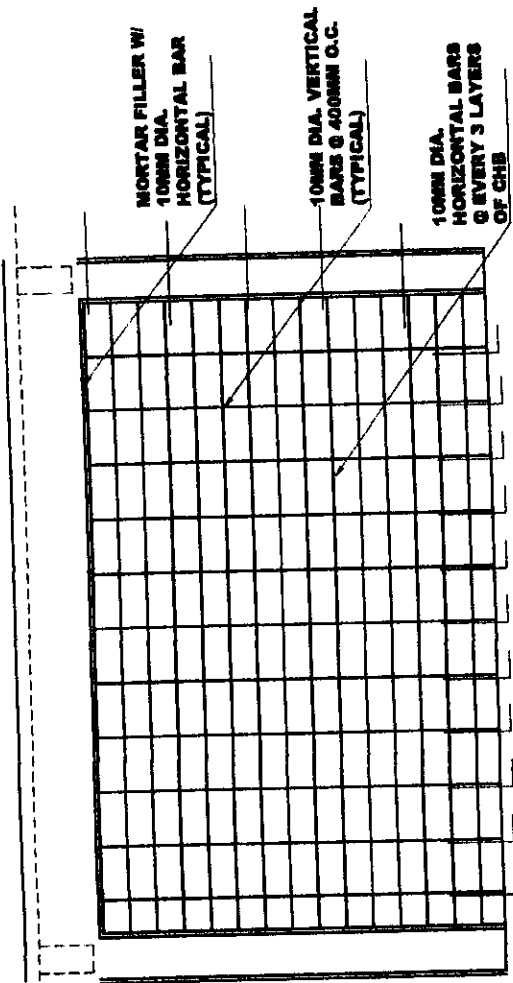
PROJECT TITLE:
UPGRADING OF ELECTRICAL SYSTEM

OWNER:
DEPARTMENT OF EDUCATION - DIVISION OF BAGUIO

SHEET NO.:
S2 / 3

SHEET CONTENT:
• BEAM SCHEDULE
• SLAB DETAIL
• COLUMN DETAIL

TOP OF SLAB



1 **TYPICAL MASONRY ELEVATION**
NOT TO SCALE

S 3

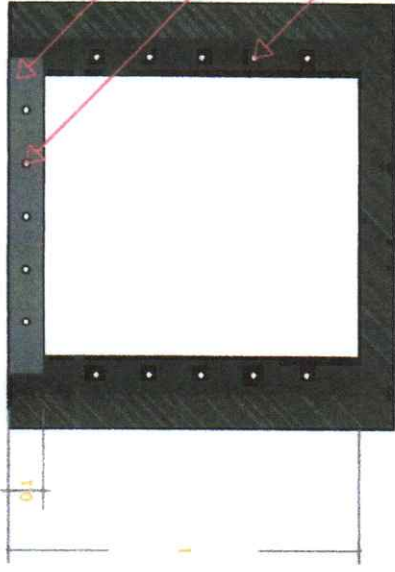
REPUBLIC OF THE PHILIPPINES DepEd DEPARTMENT OF EDUCATION EDUCATION FACILITIES DIVISION 143 MILITARY LITE. BLDG. BANGALU CITY		PREPARED BY : JESTER SETH B. CALIXTO SENIOR TECHNICAL ASSISTANT I	RECOMMENDING APPROVAL: SONAYA T. JACULO OIC - CHIEF, MUDT	APPROVED BY : MARIE CAROLYN B. VERANO, CESO V HEAD OF PROCUREMENT ENTITY	PROJECT TITLE : UPGRADING OF ELECTRICAL SYSTEM	OWNER : DEPARTMENT OF EDUCATION - DIVISION OF BAGUIO SHEET CONTENT : TYPICAL MASONRY ELEVATION	SHEET NO. : S 3
--	--	--	--	---	--	---	---------------------------

MANHOLE DETAILS

DRAWN NOT TO SCALE

1

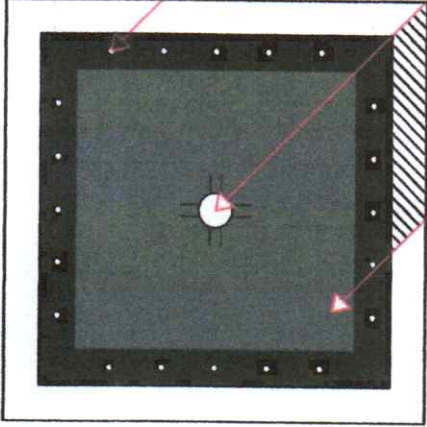
E 1



MANHOLE COVER

D 12 mm space @ 150 mm
O.C both ways

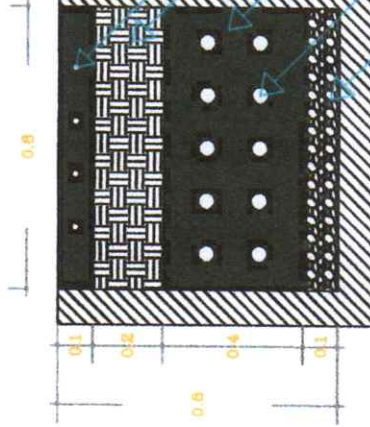
D 12 mm space @ 150 mm
O.C both ways



MANHOLE COVER

D 12 mm space @ 150 mm
O.C Both ways

D 12 mm space @ 150 mm
O.C Both ways



D 12 mm space @ 150 mm O.C Both ways

0.2m Backfill

Pipe Reinforce Concrete

Electrical Conduit space @ 100 mm O.C

0.1m GRAVEL BEDDING

TRENCH DETAILS

DRAWN NOT TO SCALE

1

E 2

REPUBLIC OF THE PHILIPPINES
DepEd
DEPARTMENT OF EDUCATION
EDUCATION FACILITIES DIVISION
12 MILITARY C.T. - U.T. BAGUIO CITY

PREPARED BY:

JESTER SETH B. CALIXTO
SENIOR TECHNICAL ASSISTANT I

RECOMMENDING APPROVAL:

SORAYA T. FACULO
OIC - CHIEF, SUD

APPROVED BY:

MARIE CAROLYN B. VERANO, CESO V
HEAD OF PROVINCIAL ENTITY

PROJECT TITLE:

UPGRADING OF ELECTRICAL SYSTEM

OWNER:

DEPARTMENT OF EDUCATION - DIVISION OF BAGUIO

SHEET CONTENT:
**MANHOLE DETAILS
TRENCH DETAILS**

SHEET NO.:

E1
1