



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 - 03

School : MAGSAYSAY NATIONAL HIGHSCHOOL		Date:				
School I.D : 305283		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		
	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**

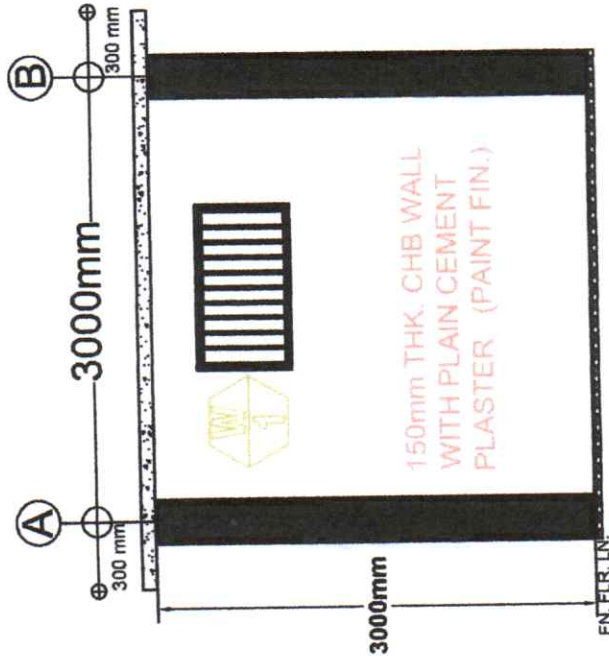
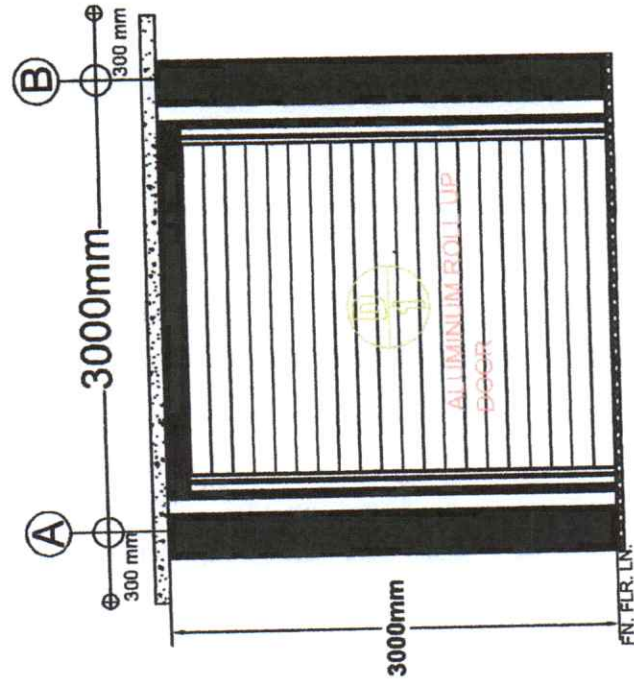
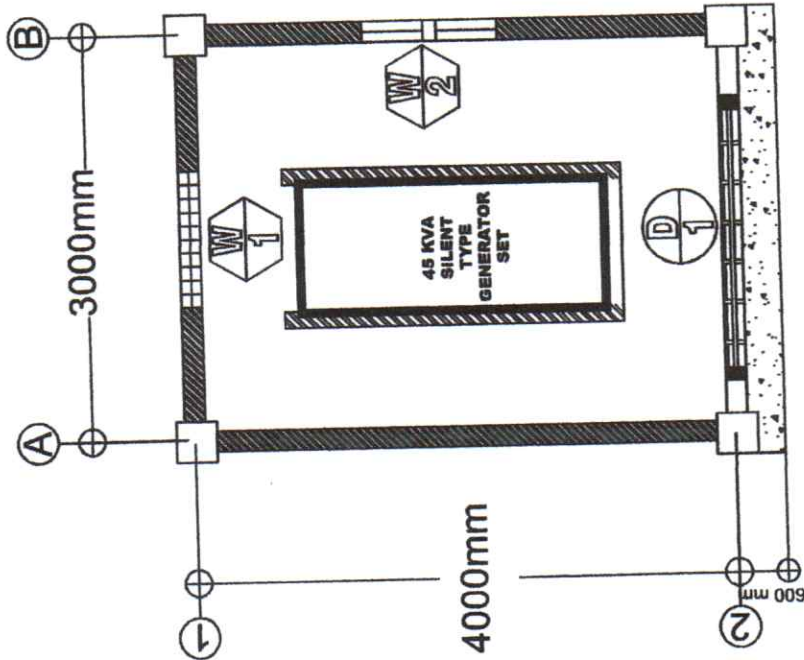
PROJECT : UPGRAADING OF ELECTRICAL SYSTEM
SCHOOL : MAGSAYSAY NATIONAL HIGHSCHOOL
LOCATION : BAGUIO CITY
OWNER : DEPARTMENT OF EDUCATION

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					
	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	10.00					
	THHN # 6	m	1,400.00					
	THHN # 2	m	160.00					
	THHN # 1/0	m	160.00					
	Electrical Conduit uPVC, 50mmØ	pcs	300.00					
	Electrical Conduit uPVC, 25mmØ	pcs	20.00					
	Adhesive Marker(color coded & properly labeled)	set	20.00					
	4"wide Underground Warning Tape	m	525.00					
	RSC Pipe Conduit, 50mmØ	pc	10.00					
	RSC Pipe Coupling, 50mmØ	pc	10.00					
	Heavy Duty Main Distribution Panel Box Center Main, 12 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	1.00					
	60A, , Bolt On Industrial Type Circuit Breaker	pc	11.00					
	Manual Transfer Switch	lot	1.00					
	Solderless Connector	pc	20.00					
	Liquid Tight Conduit, 50mmØ	m	100.00					
	Terminal Lugs # 6	pc	22.00					
	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	212.00					
	Crushed Gravel, 3/4	cu.m.	44.36					
	Crushed Sand	cu.m.	11.95					
	12mm Diam. RSB	kgs	1,641.47					
	#16 G.I. Tie Wire	kg	24.00					
	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							
	STREETLIGHT							
	Integrated Solar Streetlight Weatherproof 150Watts Light Output,250Watts solar panel output, with motion sensor and prefabricated mounting bracket	assy	3.00					
	Prefabricated 4"x2"x25 ft Lamp Post, Hot dipped galvanized with base plate anchored in a concrete pedestal	assy	3.00					
	Removal of Concrete Structures/Obstructions	cu.m.	0.60					
	Excavation	cu.m.	3.00					

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT COST		TOTAL COST		GRAND TOTAL
				MATERIAL	LABOR	MATERIAL	LABOR	
	Portland Cement	bags	54.00					
	Crushed Gravel, 3/4	cu.m.	4.50					
	Crushed Sand	cu.m.	3.00					
	16mm Diam. RSB	kg	227.28					
	10mm Diam. RSB	kg	33.24					
	#16 G.I. Tie Wire	kg	3.00					
	Rough Lumber	bd.ft	120.00					
	Plywood, Ordinary 1/4"x 4'x 8'	pcs	6.00					
	CWN	kg	9.00					
	Sub-total							
	METERING REQUIREMENT							
	KWHM, 1P, 2W, CL200, 240V, Form1S	set	4.00					
	Meter seal, plastic	pc	8.00					
	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					
	Acri 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"



SHEET NO.:

A1
2

OWNER:

DEPARTMENT OF EDUCATION-
DIVISION OF BAGUIO

SHEET CONTENT:
FLOOR PLAN
FRONT ELEVATION
REAR ELEVATION

PROJECT TITLE:

UPGRADING OF
ELECTRICAL
SYSTEM

APPROVED BY:

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

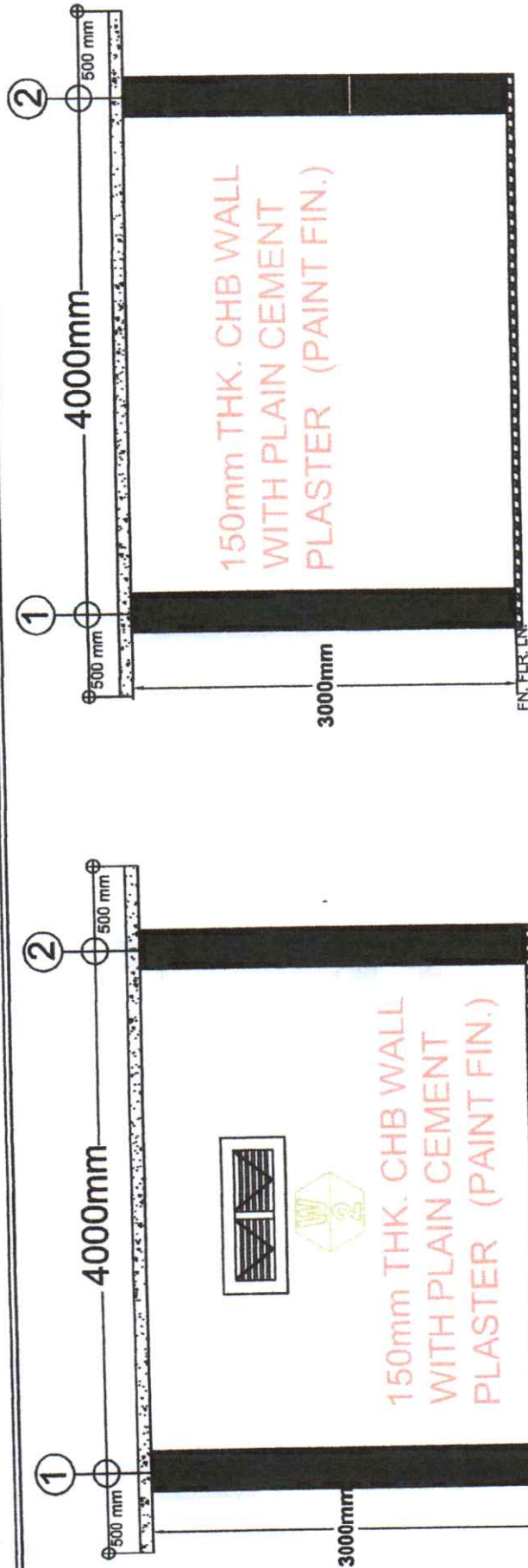
RECOMMENDING APPROVAL:

SORAYA T. PACULO
OIC - CHIEF, SUSD

PREPARED BY:

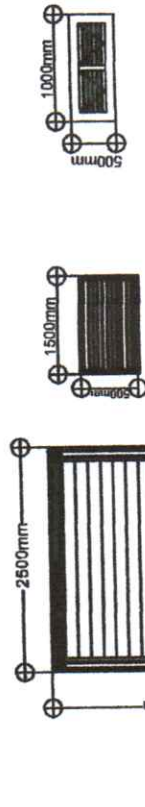
JESTER SETH B. CALIXTO
SENIOR TECHNICAL ASSISTANT I

REPUBLIC OF THE PHILIPPINES
DepEd
DEPARTMENT OF EDUCATION
EDUCATION FACILITIES DIVISION
402 MILITARY CITE-UPD, BAGUIO CITY



3 LEFT SIDE ELEVATION
A 2
DRAWN
NOT TO SCALE

4 RIGHT SIDE ELEVATION
A 2
DRAWN
NOT TO SCALE



1 DOOR AND WINDOWS SCHEDULE
A 3
DRAWN
NOT TO SCALE

LABEL	DESCRIPTION	NO. OF SET	RECOMMENDING APPROVAL:	APPROVED BY:	PROJECT TITLE:	OWNER:	SHEET NO.:
D1	ALUMINUM ROLL UP DOOR	1 SET			UPGRADING OF ELECTRICAL SYSTEM	DEPARTMENT OF EDUCATION - DIVISION OF BAGUIO	A2
W1	ALUMINUM LOUVER TYPE WINDOW	1 SET					2
W2	AWNING WINDOW	1 SET					

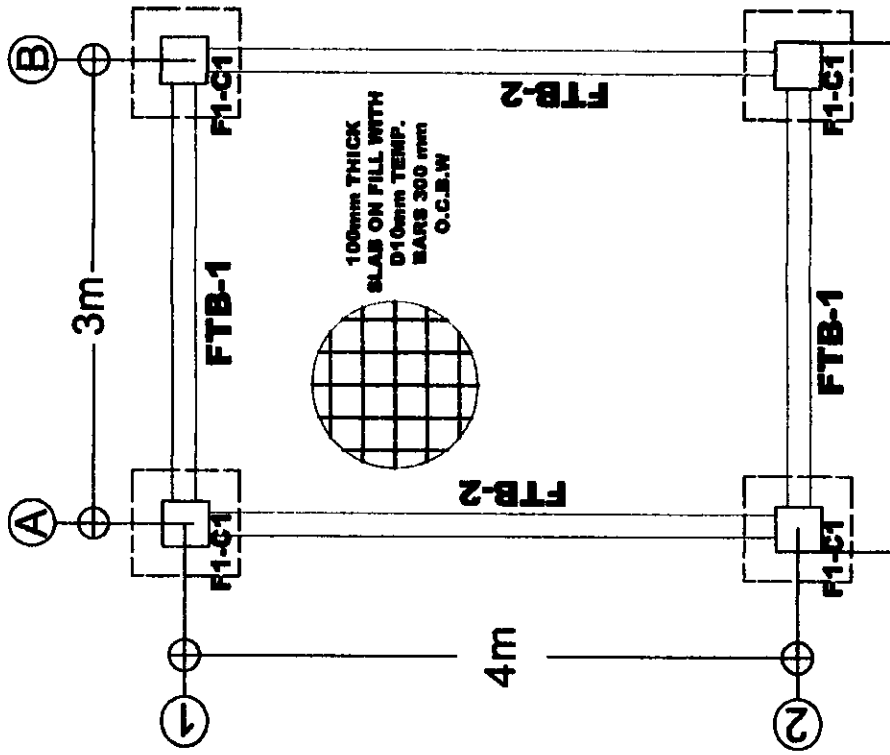
PREPARED BY:
JESTER SETH B. CALIXTO
SENIOR TECHNICAL ASSISTANT I

RECOMMENDING APPROVAL:
SORAYA T. FACULO
OIC - CHIEF, SCOD

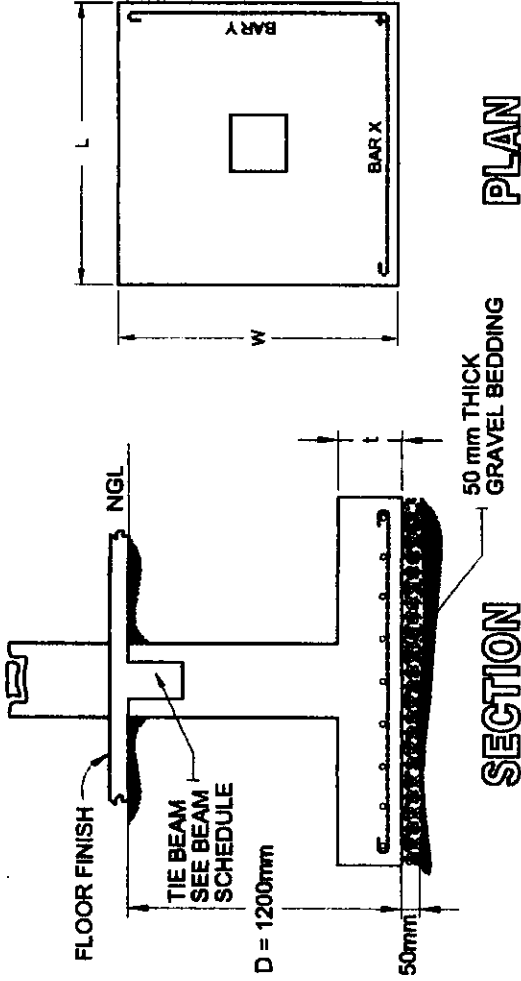
APPROVED BY:
MARIE CAROLYN B. VERANO, CESO V
HEAD OF PROCURING ENTITY

PROJECT TITLE:
UPGRADING OF ELECTRICAL SYSTEM

OWNER:
DEPARTMENT OF EDUCATION - DIVISION OF BAGUIO
SHEET CONTENT:
LEFT SIDE ELEVATION
RIGHT SIDE ELEVATION
DOOR AND WINDOWS SCHEDULE



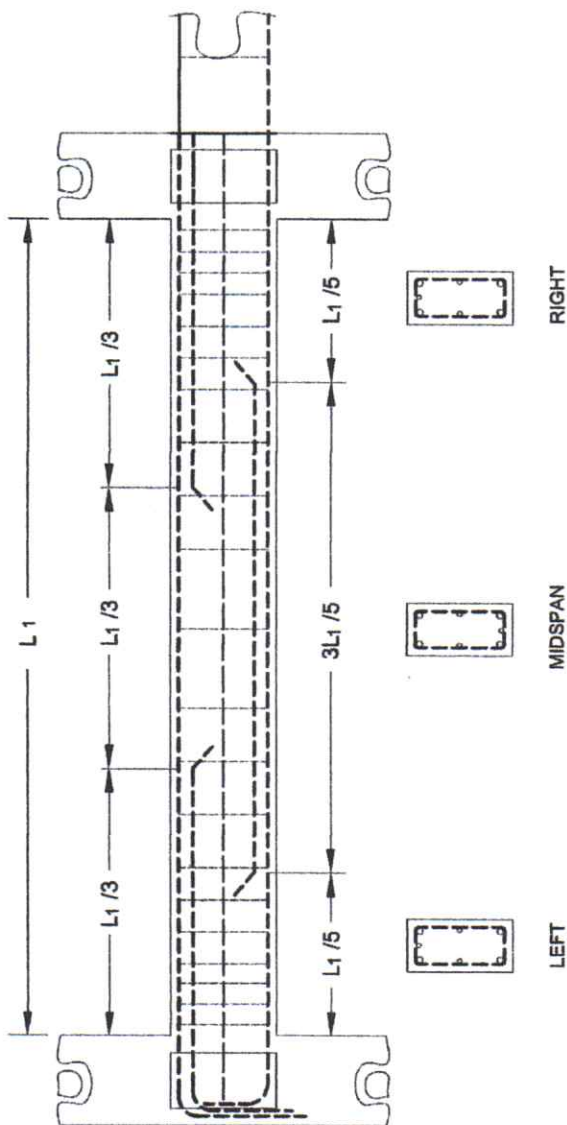
1 FOUNDATION PLAN
S 1
DRAWN NOT TO SCALE



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 - D18mm	8 - D18mm	SQUARE FOOTING

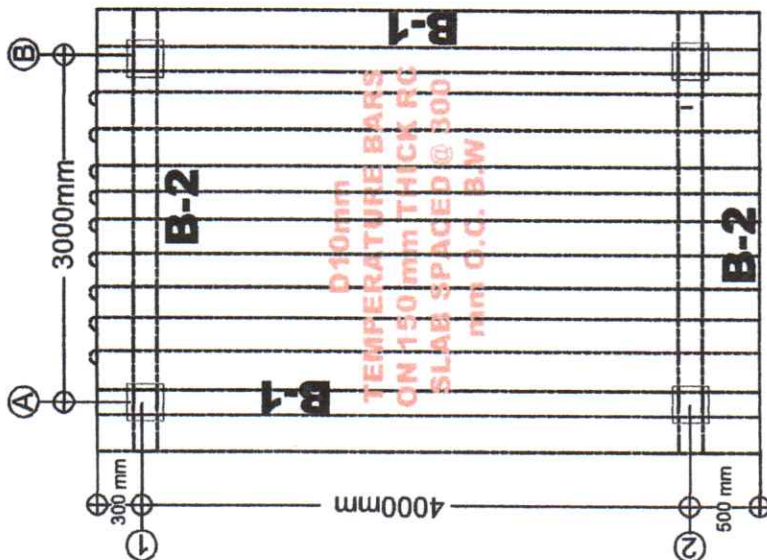
2 FOOTING DETAIL
S 1
DRAWN NOT TO SCALE

REPUBLIC OF THE PHILIPPINES DepEd DEPARTMENT OF EDUCATION EDUCATION FACILITIES DIVISION 13 MILITARY LIT. OFF. BAGUIO CITY	PREPARED BY: JESTER SETH B. CALIXTO SENIOR TECHNICAL ASSISTANT I	RECOMMENDING APPROVAL: SORAYA T. PACULO UK - CHIEF, SQUAD	APPROVED BY: MARIE CAROLYN B. VERANO, CSO V HEAD OF PROCURING ENTITY	PROJECT TITLE: UPGRADING OF ELECTRICAL SYSTEM	OWNER: DEPARTMENT OF EDUCATION - DIVISION OF BAGUIO SHEET CONTENT: FOUNDATION PLAN	SHEET NO.: S1 3
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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 NOT TO SCALE

COLUMN SCHEDULE	
350 mm	350 mm
350 mm	350 mm
MAIN BAR:	6 D16mm
TIES:	4@50, 2@100, 2@150
REST @	200mm TO CENTER

1 BEAM SCHEDULE
DRAWN NOT TO SCALE

3 COLUMN DETAIL
DRAWN NOT TO SCALE

PROJECT TITLE:

APPROVED BY:

RECOMMENDING APPROVAL:

PREPARED BY:

SHEET NO.:

UPGRADING OF
ELECTRICAL
SYSTEM

DEPARTMENT OF EDUCATION-
DIVISION OF BAGUIO

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

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EDUCATION FACILITIES DIVISION
#12 MILITARY CMT. OFF. BAGUIO CITY

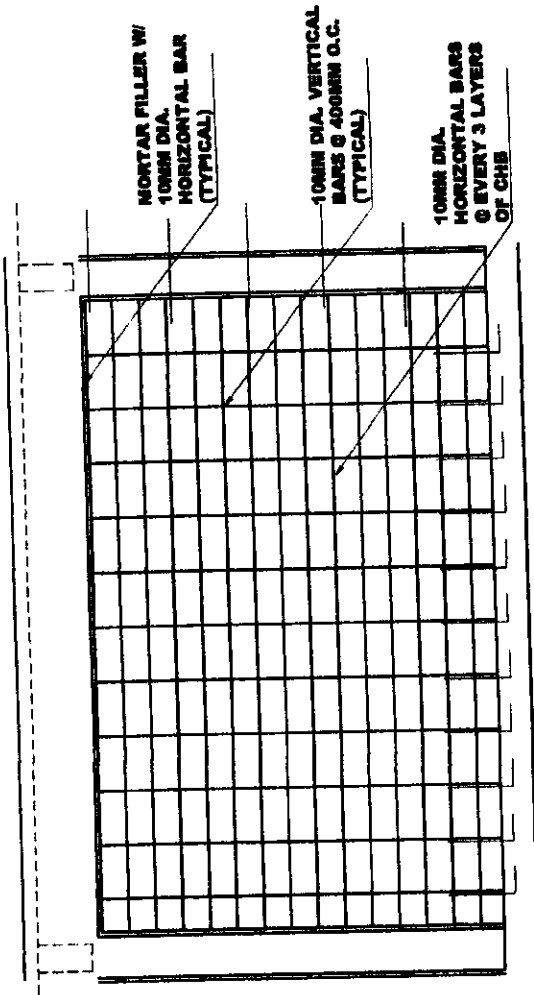
JESTER SETH B. CALIXTO
SENIOR TECHNICAL ASSISTANT I

SONAZA T. FACULO
UC - CHIEF, SCOD

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




S2
3

TOP OF SLAB



1 TYPICAL MASONRY ELEVATION
NOT TO SCALE

1
S 3
DRAWN

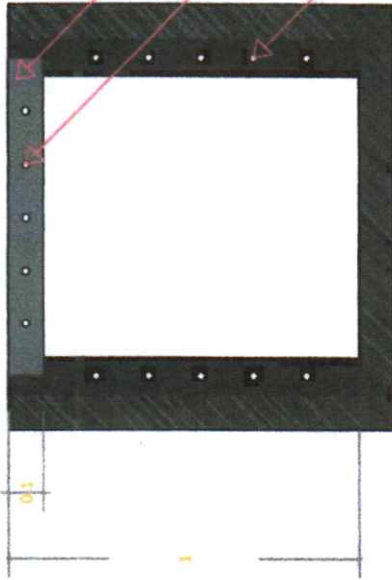
SHEET NO.: S3 3	
OWNER: DEPARTMENT OF EDUCATION - DIVISION OF BAGUIO SHEET CONTENT: TYPICAL MASONRY ELEVATION	
PROJECT TITLE: UPGRADING OF ELECTRICAL SYSTEM	
APPROVED BY:  MARIE CAROLYN B. VERANO, CESO V HEAD OF PROVIDING ENTITY	RECOMMENDING APPROVAL:  SONAYA T. JACULO OIC - CHIEF, SCOD
PREPARED BY:  JESTER SETH B. CALIXTO SENIOR TECHNICAL ASSISTANT I	REPUBLIC OF THE PHILIPPINES DepEd DEPARTMENT OF EDUCATION EDUCATION FACILITIES DIVISION A 10 MILITARY CUIT, DPT. 300000 CITY

MANHOLE DETAILS

DRAWN NOT TO SCALE

DRAWN

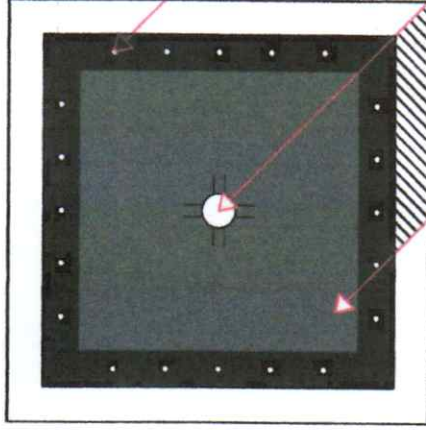
1
E 1



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

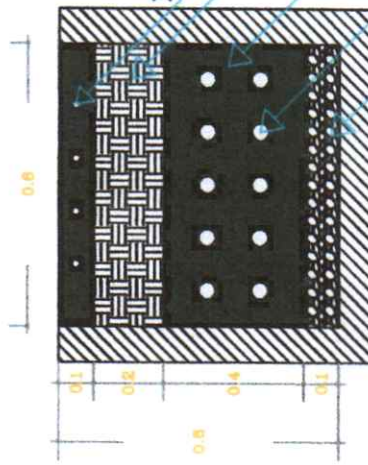
D 12 mm space @ 150 mm
O.C Both ways

TRENCH DETAILS

DRAWN NOT TO SCALE

DRAWN

1
E 2



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