Benguet State University
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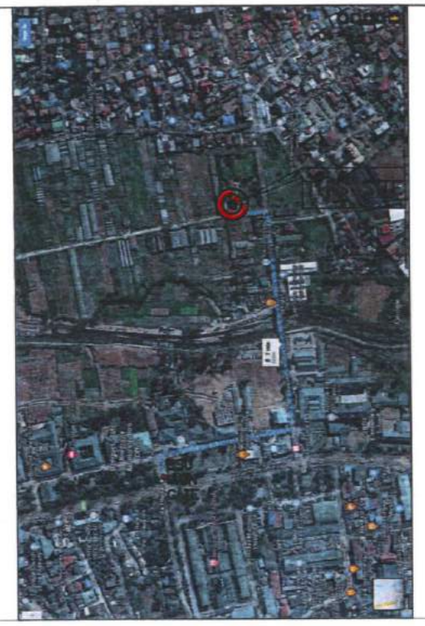
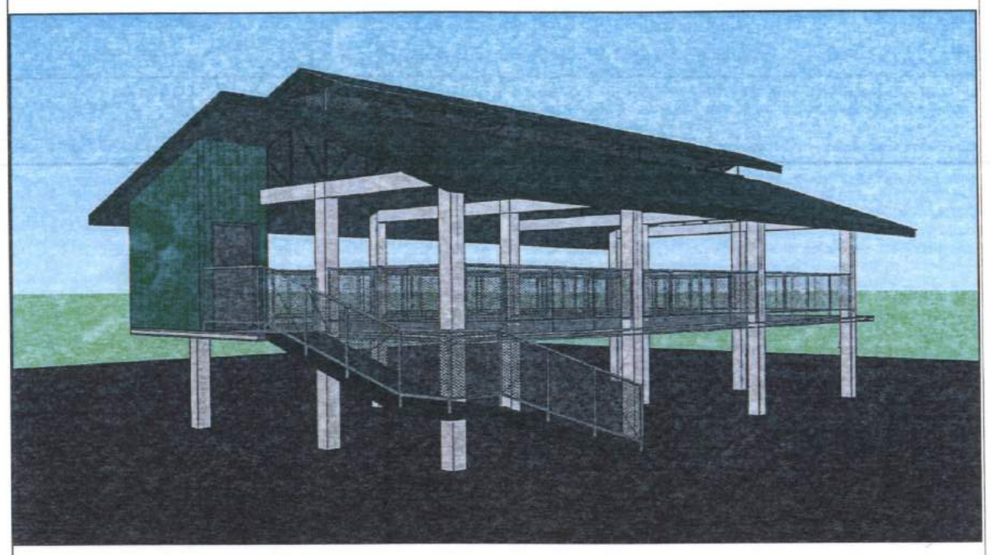
Procurement Management Office

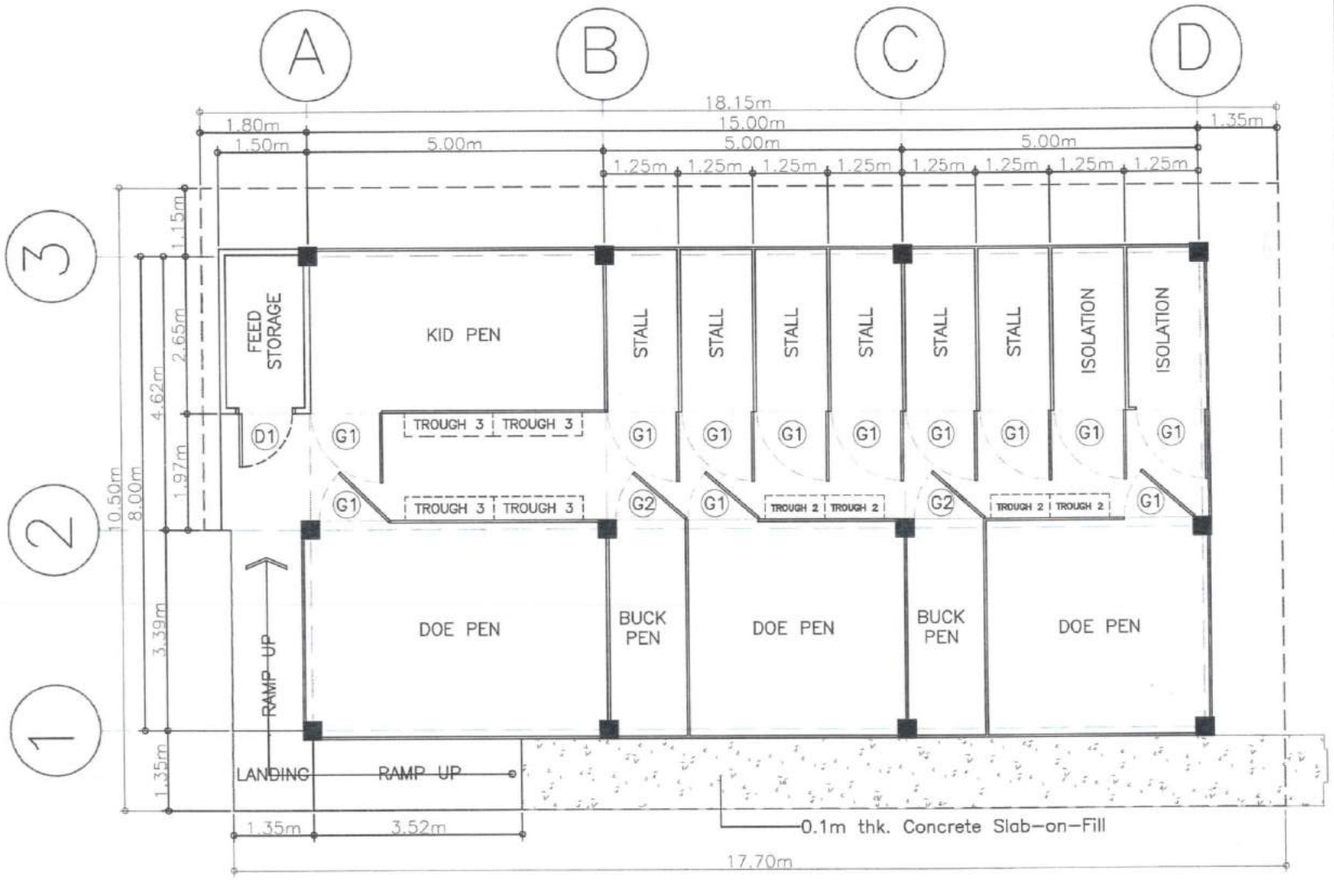


A A–1 LOCATION MAP
SCALE AS SHOWN

B A–1 SITE DEV'T. PLAN
SCALE AS SHOWN

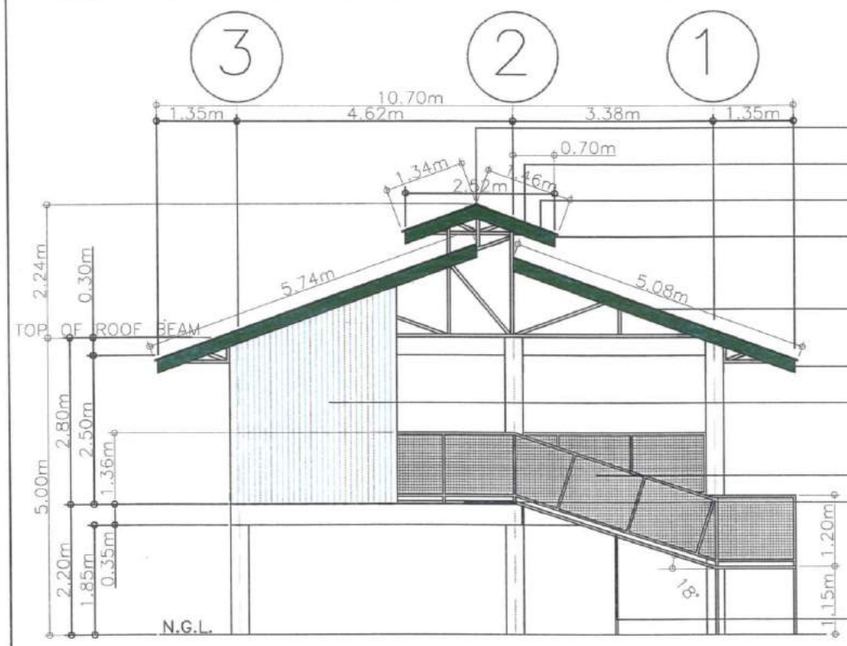


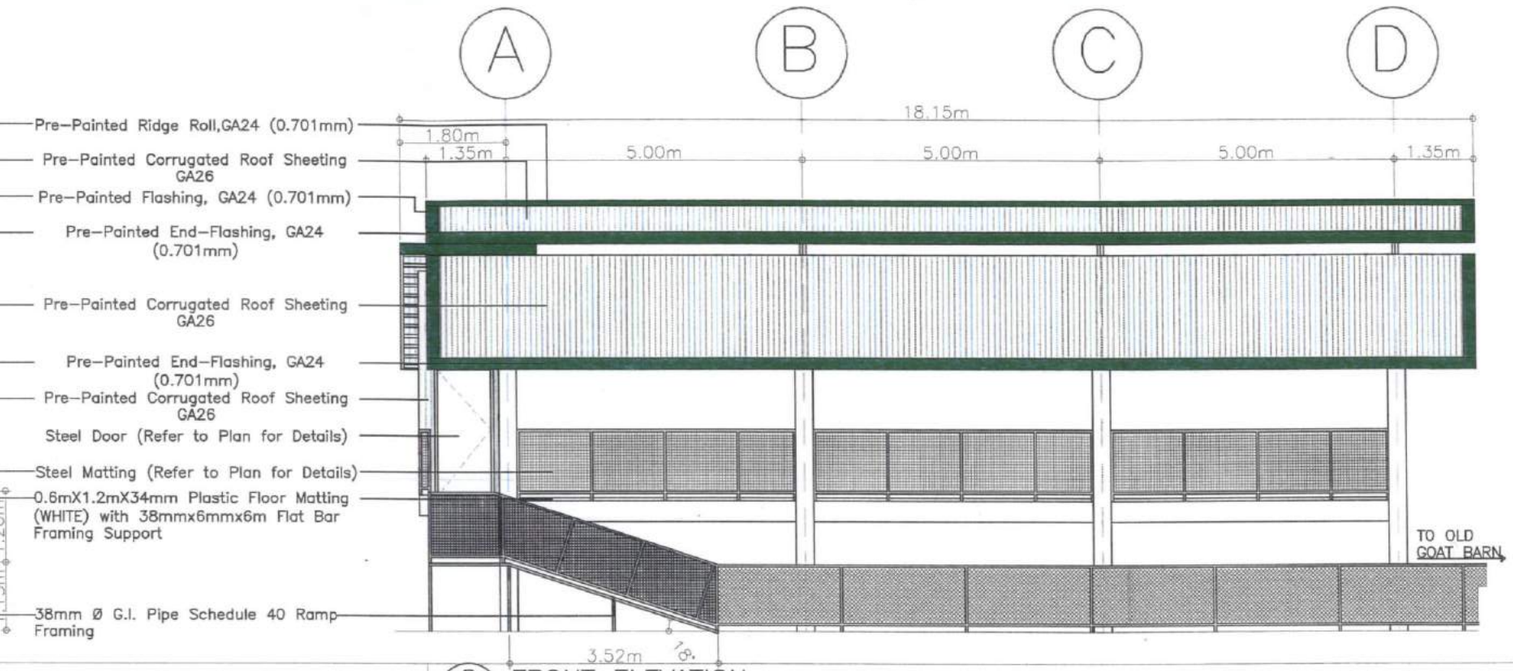
C A–1 PROJECT PERSPECTIVE
SCALE AS SHOWN



D A–2 FLOOR PLAN
SCALE 1:100

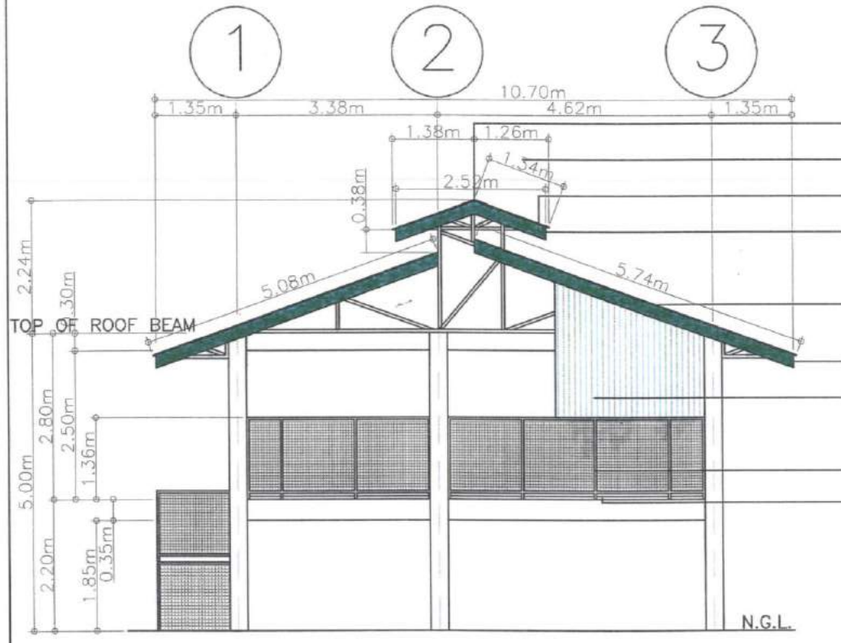
BENGUET STATE UNIVERSITY	BSU AND DA–CAR SHEEP AND GOAT MULTIPLIER BREEDER FARM PROJECT BALILI, BSU LA TRINIDAD CAMPUS, LA TRINIDAD, BENGUET PROJECT TITLE/ LOCATION	SHERIFF JOHN C. LA MADRID PROJECT DEVELOPMENT OFFICER	RICHARD P. DUMAPIS END–USER	ALLAN C. SACPA VP FOR ADMIN. AND FINANCE	FELIPE SALAING COMILA UNIVERSITY PRESIDENT	SHEET NO. A–01 08





E A-2 LEFT SIDE ELEVATION
SCALE 1:100

G A-2 FRONT ELEVATION
SCALE 1:100



F A-2 RIGHT SIDE ELEVATION
SCALE 1:100

H A-2 BACK ELEVATION
SCALE 1:100

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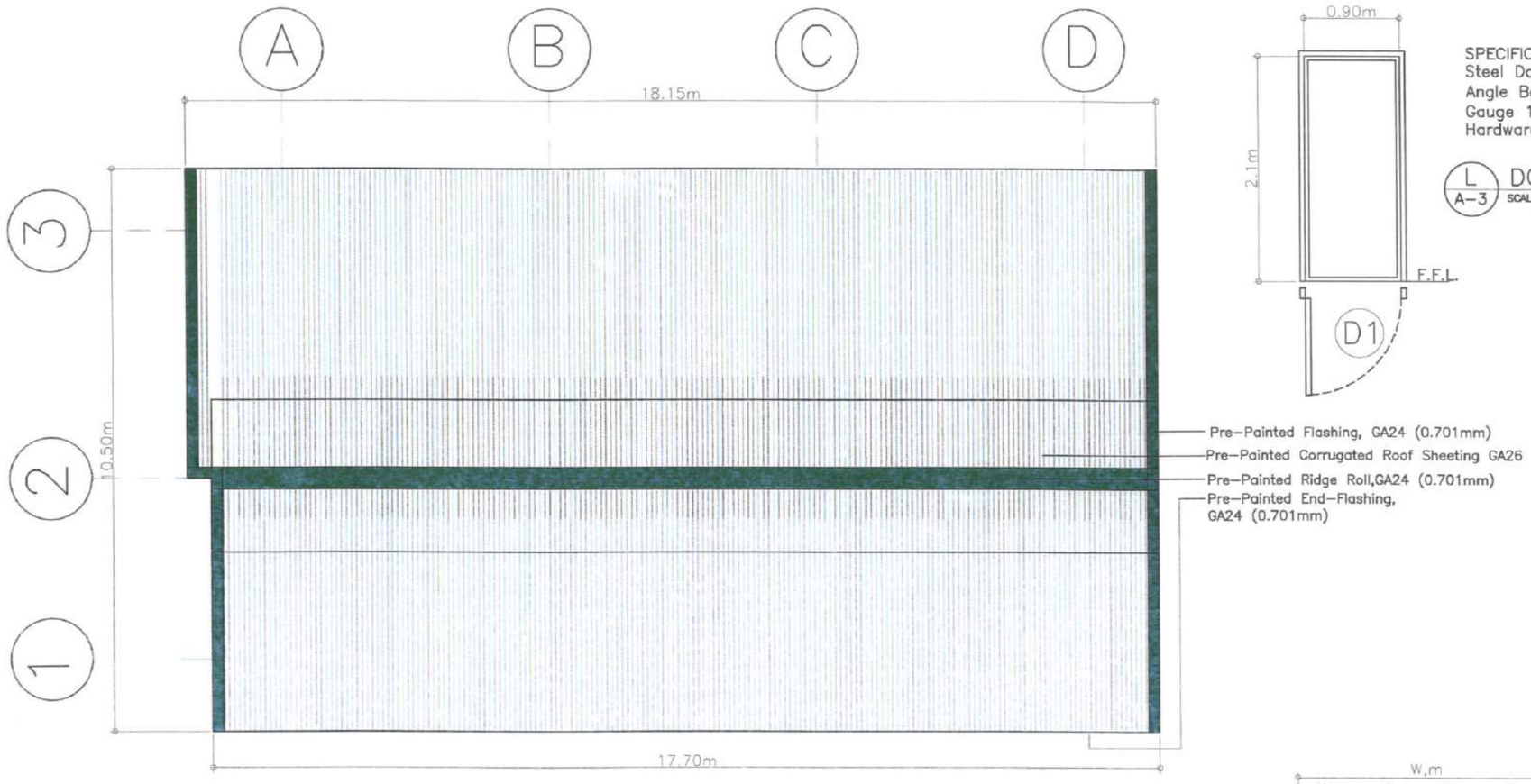
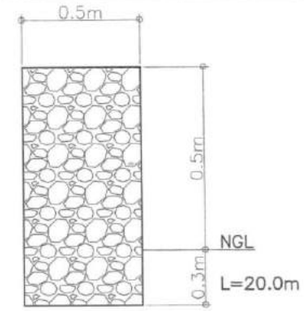


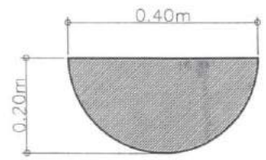
I A-3 ROOF PLAN
SCALE 1:100

SPECIFICATIONS:
Steel Door on 50mmx50mmx4.5mm Angle Bar Jamb w/ GI Sheet Plain Gauge 16 Facing Outside Complete w/ Hardware, Accessories, and Locksets

L A-3 DOOR SCHEDULE
SCALE 1:100

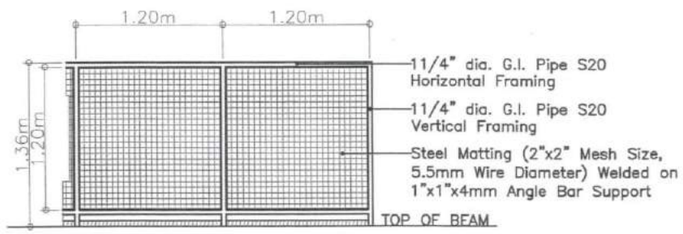


M A-3 RIPRAP DETAILS
SCALE AS SHOWN

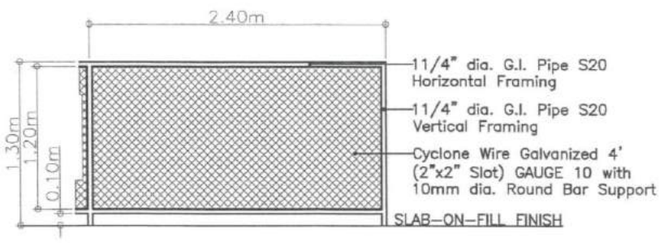


	LENGTH	SPECIFICATIONS	LOCATION
TROUGH 1	0.90m	1.5mm THK. STAINLESS STEEL	G1/G2
TROUGH 2	1.00m		DOE PEN, KID PEN
TROUGH 3	1.50m		DOE PEN

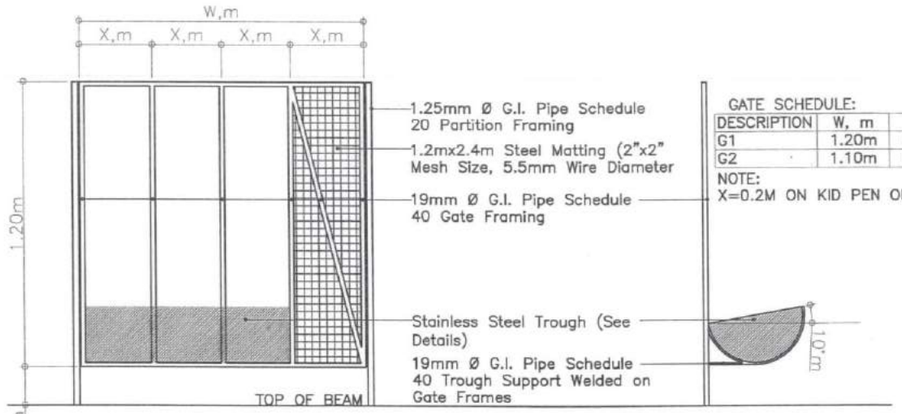
N A-3 STAINLESS STEEL TROUGH SCHEDULE
SCALE AS SHOWN



J A-3 STEEL MATTING WALL/PARTITION DETAILS
SCALE AS SHOWN



K A-3 CYCLONE WIRE FENCE DETAILS
SCALE AS SHOWN



GATE SCHEDULE:

DESCRIPTION	W, m	X, m
G1	1.20m	0.30m
G2	1.10m	0.30m

NOTE:
X=0.2M ON KID PEN ONLY

O A-3 TYPICAL STEEL GATE DETAILS
SCALE AS SHOWN

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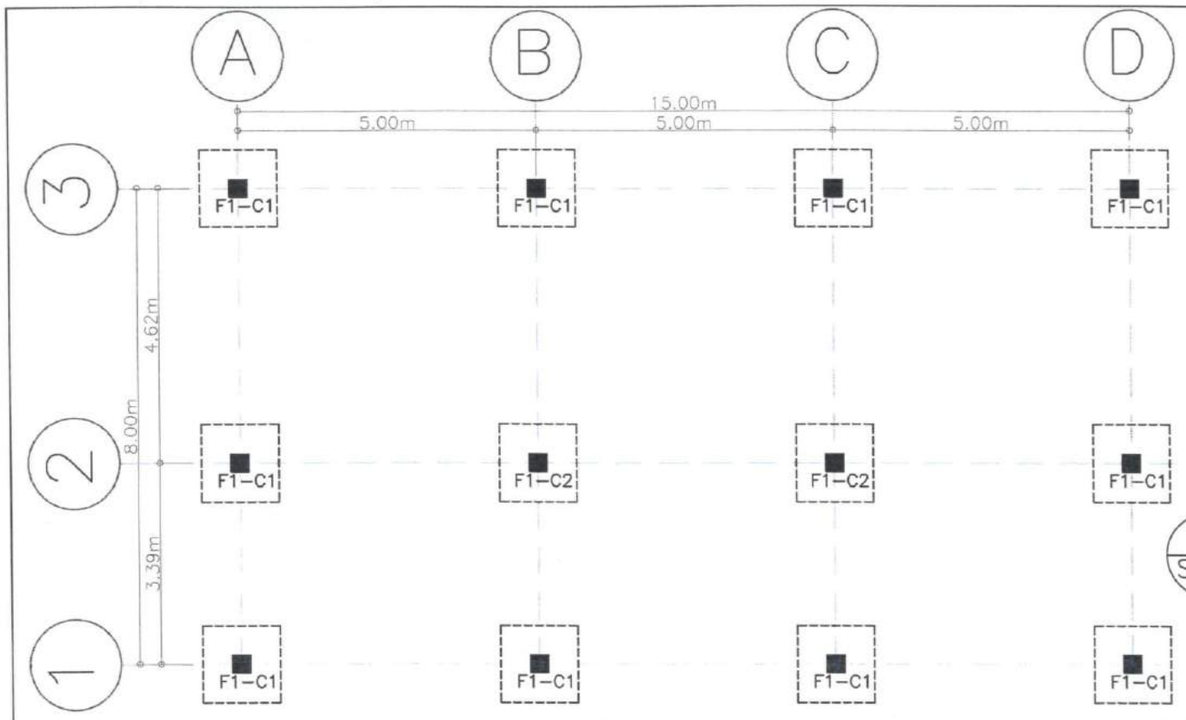
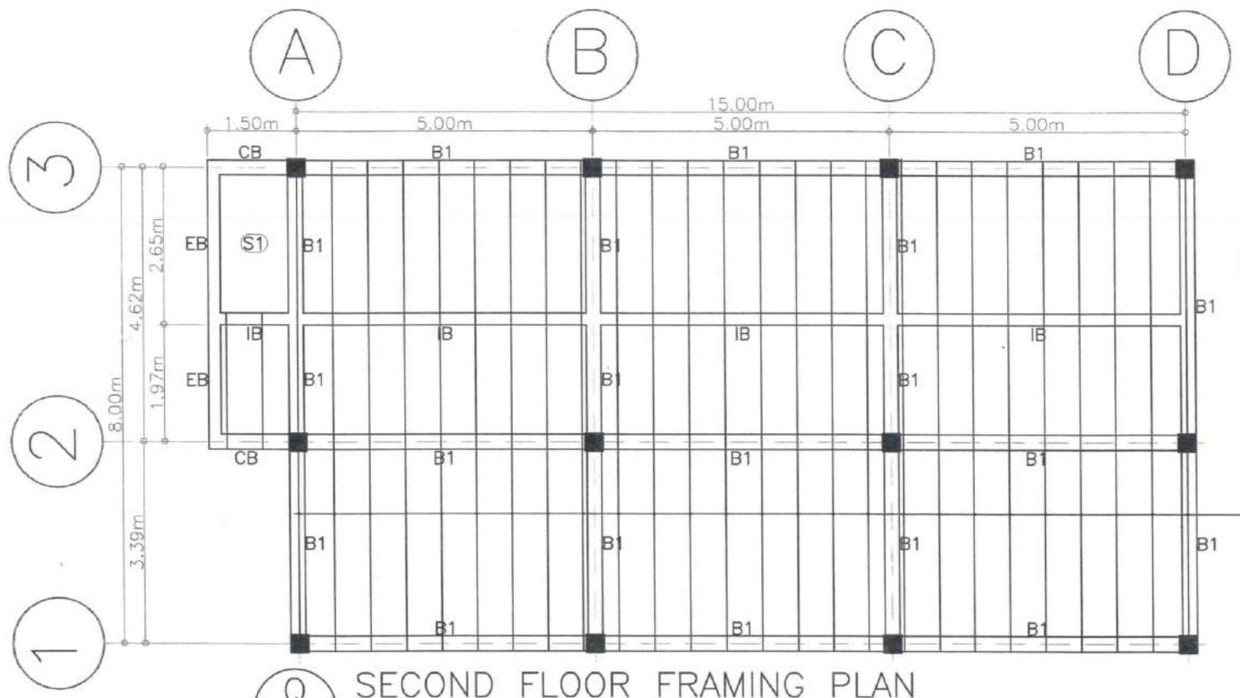
	PROJECT TITLE/ LOCATION	PROJECT DEVELOPMENT OFFICER	END-USER	VP FOR ADMIN. AND FINANCE	UNIVERSITY PRESIDENT

SHEET NO. A-03

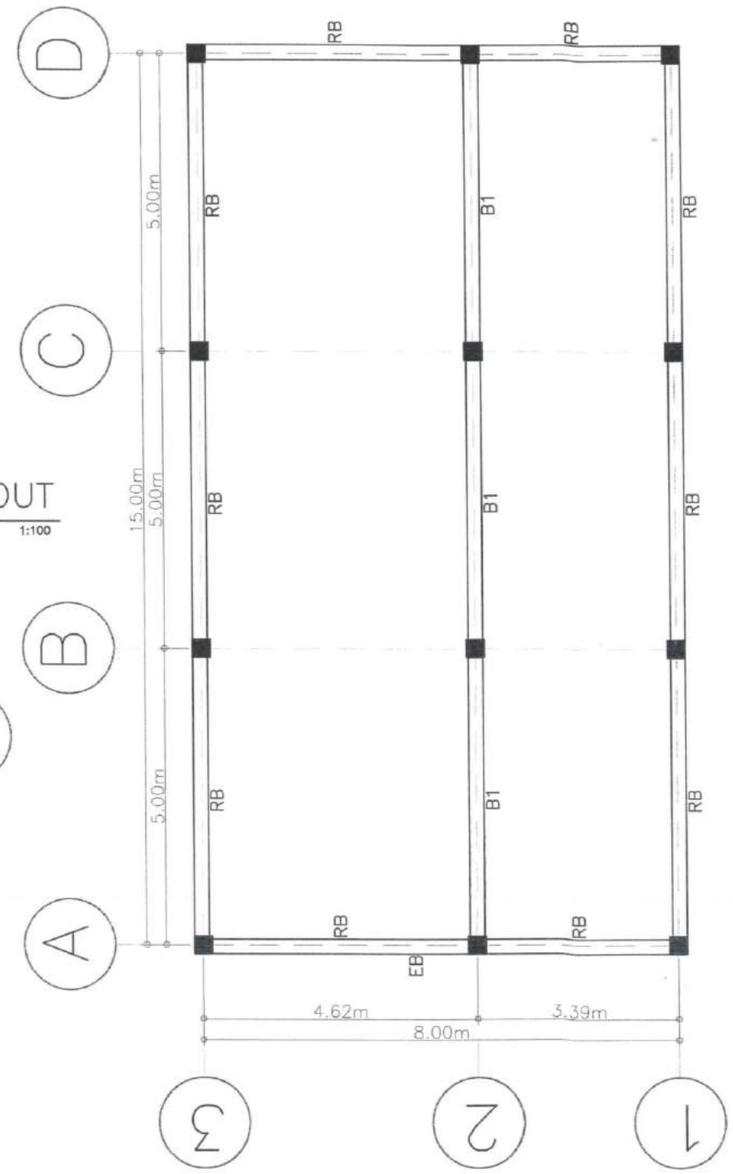
08



P S-1 FOOTING LAYOUT
SCALE 1:100



Q S-1 SECOND FLOOR FRAMING PLAN
SCALE 1:100



R S-1 ROOF FRAMING PLAN @ BOTTOM CHORD LEVEL
SCALE 1:100

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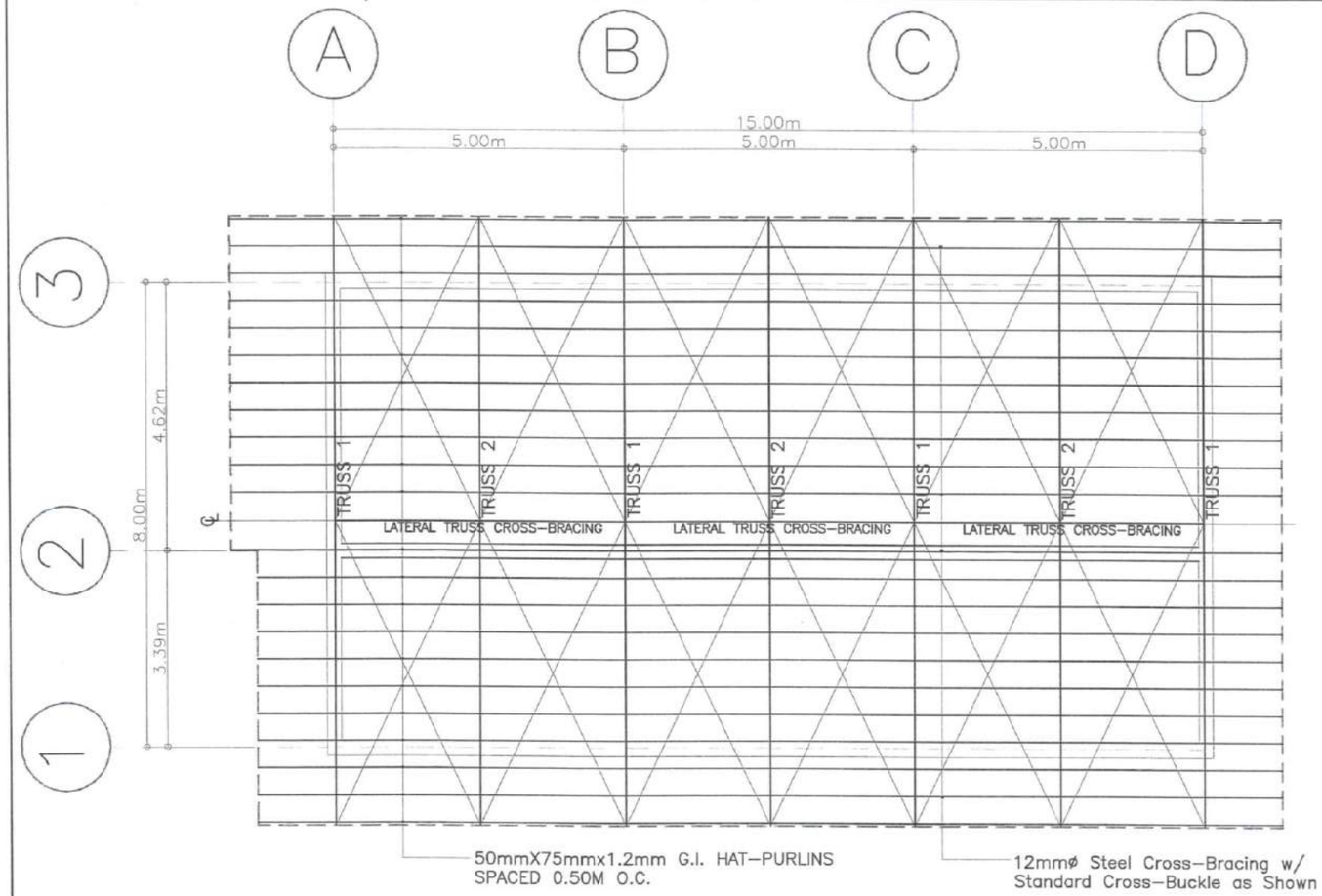
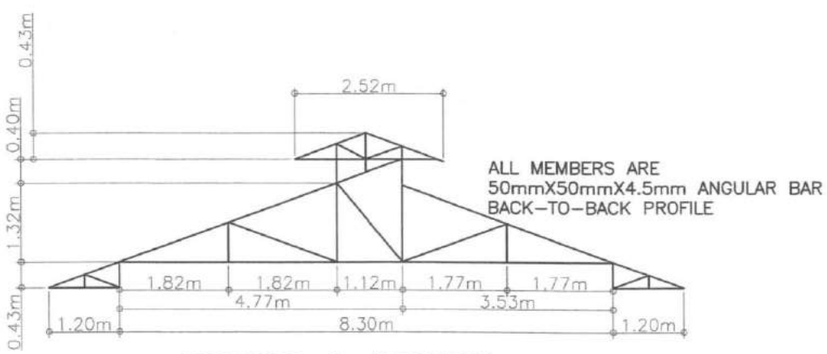


S / S-2 ROOF FRAMING PLAN @ TOP CHORD LEVEL

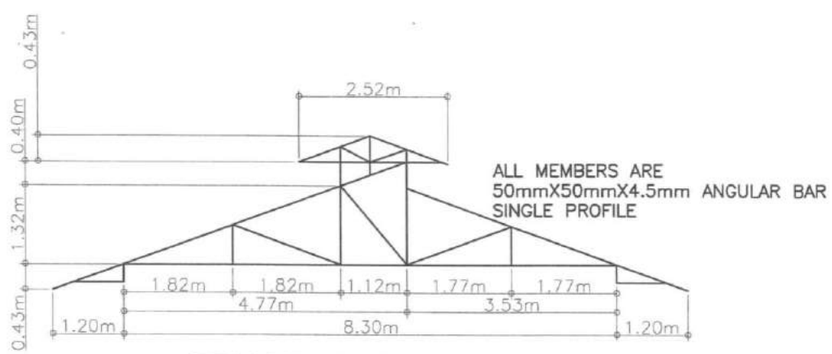
SCALE 1:100

SCHEDULE OF COLUMNS

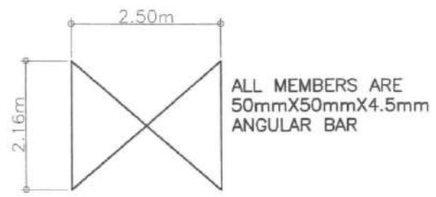
3.2M TO 6.0M	C20 : Fy276, Cover=40mm Confining Zone=450mm (3) (2) TIES: 10mmø RSB 6 pcs. (2),(3) @ 75mm c/c, REST (2),(3) @ 100 to MIDHEIGHT 300 300 MAIN BAR: 8 PCS. – 16mmø RSB	
0M TO 3.2M	C20 : Fy276, Cover=40mm Confining Zone=475mm (3) (2) TIES: 10mm ø RSB 6 pcs. (2),(3) @ 75mm c/c, REST (2),(3) @ 100 to MIDHEIGHT 300 300 MAIN BAR: 8 PCS. – 16mmø RSB	C20 : Fy276, Cover=40mm Confining Zone=475mm TIES: 10mm ø RSB 150mm to MIDHEIGHT (2) 200 200 MAIN BAR: 4 PCS. – 12mmø RSB
COLUMN MARK	C1	C2



TRUSS 1 DESIGN



TRUSS 2 DESIGN



LATERAL CROSS-BRACING DESIGN

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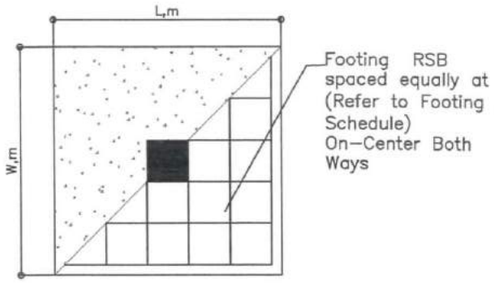
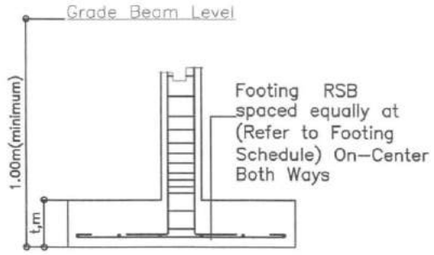
S C H E D U L E O F F O O T I N G

FOOTING MARK	FOOTING DIMENSION, m					FOOTING REINFORCEMENT								REMARKS
	LEFT OVERHANG	RIGHT OVERHANG	WIDTH, W	LENGTH, L	THICKNESS, t	Main RSB Top		Secondary RSB Top		Main RSB Bottom		2'ndary RSB Bottom		
						RSB ø	Spacing	RSB ø	Spacing	RSB ø	Spacing	RSB ø	Spacing	
IF1	–	–	1.30	1.30	0.30	–	–	–	–	16	270mm	16	270mm	ISOLATED FOOTING
IF2	–	–	0.50	0.50	0.25	–	–	–	–	12	100mm	12	100mm	PEDESTAL FOOTING

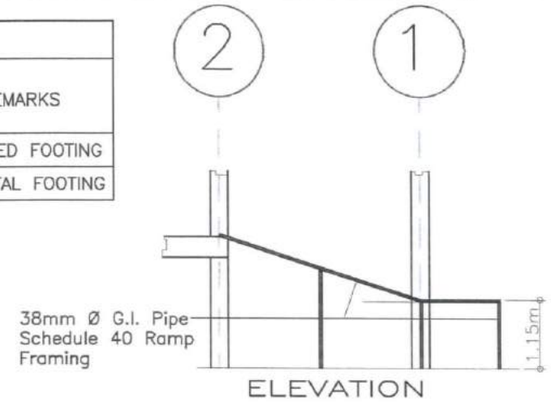


PLAN

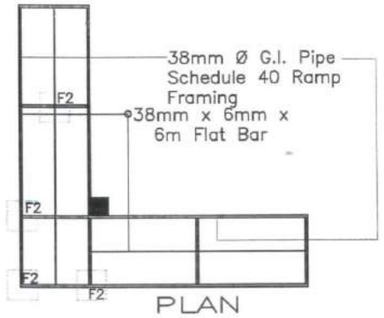


ELEVATION

ISOLATED FOOTING DETAILS



ELEVATION



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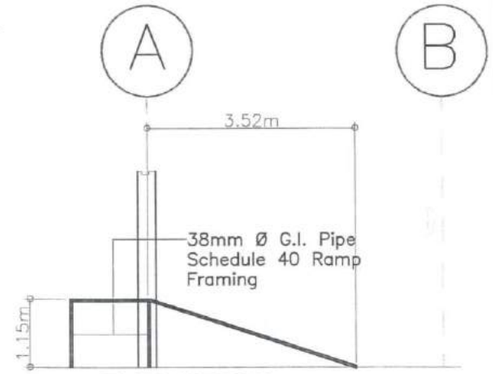
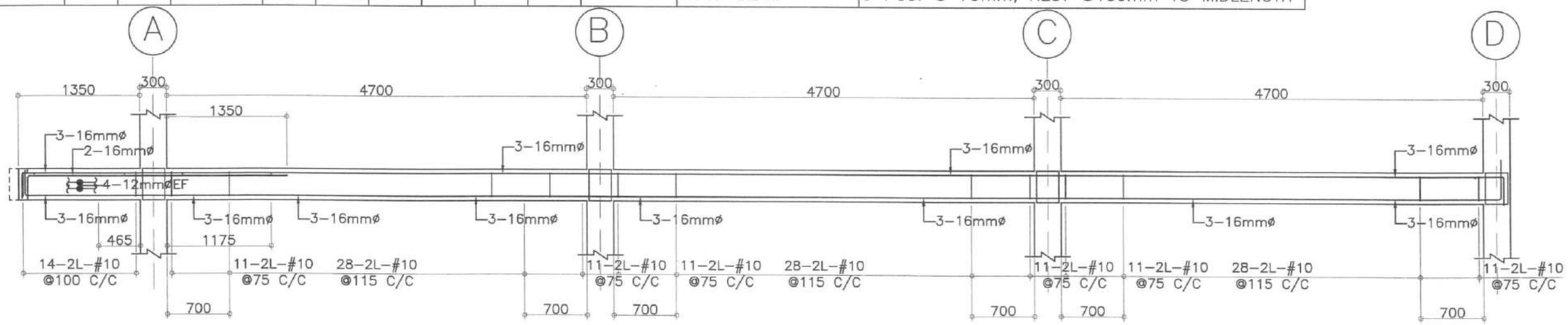


ELEVATION

S C H E D U L E O F B E A M S

Beam Mark	Beam Dimensions (mm)		Reinforcing Bars							SFR 12mmØEF RSB	DESCRIPTION	STIRRUPS 10mmØ RSB (Unless Noted Otherwise)
			Rebar Size	Left Support		Midspan		Right Support				
	b	h		Top	Bottom	Top	Bottom	Top	Bottom			
B1	250	350	16mm ø	3	3	3	3	3	3	–	MAIN BEAM	11 PCS. @ 75mm, REST @115mm TO MIDLENGTH
CB	250	350	16mm ø	5	3	5	3	–	–	4	CANTILEVER BEAM	4 PCS. @ 50mm, REST @100mm TO END
IB	200	350	16mm ø	2	2	2	2	2	2	–	INTERMEDIARY BEAM	150mm O.C. TO MIDLENGTH
EB	200	350	16mm ø	2	2	2	2	2	2	4	EDGE BEAM	100mm O.C. TO MIDLENGTH
RB	250	300	16mm ø	2	2	2	2	2	2	–	ROOF BEAM	9 PCS. @ 75mm, REST @100mm TO MIDLENGTH



TYPICAL BEAM ELEVATION

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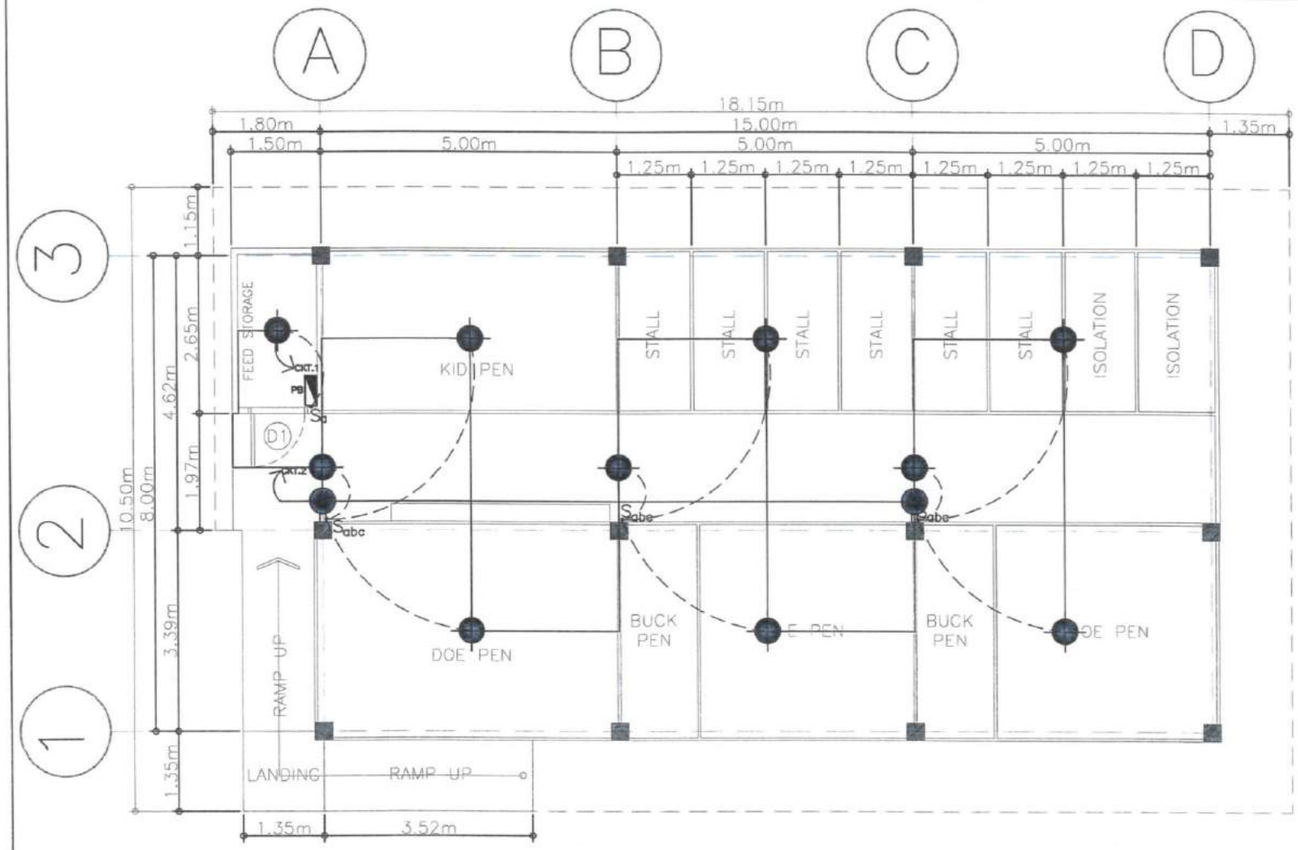


T E-1 ELECTRICAL LAYOUT
SCALE 1:100

LEGENDS:

- 20 WATTS LED LIGHTING OUTLET
- 2 GANG CONVENIENCE OUTLET
- PANEL BOX
- S_a SINGLE GANG SWITCH
- S_{abc} THREE GANG SWITCH

PANEL BOX LOAD TABULATION AND COMPUTATION:

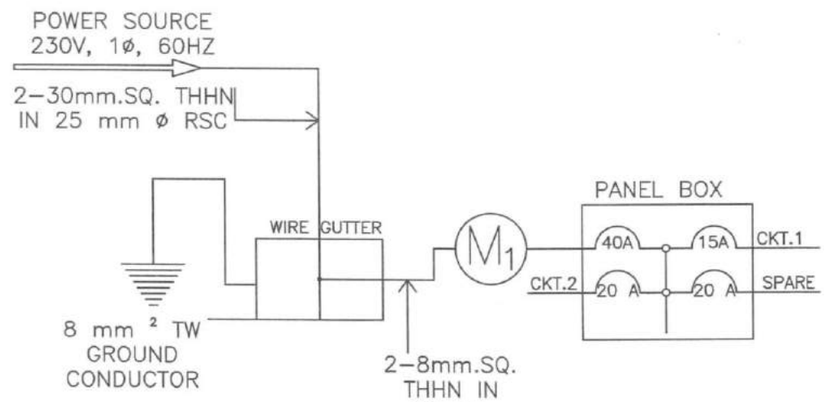
CIRCUIT NUMBER	T Y P E	NO. OF LIGHT/ OUTLET	VOLTS	WATTS	AMPERES	TRIP	NO. OF WIRE	WIRE SIZE & TYPE	CONDUIT SIZE & TYPE
CKT. 01	LED LIGHTING, 20W	10	230	200	0.87	15 AT	2	2.0mm² THHN	15mm Ø uPVC
CKT. 02	CONVENIENCE OUTLET	2	230	360	1.57	20 AT	2	3.5mm² THHN	15mm Ø uPVC
CKT. 03	SPARE	1	230	1500	6.52	20 AT	2	3.5mm² THHN	15mm Ø uPVC
TOTAL				2060	8.96	40 AT	2	8.00mm² THHN	20mm Ø uPVC

TABLE 2.20.3.3 PEC
FIRST 3000VA AT 100%DF – 2,060VA
REM. _____ AT 35%DF – ____VA
NET. TOTAL = 2,060VA

$I_{TOT.}$ = 2,060/230 = 8.96AMP.
USE: 40AT, 2P, 240 FOR MAIN SERVICE EQUIP.
2–8mm.SQ. THHN FOR FEEDER CONDUCTOR

GENERAL ELECTRICAL NOTES

1. ALL ELECTRICAL WORKS SHALL CONFORM TO THE LATEST EDITION OF PHILIPPINE ELECTRICAL CODE, TO THE RULES AND REGULATIONS OF LOCAL AND NATIONAL AUTHORITIES CONCERNED AND THE REQUIREMENTS OF LOCAL UTILITY COMPANIES.
2. WIRING METHODS SHALL BE AS FOLLOWS
   a. MAIN SERVICE ENTRANCE ..... RIGID STEEL CONDUIT (RSC)
   b. RACEWAYS EMBEDDED IN CONCRETE WALL AND FLOORING ..... POLYVINYL CHLORIDE (PVC)
   c. RACEWAYS NOT EMBEDDED IN CONCRETE ..... ELECTRICAL METALLIC TUBING (EMT)
3. SERVICE VOLTAGE ENTERING THE STRUCTURE SHALL BE 220 VOLTS SINGLE PHASE TWO WIRE SYSTEM.
4. MINIMUM SIZE OF WIRE AND OF CONDUIT SHALL BE 2.0 mm Ø THHN (#14 AWG) AND 15mm (1/ 2") NOMINAL DIAMETER RESPECTIVELY, UNLESS OTHERWISE SPECIFIED ON PLANS.
5. NO BRANCH CIRCUIT WIRING IN LIGHTING AND POWER SHALL HAVE A LOAD MORE THAN 80% OF IT'S RATING.
6. ALL MATERIALS TO BE USED SHALL BE NEW AND APPROVED TYPE APPROPRIATE FOR BOTH LOCATION AND INTENDED USE.
7. UNLESS OTHERWISE SPECIFIED PULLBOXES OR JUNCTION BOXES SHALL BE PROVIDED WHENEVER REQUIRED AND NECESSARY, ALTHOUGH SUCH BOXES ARE NOT INDICATED ON PLANS.
8. FOR EACH SPARE CIRCUIT IN PANEL BOARD, PROVIDE AN EMPTY CONDUIT 20mm Ø (3/ 4") DIAMETER TERMINATING TO A COVERED SQUARE BOX.
9. ALL LOADS SHALL BE PROPERLY AND ADEQUATELY GROUNDED.
10. ALL MATERIALS AND EQUIPMENT TO BE USED SHALL BE BRAND NEW AND OF APPROVED TYPE AS LOCATION AND PURPOSE.
11. KITCHEN PLANS SHALL GOVERN ON THE ACTUAL LOCATION AND DIMENSION PRIOR TO ROUGH–IN OF CONDUIT AND PIPES.
12. ALL INSTALLATIONS AND WIRING SHALL BE CONCEALED FROM VIEW AND SHALL BE ENCASED IN POLYVINYL CHLORIDE (PVC) CONDUITS OR ELECTRICAL METALLIC TUBING (BMT) OR RIGID STEEL CONDUITS (RSC).
13. ALL JUNCTION BOXES, DISCONNECTS, ETC. SHALL BE INSTALLED SO AS NOT TO INTERFERE WITH EQUIPMENT PLACEMENTS.
14. ALL 20–AMPERES CIRCUIT HOMERUN TO PANEL BOARD MORE THAN 30 METERS IN LENGTH SHALL BE 5.5mm ø THHN. (# 10), UNLESS OTHERWISE SPECIFIED ON PLANS.
15. LIGHT CONTROL SWITCHES SHALL BE RATED 10A 300V AND SHALL CARRY A LOAD GREATER THAN 50A.
16. AN EMPTY 3/ 4" DIA. RISER TERMINATING IN A 2" DEEP BY 4" OCTAGONAL BOX ABOVE CEILING SHALL BE PROVIDED TO ACCOMMODATE THE SPARE CIRCUIT IN PANELBOARD.
17. ALL WORKS SHALL BE DONE WITH THE DIRECT SUPERVISION OF A DULY LICENSED ELECTRICAL ENGINEER OR A REGISTERED MASTER ELECTRICIAN.
18. OUTLET BOXES SHALL BE AS FOLLOWS:
    A. LIGHT OUTLETS 1–1/ 2" DEEP BY 4" OCTAGONAL BOX WITH ONE OR TWO WAY ENTRIES
    B. RECEPTACLES 2–1/ 8" DEEP 2"X4" UTILITY BOX ONE GANG WITH RAISED PLASTIC COVER
19. MOUNTING HEIGHTS SHALL BE AS FOLLOWS:
    a. LIGHTING SWITCHES 1370mm ABOVE FLOOR FINISH (A.F.F.)
    b. CONVENIENCE OUTLETS 300mm (A.F.F.)
    c. PANEL BOARDS 1700mm (A.F.F.)



SINGLE LINE DIAGRAM

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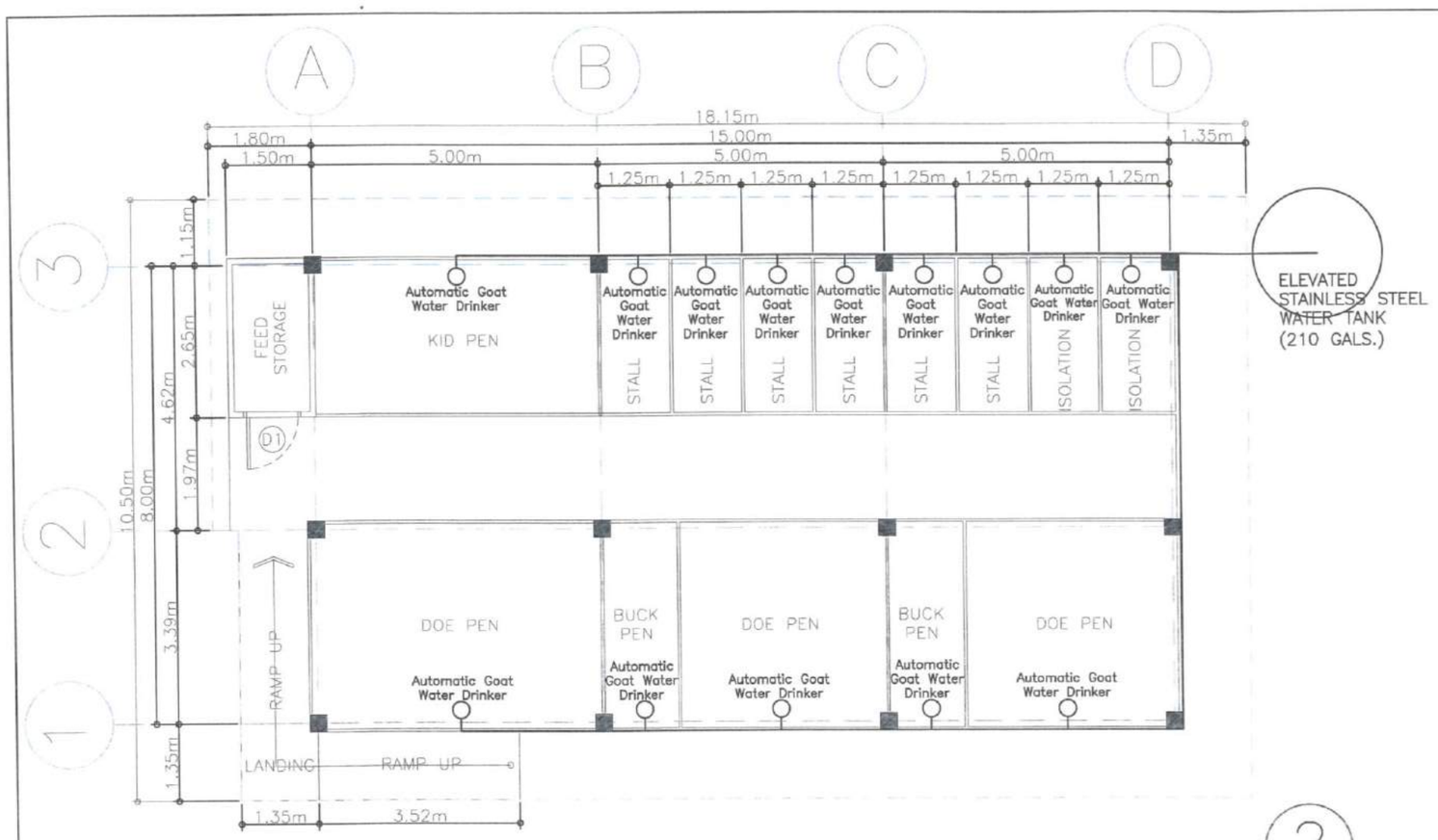


U P-1 PLUMBING LAYOUT
SCALE 1:100

GENERAL PLUMBING NOTES

1.0 ALL PLUMBING WORKS INCLUDED HEREIN SHALL BE EXECUTED IN ACCORDANCE TO THE PROVISION OF THE REVISED PHILIPPINE PLUMBING CODE. THE NATIONAL BUILDING CODE AND THE RULES AND REGULATIONS OF THE CITY OF BAGUIO.

2.0 COORDINATE THE DRAWINGS WITH OTHER RELATED DRAWINGS AND SPECIFICATIONS. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY FOUND HEREIN.

3.0 ALL PIPES SHALL BE INSTALLED AS INDICATED. ANY RELOCATION REQUIRED FOR PROPER EXECUTION OF THE PLUMBING WORK SHALL BE WITH PRIOR APPROVAL OF THE ENGINEER.

4.0 PROPOSED SANITARY UTILITIES SHALL CONFORM TO THE ACTUAL LOCATION, DEPTH AND INVERT ELEVATIONS OF ALL EXISTING PIPES AND STRUCTURES AS VERIFIED BY THE CONTRACTOR.

5.0 ALL SLOPES FOR HORIZONTAL DRAINAGE SHALL MAINTAIN TWO PERCENT (0.02) AND ONE PERCENT (0.01) MINIMUM UNLESS OTHERWISE SPECIFIED.

6.0 WATER SUPPLY PIPE TO FIXTURE SHALL BE SIZED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

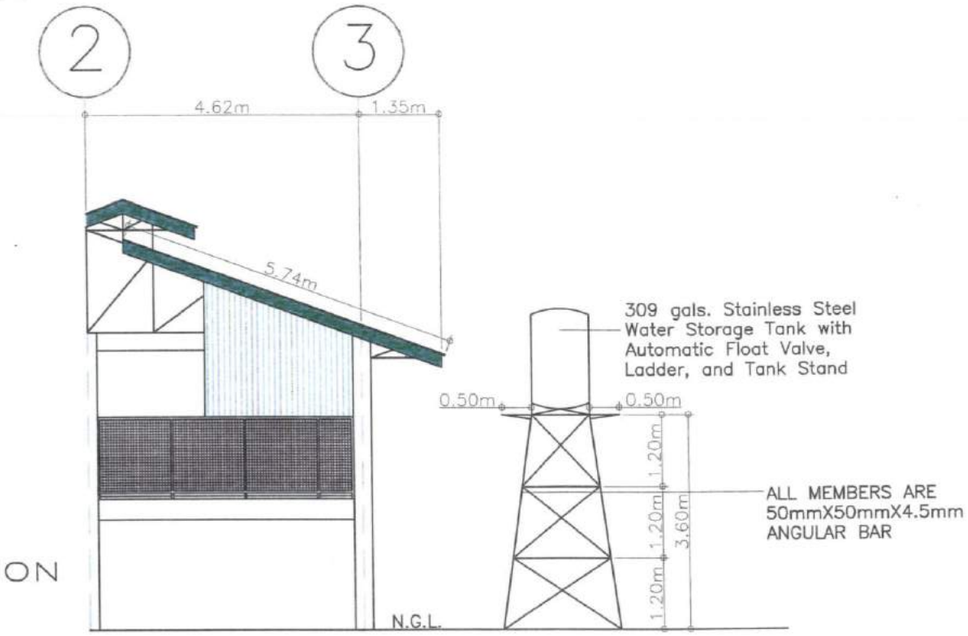
7.0 ALL BRANCHES OF FIXTURE OR GROUP OF FIXTURES SHALL BE PROVIDED WITH AIR CHAMBER MADE OF CAPPED VERTICAL EXTENSION PIPE.

8.0 ALL WATER LINES SHALL BE HYDROSTATICALLY TESTED @ 100 PSI FOR A PERIOD OF TWO(2) HOURS BEFORE BURIED OR COVERED. GALVANIZED IRON (G.I.) PIPES DIRECTLY IN CONTACT WITH THE SOIL SHALL BE PROVIDED WITH TWO COATS OF MELTED ASPHALT AND WRAPPED WITH JUTE CLOTH SOAKED IN MELTED ASPHALT.

9.0 THE CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES @ SITE AND COORDINATE THE WORK WITH THE SEWER AND STORM DRAINAGE LINE EFFLUENT DISPOSAL POINT AND WATERLINE SERVICE CONNECTING/TAPPING POINT.

10.0 ALL PIPE SIZES AND OTHER DIMENSIONS ARE IN MILLIMETER (MM) UNLESS OTHERWISE SPECIFIED.

11.0 ALL PLUMBING WORKS THEREIN, SHALL BE UNDER THE DIRECT SUPERVISION OF A MASTER PLUMBER AND OR A DULY LICENSED SANITARY ENGINEER.



WATER TANK ELEVATION

BENGUET STATE UNIVERSITY	BSU AND DA-CAR SHEEP AND GOAT MULTIPLIER BREEDER FARM PROJECT BALILI, BSU LA TRINIDAD CAMPUS, LA TRINIDAD, BENGUET					SHEET NO.
	PROJECT TITLE/ LOCATION	SHERIFF JOHN C. LA MADRID PROJECT DEVELOPMENT OFFICER	RICHARD P. DUMAPIS END-USER	ALLAN C. SACPA VP FOR ADMIN. AND FINANCE	FELIPE SALAING COMILA UNIVERSITY PRESIDENT	P-01 08