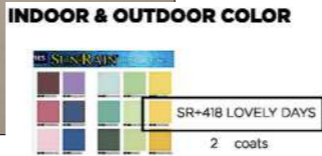
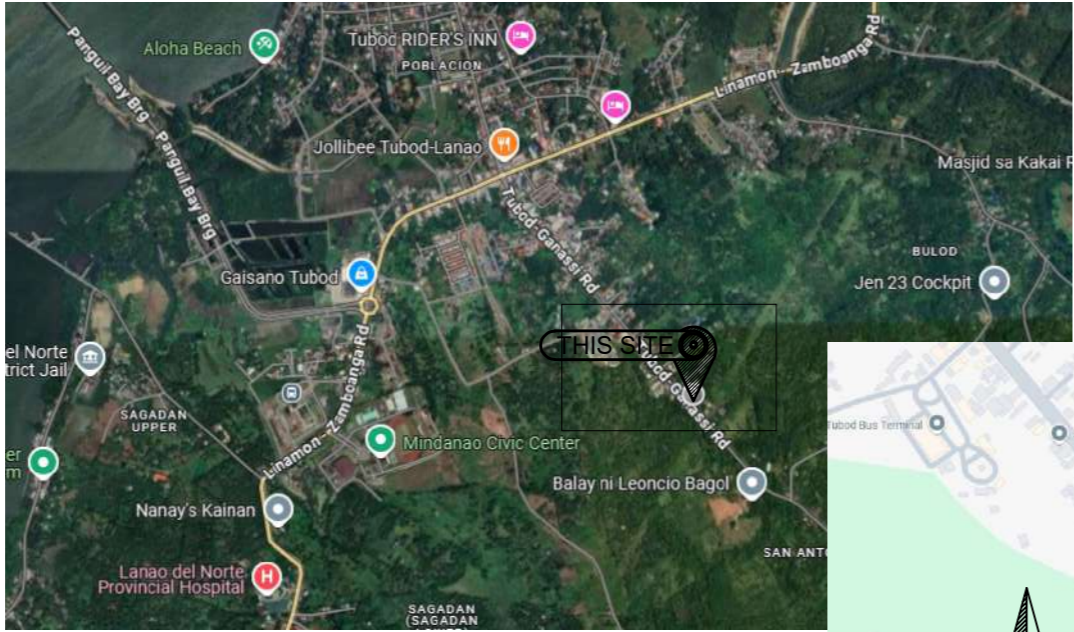




PERSPECTIVE



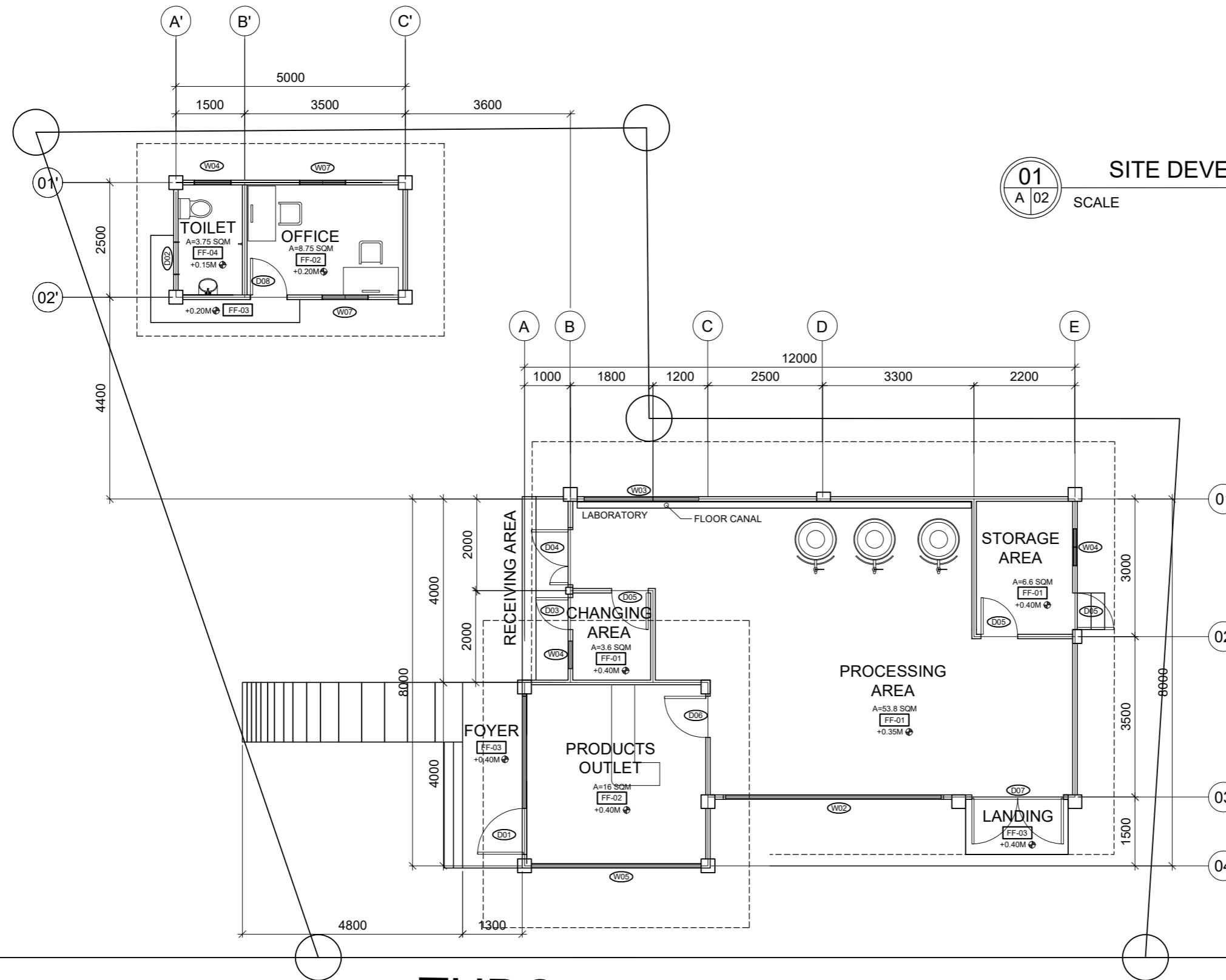
NOTE: HEIGHT OF THE BUILDING MAY VARY DEPENDING ON THE NATIONAL ROAD LEVEL (ELEV 0+00)



VICINITY MAP




CONTENTS		REPUBLIC OF THE PHILIPPINES
ARCHITECTURAL		OFFICE OF THE BUILDING OFFICIAL
A01 PERSPECTIVE VICINITY MAP		
A02 SITE DEVELOPMENT PLAN		
A03 FLOOR PLAN		
A04 REFLECTED CEILING PLAN		LINE AND GRADE
A05 DAIRY BOX ELEVATION (FRONT SIDE ELEVATION REAR SIDE ELEVATION LEFT SIDE ELEVATION RIGHT SIDE ELEVATION)		
A06 OFFICE WITH CR ELEVATION (FRONT SIDE ELEVATION REAR SIDE ELEVATION LEFT SIDE ELEVATION RIGHT SIDE ELEVATION)		
A07 DAIRY BOX SECTION (SECTION THRU 03 SECTION THRU B) OFFICE WITH CR SECTION (SECTION THRU 03' SECTION THRU A')		
A08 SCHEDULE OF DOORS AND WINDOWS		LAND USE AND ZONING
A09 SCHEDULE OF DOORS AND WINDOWS FINISHING SCHEDULE		
A10 SIGNAGE DETAILS MISCELLANEOUS DETAILS MOULDING DETAILS		
A11 PRODUCTS OUTLET INTERIOR WALL DETAILS SIGNAGE DETAILS		
STRUCTURAL		ARCHITECTURAL
S01 STRUCTURAL NOTES		
S02 SITE CONCRETING PLAN		
S03 FOUNDATION PLAN ROOFBEAM PLAN		
S04 TYP. COLUMN & FTG. DET. WALL FTG DETAILS TYP. BEAM DETAILS		STRUCTURAL
S05 DOOR/WINDOW OPENING DETAILS RAMP AND RAILINGS DETAILS MISCELLANEOUS DETAILS		
S06 ROOF PLAN ROOF FRAMING PLAN		
S07 MISCELLANEOUS DETAILS ROOF FRAMING DETAILS		
PLUMBING		SANITARY
P01 PLUMBING NOTES CATCH BASIN DETAILS FLOOR CANAL SECTION		
P02 PLUMBING LEGENDS COLD WATERLINE LAYOUT		
SANITARY LAYOUT SERIES ST-1000 SEPTIC TANK DETAILS		
ELECTRICAL		ELECTRICAL
E01 ELECTRICAL NOTES LEGEND AND SYMBOLS		
E02 LIGHTING LAYOUT POWERLINE LAYOUT		
E03 LOAD SCHEDULE RISER DIAGRAM		
		MECHANICAL



01 SITE DEVELOPMENT PLAN  
A 02 SCALE 1:100 M

TUBOD-GANASSI ROAD

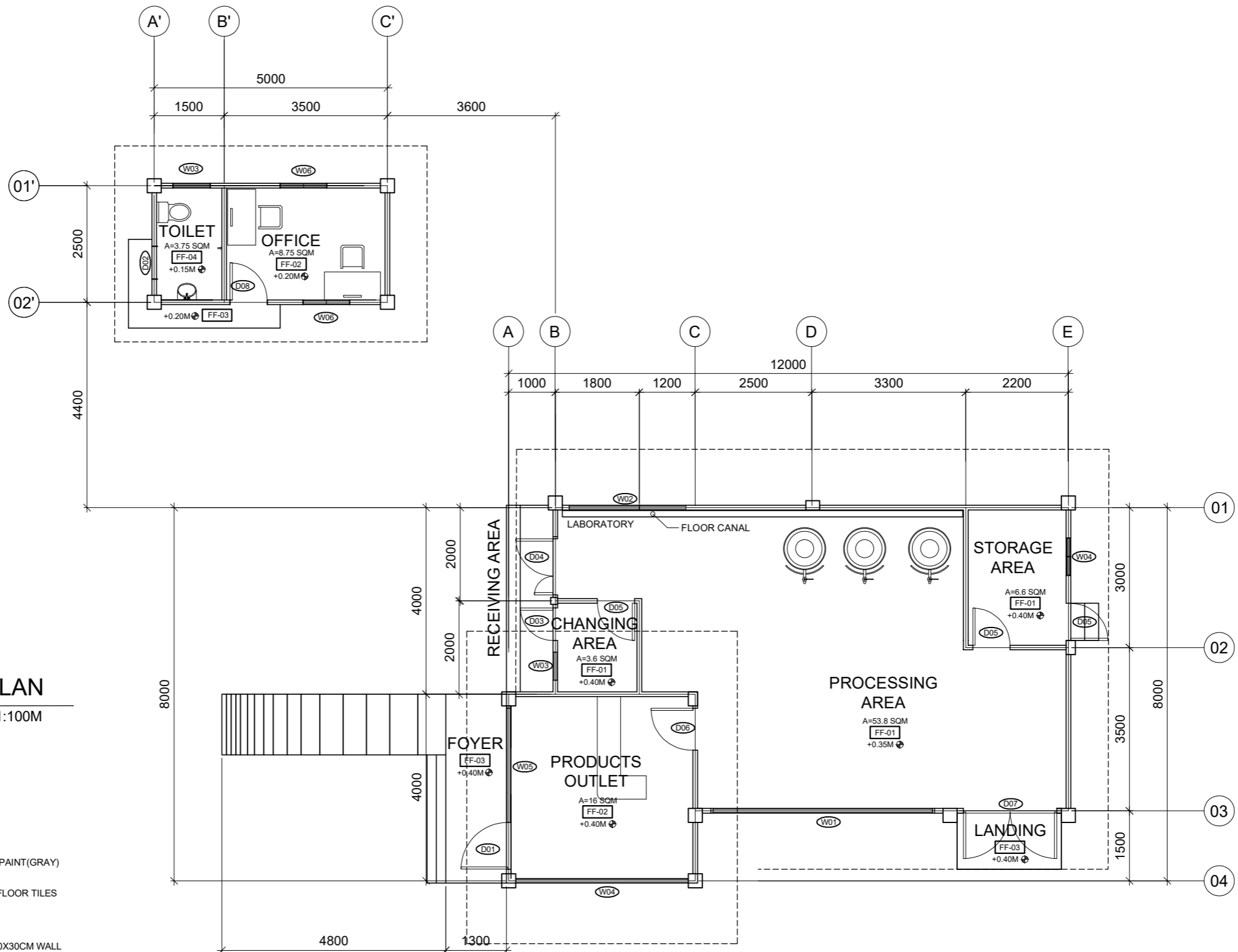
	<b>PHILIPPINE CARABAO CENTER</b> NATIONAL GENE POOL & HEADQUARTERS  CLSU Cpd., Science City of Munoz, Nueva Ecija	PREPARED BY:		CHECKED AND REVIEWED BY:		RECOMMENDING APPROVAL:		PROJECT TITLE/LOCATION:		APPROVED BY:		DRAFTED BY:	SHEET CONTENTS:	SHEET No. <div>A-02 02   23</div>
		AR. ANA FRANCESCA C. DUCUSIN		ENGR. CRIS GUZON		DR. CECILIO G. VELEZ		DAIRY PROCESSING FACILITY AND PRODUCTS OUTLET		DR. LIZA G. BATTAD		CFFSM	AS SHOWN	
		ARCHITECT I, LIVESTOCK ENGINEERING SECTION, PHILIPPINE CARABAO CENTER		HEAD, LIVESTOCK ENGINEERING SECTION, PHILIPPINE CARABAO CENTER		CENTER CHIEF PHILIPPINE CARABAO CENTER - MLPC		TUBOD, LANAO DEL NORTE		EXECUTIVE DIRECTOR, PHILIPPINE CARABAO CENTER		REVISION:		

01 FLOOR PLAN  
A 03 SCALE 1:100M

LEGENDS:

- FF-01 HEAVY DUTY POLYURETHANE PAINT(GRAY)  
FF-02 40X40CM POLISHED GRANITE FLOOR TILES  
FF-03 SMOOTH CEMENT FINISH  
FF-04 30X30CM FLOOR TILES WITH 30X30CM WALL TILES (1.5M HEIGHT FROM FFL)

+0.00M FLOOR ELEVATION



**PHILIPPINE CARABAO CENTER**  
**NATIONAL GENE POOL & HEADQUARTERS**  
CLSU Cpd., Science City of Munoz, Nueva Ecija

PREPARED BY:  
AR. ANA FRANCESCA C. DUCUSIN  
ARCHITECT I, LIVESTOCK ENGINEERING SECTION,  
PHILIPPINE CARABAO CENTER

PRC ID:  
PTR NO:  
ISSUED ON:  
ISSUED AT:

CHECKED AND REVIEWED BY:  
ENGR. CRIS GUZON  
HEAD, LIVESTOCK ENGINEERING SECTION,  
PHILIPPINE CARABAO CENTER

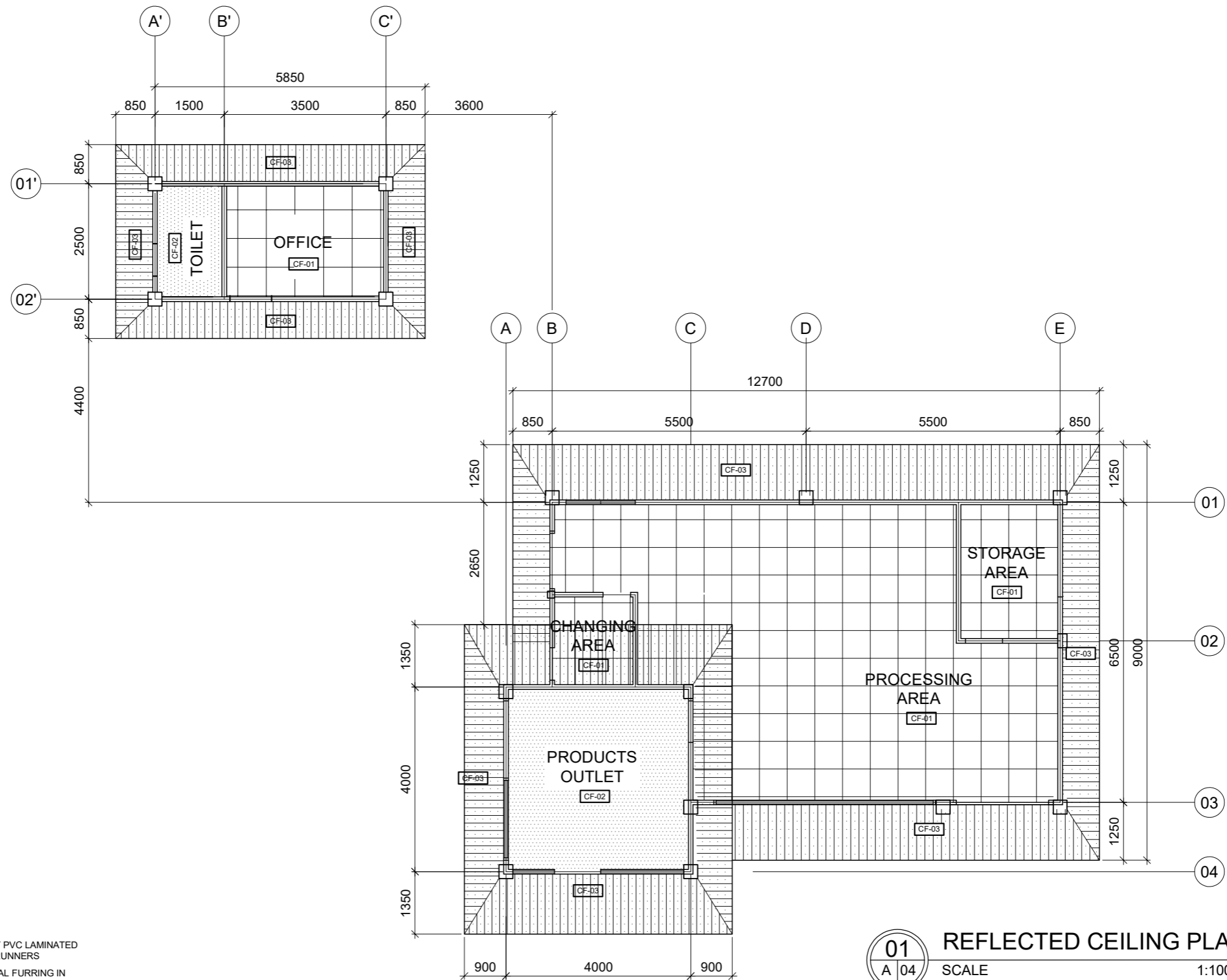
RECOMMENDING APPROVAL:  
DR. CECILIO G. VELEZ  
CENTER CHIEF  
PHILIPPINE CARABAO CENTER - MLPC

PROJECT TITLE/LOCATION:  
DAIRY PROCESSING FACILITY  
AND PRODUCTS OUTLET  
TUBOD, LANA DEL NORTE

APPROVED BY:  
DR. LIZA G. BATTAD  
EXECUTIVE DIRECTOR,  
PHILIPPINE CARABAO CENTER

DRAFTED BY: CFFSM  
REVISION: AS SHOWN

SHEET No.  
A-03  
03/23



**PHILIPPINE CARABAO CENTER**  
NATIONAL GENE POOL & HEADQUARTERS  
CLSU Cpd., Science City of Munoz, Nueva Ecija

PREPARED BY:

AR. ANA FRANCESCA C. DUCUSIN  
ARCHITECT I, LIVESTOCK ENGINEERING SECTION,  
PHILIPPINE CARABAO CENTER

PRC ID:

PTR NO:

ISSUED ON:

ISSUED AT:

CHECKED AND REVIEWED BY:

ENGR. CRIS GUZON  
HEAD, LIVESTOCK ENGINEERING SECTION,  
PHILIPPINE CARABAO CENTER

RECOMMENDING APPROVAL:

DR. LIZA G. BATTAD  
EXECUTIVE DIRECTOR,  
PHILIPPINE CARABAO CENTER - MUNOZ

PROJECT TITLE/LOCATION:

DAIRY PROCESSING FACILITY  
AND PRODUCTS OUTLET  
TUBOG BAHAG, BUNYONTE

APPROVED BY:

DR. LIZA G. BATTAD  
EXECUTIVE DIRECTOR,  
PHILIPPINE CARABAO CENTER

DRAFTED BY:

CFFSM

REVISION:

SHEET CONTENTS:

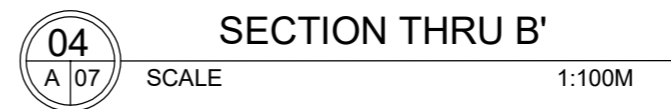
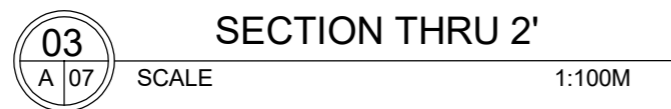
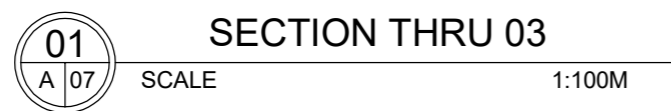
AS SHOWN

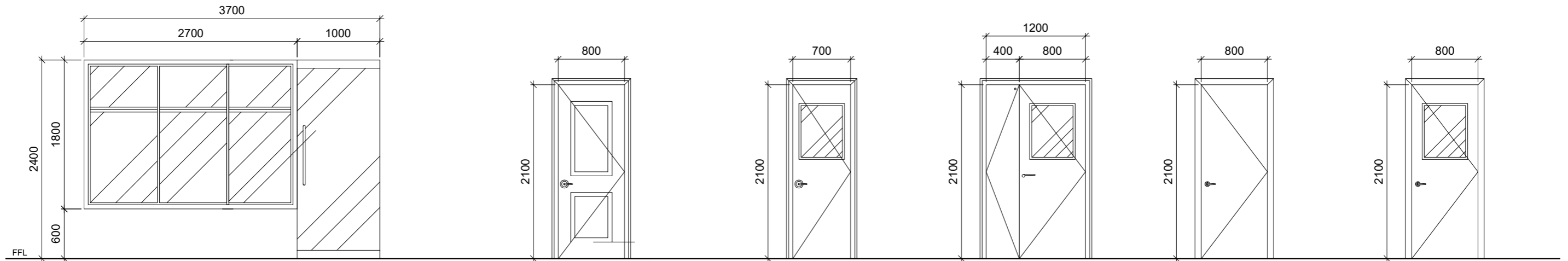
SHEET No.

A-04  
04 22

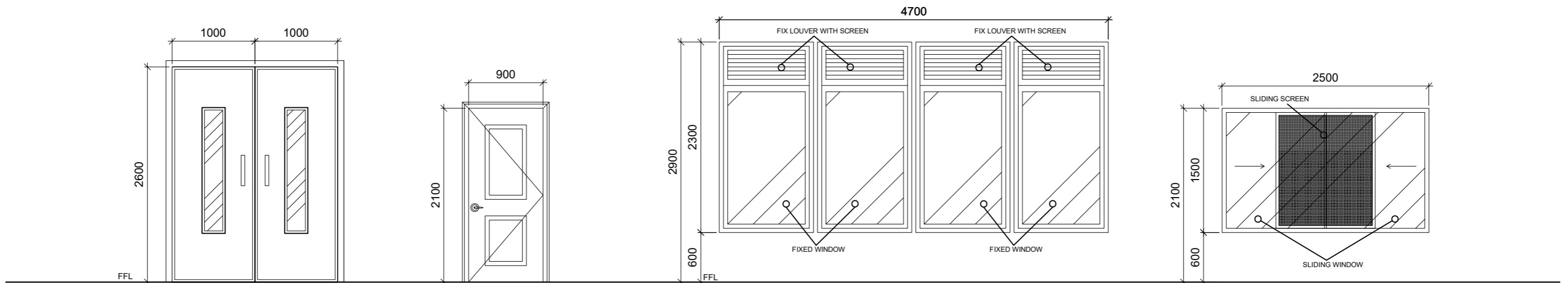








<b>D01</b> 1 SET	<b>D02</b> 1 SET	<b>D03</b> 1 SET	<b>D04</b> 1 SET (CONTROLLED DOOR)	<b>D05</b> 3 SETS	<b>D06</b> 1 SET
LOCATION: STORE OUTLET ENTRANCE	LOCATION: CR	LOCATION: CHANGING ROOM	LOCATION: MILK RECEIVING AREA	LOCATION: STORAGE AREAS (PROCESSING)	LOCATION: STORE OUTLET
DESCRIPTION: ANALOK ALUMINUM TOP AND BOT FRAMED 12MM THK ORDINARY CLEAR GLASS SWING DOOR	DESCRIPTION: WOOD PANEL DOOR IN SOLID WOOD JAMB	DESCRIPTION: FIRE RATED HOLLOW CORE (HONEYCOMB) STEEL DOOR W/ CLEAR GLASS PEEK WINDOW IN STEEL JAMB	DESCRIPTION: FIRE RATED HOLLOW CORE (HONEYCOMB) STEEL DOOR W/ CLEAR GLASS PEEK WINDOW IN STEEL JAMB	DESCRIPTION: FIRE RATED HOLLOW CORE (HONEYCOMB) STEEL DOOR W/ INTUMESCENT STRIP IN STEEL JAMB	DESCRIPTION: FIRE RATED HOLLOW CORE (HONEYCOMB) STEEL DOOR W/ PASS-IN SWING TYPE WINDOW
HARDWARE: 2 - HEAVY DUTY STAINLESS STEEL PIVOT HINGES, AUTO-CLOSING; STAINLESS STEEL PULL HANDLE; STAINLESS STEEL FOOT BOLT/ LOCKSET	HARDWARE: 3 - STAINLESS STEEL BALL BEARING HINGES; STAINLESS STEEL LEVER TYPE LOCKSET AND STAINLESS STEEL DEADBOLT; STAINLESS STEEL SURFACE MOUNTED DOOR CLOSER	HARDWARE: 3 - STAINLESS STEEL BALL BEARING HINGES; STAINLESS STEEL PRIVACY LOCKSET	HARDWARE: 4 - STAINLESS STEEL BALL BEARING HINGES; STAINLESS STEEL LEVER-TYPE LOCKSET; STAINLESS STEEL SURFACE MOUNTED DOOR CLOSER; INTUMESCENT STRIP	HARDWARE: 4 - STAINLESS STEEL BALL BEARING HINGES; STAINLESS STEEL LEVER-TYPE LOCKSET; STAINLESS STEEL SURFACE MOUNTED DOOR CLOSER	HARDWARE: 4 - STAINLESS STEEL BALL BEARING HINGES; STAINLESS STEEL LEVER-TYPE LOCKSET; STAINLESS STEEL SURFACE MOUNTED DOOR CLOSER





<b>D07</b> 1 SET	<b>D08</b> 1 SET	<b>W01</b> 1 SET	<b>W02</b> 1 SET
LOCATION: PROCESSING AREA	LOCATION: OFFICE	LOCATION: PROCESSING AREA	LOCATION: PROCESSING AREA
DESCRIPTION: DOUBLE DOOR - FIRE RATED HOLLOW CORE (HONEYCOMB) STEEL DOOR W/ CLEAR GLASS PEEK WINDOW IN STEEL JAMB	DESCRIPTION: WOOD PANEL DOOR IN SOLID WOOD JAMB	DESCRIPTION: ANALOK ALUMINUM FRAMED FIX LOUVER & FIX STAINLESS STEEL WIRE 20-MESH (20 HOLES IN 1 INCH) ON THE BACK SIDE OF LOUVER , BLADE THICKNESS 0.6MM-1.5MM ANALOK ALUMINUM FRAMED 8MM THK FIX GLASS WINDOW	DESCRIPTION: ALUMINUM FRAMED 4.5MM THK CLEAR SLIDING GLASS WINDOW WITH ALUMINUM FRAMED SLIDING STAINLESS STEEL WIRE 20-MESH (20 HOLES IN 1 INCH) SCREEN
HARDWARE: STAINLESS STEEL BALL BEARING HINGES; STAINLESS STEEL PULL HANDLE; STAINLESS STEEL FOOT BOLT/LOCKSET.	HARDWARE: 3 - STAINLESS STEEL BALL BEARING HINGES; STAINLESS STEEL LEVER TYPE LOCKSET AND STAINLESS STEEL DEADBOLT; STAINLESS STEEL SURFACE MOUNTED DOOR CLOSER	HARDWARE:	HARDWARE: STANDARD ALUMINUM WINDOW LOCKSET

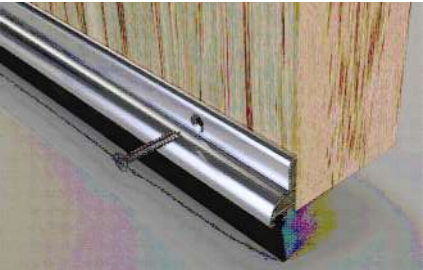
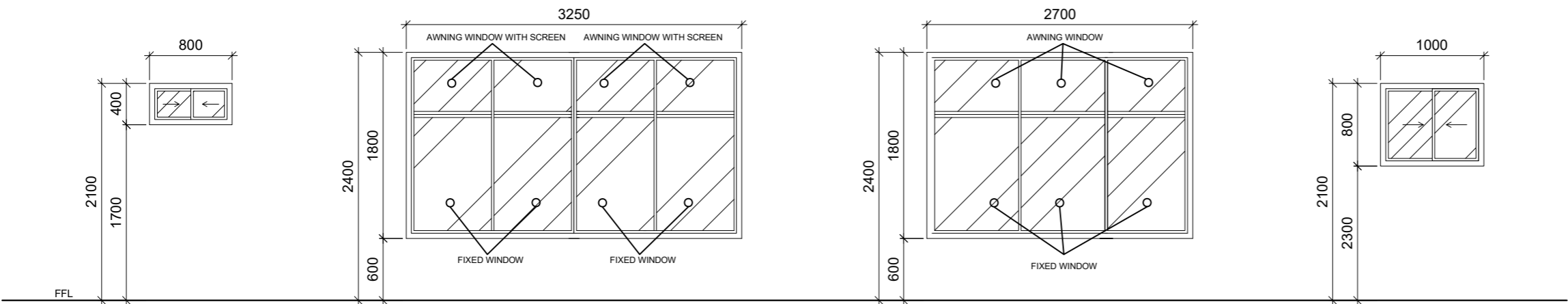


## SCHEDULE OF DOORS AND WINDOWS

SCALE

1:50M

	<b>PHILIPPINE CARABAO CENTER</b> NATIONAL GENE POOL & HEADQUARTERS  CLSU Cpd., Science City of Munoz, Nueva Ecija	PREPARED BY:		CHECKED AND REVIEWED BY:	RECOMMENDING APPROVAL:	PROJECT TITLE/LOCATION:	APPROVED BY:	DRAFTED BY:	SHEET CONTENTS:	SHEET No.
		AR. ANA FRANCESCA C. DUCUSIN ARCHITECT I, LIVESTOCK ENGINEERING SECTION, PHILIPPINE CARABAO CENTER	PRC ID:	ENGR. CRIS GUZON HEAD, LIVESTOCK ENGINEERING SECTION, PHILIPPINE CARABAO CENTER	DR. CECILIO G. VELEZ CENTER CHIEF PHILIPPINE CARABAO CENTER - MLPC	DAIRY PROCESSING FACILITY AND PRODUCTS OUTLET  TUBOD, LANA O DEL NORTE	DR. LIZA G. BATTAD EXECUTIVE DIRECTOR, PHILIPPINE CARABAO CENTER	CFFSM	AS SHOWN	
			PTR NO:					REVISION:		
			ISSUED ON:							
			ISSUED AT:							



NOTE:  
ON THE PROCESSING AREA IT IS REQUIRED TO INSTALL  
ALUMINUM RUBBER BOTTOM DOOR SEAL ON EVERY DOOR.

<b>W03</b>	3 SET	<b>W04</b>	1 SET	<b>W05</b>	1 SET	<b>W06</b>	2 SET
LOCATION:	CHANGING ROOM, CR, STORAGE	LOCATION:	STORE OUTLET	LOCATION:	STORE OUTLET	LOCATION:	OFFICE AREA
DESCRIPTION:	ANALOK ALUMINUM FRAMED 4.5MM THK CLEAR SLIDING GLASS WINDOW WITH ALUMINUM FRAMED SLIDING STAINLESS STEEL WIRE 20-MESH (20 HOLES IN 1 INCH) SCREEN	DESCRIPTION:	ANALOK ALUMINUM FRAMED 8MM THK CLEAR AWNING WITH STAINLESS STEEL WIRE 20-MESH (20 HOLES IN 1 INCH) SCREEN AND FIXED GLASS WINDOW	DESCRIPTION:	ANALOK ALUMINUM FRAMED 8MM THK CLEAR AWNING WITH STAINLESS STEEL WIRE 20-MESH (20 HOLES IN 1 INCH) SCREEN FIXED GLASS WINDOW	DESCRIPTION:	ANALOK ALUMINUM FRAMED 4.5MM THK CLEAR SLIDING GLASS WINDOW WITH ALUMINUM FRAMED SLIDING STAINLESS STEEL WIRE 20-MESH (20 HOLES IN 1 INCH) SCREEN
HARDWARE:	STANDARD ALUMINUM WINDOW LOCKSET	HARDWARE:	STANDARD ALUMINUM WINDOW LOCKSET	HARDWARE:	STANDARD ALUMINUM WINDOW LOCKSET	HARDWARE:	STANDARD ALUMINUM WINDOW LOCKSET



SCHEDULE OF DOORS AND WINDOWS

SCALE

1:50M

FINISHING SCHEDULE					
AREA/ROOM	FLOOR FINISH	CEILING FINISH	WALL FINISH		REMARKS
			INTERIOR WALL FINISH	EXTERIOR WALL FINISH	
PRODUCTS OUTLET	40X40CM POLISHED GRANITE FLOOR TILES	FIBER CEMENT BOARD ON METAL FURRING IN FLAT ACRYLIC PAINT FINISH (WHITE)	SUN & RAIN SR+418 LOVELY DAYS OR SIMILAR	SR+418 LOVELY DAYS OR SIMILAR, CHOCO BROWN SR-933 OR SIMILAR	
PROCESSING AREA	HEAVY DUTY POLYURETHANE PAINT (GRAY )	60CM x 60CM MOISTURE-RESISTANT ACOUSTIC CEILING ON METAL T-RUNNERS (WHITE)	PAINT FINISH, SEMI-GLOSS LATEX WHITE	SR+418 LOVELY DAYS OR SIMILAR, CHOCO BROWN SR-933 OR SIMILAR	150MM BASEBOARD HEAVY DUTY POLYURETHANE PAINT (GRAY )
CHANGING AREA	HEAVY DUTY POLYURETHANE PAINT (GRAY )	60CM x 60CM MOISTURE-RESISTANT ACOUSTIC CEILING ON METAL T-RUNNERS (WHITE)	PAINT FINISH, SEMI-GLOSS LATEX WHITE	SR+418 LOVELY DAYS OR SIMILAR, CHOCO BROWN SR-933 OR SIMILAR	150MM BASEBOARD HEAVY DUTY POLYURETHANE PAINT (GRAY )
STORAGE	HEAVY DUTY POLYURETHANE PAINT (GRAY )	60CM x 60CM MOISTURE-RESISTANT ACOUSTIC CEILING ON METAL T-RUNNERS (WHITE)	PAINT FINISH, SEMI-GLOSS LATEX WHITE	SR+418 LOVELY DAYS OR SIMILAR, CHOCO BROWN SR-933 OR SIMILAR	150MM BASEBOARD HEAVY DUTY POLYURETHANE PAINT (GRAY )
OFFICE	40X40CM POLISHED GRANITE FLOOR TILES	60CM x 60CM MOISTURE-RESISTANT ACOUSTIC CEILING ON METAL T-RUNNERS (WHITE)	PAINT FINISH, SEMI-GLOSS LATEX WHITE	SR+418 LOVELY DAYS OR SIMILAR, CHOCO BROWN SR-933 OR SIMILAR	150MM BASEBOARD HEAVY DUTY POLYURETHANE PAINT (GRAY )
COMFORT ROOM	30X30CM FLOOR TILES	FIBER CEMENT BOARD ON METAL FURRING IN FLAT ACRYLIC PAINT FINISH (WHITE)	30X30CM WALL TILES (1.5M HEIGHT FROM FFL), PAINT THE REMAINING WALL.	SR+418 LOVELY DAYS OR SIMILAR, CHOCO BROWN SR-933 OR SIMILAR	
OUTSIDE FLOOR & CEILING	SMOOTH CEMENT FINISH	METAL SPANDREL (WHITE)			

	<b>PHILIPPINE CARABAO CENTER</b> NATIONAL GENE POOL & HEADQUARTERS  CLSU Cpd., Science City of Munoz, Nueva Ecija	PREPARED BY:		CHECKED AND REVIEWED BY:		RECOMMENDING APPROVAL:		PROJECT TITLE/LOCATION:		APPROVED BY:		DRAFTED BY:	SHEET CONTENTS:	SHEET No. 
		AR. ANA FRANCESCA C. DUCUSIN		ENGR. CRIS GUZON		DR. CECILIO G. VELEZ		DAIRY PROCESSING FACILITY AND PRODUCTS OUTLET		DR. LIZA G. BATTAD		CFFSM	AS SHOWN	
		ARCHITECT I, LIVESTOCK ENGINEERING SECTION, PHILIPPINE CARABAO CENTER		HEAD, LIVESTOCK ENGINEERING SECTION, PHILIPPINE CARABAO CENTER		CENTER CHIEF PHILIPPINE CARABAO CENTER - MLPC		TUBOD, LANA O DEL NORTE		EXECUTIVE DIRECTOR, PHILIPPINE CARABAO CENTER		REVISION:		
		PTR NO: ISSUED ON: ISSUED AT:												



**PHILIPPINE CARABAO CENTER**  
**NATIONAL GENE POOL & HEADQUARTERS**  
CLSU Cpd., Science City of Munoz, Nueva Ecija

PREPARED BY:

AR. ANA FRANCESCA C. DUCUSIN  
ARCHITECT I, LIVESTOCK ENGINEERING SECTION,  
PHILIPPINE CARABAO CENTER

ISSUED A

CHECKED AND REVIEWED BY:

ENGR. CRIS GUZON  
HEAD, LIVESTOCK ENGINEERING SECTION,  
PHILIPPINE CARABAO CENTER

RECOMMENDING APPROVAL:

DR. CECILIO G. VELEZ  
CENTER CHIEF  
PHILIPPINE CARABAO CENTER - MLPC

PROJECT TITLE/LOCATION:
-------------------------

DAIRY PROCESSING FACILITY  
AND PRODUCTS OUTLET

TUBOD, LANA O DEL NORTE

APPROVED BY:

**DR. LIZA G. BATTAD**  
EXECUTIVE DIRECTOR,  
PHILIPPINE CARABAO CENTER

**DRAFTED BY:**

CFFSM
REVISION:

REVISION:

--	--

--	--

: SHEET CONTENTS

AS SHOWN

SHEET No.





STRUCTURAL NOTES

A. GENERAL

1. CONSTRUCTION NOTES AND TYPICAL DETAILS APPLY TO ALL DRAWINGS UNLESS OTHERWISE SHOWN OR NOTED. MODIFY TYPICAL DETAILS AS DIRECTED TO MEET SPECIAL CONDITIONS.
2. SHOP DRAWINGS WITH ERECTION AND PLACING DIAGRAM OF ALL STRUCTURAL STEEL, MISCELLANEOUS IRON, PRE-CAST CONCRETE ETC. SHALL BE SUBMITTED FOR ENGINEER'S APPROVAL BEFORE FABRICATION.
3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS BEFORE ALL WORK IS TO BEGIN, CHECK WITH MECHANICAL AND ELECTRICAL CONTRACTORS FOR CONDUITS, PIPE SLEEVES, ETC. TO BE EMBEDDED IN CONCRETE.
4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ADEQUATE SHORINGS AND BRACINGS OF THE STRUCTURE FOR ALL LOADS THAT MAYBE IMPOSED DURING CONSTRUCTION.

B. CONCRETE & REINFORCEMENT

1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM WITH THE LATEST BULDING CODE OF AMERICAN CONCRETE INSTITUTE (ACI-318).
2. ALL CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH AT THE END OF TWENTY EIGHT (28) DAYS WITH CORRESPONDING MAXIMUM SIZE AGGREGATE AND SLUMPS AS FOLLOWS :

LOCATION	28 DAYS STRENGTH	MAX. SIZE AGGREGATE	MAX. SLUMP
LEDGE & SLAB ON GRADE	3000 PSI	1 IN. (25MM.)	4 IN. (100MM.)
FOUNDATION	3000 PSI	1 IN. (25MM.)	4 IN. (100MM.)
WALL FOOTING	3000 PSI	1 IN. (25MM.)	4 IN. (100MM.)
COLUMN	3000 PSI	1 IN. (25MM.)	4 IN. (100MM.)
BEAMS & SLABS	3000 PSI	1 IN. (25MM.)	4 IN. (100MM.)

3. ALL REINFORCING BARS SHALL CONFORM TO ASTM A615 GRADE 60 FOR DIA. 16 AND LARGER BARS AND GRADE 40 FOR DIA. 12 AND SMALLER BARS.
4. IN GENERAL, THE LATEST EDITION OF ACI-315, MANUAL OF STANDARD PRACTICE DETAILING REINFORCED CONCRETE STRUCTURES SHALL BE ADHERED TO, UNLESS OTHERWISE SHOWN OR NOTED.
5. MAINTAIN MINIMUM CONCRETE COVER FOR REINFORCING STEEL AS FOLLOWS:

SUSPENDED SLABS .....	3/4 IN. ( 19 MM. )
SLAB ON GRADE .....	1 1/2 IN. ( 38 MM. )
WALLS ABOVE GRADE .....	1 IN. ( 25 MM. )
BEAM STIRRUPS AND COLUMN TIES .....	1 1/2 IN. ( 38 MM. )
WHERE CONCRETE IS EXPOSED TO EARTH BUT POURED AGAINST FORMS .....	2 IN. ( 50 MM. )
WHERE CONCRETE IS DEPOSITED DIRECTLY AGAINST EARTH .....	3 IN. ( 75 MM. )

6. SPLICES SHALL BE SECURELY WIRED TOGETHER AND SHALL LAP OR EXTEND IN
7. ALL CONCRETE SHALL BE KEPT MOIST FOR A MINIMUM OF SEVEN (7) CONSECUTIVE DAYS IMMEDIATELY AFTER POURING BY THE USE OF WET BURLAP, FOG SPRAYING, CURING COMPOUNDS OR OTHER APPROVED METHODS.
8. STRIPPING OF FORMS AND SHORES:
- |   |         |
|---|---------|
| FOUNDATION .....  | 24 HRS. |
| SUSPENDED SLAB EXCEPT WHEN ADDITIONAL LOADS ARE IMPOSED ..... | 28 DAYS |
| WALLS .....   | 18 HRS. |
| BEAMS .....   | 14 DAYS |

C. FOOTINGS

1. UNLESS OTHERWISE INDICATED IN THE PLANS, THE ALLOWABLE SOIL PRESSURE SHALL BE AT LEAST 2000 PSF.
2. FOUNDATION SHALL REST ON NATURAL SOIL, UNLESS OTHERWISE NOTED BY THE ENGINEER, **NO PART OF THE FOUNDATION SHALL REST ON FILL. (PROVIDE 1m MINIMUM EMBEDMENT FROM NATURAL SOIL LEVEL AND BELOW).**
3. TO MAKE SURE OF THE DEPTH OF EXCAVATION, THE CONTRACTOR SHALL EXCAVATE FIRST AT LEAST FOUR (4) FOOTINGS LOCATED AT THE CORNERS OF THE PROPOSED BUILDING. THE DEPTH OF THE EXCAVATION SHALL BE CONFIRMED BY THE STRUCTURAL ENGINEER AS BASIS OF EXCAVATION FOR ALL OTHER FOOTINGS
4. THE STRUCTURAL ENGINEER SHALL BE INFORMED OF ANY DEVIATION OF THE SOIL LAYERING AS COMPARED TO THE FIRST FOUR (4) EXCAVATION
5. EXISTING UNDERGROUND PIPES, TUNNELS ETC. SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER FOR EVALUATION
6. ANY EXCAVATION ADJACENT TO ANY EXISTING STRUCTURE SHALL BE PROVIDED WITH ADEQUATE SHEET PILING BY THE CONTRACTOR. THE SHEET PILES SHALL BE PROPERLY DESIGNED TO RESIST THE EARTH AND WATER PRESSURES AS WELL AS SURCHARGED LOADINGS ON THE FOOTINGS OF THE ADJACENT EXISTING STRUCTURES.
7. UNLESS OTHERWISE SPECIFIED BY THE STRUCTURAL ENGINEER, THE CHB WALL FOOTING SHALL BE AS SHOWN IN THE STRUCTURAL PLAN
8. R.C. SLABS ON FILL SHALL BE 0.15 M THICK WITH 12MM REINFORCING BARS AT 0.30M O.C. EACH WAY UNLESS OTHERWISE SPECIFIED IN THE PLANS
9. PARKING SIDEWALKS ETC., SHALL BE COMPACTED 90% COMPACTION IN LAYERS OF 0.30M UNLESS OTHERWISE SPECIFIED BY THE STRUCTURAL ENGINEER.

D. REINFORCED CONCRETE SLABS

1. UNLESS OTHERWISE NOTED IN THE PLANS OR SPECIFICATIONS, CAMBER ALL R.C. SLABS 3mm FOR EVERY 3,300mm OF THE SHORTER SPAN
2. IF SLABS ARE REINFORCED BOTHWAYS, BARS ALONG THE SHORTER SPAN SHALL BE PLACED BELOW THOSE ALONG THE LONGER SPAN AT THE CENTER AND OVER THE LONGER BARS NEAR THE SUPPORTS
3. LENGTHS OF BAR CUT-OFFS SHALL BE AS SHOWN IN THE STRUCTURAL PLANS
4. FOR FLAT SLABS, LONG SPAN BOTTOM BARS SHALL BE PLACED BELOW THE SHORT SPAN BARS AND TOP BARS, VICE VERSA
5. CONCRETE COVERING SHALL BE 20mm CLEAR FOR TOP AND BOTTOM BARS
6. UNLESS OTHERWISE SPECIFIED BY THE STRUCTURAL ENGINEER, BAR CHAIRS SHALL BE PROVIDED AT LEAST 600mm EACH WAY TO SUPPORT THE TOP AND BOTTOM BARS SEPARATELY.

E. CHB WALLS

1. UNLESS OTHERWISE SPECIFIED, THE VERTICAL AND HORIZONTAL REINFORCEMENTS FO CHB SHALL BE 12MM AT 0.40M O.C. FOR WALL THICKNESS, LAP SPLICES SHALL BE 0.30M LONG (MINIMUM)
2. LINTEL BEAMS TO BE USED SHALL BE (t x 0.20M) REINFORCED BY 4-12MM BARS WITH 10MM AT 0.30M. O.C. TIES WHERE "t" IS THE CHB WALL THICKNESS.
3. LINTEL BEAMS SHALL BE PROVIDED AT THE TOP OF CHB WALL OPENINGS. IT SHALL BE EXTENDED AT LEAST 0.20M BEYOND OPENINGS
4. FOR HIGH WALLS, LINTEL BEAMS SHALL BE PROVIDED AT 3.00m O.C.
5. FOR LONG WALLS, LINTEL BEAMS ACTING AS COLUMN SHALL BE PROVIDED AT 3.0m O.C.
6. WHERE CHB WALL ADJOINS R.C. COLUMN AND BEAMS PRIOR TO POURING TO MATCH CHB WALL REINFORCEMENT, THE DOWEL SHALL BE 12mm BARS AT 0.40m O.C.
7. WHERE THE TOP CHB WALL ADJOINS A BEAM, PROVIDE A 25mm TO FILLED WITH SOFT MATERIAL LIKE BACKER ROD AND SEALANT.
8. WHERE COLUMNS AND BEAMS ARE TO BE POURED WITHOUT CHB WALL DOWEL PROVIDE RAMPSETS AND 16 GA GALVANIZED STEEL STRAPS 0.40m O.C. NO CHIPPING OF CONCRETE COLUMNS AND BEAMS IS ALLOWED UNLESS OTHERWISE PERMITTED BY THE STRUCTURAL ENGINEER.

F. STRUCTURAL TOLERANCES

UNLESS OTHERWISE SPECIFIED BY THE STRUCTURAL ENGINEER THE FOLLOWING ARE ACCEPTABLE STRUCTURAL TOLERANCES FOR CAST-IN-PLACE CONCRETE CONTRUCTION. ALL DIMENSION WHICH ARE NOT WITHIN THE REQUIRED TOLERANCES SHALL BE CORRECTED PRIOR TO POURING OF CONCRETE. TOLERANCES FOR PRE-CAST CONCRETE CONSTRUCTION SHALL ½ OF THE VALUES GIVEN BELOW

- 1.A CROSS SECTIONAL DIMENSIONS AND LOCATION OF REINFORCEMENTS, PRE-STRESSING STEEL AND PRE-STRESSING STEEL DUCTS
- |                            |          |
|----------------------------|----------|
| DIMENSIONS LESS THAN 200mm | +/- 6mm  |
| 200mm TO 600mm             | +/- 9mm  |
| OVER 600mm                 | +/- 12mm |
- 2.B. MEMBER LENGTH OR HEIGHT +/- 6mm PER 3.0m (MAXIMUM LIMITATION = 12mm)
- 3.C. DEVIATION FROM STRAIGHT LINE (SWEEP AND / OR PLUMBERS ) +/- 6mm PER 3.0m
- 4.D. LOCATION OF BAR CUT-OFFS OR BENDS +/- 50mm

G. CONSTRUCTION JOINTS

1. CONSTRUCTION JOINTS SHALL BE LOCATED NEAR THE MIDDLE OF THE SPAN OF SLABS,, BEAMS OR GIRDERS
2. AT BEAM / GIRDER INTERSECTION, THE CONSTRUCTION JOINT ON THE GIRDER SHALL BE OFFSET AT A DISTANCE EQUAL TO TWICE THE WIDTH OF THE BEAM. DIAGONAL BARS SHALL BE PROVIDED TO RESIST 100% SHEAR OF THE CONSTRUCTION JOINT
3. CONSTRUCTION JOINTS IN COLUMN SHALL BE LOCATED A DISTANCE ABOVE THE FLOOR EQUAL TO MAXIMUM DIMENSION OR ¼ THE STORY HEIGHT
4. WHERE THE JOINT IS TO BE MADE, THE SURFACE OF THE CONCRETE SHALL BE THOROUGHLY WETTED AND COATED WITH NEAT CEMENT GROUT IMMEDIATELY BEFORE PLACING NEW CONCRETE
5. CONSTRUCTION JOINTS IN WALLS, SLABS AND OTHER STRUCTURES THAT ARE SUBJECTED TO WATER PRESSURE SHALL BE PROVIDED WITH WATER STOPS, KIND, TYPE AND SIZE OF WATER STOPS SHALL BE AS APPROVED BY THE ENGINEER

H. STANDARD HOOK

1. A STANDARD HOOK FOR REBARS IF REQUIRED SHALL BE EITHER OF THE FOLLOWING:
- 1.1. A SEMICIRCULAR TUM PLUS AN EXTENSION OF AT LEAST 4 DIA. BUT NOT LESS THAN 62mm AT THE FREE END OF THE BAR
- 1.2. A 90 DEG. TURN PLUS AN EXTENSION OF AT LEAST 12 DIA. AT THE FREE AND OF THE BAR
2. MINIMUM DIAMETER OF BEND MEASURED ON THE INSIDE OF THE BAR SHALL BE AS FOLLOW



10mm DIAMETER TO 25mm DIAMETER	6 DIA.
28mm DIAMETER TO 26mm DIAMETER	8 DIA.
NO. 14 TO NO. 18	10 DIA.

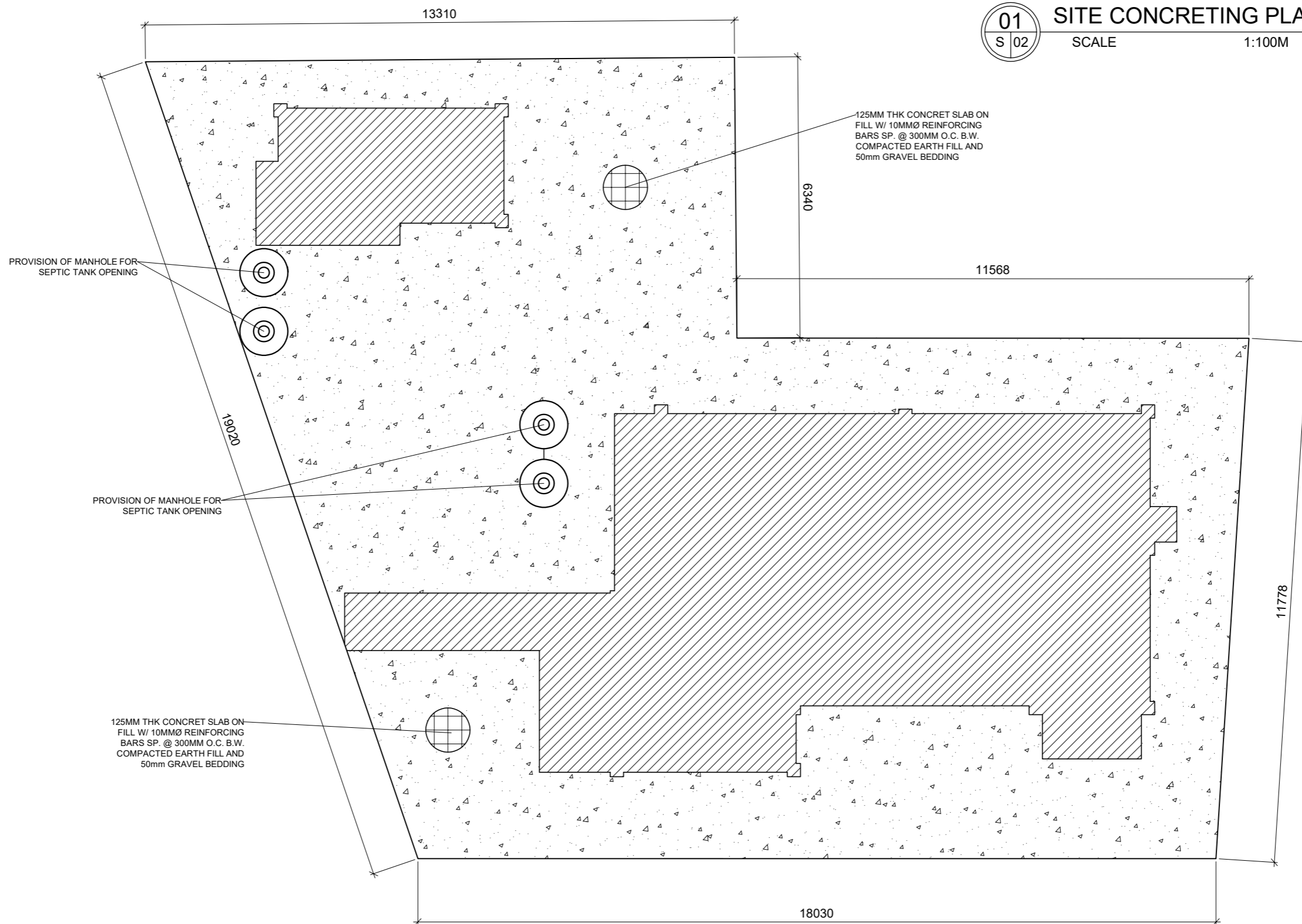
I. R.C. SLABS ON GROUND

UNLESS OTHERWISE SPECIFIED, THICKNESS AND REINFORCEMENT OF R.C. SLABS FOR DIFFERENT TYPES OF OCCUPANCY:



BAR SIZE	fc' = 20.7 MPa	fc' = 27.8 MPa
10	300	300
12	300	300
16	360	360
20	430	430
25	810	710
28	1,550	1,350
32	1,980	1,700
36	2,440	2,100

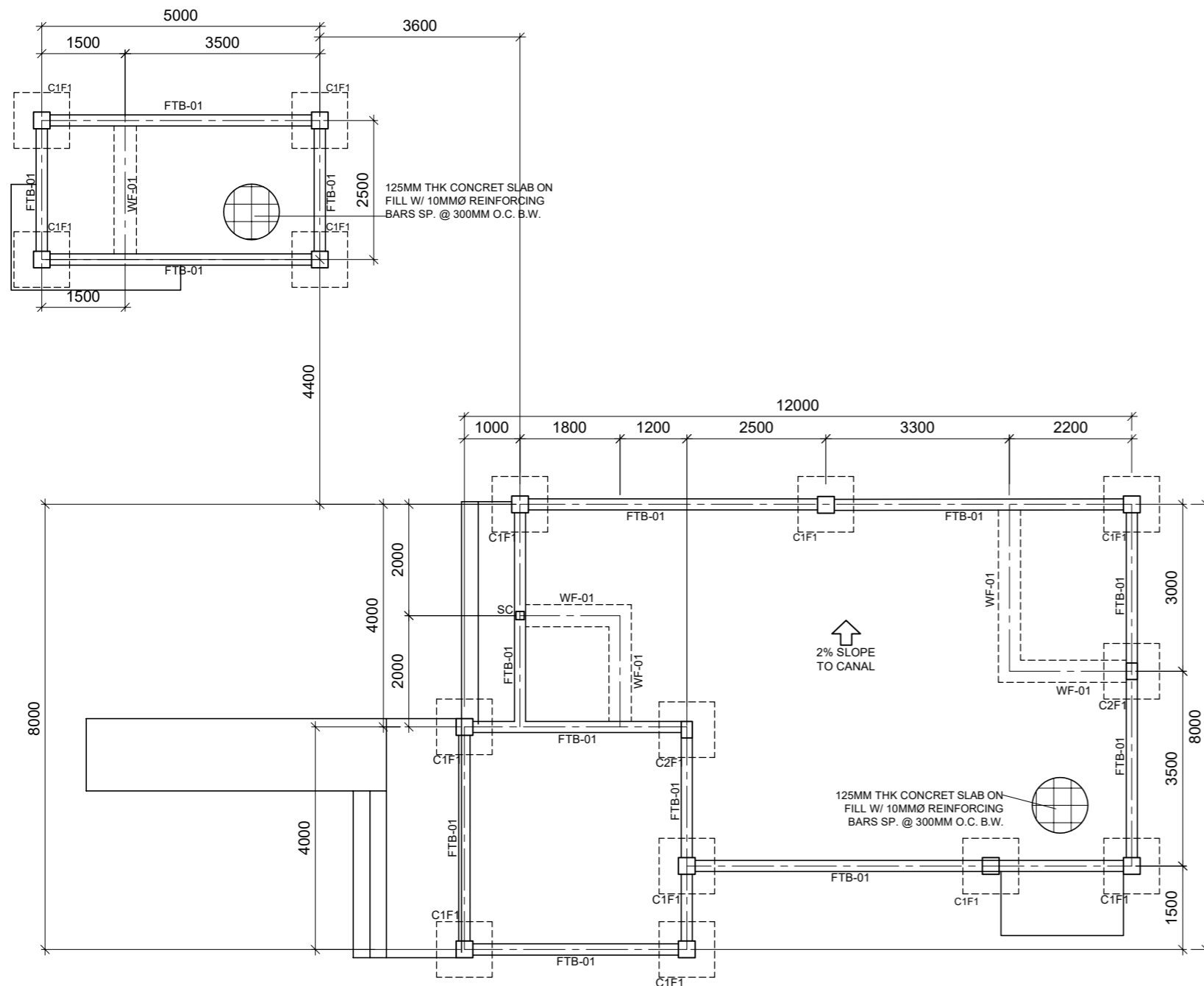
OCCUPANCY	ALLOWABLE LIVE LOAD	SLAB THICKNESS	REINFORCEMENT
DOMESTIC OR LIGHT COMMERCIAL	4.8 kPa	0.100 M	10mm DIAMETER @ 300mm B.W.
COMMERCIAL	7.2 kPa	0.123 M	10mm DIAMETER @ 300mm B.W.
INDUSTRIAL PLANTS, GAS STATIONS & GARAGES	24.0 kPa	0.150 M	12mm DIAMETER @ 300mm B.W.
INDUSTRIAL	48.0 kPa	0.200 M	12mm DIAMETER @ 300mm B.W. TOP & BOTTOM

	<b>PHILIPPINE CARABAO CENTER</b> NATIONAL GENE POOL & HEADQUARTERS  CLSU Cpd., Science City of Munoz, Nueva Ecija	PREPARED BY:		CHECKED AND REVIEWED BY:	RECOMMENDING APPROVAL:	PROJECT TITLE/LOCATION:	APPROVED BY:	DRAFTED BY:	SHEET CONTENTS:	SHEET No.
		ENGR. CHRISTOPHER FEBB F. SAN MIGUEL ENGINEER I, LIVESTOCK ENGINEERING SECTION, PHILIPPINE CARABAO CENTER	PRC ID:	ENGR. CRIS GUZON HEAD, LIVESTOCK ENGINEERING SECTION, PHILIPPINE CARABAO CENTER	DR. CECILIO G. VELEZ CENTER CHIEF PHILIPPINE CARABAO CENTER - MLPC	DAIRY PROCESSING FACILITY AND PRODUCTS OUTLET  TUBOD, LANA O DEL NORTE	DR. LIZA G. BATTAD EXECUTIVE DIRECTOR, PHILIPPINE CARABAO CENTER	CFFSM	AS SHOWN	
			PTR NO:					REVISION:		
			ISSUED ON:							
			ISSUED AT:							

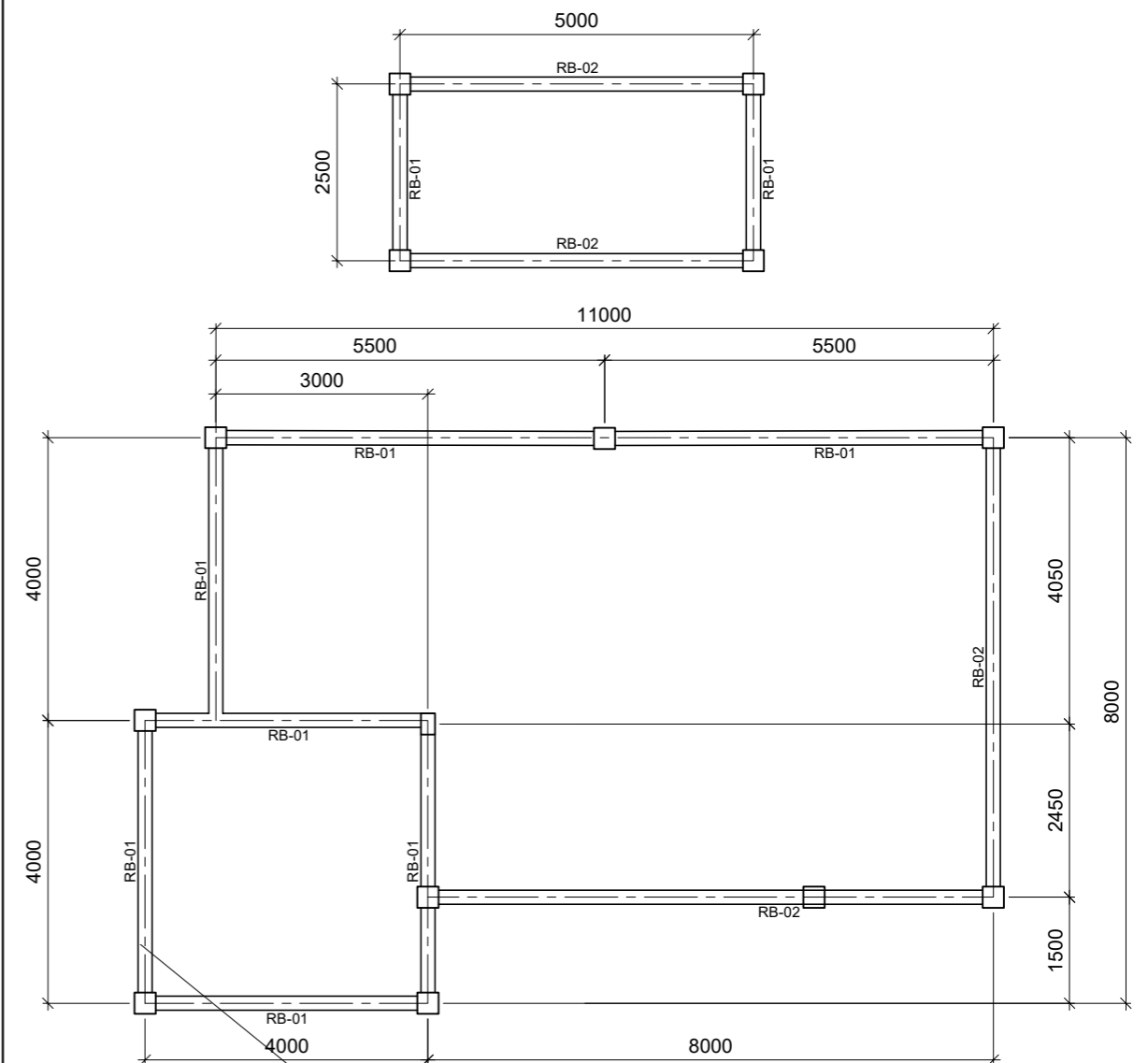


**01**  
S 02  
**SITE CONCRETING PLAN**  
SCALE 1:100M

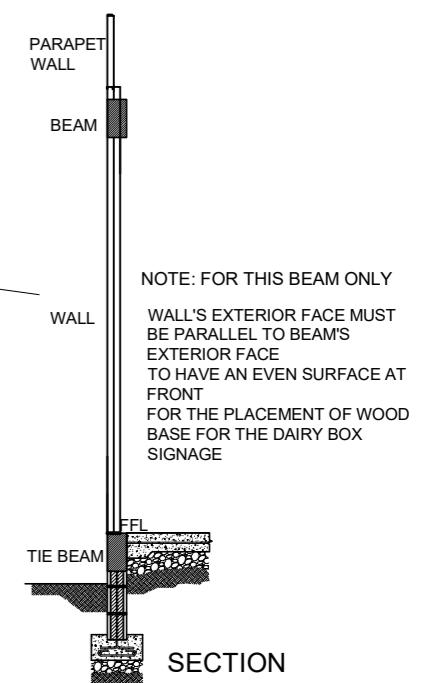
	<b>PHILIPPINE CARABAO CENTER</b> NATIONAL GENE POOL & HEADQUARTERS CLSU Cpd., Science City of Munoz, Nueva Ecija	PREPARED BY:		CHECKED AND REVIEWED BY:	RECOMMENDING APPROVAL:	PROJECT TITLE/LOCATION:	APPROVED BY:	DRAFTED BY:	SHEET CONTENTS:	SHEET No.
		ENGR. CHRISTOPHER FEBB F. SAN MIGUEL ENGINEER I, LIVESTOCK ENGINEERING SECTION, PHILIPPINE CARABAO CENTER		ENGR. CRIS GUZON HEAD, LIVESTOCK ENGINEERING SECTION, PHILIPPINE CARABAO CENTER	DR. CECILIO G. VELEZ CENTER CHIEF PHILIPPINE CARABAO CENTER - MLPC	DAIRY PROCESSING FACILITY AND PRODUCTS OUTLET TUBOD, LANA O DEL NORTE	DR. LIZA G. BATTAD EXECUTIVE DIRECTOR, PHILIPPINE CARABAO CENTER	CFFSM	AS SHOWN	
		PTR NO:		ISSUED ON:		REVISION:				
		ISSUED AT:								



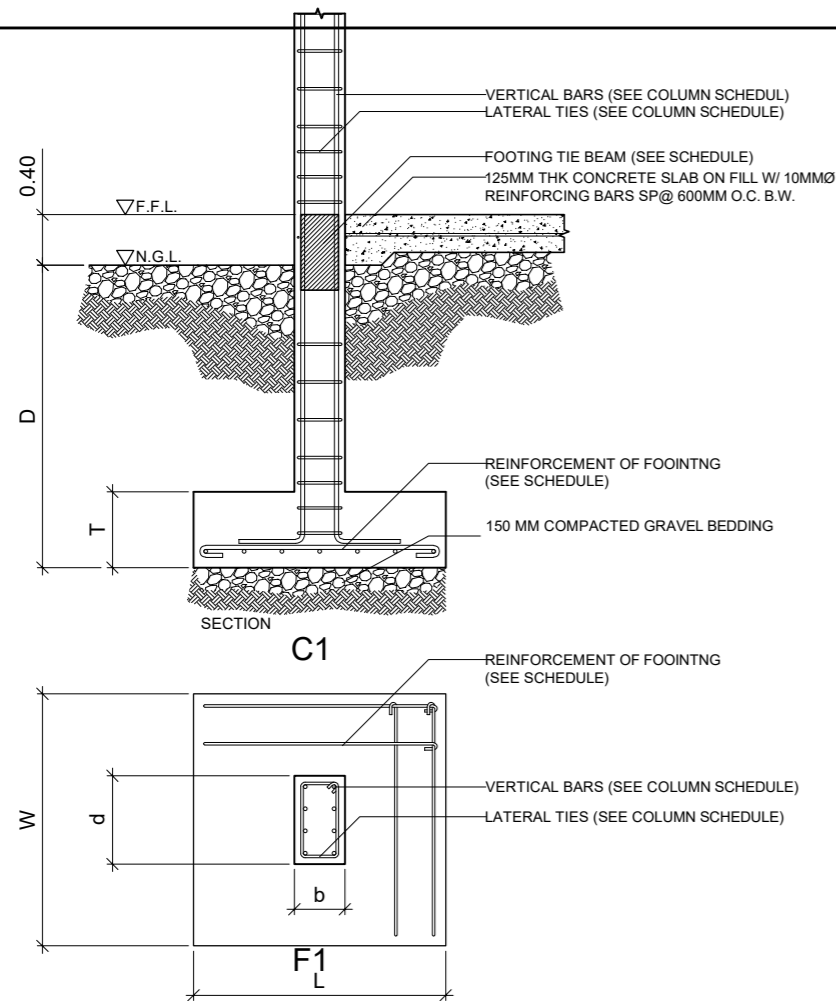
**01**  
S 03 FOUNDATION PLAN  
SCALE 1:100M



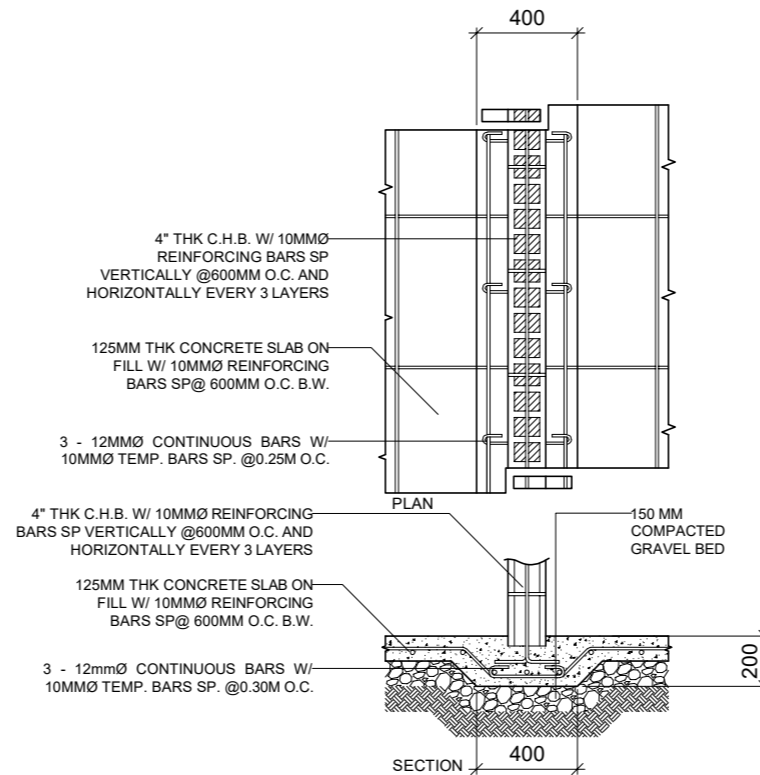
**02**  
S 03 ROOF BEAM PLAN  
SCALE 1:100M



	<b>PHILIPPINE CARABAO CENTER</b> <b>NATIONAL GENE POOL &amp; HEADQUARTERS</b> CLSU Cpd., Science City of Munoz, Nueva Ecija	PREPARED BY: ENGR. CHRISTOPHER FEBB F. SAN MIGUEL ENGINEER I, LIVESTOCK ENGINEERING SECTION, PHILIPPINE CARABAO CENTER	CHECKED AND REVIEWED BY: ENGR. CRIS GUZON HEAD, LIVESTOCK ENGINEERING SECTION, PHILIPPINE CARABAO CENTER	RECOMMENDING APPROVAL: DR. CECILIO G. VELEZ CENTER CHIEF PHILIPPINE CARABAO CENTER - MLPC	PROJECT TITLE/LOCATION: DAIRY PROCESSING FACILITY AND PRODUCTS OUTLET TUBOD, LANAO DEL NORTE	APPROVED BY: DR. LIZA G. BATTAD EXECUTIVE DIRECTOR, PHILIPPINE CARABAO CENTER	DRAFTED BY: CFFSM REVISION:	SHEET CONTENTS: AS SHOWN	SHEET No. <b>S-03</b> 14 23
--	---	---	---	--	---	--	-----------------------------------	-----------------------------	-----------------------------------



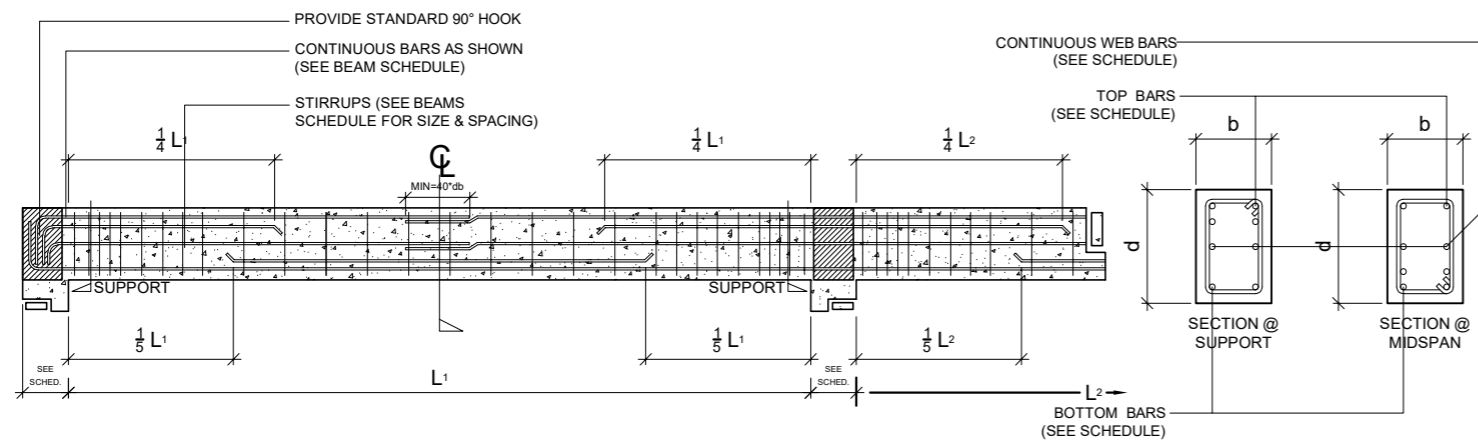
**01**  
S 04  
**TYP. COLUMN & FTG. DET.**  
SCALE NTS



**02**  
S 04  
**WALL FTG DETAILS**  
SCALE NTS

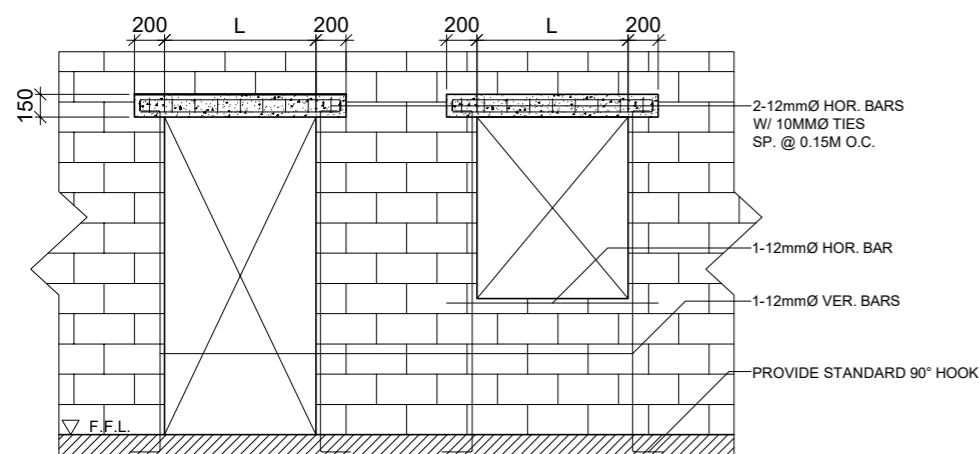
SCHEDULE OF COLUMNS				
COLUMN ID	b (MM)	d (MM)	VERTICAL	LAT. TIES
C1	300	300	8 - 16mmØ	10MMØ SP. 2@.05, 2@0.10, 2@.15 REST @ .20M. O.C.
C2	200	300	6 - 16mmØ	10MMØ SP. 2@.05, 2@0.10, 2@.15 REST @ .20M. O.C.
SC	150	150	4 - 16mmØ	10MMØ SP. 2@.05, 2@0.10, 2@.15 REST @ .20M. O.C.

SCHEDULE OF FOOTINGS				
FOOTING ID	L (MM)	W (MM)	T (MM)	D (MM)
F1	1000	1000	300	1500
				TEMP. BARS
				7 - 16mmØ BOTH WAYS



**03**  
S 04  
**TYP. BEAM DETAILS**  
SCALE NTS

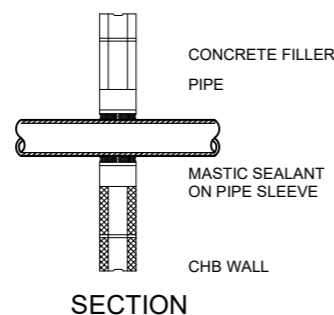
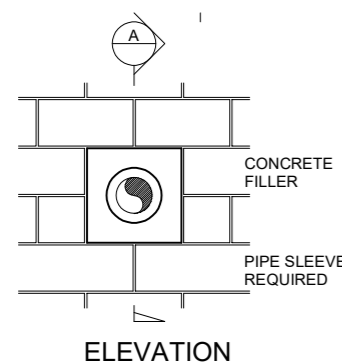
SCHEDULE OF BEAMS								
BEAM ID	b (MM)	d (MM)	@SUPPORT		@MIDSPAN		WEB BARS	STIRRUPS
			TOP BARS	BOT BARS	TOP BARS	BOT BARS		
FTB1	200	400	2 - 16mmØ	2 - 16mmØ	2 - 16mmØ	2 - 16mmØ	-	10MMØ SP. 4@.05, 2@0.10, 2@.15 REST @ .20M. O.C.
RB1	200	300	2 - 16mmØ	2 - 16mmØ	2 - 16mmØ	2 - 16mmØ	-	10MMØ SP. 4@.05, 2@0.10, 2@.15 REST @ .20M. O.C.
RB2	200	300	2 - 16mmØ	2 - 16mmØ	2 - 16mmØ	2 - 16mmØ	2 - 12MMØ	10MMØ SP. 4@.05, 2@0.10, 2@.15 REST @ .20M. O.C.



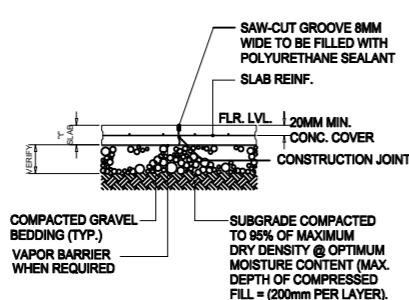
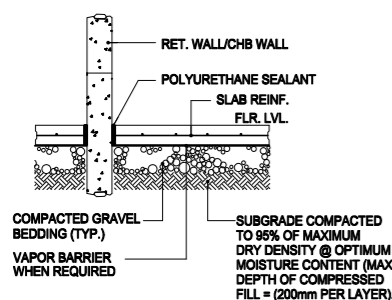
01  
S 05

## DOOR/WINDOW OPENING DETAILS

SCALE NTS



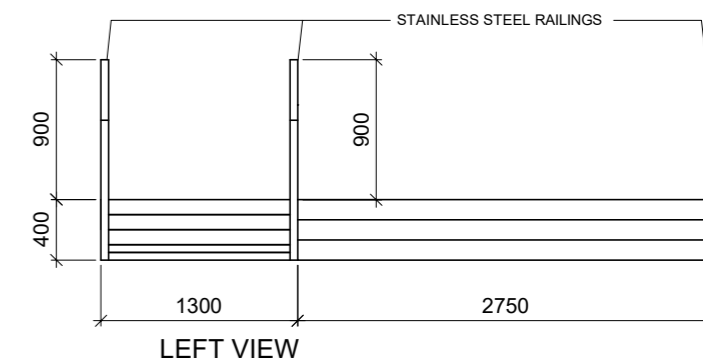
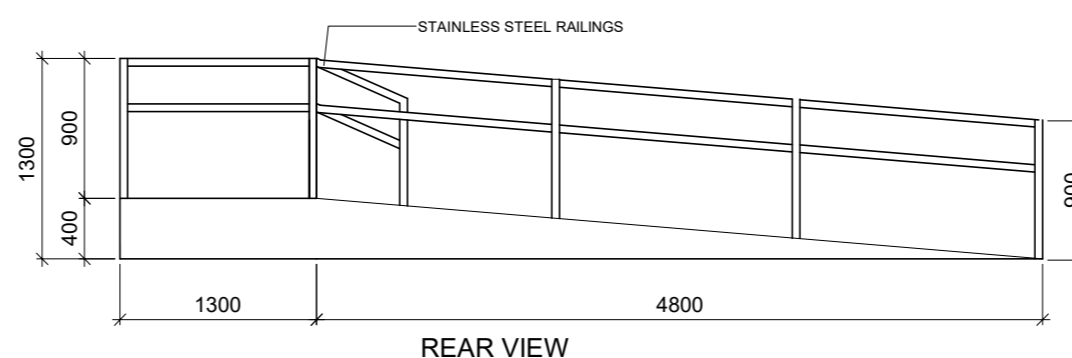
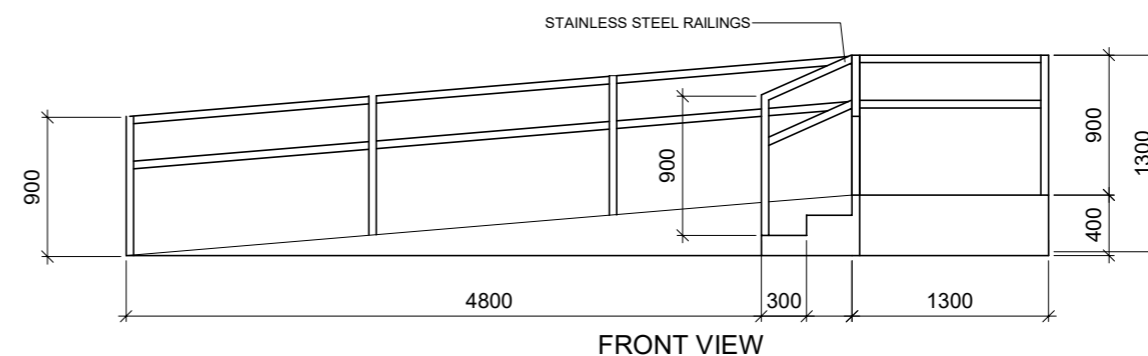
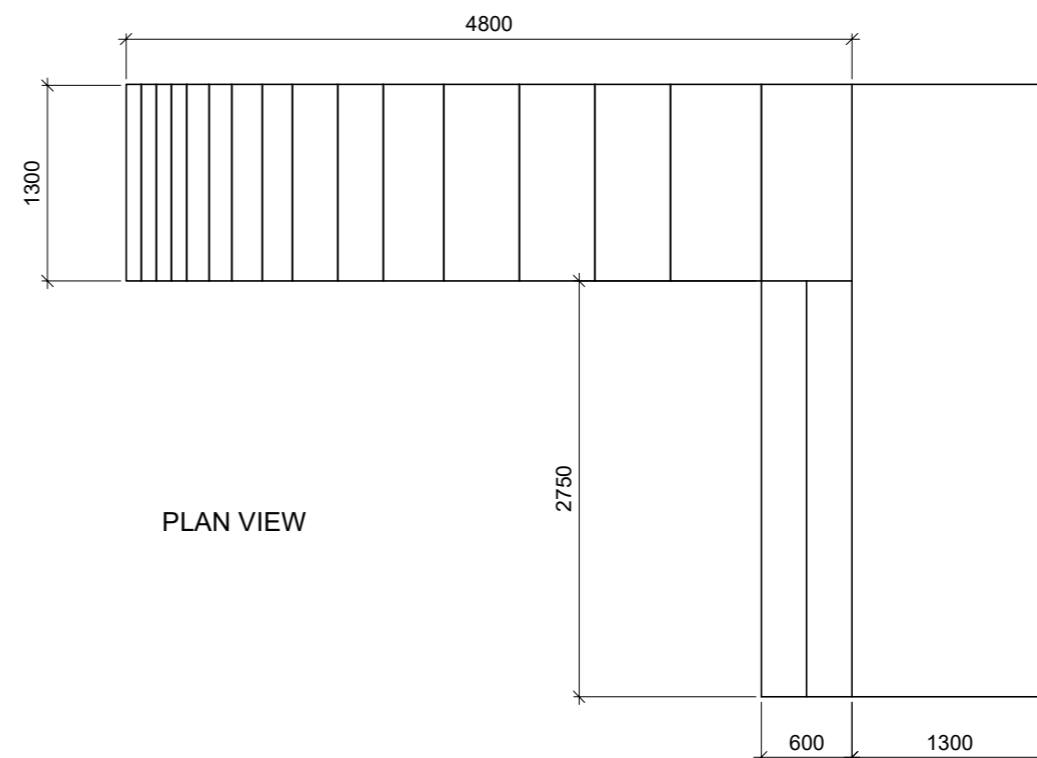
## PIPE SLEEVE THRU WALL



02  
S 05

## MISCELLANEOUS DETAILS

SCALE NTS



03  
S 05

## RAMP AND RAILINGS DETAILS

SCALE 1:100M



**PHILIPPINE CARABAO CENTER**  
NATIONAL GENE POOL & HEADQUARTERS  
CLSU Cpd., Science City of Munoz, Nueva Ecija

PREPARED BY:  
ENGR. CHRISTOPHER FEBB F. SAN MIGUEL  
ENGINEER I, LIVESTOCK ENGINEERING SECTION,  
PHILIPPINE CARABAO CENTER

PRC ID:  
PTR NO:  
ISSUED ON:  
ISSUED AT:

CHECKED AND REVIEWED BY:  
ENGR. CRIS GUZON  
HEAD, LIVESTOCK ENGINEERING SECTION,  
PHILIPPINE CARABAO CENTER

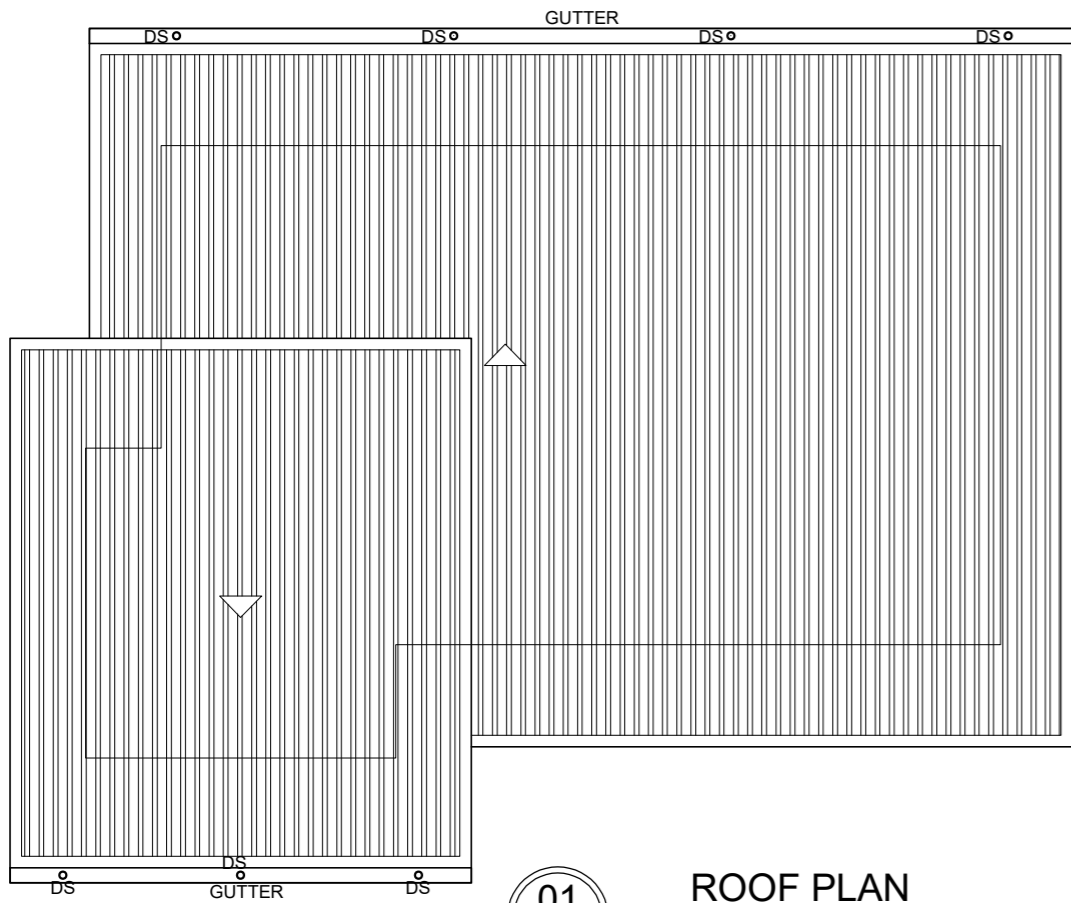
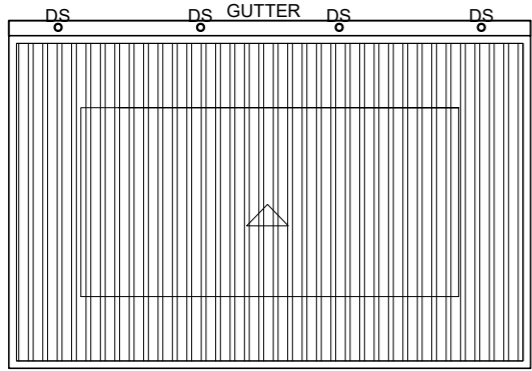
RECOMMENDING APPROVAL:  
DR. CECILIO G. VELEZ  
CENTER CHIEF  
PHILIPPINE CARABAO CENTER - MLPC

PROJECT TITLE/LOCATION:  
DAIRY PROCESSING FACILITY  
AND PRODUCTS OUTLET  
TUBOD, LANA O DEL NORTE

APPROVED BY:  
DR. LIZA G. BATTAD  
EXECUTIVE DIRECTOR,  
PHILIPPINE CARABAO CENTER

DRAFTED BY: SHEET CONTENTS:  
CFFSM AS SHOWN  
REVISION:

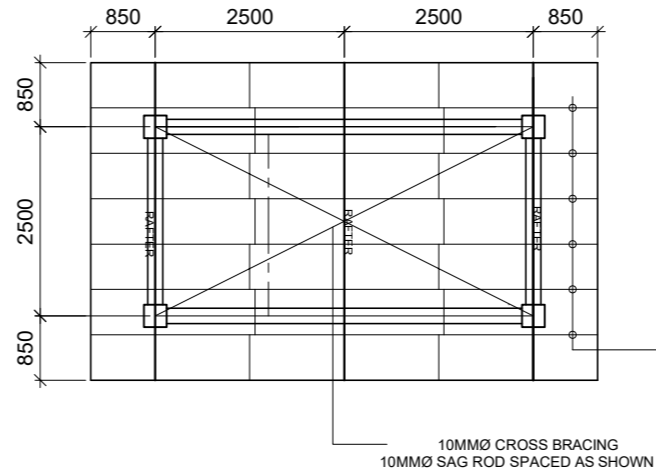
SHEET No.  
S-05  
16/23



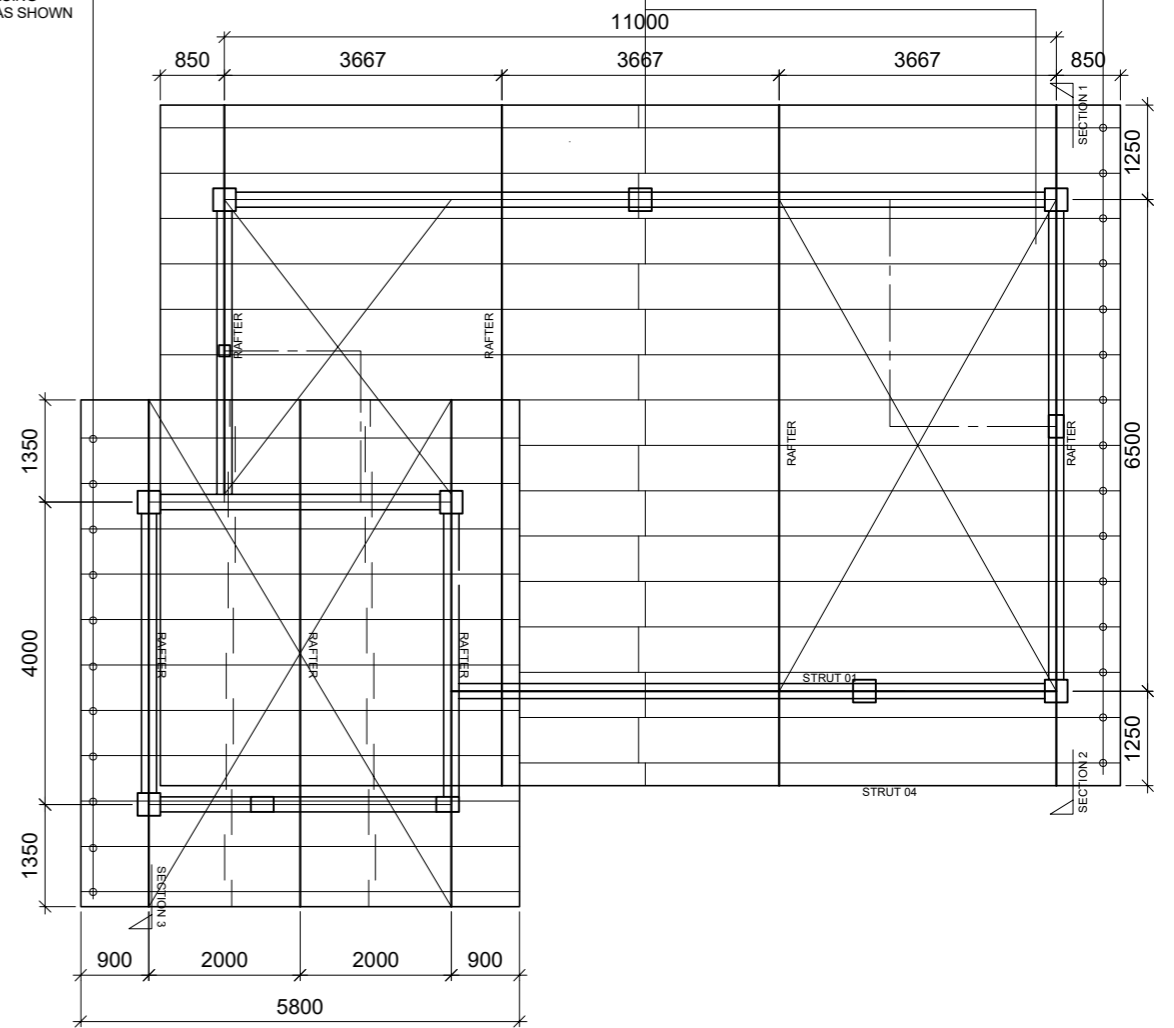
01  
S 06

### ROOF PLAN

SCALE 1:100M



2" x 4" C-PURLINS SP @600MM O.C.  
W/ 10MMØ PLAIN ROUND SAG ROD SP.  
AS SHOWN ON ROOF FRAMING PLAN



02  
S 06

### ROOF FRAMING PLAN

SCALE 1:100M



**PHILIPPINE CARABAO CENTER**  
NATIONAL GENE POOL & HEADQUARTERS  
CLSU Cpd., Science City of Munoz, Nueva Ecija

PREPARED BY:  
ENGR. CHRISTOPHER FEBB F. SAN MIGUEL  
ENGINEER I, LIVESTOCK ENGINEERING SECTION,  
PHILIPPINE CARABAO CENTER

PRC ID:  
PTR NO:  
ISSUED ON:  
ISSUED AT:

CHECKED AND REVIEWED BY:  
ENGR. CRIS GUZON  
HEAD, LIVESTOCK ENGINEERING SECTION,  
PHILIPPINE CARABAO CENTER

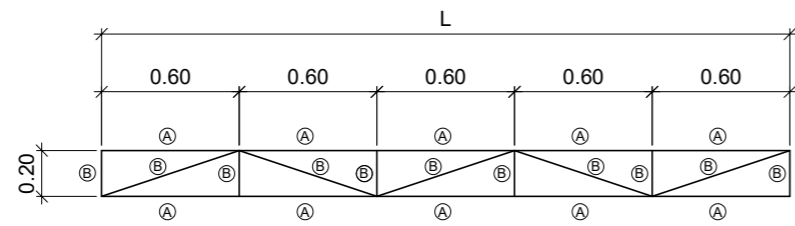
RECOMMENDING APPROVAL:  
DR. CECILIO G. VELEZ  
CENTER CHIEF  
PHILIPPINE CARABAO CENTER - MLPC

PROJECT TITLE/LOCATION:  
DAIRY PROCESSING FACILITY  
AND PRODUCTS OUTLET  
TUBOD, LANA O DEL NORTE

APPROVED BY:  
DR. LIZA G. BATTAD  
EXECUTIVE DIRECTOR,  
PHILIPPINE CARABAO CENTER

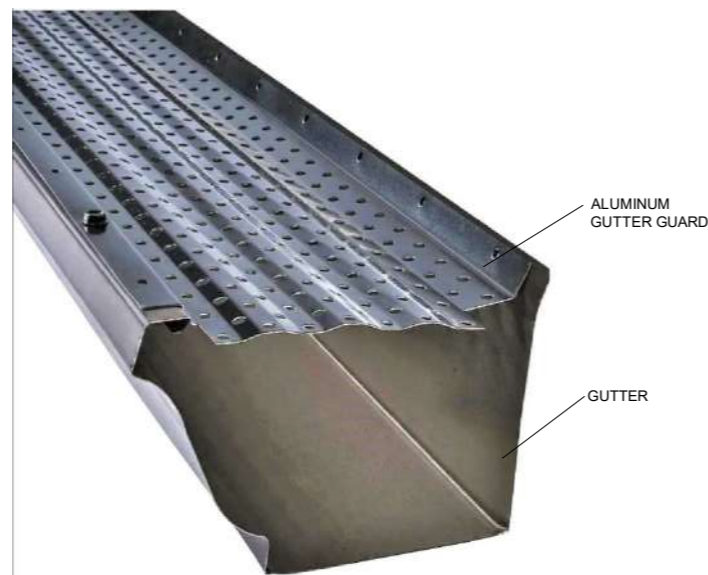
DRAFTED BY: CFFSM  
REVISION:  
SHEET CONTENTS: AS SHOWN

SHEET No.  
S-06  
17/23



RAFTER DETAILS

- (A) 2 - L 50MM x 50MM ANGLE BAR TOP AND BOTTOM CHORD  
 (B) 1 - L 50MM x 50MM ANGLE BAR WEB MEMBERS

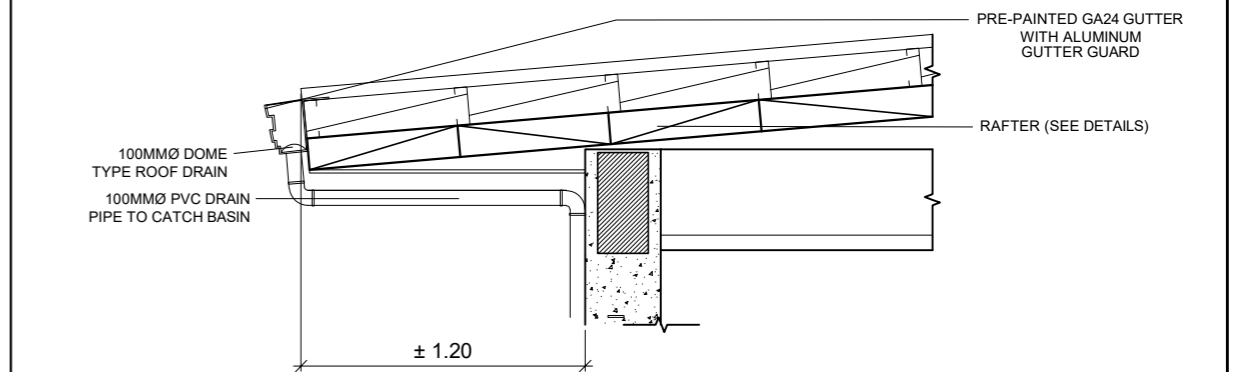


ALUMINUM GUTTER GUARD

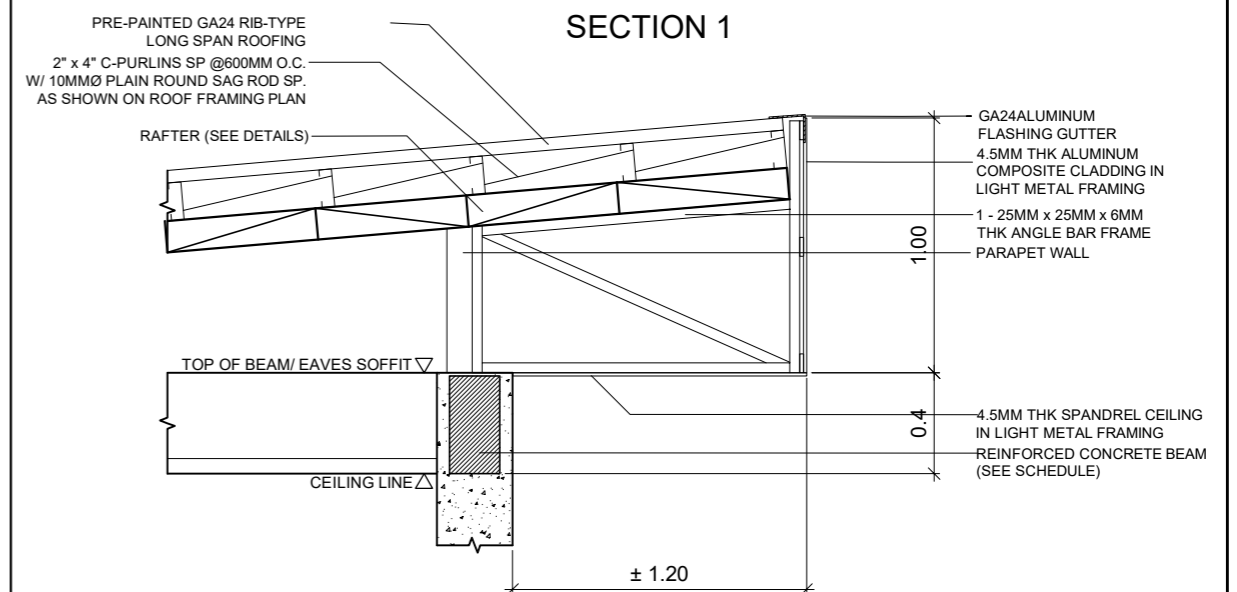


MISCELLANEOUS DETAILS

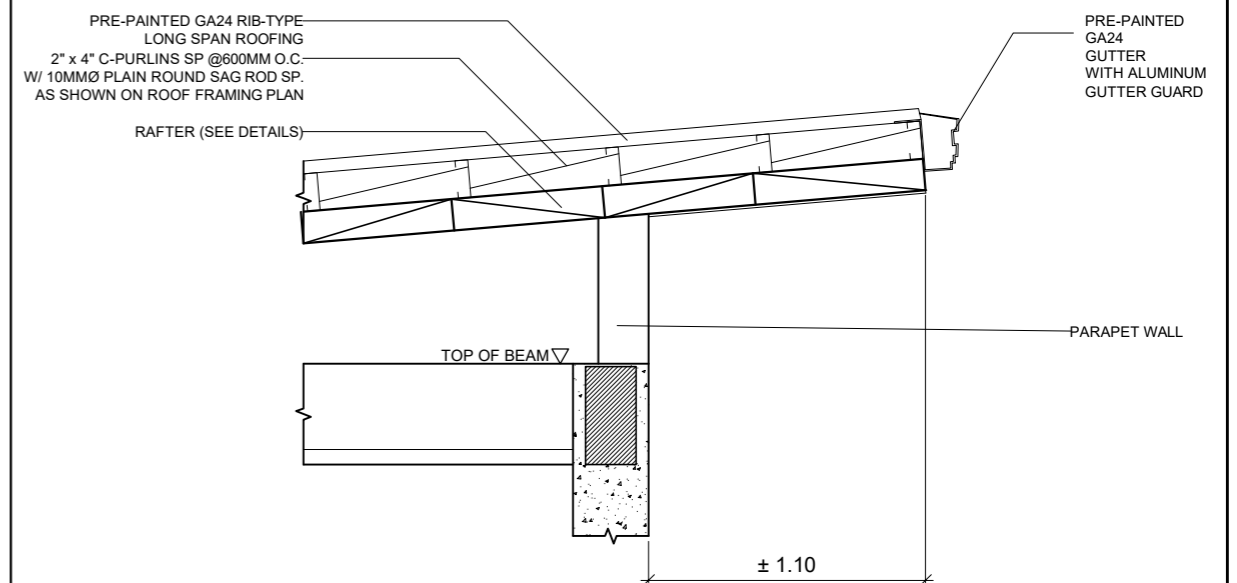
SCALE NTS



SECTION 1



SECTION 2



SECTION 3



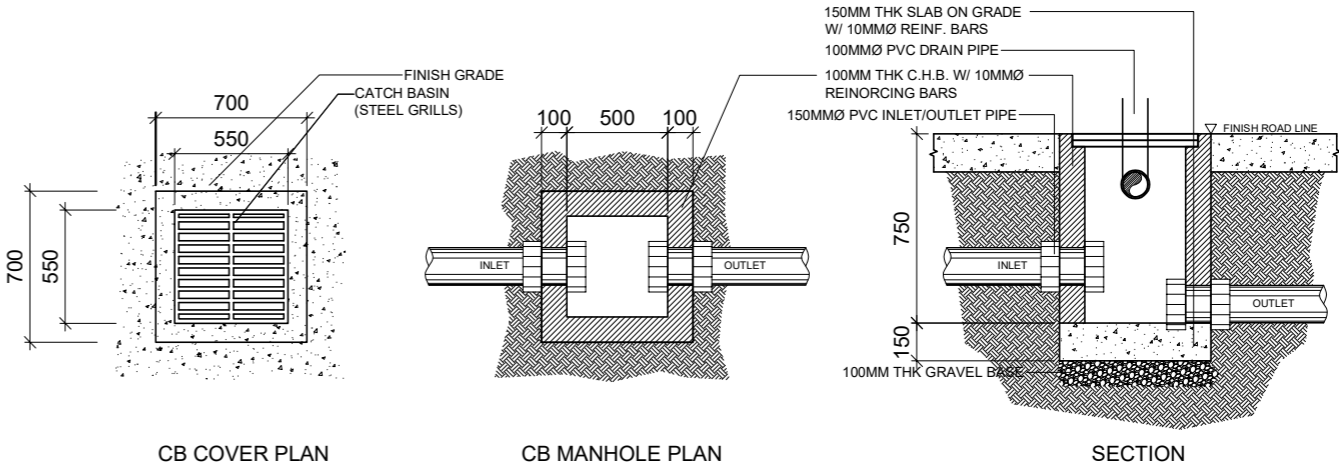
ROOF FRAMING DETAILS

SCALE NTS

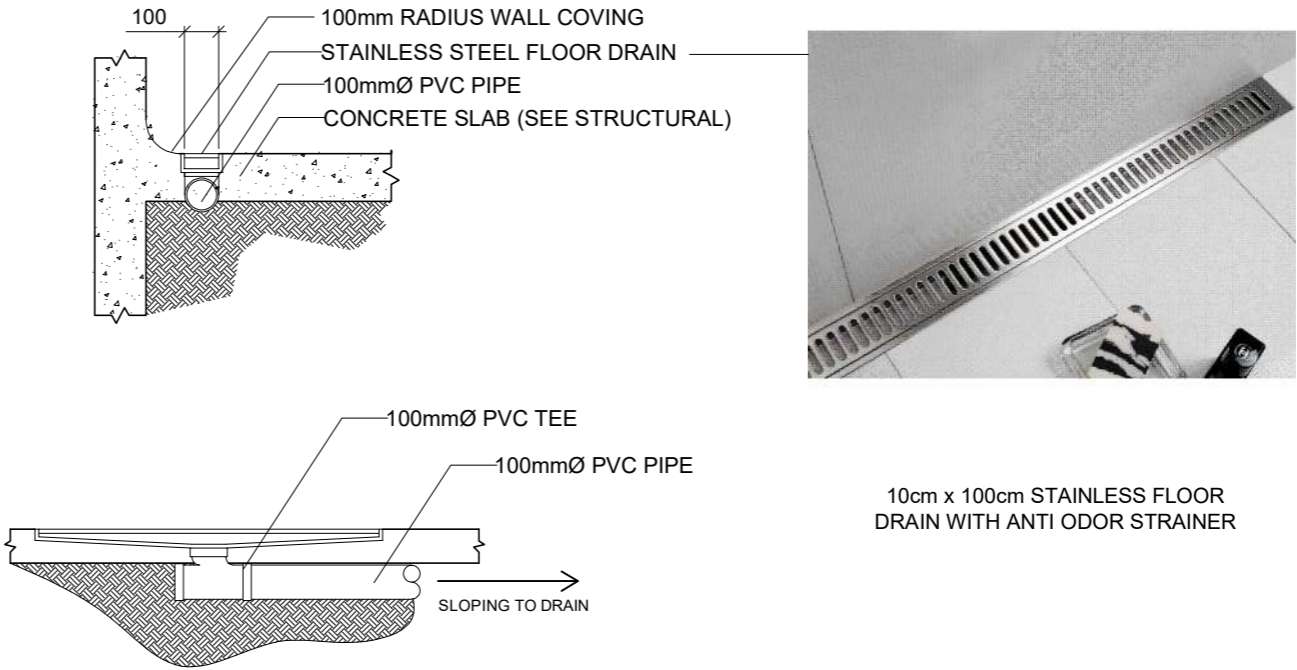
	<b>PHILIPPINE CARABAO CENTER</b> <b>NATIONAL GENE POOL &amp; HEADQUARTERS</b> CLSU Cpd., Science City of Munoz, Nueva Ecija	PREPARED BY: ENGR. CHRISTOPHER FEBB F. SAN MIGUEL ENGINEER I, LIVESTOCK ENGINEERING SECTION, PHILIPPINE CARABAO CENTER	PRC ID: PTR NO: ISSUED ON: ISSUED AT:	CHECKED AND REVIEWED BY: ENGR. CRIS GUZON HEAD, LIVESTOCK ENGINEERING SECTION, PHILIPPINE CARABAO CENTER	RECOMMENDING APPROVAL: DR. CECILIO G. VELEZ CENTER CHIEF PHILIPPINE CARABAO CENTER - MLPC	PROJECT TITLE/LOCATION: DAIRY PROCESSING FACILITY AND PRODUCTS OUTLET TUBOD, LANAO DEL NORTE	APPROVED BY: DR. LIZA G. BATTAD EXECUTIVE DIRECTOR, PHILIPPINE CARABAO CENTER	DRAFTED BY: CFFSM REVISION: SHEET CONTENTS: AS SHOWN	SHEET No. S-07 18/23
--	---	---	--	---	--	---	--	--	----------------------------

PLUMBING NOTES


- 1. ALL MATERIALS, FIXTURES & EQUIPMENT TO BE USED IN THE PLUMBING INSTALLATION SHALL BE NEW, OF THE APPROVED TYPE & SIZE AS TO ITS INTENDED USAGE.
- 2. ALL INSTALLATION SHALL BE IN CONFORMANCE WITH THE PLUMBING CODE OF THE PHILIPPINES, ITS RULES & REGULATIONS.
- 3. DRAINAGE PIPING SHALL BE PROVIDED WITH APPROVED INLET FITTINGS FOR FIXTURE CONNECTIONS, CORRECTLY LOCATED ACCORDING TO THE SIZE & TYPE OF FIXTURE PROPOSED TO BE CONNECTED.
- 4. CHANGE IN DIRECTION OF DRAINAGE PIPING SHALL BE MADE WITH APPROPRIATE USE OF APPROVED FITTINGS & SHALL BE OF THE ANGLES REPRESENTED BY A 1/16 BEND, 1/8 BEND, 1/6 BEND OR OTHER APPROVED FITTINGS OR EQUIVALENT SWEEP.
- 5. PROVIDE CLEAN-OUT FOR EACH CHANGE IN DIRECTION IF THE TOTAL AGGREGATE CHANGE EXCEEDS 135 DEGREES.
- 6. EACH CLEAN-OUT SHALL BE INSTALLED SO THAT IT OPENS IN A DIRECTION OPPOSITE TO THE FLOW OF SOIL OR WASTE OR AT RIGHT ANGLES THERETO. ADDITIONAL CLEANOUTS SHALL BE INSTALLED AT INTERVALS NOT TO EXCEED 100 FT (30.5 m.) IN STRAIGHT RUNS.
- 7. HORIZONTAL DRAINAGE PIPING SHALL RUN IN PRACTICAL ALIGNMENT & A UNIFORM SLOPE OF NOT LESS THAN 1/4 OF AN INCH PER FOOT (20.8 mm/mt.) OR 2% TOWARD THE POINT OF DISPOSAL.
- 8. UNLESS PROHIBITED BY STRUCTURAL CONDITIONS, EACH VENT SHALL RISE VERTICALLY TO A POINT NOT LESS THAN 6" (152.4 mm ABOVE THE FLOOD LEVEL RIM OF THE FIXTURE SERVED BEFORE) OFFSETTING HORIZONTALLY.
- 9. EACH VENT PIPE OR STACK SHALL EXTEND THROUGH ITS FLASHING & SHALL TERMINATE VERTICALLY NOT LESS THAN 6" (152.4 mm) ABOVE THE ROOF & ONE FOOT (0.30 m.) FROM ANY VERTICAL SURFACE.
- 10. PIPING SHALL BE LAID ON A FIRM BED THROUGHOUT ITS ENTIRE LENGTH. IF ANY SUCH PIPING IS LAID IN MADE OR FILLED GROUND, IT SHALL BE LAID ON A BED OF APPROVED MATERIALS & SHALL BE ADEQUATELY SUPPORTED.

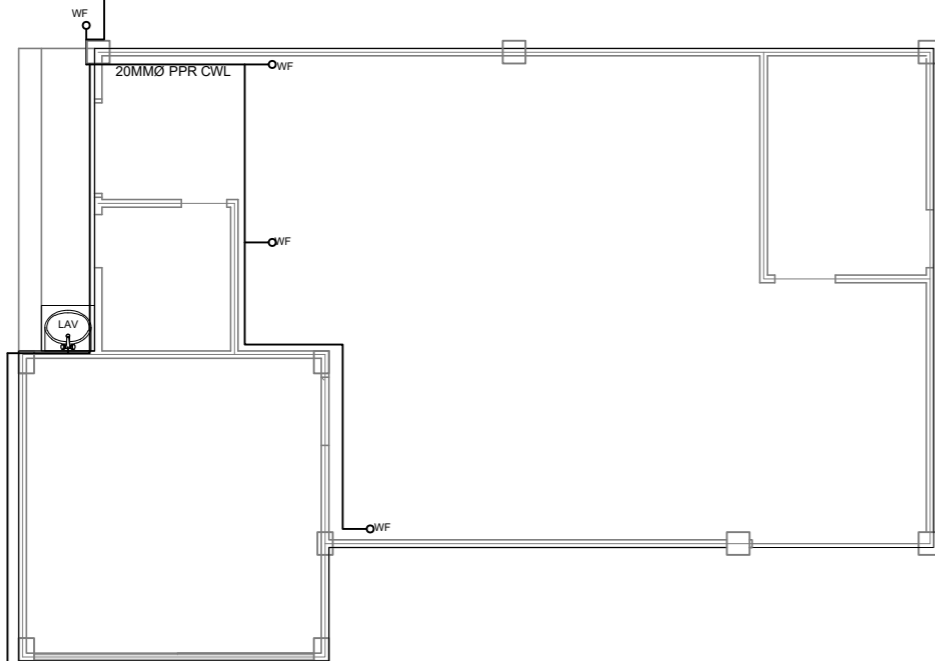
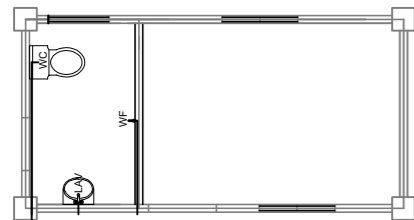


01 CATCH BASIN DETAILS  
P 01 SCALE NTS



02 FLOOR CANAL SECTION  
P 01 SCALE NTS

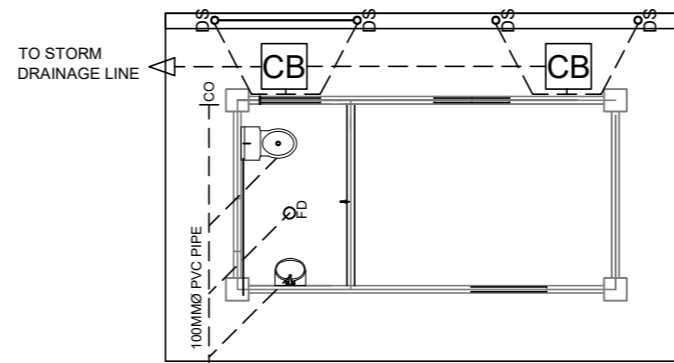
	<b>PHILIPPINE CARABAO CENTER</b> NATIONAL GENE POOL & HEADQUARTERS  CLSU Cpd., Science City of Munoz, Nueva Ecija	PREPARED BY:		CHECKED AND REVIEWED BY:	RECOMMENDING APPROVAL:	PROJECT TITLE/LOCATION:	APPROVED BY:	DRAFTED BY:	SHEET CONTENTS:	SHEET No.
		ENGR. CHRISTOPHER FEBB F. SAN MIGUEL ENGINEER I, LIVESTOCK ENGINEERING SECTION, PHILIPPINE CARABAO CENTER	PRC ID:	ENGR. CRIS GUZON  HEAD, LIVESTOCK ENGINEERING SECTION, PHILIPPINE CARABAO CENTER	DR. CECILIO G. VELEZ  CENTER CHIEF PHILIPPINE CARABAO CENTER - MLPC	DAIRY PROCESSING FACILITY AND PRODUCTS OUTLET  TUBOD, LANAO DEL NORTE	DR. LIZA G. BATTAD  EXECUTIVE DIRECTOR, PHILIPPINE CARABAO CENTER	CFFSM	AS SHOWN	<div><div>P-01</div><div>19/23</div></div>
			PTR NO:					REVISION:		
			ISSUED ON:							
			ISSUED AT:							



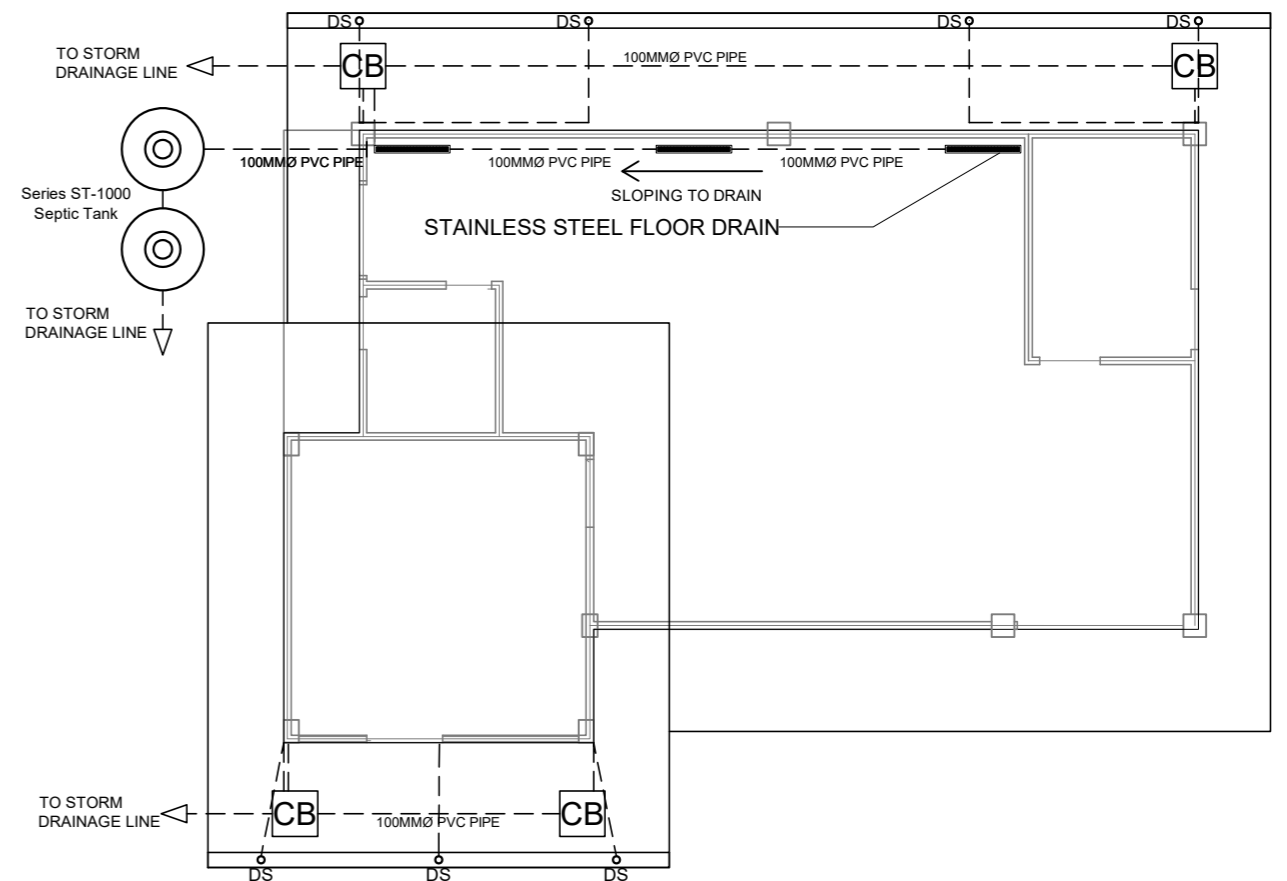
**01 COLD WATERLINE LAYOUT**  
P 02 SCALE 1:100M

### PLUMBING LEGENDS

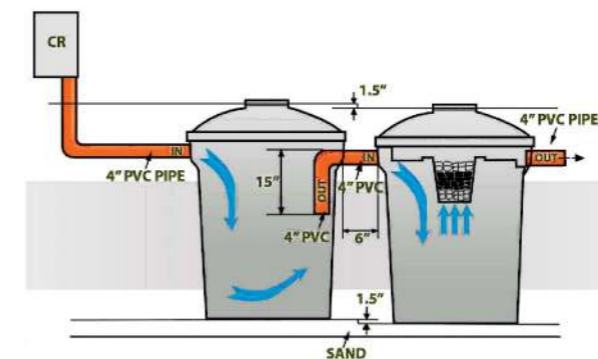
— COLD WATER LINE	FD FLOOR DRAIN
— SANITARY LINE	CO CLEAN OUT
DS DOWNSPOUT	CB CATCH BASIN
LAV LAVATORY	⊗ WATER METER( MAIN)
WF WATER FAUCET	⋈ GATE VALVE
WC WATER CLOSET	~ CHECK VALVE



Series ST-1000  
Septic Tank



### SERIES ST-1000 SEPTIC TANK DETAILS



**PHILIPPINE CARABAO CENTER**  
NATIONAL GENE POOL & HEADQUARTERS  
CLSU Cpd., Science City of Munoz, Nueva Ecija

PREPARED BY:  
ENGR. CHRISTOPHER FEBB F. SAN MIGUEL  
ENGINEER I, LIVESTOCK ENGINEERING SECTION,  
PHILIPPINE CARABAO CENTER

PRC ID:  
PTR NO:  
ISSUED ON:  
ISSUED AT:

CHECKED AND REVIEWED BY:  
ENGR. CRIS GUZON  
HEAD, LIVESTOCK ENGINEERING SECTION,  
PHILIPPINE CARABAO CENTER

RECOMMENDING APPROVAL:  
DR. CECILIO G. VELEZ  
CENTER CHIEF  
PHILIPPINE CARABAO CENTER - MLPC

PROJECT TITLE/LOCATION:  
DAIRY PROCESSING FACILITY  
AND PRODUCTS OUTLET  
TUBOD, LANA O DEL NORTE

APPROVED BY:  
DR. LIZA G. BATTAD  
EXECUTIVE DIRECTOR,  
PHILIPPINE CARABAO CENTER

DRAFTED BY: SHEET CONTENTS:  
CFFSM AS SHOWN  
REVISION:

SHEET No.  
P-02  
2023

ELECTRICAL NOTES

1.

ALL ELECTRICAL WORKS HEREIN INCLUDED WERE EXECUTED IN ACCORDANCE WITH THE PROVISION OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE, THE THE RULES AND REGULATIONS OF THE LOCALITY AND THE REQUIREMENTS OF THE POWER COMPANY.
2.

ALL ELECTRICAL WORKS HEREIN WERE EXECUTED BY EXPERIENCED MEN UNDER THE DIRECT SUPERVISION OF A FULL-TIME LICENSED ELECTRICAL ENGINEER AND A DULY ACCREDITED ELECTRICAL CONTRACTOR BY PCAB. WORKS WERE NEATLY PLACED, SECURELY FASTENED AND PROPERLY FINISHED.
3.

TYPE OF SERVICE ENTRANCE WERE THREE-PHASE, THREE-WIRE PLUS GROUND 13.2KVOLTS, 60 HERTZ TO STEP DOWN TO 230V VIA PAD MOUNTED TRANSFORMERS.
4.

ALL MATERIALS WERE CONFORM WITH THE INTERNATIONALLY ACCREDITED RECOGNIZED STANDARDS, IN EVERY CASE WHERE SUCH A STANDARD HAD BEEN ESTABLISHED FOR THE PARTICULAR TYPE OF MATERIAL IN QUESTION.
5.

ALL FEEDER CONDUITS WERE INTERMEDIATE METALLIC CONDUIT (IMC) OF HIGH STRENGTH AND GALVANIZED WITH AN ADDITIONAL INTERIOR PROTECTIVE COATING WERE USED OR AS INDICATED ON THE PLAN. ALL EMBEDDED BRANCH CIRCUITS WERE PVC CONDUITS AND FOR EXPOSED INSTALLATION WERE EMT.
6.

ELECTRICAL TRADE SIZE WERE USED, A MINIMUM OF 15mm Ø FOR CONDUITS AND IN NO CASE THERE WERE MORE THAN THE EQUIVALENT OF FOUR QUARTER BENDS IN ANY ONE RUN.
7.

ALL CONDUITS WERE PROTECTED AGAINST DAMAGES BY THE ENTRANCE OF WATER AND FOREIGN MATTER DURING CONSTRUCTION. ALL ENDS OF CONDUITS WERE PLUGGED TO EXCLUDE MOISTURE AND DUST IMMEDIATELY AFTER THE CONDUITS WAS PLACED.
8.

ALL CONDUIT BENDS WERE FIELD MADE BY USING HYDRAULIC BENDERS. MINIMUM BENDING RADIUS WERE IN ACCORDANCE TO THE CODE REQUIREMENTS.
9.

SINGLE CONDUCTOR INSULATED THHN / THWN THERMOPLASTIC 600 V WIRES WERE USED IN CONDUIT. MINIMUM SIZE OF WIRES WERE 2.0 mmØ THHN (#12AWG, SOLID) FOR ALL LIGHTING AND POWER SYSTEM.
10.

ALL WIRES AND CABLES WERE COLOR CODED AND WERE UL LISTED AS FOLLOWS:  
PHASE A - BLACK GROUND - GREEN  
PHASE B - RED CONTROL WIRE #1 - BLUE  
PHASE C - YELLOW CONTROL WIRE #2 - WHITE
11.

TWISTLOCK CONNECTORS WERE USED IN ALL SPLICING AND CONNECTIONS FROM 2.0 mm dia. UP TO 8.0 sq. mm. WIRES, CRIMPING-TYPE LUGS/CONNECTORS IN ALL OTHER SIZES WITH APPROVED DIES AND HYDRAULIC CRIMPERS, CONNECTORS WERE "ELPRESS".
12.

WALL SWITCHES WERE RATED 15 AMPERES, 300 VOLTS TUMBLER TYPE AND CONVE-NIENCE OUTLETS WERE OF GROUNDING TYPE THREE-WIRE, 250 VOLTS OR AS INDICATED ON THE PLANS AND SPECIFICATIONS.
13.

SIZING OF ALL PULLBOXES SHALL BE COMPUTED BASED ON THE CODE REQUIREMENTS. SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION. LOCATION OF PULLBOXES WERE APPROVED BY THE ARCHITECT/ENGINEER AND WAS REFLECTED ON THE "AS-BUILT" PLAN. FABRICATOR OF PULLBOXES WERE THE SAME FABRICATOR FOR THE PANELBOARDS.

14.

CONTRACTORS HAD SUBMITTED SHOP DRAWINGS OF ALL PANELBOARDS AND PULLBOXES TO THE ENGINEER PRIOR TO FABRICATION. ONLY ONE BRAND OF CIRCUIT BREAKER AND ONLY THE APPROVED PANEL FABRICATOR WERE UTILIZED IN THE ENTIRE PROJECT REQUIREMENT.
15.

MOUNTING HEIGHTS OF DEVICES WERE AS APPROVED BY THE ARCHITECT AND/OR AS FOLLOWS :  
PANEL BOARD \_ \_ \_ \_ \_ 1.82 M. above finished floor to top of panel  
WALL SWITCHES \_ \_ \_ \_ \_ 1.37 M. above finished floor to center of device  
CONVENIENCE OUTLET \_ 0.30 M. above finished floor to center of device or  
0.15 M. above working counter to center of device
16.

THERE WERE ADEQUATE AND EFFECTIVE EQUIPMENT GROUNDING.
17.

UPON COMPLETION OF ELECTRICAL CONSTRUCTION WORK, THE FOLLOWING TESTS WERE PERFORMED BY THE CONTRACTOR INCLUSIVE OF THE INSTALLATION TO BE REPORTED IN DETAILS ON FORMS APPROVED BY THE OWNER'S REPRESENTATIVE :  
A. INSULATION RESISTANCE TEST E. PHASE SEQUENCE TESTING  
B. GROUND RESISTANCE TEST F. HI-POT TESTING  
C. OPERATIONAL TEST G. SYSTEM TEST  
D. PHASE BALANCING TEST H. ROUTINE TESTING
18.

DOWN CONDUCTOR FOR THE LIGHTNING PREVENTION SYSTEM WERE STRANDED BARE COPPER, 100mm<sup>2</sup> FOR CONNECTION TO GROUNDING ELECTRODE USING EXOTHERMIC CONNECTIONS.
19.

AIR TERMINAL/IONZER TO BE USED WERE LISTED PER UL 96A, NFPA-78.
20.






























A PHASE TO PHASE AND PHASE TO GROUND MINIMUM CLEARANCE OF 460mm AND 330mm RESPECTIVELY, WERE MAINTAINED INSIDE THE HIGH VOLTAGE CUBICLE..
21.

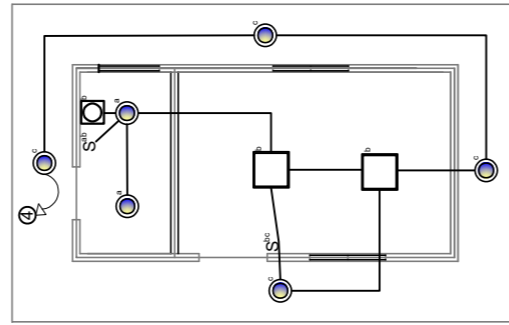
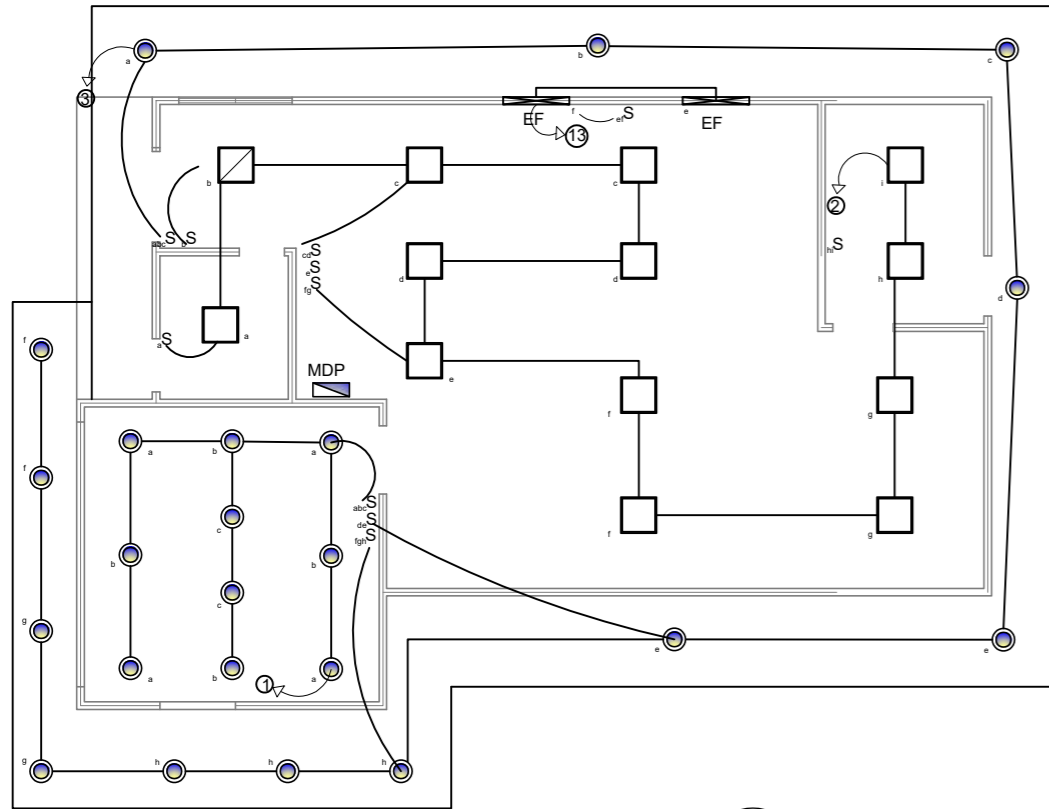
THE MINIMUM VERTICAL AND HORIZONTAL CLEARANCE OF 34.5KV BARE CONDUCTORS FROM THE BUILDING SHALL BE 3.05 METERS.
22.

THE GROUND RESISTANCE OF THE SUBSTATION WAS NOT MORE THAN 5 OHMS, IF GROUND RESISTANCE EXCEEDS 5 OHMS, ADDITIONAL GROUND RODS WERE PROVIDED.
23.

THE CONTROLS OF THE MAIN SECONDARY BREAKERS, GENERATOR BREAKERS, THE BREAKERS AND INTERLOCKS WERE TESTED BY MERALCO TO ASSURE THAT THERE IS NO PARALLEL OPERATION WITH OR FEEDBACK INTO THE MERALCO DISTRIBUTION SYSTEM.
24.

DANGER SIGNS ON THE POWER ROOM WERE PROVIDED BY THE CUSTOMER.

LEGENDS AND SYMBOLS	
	LP - LIGHTING PANELBOARD PP - POWER PANELBOARD RP - RECEPTACLE PANEL DP - DISTRIBUTION PANEL MDP - MAIN DISTRIBUTION PANEL
	POWER LINES
	CIRCUIT RUN FOR LIGHTING
	LIGHTING SWITCH HOMERUN
	CIRCUIT RUN UNDERFLOOR OR UNDERGROUND
	CIRCUIT HOMERUN DESIGNATION, UPPER HALF DENOTES POWER SOURCE OF THE CIRCUIT WHILE LOWER HALF DESIGNATES CIRCUIT NO.
	CONDUIT RISER UP
	CONDUIT RISER DOWN
	LIQUIDTIGHT FLEXIBLE CONDUIT
	PULLBOX, SIZE AS REQUIRED
	DUPLEX CONVENIENCE OUTLET , 3-WIRE GROUNDING TYPE, 230VAC 15 AMPERES, FLOOR MOUNTED
	DUPLEX CONVENIENCE OUTLET , 3-WIRE GROUNDING TYPE, 230VAC 15 AMPERES
	DITTO , BUT WITH WEATHERPROOF COVER
	DITTO , BUT WITH GROUND FAULT CIRCUIT INTERRUPTER
	DITTO , BUT WITH WEATHER PROOF COVER AND GROUND FAULT CIRCUIT INTERRUPTER COMBINATION
	S1a SINGLE-GANG SWITCH, 15 A , 230VAC
	S2ab TWO-GANG SWITCH , 15A 230VAC
	S3abc TREE-GANG SWITCH , 15A , 230VAC
	S3Wa ONE-GANG THREE WAY SWITCH 15 A , 230VAC
	6" DIAMETER PINLIGHT WITH ALUMINUM REFLECTOR AND GLASS COVER 1 X 13 WATTS LED BULB
	36WATTS, RECESSED LED PANEL LIGHT , 60CM X 60CM
	EF INDUSTRIAL GRADE WALL EXHAUST FAN WITH SHUTTER 16" DIAMETER BLADE
	12X12" CEILING EXHAUST FAN
	SERVICE ENTRANCE, 13.2KV, 3ø, 4 WIRES, 60HZ
	~ LIGHTING PROTECTION SYSTEM, AIR TERMINAL
	LA LIGHTNING ARRESTER, 15KV
	FUSE CUT-OUT, 15KV
	⊙ / ⚡ GROUND SYSTEM W/ 20mmø x 3000mmL GROUND ROD
	EMH ELECTRICAL MANHOLE

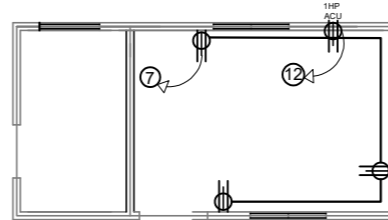
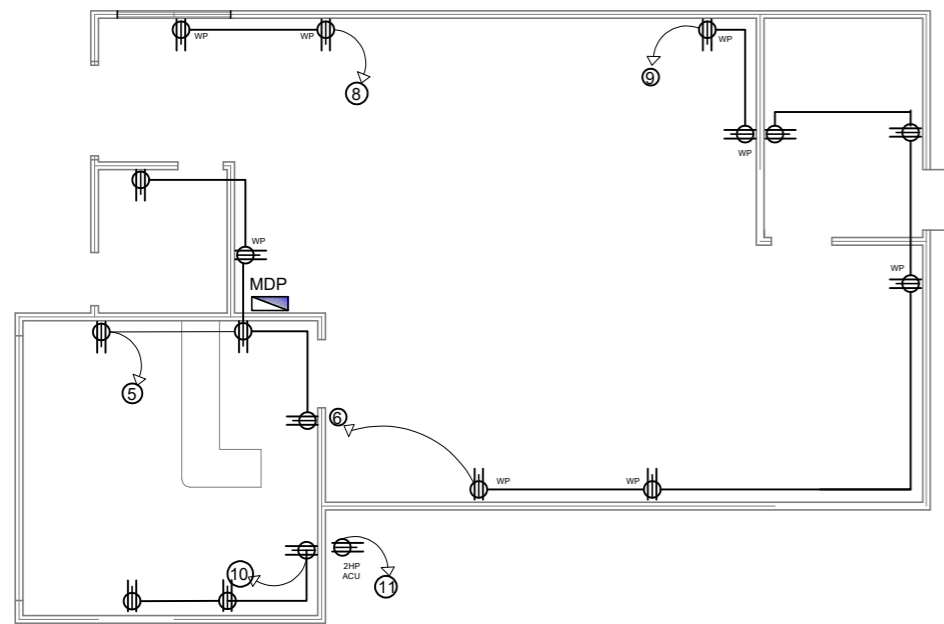


**01**  
E 02  
**LIGHTING LAYOUT**  
SCALE 1:100M

SAMPLE IMAGES FOR  
ELECTRICAL FIXTURES  
VERIFY TO OWNER /  
DESIGNATED OFFICE FOR THE  
CHANGE OR ALTERNATIVES  
BASED ON MARKET  
AVAILABILITY




INDUSTRIAL GRADE WALL  
EXHAUST FAN WITH SHUTTER,  
16" DIAMETER BLADE



**02**  
E 02  
**POWER LINE LAYOUT**  
SCALE 1:100M



36WATTS, RECESSED LED PANEL LIGHT  
60CM X 60CM

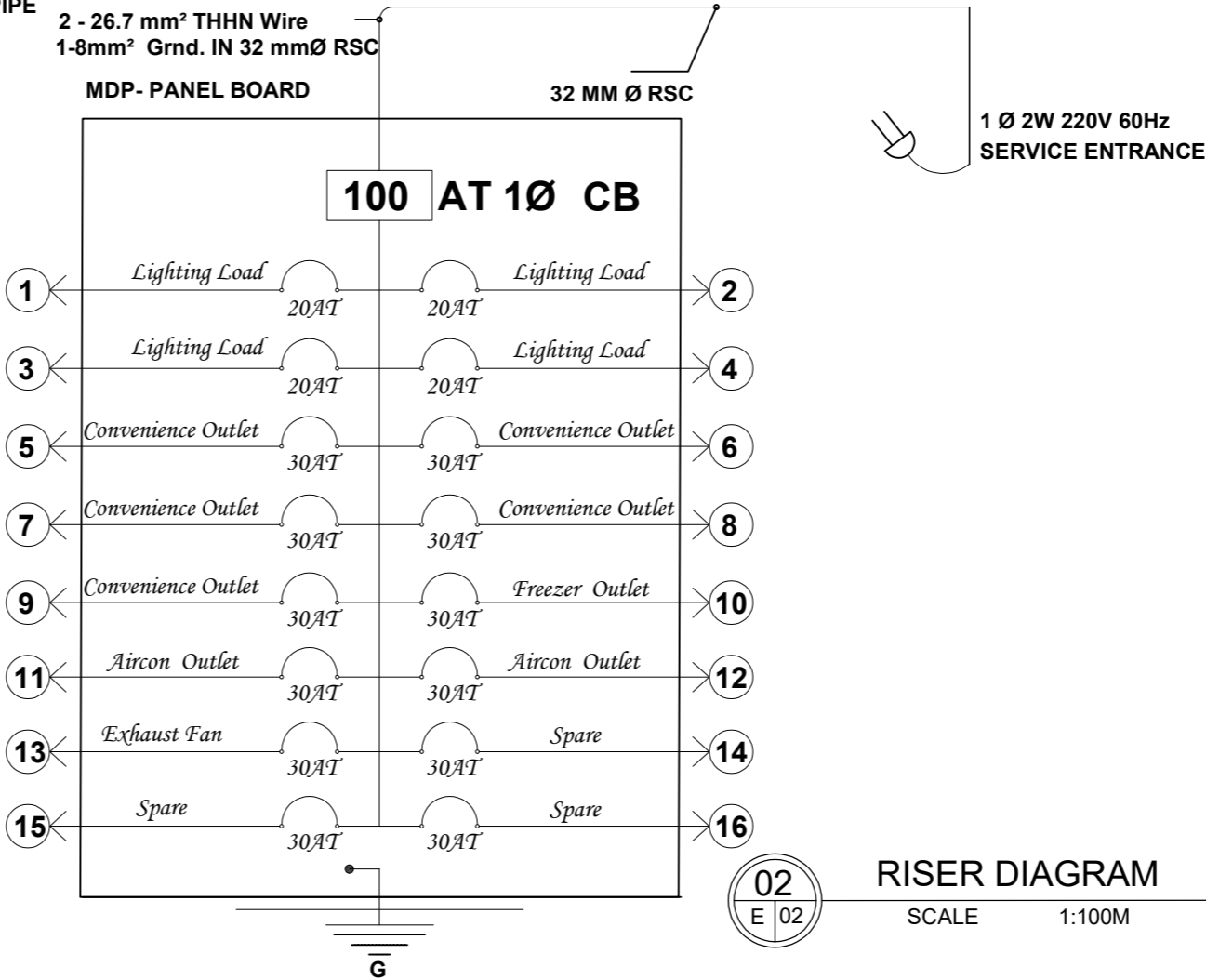
	<div>PHILIPPINE CARABAO CENTER</div> <div>NATIONAL GENE POOL &amp; HEADQUARTERS</div> <div>CLSU Cpd., Science City of Munoz, Nueva Ecija</div>	PREPARED BY:		CHECKED AND REVIEWED BY:	RECOMMENDING APPROVAL:	PROJECT TITLE/LOCATION:	APPROVED BY:	DRAFTED BY:	SHEET CONTENTS:	SHEET No.
			PRC ID:	<div>ENGR. CRIS GUZON</div> <div>HEAD, LIVESTOCK ENGINEERING SECTION,</div> <div>PHILIPPINE CARABAO CENTER</div>	<div>DR. CECILIO G. VELEZ</div> <div>CENTER CHIEF</div> <div>PHILIPPINE CARABAO CENTER - MLPC</div>	<div>DAIRY PROCESSING FACILITY</div> <div>AND PRODUCTS OUTLET</div> <div>TUBOD, LANAO DEL NORTE</div>	<div>DR. LIZA G. BATTAD</div> <div>EXECUTIVE DIRECTOR,</div> <div>PHILIPPINE CARABAO CENTER</div>	CFFSM	AS SHOWN	<div>E-02</div> <div>22/23</div>
			PTR NO:					REVISION:		
			ISSUED ON:							
			ISSUED AT:							


LOAD SCHEDULE																							
PANEL	CKT NO.	LIGHTING OUTLET					SW			CO 180	OTHERS	QTY	WATTS	VOLT	AMPS	AMPERE AB	C.B. RATING					SIZE OF WIRE (THHN)	SIZE OF CONDUIT (RSC/EMT.PVC)
		10W	28W	36W	13W	EF	S3G	S2G	S1G								AT	AF	POLE	KAIC			
PANEL - MDP	1				10		1						130	220	0.590909	0.6	20	100	2	10	2-2.0mm <sup>2</sup> , 1-2.0mm <sup>2</sup> GRD.	20mmØ PVC	
	2			13				3	3				468	220	2.127273	2.13	20	100	2	10	2-2.0mm <sup>2</sup> , 1-2.0mm <sup>2</sup> GRD.	20mmØ PVC	
	3				13		2	1					182	220	0.827273	0.83	20	100	2	10	2-2.0mm <sup>2</sup> , 1-2.0mm <sup>2</sup> GRD.	20mmØ PVC	
	4			2	6			2			CEILING EXHAUST FAN (40W)	1	190	220	0.863636	0.87	20	100	2	10	2-2.0mm <sup>2</sup> , 1-2.0mm <sup>2</sup> GRD.	20mmØ PVC	
	5										POWER OUTLET	5	900	220	4.090909	4.1	30	100	2	10	2-3.5mm <sup>2</sup> , 1-2.0mm <sup>2</sup> GRD.	20mmØ PVC	
	6										POWER OUTLET	5	900	220	4.090909	4.1	30	100	2	10	2-3.5mm <sup>2</sup> , 1-2.0mm <sup>2</sup> GRD.	20mmØ PVC	
	7										POWER OUTLET	3	540	220	2.454545	2.46	30	100	2	10	2-3.5mm <sup>2</sup> , 1-2.0mm <sup>2</sup> GRD.	20mmØ PVC	
	8										POWER OUTLET	2	360	219	1.643836	5.46	30	100	2	10	2-3.5mm <sup>2</sup> , 1-2.0mm <sup>2</sup> GRD.	20mmØ PVC	
	9										POWER OUTLET	2	360	220	1.636364	1.64	30	100	2	10	2-3.5mm <sup>2</sup> , 1-2.0mm <sup>2</sup> GRD.	20mmØ PVC	
	10										FREEZER (400W)	3	1200	220	5.454545	5.46	30	100	2	10	2-5.5mm <sup>2</sup> , 1-3.5mm <sup>2</sup> GRD.	20mmØ PVC	
	11										2HP AC	1	1492	220	6.781818	6.79	30	100	2	10	2-5.5mm <sup>2</sup> , 1-3.5mm <sup>2</sup> GRD.	20mmØ PVC	
	12										1HP AC	1	746	220	3.390909	3.4	30	100	2	10	2-5.5mm <sup>2</sup> , 1-3.5mm <sup>2</sup> GRD.	20mmØ PVC	
	13							1			EXHAUST FAN (750W)	2	1500	220	6.818182	6.82	30	100	2	10	2-3.5mm <sup>2</sup> , 1-3.5mm <sup>2</sup> GRD.	20mmØ PVC	
	14										SPARE	1	1500	220	6.818182	6.82	30	100	2	10	2-5.5mm <sup>2</sup> , 1-3.5mm <sup>2</sup> GRD.	20mmØ PVC	
	15										SPARE	1	1500	220	6.818182	6.82	30	100	2	10	2-5.5mm <sup>2</sup> , 1-3.5mm <sup>2</sup> GRD.	20mmØ PVC	
	16										SPARE	1	1500	220	6.818182	6.82	30	100	2	10	2-5.5mm <sup>2</sup> , 1-3.5mm <sup>2</sup> GRD.	20mmØ PVC	
TOTAL				15	29		3	7	3				13468			65.12							

IFL = 13,468/(220) x 1.20 = 78.14 AMPS @ 100% D.F. ( BASED ON LOAD CALCULATION )

MCB = 100AT/100AF, 2P, 230V, 10KAIC

USE = 2-26.7mm<sup>2</sup> THHN WIRE & 1-8mm<sup>2</sup> GRD THHN WIRE IN 32mm Ø RSC PIPE



	<b>PHILIPPINE CARABAO CENTER</b> NATIONAL GENE POOL & HEADQUARTERS  CLSU Cpd., Science City of Munoz, Nueva Ecija	PREPARED BY:		CHECKED AND REVIEWED BY:	RECOMMENDING APPROVAL:	PROJECT TITLE/LOCATION:	APPROVED BY:	DRAFTED BY:	SHEET CONTENTS:	SHEET No.	
			PRC ID:	<div>ENGR. CRIS GUZON</div> <div>HEAD, LIVESTOCK ENGINEERING SECTION, PHILIPPINE CARABAO CENTER</div>	<div>DR. CECILIO G. VELEZ</div> <div>CENTER CHIEF PHILIPPINE CARABAO CENTER - MLPC</div>	DAIRY PROCESSING FACILITY AND PRODUCTS OUTLET	<div>DR. LIZA G. BATTAD</div> <div>EXECUTIVE DIRECTOR, PHILIPPINE CARABAO CENTER</div>	TUBOD, LANA DEL NORTE	CFFSM	AS SHOWN	<div>E-03</div> <div>23/23</div>
			PTR NO:					REVISION:			
			ISSUED ON:								
			ISSUED AT:								