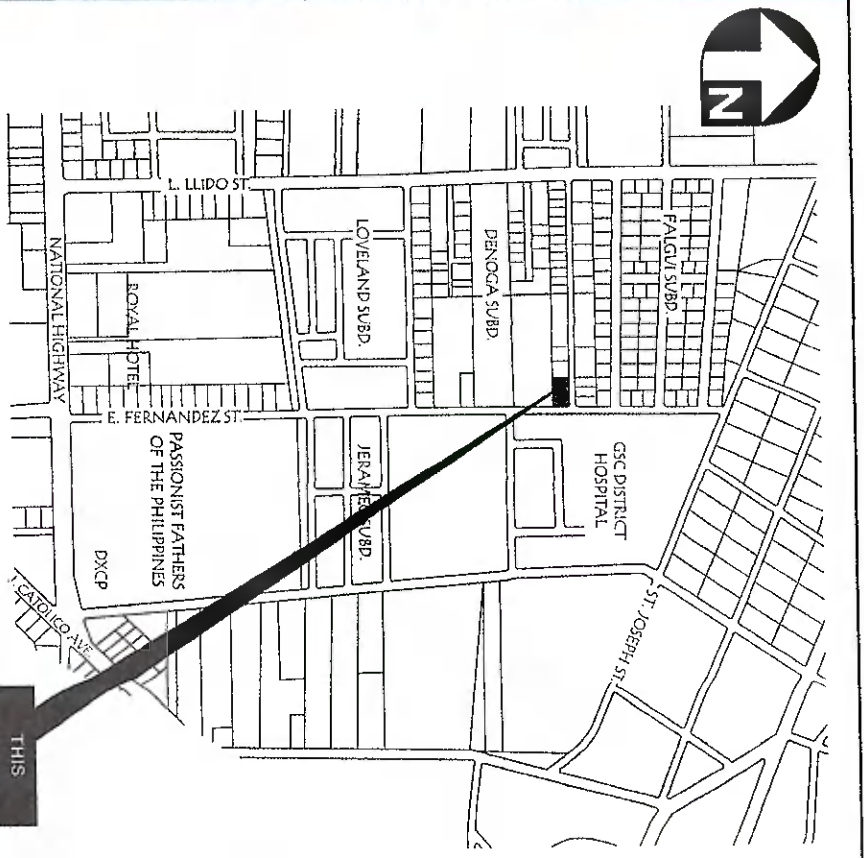
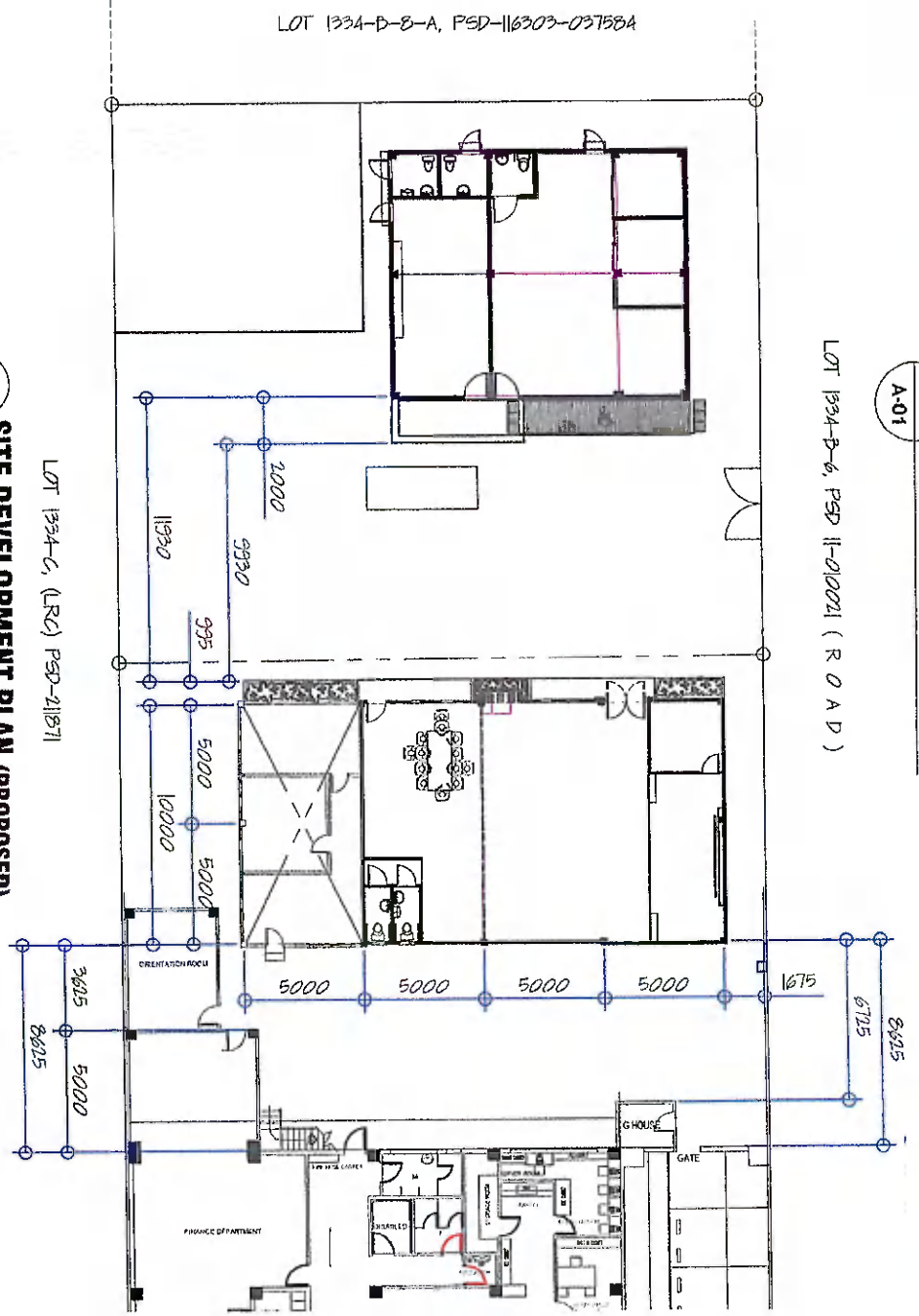




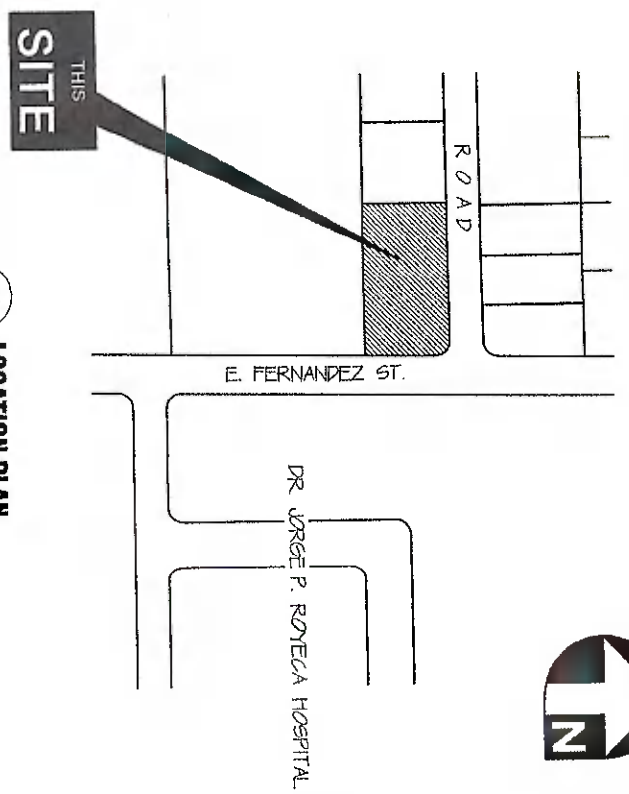
01 PERSPECTIVE (PROPOSED)
A-01



02 VICINITY MAP
A-01 NOT TO SCALE



03 SITE DEVELOPMENT PLAN (PROPOSED)
A-01 SCALE: 1:2000



04 LOCATION PLAN
A-01 NOT TO SCALE

REPUBLIC OF THE PHILIPPINES
CITY OF GENERAL SANTOS
OFFICE OF THE CITY ENGINEER

OFFICE OF THE BUILDING OFFICIAL

MECHANICAL	SHEET NO.
ELECTRICAL	
STRUCTURAL	
ARCHITECTURAL	
LINE AND GRADE	
LAND USE & ZONING	
SANITARY	
AS SHOWN	A-01

GENERAL SANTOS CITY WATER DISTRICT
E. FERNANDEZ STREET, BRGY. LAGA, GENERAL SANTOS CITY
ENGINEERING & CONSTRUCTION DEPARTMENT
PLANNING AND DESIGN DIVISION
TEL. NO.: (083) 952-3824

DANILO M. ORLANDO, JR.
CIVIL ENGINEER
REG. NO. 0107245
P.R. NO. 618734
TIN. NO. 291-941-997
DATE: 01/12/2022

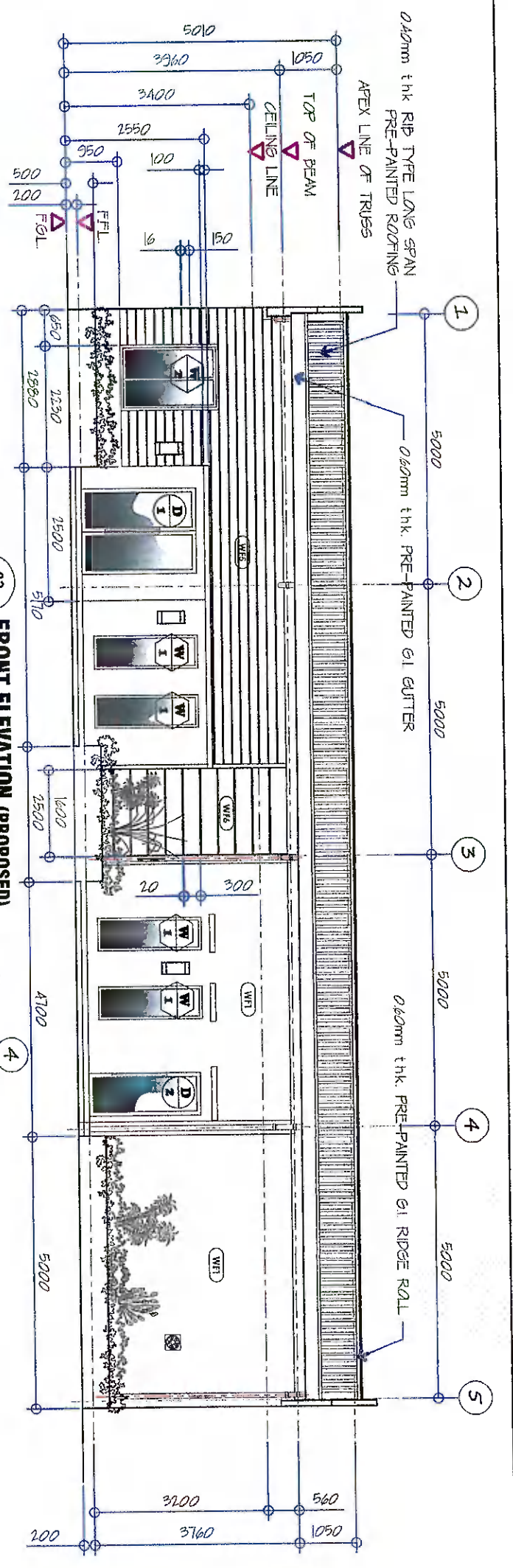
PROJECT AND LOCATION
RENOVATION AND IMPROVEMENT OF OLD WAREHOUSE INTO HRD TRAINING HALL
LOCATION: E. FERNANDEZ ST., LAGA, GSC

CHECKED & REVIEWS:
ENGR. MARIA CELIA N. DANDAN
OIC - FDD

APPROVED:
ENGR. ROGELIO A. BESANA, JR.
AGM, OPERATION & TECHNICAL SERVICES

SHEET CONTENTS

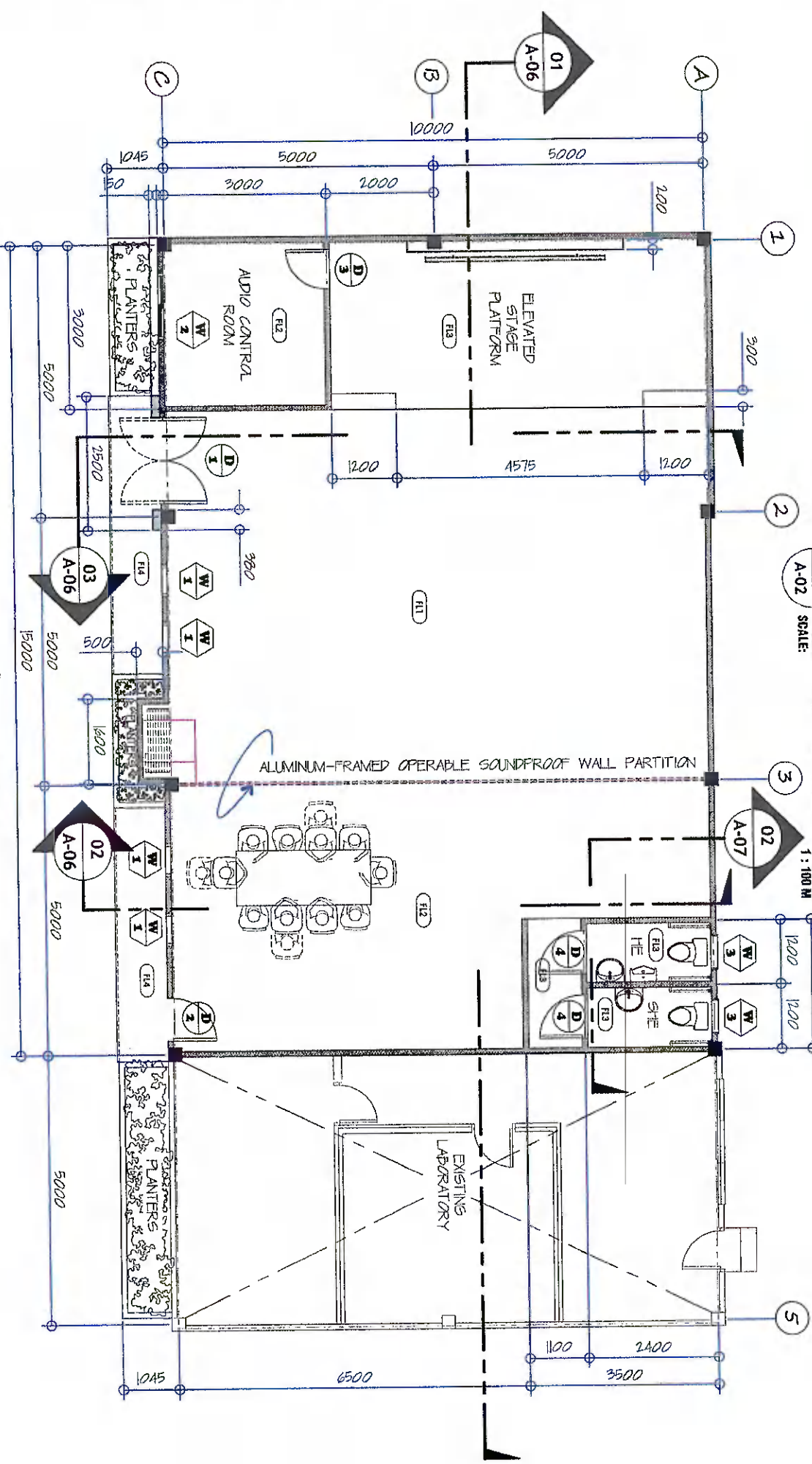
DRAWN BY: DONG-RAE	REV. NO.	01
CHECKED BY: DONG-RAE	DATE:	August 2022



FRONT ELEVATION (PROPOSED)
SCALE: 1:100 M

SCHEDULE OF FINISH

- FLOORS :**
- (F1) 200mm x 900mm CERAMIC WOOD-LOOK FLOOR TILE (DARK)
 - (F2) 200mm x 900mm CERAMIC WOOD-LOOK FLOOR TILE (LIGHT)
 - (F3) 600mm x 600mm UNGLAZED CERAMIC FLOOR TILES
 - (F4) 300mm x 300mm INTERLOCKING WOODEN DECKING PLASTIC FLOOR TILES
- WALLS :**
- (WF1) EXISTING CHB WALL, PLAIN CEMENT PLASTER (PAINT FINISH)
 - (WF2) 100mm thk. CHB, PLAIN CEMENT PLASTER (PAINT FINISH)
 - (WF3) 6mm thk. FIBER CEMENT BOARD PANEL (PAINT FINISH) ON 50mm x 50mm WOODEN VERTICAL & HORIZONTAL STUDDINGS
 - (WF4) 300mm x 300mm GLAZED CERAMIC WALL TILES
 - (WF5) PLAIN CEMENT PLASTER FINISH W/ GROOVE 16mm Spa @ 166mm O.C.
 - (WF6) PLAIN CEMENT PLASTER FINISH W/ GROOVE 20mm Spa @ 320mm O.C.



01 FLOOR PLAN (PROPOSED)
SCALE: 1:100 M

GENERAL SANTOS CITY WATER DISTRICT
E. FERNANDEZ STREET, BNGR. LAGAO, GEN. SANTOS CITY
ENGINEERING & CONSTRUCTION DEPARTMENT
PLANNING AND DESIGN DIVISION
TEL. NO.: (083) 592-3824

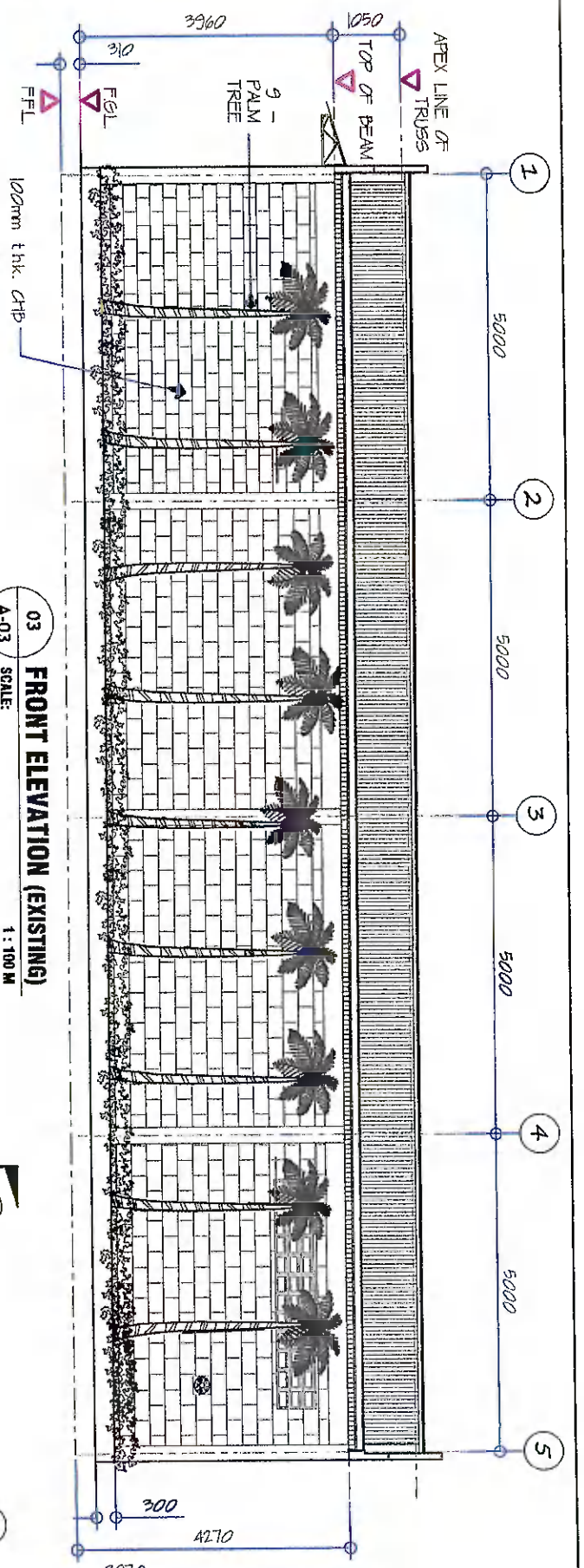
DANILO M. TORRADOR, JR.
CIVIL ENGINEER
REG. NO. 0107545
I.N. NO. 291-941-997
DATE: 01/12/2022

PROJECT AND LOCATION
RENOVATION AND IMPROVEMENT OF OLD WAREHOUSE INTO HRD TRAINING HALL
LOCATION: E. FERNANDEZ ST., LAGAO, GSC

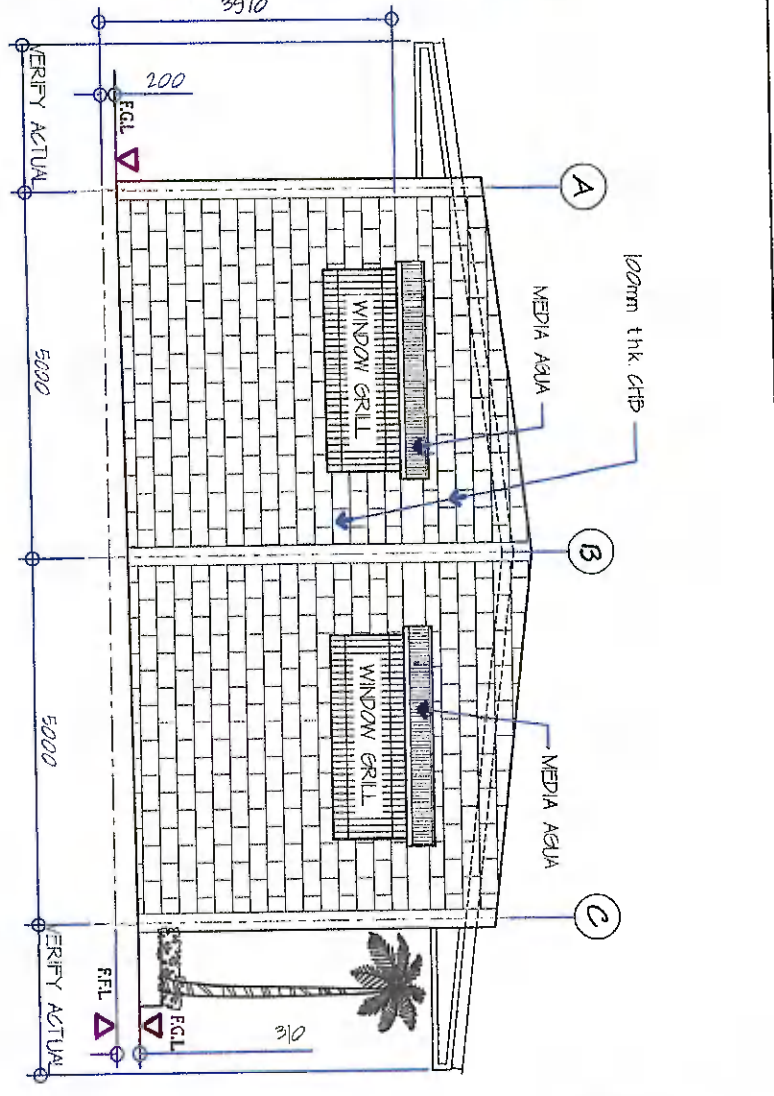
CHECKED & REVIEWS:
ENGR. MA. CELIA N. DANDAN
O.C. - PDD

APPROVED:
ENGR. ROGELIO A. BESANA, JR.
AGM, OPERATION & TECHNICAL SERVICES

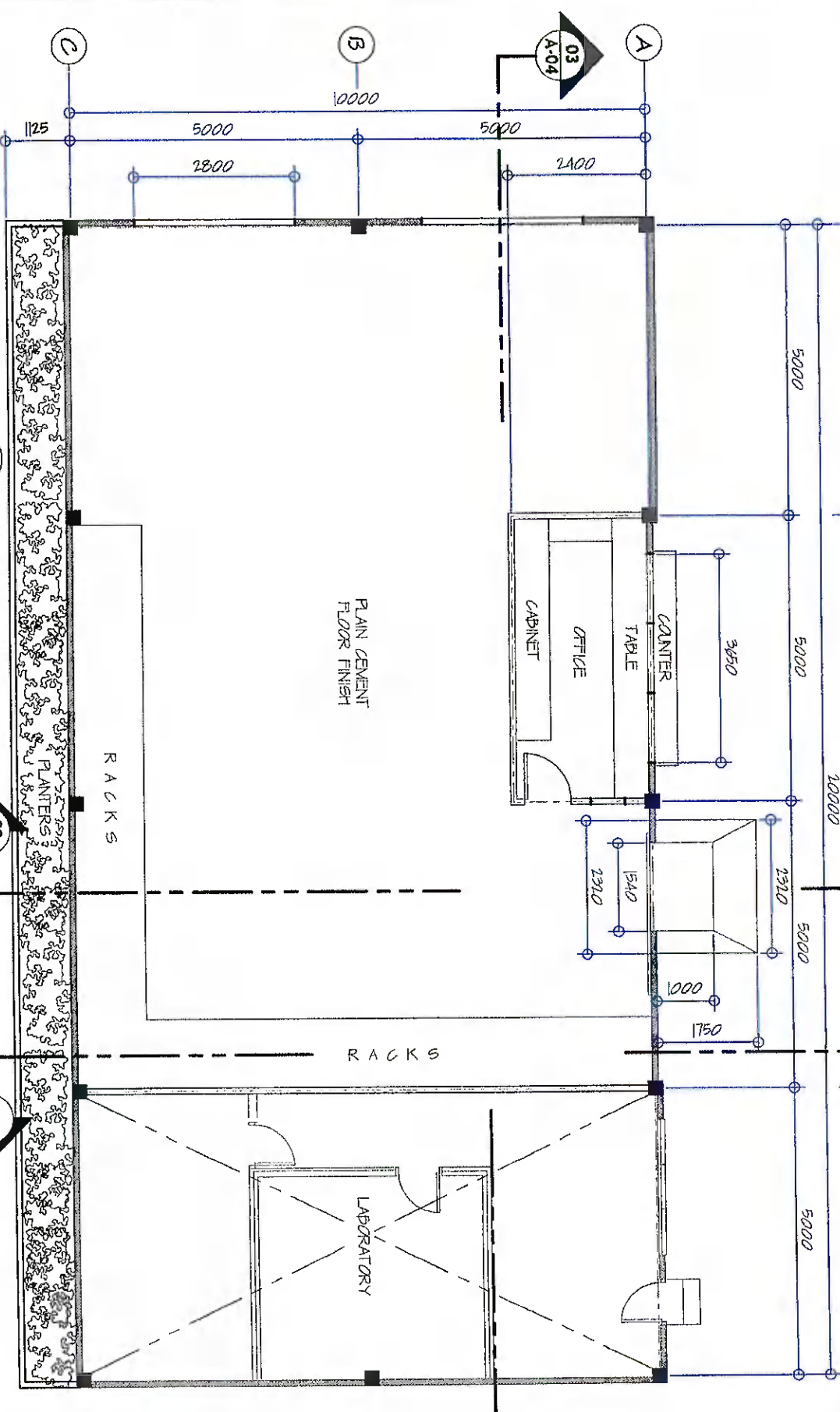
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AS SHOWN		A-02	21
DRAWN BY: DOUG-RAB	REV. NO.		
CHECKED BY: JEROME-JOAN	DATE: August 2022		



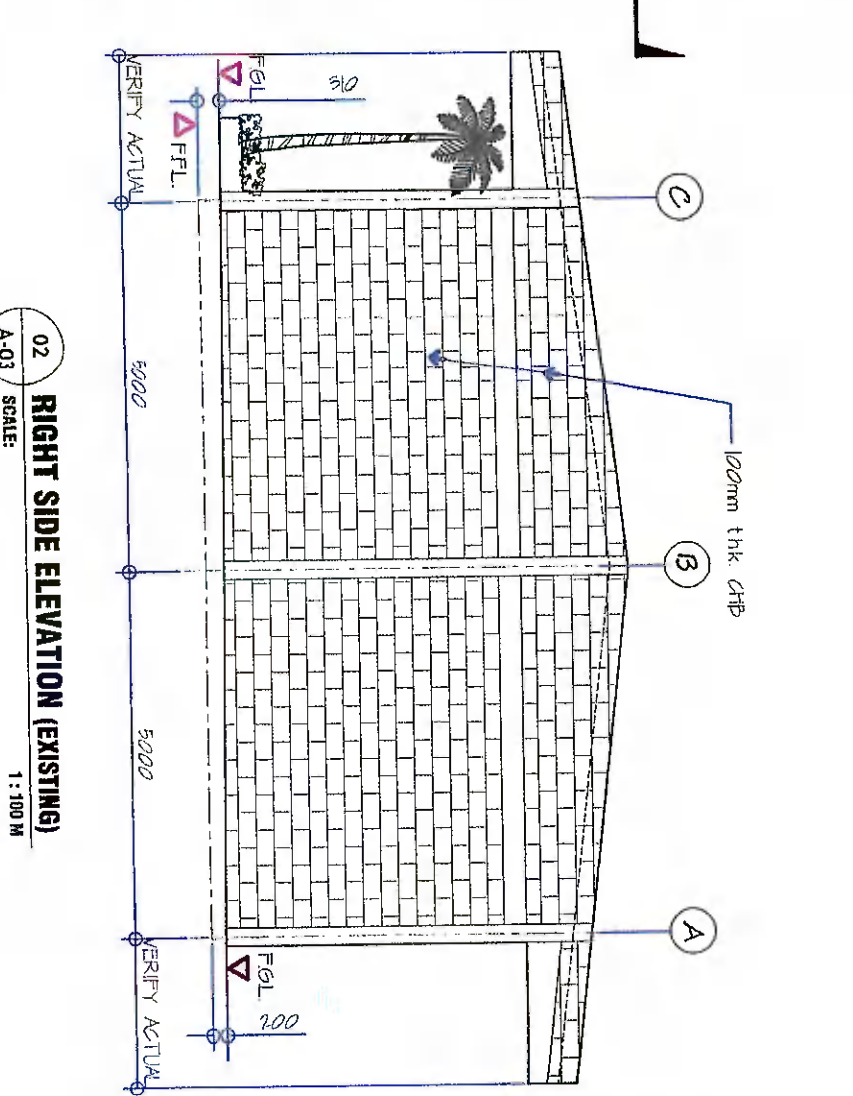
03 FRONT ELEVATION (EXISTING)
SCALE: 1 : 100 M



04 LEFT SIDE ELEVATION (EXISTING)
SCALE: 1 : 100 M

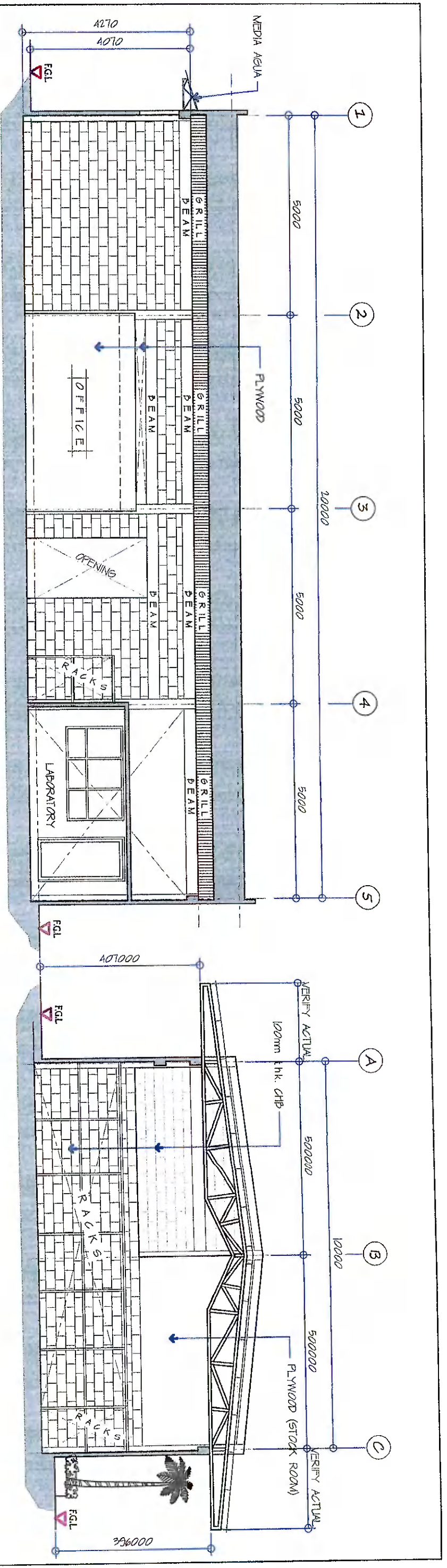


01 FLOOR PLAN (EXISTING)
SCALE: 1 : 100 M



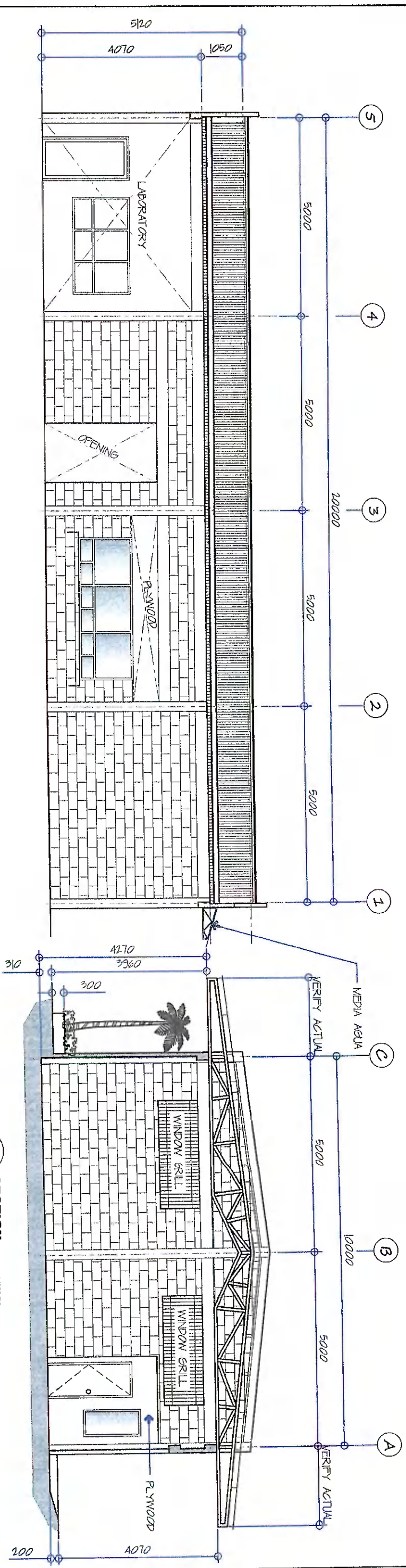
02 RIGHT SIDE ELEVATION (EXISTING)
SCALE: 1 : 100 M

<p>GENERAL SANTOS CITY WATER DISTRICT E. FERNANDEZ STREET BRGY. LAGA O, GEN. SANTOS CITY ENGINEERING & CONSTRUCTION DEPARTMENT PLANNING AND DESIGN DIVISION TEL. NO.: (083) 557-3824</p>		<p>DANILO M. TORILADOR, JR. CIVIL ENGINEER</p>		<p>PROJECT AND LOCATION RENOVATION AND IMPROVEMENT OF OLD WAREHOUSE INTO HRD TRAINING HALL</p>		<p>CHECKED & REVIEWS:</p>		<p>APPROVED:</p>		<p>SHEET CONTENTS</p>	
REG. NO. 0107545	IN. NO. 291-941-597	DATE: 01/12/2022	LOCATION: E. FERNANDEZ ST. LAGA O, GSC	ENGR. MA. RIA CELIA N. DANDAN	O.C. - PDS	ENGR. ROGELIO A. BEANA, JR.	AGM. OF PLANNING & TECHNICAL SERVICES	DRAWN BY: 20205-406	REV. NO.	DATE: Sept. 2022	AS SHOWN
PIR. NO. 61873A								CHECKED BY: JESUS-2009			
										A-03	03
											21




03 SECTION (EXISTING)
A-04 SCALE: 1:100 M

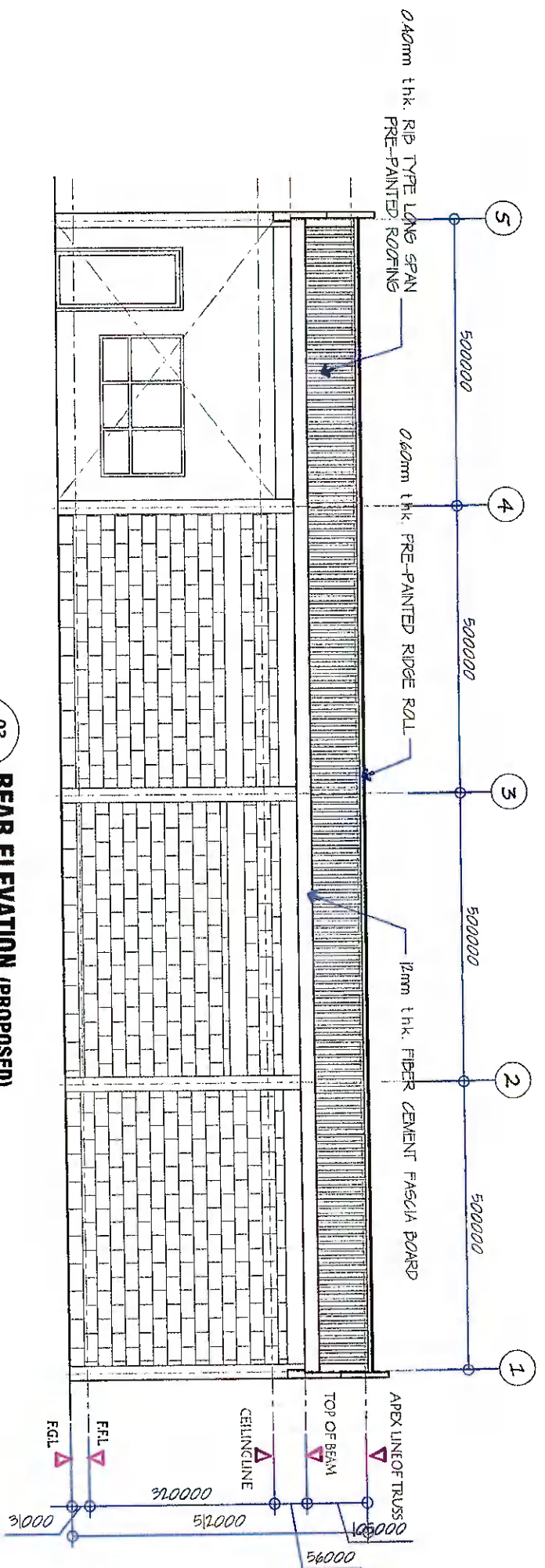
04 SECTION (EXISTING)
A-04 SCALE: 1:100 M



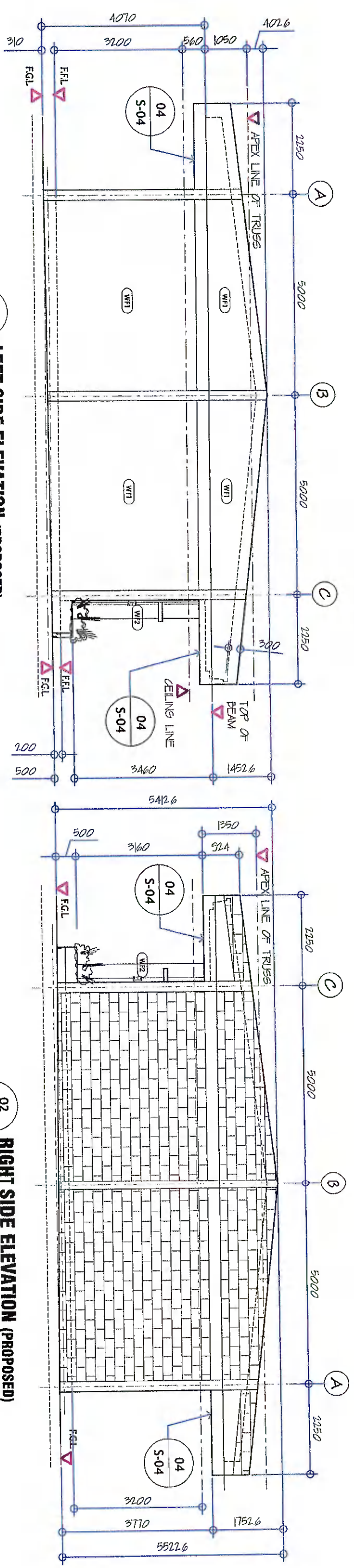
01 FRONT ELEVATION (EXISTING)
A-04 SCALE: 1:100 M

02 SECTION (EXISTING)
A-04 SCALE: 1:100 M

 <p>GENERAL SANTOS CITY WATER DISTRICT E. FERNANDEZ STREET, BRGY. LAGA, GEN. SANTOS CITY ENGINEERING & CONSTRUCTION DEPARTMENT PLANNING AND DESIGN DIVISION TEL. NO.: (083) 522-3824</p>		<p>DANILO M. FORLADOR, JR. CIVIL ENGINEER</p>		<p>PROJECT AND LOCATION RENOVATION AND IMPROVEMENT OF OLD WAREHOUSE INTO HRD TRAINING HALL LOCATION: E. FERNANDEZ ST., LAGA, GSC</p>		<p>CHECKED & REVIEWS: ENGR. MARIA CELIA N. DANDAN OIC - PDD</p>		<p>APPROVED:</p>		<p>SHEET CONTENTS</p>		<p>SHEET NO.</p>	
<p>REG. NO. 0107545 PTR. NO. 61873A</p>		<p>TIN. NO. 291-941-997 DATE: 01/12/2022</p>		<p>ENGR. ROGELIO A. BEANA, JR. AGM OPERATION & TECHNICAL SERVICES</p>		<p>AS SHOWN</p>		<p>DATE: Sep. 2022</p>		<p>04</p>		<p>21</p>	




03 REAR ELEVATION (PROPOSED)
A-05 SCALE: 1 : 100 M



01 LEFT SIDE ELEVATION (PROPOSED)
A-05 SCALE: 1 : 100 M

02 RIGHT SIDE ELEVATION (PROPOSED)
A-05 SCALE: 1 : 100 M

 <p>GENERAL SANTOS CITY WATER DISTRICT E. FERNANDEZ STREET, BRGY. LAGAJO, GEN. SANTOS CITY ENGINEERING & CONSTRUCTION DEPARTMENT PLANNING AND DESIGN DIVISION TEL. NO.: (083) 532-3284</p>		<p>DANILO M. TORLADOR, JR. CIVIL ENGINEER</p>		<p>PROJECT AND LOCATION RENOVATION AND IMPROVEMENT OF OLD WAREHOUSE INTO HRD TRAINING HALL LOCATION: E. FERNANDEZ ST., LAGAJO, GSC</p>		<p>CHECKED & REVIEWS: ENGR. MARIAL DELA N. DANDAN OIC - PDD</p>		<p>APPROVED: ENGR. ROGELIO A. BEANA, JR. AGM, OPERATION & TECHNICAL SERVICES</p>		<p>SHEET CONTENTS AS SHOWN</p>		<p>SHEET NO. A-05</p>	
<p>REG. NO. 0107545 PR. NO. 61873A</p>		<p>TIN. NO. 291-241-997 DATE: 01/12/2022</p>		<p>LOCATION: E. FERNANDEZ ST., LAGAJO, GSC</p>		<p>ENGR. MARIAL DELA N. DANDAN OIC - PDD</p>		<p>ENGR. ROGELIO A. BEANA, JR. AGM, OPERATION & TECHNICAL SERVICES</p>		<p>DRAWN BY: DONIS-PAE CHECKED BY: JEROME-2004</p>		<p>REV. NO. Aug 2022 DATE: Aug 2022</p>	
										<p>05</p>		<p>21</p>	



GENERAL SANTOS CITY WATER DISTRICT
 E. FERNANDEZ STREET, BSGY, LAGA O, GENERAL SANTOS CITY
 ENGINEERING & CONSTRUCTION DIVISION
 TEL. NO.: (083) 592-9884

DANILO M. HORTALADOR, JR.
 CIVIL ENGINEER
 REG. NO. 0107345
 TIN. NO. 291-941-997
 PPR. NO. 818/734
 DATE: 01/12/2022

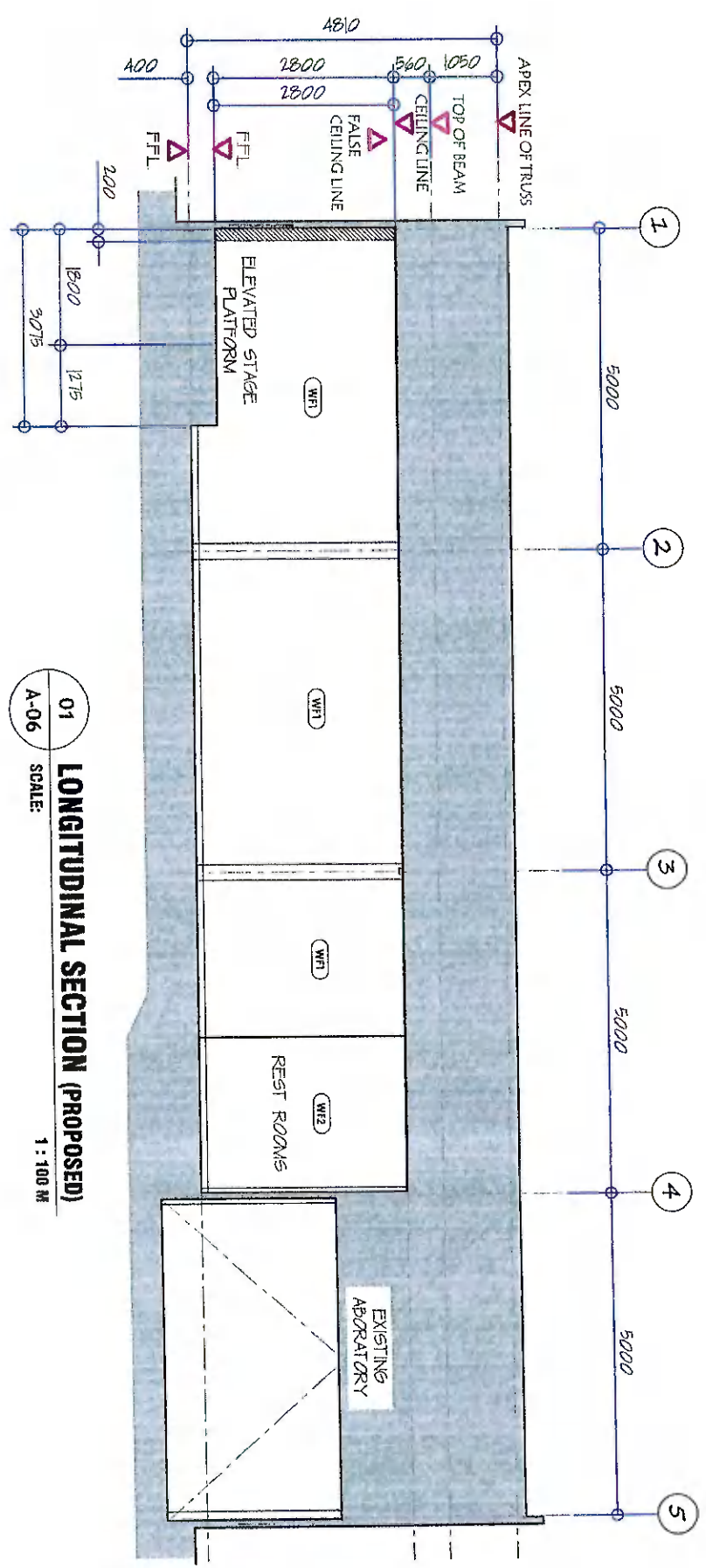
PROJECT AND LOCATION
 RENOVATION AND IMPROVEMENT OF OLD
 WAREHOUSE INTO HRD TRAINING HALL
 LOCATION: E. FERNANDEZ ST., LAGA O, GSC

CHECKED & REVIEWED:
 ENGR. MARIA CELIA N. DANDAN
 OIC - PDD

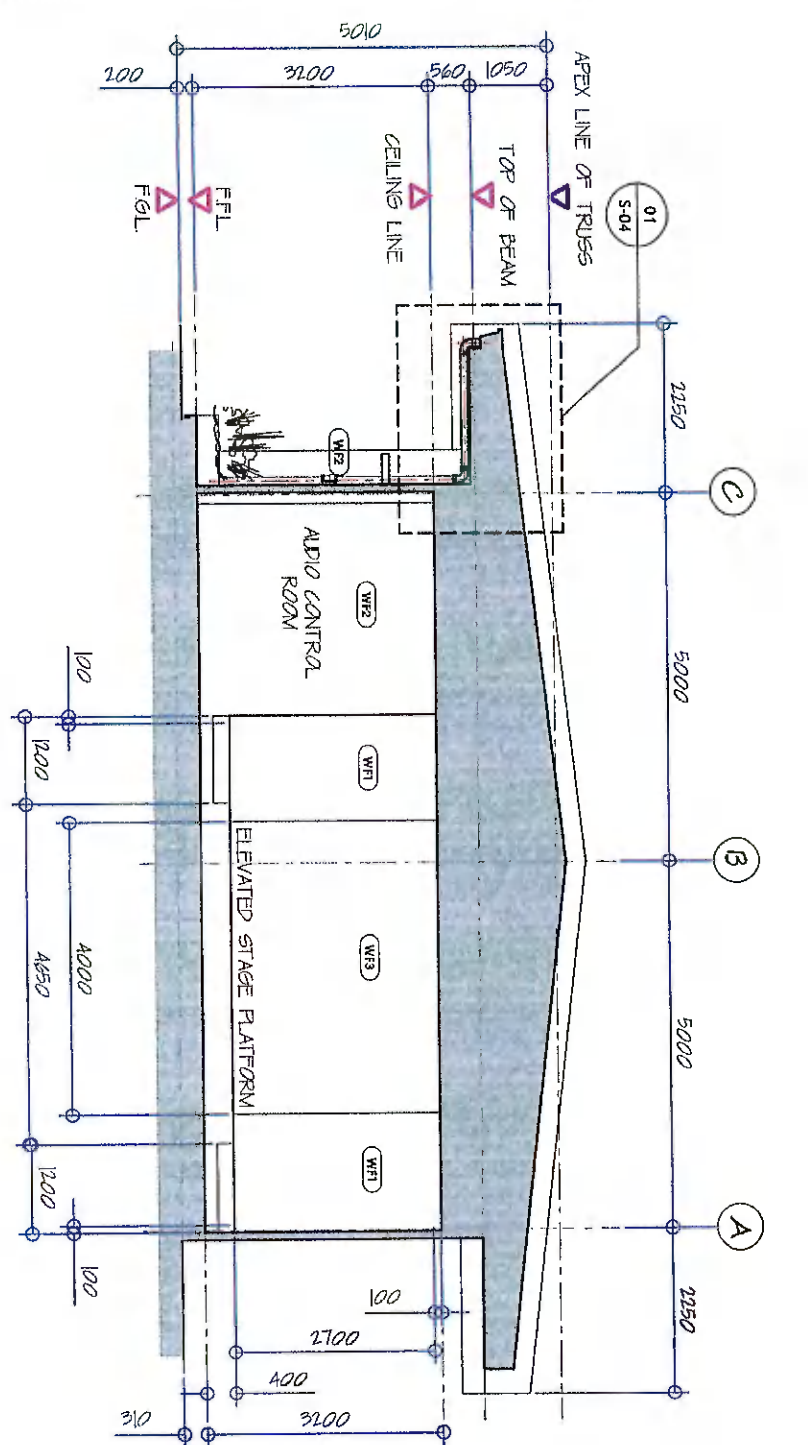
APPROVED:
 ENGR. ROGELIO A. BISANA, JR.
 AGM, OPERATION & TECHNICAL SERVICES

SHEET CONTENTS
 AS SHOWN

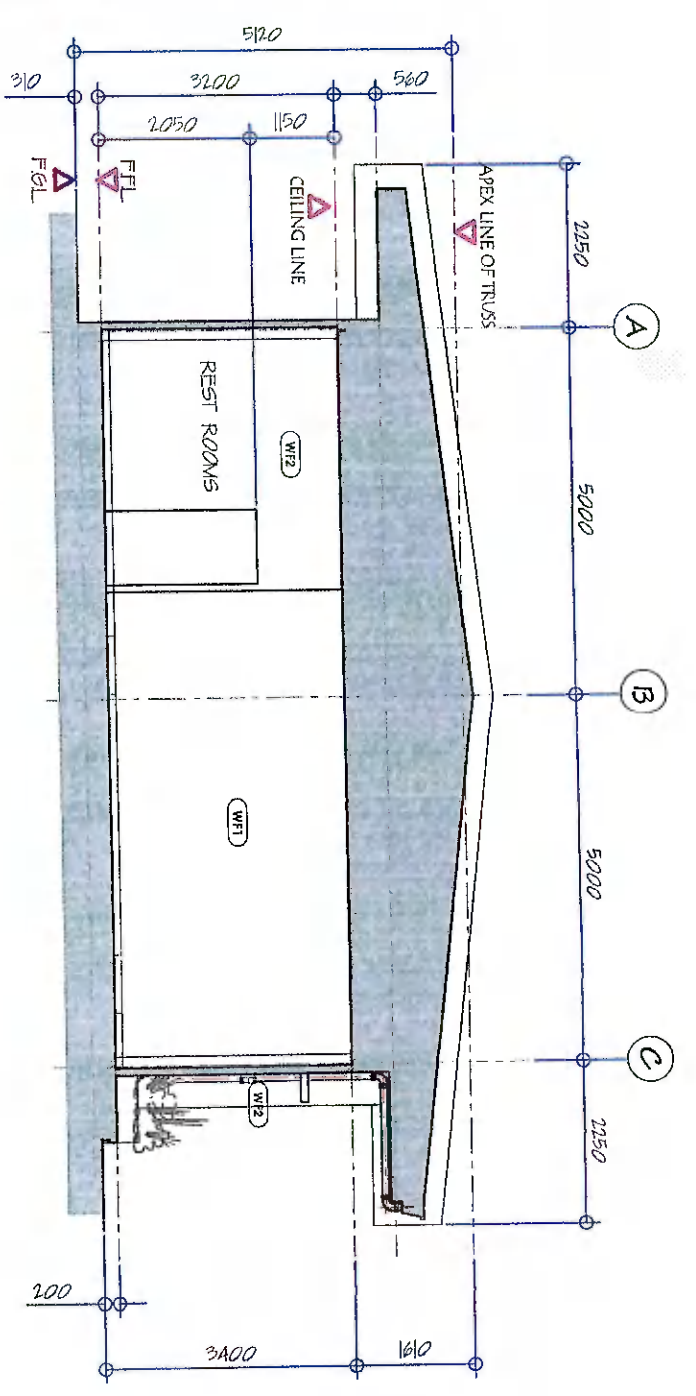
SHEET NO.
 A-06
 06
 21



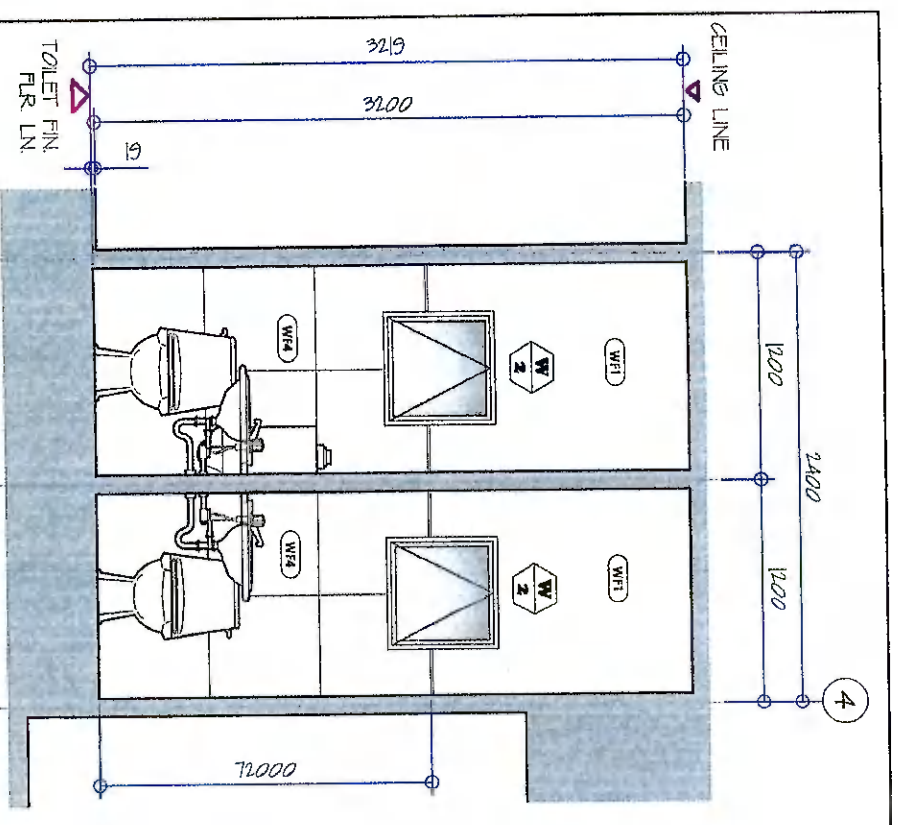
01 LONGITUDINAL SECTION (PROPOSED)
 SCALE: 1 : 100 M



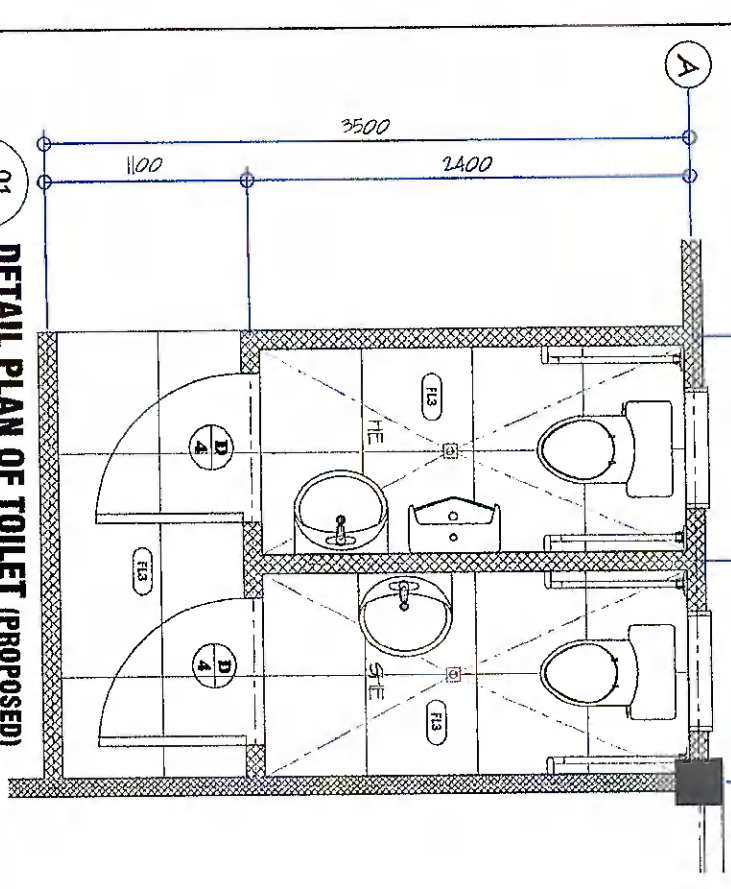
02 CROSS SECTION (PROPOSED)
 SCALE: 1 : 100 M



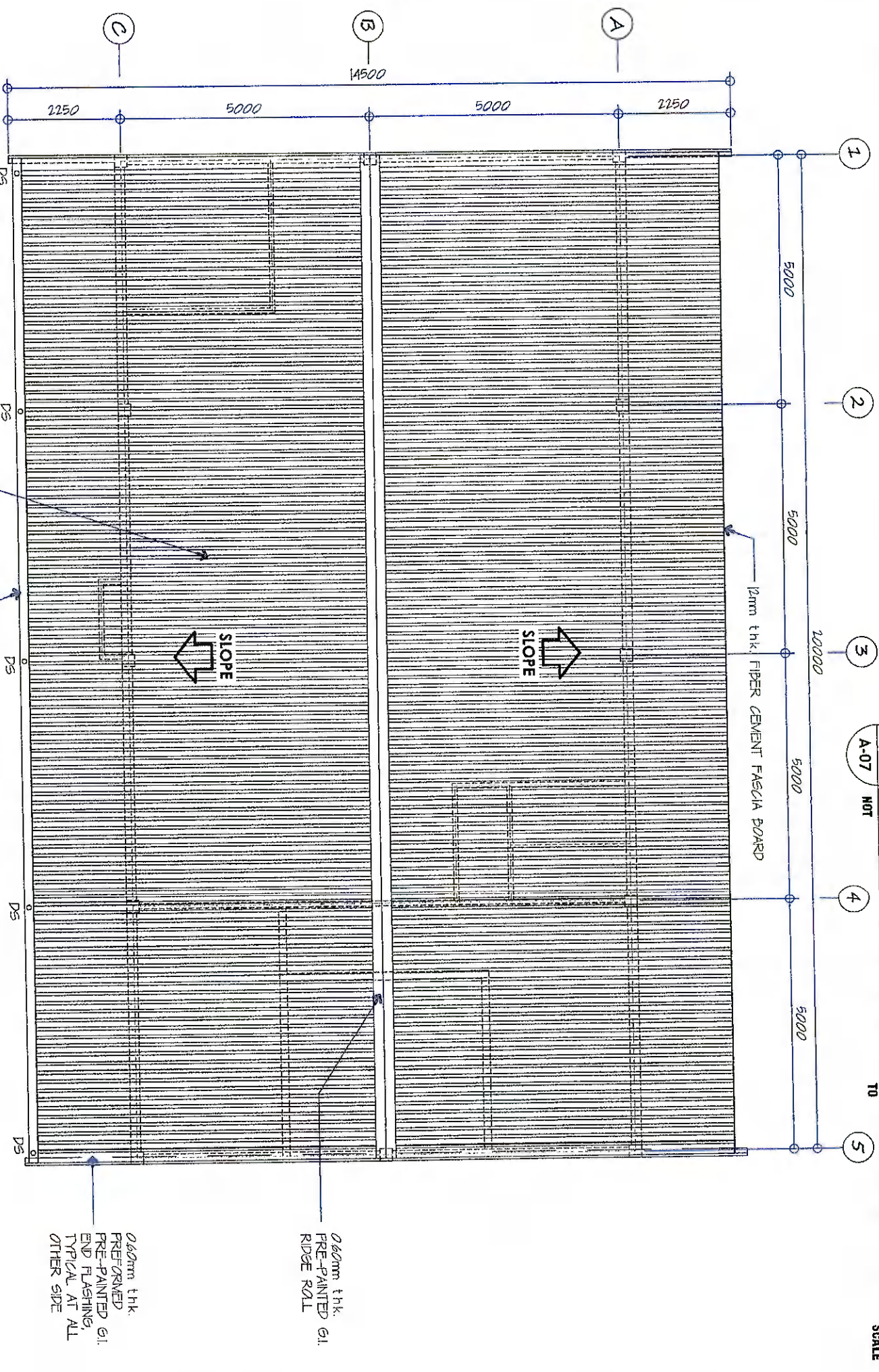
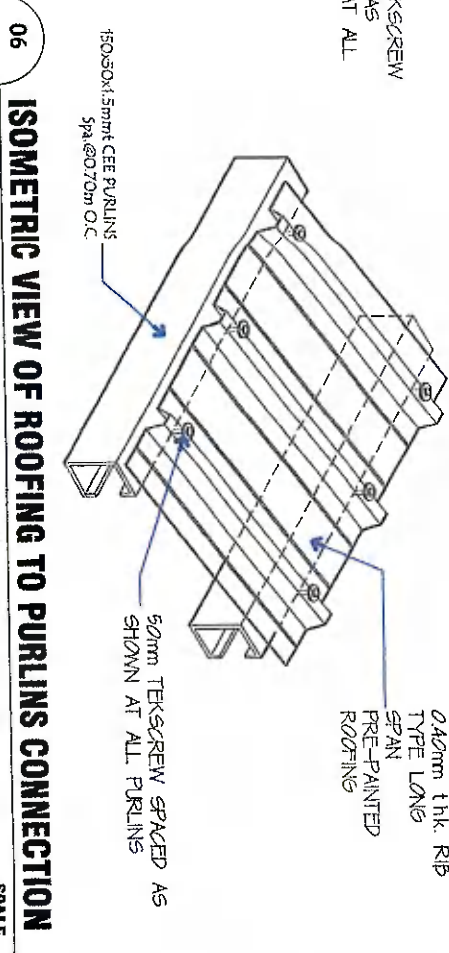
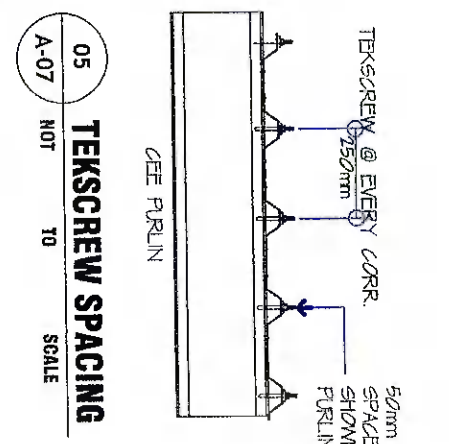
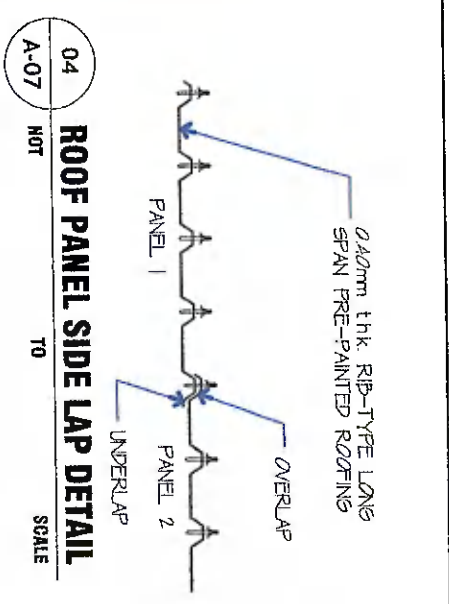
03 CROSS SECTION (PROPOSED)
 SCALE: 1 : 100 M



02
SCALE: 1:40 M



01
SCALE: 1:40 M



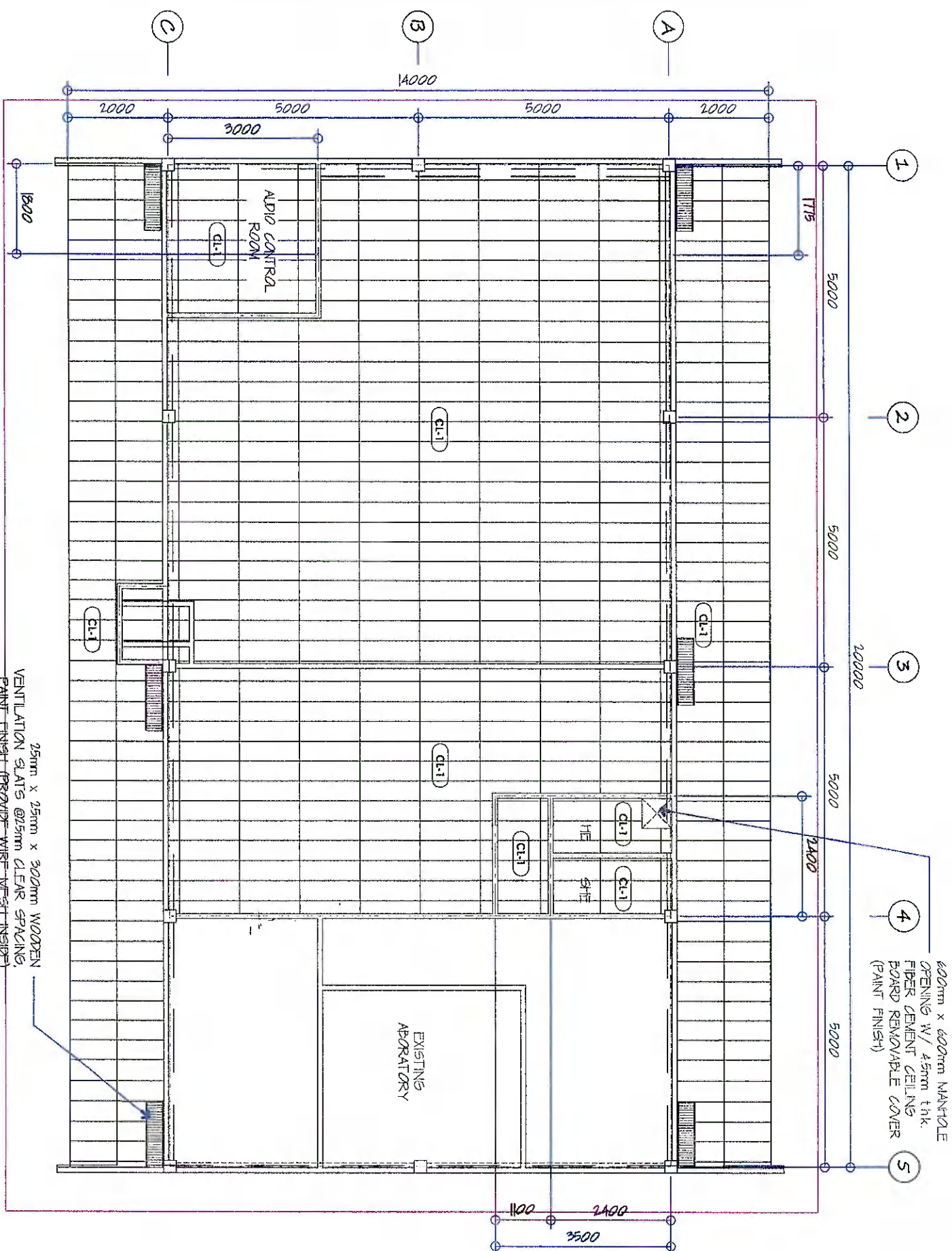
03
SCALE: 1:100 M

<p>GENERAL SANTOS CITY WATER DISTRICT E. FERNANDEZ STREET, BRGY. LAGA, GENERAL SANTOS CITY ENGINEERING & CONSTRUCTION DEPARTMENT PLANNING AND DESIGN DIVISION TEL. NO.: (083) 552-3824</p>		<p>DANILO M. ORLANDO, JR. CIVIL ENGINEER</p>		<p>PROJECT AND LOCATION RENOVATION AND IMPROVEMENT OF OLD WAREHOUSE INTO HRD TRAINING HALL LOCATION: E. FERNANDEZ ST., LAGA, CSC</p>		<p>CHECKED & REVIEWS: ENGR. MARIA CEJLA N. DANDAN O.C. - PDD</p>		<p>APPROVED: ENGR. ROGELIO A. BENA, JR. A.G.M. Operations & Technical Services</p>		<p>SHEET CONTENTS</p>		<p>SHEET NO.</p>	
<p>REG. NO. 0107345 PRR NO. 61873A</p>		<p>TIN NO. 291-941-997 DATE: 01/12/2022</p>		<p>AS SHOWN</p>		<p>DATE: August 2022</p>		<p>07</p>		<p>21</p>		<p>A-07</p>	

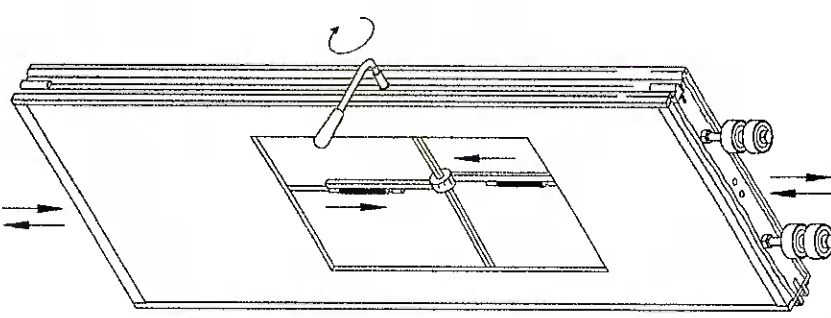
SCHEDULE OF FINISH

CEILING :

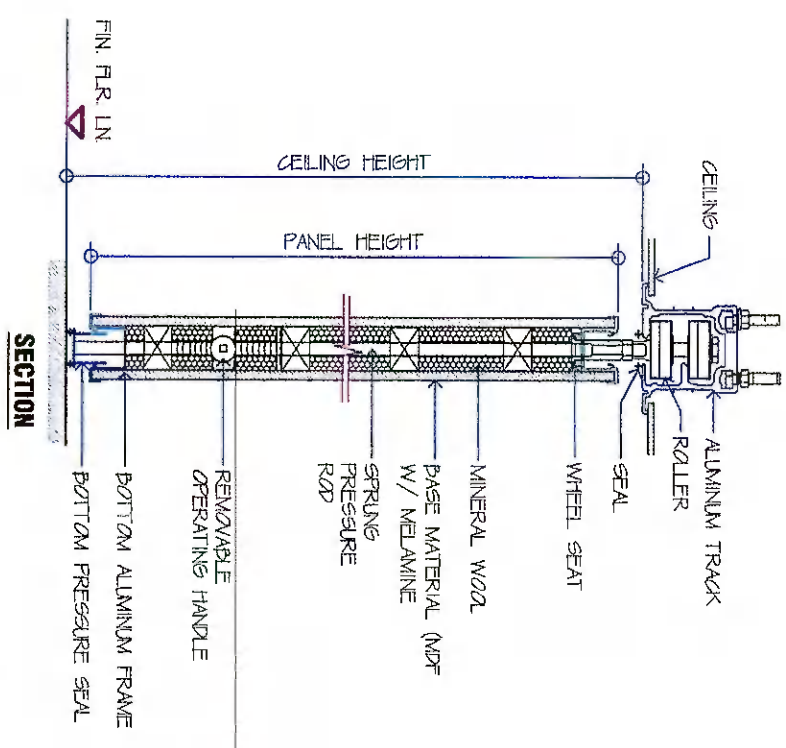
- (CL-1) 3.5mm thick FIBER CEMENT BOARD (PAINT FINISH) ON METAL FURRING CEILING FRAMES. USE 0.60mm thick x 19mm x 50mm x 5000mm DOUBLE FURRING CHANNELS @ 400mm ON CENTER W/ 0.60mm thick x 38mm x 5000mm CARRYING CHANNELS @ 1200mm ON CENTERS & 2 - 6mm thick x 50mm x 50mm STEEL ANGLE BAR SUSPENSION ROD HOLDER @ 1200mm O.C., SHORTER SPAN



01 REFLECTED CEILING PLAN (PROPOSED)
SCALE: 1 : 100 M



ISOMETRIC



02 OPERABLE SOUNDPROOF WALL PARTITION (PROPOSED)
SCALE: N.T.S

GENERAL SANTOS CITY WATER DISTRICT
E. FERNANDEZ STREET, BANGALAO, GENERAL SANTOS CITY
ENGINEERING & CONSTRUCTION DEPARTMENT
PLANNING AND DESIGN DIVISION
TEL. NO.: (063) 592-3824

DANIL O. TORLADOR, JR.
CIVIL ENGINEER
REG. NO. 0107545
PR. NO. 618734
TIN. NO. 291-941-997
DATE: 01/12/2022

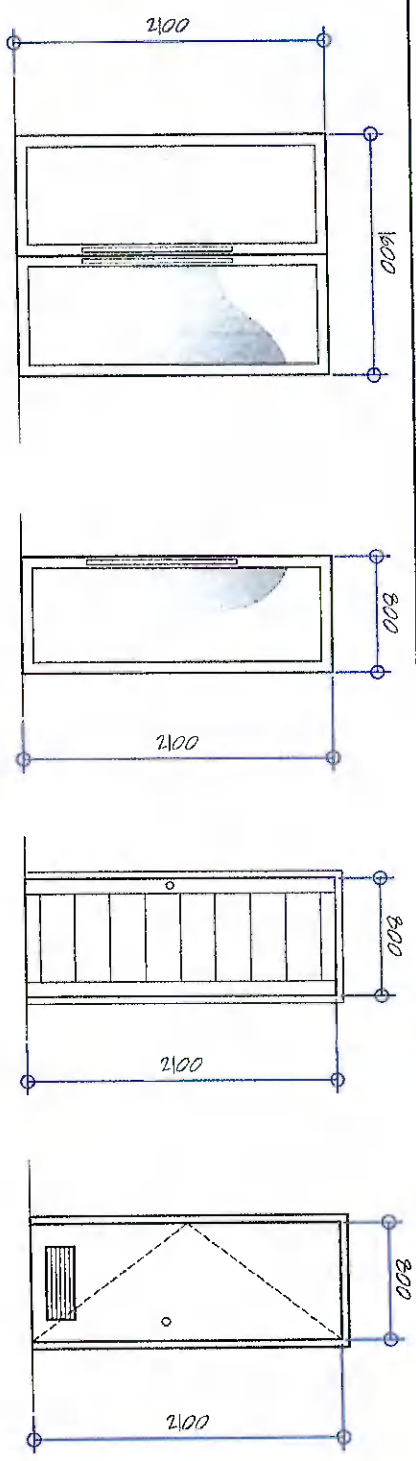
PROJECT AND LOCATION
RENOVATION AND IMPROVEMENT OF OLD WAREHOUSE INTO HRD TRAINING HALL
LOCATION: E. FERNANDEZ ST., LAGAJO, GSC

CHECKED & REVIEWS:
ENGR. MARIA CELIA N. DANDAN
OIC - PDD

APPROVED:
ENGR. ROGELIO A. BESANA, JR.
AGM, OPERATION & TECHNICAL SERVICES

SHEET CONTENTS
AS SHOWN

SHEET NO.
A-08
08
21

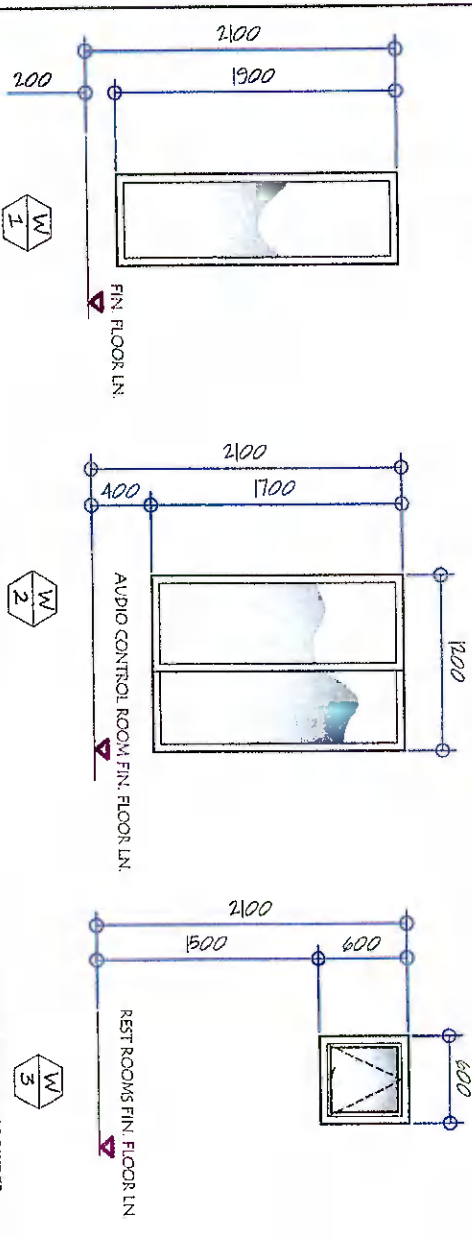


1 TWO-WAY DOUBLE SWING DOOR IN POWDER COATED FINISH ALUMINUM FRAMED WITH 10mm THK FIXED TINTED GLASS PANELS
ONE (1) SET

2 TWO-WAY SWING DOOR IN POWDER COATED FINISH ALUMINUM FRAMED WITH 10mm THK FIXED TINTED GLASS PANELS
ONE (1) SET

3 40mm THK PANEL DOOR TYPE IN 50 X 150 KD DOOR JAMB PAINT FINISH WITH COMPLETE ACCESSORIES
ONE (1) SET

4 PVC TOILET DOOR W/ COVER SET PLAIN AND COMPLETE HARDWARE
TWO (2) SETS

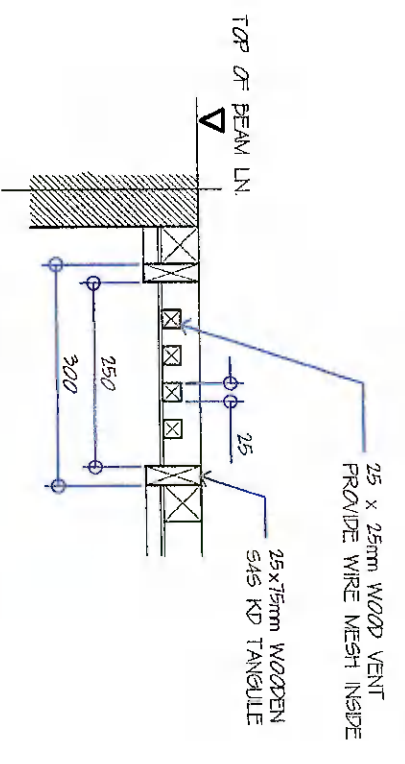


1 FIXED WINDOW IN POWDER COATED FINISH ALUMINUM FRAME WITH 6mm THK TINTED GLASS PANEL WITH COMPLETE ACCESSORIES
FOUR (4) SETS

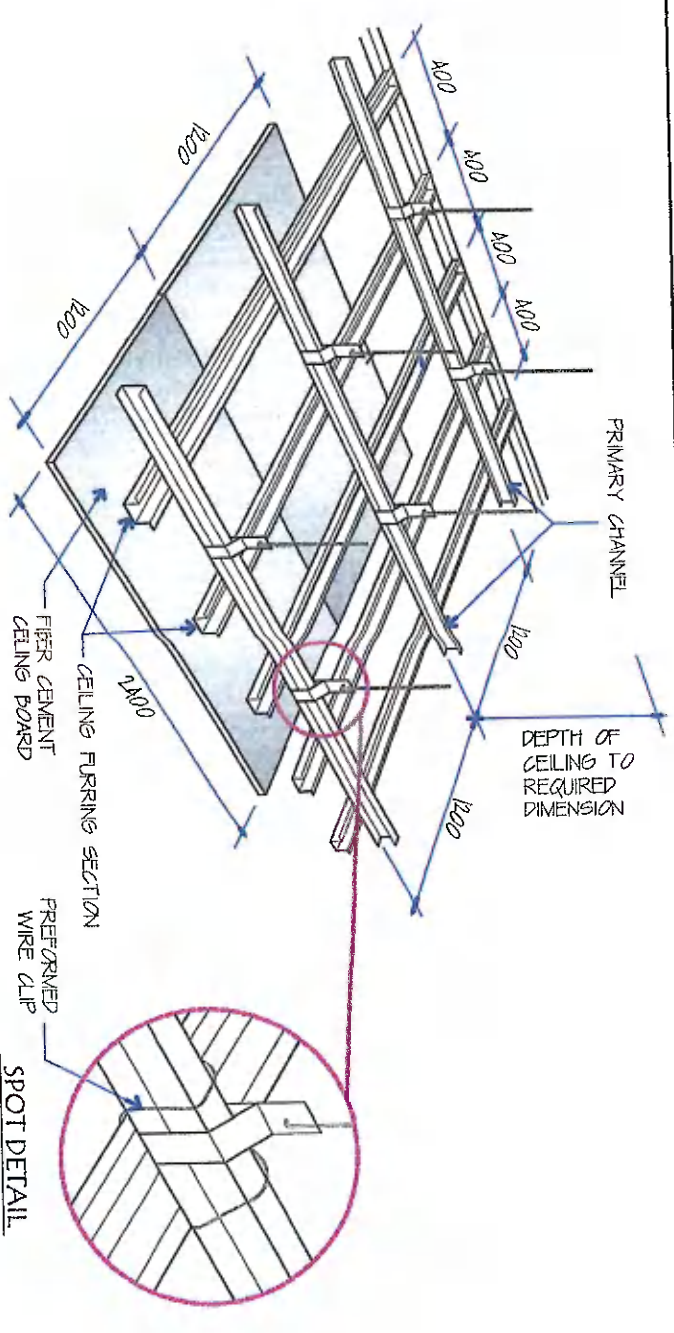
2 SLIDING WINDOW IN POWDER COATED FINISH ALUMINUM FRAME WITH 6mm THK TINTED GLASS PANEL WITH COMPLETE ACCESSORIES
ONE (1) SET

3 AWNING WINDOW IN POWDER COATED FINISH ALUMINUM FRAME WITH 6mm THK TINTED GLASS PANEL ON STEEL JAMB/FRAMING WITH COMPLETE ACCESSORIES
TWO (2) SETS

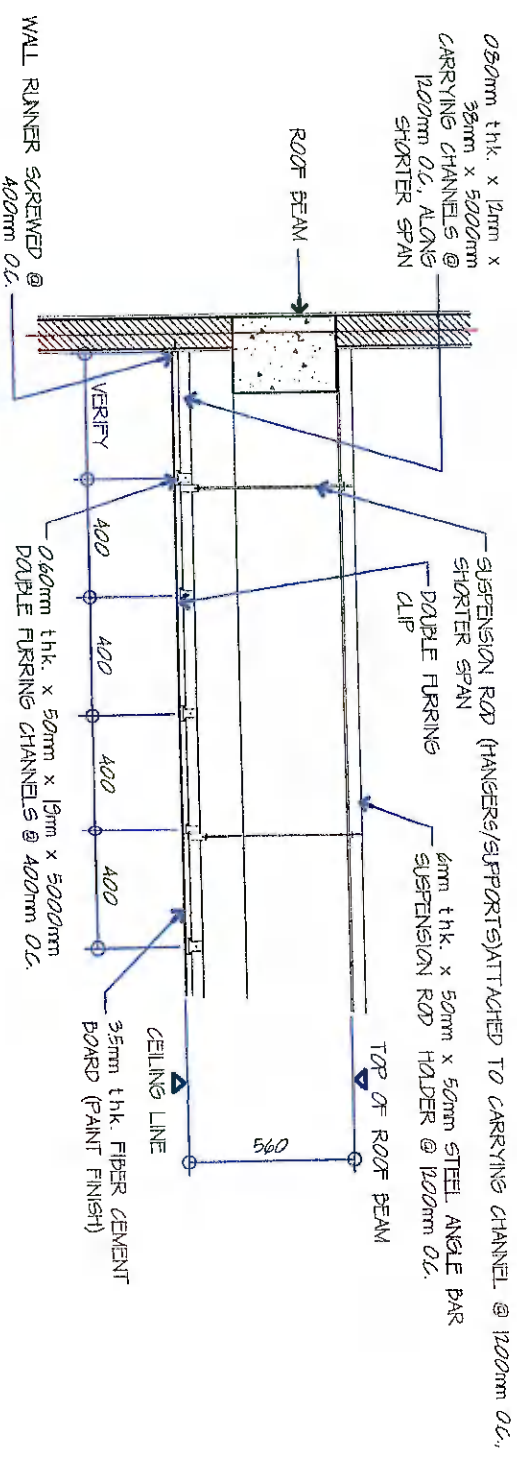
03 SCHEDULE OF DOORS & WINDOWS (PROPOSED)
SCALE: 1:10 M



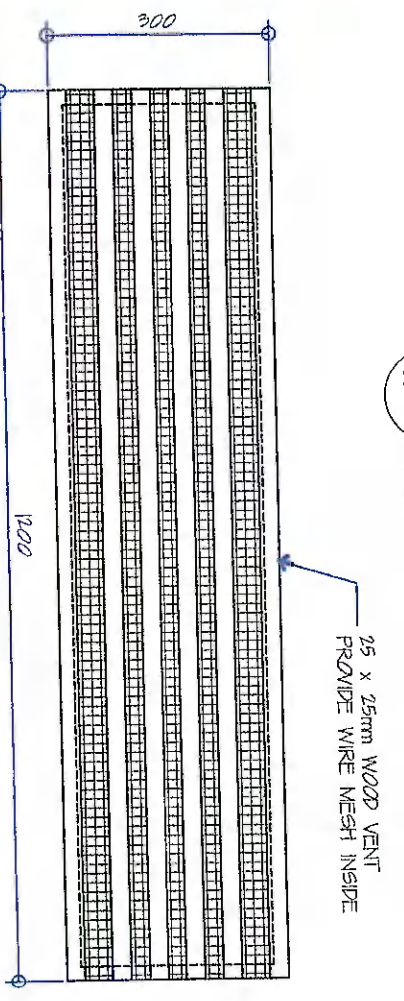
01 TYPICAL CEILING VENT SECTION DETAIL (PROPOSED)
SCALE: 1:10 M



05 PERSPECTIVE, CEILING (PROPOSED)
SCALE: NOT TO SCALE



04 DETAIL SECTION, METAL FURRING CONNECTION (PROPOSED)
SCALE: 1:25 M



02 TYPICAL CEILING VENT PLAN DETAIL (PROPOSED)
SCALE: 1:10 M

<p>GENERAL SANTOS CITY WATER DISTRICT E. FERNANDEZ STREET, BRGY. LAGAO, GEN. SANTOS CITY ENGINEERING & CONSTRUCTION DEPARTMENT PLANNING AND DESIGN DIVISION TEL. NO.: (083) 552-3824</p>		<p>DANILO M. HORLADOR, JR. CIVIL ENGINEER REG. NO. 0107545 PR. NO. 61873A DATE: 01/12/2022</p>		<p>RENOVATION AND IMPROVEMENT OF OLD WAREHOUSE INTO HRD TRAINING HALL LOCATION: E. FERNANDEZ ST., LAGAO, GSC</p>		<p>ENG. MA. RIA CELIA N. DANDAN OIC - HDD</p>		<p>ENG. ROGELIO A. BESANA, JR. AGM, OPERATIONS & TECHNICAL SERVICES</p>		<p>AS SHOWN</p>		<p>A-09</p>	
<p>PROJECT AND LOCATION</p>		<p>CHECKED & REVIEWS:</p>		<p>APPROVED:</p>		<p>SHEET CONTENTS</p>		<p>SHEET NO.</p>		<p>09</p>		<p>21</p>	

GENERAL CONSTRUCTION NOTES

GENERAL NOTES

1. IN THE INTERPRETATION OF THE DRAWING INDICATED DIMENSIONS SHALL GOVERN AND DISTANCES AND SIZES SHALL NOT BE SOLELY FOR CONSTRUCTION PURPOSES.
2. IN REFERENCE TO OTHER DRAWINGS, SEE ARCHITECTURAL DRAWINGS FOR DEPRESSIONS IN FLOOR SLABS, OPENINGS IN THE WALLS AND SLABS, INTERIOR PARTITIONS, LOCATION OF DRAINS ETC.
3. IN CASE OF DISCREPANCIES AS TO THE LAYOUT, DIMENSIONS, AND ELEVATIONS BETWEEN THE STRUCTURAL PLANS, AND ARCHITECTURAL DRAWINGS, THE CONTRACTOR SHALL NOTIFY BOTH THE STRUCTURAL ENGINEER AND THE ARCHITECT.
4. ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH THE ACI 318-05, BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE AND ALL STRUCTURAL STEEL WORK SHALL BE DONE IN ACCORDANCE WITH THE AISC 360-10, SPECIFICATION FOR STRUCTURAL STEEL WITH THE LOCAL BUILDING CODE REQUIREMENT.
5. ACI REFERS TO AMERICAN CONCRETE INSTITUTE, ASSC TO AMERICAN INSTITUTE OF STEEL CONSTRUCTION AND ASTM TO AMERICAN SOCIETY FOR TESTING MATERIALS.
6. CONSTRUCTION NOTES AND TYPICAL DETAILS APPLY TO ALL DRAWINGS UNLESS OTHERWISE SHOWN OR NOTED. MODIFY TYPICAL DETAILS AS DIRECTED TO MEET SPECIAL CONDITIONS.
7. SHOP DRAWINGS WITH ERECTION AND PLACING DETAILS OF ALL STRUCTURAL STEELS, MISCELLANEOUS IRON, PRE-CAST CONCRETE, ETC. SHALL BE SUBMITTED FOR ENGINEERS APPROVAL BEFORE FABRICATION.
8. CONTRACTOR SHALL NOTE AND PROVIDE ALL MISCELLANEOUS CURBS, SILLS, STICOLS, ELECTRICAL AND MECHANICAL DRAWINGS.
9. ALL RESULTS OF MATERIAL TESTING FOR CONCRETE, REINFORCING BARS, & STRUCTURAL STEEL MUST BE NOTED & APPROVED BY THE STRUCTURAL DESIGNER.

NOTES ON CONCRETE MIXES & PLACING

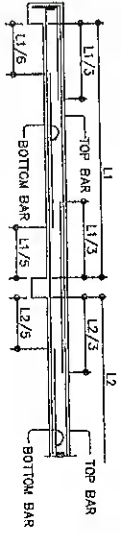
1. ALL CONCRETE SHALL DEVELOP A MIN. COMPRESSIVE STRENGTH AT THE END OF TWENTY EIGHT (28) DAYS W/ CORRESPONDING MAXIMUM SIZE AGGREGATE & BLENDS AS FOLLOWS
- | LOCATION | 28 DAYS STRENGTH | MAX. SIZE OF AGGREGATE | MAX. SLUMP |
|---------------------------------------|---------------------|------------------------|------------|
| ALL OTHERS INCLUDING SUSPENDED SLABS: | 4000 PSI (27.6 MPa) | 20mm | 100mm |
| COLUMNS: | 4000 PSI (27.6 MPa) | 20mm | 100mm |
| BEAMS, SLABS: | 4000 PSI (27.6 MPa) | 20mm | 100mm |
| SLAB ON FILL: | 4000 PSI (27.6 MPa) | 20mm | 100mm |
2. MAINTAIN MINIMUM CONCRETE COVER FOR REINFORCING STEEL AS FOLLOWS:
- | SLAB ON GRADE | 20mm | 40mm |
|---------------|------|------|
| WALLS | 20mm | 25mm |
| BEAMS | 25mm | 40mm |
| COLUMNS | 40mm | 49mm |
3. WHERE CONCRETE IS EXPOSED TO EXTERNAL BUT FURNISHED AGAINST FORMS WHERE CONCRETE IS DEPOSITED DIRECTLY AGAINST EARTH
 4. CONCRETE SHALL BE DEPOSITED IN ITS FINAL POSITION WITHOUT SEGREGATION. BE-HAND LUNG OR PLACING SHALL BE DONE PREFERABLY WITH BUCKETS, BUCKETS OR WHEELBARROWS. NO CHUTES WILL BE ALLOWED EXCEPT TO TRANSFER CONCRETE FROM HOOPERS TO (6) METERS IN AGGREGATE LENGTH.
 5. ALL AIR ENTRAINMENT SHALL BE ALLOWED WITHOUT THE USE OF VARIATORS UNLESS AUTHORIZED IN WRITING BY THE DESIGNER AND ONLY FOR UNUSUAL CONDITIONS WHERE VARIATIONS ARE EXTREMELY DIFFICULT TO ACCOMPLISH.
 6. ALL ANCHOR BOLTS, DOWELS, AND OTHER INSERTS, SHALL BE PROPERLY POSITIONED & SECURED IN PLACE PRIOR TO PLACING OF CONCRETE.
 7. ALL CONCRETE SHALL BE KEPT MOIST FOR A MINIMUM OF SEVEN CONSECUTIVE DAYS AFTER PLACING BY THE USE OF WET BURLAP, FOG SPRAYING, CURING COMPOUNDS OR OTHER APPROVED METHODS.
 8. STRIPPING OF FORMS AND SHORES:
 - 24 HRS. FOUNDATION SLAB EXCEPT WHEN ADDITIONAL LOADS ARE IMPOSED
 - 21 DAYS AT EACH CORNER
 - 14 DAYS AT OTHER CORNERS
 - 21 DAYS AT OTHER CORNERS
 9. THE CONTRACTOR SHALL SUBMIT THE SCHEDULE OF POURING AND THE LOCATION OF THE CONSTRUCTION JOINTS TO THE STRUCTURAL ENGINEER AT LEAST (4) DAYS PRIOR TO THE POURING FOR APPROVAL.
 10. THE CONTRACTOR SHALL FURNISH AND MAINTAIN ADEQUATE FORMS AND SHORINGS UNTIL THE CONCRETE MEMBERS HAVE ATTAINED THEIR WORKING CONDITION AND STRENGTH.

NOTES ON REINFORCEMENT

1. UNLESS OTHERWISE NOTED IN PLANS, THE YIELD STRENGTH OF REINFORCING BARS SHALL BE:
 - A. FOOTINGS, FLOORING BEAMS AND GIRDERS $f_y = 275 \text{ MPa}$ (40,000 psi)
 - B. FLOORING BEAMS AND GIRDERS $f_y = 275 \text{ MPa}$ (40,000 psi)
 - C. BEAMS AND GIRDERS $f_y = 275 \text{ MPa}$ (40,000 psi)
 - D. NON-LOAD BEARING WALL PARTITIONS, EMBEDDED SLABS, FLOOR & ROOF SLABS, PARAPETS, CURB BARS, SIDE WALK, $f_y = 275 \text{ MPa}$ (40,000 psi)
2. ALL REINFORCING BARS SHALL BE PLACED IN ACCORDANCE WITH THE FOLLOWING:
 - A. ALL REINFORCING BARS SHALL BE PLACED IN ACCORDANCE WITH THE FOLLOWING:
 - 1. ALL SLAB REINFORCEMENTS SHALL BE 20mm CLEAR MINIMUM FROM BOTTOM AND FROM THE TOP OF SLAB.
 - 2. UNLESS OTHERWISE SHOWN, REINFORCEMENT IN CONTINUOUS ELEVATED SLAB SHALL BE CUT AS FOLLOWS:
 - 3. UNLESS OTHERWISE NOTED IN PLANS, LAP SPACES FOR VERTICAL COLUMN REINFORCEMENTS SHALL BE MADE WITHIN THE CENTER HALF OF COLUMN HEIGHT, AND THE SPICE LENGTH SHALL NOT BE LESS THAN 40 BAR DIAMETERS. WELDING OR APPROVED MECHANICAL DEVICES MAY BE USED PROVIDED THAT THE WELDING AND THE WELDING BARS ARE WELDED OR MECHANICALLY CONNECTED AT SPACES OF AT LEAST 100mm CLEARANCE FROM THE JOINTS. UNLESS OTHERWISE NOTED IN PLANS, LAP SPACES FOR VERTICAL COLUMN REINFORCEMENTS SHALL BE MADE WITHIN THE CENTER HALF OF COLUMN HEIGHT, AND THE SPICE LENGTH SHALL NOT BE LESS THAN 40 BAR DIAMETERS. WELDING OR APPROVED MECHANICAL DEVICES MAY BE USED PROVIDED THAT THE WELDING AND THE WELDING BARS ARE WELDED OR MECHANICALLY CONNECTED AT SPACES OF AT LEAST 100mm CLEARANCE FROM THE JOINTS.

NOTES ON CONCRETE SLABS

1. ALL SLAB REINFORCEMENTS SHALL BE 20mm CLEAR MINIMUM FROM BOTTOM AND FROM THE TOP OF SLAB.
2. UNLESS OTHERWISE SHOWN, REINFORCEMENT IN CONTINUOUS ELEVATED SLAB SHALL BE CUT AS FOLLOWS:



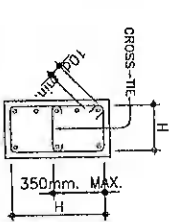
TYPICAL BAR BENDING AND CUTTING DETAILS FOR SLABS

1. 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 SPAN FOR REINFORCING BARS NEAR THE SUPPORTS. THE SPACING OF THE BARS AT THE COLUMN STRIPS SHALL NOT BE MORE THAN ONE AND A HALF (1 1/2) SLAB THICKNESS.
2. TEMPERATURE BARS FOR SLAB SHALL BE GENERALLY PLACED NEAR THE FACE IN TENSION AND SHALL NOT BE LESS THAN 0.0025 X GROSS CROSS-SECTIONAL AREA (A_G) OF THE SLAB (SEE SCHEDULE BELOW)

THICKNESS	MINIMUM TEMPERATURE BARS
100 mm	10 mm @ 250mm EACH WAY
125 mm	10 mm @ 225mm EACH WAY
150 mm	10 mm @ 180mm EACH WAY
175 mm	10 mm @ 150mm EACH WAY
200 mm	10 mm @ 120mm EACH WAY

NOTES ON COLUMNS

1. PROVIDE EXTRA SETS OF TIES AT 100mm O.C. FOR TIED COLUMN REINFORCEMENT ABOVE AND BELOW BEAM-COLUMN CONNECTIONS FOR A MINIMUM THICKNESS OF CONNECTION EQUAL TO THE HEIGHT OF COLUMN OR 450mm, 1/6 THE CLEAR HEIGHT OF COLUMN OR 450mm.
2. COLUMN TIES SHALL BE PROTECTED EXTERNALLY BY A COVERING OF CONCRETE CAST MONOLITHICALLY WITH THE CORE WITH THE MINIMUM THICKNESS OF 20mm AND NOT LESS THAN 40 TIMES THE MAXIMUM SIZE OF CORNER AGGREGATE IN MILLIMETERS WHERE COLUMN CHANGE IN SIZE VERTICAL. REINFORCEMENTS SHALL BE OFFSET AT A SLOPE OF NOT MORE THAN 1 IN 6 AND EXTRA 10mm TIES AT 100mm SHALL BE PROVIDED THROUGH THE OFFSET REGION.
3. UNLESS OTHERWISE NOTED IN THE PLANS, LAP SPACES FOR VERTICAL COLUMN REINFORCEMENTS SHALL BE MADE WITHIN THE CENTER HALF OF COLUMN HEIGHT, AND THE SPICE LENGTH SHALL NOT BE LESS THAN 40 BAR DIAMETERS. WELDING OR APPROVED MECHANICAL DEVICES MAY BE USED PROVIDED THAT THE WELDING AND THE WELDING BARS ARE WELDED OR MECHANICALLY CONNECTED AT SPACES OF AT LEAST 100mm CLEARANCE FROM THE JOINTS.



TYPICAL COLUMN ELEV. SHOWING DOVELS AND TIES SPACING

1. ALL CONCRETE REINFORCEMENT SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF ACI DETAILS, ALL OTHER CONDITIONS USE HOOPS @ 50mm CENTERS.
2. FOR COL. BAR SPACES SEE TABLE 1. COLUMN REINFORCEMENT (SPACING OF TIES ALONG THIS REGION SHALL NOT BE LESS THAN 100mm).

BAR SIZE (mm)	EMBEDMENT (mm)	LAPPED (mm)	LAPPED (mm)
10mm	300	300	300
12mm	300	300	300
16mm	400	400	400
20mm	500	500	500
25mm	600	600	600
32mm	750	750	750

NOTES ON BEAMS AND GIRDERS

1. UNLESS OTHERWISE NOTED IN PLANS, CAMBER ALL BEAMS AND GIRDERS AT LEAST 6mm FOR EVERY 4.5m OF SPAN, EXCEPT CAMBERERS FOR WHICH THE USER SHALL BE AS NOTED IN PLANS OR AS ORDERED BY THE ENGINEER BUT IN NO CASE LESS THAN 20mm FOR EVERY 3.0m OF FREE SPAN.
2. TYPICAL BARS BENDING AND CUTTING DETAILS FOR BEAMS SHALL BE AS SHOWN IN FIG. B-1.

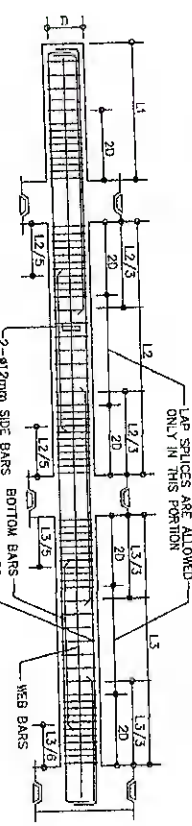


TABLE A: EMBEDMENT LENGTHS AND LAPPED SPICES IN MILLIMETERS

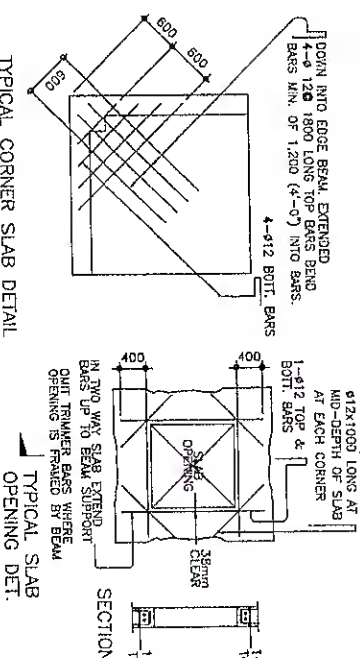
BAR SIZE (mm)	EMBEDMENT (mm)	LAPPED (mm)	LAPPED (mm)
10mm	300	300	300
12mm	300	300	300
16mm	400	400	400
20mm	500	500	500
25mm	600	600	600
32mm	750	750	750

TABLE B: EMBEDMENT LENGTHS AND LAPPED SPICES IN MILLIMETERS

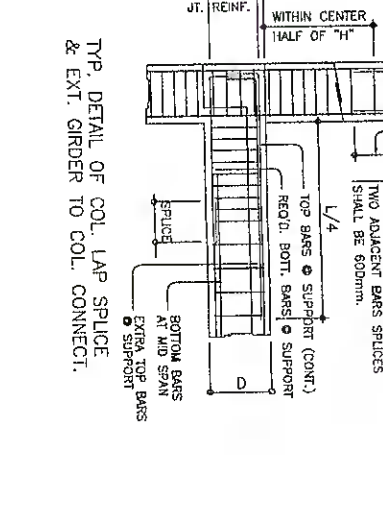
BAR SIZE (mm)	EMBEDMENT (mm)	LAPPED (mm)	LAPPED (mm)
10mm	225	300	300
12mm	225	300	300
16mm	300	400	400
20mm	400	500	500
25mm	500	600	600
32mm	700	750	750

NOTES ON FOOTINGS

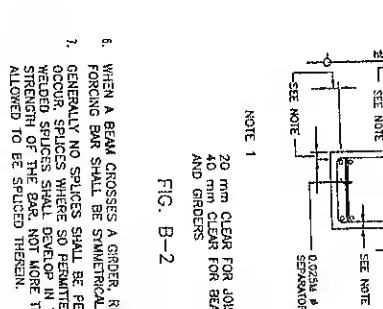
1. FOOTINGS ARE DESIGNED FOR AN ALLOWABLE SOIL BEARING CAPACITY OF 120 kPa (L2000 psf). CONTRACTOR SHALL REPORT TO THE ENGINEER, IN WRITING, THE ACTUAL SOIL CONDITIONS UNCOVERED AND CONFIRM ACTUAL BEARING CAPACITY OF SOIL BEFORE DEPOSITING CONCRETE.
2. FOOTING SHALL REST AT LEAST 150mmmm BELOW NATURAL GRADE LINE UNLESS OTHERWISE NOTED IN PLANS. NO FOOTING SHALL REST ON FILL.
3. MINIMUM CONCRETE PROTECTION FOR REINFORCEMENTS SHALL BE 75mm CLEAR FOR CONCRETE COVERED THE GROUND AND 50mm FOR CONCRETE COVERED AGAINST A FORMWORK.



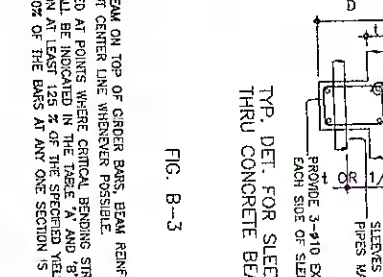
TYPICAL CORNER SLAB DETAIL



TYP. DETAIL OF COL. LAP SPICE & EXT. GIRDER TO COL. CONNECT.



TYP. DET. FOR SLEEVES THRU CONCRETE BEAM



MAIN REINFORCEMENT

20 mm CLEAR FOR JOINTS AND GIRDERS

GENERAL CONSTRUCTION NOTES

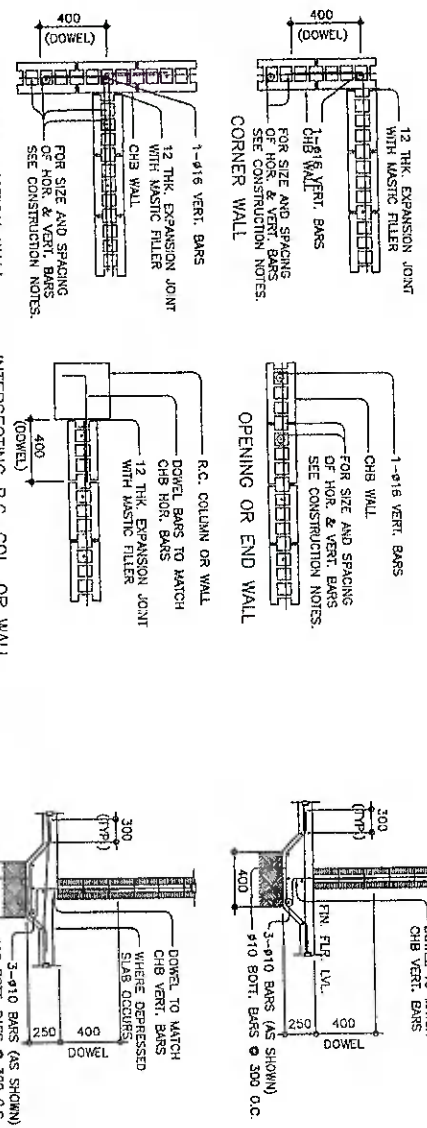
NOTES ON CONCRETE HOLLOW BLOCK WALLS

- UNLESS OTHERWISE SHOWN IN PLANS ALL CONCRETE HOLLOW BLOCKS AND CERAMIC BLOCKS SHALL BE REINFORCED AS SHOWN IN THE SCHEDULE OF CONCRETE HOLLOW BLOCKS AND CERAMIC BLOCK REINFORCEMENT.
- PROVIDE 150mm x 300mm STIFFENER COLUMN REINFORCED WITH 4-12mm VERT. BARS AT 150mm ON CENTER WHERE CONCRETE HOLLOW BLOCK TERMINATES AND AT EVERY 3.0M LENGTH OF CONCRETE HOLLOW BLOCK WALLS UNLESS NOTED IN STRUCTURAL PLANS.

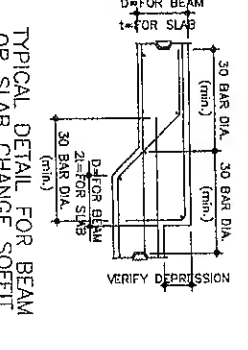
BLOCK THICKNESS	REINFORCEMENT		NOTES
	HORIZONTAL	VERTICAL	
75 mm	10mm ϕ 600mm O.C.	10mm ϕ 600mm O.C.	4. Manual Laps at Splice = 0.29m B. Provide 10mm ANKLED REINFORCEMENT AT CORNERS 0.9m LONG
125 mm	10mm ϕ 600mm O.C.	10mm ϕ 600mm O.C.	C. Where CHB OR CER. BLK. WALL DOWNES JOIN COL. R.C. BEAMS AND WALL DOWNES WITH THE SAME SIZE AS VERT. COL. R.C. REINFORCEMENTS SHALL BE PROVIDED
150 mm	10mm ϕ 600mm O.C.	10mm ϕ 600mm O.C.	
200 mm	12mm ϕ 600mm O.C.	12mm ϕ 600mm O.C.	

REINFORCING CONCRETE LINTEL BEAM IN CONCRETE BLOCK WALLS

CLEAR LENGTH (CL) (m)	TOTAL CLR. LEN. (m)	NO. OF REINFORCING BARS	REINFORCEMENT	
			TOP	BOTTOM
1.20m	1.60m	200	1-#10	1-#10
1.50m	1.90m	200	1-#10	1-#10
1.80m	2.20m	200	1-#12	1-#12
2.10m	2.50m	250	1-#12	1-#12
2.40m	2.80m	250	1-#12	1-#12
2.70m	3.10m	250	1-#12	1-#12
3.00m	3.40m	300	1-#12	1-#12
3.30m	3.70m	300	1-#12	1-#12
3.60m	4.00m	400	1-#12	1-#12



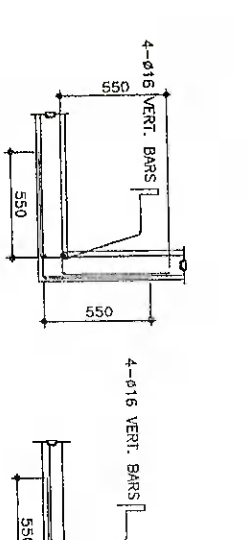
TYPICAL CHB FOOTING DETAILS (WHERE APPLICABLE)



NOTES ON CONCRETE WALLS

- ALL WALLS SHALL BE REINFORCED ACCORDING TO THE FOLLOWING SCHEDULE OF WALL REINFORCEMENT UNLESS OTHERWISE INDICATED IN THE PLANS.

WALL THICKNESS	REINFORCEMENT		VERTICAL SPACING
	HORIZONTAL	VERTICAL	
100mm	10mm ϕ 250mm O.C.	10mm ϕ 300mm O.C.	VERT. BARS STAGGERED OUT
150mm	10mm ϕ 250mm O.C.	10mm ϕ 300mm O.C.	
180mm	12mm ϕ 250mm O.C.	12mm ϕ 300mm O.C.	



NOTES ON WELDS

- USE E70XX ELECTRODES FOR ALL MEMBERS WELDED.
- WELDS SHALL DEVELOP THE FULL STRENGTH OF MEMBERS JOINED UNLESS OTHERWISE SHOWN OR DETAILED IN THE DRAWINGS.

NOTES ON STRUCTURAL STEEL

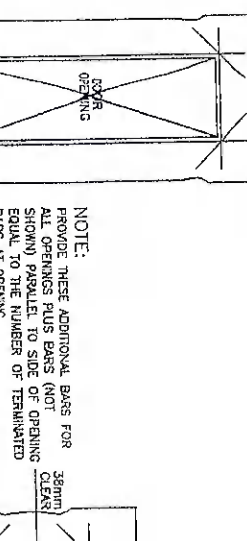
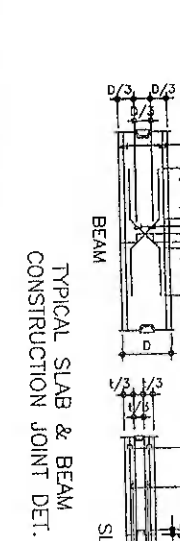
- STRUCTURAL STEEL TO BE USED FOR FABRICATION AND ERECTION OF THIS STRUCTURE SHALL COMPLY WITH ALL RELEVANT PROVISIONS OF AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS LATEST EDITION.
- ALL STRUCTURAL STEEL SHAPES SHALL CONFORM TO ASTM A36 STRUCTURAL STEEL UNLESS OTHERWISE INDICATED.
- ALL WELDED CONNECTIONS SHALL DEVELOP THE FULL STRENGTH OF THE MEMBERS CONNECTED.
- UNLESS OTHERWISE SPECIFIED ALL WELDING RODS SHALL CONFORM A55 E60 ELECTRODES.
- ALL BOLTS USED UNLESS OTHERWISE SPECIFIED SHALL BE ASTM A 307 BOLTS.

NOTES ON EMBEDDED PIPES

- ALL EMBEDDED PIPES FOR UNITS, ETC. THAT PASS THRU BEAMS SHALL NOT EXCEED 100mm IN DIAMETER OR 1/3 BEAM DEPTH WHICHEVER IS LESS. UNLESS OTHERWISE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER.
- NO PIPES SHALL BE ALLOWED TO PASS THRU BEAMS VERTICALLY.
- NO PIPES SHALL BE EMBEDDED IN COLUMNS.

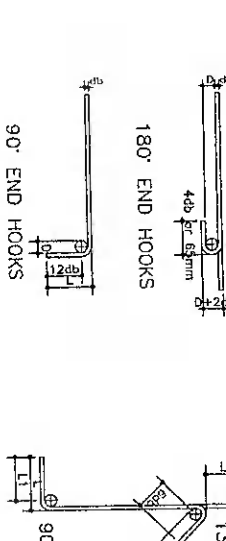
NOTES ON CONSTRUCTION JOINTS IN CONCRETE

- WHERE A CONSTRUCTION JOINT IS TO BE MADE THE SURFACE OF CONCRETE SHALL BE CLEANED AND ALL UNWANTED AND SPANNING WATER REMOVED. SHIRAR KEY SHALL BE PROVIDED AT THE JOINT.



NOTES OF STIRRUPS

- ALL REINFORCEMENT SHALL BE BENT COLD UNLESS OTHERWISE PERMITTED BY THE STRUCTURAL ENGINEER.
- REINFORCEMENT PARALLEL EMBEDDED IN CONCRETE SHALL NOT BE BENT EXCEPT AS SHOWN IN THE DESIGN DRAWINGS OR PERMITTED BY THE STRUCTURAL ENGINEER.
- TIES & CLOSE STIRRUPS MUST BE BENT AT 135°.



MAIN BARS END HOOKS (ALL GRADES)			
BAR SIZE (mm)	180° HOOK	90° HOOK	135° HOOK
10mm	125	150	100
12mm	150	200	115
16mm	175	250	150
20mm	200	300	200
25mm	250	350	250
32mm	300	400	300

STIRRUP AND TIE HOOKS (ALL GRADES)			
BAR SIZE (mm)	180° HOOK	90° HOOK	135° HOOK
10mm	40	65	100
12mm	50	85	115
16mm	65	115	150
20mm	85	150	200
25mm	115	200	250
32mm	150	250	300

TYP. DET. OF LINTEL BEAM AT CHB WALL OPENING



GENERAL SANTOS CITY WATER DISTRICT
E. FERNANDEZ STREET, BRGY. LAGA, GENERAL SANTOS CITY
ENGINEERING & CONSTRUCTION DEPARTMENT
PLANNING AND DESIGN DIVISION
TEL. NO.: (083) 592-3894

DANILON M. KRADADOR, JR.
CIVIL ENGINEER
REG. NO. 0107945
P.R. NO. 61873A

PROJECT AND LOCATION:
RENOVATION AND IMPROVEMENT OF OLD WAREHOUSE INTO HRD TRAINING HALL

LOCATION: E. FERNANDEZ ST., LAGA, GSC

CHECKED & REVIEWED:
ENGR. MARIA CELIA N. DANDAN
OIC - PDD

DATE: 01/12/2022

APPROVED:
ENGR. ADGELIO A. BESANNA, JR.
AGM, OPERATIONS & TECHNICAL SERVICES

DRAWN BY: ZONG-RAE

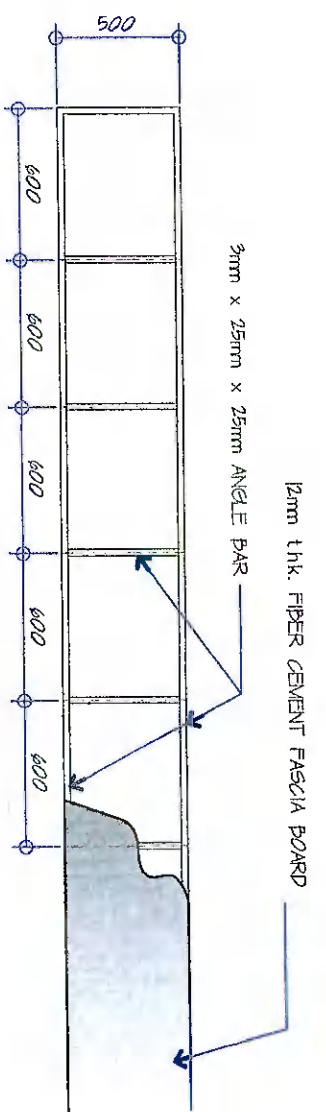
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REV. NO. AUGUST 2022

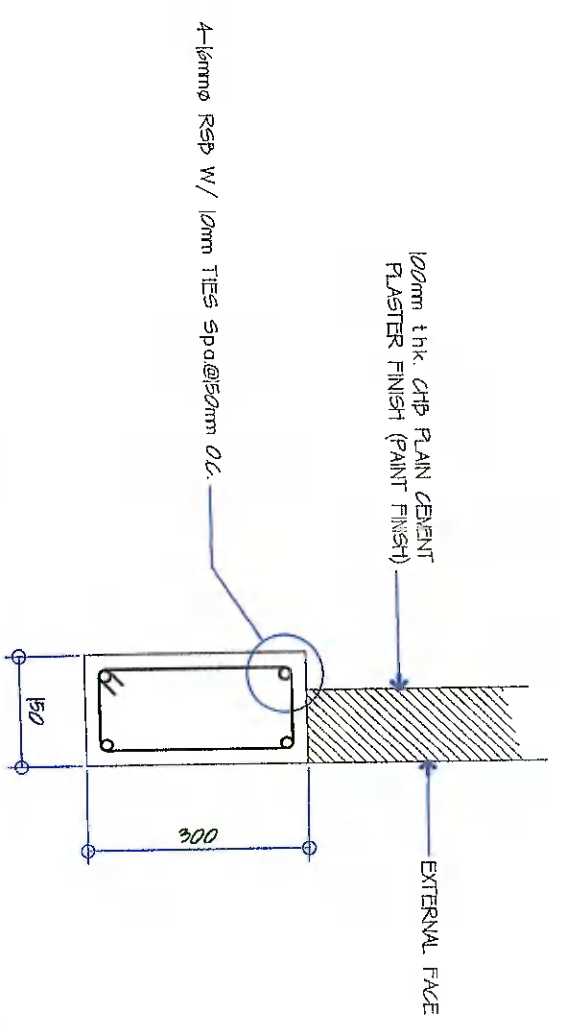
SHEET NO. **S-02**

DATE: AUGUST 2022

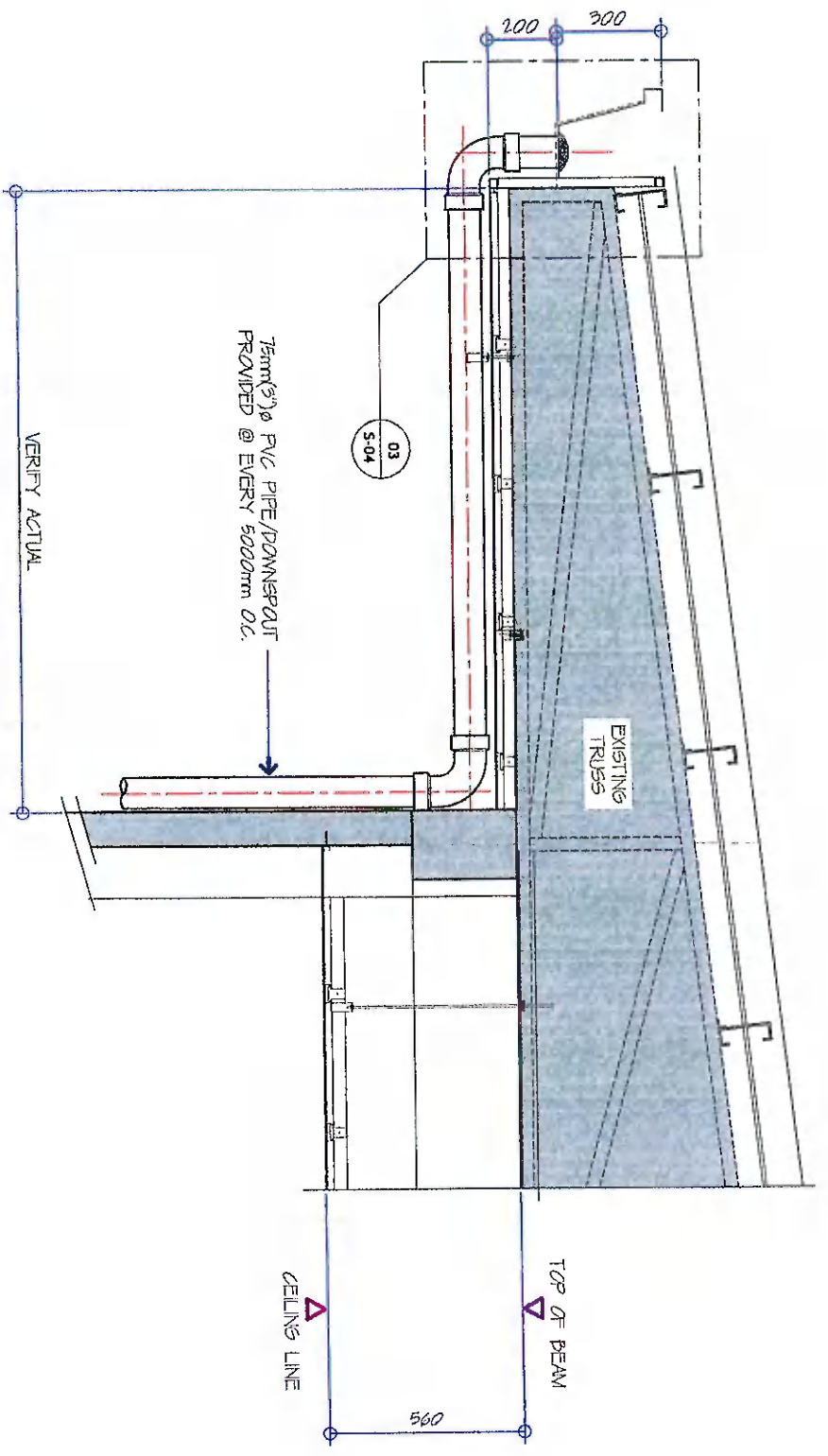
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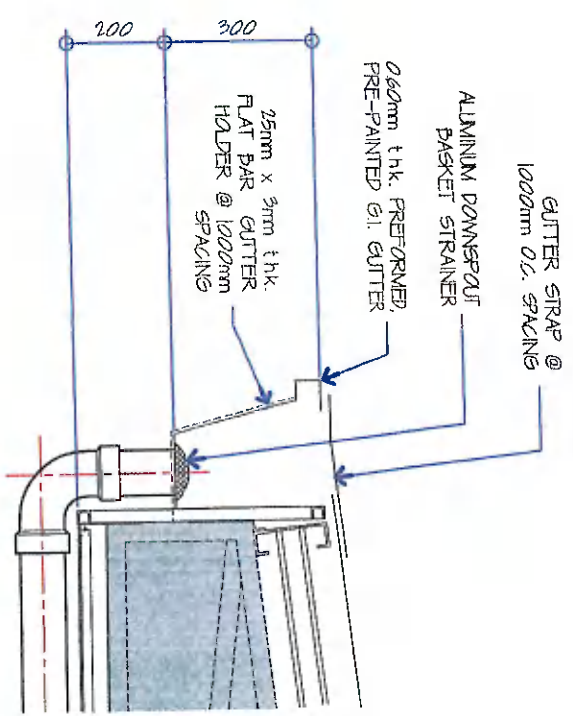
02 FASCIA FRAME DETAIL (PROPOSED)
SCALE: 1:80 M



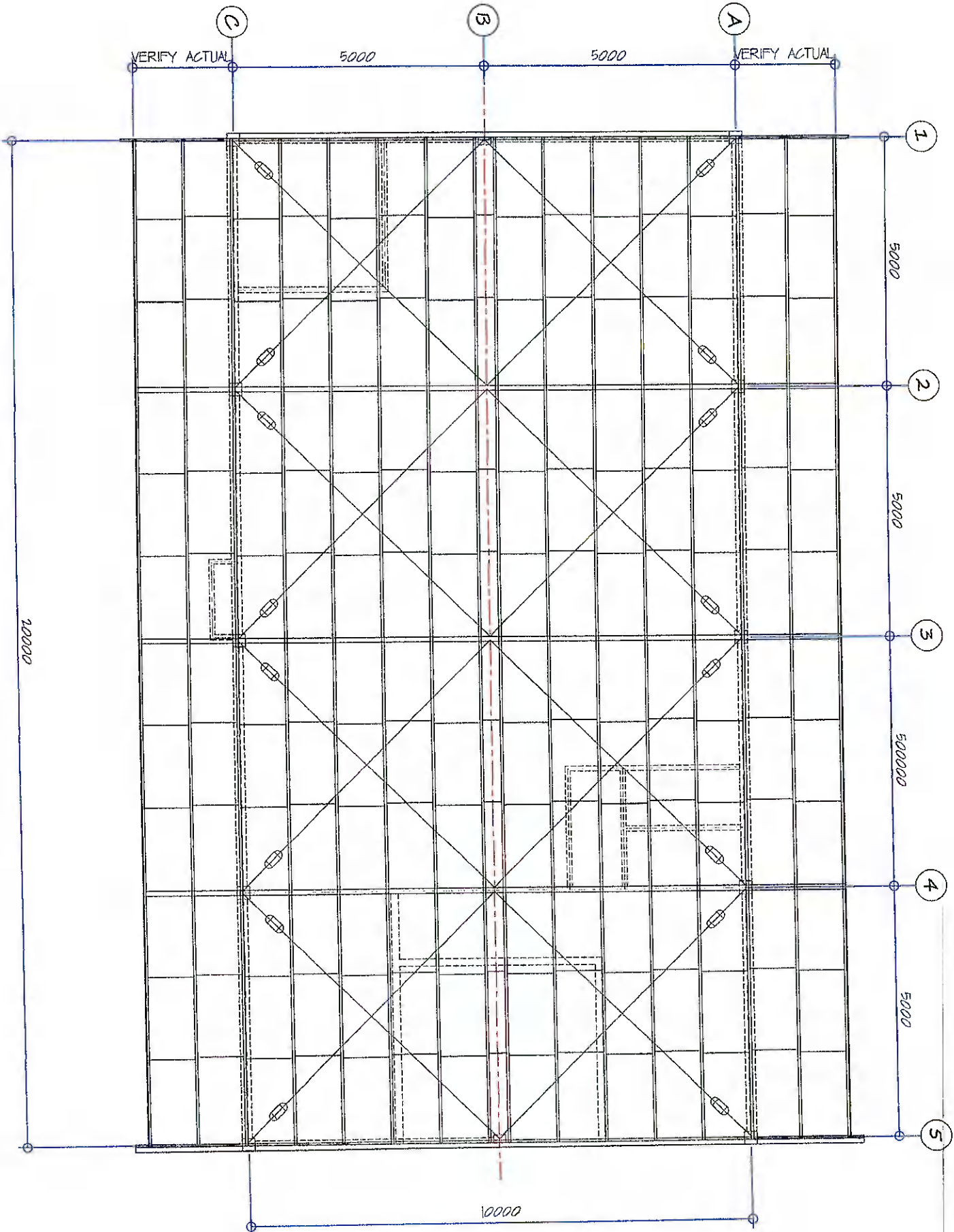
04 CANTILEVER BEAM DETAIL (PROPOSED)
SCALE: 1:10 M



01 SPOT DETAIL (PROPOSED)
SCALE: 1:20 M



03 SPOT DETAIL (PROPOSED)
SCALE: 1:15 M



01
5-05
ROOF FRAMING PLAN (EXISTING)
SCALE: 1:100 M

DANILO M. HORRADOR, JR.
CIVIL ENGINEER
REG. NO. 0107545
P.R. NO. 61873A
DATE: 01/12/2022

PROJECT AND LOCATION
RENOVATION AND IMPROVEMENT OF OLD
WAREHOUSE INTO HRD TRAINING HALL
LOCATION: E. FERNANDEZ ST., LAGAO, GSC

CHECKED & REVIEWS:
ENGR. MARIA CELIA N. DANDAN
OIC - PDD

APPROVED:
ENGR. ROGELIO A. BESANA, JR.
AGM, OPERATION & TECHNICAL SERVICES

SHEET CONTENTS
AS SHOWN
DRAWN BY: ZONG-RAB
CHECKED BY: JEROME-ROSA
REV. NO.
DATE: 30th, 2022

SHEET NO.
S-05
14
21

PLUMBING NOTES:

- GRADES OF HORIZONTAL PIPING RUN ALL HORIZONTAL PIPINGS IN PERFECT ALIGNMENT AND AT A FIRM GRADE OF NOT LESS THAN TWO PERCENT (2%)
- CHANGE IN DIRECTION ALL CHANGE IN DIRECTION SHALL BE MADE BY APPROPRIATE USE OF FORTY FIVE DEGREES (45°) WYES LONG SWEEP QUARTER BEND, SIX EIGHT OR SIXTEENTH BENDS. WHEN THE CHANGE OF FLOW IS FROM HORIZONTAL TO VERTICAL, 1/8 BEND COMBINATION MAYBE USED ON VERTICAL STACKS AND SHORT QUARTER BENDS MAYBE USED ON WASTE LINE. TE AND CROSS MAYBE USED IN VENT PIPES.
- PROHIBITED FITTINGS NO DOUBLE HUB OR TEE BRANCH SHALL BE USED ON HORIZONTAL WASTE LINES. THE DRILLINGS AND TAPINGS OF HOUSE DRAIN, WASTE OR VENT PIPES AND USE OF SADDLE HUB AND BEND ARE PROHIBITED.
- SLEEVES PROVIDE PIPE SLEEVES AT WALLS, COLUMNS OR SLABS ONE SIZE BIGGER THAN THE ACTUAL SIZE PASSING THROUGH THE WALLS, COLUMNS OR UNDER SLAB TO PROTECT PIPE FROM LEAKAGE
- PIPE CLEAN-OUTS PIPE CLEAN-OUTS ARE REQUIRED UNDER THE FOLLOWING CONDITIONS:
 - EVERY CHANGE IN HORIZONTAL DIRECTIONS EXCEEDING TWENTY-TWO AND ONE-HALF DEGREES (22.5°), ONE AND ONE-HALF METERS (1.50 m) INSIDE THE PROPERTY LINE BEFORE THE HOUSE DRAINAGE CONNECTION.
 - EVERY FIFTEEN METERS (15.00 m) IN HORIZONTAL RUN OF PIPES
 - AT THE END OF ANY HORIZONTAL PIPE LINES.
- THE DIGESTION CHAMBER OF SEPTIC VAULT MUST BE WATERPROOFED.
- NOT LESS THAN 300 mm OF AIR SPACE MUST BE LEFT BETWEEN THE TOP OF THE SEWAGE AND THE UNDER PART OF THE VAULT ROOF SLAB.
- NO SEPTIC VAULT MUST BE CONSTRUCTED UNDER THE BUILDING.
- ALL PLUMBING WORKS SHALL BE DONE BY A LICENSED MASTER PLUMBER AND A LICENSED PLUMBING CONTRACTOR.

SPECIFICATIONS:

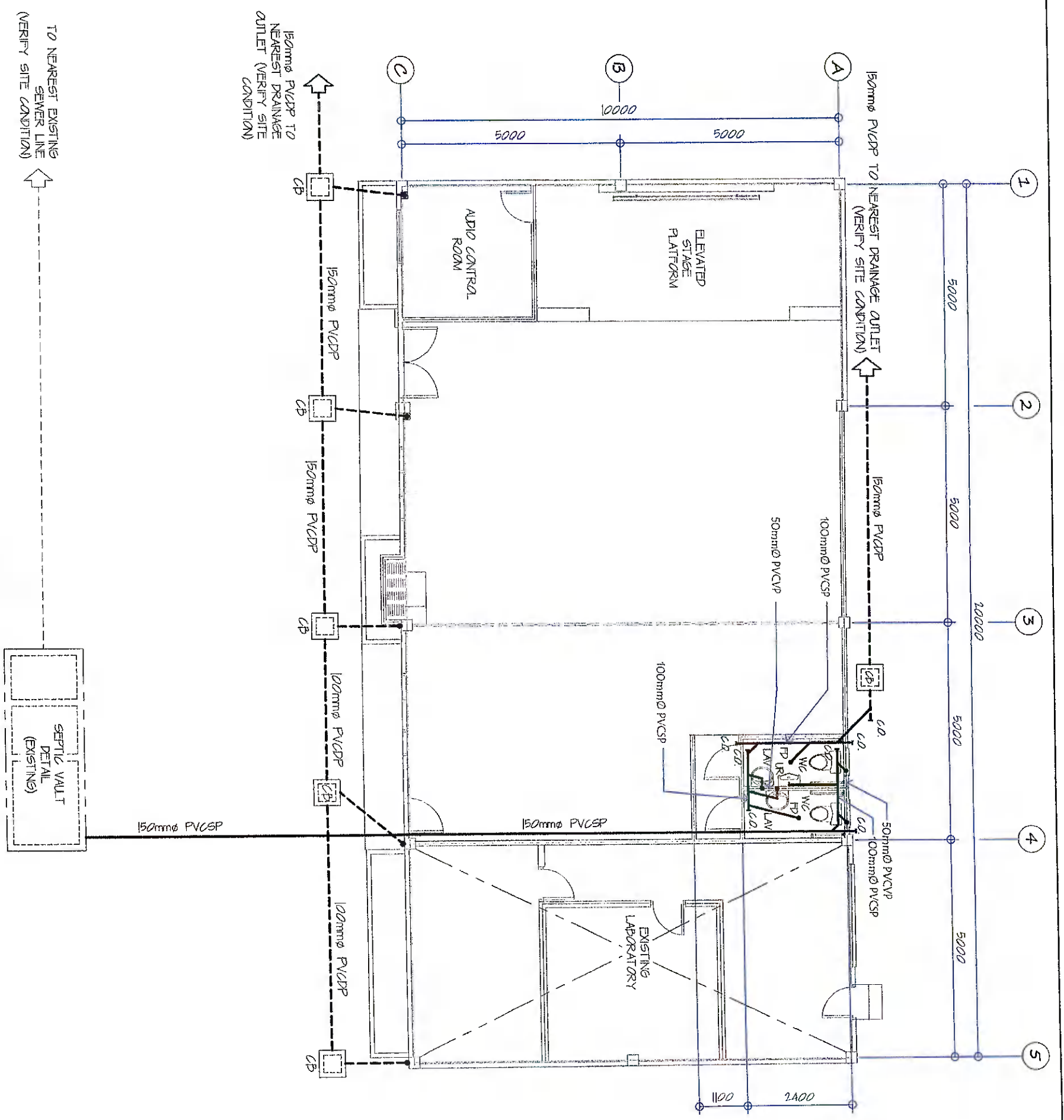
ALL PLUMBING WORKS AND INSTALLATION SHALL CONFORM WITH THE LATEST EDITION OF NATIONAL PLUMBING CODE RULES AND REGULATION OF THE ENFORCING AUTHORITY CONCERNED AND CITY

ALL HORIZONTAL PIPINGS SHALL RUN IN PRACTICAL ALIGNMENT AND SHALL BE PROVIDED WITH SLOPE OF NOT LESS THAN 1% SLOPE AND SUPPORTED OF ANCHORED EVERY 3000mm INTERVALS

ALL MATERIALS SHALL BE NEW AND APPROVED TYPES:

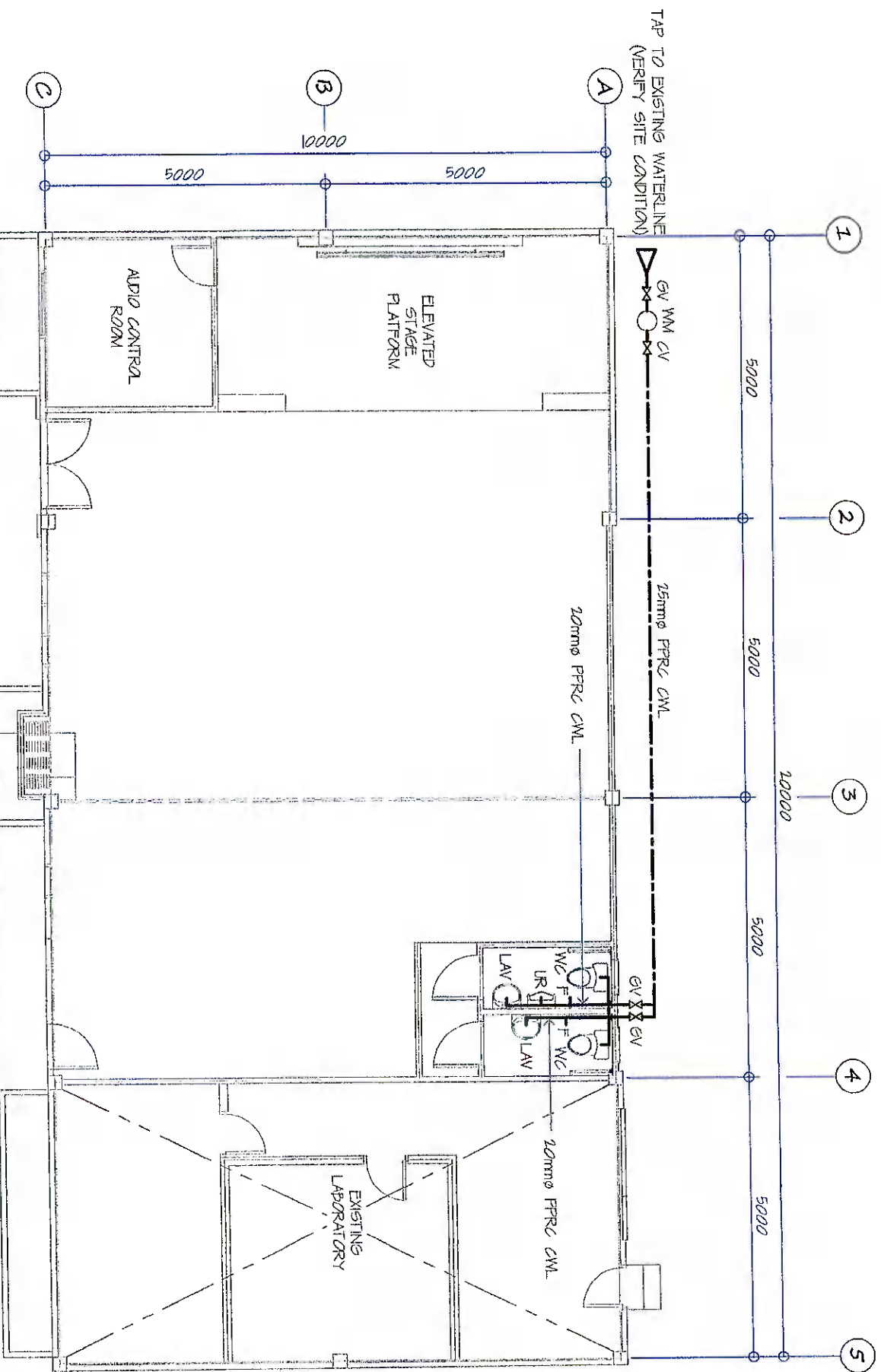
- FOR SANITARY LINES:
 - 2" PVC PIPES FOR VENTS AND FIXTURES
 - 4" PVC PIPES FOR WC, FP, CO.
- FOR WATER LINES:
 - 1" O.G.L. PIPE FOR FIXTURES
 - 1/2" O.G.L. PIPE FOR BRANCHES
 - 1" O.G.L. PIPE FOR MAINLINE SUPPLY

ALL PLUMBING WORKS AND INSTALLATION SHALL BE STRICTLY SUPERVISED BY A DULY REGISTERED MASTER PLUMBER



01 FLOOR PLAN, SEWER & DRAINAGE LAYOUT (PROPOSED)
SCALE: 1 : 100 M


<p>GENERAL SANTOS CITY WATER DISTRICT E. FERNANDEZ STREET, BAY, LAGAO, GENERAL SANTOS CITY ENGINEERING & CONSTRUCTION DEPARTMENT PLANNING AND DESIGN DIVISION TEL. NO.: (083) 552 - 3824</p>		<p>ENGR. ROGELIO A. BESANA, JR. REGISTERED MASTER PLUMBER REG. NO. 2672 TIN. NO. 150-455-522 DATE:</p>		<p>PROJECT AND LOCATION RENOVATION AND IMPROVEMENT OF OLD WAREHOUSE INTO HRD TRAINING HALL LOCATION: E. FERNANDEZ ST., LAGAO, GSC</p>		<p>CHECKED & REVIEWS: ENGR. MARIA CELIA N. DANDAN OIC - PDD</p>		<p>APPROVED: ENGR. ROGELIO A. BESANA, JR. AGM, OPERATION & TECHNICAL SERVICES</p>		<p>SHEET CONTENTS</p>		<p>SHEET NO.</p>	
		<p>AS SHOWN</p>						<p>15</p>		<p>P-01</p>		<p>21</p>	



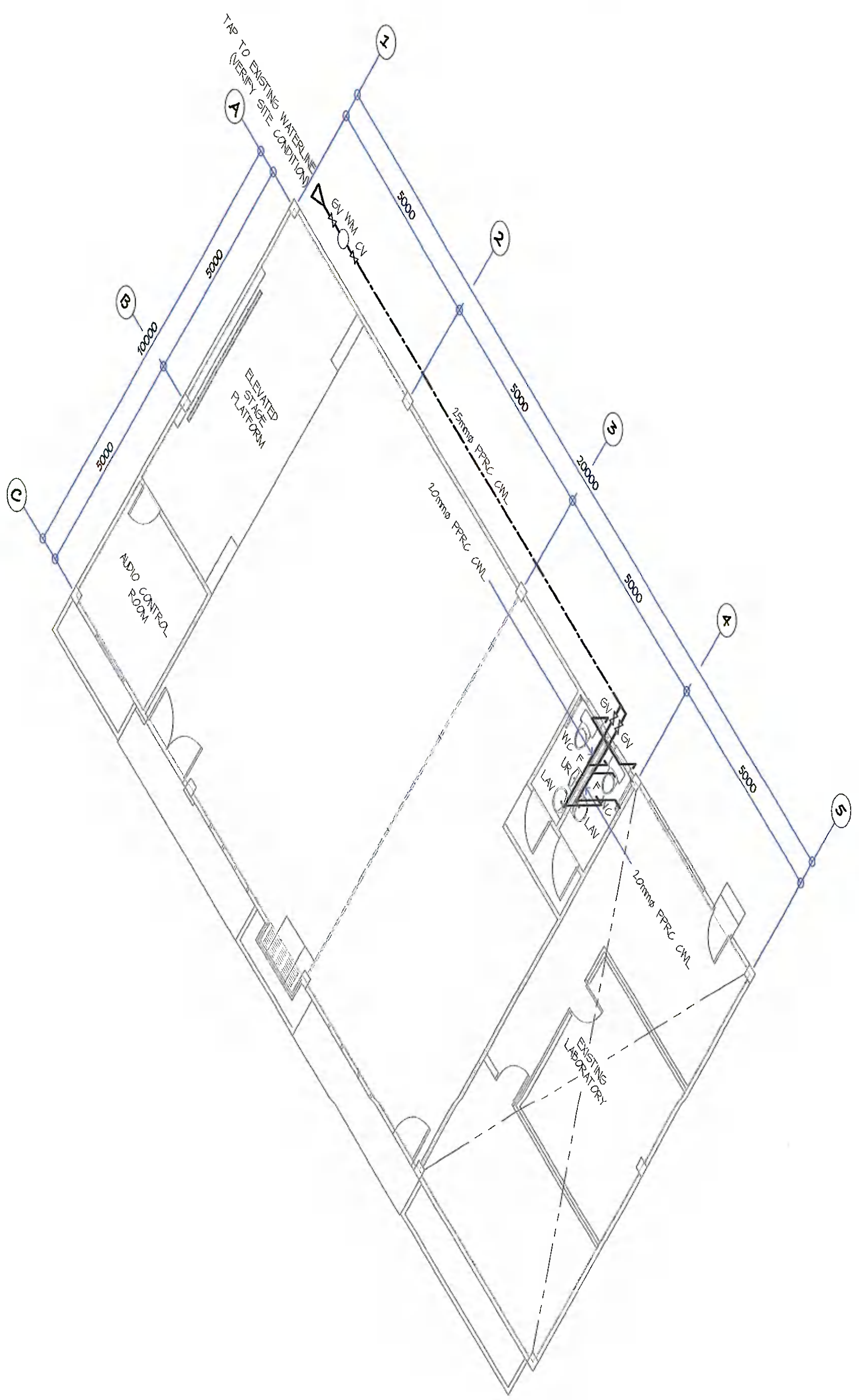
01 FLOOR PLAN, WATERLINE LAY-OUT (PROPOSED)
 SCALE: 1 : 100 M

PLUMBING LEGEND:

CB	CATCH BASIN
CO	CLEAN OUT
CV	CHECK VALVE
F	FAUCET
FD	FLOOR DRAIN
GV	GATE VALVE
LAV	LAVATORY
MANH	MANHOLE
PPRC CWL	POLYPROPYLENE RANDOM COPOLYMER COLD WATER LINE
PPCDP	POLYVINYL CHLORIDE DRAINAGE PIPE
PPCDS	POLYVINYL CHLORIDE DOWNSPOUT
PPCSP	POLYVINYL CHLORIDE SOIL PIPE
PPCVP	POLYVINYL CHLORIDE VENT PIPE
PPCVS	POLYVINYL CHLORIDE VENT STACK
PPCVTR	POLYVINYL CHLORIDE VENT THROUGH ROOF
PPCWTP	POLYVINYL CHLORIDE WASTE PIPE
RD	ROOF DRAIN
UR	URINAL
W/C	WATER CLOSET
WM	WATER METER

 <p>GENERAL SANTOS CITY WATER DISTRICT E. FERNANDEZ STREET, BRGY. LAGAO, GEN. SANTOS CITY ENGINEERING & CONSTRUCTION DEPARTMENT PLANNING AND DESIGN DIVISION TEL. NO.: (083) 552-3824</p>	<p>ENGR. ROGELIO A. BESANA, JR. REGISTERED MASTER PLUMBER</p> <p>REG. NO. 2672 TIN. NO. 190-455-622 PIR. NO. _____ DATE: _____</p>	<p>PROJECT AND LOCATION RENOVATION AND IMPROVEMENT OF OLD WAREHOUSE INTO HRD TRAINING HALL LOCATION: E. FERNANDEZ ST., LAGAO, GSC</p> <p>CHECKED & REVIEWS: ENGR. MARICELIA N. DANDAN OIC - PDD</p> <p>APPROVED: ENGR. ROGELIO A. BESANA, JR. AGM, OPERATION & TECHNICAL SERVICES</p>
<p>SHEET CONTENTS</p> <p>AS SHOWN</p> <p>DRAWN BY: <i>Donat Rde</i> REV. NO. _____ CHECKED BY: <i>Jeanne-rose</i> DATE: August 2022</p>		<p>SHEET NO.</p> <p>P-02</p> <p>16 21</p>

01 ISOMETRIC DIAGRAM, WATERLINE LAY-OUT (PROPOSED)
 P-04 NOT TO SCALE



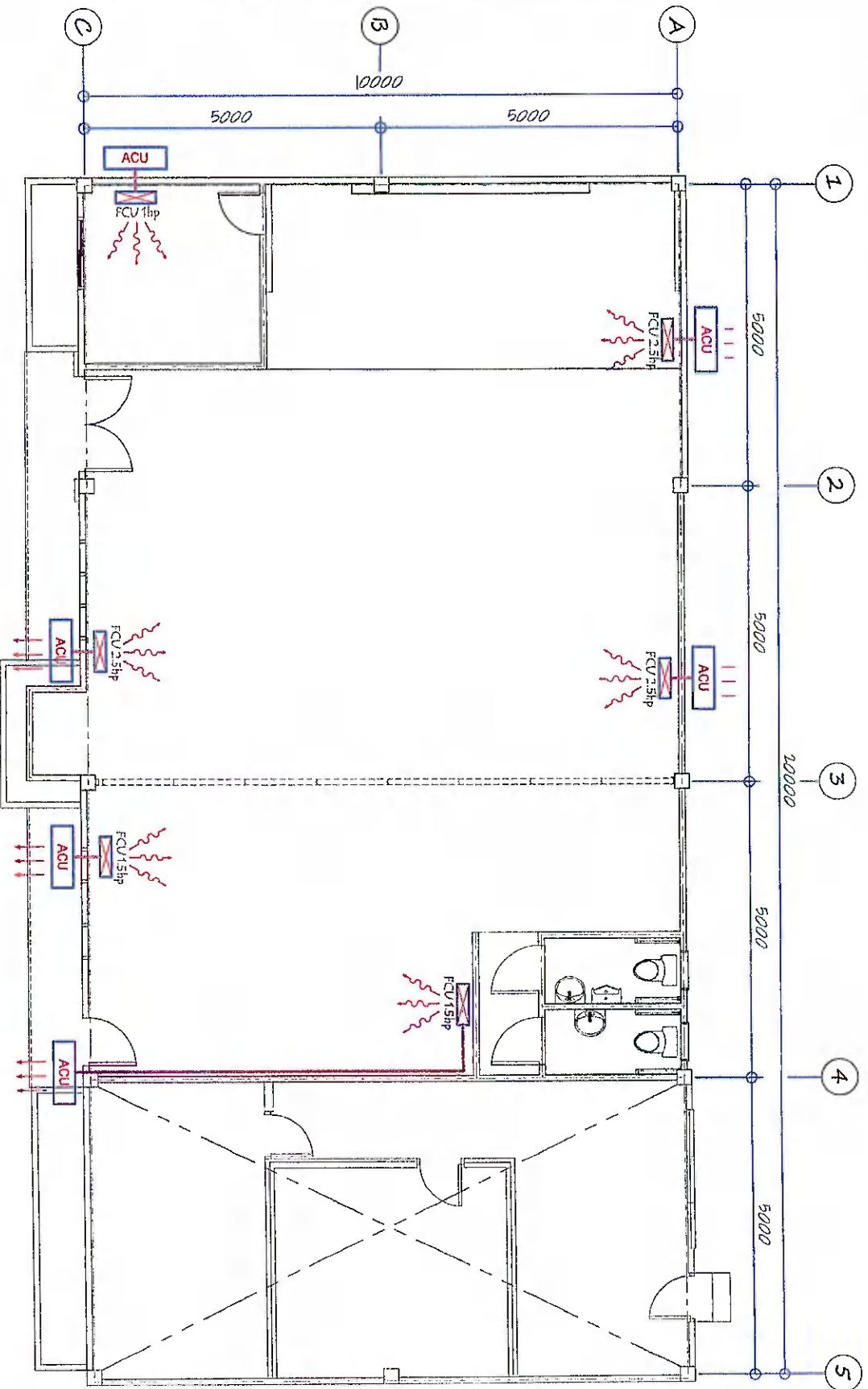
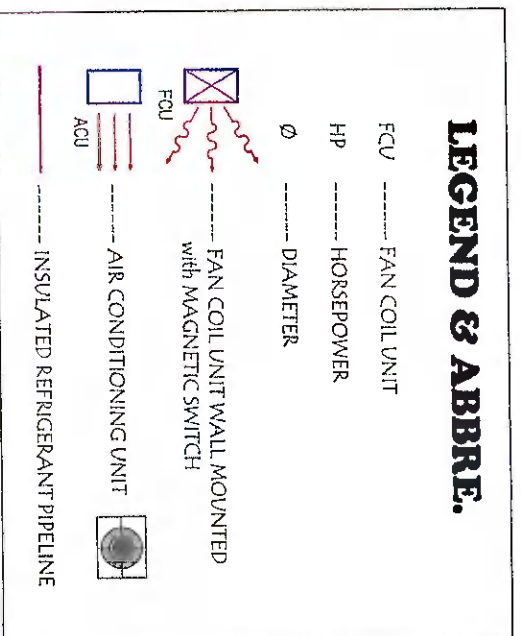
MECHANICAL GENERAL NOTES:

1. ALL AIR-CONDITIONING AND VENTILATING UNITS SHALL BE NEW AND THE APPROVED PRODUCTS OF REPUTABLE MANUFACTURERS
2. FAN COIL UNITS SHALL BE SUM MODEL MOUNTED AND MUST BE PROVIDED WITH BLUE PVC DRAIN PIPE
3. REFRIGERANT SUCTION LINES SHALL BE INSULATED WITH 13MM THK. ELASTOMERIC PRE-MOLDED RUBBER INSULATION
4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE HIS WORK WITH THE OTHER TRADES CONCERNED AND WITH THE OTHER PROJECT ENGINEER.
5. THE WORKS THROUGHOUT SHALL BE EXECUTED IN THE MOST THROUGH MANNER KNOWN TO THE TRADE AND TO THE SATISFACTION OF THE ARCHITECT/ENGINEER.
6. PROVIDE PROPER FOUNDATION FOR THE MOUNTING OF EQUIPMENT FOUNDATION FOR THE FCU SHALL BE AT LEAST 100MM FROM FINISHED FLOOR LINE.
7. ALL AIR-CONDITIONING UNITS SHALL BE PROVIDED WITH THE AUTOMATIC MOTOR PROTECTOR TO BE INSTALLED BESIDE THE ACU.
8. REFRIGERANT PIPES FOR SPLIT TYPE AIR-CON SHALL BE CLAD WITH A 4"Ø PVC PIPE PRIOR TO BEING EMBEDDED.
9. ALL REFRIGERANT PIPES SHALL BE LOCATED AT THE REAR OF THE FCU'S AND NOT ON THE USUAL SIDE LOCATION.
10. HANGER/SUPPORT MUST BE PAINTED WITH DOUBLE COAT OF RUST PROTECTIVE PAINT.

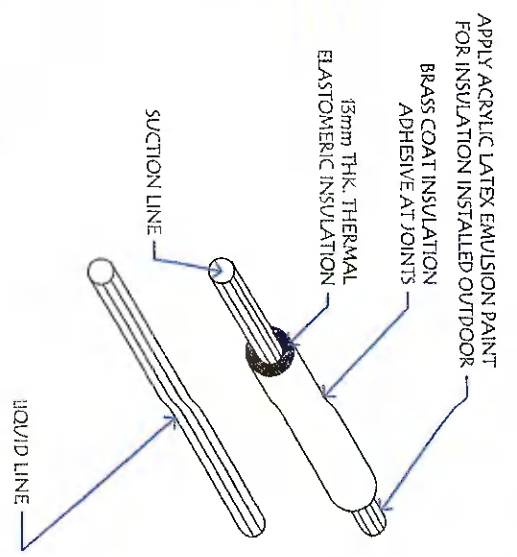
11. VERIFY ALL DIMENSIONAL LOCATION OF EQUIPMENT ON THE DRAWINGS OF RELATED TRADES AND INVESTIGATE ALL POSSIBLE INTERFERENCE AND CONDITION AFFECTING THE MECHANICAL WORK.
12. UPON THE COMPLETION OF THE A/C EQUIPMENT INSTALLATION, TEST ALL FACTORY AND FIELD INSTALLED REFRIGERANT PIPING WITH A LEAK DETECTOR TO ACQUIRE A LEAK-TIGHT CORRECT AND RE-TEST THE SYSTEM FOLLOWING THE MANUFACTURERS RECOMMENDATIONS.
13. THE CONTRACTOR SHALL SUBMIT MANUFACTURERS WARRANTY CERTIFICATE UPON THE COMPLETION OF THE PROJECT.

- NOTE:
1. ADHESIVE & LATEX PAINT SHOULD BE COMPATIBLE WITH THE INSULATION.
 2. LIQUID LINE EXPOSED TO DIRECT SUNLIGHT SHALL BE PROVIDED WITH INSULATION, PROVIDE #24 INSULATION SHIELD AT THE POINT OF SUPPORT.

LEGEND & ABBRE.



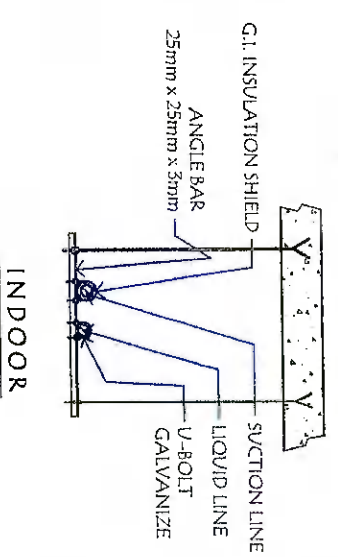
01 MECHANICAL PLAN (PROPOSED)
SCALE: 1 : 100 M



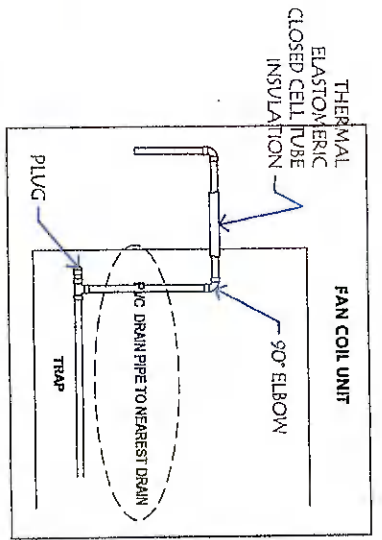
03 PIPE INSULATION DETAIL (PROPOSED)
SCALE: M-01
NTS

RECOMMENDED SUPPORT SPACING FOR COPPER TUBING

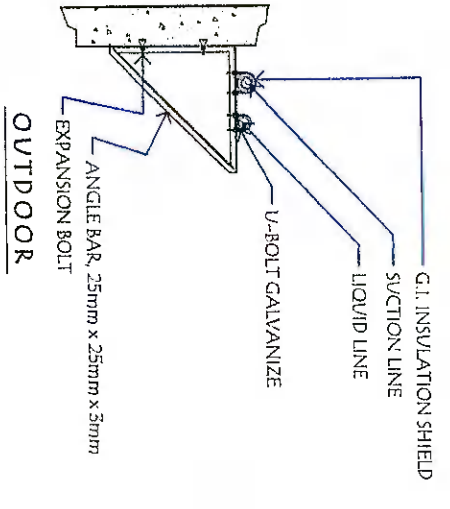
PIPE O.D. (mm)	DISTANCE BETWEEN SUPPORTS (m)
16	1.89
22-29	2.44
35-54	3.05



02 PIPE HANGER DETAIL (PROPOSED)
SCALE: M-01
NTS



04 CONDENSER DRAIN PIPE (PROPOSED)
SCALE: M-01
NTS



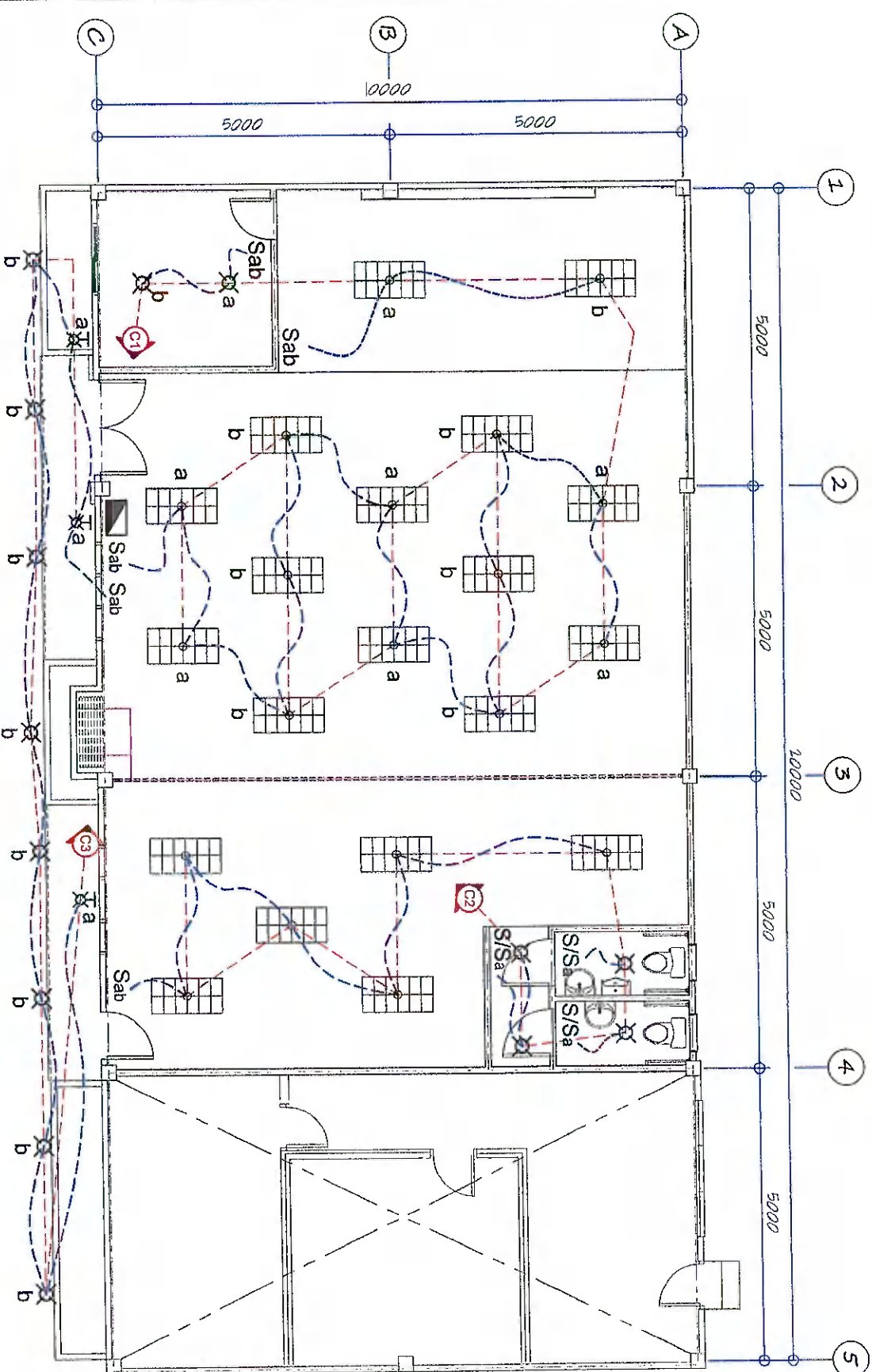
GENERAL NOTES:

1. ALL ELECTRICAL WORKS SHALL BE DONE IN ACCORDANCE WITH THE PROVISION OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE, EXISTING APPLICABLE ORDINANCES, RULES AND REGULATIONS OF THE LOCAL GOVERNMENT AND WITH THE REQUIREMENTS OF THE LOCAL POWER COMPANY.
2. THE TYPE OF SERVICE POWER SUPPLY TO BE USED SHALL BE SINGLE-PHASE, 2-WIRE, 230V, 60 HERTZ, A.C
3. THE CONTRACTOR SHALL VERIFY AND ORIENT THE ACTUAL LOCATION OF SERVICE ENTRANCE FOR CONNECTION TO THE POWER COMPANY SERVICE POINT.
4. UNLESS OTHERWISE SPECIFIED, THE MINIMUM SIZES OF WIRE AND GALVANIZED RIGID STEEL CONDUIT TO BE USED SHALL BE 3.5mm² THIN AND 15mm NOMINAL DIAMETER, RESPECTIVELY. LIKEWISE ALL ELECTRICAL WIRES SHALL BE COLOR-CODED.
5. ALL LIGHTING CIRCUIT HOME RUNS AND CONVENIENCE OUTLETS SHALL BE WIRED WITH NOT LESS THAN 3.5 mm² IN SIZE.
6. WHEREVER REQUIRED AND NECESSARY, PULL OR JUNCTION BOXES SHALL BE INSTALLED AT CONVENIENT AND INCONSPICUOUS LOCATION, ALTHOUGH SUCH BOXES ARE NOT SHOWN ON THE PLAN NOR MENTIONED IN THE SPECIFICATIONS.
7. ALL NON-CURRENT CARRYING METAL PARTS OF ELECTRICAL EQUIPMENT SHALL BE PROPERLY GROUNDED IN ACCORDANCE WITH THE PROVISIONS OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE.
8. ALL MATERIALS TO BE USED SHALL BE BRAND NEW AND OF THE APPROVED TYPE FOR LOCATION AND PURPOSE.
9. STANDARD TYPE OF ACCESSORIES, SPlicing DEVICES, TERMINATIONS AND OTHER APPURTENANCES FOR THE ENTIRE ELECTRICAL INSTALLATION SHALL BE USED.

10. ALL WALL OUTLETS SHALL BE INSTALLED AT THE FOLLOWING HEIGHTS ABOVE THE FINISHED FLOOR LEVEL, UNLESS NOTED IN THE PLAN
 - a) WALL SWITCHES @ 1300mm
 - b) WALL CONVENIENCE OUTLETS @ 300 mm
11. ALL ELECTRICAL WORKS SHALL BE DONE UNDER THE DIRECT AND IMMEDIATE SUPERVISION OF A DULY REGISTERED ELECTRICAL ENGINEER.

MOUNTING HEIGHTS:

CONVENIENCE OUTLETS	: 300mm FROM BOTTOM OF OUTLET TO FINISH FLOOR LEVEL
WALL SWITCHES	: 1370mm FROM BOTTOM OF SWITCH TO FINISH FLOOR LEVEL
PANEL BOARD	: 1380mm FROM TOP OF PANEL TO FINISH FLOOR LEVEL
KILO-WATT HOUR METER	: 1380mm FROM CENTER OF DEVICES TO FINISH GRADE LEVEL



01 LIGHTING LAYOUT (PROPOSED)
E-01 SCALE: 1 : 100 M

LEGEND

	2 x 36w FLUORESCENT LIGHTING FIXTURE
	STRIP LIGHT OUTLET
	CEILING LIGHT OUTLET
	WALL LAMP OUTLET
	DUPLEX CONVENIENCE OUTLET, GROUNDING TYPE 10 AMP, 250 VOLT W/ MODERN PLATE COVER
	FLOOR DUPLEX OUTLET
	MAIN DISTRIBUTION PANEL
	ELECTRIC SERVICE METER
	GROUNDING SYSTEM
	ELECTRIC SERVICE ENTRANCE
	RACEWAY CONDUIT CONCEALED UNDER FLOOR
	CIRCUIT RUN
	RACEWAY CONDUIT CONCEALED IN CEILING
	HOMERUN DIRECT TO PANEL BOARD
	ONE GANG DEVICE SWITCH
	TWO GANG DEVICE SWITCH

<p>GENERAL SANTOS CITY WATER DISTRICT E. FERRANDEZ STREET, BRGY. LAGAO, GEN. SANTOS CITY ENGINEERING & CONSTRUCTION DEPARTMENT PLANNING AND DESIGN DIVISION TEL. NO.: (083) 522-3824</p>	<p>PROFESSIONAL ELECTRICAL ENGINEER</p>		<p>PROJECT AND LOCATION</p> <p>RENOVATION AND IMPROVEMENT OF OLD WAREHOUSE INTO HRD TRAINING HALL</p>		<p>CHECKED & REVIEWS:</p> <p>ENGR. MARIA CELIA N. DANDAN</p>		<p>APPROVED:</p> <p>ENGR. ROGELIO A. BERANA, JR.</p>		<p>SHEET CONTENTS</p> <p>AS SHOWN</p>		<p>SHEET NO.</p>	
	REG. NO.	TIN NO.	DATE:	LOCATION: E. FERRANDEZ ST., LAGAO, GSC	OIC - PDD	AGM, OPERATION & TECHNICAL SERVICES	DRAWN BY: DANA-RAE	REV. NO.	CHECKED BY: JEMAR-200V	DATE: August 2022	20	21

SCHEDULE OF LOADS:

CIRCUIT No.	PARTICULARS	LP		NO. OF OUTLET	WATTS	PHASE	VOLTS	AMPERE	CB RATING	WIRE SIZE AND CONDUIT
		TOP SURFACE	VOLUME							
1	2 x 35W LED TUBE LIGHTING FIXTURE - 14		240	16	1400	1	230	6.96	15 AT	2-3.5mm ² THWN, 1-2.0mm ² TW(GND) IN 20mm \varnothing CONDUIT
2	2 x 36W LED TUBE LIGHTING FIXTURE - 6			10	1000	1	230	4.35	15 AT	2-3.5mm ² THWN, 1-2.0mm ² TW(GND) IN 20mm \varnothing CONDUIT
3	LED LAMP - 8			11	1100	1	230	4.78	15 AT	2-3.5mm ² THWN, 1-2.0mm ² TW(GND) IN 20mm \varnothing CONDUIT
4	WALL LAMP OUTLET - 3			8	1440	1	230	6.26	20 AT	2-5.5mm ² THWN, 1-2.0mm ² TW(GND) IN 20mm \varnothing CONDUIT
5	CONVENIENCE OUTLET			6	1080	1	230	4.70	20 AT	2-5.5mm ² THWN, 1-2.0mm ² TW(GND) IN 20mm \varnothing CONDUIT
6	ACU, 1 hp (Magnetic Switch w/ Built-in 3-Prong Outlet)			1	746	1	230	3.24	20 AT	2-5.5mm ² THWN, 1-2.0mm ² TW(GND) IN 20mm \varnothing CONDUIT
7	ACU, 2.5 hp (Magnetic Switch w/ Built-in 3-Prong Outlet)			1	1865	1	230	8.11	20 AT	2-5.5mm ² THWN, 1-2.0mm ² TW(GND) IN 20mm \varnothing CONDUIT
8	ACU, 2.5 hp (Magnetic Switch w/ Built-in 3-Prong Outlet)			1	1865	1	230	8.11	20 AT	2-5.5mm ² THWN, 1-2.0mm ² TW(GND) IN 20mm \varnothing CONDUIT
9	ACU, 2.5 hp (Magnetic Switch w/ Built-in 3-Prong Outlet)			1	1865	1	230	8.11	20 AT	2-5.5mm ² THWN, 1-2.0mm ² TW(GND) IN 20mm \varnothing CONDUIT
10	ACU, 1.5 hp (Magnetic Switch w/ Built-in 3-Prong Outlet)			1	1119	1	230	4.87	20 AT	2-5.5mm ² THWN, 1-2.0mm ² TW(GND) IN 20mm \varnothing CONDUIT
11	ACU, 1.5 hp (Magnetic Switch w/ Built-in 3-Prong Outlet)			1	1119	1	230	4.87	20 AT	2-5.5mm ² THWN, 1-2.0mm ² TW(GND) IN 20mm \varnothing CONDUIT
12	SPARE			1	870	1	230	8.70	20 AT	2-3.5mm ² THWN, 1-2.0mm ² TW(GND) IN 20mm \varnothing CONDUIT
									73.06	

Total Current = 73.06 A
Main = 125 Amps, 1 ϕ , 230V

KVA = 73.06 x 230 / 1000
KVA = 16.80

USE: 37.5 KVA POLE MOUNTED SINGLE PHASE TRANSFORMER, 2 - 38mm² THWN wire, 1 - 8.0mm² TW(GND) WIRE IN 40mm \varnothing CONDUIT

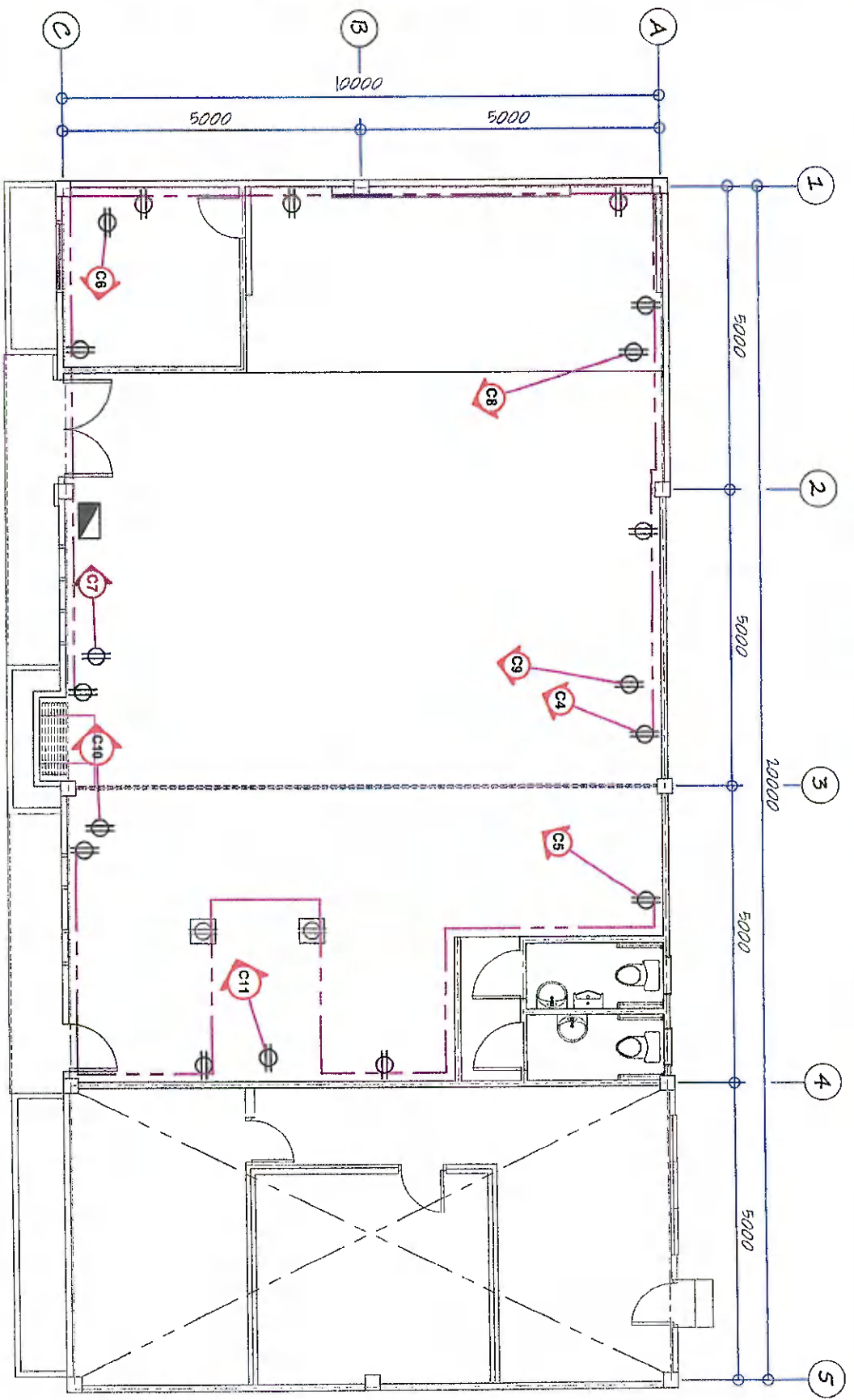
USE: 37.5 KVA GENERATOR SET, 1 ϕ , 230V, 60 Hz

MAIN: 125 Amp, 1 ϕ , 230V

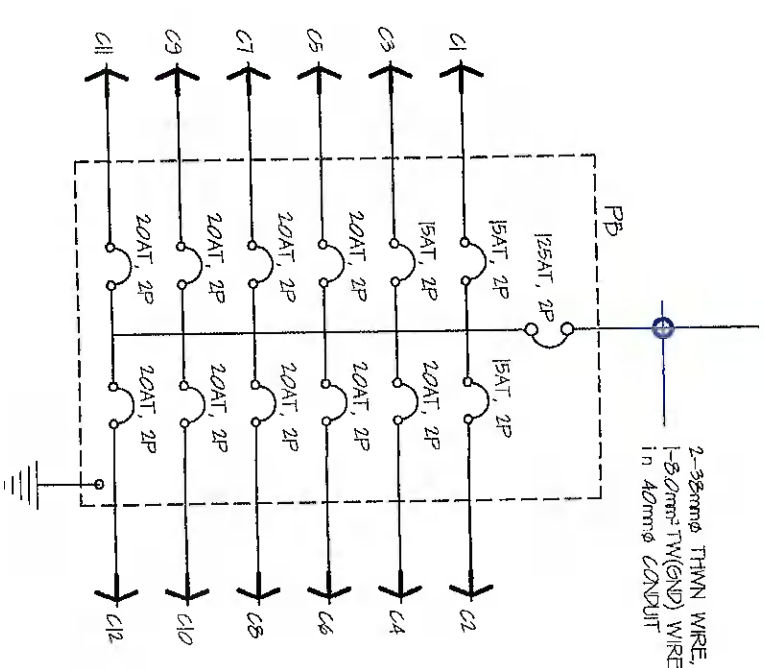
SCHEDULE OF LIGHTING FIXTURES AND LAMPS

SYMBOLS	DESCRIPTION	INSTALLATION/MOUNTING
(2)	TWO (2) - 36W, 230V, 60Hz AC, FLUORESCENT LIGHTING FIXTURE, BOX TYPE	SURFACED CEILING MOUNTING
(X)	ONE (1) - 5W, 230V, 8" DIA., LED DOWNLIGHT INDOOR CEILING PIN LIGHT	RECESSED TYPE
(X)	ONE (1) - 7WATTS DAYLIGHT, 230V, BLACK, LED WALL LAMP OUTDOOR	WALL MOUNTING

NOTE: ALL FLUORESCENT LIGHTING FIXTURES SHALL BE EQUIPPED WITH A HIGH POWER FACTOR, PRE-HEAT WITH STARTER AND THERMALLY PROTECTED BALLAST, COMPLETE WITH ALL NECESSARY ACCESSORIES, WIRED AND READY FOR USE.



01 POWER LAYOUT (PROPOSED)
SCALE: 1 : 100 M



02 POWER SYSTEM SINGLE LINE DIAGRAM (PROPOSED)
E-02

GENERAL SANTOS CITY WATER DISTRICT
E. FERNANDEZ STREET, BRGY. LAGAJO, GEN. SANTOS CITY
ENGINEERING & CONSTRUCTION DEPARTMENT
PLANNING AND DESIGN DIVISION
TEL. NO.: (083) 592 - 8824

PROFESSIONAL ELECTRICAL ENGINEER
REG. NO. _____ TIN. NO. _____
DATE: _____

PROJECT AND LOCATION
RENOVATION AND IMPROVEMENT OF OLD WAREHOUSE INTO HRD TRAINING HALL
LOCATION: E. FERNANDEZ ST., LAGAJO, GSC

CHECKED & REVIEWS:
ENGR. MARIA CELIA N. DANDAN
OIC - PDD

APPROVED:
ENGR. ROGELIO A. BEANA, JR.
AGM, OPERATION & TECHNICAL SERVICES

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CHECKED BY: JFVMS-309V	21
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