

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGION XI
DAVAO DEL NORTE
DISTRICT ENGINEERING OFFICE
TAGUM CITY

F.Y. 2025 GAA (BIP)
DETAILED ENGINEERING DESIGN PLAN FOR
**CONSTRUCTION OF MULTI-PURPOSE BUILDING
(ADMINISTRATIVE BUILDING) IN BARANGAY SAN
AGUSTIN, TAGUM, DAVAO DEL NORTE**
PROJECT

TAGUM CITY, DAVAO DEL NORTE
LOCATION

SUBMITTED:


CHIRWEN P. NAZARENO
CHIEF, PLANNING & DESIGN SECTION
DATE:

RECOMMENDED:


LEO ALEX A. MABANGLO
OFFICER-IN-CHARGE
OFFICE OF THE ASSISTANT DISTRICT ENGINEER
DATE:

APPROVED:


EDITHA G. MONTILDE
DISTRICT ENGINEER
DATE:

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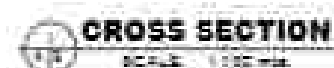


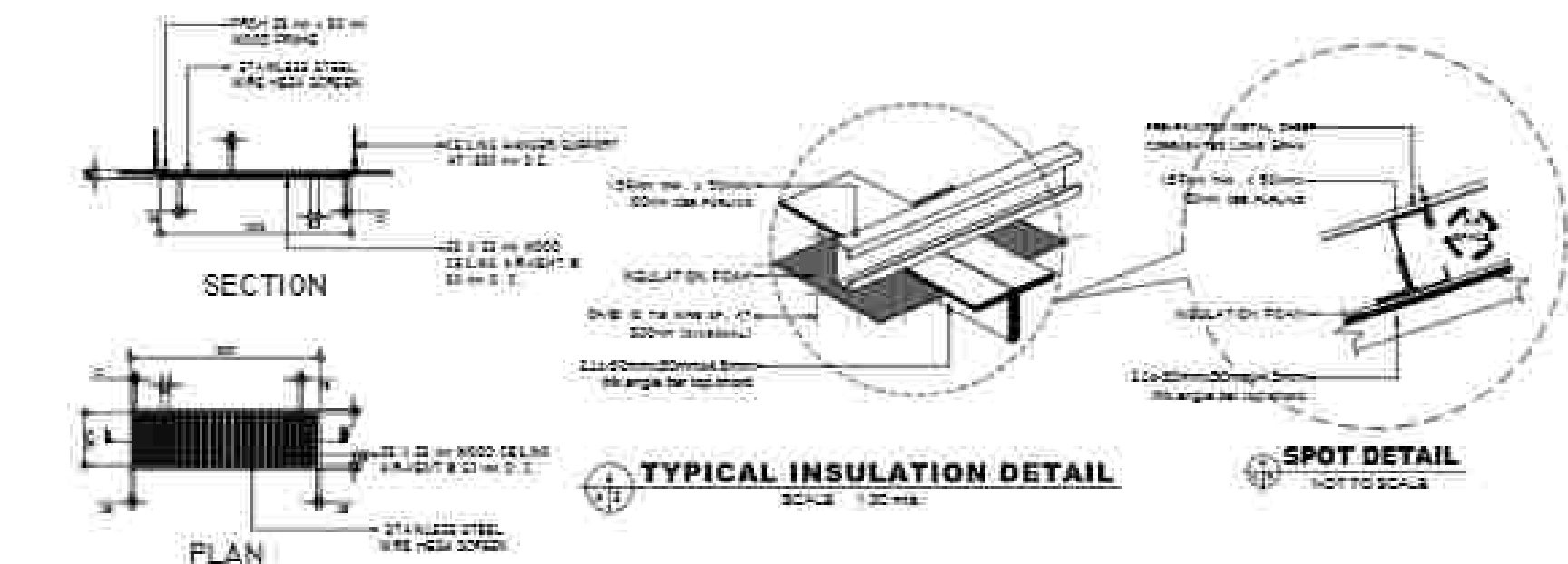
 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE CITY OF SAN AGUSTIN, BAYAN DEL NORTE BAYAN DEL NORTE, BAYAN DEL NORTE	PROJECT NAME AND LOCATION CONSTRUCTION OF MULTI-PURPOSE BUILDING (ADMINISTRATIVE BUILDING) IN SAN AGUSTIN, BAYAN DEL NORTE	DESIGNER ARCHITECT 2020/08/11 (PENDING)	DESIGNER ARCHITECT 2020/08/11 (PENDING)	DESIGNER ARCHITECT 2020/08/11 (PENDING)	DESIGNER ARCHITECT 2020/08/11 (PENDING)	DESIGNER ARCHITECT 2020/08/11 (PENDING)	DESIGNER ARCHITECT 2020/08/11 (PENDING)	DESIGNER ARCHITECT 2020/08/11 (PENDING)
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SUMMARY OF QUANTITIES

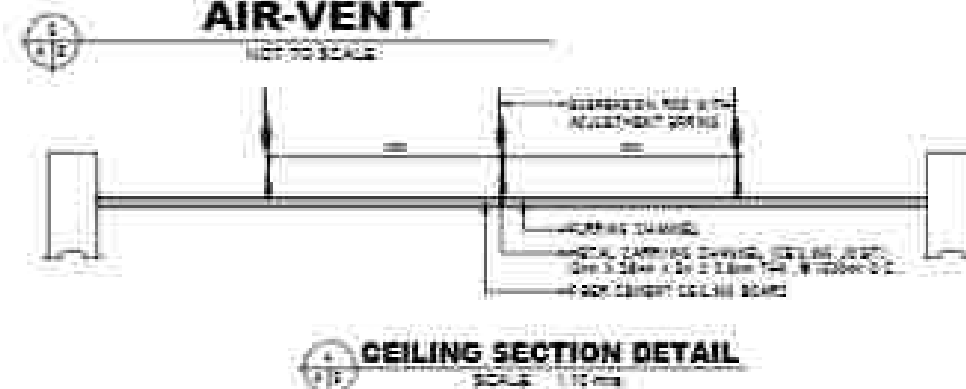
Item No.	Description	Quantity		Unit
		As Submitted	As Proposed	
Part B	STRUCTURAL REINFORCEMENT			
B.1.1	Reinforcing Bars (Grade 60)	1000		lb
B.1.2	Reinforcing Bars (Grade 40)	500		lb
B.1.3	Reinforcing Bars (Grade 30)	100		lb
B.1.4	Reinforcing Bars (Grade 20)	100		lb
B.1.5	Reinforcing Bars (Grade 10)	100		lb
B.1.6	Reinforcing Bars (Grade 5)	100		lb
B.1.7	Reinforcing Bars (Grade 2)	100		lb
	TOTAL OF PART B			
Part C	FINISHES - GENERAL			
C.1.1	Plaster (Type X)	1000		sq ft
C.1.2	Plaster (Type Y)	500		sq ft
C.1.3	Plaster (Type Z)	100		sq ft
C.1.4	Plaster (Type A)	100		sq ft
C.1.5	Plaster (Type B)	100		sq ft
	TOTAL OF PART C			
Part D	FLYING AND REINFORCED CONCRETE (WING)			
D.1.1	Reinforced Concrete (Type X)	1000		cu ft
D.1.2	Reinforced Concrete (Type Y)	500		cu ft
D.1.3	Reinforced Concrete (Type Z)	100		cu ft
D.1.4	Reinforced Concrete (Type A)	100		cu ft
D.1.5	Reinforced Concrete (Type B)	100		cu ft
	TOTAL OF PART D			
Part E	FINISHES - BUILDINGS			
Sub - Part E.1	FINISHES - BUILDINGS - WALLS			
E.1.1	Plaster (Type X)	1000		sq ft
E.1.2	Plaster (Type Y)	500		sq ft
Sub - Part E.2	FINISHES - BUILDINGS - FLOORS			
E.2.1	Plaster (Type X)	1000		sq ft
E.2.2	Plaster (Type Y)	500		sq ft
E.2.3	Plaster (Type Z)	100		sq ft
E.2.4	Plaster (Type A)	100		sq ft
E.2.5	Plaster (Type B)	100		sq ft
E.2.6	Plaster (Type C)	100		sq ft
E.2.7	Plaster (Type D)	100		sq ft
E.2.8	Plaster (Type E)	100		sq ft
E.2.9	Plaster (Type F)	100		sq ft
E.2.10	Plaster (Type G)	100		sq ft
E.2.11	Plaster (Type H)	100		sq ft
E.2.12	Plaster (Type I)	100		sq ft
E.2.13	Plaster (Type J)	100		sq ft
E.2.14	Plaster (Type K)	100		sq ft
E.2.15	Plaster (Type L)	100		sq ft
E.2.16	Plaster (Type M)	100		sq ft
E.2.17	Plaster (Type N)	100		sq ft
E.2.18	Plaster (Type O)	100		sq ft
E.2.19	Plaster (Type P)	100		sq ft
E.2.20	Plaster (Type Q)	100		sq ft
E.2.21	Plaster (Type R)	100		sq ft
E.2.22	Plaster (Type S)	100		sq ft
E.2.23	Plaster (Type T)	100		sq ft
E.2.24	Plaster (Type U)	100		sq ft
E.2.25	Plaster (Type V)	100		sq ft
E.2.26	Plaster (Type W)	100		sq ft
E.2.27	Plaster (Type X)	100		sq ft
E.2.28	Plaster (Type Y)	100		sq ft
E.2.29	Plaster (Type Z)	100		sq ft
E.2.30	Plaster (Type A)	100		sq ft
E.2.31	Plaster (Type B)	100		sq ft
E.2.32	Plaster (Type C)	100		sq ft
E.2.33	Plaster (Type D)	100		sq ft
E.2.34	Plaster (Type E)	100		sq ft
E.2.35	Plaster (Type F)	100		sq ft
E.2.36	Plaster (Type G)	100		sq ft
E.2.37	Plaster (Type H)	100		sq ft
E.2.38	Plaster (Type I)	100		sq ft
E.2.39	Plaster (Type J)	100		sq ft
E.2.40	Plaster (Type K)	100		sq ft
E.2.41	Plaster (Type L)	100		sq ft
E.2.42	Plaster (Type M)	100		sq ft
E.2.43	Plaster (Type N)	100		sq ft
E.2.44	Plaster (Type O)	100		sq ft
E.2.45	Plaster (Type P)	100		sq ft
E.2.46	Plaster (Type Q)	100		sq ft
E.2.47	Plaster (Type R)	100		sq ft
E.2.48	Plaster (Type S)	100		sq ft
E.2.49	Plaster (Type T)	100		sq ft
E.2.50	Plaster (Type U)	100		sq ft
E.2.51	Plaster (Type V)	100		

10201	Cabinet/Panor Work	11.50
10201	Reflector Insulation	20.00
10201	Flange	1.00
	Sub-Total E.3	
E.4 Paving Works		
10201	Paving Works (Concrete/Gravel)	10.00
10201	Paving Works (Wood)	1.00
10201	Paving Works (Steel)	10.00
	Sub-Total E.4	
E.5 Miscellaneous		
10201	Miscellaneous (Cement/Steel)	11.00
	Sub-Total E.5	
E.6 Steel Framing and Fixing Works		
10201	Structural Steel Fixing Assembly, Heavy (up to 20, 100, 110)	10.00
10201	Structural Steel Fixing Assembly, Light (up to 10, 10, 10)	10.00
10201	Structural Steel (Designated Type, Long Steel 110, 110, 110)	10.00
10201	Structural Steel, Tension	10.00
10201	Structural Steel, Tension	10.00
10201	Steel Structure Assembly, Bulk and Bulk	10.00
10201	Steel Structure Assembly, Tension	10.00
10201	Steel Structure Assembly, Compression	10.00
10201	Steel Structure Assembly, Steel Plate	10.00
10201	Steel Structure Assembly, Support	10.00
	Sub-Total E.6	
E.7 Paving/Finishing Works		
10201	Steel Plate/Plate	10.00
10201	Steel Plate/Plate	10.00
10201	Steel Structure and Support	10.00
10201	Finishing Plate	10.00
10201	Steel WAP (in Concrete/CR)	10.00
10201	Steel Plate	10.00
	Sub-Total E.7	
	TOTAL OF PART E	
PART F	ELECTRICAL WORK	
110201	Cable, Wire & Pipe (Cable/Wire/Cable/Support)	10.00
110201	Wire in Wire/Device	10.00
110201	Wire in Wire/Device (Cable/Support)	10.00
110201	Support System	10.00
	TOTAL OF PART F	
PART G	MECHANICAL WORK	
120201	Air Conditioning System	10.00
120201	Water Tank/Storage	10.00
120201	Hot Water System	10.00

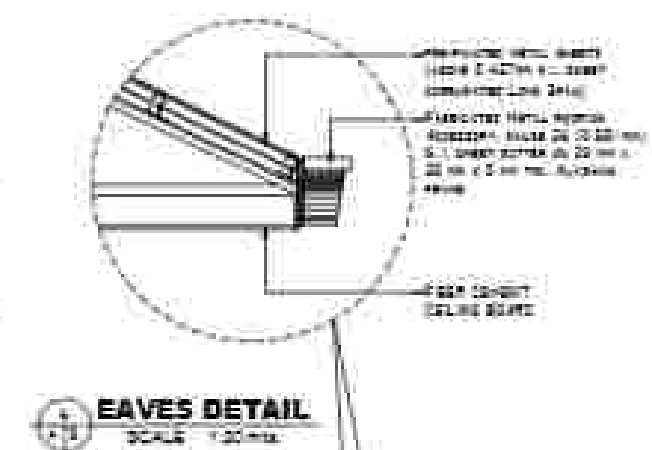
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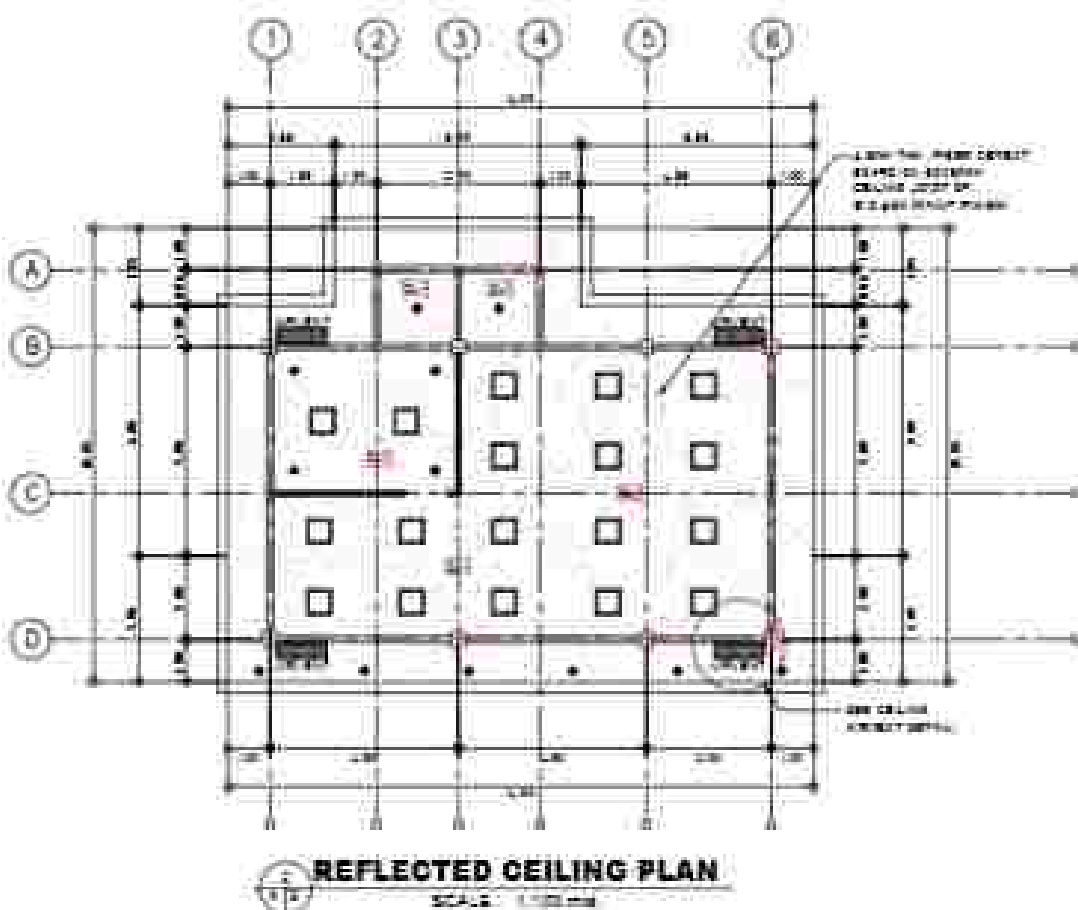
DETAIL OF CEILING AIR-VENT



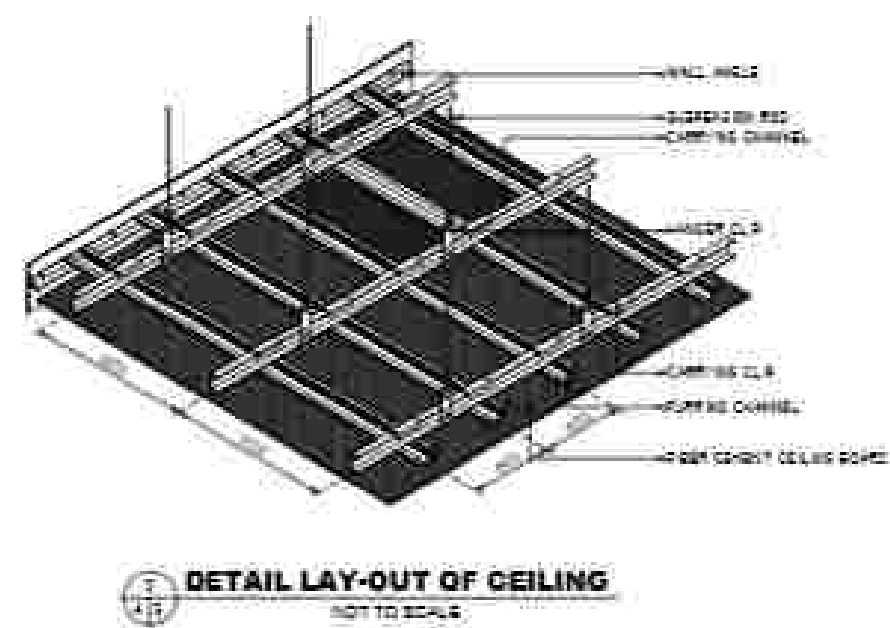
CEILING SECTION DETAIL
SCALE: 1/4" = 1'-0"



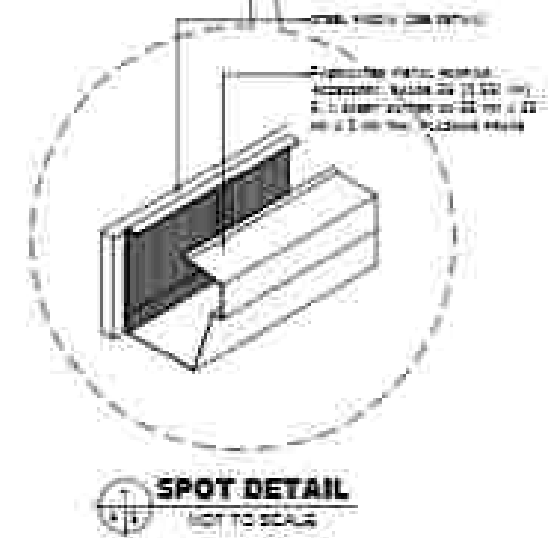
EAVES DETAIL
SCALE 1/2"=1'-0"



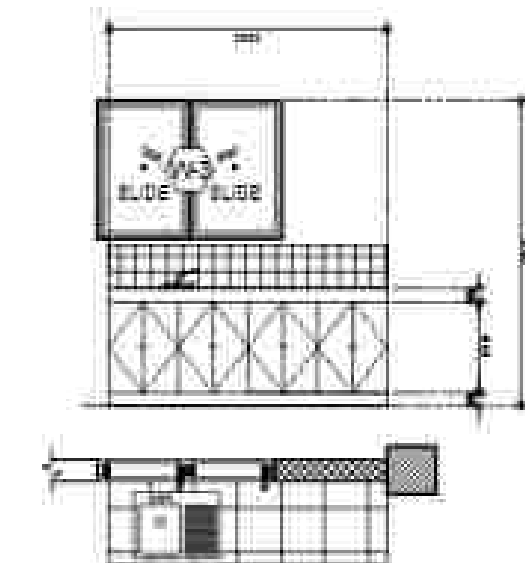
REFLECTED CEILING PLAN



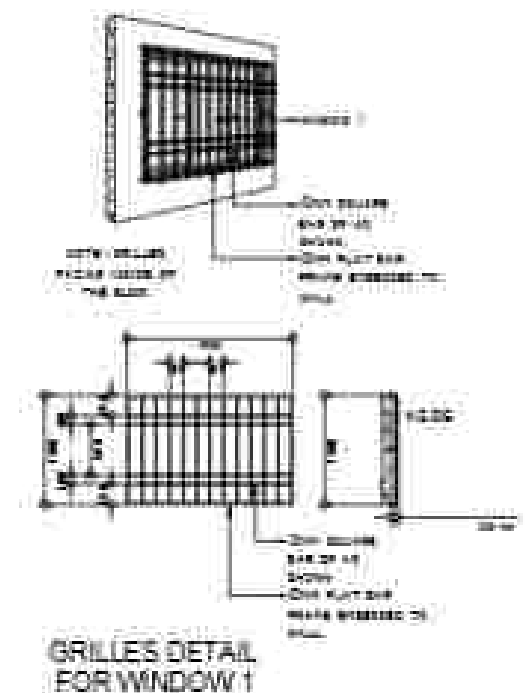
DETAIL LAY-OUT OF CEILING
NOT TO SCALE



SPOT DETAIL



SCHEDULE OF DOORS AND WINDOWS
SCALE: 1:50 mm



STEEL GRILLES DETAIL
SCALE: 1:50 mm

NOTE: COMPONENT OF CONSTRUCTION AREA MAY VARY DEPENDING ON ACTUAL SITE CONDITION
CAUTION FOR EXCAVATED AREA DURING FOUNDATION WORKS

LEGEND:

- 16  CAUTION HOT SURFACE
9  CAUTION FALLING OBJECTS

LEGEND:

- 1  2  3 
4  5  6 
7  8  9 
10  11  12 
13  14  15 

NOTE:

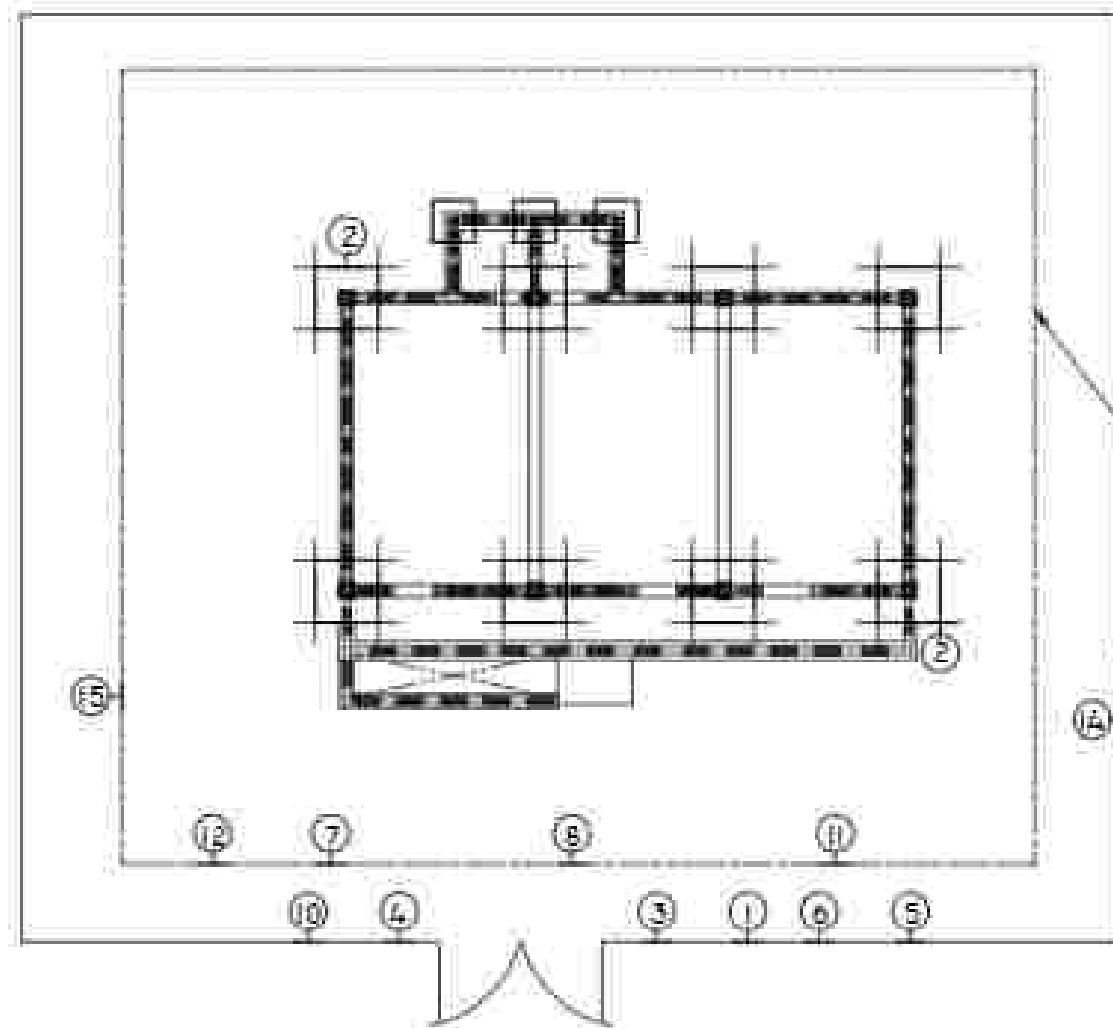
- ALL MATERIALS, EQUIPMENT OR DEVICES TO BE USED MUST BE APPROVED BY THE PROJECT MANAGER AND MUST BE USED AS INTENDED.
- THE SITE SHALL BE KEPT OPEN AND ACCESSIBLE AND MUST BE KEPT OPEN TO THE PUBLIC AT ALL TIMES. THE SITE SHALL BE KEPT OPEN TO THE PUBLIC AT ALL TIMES.
- THE PROJECT MANAGER SHALL BE RESPONSIBLE FOR THE SAFETY OF THE SITE AND SHALL BE RESPONSIBLE FOR THE SAFETY OF THE SITE.
- THE PROJECT MANAGER SHALL BE RESPONSIBLE FOR THE SAFETY OF THE SITE AND SHALL BE RESPONSIBLE FOR THE SAFETY OF THE SITE.



NOTE:

For General Construction Work, basic PPE for all construction workers as per DO No. 13, s. 1998 are the following:

- Safety Helmet and Hard hat
- Safety Gloves and / Working gloves
- Safety Shoes and / Rubber Boots
- Safety vest
- Raincoat



SAFETY & HEALTH PLAN
SCALE: 1:1000

 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS BUREAU OF ROAD CONSTRUCTION AND MAINTENANCE BUREAU OF ROAD CONSTRUCTION AND MAINTENANCE	PROJECT NAME AND LOCATION CONSTRUCTION OF MULTI-PURPOSE BUILDING (ADMINISTRATIVE BUILDING) IN BARANGAY SAN AGUSTIN, TACUR, CAVITE DEL NORTE	PROJECT NO. 2021-0001 (PROJECT NO. 12345)	DESIGNED BY [Signature] DATE	CHECKED BY [Signature] DATE	APPROVED BY [Signature] DATE	REVIEWED BY [Signature] DATE	APPROVED BY [Signature] DATE	DATE 1/1/2021
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REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGION III
SAVAO DEL NORTE
DISTRICT ENGINEERING OFFICE
TAAGUN

Project: _____ Date: _____
 Location: _____ Fund Source(s): _____

Implementing Agency/ies: _____
 Development Partners: _____
 Contractor/Supplier: _____
 Brief Description of Project: _____

Project Details

PROJECT DATE			PROJECT STATUS			REMARKS
Start	End	Next Date of Inspection	Planned at Completion	Actual Date	On Completion	


 To be placed in project area by project proponent/contractor/Regional Office
 at Office of the District Engineer or the project

District Engineer/Contractor

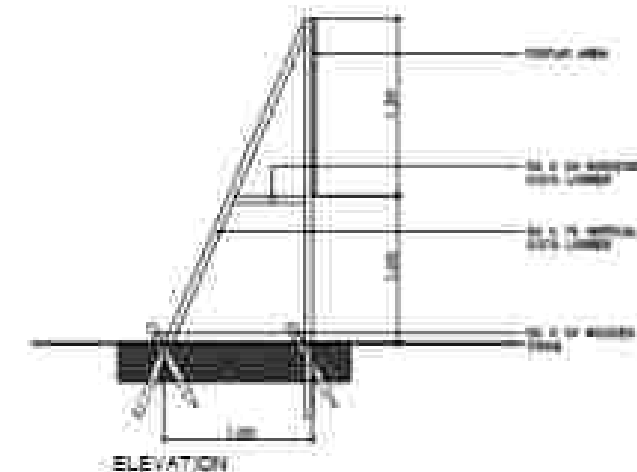
TAAGUN

6440 MM. (2 FT.)

COA BILLBOARD

NOTE:

- THE NEW BILLBOARD DESIGN LAYOUT, DIMENSION AND LETTER SIZE ON WHITE BACKGROUND AS SHOWN ON THE ATTACHED DRAWING, SHALL BE OBSERVED ON A STANDARD BILLBOARD MEASURING 3000 x 4000 MM. (12 FT. x 16 FT.) USING 2.0MM. (1/16 INCH) THICK HANDED PLYWOOD OR TAMBULIN OF THE SAME SIZE MOUNTED ON 40 x 100 x 6.35MM. (1 1/2 INCH) HANDED PLYWOOD.
- ALL EXISTING BILLBOARDS AT ON-ROAD PROJECTS SHALL BE REPLACED WITH NEW ONE ADHERING THE ABOVE GUIDELINES.
- FOR EACH BILLING PROJECT, THE BILLBOARD SHALL BE INSTALLED IN FRONT OF THE PROJECT.
- FOR EACH ROAD IMPROVEMENT/ROAD CONTROL PROJECT, TWO BILLBOARDS SHALL BE INSTALLED: ONE AT THE BEGINNING AND ONE AT THE END OF PROJECT.
- LOGOS AND/OR PICTURES OF ANY PERSONAGES SHOULD NOT APPEAR IN THE BILLBOARD.
- NO OTHER BILLBOARDS SHALL BE ALLOWED TO BE INSTALLED 50 METERS BEFORE AND 50 METERS AFTER ALL DPWH PROJECTS & IN BETWEEN THE PROJECT LIMITS OR WITHIN THE ROAD RIGHT-OF-WAY.
- DPWH CONTRACTORS SHALL NOT BE ALLOWED TO PLACE NAMES OF POLITICIAN OR PARTY POLITICAL BILLBOARD ON THEIR EQUIPMENT OR ON ANY BILLBOARD.







THIS IS WHERE YOUR TAXES GO

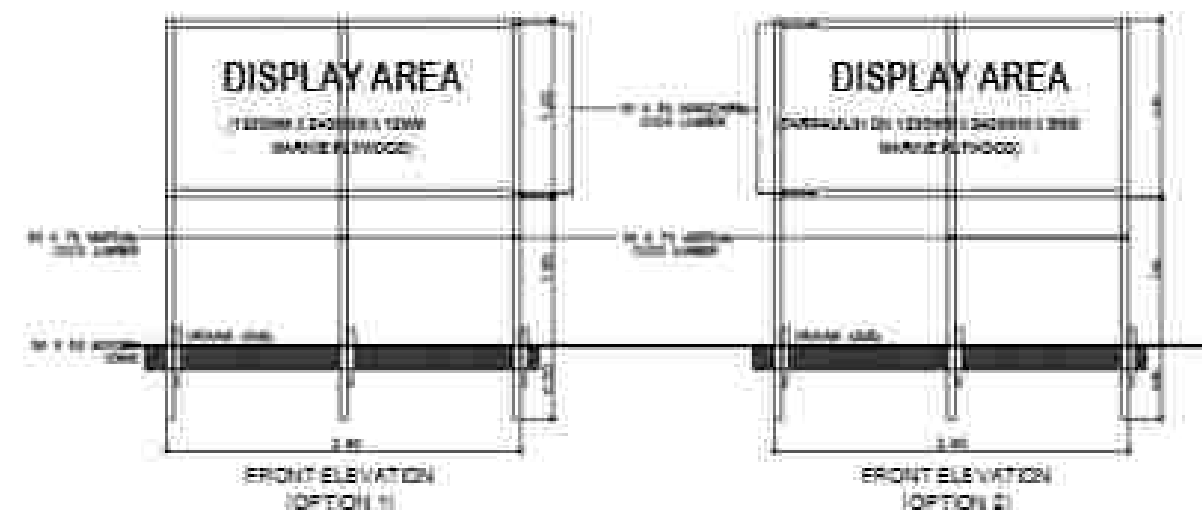
NAME OF PROJECT: _____
 LOCATION: _____
 NAME OF CONTRACTOR: _____
 DATE STARTED: _____
 CONTRACT COMPLETION DATE: _____
 CONTRACT COST: _____
 IMPLEMENTING OFFICE: _____
 SOURCES OF FUND: _____

Department of Public Works and Highways
 REGION III - SAVA DEL NORTE
 TAAGUN

DPWH STANDARD PROJECT BILLBOARD

NOTE:

- INSTALLATION OF BILLBOARD SHALL BE DONE (1) AT THE BEGINNING & (2) AT THE END OF THE PROJECT.
- LOGOS OR PICTURES OF ANY PERSONAGES SHOULD NOT APPEAR IN THE BILLBOARD.
- NO POLITICAL BILLBOARDS SHALL BE ALLOWED TO BE INSTALLED 50M BEFORE & 50M AFTER ALL DPWH PROJECTS & IN BETWEEN THE PROJECT LIMITS OR WITHIN THE ROAD RIGHT-OF-WAY.
- DPWH CONTRACTORS SHALL NOT BE ALLOWED TO PLACE NAMES OF POLITICIAN OR PARTY POLITICAL BILLBOARD ON THEIR EQUIPMENT.



DPWH STANDARD PROJECT BILLBOARD DETAIL
 NOT TO SCALE

 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGION III DISTRICT ENGINEERING OFFICE TAAGUN, SAVA DEL NORTE	PROJECT NAME AND LOCATION: CONSTRUCTION OF MULTI-PURPOSE BUILDING (ADMINISTRATIVE BUILDING) IN SAVA DEL NORTE, TAAGUN, SAVA DEL NORTE	DISTRICT ENGINEER:  DATE: _____	DISTRICT ENGINEER:  DATE: _____	DISTRICT ENGINEER:  DATE: _____	DISTRICT ENGINEER:  DATE: _____	DISTRICT ENGINEER:  DATE: _____
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GENERAL CONSTRUCTION NOTES "B"

TABLE 1
REINFORCING BARS
TABLE OF SPACING REINFORCING BARS

BAR SIZE	1-12 INCHES	13-18 INCHES	19-24 INCHES	25-30 INCHES
10	12	18	24	30
12	16	24	30	36
14	18	28	36	42
16	20	30	40	48
18	24	36	48	60

NOTE:
1. REINFORCING BARS SHALL BE USED IN ALL CONCRETE WALLS.
2. REINFORCING BARS SHALL BE USED IN ALL CONCRETE SLABS.

TABLE 2
REINFORCING BARS
TABLE OF SPACING REINFORCING BARS

BAR SIZE	1-12 INCHES	13-18 INCHES	19-24 INCHES	25-30 INCHES
10	12	18	24	30
12	16	24	30	36
14	18	28	36	42
16	20	30	40	48
18	24	36	48	60

NOTE:
1. REINFORCING BARS SHALL BE USED IN ALL CONCRETE WALLS.
2. REINFORCING BARS SHALL BE USED IN ALL CONCRETE SLABS.

REINFORCING CONCRETE WALLS
TABLE OF SPACING REINFORCING BARS

BAR SIZE	1-12 INCHES	13-18 INCHES	19-24 INCHES	25-30 INCHES
10	12	18	24	30
12	16	24	30	36
14	18	28	36	42
16	20	30	40	48
18	24	36	48	60

NOTE:
1. REINFORCING BARS SHALL BE USED IN ALL CONCRETE WALLS.
2. REINFORCING BARS SHALL BE USED IN ALL CONCRETE SLABS.

NOTES ON STIRUPS

1. ALL REINFORCEMENT SHALL BE SET OUT UNLESS OTHERWISE SPECIFIED BY THE STRUCTURAL ENGINEER.
2. AS SHOWN IN THE DESIGN DRAWINGS OR PERMITTED BY THE STRUCTURAL ENGINEER.
3. SEE SLICE STIRUPS DETAIL AT 101.



NOTES ON WELDS

1. USE WELDED CONNECTIONS FOR ALL REINFORCING BARS.
2. WELDS SHALL BE OF THE FULL STRENGTH OF THE BARS JOINED UNLESS OTHERWISE SPECIFIED OR DETAIL IN THE DRAWINGS.

NOTES ON STRUCTURAL STEEL

1. STRUCTURAL STEEL TO BE USED FOR FABRICATION AND ERECTION OF THE STRUCTURE SHALL COMPLY WITH ALL THE PERTINENT PROVISIONS OF ASD SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDING LIMITED EDITION.
2. ALL STRUCTURAL STEEL BARS SHALL COMPLY TO ASTM A36 STRUCTURAL STEEL UNLESS OTHERWISE INDICATED.
3. ALL WELDED CONNECTIONS SHALL BE OF THE FULL STRENGTH OF THE BARS JOINED.
4. UNLESS OTHERWISE SPECIFIED ALL WELDING SHALL COMPLY WITH AWS D1.1.
5. ALL WELDS SHALL BE OF THE FULL STRENGTH OF THE BARS JOINED UNLESS OTHERWISE SPECIFIED OR DETAIL IN THE DRAWINGS.

NOTES ON EMBEDDED PIPES

1. ALL EMBEDDED PIPES FOR UTILITIES ETC. THAT PASS THROUGH WALLS SHALL NOT EXCEED 100mm IN DIAMETER OR 1.5% OF THE WALL THICKNESS UNLESS OTHERWISE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER.
2. NO PIPES SHALL BE ALLOWED TO PASS THROUGH WALLS VERTICALLY.
3. NO PIPES SHALL BE EMBEDDED IN CORNERS.

NOTES ON CONSTRUCTION JOINTS IN CONCRETE

1. WHERE A CONSTRUCTION JOINT IS TO BE MADE, THE SURFACE OF CONCRETE SHALL BE CLEANED AND ALL LATHING AND STIRRUPS (IF REMOVED) SHALL BE SET OUT BEFORE THE JOINT.

TABLE 3
REINFORCING BARS
TABLE OF SPACING REINFORCING BARS

BAR SIZE	1-12 INCHES	13-18 INCHES	19-24 INCHES	25-30 INCHES
10	12	18	24	30
12	16	24	30	36
14	18	28	36	42
16	20	30	40	48
18	24	36	48	60

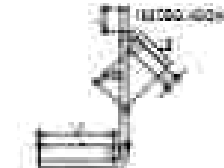
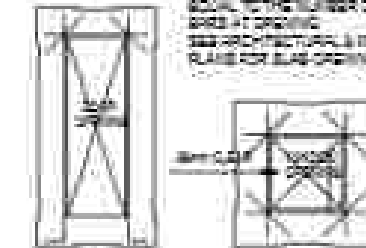


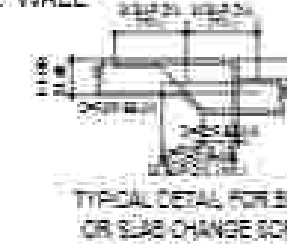
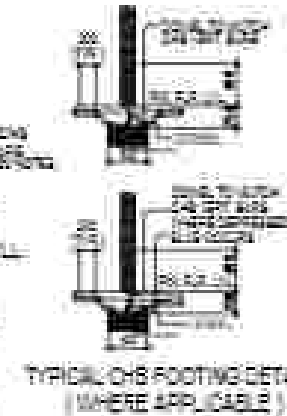
TABLE 4
REINFORCING BARS
TABLE OF SPACING REINFORCING BARS

BAR SIZE	1-12 INCHES	13-18 INCHES	19-24 INCHES	25-30 INCHES
10	12	18	24	30
12	16	24	30	36
14	18	28	36	42
16	20	30	40	48
18	24	36	48	60

NOTE:
PROVIDE THESE ADDITIONAL BARS FOR ALL CHANGES PLUS BARS NOT SHOWN PARALLEL TO SIDE OF CHANGING EQUAL TO THE NUMBER OF REINFORCING BARS AT CHANGING SEE ARCHITECTURAL & MECHANICAL PLANS FOR SLAB CHANGING LOCATION



1. IF THE REINFORCING BARS ARE IN A WALL, THE CLEAR DISTANCE FROM THE BAR TO THE OUTER FACE OF THE WALL IS NOT LESS THAN 40mm. MINIMUM LENGTH SHALL BE SHOWN IN A TABLE 1 FOR REINFORCING BARS AND THESE ARE FOR CONCRETE IN BARS UNLESS OTHERWISE SPECIFIED IN DRAWING. TOP BARS ARE NOT TO BE SPACED WITHIN THE COLUMN OR TWO STIRRUPS SHALL BE PROVIDED AT ALL SPACES.
2. IF THERE ARE TWO OR MORE LAYERS OF REINFORCING BARS, USED 20mm DIA. SEPARATORS SPACED AT 150mm OR CENTER TO CENTER CASE SHALL THERE BE TWO SEPARATORS BETWEEN LAYERS OF BARS.
3. MINIMUM CONCRETE PROTECTION FOR REINFORCING BARS OR STEEL, SHOWN AS SHOWN IN FIGURE 101 UNLESS OTHERWISE SPECIFIED.



NOTES ON CONCRETE WALLS

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

WALL TYPE	REINFORCEMENT	REMARKS	REVISION
1. EXTERIOR WALL	1. 10mm @ 150mm	1. 10mm @ 150mm	1. 10mm @ 150mm
2. INTERIOR WALL	2. 10mm @ 150mm	2. 10mm @ 150mm	2. 10mm @ 150mm
3. EXTERIOR WALL	3. 10mm @ 150mm	3. 10mm @ 150mm	3. 10mm @ 150mm
4. INTERIOR WALL	4. 10mm @ 150mm	4. 10mm @ 150mm	4. 10mm @ 150mm

1. REINFORCING BARS SHALL HAVE 20mm CLEAR CONCRETE COVER FROM FACE OF WALL EXCEPT FOR WALLS IN CONTACT WITH THE GROUND WHERE A MINIMUM OF 50mm SHALL BE PROVIDED AND FOR EXPOSED FACES OF FORMED WALLS WHERE THE MINIMUM SHALL BE 50mm CLEAR.
2. CORNER REINFORCING BARS AT LEAST 10mm ABOVE FLOOR LEVEL TO PROVIDE FOR SPICES WHEN NEEDS OF STOP AT 30mm BELOW FOR SLAB OR SOLE FOUND WHERE THE WALL SPICE VERTICAL AND HORIZONTAL BARS SHALL BE SPACED BY LAPPING A DISTANCE EQUAL TO 30 DIAMETERS AND WELDED SECURELY WITH 10mm PROVIDED THAT SPICES IN ADJACENT BARS ARE STAGGERED AT LEAST 100mm O.C.
3. UNLESS OTHERWISE NOTED IN THE PLANS, ALL CHANGES IN WALLS DOWN OR THICKER SHALL BE REINFORCED A 100mm DIA. STIRRUPS AND SPACED ACCORDING TO THE SCHEDULE UNLESS OTHERWISE NOTED.



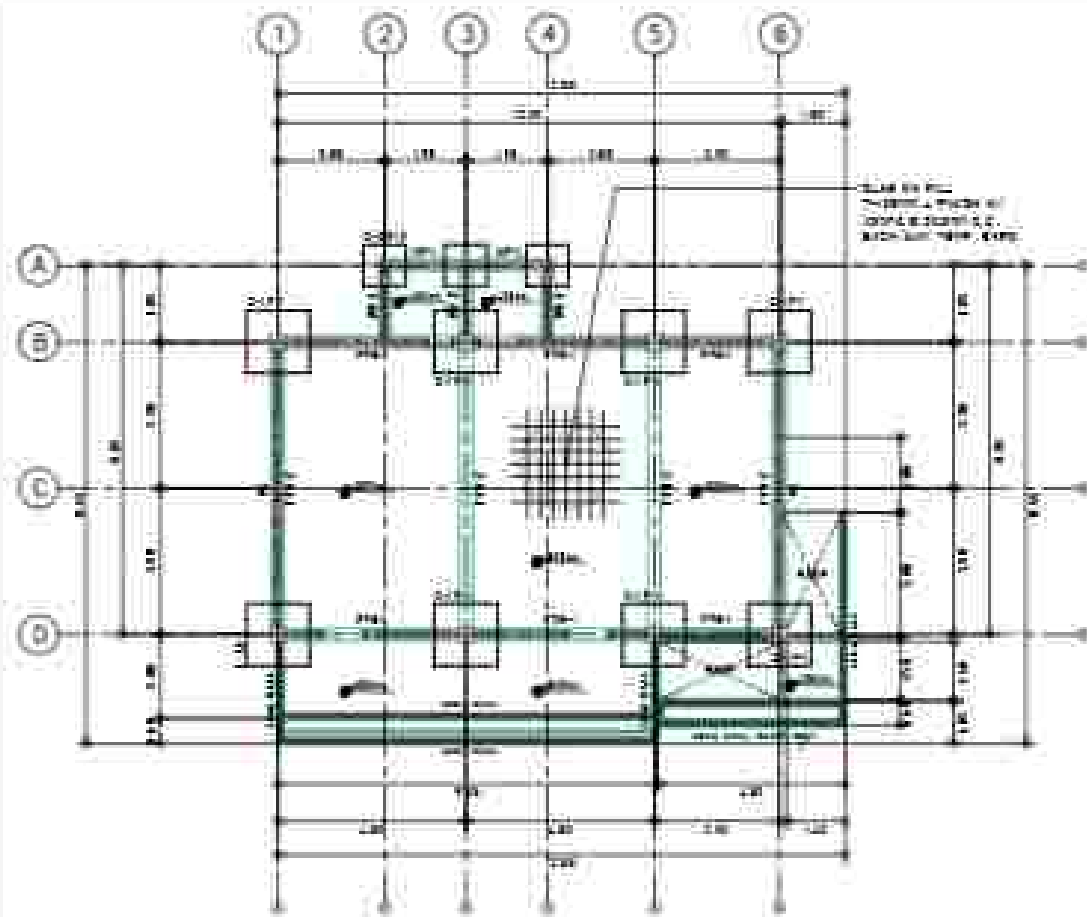
TYP. DET. OF LINTEL BEAM AT CHB WALL OPENING

NOTES ON CONCRETE HOLLOW BLOCKS WALLS

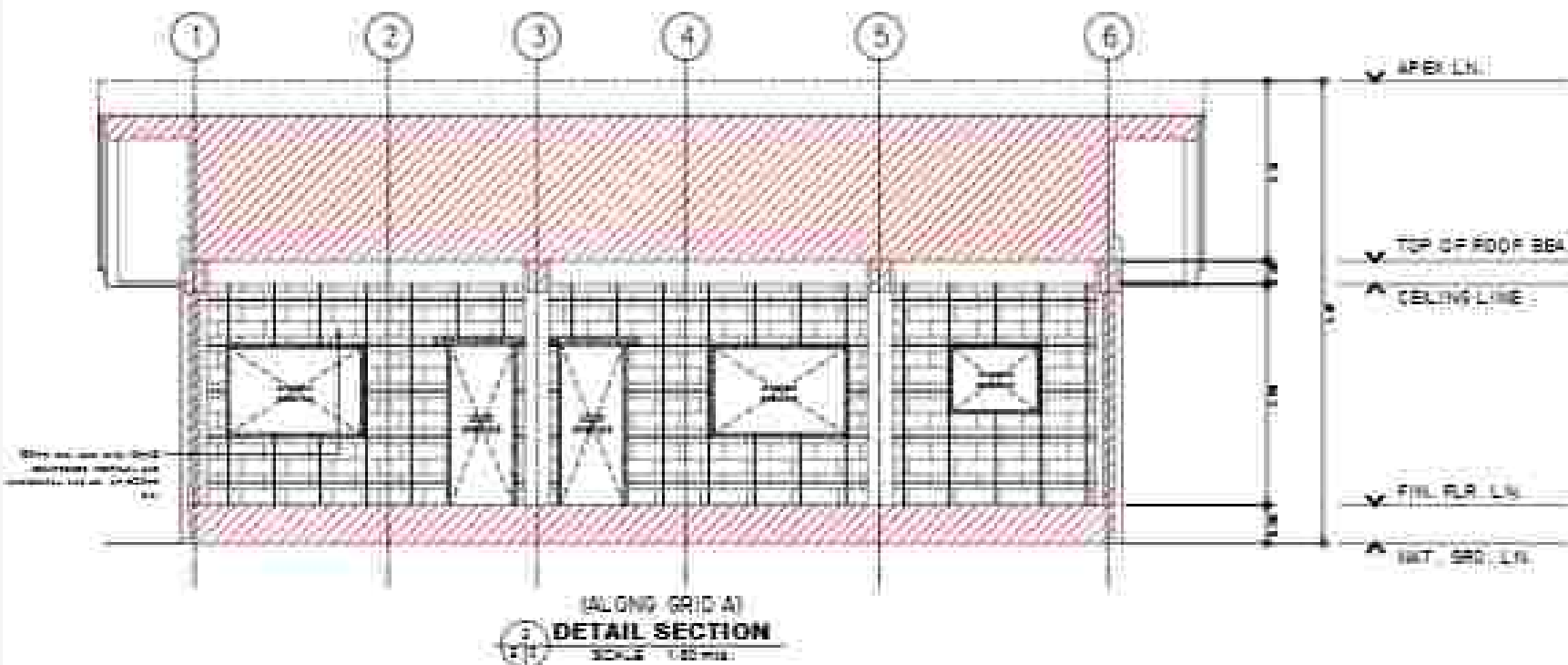
1. UNLESS OTHERWISE SHOWN IN PLANS ALL CONCRETE HOLLOW BLOCKS AND CERAMIC BLOCKS SHALL BE REINFORCED AS SHOWN IN THE SCHEDULE OF CONCRETE HOLLOW BLOCKS AND CERAMIC BLOCK REINFORCEMENT.
2. WHERE CONCRETE HOLLOW BLOCKS TERMINATE AND AT 200mm MIN. LENGTH OF CONCRETE HOLLOW BLOCK WALLS UNLESS NOTED IN STRUCTURAL PLANS.

NOTE ON CONCRETE HOLLOW BLOCK WALLS REINFORCEMENT

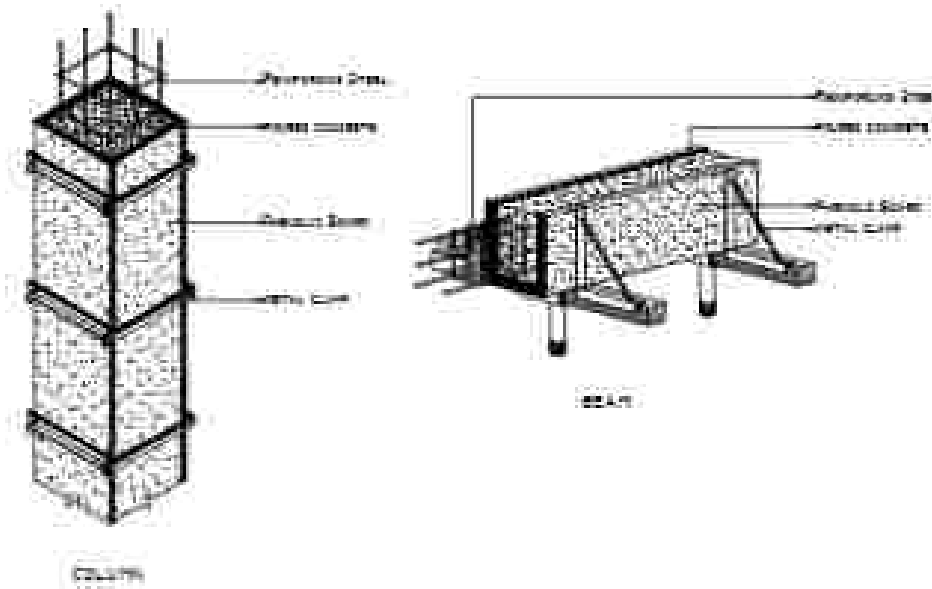
BLOCK SIZE	REINFORCEMENT	REMARKS
10mm	1. 10mm @ 150mm	1. 10mm @ 150mm
12mm	2. 10mm @ 150mm	2. 10mm @ 150mm
14mm	3. 10mm @ 150mm	3. 10mm @ 150mm
16mm	4. 10mm @ 150mm	4. 10mm @ 150mm
18mm	5. 10mm @ 150mm	5. 10mm @ 150mm



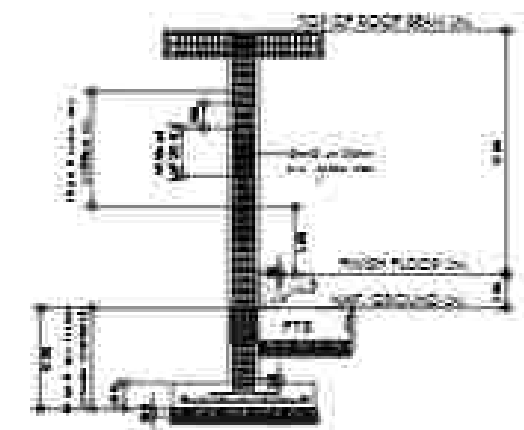
FOUNDATION PLAN
SCALE: 1:100



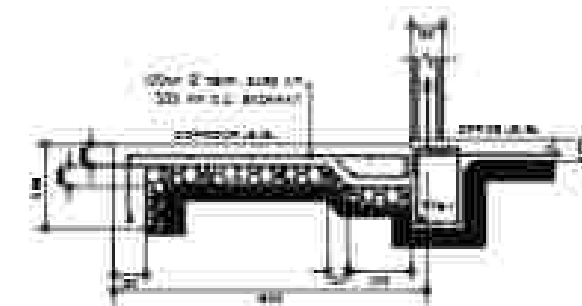
DETAIL SECTION
SCALE: 1:20



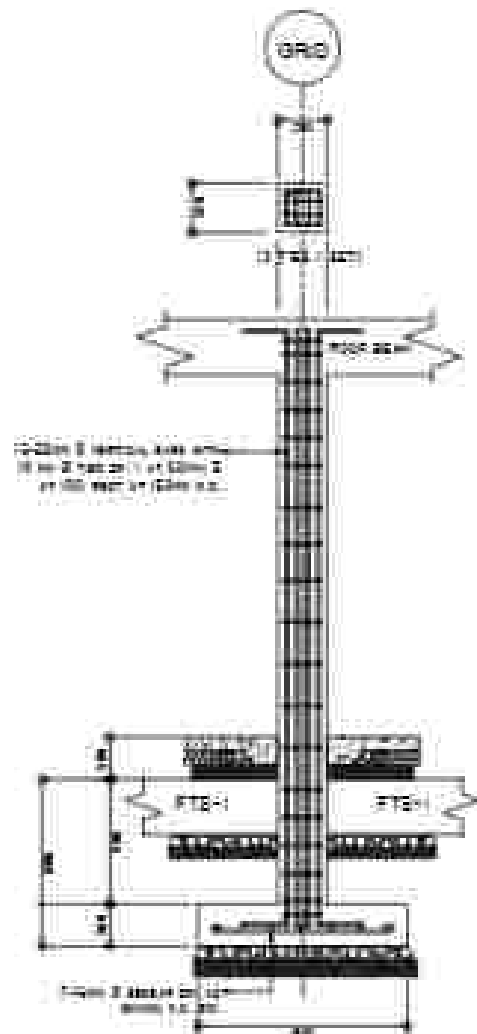
TYPICAL FORMWORKS DETAIL
NOT TO SCALE



TYPICAL DETAIL OF R.C. COLUMN
SCALE: 1:20

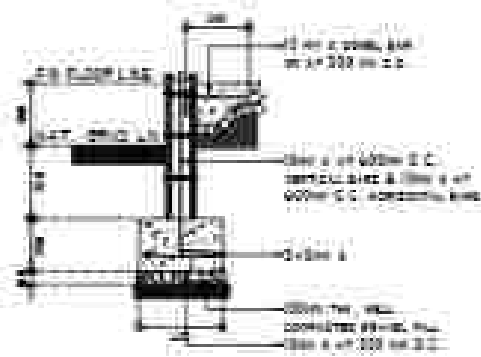


DETAIL SECTION OF CORRIDOR
SCALE: 1:20

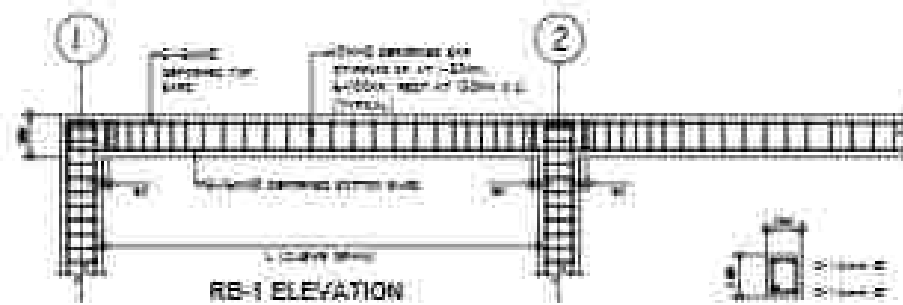


BAY SECTION
SCALE: 1:20

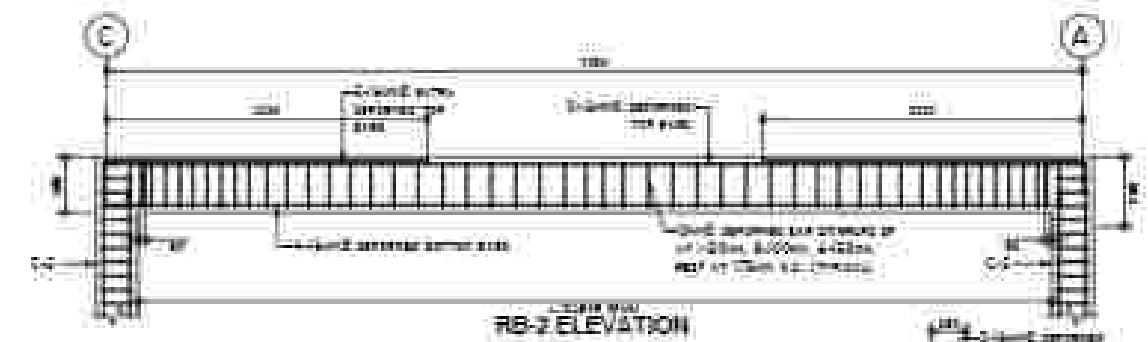
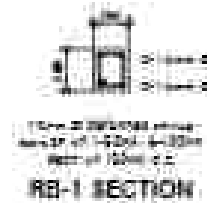
 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE CITY OF SAN ANTONIO, BANGAL, CAVITE	PROJECT NAME AND LOCATION CONSTRUCTION OF MULTI-PURPOSE BUILDING (ADMINISTRATIVE BUILDING) IN SAN ANTONIO, BANGAL, CAVITE	DESIGNER ARCE & SORIANO 2020-2021 (PROPOSED)	DESIGNER ARCE & SORIANO 2020-2021 (PROPOSED)	DESIGNER ARCE & SORIANO 2020-2021 (PROPOSED)	DESIGNER ARCE & SORIANO 2020-2021 (PROPOSED)	DESIGNER ARCE & SORIANO 2020-2021 (PROPOSED)
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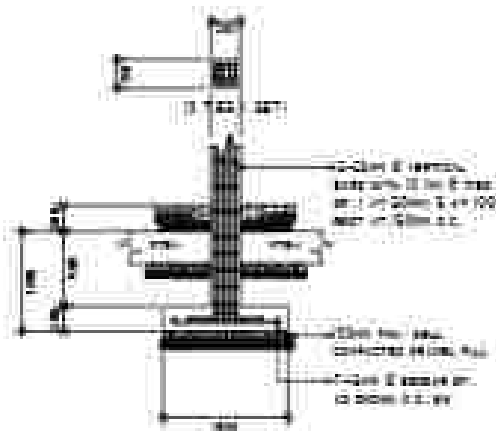
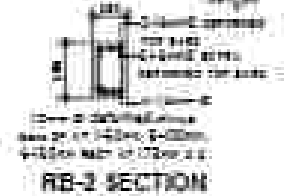
DETAIL OF WF
SCALE: 1:25 mm



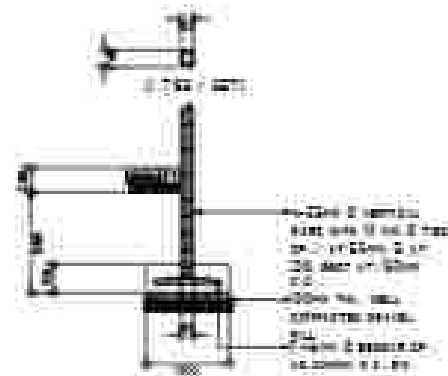
DETAIL OF ROOF BEAM (RB-1)
SCALE: 1:25 mm



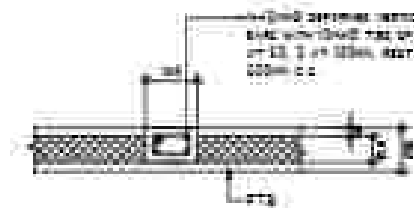
DETAIL OF ROOF BEAM (RB-2)
SCALE: 1:25 mm



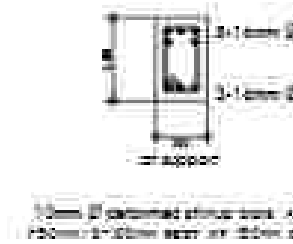
F1C1 DETAIL
SCALE: 1:25 mm



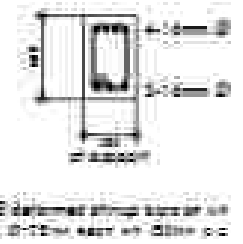
F2C2 DETAIL
SCALE: 1:25 mm



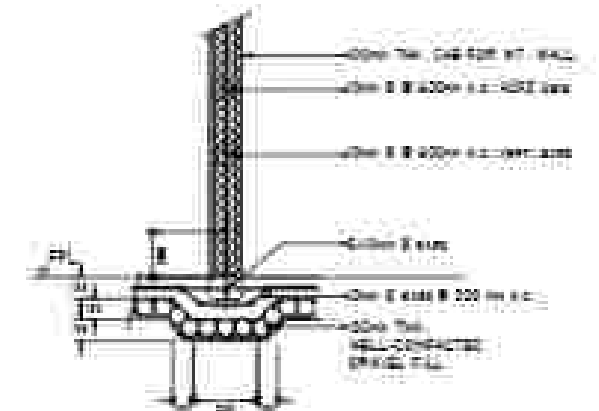
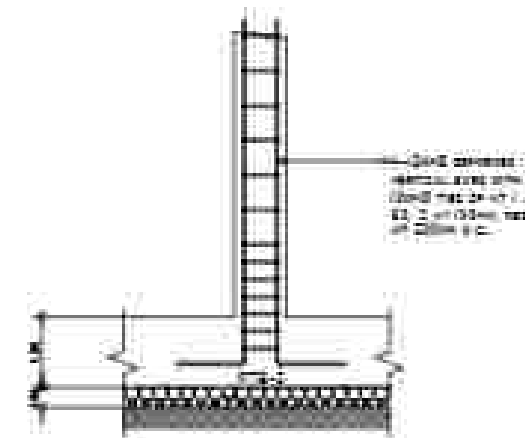
STIFFENER DETAIL
SCALE: 1:25 mm



FTB-2 DETAIL
SCALE: 1:25 mm

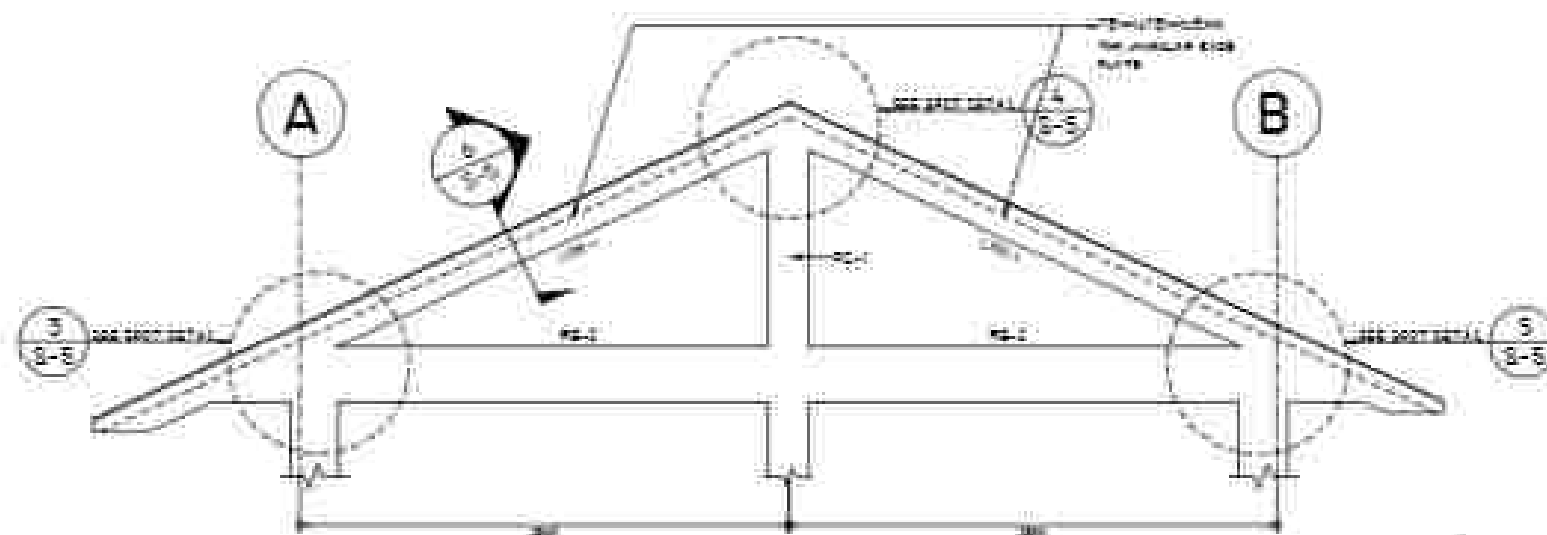


FTB-1 DETAIL
SCALE: 1:25 mm

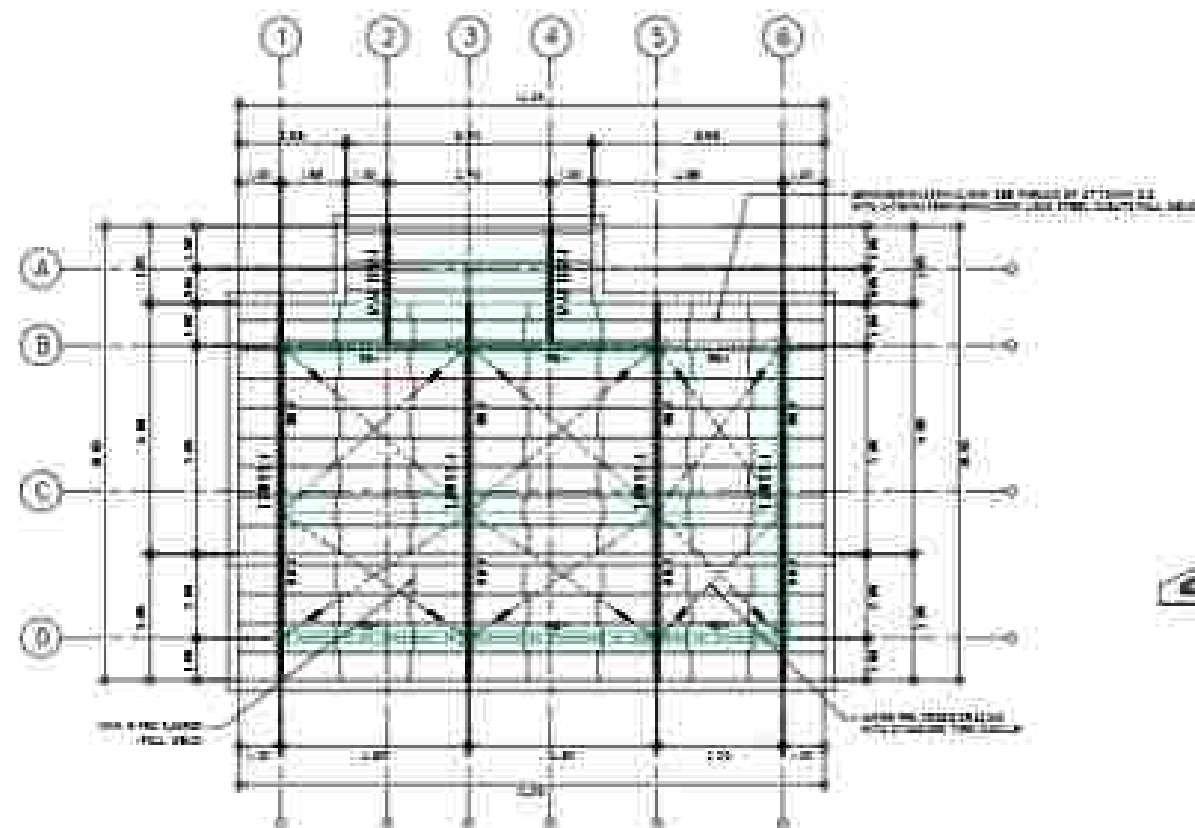


DETAIL OF WF-2
SCALE: 1:25 mm

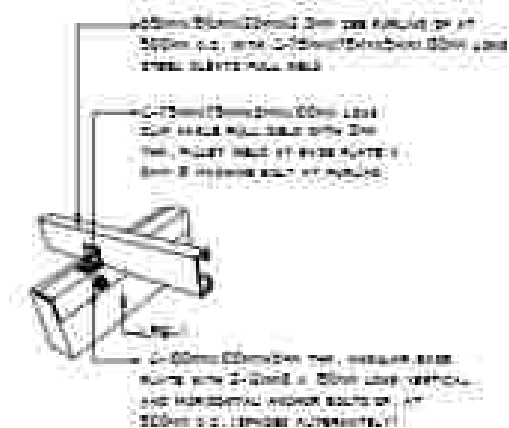
 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGION III DIVISION OFFICE - BANGALIPAN BANGALIPAN, BANGALIPAN, BANGALIPAN	PROJECT NAME AND LOCATION CONSTRUCTION OF MULTI-PURPOSE BUILDING (ADMINISTRATIVE BUILDING) IN BANGALIPAN, BANGALIPAN, BANGALIPAN	PROJECT NO. 2023-0011 (PUBD.O. 14348)	DESIGNED BY ALBERTO S. SANTIAGO	CHECKED BY ALBERTO S. SANTIAGO	APPROVED BY ALBERTO S. SANTIAGO	DATE 2023-0011 (PUBD.O. 14348)	DATE 2023-0011 (PUBD.O. 14348)	DATE 2023-0011 (PUBD.O. 14348)
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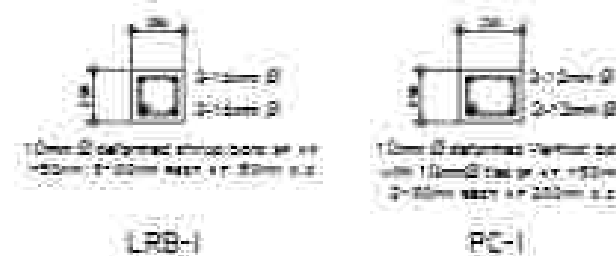
ELEVATION OF END WALL FRAME
SCALE: 1/20 mm



ROOF FRAMING PLAN
SCALE: 1/100 mm



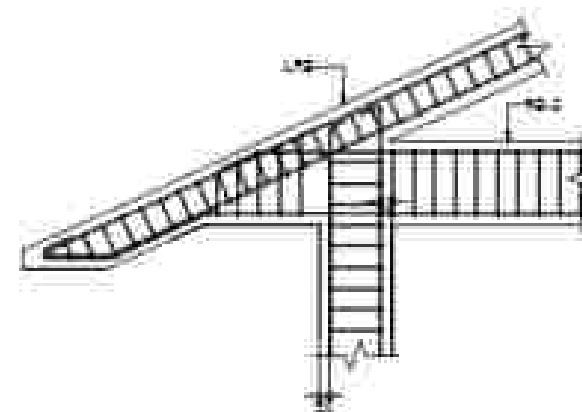
ISOMETRIC DETAIL
SCALE: 1/20 mm



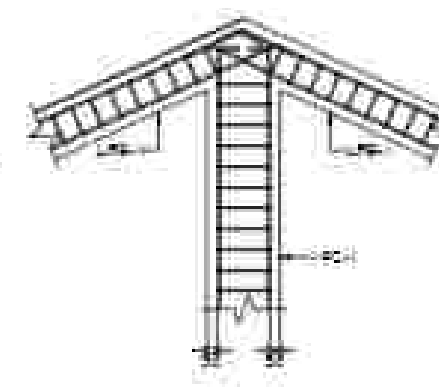
DETAIL SECTION OF LRB-1 & PC-1
SCALE: 1/20 mm



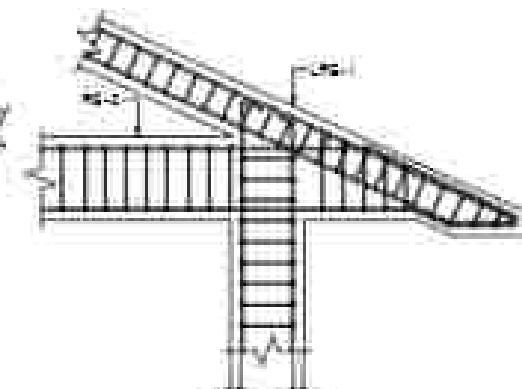
CONNECTION OF PURLINS TO LRB-1
SCALE: 1/10 mm



SPOT DETAIL - 1
SCALE: 1/20 mm



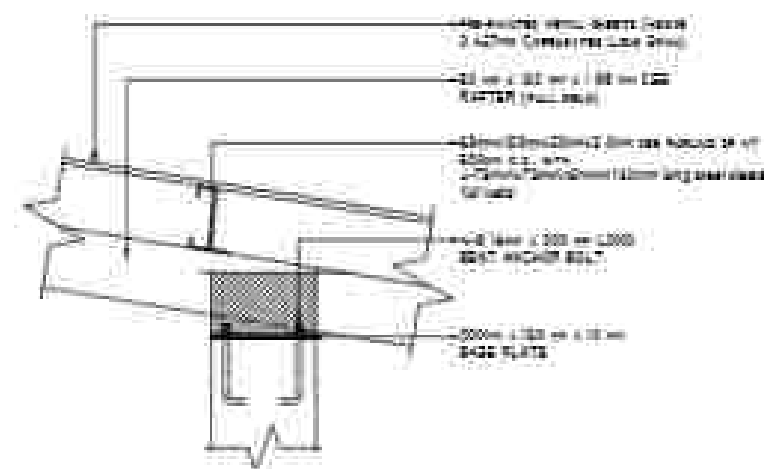
SPOT DETAIL - 2
SCALE: 1/20 mm



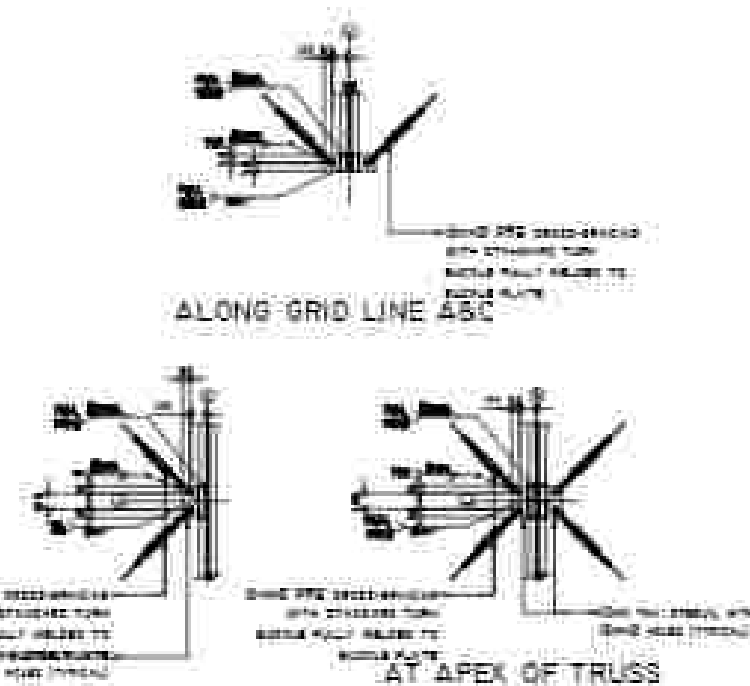
SPOT DETAIL - 3
SCALE: 1/20 mm

 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE CITY OF SAN ANTONIO, ILOILO BUILDING DIVISION - ILOILO	PROJECT NAME AND LOCATION CONSTRUCTION OF MULTI-PURPOSE BUILDING (ADMINISTRATIVE BUILDING) IN SAN ANTONIO, ILOILO	PROJECT NO. 2021-001	DESIGNED BY JOSEPH M. DELA CRUZ	CHECKED BY JOSEPH M. DELA CRUZ	APPROVED BY JOSEPH M. DELA CRUZ	DATE 2021-001	DATE 2021-001	DATE 2021-001
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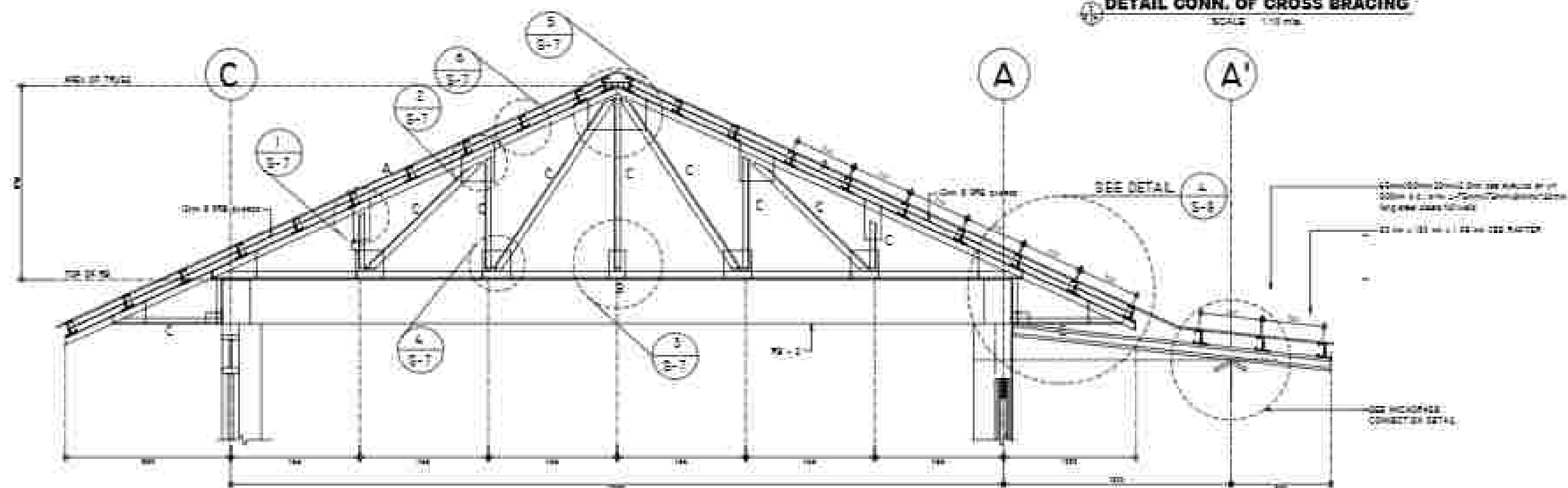
TRUSS MEMBERS (mm)	SIZE OF WELDS (mm)			REMARKS
	THICKNESS (mm)	LENGTH		
		L ₁	L ₂	L ₃
(A) 2 a-65mm x 65mm x 6mm TOP CHORD (2 a-21/27+21/27+6mm)	4	FULL WELD (TO GUSSET PLATE)		
(B) 2 a-65mm x 65mm x 6mm BOTTOM CHORD (2 a-21/27+21/27+6mm)	4	— 50 —		
(C) 2 a-50mm x 50mm x 6mm WEB MEMBERS & RAKE (2 a-30+30+6mm)	4	125	100	50
(D) 1 -100mm x 100mm x 6mm ANGULAR BASE PLATES ON TOP OF LMB 1	5	FULL WELD		



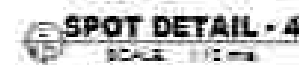
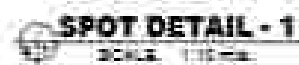
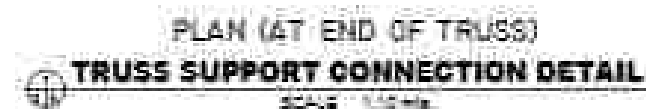
ANCHORAGE CONNECTION DETAIL

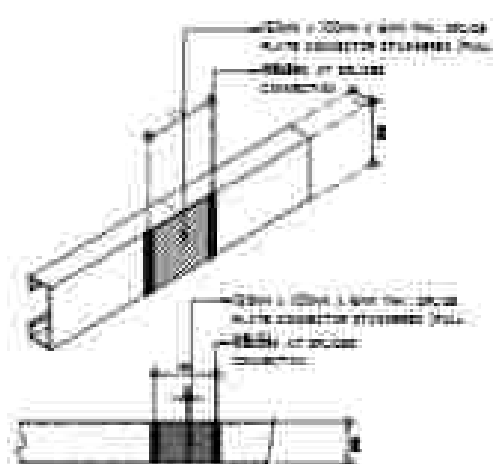
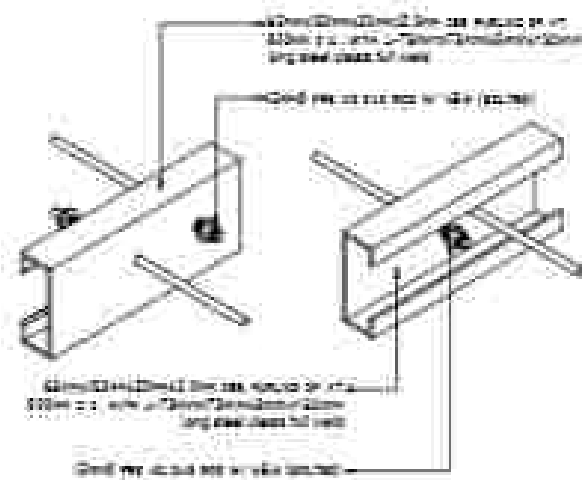


DETAIL CONN. OF CROSS BRACING

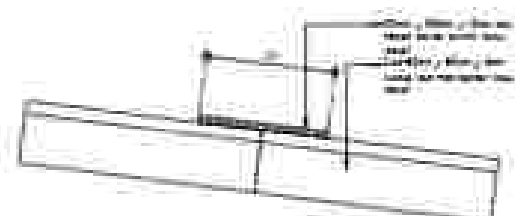


DETAIL ELEVATION OF TRUSS-1

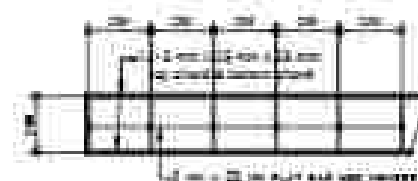




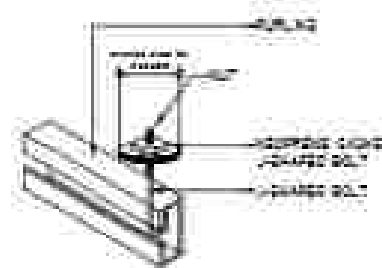
PURLIN SPLICE
SCALE: 1/10 mm



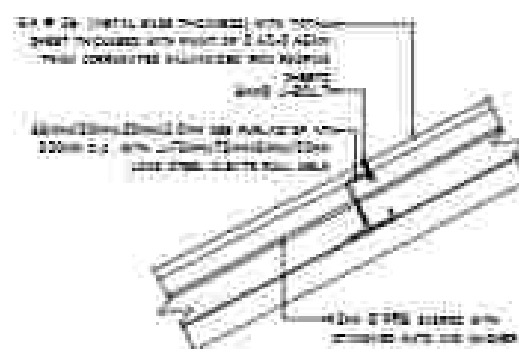
(TYPICAL) TRUSS SPLICE DETAIL
NOT TO SCALE



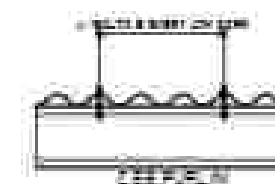
FASCIA DETAIL
SCALE: 1/10 mm



ROOFING FIXER DETAIL
NOT TO SCALE



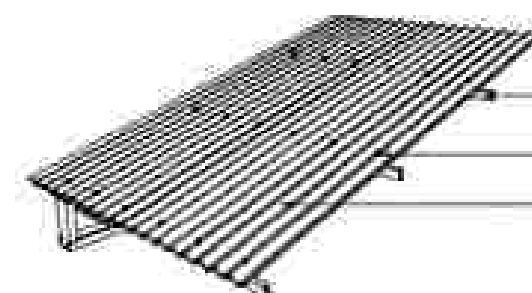
CONNECTION OF G.I SHEET ROOFING TO PURLINS
SCALE: 1/10 mm



J-BOLT SPACING
SCALE: 1/10 mm

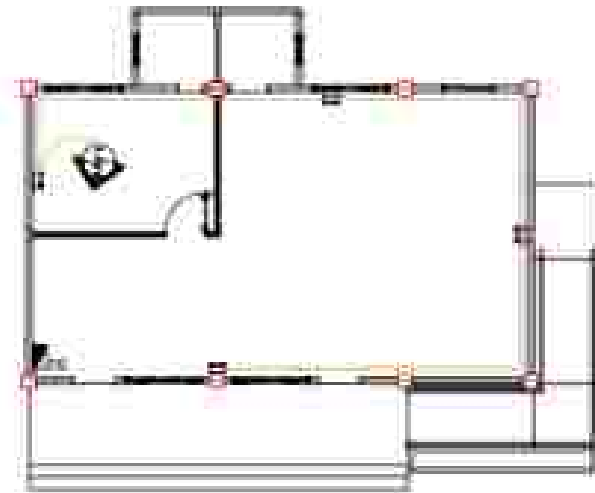


ROOF PANEL SIDE LAP DETAIL
SCALE: 1/10 mm

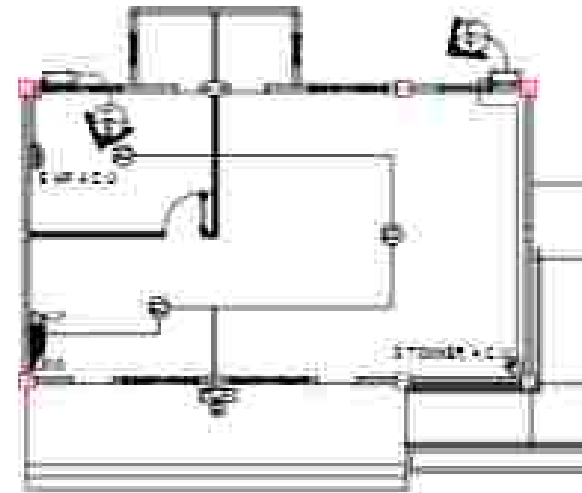


ISOMETRIC VIEW OF CONNECTION OF ROOFING TO PURLINS
SCALE: 1/10 mm

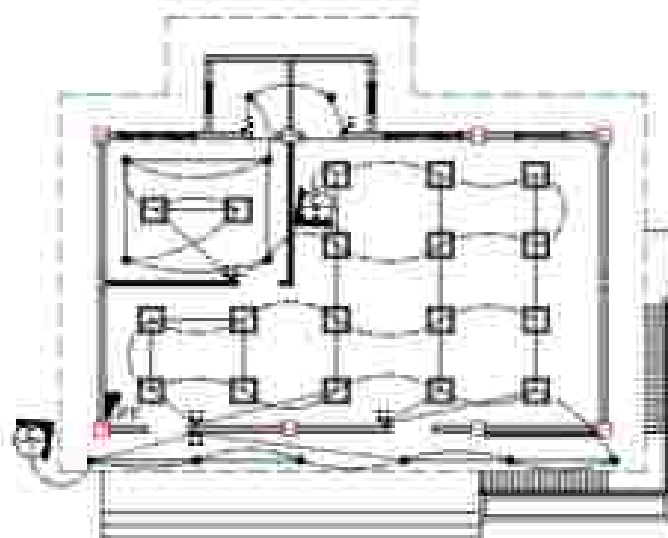
 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGION III DIVISION OFFICE - BANGALIPAN, BANGALIPAN, BANGALIPAN BANGALIPAN, BANGALIPAN, BANGALIPAN	PROJECT NAME AND LOCATION CONSTRUCTION OF MULTI-PURPOSE BUILDING (ADMINISTRATIVE BUILDING) IN BANGALIPAN, BANGALIPAN, BANGALIPAN	SHEET NO. 1	DATE 2023/03/11	DATE 2023/03/11	DATE 2023/03/11	DATE 2023/03/11	DATE 2023/03/11	DATE 2023/03/11
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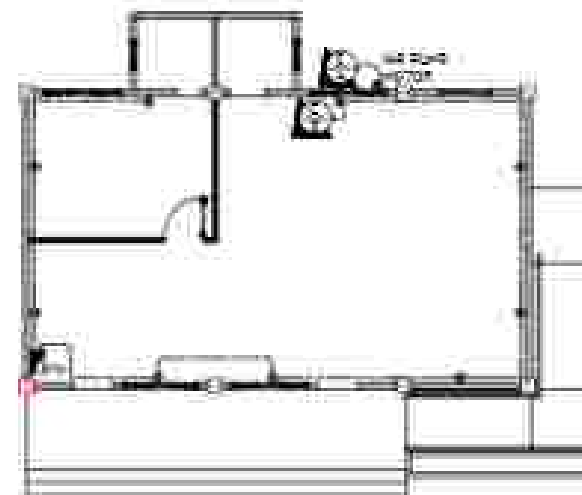
EMERGENCY LIGHTING LAY-OUT
SCALE: 1/100 mm



A.C.U LAY-OUT
SCALE: 1/100 mm



LIGHTING LAY-OUT
SCALE: 1/100 mm



POWER LAY-OUT
SCALE: 1/100 mm

AREA: 9 M x 7 M = 63 SQ. M.
LUMINOUS FLUX OF LED LIGHT = 3333 LUMENS
ILLUMINATION REQUIREMENTS = 500 Lux
CU = 0.45
MF = 0.8
ILLUMINATION = $\frac{\# \text{ LIGHT FIXTURE} \times \text{LUMINOUS FLUX/LAMP} \times \text{CU} \times \text{MF}}{\text{FLOOR AREA}}$
No. LIGHT FIXTURE = $\frac{500 \times 63}{1 \times 3333 \times 0.45 \times 0.8}$
= 26.23 = 26 LIGHTING FIXTURES HAVE IT SYMMETRICAL

COOLING LOAD ANALYSIS:

OFFICER'S ROOM:

AREA = 3.75 SQ. M.
CAPACITY FACTOR = 0.063 HP PER SQ. M.

AC CAPACITY = FLOOR AREA x CAPACITY FACTOR
AC CAPACITY = 3.75 x 0.063
AC CAPACITY = 1.23 HP
PROVIDE: 1 - 1.5 HP SPLIT TYPE A.C.U.

OFFICE:

AREA = 45.08 SQ. M.
CAPACITY FACTOR = 0.063 HP PER SQ. M.

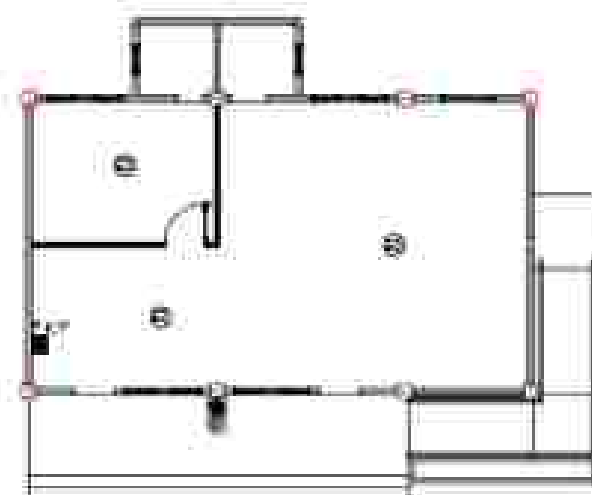
AC CAPACITY = FLOOR AREA x CAPACITY FACTOR
AC CAPACITY = 45.08 x 0.063
AC CAPACITY = 3.74 HP

PROVIDE: 1 - 3 TONNER FLOOR MOUNTED SPLIT TYPE A.C.U.

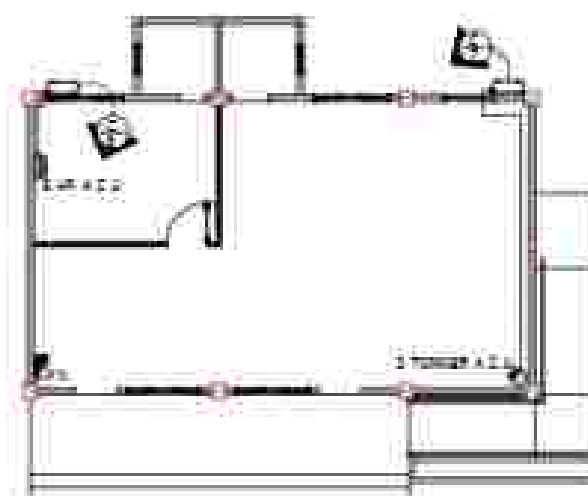
 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGION III DIVISION OFFICE - BANGALIPAN, BANGALIPAN, BANGALIPAN BANGALIPAN, BANGALIPAN, BANGALIPAN	PROJECT NAME AND LOCATION: CONSTRUCTION OF MULTI-PURPOSE BUILDING (ADMINISTRATIVE BUILDING) IN BANGALIPAN, BANGALIPAN, BANGALIPAN, TACUR, BAYAN DEL NORTE	CLIENT/OWNER: BANGALIPAN, BANGALIPAN, BANGALIPAN	DESIGNED BY:  DATE: 2023/03/11	CHECKED BY:  DATE: 2023/03/11	APPROVED BY:  DATE: 2023/03/11	REVISIONS:  DATE: 2023/03/11	NOTES:  DATE: 2023/03/11	SCALE: 1/100 mm
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INDOOR UNIT											REMARK	
SEQUENTIATION	QTY	DISCHARGE		DISCHARGE MM	REFRIG	REFRIG. PIPE (MM)					REMARK	
		FLUOR	LIQUID			REFRIG. PIPE	REFRIG. PIPE	REFRIG. PIPE	REFRIG. PIPE	REFRIG. PIPE		
ACU	2	20.000	27.000	30.000	100	1.00	1.00	0	0	0	0	ALL WITH CHARGE BY BRAND AND BY COMPLETE DISCHARGE AND RECHARGE WITH STANDARD ACCESSORIES FROM OUR OFFICE

OUTDOOR UNIT											LOCATION	
SEQUENTIATION	QTY	DISCHARGE		DISCHARGE MM	REFRIG. PIPE	REFRIG. CONNECTION					REMARK	
		FLUOR	LIQUID			REFRIG. PIPE	REFRIG. PIPE	REFRIG. PIPE	REFRIG. PIPE	REFRIG. PIPE		
ACU	2	20.000	27.000	30.000	100	1.00	1.00	0	0	0	0	



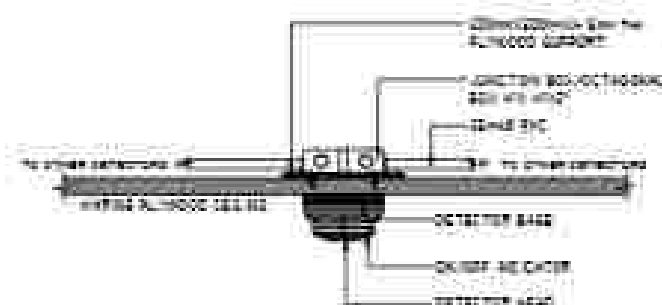
(FIRE ALARM GELL-LAYOUT PLAN)
GROUND FLOOR PLAN
SCALE: 1/8" = 1'-0"



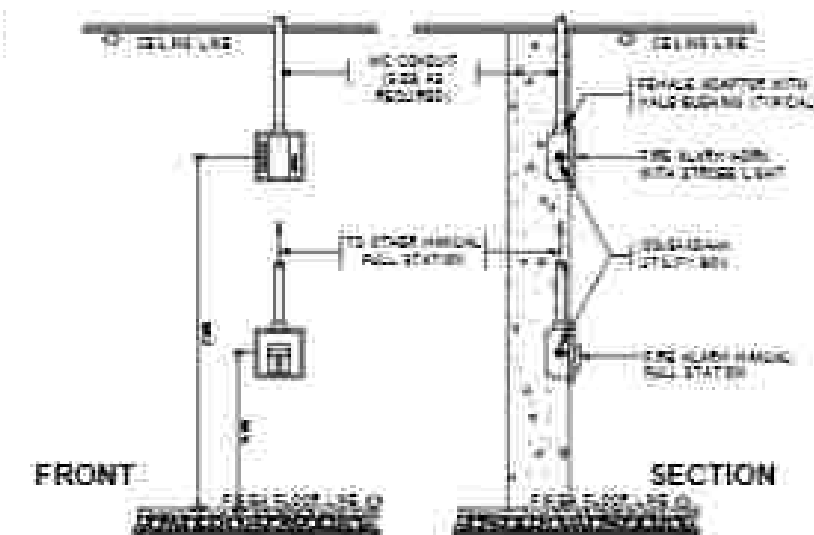
A.G.U LAY-OUT
SCALE 1:100 mm.

1. CONTRACTOR IS ADVISED TO VISIT AND SURVEY THE PLACE OF INSTALLATION.
ALL AIR CONDITIONING UNITS AND VENTILATING UNITS TO
2. BE SUPPLIED, SHALL BE NEW AND APPROVED PRODUCTS
OF REPUTABLE MANUFACTURERS.
3. INDIVIDUAL WEATHER-PROOF TYPE CIRCUIT BREAKER SHALL BE PROVIDED
PROVIDED FOR ALL CONDENSING UNITS.
4. ALL INSTALLATION WORKS SHALL BE DONE IN
A NEAT AND WORK-MANLIKE MANNER.
5. ALL ACQUIS shall BE PROVIDED WITH ANGULAR
BAR SUPPORTS (SUBMIT SHOP DRAWING PRIOR
TO INSTALLATION)

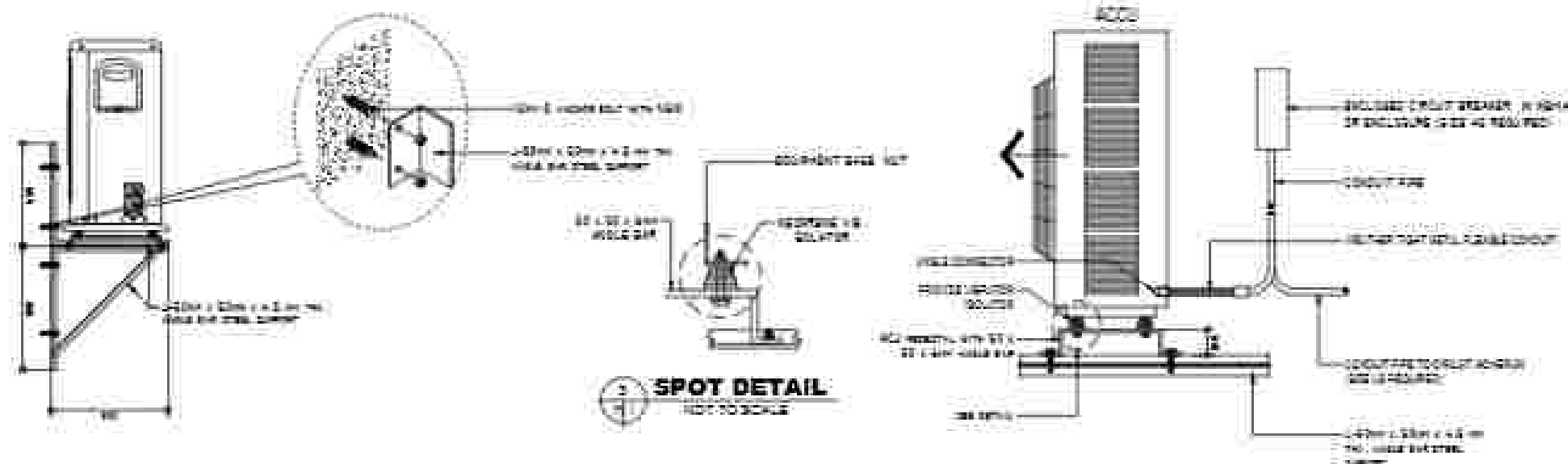
- ER TOILET DRAINING UNIT
- SOU
- SPROUT KOSERLIN



**SMOKE/HEAT DETECTOR
MOUNTING DETAIL**



**FIRE ALARM MANUAL PULL
STATION AND HORN DETAIL**

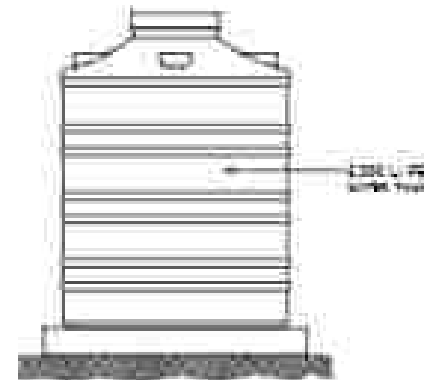


ACCU MOUNTING DETAIL
NOT TO SCALE

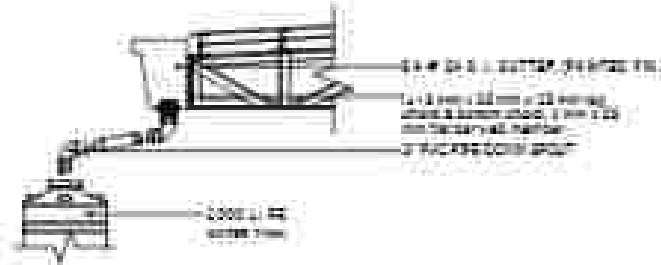
PLAN



ELEVATION



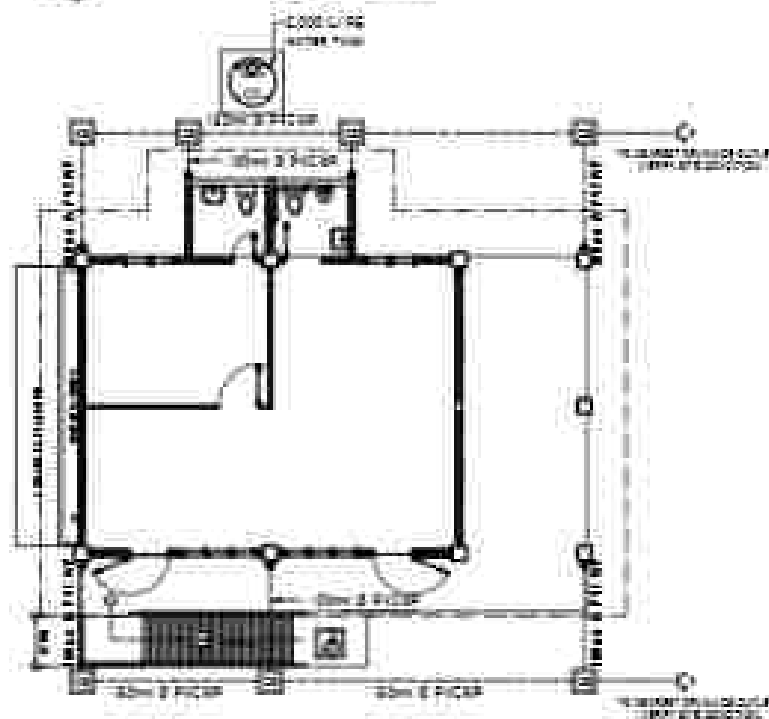
DETAIL SECTION
SCALE: 1:25 mm



PLUMBING NOTES

1. GRADES OF HORIZONTAL PIPES
FOR ALL HORIZONTAL PIPES IN ROOFTOP AND AT A FIRM GRADE NOT LESS THAN THE PERCENT (1%)
2. CHANGES IN DIRECTION
ALL CHANGES IN DIRECTION SHALL BE MADE BY APPROPRIATE USE OF FORTH-FIVE DEGREES (45°) WELD LONG SWEEP QUARTER BEND, SIXTY-SIX DEGREE OR SIXTY-THREE DEGREE WHEN THE CHANGE OF PLUMB IS FROM HORIZONTAL TO VERTICAL. A 90° ELBOW OR BEND CONNECTION SHALL BE USED ON VERTICAL STACKS AND SHORT QUARTER BEND SHALL BE USED ON WASTE LINE, TRAP AND DRAINAGE PIPES USED IN ROOFTOP.
3. PROTECTED FITTINGS
NO COUPLERS OR THE BRANCH SHALL BE USED ON HORIZONTAL SOIL AND WASTE LINES. THE COUPLERS AND TEES ARE OF HOUSE DRAIN, WASTE OR VENT PIPES AND USED OF SCHEDULE 40S AND 60S OF 800S & 1000S.
4. FIRE CLEARANCES
CLEARANCES ARE PROVIDED UNDER THE FOLLOWING CONDITIONS:
A. EVERY CHANGE OF HORIZONTAL DIRECTION EXCEEDING TWENTY DEGREE SHALL BE PROVIDED (25 CM)
B. ONE AND ONE-HALF METERS (1.5M) BELOW THE PROPERTY LINES BEFORE THE HOUSE DRAINAGE CONNECTION.
C. SIXTY-FOUR METERS (1.5M) IN HORIZONTAL RUN OF PIPES
D. AT THE END OF ANY HORIZONTAL RUN LINES.
5. THE ROOFTOP CHANGES OF DIRECTION SHALL BE WATERPROOFED.
6. NOT LESS THAN 300 METERS OF AIR SPACE MUST BE LEFT BETWEEN THE TOP OF THE ROOFTOP AND THE UNDER PART OF WASTEWATER SLAB.
7. ROOFTOP VENT SHALL BE CONSTRUCTED UNDER THE BUILDING.
8. ALL PLUMBING WORK SHALL BE UNDER THE SUPERVISION OF A LICENSED MASTER PLUMBER AND A LICENSE PLUMBER.

WATER TANK PLATFORM DETAIL
SCALE: 1:25 mm

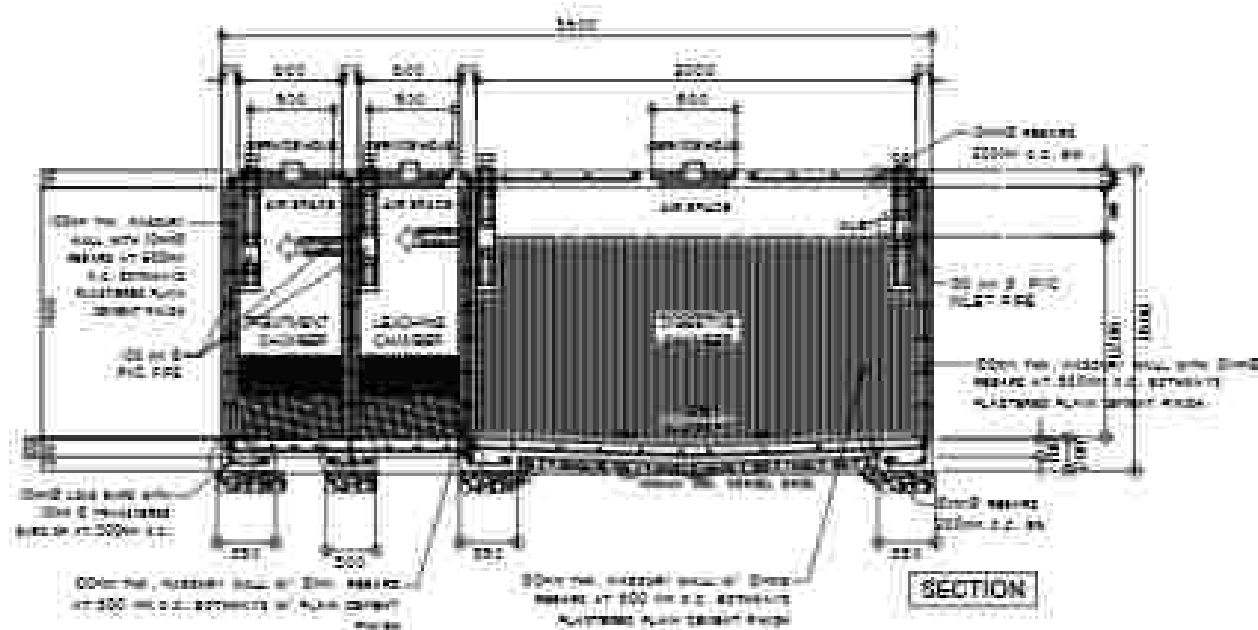
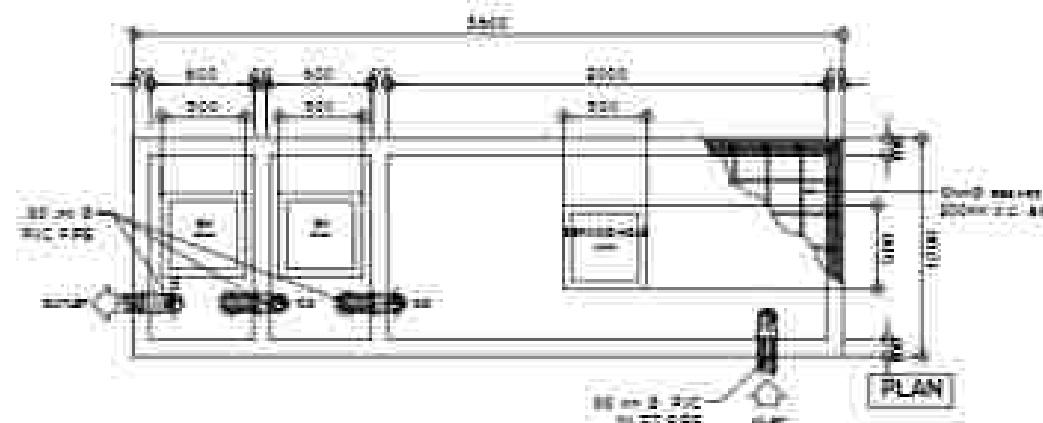
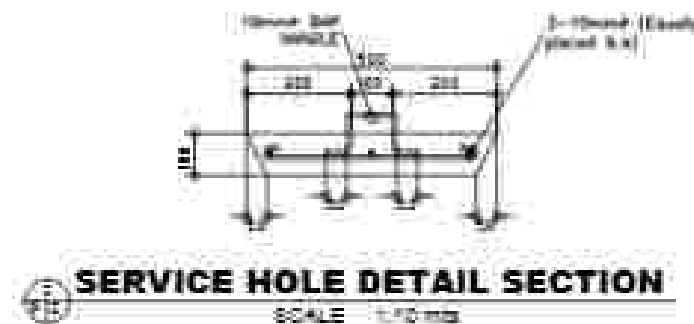


DRAINAGE LAYOUT
SCALE: 1:25 mm

ROOF DRAIN PLAN
SCALE: 1:25 mm

ISOMETRIC DIAGRAM
SCALE: 1:25 mm

 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE CITY OF NORTHERN MINDANAO BILIRAN DIVISION OFFICE BILIRAN DIVISION OFFICE	PROJECT NAME AND LOCATION CONSTRUCTION OF MULTI-PURPOSE BUILDING (ADMINISTRATIVE BUILDING) IN BARANGAY SAN AGUSTIN, TAGUR, DAVAO DEL NORTE	PROJECT NO. 202108011 (PROJECT NO. 14348)	DESIGNED BY  DATE	CHECKED BY  DATE	APPROVED BY  DATE	REVIEWED BY  DATE	APPROVED BY  DATE	SCALE 1:25 mm	DATE 1/25 mm
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DETAIL OF SEPTIC VAULT
SCALE: 1:25 mm

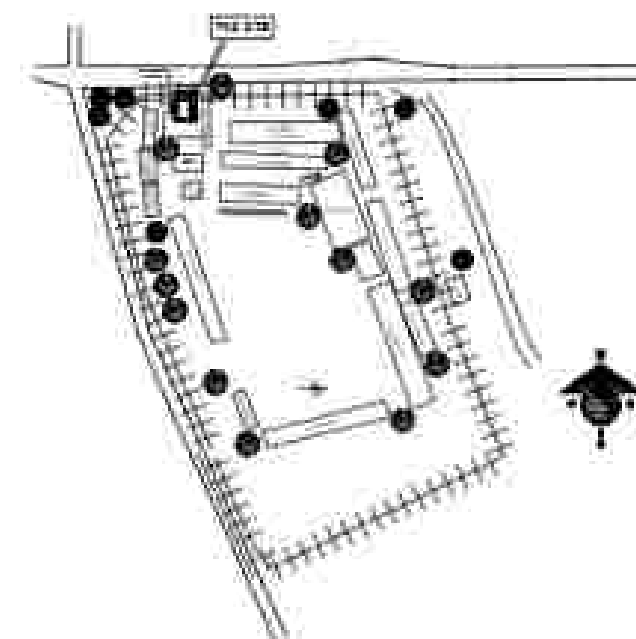
NOTE: VERIFY SITE CONDITION FOR SEPTIC VAULT LOCATION

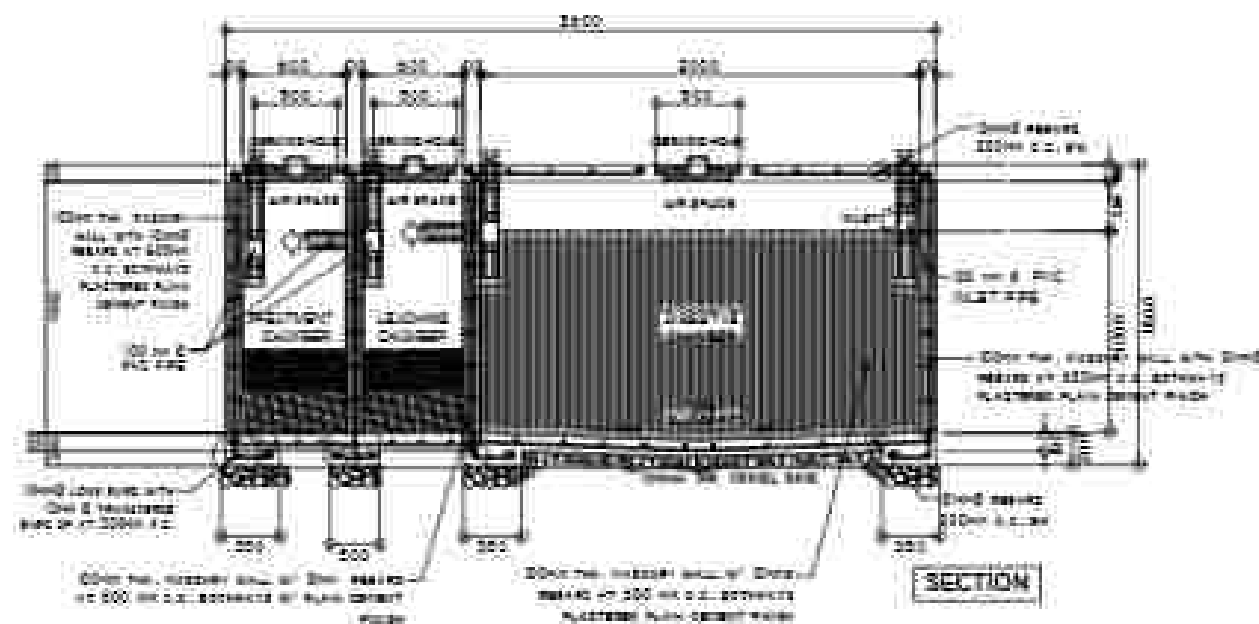
PLUMBING LEGEND

SYMBOL	DESCRIPTION
V.T.R.	VENT THRU ROOF
LAV.	LAVATORY
W.C.	WATER CLOSET
S.D.	CLEAN-OUT
F.D.	FLOOR DRAIN
S.V.	SEPTIC VAULT
C.B.	CATCH BASIN
S.S.P.	SOIL STACK PIPE
DG.	DOWNSPOUT
K.B.	KITCHEN SINK
U.W.	URINAL
S.L.	SANITARY LINE
A.W.	AWTERLINE
W.R.	WATER RIDGE
S.S.P.R.	SOIL STACK PIPE RIDGE

PLUMBING NOTES:

1. GRADES OF HORIZONTAL PIPES FOR ALL HORIZONTAL PIPES IN PERFECT ALIGNMENT AND AT A FIRM GRADE NOT LESS THAN TWO PERCENT (2%)
2. CHANGE IN DIRECTION: ALL CHANGE IN DIRECTION SHALL BE MADE BY APPROPRIATE USE OF FORTY-FIVE DEGREE (45°) ELBOW, LONG SWEEP, SHORT SWEEP, OR ELBOWS. WHEN THE CHANGE OF FLOW IS FROM HORIZONTAL TO VERTICAL, A 90° ELBOW OR SHORT SWEEP SHALL BE USED. IN VERTICAL STACKS AND SHORT SWEEP SHALL BE USED. IN VERTICAL LINE, 90° AND 45° ELBOWS SHALL BE USED IN SHORT PIPES.
3. PROHIBITED FITTINGS: NO JOINTS, FIVE ON THE BRANCH SHALL BE USED ON HORIZONTAL, SOIL AND WASTE LINES, THE DRILLING AND TAPPING OF ABOVE DRAIN, WASTE OR WASTE PIPES AND USE OF SWEAT, RIB AND RIBS ARE PROHIBITED.
4. PIPE CLEAN-OUTS: CLEAN-OUTS ARE REQUIRED UNDER THE FOLLOWING CONDITIONS: (a) EVERY CHANGE OF HORIZONTAL DIRECTION EXCEEDING THIRTY-TWO (32) DEGREES (32°); (b) ONE AND ONE-HALF METERS (1.5M) FROM THE PROPERTY LINE BEFORE THE HOUSE SEWER CONNECTION; (c) EVERY FIFTY METERS (50M) IN HORIZONTAL RUN OF PIPES; (d) AT THE END OF ANY HORIZONTAL PIPE LINES.
5. THE DIRECTION CHAMBER OF SEPTIC VAULT MUST BE WATERPROOFED.
6. NOT LESS THAN 0.30 METER OF AIR SPACE MUST BE LEFT BETWEEN THE TOP OF THE SEPTIC VAULT AND THE UNDER PART OF VAULT ROOF SLAB.
7. NO SEPTIC VAULT SHALL BE CONSTRUCTED UNDER THE BUILDING.
8. ALL PLUMBING WORKS SHALL BE UNDER THE SUPERVISION OF A LICENSED MASTER PLUMBER AND A LICENSED PLUMBER CONTRACTOR.

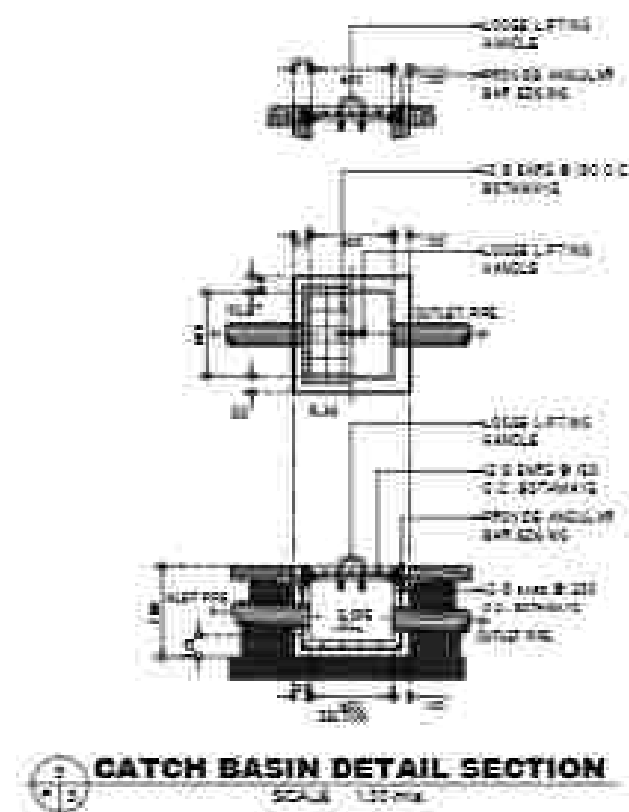
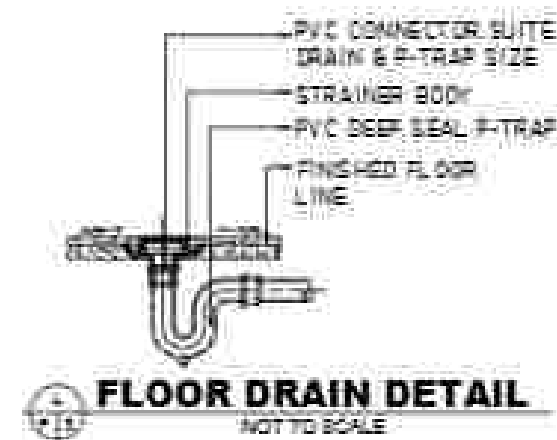
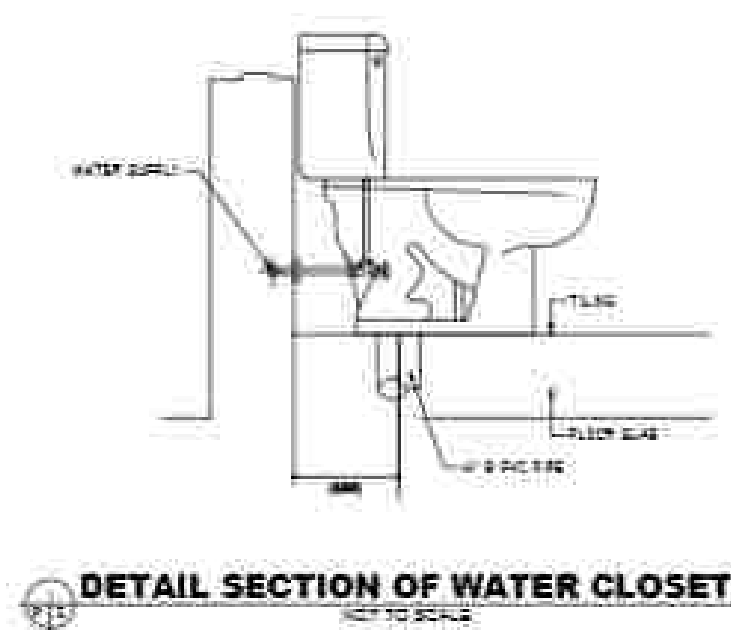
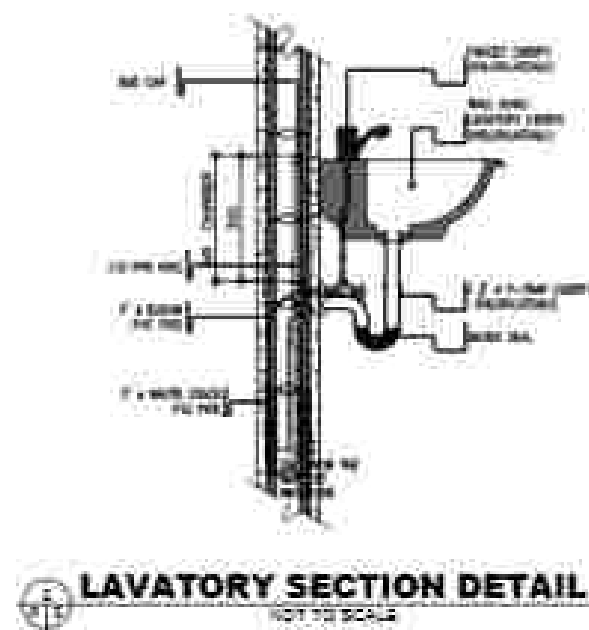
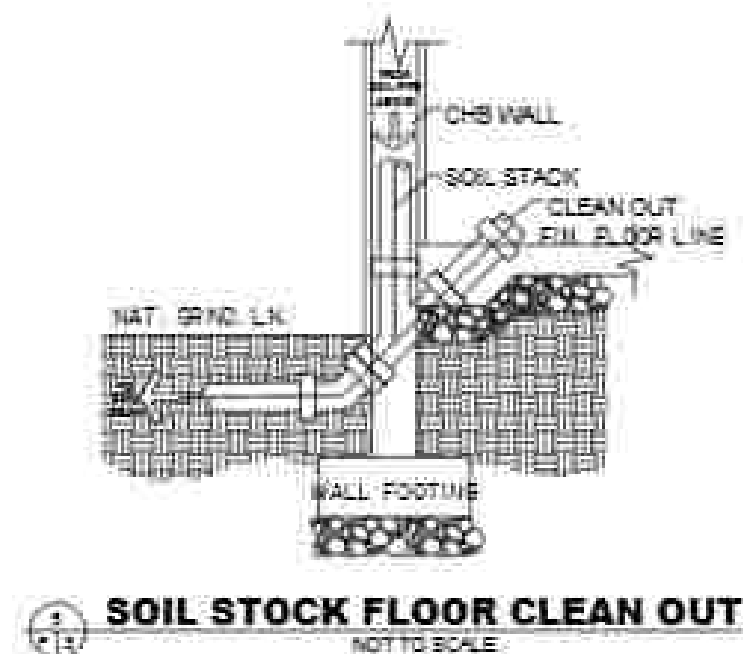
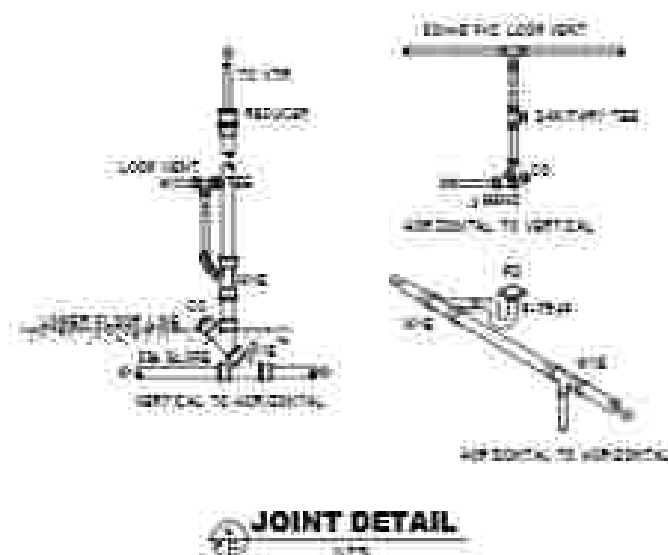
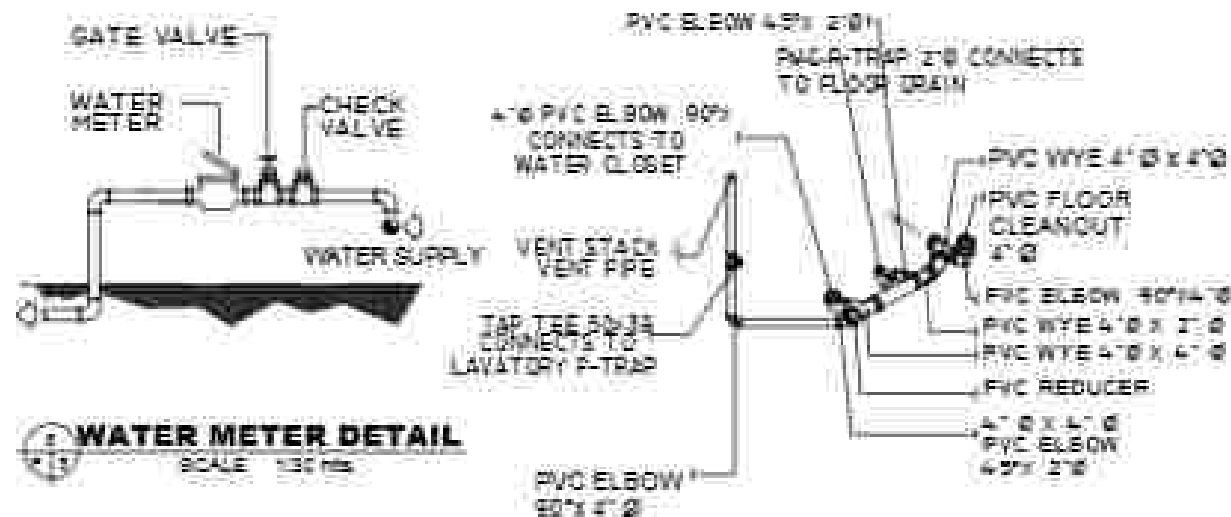




DETAIL OF SEPTIC VAULT
SCALE: 1/2" = 1'-0"

MARK	DESCRIPTION
V.T.R.	VENT THRU ROOF
LAV	LAVATORY
W.C.	WATER CLOSET
C.O.	CLEAN OUT
F.D.	FLOOR DRAIN
S.V.	SEPTIC VALVE
C.B.	CATCH BASIN
G.C.F.	GOL. STOP PIPE
D.D.	DOWNDRAFT
K.B.	KITCHEN SINK
U.F.	URINAL
	WINDY LINE
	WINDLINE
W.R.	WATER RISER
G.C.R.	GOL. STOP PIPE RISER

PLUMBING LOCATION PLAN
NOT TO SCALE



 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE CITY OF NORTHERN MARIKINA NORTH MARIKINA AVENUE, NORTHERN MARIKINA, CITY OF NORTHERN MARIKINA	PROJECT NAME AND LOCATION CONSTRUCTION OF MULTI-PURPOSE BUILDING (ADMINISTRATIVE BUILDING) IN BARANGAY SAN AGUSTIN, TAGUIG, CITY OF NORTHERN MARIKINA	DESIGNER JOSEPH M. SANTIAGO DATE: 2023/08/11	DESIGNER JOSEPH M. SANTIAGO DATE: 2023/08/11	DESIGNER JOSEPH M. SANTIAGO DATE: 2023/08/11	DESIGNER JOSEPH M. SANTIAGO DATE: 2023/08/11	DESIGNER JOSEPH M. SANTIAGO DATE: 2023/08/11	DESIGNER JOSEPH M. SANTIAGO DATE: 2023/08/11
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 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE CITY OF SAN AGUSTIN, BAYAN, BATAVIA, BATAVIA, BATAVIA	PROJECT NAME AND LOCATION CONSTRUCTION OF MULTI-PURPOSE BUILDING (ADMINISTRATIVE BUILDING) IN SAN AGUSTIN, BAYAN, BATAVIA, BATAVIA, BATAVIA	PROJECT NO. 2021-0001 (PROJECT NO. 1378)	DESIGNED BY MARCEL L. RUILOLA	CHECKED BY JOSEPH M. RUILOLA	APPROVED BY JOSEPH M. RUILOLA	DATE 2021-0001 (PROJECT NO. 1378)	DATE 2021-0001 (PROJECT NO. 1378)	DATE 2021-0001 (PROJECT NO. 1378)
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