



Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
LAGUNA 3rd DISTRICT ENGINEERING OFFICE
Mariflor Subd., Brgy. Del Remedio, San Pablo City, Region IV-A

C.Y. 2025 PROJECT
DETAILED ENGINEERING DESIGN PLAN FOR

**CONVERGENCE AND SPECIAL SUPPORT PROGRAM (CSSP)
BASIC INFRASTRUCTURE PROGRAM (BIP)
MULTI-PURPOSE BUILDING / FACILITIES TO SUPPORT SOCIAL SERVICES
CONSTRUCTION OF MULTI-PURPOSE BUILDING, PHASE 1
BARANGAY SAN JOSE
SAN PABLO CITY, LAGUNA**

SAN PABLO CITY, LAGUNA

COORDINATE : 14.059295 N, 121.348461 E

REVIEWED & SUBMITTED:

LUDY MITZI J. MAHENCIO

ENGINEER II
Officer-in-Charge
Planning and Design Section

DATE:

RECOMMENDED:

MA. SHIRLEY M. SAMIANO

Officer-in-Charge
Office of the Assistant District Engineer

DATE:

APPROVED:

CARLOS C. MUERE


Officer-in-Charge
Office of the District Engineer

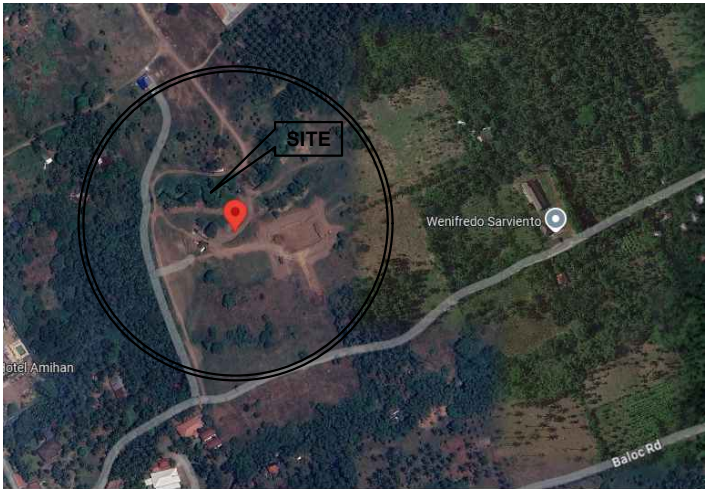
DATE:

SUMMARY OF QUANTITY

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	REMARKS
PART I FACILITIES FOR THE ENGINEER				
A.1.4 (1)	Provision of Progress Photographs	12.00	Month	
PART II OTHER GENERAL REQUIREMENTS				
B.3 (1)	Permits and Clearance	1.00	I.s.	
B.5	Project Billboard / Signboard	3.00	each	
B.7 (1)	Occupational Safety and Health Program	1.00	I.s.	
B.9 (1)	Mobilization / Demobilization	1.00	I.s.	
PART III CIVIL, MECHANICAL, ELECTRICAL AND SANITARY/PLUMBING WORKS				
PART A EARTHWORKS				
800 (1)	Clearing and Grubbing	3,000.00	sq.m.	
800 (3) a1	Individual Removal of Trees (150-300mm. dia, Small)	33.00	each	
803 (1) a	Structure Excavation (Common Soil)	3,236.00	cu.m.	
804 (1) a	Embankment from Roadway/Structure Excavation	2,528.00	cu.m.	
804 (1) b	Embankment from Borrow	1,229.00	cu.m.	
804 (7)	Gravel Fill	616.00	cu.m.	
PART B PLAIN AND REINFORCED CONCRETE WORKS				
900 (1) c	Structural Concrete (3000 psi, Class A, 28 days)	246.00	cu.m.	
900 (1) d	Structural Concrete (4000 psi, Class A, 28 days)	1,727.00	cu.m.	
902 (1) a1	Reinforcing Steel (Deformed, Grade 40)	92,371.00	kg	
902 (1) a2	Reinforcing Steel (Deformed, Grade 60)	243,658.00	kg	
903 (2)	Formworks and Falseworks	5,513.00	sq.m.	
PART C FINISHINGS AND OTHER CIVIL WORKS				
C.1 Termite Control Works				
1000 (1)	Soil Poisoning	1,800.00	L	
C.2 Masonry Works				
1046 (2) a1	CHB Non Load Bearing (including Reinforcing Steel), 100 mm	347.00	sq.m.	
1046 (2) a2	CHB Non Load Bearing (including Reinforcing Steel), 150 mm	3,567.00	sq.m.	
C.3 Fabricated Materials				
C.4 Finishing Works				
1003 (11) a1	Fascia Board (19mm, Fiber Cement Board)	201.00	m.	
1021 (1) c	Cement Floor Finish (with Floor Hardener)	2,458.00	sq.m.	
1027 (1)	Cement Plaster Finish	8,429.00	sq.m.	
1038 (1)	Reflective Insulation	5,616.00	sq.m.	
C.5 Painting Works				
1032 (1) a	Painting Works (Masonry/Concrete)	16,185.00	sq.m.	
1032 (1) c	Painting Works (Steel)	10,830.00	sq.m.	
C.6 Roof Framing and Roofing Works				
1014 (1) b2	Prepainted Metal Sheets (above 0.427 mm, Rib Type, Long Span)	5,616.00	sq.m.	
1013 (2) c	Fabricated Metal Roofing Accessory (gauge 24, 0.701 mm, Gutters)	201.00	I.m.	
1047 (8) a	Structural Steel (Trusses)	125,242.00	kg	
1047 (8) b	Structural Steel (Purlins)	18,276.00	kg	
1047 (5) d	Metal Structure Accessories (Steel Plates)	2,312.00	kg	
1047 (5) c	Metal Structure Accessories (Cross Bracing)	1,414.00	kg	
1047 (5) a	Metal Structure Accessories (Bolts and Rods)	695.00	kg	
1047 (5) b	Metal Structure Accessories (Sag rods)	6,854.00	kg	
PART D PLUMBING AND SANITARY WORKS				
1001 (11)	Septic Vault (Concrete/CHB)	1.00	I.s.	
1001 (5) a	Catch Basin (Concrete)	12.00	each	

PART J FLOOD CONTROL AND DRAINAGE				
PART I-A EARTHWORKS				
1702 (1) a	Structure Excavation (Common Soil)	3,146.00	cu.m.	
1704 (1) b	Embankment from Borrow	1,530.00	cu.m.	
1704 (4)	Gravel Fill	91.00	cu.m.	
PART I-B BANK AND SLOPE PROTECTION WORKS				
1712 (2)	Concrete (Slope Protection)	1,265.00	cu.m.	
1717 (2) a1	Sheet Piles (Steel, Slope Protection)	2,940.00	m.	

 Republic of the Philippines DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS LAGUNA 3 rd DISTRICT ENGINEERING OFFICE Mariktor Subd., Brgy. Del Remedio, San Pablo City, Region IV-A	PROJECT TITLE / LOCATION :	SHEET CONTENT :	DRAFTED :	REVIEWED :	SUBMITTED :	RECOMMENDED :	APPROVED :	SET NO.	SHEET NO.
	CONVERGENCE AND SPECIAL SUPPORT PROGRAM (CSSP) BASIC INFRASTRUCTURE PROGRAM (BIP) MULTI-PURPOSE BUILDING / FACILITIES TO SUPPORT SOCIAL SERVICES CONSTRUCTION OF MULTI-PURPOSE BUILDING, PHASE 1 BARANGAY SAN JOSE SAN PABLO CITY, LAGUNA	+ SUMMARY OF QUANTITY	CHRISTOPHER D BERON ENGINEERING AIDE B	JOEY CHRISTIAN L. DAYO ENGINEER II	LUDY MITZI J. MAHENCIO ENGINEER II Officer-in-Charge Planning and Design Section	MA. SHIRLEY M. SAMIANO Officer-in-Charge Office of the Assistant District Engineer	CARLOS C. MUERE Officer-in-Charge Office of the District Engineer		
			PREPARED : KING NOAH S. MONDUGAR ENGINEERING ASSISTANT						
DATE :									



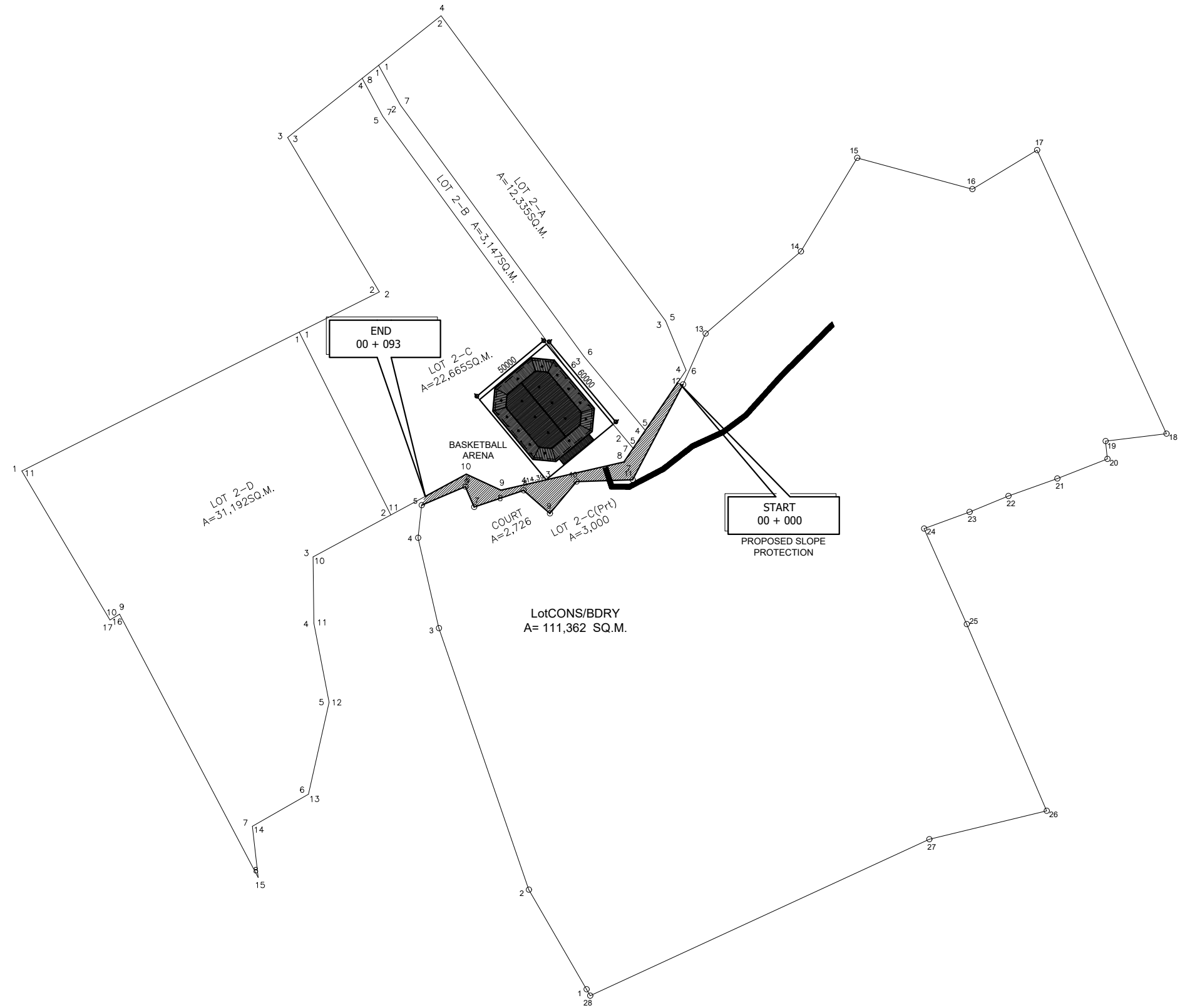
LOCATION MAP
NTS.

PERSPECTIVE
N.T.S.

+ SCHEDULE OF DOORS AND
WINDOWS

TABLE OF CONTENTS

ARCHITECTURAL		STRUCTURAL		SANITARY		ELECTRICAL		MECHANICAL		ELECTRONICS		PROJECT BILLBOARD	
A-1 +COVER SHEET A-2 +SUMMARY OF QUANTITIES A-3 + PERSPECTIVE DRAWING + LOCATION PLAN + TABLE OF CONTENT A-4 + SITE DEVELOPMENT PLAN A-5 + GROUND FLOOR PLAN A-6 + STADIUM FLOOR PLAN A-7 + FRONT ELEVATION + LEFT SIDE ELEVATION A-8 + REAR ELEVATION + RIGHT SIDE ELEVATION A-9 + LONGITUDINAL SECTION + CROSS SECTION 													



1 SITE DEVELOPMENT PLAN
A-4 SCALE 1 : 1500 M.



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SHEET CONTENT :

+ SITE DEVELOPMENT

DRAFTED :

CHRISTOPHER D BERON
ENGINEERING AIDE B

PREPARED :

KING NOAH S. MONDUGAR
ENGINEERING ASSISTANT

REVIEWED :

JOEY CHRISTIAN L. DAYO
ENGINEER II

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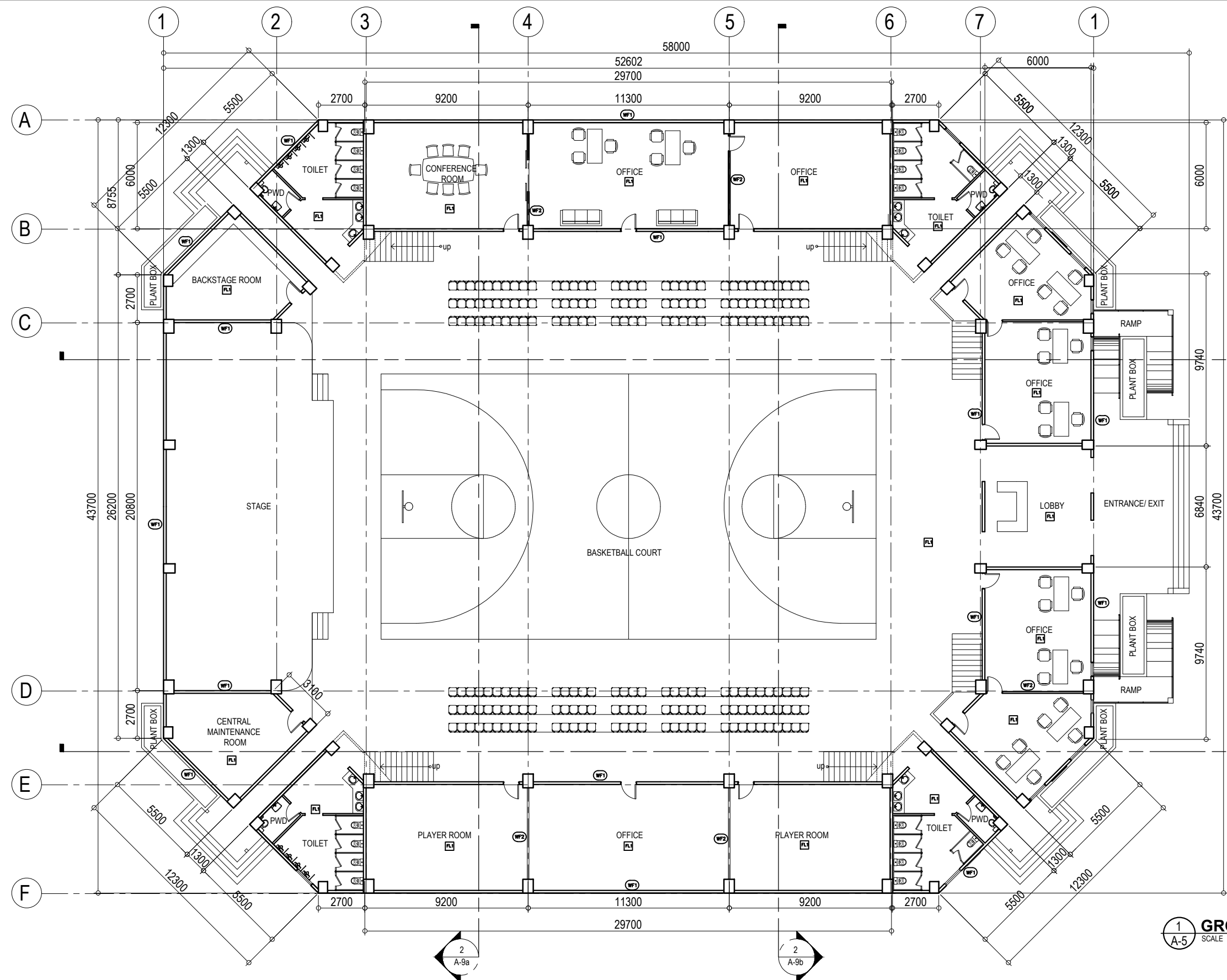
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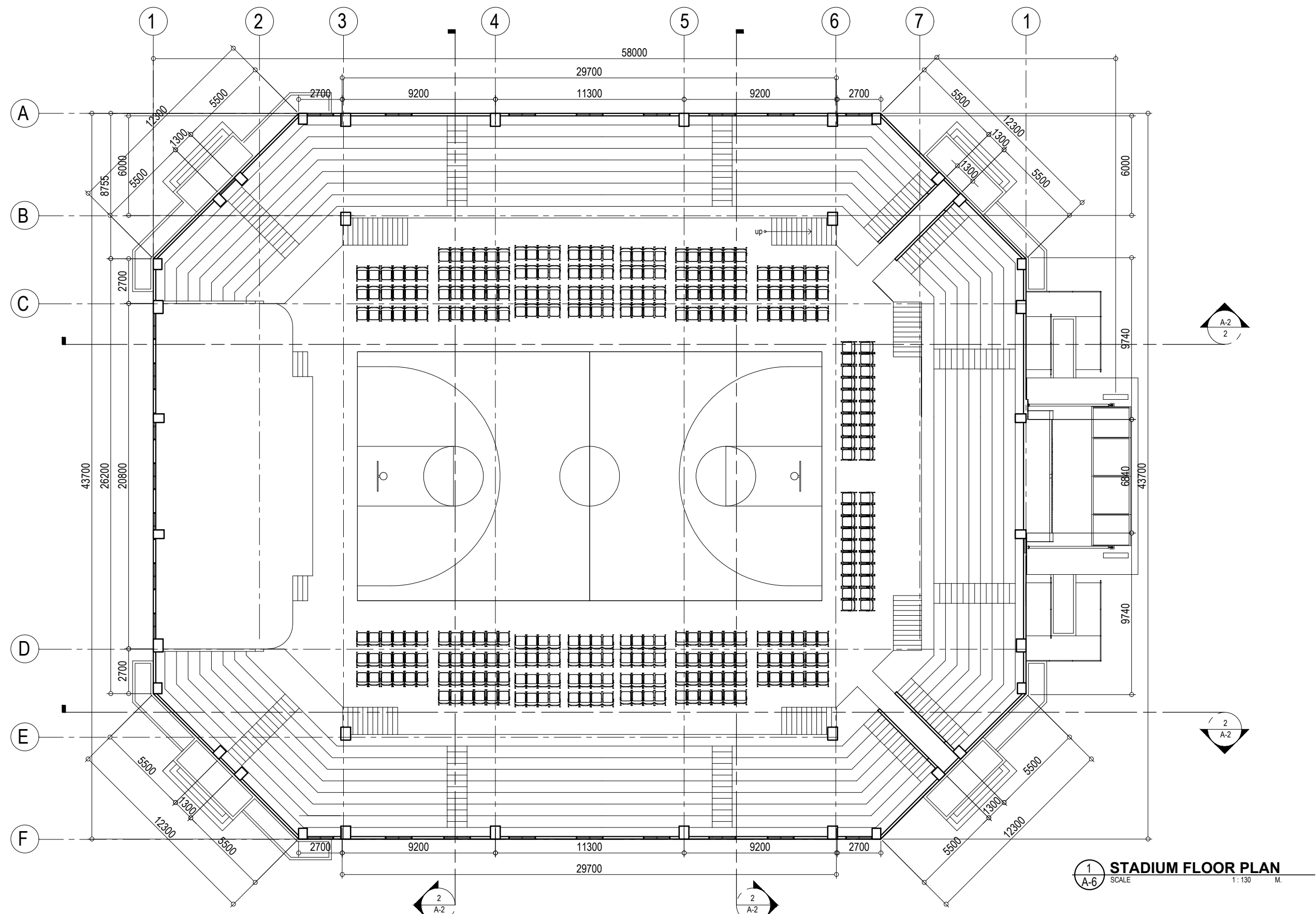


SCHEDULE OF FINISHES

FLOORS :

- FL1 FLOOR FINISH WITH HARDENER
- WF1 150 MM THK. CHB W/ PLAIN CEMENT PLASTER FIN (PAINTED)
- WF2 100 MM THK. CHB W/ PLAIN CEMENT PLASTER FIN (PAINTED)

1
A-5
SCALE 1:130 M.



1 **STADIUM FLOOR PLAN**
A-6 SCALE 1:130 M.



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+ STADIUM FLOOR PLAN

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ENGINEERING AIDE B
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ENGINEERING ASSISTANT

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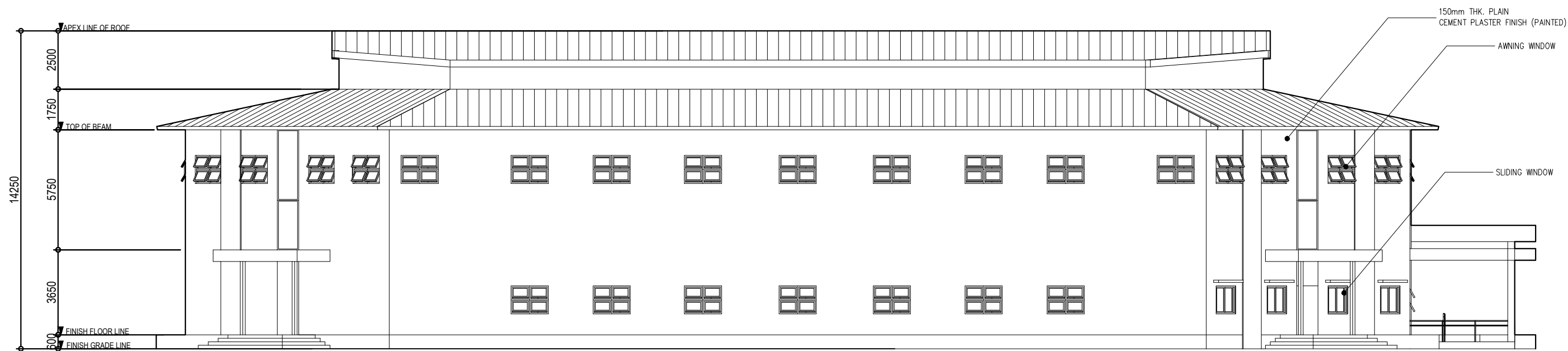
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A 6/9	6 34



1 FRONT ELEVATION
SCALE 1:100 M.



2 LEFT SIDE ELEVATION
SCALE 1:100 M.



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+ FRONT ELEVATION
+ RIGHT SIDE ELEVATION

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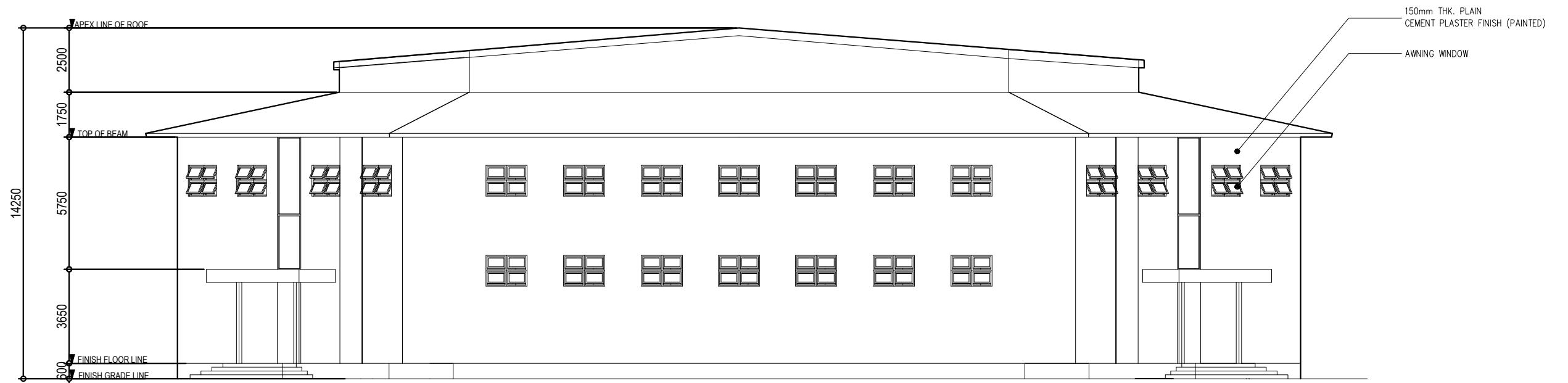
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1 REAR ELEVATION
A-8 SCALE 1:100 M.



2 RIGHT SIDE ELEVATION
A-8 SCALE 1:100 M.



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SHEET CONTENT :

*REAR ELEVATION
*LEFT SIDE ELEVATION

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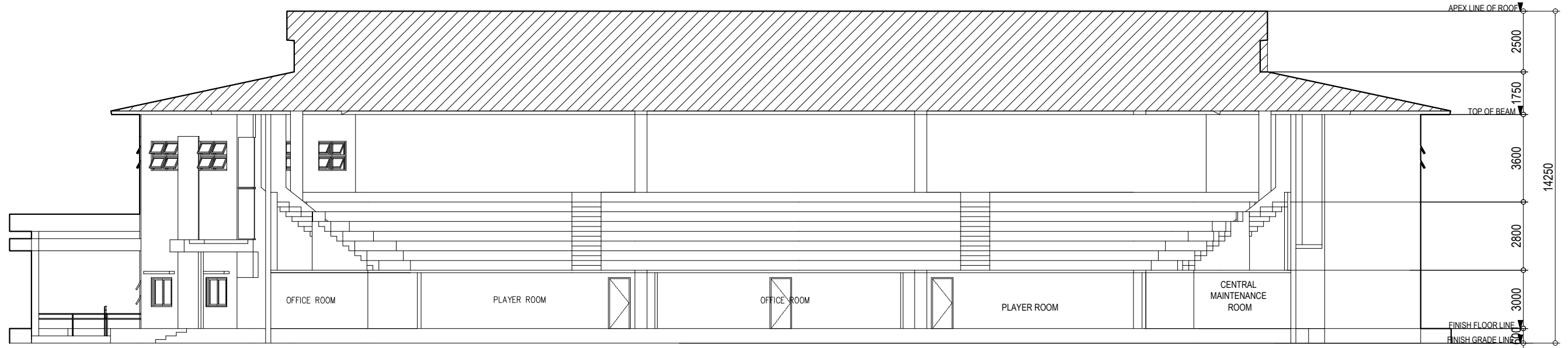
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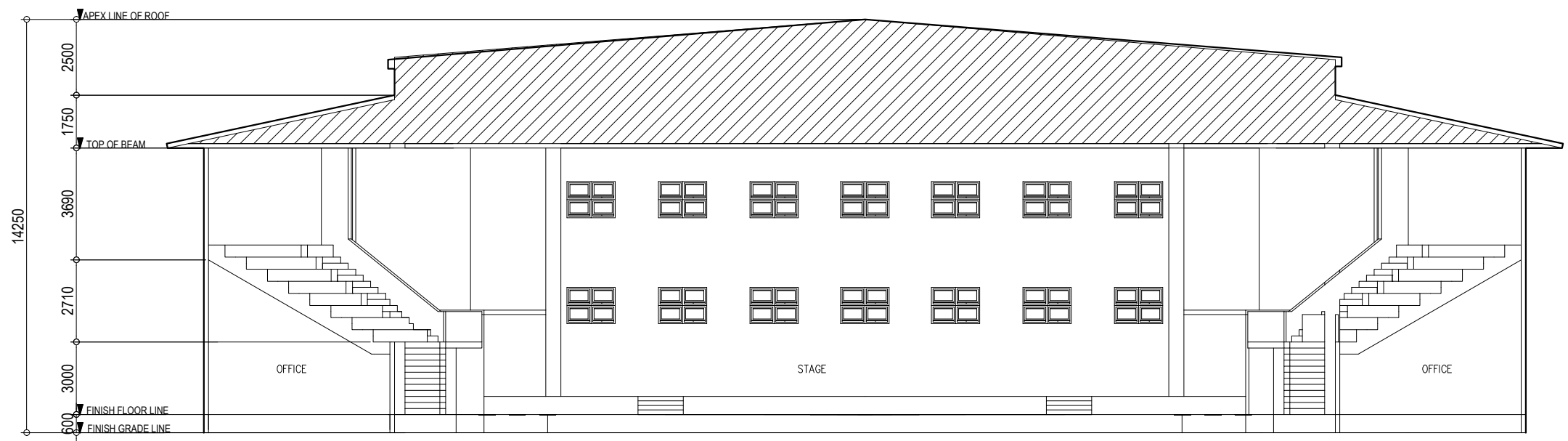
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1 LONGITUDINAL SECTION
SCALE 1:100 M.



2 CROSS SECTION
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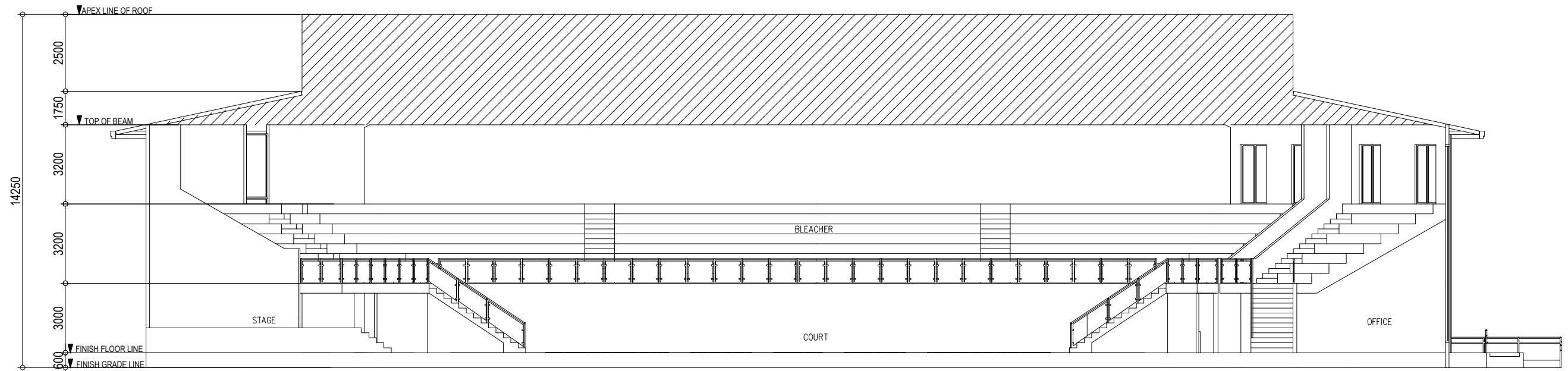
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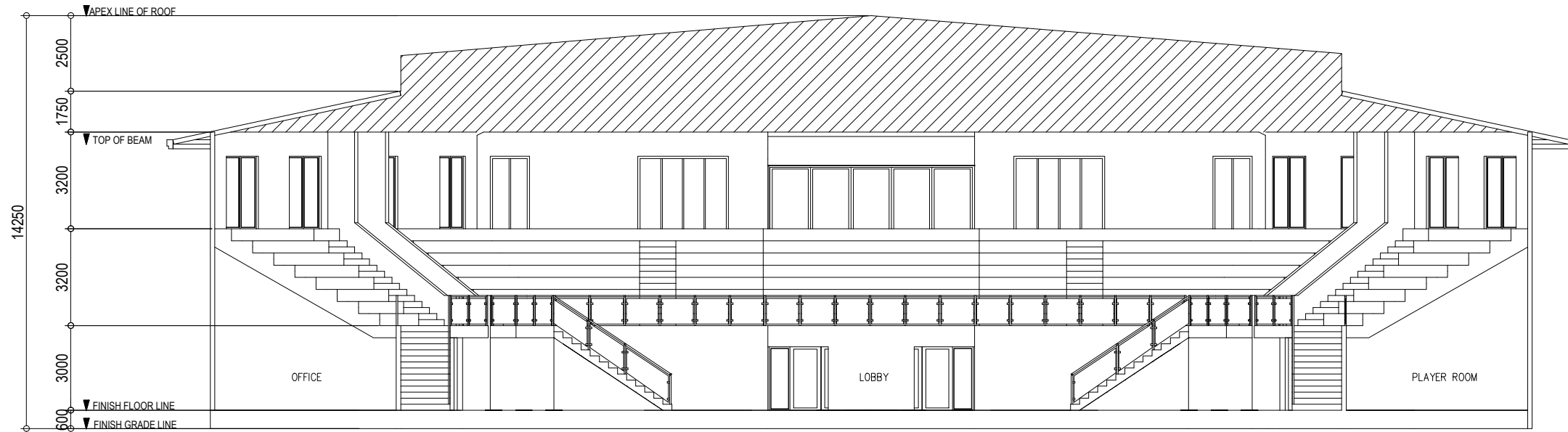
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1 LONGITUDINAL SECTION
SCALE 1:100 M.



2 CROSS SECTION
SCALE 1:100 M.



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GENERAL CONSTRUCTION NOTES

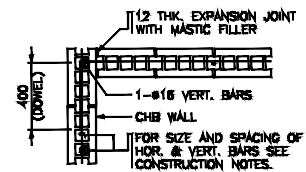
NOTES ON CONCRETE HOLLOW BLOCK WALLS

- 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 WITH 6mm TIES 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.

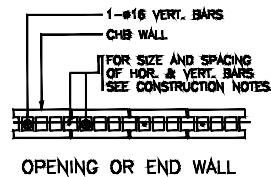
BLOCK THICKNESS	REINFORCEMENT		NOTES
	HORIZONTAL	VERTICAL	
75 mm	10mm @ 600mm O.C.	10mm @ 600mm O.C.	A. MINIMUM LAPS AT SPLICE = 0.25M B. PROVIDE RIGHT ANGLED REINFORCEMENT AT CORNERS 0.82M LONG C. WHERE CHB OR CER. BLK. WALL DOWELS JOIN COL. R.C. BEAMS AND WALL DOWELS WITH THE SAME SIZE AS VERT. OR HOR. REINFORCEMENTS SHALL BE PROVIDED
125 mm	10mm @ 600mm O.C.	10mm @ 600mm O.C.	
150 mm	10mm @ 600mm O.C.	10mm @ 600mm O.C.	
200 mm	12mm @ 600mm O.C.	12mm @ 600mm O.C.	

REINFORCING CONCRETE LINTEL BEAM IN CONCRETE BLOCK WALLS

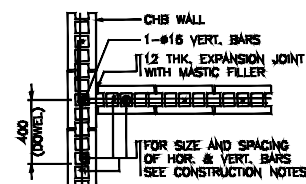
LINTELS IN BLOCK WALLS					
CLEAR SPAN (L)	TOTAL LENGTH (L+0.40M)	MIN. f_c (MPa)	HEIGHT OF Lintel (mm)	REINFORCEMENT	
				BOTTOM	TOP
1.20M	1.60M	14.0	200	1-#10	1-#10
1.50M	1.90M	200	200	1-#10	1-#10
1.80M	2.20M	200	200	1-#12	1-#10
2.10M	2.50M	250	250	1-#12	1-#10
2.40M	2.80M	17.0	250	1-#12	1-#10
2.70M	3.10M	250	250	1-#16	1-#12
3.00	3.40M	28.0	300	1-#16	1-#12
3.30	3.70M	300	300	1-#16	1-#12
3.60	4.00	300	300	1-#20	1-#12



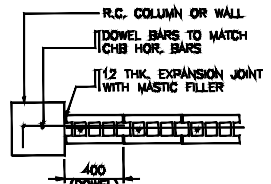
CORNER WALL



OPENING OR END WALL

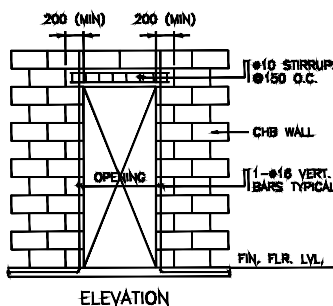


INTERSECTION WALL

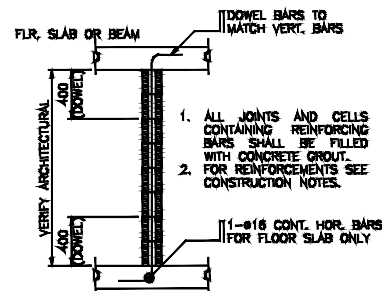


INTERSECTING R.C. COL. OR WALL

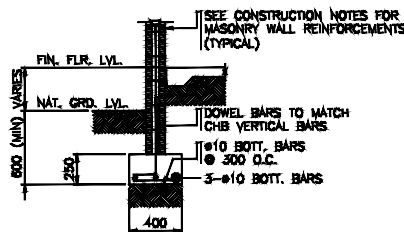
TYPICAL CONNECTION DETAIL OF MASONRY WALL



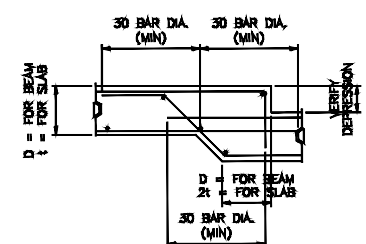
TYP. DET. OF LINTEL BEAM AT CHB WALL OPENING



TYP. SECTION OF MASONRY PARTITION REINFORCEMENTS



TYPICAL CHB FOOTING DETAILS (WHERE APPLICABLE)



TYPICAL DETAIL FOR BEAM OR SLAB CHANGE SOFFIT

NOTES ON CONCRETE WALLS

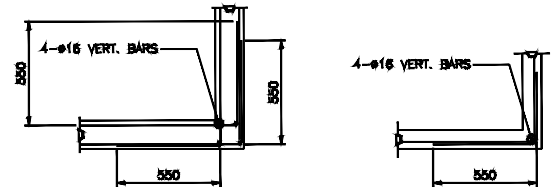
- ALL WALLS SHALL BE REINFORCED ACCORDING TO THE FOLLOWING SCHEDULE OF WALL REINFORCEMENT UNLESS OTHERWISE INDICATED IN THE PLANS.

WALL THICKNESS	REINFORCEMENT		REMARKS	VERTICAL SECTION
	HORIZONTAL	VERTICAL		
100mm	10mm @ 250mm O.C.	10mm @ 300mm O.C.	HORIZONTAL BARS	VERT. BARS
125mm	10mm @ 300mm O.C.	10mm @ 300mm O.C.	AT CENTERS VERTICAL BARS STAGGERED OUT	VERT. BARS
150mm	12mm @ 250mm O.C.	12mm @ 300mm O.C.		VERT. BARS

REINFORCING BARS SHALL HAVE 25mm CLEAR CONCRETE COVER FROM FACE OF WALL EXCEPT FOR WALLS IN CONTACT WITH THE GROUND WHERE A MINIMUM OF 80mm SHALL BE PROVIDED, AND FOR EXPOSED FACES OF FORMED WALLS WHERE THE MINIMUM SHALL BE 50mm CLEAR.

- CARRY VERTICAL BAR AT LEAST 80mm ABOVE FLOOR LEVEL TO PROVIDE FOR SPLICES WHEN NECESSARY STOP AT 30mm BELOW TOP SLAB OR SOLID BAND WHERE THE WALL ENDS. VERTICAL AND HORIZONTAL BARS SHALL BE SPLICED BY LAPPING A DISTANCE EQUAL TO 30 DIAMETERS AND WIRED SECURELY WITH 16 G. WIRE PROVIDED THAT SPLICES IN ADJACENT BARS ARE STAGGERED AT LEAST 1.00m. O.C.

- UNLESS OTHERWISE NOTED IN THE PLANS, ALL OPENINGS IN WALLS 230mm OR THICKER SHALL BE REINFORCED AROUND WITH 2-20mm BARS FOR 225mm, 200mm, 175mm, 150mm, USE 2-16mm. FOR 125mm AND 100mm WALLS, USE 2-12mm BARS. ALL WALLS SPANNING SHALL HAVE VERTICAL REINFORCEMENT BENT TO U-FORM LIKE STIRRUPS AND SPACED ACCORDING TO THE SCHEDULE UNLESS OTHERWISE NOTED (SEE FIG.1)



TYPICAL CONNECTION DETAIL OF R.C. WALL AT CORNERS

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 THE PERTINENT PROVISION OF AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDING 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 AWS E60 ELECTRODES.
- ALL BOLTS USED UNLESS OTHERWISE SPECIFIED SHALL BE ASTM A 307 BOLTS.

NOTES ON EMBEDDED PIPES

- ALL EMBEDDED PIPES FOR UTILITIES, ETC. THAT PASS THRU BEAMS SHALL NOT EXCEED 100mm IN DIAMETER OR 1/4 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.

DESIGN CRITERIA

- LOADINGS
 - DEAD LOAD
CONCRETE -23.56 kN/m²
STEEL -76.03 kN/m²
150mm THK. CHB WALL -2.73 kPa
100mm THK. CHB WALL -2.11 kPa
 - LIVE LOAD
ROOF -1.00 kPa
 - WIND LOAD (NSCP 2010)
BASIC WIND VELOCITY, V = 250 KPH
P = qh (GCp)(GCp) (DESIGN WIND PRESSURE)
Where: qh = VELOCITY PRESSURE, kPa
GCp = EXTERNAL PRESSURE COEFFICIENT
GCpi = INTERNAL PRESSURE COEFFICIENT
 - SEISMIC LOAD (NSCP 2010)
V = W (DESIGN BASE SHEAR)
Vmax = $\frac{C_v}{R T}$ W Vmin = 0.11 CalW
Where: W = TOTAL DEAD LOAD
T = NATURAL PERIOD = C (h)^{1/3} 0.80 Zm
Where: C = NUMERICAL COEFFICIENT
h = BUILDING HEIGHT
I = IMPORTANCE FACTOR = 1.50
R = NUMERICAL FACTOR = 8.50
SEISMIC COEFFICIENT Cv = 0.44 Nv
Ca = 0.64 N
NEAR SOURCE FACTOR (10km) Nv = 1.2 Na = 1.0
Z = SEISMIC ZONE = 0.40 (ZONE 4)
S = SOIL TYPE = D

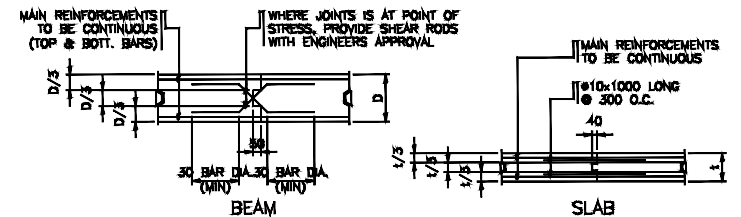
NOTE: PURSUANT TO SECTION 4 OF ANNEX "A" OF THE REVISED IMPLEMENTING RULES AND REGULATIONS OF RA 8104, APPROVAL BY THE AUTHORIZED DESIGN OFFICIALS OF DETAILED ENGINEERING SURVEYS AND DESIGN UNDERTAKEN BY CONSULTANTS NEITHER DIMINISHES THE RESPONSIBILITY OF THE LATTER FOR THE TECHNICAL INTEGRITY OF THE SURVEYS AND DESIGN NOR TRANSFER ANY PART OF THAT RESPONSIBILITY TO THE APPROVING OFFICIALS.

THE DESIGN CONSULTANT SHALL BE HELD FULLY RESPONSIBLE FOR THE FAILURE OF THE FACILITY/IES/STRUCTURES DUE TO FAULTY DESIGN EXCEPT FOR THE CHANGES MADE WITHOUT THE CONFORMITY OF THE CONSULTANTS.

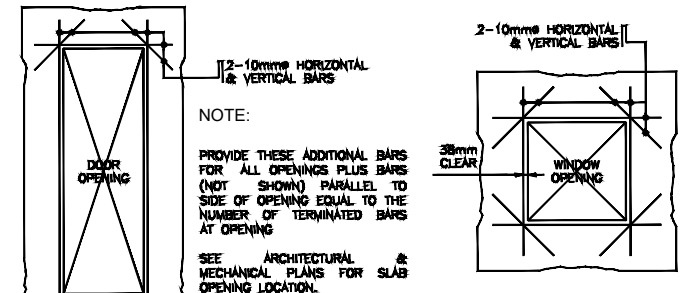
- DESIGN STRESSES
 - CONCRETE
COMPRESSIVE STRENGTH @ 28 DAYS
F_c = 20.7 MPa (3,000 psi)
 - REINFORCING BARS
 - FOR BARS 16mmØ AND GREATER
F_y = 275 MPa (40,000 psi)
 - FOR BARS LESS THAN 16mmØ
F_y = 250 MPa (33,000 psi)
 - STRUCTURAL STEEL, ASTM-A36
FOR TRUSSES, BRACINGS, & STRUTS
F_y = 248 MPa (36,000 psi)
 - PURLINS
COLD FORMED LIGHT GAGE SHAPES
F_y = 248 MPa (36,000 psi)
 - MASONRY UNIT (CHB)
NON-LOAD BEARING CHB WALLS
F_m = 3.45 MPa (500 psi)
 - F. WELDS-USED E-60xx ELECTRODE
G. STRUCTURAL BOLTS, ASTM-A307
FOR 1 BEAM = 345 MPa (50,000 PSI)
COLUMN AND BEAM
a. F_t = 96.60 MPa (14,000 psi)
b. F_v = 69 MPa (10,000 psi)

NOTES ON CONSTRUCTION JOINTS IN CONCRETE

- WHERE A CONSTRUCTION JOINT IS TO BE MADE, THE SURFACE OF CONCRETE SHALL BE CLEANED AND ALL LAITANCE AND STANDING WATER REMOVED. SHEAR KEY SHALL BE PROVIDED AT THE JOINT.

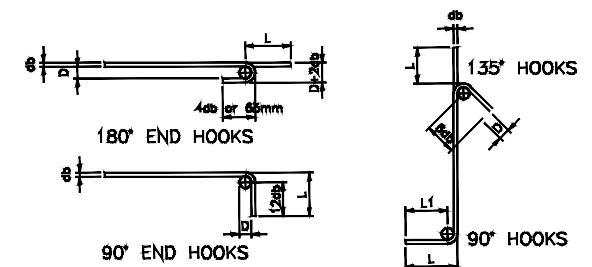


TYPICAL SLAB & BEAM CONSTRUCTION JOINT DETAIL



TYP. EXTERIOR WINDOW & DOOR OPENING

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



MAIN BAR END HOOKS (ALL GRADES)				STIRRUP AND TIE HOOKS (ALL GRADES)			
BAR SIZE (DEFORMED)	DIAMETER (mm)	180° HOOK	90° HOOK	BAR SIZE (DEFORMED)	DIAMETER (mm)	180° HOOK	90° HOOK
10mm	80	75	125	10mm	40	125	85
12mm	75	100	150	12mm	50	185	115
16mm	85	125	175	16mm	65	200	140
20mm	115	150	200	20mm	115	250	185
25mm	150	200	250	25mm	150	305	230
30mm	240	300	350				
32mm	300	335	450				

GENERAL CONSTRUCTION NOTES

GENERAL NOTES

1. IN THE INTERPRETATION OF THE DRAWING, INDICATED DIMENSIONS SHALL GOVERN AND DISTANCES AND SIZES SHALL NOT BE SCALED 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 ACCORDING WITH AISC SPECIFICATION (9TH EDITION) IN SO FAR AS THEY DO NOT CONFLICT WITH THE LOCAL BUILDING CODE REQUIREMENT.
5. ACI REFERS TO AMERICAN CONCRETE INSTITUTE, AISC 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 DIAGRAMS 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, STOOLS, EQUIPMENT'S AND MECHANICAL BASES THAT ARE REQUIRED BY THE ARCHITECTURAL, 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 & SLUMPS AS FOLLOWS.

LOCATION	28 DAYS STRENGTH	MAX. SIZE OF AGGREGATE	MAX. SLUMP
ALL OTHERS, INCLUDING SUSPENDED SLABS,	3000 PSI (27.6 MPa)	20mm	100mm
COLUMNS	3000 PSI (27.6 MPa)	20mm	100mm
BEAMS, SLABS	3000 PSI (27.6 MPa)	20mm	100mm
SLAB ON FILL	3000 PSI (27.6 MPa)	20mm	100mm
2. MAINTAIN MINIMUM CONCRETE COVER FOR REINFORCING STEEL AS FOLLOWS.

LOCATION	MIN. COVER
SUSPENDED SLABS	20mm
SLAB ON GRADE	40mm
WALLS ABOVE GRADE	25mm
BEAM STIRRUPS AND COLUMN TIES	40mm
WHERE CONCRETE IS EXPOSED TO EARTH BUT POURED AGAINST FORMS	50mm
WHERE CONCRETE IS DEPOSITED DIRECTLY AGAINST EARTH.	75mm
3. CONCRETE SHALL BE DEPOSITED IN ITS FINAL POSITION WITHOUT SEGREGATION. RE-HANDLING OR PLACING SHALL BE DONE PREFERABLY WITH BUCKETS, BUCKETS OR WHEELBARROWS. NO CHUTES WILL BE ALLOWED EXCEPT TO TRANSFER CONCRETE FROM HOPPERS TO BUCKETS OR BUCKETS IN WHICH CASE THEY SHALL NOT EXCEED SIX (6) METERS IN AGGREGATE LENGTH.
4. NO DEPOSITING OF CONCRETE SHALL BE ALLOWED WITHOUT THE USE OF VIBRATORS UNLESS AUTHORIZED IN WRITING BY THE DESIGNERS AND ONLY FOR UNUSUAL CONDITIONS WHERE VIBRATIONS IS EXTREMELY DIFFICULT TO ACCOMPLISH.
5. ALL ANCHOR BOLTS, DOWELS, AND OTHER INSERTS, SHALL BE PROPERLY POSITIONED & SECURED IN PLACE PRIOR TO PLACING OF CONCRETE.
6. ALL CONCRETE SHALL BE KEPT MOIST FOR A MINIMUM OF SEVEN CONSECUTIVE DAYS IMMEDIATELY AFTER POURING BY THE USE OF WET BURLAP, FOG SPRAYING, CURING COMPOUNDS OR OTHER APPROVED METHODS.
7. STRIPPING OF FORMS AND SHORES:

FOUNDATION	24 HRS
SUSPENDED SLAB EXCEPT WHEN ADDITIONAL LOADS ARE IMPOSED	8 DAYS
WALLS	21 DAYS
BEAMS	14 DAYS
COLUMNS	21 DAYS
8. 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.
9. THE CONTRACTOR SHALL FURNISH AND MAINTAIN ADEQUATE FORMS AND SHORING UNTIL THE CONCRETE MEMBERS HAVE ATTAINED THEIR WORKING CONDITION AND STRENGTH.

NOTES ON FOOTINGS

1. FOOTINGS ARE DESIGNED FOR AN ALLOWABLE SOIL BEARING PRESSURE OF 98 kPa (2000 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 1500mm BELOW NATURAL GRADE LINE UNLESS OTHERWISE INDICATED IN PLANS. NO FOOTING SHALL REST ON FILL.
3. MINIMUM CONCRETE PROTECTION FOR REINFORCEMENTS SHALL BE 75mm CLEAR FOR CONCRETE DEPOSITED THE GROUND AND 50mm FOR CONCRETE DEPOSITED AGAINST A FORMWORK.

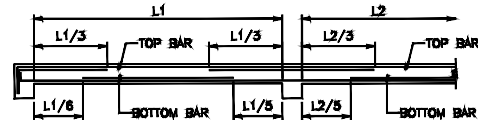
NOTES ON REINFORCEMENT

1. UNLESS OTHERWISE NOTED IN PLANS, THE YIELD STRENGTH OF REINFORCING BARS SHALL BE:

REINFORCEMENT	YIELD STRENGTH
A. FOOTINGS, FOOTING BEAMS AND GIRDERS	Fy = 275 MPa (40,000 psi)
B. COLUMNS AND SHEAR WALLS	Fy = 275 MPa (40,000 psi)
C. BEAMS AND GIRDER	Fy = 275 MPa (40,000 psi)
D. NON-LOAD BEARING WALL PARTITIONS, BEDDED SLABS, FLOOR & ROOF SLABS, PARAPETS, CATCH BASIN, SIDEWALK	Fy = 227.5 MPa (33,000 psi)
2. ALL REINFORCING BARS SIZE 10mm OR LARGER SHALL BE INTERMEDIATE GRADE DEFORMED IN ACCORDANCE WITH ASTM A 706. BARS SMALLER THAN 10mm MAY BE PLAIN.
3. SPLICES SHALL BE SECURELY WIRED TOGETHER & SHALL LAP OR EXTEND IN ACCORDANCE W/ TABLE A & TABLE B (TABLE OF LAP SPlice & ANCHORAGE LENGTH) UNLESS OTHERWISE SHOWN ON DRAWINGS, SPLICES SHALL BE STAGGERED WHENEVER POSSIBLE.

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:

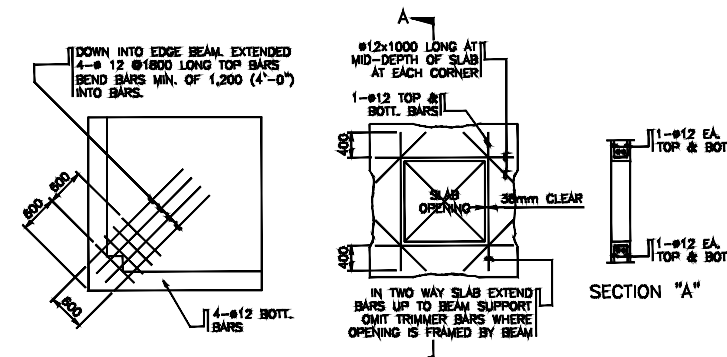


TYPICAL BAR BENDING AND CUTTING DETAILS FOR SLABS

3. IF SLABS ARE REINFORCED BOTHWAYS BARS ALONG THE SHORTER SPAN SHALL BE PLACED BELOW THOSE ALONG THE LONG 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.
4. 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 (Ag) OF THE SLAB (SEE SCHEDULE BELOW).

SCHEDULE OF MINIMUM SLAB REINFORCEMENT	
THICKNESS	MINIMUM TEMPERATURE BARS
100 mm	10 mm ϕ @ 250mm EACH WAY
125 mm	10 mm ϕ @ 225mm EACH WAY
150 mm	10 mm ϕ @ 185mm EACH WAY
175 mm	10 mm ϕ @ 160mm EACH WAY
200 mm	10 mm ϕ @ 140mm EACH WAY

5. UNLESS OTHERWISE NOTED IN THE PLANS ALL BEDDED SLABS SHALL BE REINFORCED WITH 10mm ϕ AT 250mm O.C. EACH WAY TO CENTER OF SLAB AND CONSTRUCTION JOINTS FOR SAME SHALL NOT BE LESS THAN 3.65 METER APART
6. PROVIDE EXTRA REINFORCEMENTS FOR CORNER SLAB (TWO ADJACENT DISCONTINUOUS EDGES) AS SHOWN BELOW.
7. CONCRETE SLAB REINFORCEMENTS SHALL BE PROPERLY SUPPORTED WITH 10mm ϕ STEEL CHAIR OR APPROVED EQUIVALENT SPACED AT 1.0 METER ON CENTER BOTHWAYS



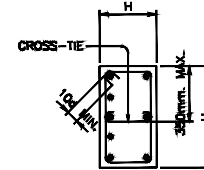
TYPICAL CORNER SLAB DETAIL

TYPICAL SLAB OPENING DET.

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 DISTANCE FROM FACE OF CONNECTION EQUAL TO THE GREATER OF THE OVERALL THICKNESS OF COLUMN, 1/6 THE CLEAR HEIGHT OF COLUMN OR 450mm.

2. COLUMN TIES SHALL BE PROTECTED EVERYWHERE BY A COVERING OF CONCRETE CAST MONOLITHICALLY WITH THE CORE WITH THE MINIMUM THICKNESS OF 40mm AND NOT LESS THAN 40 TIMES THE MAXIMUM SIZE OF COARSE AGGREGATE IN MILLIMETERS.
3. WHERE COLUMNS 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 THRU OUT THE OFFSET REGION.
4. UNLESS OTHERWISE INDICATED IN THE PLANS, LAP SPLICES FOR VERTICAL COLUMN REINFORCEMENT SHALL BE MADE WITHIN THE CENTER HALF OF COLUMN HEIGHT, AND THE SPLICE LENGTH SHALL NOT BE LESS THAN 40 BAR DIAMETERS, WELDING OR APPROVED MECHANICAL DEVICES MAY BE USED PROVIDED THAT NOT MORE THAN ALTERNATE BARS ARE WELDED OR MECHANICALLY SPLICED AT ANY LEVEL AND THE VERTICAL DISTANCES BETWEEN THESE WELDS OR SPLICES OF ADJACENT BARS IS NOT LESS THAN 600mm.

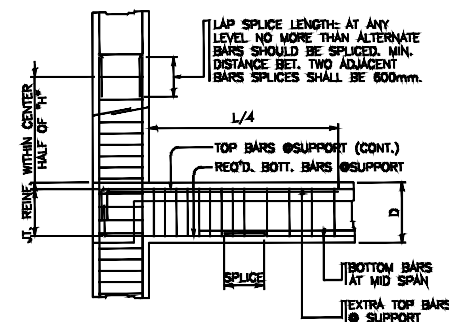


JOINT HOOP SPACE @ "2sh" WHEN THERE ARE BEAMS HAVING WIDTH OF AT LEAST ONE-HALF THE COLUMN WIDTH & DEPTHS NOT LESS THAN THREE QUARTERS OF THE DEEPEST BEAM THAT FRAME INTO FOUR SIDES OF THE COLUMN. ALL OTHER CONDITIONS USE HOOPS @ "sh" CENTERS.

FOR COL. BAR SPLICES SEE TABLE OF MIN. LAP SPlice LENGTH OF COLUMN REINFORCEMENT (SPACING OF TIES ALONG THIS REGION SHALL NOT BE LESS THAN 100mm)

ALL CONCRETE REINF. DETAIL SHOULD BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF ACI DETAILING MANUAL

TYPICAL COLUMN ELEV. SHOWING DOWELS AND TIES SPACING



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

NOTES ON BEAMS AND GIRDERS

1. UNLESS OTHERWISE NOTED IN PLANS, CAMBER ALL BEAMS AND GIRDERS AT LEAST 6mm FOR EVERY 4.50m OF SPAN, EXCEPT CANTILEVERS FOR WHICH THE CAMBER 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.

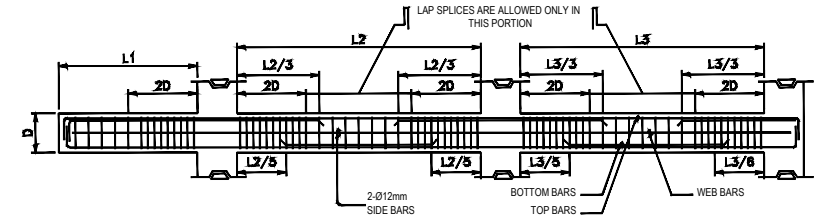


FIG. B-1

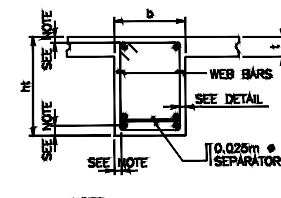
TABLE 'A' TENSION BARS EMBEDMENT LENGTHS AND LAPPED SPLICES IN MILLIMETERS				
BAR SIZE (DEFORMED)	fy = 20.7MPa (3000psi)	fy = 27.6MPa (4000psi)	fy = 35.5MPa (5100psi)	fy = 48.3MPa (7000psi)
10mm ϕ	300	300	300	300
12mm ϕ	300	300	300	300
16mm ϕ	300	400	300	400
20mm ϕ	400	500	350	500
25mm ϕ	600	800	550	750
28mm ϕ	750	1000	650	850
32mm ϕ	950	1300	850	1100

NOTE: TOP PLAIN BARS, MULTIPLY VALUE BY 2

TABLE 'B' COMPRESSION BARS EMBEDMENT LENGTHS AND LAPPED SPLICES IN MILLIMETERS				
BAR SIZE (DEFORMED)	fy = 20.7MPa (3000psi)	fy = 27.6MPa (4000psi)	fy = 35.5MPa (5100psi)	fy = 48.3MPa (7000psi)
10mm ϕ	225	300	300	300
12mm ϕ	275	300	350	300
16mm ϕ	350	400	325	400
20mm ϕ	450	500	475	500
25mm ϕ	550	625	550	625
28mm ϕ	625	675	625	675
32mm ϕ	700	775	700	775

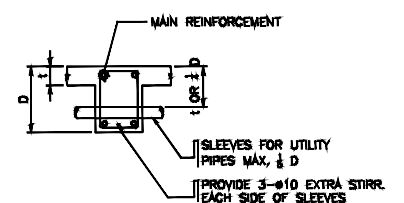
NOTE: TOP PLAIN BARS, MULTIPLY VALUE BY 2
VALUES GIVEN ABOVE CAN ALSO BE USED FOR COLUMNS.

3. IF THE BEAM REINFORCING BARS END IN A WALL THE CLEAR DISTANCE FROM THE BAR TO THE FARTHER FACE OF THE WALL NOT BE LESS THAN 25mm. EMBEDMENT LENGTH SHALL BE AS SHOWN IN A TABLE 'A' FOR TENSION BARS AND TABLE 'B' FOR COMPRESSION BARS UNLESS SPECIFIED IN PLAN. TOP BAR SHALL NOT BE SPLICED WITHIN THE COLUMN OR WITHIN A DISTANCE TWICE THE MEMBER DEPTH FROM THE FACE OF THE COLUMN. AT LEAST TWO STIRRUPS SHALL BE PROVIDED AT ALL SPLICES.
4. IF THERE ARE TWO OR MORE LAYERS OF REINFORCING BARS, USE 25mm ϕ BAR SEPARATORS SPACED AT 1.0m ON CENTER. IN NO CASE SHALL THERE BE LESS THAN TWO (2) SEPARATORS BETWEEN TWO LAYERS OF BARS.
5. MINIMUM CONCRETE PROTECTION FOR REINFORCING BARS OR STEEL SHAPES SHALL BE AS SHOWN IN FIG. B-2 UNLESS SPECIFIED ELSEWHERE.



NOTE:
20mm CLEAR FOR JOIST
40mm CLEAR FOR BEAMS AND GIRDERS

FIG. B-2



TYP. DET. FOR SLEEVES THRU CONCRETE BEAM

FIG. B-3

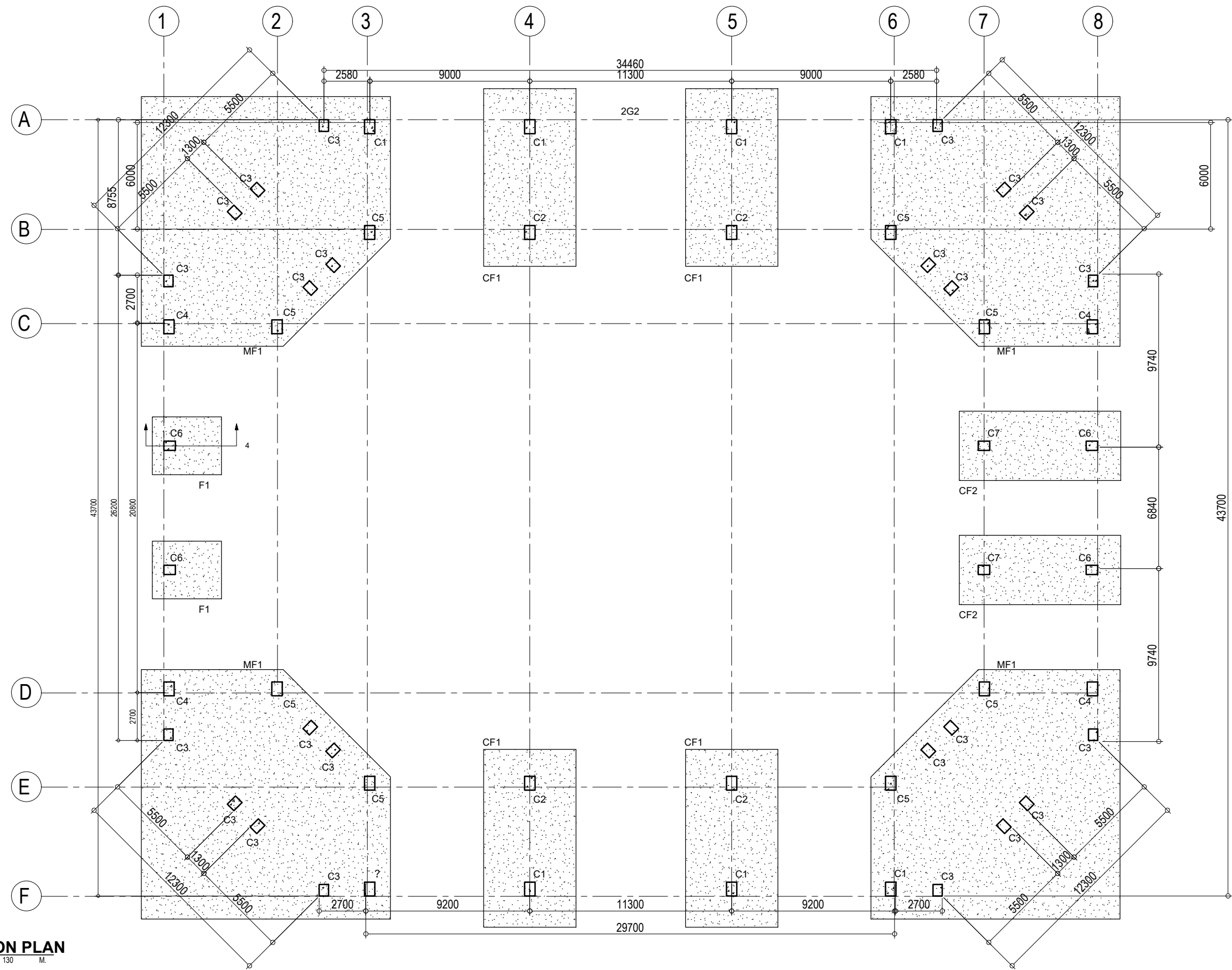
6. WHEN A BEAM CROSSES A GIRDER, REST BEAM ON TOP OF GIRDER BARS. BEAM REINFORCING BAR SHALL BE SYMMETRICAL ABOUT CENTER LINE WHENEVER POSSIBLE.
7. GENERALLY NO SPLICES SHALL BE PERMITTED AT POINTS WHERE CRITICAL BENDING STRESSES OCCUR. SPLICES WHERE SO PERMITTED SHALL BE INDICATED IN THE TABLE 'A' AND 'B'. WELDED SPLICES SHALL DEVELOP IN TENSION AT LEAST 125% OF THE SPECIFIED YIELD STRENGTH OF THE BAR, NOR MORE THAN 80% OF THE BARS AT ANY ONE SECTION IS ALLOWED TO BE SPLICED THEREIN.

NOTES

PURSUANT TO SECTION 4 OF ANNEX "A" OF THE REVISED IMPLEMENTING RULES AND REGULATION OF R.A. 9164, APPROVAL BY THE AUTHORIZED DPWH OFFICIALS OF DETAILED ENGINEERING SURVEYS AND DESIGN UNDERTAKEN BY CONSULTANTS NEITHER DIMINISHES THE RESPONSIBILITY OF THE LATTER FOR THE TECHNICAL INTEGRITY OF THE SURVEYS AND DESIGN NOR TRANSFER ANY PART OF THAT RESPONSIBILITY TO THE APPROVING OFFICIALS.

THE DESIGN CONSULTANT SHALL BE HELD FULLY RESPONSIBLE FOR THE FAILURE OF THE FACILITY/ES/STRUCTURES DUE TO FAULTY DESIGN EXCEPT FOR THE CHANGES MADE WITHOUT THE CONFORMITY OF THE CONSULTANTS.

PROJECT TITLE / LOCATION :		SHEET CONTENT :	DRAFTED :	REVIEWED :	SUBMITTED :	RECOMMENDED :	APPROVED :	SET NO.	SHEET NO.
CONVERGENCE AND SPECIAL SUPPORT PROGRAM (CSSP) BASIC INFRASTRUCTURE PROGRAM (BIP) MULTI-PURPOSE BUILDING / FACILITIES TO SUPPORT SOCIAL SERVICES CONSTRUCTION OF MULTI-PURPOSE BUILDING, PHASE 1 BARANGAY SAN GABRIEL SAN PABLO, LAGUNA		GENERAL STRUCTURAL NOTES	CHRISTOPHER D BERON ENGINEERING AIDE A KING NOAH S. MONDUGAR ENGINEERING ASSISTANT	JOEY CHRISTIAN L. DAYO ENGINEER II	LUDY MITZI J. MAHENCIO ENGINEER II Office-in-Charge Planning and Design Section	MA. SHIRLEY M. SAMIANO Office-in-Charge Office of the Assistant District Engineer	CARLOS C. MUERE Office-in-Charge Office of the District Engineer	S 2/23	11 34



1 FOUNDATION PLAN
S-3 SCALE 1:130 M.



Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
LAGUNA 3rd DISTRICT ENGINEERING OFFICE
Mariktor Subd., Brgy. Del Remedio, San Pablo City, Region IV-A

PROJECT TITLE / LOCATION :
CONVERGENCE AND SPECIAL SUPPORT PROGRAM (CSSP)
BASIC INFRASTRUCTURE PROGRAM (BIP)
MULTI-PURPOSE BUILDING / FACILITIES TO SUPPORT SOCIAL SERVICES
CONSTRUCTION OF MULTI-PURPOSE BUILDING, PHASE 1
BARANGAY SAN JOSE
SAN PABLO CITY, LAGUNA

SHEET CONTENT :
*FOUNDATION PLAN

DRAFTED :
CHRISTOPHER D. BERON
ENGINEERING AIDE B
PREPARED :
KING NOAH S. MONDUGAR
ENGINEERING ASSISTANT

REVIEWED :
JOEY CHRISTIAN L. DAYO
ENGINEER II
DATE :

SUBMITTED :
LUDY MITZI J. MAHENCIO
ENGINEER II
Officer-in-Charge
Planning and Design Section
DATE :

RECOMMENDED :
MA. SHIRLEY M. SAMIANO
Officer-in-Charge
Office of the Assistant District Engineer
DATE :

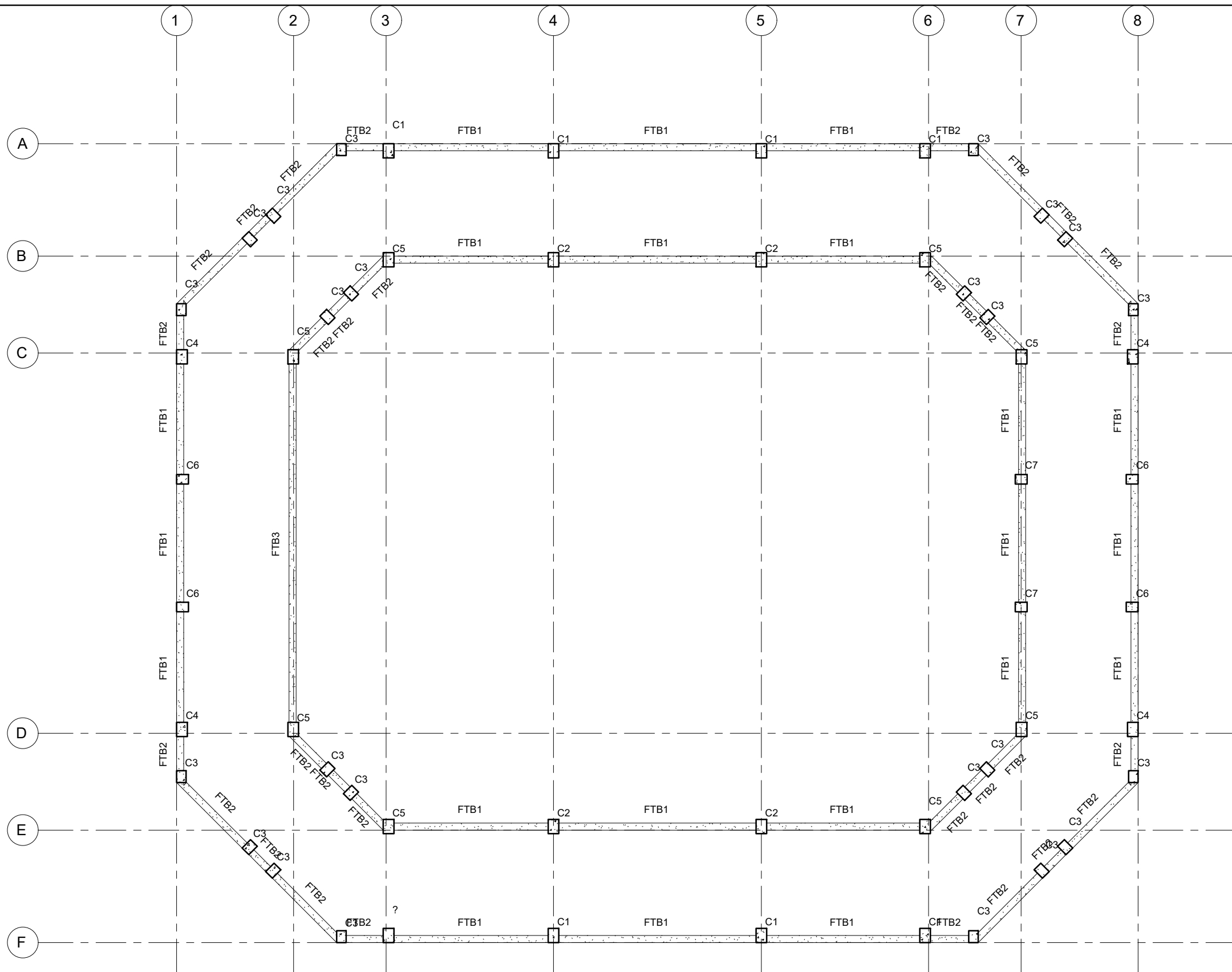
APPROVED :
CARLOS C. MUERE
Officer-in-Charge
Office of the District Engineer
DATE :

SET NO.

S
3 23

SHEET NO.

12
34



1 GROUND FLOOR FRAMING PLAN
S-4 SCALE 1 : 130 M.



Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
LAGUNA 3RD DISTRICT ENGINEERING OFFICE
Mariktor Subd., Brgy. Del Remedio, San Pablo City, Region IV-A

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MULTI-PURPOSE BUILDING / FACILITIES TO SUPPORT SOCIAL SERVICES
CONSTRUCTION OF MULTI-PURPOSE BUILDING, PHASE 1
BARANGAY SAN JOSE
SAN PABLO CITY, LAGUNA

SHEET CONTENT :

*GROUND FLOOR FRAMING PLAN

CHRISTOPHER D. BERON
ENGINEERING AIDE B

PREPARED :

KING NOAH S. MONDUGAR
ENGINEERING ASSISTANT

REVIEWED :

JOEY CHRISTIAN L. DAYO
ENGINEER II

DATE :

SUBMITTED :

LUDY MITZI J. MAHENCIO
ENGINEER II
Officer-in-Charge
Planning and Design Section

DATE :

RECOMMENDED :

MA. SHIRLEY M. SAMIANO
Officer-in-Charge
Office of the Assistant District Engineer

DATE :

APPROVED :

CARLOS C. MUERE
Officer-in-Charge
Office of the District Engineer

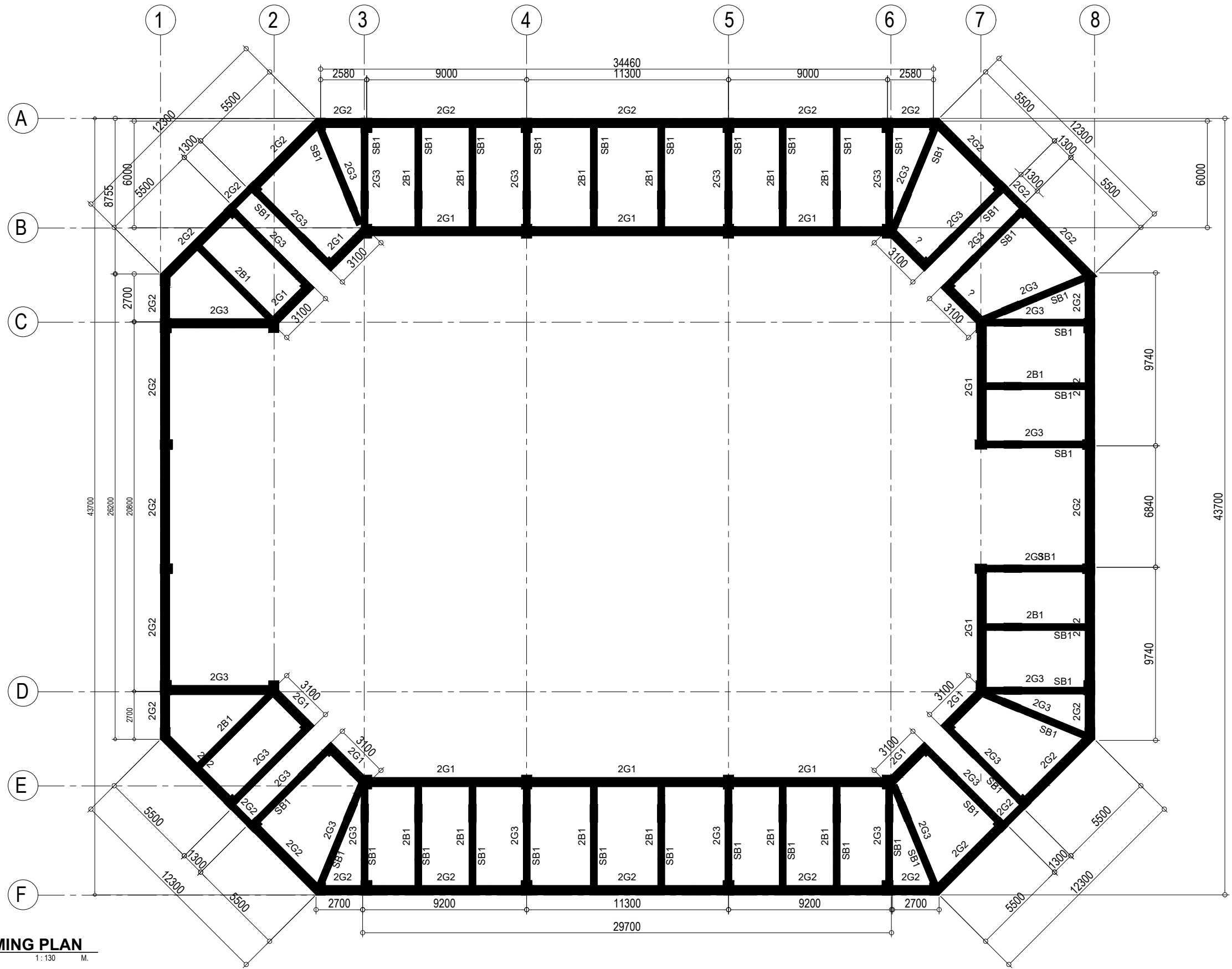
DATE :

SET NO.

S
4 23

SHEET NO.

13
34



1
S-5 **SECOND FLOOR FRAMING PLAN**
SCALE 1:130 M.



Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
LAGUNA 3RD DISTRICT ENGINEERING OFFICE
Mariktor Subd., Brgy. Del Remedio, San Pablo City, Region IV-A

PROJECT TITLE / LOCATION :
CONVERGENCE AND SPECIAL SUPPORT PROGRAM (CSSP)
BASIC INFRASTRUCTURE PROGRAM (BIP)
MULTI-PURPOSE BUILDING / FACILITIES TO SUPPORT SOCIAL SERVICES
CONSTRUCTION OF MULTI-PURPOSE BUILDING, PHASE 1
BARANGAY SAN JOSE
SAN PABLO CITY, LAGUNA

SHEET CONTENT :
+SECOND FLOOR FRAMING PLAN

CHRISTOPER D BERON
ENGINEERING AIDE B

PREPARED :
KING NOAH S. MONDUGAR
ENGINEERING ASSISTANT

REVIEWED :

JOEY CHRISTIAN L. DAYO
ENGINEER II

DATE :

SUBMITTED :

LUDY MITZI J. MAHENCIO
ENGINEER II
Officer-in-Charge
Planning and Design Section

DATE :

RECOMMENDED :

MA. SHIRLEY M. SAMIANO
Officer-in-Charge
Office of the Assistant District Engineer

DATE :

APPROVED :

CARLOS C. MUERE
Officer-in-Charge
Office of the District Engineer

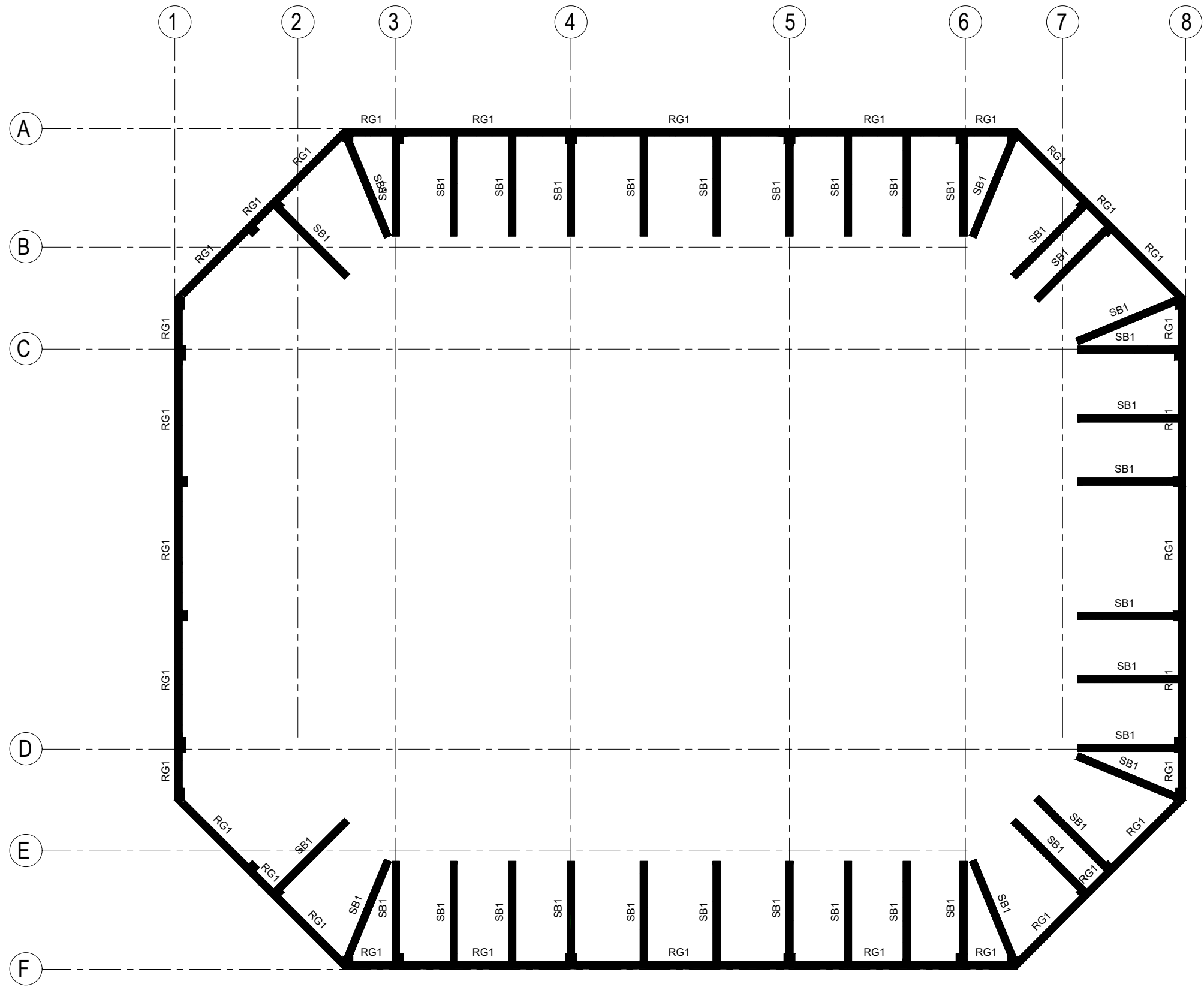
DATE :

SET NO.

S
5 23

SHEET NO.

14
34



1 TOP OF BENCH FRAMING PLAN
S-5 SCALE 1 : 130 M.



Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
LAGUNA 3rd DISTRICT ENGINEERING OFFICE
Mariktor Subd., Brgy. Del Remedio, San Pablo City, Region IV-A

PROJECT TITLE / LOCATION :
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BASIC INFRASTRUCTURE PROGRAM (BIP)
MULTI-PURPOSE BUILDING / FACILITIES TO SUPPORT SOCIAL SERVICES
CONSTRUCTION OF MULTI-PURPOSE BUILDING, PHASE 1
BARANGAY SAN JOSE
SAN PABLO CITY, LAGUNA

SHEET CONTENT :
+TOP OF BENCH FRAMING PLAN

CHRISTOPHER D BERON
ENGINEERING AIDE B

PREPARED :
KING NOAH S. MONDUGAR
ENGINEERING ASSISTANT

REVIEWED :

JOEY CHRISTIAN L. DAYO
ENGINEER II

DATE :

SUBMITTED :

LUDY MITZI J. MAHENCIO
ENGINEER II
Officer-in-Charge
Planning and Design Section

DATE :

RECOMMENDED :

MA. SHIRLEY M. SAMIANO
Officer-in-Charge
Office of the Assistant District Engineer

DATE :

APPROVED :

CARLOS C. MUERE
Officer-in-Charge
Office of the District Engineer

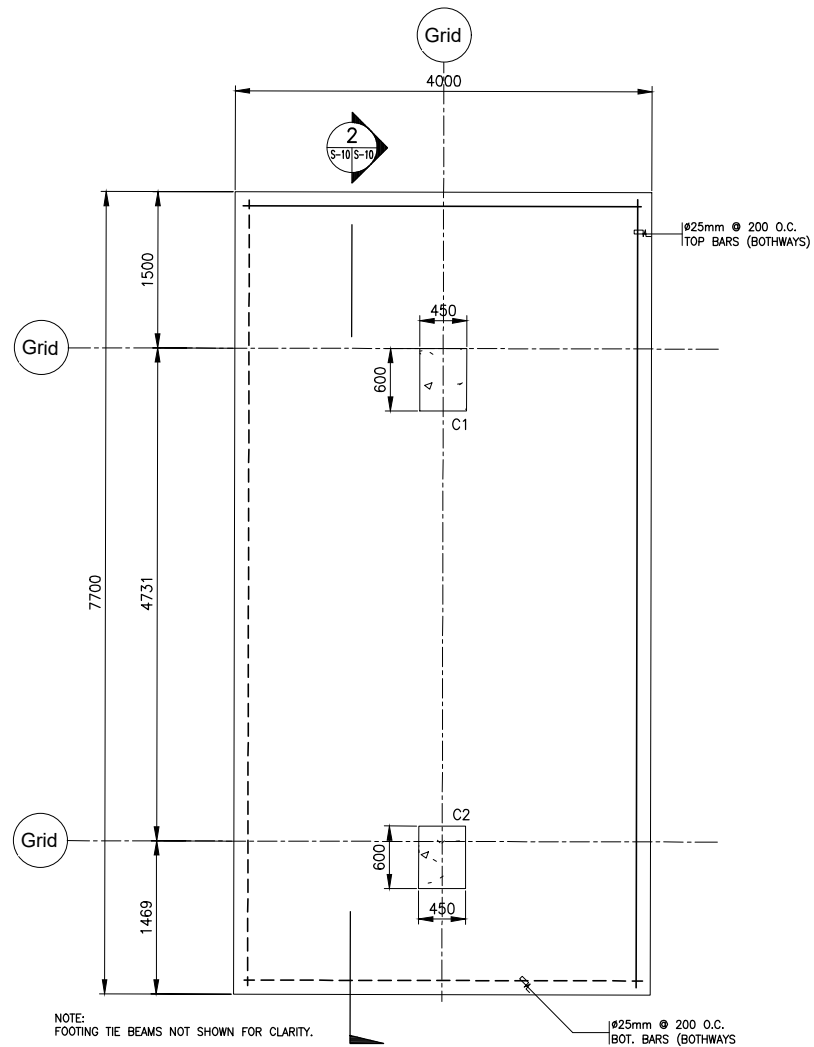
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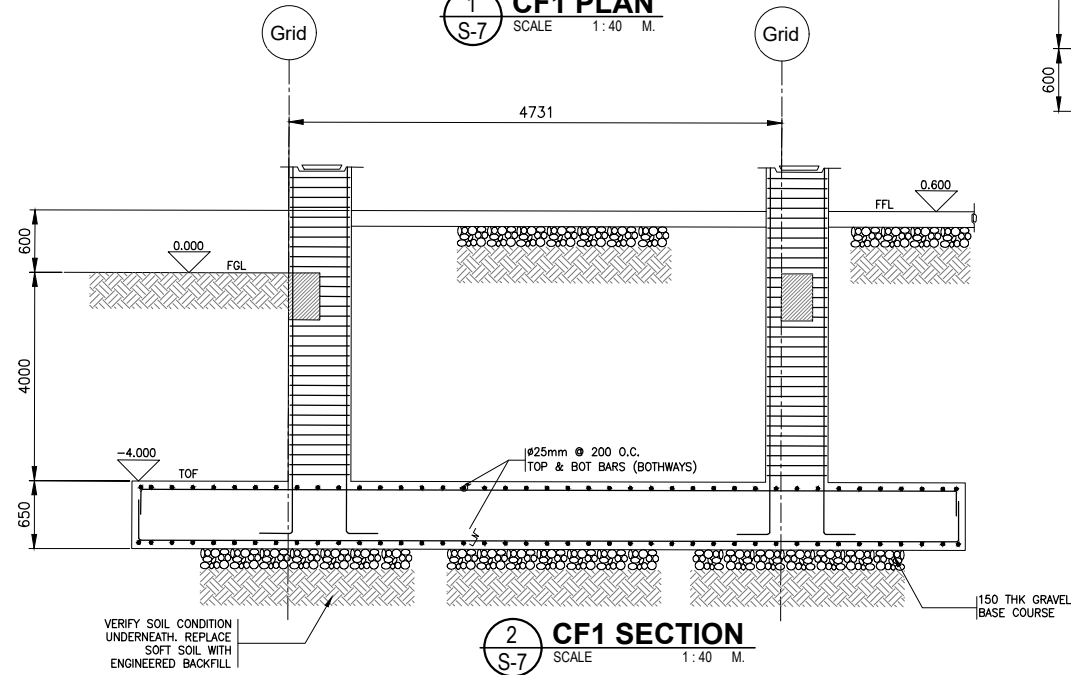
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6/23

SHEET NO.

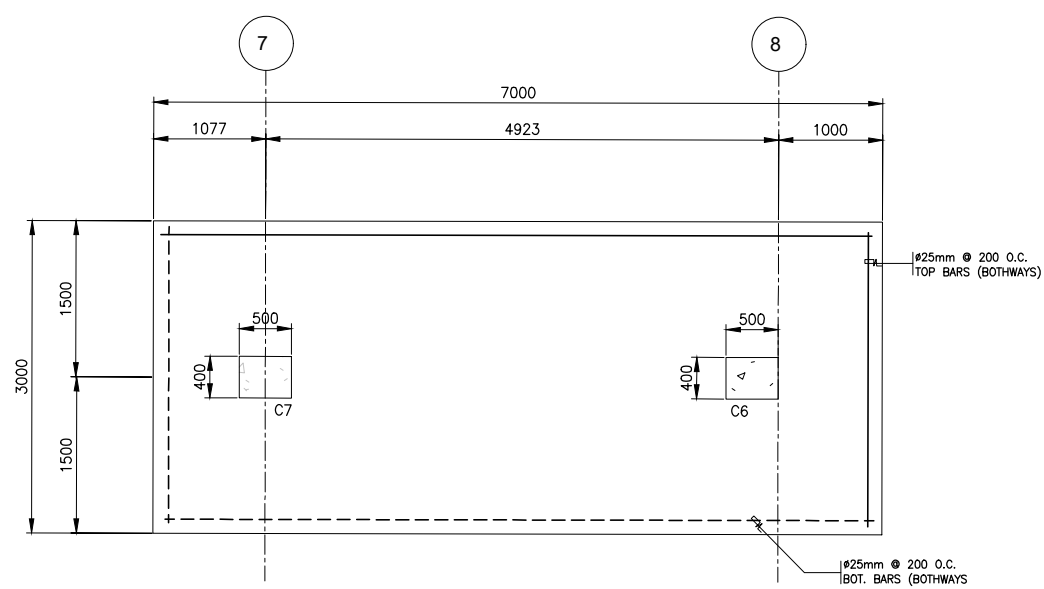
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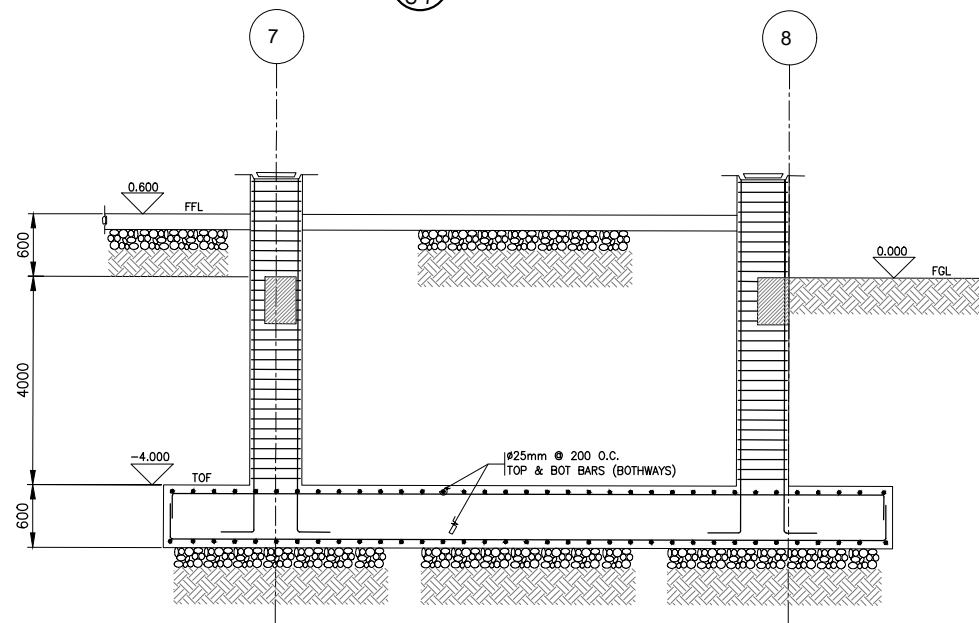
1 CF1 PLAN
S-7 SCALE 1:40 M.



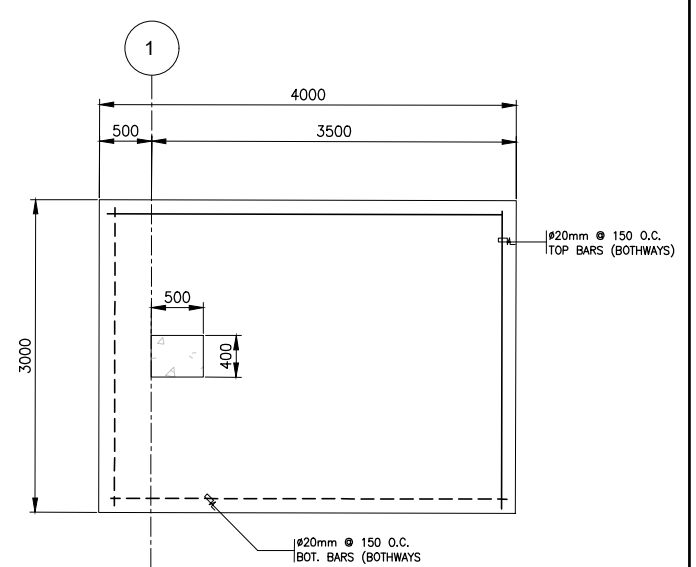
2 CF1 SECTION
S-7 SCALE 1:40 M.



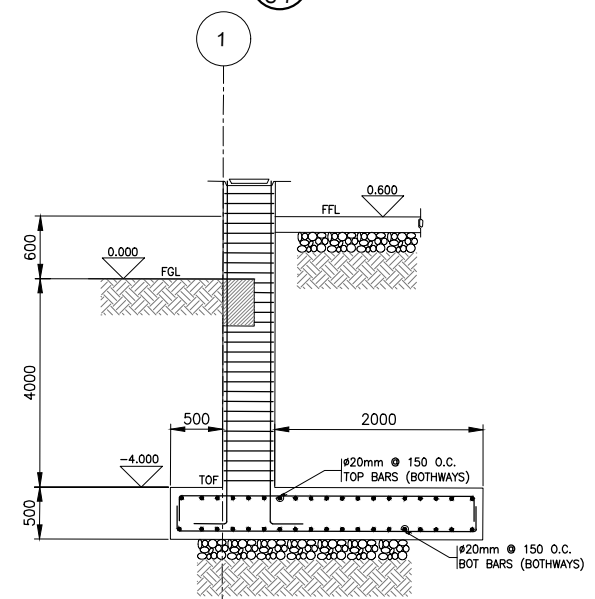
3 CF2 PLAN
S-7 SCALE 1:40 M.



4 CF2 SECTION
S-7 SCALE 1:40 M.



5 F1 PLAN
S-7 SCALE 1:40 M.



6 F1 SECTION
S-7 SCALE 1:40 M.



Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
LAGUNA 3rd DISTRICT ENGINEERING OFFICE
Mariktor Subd., Brgy. Del Remedio, San Pablo City, Region IV-A

PROJECT TITLE / LOCATION :
CONVERGENCE AND SPECIAL SUPPORT PROGRAM (CSSP)
BASIC INFRASTRUCTURE PROGRAM (BIP)
MULTI-PURPOSE BUILDING / FACILITIES TO SUPPORT SOCIAL SERVICES
CONSTRUCTION OF MULTI-PURPOSE BUILDING, PHASE 1
BARANGAY SAN JOSE
SAN PABLO CITY, LAGUNA

SHEET CONTENT :
+CF1 PLAN
+CF2 PLAN
+F1 PLAN

DRAFTED :
CHRISTOPHER D. BERON
ENGINEERING AIDE B
PREPARED :
KING NOAH S. MONDUGAR
ENGINEERING ASSISTANT

REVIEWED :
JOEY CHRISTIAN L. DAYO
ENGINEER II
DATE :

SUBMITTED :
LUDY MITZI J. MAHENCIO
ENGINEER II
Officer-in-Charge
Planning and Design Section
DATE :

RECOMMENDED :
MA. SHIRLEY M. SAMIANO
Officer-in-Charge
Office of the Assistant District Engineer
DATE :

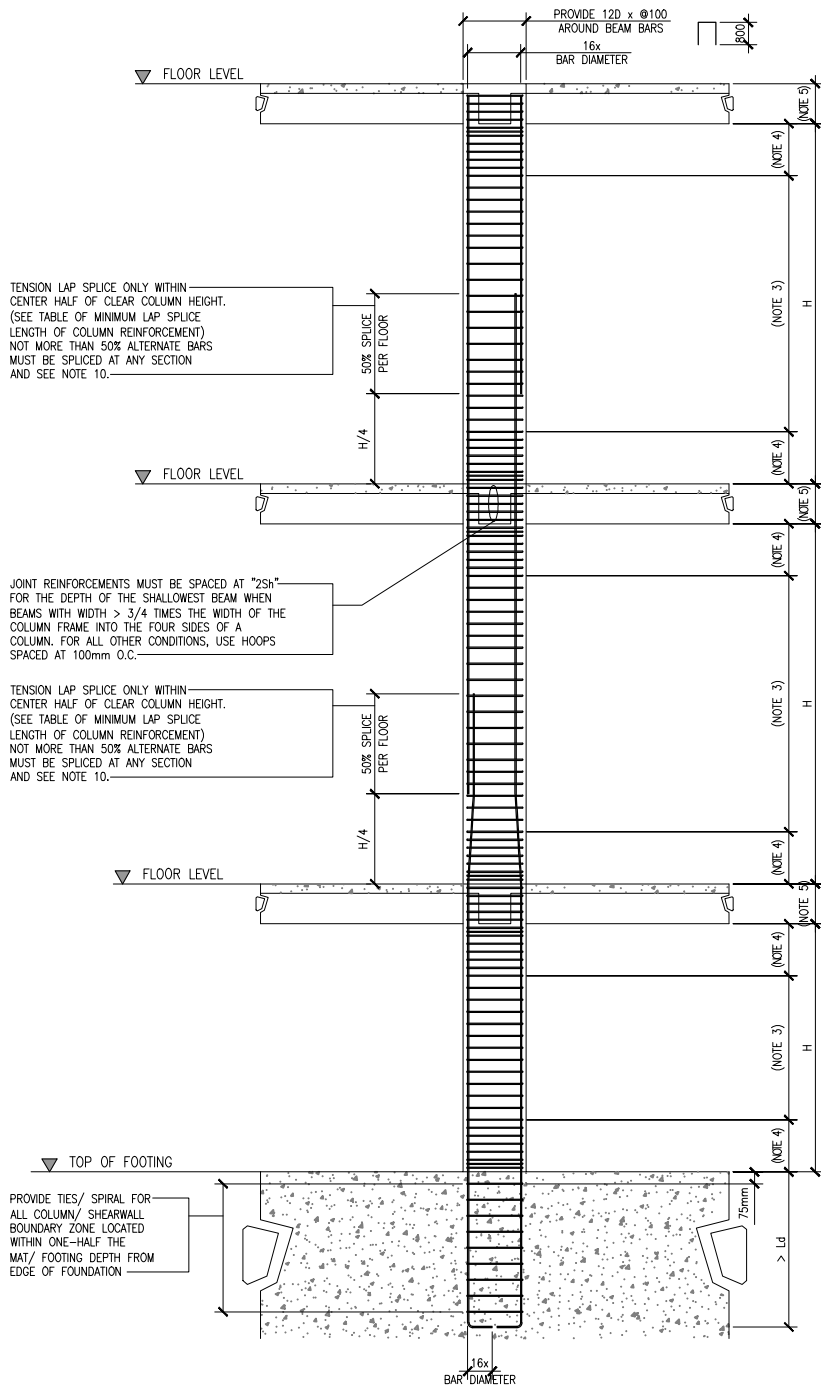
APPROVED :
CARLOS C. MUERE
Officer-in-Charge
Office of the District Engineer
DATE :

SET NO.

S
7/23

SHEET NO.

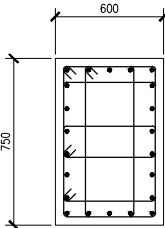
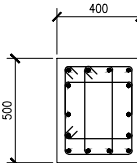
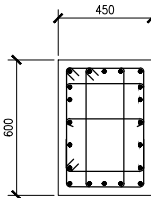
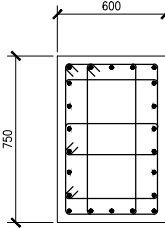
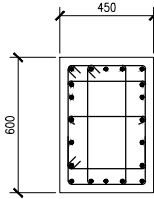
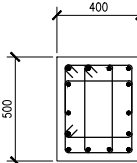
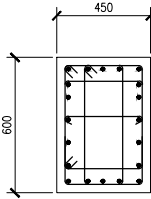
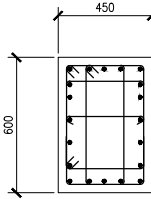
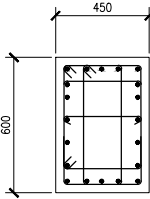
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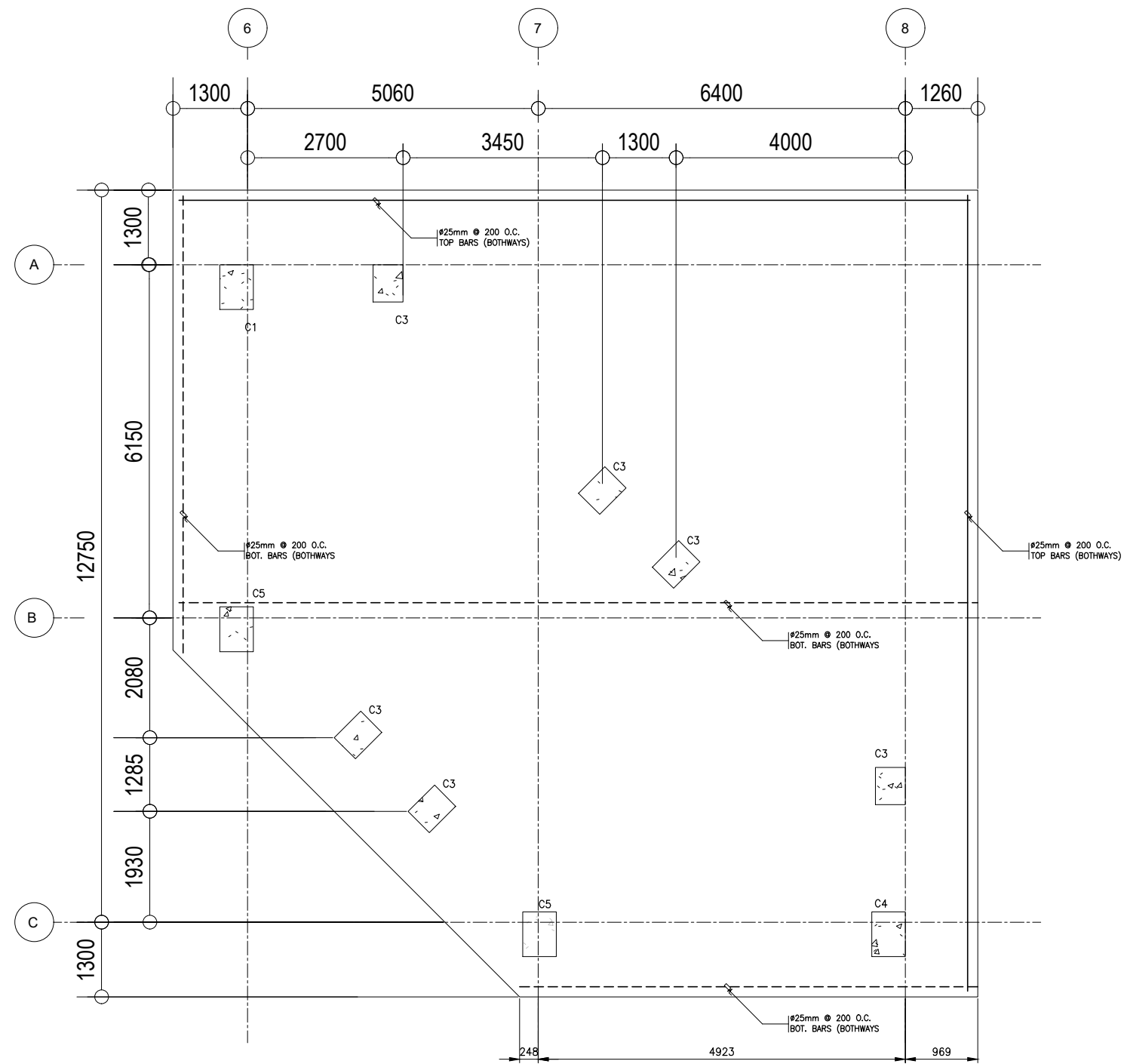
1 TYP. COLUMN ELEVATION
S-8 SCALE N.T.S.

NOTES :

1. THIS DETAIL IS FOR CONCRETE MOMENT FRAME COLUMNS DEVOTED AS "C" ON THE STRUCTURAL PLANS.
 2. SEE CONCRETE COLUMN SCHEDULE FOR COLUMN SIZE, VERTICAL REINFORCING, AND VERTICAL REINFORCING SPLICE LENGTH.
 3. COLUMN TIES SHALL BE AS SCHEDULE ON CENTER, SEE COLUMN SCHEDULE FOR TIE CONFIGURATION.
 4. CONFINEMENT REINFORCEMENT SHALL BE AT 100mm ON CENTER FOR H/6, MAX. COLUMN DIMENSION OR AS SCHEDULE, WHICHEVER IS GREATER, OR COLUMN SCHEDULE FOR CONFIGURATION.
 5. JOINT REINFORCEMENT SHALL BE AT 100mm ON CENTER THROUGH OUT THE BEAM, BAND BEAM, SLAB OR DROP PANEL DEPTH.
 6. TYPICALLY, COLUMN VERTICAL BARS SHALL BE SPLICED AT EVERY OTHER FLOOR LEVEL. AT CONTRACTOR'S OPTION, COLUMN VERTICAL MAY BE EXTENDED UP TO ADDITIONAL FLOOR LEVELS WITHOUT SPLICES AT FLOORS.
 7. PLACE HORIZONTAL HOOKS DIRECTLY BELOW TOP BARS OF MOMENT FRAME BEAMS.
 8. UNLESS NOTED OTHERWISE, COLUMN CONSTRUCTION JOINT SHALL BE AT THE UNDERSIDE OF FLOOR SLABS, BEAMS, OR GIRDERS, AND AT THE TOP OF FOOTING OR FLOOR SLABS, BEAMS GIRDERS, BRACKETS, COLUMN CAPITALS, HAUNCHES AND DROP PANELS SHALL BE PLACED AT THE SAME TIME AS SLABS.
 9. COLUMN OVER POURS INTO THE UNDERSIDE OF FLOOR SLABS, BEAMS, OR GIRDERS, SHALL BE REMOVED DOWN TO THE CONSTRUCTION JOINT.
 10. COLUMN TIES @ 100mm O.C. WITHIN LAP SPLICE LENGTH.
1. THE CONTRACTOR SHALL CAREFULLY EXAMINE, COMPARE AND VERIFY THE DATA FURNISHED BY THE DRAWINGS AND SPECIFICATIONS. ANY DOUBT AS TO THE MEANING OF THE DRAWINGS (INCLUDING NOTES THEREON) OR OF THE SPECIFICATIONS OR OF ANY ERRORS/OMMISSIONS AFTER ITS DISCOVERY, ANY WORK INVOLVING SUCH DISCREPANCIES SHALL BE DONE AT THE CONTRACTOR'S RISK.
 2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEER'S AND ARCHITECT'S DRAWINGS AND WITH ALL RELEVANT SPECIFICATIONS.
 3. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
 4. FOR STRUCTURAL NOTES, REFER TO DRAWING NO. S101.
 5. DRAWINGS ARE NOT TO BE SCALED UNLESS OTHERWISE NOTED.
 6. STRUCTURAL SLAB ELEVATIONS SHALL BE VERIFIED WITH THE ARCHITECTURAL DRAWINGS.
 7. THIS DETAIL IS FOR CONCRETE MOMENT FRAME COLUMNS DEVOTED AS "C" ON THE STRUCTURAL PLANS.
 8. SEE CONCRETE COLUMN SCHEDULE FOR COLUMN SIZE, VERTICAL REINFORCING, AND VERTICAL REINFORCING

SCHEDULE OF R.C. COLUMNS		SECOND FLOOR LEVEL TOP OF BENCH LEVEL (+350MM)		FOUNDATION TO SECOND FLOOR LEVEL		LEVELS COLUMN DESIGNATION				
										
		VERTICAL BARS : 20-#28mm TIES : 3-#12@150 JOINT REINF : 3-#12@75 CONF. REINF : 3-#12@75	VERTICAL BARS : 14-#20mm TIES : 3-#12@150 JOINT REINF : 3-#12@75 CONF. REINF : 3-#12@75	VERTICAL BARS : 20-#25mm TIES : 3-#12@150 JOINT REINF : 3-#12@75 CONF. REINF : 3-#12@75	VERTICAL BARS : 22-#25mm TIES : 3-#12@150 JOINT REINF : 3-#12@75 CONF. REINF : 3-#12@75	VERTICAL BARS : 20-#25mm TIES : 3-#12@150 JOINT REINF : 3-#12@75 CONF. REINF : 3-#12@75	VERTICAL BARS : 14-#25mm TIES : 3-#12@150 JOINT REINF : 3-#12@75 CONF. REINF : 3-#12@75	VERTICAL BARS : 20-#25mm TIES : 3-#12@150 JOINT REINF : 3-#12@75 CONF. REINF : 3-#12@75	VERTICAL BARS : 20-#25mm TIES : 3-#12@150 JOINT REINF : 3-#12@75 CONF. REINF : 3-#12@75	VERTICAL BARS : 20-#25mm TIES : 3-#12@150 JOINT REINF : 3-#12@75 CONF. REINF : 3-#12@75
		C1	C2	C3 & C4	C5	C6	C7			

2 COLUMN SCHEDULE
S-8 SCALE N.T.S.



1 MAT FOOTING DETAILS
S-9 SCALE N.T.S



Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
LAGUNA 3rd DISTRICT ENGINEERING OFFICE
Mariktor Subd., Brgy. Del Remedio, San Pablo City, Region IV-A

PROJECT TITLE / LOCATION :
CONVERGENCE AND SPECIAL SUPPORT PROGRAM (CSSP)
BASIC INFRASTRUCTURE PROGRAM (BIP)
MULTI-PURPOSE BUILDING / FACILITIES TO SUPPORT SOCIAL SERVICES
CONSTRUCTION OF MULTI-PURPOSE BUILDING, PHASE 1
BARANGAY SAN JOSE
SAN PABLO CITY, LAGUNA

SHEET CONTENT :
MAT FOOTING DETAILS

DRAFTED :
CHRISTOPHER D BERON
ENGINEERING AIDE B
PREPARED :
KING NOAH S. MONDUGAR
ENGINEERING ASSISTANT

REVIEWED :
JOEY CHRISTIAN L. DAYO
ENGINEER II
DATE :

SUBMITTED :
LUDY MITZI J. MAHENCIO
ENGINEER II
Officer-in-Charge
Planning and Design Section
DATE :

RECOMMENDED :
MA. SHIRLEY M. SAMIANO
Officer-in-Charge
Office of the Assistant District Engineer
DATE :

APPROVED :
CARLOS C. MUERE
Officer-in-Charge
Office of the District Engineer
DATE :

SET NO.
S
9/23

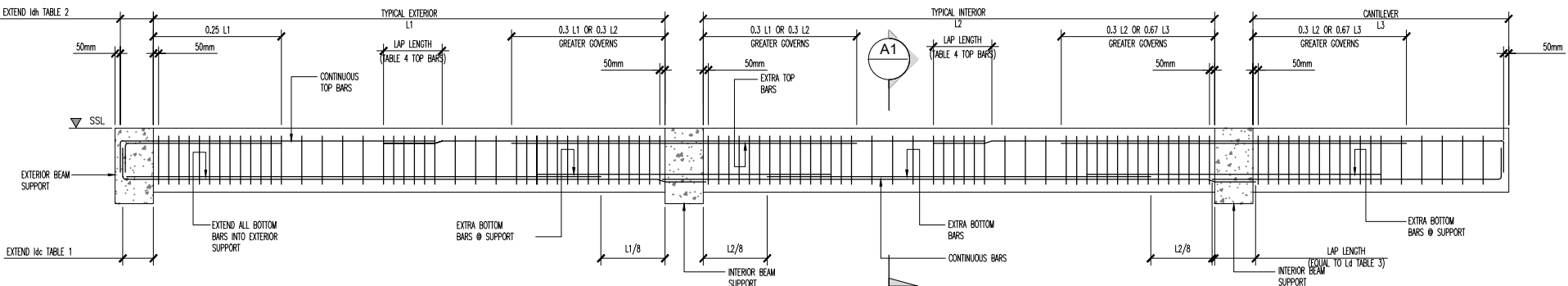
SHEET NO.
18
34

- NOTES:
1. THE CONTRACTOR SHALL CAREFULLY EXAMINE, COMPARE AND VERIFY THE DATA FURNISHED BY THE DRAWINGS AND SPECIFICATIONS. ANY DOUBT AS TO THE MEANING OF THE DRAWINGS (INCLUDING NOTES THEREON) OR OF THE SPECIFICATIONS OR OF ANY ERRORS/OMISSIONS AFTER ITS DISCOVERY, ANY WORK INVOLVING SUCH DISCREPANCIES SHALL BE DONE AT THE CONTRACTOR'S RISK.
 2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEER'S AND ARCHITECT'S DRAWINGS AND WITH ALL RELEVANT SPECIFICATIONS.
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 6. STRUCTURAL SLAB ELEVATIONS SHALL BE VERIFIED WITH THE ARCHITECTURAL DRAWINGS.

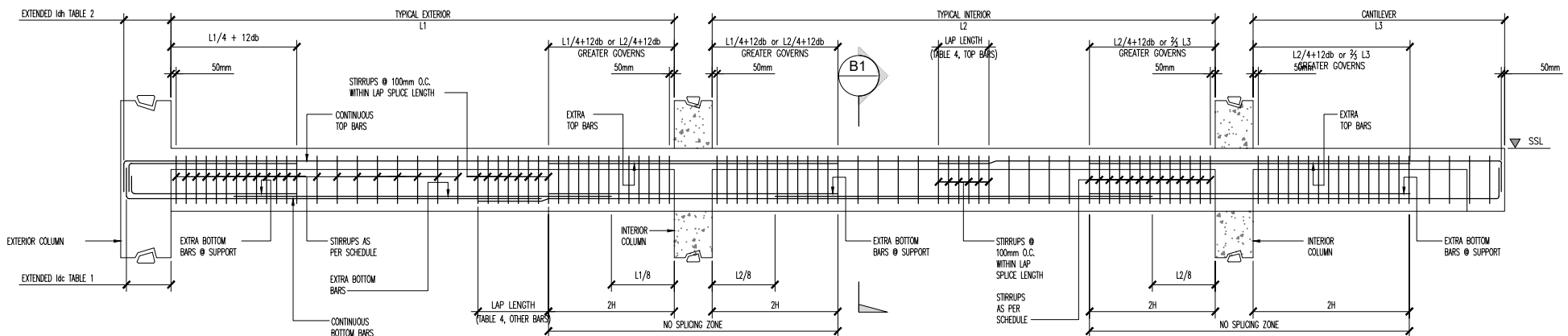
SCHEDULE OF R.C. BEAMS AND GIRDERS

MARK	SIZE (mm)		TOP BARS (mm ϕ)			BOTTOM BARS (mm ϕ)				WEB BARS (mm ϕ)	STIRRUPS	TYPE OF STIRRUPS
	b	h	CONT.	EXTRA @ LEFT	EXTRA @ RIGHT	CONT.	EXTRA @ MIDSPAN	EXTRA @ LEFT	EXTRA @ RIGHT			
FB1	300	450	3- ϕ 20	2- ϕ 20	2- ϕ 20	5- ϕ 20	-	-	-	2- ϕ 16	ϕ 12 @ 1-50mm, 8 @ 75mm, REST @ 150mm	A
FB2	300	450	3- ϕ 20	2- ϕ 20	2- ϕ 20	5- ϕ 20	-	-	-	2- ϕ 16	ϕ 12 @ 1-50mm, 8 @ 75mm, REST @ 150mm	A
FB3	300	450	3- ϕ 20	-	-	5- ϕ 20	-	-	-	2- ϕ 16	ϕ 12 @ 1-50mm, 8 @ 75mm, REST @ 150mm	A
2G1	400	600	5- ϕ 20	3- ϕ 20	3- ϕ 20	5- ϕ 20	3- ϕ 20	-	-	3- ϕ 16	ϕ 12 @ 1-50mm, 8 @ 75mm, REST @ 150mm	B
2G2	400	600	5- ϕ 20	3- ϕ 20	3- ϕ 20	5- ϕ 20	3- ϕ 20	-	-	3- ϕ 16	ϕ 12 @ 1-50mm, 8 @ 75mm, REST @ 150mm	B
2G3	300	500	5- ϕ 20	-	-	5- ϕ 20	-	-	-	3- ϕ 16	ϕ 12 @ 1-50mm, 8 @ 75mm, REST @ 150mm	B
2B1	300	500	5- ϕ 20	-	-	5- ϕ 20	-	-	-	2- ϕ 16	ϕ 12 @ 1-50mm, 8 @ 75mm, REST @ 150mm	A
SB1	300	500	5- ϕ 20	-	-	5- ϕ 20	3- ϕ 20	-	-	2- ϕ 16	ϕ 12 @ 1-50mm, 8 @ 75mm, REST @ 150mm	A
RG1	400	600	-	3- ϕ 20	3- ϕ 20	5- ϕ 20	3- ϕ 20	-	-	3- ϕ 16	ϕ 12 @ 1-50mm, 8 @ 75mm, REST @ 150mm	B

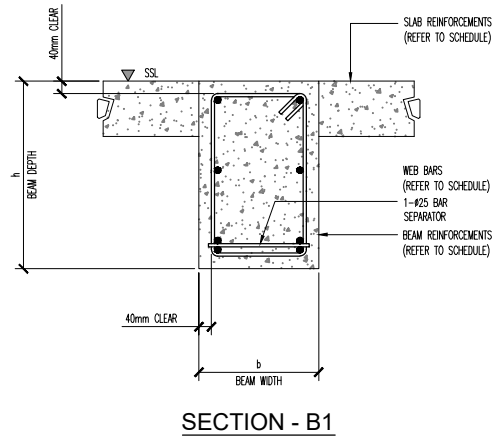
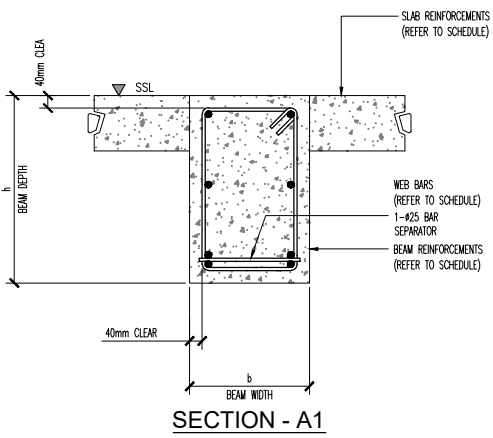
TYPE OF STIRRUPS									
TYPE "A"		TYPE "B"		TYPE "C"		TYPE "D"		TYPE "E"	
SINGLE LINE	DOUBLE LINE	SINGLE LINE	DOUBLE LINE	SINGLE LINE	DOUBLE LINE	SINGLE LINE	DOUBLE LINE	SINGLE LINE	DOUBLE LINE



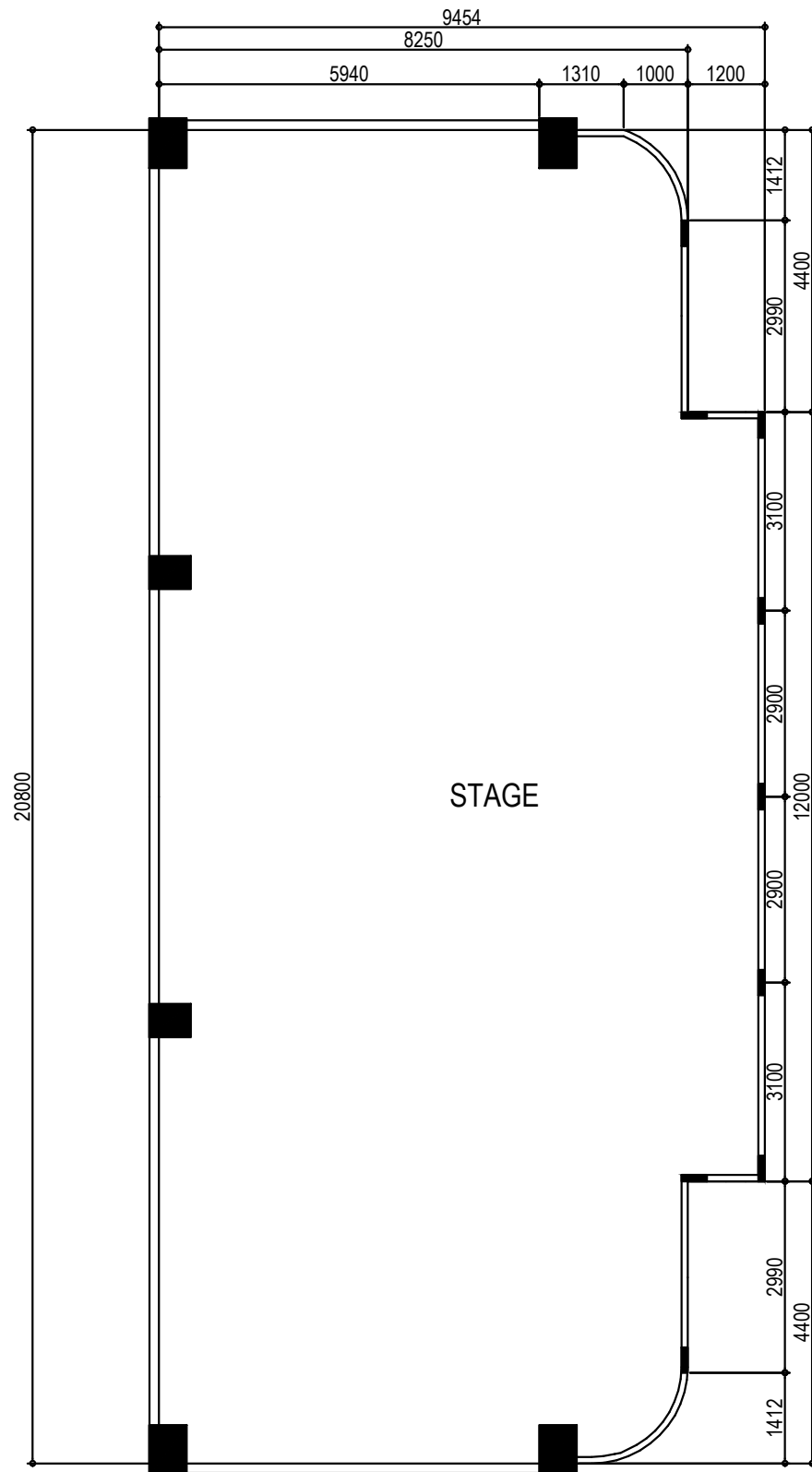
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S-10
SCALE
TYPICAL ELEVATION INTERMEDIATE FRAME BEAMS SHOWING BAR CUT-OFF
N.T.S



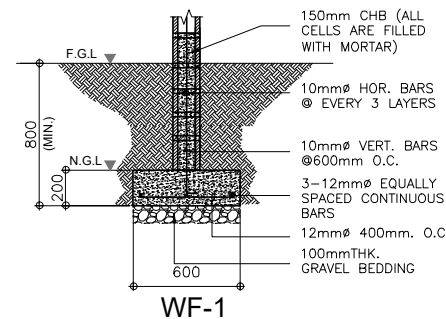
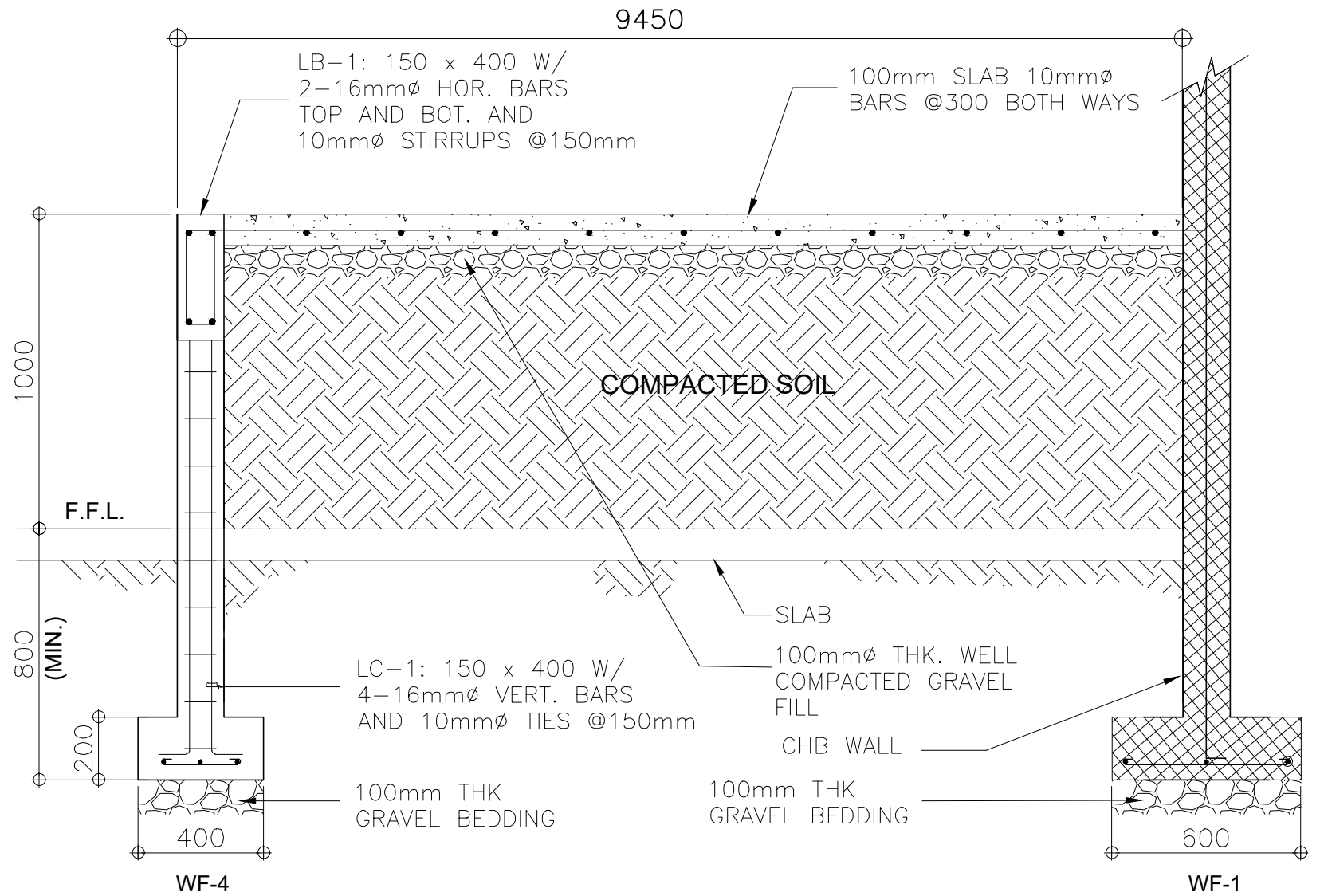
2
S-10
SCALE
TYPICAL ELEVATION SEISMIC FRAME BEAMS SHOWING BAR CUT-OFF
N.T.S



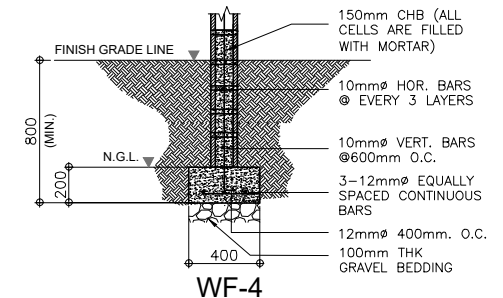
PROJECT TITLE / LOCATION :		SHEET CONTENT :		DRAFTED :		REVIEWED :		SUBMITTED :		RECOMMENDED :		APPROVED :		SET NO.	SHEET NO.
CONVERGENCE AND SPECIAL SUPPORT PROGRAM (CSSP) BASIC INFRASTRUCTURE PROGRAM (BIP) MULTI-PURPOSE BUILDING / FACILITIES TO SUPPORT SOCIAL SERVICES CONSTRUCTION OF MULTI-PURPOSE BUILDING, PHASE 1 BARANGAY SAN JOSE SAN PABLO CITY, LAGUNA		+TYPICAL ELEVATION SEISMIC FRAME BEAMS SHOWING BAR CUT-OFF +TYPICAL ELEVATION INTERMEDIATE FRAME BEAMS SHOWING BAR CUT-OFF		CHRISTOPHER D BERON ENGINEERING AIDE B PREPARED : KING NOAH S. MONDUGAR ENGINEERING ASSISTANT		JOEY CHRISTIAN L. DAYO ENGINEER II DATE :		LUDY MITZI J. MAHENCIO ENGINEER II Officer-in-Charge Planning and Design Section DATE :		MA. SHIRLEY M. SAMIANO Officer-in-Charge Office of the Assistant District Engineer DATE :		CARLOS C. MUERE Officer-in-Charge Office of the District Engineer DATE :		S 10/23	19 34



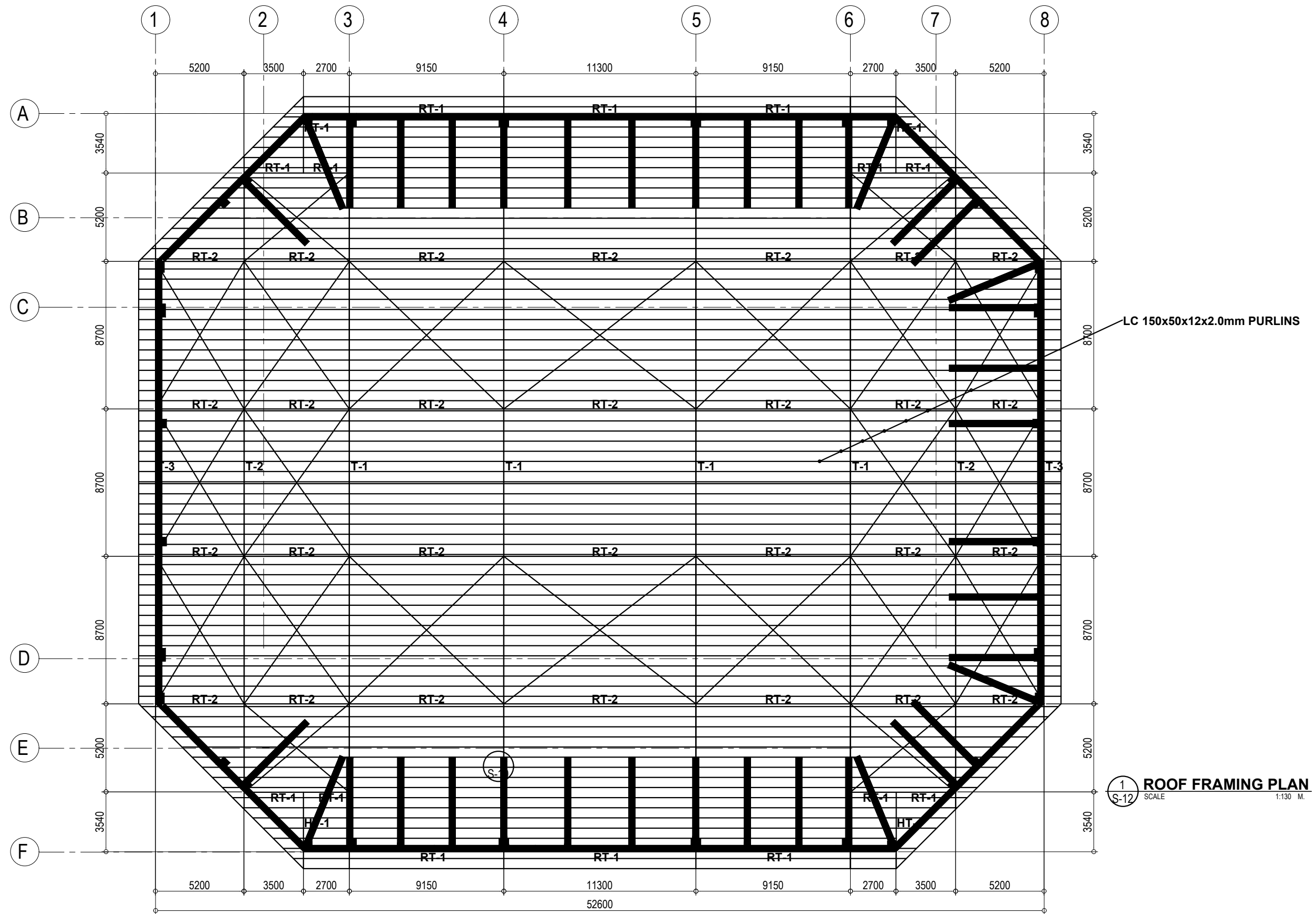
1
S-11 SCALE N.T.S.



5
S-3 SCALE 1:20 M.



WF-4



1 ROOF FRAMING PLAN
S-12 SCALE 1:130 M.



Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
LAGUNA 3RD DISTRICT ENGINEERING OFFICE
Mariktor Subd., Brgy. Del Remedio, San Pablo City, Region IV-A

PROJECT TITLE / LOCATION :

CONVERGENCE AND SPECIAL SUPPORT PROGRAM (CSSP)
BASIC INFRASTRUCTURE PROGRAM (BIP)
MULTI-PURPOSE BUILDING / FACILITIES TO SUPPORT SOCIAL SERVICES
CONSTRUCTION OF MULTI-PURPOSE BUILDING, PHASE 1
BARANGAY SAN JOSE
SAN PABLO CITY, LAGUNA

SHEET CONTENT :

*ROOF FRAMING PLAN

DRAFTED :

CHRISTOPHER D. BERON
ENGINEERING AIDE B

PREPARED :

KING NOAH S. MONDUGAR
ENGINEERING ASSISTANT

REVIEWED :

JOEY CHRISTIAN L. DAYO
ENGINEER II

DATE :

SUBMITTED :

LUDY MITZI J. MAHENCIO
ENGINEER II
Officer-in-Charge
Planning and Design Section

DATE :

RECOMMENDED :

MA. SHIRLEY M. SAMIANO
Officer-in-Charge
Office of the Assistant District Engineer

DATE :

APPROVED :

CARLOS C. MUERE
Officer-in-Charge
Office of the District Engineer

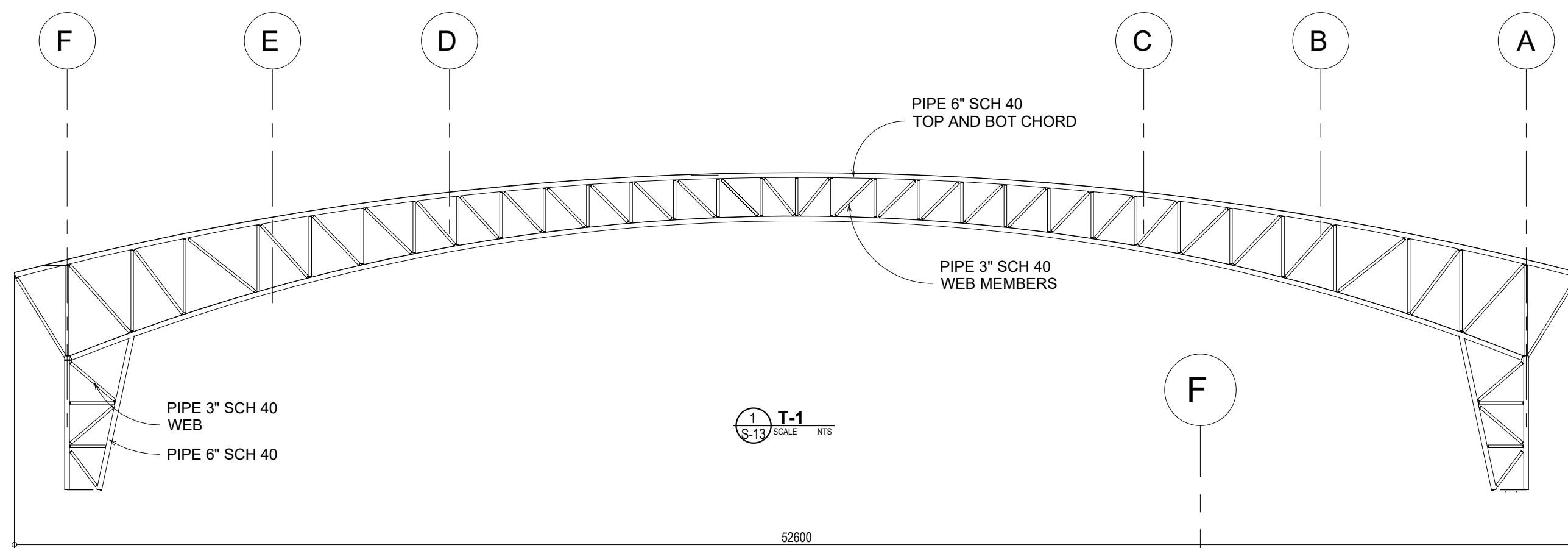
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SET NO.

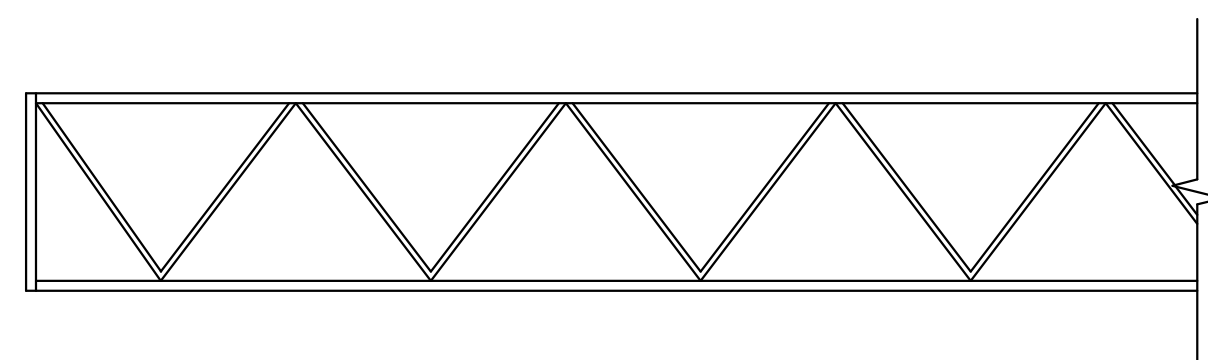
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12/23

SHEET NO.

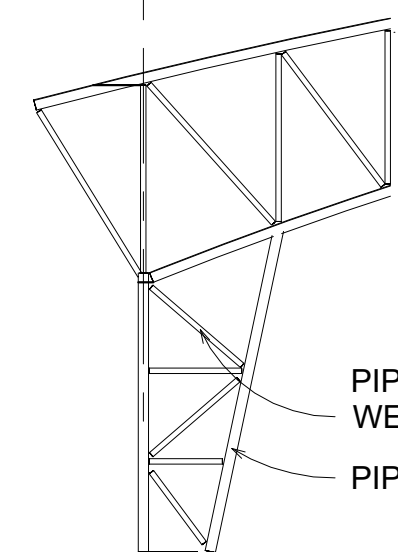
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34




1 T-1
S-13 SCALE NTS

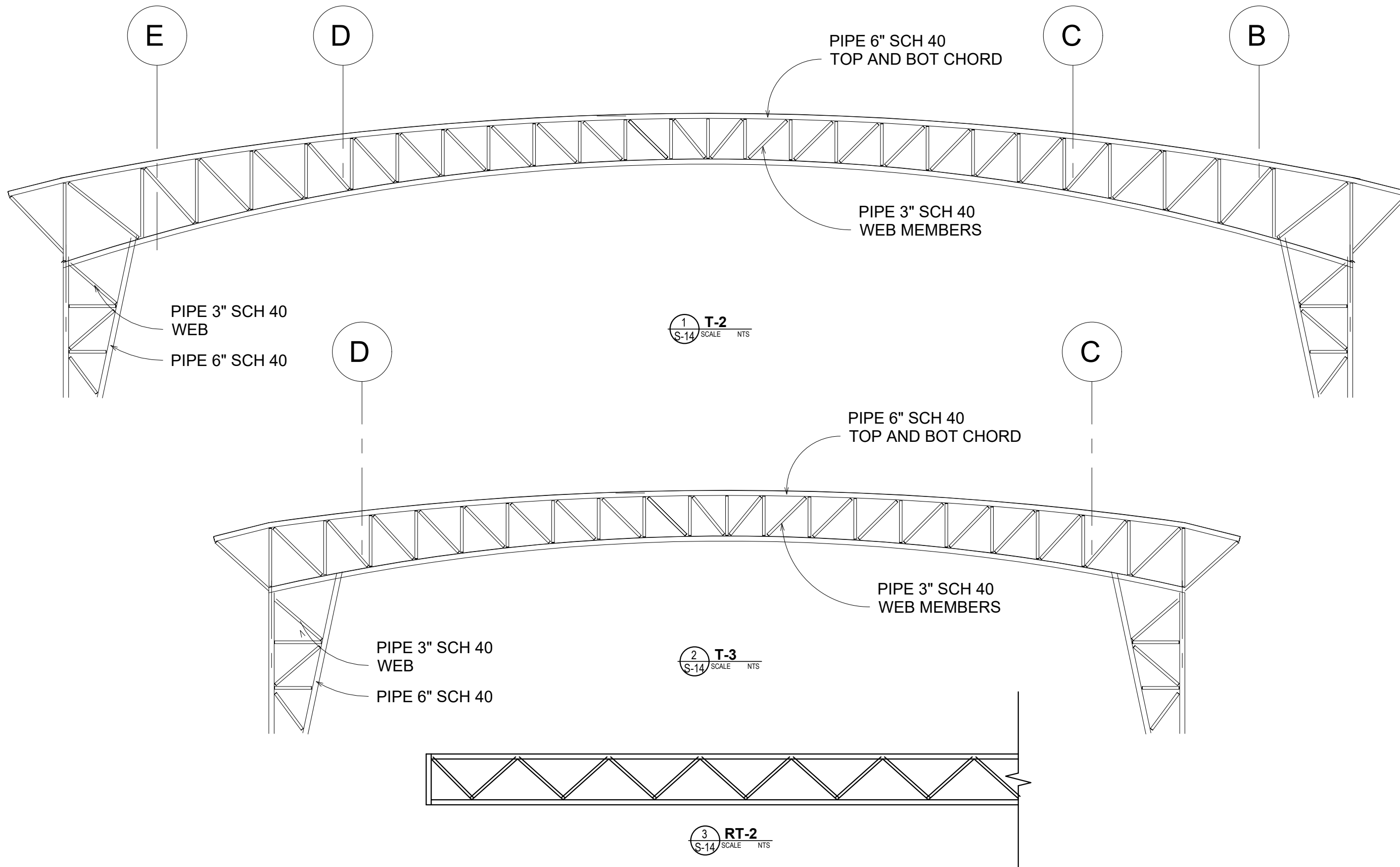



2 RT-1
S-13 SCALE NTS

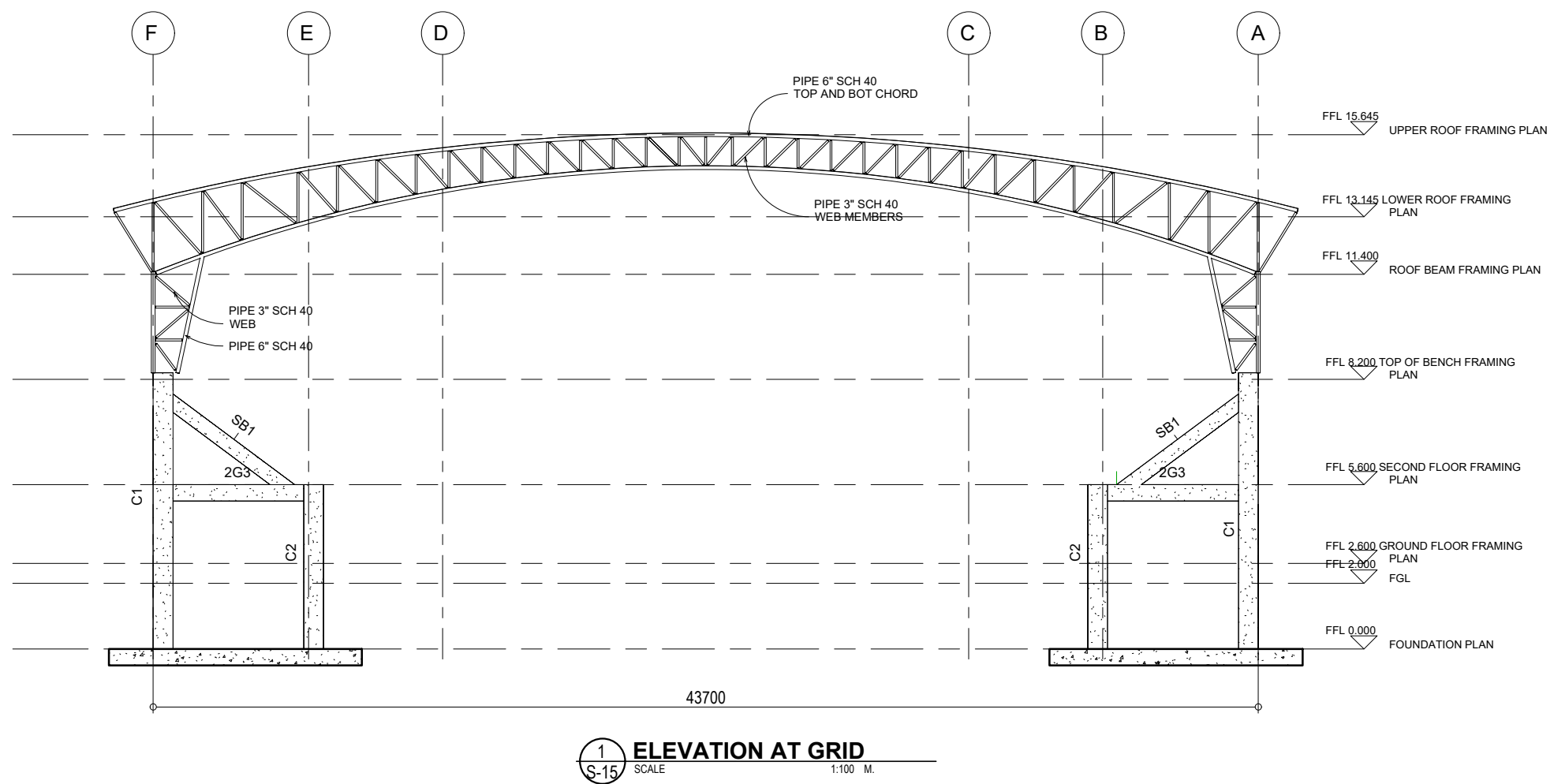


3 HT-1
S-13 SCALE NTS

 <p>Republic of the Philippines DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS LAGUNA 3rd DISTRICT ENGINEERING OFFICE Marikor Subd., Brgy. Del Remedio, San Pablo City, Region IV-A</p>	PROJECT TITLE / LOCATION :	SHEET CONTENT :	DRAFTED :	REVIEWED :	SUBMITTED :	RECOMMENDED :	APPROVED :	SET NO.	SHEET NO.
	<p>CONVERGENCE AND SPECIAL SUPPORT PROGRAM (CSSP) BASIC INFRASTRUCTURE PROGRAM (BIP) MULTI-PURPOSE BUILDING / FACILITIES TO SUPPORT SOCIAL SERVICES CONSTRUCTION OF MULTI-PURPOSE BUILDING, PHASE 1 BARANGAY SAN JOSE SAN PABLO CITY, LAGUNA</p>	<p>+RT-1 +T-1 +HT-1</p>	<p>CHRISTOPHER D BERON ENGINEERING AIDE B</p> <p>PREPARED : KING NOAH S. MONDUGAR ENGINEERING ASSISTANT</p>	<p>JOEY CHRISTIAN L. DAYO ENGINEER II</p> <p>DATE :</p>	<p>LUDY MITZI J. MAHENCIO ENGINEER II Officer-in-Charge Planning and Design Section</p> <p>DATE :</p>	<p>MA. SHIRLEY M. SAMIANO Officer-in-Charge Office of the Assistant District Engineer</p> <p>DATE :</p>	<p>CARLOS C. MUERE Officer-in-Charge Office of the District Engineer</p> <p>DATE :</p>	<p>S 13/23</p>	<p>22 34</p>

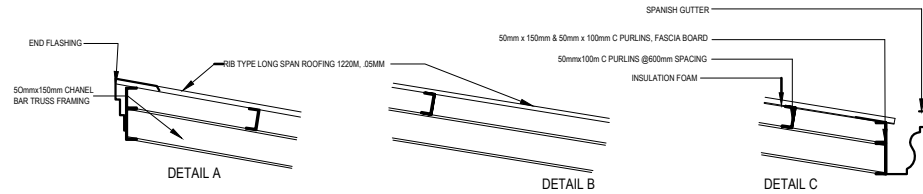


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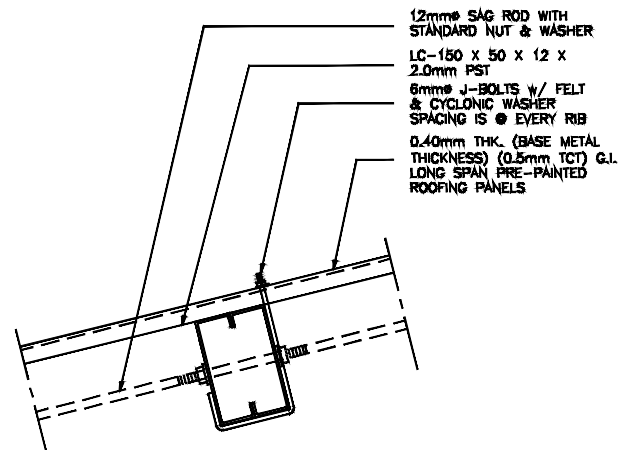


Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
LAGUNA 3RD DISTRICT ENGINEERING OFFICE
Mariktor Subd., Brgy. Del Remedio, San Pablo City, Region IV-A

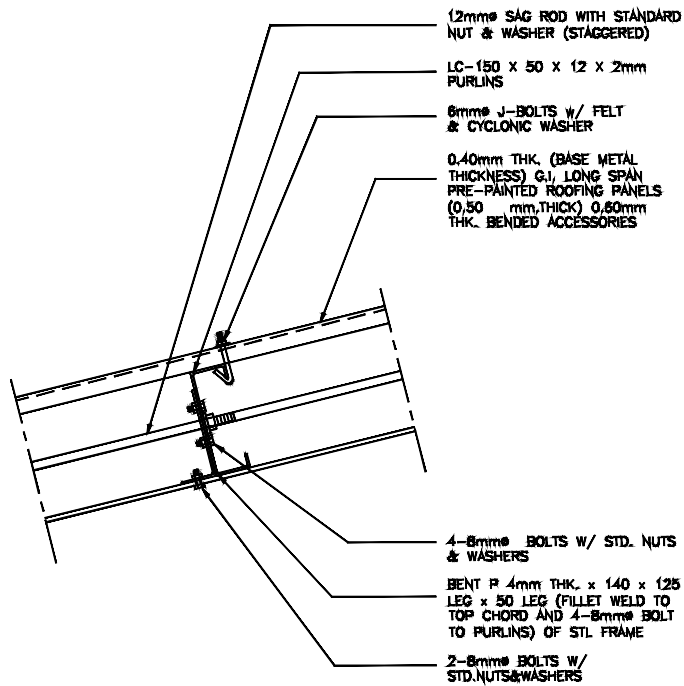
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		PREPARED : KING NOAH S. MONDUGAR ENGINEERING ASSISTANT						
			DATE :	DATE :	DATE :	DATE :		



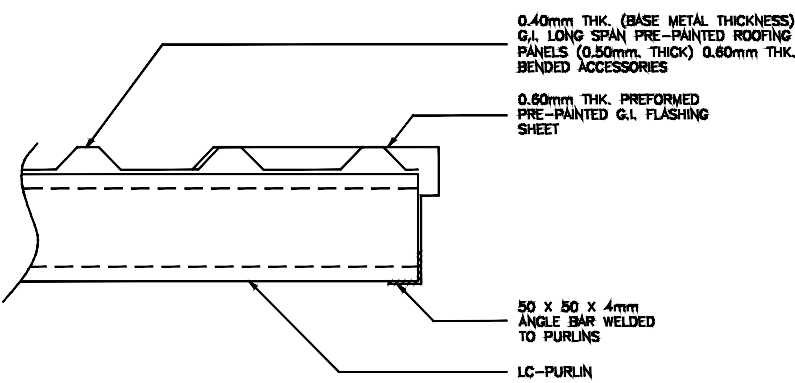
1 TRUSS DETAILS
S-16 SCALE 1:30 M.



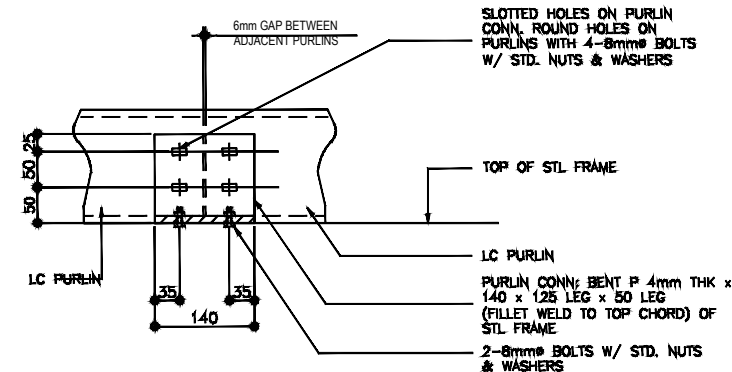
4 CONN. DETAIL PST TO ROOFING
S-16 SCALE 1:5 M.



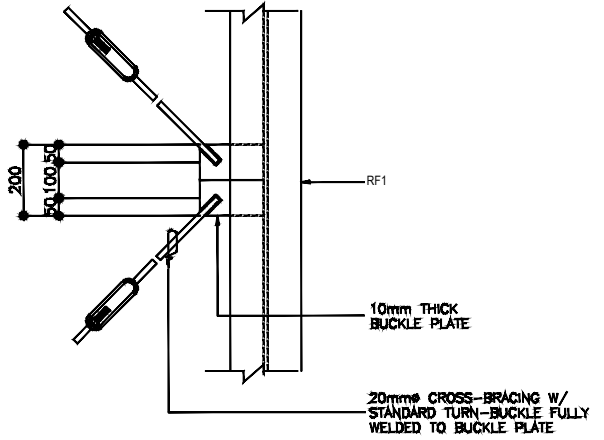
7 CONN. DETAIL P1 TO ROOFING
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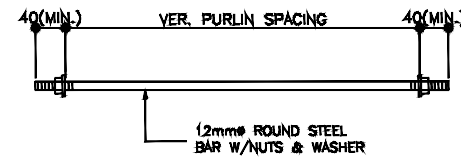
2 DETAIL OF END SIDE ROOFING
S-16 SCALE 1:5 M.



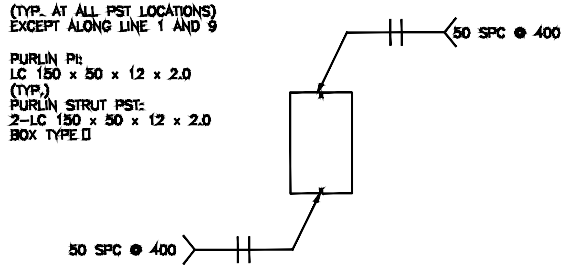
6 DET. PURLIN CONNECTION
S-16 SCALE 1:5 M.



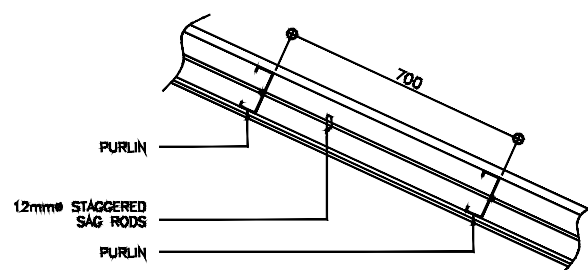
8 CONNECTION DETAIL OF CROSS BRACING
S-16 SCALE 1:10 M.



3 DET. SAG RODS
S-16 SCALE 1:5 M.



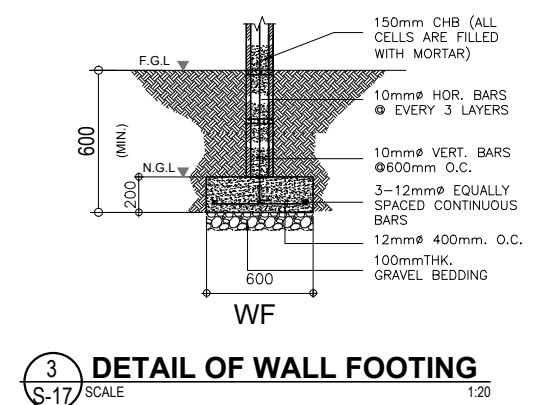
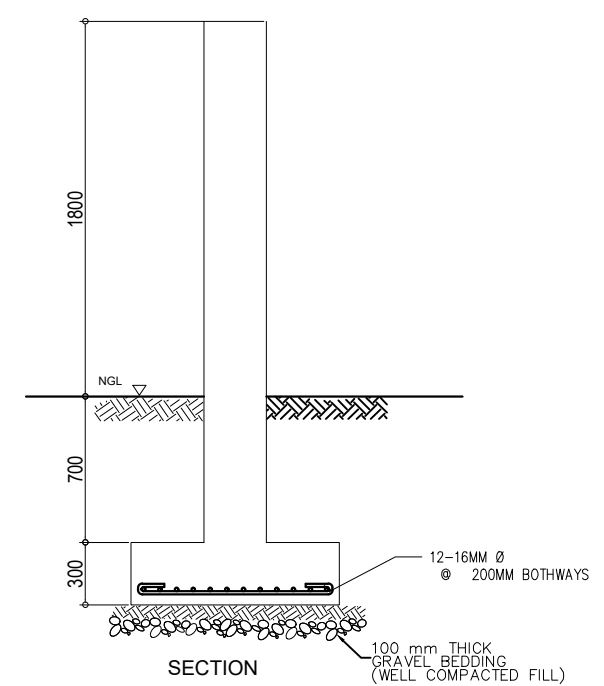
5 DET. PURLIN STRUT PST
S-16 NOT TO SCALE



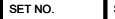


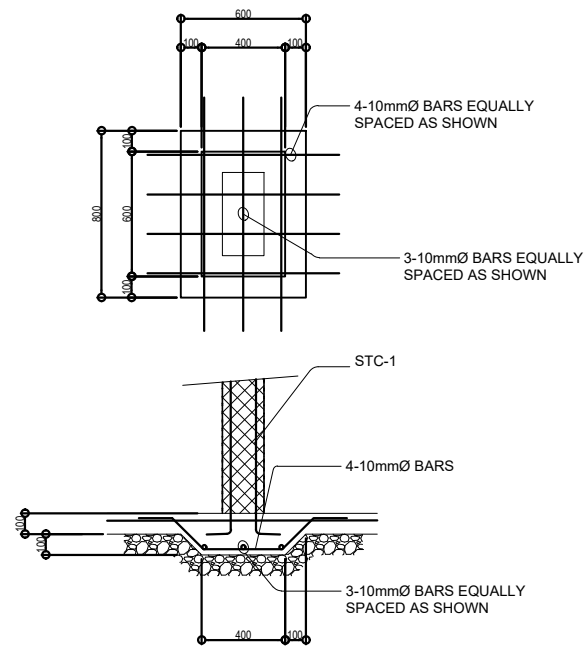
9 DETAIL SAG ROD CONN.
S-16 SCALE 1:10 M.

NOTE:
PURSUANT TO SECTION 4 OF ANNEX "A" OF THE REVISED IMPLEMENTING RULES AND REGULATIONS OF RA 9184, APPROVAL BY THE AUTHORIZED DPWH OFFICIALS OF DETAILED ENGINEERING SURVEYS AND DESIGN UNDERTAKEN BY CONSULTANTS NEITHER DIMINISHES THE RESPONSIBILITY OF THE LATTER FOR THE TECHNICAL INTEGRITY OF THE SURVEYS AND DESIGN NOR TRANSFER ANY PART OF THAT RESPONSIBILITY TO THE APPROVING OFFICIALS.

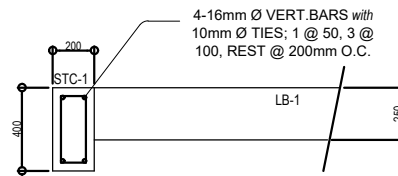
THE DESIGN CONSULTANT SHALL BE HELD FULLY RESPONSIBLE FOR THE FAILURE OF THE FACILITY/ES/STRUCTURES DUE TO FAULTY DESIGN EXCEPT FOR THE CHANGES MADE WITHOUT THE CONFORMITY OF THE CONSULTANTS.



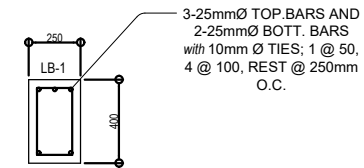
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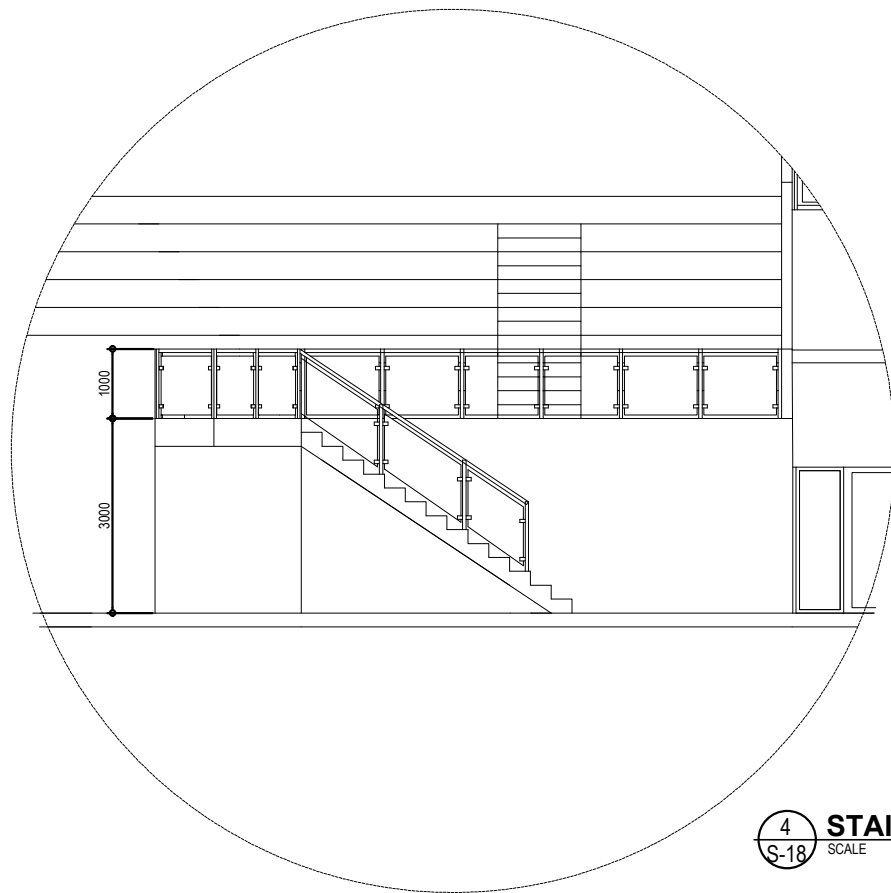
1 STAIRWAY FOOTING (SF-1) DETAIL
SCALE 1:20 M.



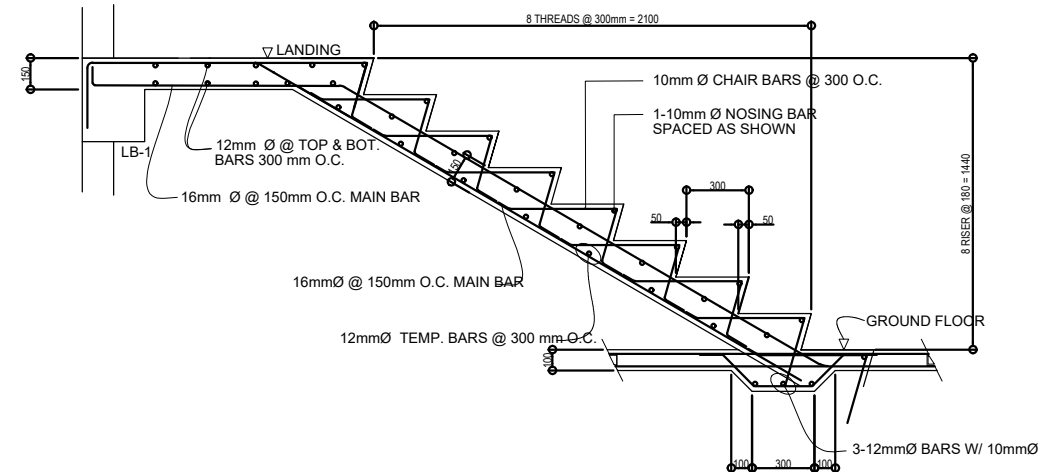
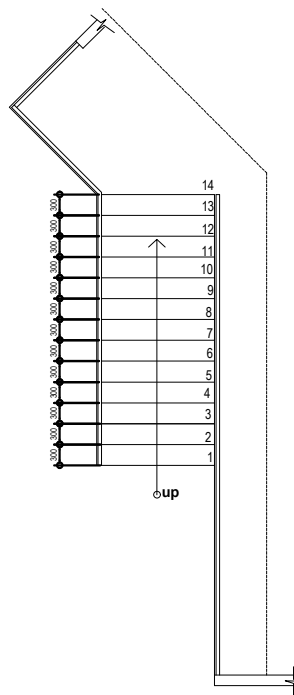
2 DETAIL OF STAIRWAY COLUMN (STC-1)
SCALE 1:20 M.



3 DETAIL OF LANDING BEAM (LB-1)
SCALE 1:20 M.



4 STAIR ELEVATION
SCALE 1:60 M.



5 DET. SECTION OF STAIR
SCALE: 1:40 m.



Republic of the Philippines
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LAGUNA 3RD DISTRICT ENGINEERING OFFICE
Mariktor Subd., Brgy. Del Remedio, San Pablo City, Region IV-A

PROJECT TITLE / LOCATION :
CONVERGENCE AND SPECIAL SUPPORT PROGRAM (CSSP)
BASIC INFRASTRUCTURE PROGRAM (BIP)
MULTI-PURPOSE BUILDING / FACILITIES TO SUPPORT SOCIAL SERVICES
CONSTRUCTION OF MULTI-PURPOSE BUILDING, PHASE 1
BARANGAY SAN JOSE
SAN PABLO CITY, LAGUNA

SHEET CONTENT :
+STAIR FOOTING DETAIL
+STAIRWAY DETAIL
+LANDING BEAM
+STAIR ELEVATION
+STAIR SECTION

DRAFTED :
CHRISTOPHER D BERON
ENGINEERING AIDE B
PREPARED :
KING NOAH S. MONDUGAR
ENGINEERING ASSISTANT

REVIEWED :
JOEY CHRISTIAN L. DAYO
ENGINEER II
DATE :

SUBMITTED :
LUDY MITZI J. MAHENCIO
ENGINEER II
Officer-in-Charge
Planning and Design Section
DATE :

RECOMMENDED :
MA. SHIRLEY M. SAMIANO
Officer-in-Charge
Office of the Assistant District Engineer
DATE :

APPROVED :
CARLOS C. MUERE
Officer-in-Charge
Office of the District Engineer
DATE :

SET NO.
S
18/23

SHEET NO.
27
34

LEGENDS, SYMBOLS AND ABBREVIATION

NORTH SIGN	
GRID COORDINATES	
CL OF PROJECT ROAD	
PROJECT ROAD	
RIGHT OF WAY LIMIT	
POINT OF INTERSECTION	
FINISHED GRADE ON PROFILE	
NEW BRIDGE	
SINGLE RC PIPE CULVERT	
DOUBLE RC PIPE CULVERT	
BOX CULVERT	
EARTH DITCH FLOW	
TRANSVERSE DIRECTION OF FLOW	
GUARDRAIL ON PLAN	
GUARDRAIL ON PROFILE	
RIPRAP	
RUBBLE MASONRY RETAINING WALL	
LIMIT OF PROPOSED RIPRAP	
PLAN VIEW OF SLOPE PROTECTION	
HIDDEN LINE	
LINE OF SYMMETRY	
INDICATION OF ELEVATION	ELEV. 5.15
EMBANKMENT	
EXCAVATION	
SECTION IN WATER	
SECTION IN EARTH	
ELASTOMERIC PAD	
LIMIT OF AREA COVERED BY BARS	
BUNDLED BARS	
GOVERNMENT BUILDING	
NIPA HUT	
CHURCH/CHAPEL	
WOODEN ELECTRIC POST	
BENCH MARK	

ACP	ASPHALT CONCRETE PAVEMENT
AZM	AZIMUTH
BLDG	BUILDING
BM	BENCH MARK
BOQ	BILL OF QUANTITY
BR	BRIDGE
BRDY	BOUNDARY
BRGY	BARANGAY
BVCE	BEGIN OF VERTICAL CURVE ELEV.
BVCS	BEGIN OF VERTICAL CURVE STATION
BW	BOTHWAYS
CEP	CONCRETE ELECTRIC POST
CM	CURB INLET MANHOLE
CL	CENTERLINE
cm	CENTIMETER
CS	CURB TO SPIRAL
CTP	CONCRETE TELEPHONE POST
CU	CULVERT
D	DEGREE OF CURVE
DIST	DISTANCE
DLI - 01	DRAINAGE MANHOLE MEMBER
DPWH	DEPARTMENT OF PUBLIC WORKS AND HIGHWAY
E	EXTERNAL DISTANCE / EASTING
e	SUPER ELEVATION
EB	EAST BOUND
ELEV.	ELEVATION
EXTG.	EXISTING
g	GRADIENT
GV	GATE VALVE
HOR	HORIZONTAL
I	INTERSECTION ANGLE
IIE	INLET INVERT ELEVATION
INTL	INTERNATIONAL
KMS	KILOMETERS
L	LEFT / LENGTH
Lc	LENGTH OF HORIZONTAL CURVE
Lm	LINEAR METER
LP	STEEL LIGHT POST
LT	LEFT
LVC	LENGTH OF VERTICAL CURVE
M	METER
Max	MAXIMUM
MH	MANHOLE
mm	MILLIMETER
Mo	MIDDLE ORDINATE
MUN	MUNICIPAL
MWSS	MANILA WATER SEWERAGE SYSTEM
NB	NORTH BOUND
O.C.	ON CENTER
OIE	OUTLET INVERT ELEVATION
PC	POINT OF CURVE
PCCP	PORTLAND CONCRETE CEMENT PAVEMENT
PI	POINT OF INTERSECTION
PT	POINT OF TANGENCY
PVI	POINT OF VERTICAL INTERSECTION
PVC	POINT OF VERTICAL CURVE
PVT	POINT OF VERTICAL TANGENCY
R	RADIUS
RC	REINFORCED CONCRETE
RCBC	REINFORCED CONCRETE BOX CULVERT
RPCP	REINFORCED CONCRETE PIPE CULVERT
RD	ROAD
RROW	ROAD RIGHT - OF - WAY
RT	RIGHT
S	NORMAL CROSSFALL
SB	SOUTH BOUND
SHLDR	SHOULDER
STA	STATION
STD	STANDARD
STP	STEEL TELEPHONE POST
SW	SOUTHWEST
T	TANGENT
TBM	TEMPORARY BENCH MARK
VC	VERTICAL CURVE
VERT, V	VERTICAL
W	WIDENING
WB	WEST BOUND
WW	WINGWALL
ø	DIAMETER
NC	NORMAL CROWN

GENERAL NOTES :

I. DESIGN CRITERIA AND SPECIFICATIONS

1. DPWH DESIGN GUIDELINES, CRITERIA, AND STANDARDS (DGCS) - VOLUME III 2015 EDITION
2. DPWH STANDARD SPECIFICATIONS FOR HIGHWAYS, BRIDGES, AND AIRPORTS - VOLUME II, LATEST EDITION
3. DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES (BUILDINGS, PORTS AND HARBORS, FLOOD CONTROL AND DRAINAGE STRUCTURES AND WATER SUPPLY SYSTEMS) - VOLUME III, 2019 EDITION

II. DESIGN CONDITIONS

1. SURCHARGE LOAD APPLIED = 10kPa
2. SEISMIC COEFFICIENTS:
Kh = -0.10
Kv = 0.00
3. ASSUMED PROPERTIES :
NATURAL SOIL ON SITE
UNIT WEIGHT: Y = 19 - 20 kN/m³
ANGLE OF INTERNAL FRICTION: φ = 20° - 22°
COHESION OF SOIL: c_{ef} = 10 - 15 kPa
ANGLE OF FRICTION STRUC. - SOIL δ = 7° - 10°
SOIL (PRESSURE AT REST) cohesionless
SATURATED UNIT WEIGHT: y_{sat} = 19 - 20 kN/m³
EMBANKMENT (DEGREE OF COMPACTION ≥ 95%)
UNIT WEIGHT: Y = 18 - 20 kN/m³
ANGLE OF INTERNAL FRICTION: φ = 25° - 30°
ANGLE OF FRICTION STRUC. -SOIL δ = 8° - 10°
SOIL (PRESSURE AT REST) cohesionless
SATURATED UNIT WEIGHT: y_{sat} = 19 - 21 kN/m³

III. SPECIAL NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
2. ALL CONCRETE SHALL BE CLASS "A" (1 : 2 : 4).
3. MINIMUM CLEARANCE BETWEEN REINFORCING STEEL AND SURFACE OF CONCRETE SHALL BE 75mm FOR VERTICAL WALL AND 100mm FOR THE FOOTING.
4. DESIGNED FOR LEVEL EARTH SURFACE WITH PROVISION AGAINST OVERTURNING FOR POSSIBLE INCREASE OF 50% IN ORDINARY EARTH PRESSURE.
5. ALL REINFORCING BARS SHALL CONFORM TO ASTM A615/A615M, USE MINIMUM GRADE 40 (fy = 276 MPa) FOR BARS WITH DIAMETER EQUAL TO OR LESS THAN 12mm, AND UNSE MINIMUM GRADE 60 (fy = 414 MPa) FOR BARS WITH DIAMETER EQUAL TO OR GREATER THAN 16mm
6. BAR BENDING, SPLICING AND OTHER REQUIREMENTS SHALL CONFORM TO ITEM 404 - REINFORCING STEEL OF THE DPWH STANDARD SPECIFICATIONS FOR HIGHWAYS, BRIDGES, AND AIRPORTS - VOLUME II, LATEST EDITION.
7. NO SPLICE SHALL BE MADE FROM THE BOTTOM OF THE WALL UP TO ¼ OF ITS HEIGHT NOR MORE THAN ¼ OF THE BARS BE SPLICED IN THE SAME CROSS SECTION.
8. ALLOWABLE SOIL BEARING CAPACITY SHALL BE GREATER THAN THE MAXIMUM PRESSURE AT TOE INDICATED IN THE SECTION DETAILS. IN CASE ALLOWABLE SOIL BEARING IS LESS THAN THE INDICATED MAXIMUM PRESSURE, GROUND IMPROVEMENT/FOUNDATION SHALL BE DESIGNED SEPARATELY.
9. SCOUR PROTECTION WORKS, EG. GABION, MATTRESS, PRECAST BLOCKS, ETC. SHALL BE PROVIDED. DIMENSIONS AND TYPE SHALL BE DETERMINED BASED ON THE RESULT OF HYDRAULIC & SCOUR ANALYSIS.
10. ACTUAL DESIGN CONDITIONS AND REQUIREMENTS SHALL BE VERIFIED PRIOR ADOPTION OF DETAILS INDICATED IN THIS STANDARD PLAN.

BAR DIAMETER (MM)	SPLICE LENGTH Ld (MM)	BAR DIAMETER (MM)	SPLICE LENGTH Ld (MM)
12	350	12	350
16	465	16	465
20	580	20	580
25	925	25	925

IV. HOOK, BENDS AND SPLICER

1. DIMENSIONS OF 90-DEGREES AND 180-DEGREES HOOKS
2. SPLICES SHALL BE SECURELY WIRED TOGETHER AND SHALL LAP OR EXTEND IN ACCORDANCE WITH THE FOLLOWING TABLE (TABLE OF LAP SPLICES AND ANCHORAGE LENGTHS) UNLESS OTHERWISE SHOWN ON DRAWINGS. SPLICES SHALL NOT BE MORE THAN 50% OF THE BARS AT ANY ONE POINT.

FOR GRADE 40 REBARS WITH
CONCRETE COMPRESSIVE
STRENGTH f_c = 21 MPa

FOR GRADE 60 REBARS WITH
CONCRETE COMPRESSIVE
STRENGTH f_c = 21 MPa






PIN DIAMETER: D= 6d FOR Ø10 THRU Ø25



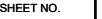
STANDARD SIZE OF BARS (MM)	6M RETAINING WALL				5M RETAINING WALL				4M RETAINING WALL				3M RETAINING WALL				2M RETAINING WALL			
	FRONT WALL	BACK WALL	TOP BASE	BOTTOM BASE	FRONT WALL	BACK WALL	TOP BASE	BOTTOM BASE	FRONT WALL	BACK WALL	TOP BASE	BOTTOM BASE	FRONT WALL	BACK WALL	TOP BASE	BOTTOM BASE	FRONT WALL	BACK WALL	TOP BASE	BOTTOM BASE
12.0000													250	100	140	250	250	200	250	250
16.0000									200	90	90	200	250	125	140	250				
20.0000					200	80	100	200	200	125	140	250								
25.0000	200	80	120	200	250	120	160	250												

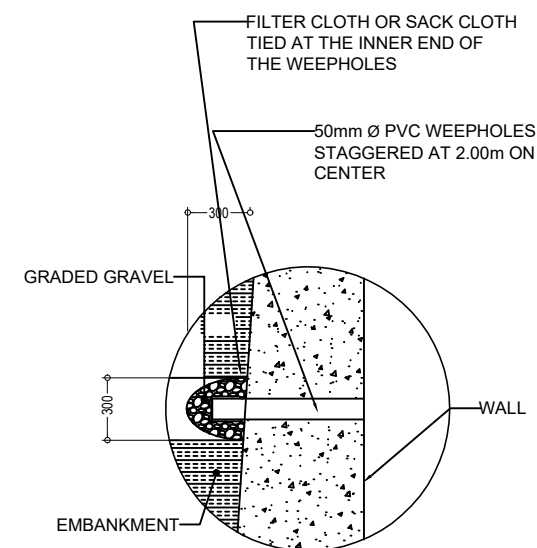
NOTE: UNIFORM BAR SIZE SHALL BE USED PER STRUCTURES HEIGHT. COMBINATION OF BAR SIZES INDICATED IN THE TABLE WAS NOT COVERED IN THIS STANDING PLAN. SHRINKAGE BARS SHALL BE PROVIDED WITH MAXIMUM SPACING AT EVERY 250mm ON BOTH VERTICAL WALL AND FOOTING

1
1 SIZE AND SPACING OF REINFORCEMENT BARS
SCALE: 1:1

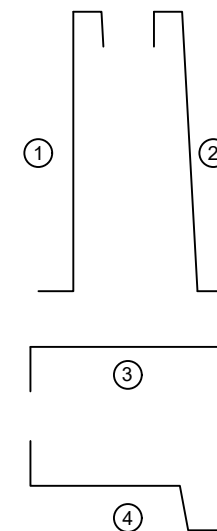
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 <p>Republic of the Philippines DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS LAGUNA 3RD DISTRICT ENGINEERING OFFICE Mariflor Subd., Brgy. Del Remedio, San Pablo City, Region IV-A</p>	PROJECT TITLE / LOCATION :	SHEET CONTENT :	DRAFTED :	REVIEWED :	SUBMITTED :	RECOMMENDED :	APPROVED :	SET NO.	SHEET NO.
	<p>CONVERGENCE AND SPECIAL SUPPORT PROGRAM (CSP) BASIC INFRASTRUCTURE PROGRAM (BIP) MULTI-PURPOSE BUILDING / FACILITIES TO SUPPORT SOCIAL SERVICES CONSTRUCTION OF MULTI-PURPOSE BUILDING, PHASE 1 BARANGAY SAN JOSE SAN PABLO CITY, LAGUNA</p>	<p>+TYPICAL CROSS SECTION DETAIL</p>	<p>CHRISTOPHER D BERON ENGINEERING AIDE B</p> <p>PREPARED :</p> <p>KING NOAH S. MONDUGAR ENGINEERING ASSISTANT</p>	<p>JOEY CHRISTIAN L. DAYO ENGINEER II</p> <p>DATE :</p>	<p>LUDY MITZI J. MAHENCIO ENGINEER II Officer-in-Charge Planning and Design Section</p> <p>DATE :</p>	<p>MA. SHIRLEY M. SAMIANO Officer-in-Charge Office of the Assistant District Engineer</p> <p>DATE :</p>	<p>CARLOS C. MUERE Officer-in-Charge Office of the District Engineer</p> <p>DATE :</p>		






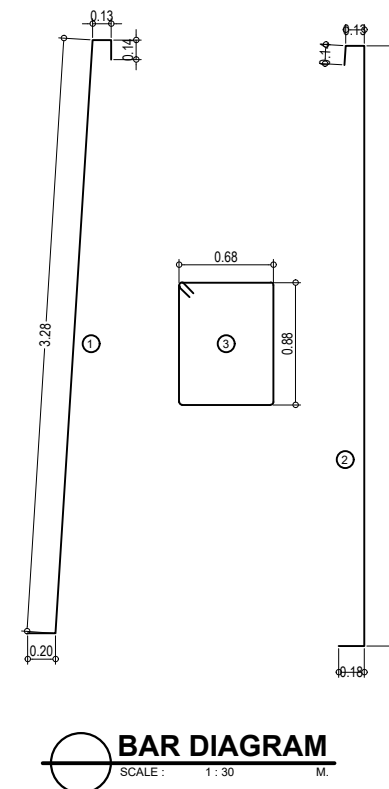
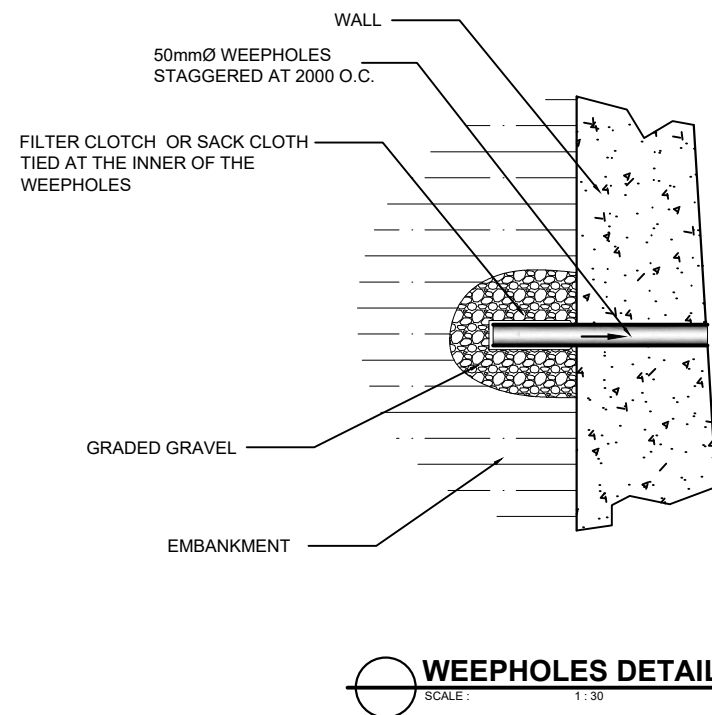
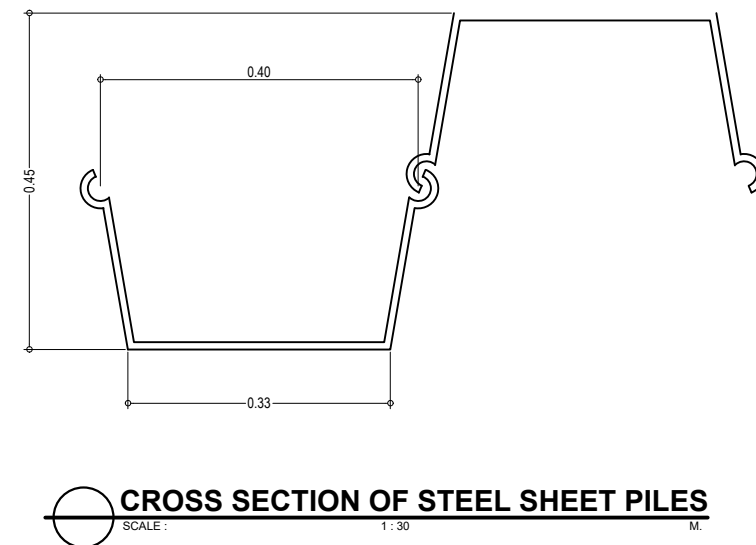
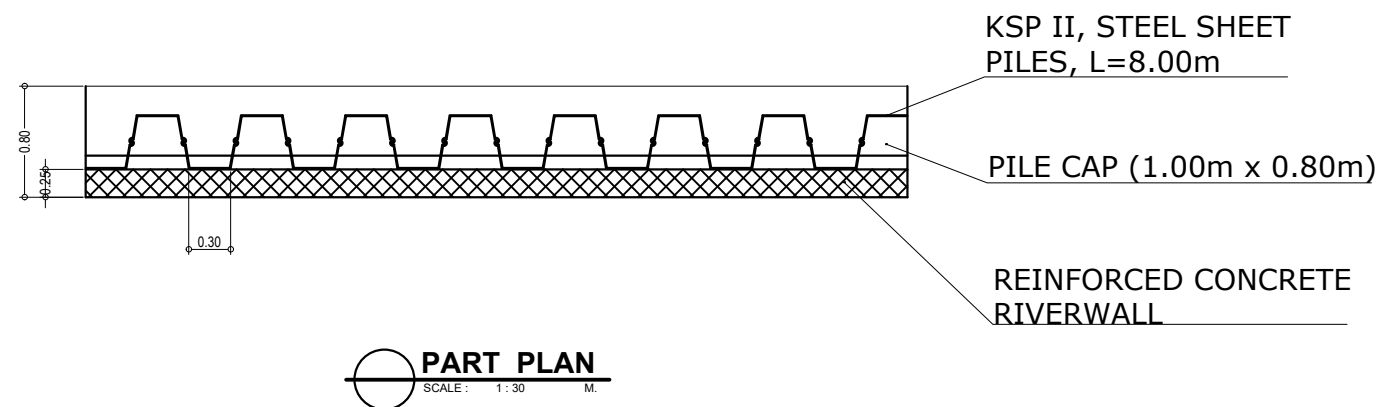
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SCALE: _____ NTS

SCALE: (MAX. PRESSURE AT TOE = 228.86 kPa) 1:50

 <p>Republic of the Philippines DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS LAGUNA 3RD DISTRICT ENGINEERING OFFICE Mariflor Subd., Brgy. Del Remedio, San Pablo City, Region IV-A</p>	PROJECT TITLE / LOCATION :	SHEET CONTENT :	DRAFTED :	REVIEWED :	SUBMITTED :	RECOMMENDED :	APPROVED :	SET NO.	SHEET NO.
	<p>CONVERGENCE AND SPECIAL SUPPORT PROGRAM (CSSP) BASIC INFRASTRUCTURE PROGRAM (BIP) MULTI-PURPOSE BUILDING / FACILITIES TO SUPPORT SOCIAL SERVICES CONSTRUCTION OF MULTI-PURPOSE BUILDING, PHASE 1 BARANGAY SAN JOSE SAN PABLO CITY, LAGUNA</p>	<p>+SECTION OF 6M. RET. WALL +ARRANGEMENT OF WEEPHOLES +CUT SHAPES FOR TRANSVERSE REINFORCEMENT</p>	<p>CHRISTOPER D BERON ENGINEERING AIDE B</p> <p>PREPARED :</p> <p>KING NOAH S. MONDUGAR ENGINEERING ASSISTANT</p>	<p>JOEY CHRISTIAN L. DAYO ENGINEER II</p> <p>DATE :</p>	<p>LUDY MITZI J. MAHENCIO ENGINEER II Officer-in-Charge Planning and Design Section</p> <p>DATE :</p>	<p>MA. SHIRLEY M. SAMIANO Officer-in-Charge Office of the Assistant District Engineer</p> <p>DATE :</p>	<p>CARLOS C. MUERE Officer-in-Charge Office of the District Engineer</p> <p>DATE :</p>		





THIS IS WHERE YOUR TAXES GO

NAME OF PROJECT:

LOCATION:

NAME OF CONTRACTOR:

DATE STARTED:

CONTRACT COMPLETION DATE:

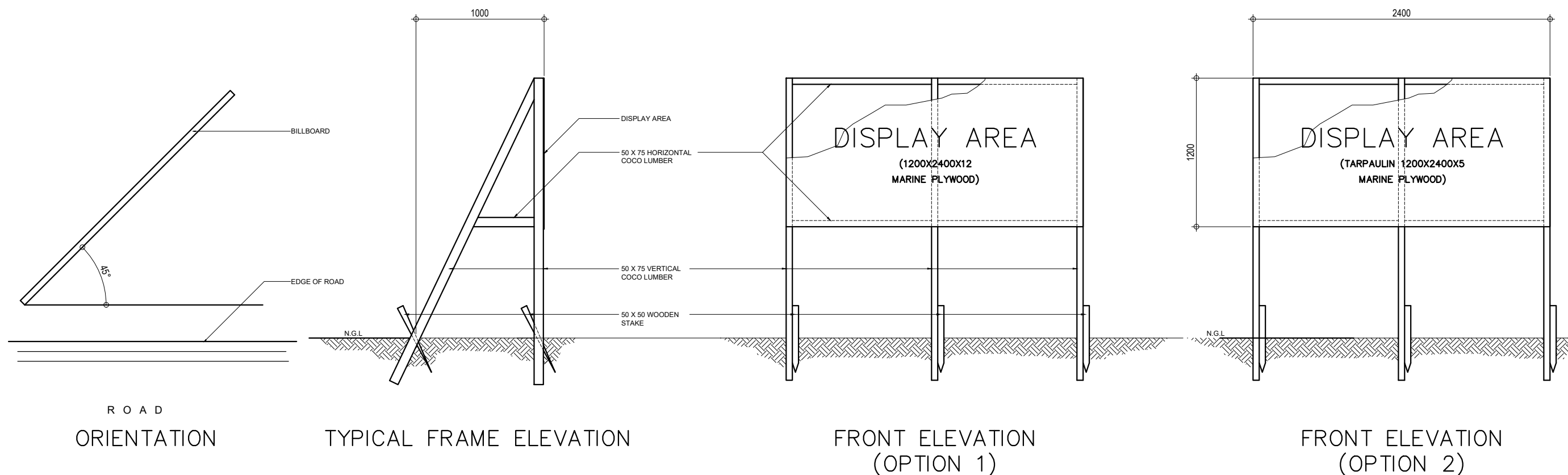
CONTRACT COST:

IMPLEMENTING OFFICE:

SOURCES OF FUND:

Department of Public Works and Highways
Text 2920 or Call (02) 165-02 for any concerns on this project
www.dpw.gov.ph

DPWH STANDARD PROJECT BILLBOARD



DETAIL OF DPWH STANDARD PROJECT BILLBOARD
NOT TO SCALE



Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
LAGUNA 3rd DISTRICT ENGINEERING OFFICE
Mariktor Subd., Brgy. Del Remedio, San Pablo City, Region IV-A

PROJECT TITLE / LOCATION :

CONVERGENCE AND SPECIAL SUPPORT PROGRAM (CSSP)
BASIC INFRASTRUCTURE PROGRAM (BIP)
MULTI-PURPOSE BUILDING / FACILITIES TO SUPPORT SOCIAL SERVICES
CONSTRUCTION OF MULTI-PURPOSE BUILDING, PHASE 1
BARANGAY SAN JOSE
SAN PABLO CITY, LAGUNA

SHEET CONTENT :

*DPWH STANDARD PROJECT
BILLBOARD

DRAFTED :

CHRISTOPHER D. BERON
ENGINEERING AIDE B

PREPARED :

KING NOAH S. MONDUGAR
ENGINEERING ASSISTANT

REVIEWED :

JOEY CHRISTIAN L. DAYO
ENGINEER II

DATE :

SUBMITTED :

LUDY MITZI J. MAHENCIO
ENGINEER II
Officer-in-Charge
Planning and Design Section

DATE :

RECOMMENDED :

MA. SHIRLEY M. SAMIANO
Officer-in-Charge
Office of the Assistant District Engineer

DATE :

APPROVED :

CARLOS C. MUERE
Officer-in-Charge
Office of the District Engineer

DATE :

SET NO.

S
23/23

SHEET NO.

33
34



Republic of the Philippines
COMMISSION ON AUDIT
Office of the Audit Team Leader
DPWH 3RD DISTRICT ENGINEERING OFFICE
San Pablo City, Laguna

Project : _____ Cost: _____

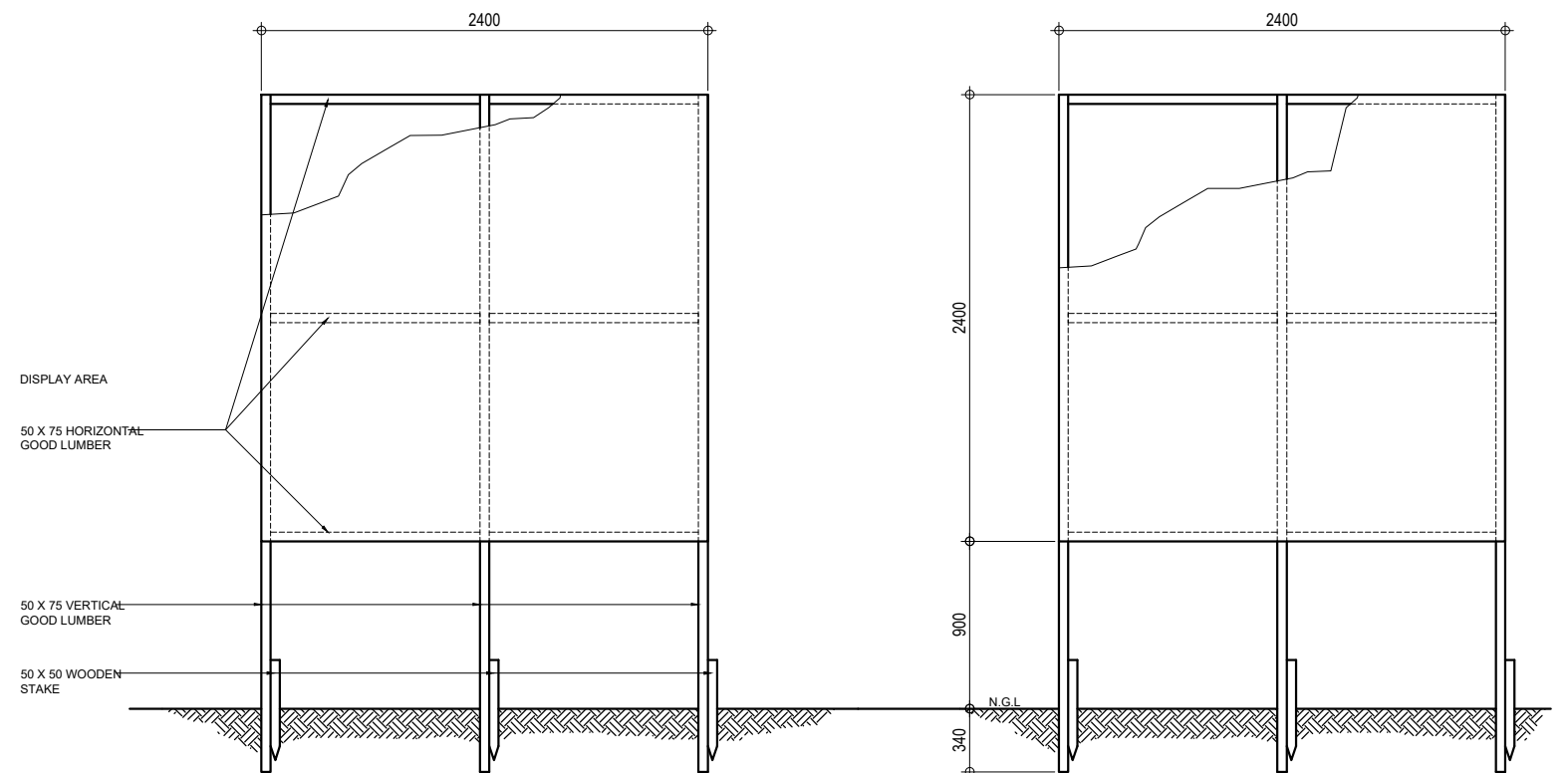
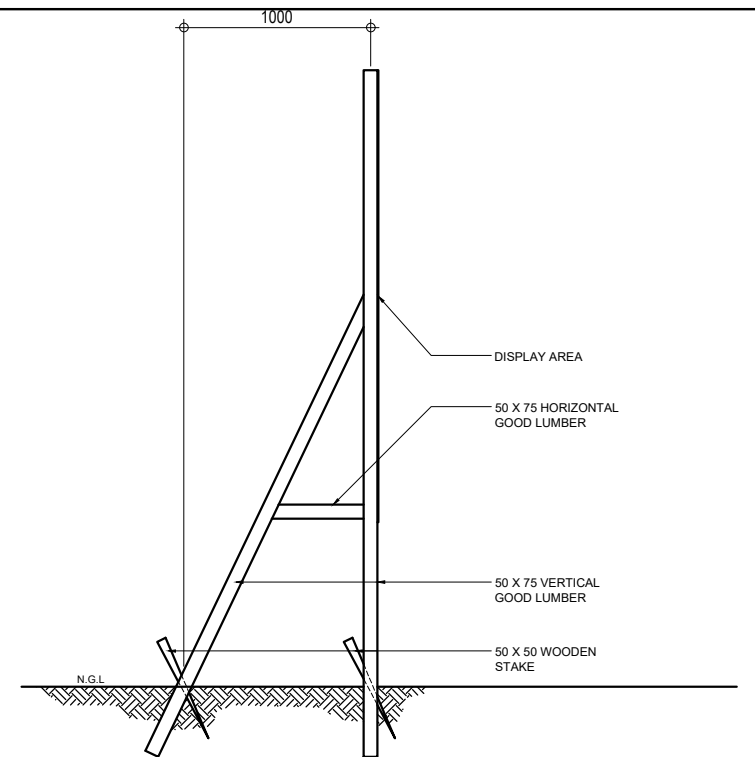
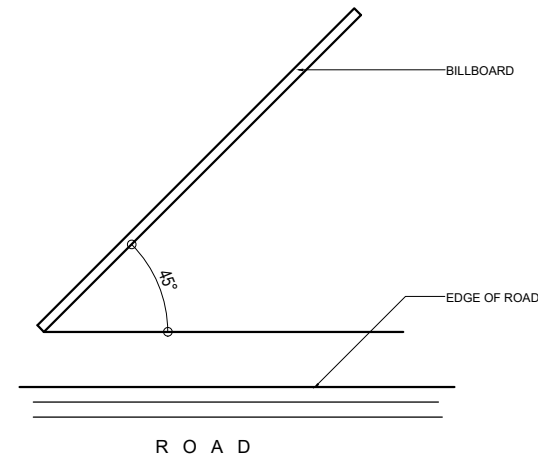
Location : _____ Fund Source/S: _____
Implementing Agency/ies : _____
Development Partner/s : _____
Contractor/ Supplier : _____
Brief Description of Project : _____

Project Detail :

PROJECT DATE			PROJECT STATUS				REMARKS
DURATION	STARTED	TARGET DATE OF COMPLETION	PERCENTAGE OF COMPLETION	AS OF DATE	COST INCURRED TO DATE	DATE COMPLETED	

For particulars or complains about this project, Contact the Regional office or Cluster which has audit jurisdiction on this project.

COA Regional Office no./ Cluster: _____
Address: _____
Contact no.: _____ or Text COA Citizen's Desk at 0915-539-1957



DETAIL OF COA STANDARD PROJECT BILLBOARD
NOT TO SCALE



Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
LAGUNA 3RD DISTRICT ENGINEERING OFFICE
Mariktor Subd., Brgy. Del Remedio, San Pablo City, Region IV-A

PROJECT TITLE / LOCATION :
**CONVERGENCE AND SPECIAL SUPPORT PROGRAM (CSSP)
BASIC INFRASTRUCTURE PROGRAM (BIP)
MULTI-PURPOSE BUILDING / FACILITIES TO SUPPORT SOCIAL SERVICES
CONSTRUCTION OF MULTI-PURPOSE BUILDING, PHASE 1**
BARANGAY SAN JOSE
SAN PABLO CITY, LAGUNA

SHEET CONTENT :
+COA'S STANDARD PROJECT
BILLBOARD

DRAFTED :
CHRISTOPHER D BERON
ENGINEERING AIDE B
PREPARED :
KING NOAH S. MONDUGAR
ENGINEERING ASSISTANT

REVIEWED :
JOEY CHRISTIAN L. DAYO
ENGINEER II
DATE :

SUBMITTED :
LUDY MITZI J. MAHENCIO
ENGINEER II
Officer-in-Charge
Planning and Design Section
DATE :

RECOMMENDED :
MA. SHIRLEY M. SAMIANO
Officer-in-Charge
Office of the Assistant District Engineer
DATE :

APPROVED :
CARLOS C. MUERE
Officer-in-Charge
Office of the District Engineer
DATE :

SET NO.
S
23/23

SHEET NO.
34
34