Republic of the Philippines

DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

REGIONAL OFFICE No. VIII

NORTHERN SAMAR FIRST

DISTRICT ENGINEERING OFFICE

Catarman, Northern Samar

C.Y. 2025 PROJECT

DETAILED ENGINEERING DESIGN PLAN FOR

CONSTRUCTION OF MULTI-PURPOSE FACILITY (COVERED COURT) IN BARANGAY SAN JOSE, LAVEZARES, NORTHERN SAMAR

Location: Lavezares, Northern Samar
Latitude: 12.514611
Longitude: 124.361249

SUBMITTED:

ANDY S. ERERO
CHIEF, PLANNING AND DESIGN SECTION
Date:

RECOMMENDED:

VIVIAN G. BIACO
ASSISTANT DISTRICT ENGINEER
Date:

APPROVED:

ALVIN A. IGNACIO
DISTRICT ENGINEER
Date:

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	REMARKS
PART B	OTHER GENERAL REQUIREMENTS			
B.3(1)	Permits and Clearances	l.s.	1.00	
B.5(1)	Project Billboard/Signboard (COA Standard Project Billboard)	each	1.00	
B.5 (1)	Project Billboard/Signboard (DPWH Standard Project Billboard)	each	1.00	
B.7(1)	Occupational Safety and Health	l.s.	1.00	
B.9(1)	Mobilization/Demobilization	l.s.	1.00	
	DIVISION I - GENERAL			
PART C	EARTHWORK			
800(1)	Clearing and Grubbing	sq.m.	574.00	
803(1)a	Structure Excavation, Common Soil	cu.m.	167.44	
804(1)a	Embankment from Structure Excavation (Common Soil)	cu.m.	153.95	
804(1)b	Embankment from Borrow (Common Soil)	cu.m.	289.65	
804(7)	Gravel Fill	cu.m.	129.49	
PART D	REINFORCED CONCRETE			
900(2)c	Structural Concrete (Class B, 28 days)	cu.m	116.96	
900(1)i	Structural Concrete (Class A, 28 days)	cu.m	20.85	
900(1)c	Structural Concrete, 3000psi (Class A, 28 days)	cu.m	108.55	
902(1)a1	Reinforcing Steel (Deformed), Grade 40	kg	11,622.57	
902(1)a2	Reinforcing Steel (Deformed), Grade 60	kg	28,953.40	
903(2)	Formworks and Falseworks	sq.m	773.97	
	DIVISION II - BUILDINGS			
PART E	FINISHING AND OTHER CIVIL WORKS			
411(1)	Paint	l.s	1.00	
1000(1)	Soil Poisoning	L	23.00	
1001(8)	Sewer Line Works	l.s.	1.00	
1001(9)	Storm Drainage and Downspout	l.s.	1.00	
1002(27)	Plumbing Works	l.s.	1.00	
1002(4)	Plumbing Fixtures	l.s.	1.00	
1003(1)c2	Ceiling, 6.0 mm, Wood Frame, Marine Plywood	sq.m.	16.52	
1004(2)	Finishing Hardware	l.s.	1.00	
1008(1)c	Aluminum Glass Windows, Awning Type	sq.m.	0.50	
1010(1)	Frames, Jambs	Set	2.00	
1010(2)b	Doors (Wood Panel)	sq.m	2.94	
1014(1)b2	Prepainted Metal Sheets (Rib Type, Long Span)	sq.m	684.64	
1016(1)a	Waterproofing (Cement-base)	sq.m	52.92	
1018(1)	Glazed Tiles and Trims	sq.m	14.66	
1018(2)	Unglazed Tiles	sq.m	16.52	
1027(1)	Cement Plaster Finish	sq.m	634.88	
1032(1)a	Painting Works, Masonry/Concrete	sq.m	784.96	
1032(1)c	Painting Works, Steel	sq.m	939.05	
1038(1)	Reflective Insulation	sq.m.	595.34	
1046(2)a1	CHB Non Load Bearing (including Reinforcing Steel), 100 mm	sq.m	34.56	
1046(2)a2	CHB Non Load Bearing (including Reinforcing Steel), 150 mm	sq.m	268.47	
1047(3)	Metal Structure Accessories	l.s	1.00	
1047(4)b	Metal Structure Accessories, Turnbuckles	each	40.00	
1047(5)a	Metal Structure Accessories, Bolts and Rods	kg	298.68	
1047(5)b	Metal Structure Accessories, Sagrods	kg	188.81	
1047(5)c	Metal Structure Accessories, Cross Bracing	kg	845.17	
1047(5)d	Metal Structure Accessories, Steel Plates	kg	2,566.01	
1047(6)a	Structural Steel, Trusses	kg	12 502.95	
1047(6)b	Structural Steel, Purlins	kg	8,907.40	
PART F	ELECTRICAL			
1100(10)	Conduits, Boxes & Fittings (Conduit Works/Conduit Rough-in)	l.s.	1.00	
1101 (33)	Wires and Wiring Devices	l.s.	1.00	
1102(1)	Panelboard with Main & Branch Breakers	l.s	1.00	
1102(16)a1	Generator (Single or Three phase), Stand - by	l.s.	1.00	
1103(1)	Lighting Fixtures	l.s	1.00	

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGIONAL OFFICE NO. VIII
NORTHERN SAMAR FIRST DISTRICT ENGINEERING OFFICE
CATARMAN, NORTHERN SAMAR

PROJECT NAME / LOCATION: CONSTRUCTION OF MULTI-PURPOSE FACILITY, (COVERED COURT) BARANGAY SAN JOSE, LAVEZARES, NORTHERN SAMAR
LAVEZARES, NORTHERN SAMAR

SHEET CONTENTS: SUMMARY OF QUANTITIES

DESIGNED: MART [illegible] DUMAURO, ENGR. II, DPE

REVIEWED: MARIA DONALDA A. [illegible], ASST. CHIEF [illegible] DPE

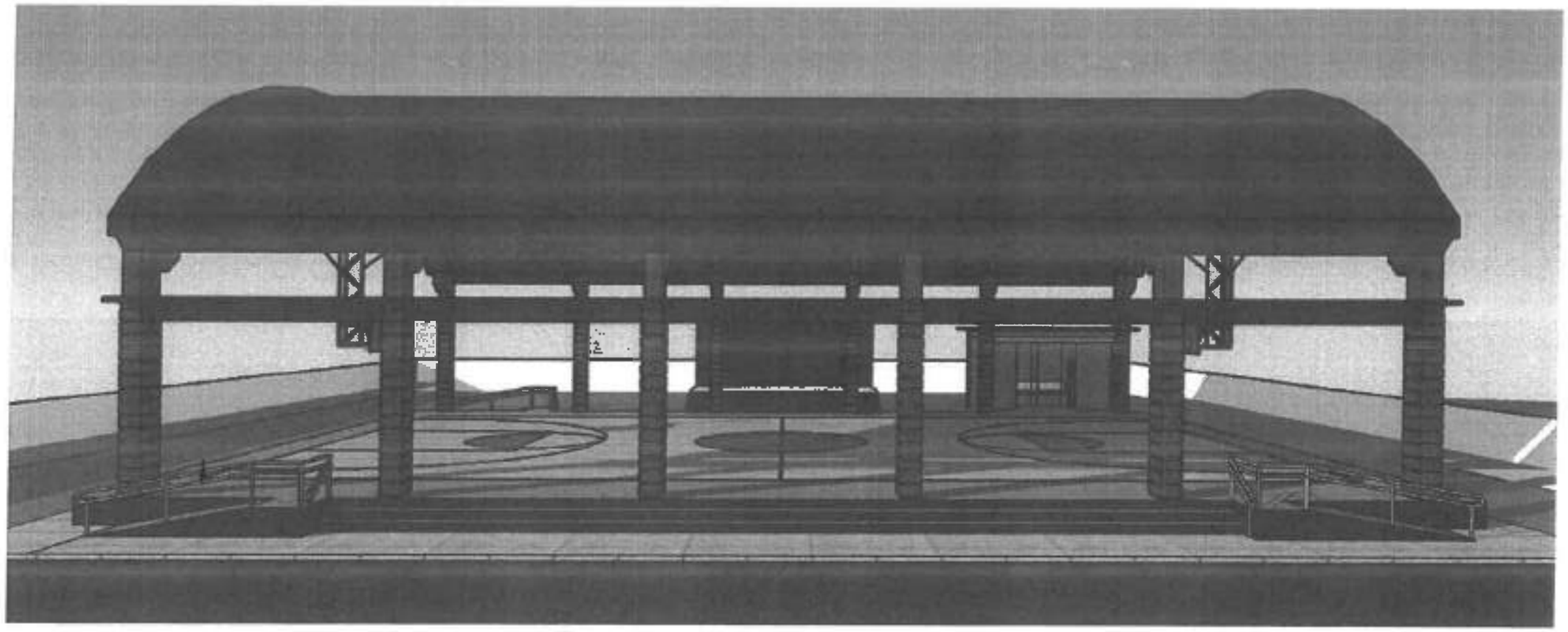
SUBMITTED: ANDY S. [illegible], CHIEF, PLANTS AND DESIGN SECTION, DPE

RECOMMENDED: [illegible] RACO, ASST. DISTRICT ENGINEER, DPE

APPROVED: ALVIN A. IGNACIO, DISTRICT ENGINEER, DPE

SHEET No. 500

SHEET No. 2 / 42



1 / A-1 **PERSPECTIVE**
SCALE NTS

Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

APPROVED DATE

LAND USE AND ZONING

APPROVED DATE

LINE AND GRADE

APPROVED DATE

ARCHITECTURAL

APPROVED DATE

SANITARY

APPROVED DATE

STRUCTURAL

APPROVED DATE

MECHANICAL

APPROVED DATE

ELECTRICAL

APPROVED DATE

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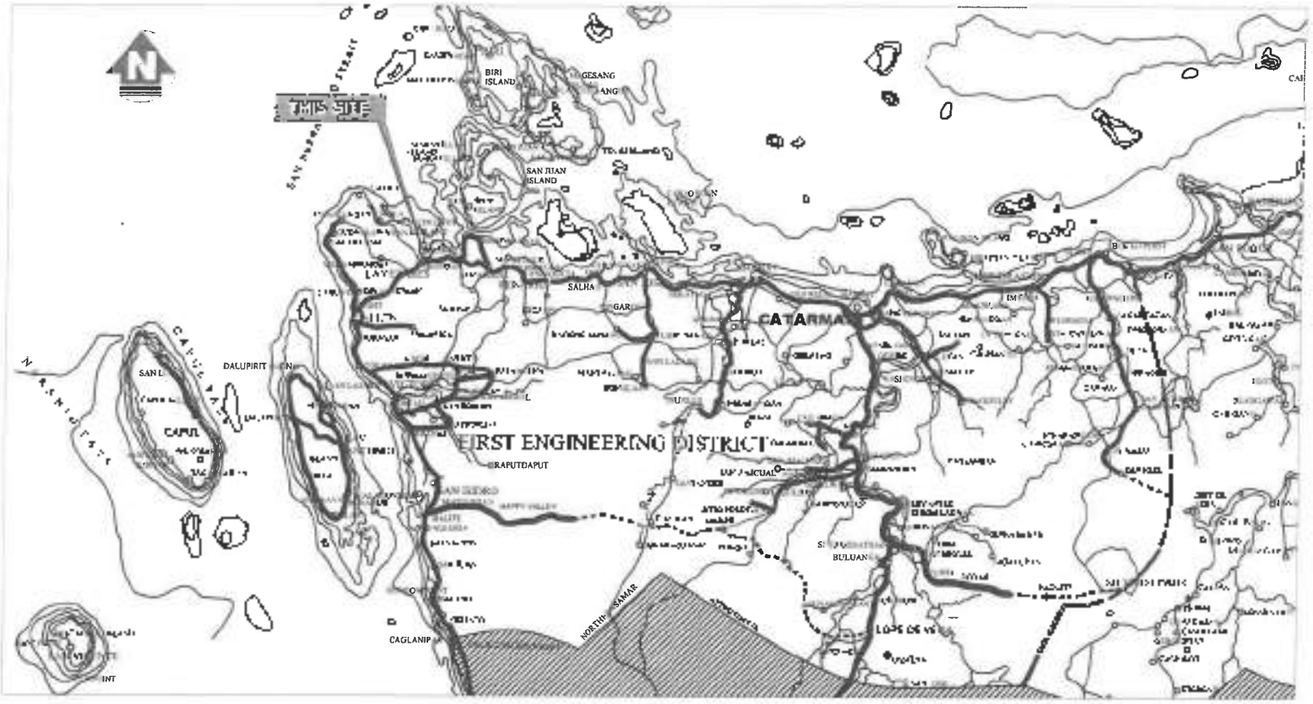
Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGIONAL OFFICE No. VIII
NORTHERN SAMAR FIRST DISTRICT ENGINEERING OFFICE
Catarman, Northern Samar

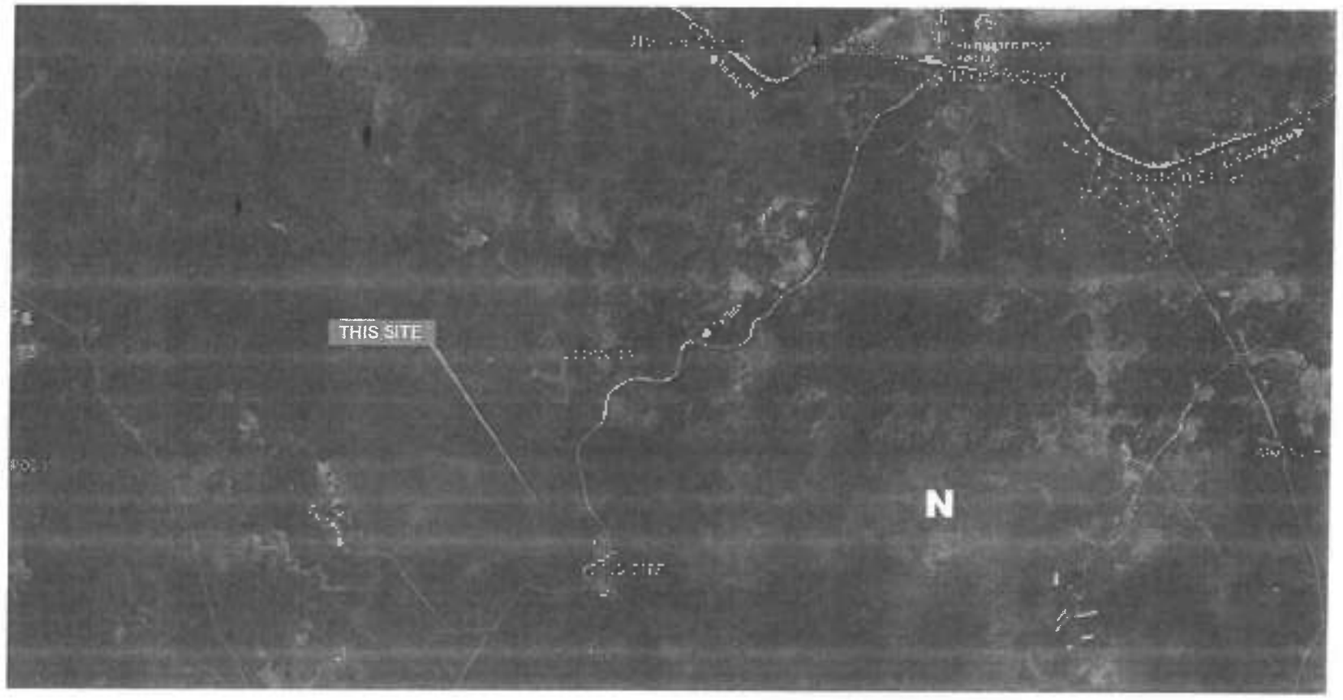
PROJECT NAME & LOCATION	SHEET CONTENTS:	DESIGNED:	REVIEWED:	SUBMITTED:	RECOMMENDED	APPROVED:	SCALE	SHEET No.
CONSTRUCTION OF MULTI-PURPOSE FACILITY, (COVERED COURT) BARANGAY SAN JOSE, LAVEZARES, NORTHERN SAMAR	TABLE OF CONTENTS PERSPECTIVE	ALVIN C. IGNACIO, ARCHITECT	MAR DONALD R. CLIMAY, ASST. CHIEF, PLANNING & DESIGN SECTION	ANDY S. [illegible]ÑO, CHIEF, PLANNING & DESIGN SECTION	[illegible] BIAGO, ASST. DISTRICT ENGINEER	ALVIN A. IGNACIO, DISTRICT ENGINEER	A-1	3 / 42



3 / A-2 **GEOTAGGED PHOTOGRAPH**
SCALE. NTS

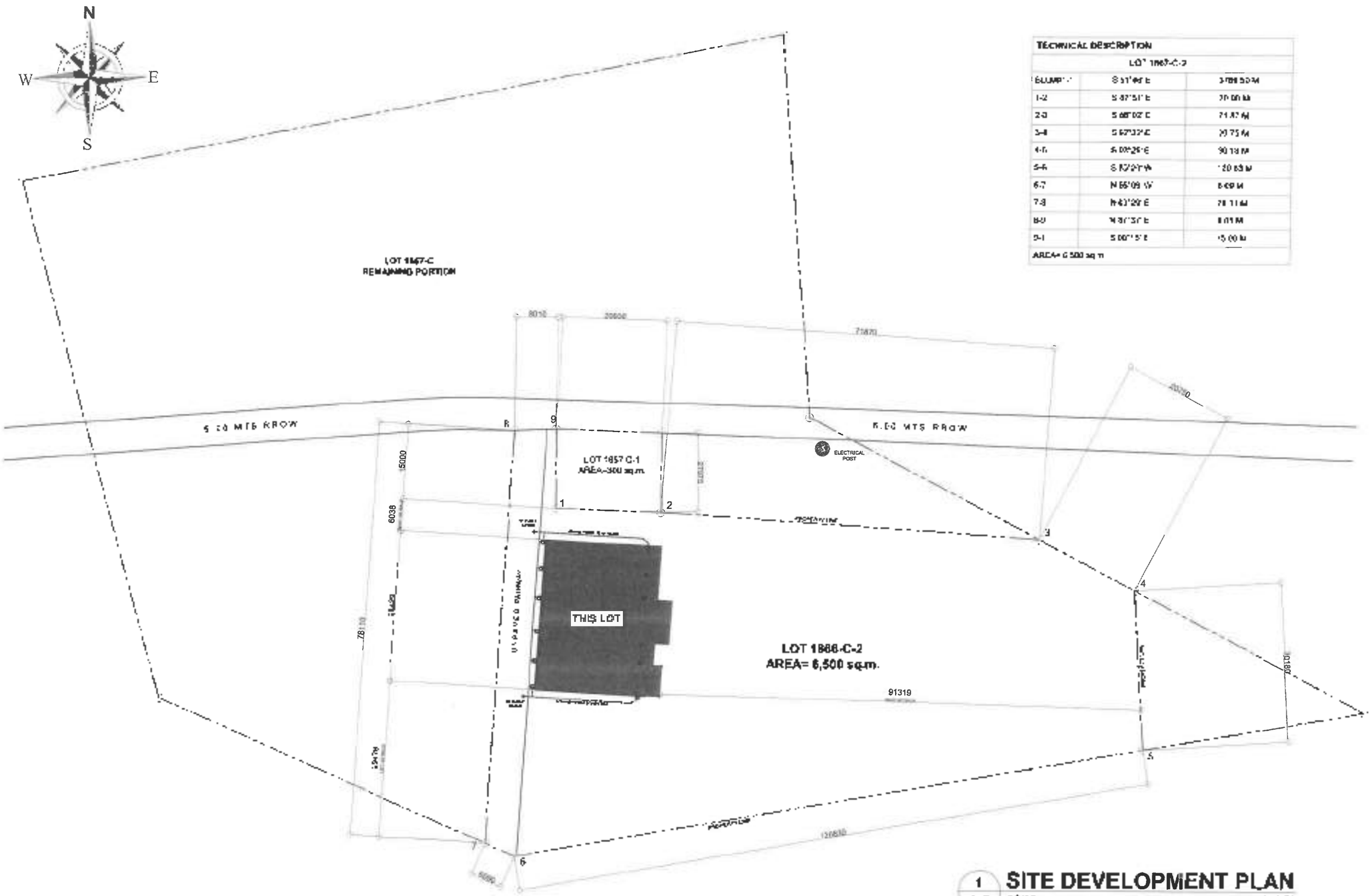
FIRST ENGINEERING OFFICE LOCATION MAP

1 / A-2 SCALE: NTS



2 / A-2 **VICINITY MAP**
SCALE. NTS

	PROJECT NAME & LOCATION	SHEET CONTENTS:	DESIGNED:	REVIEWED:	SUBMITTED:	RECOMMENDED:	APPROVED:	SHEET No	SHEET No
Republic of the Philippines DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE No. VIII NORTHERN SAMAR FIRST DISTRICT ENGINEERING OFFICE Catarman, Northern Samar	CONSTRUCTION OF MULTI-PURPOSE FACILITY, (COVERED COURT) BARANGAY SAN JOSE, LAVEZARES, NORTHERN SAMAR Lavezares, Northern Samar	LOCATION MAP VICINITY PLAN GEOTAGGED PHOTOGRAPH	ELIAT R. VICTORINO Engr.	ARK OSWALD N. SMITH ASST. CHIEF, PLANNING & DESIGN SECTION Date	ANDY S. TRONO CHIEF, PLANNING & DESIGN SECTION Date	VIVIAN C. BRAGO Chief, Planning & Design Date	ALVIN A. IGNACIO DISTRICT ENGINEER Date	A-2	4 / 42

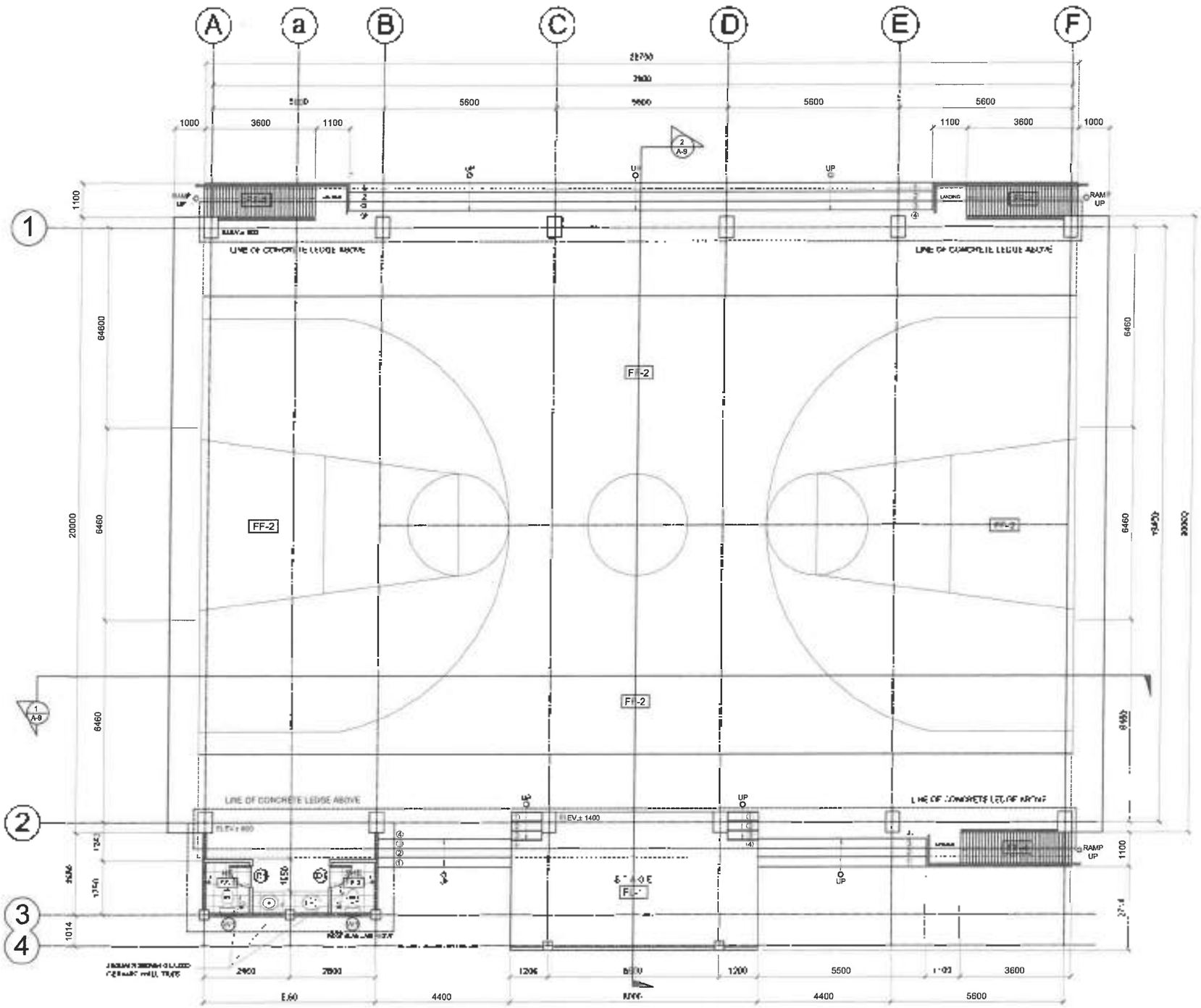


TECHNICAL DESCRIPTION		
LOT 1867-C-2		
BLLM 1	S 51°46' E	3,788.50 M
1-2	S 87°51' E	20.00 M
2-3	S 88°02' E	71.87 M
3-4	S 87°32' E	20.75 M
4-5	S 00°26' E	90.18 M
5-6	S 87°27' W	120.83 M
6-7	N 85°09' W	8.09 M
7-8	N 43°29' E	78.11 M
8-9	N 87°31' E	8.01 M
9-1	S 00°15' E	15.00 M
AREA= 6,500 sq.m.		

1 / A-3 **SITE DEVELOPMENT PLAN**

SCALE: 1:1000MTS

REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE NO. VIII NORTHERN SAMAR FIRST DISTRICT ENGINEERING OFFICE Catarman, Northern Samar	PROJECT NAME & LOCATION CONSTRUCTION OF MULTI-PURPOSE FACILITY (COVERED COURT), BARANGAY SAN JOSE, LAVEZARES, NORTHERN SAMAR. Lavezares, Northern Samar	SHEET CONTENTS: SITE DEVELOPMENT PLAN	DESIGNED: EUR... TACNAURO ARCHITECT II Date	REVIEWED: MER QUINTILOS, Elena ASST. CHIEF PLANNING & DESIGN SECTION Date	SUBMITTED: ANDY B. ERERO CHIEF, PLANNING & DESIGN SECTION Date	RECOMMENDED: ...MAN D. BIACO ...VISION Date	APPROVED: ALVIN A. IGNACIO DISTRICT ENGINEER Date	SCALE A-3	SHEET No. 5 / 42



GROUND FLOOR PLAN

SCALE: 1:100MTS

WALL FINISH	DESCRIPTION
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

FLOOR FINISH	DESCRIPTION
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

CEILING FINISH	DESCRIPTION
[illegible]	[illegible]
[illegible]	[illegible]

ROOF FINISH	DESCRIPTION
[illegible]	[illegible]
[illegible]	[illegible]

NOTES:

[illegible]

Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGIONAL OFFICE No. VII
NORTHERN SAMAR FIRST DISTRICT ENGINEERING OFFICE
Catarman, Northern Samar

PROJECT NAME & LOCATION: CONSTRUCTION OF MULTI-PURPOSE FACILITY, KOTKOTED COURT (BARANGAY SAN JOSE, LAVEZARES, NORTHERN SAMAR
Lavezares, Northern Samar

SHEET CONTENTS: GROUND FLOOR PLAN

DESIGNED: [illegible] — ARCHITECT II — Date

REVIEWED: [illegible] — Chief, Planning & Design Section — Date

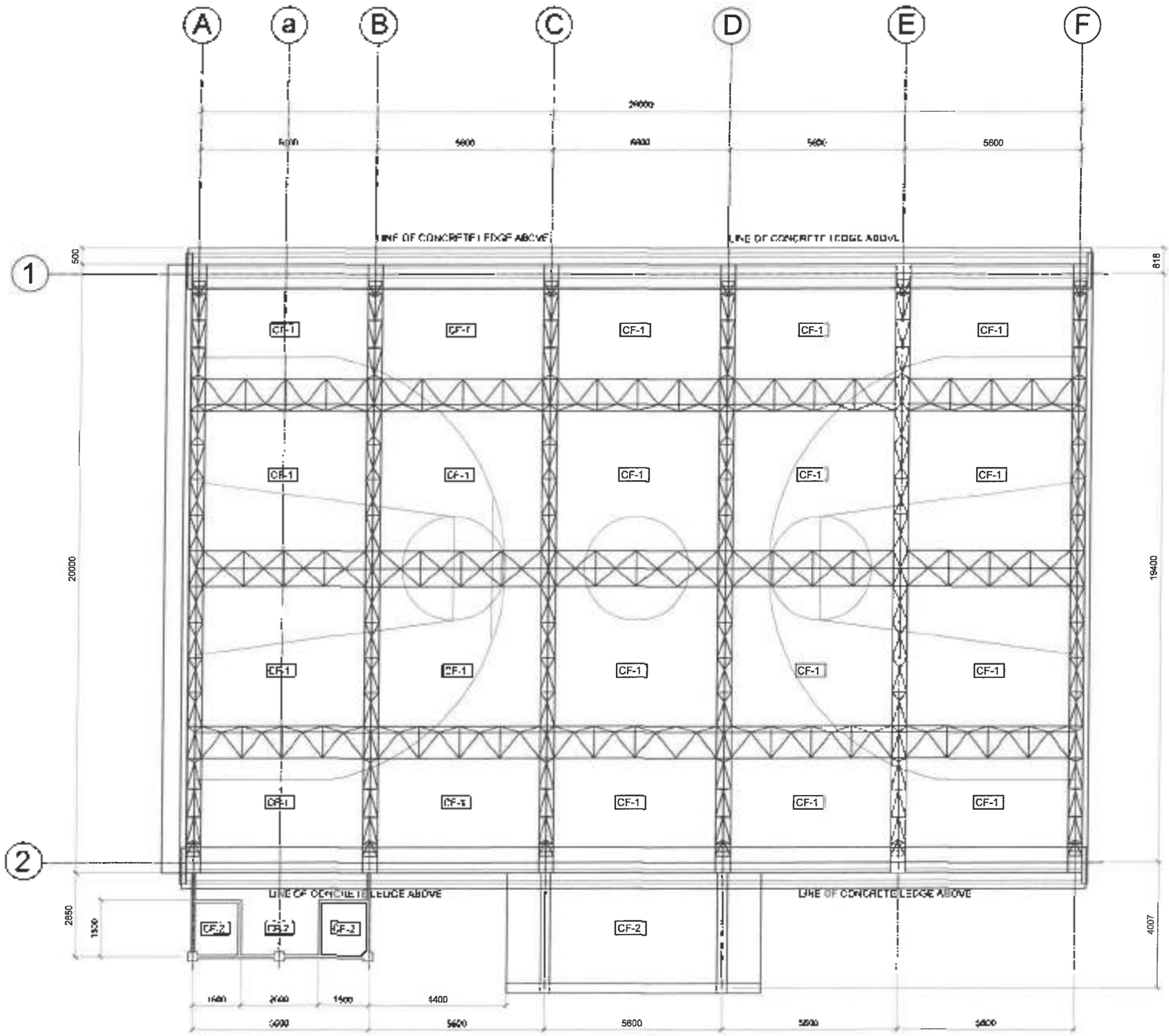
SUBMITTED: ANDY B. ERENO — Chief, Planning & Design Section — Date

RECOMMENDED: VIVIAN B. BIACO — ASST. DISTRICT ENGINEER — Date

APPROVED: ALVIN A. IGNACIO — District Engineer — Date

SHEET No.: A-8

SHEET No.: 6 / 42



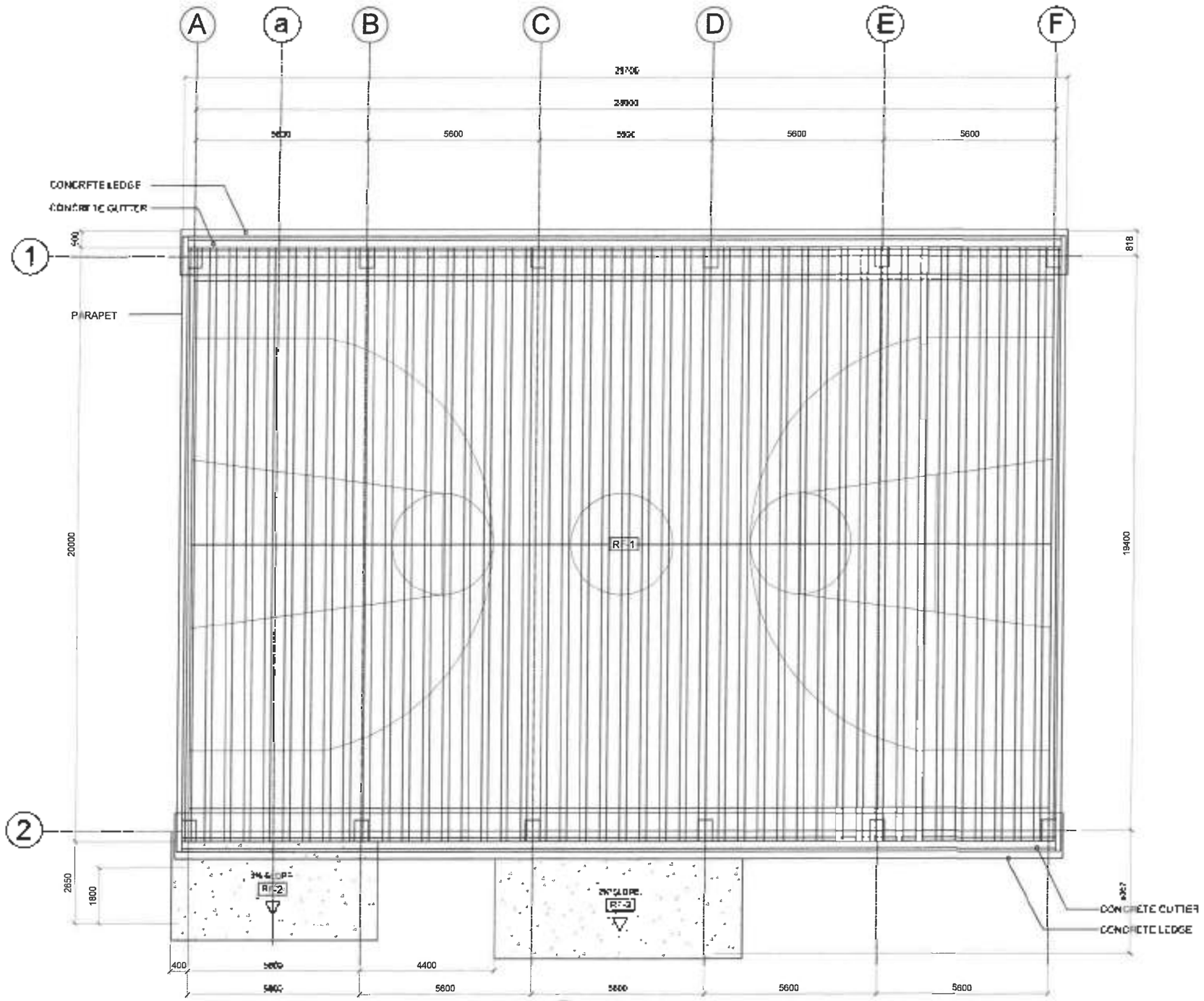
1 REFLECTED CEILING PLAN

A-5 SCALE 1:100MTS

SCHEDULE OF FINISHES	
WALL FINISH	DESCRIPTION
FLOOR FINISH	DESCRIPTION
CEILING FINISH	DESCRIPTION
ROOFING FINISH	DESCRIPTION

NOTES:

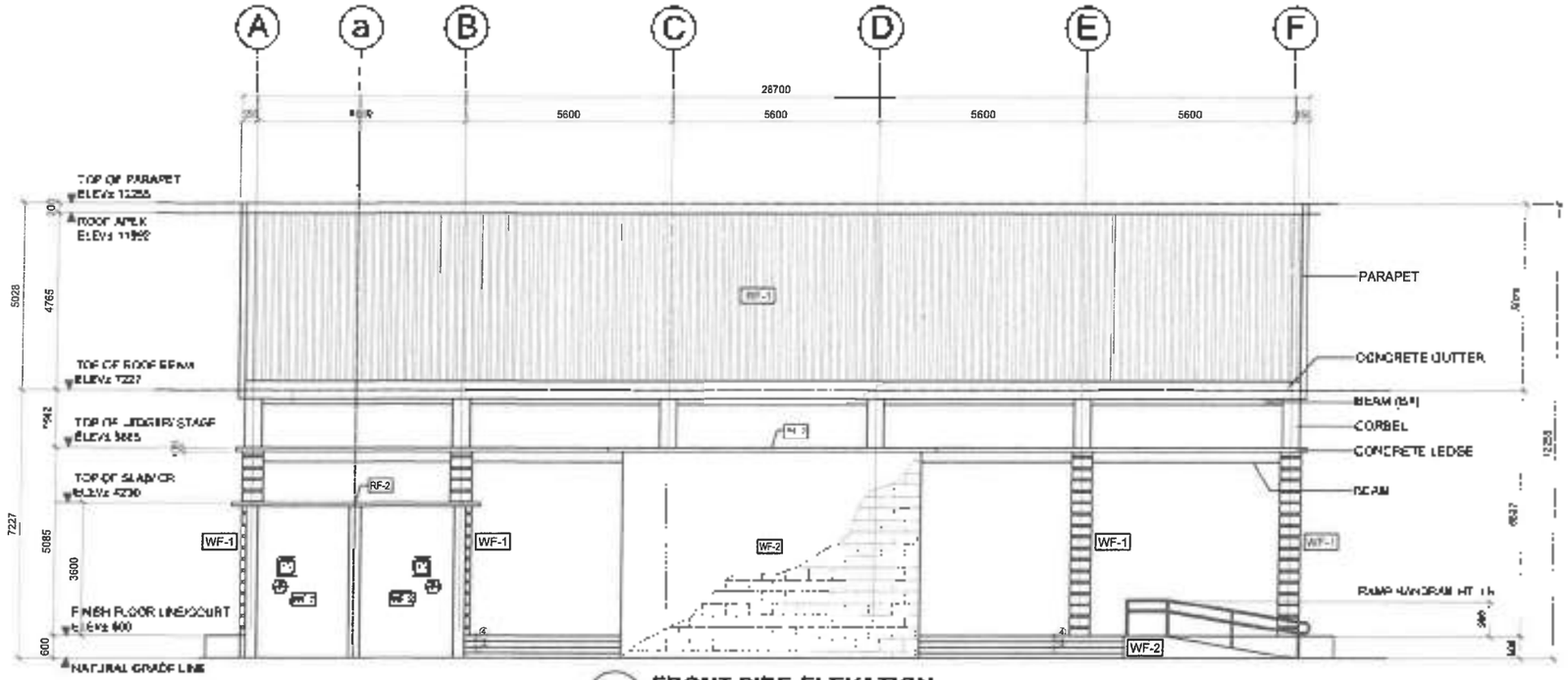
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS NORTHERN SAMAR FIRST DISTRICT ENGINEERING OFFICE	CONSTRUCTION OF MULTI-PURPOSE FACILITY, (COVERED COURT) BARANGAY SAN JOSE, LAVEZARES, NORTHERN SAMAR	REFLECTED CEILING PLAN	DESIGNED:	REVIEWED:	SUBMITTED: ANDY S. ERENO	RECOMMENDED:	APPROVED: ALVIN A. KALAGIO	A-5	42



1 / A-6 **ROOF PLAN**

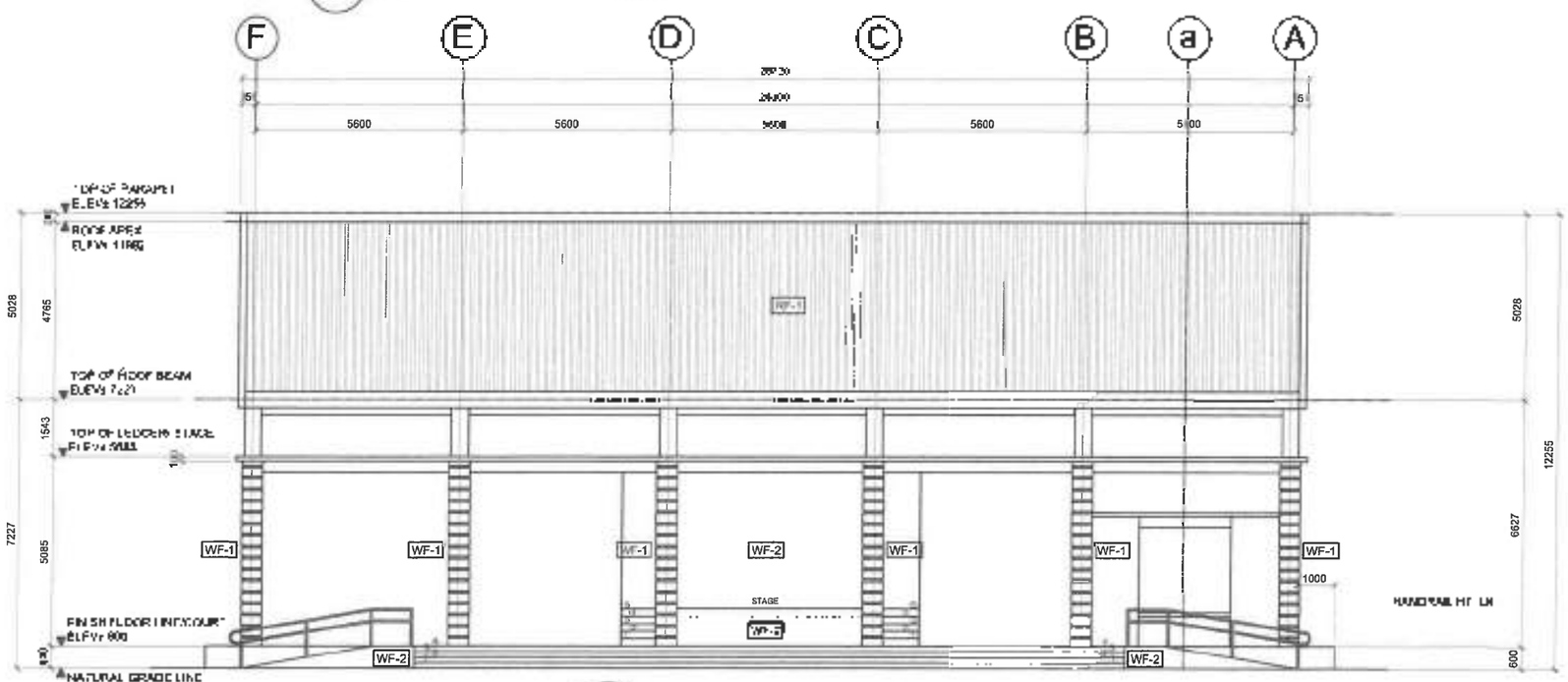
SCALE : 1 UNITS

Republic of the Philippines DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE NO. VIII NORTHERN SAMAR FIRST DISTRICT ENGINEERING OFFICE Catarman, Northern Samar	PROJECT NAME & LOCATION CONSTRUCTION OF MULTIPURPOSE FACILITY, (COVERED COURT) BARANGAY SAN JOSE, LAVEZARES, NORTHERN SAMAR Lavezares, Northern Samar	SHEET CONTENTS ROOF PLAN	DESIGNED LARRY JOHN P. LUCIANO Architect II Date:	REVIEWED: JOHN DONALD R. ERMAN Asst. Chief, Planning & Design Section Date:	RECOMMENDED ANDY S. BRIGO Chief, Architectural Section Date:	RECOMMENDED VIVIAN B. CABACO Asst. District Engineer Date:	APPROVED: ALVIN A. IGNACIO District Engineer Date:	SHEET No. A-6	SHEET No. 5 of 12



1 / A-7 **FRONT SIDE ELEVATION**

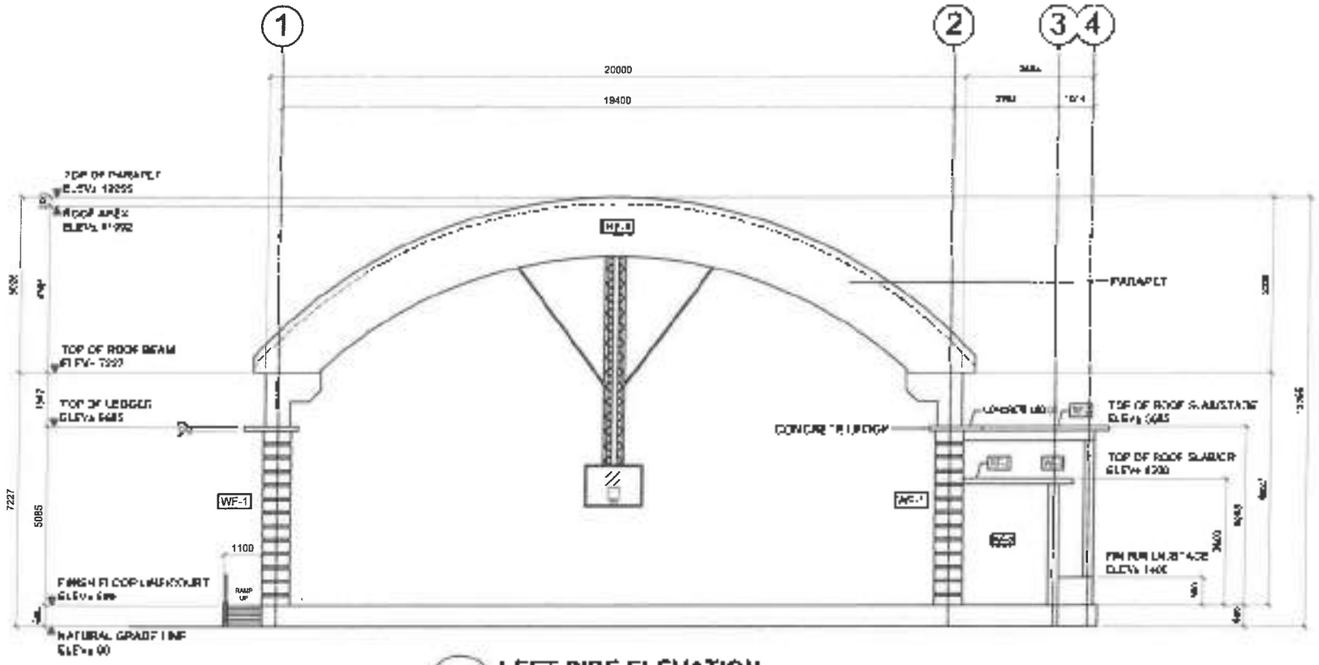
SCALE: 1:100MTS



2 / A-7 **REAR SIDE ELEVATION**

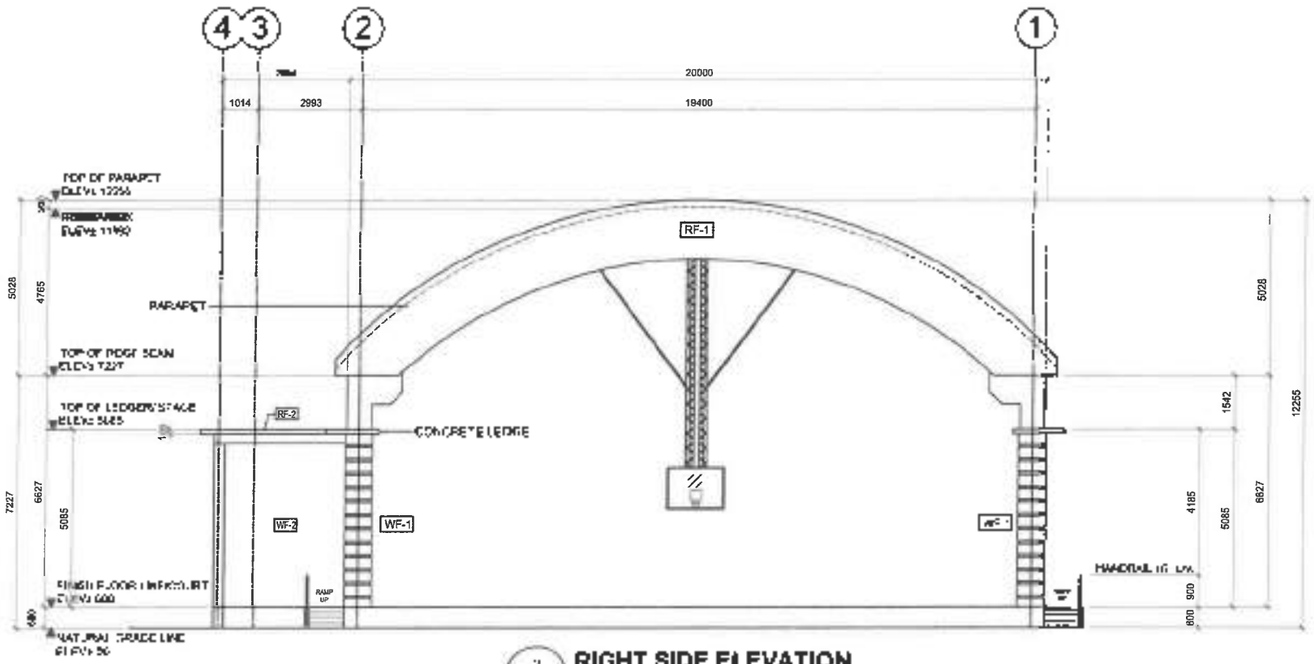
SCALE: 1:100MTS

Republic of the Philippines DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE NO. VIII NORTHERN SAMAR FIRST DISTRICT ENGINEERING OFFICE Catarman, Northern Samar	PROJECT NAME / LOCATION	SHEET CONTENTS	DESIGNED:	REVIEWED:	SUBMITTED:	RECOMMENDED:	APPROVED:	SET No.	SHEET No.
	CONSTRUCTION OF MULTI-PURPOSE FACILITY (COVERED COURT) BARANGAY SAN JOSE, LAVEZARES, NORTHERN SAMAR Lavezares, Northern Samar	FRONT SIDE ELEVATION REAR SIDE ELEVATION	BURT [illegible] LUCERNARIO Engr.	[illegible] Date	ANDY S. [illegible] Date	VIVIAN [illegible] BIAGO Date	ALVIN A. BONACIO Engr.	A-7	8 / 47



1 / A-8 **LEFT SIDE ELEVATION**

SCALE: 1:100MTS



2 / A-8 **RIGHT SIDE ELEVATION**

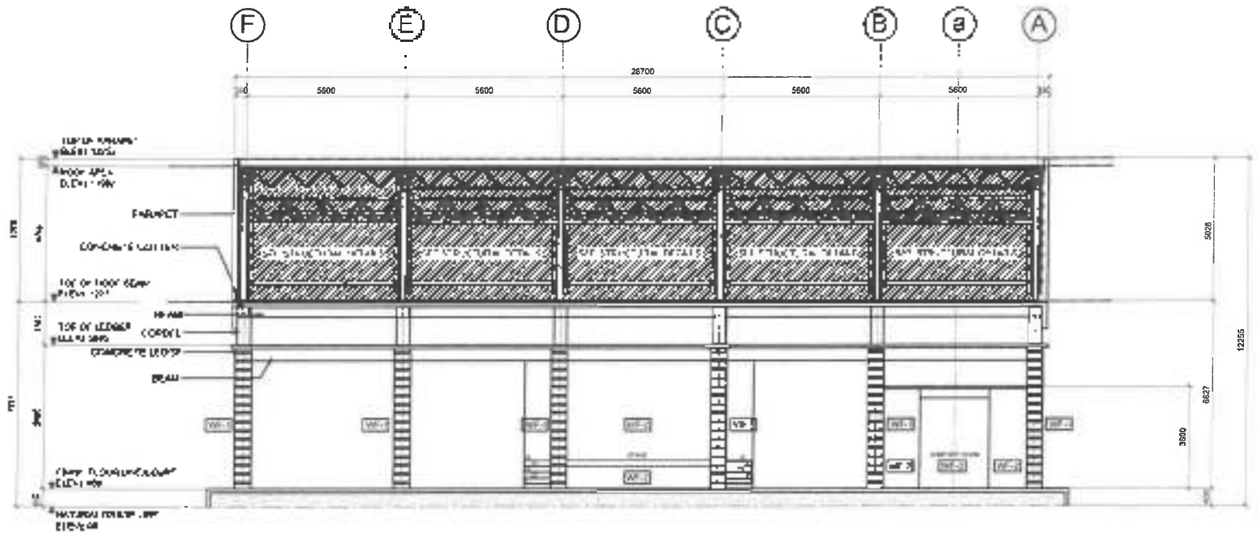
SCALE: 1:100MTS

SCHEDULE OF FINISHES	
WALL FINISH	DESCRIPTION
WF-1	[illegible]
WF-2	[illegible]
WF-3	[illegible]
FLOOR FINISH	DESCRIPTION
FF-1	[illegible]
FF-2	[illegible]
FF-3	[illegible]
FF-4	[illegible]
CEILING FINISH	DESCRIPTION
CF-1	[illegible]
CF-2	[illegible]
ROOFING FINISH	DESCRIPTION
RF-1	[illegible]
RF-2	[illegible]

NOTES:

[illegible]

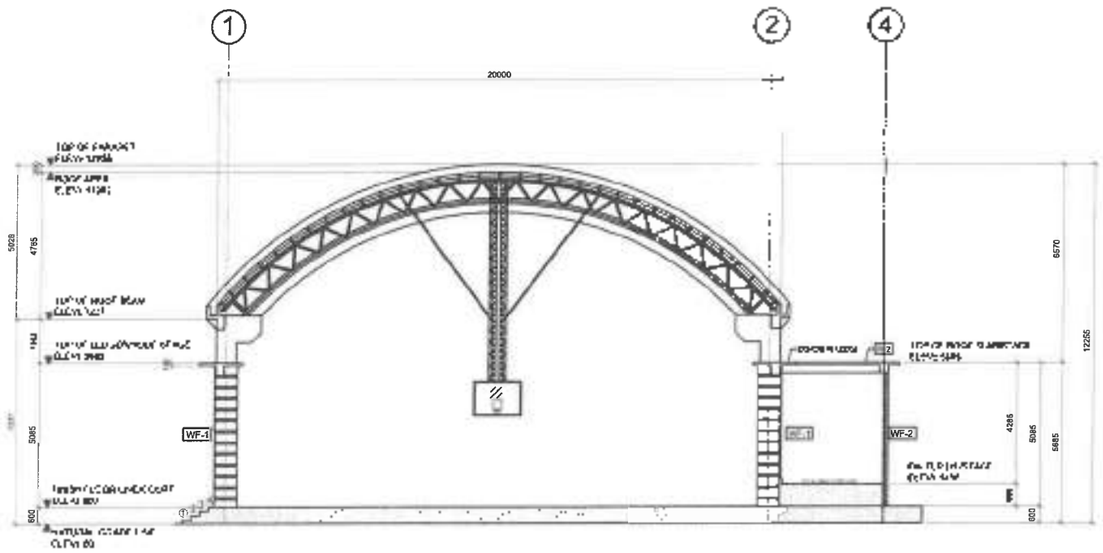
	PROJECT NAME & LOCATION	SHEET CONTENTS:	DESIGNED:	REVIEWED:	SUBMITTED	RECOMMENDED:	APPROVED:	SET No.	SHEET no.
Republic of the Philippines DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE No. VIII NORTHERN SAMAR FIRST DISTRICT ENGINEERING OFFICE Catarman, Northern Samar	CONSTRUCTION OF MULTI-PURPOSE FACILITY (COVERED COURT) BARANGAY SAN JOSE LAVEZARES, NORTHERN SAMAR Lavezares, Northern Samar	RIGHT SIDE ELEVATION LEFT SIDE ELEVATION	[illegible] ARCHITECT Date	[illegible] ASST. DISTRICT ENGINEER Date	ANDY S. [illegible] CHIEF, PLANNING & DESIGN SECTION Date	VIVIAN [illegible] BIACO ASST. DISTRICT ENGINEER Date	ALVIN A. IGNACIO DISTRICT ENGINEER Date	A-8	10 / 42



1 / A-5 **LONGITUDINAL SECTION**

SCALE: 1:100MTS

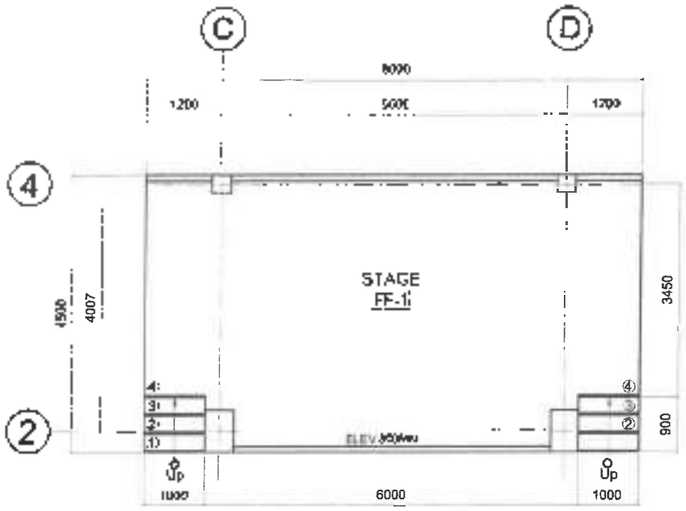
SCHEDULE OF FINISHES	
[illegible]	DESCRIPTION
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
FLOOR FINISH	DESCRIPTION
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
CEILING FINISH	DESCRIPTION
[illegible]	[illegible]
[illegible]	[illegible]
ROOFING FINISH	DESCRIPTION
[illegible]	[illegible]
[illegible]	[illegible]
NOTES:	
[illegible]	



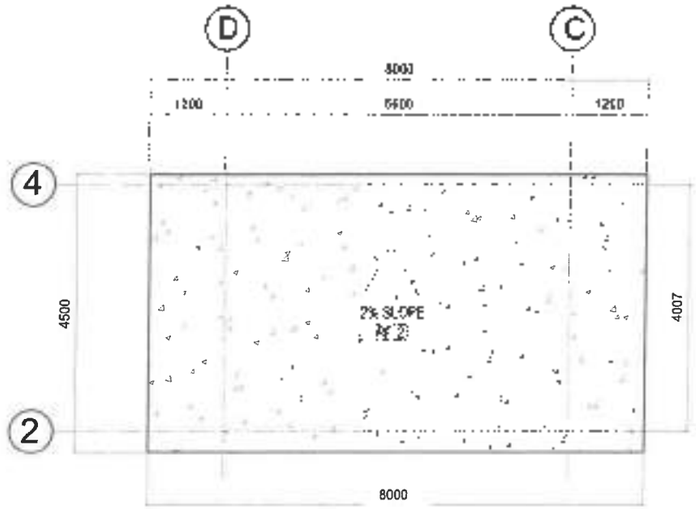
2 / A-9 **CROSS SECTION**

SCALE: 1:100MTS

Republic of the Philippines DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS Bonifacio, Northern Samar NORTHERN SAMAR FIRST DISTRICT ENGINEERING OFFICE Catarman, Northern Samar	PROJECT NAME & LOCATION: CONSTRUCTION OF MULTI-PURPOSE FACILITY, (COVERED COURT), BARANGAY SAN JOSE, LAVEZARES, NORTHERN SAMAR Lavezares, Northern Samar	SHEET CONTENTS: CROSS SECTION LONGITUDINAL SECTION	DESIGNED: [illegible] ARCHITECT Date	REVIEWED: [illegible] ASST. DIST. ENGINEER (PLANNING & DESIGN SECTION) Date	SUBMITTED: ANDY B. ERANO CHIEF, PLANNING & DESIGN SECTION Date	RECOMMENDED: [illegible] ASST. DISTRICT ENGINEER Date	APPROVED: ALVIN A. IGNACIO DISTRICT ENGINEER Date	SFT No. A-5	SHEET No. 11 / 42



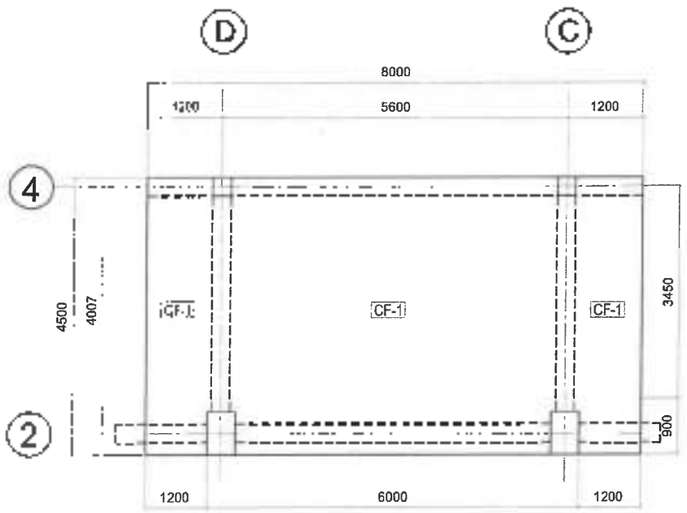
1 A-10 **STAGE DETAIL PLAN**
SCALE: 1:50MTS



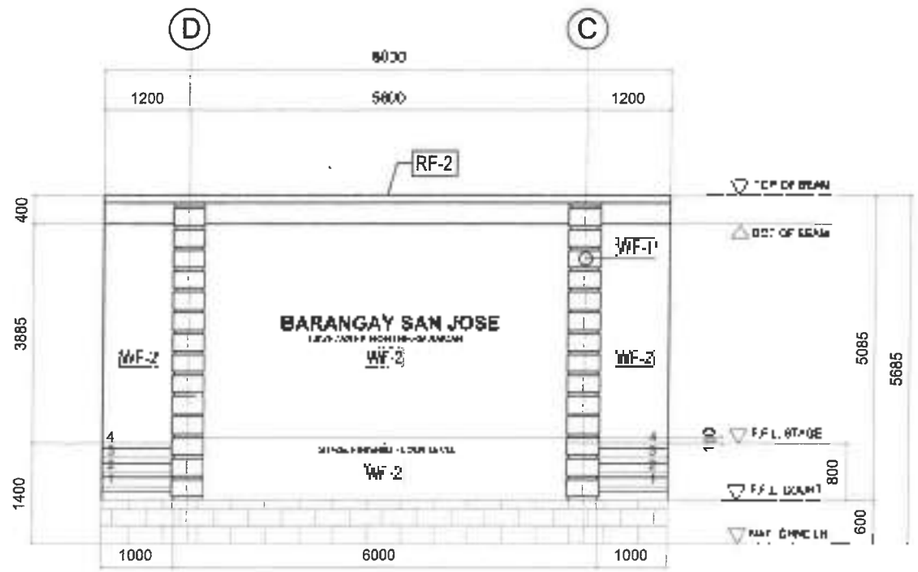
2 A-10 **STAGE ROOF PLAN**
SCALE: 1:50MTS

SCHEDULE OF FINISHES	
WALL FINISH	DESCRIPTION
WF-1	[illegible]
WF-2	[illegible]
WF-3	[illegible]
FLOOR FINISH	DESCRIPTION
FF-1	[illegible]
FF-2	[illegible]
FF-3	[illegible]
FF-4	[illegible]
CEILING FINISH	DESCRIPTION
CF-1	[illegible]
CF-2	[illegible]
ROOFING FINISH	DESCRIPTION
RF-1	[illegible]
RF-2	[illegible]

NOTE:
[illegible]

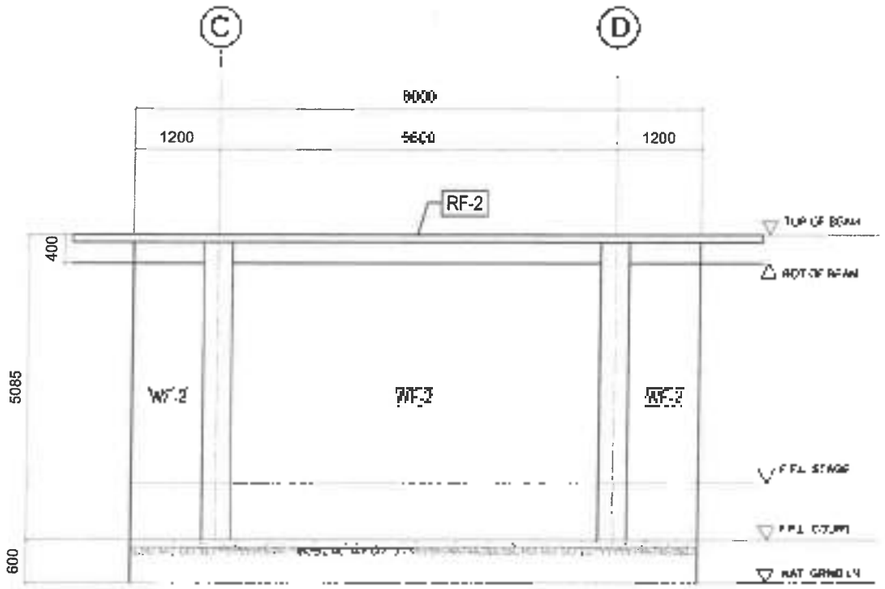


3 A-10 **STAGE REFLECTED CEILING PLAN**
SCALE: 1:50MTS

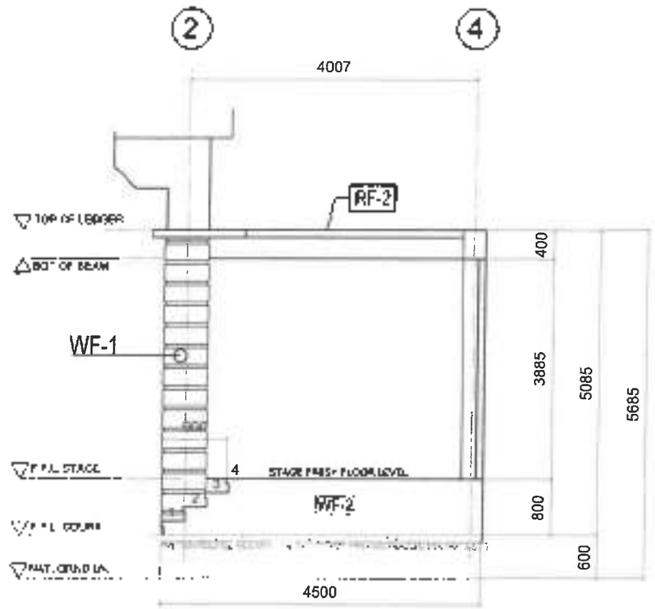


4 A-10 **STAGE FRONT SIDE ELEVATION**
SCALE: 1:50MTS

	PROJECT NAME & LOCATION:	SHEET CONTENTS:	DESIGNED:	REVIEWED:	SUBMITTED:	RECOMMENDED:	APPROVED:	SET No	SHEET No
Republic of the Philippines DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS Region VIII, Leyte NORTHERN SAMAR FIRST DISTRICT ENGINEERING OFFICE Catarman, Northern Samar	CONSTRUCTION OF MULTIPURPOSE FACILITY, (COVERED COURT) BARANGAY SAN JOSE, LAVEZARES, NORTHERN SAMAR Lavezares, Northern Samar	STAGE DETAIL PLAN ROOF PLAN REFLECTED CEILING PLAN FRONT SIDE ELEVATION	KURT B. [illegible] EDUARDO Date	MARIO DONALD N. [illegible] Date	ANDY S. [illegible] Date	VIVIAN A. IGNACIO Date	ALVIN A. IGNACIO Date	A-10	12 of 12

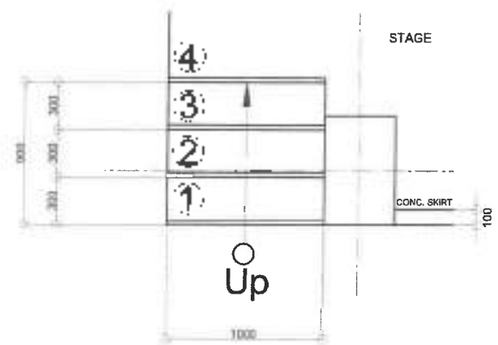


1 A-11 **REAR SIDE ELEVATION**
SCALE 1:50MTS

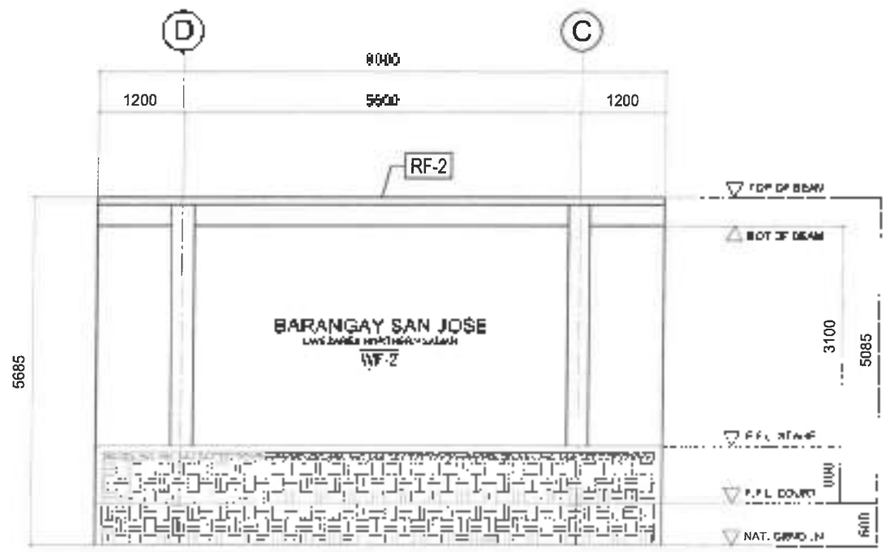


2 A-11 **RIGHT/LEFT SIDE ELEVATION**
SCALE

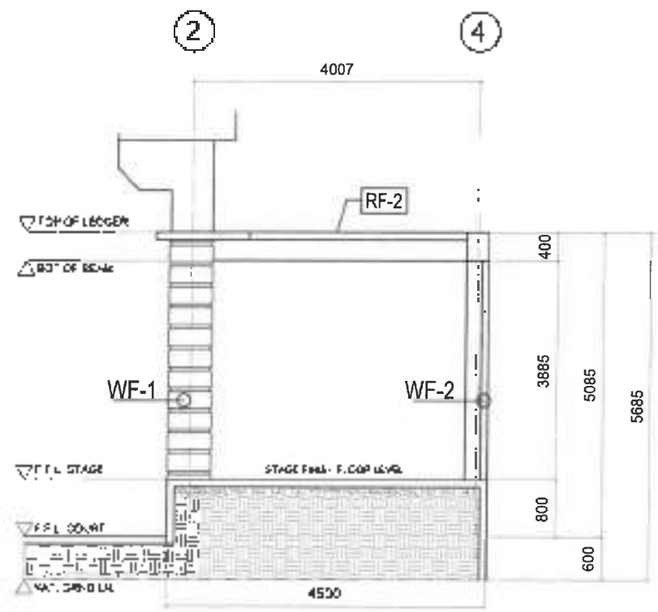
SCHEDULE OF FINISHES	
WALL FINISH	DESCRIPTION
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
FLOOR FINISH	DESCRIPTION
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
CEILING FINISH	DESCRIPTION
[illegible]	[illegible]
[illegible]	[illegible]
Architrave Finish	DESCRIPTION
[illegible]	[illegible]
[illegible]	[illegible]
NOTES:	
[illegible]	



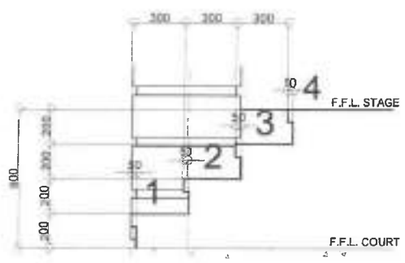
5 A-11 **STAIR BLOW UP PLAN**
SCALE 1:30MTS



3 A-11 **LONGITUDINAL SECTION TRU X**
SCALE 1:50MTS

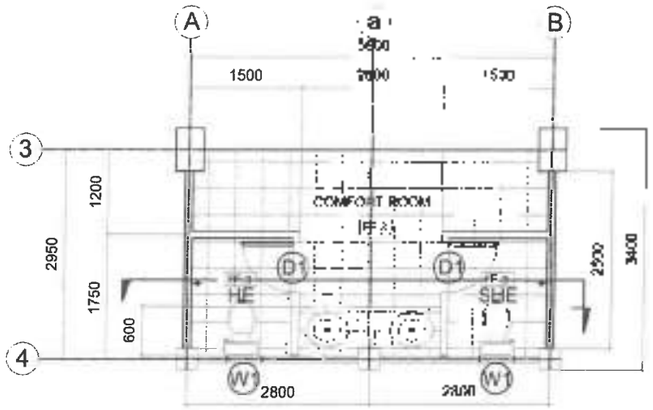


4 A-11 **CROSS SECTION TRU Y**
SCALE 1:50MTS

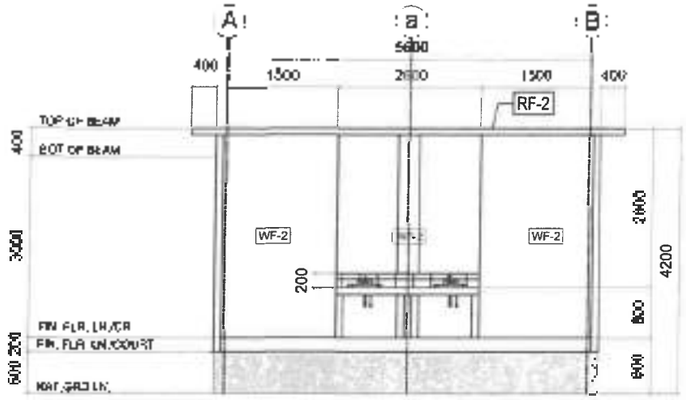


6 A-11 **STAIR BLOW UP DET.**
SCALE

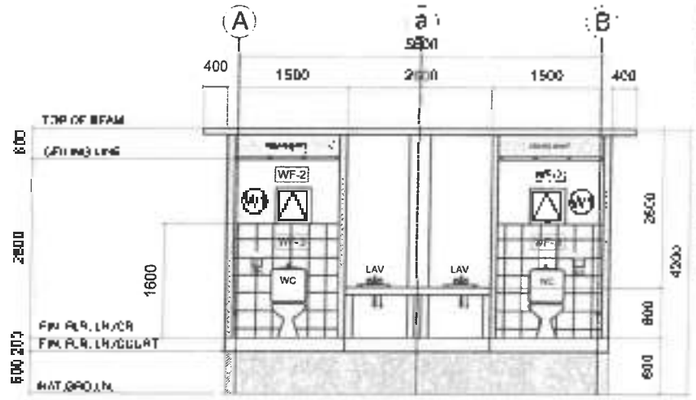
Republic of the Philippines DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE No. VIII NORTHERN SAMAR FIRST DISTRICT ENGINEERING OFFICE Catarman, Northern Samar	PROJECT NAME & LOCATION: CONSTRUCTION OF MULTI-PURPOSE FACILITY (COVERED COURT) BARANGAY SAN JOSE LAVEZARES, NORTHERN SAMAR Lavezares, Northern Samar	SHEET CONTENTS: [illegible]	DESIGNED: [illegible]	REVIEWED: ALAN DONALD R. BIMAN Asst. Chief, Planning & Design Section	SUBMITTED: ANDY B. [illegible] Chief, Planning & Design Section	RECOMMENDED: VIVIAN [illegible]ACO Head, Planning & Design Section	APPROVED: ALVIN A. IGNACIO Director, Regional Projects	SHEET No. A-11	SHEET No. 13 / 42



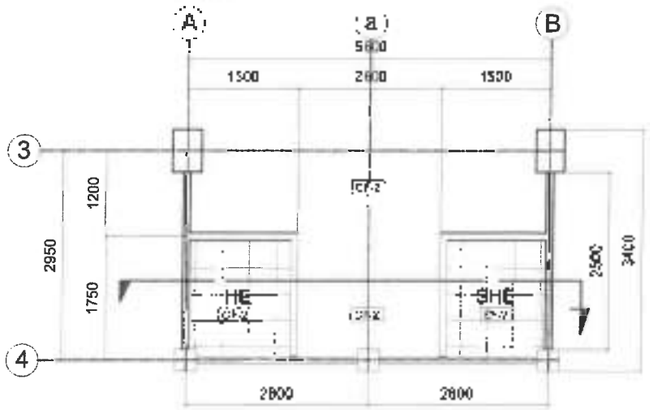
PUBLIC TOILET
DETAIL PLAN OF CR
1 / A-12 SCALE: 1:50MTS



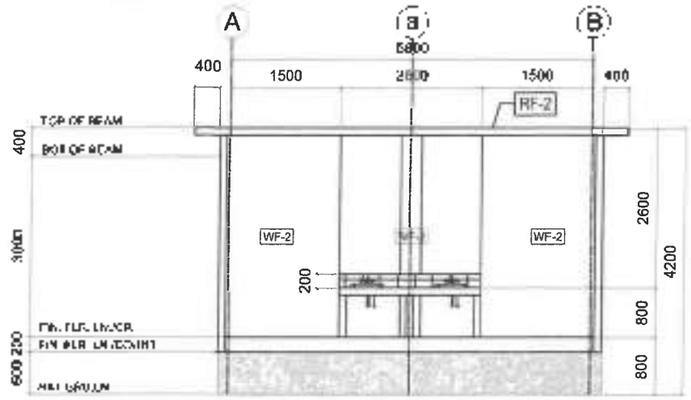
3 / A-12 **FRONT SIDE ELEVATION**
SCALE: 1:50MTS



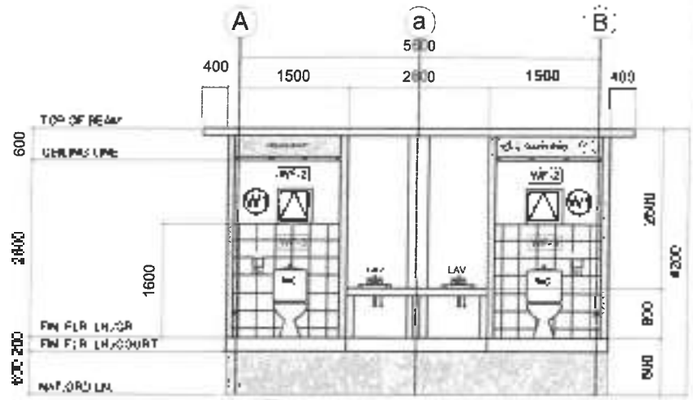
6 / A-12 **SECTION THRU-Y'**
SCALE: 1:50MTS



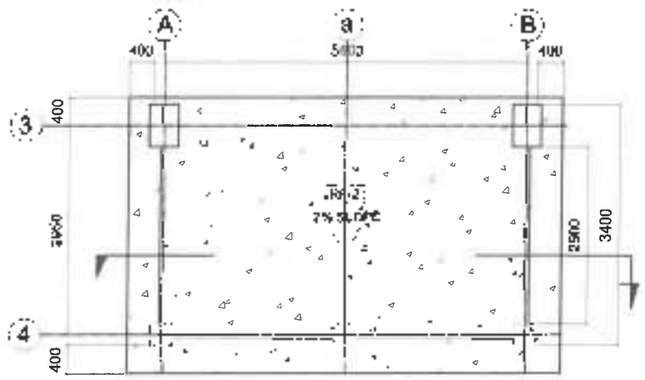
PUBLIC TOILET
REFLECTED CEILING PLAN
2 / A-12 SCALE: 1:50MTS



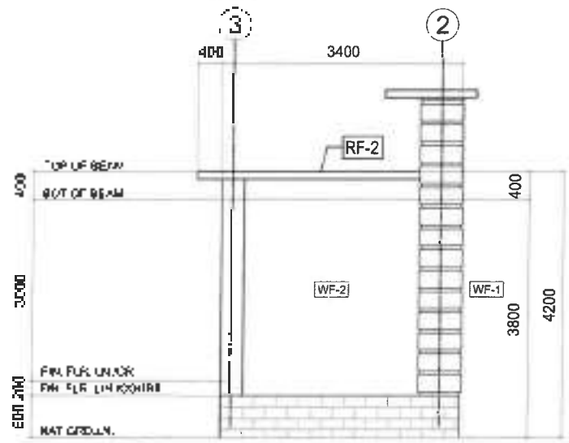
4 / A-12 **REAR SIDE ELEVATION**
SCALE: 1:50MTS



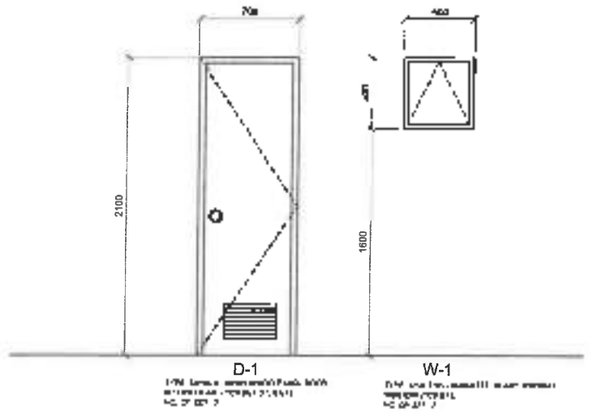
7 / A-12 **SECTION THRU-X'**
SCALE: 1:50MTS



PUBLIC TOILET
ROOF PLAN
3 / A-12 SCALE: 1:50MTS

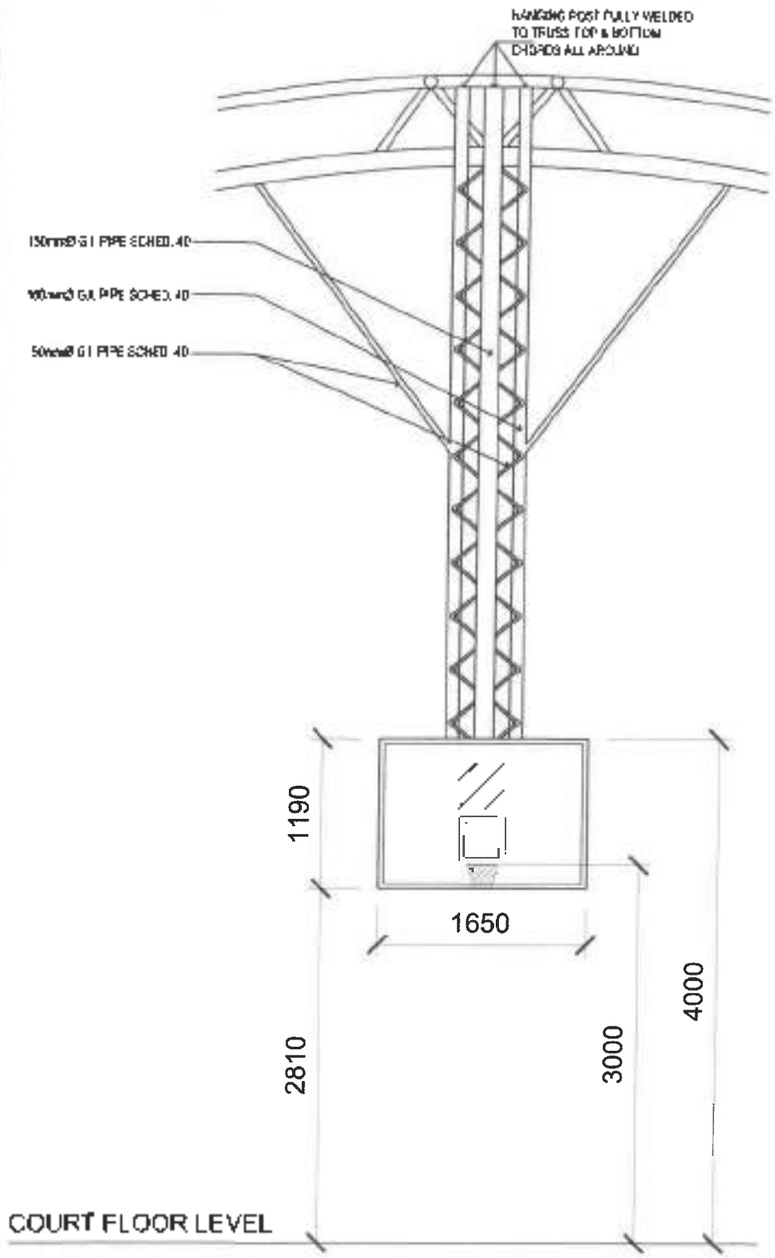


5 / A-12 **RIGHT/LEFT SIDE ELEVATION**
SCALE: 1:50MTS

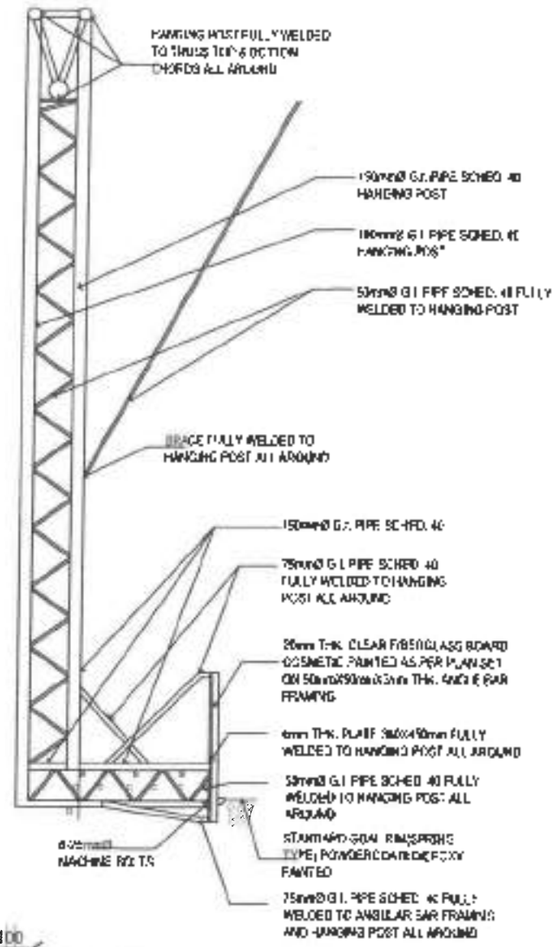


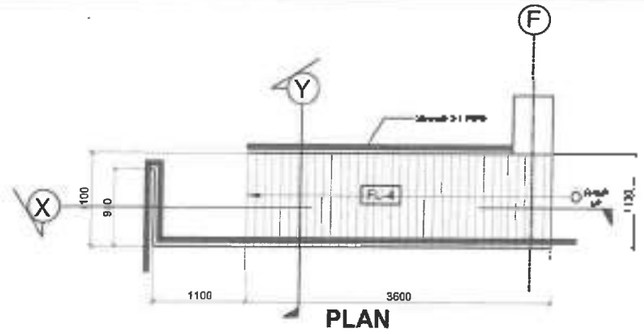
8 / A-12 **SCHEDULE OF DOORS AND WINDOW**
SCALE : NS

	PROJECT NAME & LOCATION	SHEET CONTENTS:	DESIGNED:	REVIEWED	SUBMITTED	RECOMMENDED	APPROVED	SET No.	SHEET No.
Republic of the Philippines DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE No. VIII NORTHERN SAMAR FIRST DISTRICT ENGINEERING OFFICE Catarman, Northern Samar	CONSTRUCTION OF MULTIPURPOSE FACILITY, (COVERED COURT) BARANGAY SAN JOSE, LAVEZARES, NORTHERN SAMAR Lavezares, Northern Samar	DETAIL PLAN OF CR REFLECTED CEILING PLAN ROOF PLAN FRONT SIDE ELEVATION REAR SIDE ELEVATION RIGHT/LEFT SIDE ELEVATION SECTION THRU-Y' SECTION THRU-X' SCHEDULE OF DOORS AND WINDOWS	MAR JUNDY L. LIGUMARIO ARCHITECT DPM	MAR DEBORAH H. EMAN Asst. Chief, Planning & Design Section DPM	ANDY B. LAGERO Chief, Planning & Design Section DPM	VIVIAN V. IGNACIO Asst. District Engineer DPM	ALVIN A. IGNACIO District Engineer DPM	A-12	14 / 42

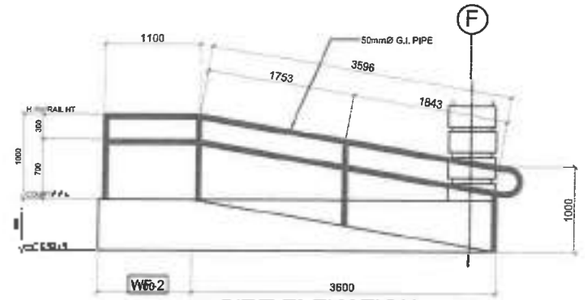


1 A-13 **HANGING BASKETBALL RING DETAIL**
SCALE: 1:30MTS

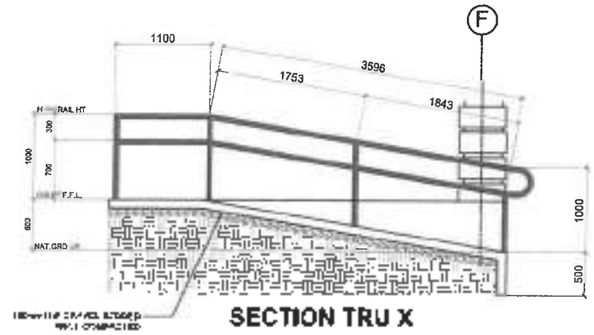




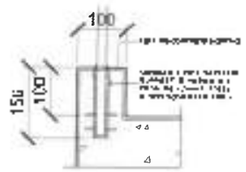
PLAN



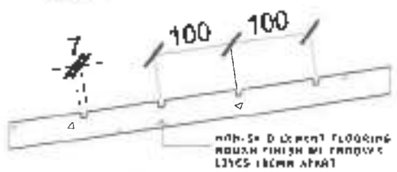
SIDE ELEVATION



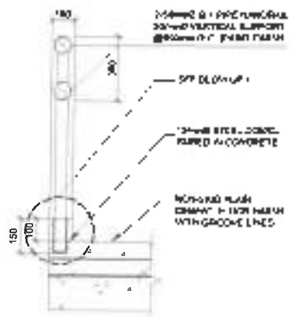
SECTION TRU X



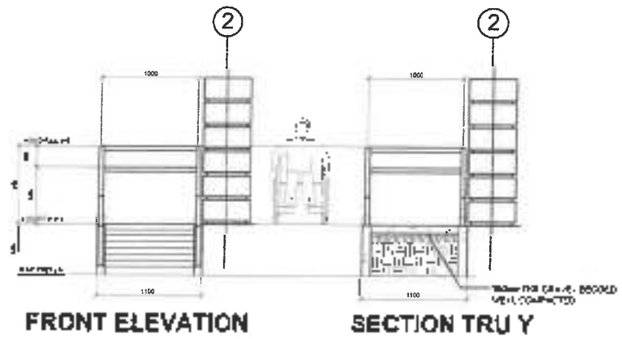
4 A-13 **SECTION TRU H**
SCALE: 1:30MTS



5 A-13 **GROOVE DETAIL**
SCALE: 1:30MTS



3 A-13 **HANDRAIL DETAIL**
SCALE: 1:30MTS



FRONT ELEVATION **SECTION TRU Y**

2 A-13 **RAMP DETAIL**
SCALE: 1:30MTS

Republic of the Philippines DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE No. VIII NORTHERN SAMAR FIRST DISTRICT ENGINEERING OFFICE Catarman, Northern Samar	PROJECT NAME & LOCATION CONSTRUCTION OF MULTI-PURPOSE FACILITY, (COVERED COURT) BARANGAY SAN JOSE, LAVEZARES, NORTHERN SAMAR Lavezares, Northern Samar	SHEET CONTENTS HANGING BASKETBALL RING DETAIL RAMP DETAIL HANDRAIL DETAIL	DESIGNED DUKE ROBERT LUCIANO Engineer II Date	REVIEWED: IVAN DONALD K. DIMAN Asst. Chief, Planning & Design Section Date	RECOMMENDED: ANDY S. FERRER Chief, Planning & Design Section Date	RECOMMENDED: ARMAN D. IGNACIO Asst. District Engineer Date	APPROVED: ALVIN A. IGNACIO District Engineer Date	SHEET No. A-13	SHEET No. 15 42

GENERAL NOTES:

GENERAL

- ALL DIMENSIONS ARE SHOWN IN MILLIMETERS, ELEVATION ARE IN METERS, UNLESS NOTED OTHERWISE
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE SITE AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN ACTUAL CONDITIONS AND INFORMATION SHOWN ON THE DRAWINGS BEFORE PROCEEDING WITH THE WORK. THIS SHALL INCLUDE THE LOCATION AND DIMENSION OF OPENINGS IN WALLS, FLOORS, OPENINGS, EMBEDDED OR ATTACHMENTS, ETC. REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING PLANS. ALL REQUIRED DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE SHOWN ON PLANS, DRAWINGS
- NOTHING SHOWN HERE IS INTENDED TO LIMIT OTHERS ON DRAWINGS SHALL THAT PROVIDE NOT OTHERWISE NOTES AND TYPICAL DETAILS
- THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. EXCAVATION, THE CONTRACTOR SHALL PROVIDE ALL NECESSARY MEASURES TO PROTECT PERSONNEL, EQUIPMENT, MATERIALS, WORKMEN AND OTHER PERSONS DURING ALL PHASES OF CONSTRUCTION
- THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER AND / OR THE ENGINEER OF ANY CONDITION WHICH IN THE OPINION MAY ENDANGER THE STABILITY OF THE STRUCTURES OR CAUSE DISTRESS IN THE STRUCTURES
- CONSTRUCTION MATERIALS SHALL NOT BE STORED ON POURED FLOORS. IT IS ESSENTIAL CONTRACTORS RESPONSIBILITY TO ENSURE THAT THE SUB-CONTRACTORS ARE INFORMED AND DO NOT VIOLATE THIS IMPORTANT REQUIREMENT
- THE CONTRACTOR SHALL PROVIDE TEMPORARY ERECTION BRACINGS AND SHORINGS FOR ALL THE STRUCTURAL MEMBERS AS REQUIRED FOR THE STRUCTURE STABILITY DURING ALL PHASES OF CONSTRUCTION
- THE CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO ENSURE THE PROPER ALIGNMENT OF THE STRUCTURE THROUGH AND INSTALLATION JOINTS UNLESS OTHERWISE SHOWN ON THE DRAWINGS

STANDARDS REFERENCES :

THE FOLLOWING SHALL GOVERN THE DESIGN, MANUFACTURE AND CONSTRUCTION OF THE PROJECT:

- AMERICAN CONCRETE INSTITUTE (ACI PUBLICATIONS):
  - ACI 318-2002 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
  - ACI SP-66 MANUAL OF STANDARD PRACTICE DETAILING REINFORCED CONCRETE
  - OF CONCRETE REINFORCEMENT.
- AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) PUBLICATIONS
  - MANUAL OF STEEL CONSTRUCTION, NINTH EDITION.
- AMERICAN WELDING SOCIETY (AWS) PUBLICATION D1.1-2000.
- AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)
- NATIONAL STRUCTURAL CODE OF THE PHILIPPINES (NSCP) VOL. 1 SIXTH EDITION 2010
- ASSOCIATION OF STRUCTURAL ENGINEERS OF THE PHILIPPINES (ASEP)
  - HANDBOOK FOR STRUCTURAL STEEL SHAPES AND SECTIONS 1997
- UNIFORM BUILDING CODE (UBC) VOL. 2 1997 EDITION
  - DRAFT STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES (BRIDGES, PORTS AND FLOOD CONTROL AND DRAINAGE STRUCTURES, AND WATER SUPPLY SYSTEM VOLUME II 2010

DESIGN CRITERIA

MATERIAL PROPERTIES

- CONCRETE 24.0 kN/m³
- STEEL 77.0 kN/m³
- SOIL 18.00 kN/m³
- HOLLOW BLOCK WALL INSULATION 9.20 kPa
- COLUMN 8.31 kPa
- FLOOR FINISH 1.0 kPa

LIVE LOADS (UL)

- ROOF 0.96 kPa
- WIND (ULTIMATE)

THE WIND LOAD ON STRUCTURE AND BUILDING SHALL BE DETERMINED IN ACCORDANCE WITH THE NATIONAL CODE OF THE PHILIPPINES. CONSIDERATION HAVE WIND BASED ON THE DIRECTIONS OUTLINED SPECIFICATIONS FOR AMPEC.

BASIC WIND SPEED V = 270 km/hour

IMPORTANCE FACTOR = 1

EXPOSURE CATEGORY = D

VERTICAL PRESSURE ACTING ON THE ROOF = ADOPTED 1.0 kPa

WHERE: V = WIND SPEED

p = VELOCITY PRESSURE = 1.0 kPa

p = PRESSURE COEFFICIENT = 0.8 (+) 0.3 (-)

p = GRAVITY LOAD = 1.0 kPa AND a = 5

AND Q = 0.0455 x 270 = 1.0 kN/m²

THE VELOCITY PRESSURE SHALL BE USED ALONG WITH POSITIVE COEFFICIENTS TO CALCULATE WIND LOAD ON SPECIFIC SURFACES.

- SEISMIC LOAD, E

SEISMIC LOADS FOR BUILDING STRUCTURES ARE CALCULATED BASED ON THE FOLLOWING

E = ZIC / R * W

Where: Z = 0.4

I = 1.0

WHERE:

E = NATURAL PERIOD OF THE STRUCTURE

W = THE EARTHQUAKE LOAD DUE TO BASE SHEAR, V OR THE DESIGN

V = NATURAL PERIOD (s)

Ka = THE ESTIMATED MAXIMUM HORIZONTAL FORCE THAT CAN BE EXPERIENCED IN THE STRUCTURE

Ca = THE COEFFICIENT DEPENDING ON THE SEISMIC COMPONENT OF THE EARTHQUAKE SHOULD NOT BE EXCEEDED BY THE FOLLOWING FORMULA

Ca = THE SEISMIC FORCE AMPLIFICATION FACTOR THAT IS DEPENDENT ACCORDING TO THE STRUCTURAL OVERSTRENGTH

R = RESPONSE MODIFICATION FACTOR WHICH SHALL NOT BE TAKEN LESS THAN 1.0 AND GREATER THAN 5.0 GIVEN BY THE FOLLOWING FORMULA:

WHERE

Ca = THE MAXIMUM HORIZONTAL FORCE DIVIDED BY THE TOTAL DESIGN STORY SHEAR IN THE ABOVE LOADS SHALL BE NOT GIVEN BY THE TOTAL DESIGN STORY SHEAR

FOR MOMENT FRAMES, CAN BE TAKEN AS 1.0 PROVIDED ON THE TOP OF THE SHEAR SHALL NOT TWO ADJACENT COLUMNS IN A GIVEN FRAME AND DIVIDED BY THE STORY SHEAR FOR EITHER DIRECTION OF THE FRAME, 100 PERCENT OF THE SHEAR IN THAT COLUMN MAY BE USED IN THE COLUMN FRAME SUBMISSION WITH THE SUPPORTING FRAMES OF THE STRUCTURE.

EARTHQUAKE BASE SHEAR, V

THE TOTAL EARTHQUAKE SHEAR IN A GIVEN DIRECTION SHALL BE DETERMINED FROM THE FOLLOWING FORMULA

V = (Z I C) / (R W)

AND NOT LESS THAN THE FOLLOWING

BUT SHALL NOT BE LESS THAN THE FOLLOWING

IN ADDITION FOR SEISMIC ZONE 4, THE TOTAL BASE SHALL ALSO BE NOT LESS THAN THE FOLLOWING:

WHERE:

SEISMIC ZONE FACTOR = 0.40

IMPORTANCE FACTOR = 1.0

GROUND DUCTILITY CHARACTERISTIC = 0.625

SEISMIC FORCE DISTRIBUTION FACTOR = 1.0

SEISMIC SOURCE TYPE = (Type A)

NEAR - SOURCE FACTOR, Na = 1.0

NEAR - SOURCE TYPE, Nv = 1.0

- MATERIALS

NORMAL WEIGHT CONCRETE

Wc = 1.0 (Ec) 1.5

Ec = (0.043 Wc^1.5 √f'c) / 9.81 (MPa)

- CONCRETE USED IN THE WORKS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AS SHOWN ON PLANS

COLUMNS, BEAMS AND FOOTINGS f'c = 20MPa (3000 PSI)

FOOTING, TIE BEAMS f'c = 20MPa (3000 PSI)

SLAB ON GRADE f'c = 17.5MPa (2,500 PSI)

- ALL REINFORCED CONCRETE WORKS, MIXED AND CURED IN ACCORDANCE WITH ACI 318 STANDARD
- MINIMUM COVER TO REINFORCEMENT SHALL BE AS FOLLOWS
- FOOTINGS AND BOTTOM OF FOOTING TIE BEAM = 75MM (FOR AGAINST EARTH)
- BEAMS AND COLUMNS = 40MM (FOR INTERIOR EXPOSED)
- SLABS AND WALLS = 20MM (FOR AGAINST FORMS)
- BEFORE CONCRETE IS POURED, CHECK WITH ALL TRADES TO ENSURE PROPER PLACEMENT OF ALL EMBEDMENTS.

SLABS ON GRADE: CONCRETE MUST BE LEVEL TO THE MORE

- WHEN CONCRETE WILL BE POURED ON FIRM GROUND, WHERE THE FORMS DO NOT SERVE AS SURFACES, SUCH AS DECKING

SLAB BRACKETS, WATER, SLAB WATER OR SEPARATE FROM THE SUBGRADE, THEY MUST BE PROVIDED TO SATISFY THE SPECIFICATIONS REQUIREMENTS OF ACI 318-05

- ALL CONCRETE SHALL BE KEPT MOIST FOR MINIMUM OF 7 CONSECUTIVE DAYS IMMEDIATELY AFTER PLACING BY THE CURING METHOD

- REINFORCING BARS
- UNLESS OTHERWISE SPECIFIED ON PLANS, REINFORCING BARS SHALL BE DEFORMED BARS WITH A MINIMUM YIELD STRENGTH

GRADE 60 (Fy = 414 MPa (60000 PSI))

- ALL REINFORCING BARS SHALL BE CLEANED OF DIRT, GREASE OR OTHER MATERIALS WHICH TEND TO REDUCE BOND
- ALL REINFORCING BARS SHALL BE FIRMLY TIED AND SUPPORTED PLACED BEFORE POURING CONCRETE OR GROUTING, MORTAR OR GROUT

- SPLICES SHOULD BE STAGGERED WHERE POSSIBLE
- UNLESS INDICATED OTHERWISE, SPLICING OF REINFORCING BARS SHALL BE IN ACCORDANCE WITH ACI 318-2002.
- UNLESS SHOWN OTHERWISE ON PLANS, SPLICES SHALL BE AS FOLLOWS:
- BEAMS AND FOOTING TIE BEAMS: TOP AND BOTTOM BARS SHALL NOT BE SPLICED WITHIN THE COLUMN OR WITHIN A DISTANCE OF TWICE THE MINIMUM DEPTH FROM THE FACE OF THE COLUMN; ALL TRANSVERSE BARS SHALL BE SPLICED WITHIN THE MIDDLE HALF OF THE SPAN. THE SPLICE LENGTHS SHALL NOT BE LESS THAN THE LENGTH IN ITEM 4.3.8 BELOW
- COLUMN SPLICES: A REINFORCED SHALL BE MADE WITHIN THE CENTER HALF OF COLUMN HEIGHT AND LAP SPLICE SHALL NOT BE LESS THAN 40 BARS DIAMETERS. THE USE OF APPROVED MECHANICAL DEVICES MAY BE PERMITTED PROVIDED THAT NOT MORE THAN ALTERNATE BARS ARE SPLICED AT ANY LEVEL AND THE MINIMUM VERTICAL DISTANCE BETWEEN TWO ADJACENT BAR SPLICES SHALL BE 600MM.
- SHEAR WALLS VERTICAL BARS SHALL BE SPLICED AT THE TOP OF WALL FOOTING OR TIE BEAM AND AT THE BOTTOM OF RC (WITH BEAMS) BEAMS. SPLICE LENGTH SHALL BE 600MM MIN.
- UNLESS INDICATED OTHERWISE ALL BEAMS TERMINATING AT THE COLUMN SHALL HAVE TOP AND BOTTOM BARS EXTENDING TO THE FAR FACE OF THE COLUMN, TRANSVERSE WITH A STANDARD 90 HOOK LENGTH OF AN HORIZONTAL NOT LESS THAN 600MM
- SHOP DRAWINGS FOR BENDING AND CUTTING OF REINFORCEMENT SHALL BE SUBMITTED FOR APPROVAL TO THE ENGINEER PRIOR TO FABRICATION
- SPLICE LENGTH OF REINFORCING BARS SHALL BE AS SHOWN IN THE TABLE BELOW

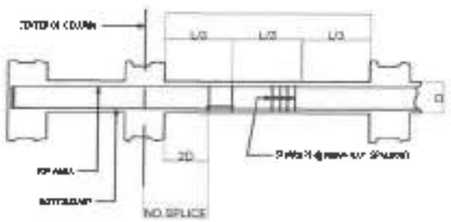
- STRUCTURAL STEELWORK FOR BOLTS, NUTS, WASHERS & WELDMENTS, PLATE, SHEET AND CROSS TIES
- ALL STRUCTURAL STEEL SHALL HAVE A MINIMUM YIELD STRENGTH. Fy = 248 MPa (36 KSI) AND SHALL CONFORM TO ASTM A 36 SPECIFICATION
- ALL STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE AISC SPECIFICATION (8TH EDITION) AND CODE OF STANDARD PRACTICE AS ADOPTED TO DATE
- ALL COLD FORMED STEEL SHALL HAVE A MINIMUM STRENGTH, Fy = 230 MPa (33 KSI)
- THE CONTRACTOR/FABRICATOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL TO THE ENGINEER PRIOR TO FABRICATION/ERECTION OF ALL STEEL WORKS
- ALL SHOP AND FIELD WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1 – 2000 AND PERFORMED BY QUALIFIED WELDERS
- UNLESS INDICATED OTHERWISE, WELDING ELECTRODES SHALL BE E60XX MINIMUM THICKNESS OF WELD SHALL 3MM.
- UNLESS OTHERWISE INDICATED, BOLTS AND/OR BOLTS SHALL CONFORM TO ASTM A325 SPECIFICATION
- BOLTS FOR MEMBER CONNECTIONS SHALL BE HIGH STRENGTH BOLTS, CONFORMING TO ASTM A325 FRICTION TYPE WITH WASHERS

CONSTRUCTION JOINTS:

- CONSTRUCTION JOINTS NOT INDICATED ON PLANS SHALL BE MADE SO AS TO LEAST IMPAIR THE STRENGTH OF THE STRUCTURE AND SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER
- UNLESS SHOWN OTHERWISE, SLAB ON GRADE SHALL HAVE CONTROL JOINTS @ 6.00M MAXIMUM CENTER TO CENTER
- NOTES ON BEAMS AND GIRDERS
- THE REINFORCEMENT NOTED IN PLANS OR SPECIFICATIONS, DAMAGE ALL BEAMS AND GIRDERS AT LEAST 6 DIAMETER EVERY 4.50M OF LENGTH EXCEPT CANTILEVERS FOR WHICH THE DAMAGE SHALL BE AS NOTED ON THE PLANS OR AS ORDERED BY THE ENGINEER, BUT IN NO CASE LESS THAN 3.00M FOR EVERY 3.00M OF BEAM LENGTH
- IF THERE ARE TWO (2) OR MORE LAYERS OF REINFORCING BARS, USE SEPARATORS OF SIZE NOT LESS THAN 25MM BARS SPACED ABOUT 1.00M ON CENTER AND PLACED DIAGONALLY. IN NO CASE SHALL THERE BE LESS THAN (2) SEPARATORS BETWEEN LAYERS OF BARS
- WHEN A BATCH CONSISTS A NUMBER, REST BEAM BARS ON TOP OF GIRDER (WITH REINFORCING BARS) SHALL BE DISTRIBUTED ABOUT THE CENTER LINE WHENEVER POSSIBLE. UPPER LAYER SHALL BE PLACED DIRECTLY ABOVE THOSE IN THE BOTTOM LAYER. SPACING OF BARS IN LAYER SHALL NOT BE LESS THAN 1.0 TIMES THE ONE BAR DIAMETER
- GENERALLY, NO SPLICE SHALL BE PERMITTED ON BEAM AT POINT WHERE CRITICAL BENDING STRESS OF THE WELDED SPLICE SHALL DEVELOP BY 125% OR AT LEAST 1.50% OF THE SPECIFIED STRENGTH OF THE BAR. NOT MORE THAN 50% OF THE BARS AT ANY ONE SECTION SHALL BE ALLOWED TO BE SPLICED THERE
- FOR BAR TERMINATIONS OF TOP BARS AT SUPPORT AND MIDSPAN BARS, CUT OFF ONLY TWO BARS AT EVERY 3.00 INTERVAL (UNLESS REQUIRED IN SPECIFICATIONS OR NOTED OTHERWISE)

FOUNDATIONS

- FOOTINGS WERE DESIGNED USING AN ALLOWABLE SOIL BEARING CAPACITY OF 95 KPA (2,000 PSF) AT OFFICIAL GRADE AS PER DRAWING
- WHERE FOUNDATION BOTTOM IS FOUND BELOW AT DEPTH OF FOOTING OR FOUNDATION INDICATED, EXCAVATE TO THIS LEVEL AND REPLACE LOOSE SOFT MATERIALS AND DEBRIS IN THE FOOTING WITHIN THE FOOTING AREA. PLACE SUFFICIENT DEPTH OF SOIL MATERIAL ON ALL SIDE WITH SELECTED BACKFILL COMPACT SELECTED BACKFILL TO 95% MAXIMUM DRY DENSITY PER ASTM D 698-78
- NO FILL MATERIAL SHALL REST ON FILL PROVIDE 100MM THICK WELL COMPACTED GRAVEL BASE COURSE IN ALL COLUMN FOOTING, UNLESS OTHERWISE STATED
- FILL MATERIALS SHALL BE PLACED IN 200MM LAYERS AND EACH LAYER SHALL BE COMPACTED TO 95% MAXIMUM DRY DENSITY BEFORE SUBSEQUENT LAYERS ARE TO BE LAID
- FOUNDATION DESIGN SHALL BE BASED ON ACTUAL GEOTECHNICAL REPORT CONDUCTED ON SITE AND CONFIRMATORY BORINGS MUST BE DONE BEFORE START OF CONSTRUCTION. IF THE ACTUAL SOIL CONDITION IS FOUND NOT ACCORDANCE WITH THE ASSUMED SOIL BEARING CAPACITY, NOTIFY THE DESIGNER FOR PROPER REVISION OF THE FOUNDATION DESIGN



TYP. SPLICE DETAILS FOR BEAMS FRAMING INTO COLUMN
NTS

LAP SPLICE & HANDHOLE LENGTH TABLE

BAR DIAMETER (mm)	NOMINAL LENGTH (mm)	[illegible]			[illegible]				[illegible]	[illegible]	
					[illegible]		[illegible]				
		0°	45°	90°	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
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NOTES:

- [illegible]
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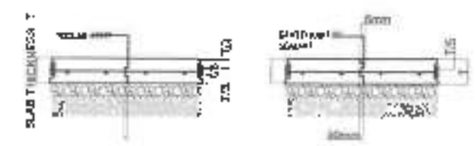
- [illegible]

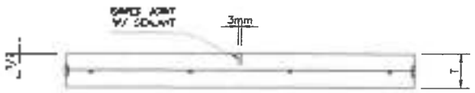


NOTE
CONTROL JOINTS CAN BE EITHER CONSTRUCTION JOINTS OR WEAKENED PLANE JOINTS

CONTROL JOINTS FOR SLAB-ON GRADE
NTS

Republic of the Philippines DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE No. VIII NORTHERN SAMAR 1ST DISTRICT ENGINEERING OFFICE Catarman, Northern Samar	PROJECT NAME & LOCATION: CONSTRUCTION OF MULTI-PURPOSE FACILITY, (COVERED COURT) BARANGAY SAN JOSE, LAVEZARES, NORTHERN SAMAR Lavezares, Northern Samar	SHEET CONTENTS: GENERAL CONSTRUCTION NOTES	PREPARED: AURT B. LEONARDO Date DESIGNED: JEFF F. PEDROLA Date	REVIEWED: RUR DONALD R. ROMAN ASST. DIST. ENGINEER – PLANNING & DESIGN SECTION	SUBMITTED: ANDY S. BRIÑO CHIEF, PLANNING & DESIGN SECTION	RECOMMENDED: VIVIA [illegible] BUCO DISTRICT ENGINEER	APPROVED: ALVIN A. IGNACIO DISTRICT ENGINEER

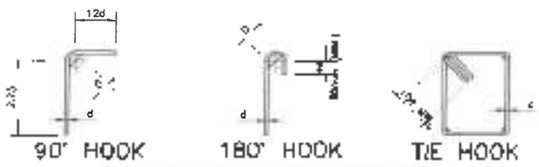
SET No.	SHEET No.
S-1	16 / 42



NOTE: CONTROL JOINT CAN BE EITHER CONSTRUCTION JOINT OR WEAKENED PLANE JOINT.

1C / S-2 CONTROL JOINTS FOR SLAB-ON-FILL

NOT TO SCALE

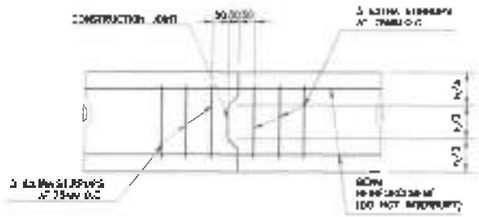


BAR SIZE	D	
	90° HOOK	180° HOOK
10mm@ THRU 25mm@	6d	4d
25mm@ THRU 35mm@	8d	6d

NOTE:
1. ALL HOOKS SHOWN IN DETAILS/SCHEDULES SHALL BE STANDARD HOOK OTHERWISE NOTED.
2. 180° HOOKS MAY BE SUBSTITUTED FOR 90° HOOKS

1B / S-2 TYP. REINFORCEMENT DETAIL

NOT TO SCALE



NOTE:

PURSUANT TO SECTION [illegible] OF RA [illegible] THE RULES AND REGULATION OF RA [illegible] THE REVISED IMPLEMENTING RULES AND REGULATION OF RA [illegible] ALL DRAWINGS OF THE PROJECT ARE THE EXCLUSIVE PROPERTY OF THE DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS. THE REPRODUCTION, PUBLICATION, MODIFICATION AND USE OF THE DRAWINGS IN ANY FORM OR MANNER WITHOUT PRIOR WRITTEN CONSENT OF THE DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS IS PROHIBITED EXCEPT TO THE EXTENT NECESSARY FOR THE INTENDED USE OF THE PROJECT. THE DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS WILL NOT BE LIABLE FOR ANY USE OF THE DRAWINGS FOR OTHER PROJECTS OR PURPOSES.

THE DESIGN CONSULTANT SHALL BE HELD FULLY RESPONSIBLE FOR THE FAILURE OF THE FACILITY/STRUCTURE DUE TO FAULT DESIGN STEMMING FROM THE UNAUTHORIZED USE WITHOUT THE CONSENT OF THE CONSULTANTS.

1A / S-2 BEAM CONSTRUCTION JOINT

NOT TO SCALE

NOTES ON CONCRETE MIXES & PLACING

PROJECT

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	(20.7 MPa)	20mm	100mm
COLUMNS	3000 PSI	(20.7 MPa)	20mm	100mm
BEAMS, SLABS	3000 PSI	(20.7 MPa)	20mm	100mm
SLAB ON FILL	2500 PSI	(17.5 MPa)	20mm	100mm

2. MAINTAIN MINIMUM CONCRETE COVER FOR REINFORCING STEEL AS FOLLOWS:
   - 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 MECHANICALLY WITH SLINGS, BUCKETS OR WHEELBARROWS. NO CHUTES MAY BE ALLOWED EXCEPT TO TRANSFER CONCRETE FROM HOPPERS TO BUGGIES, WHEELBARROWS OR BUCKETS IN WHICH CASE THEY SHALL NOT EXCEED SIX (6) METERS IN AGGREGATE LENGTH.
4. NO RE-POURING OF CONCRETE SHALL BE ALLOWED WITHOUT THE USE OF VIBRATORS UNLESS AUTHORIZED IN WRITING BY THE DESIGNERS AND ONLY FOR UNUSUAL CONDITIONS WHERE VIBRATIONS ARE EXTREMELY DIFFICULT TO ACCOMPLISH.
5. ALL ANCHOR BOLTS, DOWELS, AND OTHER INSERTS, SHALL BE PROPERLY POSITIONED & SECURED BY PLANT 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 PROVIDE AND MAINTAIN ADEQUATE FORMS AND SHORINGS 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 ___ KPa (_____ psf). CONTRACTOR SHALL REPORT TO THE ENGINEER, IN WRITING, THE ACTUAL SOIL CONDITIONS ENCOUNTERED AND CONFIRM ACTUAL BEARING CAPACITY OF SOIL BEFORE DEPOSITING CONCRETE.
2. FOOTING SHALL REST AT LEAST 1000mm BELOW NATURAL GROUND 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 ON THE GROUND AND 50mm FOR CONCRETE DEPOSITED AGAINST A FORMWORK.
4. IN CASES WHERE THE SOIL CONDITION IS SUCH THAT THE MINIMUM ALLOWABLE SOIL PRESSURE OF 50 KPa (2,000 psf) CAN NOT BE ATTAINED AT PRACTICAL DEPTHS, THE USE OF MICROPILES, BORED PILES, OR DRIVEN PILES MAY BE ADOPTED IN LIEU OF STANDARD ISOLATED FOOTINGS.

NOTES ON REINFORCEMENT

1. UNLESS OTHERWISE NOTED IN PLANS, THE YIELD STRENGTH OF REINFORCING BARS SHALL BE:
   - A. FOOTINGS, FOOTING BEAMS AND COLUMNS ------- 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, BEDFOR SLABS, TICKNESS & ROOF SLABS, PARAPETS, CATTLE DAMS, SOC WALL ------- fy = 220.0 MPa (32,000 psi)
2. ALL REINFORCING BARS SIZE 10mm OR LARGER SHALL BE 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 OF LAP SPLICE & ANCHORAGE LENGTH) UNLESS OTHERWISE SHOWN ON DRAWINGS. SPLICES SHALL BE STAGGERED WHENEVER POSSIBLE.

4.0 MATERIALS

4.1 CONCRETE

4.1.1 CONCRETE COVER OVER REINFORCING BARS SHALL BE AS FOLLOWS

- A. FOOTINGS, FOOTING-TIE BEAMS (CAST AGAINST EARTH) — 75mm
- B. BEAMS AND COLUMNS (TO STIRRUPS AND TIES) — 40mm
- C. WALLS, SIDE OF FOOTING-TIE BEAMS (CAST AGAINST FORMS) — 40mm
- D. SUSPENDED SLAB — 20mm

4.1.2 BEFORE CONCRETE IS POURED, CHECK WITH ALL TRADES TO ENSURE PROPER PLACEMENT OF ALL OPENINGS, SLEEVES, CURBS, CONDUITS, ETC. RELATING TO THE WORK.

4.2 REINFORCING BARS

4.2.1 ALL REINFORCING BARS SHALL BE CLEAN OF RUST, GREASE OR OTHER MATERIALS THAT WILL IMPAIR BOND.

4.2.2 ALL REINFORCING BARS SHALL BE ACCURATELY AND SECURELY PLACED BEFORE POURING CONCRETE OR APPLYING MORTAR OR GROUT.

4.2.3 LAPPED SPLICES SHALL BE STAGGERED WHERE POSSIBLE.

4.2.4 UNLESS OTHERWISE INDICATED, SPLICING OF REINFORCEMENT SHALL BE IN ACCORDANCE WITH ACI-318M, EXCEPT THAT THE MINIMUM LAP SPLICE SHALL BE 40 BAR DIAMETER BUT NOT LESS THAN 600mm.

4.2.5 UNLESS SHOWN OTHERWISE ON PLANS, SPLICES SHALL BE AS FOLLOWS:

A. INTERMEDIATE BEAMS: TOP BARS SHALL BE SPLICED AT MID-SPAN, AND BOTTOM BARS AT THE SUPPORT.

B. BEAMS FRAMING TO COLUMNS: TOP BARS SHALL BE SPLICED AT MID-SPAN AND BOTTOM BARS SHALL NOT BE SPLICED W/IN THE COLUMN OR W/IN A DISTANCE OF ONCE THE MEMBER DEPTH FROM THE FACE OF THE COLUMN. THE SPLICED LENGTH SHALL NOT BE LESS THAN 1.4 TIMES THE DEVELOPMENT LENGTH (ld) IN 4.2.9 BELOW BUT NOT LESS THAN THAN 600mm.

C. COLUMNS: LAP SPLICES SHALL BE MADE WITHIN THE CENTER HALF OF HEIGHT AND THE SPLICE SHALL NOT BE LESS THAN 30 BAR DIAMETER. WELDING OR THE USE OF APPROVED MECHANICAL DEVICES MAY BE PERMITTED PROVIDED NOT MORE THAN ALTERNATE BARS ARE WELDED OR SPLICED AT ANY LEVEL AND THE MINIMUM VERTICAL DISTANCE BETWEEN TWO ADJACENT BAR SPLICES SHALL BE 600mm.

D. CHB WALLS: VERTICAL BARS SHALL BE SPLICED AT THE TOP OF WALL FOOTINGS OR FOOTING-TIE BEAMS AND AT THE BOTTOM OF REINFORCED CONCRETE LINTEL BEAMS OR BEAMS.

4.2.6 UNLESS OTHERWISE INDICATED: ALL BEAMS TERMINATING AT A COLUMN SHALL HAVE TOP AND BOTTOM BARS EXTENDING TO THE FAR FACE OF THE COLUMN. TERMINATING IN A STANDARD 90 HOOK. LENGTH OF ANCHORAGE SHALL NOT BE LESS THAN 600mm.

4.2.7 SHOP DRAWING FOR REINFORCEMENT SHALL BE SUBMITTED FOR APPROVAL OF THE ENGINEER PRIOR TO FABRICATION & INSTALLATION.

4.2.8 DEVELOPMENT LENGTH (ld) OF REINFORCING BARS SHALL BE AS FOLLOWS:

SIZE OF REBARS	DEVELOPMENT LENGTH
12 mm	170 mm
14 mm	230 mm
16 mm	270 mm
20 mm	380 mm
25 mm	400 mm

NOTES ON CONCRETE HOLLOW (BLOCK) WALLS

[illegible]

NOTES ON CONCRETE HOLLOW BLOCK WALL REINFORCEMENTS			
BLOCK THICKNESS	[illegible]		NOTES
	HORIZONTAL	VERTICAL	
20 mm	[illegible]	[illegible]	[illegible]
25 mm	[illegible]	[illegible]	[illegible]
30 mm	[illegible]	[illegible]	[illegible]
40 mm	[illegible]	[illegible]	[illegible]

NOTES ON WELDS

[illegible]

NOTES ON STRUCTURAL STEEL

[illegible]

[illegible]

NOTES ON EXPANSION JOINTS IN CONCRETE

[illegible]

Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGIONAL OFFICE No. VIII
NORTHERN SAMAR FIRST DISTRICT ENGINEERING OFFICE
Catarman, Northern Samar

PROJECT NAME & LOCATION: CONSTRUCTION OF MULTI-PURPOSE FACILITY (COVERED COURT) BARANGAY SAN JOSE, LAVEZARES, NORTHERN SAMAR
Municipality: Northern Samar

SHEET CONTENTS: GENERAL CONSTRUCTION NOTES

PREPARED: BURT [illegible] LIGUNAO, Engineer II
DESIGNED: JEFF F. PEDROLA, Engineer I

REVIEWED: IMAR DONALD R. [illegible], Asst. Chief, Planning & Design Section

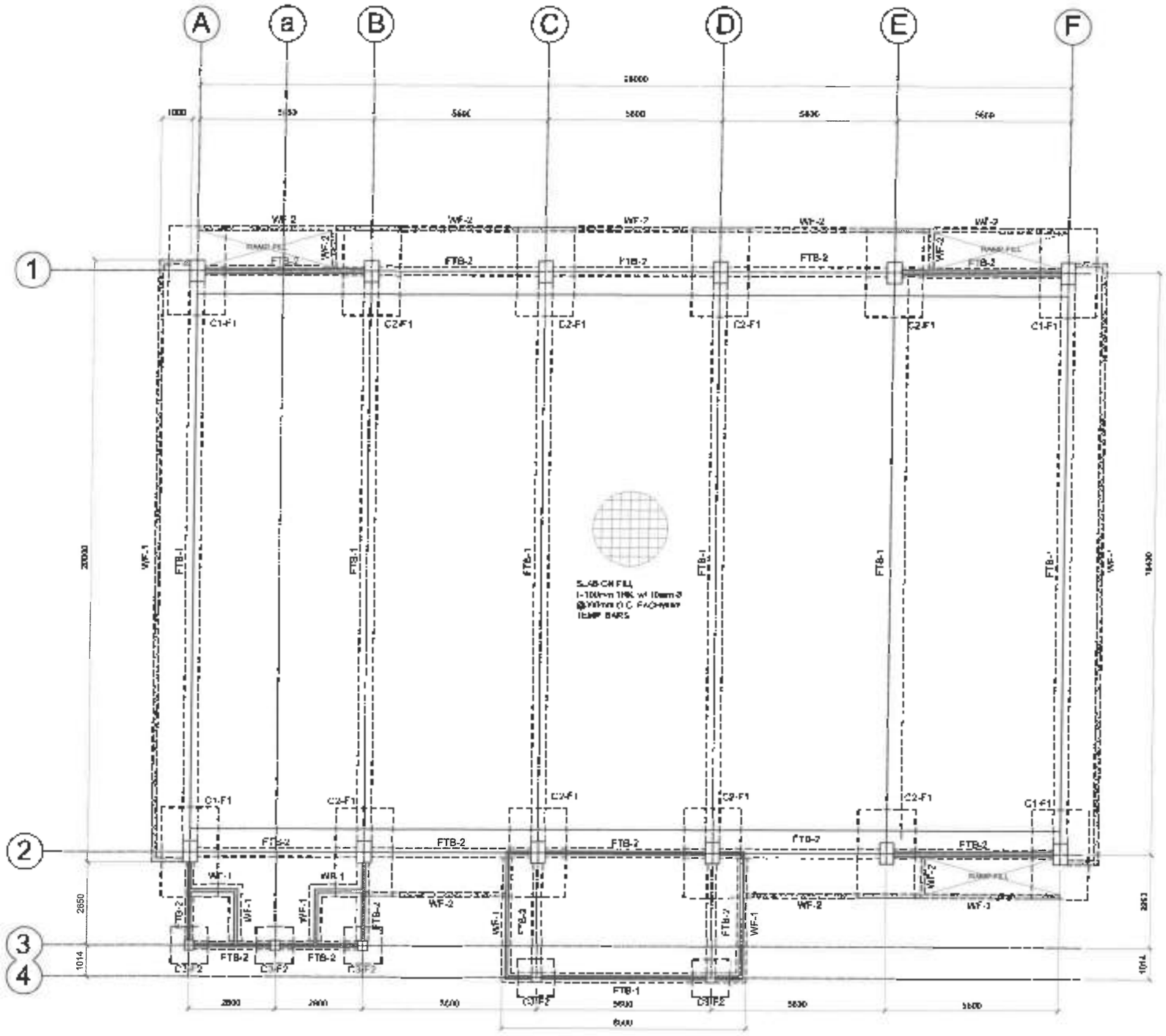
SUBMITTED: ANDY B. [illegible], Chief, Planning & Design Section

RECOMMENDED: VIVIAN [illegible], Asst. District Engineer

APPROVED: ALVIN A. IGNACIO, District Engineer

SET NO. 52

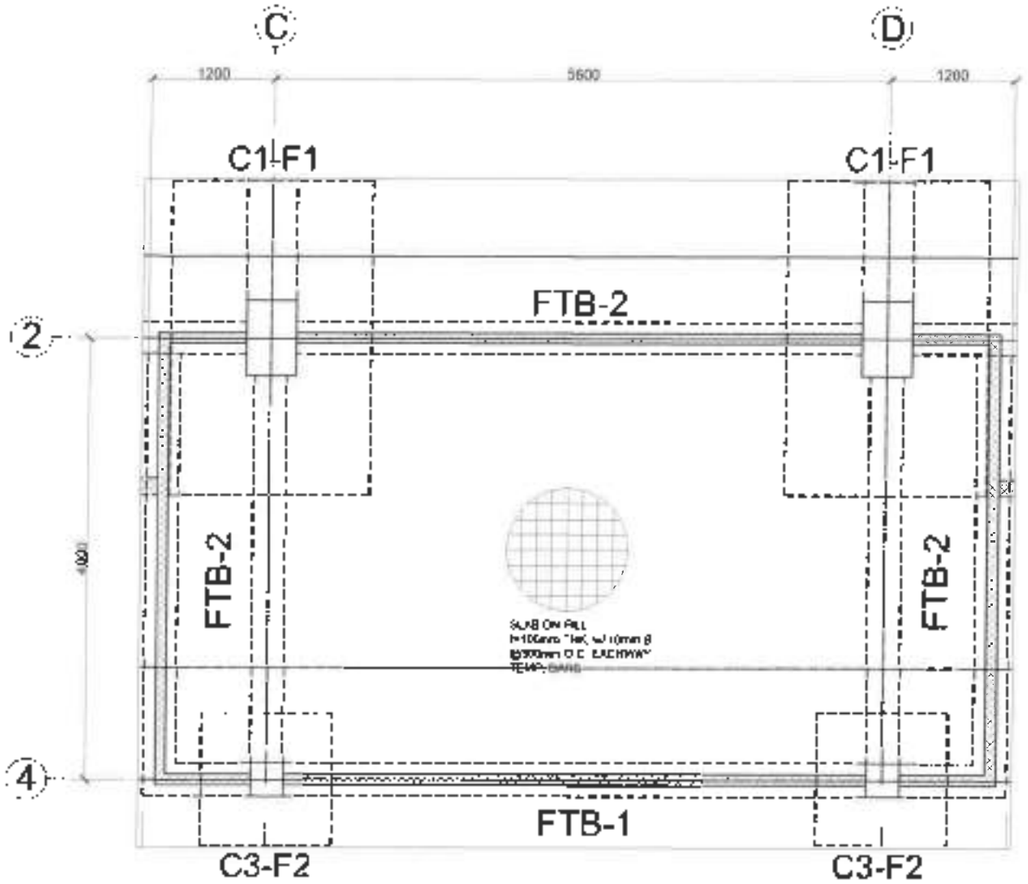
SHEET NO. 17 / 42



1 / S-3 **FOUNDATION PLAN/COURT**

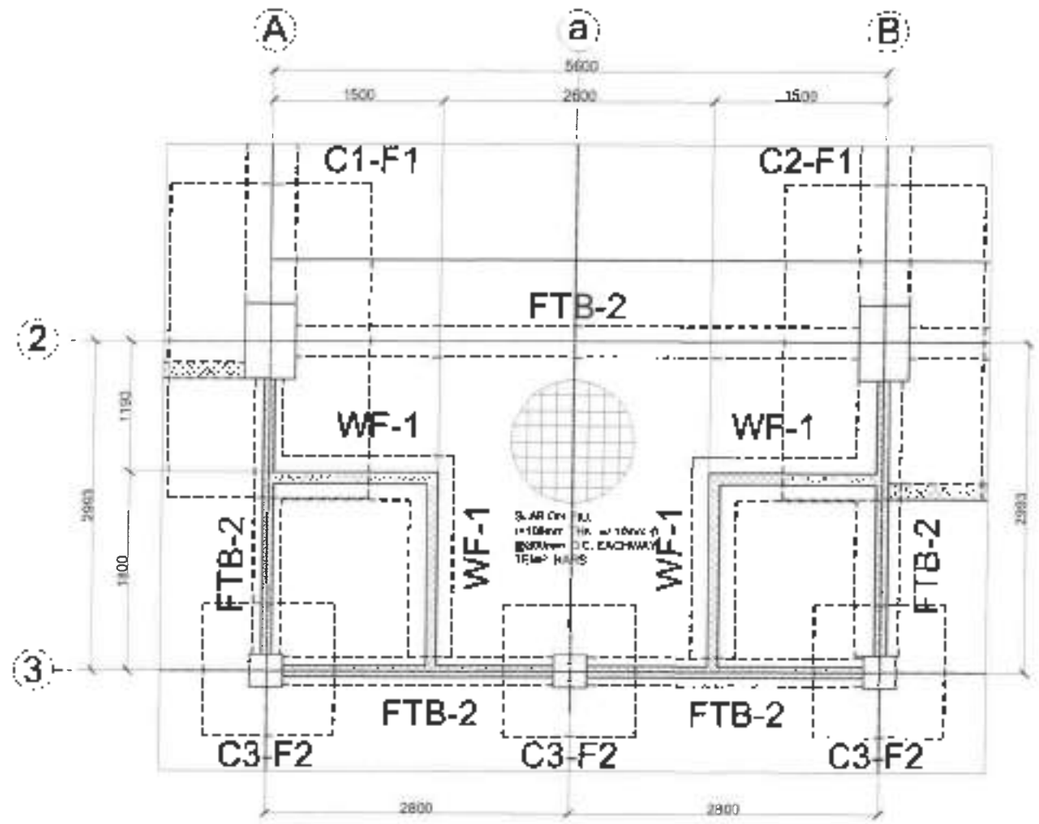
SCALE

Republic of the Philippines DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE No. VIII NORTHERN SAMAR FIRST DISTRICT ENGINEERING OFFICE Catarman, Northern Samar	PROJECT NAME & LOCATION CONSTRUCTION OF MULTI-PURPOSE FACILITY, (COVERED COURT) BARANGAY SAN JOSE, LAVEZARES, NORTHERN SAMAR	SHEET CONTENTS: FOUNDATION PLAN	PREPARED: ARCHITECT DESIGNED: JEFFE F. PEÑAROLA ENGINEER II	APPROVED: MAR DONALD M. ERMAN ASST. CHIEF, PLANNING & DESIGN SECTION	SUBMITTED: ANDY S. [illegible] CHIEF, PLANNING & DESIGN SECTION	RECOMMENDED: VIVIAN [illegible] ASST. DISTRICT ENGINEER	APPROVED: ALVIN A. IGNACIO DISTRICT ENGINEER	SHEET No. S-3	SHEET No. 18 42



1 / S-4 **BLOW UP FOUNDATION PLAN/STAGE**

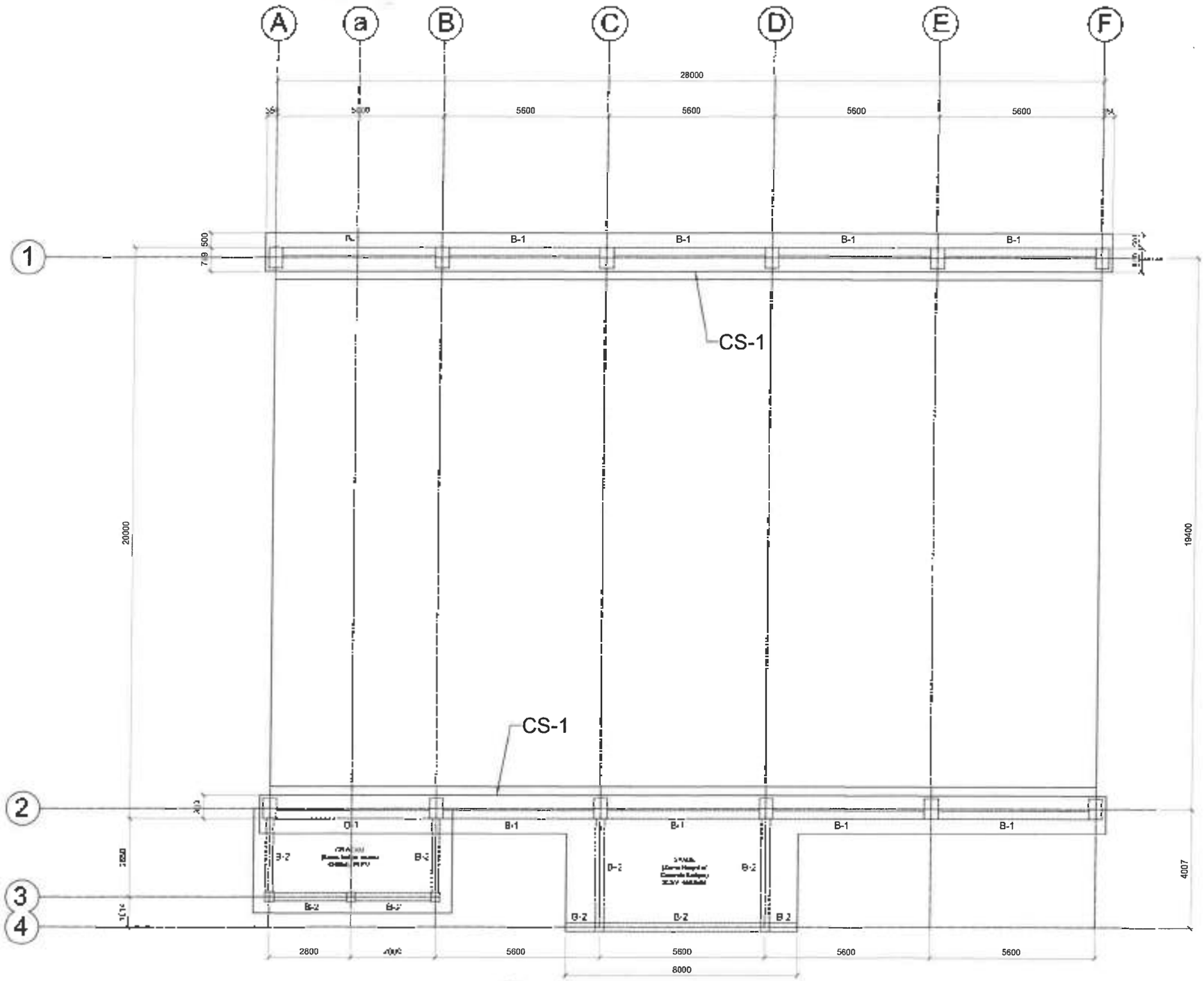
SCALE: 1:50NTS



2 / S-4 **BLOW UP FOUNDATION PLAN/CR**

SCALE: 1:50NTS

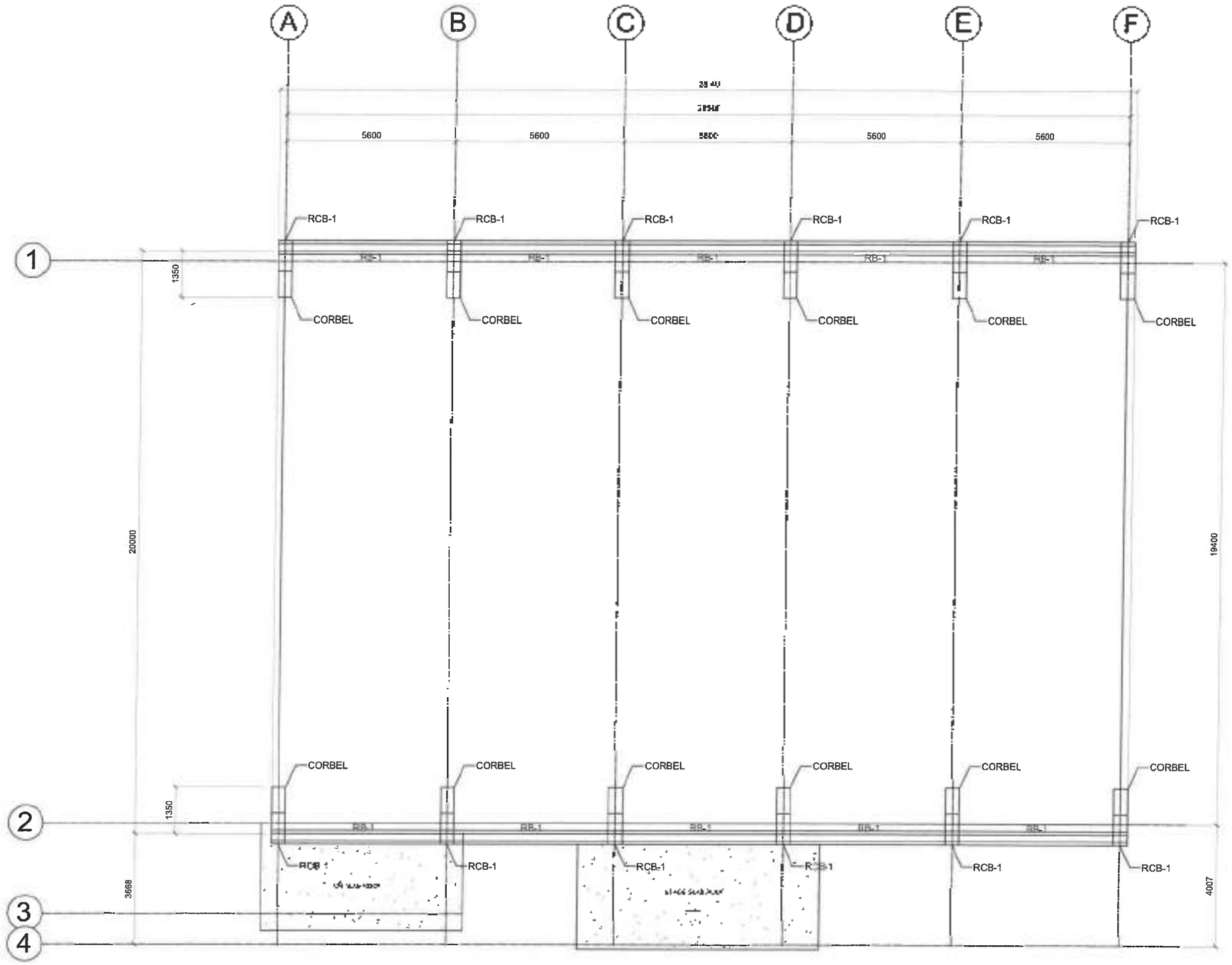
Republic of the Philippines DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE No. VIII NORTHERN SAMAR FIRST DISTRICT ENGINEERING OFFICE Catarman, Northern Samar	PROJECT NAME & LOCATION: CONSTRUCTION OF MULTI-PURPOSE FACILITY, (COVERED COURT) BARANGAY SAN JOSE, LAVEZARES, NORTHERN SAMAR Lavezares, Northern Samar	SHEET CONTENTS: FOUNDATION FUNCTIONAL FOUNDATION PLAN/CR	PREPARED: JEFF F. PEDROLA DESIGNED: JEFF F. PEDROLA	REVIEWED: Date	SUBMITTED: Date	RECOMMENDED: Date	APPROVED: ALVIN A. IGNACIO DISTRICT ENGINEER Date	SHEET No. S-4 SHEET No. 19 / 42



1 / S-5 **CONCRETE LEDGE FRAMING PLAN**

SCALE: 1:100MTS

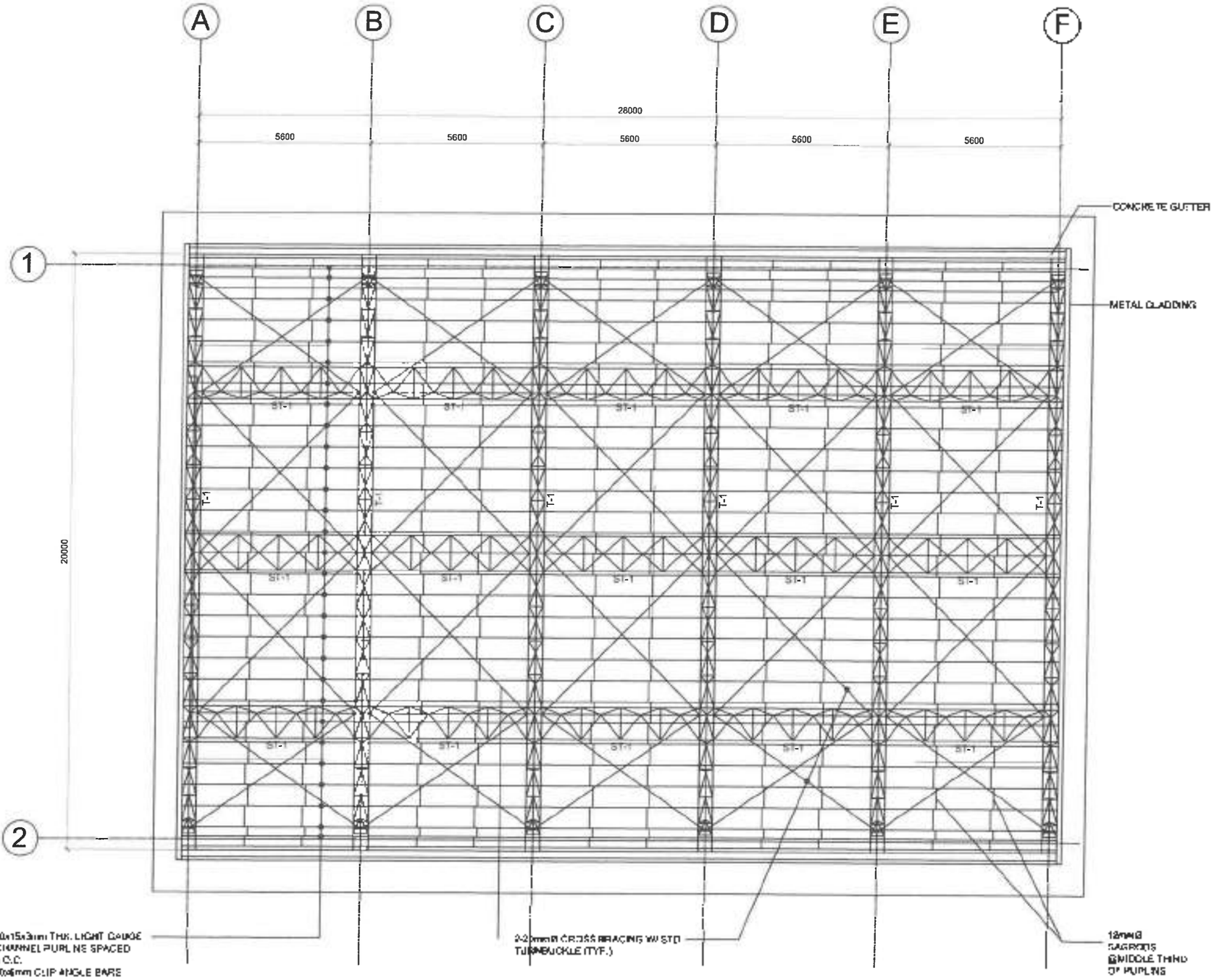
Republic of the Philippines DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE No. VIII NORTHERN SAMAR FIRST DISTRICT ENGINEERING OFFICE Catarman, Northern Samar	PROJECT NAME & LOCATION: CONSTRUCTION OF MULTI-PURPOSE FACILITY (COVERED COURT) BARANGAY SAN JOSE, LAVEZARES, NORTHERN SAMAR Lavezares, Northern Samar	SHEET CONTENTS: CONCRETE LEDGE FRAMING PLAN	PREPARED: BART [illegible] DEL ROSARIO Engineer DESIGNED: JOFF F. REGALADO ENGINEER II Date:	REVIEWED: MAR DONALD N. IGNAS ASST. CHIEF, PLANNING & DESIGN SECTION Date:	SUBMITTED: ANDY B. [illegible] CHIEF PLANNING & DESIGN SECTION Date:	RECOMMENDED: VIVIAN [illegible] ALCO ASST. DISTRICT ENGINEER Date:	APPROVED: ALVIN A. IGNACIO DISTRICT ENGINEER Date:	SHEET No. S-5	SHEET No. 20 / 42



1 / S-6 **ROOF BEAM FRAMING PLAN**

SCALE: 1:100MTS

Republic of the Philippines DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE No. VIII NORTHERN SAMAR FIRST DISTRICT ENGINEERING OFFICE Catarman, Northern Samar	PROJECT NAME & LOCATION: CONSTRUCTION OF MULTIPURPOSE FACILITY, (COVERED COURT) BARANGAY SAN JOSE, LAVEZARES, NORTHERN SAMAR Lavezares, Northern Samar	SHEET CONTENTS: ROOF BEAM FRAMING PLAN	PREPARED: ELVIE JOHN P. CHAVEZ Date DESIGNED: JEFF P. PEÑAFLOR Date	REVIEWED: NER DONALD N. OLIVAN Date	RECOMMENDED: ANDY S. CREÑO Date	RECOMMENDED: JAMAL P. DIBAOD Date	APPROVED: ALVIN A. IBNACIO DISTRICT ENGINEER Date	SHEET No. S-6	SHEET No. 21 42



1 / S-7 **ROOF FRAMING PLAN**

SCALE: 1:100MTS

Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGIONAL OFFICE No. VIII
NORTHERN SAMAR FIRST DISTRICT ENGINEERING OFFICE
Catarman, Northern Samar

PROJECT NAME & LOCATION: CONSTRUCTION OF MULTI-PURPOSE FACILITY, (COVERED COURT) BARANGAY SAN JOSE, LAVEZARES, NORTHERN SAMAR
Lavezares, Northern Samar

SHEET CONTENTS: ROOF FRAMING PLAN

PREPARED: QURT [illegible] ARCHITECT II
Checked: JEFF P. [illegible] Engr. II

REVIEWED: MAR DONALD N. DIMAN, ASST. DIST. PLANNING & DESIGN SECTION CHIEF

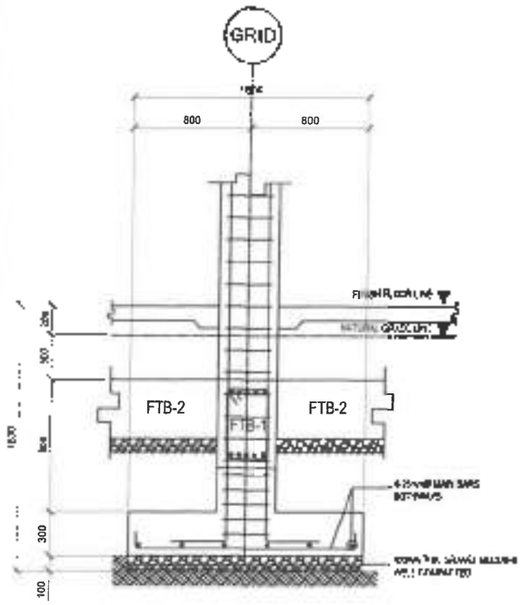
SUBMITTED: ANDY E. BRIERO, DIST. PLANNING & DESIGN SECTION CHIEF

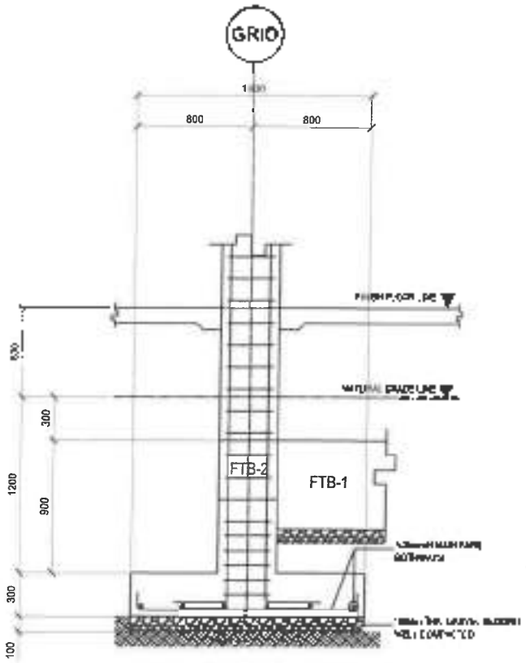
RECOMMENDED: VIVIAN [illegible]ACO, ASST. DISTRICT ENGINEER

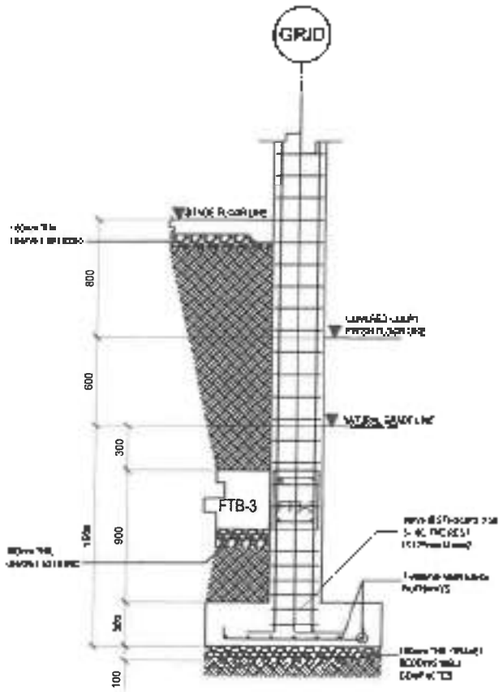
APPROVED: ALVIN A. IGNACIO, DISTRICT ENGINEER

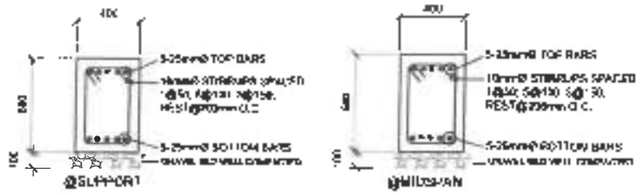
SERIES: S-7

SHEET No.: 22 / 42

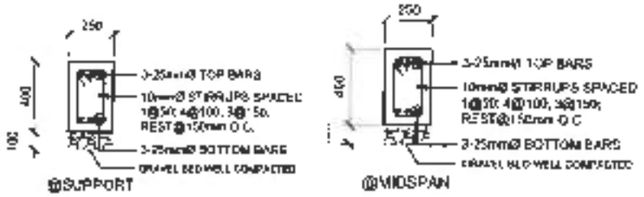




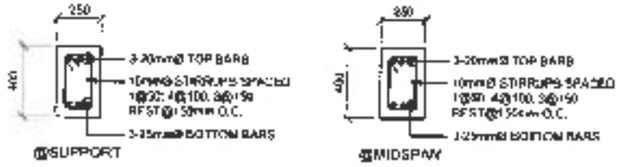




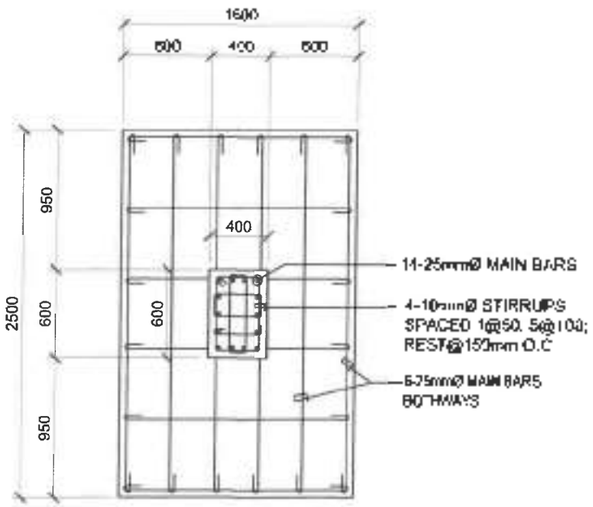
4 S-8 **FTB-1 DETAIL PLAN**



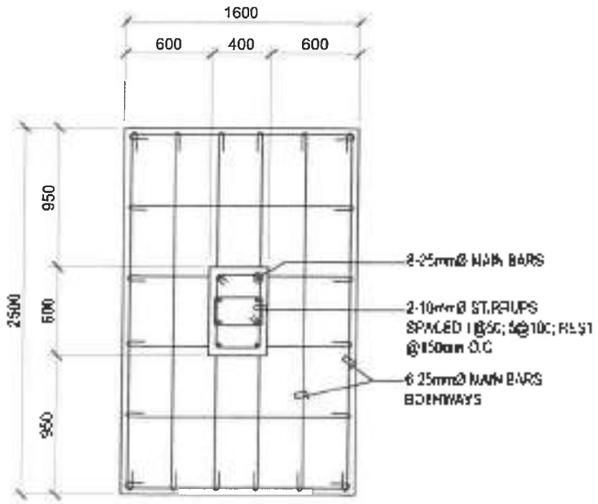
5 S-8 **FTB-2 DETAIL PLAN**



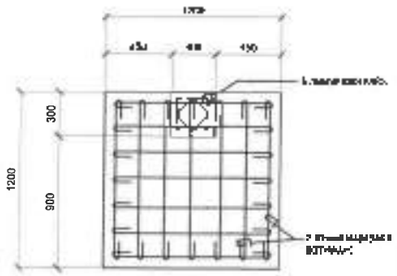
6 S-8 **B-1 DETAIL PLAN**



1 S-8 **C-1/F-1 DETAIL**

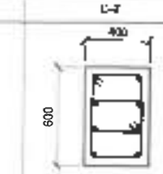
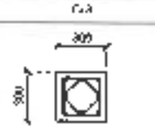


2 S-8 **C-2/F-1 DETAIL**



3 S-8 **C-3/F-2 DETAIL**

COLUMN SCHEDULE

COVERED COURT COLUMN	C-1	C-2	C-3
			
	14-25mmØ MAIN BARS	8-25mmØ MAIN BARS	8-20mmØ MAIN BARS

Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGIONAL OFFICE No. VIII
NORTHERN SAMAR FIRST DISTRICT ENGINEERING OFFICE
Catarman, Northern Samar

PROJECT NAME & LOCATION:
CONSTRUCTION OF MULTI-PURPOSE FACILITY (COVERED COURT) BARANGAY SAN JOSE, LAVEZARES, NORTHERN SAMAR
Lavezares, Northern Samar

SHEET CONTENTS:
COVER SHEET
GENERAL NOTES
GENERAL NOTES
GENERAL NOTES
FTB-1 DETAIL
FTB-2 DETAIL
B-1 DETAIL
C-1/F-1 DETAIL
C-2/F-1 DETAIL
C-3/F-2 DETAIL
COLUMN SCHEDULE

PREPARED:
DURT [illegible] TOLEDANO
Date
DES GAED
JEFF F. PEDROLA
Date

REVIEWED:
MARK DONALD H. DIAZ
Date

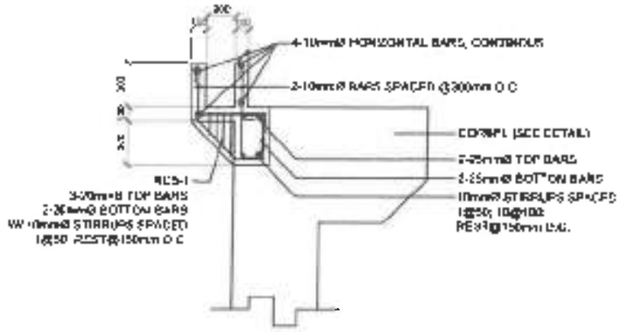
RECOMMENDED:
ANDY B. CEREÑO
Date

RECOMMENDED:
VIVIAN [illegible]
Date

APPROVED:
ALVIN A. IGNACIO
Date

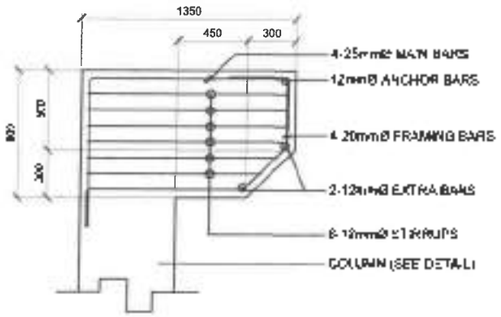
REF No. S-8

SHEET No. 23 / 42



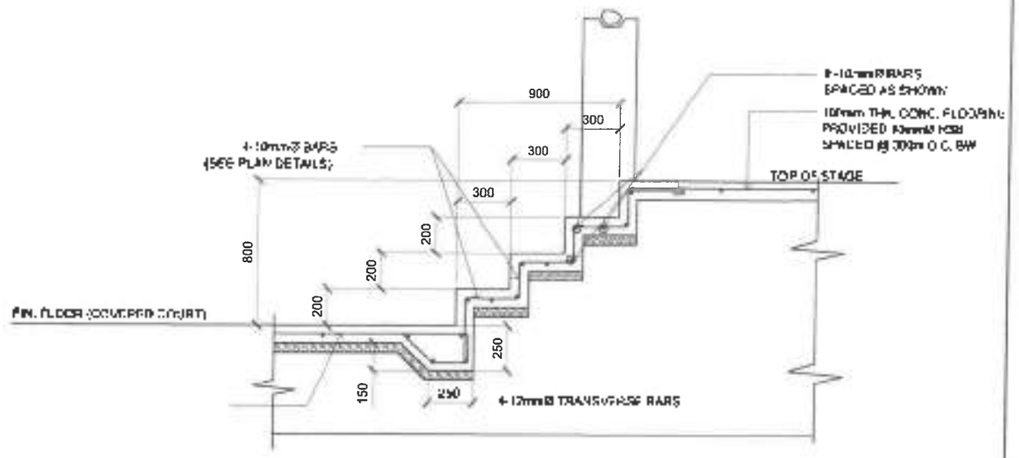
1 / S-9 RB-1/RCB-1/ CONCRETE GUTTER DETAIL

SCALE: 1:30MTS



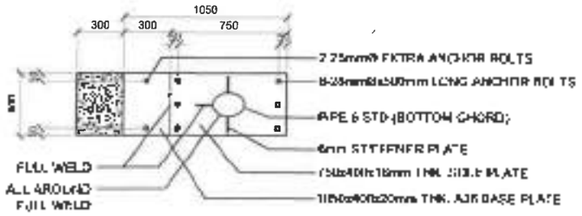
4 / S-9 CORBEL DETAIL

SCALE 1:30MTS



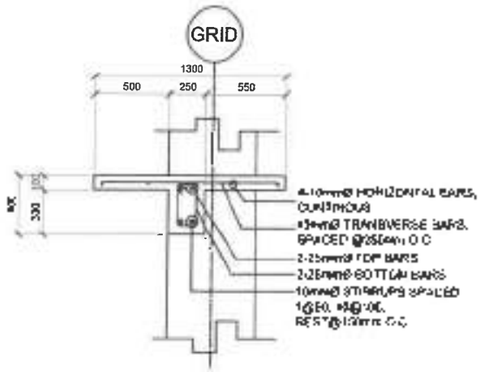
7 / S-9 STAGE SECTION DETAIL (STAIR)

SCALE 1:30MTS



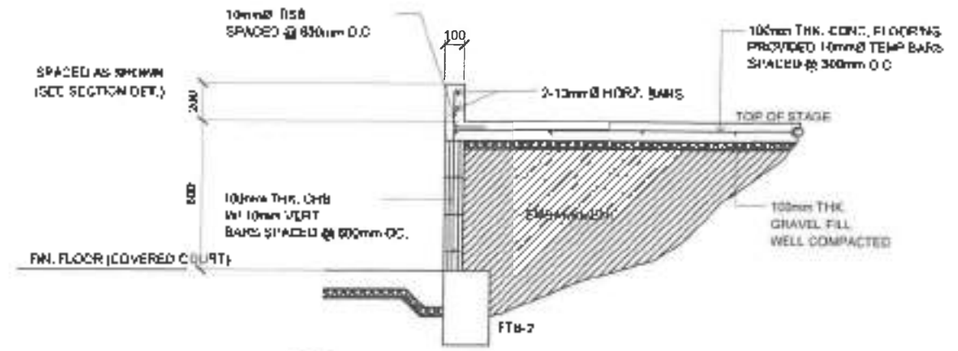
2 / S-9 CONCRETE COLUMN/TOP VIEW

SCALE 1:30MTS



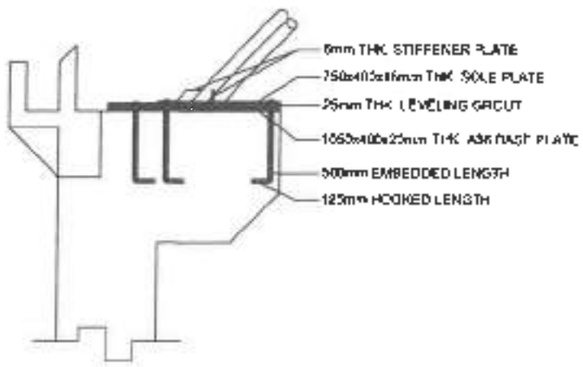
5 / S-9 B-1 / CS-1 SECTION DETAIL

SCALE:



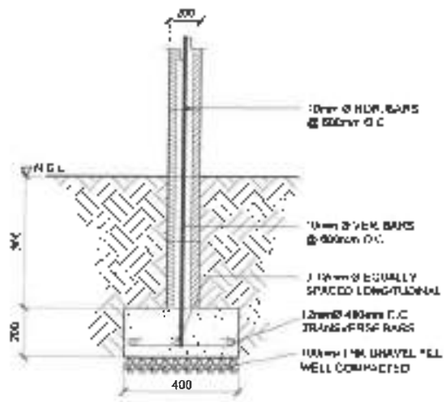
8 / S-9 STAGE SECTION DETAIL

SCALE 1:30MTS



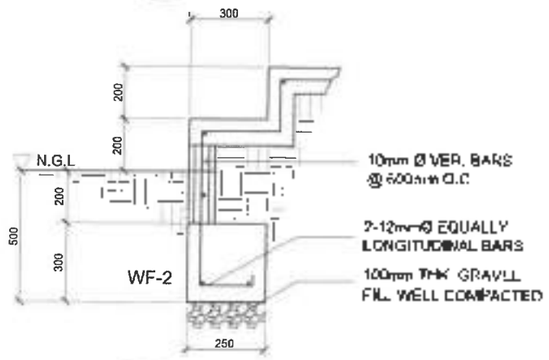
3 / S-9 BASE PLATE TO COLUMN DETAIL

SCALE:



6 / S-9 WF-1 SECTION DETAIL

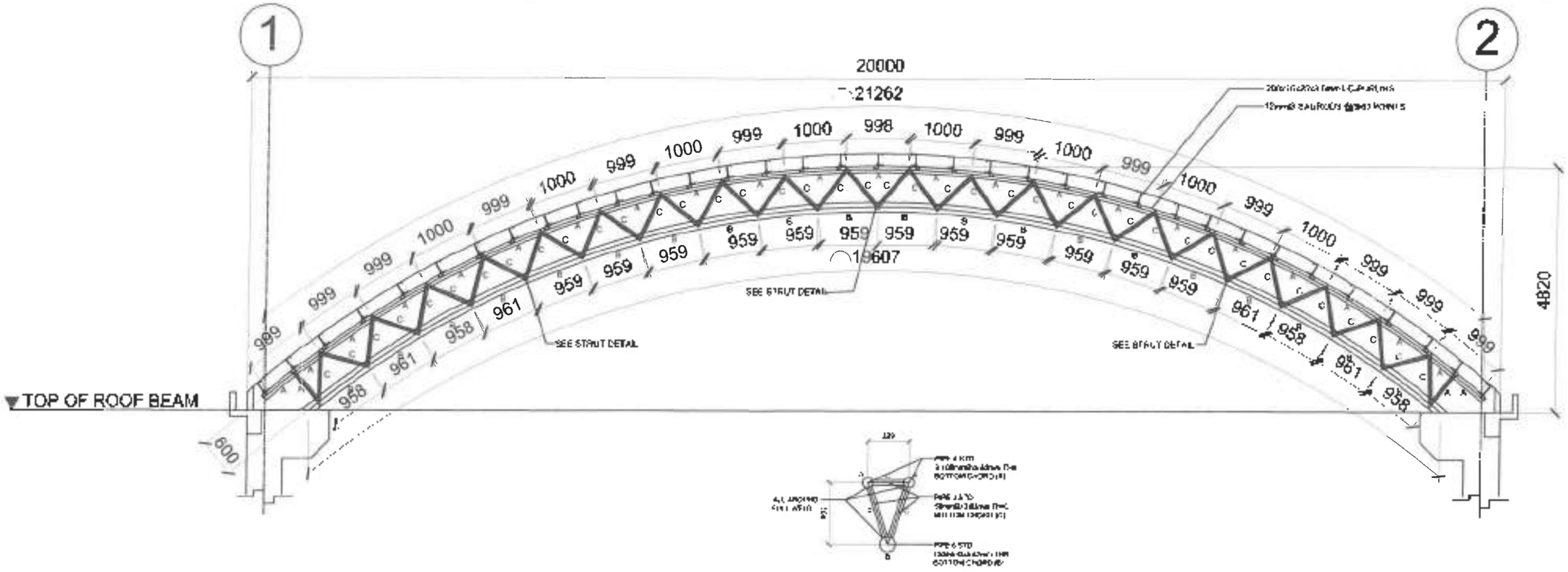
SCALE: 1:30MTS



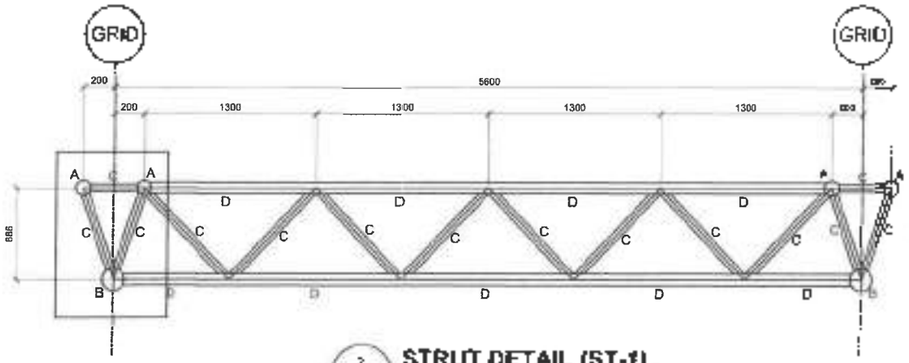
9 / S-9 WF-2 SECTION DETAIL

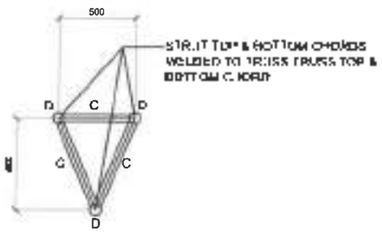
SCALE: 1:30MTS

Republic of the Philippines DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE No. VIII NORTHERN SAMAR FIRST DISTRICT ENGINEERING OFFICE Catarman, Northern Samar	PROJECT NAME & LOCATION CONSTRUCTION OF MULTI-PURPOSE FACILITY, (COVERED COURT) BARANGAY SAN JOSE, LAVEZARES, NORTHERN SAMAR Lavezares, Northern Samar	SHEET CONTENTS: [illegible]	PREPARED: [illegible] DESIGNER II Date:	CHECKED: JEFF F. PAGHOLA ENGINEER II Date:	RECOMMENDED: [illegible] Date:	SUBMITTED: [illegible] Date:	RECOMMENDED: [illegible] Date:	APPROVED: ALVIN A. IGNACIO Dep. Ho. Engineer Date:	SET No. S-9	SHEET No. 24 / 42

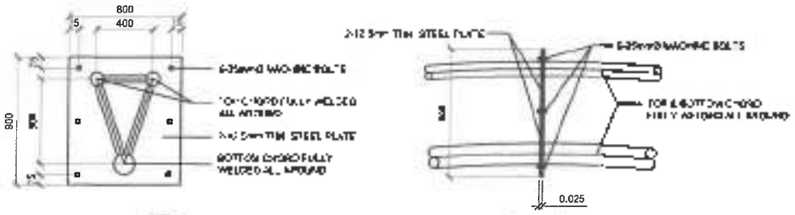


1 S-10 **TRUSS DETAIL (T-1)**
SCALE: 1:50MTS

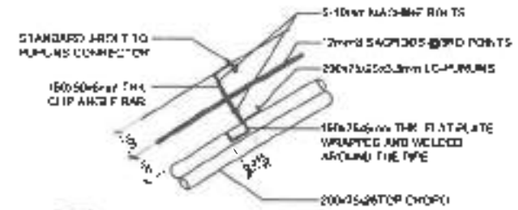




2 S-10 **STRUT DETAIL (ST-1)**
SCALE 1:30MTS



3 S-10 **TRUSS SPLICING DETAIL (TYP)**
SCALE



4 S-10 **PURLIN TO TRUSS CONN. DETAIL**
SCALE 1:15MTS

SCHEDULE OF MEMBERS & WELDS

MARK	TRUSS MEMBER SIZES	WELDS	REMARKS
A	PIPE 4 STD - 4.5"Ø x 0.271" THK. (2pcs-100mmØ x 5.61mm THK.)	5mm THK., FILLET WELD ALL AROUND	TOP CHORD
B	PIPE 6 STD - 6.63"Ø x 0.261" THK. (150mmØ x 6.62mm THK.)	6mm THK., FILLET WELD ALL AROUND	BOTTOM CHORD
C	PIPE 2 STD - 2.38"Ø x 0.143" THK. (50mmØ x 3.63mm THK.)	3mm THK., FILLET WELD ALL AROUND	WEB MEMBERS
D	PIPE 3 STD - 3.50"Ø x 0.201" THK. (75mmØ x 5.10mm THK.)	5mm THK., FILLET WELD ALL AROUND	SECONDARY WEB MEMBERS STRUT

REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE No. VIII NORTHERN SAMAR FIRST DISTRICT ENGINEERING OFFICE LAPINIG, NORTHERN SAMAR	PROJECT TITLE & LOCATION: CONSTRUCTION OF MULTI-PURPOSE FACILITY (COVERED COURT) BARANGAY SAN JOSE, LAVEZARES, NORTHERN SAMAR Lavezares, Northern Samar	SHEET CONTENTS: TRUSS DETAIL STRUT DETAIL TRUSS SPLICING DETAIL (TYP) PURLIN TO TRUSS CONN. DETAIL SCHEDULE OF MEMBERS AND WELDS	PREPARED: ENGINEER II DESIGNED: ENGINEER II	REVIEWED: MARIA DONALDO R. EMBAR JOINT CHIEF, PLANNING & DESIGN SECTION	SUBMITTED: ANDY S. CRISTO CHIEF, PLANNING & DESIGN SECTION	RECOMMENDED: VIRGILIO A. BIACO ASST. DIRECTOR	APPROVED: ALVIN A. BONAGUA DISTRICT ENGINEER	SET No. S-10	SHEET No. 26 42

GENERAL PLUMBING NOTES

1. GRADES OF HORIZONTAL PIPINGS
   RUN ALL HORIZONTAL PIPINGS PERFECT ALIGNMENT AND AT A GRADE NOT LESS THAN 2%.

2. CHANGE IN DIRECTION
   ALL CHANGE IN DIRECTION SHALL BE MADE APPROPRIATE USE OF FORTY-FIVE DEGREES (45°) WYES, LONG WEEP QUARTER BEND, SIXTH EIGHT OR SIXTEENTH BEND. WHEN THE CHANGE OF FLOW IS FROM HORIZONTAL AND VERTICAL, A SINGLE ⅜ BEND COMBINATION MAY BE USE ON VERTICAL STACK, AND SHORT QUARTER BENDS MAY BE USE ON WASTE LINE, TEE AND CROSSES MAYBE USED IN BENT PIPES.

3. PROHIBITED FITTINGS:
   NO DOUBLE HUB OR TEE BRANCE SHALL BE USED ON HORIZONTAL SOIL AND WASTE LINES. THE DRILLINGS AND THE TAPPING OF HOUSE DRAIN, WASTE OR VENT PIPES AND USE OF SADDLE HUB AND BEND ARE PROHIBITED.

4. PIPE CLEAN-OUTS
   CLEAN-OUTS ARE REQUIRED UNDER THE FOLLOWING CONDITIONS:
   a. EVERY CHANGE IN HORIZONTAL DIRECTION EXCEEDING TWENTY TWO AND HALF DEGREES (22 1/2°).
   b. ONE AND ONE-HALF METERS (1.50m) INSIDE THE PROPERTY LINES BEFORE THE HOUSE DRAINAGE CONNECTION.
   c. EVERY FIFTEEN METER (15.00) IN HORIZONTAL RUN OF PIPES.
   d. AT THE END OF ANY HORIZONTAL PIPE LINES.

5. THE DIGESTION CHAMBER OF SEPTIC VAULT MUST BE WATERPROOFED.

6. NOT LESS THAN 0.30M OF AIR SPACE MUST BE LEFT BETWEEN THE TOP OF THE SEWAGE 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 PLUMBING CONTRACTOR.

DESIGN CRITERIA

i. LIVE LOAD----------1000Pa

ii. ALLOWABLE STRESS

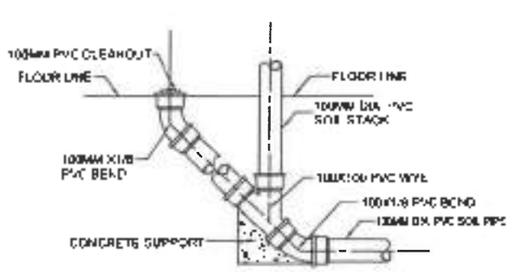
1. CONCRETE
   a. FOR FOOTING, BEAMS, AND SLABS
      fc" = 20MPa

2. CONCRETE MASONRY UNITS (LOAD BEARING CHB)
   fm' = 6.90 MPa, fm = 2.41 MPa

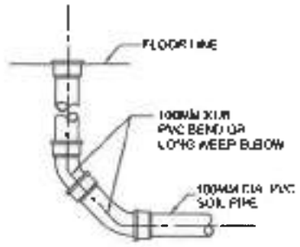
3. REINFORCING STEEL BARS
   FOR BARS SMALLER THAN 16mmØ
   fy = 230 MPa

LEGEND:

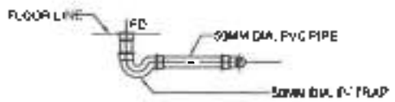
CB	CATCH BASIN
CV	CHECK VALVE
HB	HOSE BIBB
FD	FLOOR DRAIN
PPR	POLYPROPHYLENE COLD WATER
PPR	POLYPROPHYLENE COLD WATER
GV	GATE VALVE
MH	MANHOLE
CO	CLEAN OUT
PVCSP	POLYVINYL CHLORIDE SOIL PIPE
PVCVAC	POLYVINYL CHLORIDE VENT ACROSS CEILING
PVCVP	POLYVINYL CHLORIDE VENT PIPE
PVCVS	POLYVINYL CHLORIDE VENT STACK
VTR	POLYVINYL CHLORIDE VENT THU ROOFWALL
SSTR	POLYVINYL CHLORIDE SOIL STACK THRU ROOF
RD	ROOF DRAIN
DS	DOWNSPOUT
UR	URINAL DRAIN
WC	WATER CLOSET
LAV	LAVATORY
KS	KITCHEN SINK
F	FAUCET
-⋈-	GATE VALVE
-N-	CHECK VALVE
Ⓜ	WATER METER
———	PLUMBING LINE
———	WATER LINE
———	STORM LINE
———	VENT PIPE



FOR SOIL STACK TO HOUSE DRAIN
scale 1:50



FOR WATER CLOSET
scale 1:50



FOR FLOOR DRAIN
scale 1:25

PIPE LINE CONNECTION DETAIL

	PROJECT NAME & LOCATION	SHEET CONTENTS:	PREPARED:	REVIEWED:	SUBMITTED:	RECOMMENDED:	APPROVED:	SHEET No.	SHEETS No.
REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE No. VIII NORTHERN SAMAR FIRST DISTRICT ENGINEERING OFFICE Catarman, Northern Samar	CONSTRUCTION OF MULTI-PURPOSE FACILITY (COVERED COURT) BARANGAY SAN JOSE, LAVEZARES, NORTHERN SAMAR Lavezares, Northern Samar	GENERAL NOTES PIPE LINE CONNECTION DETAIL LEGEND	MARK BENDY LEONARDO Engineer II	ALVIN A. IGNACIO Civil Engineer, Supervising Engineer	ANDY B. BRIANO Chief, Engineering Design Section	VIVIAN C. BRAGO Assistant District Engineer	ALVIN A. IGNACIO District Engineer	PS-1	26 of 42

GENERAL PLUMBING NOTES

1. GRADES OF HORIZONTAL PIPINGS
   RUN ALL HORIZONTAL PIPINGS PERFECT ALIGNMENT AND AT A GRADE NOT LESS THAN 2%.

2. CHANGE IN DIRECTION
   ALL CHANGE IN DIRECTION SHALL BE MADE APPROPRIATE USE OF FORTY-FIVE DEGREES (45°) WYES, LONG WEEP QUARTER BEND, SIXTH EIGHT OR SIXTEENTH BEND. WHEN THE CHANGE OF FLOW IS FROM HORIZONTAL AND VERTICAL, A SINGLE $\frac{1}{8}$ BEND COMBINATION MAY BE USE ON VERTICAL STACK, AND SHORT QUARTER BENDS MAY BE USE ON WASTE LINE, TEE AND CROSSES MAYBE USED IN BENT PIPES.

3. PROHIBITED FITTINGS:
   NO DOUBLE HUB OR TEE BRANCE SHALL BE USED ON HORIZONTAL SOIL AND WASTE LINES. THE DRILLINGS AND THE TAPPING OF HOUSE DRAIN, WASTE OR VENT PIPES AND USE OF SADDLE HUB AND BEND ARE PROHIBITED.

4. PIPE CLEAN-OUTS
   CLEAN-OUTS ARE REQUIRED UNDER THE FOLLOWING CONDITIONS:
   a. EVERY CHANGE IN HORIZONTAL DIRECTION EXCEEDING TWENTY TWO AND HALF DEGREES (22 1/2°).
   b. ONE AND ONE-HALF METERS (1.50m) INSIDE THE PROPERTY LINES BEFORE THE HOUSE DRAINAGE CONNECTION.
   c. EVERY FIFTEEN METER (15.00) IN HORIZONTAL RUN OF PIPES.
   d. AT THE END OF ANY HORIZONTAL PIPE LINES.
5. THE DIGESTION CHAMBER OF SEPTIC VAULT MUST BE WATERPROOFED.
6. NOT LESS THAN 0.30M OF AIR SPACE MUST BE LEFT BETWEEN THE TOP OF THE SEWAGE 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 PLUMBING CONTRACTOR.

DESIGN CRITERIA

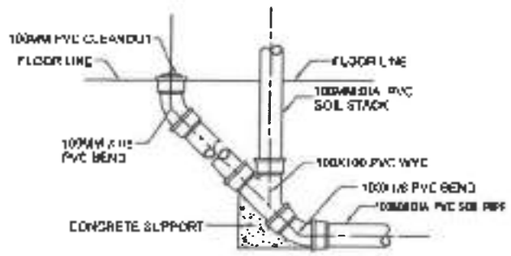
i. LIVE LOAD----------1000Pa

ii. ALLOWABLE STRESS

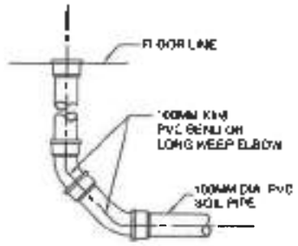
1. CONCRETE
   a. FOR FOOTING, BEAMS, AND SLABS
      fc" = 20MPa
2. CONCRETE MASONRY UNITS (LOAD BEARING CHB)
   fm' = 6.90 MPa, fm = 2.41 MPa
3. REINFORCING STEEL BARS
   FOR BARS SMALLER THAN 16mmØ
   fy = 230 MPa

LEGEND:

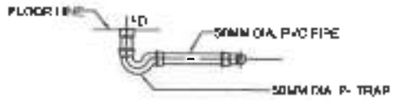
CB	CATCH BASIN
CV	CHECK VALVE
HB	HOSE BIBB
FD	FLOOR DRAIN
PPR	POLYPROPHYLENE COLD WATER
PPR	POLYPROPHYLENE COLD WATER
GV	GATE VALVE
MH	MANHOLE
CO	CLEAN OUT
PVCSP	POLYVINYL CHLORIDE SOIL PIPE
PVCVAC	POLYVINYL CHLORIDE VENT, ACROSS CEILING
PVCVP	POLYVINYL CHLORIDE VENT PIPE
PVCVS	POLYVINYL CHLORIDE VENT STACK
VTR	POLYVINYL CHLORIDE VENT TRU ROOF/WALL
SSTR	POLYVINYL CHLORIDE SOIL STACK THRU ROOF
RD	ROOF DRAIN
DS	DOWNSPOUT
UR	URINAL DRAIN
WC	WATER CLOSET
LAV	LAVATORY
KS	KITCHEN SINK
F	FAUCET
-⊲⊳-	GATE VALVE
-⊲|-	CHECK VALVE
Ⓜ	WATER METER
——	PLUMBING LINE
——	WATER LINE
——	STORM LINE
——	VENT PIPE



FOR SOIL STACK TO HOUSE DRAIN
scale: 1:1m



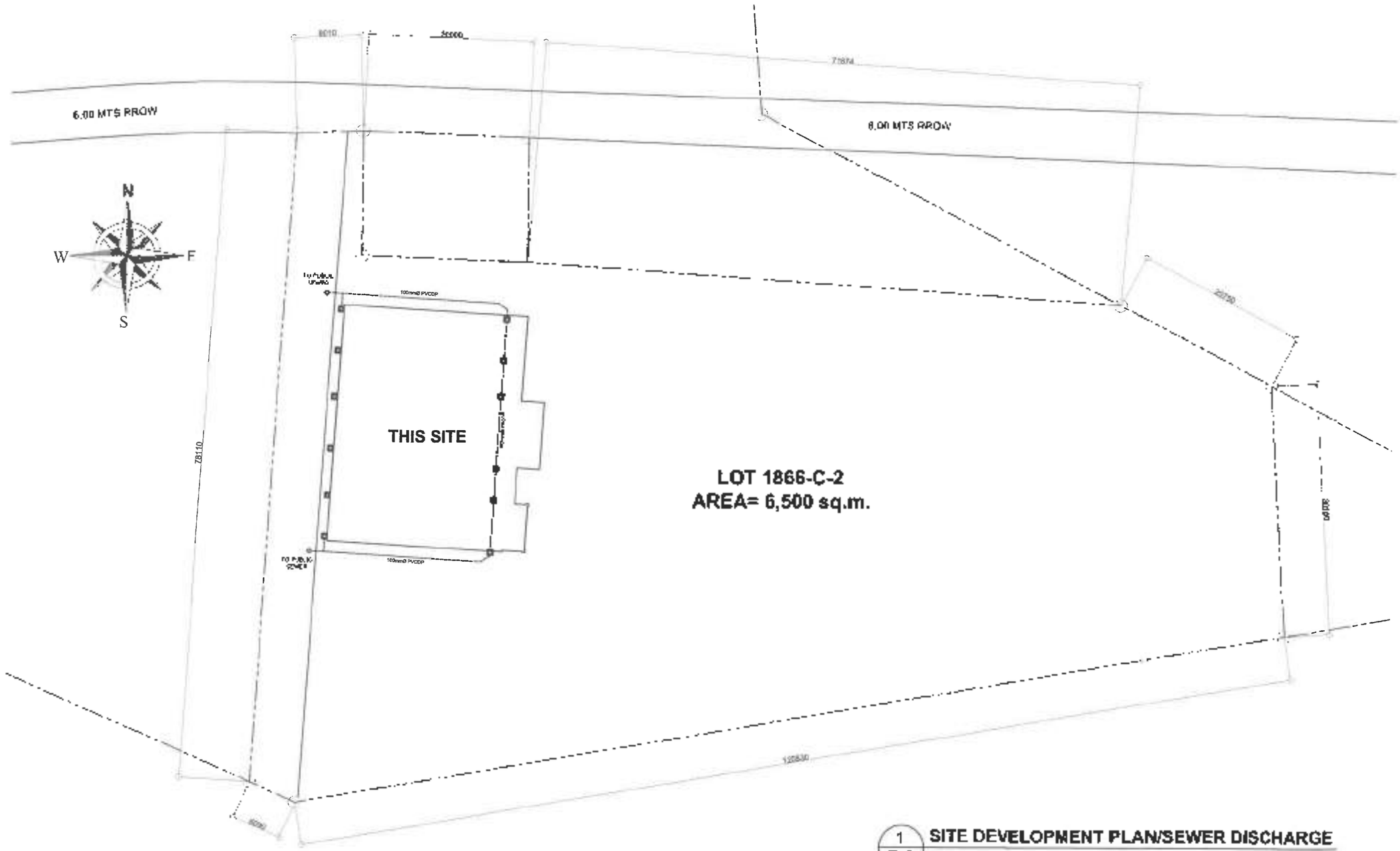
FOR WATER CLOSET
scale: 1:1m



FOR FLOOR DRAIN
scale: 1:5m

PIPE LINE CONNECTION DETAIL

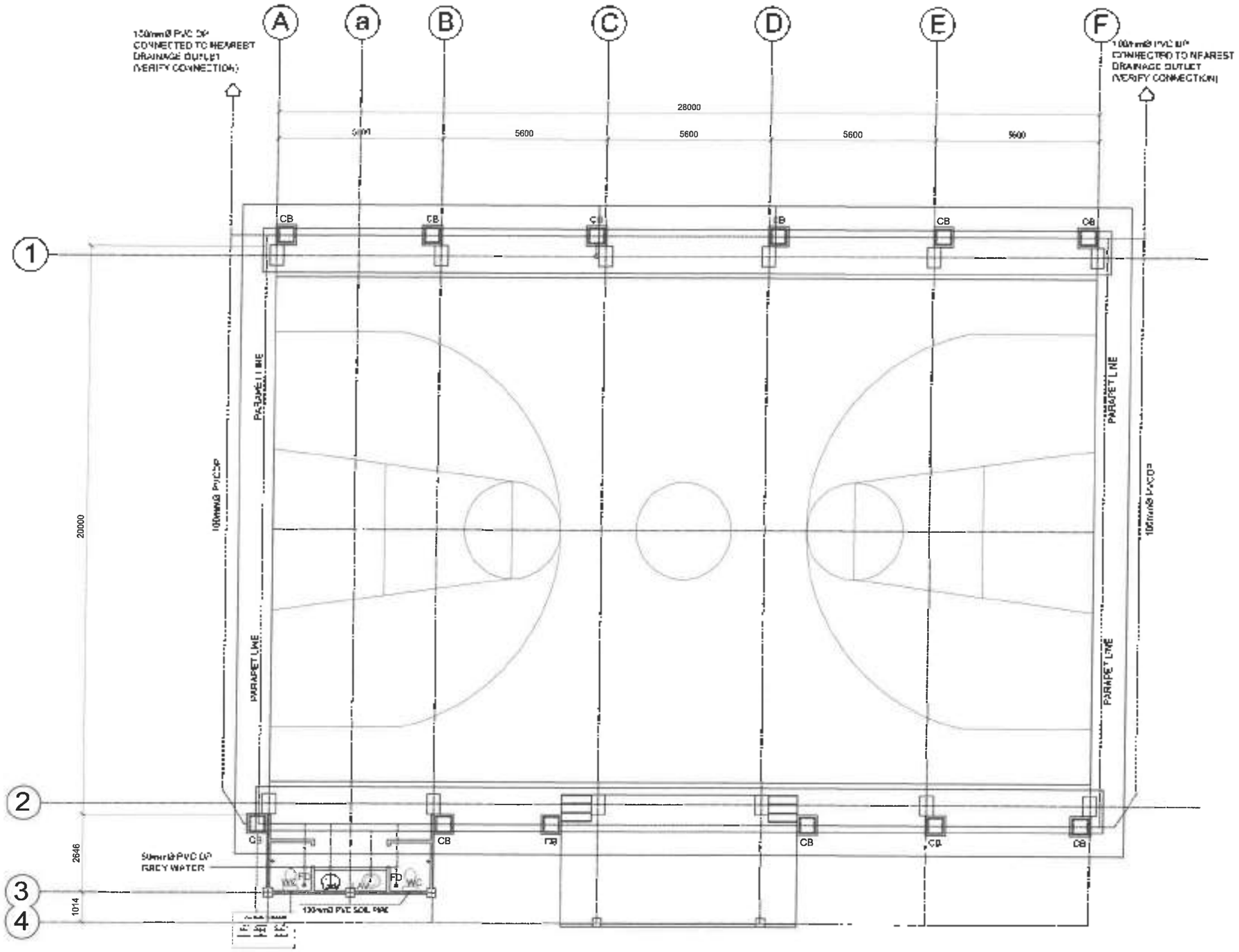
Republic of the Philippines DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE no. VIII NORTHERN SAMAR FIRST DISTRICT ENGINEERING OFFICE Catarman, Northern Samar	PROJECT NAME & LOCATION CONSTRUCTION OF MULTI-PURPOSE FACILITY, (COVERED COURT) BARANGAY SAN JOSE, LAVEZARES, NORTHERN SAMAR Municipal Hall, Lavezares, Samar	SHEET CONTENTS GENERAL NOTES PIPE LINE CONNECTION DETAIL JOB MAP	PREPARED: BUENAVENTURA COCNARO ENGINEER II Date	REVIEWED: ALAN DOCTOLERO, MNAM ASST. CHIEF PLANNING & DESIGN SECTION Date	SUBMITTED ANDY S. BRAÑO CHIEF PLUMBER & INSPECTOR Date	RECOMMENDING VIVIAN O. MACO CHIEF PLANNING & DESIGN Date	APPROVED ALVIN A. IGNACIO DISTRICT ENGINEER Date	SHT. No. P-1	SHEET No. 26 42



1 / P-2 **SITE DEVELOPMENT PLAN/SEWER DISCHARGE**

SCALE: 1:800 MTS

	PROJECT NAME & LOCATION	SHEET CONTENTS:	PREPARED:	REVIEWED:	SUBMITTED:	RECOMMENDED:	APPROVED:	SHEET No.	SHEET No.
Republic of the Philippines DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE No. VIII NORTHERN SAMAR FIRST DISTRICT ENGINEERING OFFICE Catarman, Northern Samar	CONSTRUCTION OF MULTI-PURPOSE FACILITY, (COVERED COURT) BARANGAY SAN JOSE, LAVEZARES, NORTHERN SAMAR	SITE DEVELOPMENT PLAN/SEWER DISCHARGE	RUSTY [illegible] LUCERNARIO [illegible]	[illegible] IMAN Asst. Chief, Planning & Design Section	ANDY S. [illegible] Chief, Planning & Design Section	VIVIAN [illegible] Asst. District Engineer	ALVIN A. IGNACIO District Engineer	P-2	27 / 42



1 / P-3 PLUMBING LINE LAYOUT PLAN

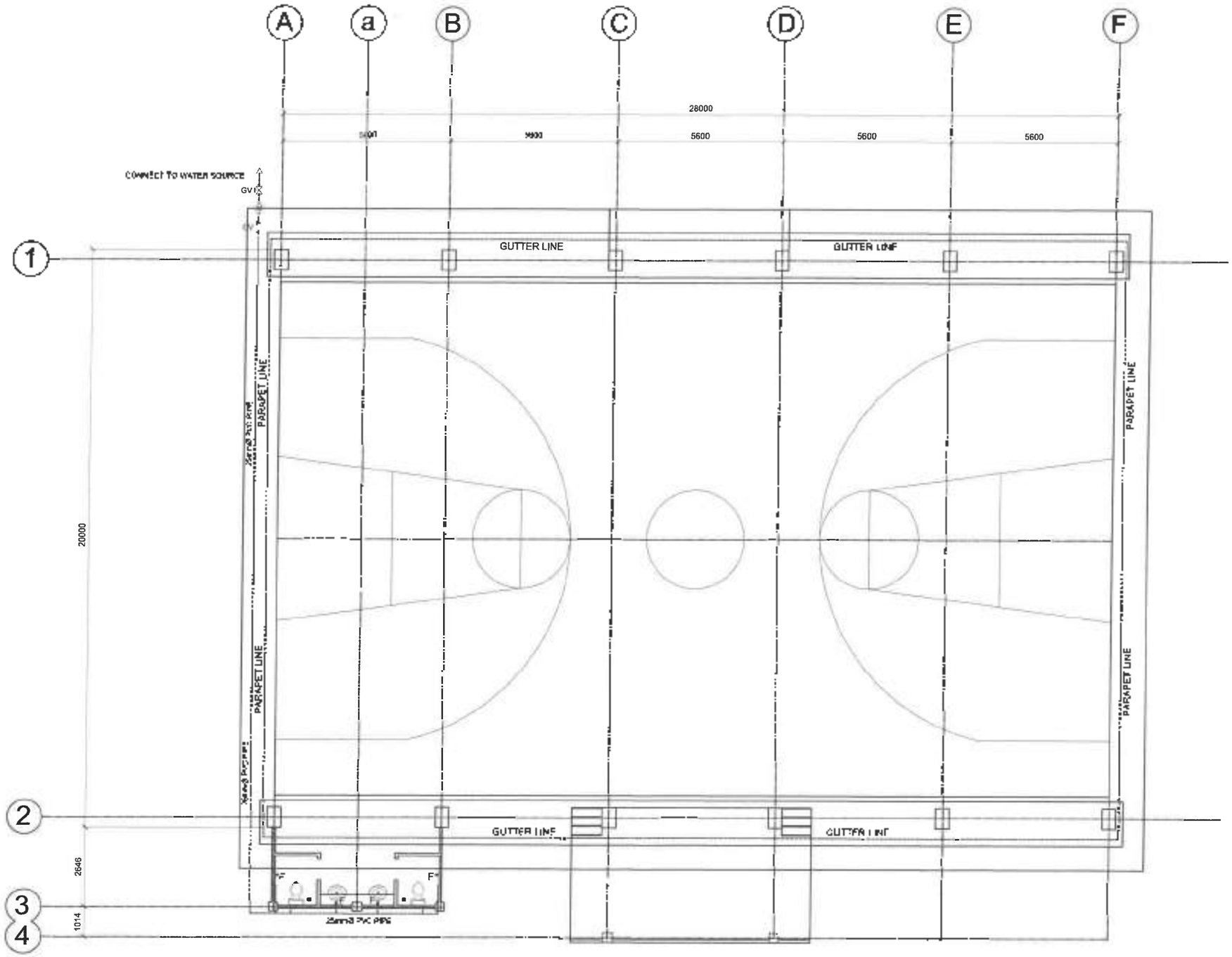
SCALE: 1:100MTS

LEGEND:

CB	CATCH BASIN
CV	CHECK VALVE
HB	HOSE BIB
FD	FLOOR DRAIN
GV	GATE VALVE
DR	DRAINAGE
CO	CLEAN OUT
RD	ROOF DRAIN
DS	DOWNSPOUT
UR	URINAL DRAIN
WC	WATER CLOSET
LAV	LAVATORY
KS	KITCHEN SINK
F	FAUCET
GV	GATE VALVE
CV	CHECK VALVE
WM	WATERMETER
	PLUMBING LINE
	WATER LINE
	STORM LINE
	VENT PIPE

DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGIONAL OFFICE No. VIII
NORTHERN SAMAR FIRST DISTRICT ENGINEERING OFFICE
Catarman, Northern Samar

PROJECT NAME & LOCATION	SHEET CONTENTS:	PREPARED:	REVIEWED:	SUBMITTED:	RECOMMENDED:	APPROVED:	SHEET No.	SHEET No.
CONSTRUCTION OF MULTI-PURPOSE FACILITY, (COVERED COURT), BARANGAY SAN JOSE, LAVEZARES, NORTHERN SAMAR (Municipal Roadway Series)	WATER LINE LAYOUT PLAN	MURE CHRISTY CUBINAR ENGINEER I Date	MAR DIONALD A. GUAN Supervising Engineer, Design Section Date	ANDY S. TRAO Chief, Plumbing & Sanitary Section Date	VIVIAN G. BLANCO Assistant District Engineer Date	ALVIN A. IGNACIO DISTRICT ENGINEER Date	P-3	28 / 42



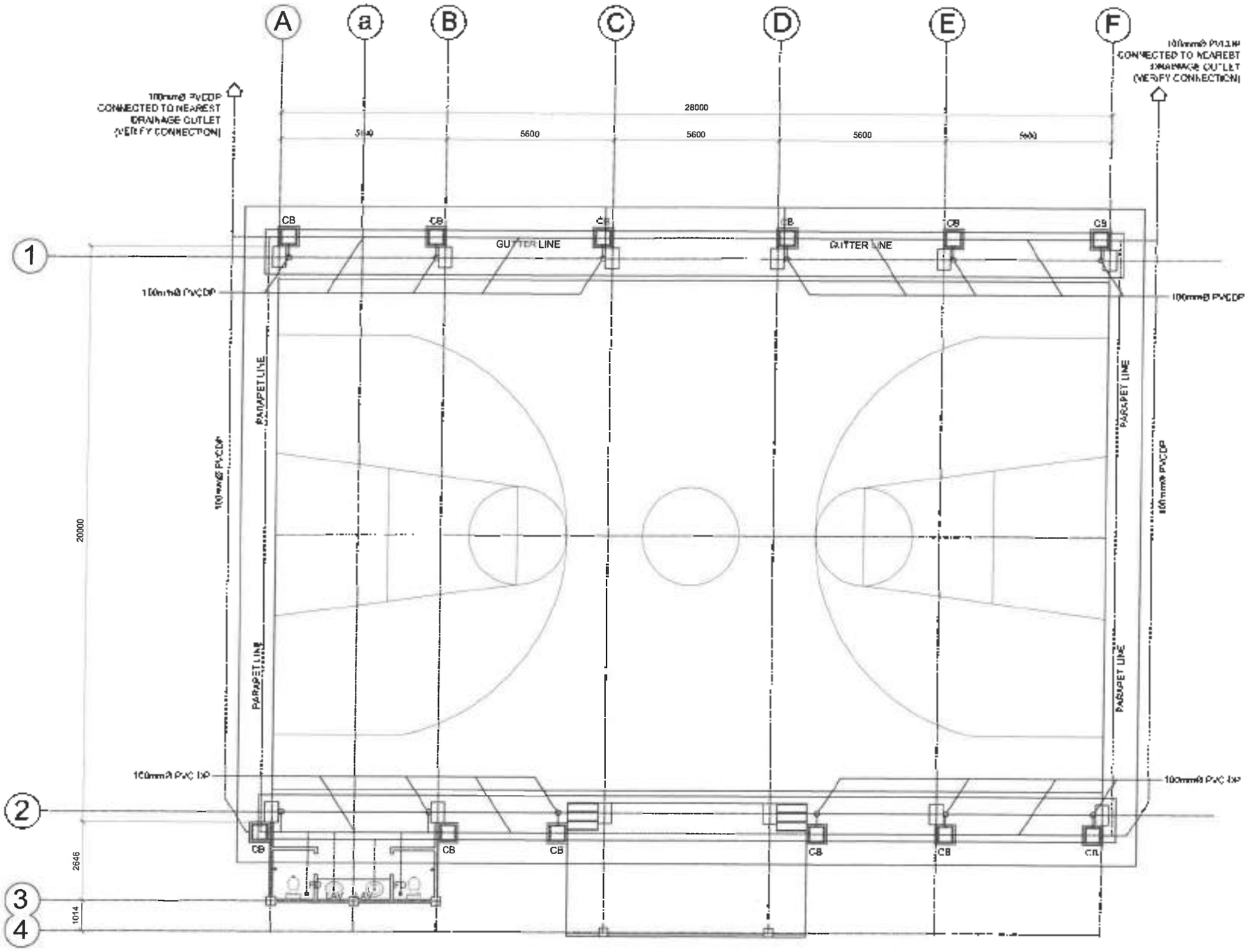
1 / P-4 **WATERLINE LAYOUT**

SCALE 1:100MTS

LEGEND:

CB	CATCH BASIN
CV	CHECK VALVE
HB	HOSE BIBB
FD	FLOOR DRAIN
PPR	POLYPROPYLENE HOT COLD WATER
HDPE	POLYPROPYLENE COLD WATER
SV	GATE VALVE
MH	MANHOLE
CO	CLEANOUT
PVCSP	PVC VITRIFIED CHLORINE SOIL PIPE
PVCVVC	POLYVINYL CHLORIDE VENT HOSE COLLAR
PVCSP	PVC VITRIFIED CHLORINE SOIL PIPE
PVCVS	POLYVINYL CHLORIDE VENT STACK
VTS	PVC VITRIFIED CHLORINE VENT THROUGH WALL
SSTQ	POLYVINYL CHLORIDE SOIL STACK THRU ROOF
BD	BLACK DRAIN
DR	DRAINAGE
UR	URINAL DRAIN
WC	WATER CLOSET
LAV	LAVATORY
KS	KITCHEN SINK
F	FAUCET
WV	WATER VALVE
CV	CHECK VALVE
WM	WATER METER
	PLUMBING LINE
	DRAIN LINE
	SANITARY LINE
	VENT PIPE

Republic of the Philippines DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE No. VIII NORTHERN SAMAR FIRST DISTRICT ENGINEERING OFFICE Catarman, Northern Samar	PROJECT NAME & LOCATION: CONSTRUCTION OF MULTI-PURPOSE FACILITY, (COVERED COURT) BARANGAY SAN JOSE, LAVEZARES, NORTHERN SAMAR Lavezares, Northern Samar	SHEET CONTENTS: DRAINAGE LAYOUT PLAN PLUMBING NOTES	PREPARED: BURT [illegible] LIGNARIO Engineer I Date	REVIEWED: MAR DONALD M. [illegible] Asst. Chief, Planning & Design Section Date	SUBMITTED: ANDY B. [illegible] Chief, Planning & Design Section Date	RECOMMENDED: VIVIAN [illegible] Asst. District Engineer Date	APPROVED: ALVIN A. IGNACIO District Engineer Date	SHEET No. P-4	SHEET No. 29 / 42



LEGEND:

CB	CATCH BASIN
CO	CLEAN OUT
HB	HOSE BIBB
FD	FLOOR DRAIN
PPR	POLYPROPYLENE PIPE
RWP	RAIN WATER PIPE
DV	DRY VENT PIPE
MH	MANHOLE
CP	CAPPED
PVCDP	POLYVINYL CHLORIDE DRAIN PIPE
PVCUP	POLYVINYL CHLORIDE UNDER PIPE
PVCVP	POLYVINYL CHLORIDE VENT PIPE
PVCVS	POLYVINYL CHLORIDE VENT STACK
VTC	POLYVINYL CHLORIDE VENT THROUGH ROOF
BUR	POLYVINYL CHLORIDE SOLID ACRYLIC THRU-ROOF
RD	ROOF DRAIN
DS	DOWNSPOUT
WF	WROUGHT FRAME
WC	WATER CLOSET
LAV	LAVATORY
KS	KITCHEN SINK
F	FAUCET
WV	GATE VALVE
AV	ANGLE VALVE
WH	WATER HEATER
	PLUMBING LINE
	WATER LINE
	STORM LINE
	VENT PIPE

1 / P-5 DRAINAGE LAYOUT PLAN

SCALE: 1:100MTS

Republic of the Philippines DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE No. VIII NORTHERN SAMAR FIRST DISTRICT ENGINEERING OFFICE Catarman, Northern Samar	PROJECT NAME & LOCATION	SHEET CONTENTS:	PREPARED:	REVIEWED:	SUBMITTED:	RECOMMENDED:	APPROVED:	SFT No.	SHEET No.
	CONSTRUCTION OF MULTI-PURPOSE FACILITY (COVERED COURT) BARANGAY SAN JOSE, LAVEZARES, NORTHERN SAMAR Lavezares, Northern Samar	DRAINAGE LAYOUT PLAN PLUMBING NOTES	JUNIT [illegible] DONARIO ARCHITECT II	[illegible] ASST. CHIEF, PLANNING & DESIGN SECTION	ANDY S. ERENO CHIEF PLANNING & DESIGN SECTION	VIVIAN C. BRACO DIST. ENGINEER	ALVIN A. IGNACIO DISTRICT ENGINEER	P-5	30 / 42