REPUBLIC OF THE PHILIPPINES

DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

BUREAU OF DESIGN

BUILDINGS DIVISION

BONIFACIO DRIVE PORT AREA, MANILA

PROJECT TITLE:

DPWH STANDARD FIELD MODULAR HOSPITAL

SUBMITTED:

4/26/21

KATHRINE ANNE C. MACOY
CARETAKER, BUILDINGS DIVISION, BUREAU OF DESIGN

RECOMMENDING APPROVAL:

MAY 03 2021

for: SAMSON L. HEBRA, CESO IV
DIRECTOR IV, BUREAU OF DESIGN

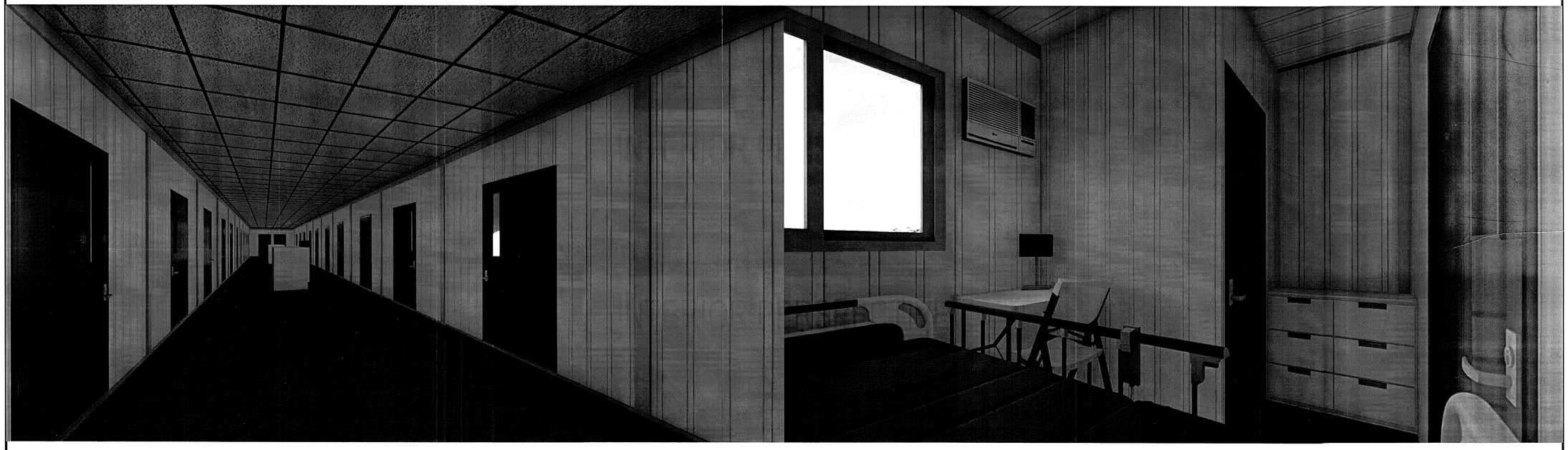
APPROVED:

MAXIMO L. CARVAJAL
UNDERSECRETARY
TECHNICAL SERVICES, DPWH

CONCURRED:

LEOPOLDO J. VEGA,MD,FPCS, FPATACSI,MBA-H
UNDERSECRETARY FOR HEALTH, DOH

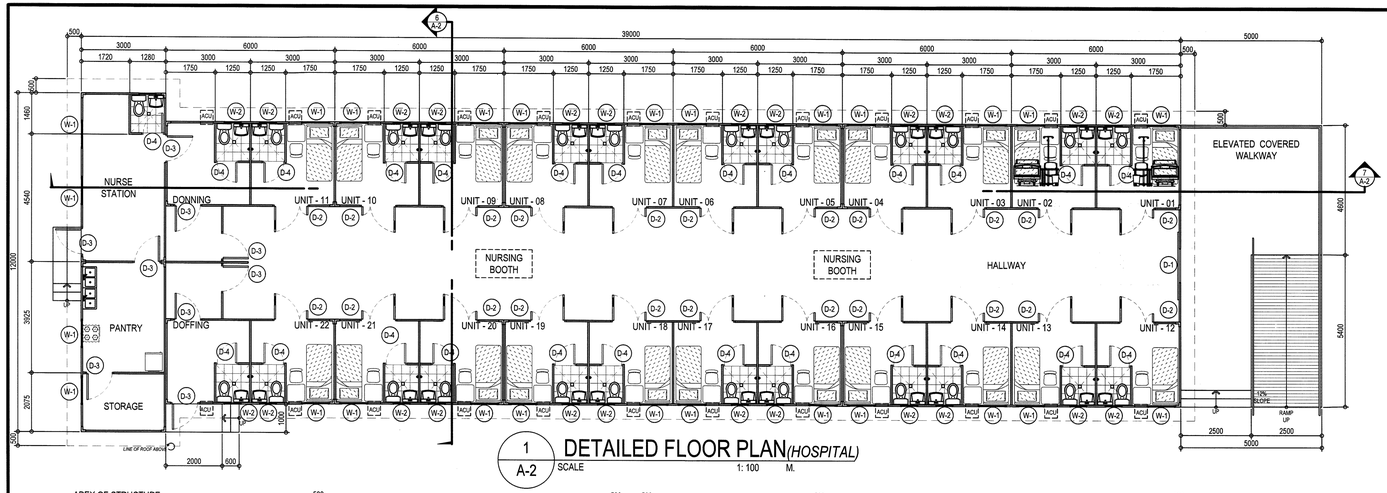
EXTERIOR PERSPECTIVE



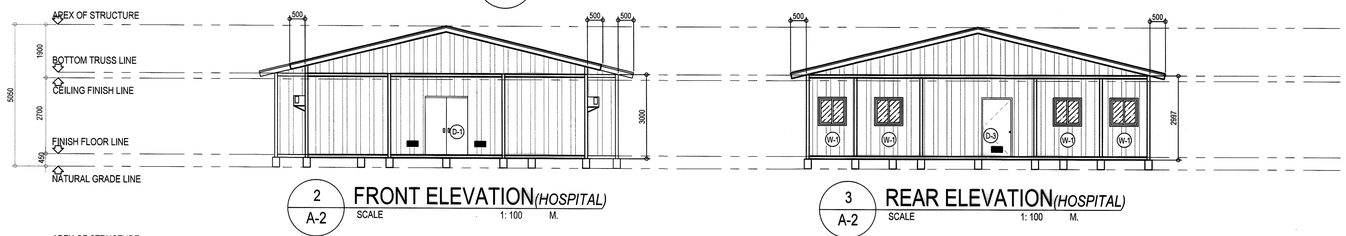
INTERIOR PERSPECTIVE

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BUREAU OF DESIGN
BUILDINGS DIVISION
BONIFACIO DRIVE PORT AREA, MANILA

PROJECT AND LOCATION:	SHEET CONTENTS:	DESIGNED BY:	SUBMITTED:	RECOMMENDING APPROVAL:	APPROVED:	CONCURRED:	SET NO.:	SHEET NO.:
DPWH STANDARD FIELD MODULAR HOSPITAL	PERSPECTIVE	ARCHITECTURAL SECTION CADD: LARK MAVERICK E. DE VERA, ARCHITECT II CHECKED: ~~FRANCIS C. SERRANO~~, ARCHITECT IV	KATHRINE ANNE C. MACOY CARETAKER, BUILDINGS DIVISION	MAY 03 2021 *SEE COVER SHEET FOR SIGNATURE* SAMSON L. HEBRA, CESO IV DIRECTOR IV BUREAU OF DESIGN	*SEE COVER SHEET FOR SIGNATURE* MAXIMO L. CARVAJAL UNDERSECRETARY FOR TECHNICAL SERVICES	*SEE COVER SHEET FOR SIGNATURE* LEOPOLDO J. VEGA,MD,FPCS, FPATACSI,MBA-H UNDERSECRETARY FOR HEALTH,DOH	BOD B	A-1 6 33

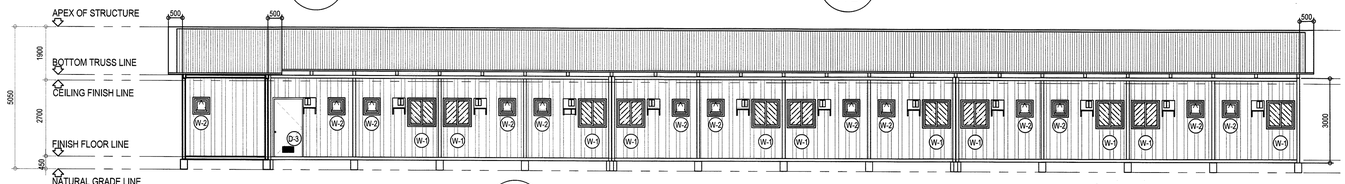


1 A-2 DETAILED FLOOR PLAN *(HOSPITAL)*
SCALE 1: 100 M.



2 A-2 FRONT ELEVATION *(HOSPITAL)*
SCALE 1: 100 M.

3 A-2 REAR ELEVATION *(HOSPITAL)*
SCALE 1: 100 M.



4 A-4 LEFT SIDE ELEVATION *(HOSPITAL)*
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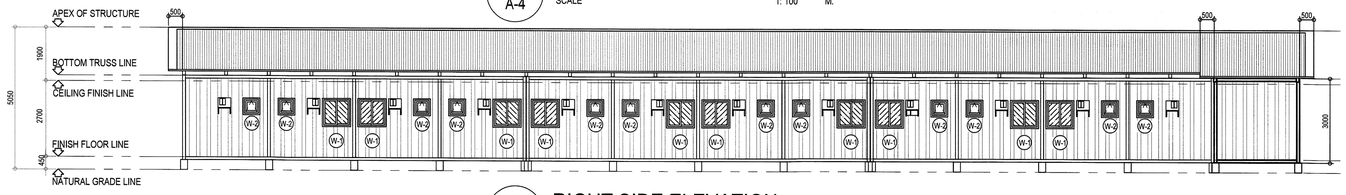
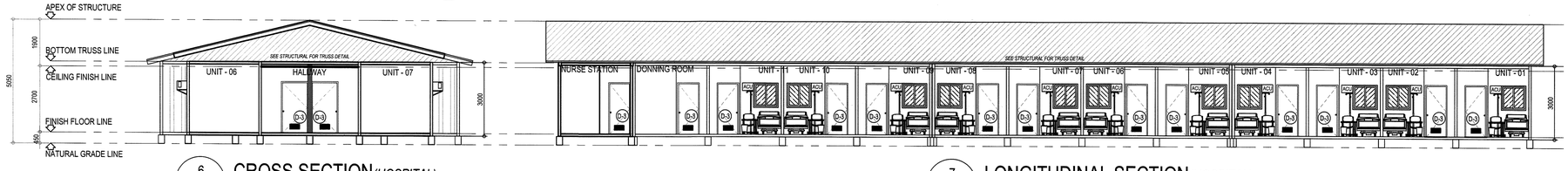


5 A-2 RIGHT SIDE ELEVATION *(HOSPITAL)*
SCALE 1: 100 M.



6 A-2 CROSS SECTION *(HOSPITAL)*
SCALE 1: 100 M.

7 A-2 LONGITUDINAL SECTION *(HOSPITAL)*
SCALE 1: 100 M.

GENERAL NOTES AND SPECIFICATIONS:

1. DIMENSIONS
   - 1.1. 12 m LENGTH x 3.0 m WIDTH X 3.0 m HEIGHT(40FT MODULAR CONTAINER VAN) OR
   - 1.2. 6 m LENGTH x 3.0 m WIDTH X 3.0 m HEIGHT(20FT MODULAR CONTAINER VAN)
2. WALLS
   - 2.1. MODULAR VAN : 2" POLYSTYRENE INSULATION WITH DOUBLE SIDED 0.45mm PRE-PAINTED GI SHEET
   - 2.2. INTERIOR PARTITIONS : DRY WALL PARTITION SYSTEM (BY OTHERS)
3. ROOF
   - 3.1. GENERAL ROOFING: GA 26 PREPAINTED GI SHEET ROOFING WITH GLASSWOOL INSULATION
   - 3.2. MODULAR VAN ROOFING: 2" POLYSTYRENE INSULATION WITH DOUBLE SIDED 0.45mm PRE-PAINTED GI SHEET
   - 3.3. ELEVATED COVERED WALKWAY : G.A. 24 RIB TYPE PRE-PAINTED ROOFING SHEET
   - 3.4. EXTERIOR STAIRS (DOFFING & NURSE STATION) : G.A. 24 RIB TYPE PRE-PAINTED ROOFING SHEET
4. CEILING
   - 4.1. HALLWAY : 600 x 600 mm VINYL CEILING BOARD
   - 4.2. MODULAR VAN : 2" POLYSTYRENE INSULATION WITH DOUBLE SIDED 0.45mm PRE-PAINTED GI SHEET
   - 4.3. ELEVATED COVERED WALKWAY : EXPOSED STRUCTURAL MEMBERS WITH G.A. 24 RIB TYPE PRE-PAINTED ROOFING SHEET
   - 4.4. EXTERIOR STAIRS (DOFFING & NURSE STATION) : G.A. 24 RIB TYPE PRE-PAINTED ROOFING SHEET
5. DOORS:
   - 5.1. D-1: 1600 x 2100 mm DOUBLE LEAF SLIDING METAL DOOR W/ COMPLETE LOCKSET
   - 5.2. D-2: 900 x 2100 mm & 300 x 2100 mm DOUBLE LEAF METAL DOOR W/ VIEWING WINDOW AND COMPLETE LOCKSETS AND LOUVERS
   - 5.3. D-3: 900 x 2100 mm METAL DOOR W/ LOUVERS AND COMPLETE LOCKSET
   - 5.4. D-4: 700 x 2100 mm METAL DOOR W/ COMPLETE LOCKSET AND LOUVERS
6. FLOORING
   - 6.2. MODULAR VAN : MAGNESIUM BOARD SUB FLOORING WITH ROLLED VINYL FINISH
   - 6.3. HALLWAY : $\frac{3}{4}$" THK. LIGHT FICEM BOARD SUB FLOORING WITH ROLLED VINYL FINISH
   - 6.4. TOILET AND BATH : FIBER GLASS TOILET FLOORING
   - 6.5. RAMP : CONCRETE RAMP (PROVIDE GROOVE LINES)
   - 6.6. ELEVATED COVERED WALKWAY : $\frac{3}{4}$" THK. LIGHT FICEM BOARD WITH RUBBERIZED PAINTED FINISH
   - 6.7. EXTERIOR STAIRS (DOFFING & NURSE STATION) : $\frac{3}{4}$" THK. LIGHT FICEM BOARD WITH RUBBERIZED PAINTED FINISH
7. WINDOWS
   - 7.1. W-1: 1000mm x 1000mm x 6mm THK. ORDINARY GLASS UPVC SLIDING WINDOW WITH INSECT SCREEN
   - 7.2. W-2: 600 mm x 600 mm x 6mm THK. ORDINARY GLASS UPVC AWNING WINDOW WITH INSECT SCREEN
8. STEEL FRAME
   - 8.1. GALVANIZED WITH PAINTING
9. ADDITIONAL SPECIFICATIONS/REQUIREMENTS
   - 9.1. MEDICAL GAS LINE (BY OTHERS)
   - 9.2. WATER HEATER

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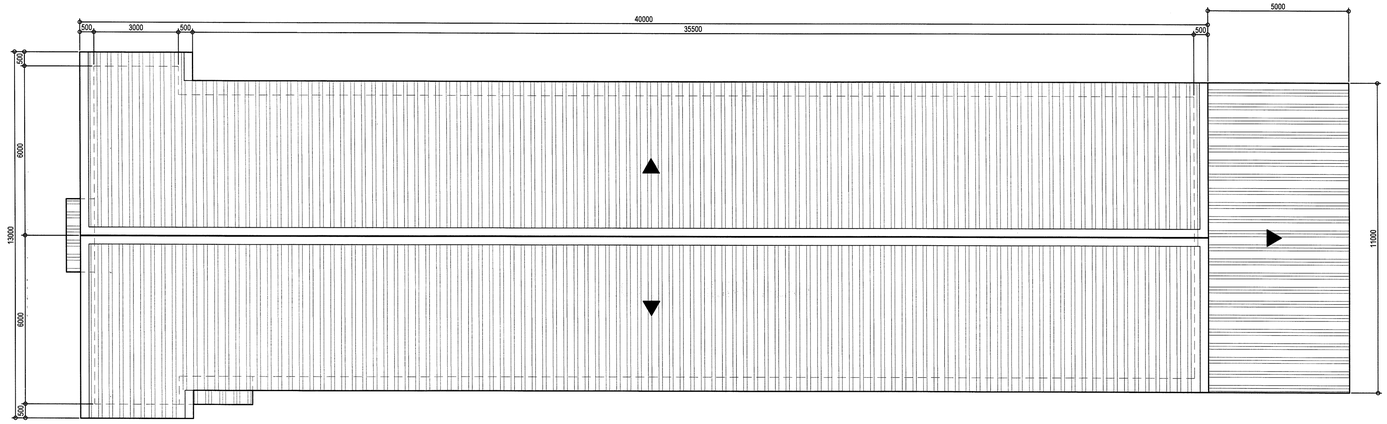
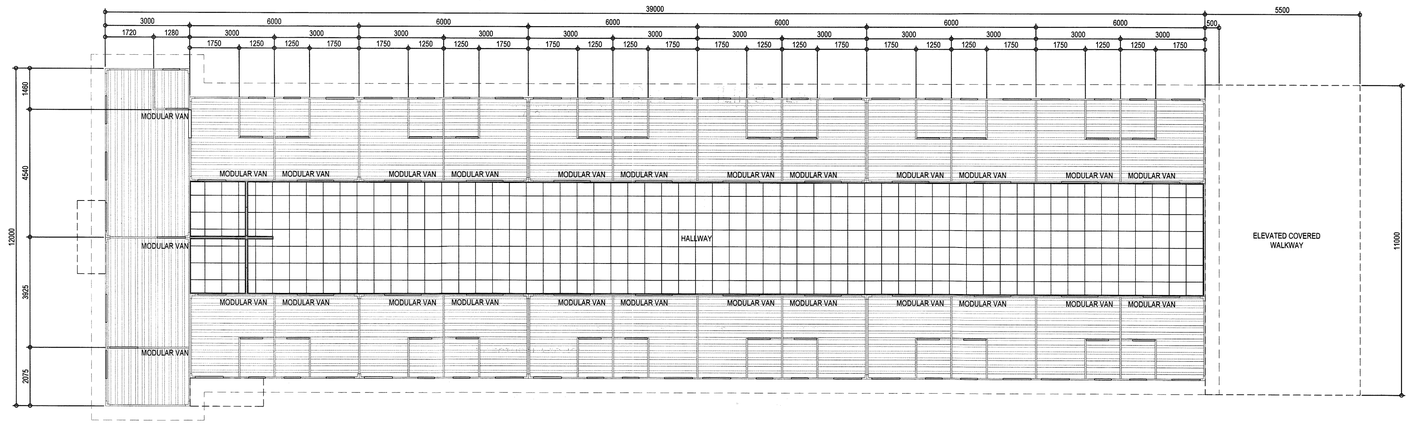
PROJECT AND LOCATION:	SHEET CONTENTS:	DESIGNED BY:	SUBMITTED:	RECOMMENDING APPROVAL:	APPROVED:	CONCURRED:	SET NO.:	SHEET NO.:
DPWH STANDARD FIELD MODULAR HOSPITAL	FLOOR PLAN ELEVATIONS SECTIONS GENERAL NOTES AND SPECIFICATIONS	**ARCHITECTURAL SECTION** CADD: **LARK MAVERICK E. DE VERA** ARCHITECT II CHECKED: **FRANCIS C. SERRANO** ARCHITECT IV	**KATHRINE ANNE C. MACOY** CARETAKER, BUILDINGS DIVISION	MAY 03 2021 *SEE COVER SHEET FOR SIGNATURE* **SAMSON L. HEBRA, CESO IV** DIRECTOR IV BUREAU OF DESIGN	*SEE COVER SHEET FOR SIGNATURE* **MAXIMO L. CARVAJAL** UNDERSECRETARY FOR TECHNICAL SERVICES	*SEE COVER SHEET FOR SIGNATURE* **LEOPOLDO J. VEGA,MD,FPCS, FPATACSI,MBA-H** UNDERSECRETARY FOR HEALTH,DOH	BOD B	A-2 6 33



1 / A-3 **ROOF PLAN** *(HOSPITAL)*
SCALE 1: 100 M.



1 / A-3 **REFLECTED CEILING PLAN**
SCALE 1: 100 M.

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BUREAU OF DESIGN
BUILDINGS DIVISION
BONIFACIO DRIVE PORT AREA, MANILA

PROJECT AND LOCATION: DPWH STANDARD FIELD MODULAR HOSPITAL

SHEET CONTENTS: REFLECTED CEILING PLAN, ROOF PLAN

DESIGNED BY: **ARCHITECTURAL SECTION**
CADD: **L.M.E.DE VERA/K.ANN MAGCAMIT** ARCHITECT II/ARCHITECT II
CHECKED: **FRANCIS G. SERRANO** ARCHITECT IV

SUBMITTED: **KATHRINE ANNE C. MACOY** 4/26/21
CARETAKER, BUILDINGS DIVISION

RECOMMENDING APPROVAL: MAY 03 2021
SEE COVER SHEET FOR SIGNATURE
SAMSON L. HEBRA, CESO IV
DIRECTOR IV, BUREAU OF DESIGN

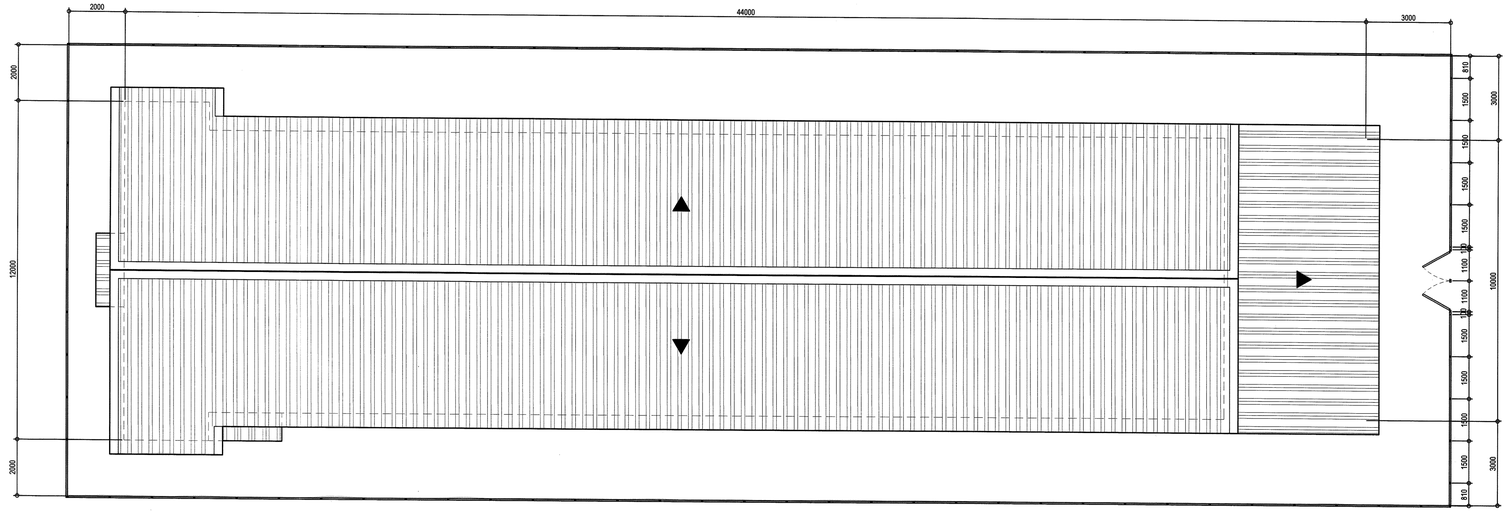
APPROVED: *SEE COVER SHEET FOR SIGNATURE*
MAXIMO L. CARVAJAL
UNDERSECRETARY FOR TECHNICAL SERVICES

CONCURRED: *SEE COVER SHEET FOR SIGNATURE*
LEOPOLDO J. VEGA,MD,FPCS, FPATACSI,MBA-H
UNDERSECRETARY FOR HEALTH,DOH

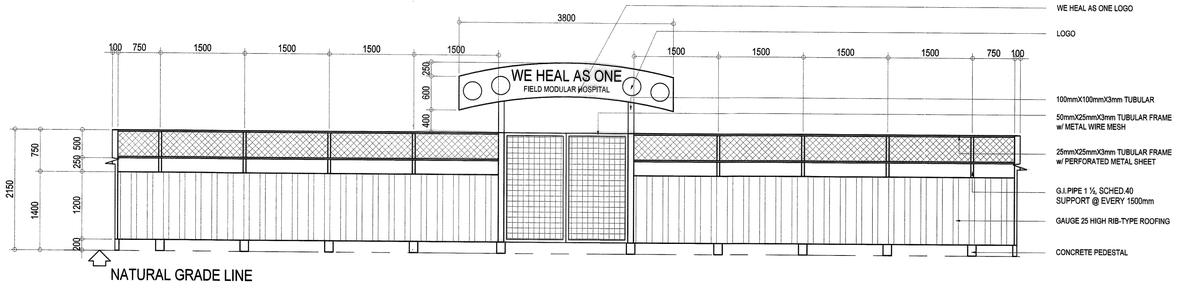
SET NO.: BOD / B

SHEET NO.: A-3 / 6 / 33

NOTE:
- SEE STRUCTURAL FOR CONNECTION DETAILS, SPECIFICATIONS AND DIMENSIONS



1 / A-4 PERIMETER FENCE PLAN *(HOSPITAL)*
SCALE 1: 100 M.



2 / A - 4 GATE FRONT DETAILS *(HOSPITAL)*
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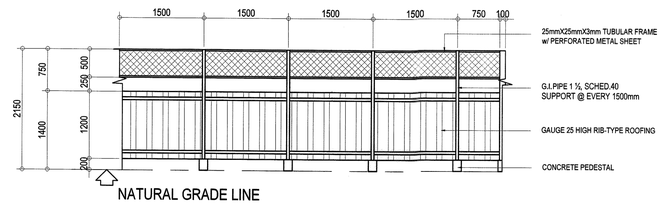
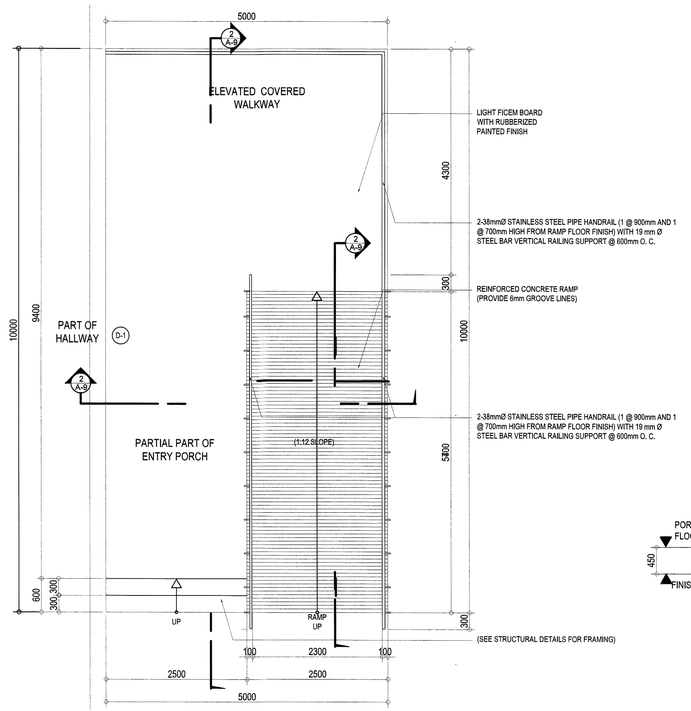
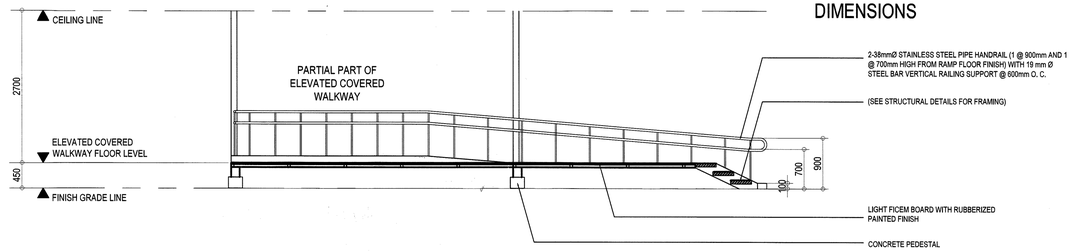


3 / A - 4 BACK OF THE FENCE DETAILS *(HOSPITAL)*
SCALE 1 : 50 M.

REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS **BUREAU OF DESIGN** BUILDINGS DIVISION BONIFACIO DRIVE PORT AREA, MANILA	PROJECT AND LOCATION: DPWH STANDARD FIELD MODULAR HOSPITAL	SHEET CONTENTS: PERIMETER FENCE PLAN GATE FRONT DETAILS BACK OF THE FENCE DETAILS	DESIGNED BY: ARCHITECTURAL SECTION CADD: L.M.E.DE VERA/C.A.M.MAGCAMIT ARCHITECT II/ARCHITECT II CHECKED: FRANCIS C. SERRANO ARCHITECT IV	SUBMITTED: KATHRINE ANNE C. MACOY CARETAKER, BUILDINGS DIVISION	RECOMMENDING APPROVAL: MAY 03 2021 *SEE COVER SHEET FOR SIGNATURE* SAMSON L. HEBRA, CESO IV DIRECTOR IV BUREAU OF DESIGN	APPROVED: *SEE COVER SHEET FOR SIGNATURE* MAXIMO L. CARVAJAL UNDERSECRETARY FOR TECHNICAL SERVICES	CONCURRED: *SEE COVER SHEET FOR SIGNATURE* LEOPOLDO J. VEGA,MD,FPCS, FPATACSI,MBA-H UNDERSECRETARY FOR HEALTH,DOH	SET NO.: BOD / B	SHEET NO.: A-4 6 / 33

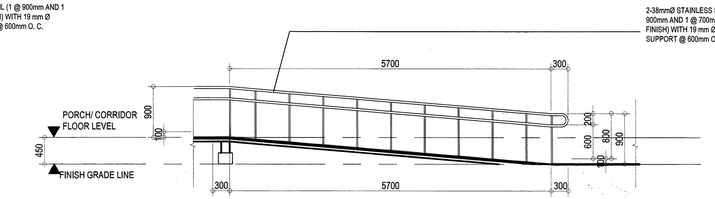


1 / A - 5 DET. PLAN OF RAMP
SCALE 1 : 50 M

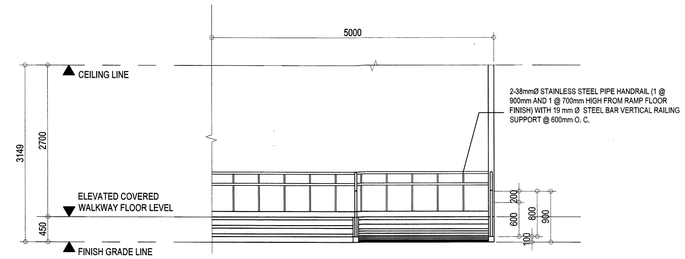


2 / A -5 DET. SECTION OF STAIRS
SCALE 1 : 50 M

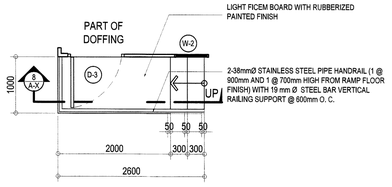
NOTE:
- SEE STRUCTURAL FOR CONNECTION DETAILS, SPECIFICATIONS AND DIMENSIONS



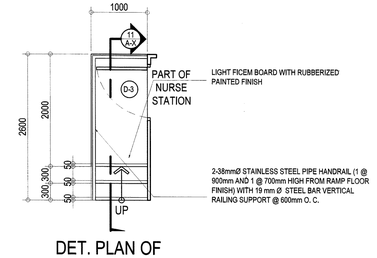
3 / A - 5 DET. SECTION OF RAMP
SCALE 1 : 50 M



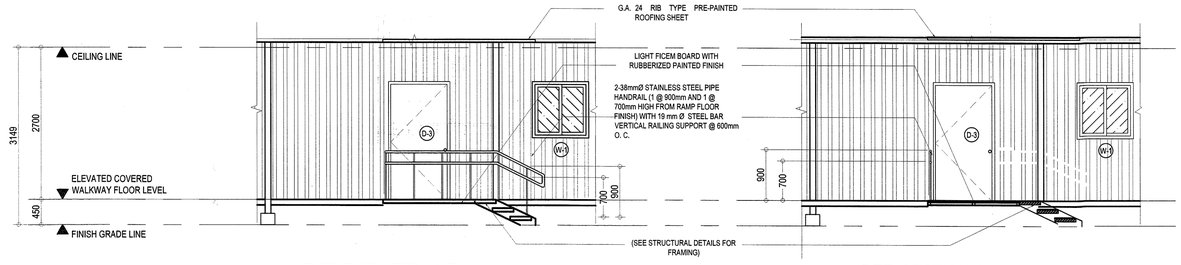
4 / A - 5 DET. ELEVATION OF STAIRS AND RAMP
SCALE 1 : 50 M



5 / A - 5 DET. PLAN OF STAIRS (DOFFING)
SCALE 1 : 50 M

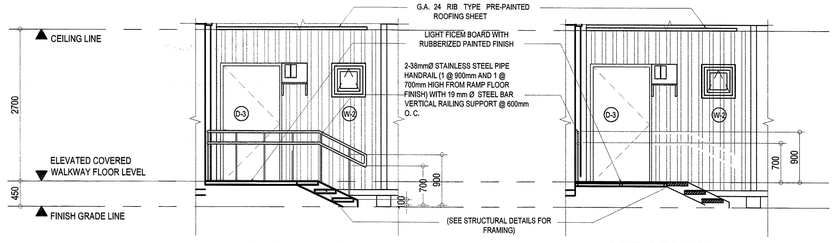


6 / A - 5 DET. PLAN OF STAIRS (NURSE STATION)
SCALE 1 : 50 M



7 / A - 5 DET. ELEVATION OF STAIRS (NURSE STATION)
SCALE 1 : 50 M

8 / A - 5 DET. SECTION OF STAIRS (NURSE STATION)
SCALE 1 : 50 M



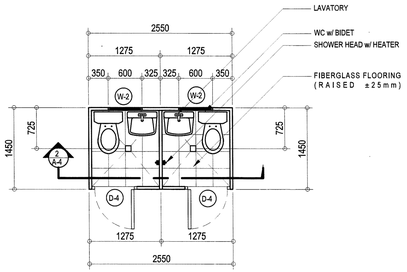
9 / A -5 DET. ELEVATION OF STAIRS
SCALE 1 : 50 M

8 / A - 5 DET. SECTION OF STAIRS
SCALE 1 : 50 M

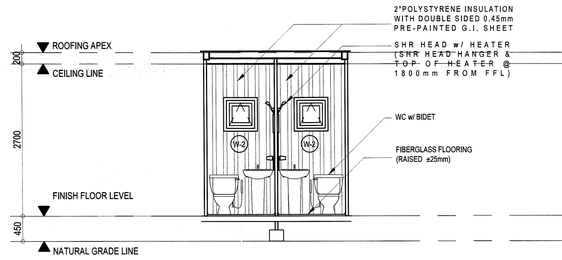
REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS **BUREAU OF DESIGN** BUILDINGS DIVISION BONIFACIO DRIVE PORT AREA, MANILA	PROJECT AND LOCATION: DPWH STANDARD FIELD MODULAR HOSPITAL	SHEET CONTENTS: MAIN ENTRANCE DETAIL	DESIGNED BY: ARCHITECTURAL SECTION CADD: L.M.E.DE VERA/J.P.P.GONZALEZ-CORTEZ ARCHITECT.II/ARCHITECT II CHECKED: FRANDIS G. SERRANO ARCHITECT IV	SUBMITTED: KATHRINE ANNE C. MACOY CARETAKER, BUILDINGS DIVISION	RECOMMENDING APPROVAL: MAY 0 3 2021 *SEE COVER SHEET FOR SIGNATURE* SAMSON L. HEBRA, CESO IV DIRECTOR IV BUREAU OF DESIGN	APPROVED: *SEE COVER SHEET FOR SIGNATURE* MAXIMO L. CARVAJAL UNDERSECRETARY FOR TECHNICAL SERVICES	CONCURRED: *SEE COVER SHEET FOR SIGNATURE* LEOPOLDO J. VEGA,MD,FPCS, FPATACSI,MBA-H UNDERSECRETARY FOR HEALTH,DOH	SET NO.: BOD B	SHEET NO.: A-5 6 33

NOTE:

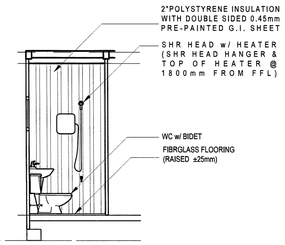
- SEE STRUCTURAL FOR CONNECTION DETAIL, SPECIFICATIONS AND DIMENSIONS



1 / A-6 DET. PLAN OF TOILET
SCALE 1:50 M



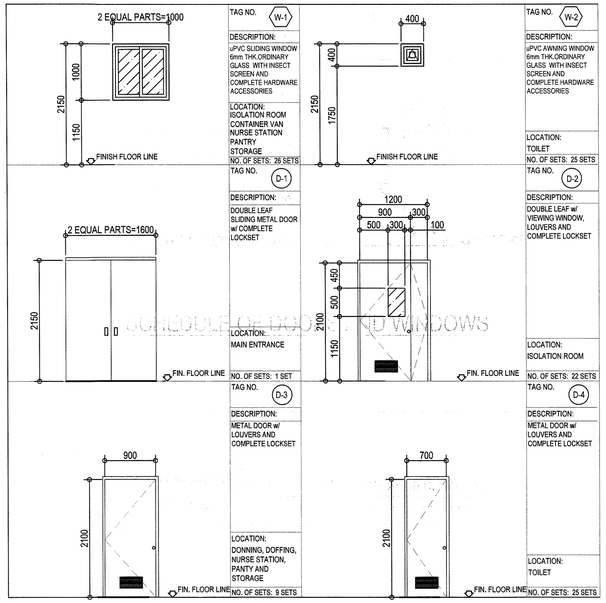
2 / A-6 BLOW-UP TYPICAL TOILET LONGITUDINAL SECTION
SCALE 1:50 M



3 / A-6 BLOW-UP TYPICAL TOILET CROSS SECTION
SCALE 1:50 M

GENERAL NOTES:

- VERIFY ACTUAL DIMENSION & NO. OF SETS BEFORE FABRICATION



1 / A-6 SCHEDULE OF DOORS AND WINDOWS
SCALE 1:50 M.

REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS **BUREAU OF DESIGN** BUILDINGS DIVISION BONIFACIO DRIVE PORT AREA, MANILA	PROJECT AND LOCATION: DPWH STANDARD FIELD MODULAR HOSPITAL	SHEET CONTENTS: TOILET DETAIL SCHEDULE OF DOORS AND WINDOWS FENCE DETAIL	DESIGNED BY: **ARCHITECTURAL SECTION** CAD: **K.A.M.MAGCAMIT/A.M.C.CARVAJAL** ARCHITECT II/ARCHITECT II CHECKED: **FRANCIS G. SERRANO** ARCHITECT IV	SUBMITTED: **KATHRINE ANNE C. MACOY** CARETAKER, BUILDINGS DIVISION	RECOMMENDING APPROVAL: MAY 03 2021 *SEE COVER SHEET FOR SIGNATURE* **SAMSON L. HEBRA, CESO IV** DIRECTOR IV BUREAU OF DESIGN	APPROVED: *SEE COVER SHEET FOR SIGNATURE* **MAXIMO L. CARVAJAL** UNDERSECRETARY FOR TECHNICAL SERVICES	CONCURRED: *SEE COVER SHEET FOR SIGNATURE* **LEOPOLDO J. VEGA,MD,FPCS, FPATACSI,MBA-H** UNDERSECRETARY FOR HEALTH,DOH	SET NO.: BOD B	SHEET NO.: A-6 6 | 33

DESIGN CRITERIA :

1.0 DEAD LOADS (DL) :

1.1	CONCRETE	24.00	kN/m³
1.2	STEEL	77.00	kN/m³
1.3	SOIL	16.00	kN/m³
1.4	ROOFING & INSULATION	0.20	kPa
1.5	100MM THK. CHB WALL	2.10	kPa

2.0 LIVE LOADS (LL) :

2.1	ROOF	0.60	kPa
2.2	FLOOR	1.90	kPa

3.0 WIND LOAD (WL) :

THE WIND LOAD ON STRUCTURE AND BUILDING SHALL BE CALCULATED BASED ON NATIONAL STRUCTURAL CODE OF THE PHILIPPINES, CONSIDERING BASIC WIND SPEED (3 SECOND GUST SPEED) EQUALS TO 94.44 M/S

3.1	BASIC WIND SPEED, V	=	270 kM/hour
3.2	OCCUPANCY CATEGORY	=	IV
3.3	EXPOSURE CATEGORY	=	B
3.4	VELOCITY PRESSURE AT HEIGHT 'Z', qz	=	$0.613K_zK_{zt}K_dV^2$ ($N/^2$); V in m/s

WHERE, V IN KM/HOUR
K_{zt} = TOPOGRAPHIC FACTOR = 1.00
K_z = EXPOSURE COEFFICIENTS = $2.01(Z/Z_g)^{2/a}$
Z_g = GRADIENT HEIGHT = 457M AND a = 5
AND, QZ = 0.9683 X Z0.174 IN kN/M²

THIS VELOCITY PRESSURE SHALL BE USED ALONG WITH FORCE COEFFICIENTS TO CALCULATE WIND LOAD ON SPECIFIC STRUCTURE.

IF LOCATION OF THE PROJECT IS NOT APPLICABLE FOR THE GIVEN WIND SPEED ASSUMPTION, THE DESIGN SHALL BE REVISED ACCORDINGLY.

4.0 MATERIALS

4.1 NORMAL WEIGHT CONCRETE :
CONCRETE USED IN THIS WORK SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH @ 28 DAYS AS FOLLOWS :

SLAB ON-GRADE, FOOTING, COLUMNS fc' = 21 MPa (3,000 PSI)

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

ALL SIZES fy = 276 MPa (40,000PSI)

4.3 STRUCTURAL STEEL :
FOR ALL STEEL PIPES AND BASE PLATES, USE
ASTM A36 STEEL Fy = 248 MPa (36,000PSI)

4.4 WELDS :
USE E60XX ELECTRODES

4.5 BOLTS :
USE A307 THREADED & ANCHOR BOLTS
Fnt = 310 MPa (44,000PSI)
Fnv = 165 MPa (23,000PSI)

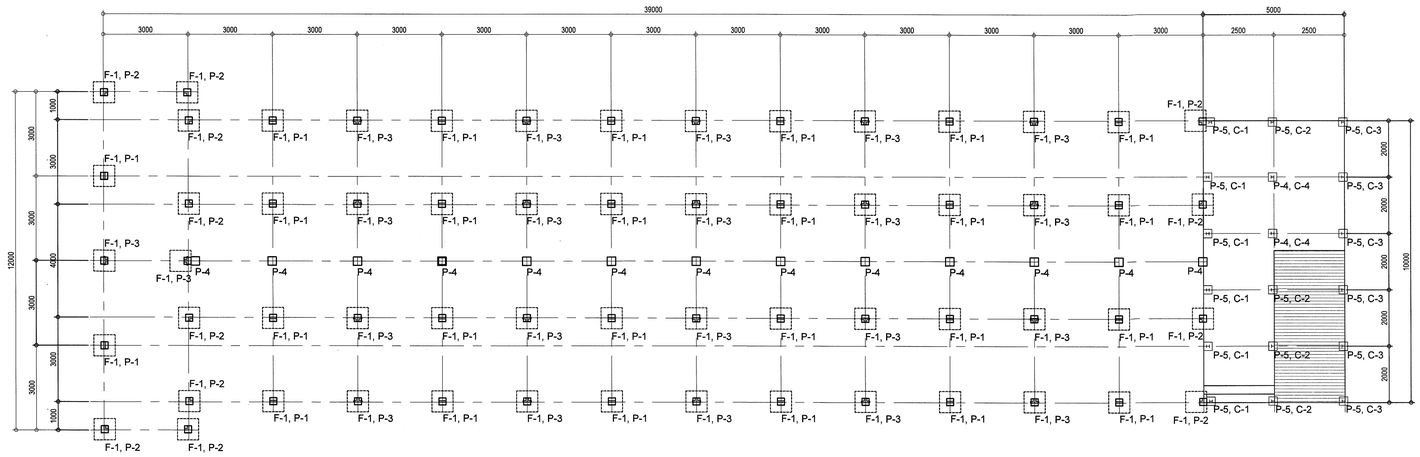
5.0 NOTES ON FOUNDATION

5.1 NO FOOTINGS SHALL REST ON FILL PROVIDE 100MM THK WELL COMPACTED GRAVEL BED BEFORE CASTING.

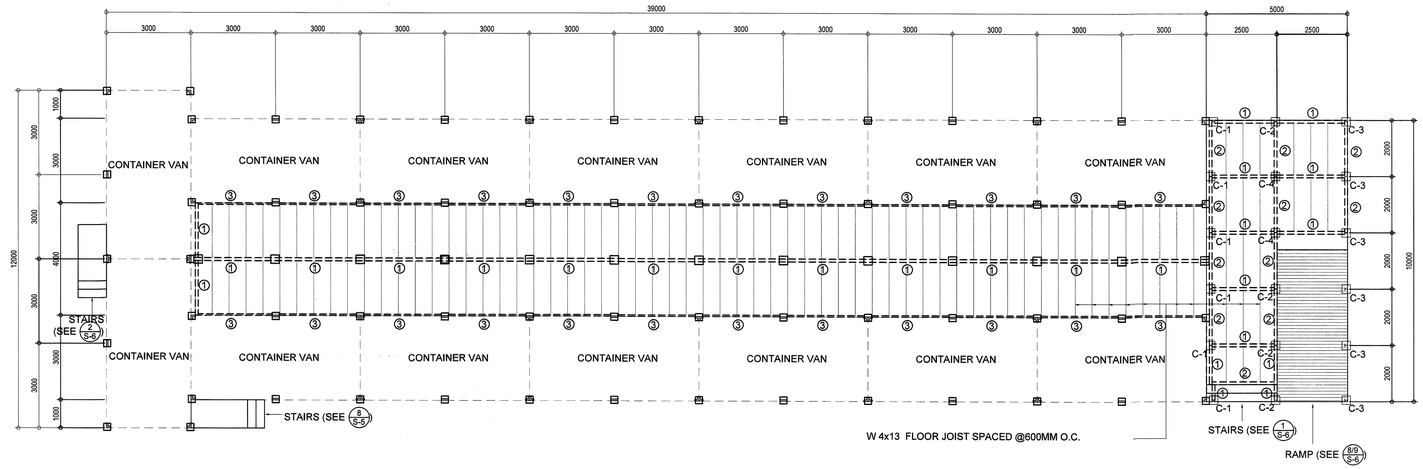
5.2 FOOTING IS DESIGNED WITH AN ASSUMED MINIMAL ALLOWABLE SOIL BEARING CAPACITY (SBC) OF 96 kPa. IF LOCATION IS KNOWN OR FOUND OUT TO HAVE AN SBC OF LESS THAN THE ASSUMED, THE FOOTING DESIGN SHALL BE REVISED ACCORDINGLY.

COLUMN SCHEDULE		
DESIGNATION	SECTION (MM)	HEIGHT (M)
C–1	W 4x13	3220
C–2	W 4x13	3170
C–3	W 4x13	3120
C–4	W 4x13	400

SECTION SCHEDULE		
DESIGNATION	SECTION	CONNECTION
①	W 4x13	FULL WELD
②	W 4x13	FULL WELD
③	L–75X75X8	FULL WELD
Ⓐ	2L–75X75X6	FULL WELD
Ⓑ	L–75X75X6MM	FULL WELD



1 / S-1 FOUNDATION PLAN
SCALE 1: 100 M.



2 / S-1 GROUND FRAMING PLAN
SCALE 1: 100 M.

NOTE:
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REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BUREAU OF DESIGN
BUILDINGS DIVISION
BONIFACIO DRIVE PORT AREA, MANILA

PROJECT AND LOCATION: DPWH STANDARD FIELD MODULAR HOSPITAL

SHEET CONTENTS: DESIGN CRITERIA; PLANS: FOUNDATION, GROUND FRAMING

DESIGNED BY: LOVINCCI D. TAN, ENGINEER II
CADD: JESSA MARIE S. CRUZ, ENGINEER II
CHECKED: WILFREDO S. VALLO, VENGINEER III

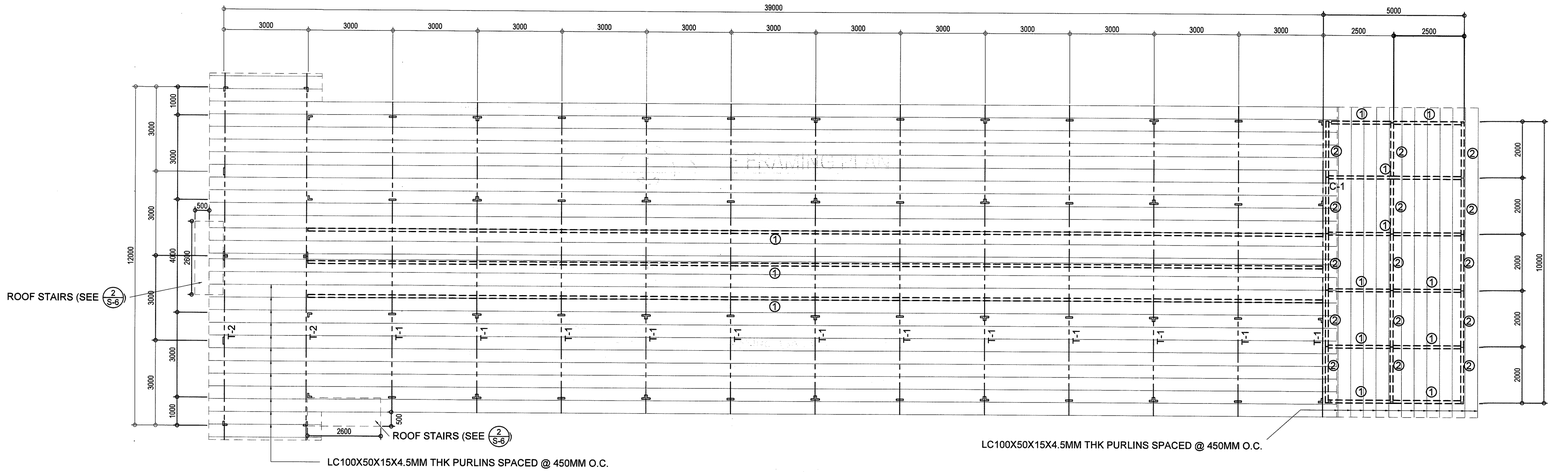
SUBMITTED: KATHRINE ANNE C. MACOY, CARETAKER, BUILDINGS DIVISION

RECOMMENDING APPROVAL: MAY 03 2021
SEE COVER SHEET FOR SIGNATURE
SAMSON L. HEBRA, CESO IV
DIRECTOR IV
BUREAU OF DESIGN

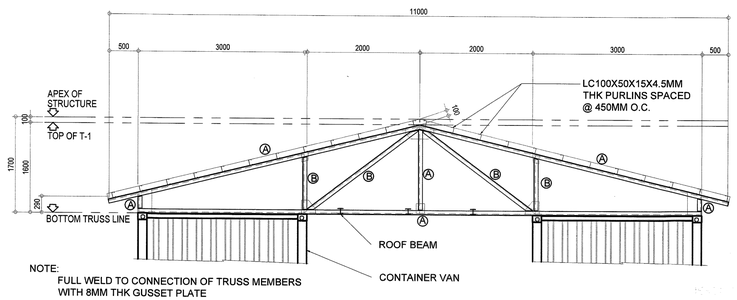
APPROVED:
SEE COVER SHEET FOR SIGNATURE
MAXIMO L. CARVAJAL
UNDERSECRETARY FOR TECHNICAL SERVICES

SET NO.: BOD / B

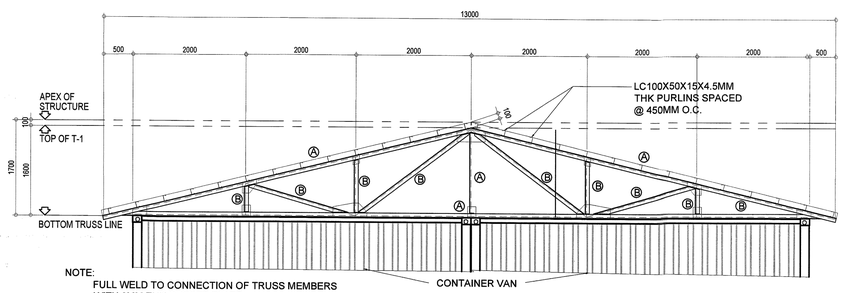
SHEET NO.: S-1 / 7 / 33



1 / S-2 **ROOF FRAMING PLAN**
SCALE 1: 100 M.



2 / S-2 **DETAIL OF ROOF TRUSS (T-1)**
SCALE 1: 50 M.



3 / S-2 **DETAIL OF ROOF TRUSS (T-2)**
SCALE 1: 50 M.

NOTE:
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DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BUREAU OF DESIGN
BUILDINGS DIVISION
BONIFACIO DRIVE PORT AREA, MANILA

PROJECT AND LOCATION: DPWH STANDARD FIELD MODULAR HOSPITAL

SHEET CONTENTS:
PLAN:
ROOF FRAMING
TRUSS DETAILS:
T-1, T-2

DESIGNED BY: **LUVINCCI D. TAN** ENGINEER II
CADD: **JESSA MARIE S. CRUZ** ENGINEER II
CHECKED: **WILFREDO S. VALLO** VENGINEER III

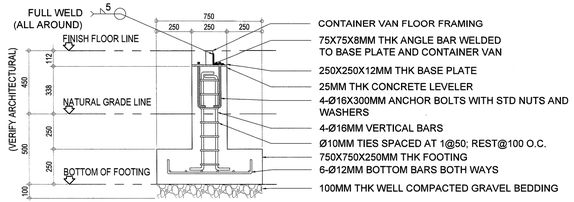
SUBMITTED: **KATHRINE ANNE C. MACOY** CARETAKER, BUILDINGS DIVISION

RECOMMENDING APPROVAL: MAY 03 2021
SEE COVER SHEET FOR SIGNATURE
SAMSON L. HEBRA, CESO IV
DIRECTOR IV
BUREAU OF DESIGN

APPROVED:
SEE COVER SHEET FOR SIGNATURE
MAXIMO L. CARVAJAL
UNDERSECRETARY FOR TECHNICAL SERVICES

SET NO.: BOD / B

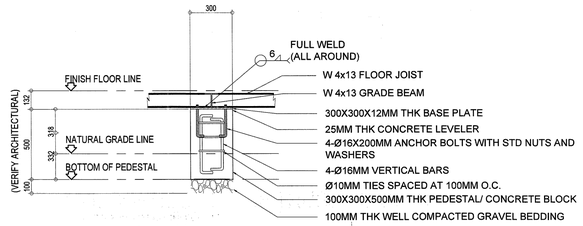
SHEET NO.: S-2 / 7 / 33



(ELEVATION AT P-1/P-2/P-3)

1 / S-3 DETAIL OF FOOTING, PEDESTAL, AND BASE PLATE (F-1)

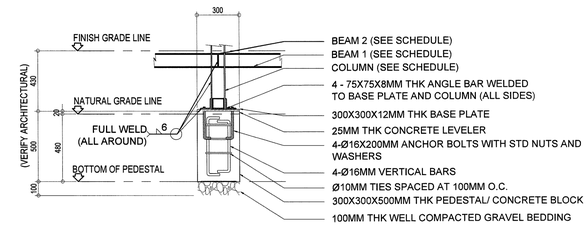
SCALE 1: 20 M.



(ELEVATION AT P-4)

2 / S-3 DETAIL OF PEDESTAL, AND BASE PLATE (P-4)

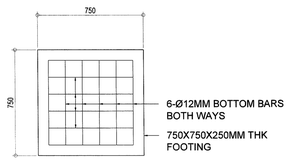
SCALE 1: 20 M.



(ELEVATION AT P-5)

3 / S-3 DETAIL OF PEDESTAL, AND BASE PLATE (P-5)

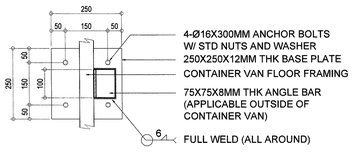
SCALE 1: 20 M.



(PLAN VIEW)

4 / S-3 DETAIL OF FOOTING

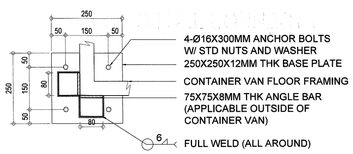
SCALE 1: 20 M.



(AT P-1)

5 / S-3 DETAIL OF BASE PLATE

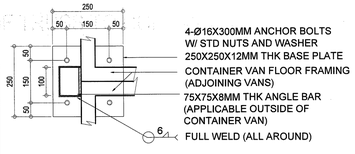
SCALE 1: 10 M.



(AT P-2)

6 / S-3 DETAIL OF BASE PLATE

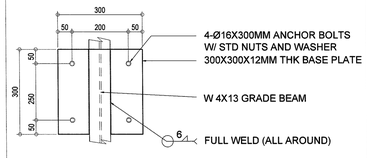
SCALE 1: 10 M.



(AT P-3)

7 / S-3 DETAIL OF BASE PLATE

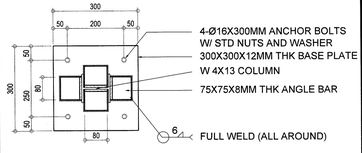
SCALE 1: 10 M.



(AT P-4)

8 / S-3 DETAIL OF BASE PLATE

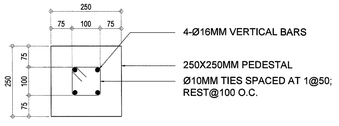
SCALE 1: 10 M.



(AT P-5)

9 / S-3 DETAIL OF BASE PLATE

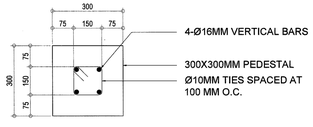
SCALE 1: 10 M.



(PLAN VIEW AT P-1/P-2/P-3)

10 / S-3 DETAIL OF PEDESTAL

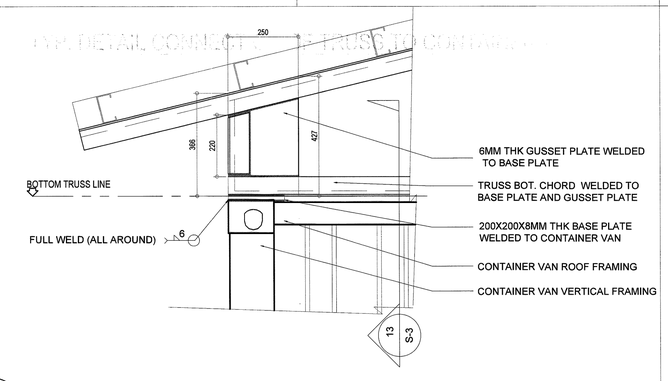
SCALE 1: 10 M.



(PLAN VIEW AT P-4/P-5)

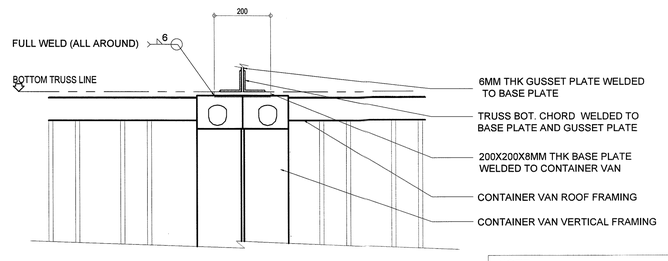
11 / S-3 DETAIL OF PEDESTAL

SCALE 1: 10 M.



12 / S-3 TYP. DETAIL CONNECTION OF TRUSS TO CONTAINER VAN

SCALE 1: 10 M.



13 / S-3 SECTION

SCALE 1: 10 M.

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REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BUREAU OF DESIGN
BUILDINGS DIVISION
BONIFACIO DRIVE PORT AREA, MANILA

PROJECT AND LOCATION: DPWH STANDARD FIELD MODULAR HOSPITAL

SHEET CONTENTS:
DETAILS:
FOOTING, PEDESTAL
BASE PLATE
CONNECTIONS:
TRUSS TO CONTAINER VAN

DESIGNED BY: LOVINCCI D. TAN, ENGINEER II
CADD: JESSA MARIE S. CRUZ, ENGINEER II
CHECKED: WILFREDO S. VALLO, ENGINEER III

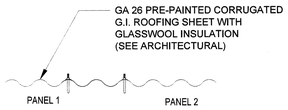
SUBMITTED: KATHRINE ANNE C. MACOY, CARETAKER, BUILDINGS DIVISION

RECOMMENDING APPROVAL: MAY 03 2021
SEE COVER SHEET FOR SIGNATURE
SAMSON L. HEBRA, CESO IV
DIRECTOR IV
BUREAU OF DESIGN

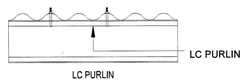
APPROVED:
SEE COVER SHEET FOR SIGNATURE
MAXIMO L. CARVAJAL
UNDERSECRETARY FOR TECHNICAL SERVICES

SET NO.: BOD / B

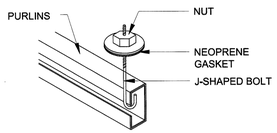
SHEET NO.: S-3 / 7 / 33



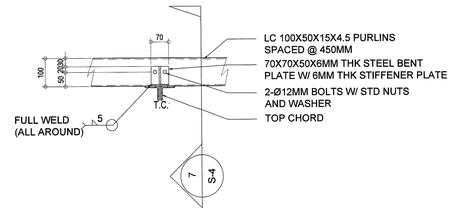
1 / S-4 ROOF PANEL SIDE LAP DETAIL
SCALE 1: 10 M.



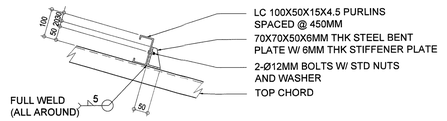
2 / S-4 J-BOLT SPACING
SCALE 1: 10 M.



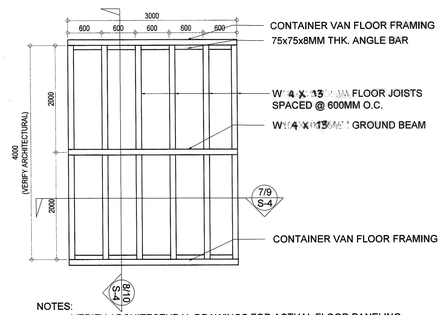
3 / S-4 ROOFING FIXER
SCALE 1: 10 M.



4 / S-4 TYP. DETAIL CONNECTION OF PURLIN
SCALE 1: 10 M.



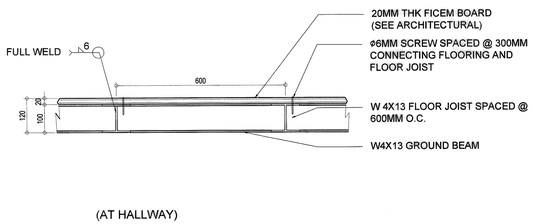
5 / S-4 SECTION
SCALE 1: 10 M.



NOTES:
- VERIFY ARCHITECTURAL DRAWINGS FOR ACTUAL FLOOR PANELING
- WELDED CONNECTION FOR MEMBERS OF EACH PANEL

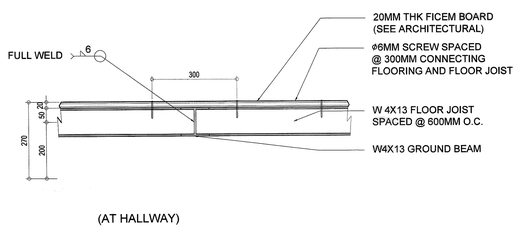
(AT HALLWAY)

6 / S-4 TYPICAL DETAIL OF FLOOR FRAMING
SCALE 1: 50 M.



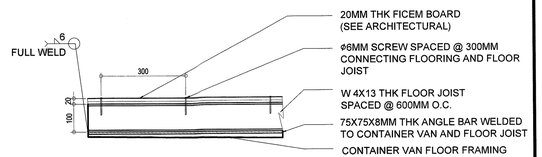
(AT HALLWAY)

7 / S-4 TYPICAL FLOOR
FRAMING CONNECTION TO GROUND BEAM
SCALE 1: 10 M.



(AT HALLWAY)

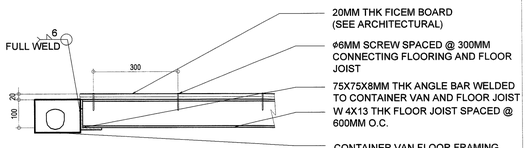
8 / S-4 FLOORING DETAIL (SECTION)
SCALE 1: 10 M.



NOTE:
ANGLE BARS SHALL EXTEND ALL THROUGH-OUT THE LENGTH OF CONTAINER VAN CONNECTED TO HALLWAY

(AT HALLWAY)

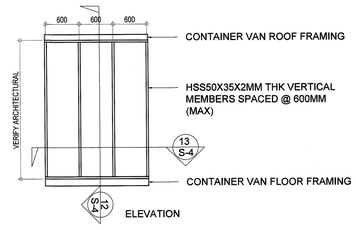
9 / S-4 TYP. DETAIL CONNECTION
OF FLOOR FRAMING TO CONTAINER VAN
SCALE 1: 10 M.



NOTE:
ANGLE BARS SHALL EXTEND ALL THROUGH-OUT THE LENGTH OF CONTAINER VAN CONNECTED TO HALLWAY

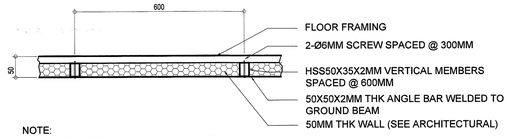
(AT HALLWAY)

10 / S-4 SECTION
SCALE 1: 10 M.



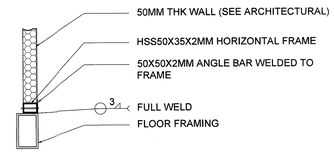
NOTE:
- VERIFY ARCHITECTURAL FOR ACTUAL WALL PANELING
- WELDED CONNECTION FOR MEMBERS OF EACH PANEL

11 / S-4 TYPICAL DETAIL OF WALL FRAMING
SCALE 1: 50 M.



NOTE:
ANGLE BARS SHALL EXTEND UNTIL
BEFORE THE CONNECTIONS OF COLUMN
TO GROUND BEAM

12 / S-4 WALL FRAMING (TOP VIEW)
SCALE 1: 10 M.



NOTE:
ANGLE BARS SHALL EXTEND UNTIL BEFORE THE CONNECTIONS OF COLUMN TO GROUND BEAM

13 / S-4 TYP. WALL FRAMING CONNECTION TO BEAM
SCALE 1: 10 M.

NOTE:
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REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BUREAU OF DESIGN
BUILDINGS DIVISION
BONIFACIO DRIVE PORT AREA, MANILA

PROJECT AND LOCATION:
DPWH STANDARD FIELD MODULAR HOSPITAL

SHEET CONTENTS:
CONNECTIONS:
PURLIN TO TRUSS
G.I. ROOFING TO PURLIN
FRAMES AND CONNECTIONS:
FLOORING
WALLS

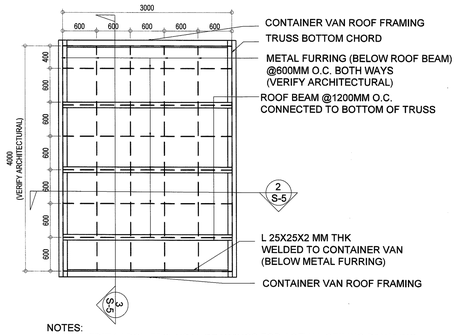
DESIGNED BY: **LOVINCCI D. TAN** ENGINEER II
CADD: **JESSA MARIE S. CRUZ** ENGINEER II
CHECKED: **WILFREDO S. VALLO** VENGINEER III

SUBMITTED: **KATHRINE ANNE C. MACOY**
CARETAKER, BUILDINGS DIVISION

RECOMMENDING APPROVAL: MAY 03 2021
SEE COVER SHEET FOR SIGNATURE
SAMSON L. HEBRA, CESO IV
DIRECTOR IV
BUREAU OF DESIGN

APPROVED:
SEE COVER SHEET FOR SIGNATURE
MAXIMO L. CARVAJAL
UNDERSECRETARY FOR TECHNICAL SERVICES

SET NO.: BOD / B
SHEET NO.: S-4 / 7 | 33

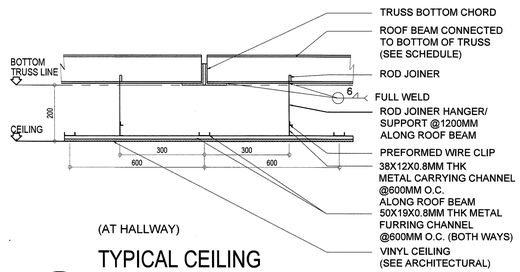


NOTES:
- VERIFY ARCHITECTURAL DRAWINGS FOR ACTUAL CEILING PANELING
- WELDED CONNECTION FOR MEMBERS OF EACH PANEL

(AT HALLWAY)

1 / S-5 TYPICAL DETAIL OF CEILING FRAMING

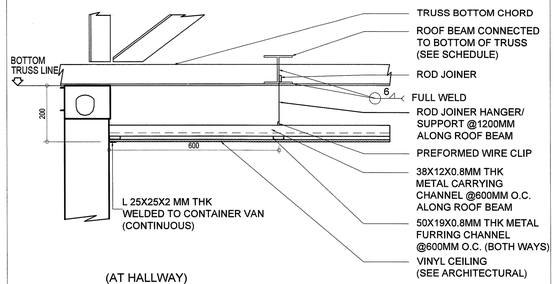
SCALE 1: 50 M.



(AT HALLWAY)

2 / S-5 TYPICAL CEILING FRAMING CONNECTION TO TRUSS

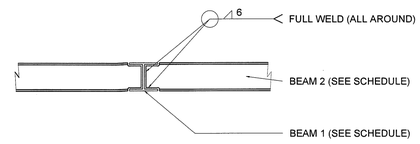
SCALE 1: 10 M.



(AT HALLWAY)

3 / S-5 TYPICAL CEILING FRAMING CONNECTION TO CONTAINER VAN

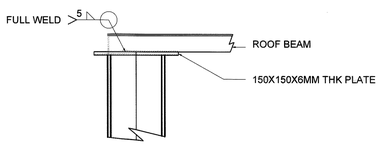
SCALE 1: 10 M.

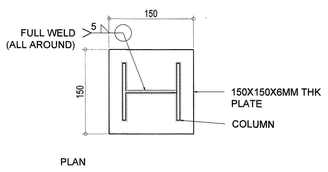


(AT ELEVATED WALKWAY)

4 / S-5 TYP. DETAIL CONNECTION OF BEAM

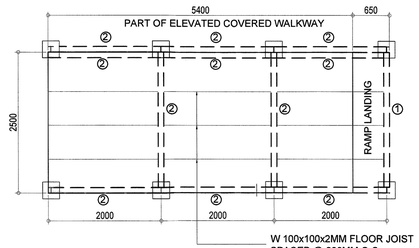
SCALE 1: 10 M.





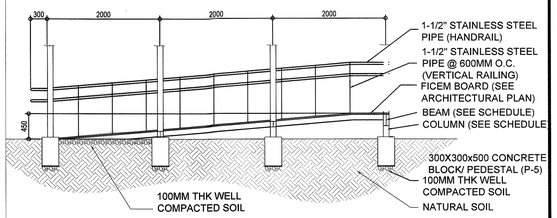
5 / S-5 DETAIL CONNECTION OF ROOF BEAM TO COLUMN

SCALE 1: 10 M.



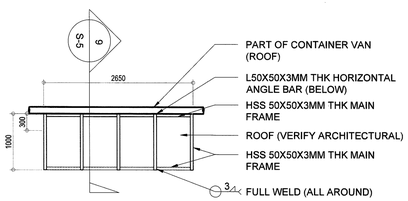
6 / S-5 RAMP FRAMING PLAN

SCALE 1: 50 M.



7 / S-5 RAMP ELEVATION

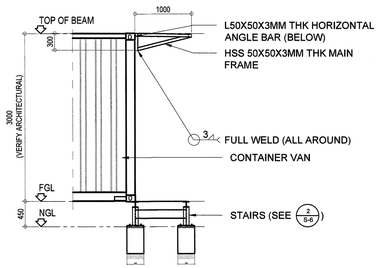
SCALE 1: 50 M.



(AT REAR/ SIDE STAIRS)

8 / S-5 ROOF FRAMING PLAN

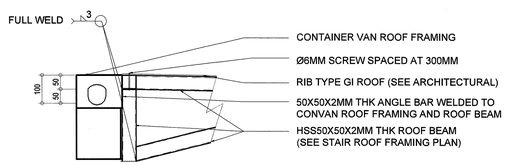
SCALE 1: 50 M.



(AT REAR/ SIDE STAIRS)

9 / S-5 ELEVATION

SCALE 1: 50 M.



NOTE:
ANGLE BARS SHALL EXTEND ALL THROUGH-OUT THE LENGTH OF CONTAINER VAN CONNECTED TO HALLWAY

(AT REAR/ SIDE STAIRS)

10 / S-5 TYPICAL STAIR ROOF BEAM CONNECTION TO CONTAINER VAN

SCALE 1: 10 M.

NOTE:
THE APPROVAL OF DPWH IS BASED ON THE DESIGN OF TEMPORARY FACILITIES APPLIED WITH GRAVITY LOADS AND WIND LOAD (V=270KPH, EXPOSURE B).

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BUREAU OF DESIGN
BUILDINGS DIVISION
BONIFACIO DRIVE PORT AREA, MANILA

PROJECT AND LOCATION: DPWH STANDARD FIELD MODULAR HOSPITAL

SHEET CONTENTS:
FRAMES AND CONNECTIONS:
CEILING
RAMP
CONNECTIONS:
ROOF BEAM TO COLUMN
BEAM TO BEAM

DESIGNED BY: **LOVINCCI D. TAN** ENGINEER II
CADD: **JESSA MARIE S. CRUZ** ENGINEER II
CHECKED: **WILFREDO S. VALLO** ENGINEER III

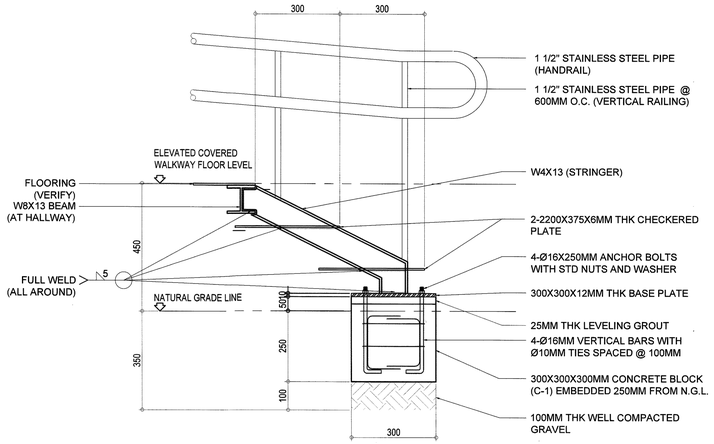
SUBMITTED: **KATHRINE ANNE C. MACOY** CARETAKER, BUILDINGS DIVISION

RECOMMENDING APPROVAL: *SEE COVER SHEET FOR SIGNATURE* MAY 03 2021 **SAMSON L. HEBRA, CESO IV** DIRECTOR IV BUREAU OF DESIGN

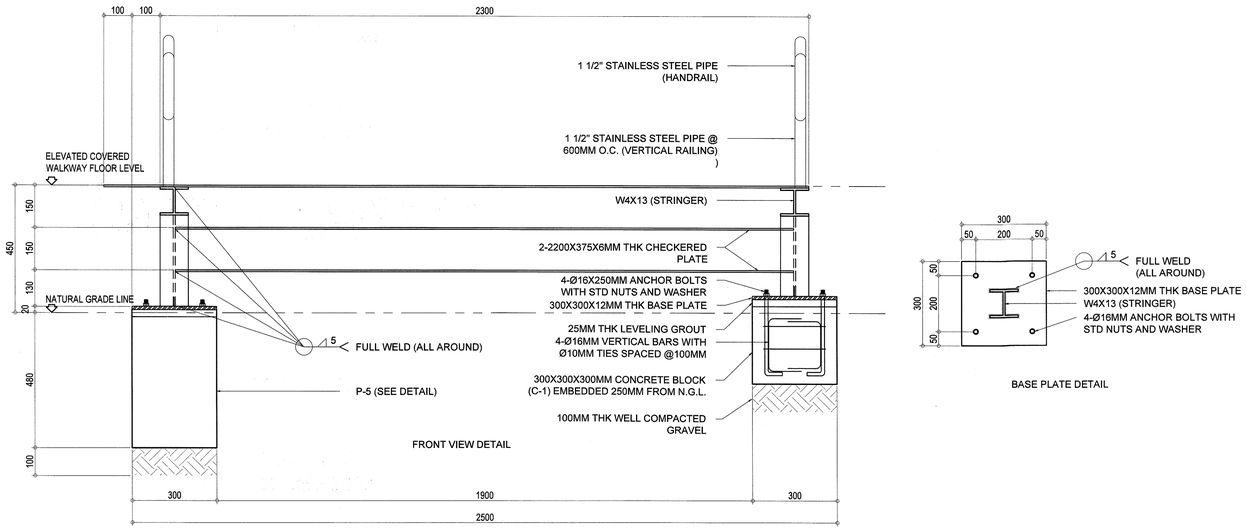
APPROVED: *SEE COVER SHEET FOR SIGNATURE* **MAXIMO L. CARVAJAL** UNDERSECRETARY FOR TECHNICAL SERVICES

SET NO.: BOD B

SHEET NO.: S-5 7 33



SIDE VIEW DETAIL

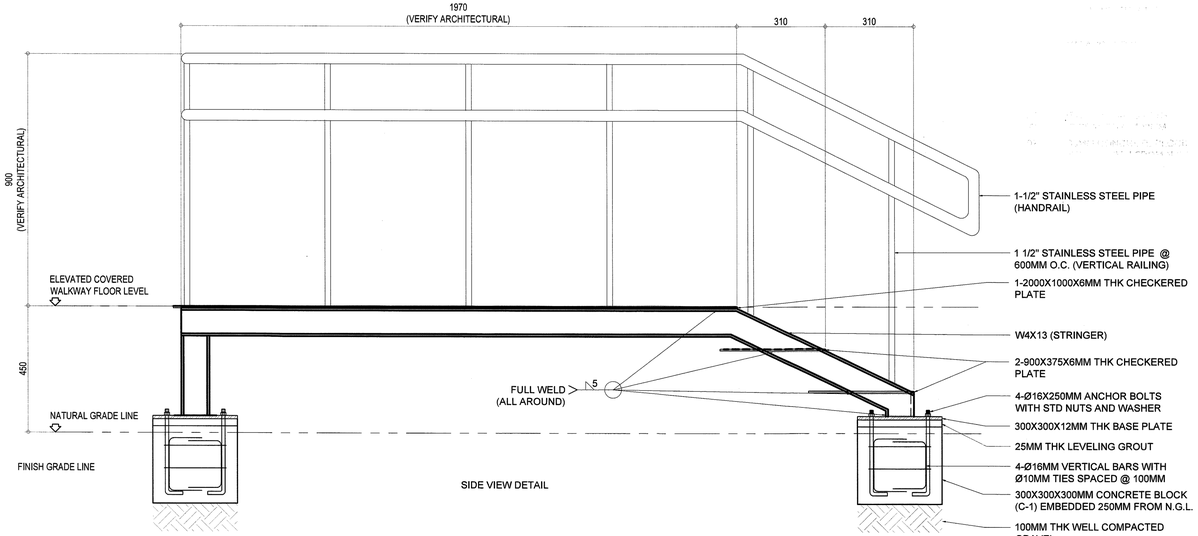


FRONT VIEW DETAIL

BASE PLATE DETAIL

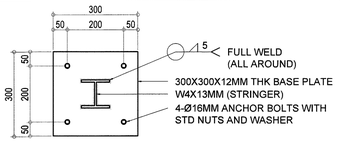
1 / S-6 DETAIL OF STAIR AT ENTRANCE

SCALE 1: 10 M.



SIDE VIEW DETAIL

FRONT VIEW DETAIL



BASE PLATE DETAIL

NOTE:
THE APPROVAL OF DPWH IS BASED ON THE DESIGN OF TEMPORARY FACILITIES APPLIED WITH GRAVITY LOADS AND WIND LOAD (V=270KPH, EXPOSURE B).

2 / S-6 TYPICAL DETAIL OF STAIR (AT SIDE AND BACK)

SCALE 1: 10 M.

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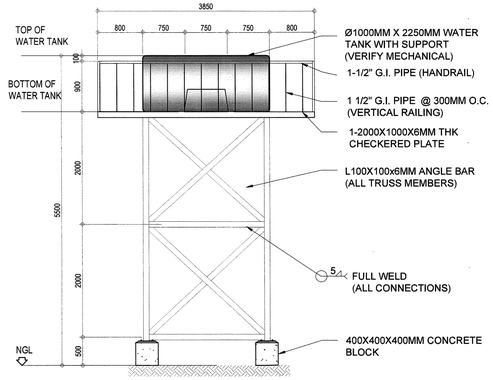
BUREAU OF DESIGN
BUILDINGS DIVISION
BONIFACIO DRIVE PORT AREA, MANILA

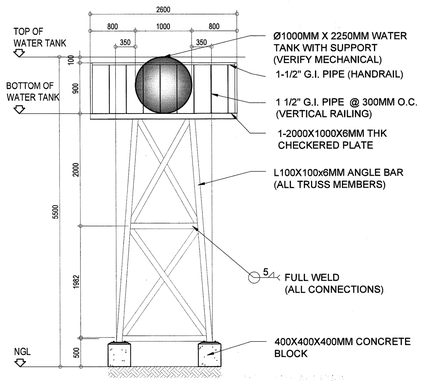
PROJECT AND LOCATION:	DPWH STANDARD FIELD MODULAR HOSPITAL
SHEET CONTENTS:	DETAILS: STAIR FRAME, FOOTING, BASE PLATE CONNECTION: STAIR BEAM TO MAIN BEAM
DESIGNED BY:	LEONNCCI D. TAN, ENGINEER II
CADD:	JESSA MARIE S. CRUZ, ENGINEER II
CHECKED:	WILFREDO S. VALLO, ENGINEER III
SUBMITTED:	KATHRINE ANNE C. MACOY, CARETAKER, BUILDINGS DIVISION
RECOMMENDING APPROVAL:	MAY 03 2021 *SEE COVER SHEET FOR SIGNATURE* SAMSON L. HEBRA, CESO IV DIRECTOR IV, BUREAU OF DESIGN
APPROVED:	*SEE COVER SHEET FOR SIGNATURE* MAXIMO L. CARVAJAL UNDERSECRETARY FOR TECHNICAL SERVICES
SET NO.:	BOD / B
SHEET NO.:	S-6 / 7 | 33



(WATER TANK)

1 / S-7 **TRUSS TOWER**

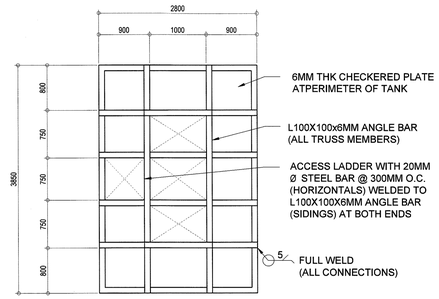
SCALE 1: 50 M.



(WATER TANK)

2 / S-7 **SECTION**

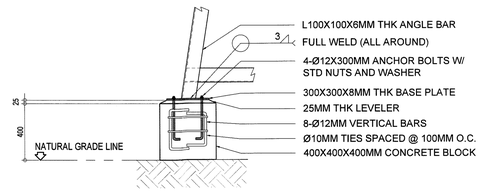
SCALE 1: 50 M.



(AT BOTTOM OF WATER TANK)

3 / S-7 **PLAN**

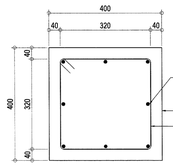
SCALE 1: 50 M.



(WATER TANK)

4 / S-7 **DETAIL OF FOOTING**

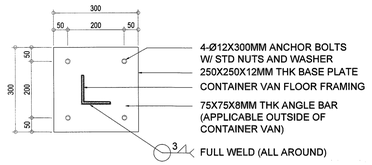
SCALE 1: 20 M.



(WATER TANK)

5 / S-7 **DETAIL OF CONCRETE BLOCK**

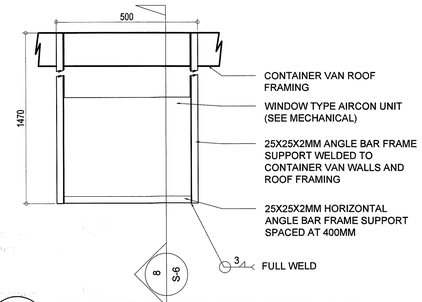
SCALE 1: 10 M.



(WATER TANK)

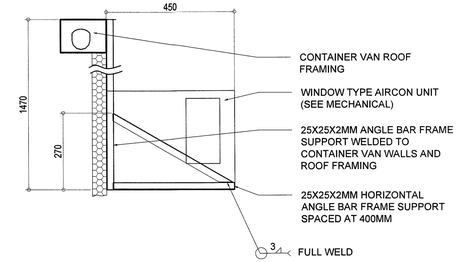
6 / S-7 **DETAIL OF BASE PLATE**

SCALE 1: 10 M.



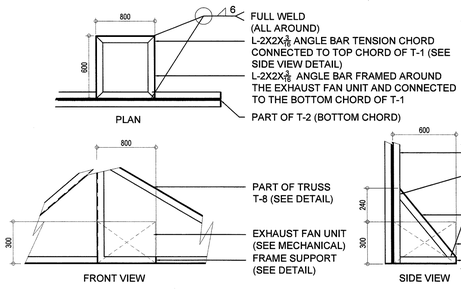
7 / S-7 **FRAME SUPPORT FOR ACU**

SCALE 1: 10 M.



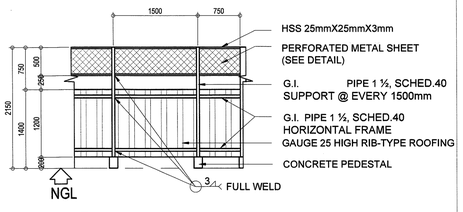
8 / S-7 **SECTION**

SCALE 1: 10 M.



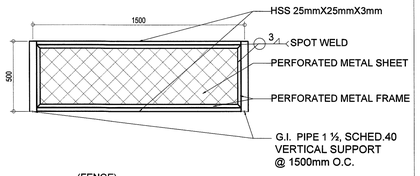
9 / S-7 **FRAME SUPPORT FOR EXHAUST FAN (EF)**

SCALE 1: 20 M.



10 / S-7 **TYPICAL FENCE DETAIL**

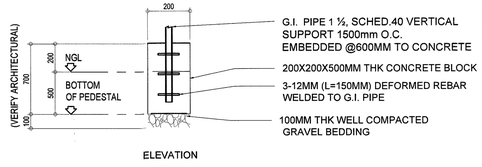
SCALE 1: 50 M.



(FENCE)

11 / S-7 **TYP. FENCE FRAMING**

SCALE 1: 20 M.



ELEVATION

(FENCE)

12 / S-7 **DETAIL OF CONCRETE BLOCK**

SCALE 1: 20 M.

NOTE:
THE APPROVAL OF DPWH IS BASED ON THE DESIGN OF TEMPORARY FACILITIES APPLIED WITH GRAVITY LOADS AND WIND LOAD (V=270KPH, EXPOSURE B).

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BUREAU OF DESIGN
BUILDINGS DIVISION
BONIFACIO DRIVE PORT AREA, MANILA

PROJECT AND LOCATION: DPWH STANDARD FIELD MODULAR HOSPITAL

SHEET CONTENTS: DETAILS: WATER TANK TRUSS TOWER, FOOTING FRAME SUPPORT FOR ACU AND EXHAUST FAN ROOF FRAMING PLAN OF REAR/ SIDE STAIRS

DESIGNED BY: **LOVINCO D. TAN** ENGINEER II
CADD: **JESSA MARIE S. CRUZ** ENGINEER II
CHECKED: **WILFREDO S. VALLO** ENGINEER III

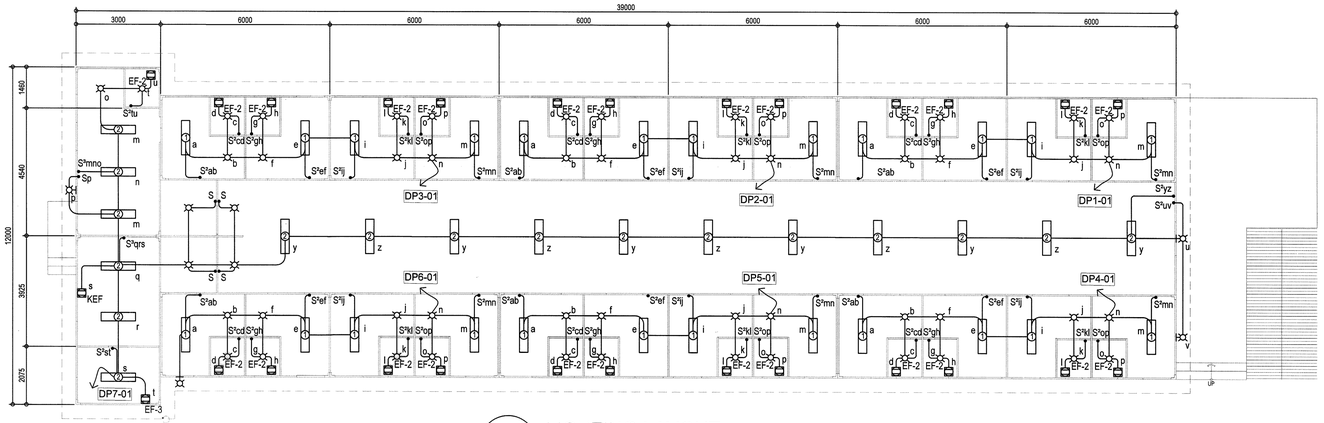
SUBMITTED: **KATHRINE ANNE C. MACOY** CARETAKER, BUILDINGS DIVISION

RECOMMENDING APPROVAL: MAY 03 2021 *SEE COVER SHEET FOR SIGNATURE* **SAMSON L. HEBRA, CESO IV** DIRECTOR IV BUREAU OF DESIGN

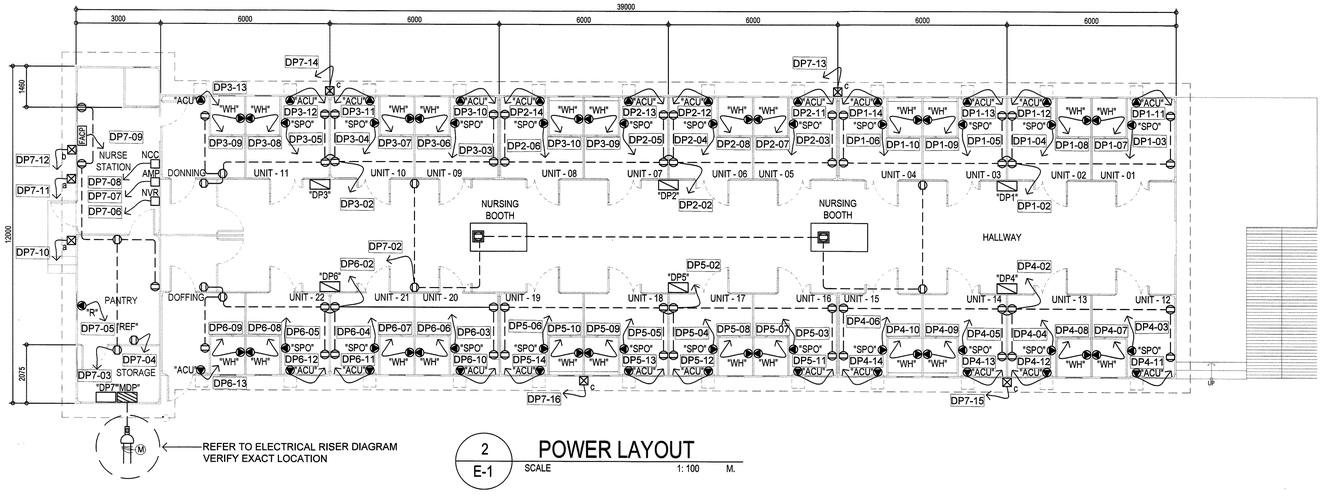
APPROVED: *SEE COVER SHEET FOR SIGNATURE* **MAXIMO L. CARVAJAL** UNDERSECRETARY FOR TECHNICAL SERVICES

SET NO.: BOD B

SHEET NO.: S-7 7 33



1 / E-1 **LIGHTING LAYOUT**
SCALE 1: 100 M.



2 / E-1 **POWER LAYOUT**
SCALE 1: 100 M.

LEGEND:

- a — AUTOMATIC CIRCUIT BREAKER 50AF, 2P, 240VOLTS, 20AT IN NEMA 3R ENCLOSURE
- b — AUTOMATIC CIRCUIT BREAKER 50AF, 2P, 240VOLTS, 30AT IN NEMA 3R ENCLOSURE
- c — AUTOMATIC CIRCUIT BREAKER 50AF, 2P, 240VOLTS, 40AT IN NEMA 3R ENCLOSURE

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
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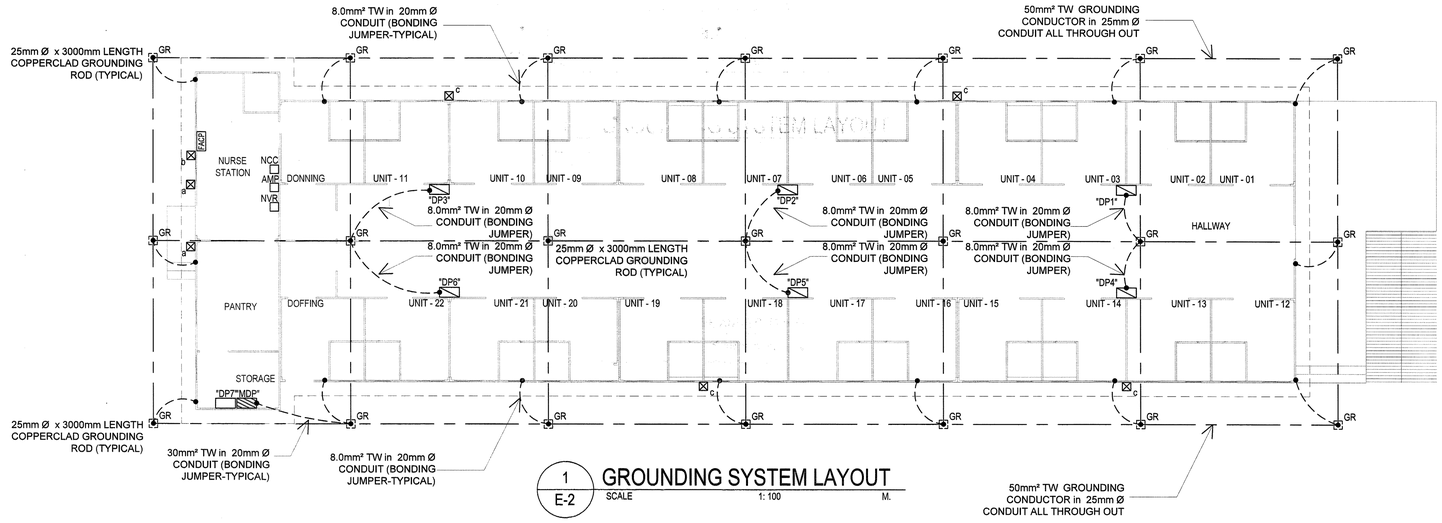
BUILDINGS DIVISION
BONIFACIO DRIVE PORT AREA, MANILA

PROJECT AND LOCATION:	SHEET CONTENTS:
DPWH STANDARD FIELD MODULAR HOSPITAL	POWER LAYOUT LIGHTING LAYOUT

DESIGNED BY:	**MARU BRYAN T. ZAPLAN** ENGINEER II
CADD:	**MARU BRYAN T. ZAPLAN** ENGINEER II
CHECKED:	**ERIBERTO B. SIOSON** ENGINEER III

SUBMITTED:	RECOMMENDING APPROVAL:	APPROVED:	CONCURRED:
KATHRINE ANNE C. MACOY CARETAKER, BUILDINGS DIVISION	MAY 03 2021 *SEE COVER SHEET FOR SIGNATURE* **SAMSON L. HEBRA, CESO IV** DIRECTOR IV BUREAU OF DESIGN	*SEE COVER SHEET FOR SIGNATURE* **MAXIMO L. CARVAJAL** UNDERSECRETARY FOR TECHNICAL SERVICES	*SEE COVER SHEET FOR SIGNATURE* **LEOPOLDO J. VEGA,MD,FPCS, FPATACSI,MBA-H** UNDERSECRETARY FOR HEALTH,DOH

SET NO.:	SHEET NO.:
BOD / B	E-1 / 6 | 33



1 / E-2 GROUNDING SYSTEM LAYOUT

SCALE 1: 100 M.

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DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BUREAU OF DESIGN
BUILDINGS DIVISION
BONIFACIO DRIVE PORT AREA, MANILA

PROJECT AND LOCATION:	SHEET CONTENTS:	DESIGNED BY:	SUBMITTED:	RECOMMENDING APPROVAL:	APPROVED:	CONCURRED:	SET NO.:	SHEET NO.:
DPWH STANDARD FIELD MODULAR HOSPITAL	GROUNDING SYSTEM LAYOUT	**MARU BRYAN T. ZAPLAN** ENGINEER II	**KATHRINE ANNE C. MACOY** CARETAKER, BUILDINGS DIVISION	MAY 03 2021 *SEE COVER SHEET FOR SIGNATURE* **SAMSON L. HEBRA, CESO IV** DIRECTOR IV BUREAU OF DESIGN	*SEE COVER SHEET FOR SIGNATURE* **MAXIMO L. CARVAJAL** UNDERSECRETARY FOR TECHNICAL SERVICES	*SEE COVER SHEET FOR SIGNATURE* **LEOPOLDO J. VEGA,MD,FPCS, FPATACSI,MBA-H** UNDERSECRETARY FOR HEALTH,DOH	BOD / B	E-2 / 6 | 33
		CADD: **MARU BRYAN T. ZAPLAN** ENGINEER II						
		CHECKED: **ERIBERTO B. SIOSON** ENGINEER III						

OPTION-1 (1-PHASE)

GENERAL NOTES:

1. ALL ELECTRICAL WORKS SHALL BE DONE IN ACCORDANCE WITH THE PROVISION OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE, EXISTING APPLICABLE ORDINANCES, RULES AND REGULATIONS OF THE LOCAL GOVERNMENT AND WITH THE REQUIREMENTS OF THE LOCAL POWER COMPANY.
2. THE TYPE OF SERVICE POWER SUPPLY TO BE USED SHALL BE SINGLE-PHASE, 2-WIRE, 230V, 60 HERTZ, A.C
3. THE CONTRACTOR SHALL VERIFY AND ORIENT THE ACTUAL LOCATION OF SERVICE ENTRANCE FOR CONNECTION TO THE POWER COMPANY SERVICE POINT.
4. UNLESS OTHERWISE SPECIFIED, THE MINIMUM SIZES OF WIRE AND GALVANIZED RIGID STEEL CONDUIT TO BE USED SHALL BE 3.5mm², THHN AND 15mm NOMINAL DIAMETER, RESPECTIVELY. LIKEWISE ALL ELECTRICAL WIRES SHALL BE COLOR-CODED.
5. ALL LIGHTING CIRCUIT HOMERUNS AND CONVENIENCE OUTLETS SHALL BE WIRED WITH NOT LESS THAN 3.5 mm² IN SIZE.
6. WHEREVER REQUIRED AND NECESSARY, PULL OR JUNCTION BOXES SHALL BE INSTALLED AT CONVENIENT AND INCONSPICUOUS LOCATION, ALTHOUGH SUCH BOXES ARE NOT SHOWN ON THE PLAN NOR MENTIONED IN THE SPECIFICATIONS.
7. ALL NON-CURRENT CARRYING METAL PARTS OF ELECTRICAL EQUIPMENT SHALL BE PROPERLY GROUNDED IN ACCORDANCE WITH THE PROVISIONS OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE.
8. ALL MATERIALS TO BE USED SHALL BE BRAND NEW AND OF THE APPROVED TYPE FOR LOCATION AND PURPOSE.
9. STANDARD TYPE OF ACCESSORIES, SPLICING DEVICES, TERMINATIONS AND OTHER APPURTENANCES FOR THE ENTIRE ELECTRICAL INSTALLATION SHALL BE USED.
10. ALL WALL OUTLETS SHALL BE INSTALLED AT THE FOLLOWING HEIGHTS ABOVE THE FINISHED FLOOR LEVEL UNLESS NOTED IN THE PLAN.
    a) WALL SWITCHES @ 1300mm
    b) WALL CONVENIENCE OUTLETS @ 300 mm
11. ALL ELECTRICAL WORKS SHALL BE DONE UNDER THE DIRECT AND IMMEDIATE SUPERVISION OF A DULY REGISTERED ELECTRICAL ENGINEER.

ELECTRICAL SYMBOLS

- 1-18 WATTS COMPACT FLUORESCENT LIGHTING FIXTURE
- 1-24 WATTS WALL MOUNTED FLUORESCENT LIGHTING FIXTURE
- 1-28 WATTS FLUORESCENT LIGHTING FIXTURE, BOX TYPE, SURFACED CEILING MOUNTED
- 2-28 WATTS FLUORESCENT LIGHTING FIXTURE, BOX TYPE, SURFACED CEILING MOUNTED
- S — SINGLE-POLE WALL SWITCHES ON ONE SWITCH PLATE, (10AMPS, 250VOLTS)
- S² — 2 SINGLE-POLE WALL SWITCHES ON ONE SWITCH PLATE, (10AMPS, 250VOLTS)
- S³ — 3 SINGLE-POLE WALL SWITCHES ON ONE SWITCH PLATE, (10AMPS, 250VOLTS)
- DUPLEX CONVENIENCE OUTLET, GROUNDING TYPE (20AMPS, 250VOLTS) EF DENOTES EXHAUST FAN OUTLET, REF DENOTES RERIGERATOR OUTLET, WM DENOTES WASHING MACHINE OUTLET, WP DENOTES WEATHERPROOF OUTLET
- EF — EXHAUST FAN OUTLET, GROUNDING TYPE
- FLOOR MOUNTED POP-UP CONVENIENCE OUTLET, GROUNDING TYPE (20AMPS, 250VOLTS)
- SPO — SPECIAL PURPOSE OUTLET, GROUNDING TYPE (30AMPS, 250VOLTS) ACU DENOTES AIR CONDITIONING UNIT OUTLET
- PB — PULLBOX
- "DP" — DISTRIBUTION PANEL
- "MDP" — DISTRIBUTION PANEL
- G — GENERATING SET
- M — SERVICE KWHR METER
- MANUAL TRANSFER SWITCH
- UNDERGROUND OR UNDERFLOOR CONDUIT RUN
- CONCEALED OR EMBEDDED CONDUIT RUN
- CIRCUIT HOMERUN
- GROUNDING SYSTEM

SCHEDULE OF WIRE, CONDUIT, AND ROD:

SERVICE WIRE AND CONDUIT:

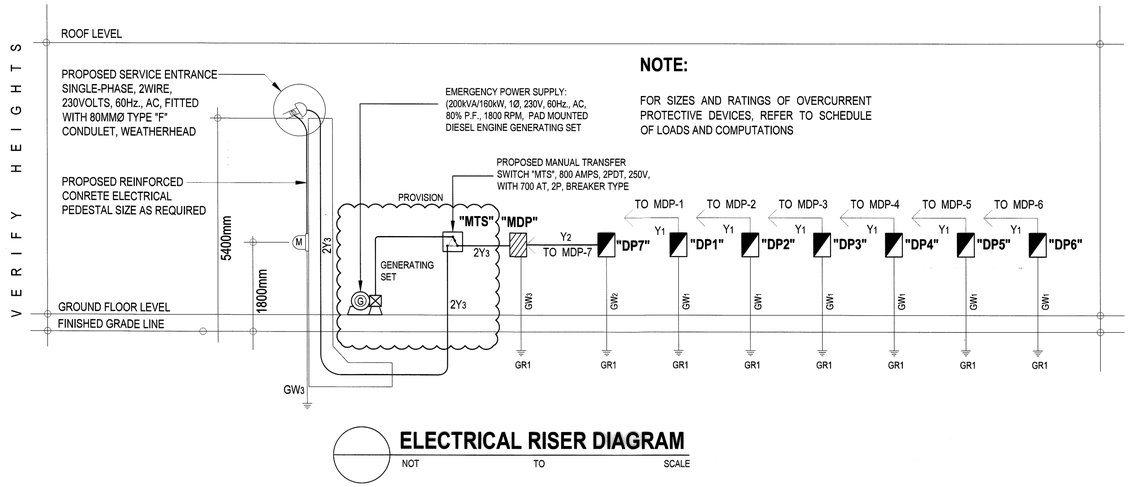
Y1	2 - 30mm² THHN + 1 - 8.0mm² THHN (G) in 40mm Ø RSC.
Y2	2 - 80mm² THHN + 1 - 22mm² THHN (G) in 50mm Ø RSC.
Y3	2 - 200mm² THHN + 1 - 30mm² THHN (G) in 80mm Ø RSC.

GROUNDING WIRE AND CONDUIT:

GW1	1 - 8.0 mm² THHN in 15mm Ø PVC
GW2	1 - 22 mm² THHN in 15mm Ø PVC.
GW3	1 - 30 mm² THHN in 20mm Ø PVC.

GROUNDING ROD:

GR1 — 25mmØ x 3000mm LENGTH COPPERCLAD GROUNDING ROD



NOTE:

FOR SIZES AND RATINGS OF OVERCURRENT PROTECTIVE DEVICES, REFER TO SCHEDULE OF LOADS AND COMPUTATIONS

ELECTRICAL RISER DIAGRAM

NOT TO SCALE

REQUIRED CAPACITY OF TRANSFORMER BANK :

TOTAL VA = 196920

$I = \frac{(VA)}{230} = \frac{(196920)}{230}$

I = 856.17 AMPS

$KVA = \frac{E\,I\,(D.F)}{1000\ (DIV.F.)}$ @ DIVERSITY FACTOR = 1.10, DEMAND FACTOR = 85%

$KVA = \frac{(230)(856.17)(0.85)}{1000\ (1.10)}$

= 152.16 kVA

USE: ONE(1) - 200 kVA, 34.5KV/230V, 1Ø, 60HZ., A.C.
OISC, POLE MOUNTED DISTRIBUTION TRANSFORMERS

REQUIRED CAPACITY OF GENERATING SET:(PROVISION)

$I = \frac{(VA)}{230} = \frac{(196920)}{230}$

I = 856.17 AMPS

$KVA = \frac{E\,I}{1000}$ @ DIV. FACTOR = 1.10, DEMAND FACTOR = 90%

$KVA = \frac{(230)(856.17)(0.90)}{1000\ (1.10)}$

= 161.12 kVA

USE: ONE(1) - 200 kVA, 230V, 1Ø, 80% P.F., 1800 RPM, 60HZ., A.C.
PAD MOUNTED DIESEL ENGINE GENERATING SET

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BUREAU OF DESIGN
BUILDINGS DIVISION
BONIFACIO DRIVE PORT AREA, MANILA

PROJECT AND LOCATION:	SHEET CONTENTS:
DPWH STANDARD FIELD MODULAR HOSPITAL	GENERAL NOTES ELECTRICAL SYMBOLS SCHEDULE OF WIRE, CONDUIT, AND RODS ELECTRICAL RISER DIAGRAM

DESIGNED BY: MARU BRYAN T. ZAPLAN, ENGINEER II CADD: MARU BRYAN T. ZAPLAN, ENGINEER II CHECKED: ERIBERTO B. SIOSON, ENGINEER III	SUBMITTED: KATHRINE ANNE C. MACOY, CARETAKER, BUILDINGS DIVISION	RECOMMENDING APPROVAL: MAY 03 2021, *SEE COVER SHEET FOR SIGNATURE* SAMSON L. HEBRA, CESO IV, DIRECTOR IV, BUREAU OF DESIGN	APPROVED: *SEE COVER SHEET FOR SIGNATURE* MAXIMO L. CARVAJAL, UNDERSECRETARY FOR TECHNICAL SERVICES	CONCURRED: *SEE COVER SHEET FOR SIGNATURE* LEOPOLDO J. VEGA,MD,FPCS, FPATACSI,MBA-H, UNDERSECRETARY FOR HEALTH,DOH	SET NO.: BOD / B	SHEET NO.: E-3 / 6 / 33

OPTION-2 (3-PHASE)

GENERAL NOTES:

1. ALL ELECTRICAL WORKS SHALL BE DONE IN ACCORDANCE WITH THE PROVISION OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE, EXISTING APPLICABLE ORDINANCES, RULES AND REGULATIONS OF THE LOCAL GOVERNMENT AND WITH THE REQUIREMENTS OF THE LOCAL POWER COMPANY.
2. THE TYPE OF SERVICE POWER SUPPLY TO BE USED SHALL BE THREE-PHASE, 3-WIRE, 230V, 60 HERTZ, A.C
3. THE CONTRACTOR SHALL VERIFY AND ORIENT THE ACTUAL LOCATION OF SERVICE ENTRANCE FOR CONNECTION TO THE POWER COMPANY SERVICE POINT.
4. UNLESS OTHERWISE SPECIFIED, THE MINIMUM SIZES OF WIRE AND GALVANIZED RIGID STEEL CONDUIT TO BE USED SHALL BE 3.5mm²,THHN AND 15mm NOMINAL DIAMETER, RESPECTIVELY. LIKEWISE ALL ELECTRICAL WIRES SHALL BE COLOR-CODED.
5. ALL LIGHTING CIRCUIT HOMERUNS AND CONVENIENCE OUTLETS SHALL BE WIRED WITH NOT LESS THAN 3.5 mm² IN SIZE.
6. WHEREVER REQUIRED AND NECESSARY, PULL OR JUNCTION BOXES SHALL BE INSTALLED AT CONVENIENT AND INCONSPICUOUS LOCATION, ALTHOUGH SUCH BOXES ARE NOT SHOWN ON THE PLAN NOR MENTIONED IN THE SPECIFICATIONS.
7. ALL NON-CURRENT CARRYING METAL PARTS OF ELECTRICAL EQUIPMENT SHALL BE PROPERLY GROUNDED IN ACCORDANCE WITH THE PROVISIONS OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE.
8. ALL MATERIALS TO BE USED SHALL BE BRAND NEW AND OF THE APPROVED TYPE FOR LOCATION AND PURPOSE.
9. STANDARD TYPE OF ACCESSORIES, SPLICING DEVICES, TERMINATIONS AND OTHER APPURTENANCES FOR THE ENTIRE ELECTRICAL INSTALLATION SHALL BE USED.
10. ALL WALL OUTLETS SHALL BE INSTALLED AT THE FOLLOWING HEIGHTS ABOVE THE FINISHED FLOOR LEVEL UNLESS NOTED IN THE PLAN.
    a) WALL SWITCHES @ 1300mm
    b) WALL CONVENIENCE OUTLETS @ 300 mm
11. ALL ELECTRICAL WORKS SHALL BE DONE UNDER THE DIRECT AND IMMEDIATE SUPERVISION OF A DULY REGISTERED ELECTRICAL ENGINEER.

ELECTRICAL SYMBOLS

- 1-18 WATTS COMPACT FLUORESCENT LIGHTING FIXTURE
- 1-24 WATTS WALL MOUNTED FLUORESCENT LIGHTING FIXTURE
- 1-28 WATTS FLUORESCENT LIGHTING FIXTURE, BOX TYPE, SURFACED CEILING MOUNTED
- 2-28 WATTS FLUORESCENT LIGHTING FIXTURE, BOX TYPE, SURFACED CEILING MOUNTED
- S — SINGLE-POLE WALL SWITCHES ON ONE SWITCH PLATE, (10AMPS, 250VOLTS)
- S² — 2 SINGLE-POLE WALL SWITCHES ON ONE SWITCH PLATE, (10AMPS, 250VOLTS)
- S³ — 3 SINGLE-POLE WALL SWITCHES ON ONE SWITCH PLATE, (10AMPS, 250VOLTS)
- DUPLEX CONVENIENCE OUTLET, GROUNDING TYPE (20AMPS, 250VOLTS) EF DENOTES EXHAUST FAN OUTLET, REF DENOTES RERIGERATOR OUTLET, WM DENOTES WASHING MACHINE OUTLET, WP DENOTES WEATHERPROOF OUTLET
- EF — EXHAUST FAN OUTLET, GROUNDING TYPE
- FLOOR MOUNTED POP-UP CONVENIENCE OUTLET, GROUNDING TYPE (20AMPS, 250VOLTS)
- SPO — SPECIAL PURPOSE OUTLET, GROUNDING TYPE (30AMPS, 250VOLTS) ACU DENOTES AIR CONDITIONING UNIT OUTLET
- PB — PULLBOX
- "DP" — DISTRIBUTION PANEL
- "MDP" — DISTRIBUTION PANEL
- G — GENERATING SET, PORTABLE TYPE
- M — SERVICE KWHR METER
- MANUAL TRANSFER SWITCH
- UNDERGROUND OR UNDERFLOOR CONDUIT RUN
- CONCEALED OR EMBEDDED CONDUIT RUN
- CIRCUIT HOMERUN
- GROUNDING SYSTEM

SCHEDULE OF WIRE, CONDUIT, AND ROD:

SERVICE WIRE AND CONDUIT:

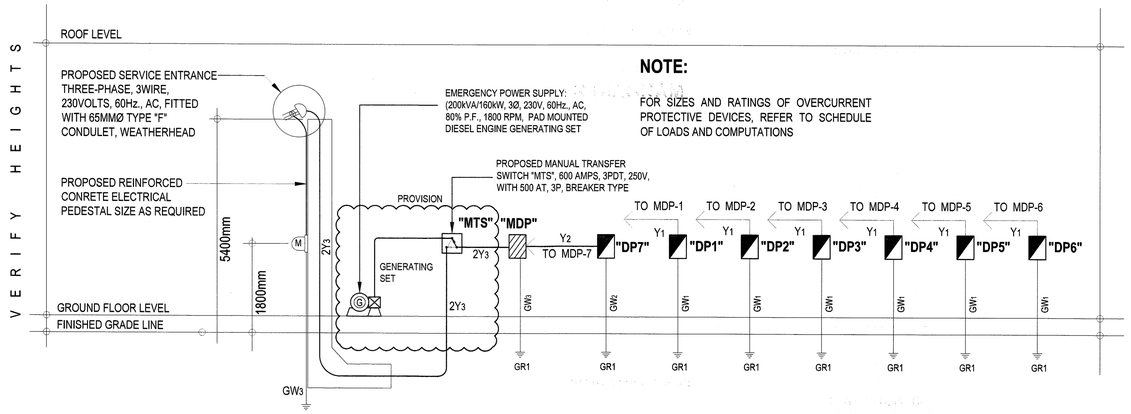
Y1	3 - 30mm² THHN + 1 - 8.0mm² THHN (G) in 40mm Ø RSC.
Y2	3 - 38mm² THHN + 1 - 14mm² THHN (G) in 40mm Ø RSC.
Y3	3 - 125mm² THHN + 1 - 30mm² THHN (G) in 65mm Ø RSC.

GROUNDING WIRE AND CONDUIT:

GW1	1 - 8.0 mm² THHN in 15mm Ø PVC
GW1	1 - 14 mm² THHN in 15mm Ø PVC
GW3	1 - 30 mm² THHN in 20mm Ø PVC.

GROUNDING ROD:

GR1 25mmØ x 3000mm LENGTH COPPERCLAD GROUNDING ROD



NOTE:

FOR SIZES AND RATINGS OF OVERCURRENT PROTECTIVE DEVICES, REFER TO SCHEDULE OF LOADS AND COMPUTATIONS

ELECTRICAL RISER DIAGRAM

NOT TO SCALE

REQUIRED CAPACITY OF TRANSFORMER BANK :

TOTAL VA = 72425

$I = \frac{\sqrt{3}\ (VA)}{230} = \frac{\sqrt{3}\ (72425)}{230}$

I = 545.41 AMPS

$KVA = \frac{\sqrt{3}\ E\ I\ (D.F)}{1000\ (DIV.F.)}$ @ DIVERSITY FACTOR = 1.10, DEMAND FACTOR = 85%

$KVA = \frac{\sqrt{3}\ (230)\ (545.41)\ (0.85)}{1000\ (1.10)}$

= 167.90 kVA

USE: ONE(1)- 200 kVA, 34.5KV/230V, 3Ø, 60HZ., A.C. OISC, POLE MOUNTED DISTRIBUTION TRANSFORMERS

REQUIRED CAPACITY OF GENERATING SET:(PROVISION)

$I = \frac{\sqrt{3}\ (VA)}{230} = \frac{\sqrt{3}\ (72425)}{230}$

I = 545.41 AMPS

$KVA = \frac{\sqrt{3}\ E\ I}{1000}$ @ DIV. FACTOR = 1.10, DEMAND FACTOR = 90%

$KVA = \frac{\sqrt{3}\ (230)\ (545.41)\ (0.90)}{1000\ (1.10)}$

= 177.77 kVA

USE: ONE(1) - 200 kVA, 230V, 3Ø, 80% P.F., 1800 RPM, 60HZ., A.C. PAD MOUNTED DIESEL ENGINE GENERATING SET

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BUREAU OF DESIGN
BUILDINGS DIVISION
BONIFACIO DRIVE PORT AREA, MANILA

PROJECT AND LOCATION: DPWH STANDARD FIELD MODULAR HOSPITAL

SHEET CONTENTS: GENERAL NOTES; ELECTRICAL SYMBOLS; SCHEDULE OF WIRE, CONDUIT, AND RODS; ELECTRICAL RISER DIAGRAM

DESIGNED BY: MARU BRYAN T. ZAPLAN, ENGINEER II
CADD: MARU BRYAN T. ZAPLAN, ENGINEER II
CHECKED: ERIBERTO B. SIOSON, ENGINEER III

SUBMITTED: KATHRINE ANNE C. MACOY, CARETAKER, BUILDINGS DIVISION

RECOMMENDING APPROVAL: MAY 03 2021 — SEE COVER SHEET FOR SIGNATURE — SAMSON L. HEBRA, CESO IV, DIRECTOR IV, BUREAU OF DESIGN

APPROVED: SEE COVER SHEET FOR SIGNATURE — MAXIMO L. CARVAJAL, UNDERSECRETARY FOR TECHNICAL SERVICES

CONCURRED: SEE COVER SHEET FOR SIGNATURE — LEOPOLDO J. VEGA,MD,FPCS, FPATACSI,MBA-H, UNDERSECRETARY FOR HEALTH,DOH

SET NO.: BOD / B

SHEET NO.: E-3a / 6 / 33

MAIN DISTRIBUTION PANELBOARD "MDP"

CKT. NO.	LOAD DESCRIPTION	VA PER CKT.	VOLTS	BRANCH BREAKER RATING AF	P	AT	SIZE OF HOMERUN (WIRES IN CONDUIT)
1	"DP1"	26192	230	225	2	125	2 - 30mm² THHN + 1 - 8.0mm² THHN (G) IN 40mm Ø RSC
2	"DP2"	26192	230	225	2	125	2 - 30mm² THHN + 1 - 8.0mm² THHN (G) IN 40mm Ø RSC
3	"DP3"	26372	230	225	2	125	2 - 30mm² THHN + 1 - 8.0mm² THHN (G) IN 40mm Ø RSC
4	"DP4"	26192	230	225	2	125	2 - 30mm² THHN + 1 - 8.0mm² THHN (G) IN 40mm Ø RSC
5	"DP5"	26192	230	225	2	125	2 - 30mm² THHN + 1 - 8.0mm² THHN (G) IN 40mm Ø RSC
6	"DP6"	26372	230	225	2	125	2 - 30mm² THHN + 1 - 8.0mm² THHN (G) IN 40mm Ø RSC
7	"DP7"	39408	230	225	2	200	2 - 80mm² THHN + 1 - 22mm² THHN (G) IN 50mm Ø RSC
8	SPACE						
TOTAL CONNECTED LOADS		196920	MAIN ACB: 800AF, 2P, 240V, 700AT, 42kAIC, NEMA 1 ENCLOSURE				

I_L @ 70% D.F. = $\left(\frac{196920}{230}\right)$ (0.70) + (0.25)(20.11) = 604.35 AMPERES

USE : 2 SETS OF 2- 200mm² THHN + 1 - 30mm² THHN (G) IN 80mm Ø RSC (604.35A / 710A)

DISTRIBUTION PANELBOARD "DP1" TYPICAL TO "DP2", "DP4", & "DP5"

CKT. NO.	LOAD DESCRIPTION	VA PER CKT.	VOLTS	BRANCH BREAKER RATING AF	P	AT	SIZE OF HOMERUN (WIRES IN CONDUIT)
1	LIGHT OUTLETS	500	230	50	2	20	2 - 3.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
2	CONVENIENCE OUTLETS	1440	230	50	2	20	2 - 3.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
3	SPECIAL PURPOSE OUTLET	1500	230	50	2	20	2 - 3.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
4	SPECIAL PURPOSE OUTLET	1500	230	50	2	20	2 - 3.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
5	SPECIAL PURPOSE OUTLET	1500	230	50	2	20	2 - 3.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
6	SPECIAL PURPOSE OUTLET	1500	230	50	2	20	2 - 3.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
7	WATER HEATER	3000	230	50	2	30	2 - 5.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
8	WATER HEATER	3000	230	50	2	30	2 - 5.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
9	WATER HEATER	3000	230	50	2	30	2 - 5.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
10	WATER HEATER	3000	230	50	2	30	2 -5.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
11	0.80 HP AIR-CONDITIONING UNIT	813	230	50	2	20	2 -3.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
12	0.80 HP AIR-CONDITIONING UNIT	813	230	50	2	20	2 -3.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
13	0.80 HP AIR-CONDITIONING UNIT	813	230	50	2	20	2 -3.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
14	0.80 HP AIR-CONDITIONING UNIT	813	230	50	2	20	2 -3.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
15	SPARE	1500	230	50	2	20	———
16	SPARE	1500	230	50	2	20	———
TOTAL CONNECTED LOADS		26192	MAIN ACB: 225AF, 2P, 240V, 125AT, 10kAIC, NEMA 1 ENCLOSURE				

I_L @ 75% D.F. = $\left(\frac{26192}{230}\right)$ (0.75) + (0.25)(3.53) = 86.29 AMPERES

USE : 2 - 30mm² THHN + 1 - 8.0mm² THHN (G) IN 40mm Ø RSC (86.29A / 115A)

SCHEDULE OF LOADS (OPTION-1)

NOT TO SCALE

DISTRIBUTION PANELBOARD "DP3" TYPICAL TO "DP6"

CKT. NO.	LOAD DESCRIPTION	VA PER CKT.	VOLTS	BRANCH BREAKER RATING AF	P	AT	SIZE OF HOMERUN (WIRES IN CONDUIT)
1	LIGHT OUTLETS	500	230	50	2	20	2 - 3.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
2	CONVENIENCE OUTLETS	1620	230	50	2	20	2 - 3.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
3	SPECIAL PURPOSE OUTLET	1500	230	50	2	20	2 - 3.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
4	SPECIAL PURPOSE OUTLET	1500	230	50	2	20	2 - 3.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
5	SPECIAL PURPOSE OUTLET	1500	230	50	2	20	2 - 3.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
6	WATER HEATER	3000	230	50	2	30	2 - 5.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
7	WATER HEATER	3000	230	50	2	30	2 - 5.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
8	WATER HEATER	3000	230	50	2	30	2 - 5.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
9	WATER HEATER	3000	230	50	2	30	2 - 5.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
10	0.80 HP AIR-CONDITIONING UNIT	813	230	50	2	20	2 -3.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
11	0.80 HP AIR-CONDITIONING UNIT	813	230	50	2	20	2 -3.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
12	0.80 HP AIR-CONDITIONING UNIT	813	230	50	2	20	2 -3.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
13	0.80 HP AIR-CONDITIONING UNIT	813	230	50	2	20	2 -3.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
14	SPARE	1500	230	50	2	20	———
15	SPARE	1500	230	50	2	20	———
16	SPARE	1500	230	50	2	20	———
TOTAL CONNECTED LOADS		26372	MAIN ACB: 225AF, 2P, 240V, 125AT, 10kAIC, NEMA 1 ENCLOSURE				

I_L @ 75% D.F. = $\left(\frac{26372}{230}\right)$ (0.75) + (0.25)(3.53) = 86.88 AMPERES

USE : 2 - 30mm² THHN + 1 - 8.0mm² THHN (G) IN 40mm Ø RSC (86.88A / 115A)

DISTRIBUTION PANELBOARD "DP7"

CKT. NO.	LOAD DESCRIPTION	VA PER CKT.	VOLTS	BRANCH BREAKER RATING AF	P	AT	SIZE OF HOMERUN (WIRES IN CONDUIT)
1	LIGHT OUTLETS	1100	230	50	2	20	2 - 3.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
2	CONVENIENCE OUTLETS	1080	230	50	2	20	2 - 3.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
3	CONVENIENCE OUTLETS	900	230	50	2	20	2 - 3.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
4	REFRIGERATOR OUTLET	500	230	50	2	20	2 - 3.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
5	RANGE OUTLET	4000	230	50	2	30	2 - 5.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
6	NETWORK VIDEO RECORDER	1500	230	50	2	20	2 - 3.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
7	AMPLIFIER	1500	230	50	2	20	2 - 3.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
8	NURSES' CALL STATION MODULE	1500	230	50	2	20	2 - 3.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
9	FIRE ALARM CONTROL PANEL	1500	230	50	2	20	2 - 3.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
10	EXHAUST FAN-1	815	230	50	2	20	2 -3.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
11	1.50 HP AIR-CONDITIONING UNIT	1350	230	50	2	20	2 -5.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
12	2.0 HP AIR-CONDITIONING UNIT	2163	230	50	2	30	2 -5.5mm² THHN + 1 - 3.5mm² THHN (G) IN 15mm Ø RSC
13	4.0 HP AIR-CONDITIONING UNIT	4625	230	50	2	40	2 -8.0mm² THHN + 1 - 5.5mm² THHN (G) IN 20mm Ø RSC
14	4.0 HP AIR-CONDITIONING UNIT	4625	230	50	2	40	2 -8.0mm² THHN + 1 - 5.5mm² THHN (G) IN 20mm Ø RSC
15	4.0 HP AIR-CONDITIONING UNIT	4625	230	50	2	40	2 -8.0mm² THHN + 1 - 5.5mm² THHN (G) IN 20mm Ø RSC
16	4.0 HP AIR-CONDITIONING UNIT	4625	230	50	2	40	2 -8.0mm² THHN + 1 - 5.5mm² THHN (G) IN 20mm Ø RSC
17	SPARE	1500	230	50	2	20	———
18	SPARE	1500	230	50	2	20	———
TOTAL CONNECTED LOADS		39408	MAIN LUGS ONLY: 200AMPS, 3P, 240 V,18kAIC IN NEMA 1 ENCLOSURE				

I_L @ 80% D.F. = $\left(\frac{39408}{230}\right)$ (0.80) + (0.25)(20.11) = 142.10 AMPERES

USE : 2 - 80mm² THHN + 1 - 22mm² THHN (G) IN 50mm Ø RSC (141.06A / 205A)

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DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BUREAU OF DESIGN
BUILDINGS DIVISION
BONIFACIO DRIVE PORT AREA, MANILA

PROJECT AND LOCATION: DPWH STANDARD FIELD MODULAR HOSPITAL

SHEET CONTENTS: SCHEDULE OF LOADS AND COMPUTATIONS

DESIGNED BY: **MARU BRYAN T. ZAPLAN** ENGINEER II
CADD: **MARU BRYAN T. ZAPLAN** ENGINEER II
CHECKED: **ERIBERTO B. SIOSON** ENGINEER III

SUBMITTED: **KATHRINE ANNE C. MACOY** CARETAKER, BUILDINGS DIVISION

RECOMMENDING APPROVAL: MAY 03 2021 *SEE COVER SHEET FOR SIGNATURE* **SAMSON L. HEBRA, CESO IV** DIRECTOR IV BUREAU OF DESIGN

APPROVED: *SEE COVER SHEET FOR SIGNATURE* **MAXIMO L. CARVAJAL** UNDERSECRETARY FOR TECHNICAL SERVICES

CONCURRED: *SEE COVER SHEET FOR SIGNATURE* **LEOPOLDO J. VEGA,MD,FPCS, FPATACSI,MBA-H** UNDERSECRETARY FOR HEALTH,DOH

SET NO.: BOD B

SHEET NO.: E-4 6 33

MAIN DISTRIBUTION PANELBOARD "MDP"

CKT. NO.	LOAD DESCRIPTION	VA PER CKT	VA PER PHASE AB	VA PER PHASE BC	VA PER PHASE CA	VOLTS	BRANCH BREAKER RATING AF	BRANCH BREAKER RATING P	BRANCH BREAKER RATING AT	SIZES OF HOMERUN (WIRES AND CONDUIT)
1	DP1	29192	9753	9813	9626	230	225	3	100	3 - 30 mm² THHN + 1- 8.0mm² THHN(G) in 40mmØ C.
2	DP2	29192	9753	9813	9626	230	225	3	100	3 - 30 mm² THHN + 1- 8.0mm² THHN(G) in 40mmØ C.
3	DP3	29872	10313	9626	9933	230	225	3	100	3 - 30 mm² THHN + 1- 8.0mm² THHN(G) in 40mmØ C.
4	DP4	29192	9753	9813	9626	230	225	3	100	3 - 30 mm² THHN + 1- 8.0mm² THHN(G) in 40mmØ C.
5	DP5	29192	9753	9813	9626	230	225	3	100	3 - 30 mm² THHN + 1- 8.0mm² THHN(G) in 40mmØ C.
	DP6	29872	10313	9626	9933	230	225	3	100	3 - 30 mm² THHN + 1- 8.0mm² THHN(G) in 40mmØ C.
6	DP7	39408	12188	13165	14055	230	225	3	150	3 - 38 mm² THHN + 1- 14mm² THHN(G) in 40mmØ C.
TOTAL CONNECTED LOADS		215920	71826	71669	72425	MAIN ACB: 600AF, 500AT, 3P, 240 V, 42kAIC IN NEMA 1 ENCLOSURE				

I_L @ 70% D.F. = $1.732\left[\left(\frac{72425}{230}\right)(0.70) + (0.25)(20.11)\right]$ = 386.81 AMPS.

USE : 2 SETS OF 3 - 125 mm² THHN + 1 - 30 mm² THHN (G) in 65mm Ø RSC. (386.81A / 530A)

DISTRIBUTION PANELBOARD "DP1" TYPICAL TO "DP2", "DP4", & "DP5"

CKT. NO.	LOAD DESCRIPTION	VA PER CKT	VA PER PHASE AB	VA PER PHASE BC	VA PER PHASE CA	VOLTS	BRANCH BREAKER RATING AF	BRANCH BREAKER RATING P	BRANCH BREAKER RATING AT	SIZES OF HOMERUN (WIRES AND CONDUIT)
1	LIGHT OUTLETS	500			500	230	50	2	20	2 - 3.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
2	CONVENIENCE OUTLETS	1440	1440			230	50	2	20	2 - 3.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
3	SPECIAL PURPOSE OUTLET	1500		1500		230	50	2	20	2 - 3.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
4	SPECIAL PURPOSE OUTLET	1500			1500	230	50	2	20	2 - 3.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
5	SPECIAL PURPOSE OUTLET	1500	1500			230	50	2	20	2 - 3.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
6	SPECIAL PURPOSE OUTLET	1500		1500		230	50	2	20	2 - 3.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
7	WATER HEATER	3000			3000	230	50	2	30	2 - 5.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
8	WATER HEATER	3000	3000			230	50	2	30	2 - 5.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
9	WATER HEATER	3000		3000		230	50	2	30	2 -5.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
10	WATER HEATER	3000			3000	230	50	2	30	2 - 5.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
11	SPARE	1500	1500			230	50	2	20	————
12	SPARE	1500		1500		230	50	2	20	————
13	0.80 HP AIR-CONDITIONING UNIT	813			813	230	50	2	20	2 - 3.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
14	0.80 HP AIR-CONDITIONING UNIT	813	813			230	50	2	20	2 - 3.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
15	0.80 HP AIR-CONDITIONING UNIT	813		813		230	50	2	20	2 - 3.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
16	0.80 HP AIR-CONDITIONING UNIT	813			813	230	50	2	20	2 - 3.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
17	SPARE	1500	1500			230	50	2	20	————
18	SPARE	1500		1500		230	50	2	20	————
TOTAL CONNECTED LOADS		29192	9753	9813	9626	MAIN ACB: 100AF, 3P, 240V, 100AT, 10kAIC, NEMA 1 ENCLOSURE				

I_L @ 80% D.F. = $1.732\left[\left(\frac{9813}{230}\right)(0.80) + (0.25)(3.53)\right]$ = 60 AMPS.

USE : 3 - 30 mm² THHN + 1 - 8.0 mm² THHN (G) in 40mm Ø RSC. (60.02A / 115A)

DISTRIBUTION PANELBOARD "DP3" TYPICAL TO "DP6"

CKT. NO.	LOAD DESCRIPTION	VA PER CKT	VA PER PHASE AB	VA PER PHASE BC	VA PER PHASE CA	VOLTS	BRANCH BREAKER RATING AF	BRANCH BREAKER RATING P	BRANCH BREAKER RATING AT	SIZES OF HOMERUN (WIRES AND CONDUIT)
1	LIGHT OUTLETS	500		500		230	50	2	20	2 - 3.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
2	CONVENIENCE OUTLETS	1620			1620	230	50	2	20	2 - 3.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
3	SPECIAL PURPOSE OUTLET	1500	1500			230	50	2	20	2 - 3.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
4	SPECIAL PURPOSE OUTLET	1500		1500		230	50	2	20	2 - 3.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
5	SPECIAL PURPOSE OUTLET	1500			1500	230	50	2	20	2 - 3.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
6	WATER HEATER	3000	3000			230	50	2	30	2 - 5.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
7	WATER HEATER	3000		3000		230	50	2	30	2 - 5.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
8	WATER HEATER	3000			3000	230	50	2	30	2 - 5.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
9	WATER HEATER	3000	3000			230	50	2	30	2 - 5.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
10	0.80 HP AIR-CONDITIONING UNIT	813		813		230	50	2	20	2 - 3.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
11	0.80 HP AIR-CONDITIONING UNIT	813			813	230	50	2	20	2 - 3.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
12	0.80 HP AIR-CONDITIONING UNIT	813	813			230	50	2	20	2 - 3.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
13	0.80 HP AIR-CONDITIONING UNIT	813		813		230	50	2	20	2 - 3.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
14	SPARE	1500			1500	230	50	2	30	————
15	SPARE	1000	1000			230	50	2	20	————
16	SPARE	3000		3000		230	50	2	30	————
17	SPARE	1500			1500	230	50	2	20	————
18	SPARE	1000	1000			230	50	2	20	————
TOTAL CONNECTED LOADS		29872	10313	9626	9933	MAIN ACB: 100AF, 3P, 240V, 100AT, 10kAIC, NEMA 1 ENCLOSURE				

I_L @ 80% D.F. = $1.732\left[\left(\frac{10313}{230}\right)(0.80) + (0.25)(3.53)\right]$ = 63.01 AMPS.

USE : 3 - 30 mm² THHN + 1 - 8.0 mm² THHN (G) in 40mm Ø RSC. (63.01A / 115A)

DISTRIBUTION PANELBOARD "DP7"

CKT. NO.	LOAD DESCRIPTION	VA PER CKT	VA PER PHASE AB	VA PER PHASE BC	VA PER PHASE CA	VOLTS	BRANCH BREAKER RATING AF	BRANCH BREAKER RATING P	BRANCH BREAKER RATING AT	SIZES OF HOMERUN (WIRES AND CONDUIT)
1	LIGHT OUTLETS	1100		1100		230	50	2	20	2 - 3.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
2	CONVENIENCE OUTLETS	1080			1080	230	50	2	20	2 - 3.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
3	CONVENIENCE OUTLET	900	900			230	50	2	20	2 - 3.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
4	REFRIGERATOR OUTLET	500		500		230	50	2	20	2 - 3.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
5	RANGE OUTLET	4000			4000	230	50	2	20	2 - 3.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
6	NETWORK VIDEO RECORDER	1500	1500			230	50	2	20	2 - 3.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
7	AMPLIFIER	1500		1500		230	50	2	20	2 - 3.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
8	NURSES' CALL STATION MODULE	1500			1500	230	50	2	20	2 - 3.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
9	FIRE ALARM CONTROL PANEL	1500	1500			230	50	2	20	2 - 3.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
10	EXHAUST FAN-1	815		815		230	50	2	20	2 - 3.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
11	1.5 HP AIR-CONDITIONING UNIT	1350			1350	230	50	2	30	2 - 3.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
12	2.0 HP AIR-CONDITIONING UNIT	2163	2163			230	50	2	30	2 - 5.5 mm² THHN + 1- 3.5mm² THHN(G) in 15mmØ C.
13	4.0 HP AIR-CONDITIONING UNIT	4625		4625		230	50	2	40	2 - 8.0 mm² THHN + 1- 3.5mm² THHN(G) in 20mmØ C.
14	4.0 HP AIR-CONDITIONING UNIT	4625			4625	230	50	2	40	2 - 8.0 mm² THHN + 1- 3.5mm² THHN(G) in 20mmØ C.
15	4.0 HP AIR-CONDITIONING UNIT	4625	4625			230	50	2	40	2 - 8.0 mm² THHN + 1- 3.5mm² THHN(G) in 20mmØ C.
16	4.0 HP AIR-CONDITIONING UNIT	4625		4625		230	50	2	40	2 - 8.0 mm² THHN + 1- 3.5mm² THHN(G) in 20mmØ C.
17	SPARE	1500			1500	230	50	2	20	————
18	SPARE	1500	1500			230	50	2	20	————
TOTAL CONNECTED LOADS		39408	12188	13165	14055	MAIN LUGS ONLY: 150AMPS, 3P, 240 V,18kAIC IN NEMA 1 ENCLOSURE				

I_L @ 80% D.F. = $1.732\left[\left(\frac{14055}{230}\right)(0.80) + (0.25)(20.11)\right]$ = 89.70 AMPS.

USE : 3 - 38 mm² THHN + 1 - 14 mm² THHN (G) in 40mm Ø RSC. (97.57A / 130A)

SCHEDULE OF LOADS (OPTION-2)

NOT TO SCALE

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BUREAU OF DESIGN
BUILDINGS DIVISION
BONIFACIO DRIVE PORT AREA, MANILA

PROJECT AND LOCATION:	SHEET CONTENTS:	DESIGNED BY:	SUBMITTED:	RECOMMENDING APPROVAL:	APPROVED:	CONCURRED:	SET NO.:	SHEET NO.:
DPWH STANDARD FIELD MODULAR HOSPITAL	SCHEDULE OF LOADS AND COMPUTATIONS	**MARU BRYAN T. ZAPLAN** ENGINEER II	**KATHRINE ANNE C. MACOY** CARETAKER, BUILDINGS DIVISION	MAY 03 2021 *SEE COVER SHEET FOR SIGNATURE* **SAMSON L. HEBRA, CESO IV** DIRECTOR IV BUREAU OF DESIGN	*SEE COVER SHEET FOR SIGNATURE* **MAXIMO L. CARVAJAL** UNDERSECRETARY FOR TECHNICAL SERVICES	*SEE COVER SHEET FOR SIGNATURE* **LEOPOLDO J. VEGA,MD,FPCS, FPATACSI,MBA-H** UNDERSECRETARY FOR HEALTH,DOH	BOD B	E-4a 6 33
		CADD: **MARU BRYAN T. ZAPLAN** ENGINEER II						
		CHECKED: **ERIBERTO B. SIOSON** ENGINEER III						

GENERAL NOTES

1. WIRING SHALL BE IN CONCEALED CONDUIT/TRUCKING UNLESS OTHERWISE SPECIFIED.
2. THE SPECIALTY CONTRACTOR SHALL BE RESPONSIBLE FOR THE LABELING OF ALL EQUIPMENT THROUGHOUT THE INSTALLATION..
3. THE SPECIALTY CONTRACTOR SHALL BE RESPONSIBLE TO LIAISE WITH THE LOCAL GOVERNMENT FOR ALL THE CLEARANCES, CABLE JOINTING AND TESTING FOR THE INSTALLATION.
4. THE OVERALL RESISTANCE FOR THE EARTHING SYSTEM (ELECTRICAL) SHALL COMPLY WITH THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL AND ELECTRONICS CODE.
5. THE SPECIALTY CONTRACTOR SHALL BE RESPONSIBLE FOR SEALING OF ALL CABLE/CONDUIT PENETRATION OPENING BETWEEN FLOOR SLAB AND WALLS ETC. WITH APPROVED FIRE RATING MATERIAL/SEALANT.
6. ALL CABLES TO BE LAID IN HD uPVC PIPES SHALL BE ENCASED IN CONCRETE WHEN LAID ACROSS THE DRIVEWAY.
7. THE SPECIALTY CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPOTENTIAL GROUNDING/ALL METAL PARTS COMPLETED BY OTHER SUB-CONTRACTORS TO THE NEAREST BONDING ELECTRICAL PANEL.
8. THE SPECIALTY CONTRACTOR SHALL FURNISH ALL NECESSARY LABOR, MATERIAL AND EQUIPMENT FOR SATISFACTORY COMPLETION OF THE ENTIRE TELECOMMUNICATION INSTALLATION AS GENERALLY DESCRIBED IN THE SPECIFICATION AND/OR SHOWN ON DRAWINGS.
9. ALL LOCATIONS OF EQUIPMENT AND CABLE ROUTES SHOWN ON THE DRAWING ARE INDICATIVE ONLY. THE EXACT LOCATIONS MUST BE COORDINATED ON THE SITE OF INSTALLATION. FULLY COORDINATED SHOP DRAWINGS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE COMMENCEMENT OF WORK.
10. ALL INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF PHILIPPINE ELECTRICAL/ELECTRONICS, EIA AND BISCI CODE. THEY SHALL BE PAINTED WITH A COAT OF ANTI-RUST PAINT AND TWO COATS OF SEMI-GLOSS TEAK PAINT OF BEST QUALITY TO THE APPROVAL OF THE CONSULTANT.
11. EACH CIRCUIT SHALL BE TESTED FOR GROUNDS AND SHORTS BY MEANS OF INSULATION RESISTANCE TESTING INSTRUMENT APPLYING A VOLTAGE NOT LESS THAN 500V D.C ON CIRCUIT UNDER TEST.
12. CABLES FOR ESSENTIAL CIRCUITS SUCH AS EMERGENCY LIGHTING CIRCUITS & FIRE FIGHTING EQUIPMENT CIRCUITS ETC. SHALL NOT BE DROWN INTO THE SAME CONDUIT INTENDED FOR NORMAL CIRCUITS AS PER PEC.
13. THE SPECIALTY CONTRACTORS SHALL OBTAIN APPROVAL FROM STRUCTURAL ENGINEERS FOR PENETRATION THROUGH RC. BEAMS AND FLOOR SLABS PRIOR TO CONSTRUCTION.
14. ALL CONDUITS LAYOUT AND INSTALLATION METHODS SHALL BE IDENTICAL IN ALL ROOMS AS MUCH AS POSSIBLE.
15. TESTING CERTIFICATES SHALL BE PROVIDED BY THE SPECIALTY CONTRACTOR PRIOR TO FINAL TURNOVER.
16. ALL MATERIALS/CABLES TO BE USED AND INSTALLATION METHOD SHALL COMPLY WITH THE TECHNICAL SPECIFICATION, STANDARDS, CODE OF PRACTICE AND AUTHORITY REQUIREMENT.
17. THE SPECIALTY CONTRACTOR IS REQUIRED TO SUBMIT DETAILS OF FINAL ARRANGEMENT AND DIMENSIONAL LAYOUT OF ALL ITEMS EQUIPMENT IN RESPECTIVE ROOMS TO SUIT SITE CONDITIONS, ETC, FOR REVIEW BY THE CONSULTANT BEFORE COMMENCEMENT INSTALLATION.
18. TELECOMMUNICATION OUTLET SHALL BE CATEGORY 6 OR OTHERWISE STATED.
19. ALL ELECTRICAL/ELECTRONICS EQUIPMENT & ACCESSORIES THAT ARE EXPOSED OR LESS THAN 2.0m AWAY FROM WATER SOURCES SHALL BE OF WEATHERPROOF TYPE.
20. COLOR FOR ALL TELECOMMUNICATION FACE PLATES SHALL BE AS PER ARCHITECT'S/INTERIOR DESIGNER'S SELECTION.
21. THE SPECIALTY CONTRACTOR SHALL LIAISE WITH OTHER CONTRACTOR TO ENSURE THAT THE POWER SUPPLIES FOR ALL EQUIPMENT ARE ADEQUATELY PROVIDED TO SUITE THE SYSTEM REQUIREMENTS.
22. SPECIALTY CONTRACTORS SHALL LIAISE WITH INTERIOR DESIGNER/ARCHITECT ON THE EXACT LOCATIONS & MOUNTING HEIGHTS (IF APPLICABLE) OF OUTLETS, MAIN DISTRIBUTION FRAME, INTERMEDIATE DISTRIBUTION FRAME BEFORE LAYING THE CONDUITS.
    * TELEPHONE OUTLET ------ 0.30 METER ABOVE FLOOR FINISH @ CENTER UNLESS OTHERWISE INDICATED BY THE FIELD CONDITIONS
23. REFER TO SPECIFICATION FOR FULL DETAILS OF EQUIPMENT AND SPECIFICATIONS.
24. THE ELECTRONICS WORKS SHALL BE UNDER THE IMMEDIATE SUPERVISION OF DULY LICENSED ELECTRONICS ENGINEER AUTHORIZED AS PER R.A. 9292.

LEGEND & SYMBOLS:

SYMBOL	DESCRIPTIONS
FACP	FIRE ALARM CONTROL PANEL
UPS	230V, 1Ø, UPS, 15 MIN BACK-UP (RATING AS INDICATED)
SD	SMOKE DETECTOR
F	FIRE ALARM MANUAL PULL STATION
S/L	FIRE ALARM SOUNDER WITH STROBE LIGHT
C	CONTROL MODULE
M	MONITOR MODULE
— FA —	FIRE ALARM SYSTEM LAYOUT
—→	HOMERUN TO FACP
⊩—	END OF LINE RESISTOR
—//—	2-2.0mm², THHN IN 15mmØ C.
	CEILING MOUNTED SPEAKER
—PA—	PUBLIC ADDRESS SYSTEM LAYOUT
	MICROPHONE
IDF	INTERMEDIATE DISTRIBUTION FRAME
	UNIVERSAL INFORMATION OUTLET, DUALPORT (DATA FOR VOIP) WALL MOUNTED
	UNIVERSAL INFORMATION OUTLET, SINGLE PORT (DATA FOR VOIP) WALL MOUNTED
NVR	NETWORK VIDEO RECORDER
J	JUNCTION BOX
	CEILING MOUNTED CAMERA (DOME)
	CEILING MOUNTED CAMERA (BULLET)
PB	PULLBOX
UPS	230V, 1Ø, UPS, 15MIN BACK-UP (RATING AS INDICATED)

ABBREVIATIONS:

AWG	AMERICAN WIRE GAUGE
UTP	UNSHIELDED TWISTED PAIR
IMC	INTERMEDIATE METALLIC CONDUIT
CAT	CATEGORY
PVC	POLYVINYL CONDUIT
UPS	UNINTERRUPTIBLE POWER SUPPLY
WP	WITH WEATHERPROOF ENCLOSURE
WAP	WIRELESS ACCESS POINT
VOIP	VOICE OVER INTERNET PROTOCOL
AMP	AMPLIFIER

DRAWING LIST:

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BUREAU OF DESIGN
BUILDINGS DIVISION
BONIFACIO DRIVE PORT AREA, MANILA

PROJECT AND LOCATION:	SHEET CONTENTS:
DPWH STANDARD FIELD MODULAR HOSPITAL	GENERAL NOTES, LEGENDS & SYMBOLS, MISCELLANEOUS DETAILS, DRAWING LIST

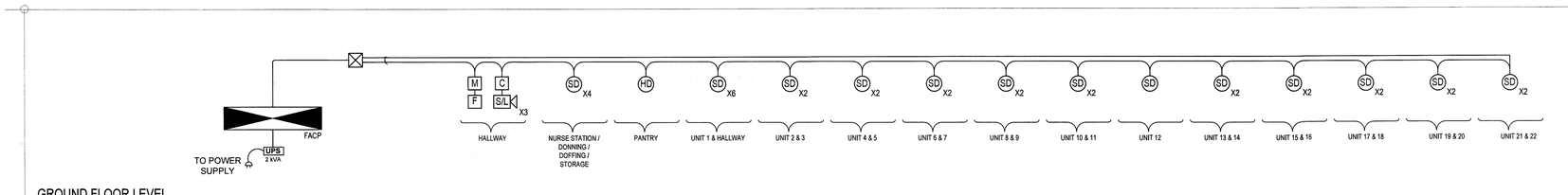
ELECTRONIC CONCEPT: **ELECTRONIC**	SUBMITTED:	RECOMMENDING APPROVAL:	APPROVED:	CONCURRED:	SET NO.:
CADD: **SHEA A. DUNDOC** ENGINEERING ASSISTANT	**KATHRINE ANNE C. MACOY**	MAY 03 2021 *SEE COVER SHEET FOR SIGNATURE* **SAMSON L. HEBRA, CESO IV**	*SEE COVER SHEET FOR SIGNATURE* **MAXIMO L. CARVAJAL**	*SEE COVER SHEET FOR SIGNATURE* **LEOPOLDO J. VEGA,MD,FPCS, FPATACSI,MBA-H**	BOD / B
CHECKED: **WILFRED M. NAPIZA** ENGINEER III	CARETAKER, BUILDINGS DIVISION	DIRECTOR IV BUREAU OF DESIGN	UNDERSECRETARY FOR TECHNICAL SERVICES	UNDERSECRETARY FOR HEALTH,DOH	

SHEET NO.: EC-1 / 7 | 33

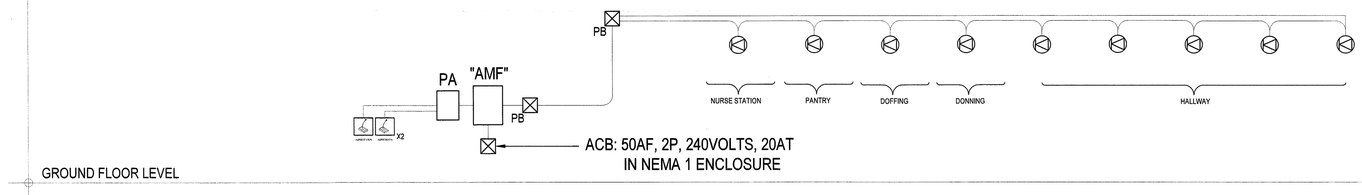
LEGENDS	DESCRIPTION
SD	SMOKE DETECTOR
HD	HEAT DETECTOR
F	MANUAL PULL STATION
M	MONITOR MODULE
C	CONTROL MODULE
S/L	FIRE ALARM SOUNDER WITH STROBELIGHT, ADDRESSABLE TYPE
	HOMERUN TO FACP
	END OF LINE RESISTOR
FACP	FIRE ALARM CONTROL PANEL
	2-2.0mm², THHN IN 15mmø C.
UPS	230V, 1ø, UPS, 15MIN BACK-UP (RATING AS INDICATED)
	PULLBOX (250X250X150)MM
PATB	PUBLIC ADDRESS TERMINAL BOX
	CEILING MOUNTED LOUDSPEAKER
	MICROPHONE
AMP	AMPLIFIER

NOTES:

1. ALL FIRE DETECTION AND ALARM SYSTEM SHALL BE DONE IN ACCORDANCE WITH THE REVISED FIRE CODE OF THE PHILIPPINES.
2. FIRE DETECTION AND ALARM SYSTEM SINGLE LINE DIAGRAM IS FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY ACTUAL NUMBER OF INITIATING AND NOTIFICATION DEVICES BASED ON ACTUAL PLANS.
3. FOR FIRE DETECTION AND ALARM SYSTEM, THE SIZE AND TYPE OF WIRE ARE AS FOLLOWS:
   a. INITIATING DEVICE LINE, USE 1.25mm² STP CABLE
   b. NOTIFICATION DEVICE LINE, USE 2-2.0mm² THHN
   c. POWER SUPPLY LINE, USE 2-3.5mm² THHN
   d. NETWORK LINE, USE 2-1.25mm STP CABLE OR BASED FROM MANUFACTURER'S RECOMMENDATION.
4. THE MINIMUM SIZE OF CONDUIT FOR FIRE DETECTION AND ALARM SYSTEM SHALL BE 20mmø IMC.
5. ACTIVATION OF SMOKE DETECTORS, HEAT DETECTORS, AND MANUAL PULL STATIONS SHALL INITIATE THE FOLLOWING TASKS FOR THE FIRE ALARM CONTROL PANEL (FACP):
   a. THE ACTIVATION OF BOTH AUDIBLE AND VISUAL ALARMS;
   b. THE LCD DISPLAY SHALL INDICATE ALL APPLICABLE INFORMATION ASSOCIATED WITH THE ALARM CONDITION INCLUDING THE ZONE, DEVICE TYPE,DEVICE LOCATION, TIME AND DATE;
   c. DOCUMENT ALL SYSTEM ACTIVITIES AND EVENTS.
6. PROVIDE ADDITIONAL POWER SUPPLY FOR NOTIFICATION CIRCUIT IF THE FIRE ALARM NOTIFICATION CIRCUIT IS INSUFFICIENT.
7. ALL RETURN LOOPS ON INITIATING AND NOTIFICATION LINE SHALL BE INSTALLED IN SEPARATE CONDUITS.
8. ZONE ADDRESSABLE MODULE SHALL BE EQUIPPED WITH DIGITAL OUTPUT (FORM C CONTACT).
9. MAXIMUM NUMBER OF DETECTORS PER LOOP SHALL NOT EXCEED 250 AND MAXIMUM LENGTH OF THE FARTHEST DETECTOR TO FACP SHALL NOT EXCEED 3000 METERS.



A EC-2 **FIRE ALARM DETECTION SYSTEM RISER DIAGRAM**
NOT TO SCALE



B EC-2 **PUBLIC ADDRESS SYSTEM RISER DIAGRAM**
NOT TO SCALE

NOTES:

1. THE PURPOSE OF THIS SCHEMATIC IS TO PROVIDE A GENERAL CONCEPT AND PRINCIPLE OF THE PROPOSED BACKGROUND MUSIC AND PUBLIC ADDRESS SYSTEM.
2. THE QUANTITY AND LOCATION OF DEVICES ARE INDICATIVE ONLY. REFER TO FLOOR PLAN LAYOUT FOR FINAL QUANTITY AND LOCATION.

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BUREAU OF DESIGN
BUILDINGS DIVISION
BONIFACIO DRIVE PORT AREA, MANILA

PROJECT AND LOCATION:	SHEET CONTENTS:	ELECTRONIC CONCEPT:	SUBMITTED:	RECOMMENDING APPROVAL:	APPROVED:	CONCURRED:	SET NO.:	SHEET NO.:
DPWH STANDARD FIELD MODULAR HOSPITAL	FIRE DETECTION AND ALARM SYSTEM AND PUBLIC ADDRESSV RISER DIAGRAM	ELECTRONIC CADD: SHEILA P. BUENDOC, ENGINEERING ASSISTANT CHECKED: WILFRED M. NAPIZA, ENGINEER III	KATHRINE ANNE C. MACOY CARETAKER, BUILDINGS DIVISION	MAY 03 2021 *SEE COVER SHEET FOR SIGNATURE* SAMSON L. HEBRA, CESO IV DIRECTOR IV BUREAU OF DESIGN	*SEE COVER SHEET FOR SIGNATURE* MAXIMO L. CARVAJAL UNDERSECRETARY FOR TECHNICAL SERVICES	*SEE COVER SHEET FOR SIGNATURE* LEOPOLDO J. VEGA,MD,FPCS, FPATACSI,MBA-H UNDERSECRETARY FOR HEALTH,DOH	BOD B	EC-2 7 33

LEGENDS	DESCRIPTION
▽	UNIVERSAL INFORMATION OUTLET, DUAL PORT (VOICE & DATA) WALL MOUNTED
▽	UNIVERSAL INFORMATION OUTLET, SINGLE PORT (DATA) WALL MOUNTED
IDF	INTERMEDIATE DISTRIBUTION FRAME
	CEILING MOUNTED CAMERA (DOME)
	WALL MOUNTED CAMERA (BULLET TYPE)
J	JUNCTION BOX
NVR	NETWORK VIDEO RECORDER
UPS	230V, 1ø, UPS, 15MIN BACK-UP (RATING AS INDICATED)
☒	PULLBOX (250X250X150)MM
NCC	NURSE CALL CONTROLLER
PSU	POWER SUPPLY UNIT, 220V IN/24V OUT
MS	MASTER CONSOLE STATION WITH INTERCOM
DS	DISPLAY STATION
CL	CORRIDOR LIGHT
PS	PATIENT STATION WITH INTERCOM
EP	EMERGENCY PULL RECORD (BATHROOM)

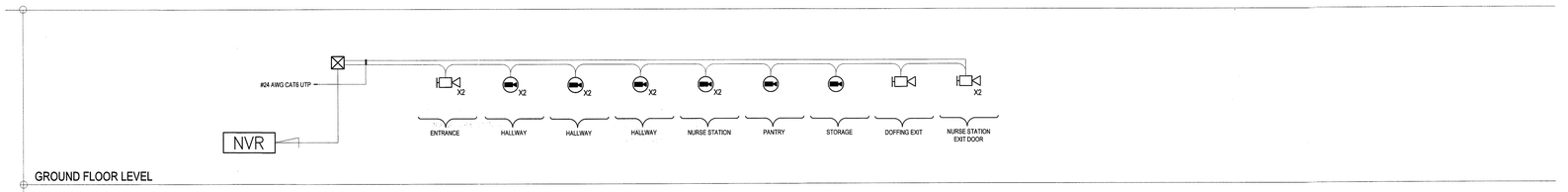
NOTES:

1. THE PURPOSE OF THIS SCHEMATIC IS TO PROVIDE A GENERAL CONCEPT AND PRINCIPLE OF THE PROPOSED CCTV SURVEILLANCE SYSTEM.
2. EQUIPMENT AND DEVICES REFLECTED ON THE PLANS ARE INDICATIVE ONLY. REFER TO FLOOR PLAN LAYOUT FOR EXACT LOCATION AND QUANTITY.
3. CONTRACTOR TO PROVIDE COMPLETE CCTV SURVEILLANCE SYSTEM TO INCLUDE ALL WIRING AND ACCESSORIES, DEVICES, EQUIPMENT SOFTWARE AND VIDEO ANALYTICS AS MAY DEEM NECESSARY FOR A SUCCESSFUL OPERATION OF THE SYSTEM.
4. QUANTITY OF CAT6 INSIDE A METALLIC CONDUIT SHALL BE:

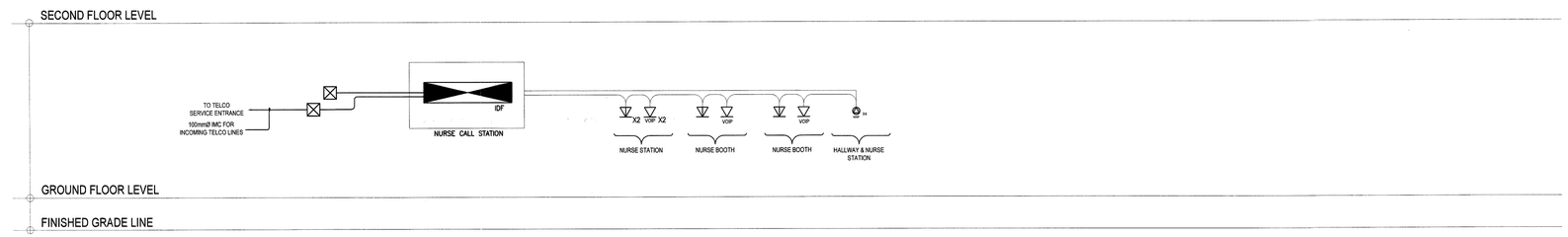
CLOSED CIRCUIT TELEVISION SYSTEM:

CONDUIT SIZE	20mmØC	25mmØC	32mmØC
#24 AWG CAT 6	4	6	9

5. UPS RATING SHALL BE CONFIRMED UPON ACTUAL REQUIREMENTS APPROVED BRAND/EQUIPMENT/DEVICES TO BE USED.
6. SECURITY PLANS AND DIAGRAMS ARE INDICATIVE ONLY. CONTRACTOR SHALL PROVIDE A CCTV SYSTEM WITH POE COMPLIANT.
7. CCTV CAMERA EXPOSED IN WEATHER CONDITION MUST BE IN A WEATHERPROOF ENCLOSURE.
8. SECURITY PLANS AND DIAGRAMS ARE INDICATIVE ONLY. CONTRACTOR SHALL PROVIDE A CCTV SYSTEM WITH POE COMPLIANT.



A EC-3 **CLOSED CIRCUIT TELEVISION RISER DIAGRAM**
NOT TO SCALE



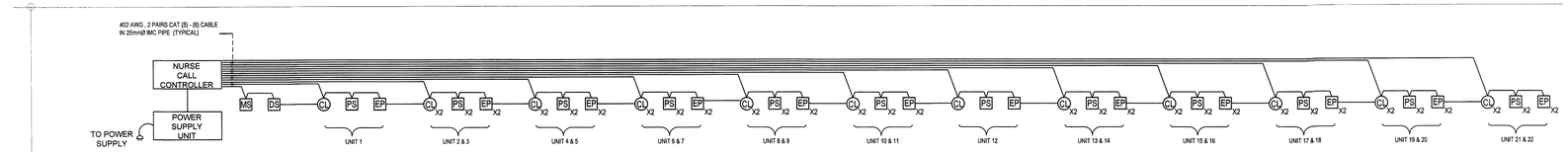
B EC-3 **STRUCTURED CABLING SYSTEM RISER DIAGRAM**
NOT TO SCALE

NOTES:

1. THE PURPOSE OF THIS SCHEMATIC IS TO PROVIDE A GENERAL CONCEPT AND PRINCIPLE OF THE PROPOSED STRUCTURED CABLING SYSTEM.
2. THE QUANTITY AND LOCATION OF DEVICES ARE INDICATIVE ONLY. REFER TO FLOOR PLAN LAYOUT FOR FINAL QUANTITY SHALL BE BASED ON THE FLOOR PLAN LAYOUT.
3. CAT6 UTP CABLE SHALL BE USED FOR HORIZONTAL DISTRIBUTION. CONDUITS AND MUST BE 40% FILL ONLY.
4. LOCATION OF DISTRIBUTION FRAMES ARE INDICATIVE ONLY. FINAL LOCATION OF DISTRIBUTION FRAMES SHALL SUBJECT TO THE APPROVAL OF THE OWNER.
5. UPS RATING SHALL BE CONFIRMED UPON ACTUAL REQUIREMENTS APPROVED BRAND/EQUIPMENT/ DEVICES TO BE USED.

STRUCTURED CABLING SYSTEM

CONDUIT SIZE	20mmØC	25mmØC	32mmØC
#24 AWG CAT 6	3	5	7



C EC-3 **NURSE CALL RISER DIAGRAM**
NOT TO SCALE

NOTES:

1. THE PURPOSE OF THIS SCHEMATIC IS TO PROVIDE A GENERAL CONCEPT AND PRINCIPLE OF THE PROPOSED NURSE CALL SYSTEM.
2. EQUIPMENT AND DEVICES REFLECTED ON THE PLANS ARE INDICATIVE ONLY. CONTRACTOR TO FURNISH AND INSTALL THE COMPLETE SYSTEM TO INCLUDE ALL WIRES/CABLES, POWER SUPPLY AND ACCESSORIES AS MAY BE DEEMED NECESSARY FOR THE SUCCESSFUL OPERATION OF THE SYSTEM.
3. REFER TO FLOOR PLAN LAYOUT FOR EXACT LOCATION AND QUANTITY.

REPUBLIC OF THE PHILIPPINES
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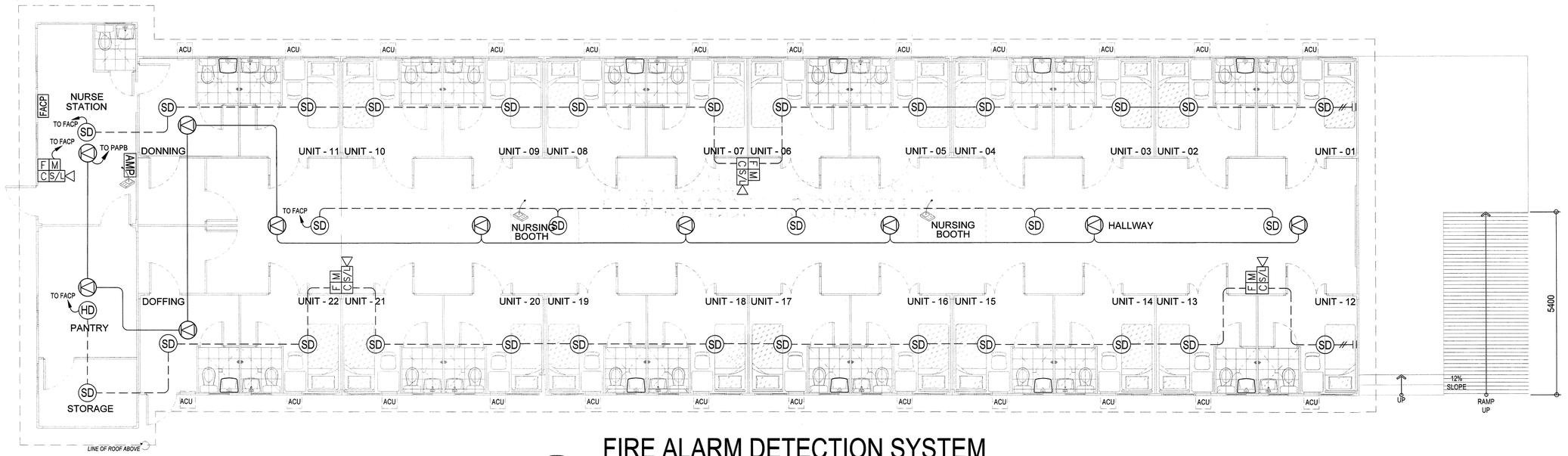
BUREAU OF DESIGN
BUILDINGS DIVISION
BONIFACIO DRIVE PORT AREA, MANILA

PROJECT AND LOCATION:	SHEET CONTENTS:
DPWH STANDARD FIELD MODULAR HOSPITAL	CLOSED CIRCUIT TELEVISION , STRUCTURED CABLING SYSTEM AND NURSE CALL RISER DIAGRAM

ELECTRONIC CONCEPT:	SUBMITTED:	RECOMMENDING APPROVAL:	APPROVED:	CONCURRED:	SET NO.:	SHEET NO.:
ELECTRONIC		MAY 03 2021		*SEE COVER SHEET FOR SIGNATURE*	BOD	EC-3
CADD: SHEILA CHECHE DOC, ENGINEERING ASSISTANT	KATHRINE ANNE C. MACOY	*SEE COVER SHEET FOR SIGNATURE*	*SEE COVER SHEET FOR SIGNATURE*	LEOPOLDO J. VEGA,MD,FPCS, FPATACSI,MBA-H	B	7 | 33
CHECKED: WILFRED M. NAPIZA, ENGINEER III	CARETAKER, BUILDINGS DIVISION	SAMSON L. HEBRA, CESO IV, DIRECTOR IV, BUREAU OF DESIGN	MAXIMO L. CARVAJAL, UNDERSECRETARY FOR TECHNICAL SERVICES	UNDERSECRETARY FOR HEALTH,DOH		

LEGENDS	DESCRIPTION
SD	SMOKE DETECTOR
HD	HEAT DETECTOR
F	MANUAL PULL STATION
M	MONITOR MODULE
C	CONTROL MODULE
S/L	FIRE ALARM SOUNDER WITH STROBELIGHT, ADDRESSABLE TYPE
——►	HOMERUN TO FACP
⊩—	END OF LINE RESISTOR

FACP	FIRE ALARM CONTROL PANEL
—//—	2–2.0mm², THHN IN 15mmø C.
UPS	230V, 1ø, UPS, 15MIN BACK–UP (RATING AS INDICATED)
☒	PULLBOX (250X250X150)MM
PATB	PUBLIC ADDRESS TERMINAL BOX
◁	CEILING MOUNTED LOUDSPEAKER
	MICROPHONE
AMP	AMPLIFIER



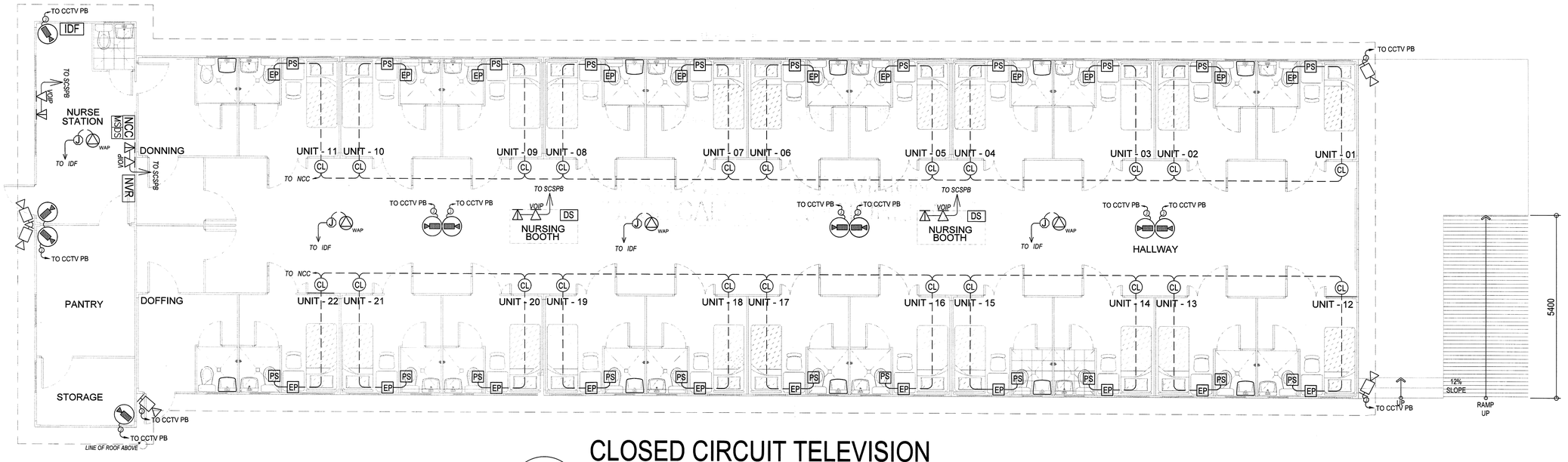
FIRE ALARM DETECTION SYSTEM
PUBLIC ADDRESS SYSTEM

1 / EC-1 SCALE 1: 100 M.

REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS **BUREAU OF DESIGN** BUILDINGS DIVISION BONIFACIO DRIVE PORT AREA, MANILA	PROJECT AND LOCATION: DPWH STANDARD FIELD MODULAR HOSPITAL	SHEET CONTENTS: FIRE DETECTION AND ALARM SYSTEM , PUBLIC ADDRES SYSTEM	ELECTRONIC CONCEPT: ELECTRONIC CADD: SHEILA A. AGUINDOC ENGINEERING ASSISTANT CHECKED: WILFRED M. NAPIZA ENGINEER III	SUBMITTED: **KATHRINE ANNE C. MACOY** CARETAKER, BUILDINGS DIVISION	RECOMMENDING APPROVAL: MAY 03 2021 *SEE COVER SHEET FOR SIGNATURE* **SAMSON L. HEBRA, CESO IV** DIRECTOR IV BUREAU OF DESIGN	APPROVED: *SEE COVER SHEET FOR SIGNATURE* **MAXIMO L. CARVAJAL** UNDERSECRETARY FOR TECHNICAL SERVICES	CONCURRED: *SEE COVER SHEET FOR SIGNATURE* **LEOPOLDO J. VEGA,MD,FPCS, FPATACSI,MBA-H** UNDERSECRETARY FOR HEALTH,DOH	SET NO.: BOD / B	SHEET NO.: EC-4 / 7 / 33

LEGENDS	DESCRIPTION
⩛	UNIVERSAL INFORMATION OUTLET, DUAL PORT (VOICE & DATA) WALL MOUNTED
▽	UNIVERSAL INFORMATION OUTLET, SINGLE PORT (DATA) WALL MOUNTED
IDF	INTERMEDIATE DISTRIBUTION FRAME
⊙	CEILING MOUNTED CAMERA (DOME)
▷□	WALL MOUNTED CAMERA (BULLET TYPE)
J	JUNCTION BOX
NVR	NETWORK VIDEO RECORDER
UPS	230V, 1ø, UPS, 15MIN BACK-UP (RATING AS INDICATED)

⊠	PULLBOX (250X250X150)MM
NCC	NURSE CALL CONTROLLER
PSU	POWER SUPPLY UNIT, 220V IN/24V OUT
MS	MASTER CONSOLE STATION WITH INTERCOM
DS	DISPLAY STATION
CL	CORRIDOR LIGHT
PS	PATIENT STATION WITH INTERCOM
EP	EMERGENCY PULL RECORD (BATHROOM)



CLOSED CIRCUIT TELEVISION
NURSE CALL & STRUCTURED CABLING SYSTEM

1 / EC

SCALE 1: 100 M.

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BUREAU OF DESIGN
BUILDINGS DIVISION
BONIFACIO DRIVE PORT AREA, MANILA

PROJECT AND LOCATION:	SHEET CONTENTS:
DPWH STANDARD FIELD MODULAR HOSPITAL	CLOSED CIRCUIT TELEVISION SYSTEM , STRUCTURED CABLING SYSTEM AND NURSE CALL SYSTEM LAYOUT

ELECTRONIC CONCEPT: ELECTRONIC
CADD: SHEILA O. PACHOCO, ENGINEERING ASSISTANT
CHECKED: WILFRED M. NAPIZA, ENGINEER III

SUBMITTED: KATHRINE ANNE C. MACOY, CARETAKER, BUILDINGS DIVISION

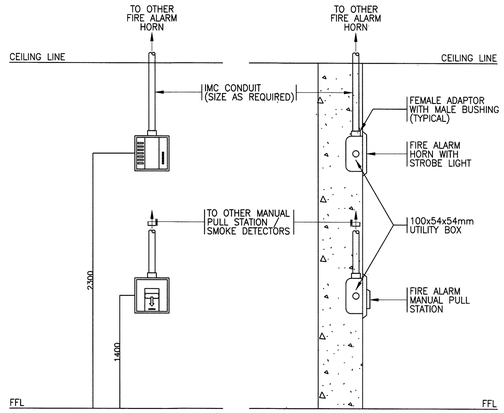
RECOMMENDING APPROVAL: MAY 03 2021 — SEE COVER SHEET FOR SIGNATURE — SAMSON L. HEBRA, CESO IV, DIRECTOR IV, BUREAU OF DESIGN

APPROVED: SEE COVER SHEET FOR SIGNATURE — MAXIMO L. CARVAJAL, UNDERSECRETARY FOR TECHNICAL SERVICES

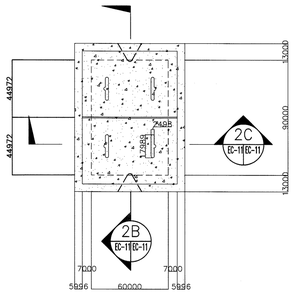
CONCURRED: SEE COVER SHEET FOR SIGNATURE — LEOPOLDO J. VEGA,MD,FPCS, FPATACSI,MBA-H, UNDERSECRETARY FOR HEALTH,DOH

SET NO.: BOD / B

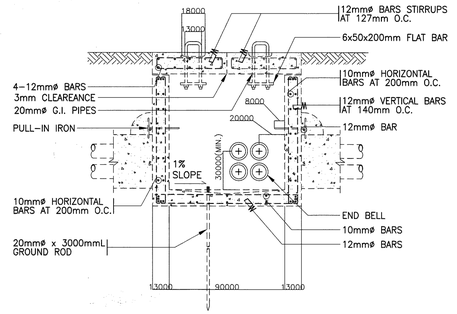
SHEET NO.: EC-5 / 7 / 33



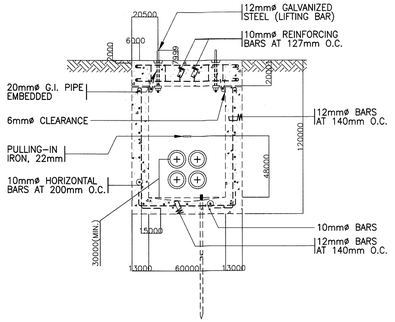
1 EC 6 FIRE ALARM MANUAL PULL STATION AND HORN INSTALLATION DETAIL NOT TO SCALE



2A EC 6 PLAN

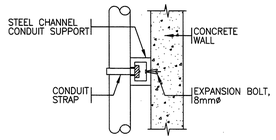


2B EC 6 SECTION

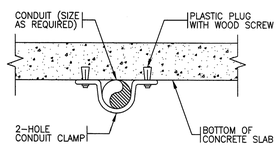


2C EC 6 SECTION

2 EC 6 CONCRETE SERVICE BOX DETAILS NOT TO SCALE

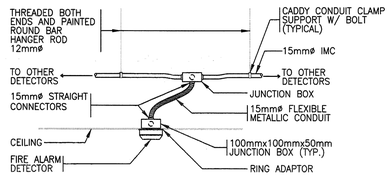


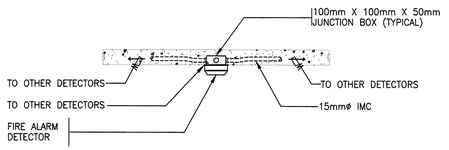
3A EC 6 ON CONCRETE WALL



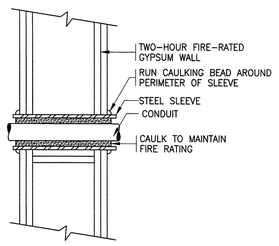
3B EC 6 ON CONCRETE SLAB

3 EC 6 CONDUIT SUPPORT DETAILS NOT TO SCALE

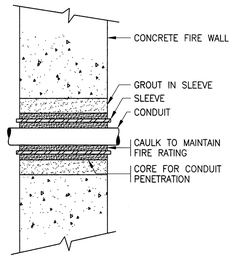




4 EC 6 SMOKE DETECTOR MOUNTING DETAIL NOT TO SCALE



FIRE WALL PENETRATION (CONDUIT) GYPSUM – STUD WALL MOUNTING DETAIL

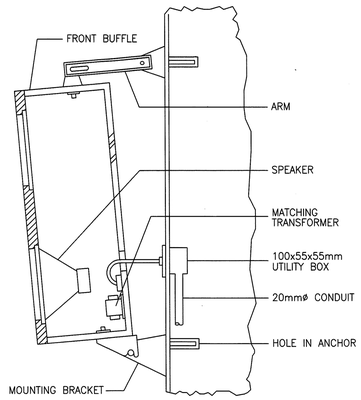


FIRE WALL PENETRATION (CONDUIT) CONCRETE WALL MOUNTING DETAIL

5 EC 6 FIRE WALL PENETRATIONS (CONDUIT) DETAILS NOT TO SCALE

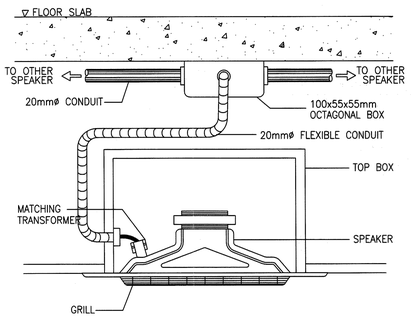
REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BUREAU OF DESIGN
BUILDINGS DIVISION
BONIFACIO DRIVE PORT AREA, MANILA

PROJECT AND LOCATION:	SHEET CONTENTS:	ELECTRONIC CONCEPT:	SUBMITTED:	RECOMMENDING APPROVAL:	APPROVED:	CONCURRED:	SET NO.:	SHEET NO.:
DPWH STANDARD FIELD MODULAR HOSPITAL	MISCELLANEOUS DETAILS 1	ELECTRONIC CADD: SHEILA O. BONDOC, ENGINEERING ASSISTANT CHECKED: WILFREDO K. NAPIZA, ENGINEER III	KATHRINE ANNE C. MACOY, CARETAKER, BUILDINGS DIVISION	MAY 03 2021 *SEE COVER SHEET FOR SIGNATURE* SAMSON L. HEBRA, CESO IV DIRECTOR IV, BUREAU OF DESIGN	*SEE COVER SHEET FOR SIGNATURE* MAXIMO L. CARVAJAL UNDERSECRETARY FOR TECHNICAL SERVICES	*SEE COVER SHEET FOR SIGNATURE* LEOPOLDO J. VEGA,MD,FPCS, FPATACSI,MBA-H UNDERSECRETARY FOR HEALTH,DOH	BOD / B	EC-6 / 7 / 33



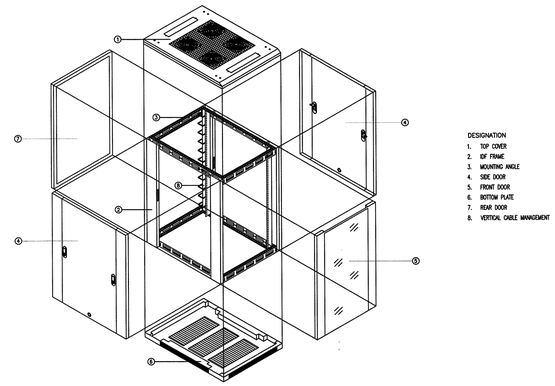
1 EC 7 **COLUMN SPEAKER MOUNTING DETAIL**

SCALE NTS



2 EC 7 **FLUSH-MOUNTED SPEAKER DETAIL**

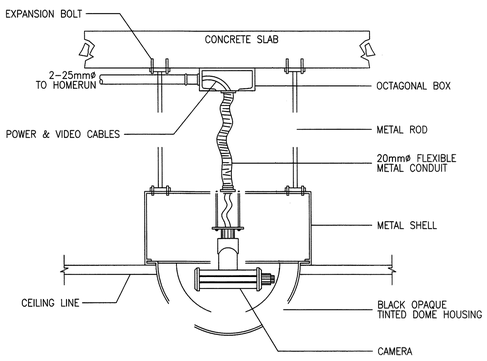
SCALE NTS



DESIGNATION
1. TOP COVER
2. IDF FRAME
3. MOUNTING ANGLE
4. SIDE DOOR
5. FRONT DOOR
6. BOTTOM PLATE
7. REAR DOOR
8. VERTICAL CABLE MANAGEMENT

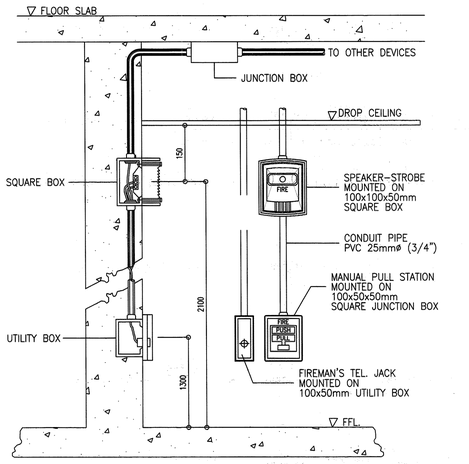
3 EC 7 **INTERMEDIATE DISTRIBUTION FRAME**

SCALE NTS



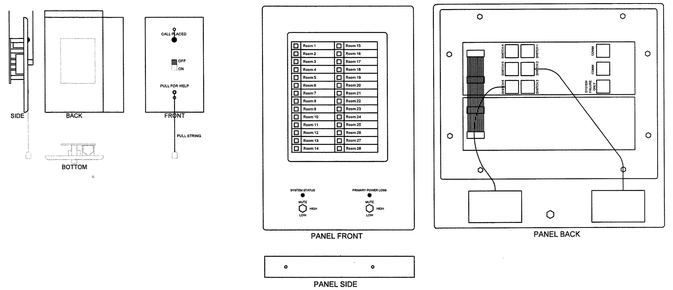
4 EC 7 **DOME TYPE CAMERA MOUNTING DETAIL**

SCALE NTS



5 EC 7 **SPEAKER-STROBE, MANUAL PULL STATION AND FIREMAN'S TELEPHONE JACK MOUNTING DETAIL**

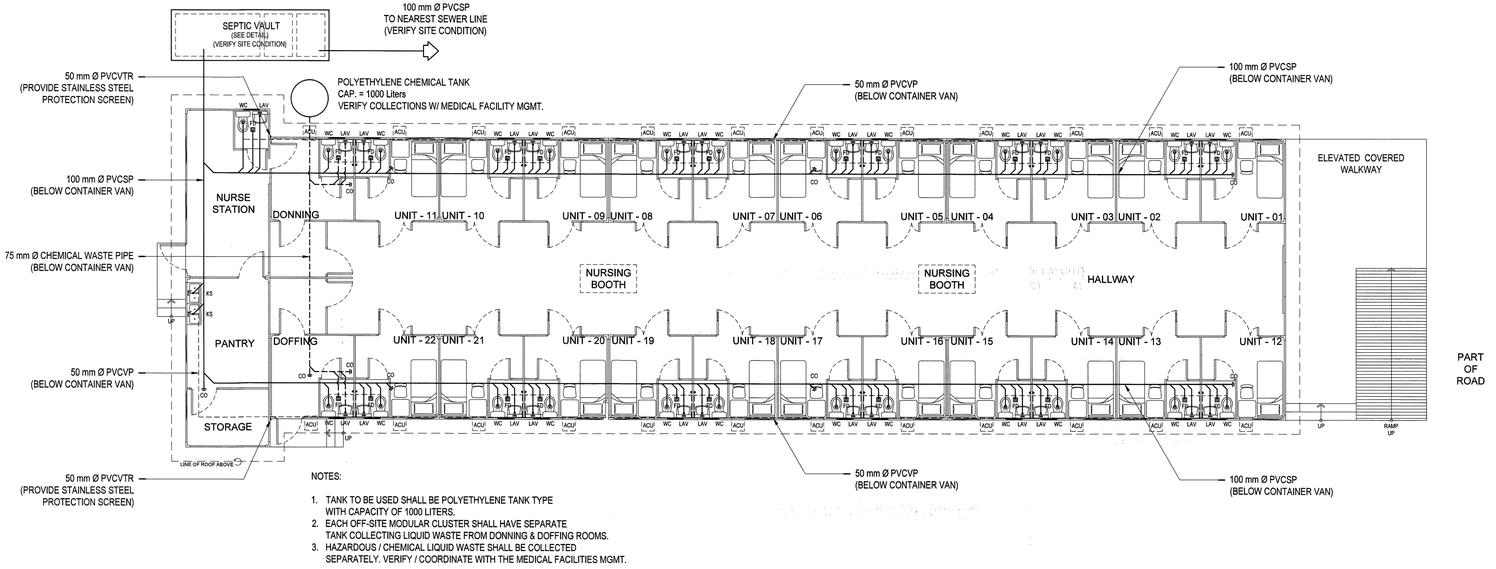
SCALE NTS



6 EC 7 **ANNUNCIATOR PANEL & PULL STRING**

SCALE NTS

REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS **BUREAU OF DESIGN** BUILDINGS DIVISION BONIFACIO DRIVE PORT AREA, MANILA	PROJECT AND LOCATION: DPWH STANDARD FIELD MODULAR HOSPITAL	SHEET CONTENTS: MISCELLANEOUS DETAILS 2	ELECTRONIC CONCEPT: **ELECTRONIC** CADD: **SHEILA MONDOC** ENGINEERING ASSISTANT CHECKED: **WILFREDO M. NAPIZA** ENGINEER III	SUBMITTED: **KATHRINE ANNE C. MACOY** CARETAKER, BUILDINGS DIVISION	RECOMMENDING APPROVAL: MAY 03 2021 *SEE COVER SHEET FOR SIGNATURE* **SAMSON L. HEBRA, CESO IV** DIRECTOR IV BUREAU OF DESIGN	APPROVED: *SEE COVER SHEET FOR SIGNATURE* **MAXIMO L. CARVAJAL** UNDERSECRETARY FOR TECHNICAL SERVICES	CONCURRED: *SEE COVER SHEET FOR SIGNATURE* **LEOPOLDO J. VEGA,MD,FPCS, FPATACSI,MBA-H** UNDERSECRETARY FOR HEALTH,DOH	SET NO.: BOD / B	SHEET NO.: EC-7 / 7 / 33



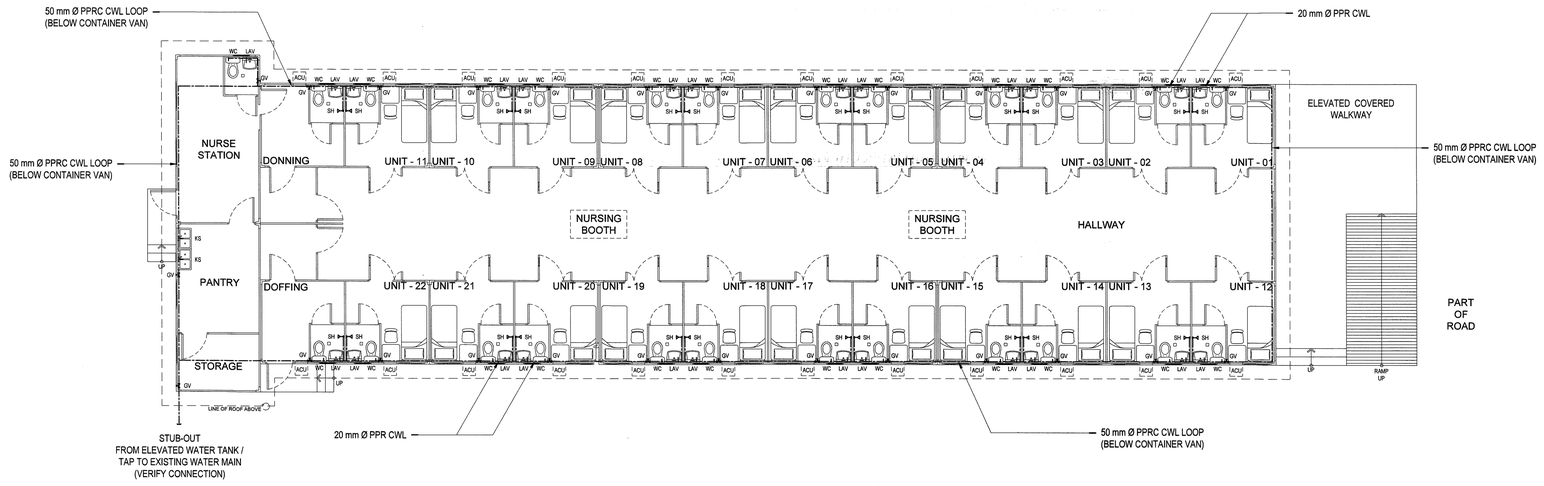
NOTES:

1. TANK TO BE USED SHALL BE POLYETHYLENE TANK TYPE WITH CAPACITY OF 1000 LITERS.
2. EACH OFF-SITE MODULAR CLUSTER SHALL HAVE SEPARATE TANK COLLECTING LIQUID WASTE FROM DONNING & DOFFING ROOMS.
3. HAZARDOUS / CHEMICAL LIQUID WASTE SHALL BE COLLECTED SEPARATELY. VERIFY / COORDINATE WITH THE MEDICAL FACILITIES MGMT.

1 / P-1 **DETAILED FLOOR PLAN** *(HOSPITAL)* **(SEWER AND CHEMICAL WASTE LINE LAYOUT)**
SCALE 1: 100 M.

PLUMBING NOTES:

1. GRADES OF HORIZONTAL PIPING
   RUN ALL HORIZONTAL PIPINGS IN PERFECT ALIGNMENT AND AT A FORM GRADE OF NOT LESS THAN TWO PERCENT (2%).
2. CHANGE IN DIRECTION
   ALL CHANGE IN DIRECTION SHALL BE MADE BY APPROPRIATE USE OF FORTY FIVE DEGREES (45°) WYES, LONGSWEEP QUARTER BEND, SIX-EIGHT OR SIXTEENTH BENDS. WHEN THE CHANGE OF FLOW IS FROM HORIZONTAL TO VERTICAL, 1/8 BEND COMBINATION MAYBE USED ON VERTICAL STACKS AND SHORT QUARTER BENDS MAYBE USED ON WASTE LINE. TEE AND CROSSES MAYBE USED IN VENT PIPES.
3. PROHIBITED FITTINGS
   NO DOUBLE HUB OR TEE BRANCH SHALL BE USED ON HORIZONTAL WASTE LINES. THE DRILLINGS AND TAPPINGS OF HOUSE DRAIN, WASTE OR VENT PIPES AND USE OF SADDLE HUB AND BEND ARE PROHIBITED.
4. SLEEVES
   PROVIDE PIPE SLEEVES AT WALLS, COLUMNS OR SLABS ONE SIZE BIGGER THAN THE ACTUAL SIZE PASSING THROUGH THE WALLS, COLUMNS OR UNDER SLAB TO PROTECT PIPE FROM BREAKAGE.
5. PIPE CLEAN-OUTS
   PIPE CLEAN-OUTS ARE REQUIRED UNDER THE FOLLOWING CONDITIONS:
   a. EVERY CHANGE IN HORIZONTAL DIRECTIONS EXCEEDING TWENTY-TWO AND ONE-HALF DEGREES (22 1/2°).
   b. ONE AND ONE-HALF METERS (1.50 m) INSIDE THE PROPERTY LINE BEFORE THE HOUSE DRAINAGE CONNECTION.
   c. EVERY FIFTEEN METERS (15.00 m) IN HORIZONTAL RUN OF PIPES.
   d. AT THE END OF ANY HORIZONTAL PIPE LINES.
6. THE DIGESTION CHAMBER OF SEPTIC VAULT MUST BE WATERPROOFED.
7. NOT LESS THAN 300 mm OF AIR SPACE MUST BE LEFT BETWEEN THE TOP OF THE SEWAGE AND THE UNDER PART OF THE VAULT ROOF SLAB.
8. NO SEPTIC VAULT MUST BE CONSTRUCTED UNDER THE BUILDING.
9. ALL PLUMBING WORKS SHALL BE DONE BY A LICENSED MASTER PLUMBER AND A LICENSED PLUMBING CONTRACTOR.



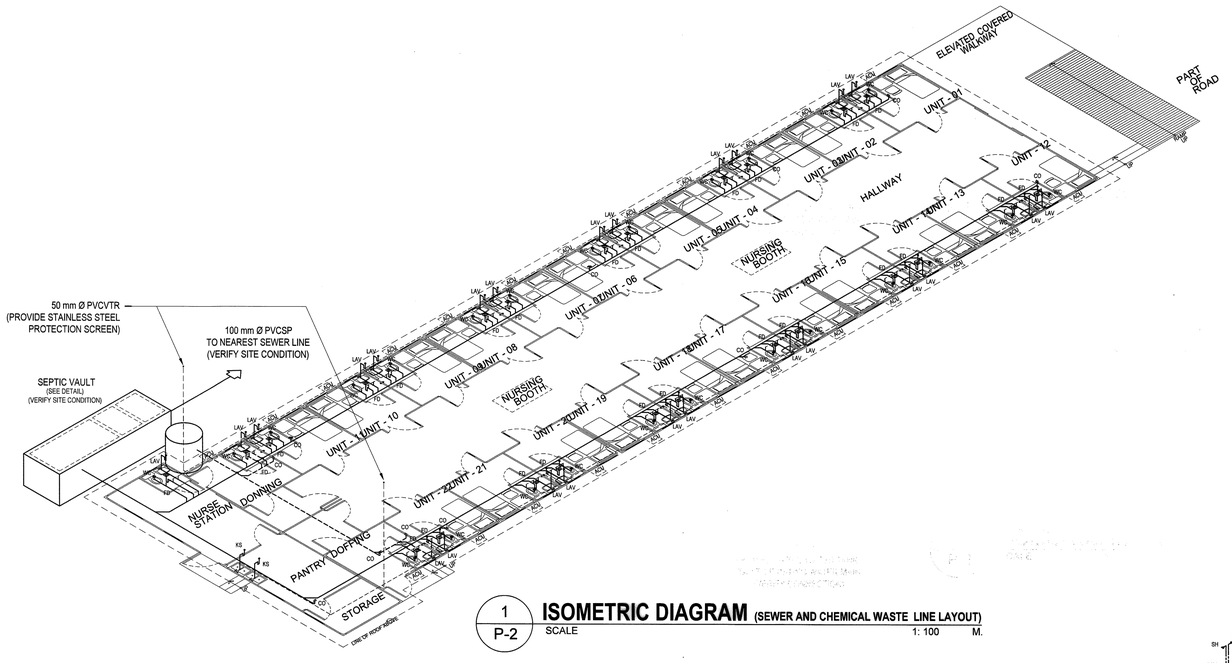
2 / P-1 **DETAILED FLOOR PLAN** *(HOSPITAL)* **(WATER LINE LAYOUT)**
SCALE 1: 100 M.

PLUMBING LEGEND:

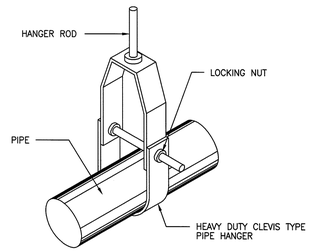
CO	CLEAN OUT
FD	FLOOR DRAIN
FAU	FAUCET
GV	GATE VALVE
KS	KITCHEN SINK
MH	MANHOLE
PPRC CWL	POLYPROPYLENE RANDOM COPOLYMER COLD WATER LINE, TYPE 3, PN 20 (EN ISO 15874 / JOINTED BY FUSION WELDING)
PVCSP	POLYVINYL CHLORIDE SOIL PIPE (SERIES 1000) (ASTM D2729 / ASTM D3311, ISO 4435 / ASTM D2564)
PVCVP	POLYVINYL CHLORIDE VENT PIPE (SERIES 600) (ASTM D2729 / ASTM D3311, ISO 4435 / ASTM D2564)
PVCVTR	POLYVINYL CHLORIDE VENT THROUGH ROOF (SERIES 600) (ASTM D2729 / ASTM D3311, ISO 4435 / ASTM D2564)
SH	SHOWER HEAD
WC	WATER CLOSET

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BUREAU OF DESIGN
BUILDINGS DIVISION
BONIFACIO DRIVE PORT AREA, MANILA

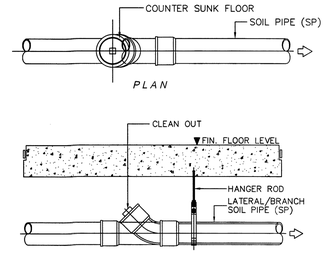
PROJECT AND LOCATION: DPWH STANDARD FIELD MODULAR HOSPITAL	SHEET CONTENTS: DETAILED FLOOR PLAN (HOSPITAL) - SEWER AND CHEMICAL WASTE LINE LAYOUT - WATER LINE LAYOUT; PLUMBING NOTES; PLUMBING LEGEND	DESIGNED BY: **REUBEN S. RAMOS** ENGINEER II CADD: **JOSE ALFREDO S. RAYCO** ENGINEER ASSISTANT CHECKED: **FRANCIS G. SERRANO** ARCHITECT IV	SUBMITTED: **KATHRINE ANNE C. MACOY** CARETAKER, BUILDINGS DIVISION	RECOMMENDING APPROVAL: MAY 03 2021 *SEE COVER SHEET FOR SIGNATURE* **SAMSON L. HEBRA, CESO IV** DIRECTOR IV BUREAU OF DESIGN	APPROVED: *SEE COVER SHEET FOR SIGNATURE* **MAXIMO L. CARVAJAL** UNDERSECRETARY FOR TECHNICAL SERVICES	CONCURRED: *SEE COVER SHEET FOR SIGNATURE* **LEOPOLDO J. VEGA,MD,FPCS, FPATACSI,MBA-H** UNDERSECRETARY FOR HEALTH,DOH	SET NO.: BOD / B	SHEET NO.: P-1 / 3 / 33



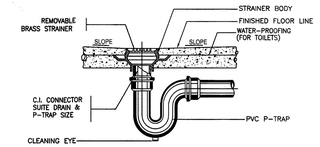
1 P-2 **ISOMETRIC DIAGRAM** (SEWER AND CHEMICAL WASTE LINE LAYOUT)
SCALE 1: 100 M.



3 P-2 **PIPE HANGER DETAIL**
SCALE NTS.



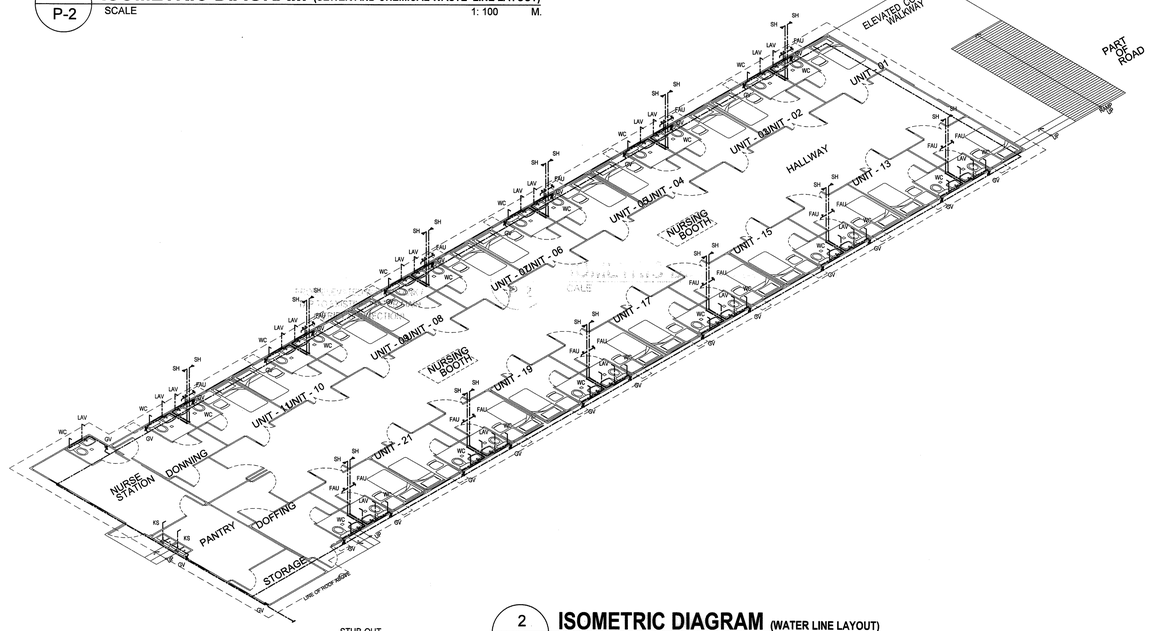
4 P-2 **CLEAN-OUT DETAIL**
SCALE NTS.



5 P-2 **FLOOR DRAIN P-TRAP DETAIL**
SCALE NTS.

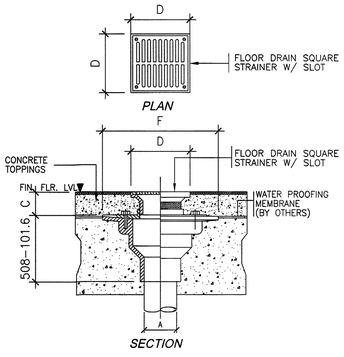
PLUMBING LEGEND:

CO	CLEAN OUT
FD	FLOOR DRAIN
FAU	FAUCET
GV	GATE VALVE
KS	KITCHEN SINK
MH	MANHOLE
PPRC CWL	POLYPROPYLENE RANDOM COPOLYMER COLD WATER LINE, TYPE 3, PN 20 (EN ISO 15874 / JOINTED BY FUSION WELDING)
PVCSP	POLYVINYL CHLORIDE SOIL PIPE (SERIES 1000) (ASTM D2729 / ASTM D3311, ISO 4435 / ASTM D2564)
PVCVP	POLYVINYL CHLORIDE VENT PIPE (SERIES 600) (ASTM D2729 / ASTM D3311, ISO 4435 / ASTM D2564)
PVCVTR	POLYVINYL CHLORIDE VENT THROUGH ROOF (SERIES 600) (ASTM D2729 / ASTM D3311, ISO 4435 / ASTM D2564)
SH	SHOWER HEAD
WC	WATER CLOSET



STUB-OUT
FROM ELEVATED WATER TANK / TAP TO EXISTING WATER MAIN
(VERIFY CONNECTION)

2 P-2 **ISOMETRIC DIAGRAM** (WATER LINE LAYOUT)
SCALE 1: 100 M.



SCHEDULE OF DIMENSIONS

PIPE SIZE IN 'A'	DIMENSIONS IN MM.		
	C	D	F
50	38.10	100X100	225.42
75	38.10	125X125	225.42
100	40.00	150X150	225.42
150	50.80	200X200	282.57

6 P-2 **FLOOR DRAIN DETAIL**
SCALE NTS.

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BUREAU OF DESIGN
BUILDINGS DIVISION
BONIFACIO DRIVE PORT AREA, MANILA

PROJECT AND LOCATION: DPWH STANDARD FIELD MODULAR HOSPITAL

SHEET CONTENTS:
- ISOMETRIC DIAGRAM
  - SEWER AND CHEMICAL WASTE LINE LAYOUT
  - WATER LINE LAYOUT
- PLUMBING LEGEND
- PIPE HANGER DETAIL
- CLEAN-OUT DETAIL
- FLOOR DRAIN P-TRAP DETAIL
- FLOOR DRAIN DETAIL

DESIGNED BY: **REUBEN C. RAMOS** / ENGINEER II
CADD: **JOSE ALFREDO S. RAYCO** ENGINEER ASSISTANT
CHECKED: **FRANCIS G. SERRANO** ARCHITECT IV

SUBMITTED: **KATHRINE ANNE C. MACOY** 4/04/21
CARETAKER, BUILDINGS DIVISION

RECOMMENDING APPROVAL: MAY 03 2021 *SEE COVER SHEET FOR SIGNATURE* **SAMSON L. HEBRA, CESO IV** DIRECTOR IV BUREAU OF DESIGN

APPROVED: *SEE COVER SHEET FOR SIGNATURE* **MAXIMO L. CARVAJAL** UNDERSECRETARY FOR TECHNICAL SERVICES

CONCURRED: *SEE COVER SHEET FOR SIGNATURE* **LEOPOLDO J. VEGA,MD,FPCS, FPATACSI,MBA-H** UNDERSECRETARY FOR HEALTH,DOH

SET NO.: BOD B

SHEET NO.: P-2 3 | 33

PLUMBING NOTES:

1. GRADES OF HORIZONTAL PIPING
   RUN ALL HORIZONTAL PIPINGS IN PERFECT ALIGNMENT AND AT A FORM GRADE OF NOT LESS THAN TWO PERCENT (2%).

2. CHANGE IN DIRECTION
   ALL CHANGE IN DIRECTION SHALL BE MADE BY APPROPRIATE USE OF FORTY FIVE DEGREES (45°) WYES, LONGSWEEP QUARTER BEND, SIX-EIGHT OR SIXTEENTH BENDS. WHEN THE CHANGE OF FLOW IS FROM HORIZONTAL TO VERTICAL, 1/8 BEND COMBINATION MAYBE USED ON VERTICAL STACKS AND SHORT QUARTER BENDS MAYBE USED ON WASTE LINE. TEE AND CROSSES MAYBE USED IN VENT PIPES.

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

4. SLEEVES
   PROVIDE PIPE SLEEVES AT WALLS, COLUMNS OR SLABS ONE SIZE BIGGER THAN THE ACTUAL SIZE PASSING THROUGH THE WALLS, COLUMNS OR UNDER SLAB TO PROTECT PIPE FROM BREAKAGE.

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

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

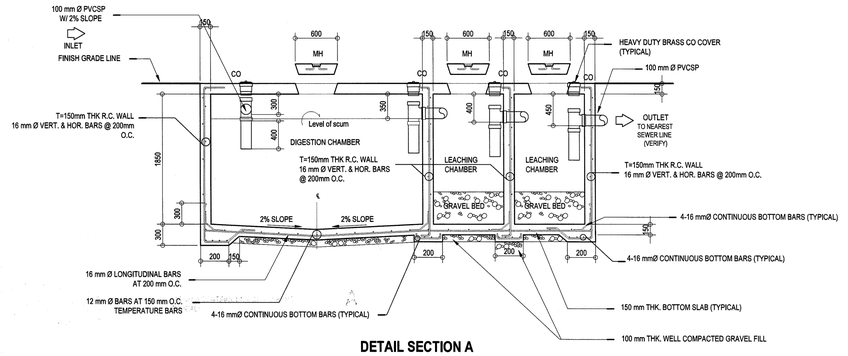
7. NOT LESS THAN 300 mm OF AIR SPACE MUST BE LEFT BETWEEN THE TOP OF THE SEWAGE AND THE UNDER PART OF THE VAULT ROOF SLAB.

8. NO SEPTIC VAULT MUST BE CONSTRUCTED UNDER THE BUILDING.

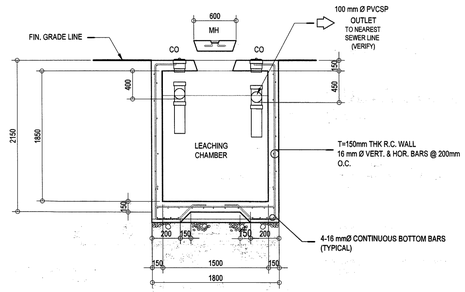
9. ALL PLUMBING WORKS SHALL BE DONE BY A LICENSED MASTER PLUMBER AND A LICENSED PLUMBING CONTRACTOR.

PLUMBING LEGEND:

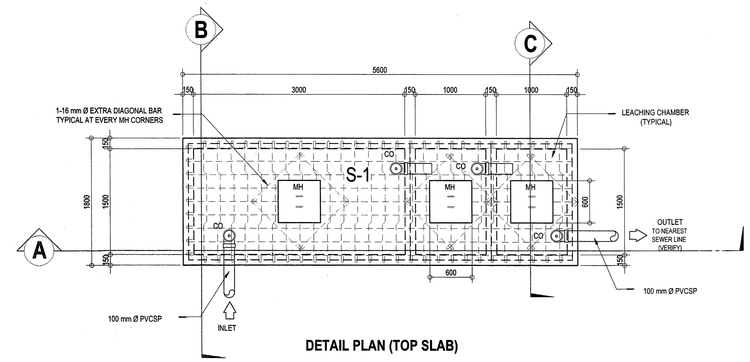
CO	CLEAN OUT
FD	FLOOR DRAIN
FAU	FAUCET
GV	GATE VALVE
KS	KITCHEN SINK
MH	MANHOLE
PPRC CWL	POLYPROPYLENE RANDOM COPOLYMER COLD WATER LINE, TYPE 3, PN 20 (EN ISO 15874 / JOINTED BY FUSION WELDING)
PVCSP	POLYVINYL CHLORIDE SOIL PIPE (SERIES 1000) (ASTM D2729 / ASTM D3311, ISO 4435 / ASTM D2564)
PVCVP	POLYVINYL CHLORIDE VENT PIPE (SERIES 600) (ASTM D2729 / ASTM D3311, ISO 4435 / ASTM D2564)
PVCVTR	POLYVINYL CHLORIDE VENT THROUGH ROOF (SERIES 600) (ASTM D2729 / ASTM D3311, ISO 4435 / ASTM D2564)
SH	SHOWER HEAD
WC	WATER CLOSET



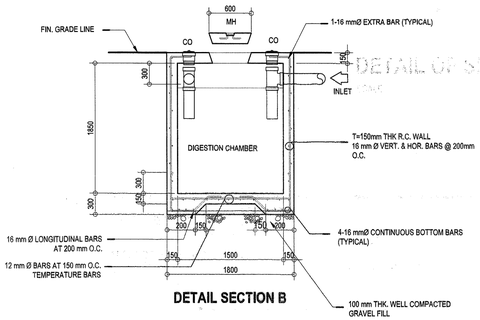
DETAIL SECTION A



DETAIL SECTION C



DETAIL PLAN (TOP SLAB)



DETAIL SECTION B

SCHEDULE OF TOP/BOTTOM SLAB REINFORCEMENT

MARK	THICKNESS	TOP SLAB	
		PARALLEL TO SHORT SPAN	PARALLEL TO LONG SPAN
S - 1	125+TOPPING	12 mm Ø BARS @ 250 mm O. C. BENT-UP 2 OUT OF 3 @ L/4 FROM FACE OF SUPPORT AND 12mmØ BARS @ 180mmO.C ADDITIONAL TOP BARS CUT-OFF@ L/4 OF SUPPORT.	12 mm Ø BARS @ 200 mm O. C. TEMPERATURE BARS
MARK	THICKNESS	BOTTOM SLAB	
		SHORT DIRECTION	PARALLEL TO LONG SPAN
SEE DETAIL SECTION A	150+TOPPING +WP	16 mm Ø BARS @ 200 mm O. C. BOTTOM BARS	16 mm Ø BARS @ 200 mm O. C. BOTTOM BARS

1 / P-3 **DETAIL OF SEPTIC VAULT (with REINFORCING BARS)**

SCALE NTS.

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BUREAU OF DESIGN
BUILDINGS DIVISION
BONIFACIO DRIVE PORT AREA, MANILA

PROJECT AND LOCATION:	SHEET CONTENTS:	DESIGNED BY:	SUBMITTED:	RECOMMENDING APPROVAL:	APPROVED:	CONCURRED:	SET NO.:	SHEET NO.:
DPWH STANDARD FIELD MODULAR HOSPITAL	PLUMBING NOTES PLUMBING LEGEND DETAIL OF SEPTIC VAULT	**REUBEN C. RAMOS** ENGINEER II CADD: **JOSE ALFREDO S. RAYCO** ENGINEER ASSISTANT CHECKED: **FRANCIS G. SERRANO** ARCHITECT IV	**KATHRINE ANNE C. MACOY** CARETAKER, BUILDINGS DIVISION	MAY 03 2021 *SEE COVER SHEET FOR SIGNATURE* **SAMSON L. HEBRA, CESO IV** DIRECTOR IV BUREAU OF DESIGN	*SEE COVER SHEET FOR SIGNATURE* **MAXIMO L. CARVAJAL** UNDERSECRETARY FOR TECHNICAL SERVICES	*SEE COVER SHEET FOR SIGNATURE* **LEOPOLDO J. VEGA,MD,FPCS, FPATACSI,MBA-H** UNDERSECRETARY FOR HEALTH,DOH	BOD / B	P-3 / 3 | 33

GENERAL NOTES:

1. CONTRACTOR IS ADVISED TO VISIT AND SURVEY THE PLACE OF INSTALLATION .HE SHALL BE RESPONSIBLE TO COORDINATE CLOSELY HIS WORK WITH ALL OTHER TRADES AND ALL INSTALLATION WORKS SHALL BE DONE IN A NEAT AND WORK-LIKE MANNER.
2. ALL NECESSARY GOVERNMENT PERMITS SHALL BE SECURED AND FOR ACCOUNT OF THE CONTRACTOR AND HE SHALL PROVIDE AS-BUILT PLANS TO THE OWNER AFTER THE COMPLETION OF HIS WORKS
3. ALL AIR CONDITIONING UNITS AND VENTILATING UNITS TO BE SUPPLIED SHALL BE NEW AND APPROVED PRODUCTS OF REPUTABLE MANUFACTURERS. ALL AIR CONDITIONING EQUIPMENT SHALL BE MANUFACTURED BY "PANASONIC" OR APPROVED EQUAL.
4. ALL DUCT WORKS SHALL BE PROVIDED WITH ANGULAR BAR SUPPORTS AND ALL MECHANICAL EQUIPMENT SHALL BE EQUIPED WITH VIBRATION ISOLATORS. (SUBMIT SHOP DRAWING PRIOR TO INSTALLATION)
5. THE CONTRACTOR SHALL SUBMIT CATALOUGE / BROCHURES SUBJECT FOR FURTHER TECHNICAL EVALUATION BY THE CONCERNED AUTHORITY (BOD) PRIOR TO PROCUREMENT / INSTALLATION OF THE EQUIPMENT / UNIT
6. ALL AIR FILTERS SHALL BE GRADE HEPA / MERV 17 - BOROSILLICATE FIBER MADE WITH 5% ARCYLIC BINDER
6. REFRIGERANT SUCTION LINES SHALL BE INSULATED WITH 25 mm THICK PREMOULDED ELASTOMERIC RUBBER INSULATION AS MANUFACTURED BY "ARMAFLEX", AEROFLEX OR APPROVED EQUAL.
7. INDIVIDUAL WEATHER PROOF TYPE CIRCUIT BREAKER SHALL BE PROVIDED FOR ALL CONDENSING UNITS.
8. ALL EXPOSED DRAIN LINES TO THE CEILING SHALL BE PROVIDED WITH INSULATION TYPICAL TO REFRIGERANT PIPING. (REFER TO PIPE INSULATION DETAIL.)
9. ALL REFRIGERANT SUCTION LINES EXPOSED INDOORS AND/OR EXPOSED TO WEATHER SHOULD BE PROVIDED WITH GAUGE #24 ALUMINUM CLADDING. (SUBMIT SHOP DRAWING PRIOR TO INSTALLATION)
10. ALL ACCU's AND FCU's SHALL BE PROVIDED WITH ANGULAR BAR SUPPORTS. (SUBMIT SHOP DRAWING PRIOR TO INSTALLATION)

SCHEDULE OF EQUIPMENT

SPLIT AIR CONDITIONER

INDOOR UNIT												OUTDOOR UNIT							REMARKS
DESIGNATION	QTY.	COOLING CAPACITY		TYPE	AIR FLOW RATE m^3 / hr	ELECTRICAL DATA					DIMENSION (H x W x D)	DESIGNATION	QTY.	DIMENSION (H x W x D)	REFRIGERANT	WEIGHT kG	PIPE SIZE (MM)		MAX PIPE LENGTH (M)	
		KJ/HR	HP (kW)			WATTS	VOLTS	PHASE	HERTZ	RATED CURRENT (A)							LIQUID	GAS		
FCU-4.0 (WM)	4	36 100	4.0 (10.03)	WALL MOUNTED	1260	3,700	220	SINGLE	60	17.0	340 x 1150 x 290	ACCU - 4HP	4	1170 x 900 x 320	R410	80	9.52 Ø	19.05 Ø	30	ALL UNITS SHALL BE BRAND NEW & COMPLETE ELECTRONIC (REMOTE)CONTROL WITH STANDARD ACCESSORIES, READY FOR SERVICE AIR-CONDITIONING AT HALLWAY AREA SHALL BE NON-INVERTER BRAND "PANASONIC" OR APPROVED EQUAL
FCU-2.0 (WM)	1	18 180	2.0 (5.0)	WALL MOUNTED	1104	1,730	220	SINGLE	60	7.6	302 x 1102 x 244	ACCU - 2.0HP	1	619 x 824 x 299	R410	26	6.3 Ø	12.7 Ø	20	
FCU-1.50 (WM)	1	12,060	1.50 (3.35)	WALL MOUNTED	660	1,080	220	SINGLE	60	4.8	295 x 920 x 200	ACCU - 1.50HP	1	542 x 780 x 290	R410	27	6.35 Ø	12.70 Ø	18	NOTE : ALL FAN COIL UNITS (FCU'S) SHALL BE PROVIDED WITH EVAPORATOR DRAIN PIPE.

WINDOW-TYPE AIR CONDITIONER

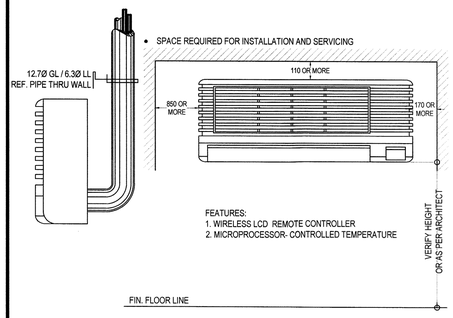
INDOOR UNIT											REMARKS
DESIGNATION	QTY.	COOLING CAPACITY		TYPE	DIMENSION (W x H x D)	ELECTRICAL DATA				REFRIGERANT TYPE	LOCATION	
		kJ / Hr	HP			KW	VOLTS	PHASE	HERTZ			
WT-0.80	24	7 420	0.80	WINDOW NON-INVERTER	450 x 350 x 580	0.65	230	SINGLE	60	R410A	ROOMS	ALL UNITS SHALL BE BRAND NEW & MANUAL TYPE PROVIDED WITH DRAIN PIPE READY FOR SERVICE.

EXHAUST FAN

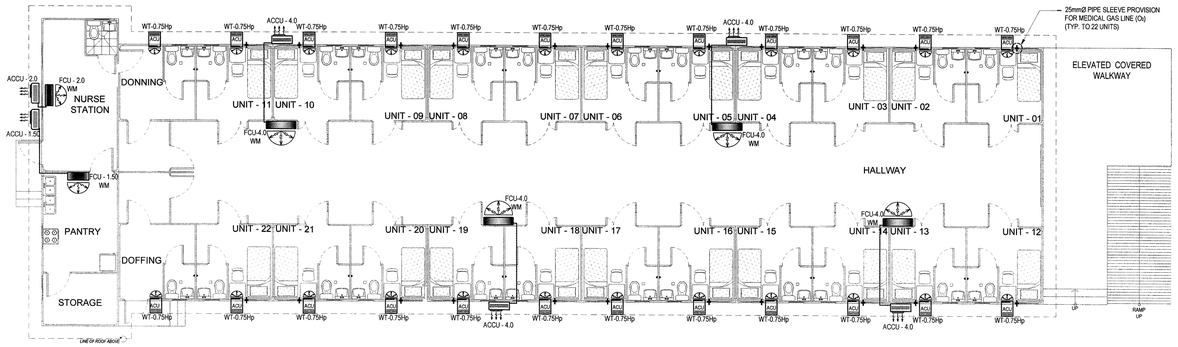
DESIGNATION	QTY.	CAPACITY		TYPE	STATIC PRESSURE	RPM	WATTS	MOTOR RATING			LOCATION	REMARKS
		CMH	CFM					VOLTS	PHASE	HERTZ		
EF-1	1	5100	3000	BELT-DRIVEN VANEAXIAL	6.35mm H_2O	1524	652	220	SINGLE	60	GROUND FLOOR	ALL UNITS SHALL BE BRAND NEW PROVIDED WITH SUPPORT AND VIBRATION ISOLATORS. CEILING CASSETE UNIT SHALL BE PROVIDED WITH VENT CAPS
EF-2	25	85	50	CEILING CASSETTE	2.54mm H_2O	800	11	220	SINGLE	60	TOILETS	
EF-3	1	255	150	WALL MOUNTED	3.80mm H_2O	170	40	220	SINGLE	60	STORAGE	
KEF	1	850	500	WALL MOUNTED	6.35mm H_2O	1560	100	220	SINGLE	60	PANTRY	

LEGENDS & SYMBOLS :

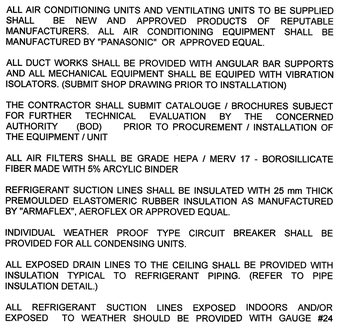
- FAN COIL UNIT FLOOR STANDING TYPE (FCU -FS)
- FAN COIL UNIT WALL MOUNTED TYPE (FCU -WM)
- AIR COOLED CONDENSING UNIT (ACCU)
- WINDOW TYPE AIR CONDITIONER (WT)
- EXHAUST FAN (EF1) BELT-DRIVEN VANEAXIAL FAN
- EXHAUST FAN (EF3) WALL MOUNTED
- EXHAUST AIR DISC (EAD)
- REFRIGERANT LINE
- FLEXIBLE DUCT 100MMØ
- SAND TRAP LOUVERS WITH FILTER
- VOLUME DAMPER (Vd)



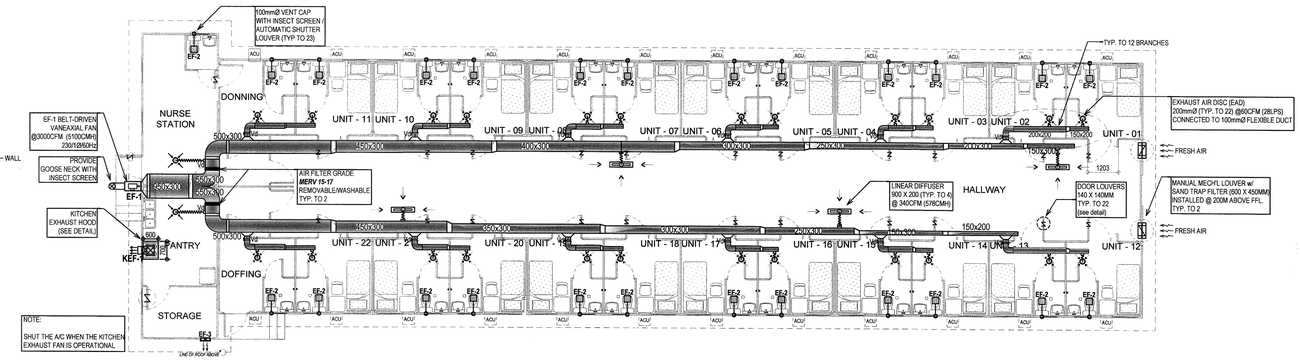
WALL MOUNTED FCU MOUNTING DETAIL
SCALE NTS



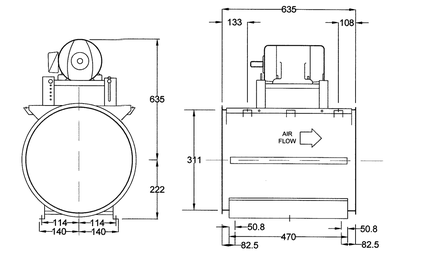
1 / M - 1 GROUND FLOOR AIR CONDITIONING PLAN / PIPE SLEEVE PROVISION FOR MEDICAL GAS LINE (O_2)
SCALE 1: 100M



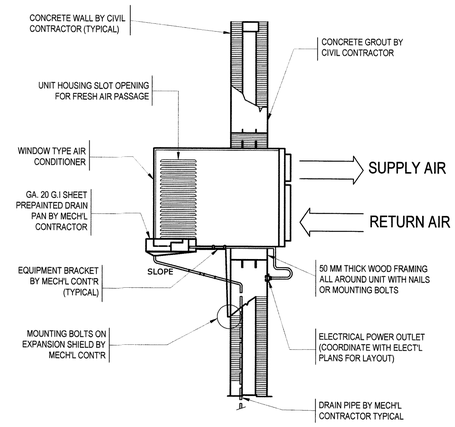
AIR COOLED CONDENSING UNIT (ACCU) DRAWING DETAIL
SCALE NTS



2 / M - 1 GROUND FLOOR VENTILATION PLAN
SCALE 1: 100M



BELT-DRIVEN VANEAXIAL FAN DETAIL *(EF-1)*
SCALE NTS



WINDOW TYPE AC INSTALLATION DETAIL
SCALE NTS

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BUREAU OF DESIGN
BUILDINGS DIVISION
BONIFACIO DRIVE PORT AREA, MANILA

PROJECT AND LOCATION: DPWH STANDARD FIELD MODULAR HOSPITAL

SHEET CONTENTS:
GENERAL NOTES
LEGENDS AND SYMBOLS
SCHEDULE OF EQUIPMENT
GROUND FLOOR PLAN FOR AIR CONDITIONING , VENTILATION AND PIPE SLEEVE FOR MEDICAL GAS LINE (O2)
MISCELLANEOUS DRAWING DETAILS

DESIGNED BY: **BENJAMIN R. GALMAK** ENGINEER II
CADD: **CZAR JOEL A. SAGUISAG** ENGINEER II
CHECKED: **CORNELIO T. EVANGELISTA JR. 4** ENGINEER III

SUBMITTED: **KATHRINE ANNE C. MACOY** CARETAKER, BUILDINGS DIVISION

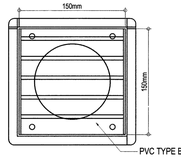
RECOMMENDING APPROVAL: MAY 03 2021 *SEE COVER SHEET FOR SIGNATURE* **SAMSON L. HEBRA, CESO IV** DIRECTOR IV BUREAU OF DESIGN

APPROVED: *SEE COVER SHEET FOR SIGNATURE* **MAXIMO L. CARVAJAL** UNDERSECRETARY FOR TECHNICAL SERVICES

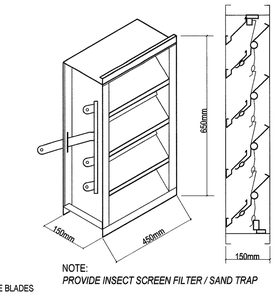
CONCURRED: *SEE COVER SHEET FOR SIGNATURE* **LEOPOLDO J. VEGA,MD,FPCS, FPATACSI,MBA-H** UNDERSECRETARY FOR HEALTH,DOH

SET NO.: BOD B

SHEET NO.: M - 1 | 1 | 33

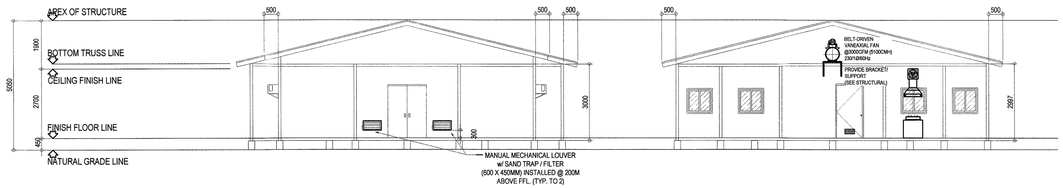


DOOR LOUVER (140X140MM)
SCALE NTS



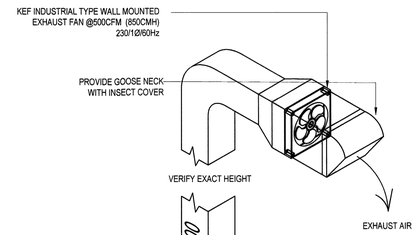
NOTE:
PROVIDE INSECT SCREEN FILTER / SAND TRAP

MANUAL MECHANICAL LOUVER
SCALE NTS

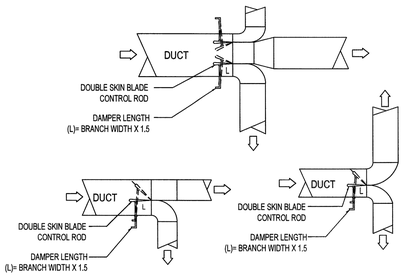


1 / M-2 FRONT ELEVATION (SHOWING MECHANICAL LOUVERS)
SCALE 1: 100M

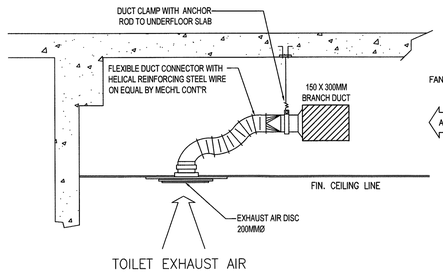
2 / M-2 REAR ELEVATION (SHOWING VANEAXIAL FAN)
SCALE 1:100M



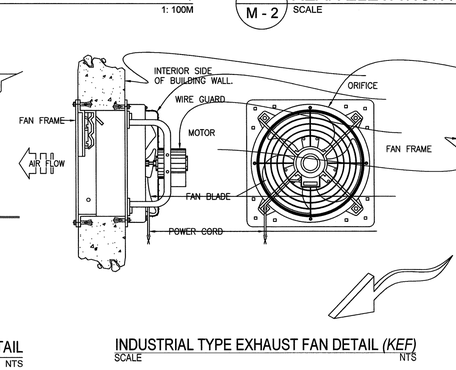
ISOMETRIC DETAIL OF KITCHEN EXHAUST SYSTEM
SCALE NTS



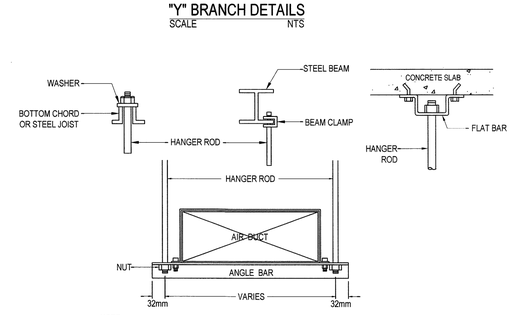
"Y" BRANCH DETAILS
SCALE NTS



EXHAUST AIR DISC CONNECTION TO FLEXIBLE PIPE DETAIL
SCALE NTS

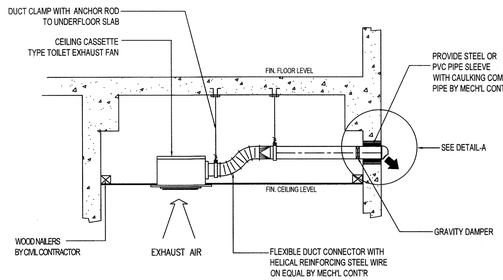


INDUSTRIAL TYPE EXHAUST FAN DETAIL *(KEF)*
SCALE NTS

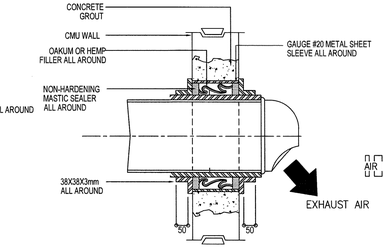


NOTE :
1. MAXIMUM HANGER SPACING SHALL BE ON 2440 MM TO 2995 MM INTERVALS.
2. ANGLE BAR SUPPORT SHALL CONFORM WITH SMACNA 5TH EDITION, TABLE 5-3
3. HANGER ROD SHALL CONFORM WITH SMACNA 5TH EDITION, TABLE 5-1.

DUCT HANGER DETAIL
SCALE NTS

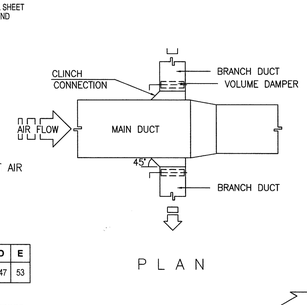


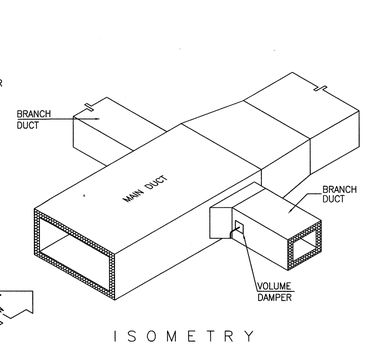
TYP. CEILING CASSETTE TYPE EXHAUST FAN DETAIL *(EF-2)*
SCALE NTS



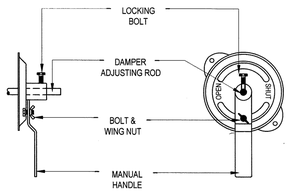
DETAIL-A

ITEM	A	B	C	D	E
VENT CAP	190	106	23	147	53

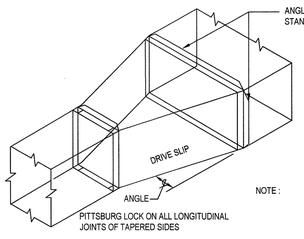




MANUAL VOLUME & SPLITTER DAMPER DETAIL
SCALE NTS

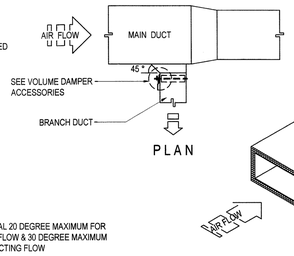


VOLUME DAMPER DETAIL
SCALE NTS

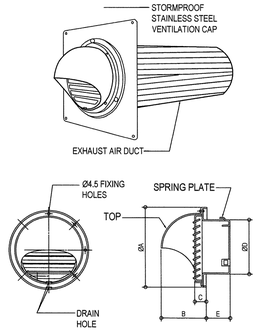


NOTE : ANGLE EQUAL 20 DEGREE MAXIMUM FOR DIVERGING FLOW & 30 DEGREE MAXIMUM ON CONTRACTING FLOW

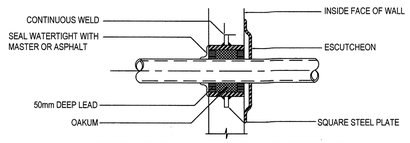
TAPPERS & OFFSET DETAILS
SCALE NTS



TYPICAL BRANCH DUCT TAKE-OFF DETAIL
SCALE NTS



VENT CAP DETAIL
SCALE NTS



WHERE PIPING PENETRATES WALL AND FLOOR SLABS, THE PIPE WORK SHALL BE SLEEVED WITH 1" THICK FIBERGLASS THE FULL LENGHT OF THE PENETRATION AND SEALED WITH J.M. DUXSEAL OR UNISEAL. FIBERGLASS SLEEVE TO BE INSTALLED WIDER THAN THICKNESS OF SLAB AFTER IS MADE UP TIGHT TO FIBERGLASS AND THE MORTAR SET TRIM EXTENDING FIBERGLASS AND SEAL EACH END WITH A NON- HARDENING COMPOUND SIMILAR TO J.M. DUXSEAL OR UNISEAL.

PIPE SLEEVE DETAIL
SCALE NTS

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BUREAU OF DESIGN
BUILDINGS DIVISION
BONIFACIO DRIVE PORT AREA, MANILA

PROJECT AND LOCATION:	SHEET CONTENTS:	DESIGNED BY:	SUBMITTED:	RECOMMENDING APPROVAL:	APPROVED:	CONCURRED:	SET NO.:	SHEET NO.:
DPWH STANDARD FIELD MODULAR HOSPITAL	FRONT ELEVATION DETAIL REAR ELEVATION DETAILS MISCELLANEOUS DRAWING DETAILS	**BENJAMIN R. GALMAK** ENGINEER II CADD: **CZAR JOEL A. SAGUISAG** ENGINEER II CHECKED: **CORNELIO T. EVANGELISTA JR. 4** ENGINEER III	9/26/21 **KATHRINE ANNE C. MACOY** CARETAKER, BUILDINGS DIVISION	MAY 03 2021 *SEE COVER SHEET FOR SIGNATURE* **SAMSON L. HEBRA, CESO IV** DIRECTOR IV BUREAU OF DESIGN	*SEE COVER SHEET FOR SIGNATURE* **MAXIMO L. CARVAJAL** UNDERSECRETARY FOR TECHNICAL SERVICES	*SEE COVER SHEET FOR SIGNATURE* **LEOPOLDO J. VEGA,MD,FPCS, FPATACSI,MBA-H** UNDERSECRETARY FOR HEALTH,DOH	BOD B	M - 2 2 33

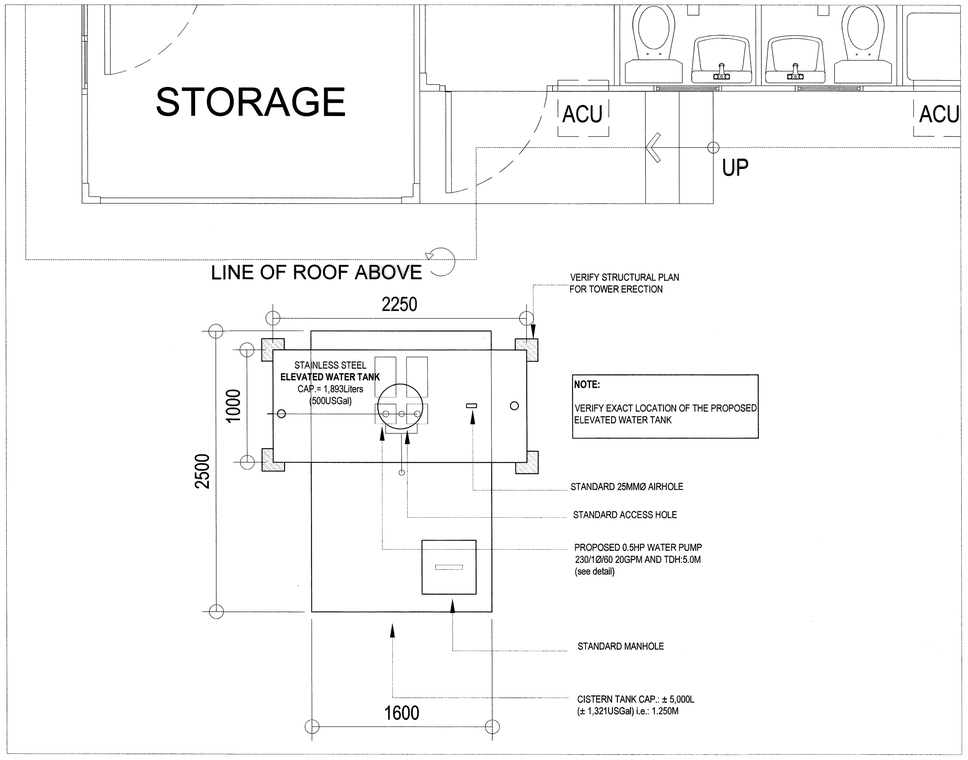
SCHEDULE OF EQUIPMENT

WATER PUMP

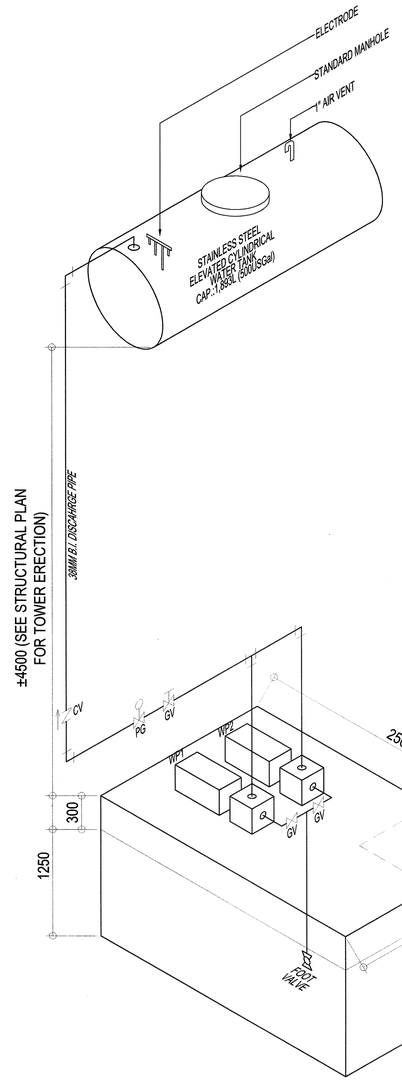
DESIGNATION	QTY.	CAPACITY L / min. / (gpm)	TYPE	TDH (meters)	MOTOR RATING					REMARKS
					RPM	KW (hp)	VOLTS	PHASE	HERTZ	
WP	2	379 (20)	END-SUCTION CENTRIFUGAL	16.48 (5)	3500	0.373 (0.50)	230	SINGLE	60	THE SAID PUMP SHALL BE BRAND NEW AND READY FOR SERVICE

LEGENDS AND ABBREVIATIONS

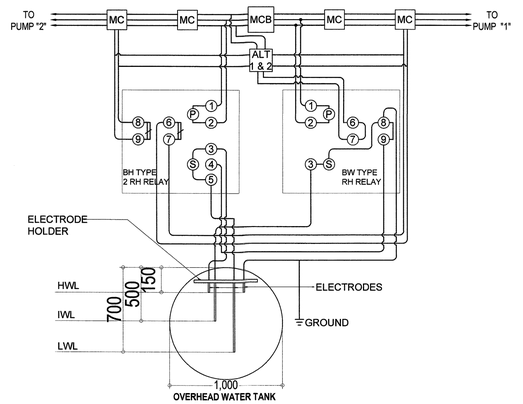
	GATE VALVE	LWL	LOW WATER LEVEL
	CHECK VALVE	IWL	INTERMEDIATE WATER LEVEL
	PRESSURE GUAGE	HWL	HIGH WATER LEVEL
	TEE	MCB	MAIN CIRCUIT BREAKER
	ELBOW	CB	CIRCUIT BREAKER
	FOOT VALVE	MC	MAGNETIC CONTACTOR



3 / WP-1 *(SHOWING LOCATION OF WATER PUMPING SYSTEM)*
PARTIAL GROUND FLOOR PLAN
SCALE NTS



2 / WP-1 ISOMETRIC DIAGRAM OF WATER PUMPING SYSTEM
SCALE NTS



OPERATION :

1. WATER LEVEL BELOW LOW WATER LEVEL (LWL) ELECTRODE, PUMPS "1" & "2" START TO OPERATE UP TO HIGH WATER LEVEL (HWL) ELECTRODES & STOPS.
2. WATER LEVEL BELOW INTERMEDIATE WATER LEVEL (IWL) ELECTRODE EITHER PUMP "1" OR "2" OPERATES AS INDICATED BY ALTERNATOR & RELAY RH, FURTHER DRAIN OF WATER BELOW LOW WATER LEVEL (LWL ELECTRODE WILL START PUMP "1" & "2" AS INDICATED BY RELAY 2RH.
3. ALTERNATOR ALTERNATE THE OPERATION OF PUMPS "1" & "2" AT SPECIFIC TIME SCHEDULE OF OPERATION.

3 / WP-1 SCHEMATIC DIAGRAM OF WATER LEVEL CONTROL
SCALE NTS

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
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PROJECT AND LOCATION: DPWH STANDARD FIELD MODULAR HOSPITAL

SHEET CONTENTS:
SCHEDULE OF PUMP
LEGENDS AND ABBREVIATIONS
PARTIAL GROUND FLOOR PLAN
ISOMETRIC DIAGRAM OF WATER PUMPING SYSTEM
SCHEMATIC DIAGRAM OF WATER LEVEL CONTROL

DESIGNED BY: BENJAMIN R. GALMAK, ENGINEER II
CADD: CZAR JOELA. SAGUISAG, ENGINEER II
CHECKED: CORNELIO T. EVANGELISTA JR. 4, ENGINEER III

SUBMITTED: KATHRINE ANNE C. MACOY, CARETAKER, BUILDINGS DIVISION

RECOMMENDING APPROVAL: MAY 03 2021 *SEE COVER SHEET FOR SIGNATURE* SAMSON L. HEBRA, CESO IV, DIRECTOR IV, BUREAU OF DESIGN

APPROVED: *SEE COVER SHEET FOR SIGNATURE* MAXIMO L. CARVAJAL, UNDERSECRETARY FOR TECHNICAL SERVICES

CONCURRED: *SEE COVER SHEET FOR SIGNATURE* LEOPOLDO J. VEGA,MD,FPCS, FPATACSI,MBA-H, UNDERSECRETARY FOR HEALTH,DOH

SET NO.: BOD / B

SHEET NO.: WP-1 / 1 | 33

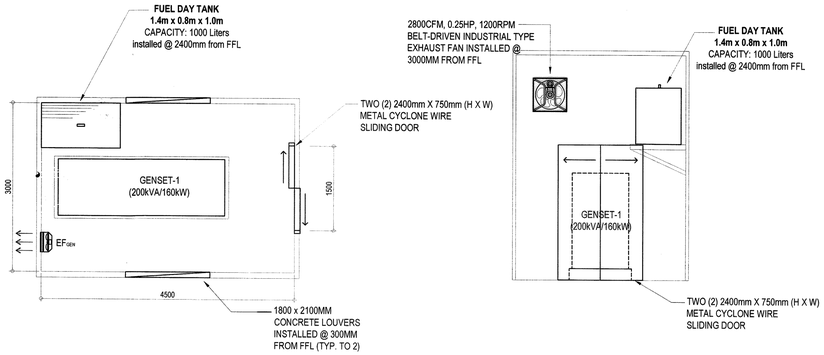
SCHEDULE OF EQUIPMENT

DIESEL ENGINE GENERATING SET

DESIGNATION	QUANTITY	DUTY	AREA SERVED	TYPE	GENERATOR SPECIFICATIONS					ENGINE SPECIFICATIONS					REMARKS
					CAPACITY (KVA)	RPM	VOLTAGE	FREQUENCY	PHASE	CAPACITY (KW)	FUEL CONSUMPTION		FUEL TYPE	RPM	COOLING	
											50 % LOAD	75 % LOAD				
GEN SET	1	STAND BY	ALL AREA	SOUND PROOF (SILENT TYPE)	200	1800	230	60	SINGLE / THREE	160	34L/hr	49L/hr	DIESEL	1800	RADIATOR	UNITS SHALL BE FOR INDOOR INSTALLATION WITH 10 HOUR CAPACITY(DAY TANK), PIPING, COMMERCIALTYPE, EXHAUST SILENCER COMPLETE WITH STANDARD ACCESSORIES AND READY FOR SERVICE.

EXHAUST FAN

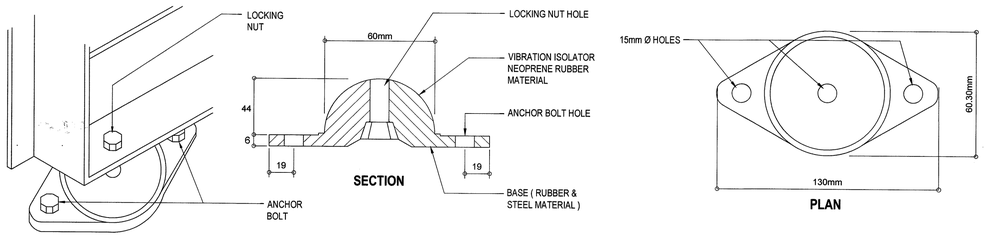
DESIGNATION	QUANTITY	CAPACITY		TYPE	STATIC PRESSURE	RPM	KW	MOTOR RATING			LOCATION	REMARKS
		CMH	CFM					VOLTS	PHASE	HERTZ		
EF_{GEN}	1	4760	2800	WALL MOUNTED (V-BELT DRIVEN)	3.80mm H_2O	1710	0.373	220	SINGLE	60	POWER HOUSE	ALL UNIT SHALL BE BRAND NEW AND COMPLETE WITH STANDARD ACCESSORIES, READY FOR SERVICE.



(SHOWING LOCATION OF GENERATOR SETS AND FUEL DAYTANK)

POWERHOUSE GROUND FLOOR PLAN

SCALE NTS.



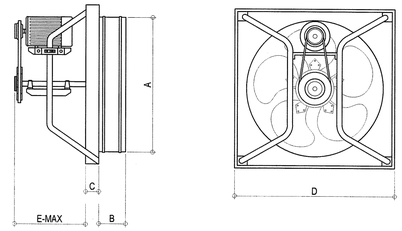
VIBRATION ISOLATOR DETAIL

SCALE NTS.

GENERATOR SET NOTES :

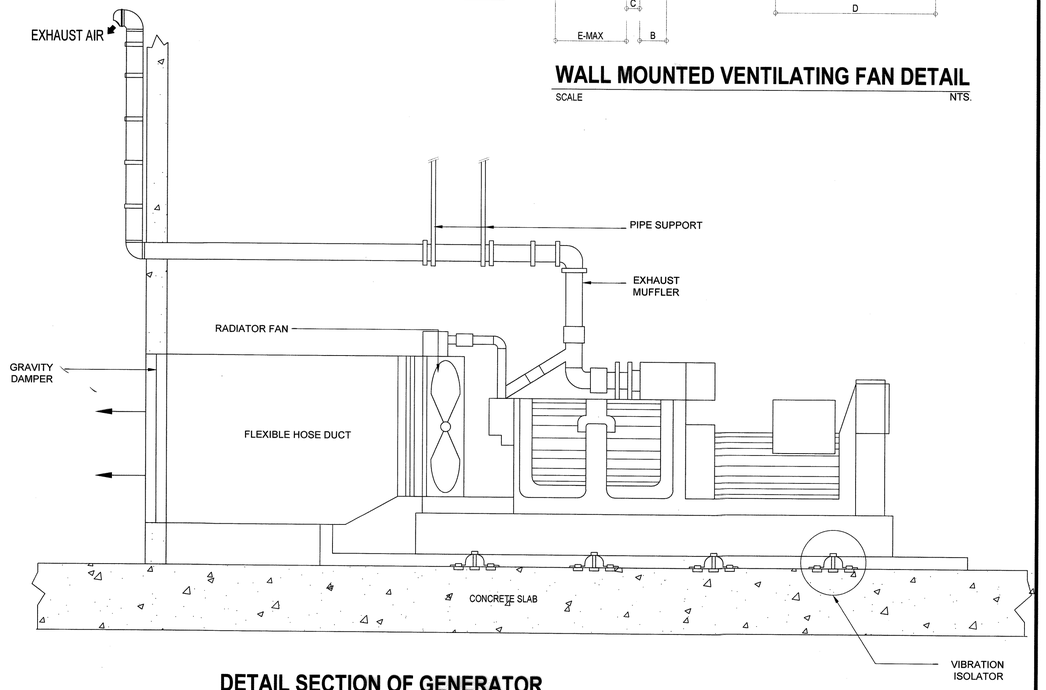
1. THE ARCHITECTURAL AND STRUCTURAL DETAILS FOR THE POWER HOUSE SHALL BE PROVIDED BY THE AWARDING CONTRACTOR AND SHALL BE VERIFIED AS TO ACTUAL SITE CONDITIONS. THE MECHANICAL PLAN FOR THE GENERATOR IS PROVIDED HEREWITH AS TO ITS CAPACITY (KVA/KW) AND VENTILATION REQUIREMENTS
2. FOUNDATION BOLT TEMPLATE - THE BOLTS SHOULD BE SUPPORTED BY A TEMPLATE, CAREFULLY LEVELED, RESTING ON THE FOUNDATION FORMS. EACH BOLT SHOULD BE SURROUNDED WITH IRON PIPE, SUPPORTED BY THE BOTTOM WASHER, AND STOPPER WITH WASHER AT THE UPPER END TO PREVENT ENTRANCE OF CONCRETE.
2. LEVELING THE ENGINE - THE ENGINE SHOULD BE LEVELED BY WEDGES RESTING ON STEEL PLATES ON TOP OF THE FOUNDATION, AND GROUTED IT WITH A THIN MIXTURE OF ONE PART CEMENT AND TWO PARTS AND. THE GROUT SHOULD FILL THE PIPES AROUND THE FOUNDATION BOLTS. THE LEVELING WEDGES SHOULD BE REMOVED AFTER GROUT HAS THOROUGHLY SET.
3. DAY TANKS - DAY TANK ABOVE THE FLOOR LINE SHOULD HAVE GAGE GLASSES TO PERMIT MEASUREMENT OF FUEL CONSUMED.
4. PIPING - SHOULD BE LOCATED IN TRENCHES WITH SIDE WALLS AND FLOORS OF CONCRETE AT LEAST 4 INCHES THICK AND COVERED BY REMOVABLE STEEL PLATES.
5. THE CONTRACTOR SHALL SUBMIT CATALOUGE / BROCHURES SUBJECT FOR FURTHER TECHNICAL E VALUATION BY THE CONCERNED AUTHORITY (BOD) PRIOR TO PROCUREMENT / INSTALLATION OF THE EQUIPMENT / UNIT.
6. EXHAUST DUCT SHALL BE INSTALLED AND HANGED WITH APPROPRIATE VIBRATION ISOLATOR

DIMENSION TABLE					
SIZE	A (mm)	B (mm)	C (mm)	D (mm)	E-MAX (mm)
24"	24.50" (622)	4.75" (121)	2" (50)	28 x 28" (712 x 712)	16" (406)



WALL MOUNTED VENTILATING FAN DETAIL

SCALE NTS.



DETAIL SECTION OF GENERATOR

SCALE NTS.

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PROJECT AND LOCATION: DPWH STANDARD FIELD MODULAR HOSPITAL

SHEET CONTENTS: SCHEDULE OF GENERATOR SET, POWERHOUSE GROUND FLOOR PLAN, SECTION DETAIL OF GENERATOR SET, MISCELLANEOUS DRAWING DETAIL

DESIGNED BY: BENJAMIN R. GALMAK, ENGINEER II
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SET NO.: BOD / B

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