



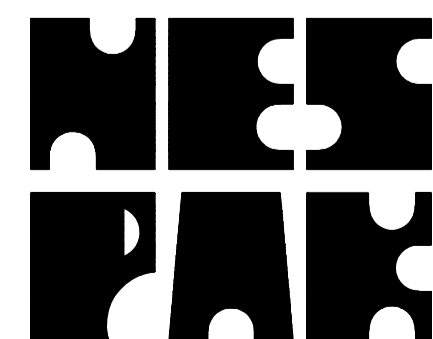
UNITED NATIONS HIGH COMMISSIONER
FOR REFUGEES (UNHCR)

ANNEX-A1 (TENDER # PAKIS/RFP/22/033)

**RENOVATION WORKS OF TRAUMA CENTER
AT ABBASI SHAHEED HOSPITAL, KARACHI**

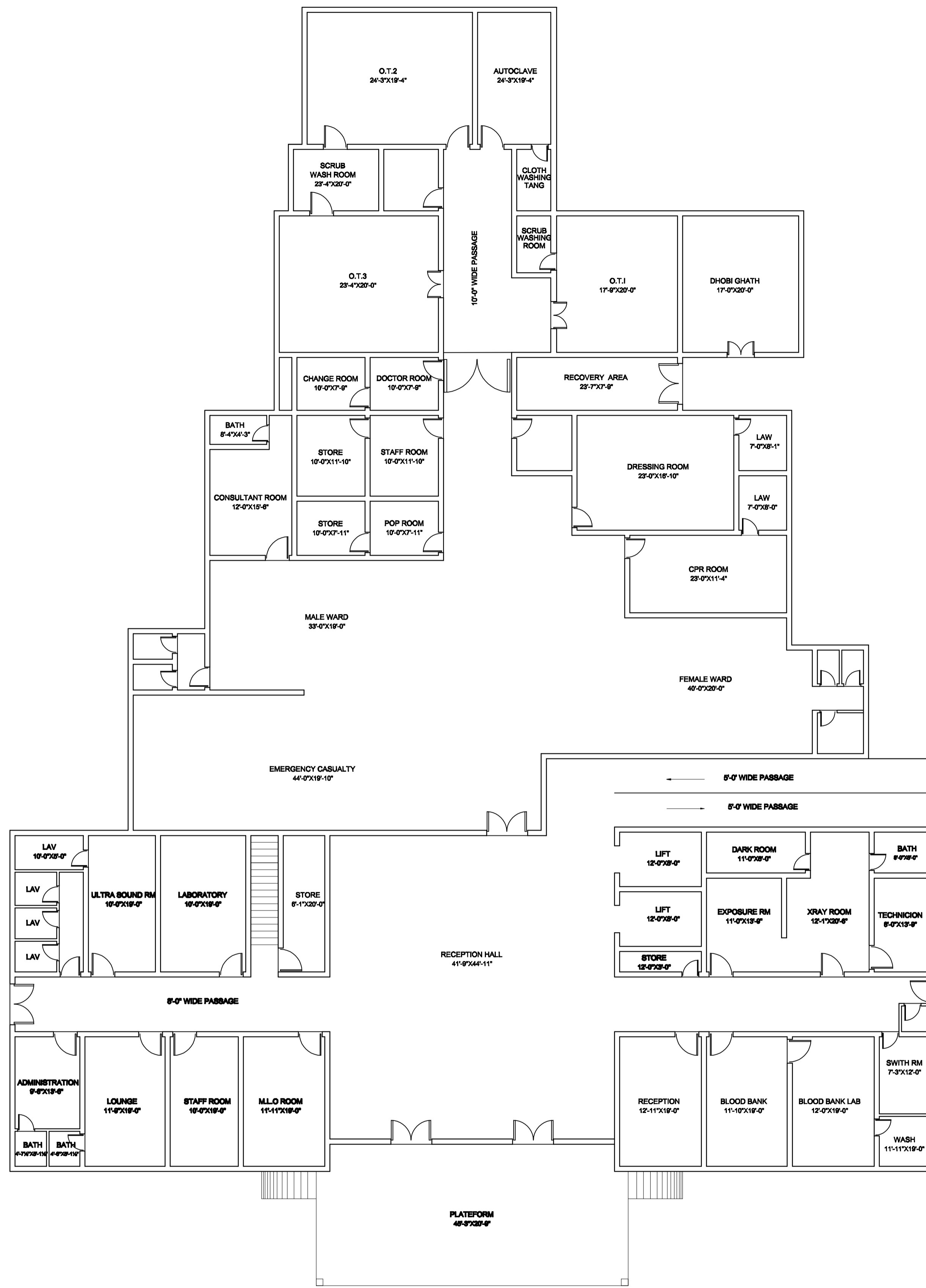
DRAWINGS

SEPTEMBER, 2022

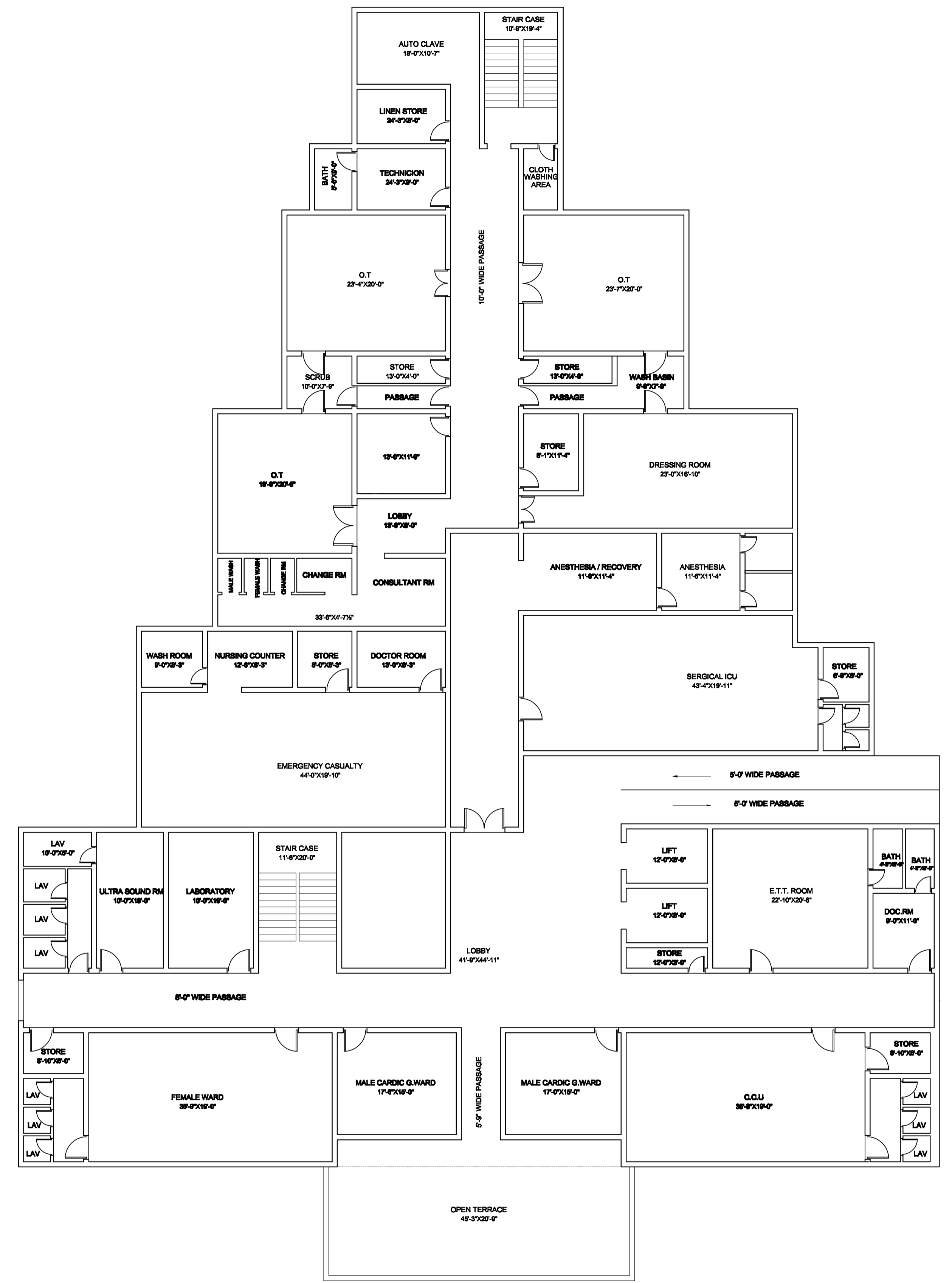


NATIONAL ENGINEERING SERVICES PAKISTAN (PVT) LIMITED
NESPAK HOUSE, Sector-G, 5/2, P. O. Box 2461, Islamabad
PHONE : (0092 51) 9221910-13 - Fax : (0092 51) 9221914
E-mail: nespak@cyber.net.pk Website: www.nespak.com.pk

Clearance Code	4199/321/M/172(22)	Doc No.	4199-03	Rev No.	0
----------------	--------------------	---------	---------	---------	---



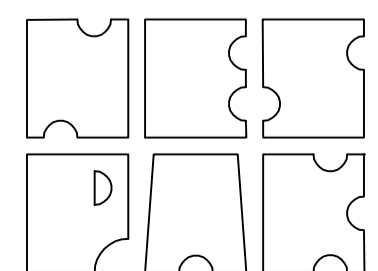
GROUND FLOOR PLAN



FIRST FLOOR PLAN



UNHCR PAKISTAN



NATIONAL ENGINEERING SERVICES
PAKISTAN (PVT.) LTD. ISLAMABAD

PROJECT
RENOVATION WORKS
OF TRAUMA CENTER
AT ABBASI SHAHEED
HOSPITAL, KARACHI

TITLE
FLOOR PLAN
DWG. NO.
4199/322/BD/01B01

SCALE
N.T.S
DATE
SEP., 22
REV.
0

SYMBOLS AND DESCRIPTIONS GENERAL NOTES

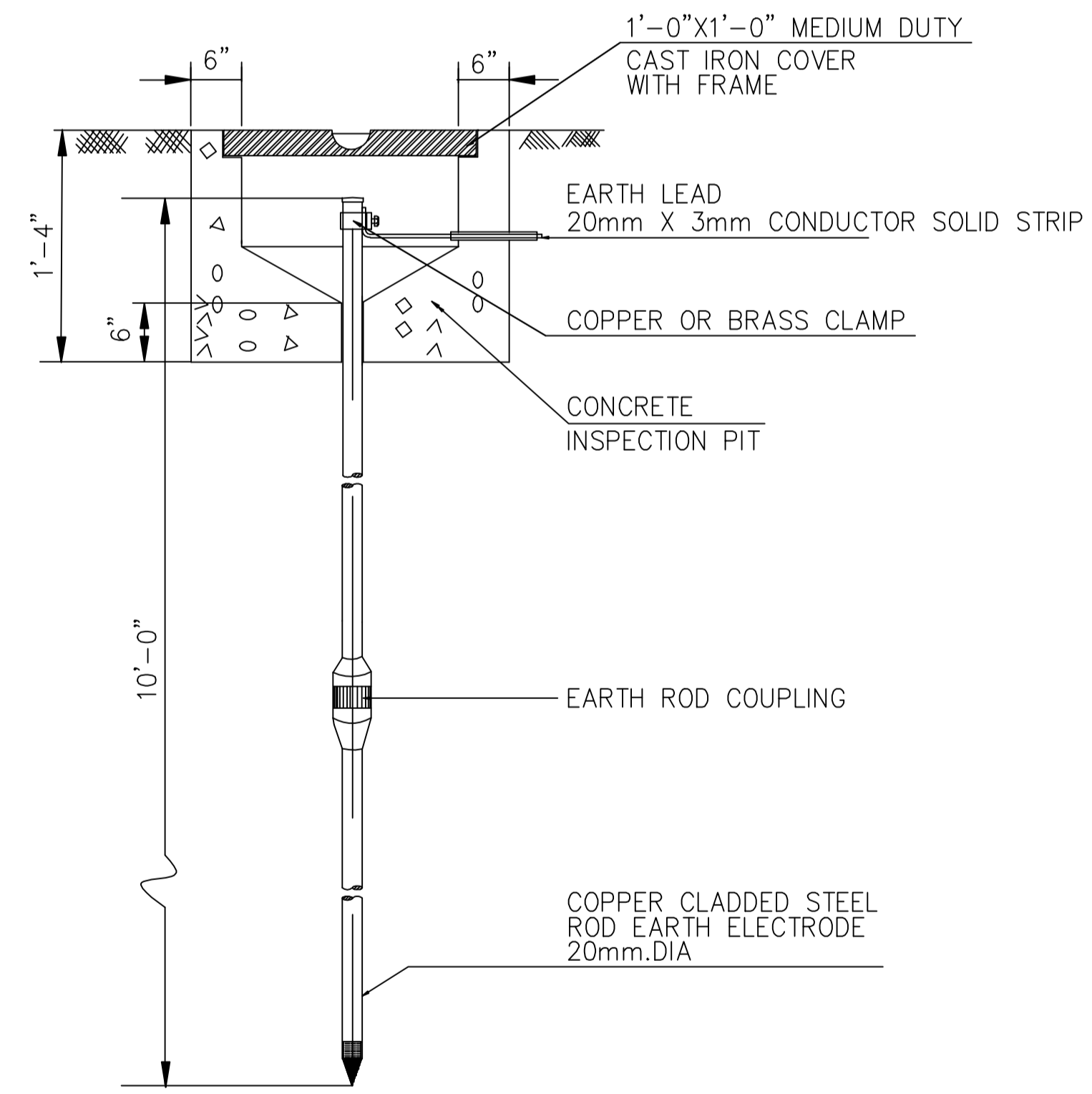
ELECTRICAL WORKS			
S. #	SYMBOL	DESCRIPTION	STATUS
1		MSB -- MAIN SWITCH BOARD	N.A
2		DB -- DISTRIBUTION BOARD	
3		CP -- CONTROL PANEL	N.A
4		PDB -- POWER DISTRIBUTION BOARD	N.A
5		TRIPLE POLE, 500 VOLTS, MOULDED CASE CIRCUIT BREAKER (RUPERTING CAPACITY INDICATED ON THE DRAWINGS & MENTIONED IN THE RELEVANT BOQ ITEM)	N.A
6		TRIPLE POLE, 500 VOLTS, MINIATURE CIRCUIT BREAKER (RUPERTING CAPACITY INDICATED ON THE DRAWINGS & MENTIONED IN THE RELEVANT BOQ ITEM)	
7		SINGLE POLE, 250 VOLTS, MINIATURE CIRCUIT BREAKER (RUPERTING CAPACITY INDICATED ON THE DRAWINGS & MENTIONED IN THE RELEVANT BOQ ITEM)	
8		FOUR POLE, 500 VOLTS, RESIDUAL CURRENT CIRCUIT BREAKER (SENSITIVITY INDICATED ON THE DRAWINGS & MENTIONED IN THE RELEVANT BOQ ITEM)	N.A
9		DOUBLE POLE, 250 VOLTS, RESIDUAL CURRENT CIRCUIT BREAKER (SENSITIVITY INDICATED ON THE DRAWINGS & MENTIONED IN THE RELEVANT BOQ ITEM)	
10		INSTRUMENTS PROTECTION FUSE (ONE NO.)	
11		INSTRUMENTS PROTECTION FUSES (THREE NOS.)	
12		VSS - VOLTMETER SELECTOR SWITCH (RY-YB-BR-OFF-RN)	
13		ASS - AMMETER SELECTOR SWITCH (R-Y-B-OFF)	
14		AC AMMETER (MEASURING RANGE INDICATED ON DRAWING)	
15		AC VOLTMETER (MEASURING RANGE INDICATED ON DRAWING)	
16		ONE NO. SINGLE PHASE CURRENT TRANSFORMER (TRANSFORMATION RATIO INDICATED ON DRAWINGS)	N.A
17		THREE NOS. SINGLE PHASE CURRENT TRANSFORMERS (TRANSFORMATION RATIOS INDICATED ON DRAWINGS)	
18		PHASE INDICATION LAMPS R - RED Y - YELLOW B - BLUE	
19		LIGHT CONTROL SWITCHES AND FAN DIMMERS	
20		13amp SOCKET WIRED WITH 2.5 SQ.mm PVC COPPER CABLE	
21		15amp SOCKET FLEX OUTLET WIRED WITH 4.0 SQ.mm PVC COPPER CABLE	
22		20amp SOCKET FLEX OUTLET WIRED WITH 6.0 SQ.mm PVC COPPER CABLE	

LIGHTING FIXTURES			
S. #	SYMBOL	DESCRIPTION	STATUS
1		12 W BULKHEAD LIGHT	
2		TUBE LIGHT	
3		12 W SURFACE MOUNTED DOWN LIGHTER	
4		12 W SURFACE MOUNTED DOWN LIGHTER	
5		09 W MIRROR LIGHT	
6		WALL BRACKET FAN	

COMMUNICATIONS SYSTEMS			
S. #	SYMBOL	DESCRIPTION	STATUS
1		INTELLIGENT PHOTO ELECTRONIC SMOKE DETECTOR	
2		INTELLIGENT THERMAL DETECTOR FIXED TEMPERATURE TYPE	
3		ADDRESSABLE MANUAL CALL POINT WITH BREAK GLASS WITH BREAK GLASS & SOUNDER	
4		FIRE ALARM CONTROL PANEL	
5		RJ 11 OUTLET FOR VOICE	
6		RJ 45 SOCKET OUTLET	

ELECTRICAL SYSTEMS																																																																																																											
S. #	SYMBOL	DESCRIPTION	STATUS																																																																																																								
<p>1. FOLLOWING NOTES SHALL IN GENERAL APPLY TO ALL ELECTRICAL DRAWINGS. THE INSTRUCTIONS IN THESE NOTES SHALL BE FOLLOWED UNLESS STATED OTHERWISE.</p> <p>THESE NOTES SHALL BE APPLICABLE TO THE ENTIRE ELECTRICAL WORKS. IF THE SITE CONDITIONS NECESSITATE ANY ALTERATIONS OR DEVIATIONS THE DIRECTIONS OF THE ENGINEER SHALL BE OBSERVED AS FINAL INSTRUCTIONS.</p> <p>ALL ELECTRICAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH BOQ, TECHNICAL SPECIFICATIONS, ARCHITECTURAL, STRUCTURAL, PLUMBING AND HVAC DRAWINGS & ALL OTHER RELEVANT DETAILS.</p> <p>DIMENSIONS/MEASUREMENTS GIVEN IN LAYOUT AND DETAILED DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE TO CALCULATE THE ACTUAL DIMENSIONS/MEASUREMENTS ACCORDING TO STRUCTURAL AND ARCHITECTURAL DRAWINGS.</p> <p>THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS WITH ALL RELEVANT DETAILS TO THE ENGINEER FOR APPROVAL ACCORDING TO THE GENERAL CONDITIONS OF CONTRACT WELL IN TIME BEFORE COMMENCEMENT OF THAT WORK.</p> <p>PROPER CO-ORDINATION OF ELECTRICAL WORKS WITH OTHER SERVICES SHALL BE CARRIED OUT AT SITE.</p> <p>ALL NON-CURRENT CARRYING PARTS I.e. OUTER CASINGS OF EQUIPMENT SUCH AS HT & LT PANELS, DISTRIBUTIONS BOARDS, CABLE TRAYS, AUXILIARY CONSTRUCTIONS FOR EQUIPMENT ETC. SHALL BE CONNECTED TO THE GROUNDING/EARTHING SYSTEM AT REQUIRED NUMBER OF POINTS WITH SPECIFIED SIZES OF CONDUCTORS. WATER PIPES ALONG ELECTRICAL LINE SHALL BE BONDED TO THE EARTHING SYSTEM WITH 10mm² SINGLE CORE, COPPER CONDUCTOR PVC CABLE.</p> <p>ELECTRICAL POINTS FOR EQUIPMENT SHALL BE INSTALLED IN CO-ORDINATION WITH THE RELEVANT DRAWINGS OF OTHER SERVICES, SUCH AS COMMUNICATION SYSTEMS, HVAC, PLUMBING ETC. THE LOCATION ON ELECTRICAL DRAWINGS IS ONLY INDICATIVE.</p> <p>ARRANGEMENT OF ELECTRICAL EQUIPMENTS ON ELECTRICAL DRAWINGS ARE TENTATIVE. EXACT ARRANGEMENT OF EQUIPMENTS SHALL BE MADE IN VIEW OF ITS PHYSICAL DIMENSIONS AND EASE OF MAINTENANCE.</p> <p>LOADS ON ALL PHASES SHALL BE BALANCED AT THE TESTING/COMMISSIONING STAGE.</p> <p>CONDUIT/DUCT RUN UNDER FLOOR SHALL HAVE A MINIMUM COVER OF TWO INCHES FROM TOP OF CONDUIT/DUCT TO FINISH FLOOR LEVEL.</p> <p>RUN GREEN-YELLOW OR GREEN SINGLE CORE PVC INSULATED COPPER CONDUCTOR CABLE OF SPECIFIED SIZES AS PROTECTIVE EARTH CONDUCTOR (ECC) ALL ALONG LIGHT AND POWER WIRING. WHEREVER SIZE IS NOT SPECIFIED THE FOLLOWING CRITERIA SHALL BE OBSERVED TO DETERMINE MINIMUM CROSS SECTIONAL AREA OF EARTH CONTINUITY CONDUCTOR(ECC) IN RELATION TO THE AREA OF ITS PHASE CONDUCTORS. RUN DEGRADATE ECC FOR EACH CIRCUIT.</p> <ul style="list-style-type: none"> - ECC & PHASE CONDUCTOR OF SAME SIZE FOR UP TO AND INCLUDING 16mm² CABLES. - 16mm² ECC FOR PHASE CONDUCTOR OF 16mm², 25mm² & 35 mm² CABLES. - FOR CABLES OF 50mm² AND ABOVE SIZES, ECC IS HALF SIZE OF PHASE CONDUCTOR. - MAXIMUM SIZE OF ECC IS 70mm². <p>THE MAXIMUM CAPACITY OF PVC CONDUITS FOR SIMULTANEOUS DRAWING OF PVC INSULATED CABLES SHALL BE DETERMINED AS PER BS 4607. THE FOLLOWING TABLE SHALL BE USED TO DETERMINE THE MAXIMUM NUMBER OF CABLES.</p> <table border="1"> <thead> <tr> <th>S. #</th> <th>NOMINAL SIZE (SQMM)</th> <th>NO. & DIA OF WIRES</th> <th>NOMINAL OVERALL DIA (3/4" DIA)</th> <th>20 MM DIA (1" DIA)</th> <th>25 MM DIA (1 1/4" DIA)</th> <th>32 MM DIA (1 1/2" DIA)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1.5</td> <td>1/1.38</td> <td>3.1</td> <td>10</td> <td>18</td> <td>30</td> </tr> <tr> <td>2</td> <td>2.5</td> <td>1/1.78</td> <td>3.5</td> <td>8</td> <td>14</td> <td>23</td> </tr> <tr> <td>3</td> <td>2.5</td> <td>7/0.67</td> <td>3.8</td> <td>7</td> <td>12</td> <td>20</td> </tr> <tr> <td>4</td> <td>4</td> <td>7/0.85</td> <td>4.3</td> <td>5</td> <td>9</td> <td>15</td> </tr> <tr> <td>5</td> <td>6</td> <td>7/1.04</td> <td>4.9</td> <td>4</td> <td>7</td> <td>12</td> </tr> <tr> <td>6</td> <td>10</td> <td>7/1.35</td> <td>6.2</td> <td>2</td> <td>4</td> <td>7</td> </tr> <tr> <td>7</td> <td>16</td> <td>7/1.70</td> <td>7.3</td> <td>-</td> <td>3</td> <td>5</td> </tr> <tr> <td>8</td> <td>25</td> <td>7/2.14</td> <td>9.0</td> <td>-</td> <td>2</td> <td>3</td> </tr> <tr> <td>9</td> <td>35</td> <td>19/1.53</td> <td>10.3</td> <td>-</td> <td>-</td> <td>2</td> </tr> </tbody> </table> <p>NORMAL & EMERGENCY CIRCUITS SHALL RUN IN DEGRADATE CONDUITS.</p> <p>ALL WIRING FOR CONTROLS SHALL BE CARRIED OUT WITH 1 CORE PVC CABLES OF SPECIFIED VOLTAGE GRADE AND SIZES.</p> <p>THE WIRING SHALL BE CONTINUOUS LOOPING-IN TYPE AND NO JOINT IN WIRES SHALL BE ALLOWED.</p> <p>THE WIRING SYSTEM SHALL BE CARRIED OUT ONLY AFTER THE CONDUIT SYSTEM IS COMPLETELY INSTALLED AND ALL OUTLET BOXES, ETC. ARE FIXED IN POSITION.</p> <p>MOUNTING HEIGHTS OF ELECTRICAL FITTINGS WHEN MEASURED FROM FINISHED FLOOR LEVEL(F.F.L.) TO THE BOTTOM OF FITTINGS SHALL BE AS UNDER, UNLESS OTHERWISE SHOWN OR INSTRUCTED.</p> <table border="1"> <tbody> <tr> <td>MAIN SWITCH BOARD</td> <td>48 INCHES</td> </tr> <tr> <td>DISTRIBUTION BOARD</td> <td>48 INCHES</td> </tr> <tr> <td>CONTROL PANEL</td> <td>48 INCHES</td> </tr> <tr> <td>ON/OFF PUSH BUTTON STATION</td> <td>48 INCHES</td> </tr> <tr> <td>DIMMER CONTROL UNIT</td> <td>48 INCHES</td> </tr> <tr> <td>LIGHT CONTROL SWITCH(ONE WAY/TWO WAY)</td> <td>48 INCHES</td> </tr> <tr> <td>5A SOCKET OUTLETS IN GENERAL AREAS</td> <td>10 INCHES</td> </tr> <tr> <td>15A SOCKET OUTLETS IN GENERAL AREAS</td> <td>10 INCHES</td> </tr> <tr> <td>20A SOCKET OUTLETS IN GENERAL AREAS</td> <td>10 INCHES</td> </tr> <tr> <td>15A SOCKET OUTLETS IN KITCHEN(ABOVE COUNTER)</td> <td>10 INCHES</td> </tr> <tr> <td>15A SOCKET OUTLETS IN TOILETS</td> <td>66 INCHES</td> </tr> <tr> <td>16A TP SPIN INDUSTRIAL SOCKET OUTLETS IN LABS.</td> <td>48 INCHES</td> </tr> <tr> <td>32A TP SPIN INDUSTRIAL SOCKET OUTLETS IN LABS.</td> <td>48 INCHES</td> </tr> <tr> <td>63A TP SPIN INDUSTRIAL SOCKET OUTLETS IN LABS.</td> <td>48 INCHES</td> </tr> <tr> <td>CELLING FAN</td> <td>96 INCHES</td> </tr> <tr> <td>WALL FAN</td> <td>84 INCHES</td> </tr> <tr> <td>EXHAUST FAN</td> <td>REFER ARCH. DRGS.</td> </tr> </tbody> </table>				S. #	NOMINAL SIZE (SQMM)	NO. & DIA OF WIRES	NOMINAL OVERALL DIA (3/4" DIA)	20 MM DIA (1" DIA)	25 MM DIA (1 1/4" DIA)	32 MM DIA (1 1/2" DIA)	1	1.5	1/1.38	3.1	10	18	30	2	2.5	1/1.78	3.5	8	14	23	3	2.5	7/0.67	3.8	7	12	20	4	4	7/0.85	4.3	5	9	15	5	6	7/1.04	4.9	4	7	12	6	10	7/1.35	6.2	2	4	7	7	16	7/1.70	7.3	-	3	5	8	25	7/2.14	9.0	-	2	3	9	35	19/1.53	10.3	-	-	2	MAIN SWITCH BOARD	48 INCHES	DISTRIBUTION BOARD	48 INCHES	CONTROL PANEL	48 INCHES	ON/OFF PUSH BUTTON STATION	48 INCHES	DIMMER CONTROL UNIT	48 INCHES	LIGHT CONTROL SWITCH(ONE WAY/TWO WAY)	48 INCHES	5A SOCKET OUTLETS IN GENERAL AREAS	10 INCHES	15A SOCKET OUTLETS IN GENERAL AREAS	10 INCHES	20A SOCKET OUTLETS IN GENERAL AREAS	10 INCHES	15A SOCKET OUTLETS IN KITCHEN(ABOVE COUNTER)	10 INCHES	15A SOCKET OUTLETS IN TOILETS	66 INCHES	16A TP SPIN INDUSTRIAL SOCKET OUTLETS IN LABS.	48 INCHES	32A TP SPIN INDUSTRIAL SOCKET OUTLETS IN LABS.	48 INCHES	63A TP SPIN INDUSTRIAL SOCKET OUTLETS IN LABS.	48 INCHES	CELLING FAN	96 INCHES	WALL FAN	84 INCHES	EXHAUST FAN	REFER ARCH. DRGS.
S. #	NOMINAL SIZE (SQMM)	NO. & DIA OF WIRES	NOMINAL OVERALL DIA (3/4" DIA)	20 MM DIA (1" DIA)	25 MM DIA (1 1/4" DIA)	32 MM DIA (1 1/2" DIA)																																																																																																					
1	1.5	1/1.38	3.1	10	18	30																																																																																																					
2	2.5	1/1.78	3.5	8	14	23																																																																																																					
3	2.5	7/0.67	3.8	7	12	20																																																																																																					
4	4	7/0.85	4.3	5	9	15																																																																																																					
5	6	7/1.04	4.9	4	7	12																																																																																																					
6	10	7/1.35	6.2	2	4	7																																																																																																					
7	16	7/1.70	7.3	-	3	5																																																																																																					
8	25	7/2.14	9.0	-	2	3																																																																																																					
9	35	19/1.53	10.3	-	-	2																																																																																																					
MAIN SWITCH BOARD	48 INCHES																																																																																																										
DISTRIBUTION BOARD	48 INCHES																																																																																																										
CONTROL PANEL	48 INCHES																																																																																																										
ON/OFF PUSH BUTTON STATION	48 INCHES																																																																																																										
DIMMER CONTROL UNIT	48 INCHES																																																																																																										
LIGHT CONTROL SWITCH(ONE WAY/TWO WAY)	48 INCHES																																																																																																										
5A SOCKET OUTLETS IN GENERAL AREAS	10 INCHES																																																																																																										
15A SOCKET OUTLETS IN GENERAL AREAS	10 INCHES																																																																																																										
20A SOCKET OUTLETS IN GENERAL AREAS	10 INCHES																																																																																																										
15A SOCKET OUTLETS IN KITCHEN(ABOVE COUNTER)	10 INCHES																																																																																																										
15A SOCKET OUTLETS IN TOILETS	66 INCHES																																																																																																										
16A TP SPIN INDUSTRIAL SOCKET OUTLETS IN LABS.	48 INCHES																																																																																																										
32A TP SPIN INDUSTRIAL SOCKET OUTLETS IN LABS.	48 INCHES																																																																																																										
63A TP SPIN INDUSTRIAL SOCKET OUTLETS IN LABS.	48 INCHES																																																																																																										
CELLING FAN	96 INCHES																																																																																																										
WALL FAN	84 INCHES																																																																																																										
EXHAUST FAN	REFER ARCH. DRGS.																																																																																																										

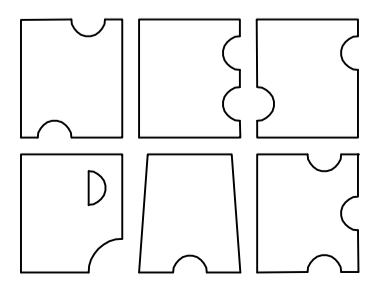
COMMUNICATION SYSTEMS																	
S. #	SYMBOL	DESCRIPTION	STATUS														
<p>1. FOLLOWING NOTES SHALL IN GENERAL APPLY TO ALL COMMUNICATION SYSTEMS DRAWINGS. THE INSTRUCTIONS IN THESE NOTES SHALL BE FOLLOWED UNLESS STATED OTHERWISE.</p> <p>THESE NOTES SHALL BE APPLICABLE TO THE ENTIRE COMMUNICATION SYSTEMS WORKS. IF THE SITE CONDITIONS NECESSITATE ANY ALTERATIONS OR DEVIATIONS THE DIRECTIONS OF THE ENGINEER SHALL BE OBSERVED AS FINAL INSTRUCTIONS.</p> <p>ALL COMMUNICATION SYSTEMS DRAWINGS SHALL BE READ IN CONJUNCTION WITH TECHNICAL SPECIFICATIONS, ITEMS OF B.O.Q., ARCHITECTURAL, STRUCTURAL, HVAC, PLUMBING DRAWINGS AND ALL OTHER RELEVANT DETAILS.</p> <p>DIMENSIONS/MEASUREMENTS GIVEN IN LAYOUT AND DETAILED DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE TO CALCULATE THE ACTUAL DIMENSIONS/MEASUREMENTS ACCORDING TO STRUCTURAL AND ARCHITECTURAL DRAWINGS.</p> <p>THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS WITH ALL RELEVANT DETAILS TO THE ENGINEER FOR APPROVAL ACCORDING TO THE GENERAL CONDITIONS OF CONTRACT WELL IN TIME BEFORE COMMENCEMENT OF THAT WORK.</p> <p>PROPER CO-ORDINATION OF COMMUNICATION SYSTEMS WORKS WITH OTHER SERVICES SHALL BE CARRIED OUT AT SITE.</p> <p>TELEPHONE SYSTEM SHALL BE COMPLETE WITH INSTRUMENTS, EQUIPMENT AND INTERCONNECTING WIRING, TELEPHONE EXCHANGE, TELEPHONE OUTLETS, JUNCTION BOXES, CONDUITS OF SPECIFIED SIZES IN THE BUILDING, AND UNDERGROUND PIPES OF SPECIFIED SIZES SHOWN ON DRAWINGS SHALL BE PROVIDED. WHERE SIZE OF CONDUIT/PIPE IS NOT SPECIFIED SUITABLE SIZE SHALL BE INSTALLED AS DIRECTED BY THE ENGINEER.</p> <p>POINTS FOR COMMUNICATION SYSTEMS EQUIPMENT SHALL BE INSTALLED IN CO-ORDINATION WITH THE RELEVANT DRAWINGS OF OTHER SERVICES, SUCH AS ELECTRICAL, HVAC, PLUMBING ETC. THE LOCATION ON COMMUNICATION SYSTEMS DRAWINGS IS ONLY INDICATIVE.</p> <p>ARRANGEMENT OF COMMUNICATION SYSTEMS EQUIPMENTS ON DRAWINGS ARE TENTATIVE EXACT ARRANGEMENT OF EQUIPMENTS SHALL BE MADE IN VIEW OF ITS PHYSICAL DIMENSIONS AND EASE OF MAINTENANCE.</p> <p>CONDUIT/DUCT RUN UNDER FLOOR SHALL HAVE A MINIMUM COVER 2 INCHES FROM TOP OF CONDUIT/DUCT TO FINISH FLOOR LEVEL.</p> <p>RUN GREEN-YELLOW OR GREEN SINGLE CORE PVC INSULATED COPPER CONDUCTOR CABLE OF SPECIFIED SIZES AS PROTECTIVE EARTH CONDUCTOR (ECC) ALL ALONG COMMUNICATION SYSTEMS WIRING.</p> <p>ALL WIRING FOR CONTROLS SHALL BE CARRIED OUT WITH 1 CORE PVC CABLES OF SPECIFIED VOLTAGE GRADE AND SIZES.</p> <p>THE WIRING SHALL BE CONTINUOUS LOOPING-IN TYPE AND NO JOINT IN WIRES SHALL BE ALLOWED.</p> <p>THE WIRING SYSTEM SHALL BE CARRIED OUT ONLY AFTER THE CONDUIT SYSTEM IS COMPLETELY INSTALLED AND ALL OUTLET BOXES, ETC. ARE FIXED IN POSITION.</p> <p>MOUNTING HEIGHTS OF ELECTRICAL FITTINGS WHEN MEASURED FROM FINISHED FLOOR LEVEL (F.F.L.) TO THE BOTTOM OF FITTINGS SHALL BE AS UNDER, UNLESS OTHERWISE SHOWN OR INSTRUCTED.</p> <table border="1"> <tbody> <tr> <td>TELEPHONE JUNCTION BOX</td> <td>10 INCHES</td> </tr> <tr> <td>TELEPHONE OUTLET</td> <td>10 INCHES</td> </tr> <tr> <td>INTERCOM CONTROL PACK</td> <td>10 INCHES</td> </tr> <tr> <td>INTERCOM STATION (WALL MOUNTED)</td> <td>36 INCHES</td> </tr> <tr> <td>FA SYSTEM CONTROL PANEL</td> <td>10 INCHES</td> </tr> <tr> <td>MANUAL CALL STATION</td> <td>42 INCHES</td> </tr> <tr> <td>AUDIO ALARM</td> <td>100 INCHES</td> </tr> </tbody> </table>				TELEPHONE JUNCTION BOX	10 INCHES	TELEPHONE OUTLET	10 INCHES	INTERCOM CONTROL PACK	10 INCHES	INTERCOM STATION (WALL MOUNTED)	36 INCHES	FA SYSTEM CONTROL PANEL	10 INCHES	MANUAL CALL STATION	42 INCHES	AUDIO ALARM	100 INCHES
TELEPHONE JUNCTION BOX	10 INCHES																
TELEPHONE OUTLET	10 INCHES																
INTERCOM CONTROL PACK	10 INCHES																
INTERCOM STATION (WALL MOUNTED)	36 INCHES																
FA SYSTEM CONTROL PANEL	10 INCHES																
MANUAL CALL STATION	42 INCHES																
AUDIO ALARM	100 INCHES																



EARTH ELECTRODE (ROD TYPE)



UNHCR PAKISTAN



NATIONAL ENGINEERING SERVICES
PAKISTAN (PVT.) LTD. ISLAMABAD

PROJECT
RENOVATION WORKS OF
TRAUMA CENTER AT ABBASI
SHAHEED HOSPITAL, KARACHI

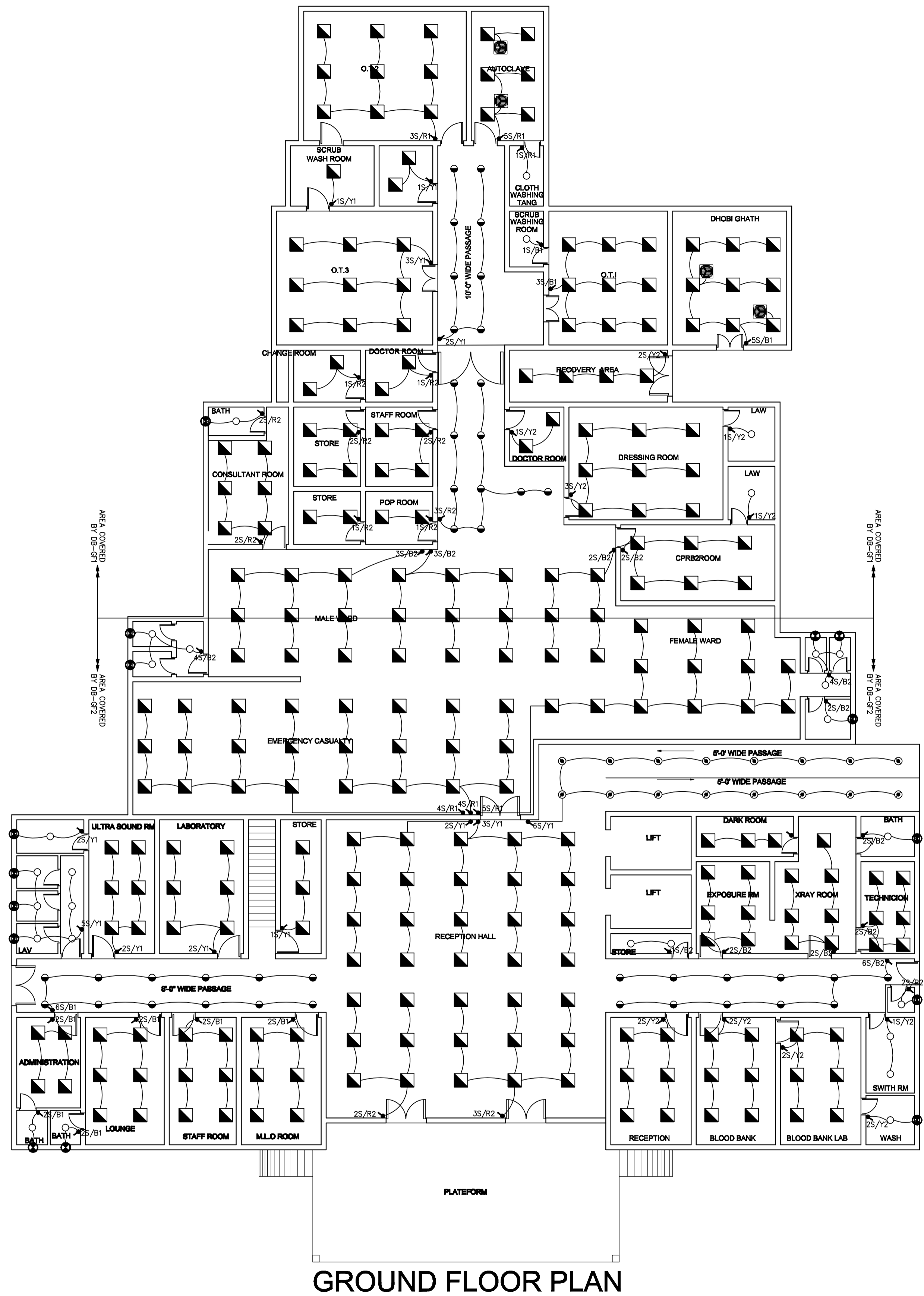
TITLE
LEGEND & GENERAL NOTES

DWG. NO.
4199/325/BD/01E01

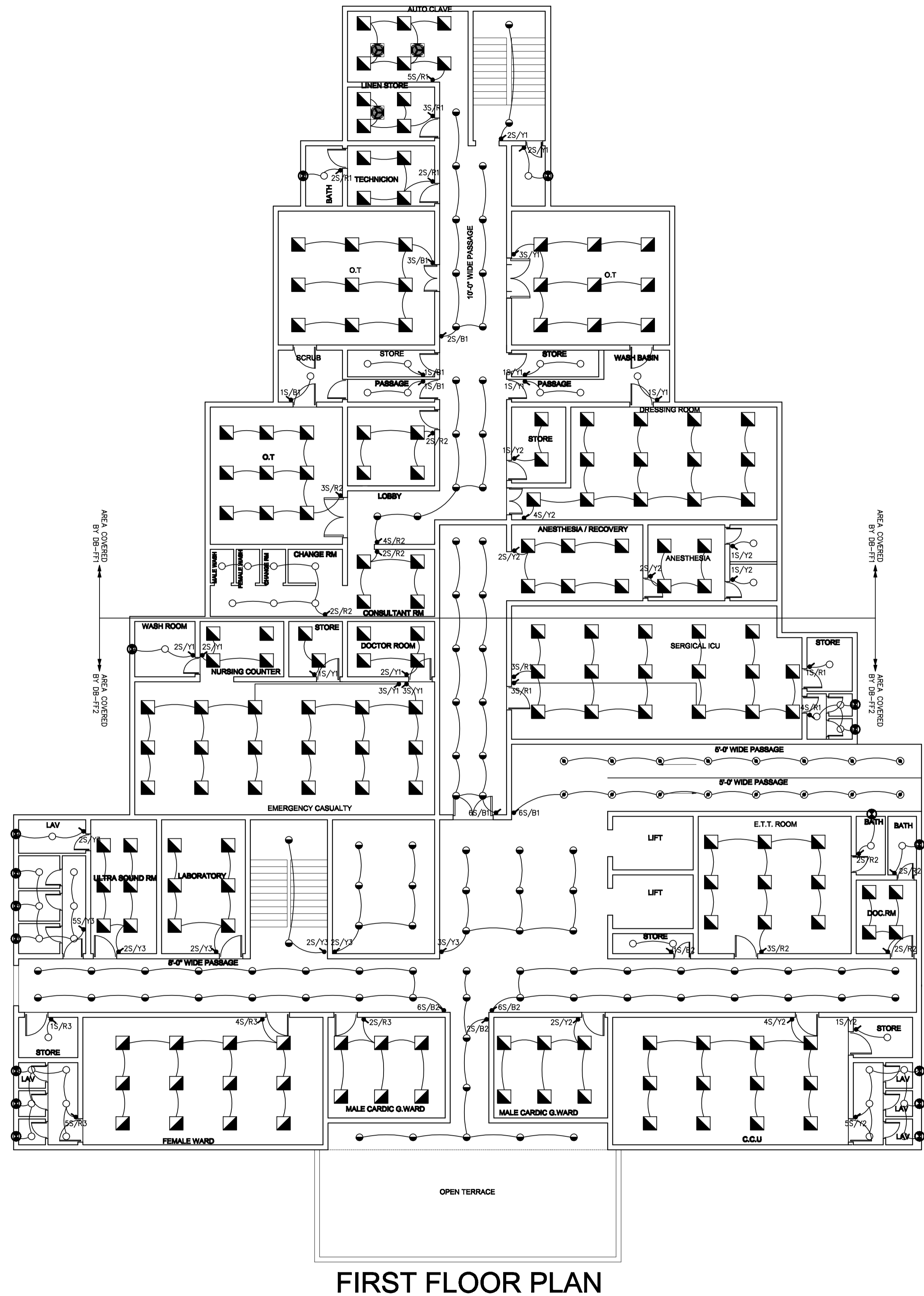
SCALE
N.T.S

DATE
SEP., 22

REV.
0



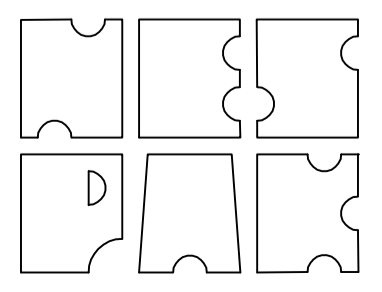
GROUND FLOOR PLAN



FIRST FLOOR PLAN

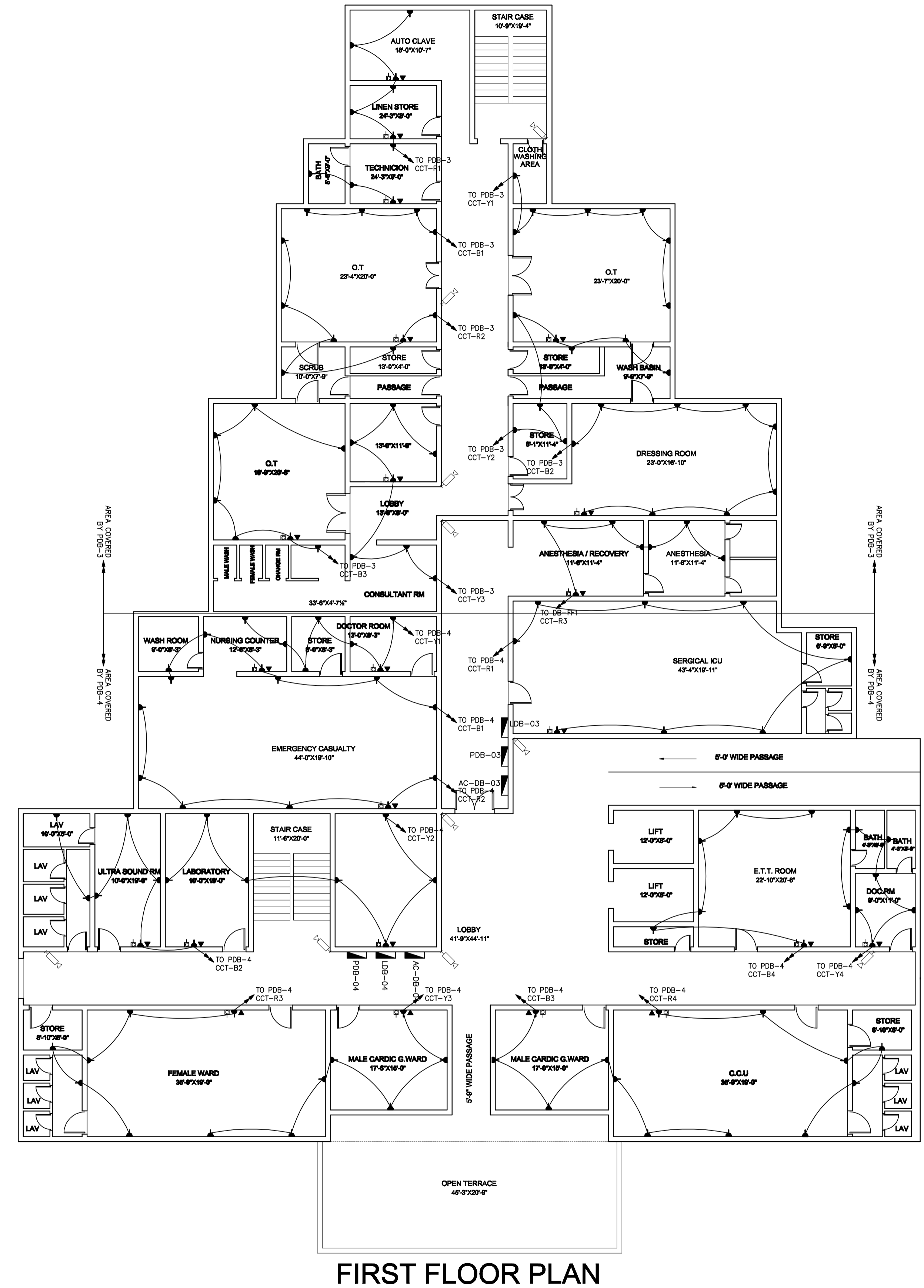
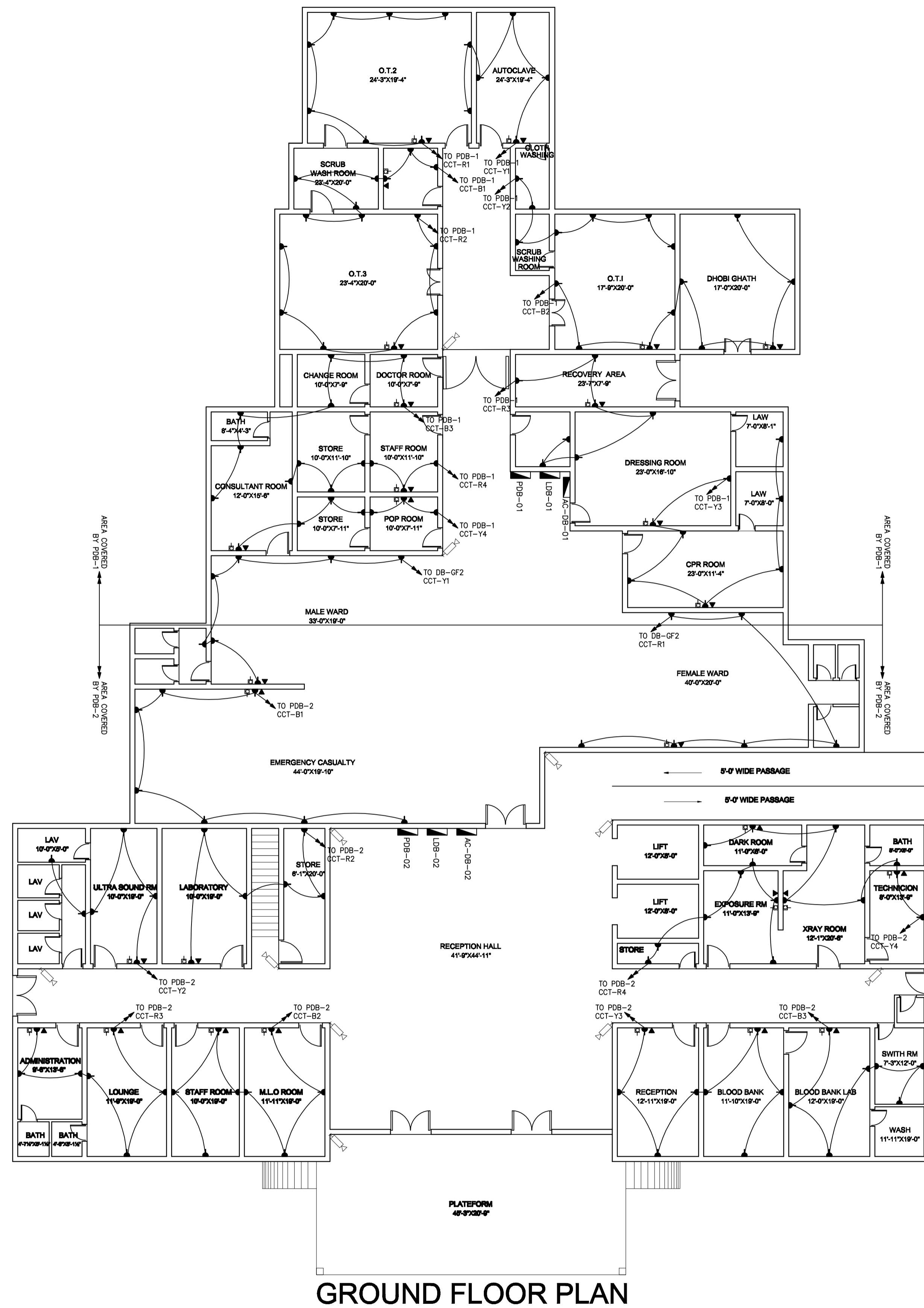


UNHCR PAKISTAN

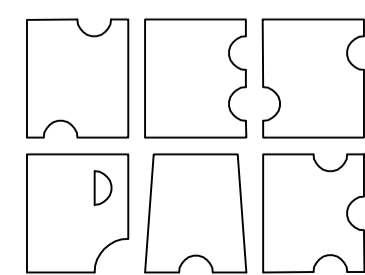


NATIONAL ENGINEERING SERVICES
PAKISTAN (PVT.) LTD. ISLAMABAD

PROJECT	TITLE	SCALE
RENOVATION WORKS OF TRAUMA CENTER AT ABBASI SHAHEED HOSPITAL, KARACHI	LIGHTING LAYOUT	N.T.S
DWG. NO.	DATE	SEP., 22
4199/325/BD/01E02	REV.	0



UNHCR PAKISTAN



NATIONAL ENGINEERING SERVICES
PAKISTAN (PVT.) LTD. ISLAMABAD

PROJECT

RENOVATION WORKS OF
TRAUMA CENTER AT ABBASI
SHAHEED HOSPITAL, KARACHI

TITLE

POWER LAYOUT

DWG. NO.

4199/325/BD/01E03

SCALE

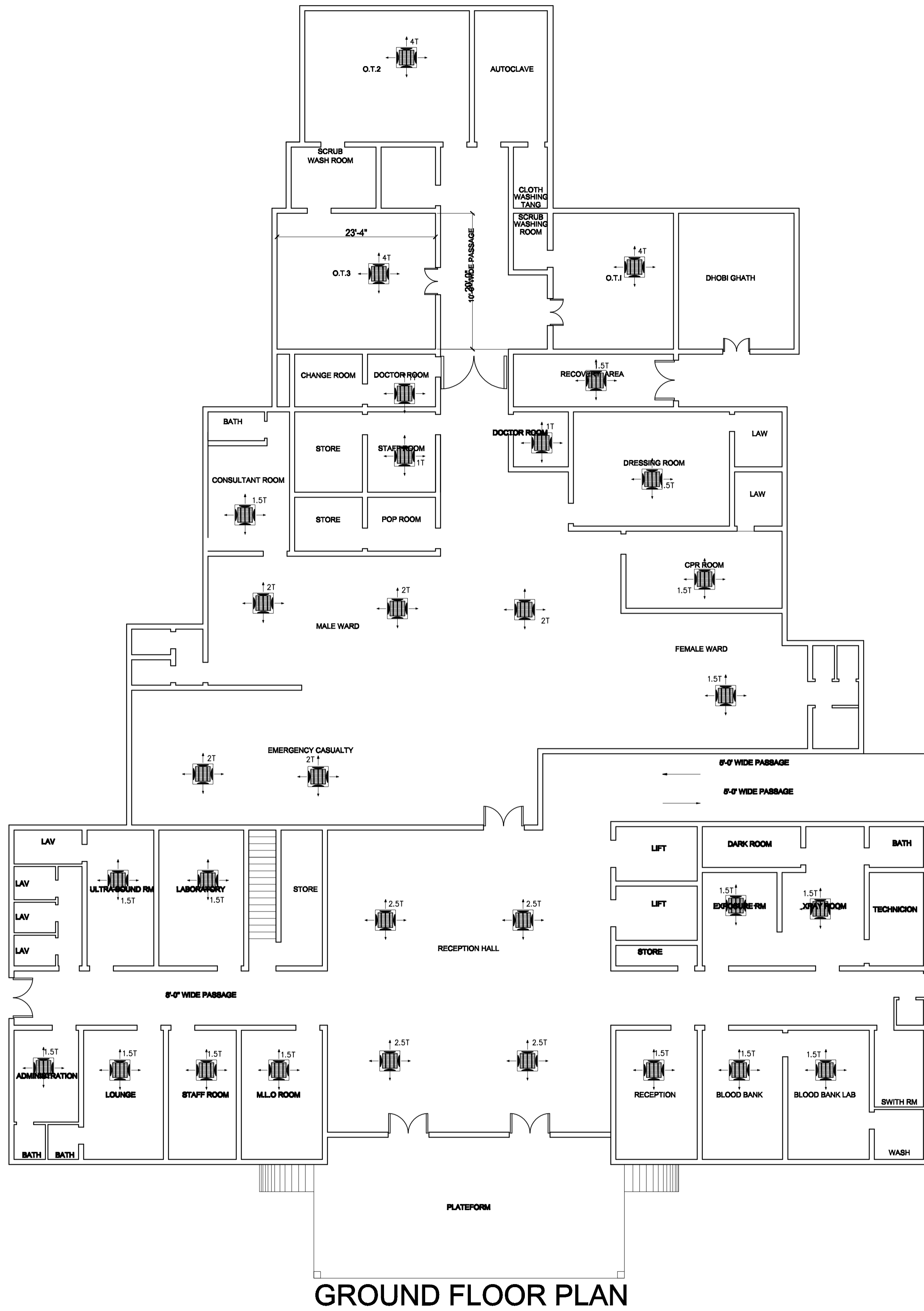
N.T.S

DATE

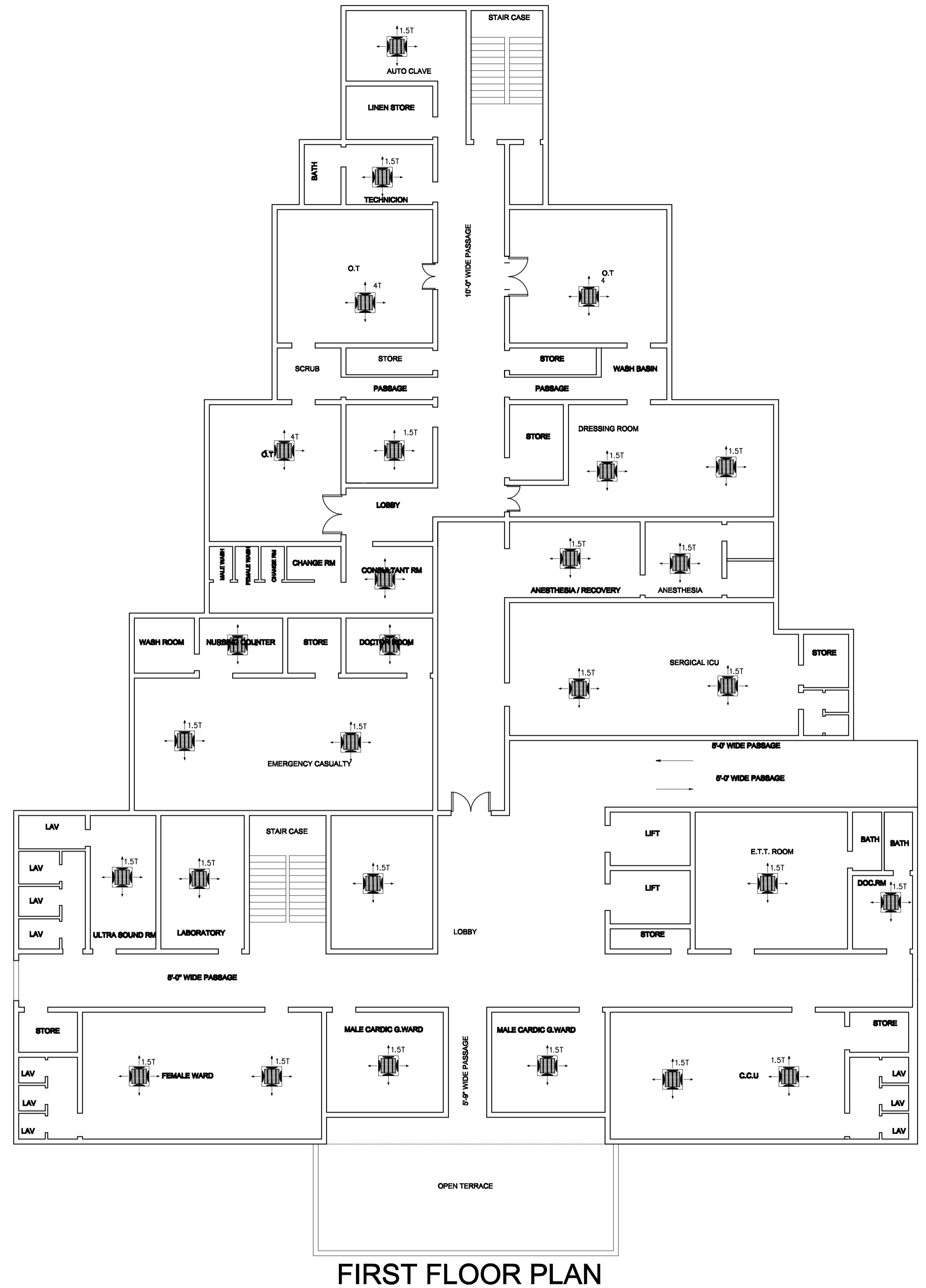
SEP., 22

REV.

0



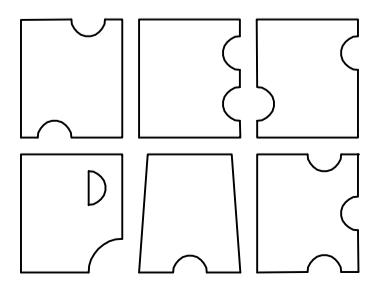
GROUND FLOOR PLAN



FIRST FLOOR PLAN



UNHCR PAKISTAN

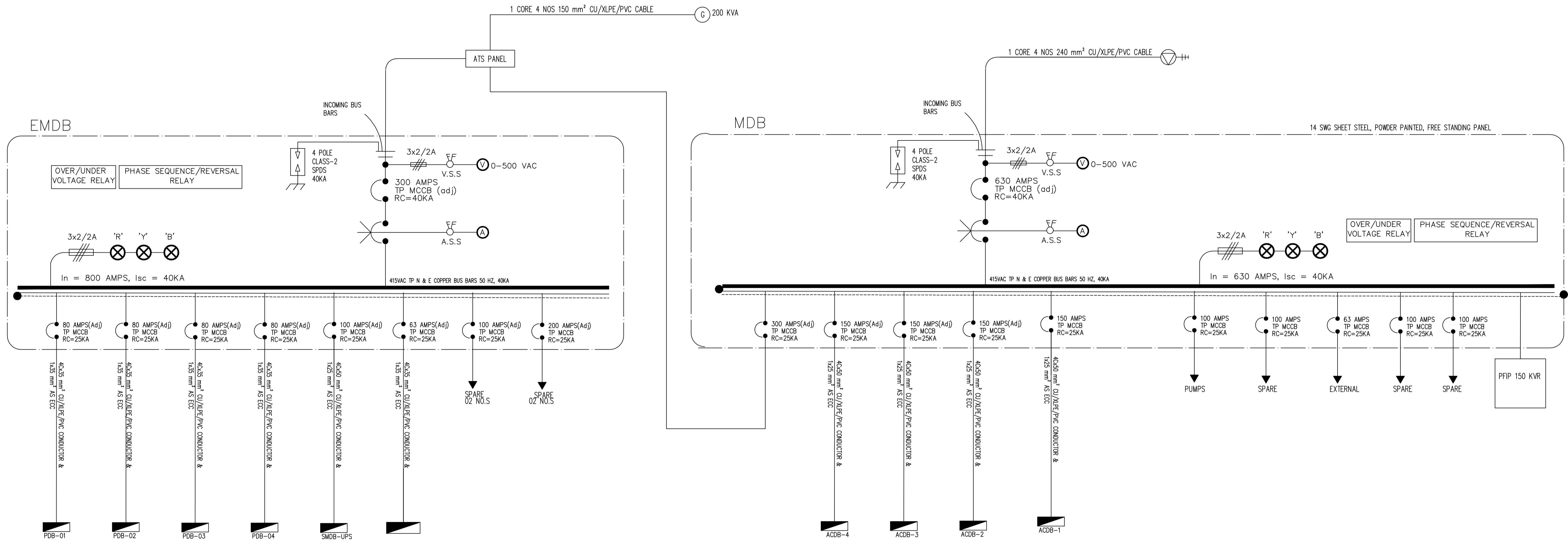


NATIONAL ENGINEERING SERVICES
PAKISTAN (PVT.) LTD. ISLAMABAD

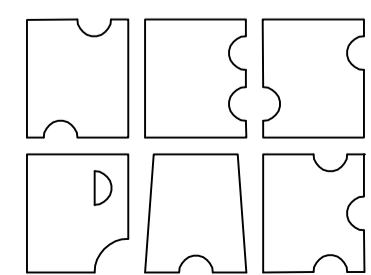
PROJECT
RENOVATION WORKS OF
TRAUMA CENTER AT ABBASI
SHAHEED HOSPITAL, KARACHI

TITLE
AC LAYOUT
DWG. NO.
4199/325/BD/01E04

SCALE
N.T.S
DATE
SEP., 22
REV.
0



UNHCR PAKISTAN



NATIONAL ENGINEERING SERVICES
PAKISTAN (PVT.) LTD. ISLAMABAD

PROJECT

RENOVATION WORKS OF
TRAUMA CENTER AT ABBASI
SHAHEED HOSPITAL, KARACHI

TITLE

SINGLE LINE DIAGRAM

DWG. NO.

4199/325/BD/01E05

SCALE

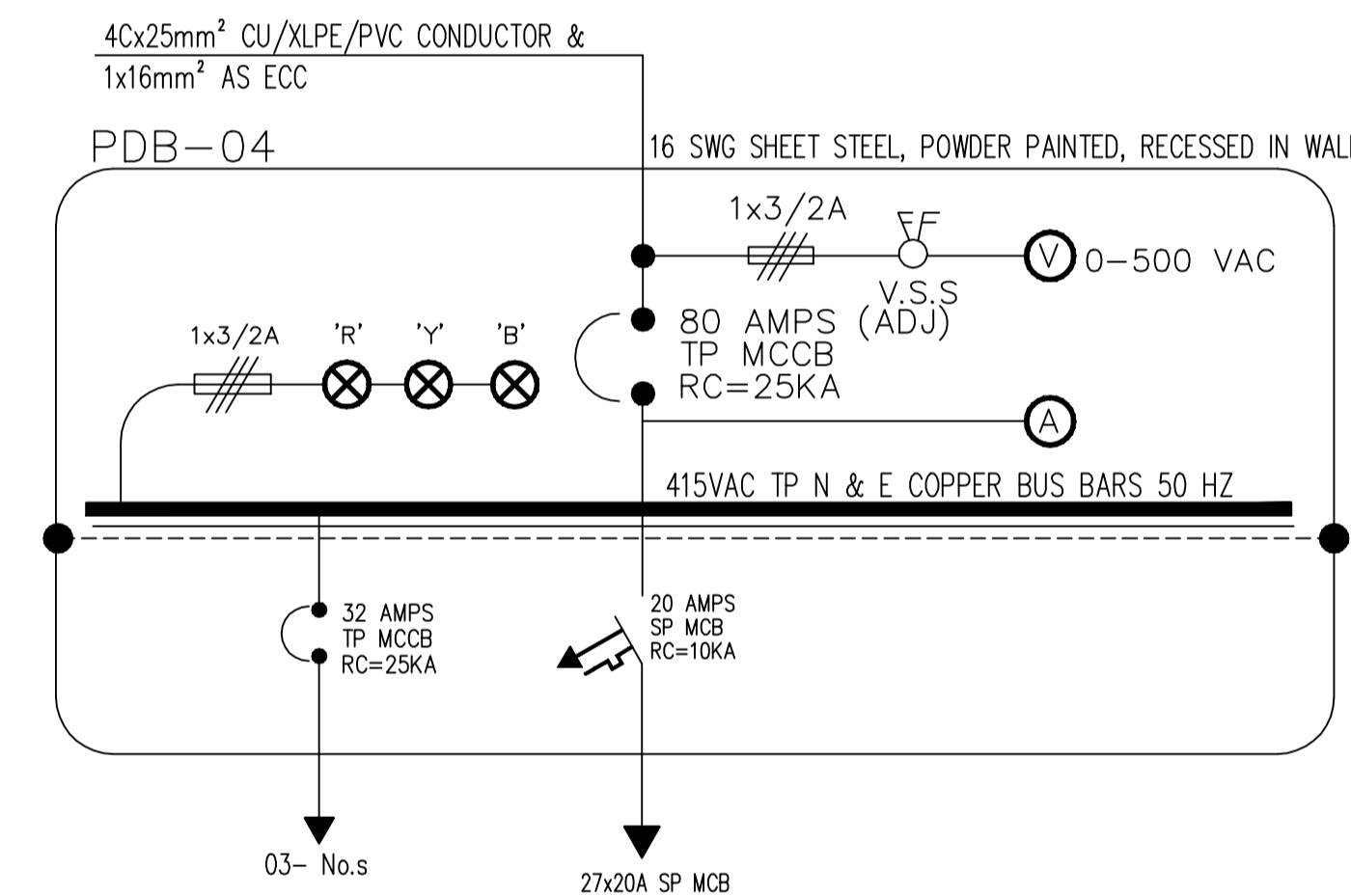
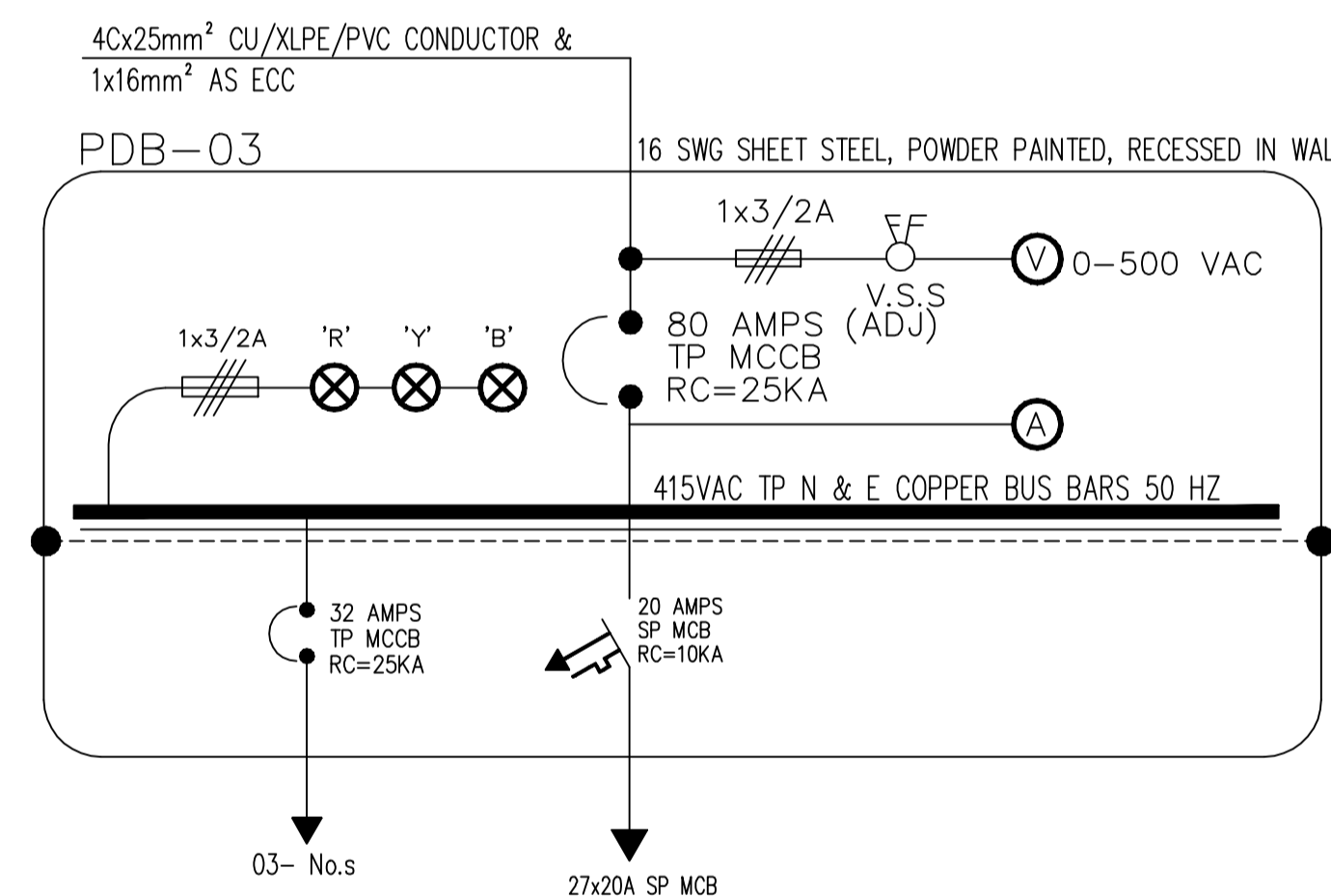
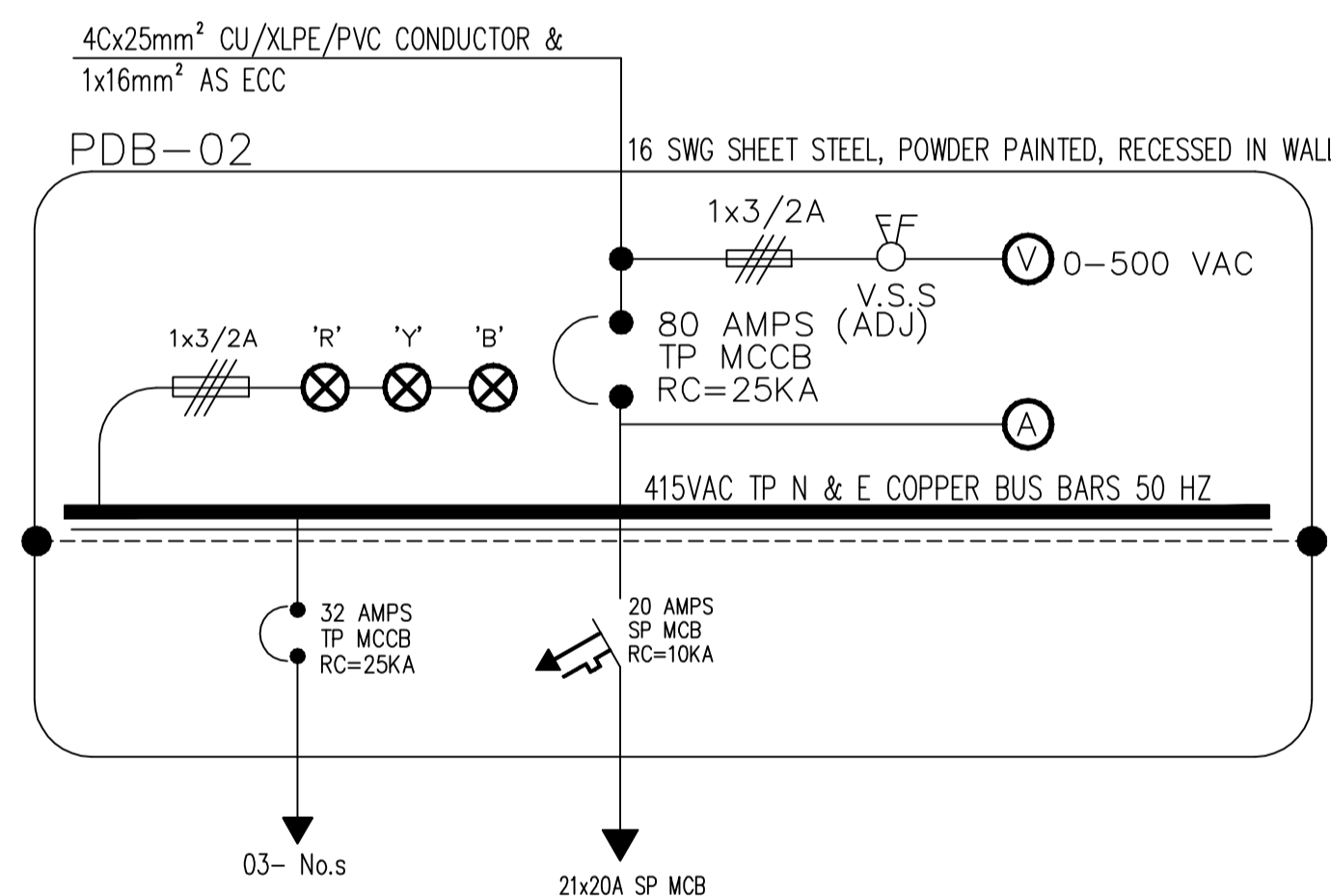
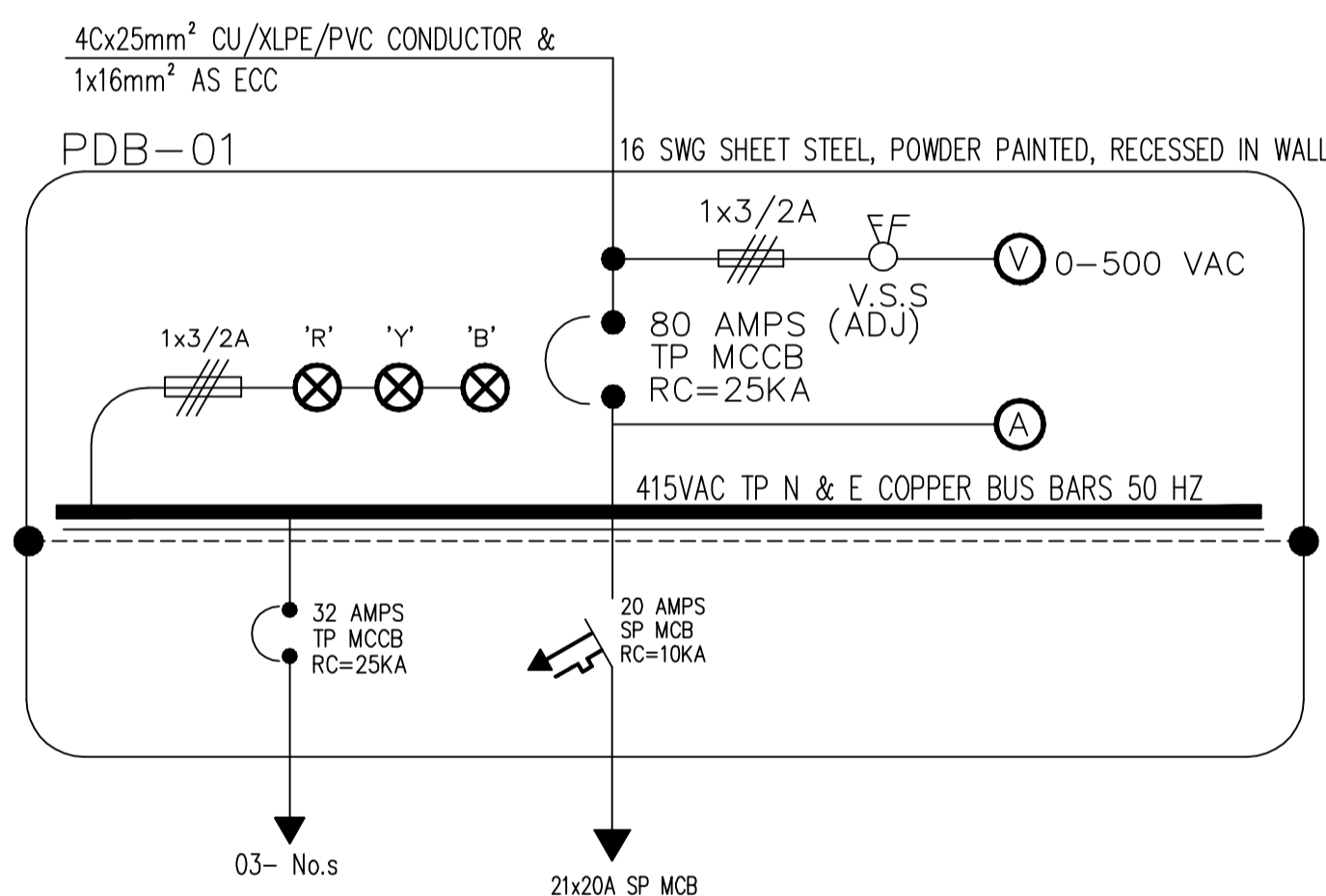
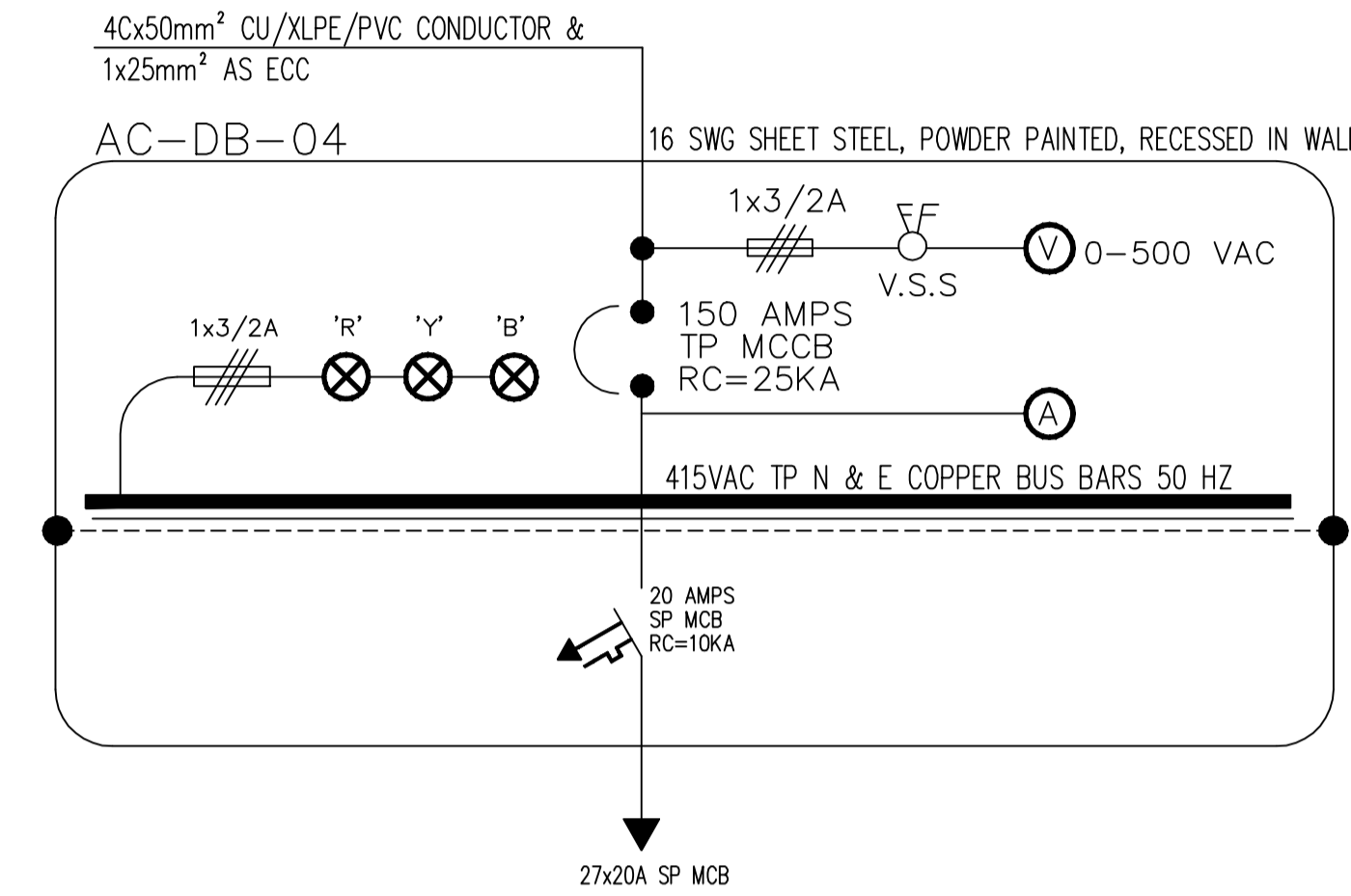
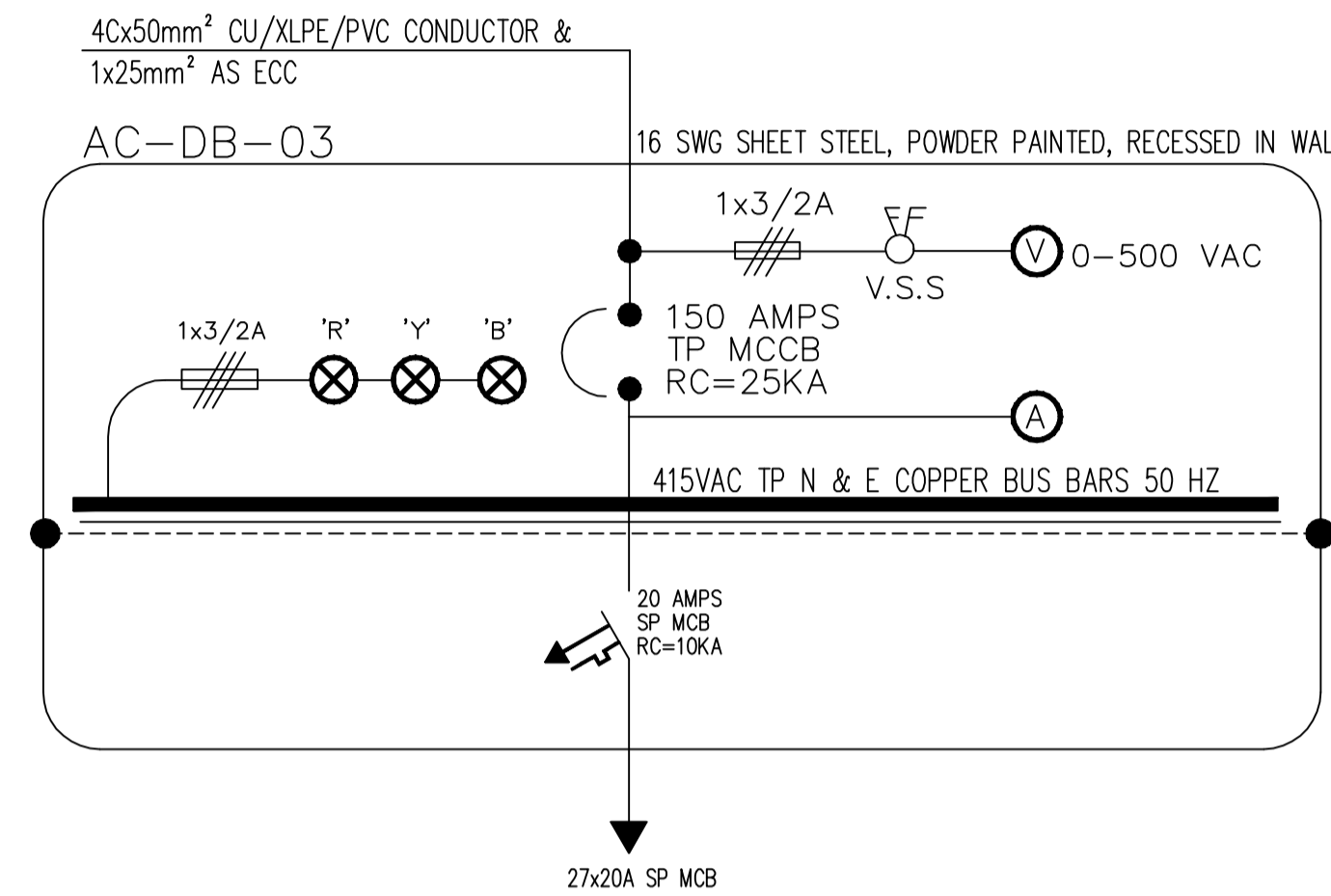
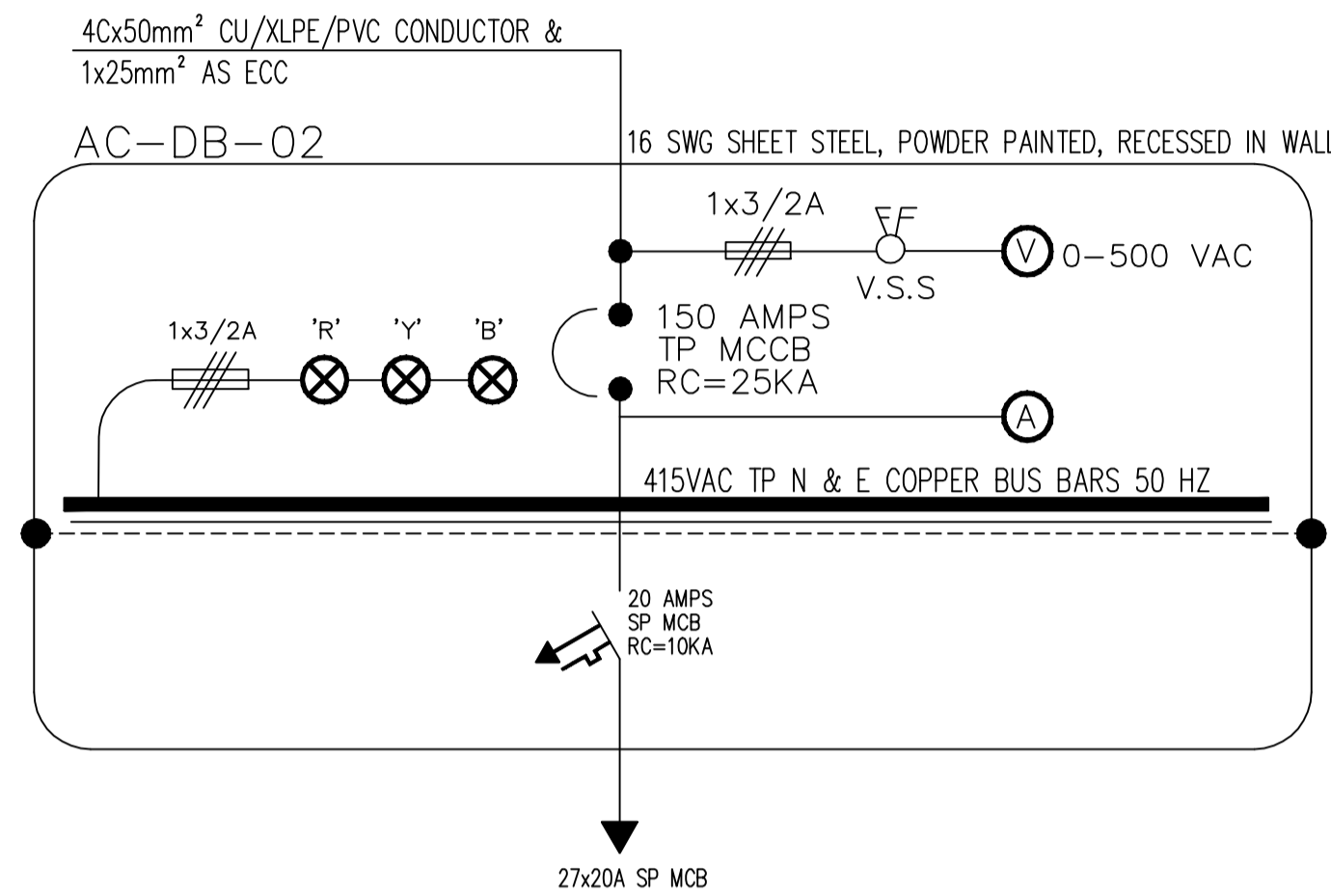
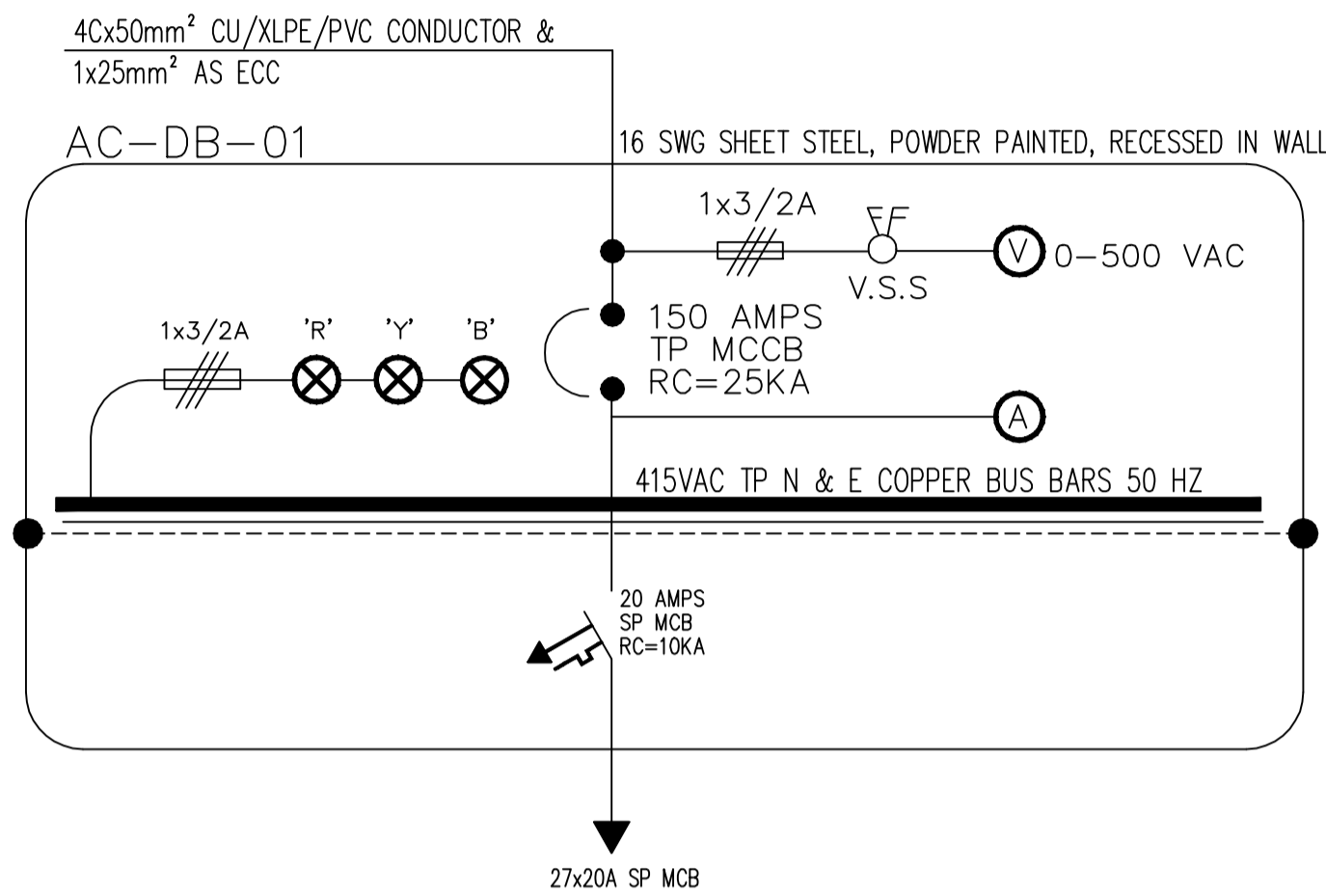
N.T.S

DATE

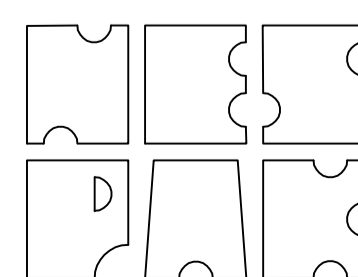
SEP.,22

REV.

0



UNHCR PAKISTAN



NATIONAL ENGINEERING SERVICES
PAKISTAN (PVT.) LTD. ISLAMABAD

PROJECT

RENOVATION WORKS OF
TRAUMA CENTER AT ABBASI
SHAHEED HOSPITAL, KARACHI

TITLE

SINGLE LINE DIAGRAM

DWG. NO.

4199/325/BD/01E06

SCALE

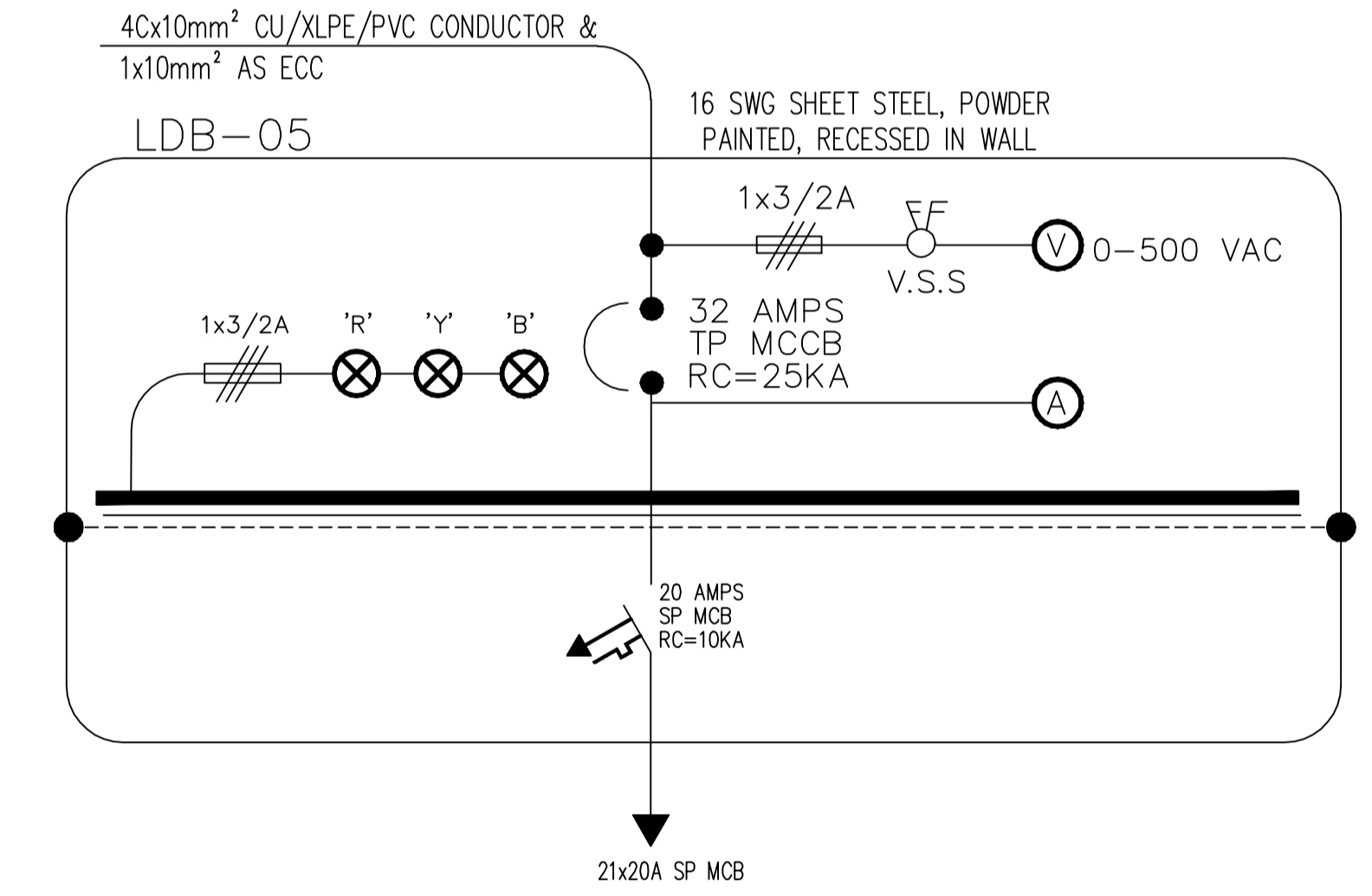
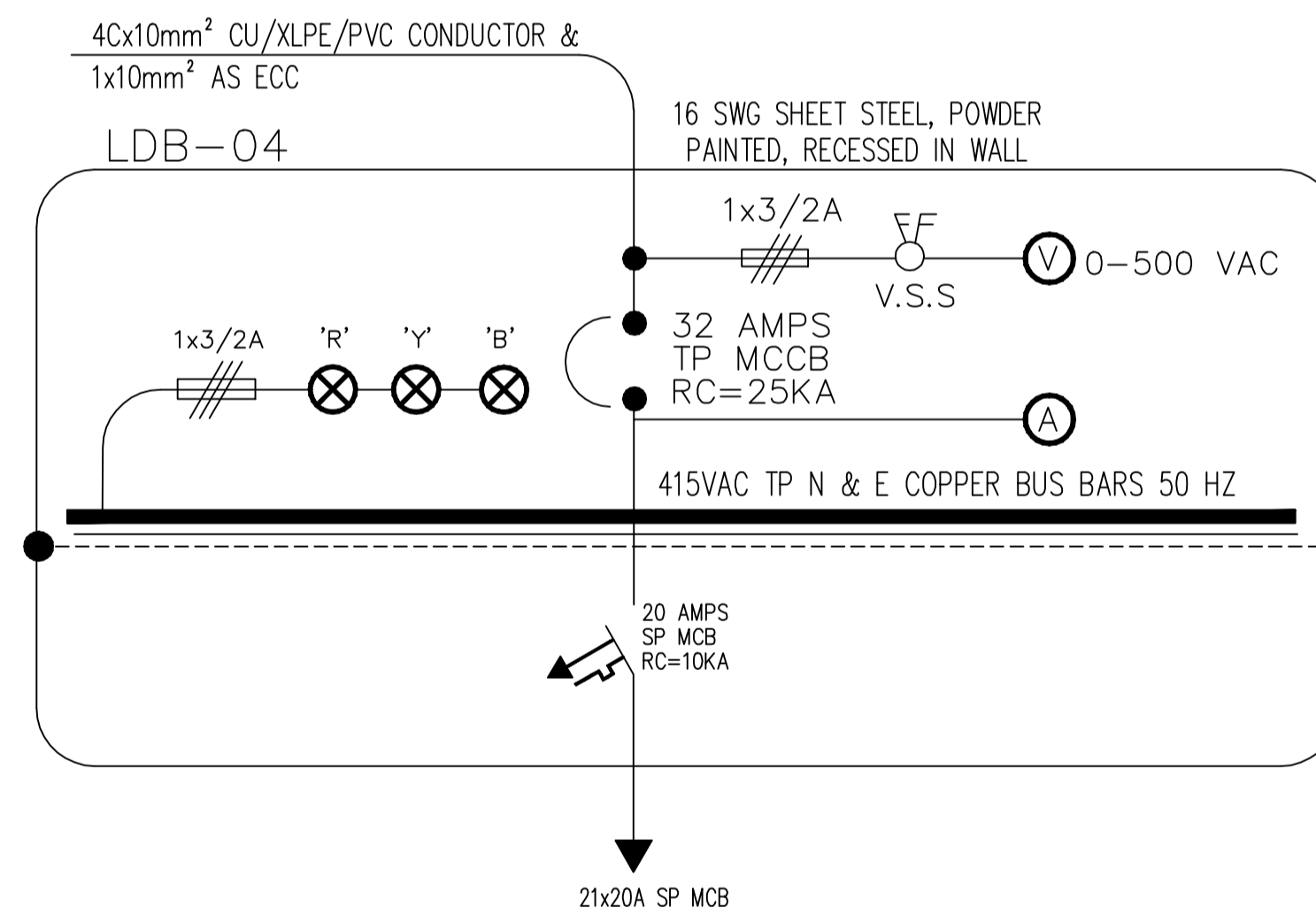
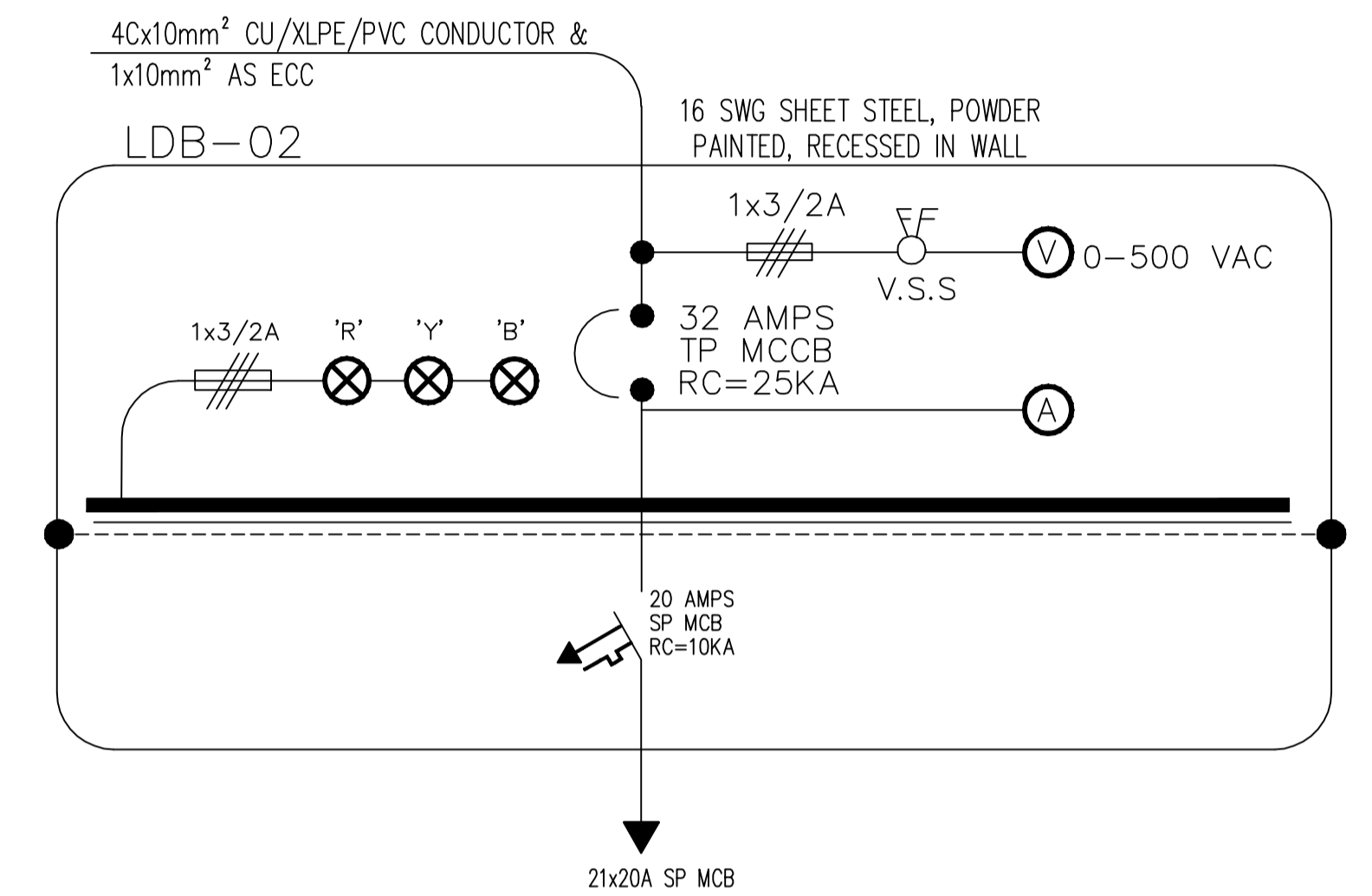
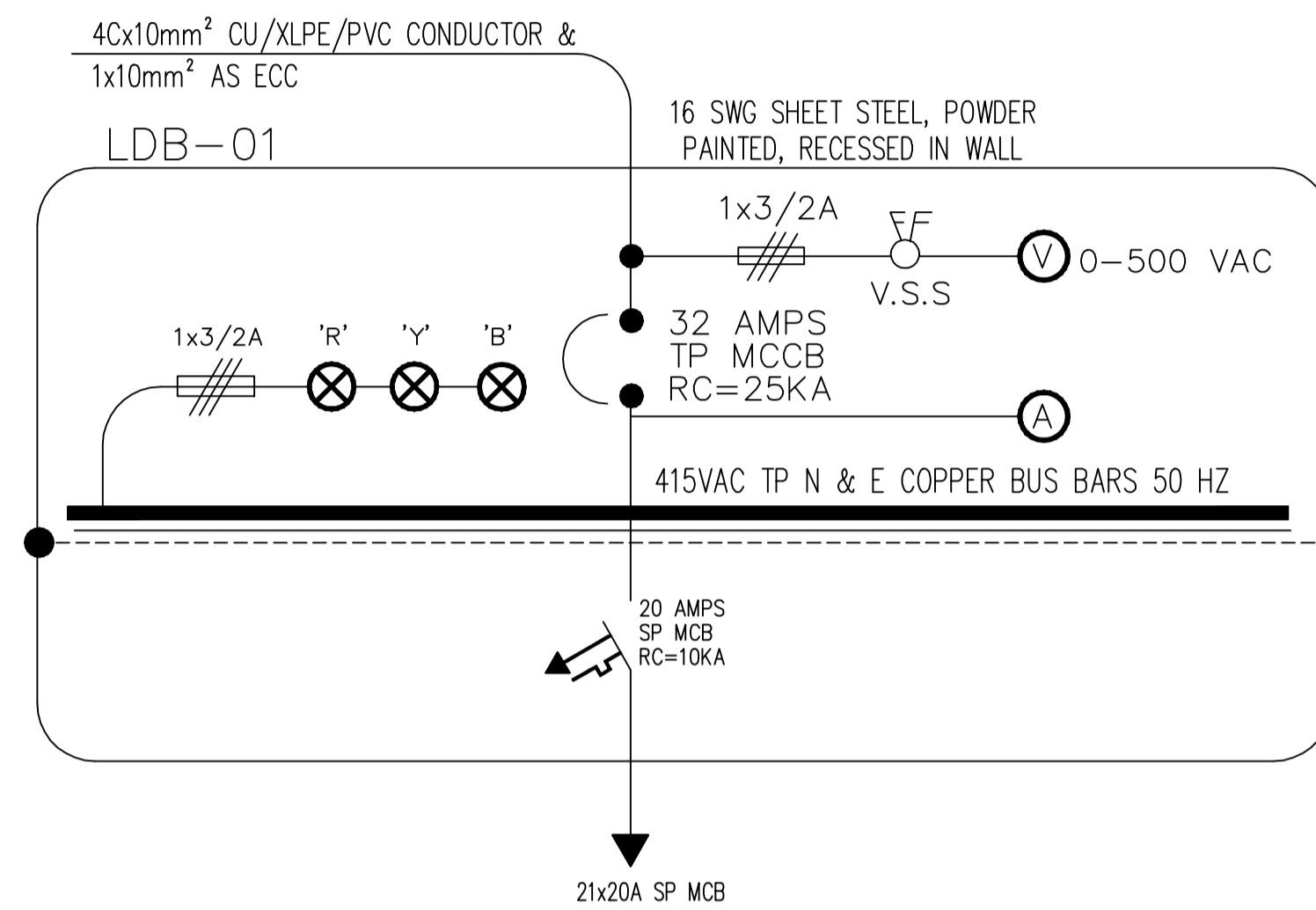
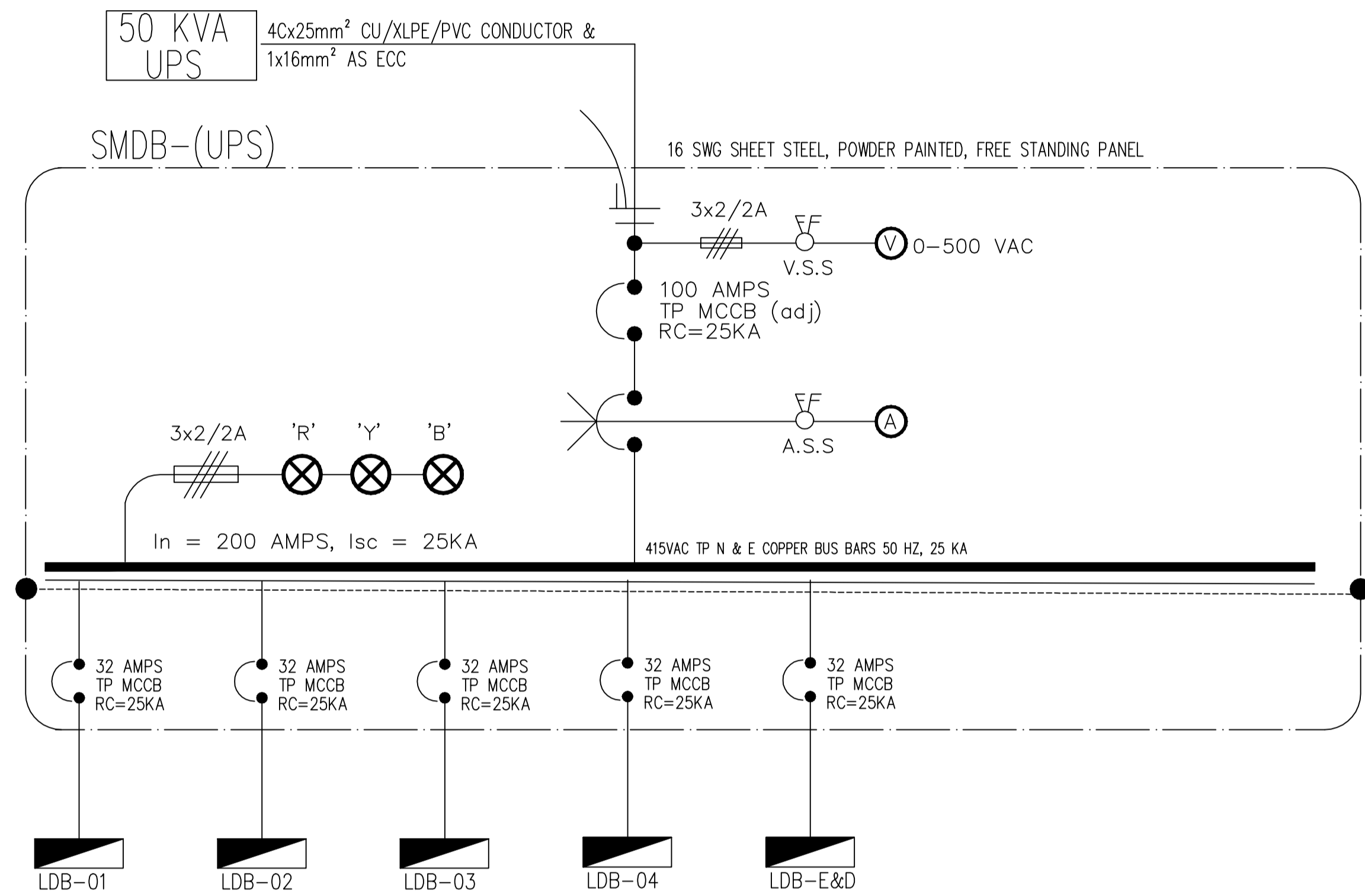
N.T.S

DATE

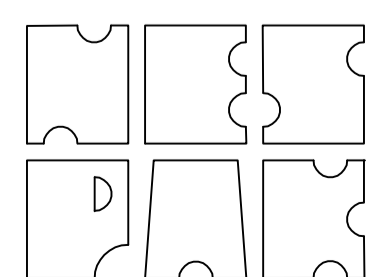
SEP.,22

REV.

0



UNHCR PAKISTAN



NATIONAL ENGINEERING SERVICES
PAKISTAN (PVT.) LTD. ISLAMABAD

PROJECT

RENOVATION WORKS OF
TRAUMA CENTER AT ABBASI
SHAHEED HOSPITAL, KARACHI

TITLE

SINGLE LINE DIAGRAM

DWG. NO.

4199/325/BD/01E07

SCALE

N.T.S

DATE

SEP.,22

REV.

0

ABBREVIATION	DESCRIPTION
∅	DIAMETER OF PIPE
CW	COLD WATER PIPE
HW	HOT WATER PIPE
CW/HW	COLD WATER & HOT WATER PIPE
SP	SOIL PIPE
WP	WASTE PIPE
VP	VENT PIPE
S/S	SOIL STACK
W/S	WASTE STACK
V/S	VENT STACK
T/A	TO ABOVE
T/B	TO BELOW
F/A	FROM ABOVE
F/B	FROM BELOW
WT	WATER TAP
U/G.	UNDER GROUND
U/F.	UNDER FLOOR
N.I.C	NOT IN CONTRACT
EWH	ELECTRIC WATER HEATER
EWC	ELECTRIC WATER COOLER

ABBREVIATION	DESCRIPTION
RWP	RAIN WATER PIPE
MH	MANHOLE
D/S	DRAINAGE STACK
GI	GALVANIZED IRON
PRV	PRESSURE REDUCING VALVE
HWR	HOT WATER RETURN
GWH	GAS WATER HEATER
GV	GATE VALVE
CV	CHECK VALVE
MS	MILD STEEL
FHC	FIRE HYDRANT CABINET
WC	WATER CLOSET
AF/C	ABOVE FALSE CEILING
(TYP)	TYPICAL
FT	FLOOR TRAP
H/L	HIGH LEVEL
U/F	UNDER FLOOR / LOW LEVEL
FHC	FIRE HOSE CABINET
WC	WATER CLOSET
N.T.S.	NOT TO SCALE

SYMBOL	DESCRIPTION
-----	COLD WATER PIPE
=====	HOT WATER PIPE
-----	SOIL PIPE
-----	WASTE PIPE
-----	VENT PIPE
-----	GATE VALVE ON HORIZONTAL PIPE
-----	GATE VALVE ON VERTICAL PIPE
-----	CHECK VALVE OR NON-RETURN VALVE
CO ⊙	FLOOR CLEAN OUT
COP ⊙	FLOOR CLEAN OUT PLUG
⊕	MULTI FLOOR TRAP
⊕	FLOOR TRAP
→	DIRECTION OF FLOW
MS ⊕	MUSLIM SHOWER
WT ⊕	WATER TAP
G.T. ⊕	GULLY TRAP
⊕ GWH	GAS WATER HEATER
⊕ EWH	ELECTRIC WATER HEATER
⊕	PLUGGED
⊕	WATER PUMP

GENERAL NOTES.

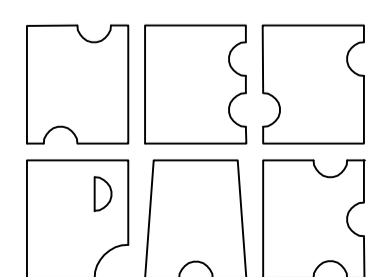
- 1 - PIPE PASSING THROUGH WALL, FLOOR OR ROOF SHALL BE PROTECTED WITH SLEEVES
- 2 - CLEANOUT OR ACCESS DOOR SHALL BE PROVIDED AT THE BASE OF ALL DRAINAGE STACK AND AT EACH FLOOR LEVEL.
- 3 - DRAINAGE STACKS SHALL BE CONNECTED TO HORIZONTAL FIXTURE DRAIN PIPES BY 90° SWEEP TEE OR Y AND 45° BEND.
- 4 - DRAINAGE STACKS SHALL BE CONNECTED TO UNDERGROUND DRAIN PIPE BY EITHER 90° LARGE/LONG RADIUS BEND OR TWO 45° BENDS.
- 5 - PIPE SIZES ARE IN INCHES.
- 6 - PLUMBING SERVICES, SHALL BE CO-ORDINATED WITH OTHER SERVICES SUCH AS ELECTRICAL, HVAC ETC. TO AVOID CONFLICT OR INTERFERENCE WITH THEM.
- 7 - SIZE OF FLOOR DRAIN UNLESS OTHERWISE STATED SHALL BE SAME AS THE SIZE OF OUTLET DRAIN PIPE.
- 8 - WHEREVER FLOOR DRAIN/TRAP IS SHOWN, SLOPE FLOOR TOWARDS DRAIN/TRAP.
- 9 - HORIZONTAL DRAINAGE PIPING OF 3 INCH DIAMETER & LESS SHALL BE INSTALLED WITH A SLOPE OF NOT LESS THEN 1/4 INCH PER FOOT, LARGER ONES WITH A SLOPE OF NOT LESS THEN 1/8 INCH PER FOOT.

GENERAL NOTES.

- 10 - EXTENSION OF VENT PIPES THROUGH A ROOF SHALL BE TERMINATED AT LEAST 6 INCHES ABOVE FINISHED ROOF LEVEL. EACH VENT TERMINAL SHALL BE MADE WATER TIGHT WITH THE ROOF BY PROPER FLASHING
- 11 - THE "VERTICAL DISTANCE" FROM FIXTURE OUTLET TO THE TRAP WEIR SHALL PREFERABLY BE NOT MORE THAN 12 INCHES. HOWEVER, THIS "VERTICAL DISTANCE" FROM THE FIXTURE OUTLET TO THE TRAP WEIR SHALL NOT EXCEED 24 INCHES.
- 12 - WHERE THE CHANGE OF DIRECTION IS 45° OR LESS, IT IS NOT NECESSARY TO PROVIDE A CLEAN OUT. BUT WHEN THE CHANGE IN DIRECTION IS MORE THAN 45°, A CLEAN OUT SHOULD BE REQUIRED.
- 13 - CLEANOUTS SHALL BE SO INSTALLED THAT THERE IS A CLEARANCE OF NOT LESS THAN 18 INCHES FOR THE PURPOSE OF RODDING.
- 14 - ALL TRAPS AND FLOOR DRAINS SHALL HAVE A WATER SEAL NOT LESS THAN 2 INCHES.
- 15 - NO T-CONNECTION IS ALLOWED IN SOIL AND WASTE PIPING.
- 16 - ALL PLUMBING DUCTS MUST HAVE ACCESS PANELS AT EACH FLOOR.
- 17 - ALL PLUMBING DUCTS MUST BE PLASTERED WITH 1:3 C/S WATER PROOF PLASTER BEFORE INSTALLATION OF PIPES ETC.



UNHCR PAKISTAN

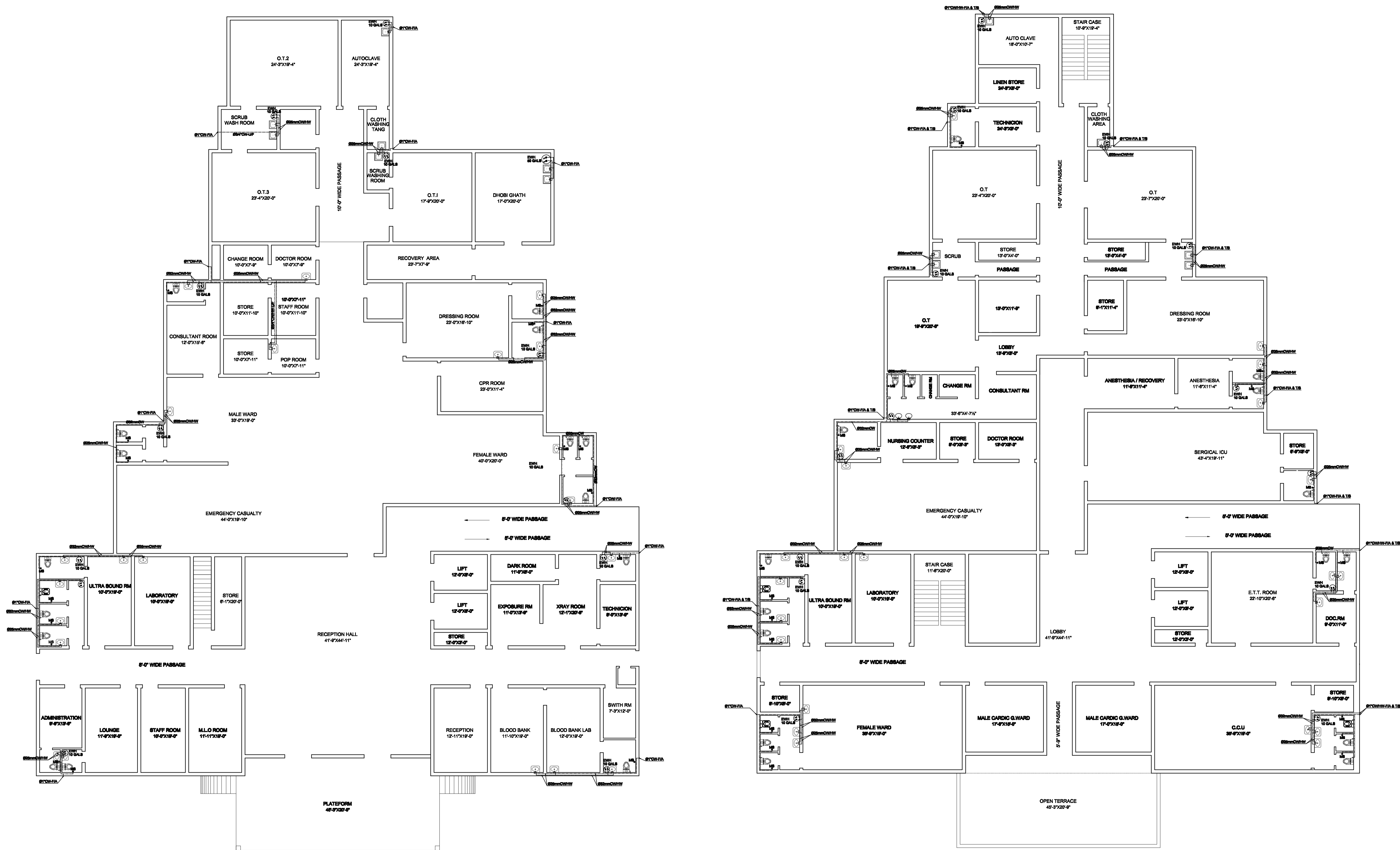


NATIONAL ENGINEERING SERVICES
PAKISTAN (PVT.) LTD. ISLAMABAD

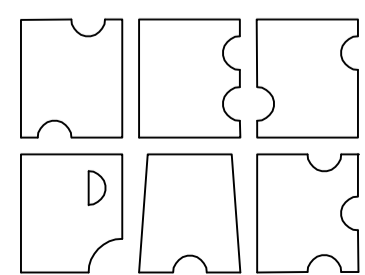
PROJECT
RENOVATION WORKS
OF TRAUMA CENTER
AT ABBASI SHAHEED
HOSPITAL, KARACHI

TITLE
MISCELLANEOUS DETAILS
(PLUMBING WORKS)
DWG. NO.
4199/326/BD/01F01

SCALE
N.T.S
DATE
SEP.,22
REV.
0



UNHCR PAKISTAN



NATIONAL ENGINEERING SERVICES
 PAKISTAN (PVT.) LTD. ISLAMABAD

PROJECT

RENOVATION WORKS
 OF TRAUMA CENTER
 AT ABBASI SHAHEED
 HOSPITAL, KARACHI

TITLE

GROUND & TYPICAL FLOOR
 (WATER SUPPLY LAYOUT)

DWG. NO.

4199/326/BD/01F02

SCALE

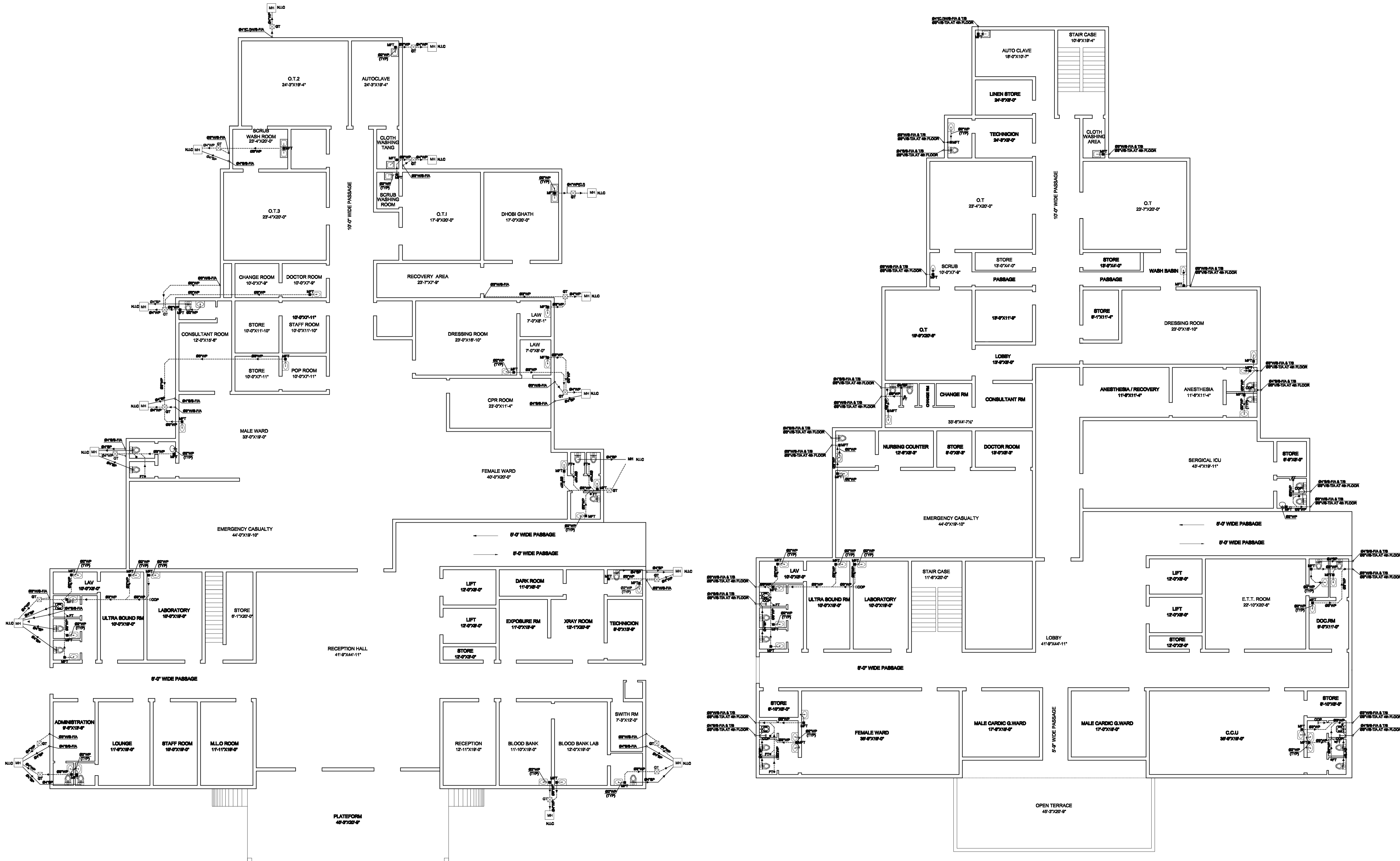
N.T.S

DATE

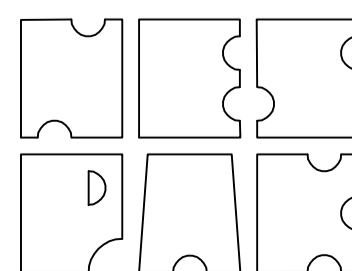
SEP., 22

REV.

0



UNHCR PAKISTAN



NATIONAL ENGINEERING SERVICES
PAKISTAN (PVT.) LTD. ISLAMABAD

PROJECT

RENOVATION WORKS
OF TRAUMA CENTER
AT ABBASI SHAHEED
HOSPITAL, KARACHI

TITLE

GROUND & TYPICAL FLOOR
(SANITARY DRAINAGE LAYOUT)

DWG. NO.

4199/326/BD/01F03

SCALE

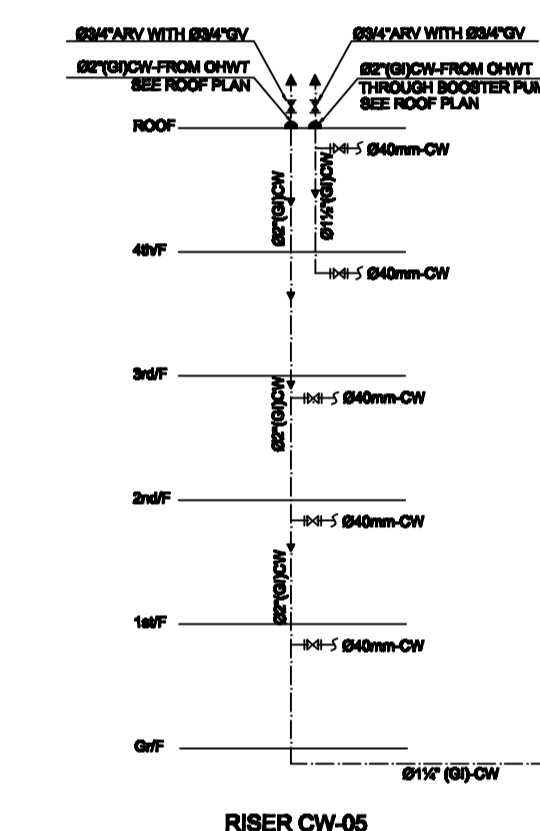
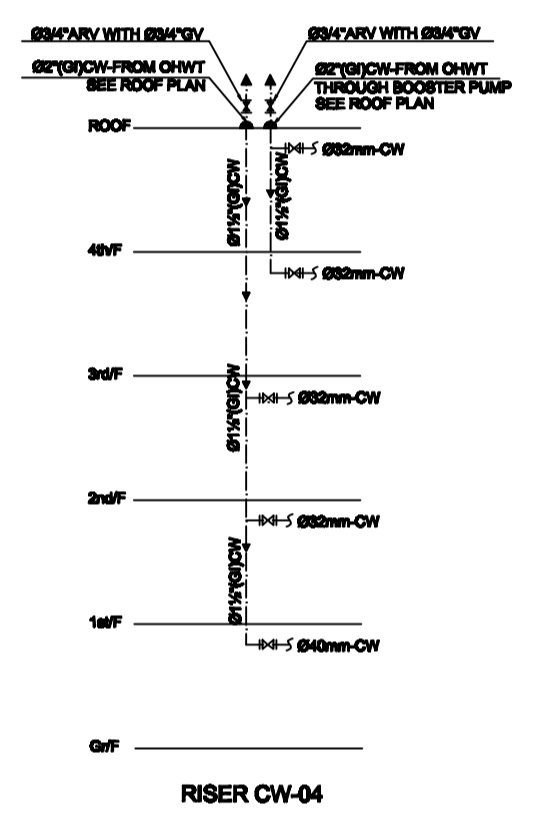
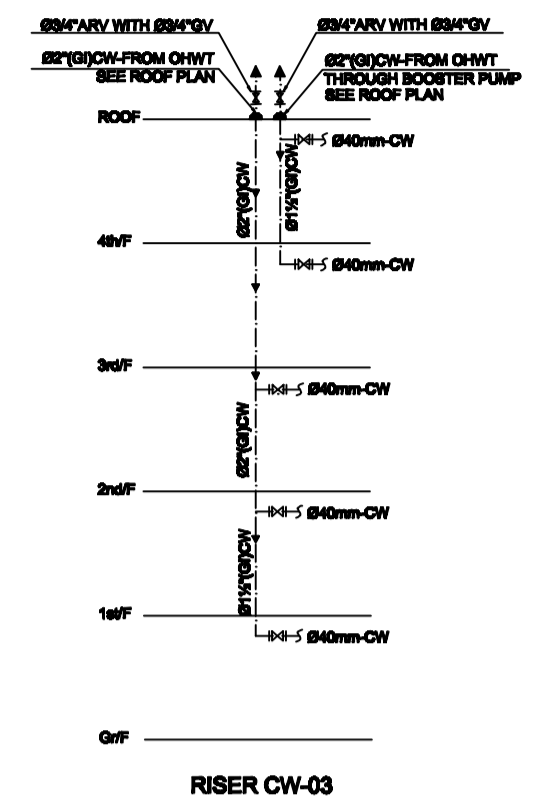
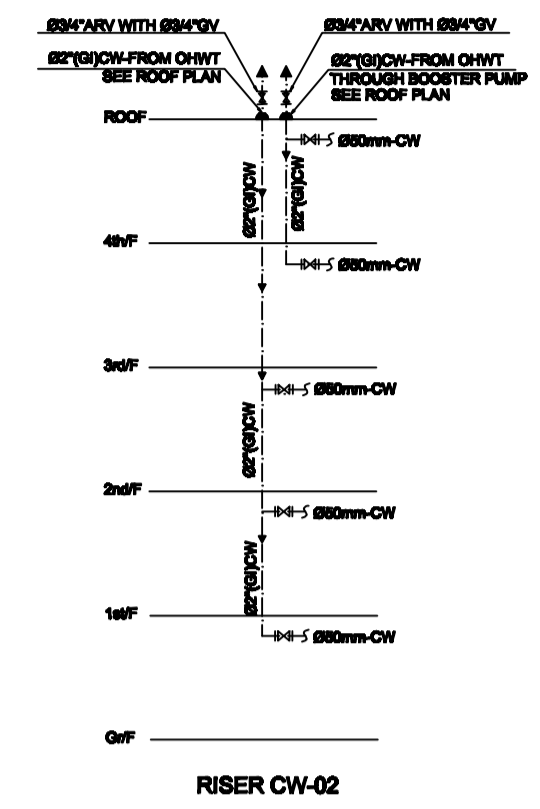
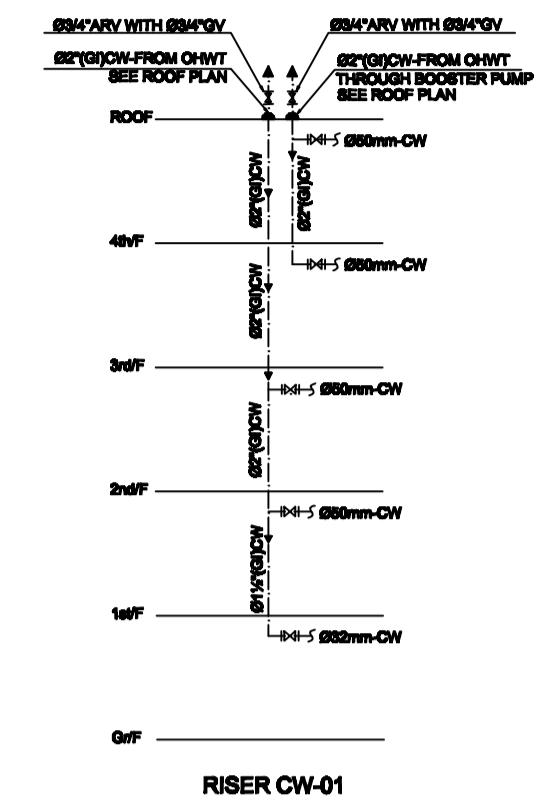
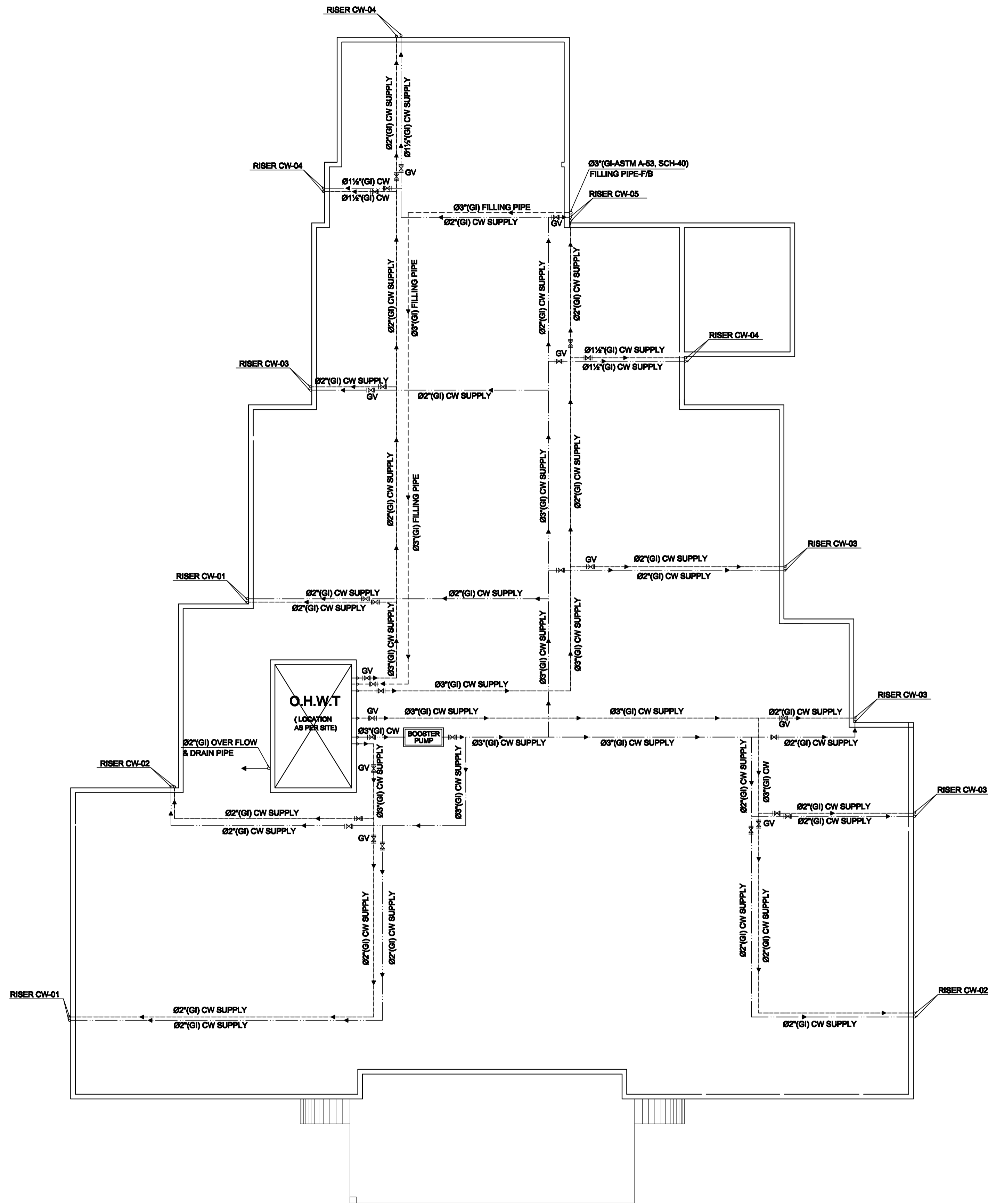
N.T.S

DATE

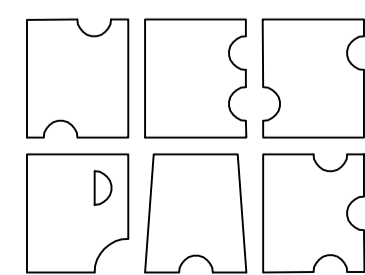
SEP., 22

REV.

0



UNHCR PAKISTAN

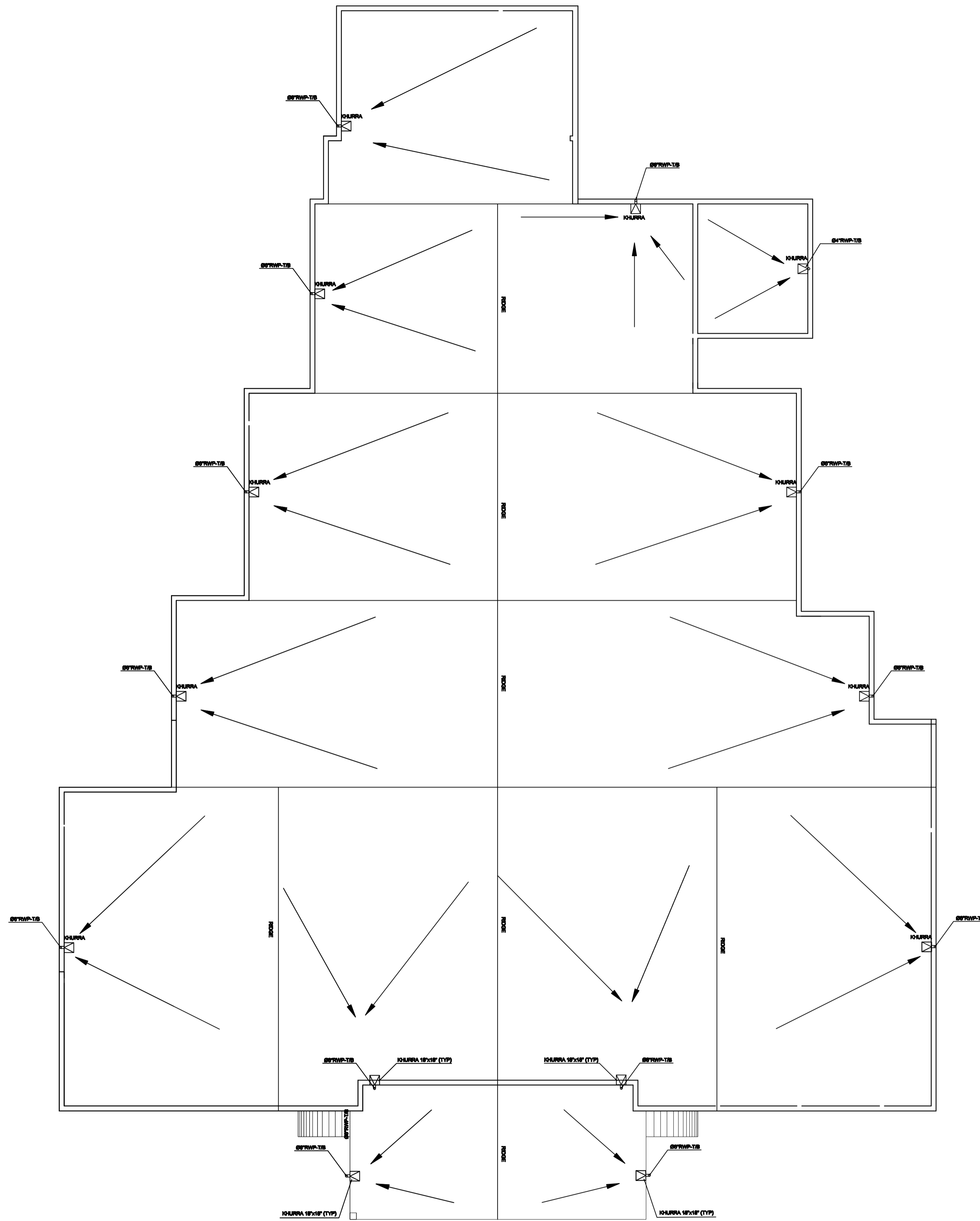


NATIONAL ENGINEERING SERVICES
PAKISTAN (PVT.) LTD. ISLAMABAD

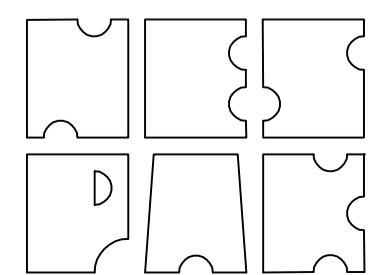
PROJECT
RENOVATION WORKS
OF TRAUMA CENTER
AT ABBASI SHAHEED
HOSPITAL, KARACHI

TITLE
ROOF PLAN
(WATER SUPPLY LAYOUT)
DWG. NO.
4199/326/BD/01F04

SCALE
N.T.S
DATE
SEP.,22
REV.
0



UNHCR PAKISTAN

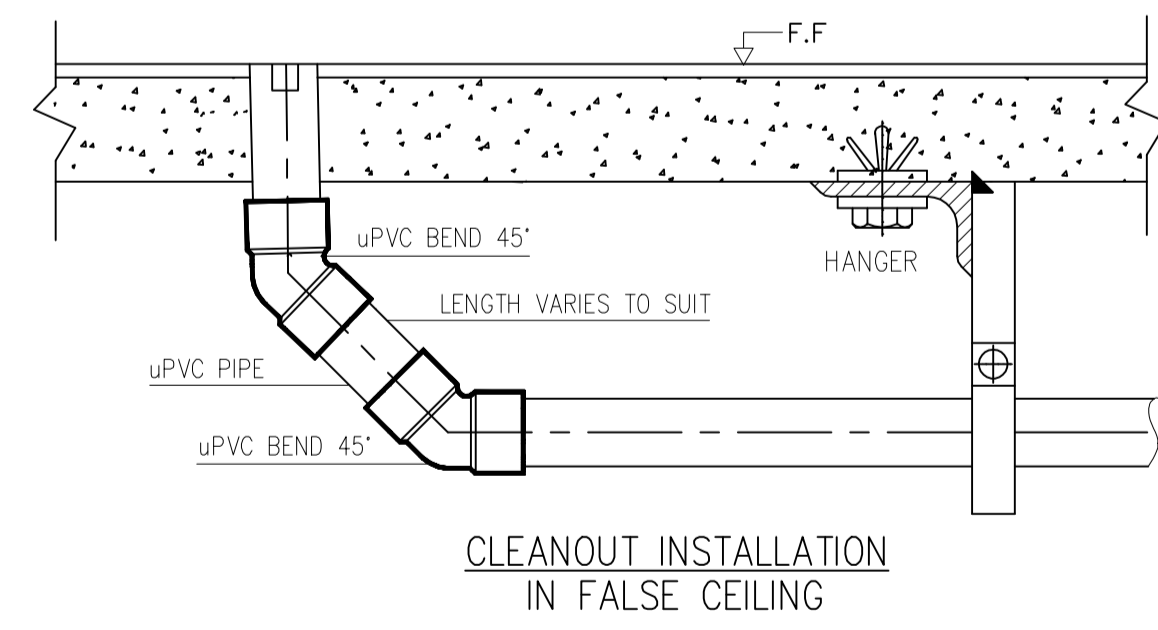
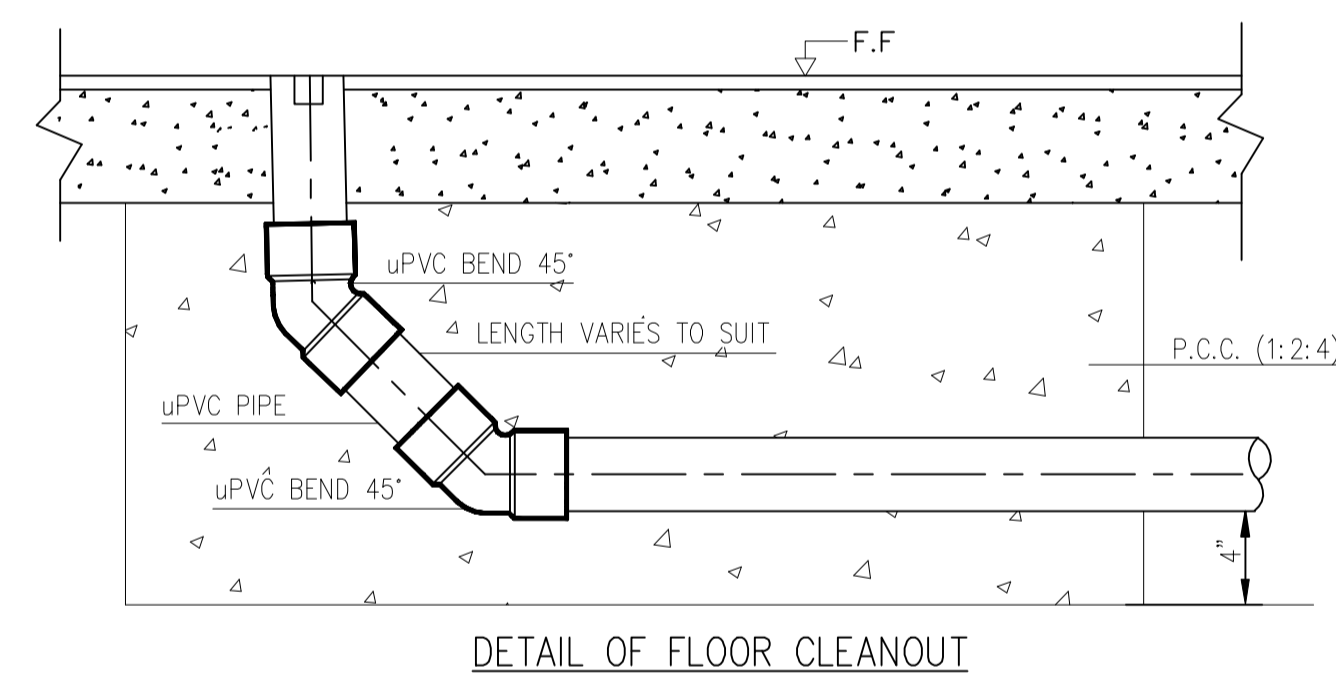
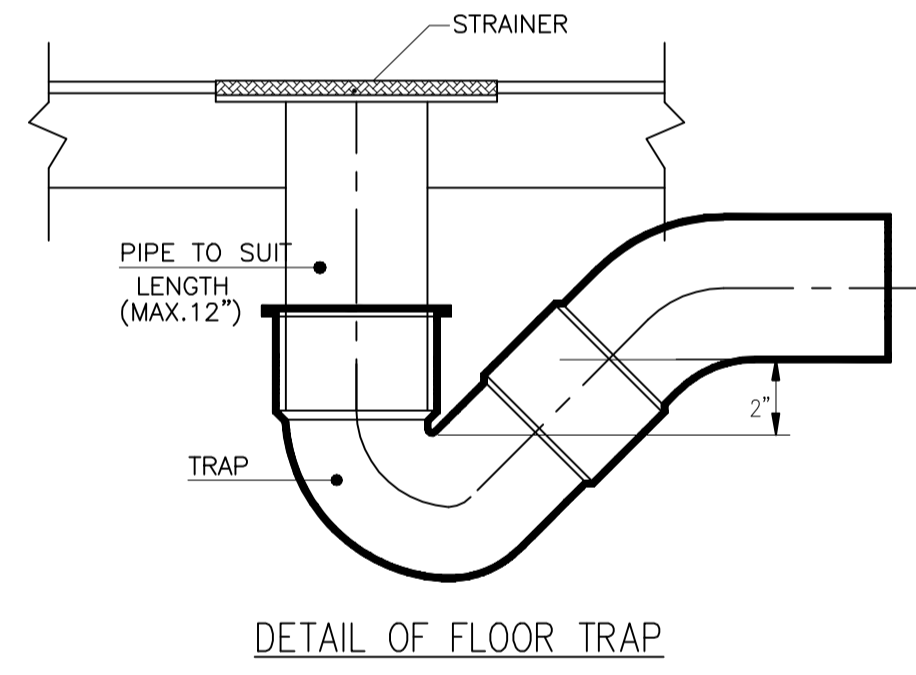
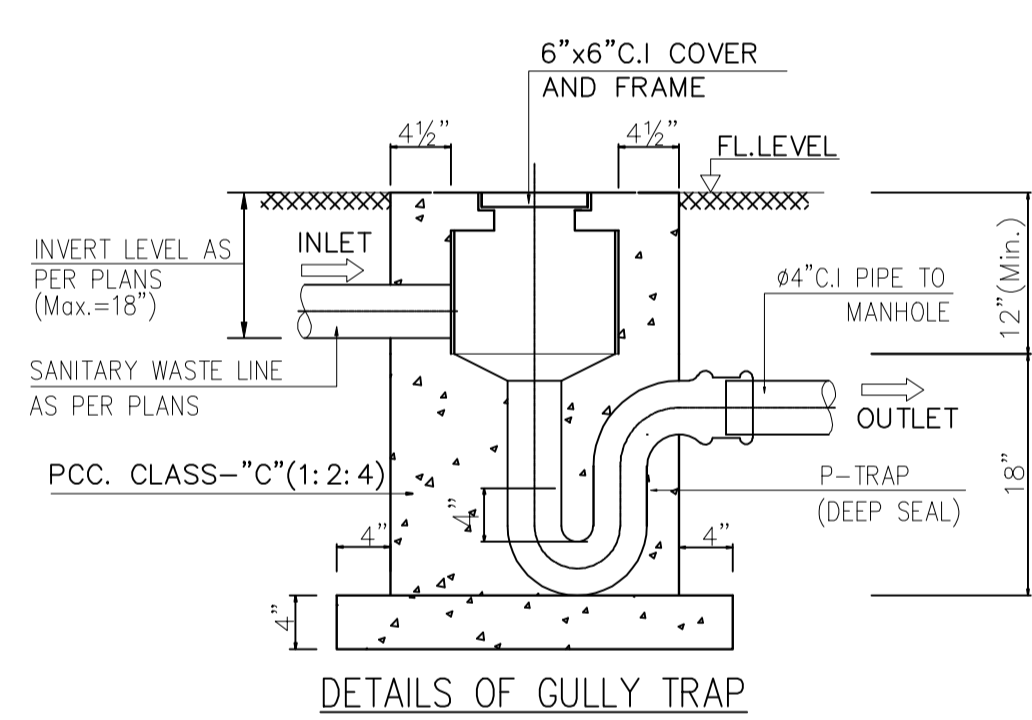
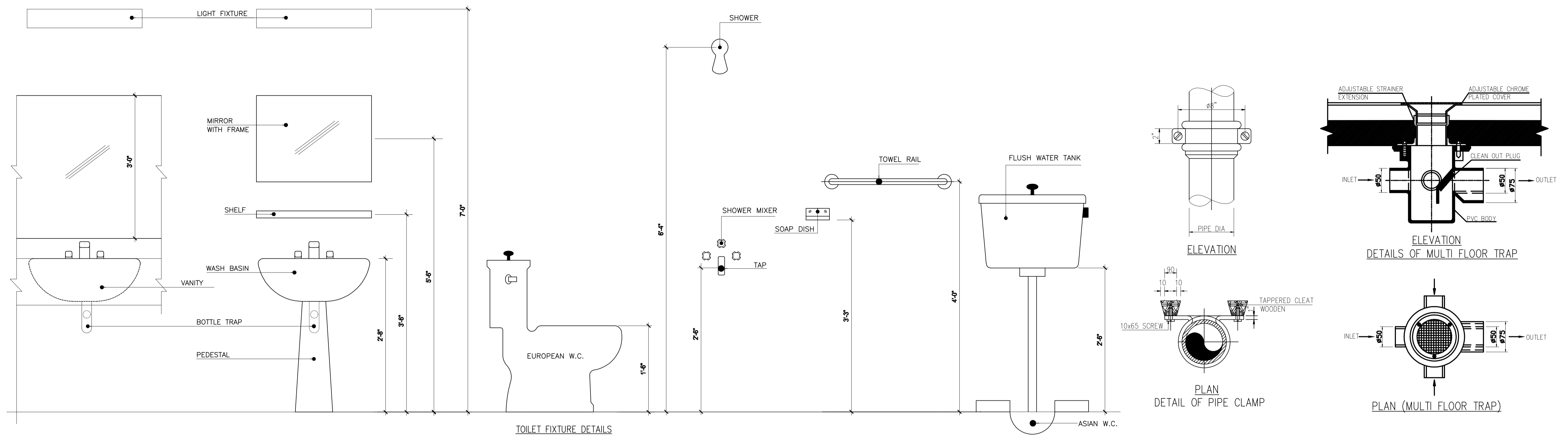


NATIONAL ENGINEERING SERVICES
PAKISTAN (PVT.) LTD. ISLAMABAD

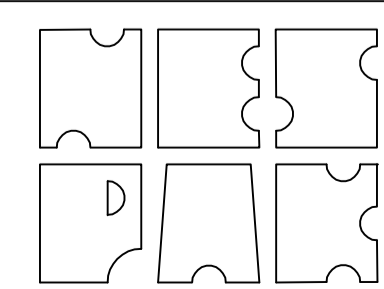
PROJECT
RENOVATION WORKS
OF TRAUMA CENTER
AT ABBASI SHAHEED
HOSPITAL, KARACHI

TITLE
ROOF PLAN
(STORM DRAINAGE LAYOUT)
DWG. NO.
4199/326/BD/01F05

SCALE
N.T.S
DATE
SEP.,22
REV.
0



UNHCR PAKISTAN



NATIONAL ENGINEERING SERVICES
PAKISTAN (PVT.) LTD. ISLAMABAD

PROJECT
RENOVATION WORKS
OF TRAUMA CENTER
AT ABBASI SHAHEED
HOSPITAL, KARACHI

TITLE
MISCELLANEOUS DETAILS
(PLUMBING WORKS)
DWG. NO.
4199/326/BD/01F06

SCALE
N.T.S
DATE
SEP., 22
REV.
0