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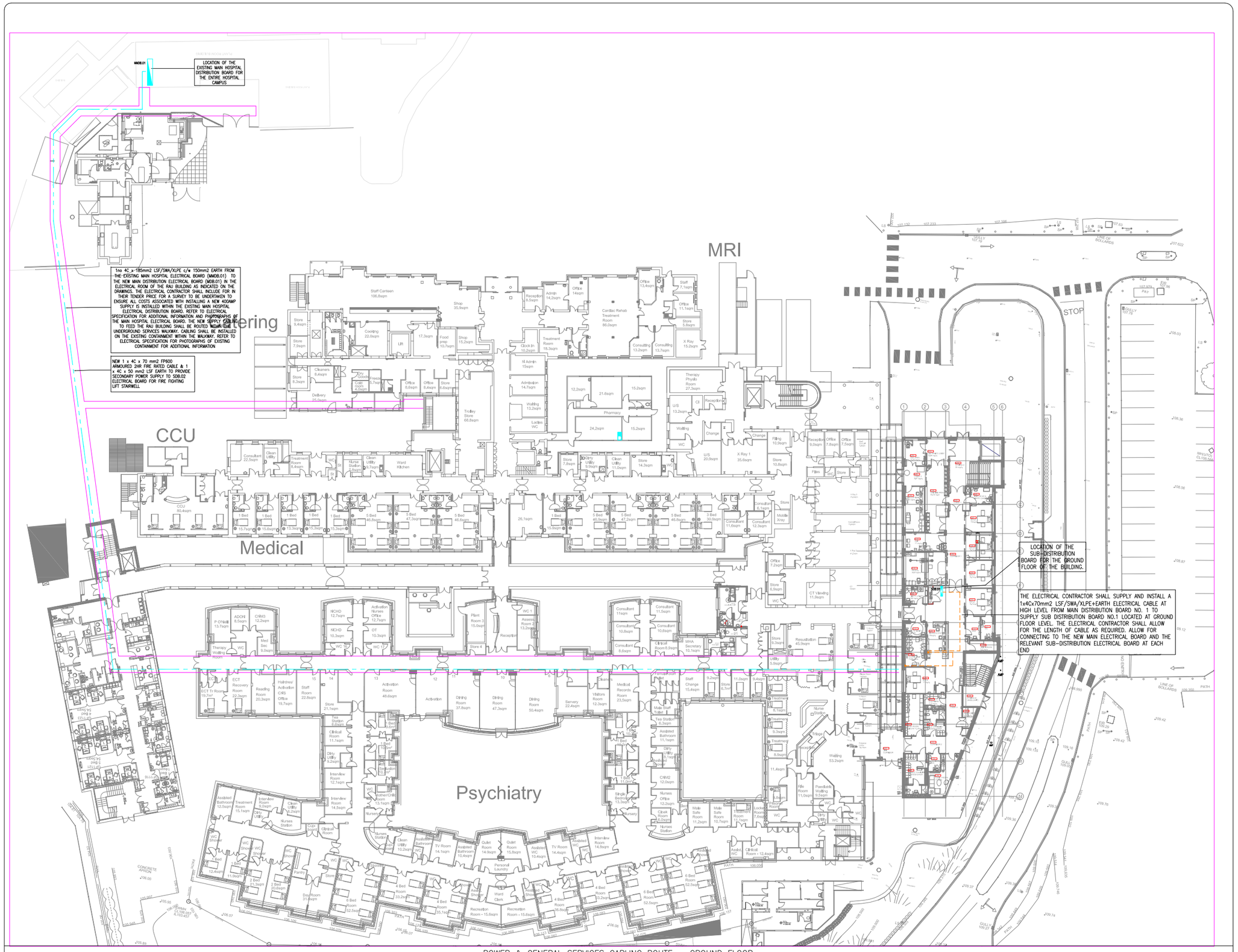

POWER & GENERAL SERVICES CABLING ROUTE – GROUND FLOOR

GENERAL NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL MECHANICAL, ELECTRICAL, ARCHITECTURAL AND STRUCTURAL DRAWINGS & SPECIFICATIONS.

2. THE CONTRACTOR SHALL CO-ORDINATE FULLY WITH ALL OTHER TRADES BEFORE COMMENCING WORK. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL THE NECESSARY INFORMATION TO ALLOW THE MAIN CONTRACTOR CO-ORDINATE ALL SERVICES.

3. THE MECHANICAL CONTRACTOR SHALL ALLOW FOR CO-ORDINATING THE MECHANICAL INSTALLATION WITH THE ELECTRICAL CONTRACTOR ON SITE. EXTRA COSTS INCURRED DUE TO THE CO-ORDINATION EXERCISE NOT BEING COMPLETED WILL NOT BE ACCEPTED BY THE ENGINEER.

4. DO NOT SCALE THIS DRAWING. ALL DIMENSIONS TO BE TAKEN ON SITE.

5. THE CONTRACTOR SHALL ALLOW FOR THE SUPPLY AND INSTALLATION OF ALL ELECTRICAL SERVICES INDICATED ON THIS DRAWING.

6. THE CONTRACTOR SHALL BE RESPONSIBLE TO IDENTIFY SUITABLE FINAL ROUTES FOR CABLE CONTAINMENT, ELECTRICAL SERVICES, ETC. AS INDICATED ON THE DRAWINGS.

7. NEW MAINS RUN OF ELECTRICAL CONTAINMENT SHALL BE INSTALLED IN THE AREAS AS INDICATED. THIS IS INDICATIVE ONLY AND IF THE CONTRACTOR FINDS A MORE CONVENIENT ROUTE FOR THE ELECTRICAL SERVICES ON SITE THEN THAT WILL BE ACCEPTABLE.

8. FINAL LOCATION OF ALL ITEMS OF SOCKETS/IT POINTS/LIGHTING, ETC. SHALL BE AGREED ON SITE WITH THE EMPLOYERS REPRESENTATIVE AND THE CLIENT.

9. ALL SERVICES THROUGH FIRE BARRIERS SHALL BE SLEEVED EACH SIDE OF THE BARRIER. THE MAIN CONTRACTOR SHALL ALLOW FOR FIRE PROOFING THE OPES AFTER SERVICES IS INSTALLED.

10. THE CONTRACTOR SHALL ALLOW FOR ALL NECESSARY LABOUR, WIRING AND ATTENDANCES IN COMPLETING ALL THE ELECTRICAL WORKS AS INDICATED ON THE DRAWINGS AND SPECIFICATIONS.

11. ASD LINES: ALL ELECTRICAL SERVICES BELOW CEILING LEVEL FOR THE ELECTRICAL INSTALLATION IN THE ASD UNIT SHALL BE UN IN STEEL CONDUIT AND INSTALLED SURFACE MOUNTED ON THE WALLS.

POWER & GENERAL SERVICES NOTES:

12. ALLOW FOR POWER SUPPLY & ELECTRICAL CONNECTION TO ALL MECHANICAL ITEMS IDENTIFIED

13. WHERE SIGNAL/CONTROL CABLES ARE ROUTED TO THEIR RESPECTIVE CONTROL PANEL PROVIDE GALVANISED STEEL TRUNKING TO ENCLOSE MULTIPLE RUNS OF CABLE.

14. MECHANICAL AND ELECTRICAL CONTRACTORS SHALL LIAISE AND ARRANGE FOR INTERFACE BETWEEN MECHANICAL INSTALLATIONS AND ELECTRICAL INSTALLATIONS.

15. SEE OTHER ELECTRICAL DRAWINGS FOR LOCATIONS OF OTHER ELECTRICAL EQUIPMENT THAT WILL REQUIRE POWER ATTENDANCES.

16. ANY SINGLE PHASE CIRCUIT FED DIRECTLY FROM A THREE PHASE DISTRIBUTION BOARD SHALL HAVE THE APPROPRIATE PHASE COLOUR EXTENDED INTO THE SINGLE PHASE CIRCUITS FED FROM THAT PHASE.

17. REFER TO TABLE 51C COLOUR CODE FOR CABLE CORES AND INSULATED CONDUCTORS OF AMENDMENT No. 2 ET101:2004/A2:2005 OF THE NATIONAL RULES FOR ELECTRICAL INSTALLATIONS

18. SURGE PROTECTION TO BE INSTALLED ON ALL ELECTRICAL BOARDS AS INDICATED. SEE SPECIFICATION FOR FURTHER DETAILS.

19. MAIN INCOMING ACB SHALL HAVE A RATED PROSPECTIVE SHORT CIRCUIT CURRENT OF NOT LESS THAN 40 kA AT A POWER FACTOR OF 0.2, AND SHALL BE TESTED TO P2 CATEGORY IEC157-1.

20. BUSBARS SHALL BE HDHC COPPER OF UNIFORM CROSS SECTION AND SHALL COMPLY FULLY WITH BS 159. THE BUSBAR SYSTEM SHALL BE TYPE TESTED IN ACCORDANCE WITH IEC 439 AND BE CAPABLE OF CARRYING THE CONTINUOUS LOAD CURRENT AS SPECIFIED.

21. BUSBARS CONNECTIONS UP TO 63 AMP MAY BE EFFECTED BY MEANS OF CABLE. BRACED AND SUPPORTED AS NECESSARY. INDEXIS CONNECTIONS ABOVE 63 AMP SHALL BE MADE BY MEANS OF HDHC RECTANGULAR SECTION COPPER BUSBAR, INSULATED AND SUPPORTED AS NECESSARY.

22. INSTALLATION RACK ON MEDIUM VOLTAGE CABLING SHALL BE AS LARGE AS POSSIBLE AND SHALL IN NO INSTANCE BE LESS THAN 18 TIMES THE OVERALL CABLE DIAMETER.

23. THERE SHALL BE A NEW MAINS DISTRIBUTION BOARD INSTALLED AT FIRST FLOOR LEVEL WHICH IN TURN SHALL FEED A NEW SUB DISTRIBUTION BOARD (SDB.01) AT GROUND FLOOR LEVEL. NEW SUB DISTRIBUTION BOARD (SDB.02) AT SECOND FLOOR LEVEL FOR FIGHTING FIGHTING LIFT STAIRWELL AND NEW IPS/UPS POWER INSTALLATION AT SECOND FLOOR LEVEL.

24. ALL IT POINTS, TELEPHONE POINTS, WFI POINTS, ACCESS CONTROL POINTS AND CCTV POINTS SHALL BE A CAT-6A UTP CCA SYSTEM AS PER ISO CLASS EA FOR THE BUILDING. THE HORIZONTAL CABLING SHALL ALL BE PANDUIT CCA CAT6A UTP. ALL CABLING SHALL BE FOUR-PAIR 100 OHM CATEGORY 6A CCA. EACH HORIZONTAL RUN TO THE OUTLET SHOULD NOT EXCEED A LINK DISTANCE OF 90M. CABLES SHOULD BE 23AWG UTP AND HAVE A DISCONTINUOUS METALLIC SHIELD USING MATRIX TECHNOLOGY. THE COMPLETE SOLUTION INCLUDING OF ALL CABLING COMPONENTS,CAMS CABINETS, RACKS AND ENCLOSURES, FROM PANDUIT SHALL BE PROVIDED, AND SHALL BE COVERED BY A 25 YEAR PERFORMANCE WARRANTY. THE CONTRACTOR SHALL PROVIDE A COMPLETE TEST OF SYSTEM. ALL IT POINTS SHALL BE CONNECTED BACK TO THEIR RESPECTIVE COMMS CABINETS AS INDICATED ON THE DRAWINGS. THE 2NO NEW COMMS CABINETS ARE LOCATED WITHIN THE NEW DEDICATED COMMS ROOM (FLOOR STANDING COMMS CABINET) LOCATED ON THE FIRST FLOOR.

25. THE UPS SYSTEM SHALL PROVIDE CONTINUOUS, TRANSIENT-FREE POWER TO CRITICAL MEDICAL LOADS REGARDLESS OF VOLTAGE AND FREQUENCY DEVIATIONS AND OUTAGES OF THE NORMAL AND/OR EMERGENCY BACKUP SUPPLY. UPS SYSTEMS SHALL BE PROVIDED AS DETAILED WITHIN THE ELECTRICAL SPECIFICATION AND ASSOCIATED UPS SCHEDULE. THE ELECTRICAL ROOM WHICH SHALL HOUSE THE UPS SHALL BE PROVIDED WITH ADEQUATE VENTILATION. THE UPS SHALL BE ON LINE ON DOUBLE CONVERSION UNIT. IT SHALL HAVE A MINIMUM EFFICIENCY OF 93% AT 80% LOAD. EMC CATEGORY SHALL BE C3 IN ACCORDANCE WITH EN 62040-2. THE MEDICAL SYSTEM SHALL BE 2 X 40KVA UPS UNIT, EACH WITH 60 MINUTES OF BACK-UP TIME AND SHALL BE SOLELY FOR THE PURPOSE OF PROTECTING THE MEDICAL GROUP 2 ISOLATED POWER SYSTEMS.

26. ALL ALL MEDICAL ROOMS ARE GROUP 2 RATING. "MEDICAL LOCATION WHERE APPLIED PARTS ARE INTENDED TO BE USED, AND WHERE DISCONTINUITY (FAILURE) OF THE SUPPLY CAN CAUSE DANGER TO LIFE". IN MEDICAL LOCATIONS OF GROUP 2 RATING THE MEASURED RESISTANCE OF THE PROTECTIVE CONDUCTOR BETWEEN THE EARTH TERMINAL OF ANY SOCKET-OUTLET (OR FIXED EQUIPMENT) AND ANY EXTRANEOUS-CONDUCTIVE-PART SHALL NOT EXCEED 0.2 Ω. THE CONNECTIONS, BONDING BUSBAR(S) SHALL BE LOCATED IN A SUITABLE, ACCESSIBLE LOCATION. CONNECTIONS SHALL BE MADE WITH TWO NO. 6MM GREEN/YELLOW CABLES. THEY MUST BE VISIBLE AND CAN EASILY BE DISCONNECTED INDIVIDUALLY. RADIAL WIRING PATTERNS SHALL BE USED TO AVOID "EARTH LOOPS" THAT MAY EXACERBATE ELECTROMAGNETIC DISTURBANCES.

A MINIMUM OF FOUR BUT NO LESS THAN 25% OF EQUIPOTENTIAL BONDING CONNECTION POINTS FOR THE CONNECTION OF MEDICAL ELECTRICAL EQUIPMENT SHALL BE PROVIDED FOR EACH PATIENT LOCATION. FIXED CONDUCTIVE NON-ELECTRICAL PATIENT SUPPORTS SUCH AS OPERATING THEATRE TABLES (IF APPLICABLE) SHOULD BE CONNECTED TO THE EQUIPOTENTIAL BONDING CONDUCTOR (CONNECTION POINT) UNLESS THEY ARE INTENDED TO BE ISOLATED FROM EARTH.
21 METRES OF 4MM EARTH CABLE OR 32 METRES OF 6MM EARTH CABLE SHALL BE ACCEPTABLE FROM EBB TO FINAL CONNECTION POINT.

THE ELECTRICAL CONTRACTOR SHALL INCLUDE AND INSTALL A EBB SUITABLE FOR SINGLE PATIENT (TYPE 1) OR MULTIPATIENT AREA (TYPE 2) WHERE APPLICABLE.

REV	DATE	PREPARED BY/PROJECT ENGINEER	QUALITY CHECK BY:
3	06.05.2025	C. COFFEY	P. CONWAY
2	26.09.2024	B. NOLAN	G. BENNDORF
2	10.05.2024	B. NOLAN	G. BENNDORF
1	29.05.2023	B. NOLAN	G. BENNDORF
0	14.04.2022	B. NOLAN	G. BENNDORF

M&E CONSULTANT

Coffey Electrical Ltd.

Drawing Status
AS BUILT

Job Title
PROPOSED RESPIRATORY ASSESSMENT UNIT EXTENSION AT MIDLAND REGIONAL HOSPITAL, PORTLAOISE, CO. LAOIS

Drawing Title
POWER & GENERAL CABLING ROUTES. GROUND FLOOR

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1:200 @ A0	C.C.	3

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