



- NOTE 1:** THIS DRAWING IS PRODUCED FOR INFORMATION PURPOSES ONLY.
- NOTE 2:** THIS DRAWING IS BASED ON TYPICAL REQUIREMENTS FOR A STANDARD 8 BAY RING-TYPE AS 110KV SUBSTATION WITH NON-SS CONTROL.
- NOTE 3:** ALL DIMENSIONS AND REFERENCES GIVEN ARE INDICATIVE AND SHOULD NOT BE USED AS A DETAILED DESIGN.
- NOTE 4:** FOR MINIMUM CABINET DIMENSIONS, REFER TO ERGRID FUNCTIONAL SPECIFICATION XOS-GFS-07-001.
- NOTE 5:** FOR MINIMUM ACCESS & EGRESS REQUIREMENTS, REFER TO ERGRID FUNCTIONAL SPECIFICATION XOS-GFS-00-001.
- NOTE 6:** TELECOMS CABINETS TO BE ARRANGED IN LINE WITH TELECOMS PROJECT SPECIFIC REQUIREMENTS.
- NOTE 7:** TELECOMS CABINETS, EXCEPT DCC RTU, TO BE SUPPLIED BY ESRN/ESR TELECOMS ON THE BEHALF OF ERGRID/ESRN. ALL OTHER CABINETS TO BE SUPPLIED BY THE CUSTOMER.
- NOTE 8:** BATTERY FUSE BOXES TO BE MOUNTED ON WALL ADJACENT TO BATTERY ROOM.
- NOTE 9 (AS ILLUSTRATED ON DRAWING):** ADDITIONAL SPACE IS REQUIRED FOR FUTURE PROTECTION AND TELECOMS CABINETS.
- NOTE 10 (AS ILLUSTRATED ON DRAWING):** THE REQUIREMENT FOR AN EXTERNAL FIRE ESCAPE FROM THE BATTERY ROOM SHALL BE DETERMINED BASED ON THE DETAILED DESIGN AND LOCAL AUTHORITY REQUIREMENTS.
- NOTE 11 (AS ILLUSTRATED ON DRAWING):** A TELECOMS EARTH BAR SHALL BE INSTALLED IN CLOSE PROXIMITY TO THE DCC RTU.
- NOTE 12 (AS ILLUSTRATED ON DRAWING):** THE WORKSHOP SHALL CONTAIN A HEAVY DUTY WORK BENCH FITTED WITH A VICE AND SUITABLE SHELVING/STORAGE FACILITIES TO HOUSE ALL NECESSARY TOOLS, SPARES AND ACCESSORIES FOR THE SUBSTATION.
- NOTE 13 (AS ILLUSTRATED ON DRAWING):** SPERATED VENTS (2 HIGH LEVEL, AND 2 LOW LEVEL) ARE TO BE INSTALLED IN THE BATTERY ROOM AS PER IEC 62485-2 ON ADJACENT EXTERNAL WALLS.
- NOTE 14 (AS ILLUSTRATED ON DRAWING):** ONLY SINGLE ROW BATTERY STANDS MAY BE LOCATED AGAINST A WALL.
- NOTE 15 (AS ILLUSTRATED ON DRAWING):** NO ELECTRICAL EQUIPMENT (INCL. BATTERIES) SHALL BE INSTALLED DIRECTLY IN FRONT OF VENTS.
- NOTE 16:** SEPARATE CUSTOMER INTERFACE CABINETS SHALL BE INSTALLED FOR EACH CUSTOMER TRANSFORMER.

LIST OF CABINETS

CABINET	DESCRIPTION	DIMENSIONS
B1-1	220V DC BATTERY 1, STAND 1	3150x550
B1-2	220V DC BATTERY 1, STAND 2	3150x550
B2-1	220V DC BATTERY 2, STAND 1	3150x550
B2-2	220V DC BATTERY 2, STAND 2	3150x550
B7	48V DC TELECOMS BATTERY	3450x860
B8	24/48V DC STATION BATTERY	3450x860
D1	220V DC DISTRIBUTION BOARD 1	2400x400
D2	220V DC DISTRIBUTION BOARD 2	2400x400
D8	24/48V DC DISTRIBUTION BOARD	1600x400
D3	AC DISTRIBUTION BOARD	3200x400
D7	48V DC DISTRIBUTION BOARD (TELECOMS)	600x600
D10	220V BATTERY No.1 CHARGER CHANGEOVER SWITCH & FUSE BOX	600x300
D11	220V BATTERY No.1: CHARGER 1 & BATTERY SUPERVISION	600x600
D12	220V BATTERY No.1: CHARGER 2 & BATTERY SUPERVISION	600x600
D20	220V BATTERY No.2 CHARGER CHANGEOVER SWITCH & FUSE BOX	600x300
D21	220V BATTERY No.2: CHARGER 1 & BATTERY SUPERVISION	600x600
D22	220V BATTERY No.2: CHARGER 2 & BATTERY SUPERVISION	600x600
D80	24/48V BATTERY: CHARGER 2 & BATTERY SUPERVISION	600x300
D81	24/48V BATTERY: CHARGER 1 & BATTERY SUPERVISION	600x600
D82	24/48V BATTERY: CHARGER 2 & BATTERY SUPERVISION	600x600
D70	48V TELECOMS CONNECTION/FUSE BOX	600x600
D71	48V S/MS (TELECOMS)	600x600
D72	TELECOMS ISOLATION SWITCH	100x100
M1	MIMIC	3600x600
M2	SYNCHRONISING PANEL	1200x600
M3	EVENT RECORDER/AAP	600x600
M4	BACKUP AAP	600x600
M5	BATTERY SUPERVISION	600x600
M6	BUSBAR PROTECTION	1200x600
M11	H04 SECTIONALISER PROTECTION	600x600
M12	H08 SECTIONALISER PROTECTION	600x600
M13	H1 BAY PROTECTION	1200x600
M14	H2 BAY PROTECTION	1200x600
M15	H3 BAY PROTECTION	1200x600
M16	H4 BAY PROTECTION	1200x600
M17	H5 BAY PROTECTION	1200x600
M18	H6 BAY PROTECTION	1200x600
M19	H7 BAY PROTECTION	1200x600
M20	H8 BAY PROTECTION	1200x600
M21	H9 COUPLER PROTECTION	600x600
M22	H10 COUPLER PROTECTION	600x600
M23	REMOTE INTERROGATION/DISTURBANCE RECORDER	600x600
M24	SIGNAL INTERPOSING	2400x600
M25	CUSTOMER INTERFACE	2400x600
M31	OPMUX 1	800x600
M32	OPMUX 2	800x600
M33	DOF	800x600
M34	IP SERVICES	800x600
M35	MAIN DISTRIBUTION FRAME	800x600
M36	NCC RTU (INCL. GPS CLOCK)	800x600
M37	TELEMETRING	800x600
M38	ERGRID ENERGY METERING	800x600
M39	DCC RTU	600x400
M40	ELITE	600x400
M51	INTRUDER ALARM PANEL	
M52	FIRE ALARM PANEL	
M53	TELEPHONE POINTS (2No.)	

REV	DESC	DRAWN	CHECKED	APPROVED	DATE
01	CONTROL BUILDING FOOTPRINT INCREASED; GENERATOR ROOM ADDED AND ROOMS REALIGNED	DA	KMCG	CF	18/10/2019
00	FIRST ISSUE	JB	RB/KF	PM	07/07/2014

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PROJECT
110kV DESIGN STANDARD

DRAWING TITLE
INDICATIVE CONTROL ROOM LAYOUT

No of Sheets	1	SIZE	A3	SCALE	N/A
DRAWING NUMBER	XDN-CR-STND-H-001		SHEET	001	REV
					01