

LEGEND	
LM	LIGHTNING MAST
SA	SURGE ARRESTER
VT	VOLTAGE TRANSFORMER
CT	CURRENT TRANSFORMER, SINGLE PHASE
PI	POST INSULATOR
LT	LINE TRAP (TYPICALLY R & T PHASES)
DL/DE	LINE/EARTH DISCONNECT
DT/DEM4	TRAF0/EARTH DISCONNECT
CB	CIRCUIT BREAKER
DA DB	BUSBAR DISCONNECT
SA1/SA2 SB1/SB2	SECTIONALISER DISCONNECT
CSE	CABLE SEALING END

- NEW C-TYPE STATION
 - FUTURE RING STATION (SPACE ONLY)
- NOTE 1:**
THIS IS A CONCEPTUAL DESIGN FOR GUIDANCE ONLY. ALL DIMENSIONS AND REFERENCES GIVEN ARE INDICATIVE ONLY. LAYOUT TO BE FURTHER OPTIMISED DURING DETAILED DESIGN PENDING SPECIFIC EQUIPMENT SUPPLIER AND SITE DETAILS.
- NOTE 2:**
RELOCATION OR ADDITIONAL POST INSULATORS MAY BE REQUIRED, SUBJECT TO DETAIL DESIGN. NOT SHOWN FOR CLARITY.
- NOTE 3:**
VEHICULAR ACCESS TO ALL HV PLANT SHALL BE PERMITTED WITHOUT THE NEED FOR UNNECESSARY PROXIMITY OUTAGES. CONSIDERATION OF LV CABLE TRENCH LAYOUTS AND TRAFFIC-BEARING TRENCH COVERS SHALL BE CONSIDERED DURING DETAILED DESIGN.
- NOTE 4:**
LIGHTNING MAST, LV TRENCH DUCT ROUTES, MARSHALLING/INTERFACE CABINETS AND LIGHTING FIXTURES SHALL BE CONSIDERED DURING DETAIL DESIGN.
- NOTE 5 (AS ILLUSTRATED ON DRAWING):**
TWO PHASES OF THE LOW LEVEL BAY CONDUCTORS ARE ARRANGED CLOSER TOGETHER TO AVOID UNNECESSARY PROXIMITY OUTAGES ON ADJACENT BAYS. TO BE REPEATED FOR ALL BAYS.
- NOTE 6 (AS ILLUSTRATED ON DRAWING):**
INDEPENDENT SUPPORTED SPAN ON LOW LEVEL BAY CONDUCTORS BETWEEN DA AND DB. THE CONNECTION AT THE PI SHOULD BE ABLE TO BE BROKEN TO ALLOW THE LINK BETWEEN DA AND DB TO BE DISCONNECTED. PI AND SPAN TO BE INSTALLED ON ALL FUTURE BAYS IN THE C-TYPE (PHASE 1) STATION.
- NOTE 7 (AS ILLUSTRATED ON DRAWING):**
DISTANCE BETWEEN CT AND CB ON WING COUPLER TO BE A MINIMUM OF 6500mm FROM THE BUSBAR SIDE OF THE OPEN DISCONNECT. DISTANCE BETWEEN DISCONNECT AND ADJACENT LOW LEVEL BAY CONDUCTOR TO BE A MINIMUM OF 6500mm.
- NOTE 8 (AS ILLUSTRATED ON DRAWING):**
6500mm DISTANCE REQUIRED BETWEEN BUSBAR AND CB ON EACH BAY.
- NOTE 9 (AS ILLUSTRATED ON DRAWING):**
DIESEL GENERATOR AND STATION RURAL FEEDING ARRANGEMENT SHALL BE IN LINE WITH EIRGRID STATION AUXILIARY POWER SUPPLIES SPECIFICATION.
- NOTE 10:**
THIS LAYOUT RELATES PRIMARILY TO NEW SUBSTATIONS AND SIGNIFICANT EXTENSIONS PROJECTS. OTHER DEVELOPMENT OF EXISTING SUBSTATIONS (BROWN-FIELD) SHALL MAKE ALL REASONABLE EFFORTS TO BRING THE ARRANGEMENT IN LINE WITH THIS STANDARD (INCREASED CLEARANCES, NEW WRAP-AROUND COUPLER, AND SECTIONALISER CONFIGURATION). THE DEVELOPMENT SHALL NOT WORSEN ANY EXISTING O&M CLEARANCES WHICH MAY NOT BE IN ACCORDANCE WITH THIS STANDARD LAYOUT.
- NOTE 11 (AS ILLUSTRATED ON DRAWING):**
REQUIREMENT FOR SURGE ARRESTERS IN CUSTOMER COMPOUND TO BE DETERMINED BASED ON INSULATION CO-ORDINATION STUDY.
- NOTE 12:**
MINIMUM ELECTRICAL CLEARANCES SHALL COMPLY AS OUTLINED IN EIRGRID GENERAL REQUIREMENTS SPECIFICATION XDS-GFS-00-001.
- NOTE 13:**
BAY CONDUCTOR PHASING TO BE AGREED BASED ON PARTICULAR PROJECT REQUIREMENTS.
- NOTE 14 (AS ILLUSTRATED ON DRAWING):**
A DETAILED ARRANGEMENT TO PREVENT PROPERTY BOUNDARY BEING USED AS A CLIMBING AID TO BE AGREED WITH EIRGRID.

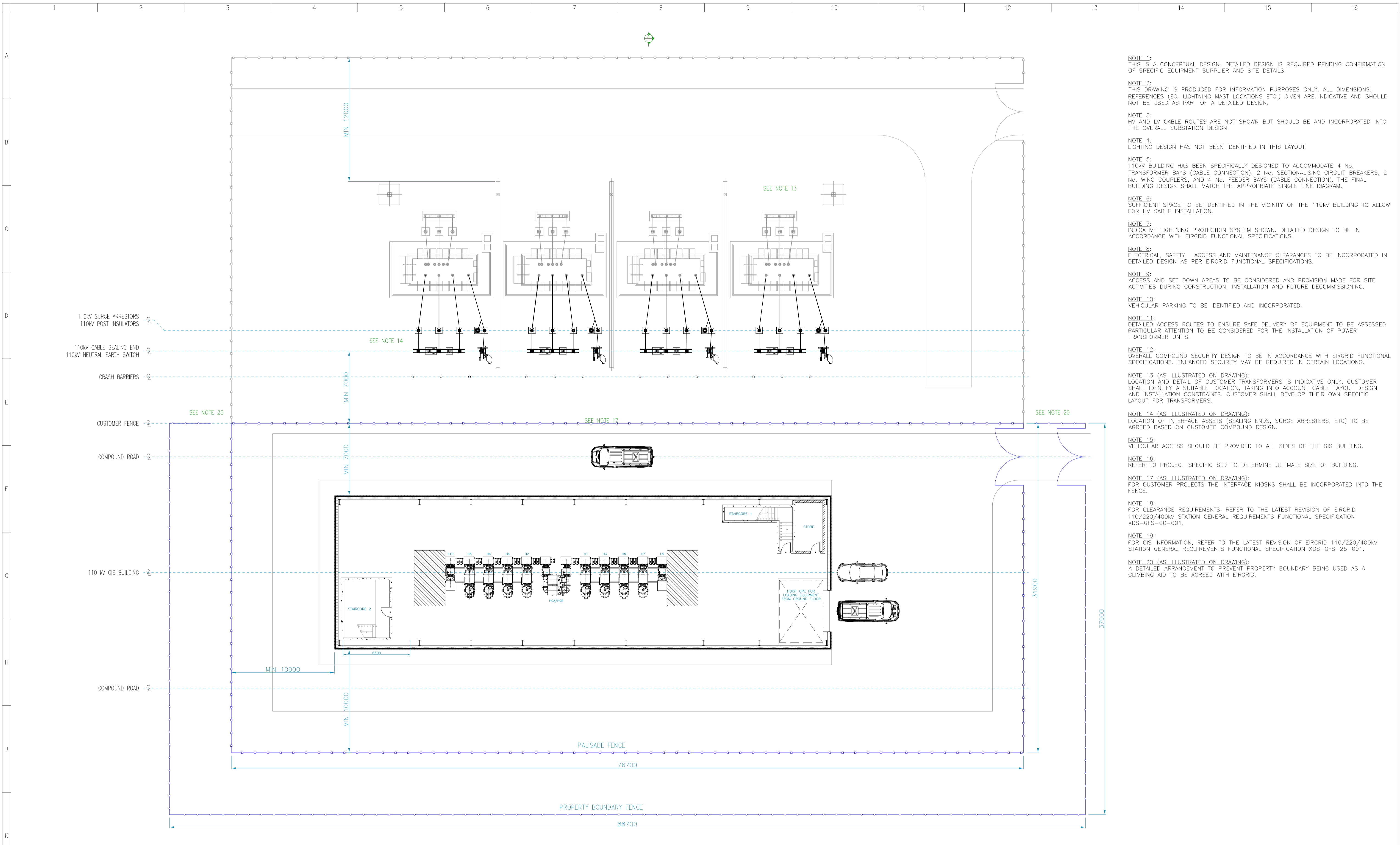
REV	DESC	DRAWN	CHECKED	APPROVED	DATE
07	REQUIREMENT FOR INDEPENDENT SPAN (NOTE 6) UPDATED; INDICATIVE CABLE BAY ADDED; CUSTOMER BAY MODIFIED; ROAD ARRANGEMENT MODIFIED; BOUNDARY FENCE MODIFIED; CONTROL BUILDING UPDATED; SHEET 02 ADDED;	JD	KMcG	CF	22/08/2019
06	SECTIONALISER BAY CHANGED AND WING COUPLERS ADDED; CONTROL ROOM ENLARGED; ADDITIONAL NOTES ADDED; FEEDER BAY CB CLEARANCE FROM MAIN BUSBAR INCREASED; BUSBAR TO BUSBAR DISTANCE INCREASED; DISCONNECTOR TYPES CHANGED	JD	RB	CF	20/11/2018
05	CONTROL ROOM RESIZED, CT & VT ADDED TO CUSTOMER COMPOUND & NOTE 2 ADDED	JB	RB	PM	17/02/2014

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PROJECT		110kV STATION DESIGN STANDARD AIS LOOP STATION	
DRAWING TITLE		INITIAL C-TYPE 110kV STATION AND FUTURE ENHANCED RING STATION PLAN VIEW	
No of Shts	2	SIZE	A3
DRAWING NUMBER	XDN-LAY-ELV-STND-H-001	SCALE	NTS
SHEET	001	REV	07



- NOTE 1:**
THIS IS A CONCEPTUAL DESIGN. DETAILED DESIGN IS REQUIRED PENDING CONFIRMATION OF SPECIFIC EQUIPMENT SUPPLIER AND SITE DETAILS.
- NOTE 2:**
THIS DRAWING IS PRODUCED FOR INFORMATION PURPOSES ONLY. ALL DIMENSIONS, REFERENCES (EG. LIGHTNING MAST LOCATIONS ETC.) GIVEN ARE INDICATIVE AND SHOULD NOT BE USED AS PART OF A DETAILED DESIGN.
- NOTE 3:**
HV AND LV CABLE ROUTES ARE NOT SHOWN BUT SHOULD BE AND INCORPORATED INTO THE OVERALL SUBSTATION DESIGN.
- NOTE 4:**
LIGHTING DESIGN HAS NOT BEEN IDENTIFIED IN THIS LAYOUT.
- NOTE 5:**
110KV BUILDING HAS BEEN SPECIFICALLY DESIGNED TO ACCOMMODATE 4 No. TRANSFORMER BAYS (CABLE CONNECTION), 2 No. SECTIONALISING CIRCUIT BREAKERS, 2 No. WING COUPLERS, AND 4 No. FEEDER BAYS (CABLE CONNECTION). THE FINAL BUILDING DESIGN SHALL MATCH THE APPROPRIATE SINGLE LINE DIAGRAM.
- NOTE 6:**
SUFFICIENT SPACE TO BE IDENTIFIED IN THE VICINITY OF THE 110KV BUILDING TO ALLOW FOR HV CABLE INSTALLATION.
- NOTE 7:**
INDICATIVE LIGHTNING PROTECTION SYSTEM SHOWN. DETAILED DESIGN TO BE IN ACCORDANCE WITH EIRGRID FUNCTIONAL SPECIFICATIONS.
- NOTE 8:**
ELECTRICAL, SAFETY, ACCESS AND MAINTENANCE CLEARANCES TO BE INCORPORATED IN DETAILED DESIGN AS PER EIRGRID FUNCTIONAL SPECIFICATIONS.
- NOTE 9:**
ACCESS AND SET DOWN AREAS TO BE CONSIDERED AND PROVISION MADE FOR SITE ACTIVITIES DURING CONSTRUCTION, INSTALLATION AND FUTURE DECOMMISSIONING.
- NOTE 10:**
VEHICULAR PARKING TO BE IDENTIFIED AND INCORPORATED.
- NOTE 11:**
DETAILED ACCESS ROUTES TO ENSURE SAFE DELIVERY OF EQUIPMENT TO BE ASSESSED. PARTICULAR ATTENTION TO BE CONSIDERED FOR THE INSTALLATION OF POWER TRANSFORMER UNITS.
- NOTE 12:**
OVERALL COMPOUND SECURITY DESIGN TO BE IN ACCORDANCE WITH EIRGRID FUNCTIONAL SPECIFICATIONS. ENHANCED SECURITY MAY BE REQUIRED IN CERTAIN LOCATIONS.
- NOTE 13 (AS ILLUSTRATED ON DRAWING):**
LOCATION AND DETAIL OF CUSTOMER TRANSFORMERS IS INDICATIVE ONLY. CUSTOMER SHALL IDENTIFY A SUITABLE LOCATION, TAKING INTO ACCOUNT CABLE LAYOUT DESIGN AND INSTALLATION CONSTRAINTS. CUSTOMER SHALL DEVELOP THEIR OWN SPECIFIC LAYOUT FOR TRANSFORMERS.
- NOTE 14 (AS ILLUSTRATED ON DRAWING):**
LOCATION OF INTERFACE ASSETS (SEALING ENDS, SURGE ARRESTERS, ETC) TO BE AGREED BASED ON CUSTOMER COMPOUND DESIGN.
- NOTE 15:**
VEHICULAR ACCESS SHOULD BE PROVIDED TO ALL SIDES OF THE GIS BUILDING.
- NOTE 16:**
REFER TO PROJECT SPECIFIC SLD TO DETERMINE ULTIMATE SIZE OF BUILDING.
- NOTE 17 (AS ILLUSTRATED ON DRAWING):**
FOR CUSTOMER PROJECTS THE INTERFACE KIOSKS SHALL BE INCORPORATED INTO THE FENCE.
- NOTE 18:**
FOR CLEARANCE REQUIREMENTS, REFER TO THE LATEST REVISION OF EIRGRID 110/220/400KV STATION GENERAL REQUIREMENTS FUNCTIONAL SPECIFICATION XDS-GFS-00-001.
- NOTE 19:**
FOR GIS INFORMATION, REFER TO THE LATEST REVISION OF EIRGRID 110/220/400KV STATION GENERAL REQUIREMENTS FUNCTIONAL SPECIFICATION XDS-GFS-25-001.
- NOTE 20 (AS ILLUSTRATED ON DRAWING):**
A DETAILED ARRANGEMENT TO PREVENT PROPERTY BOUNDARY BEING USED AS A CLIMBING AID TO BE AGREED WITH EIRGRID.

00	FIRST ISSUE	CHC	NK	CF	26/09/2019
REV	DESC	DRAWN	CHECKED	APPROVED	DATE
EirGrid plc The Oval, 160 Shelbourne Road, Ballsbridge, Dublin 4, Ireland Telephone: +353 1 677 1700 Fax: +353 1 661 5376 Email: info@eirgrid.com Web: www.eirgrid.com		PROJECT STATION DESIGN STANDARD 110kV GIS STATION DRAWING TITLE 110kV GIS STATION LAYOUT PLAN VIEW - 8 BAY STATION ENGINEERING DRAWING			
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DRAWING NUMBER XDN-LAY-ELV-STND-H-012		REV 00			