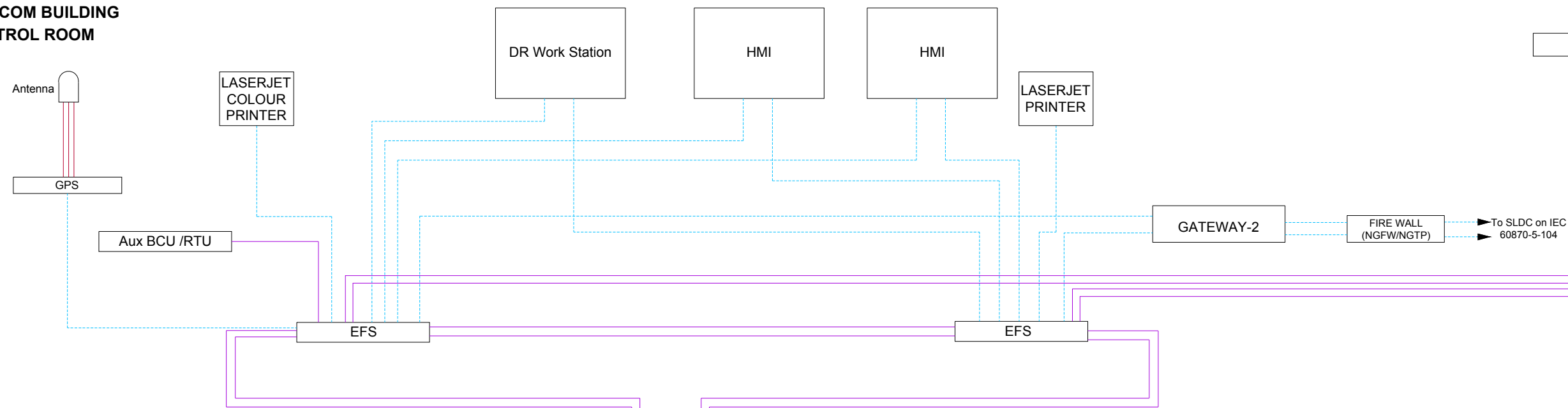


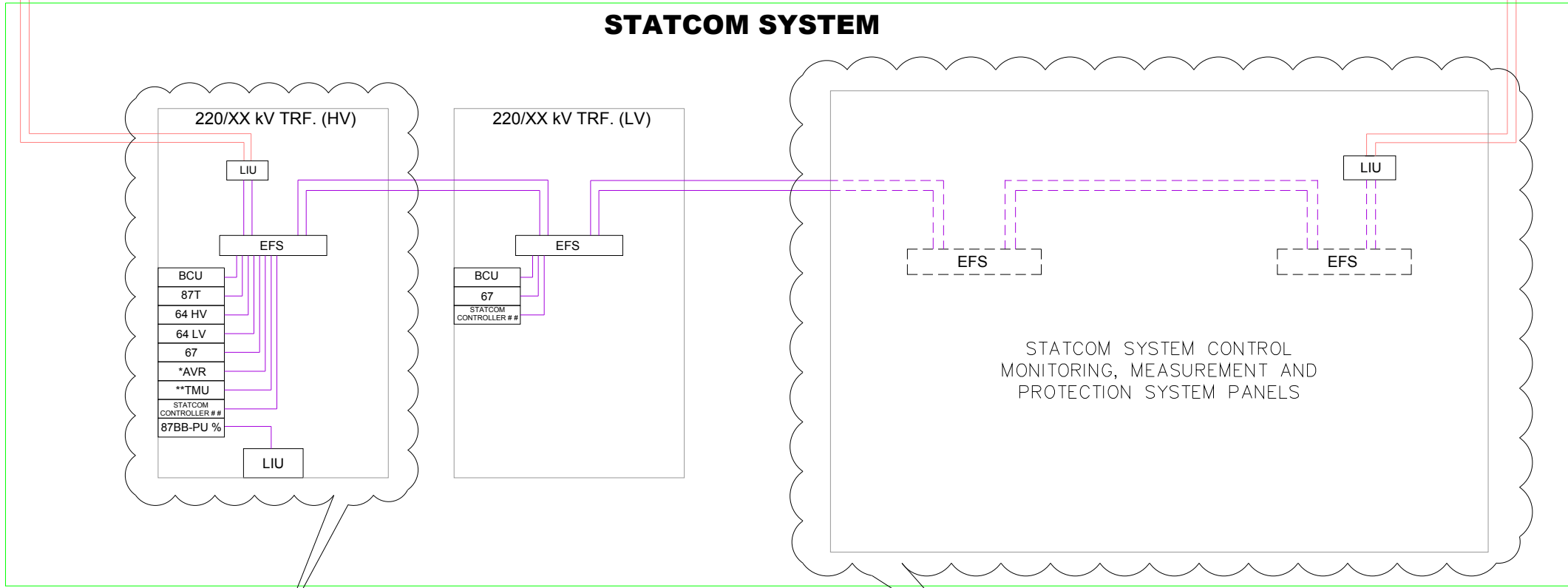
REMOTE SUB-STATION

STATCOM BUILDING  
CONTROL ROOM



100mbps Ethernet Redundant Fibre Ring Topology IEC 61850

STATCOM SYSTEM

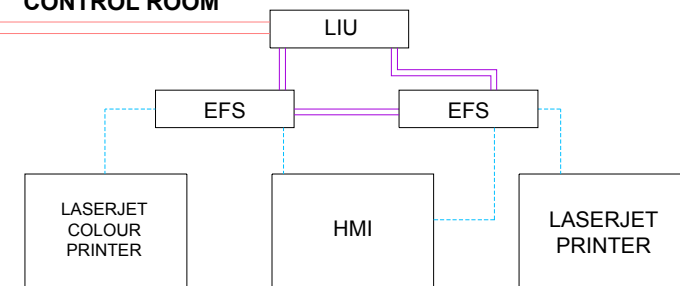


IF SCADA COMPATIBLE CONTROL &  
PROTECTION PANEL PROVIDED FOR  
COUPLING TRANSFORMER.

SHALL BE AS PER REQUIREMENT OF  
STATCOM SYSTEM.

MAIN SUB-STATION (MASTER CONTROL CENTER)

220kV SAGAPARA  
CONTROL ROOM



LEGEND (PROTECTION) :-

- 64 TRANSFORMER RESTRICTED EARTH FAULT PROTECTION
- 67 DIRECTIONAL OVER CURRENT & E/F PROTECTION
- 87T TRANSFORMER DIFFERENTIAL PROTECTION
- 87BB-PU BUS BAR PROTECTION PERIPHERAL UNIT
- AVR AUTOMATIC VOLTAGE REGULATOR
- TMU IEC 61850 COMPATIBLE TRANSFORMER MONITORING DEVICES LIKE FO SENSOR, ONLINE DGA ETC.

**NOTE:** ALL PROTECTIVE RELAYS ARE NUMERICAL & IEC 61850 AS WELL AS CYBER SECURITY COMPATIBLE

LEGEND:-

- RJ-45 Ethernet cable
- 100mbps Ethernet Armoured Fibre Optic Cable
- 100mbps Ethernet Fibre Optic Patch Cable
- Coaxial Cable (From Antenna to GPS)
- RS-485 Ethernet cable
- RS-232 cable
- OPGW CABLE

LEGEND (AUTOMATION) :-

- BCU - BAY CONTROL UNIT
- HMI - HUMAN MACHINE INTERFACE
- EFS - ETHERNET FIBER SWITCH
- LIU - LINE INTERFACE UNIT

TENDER PURPOSE

GUJARAT ENERGY TRANSMISSION CORPN.LTD.

S.P.VIDYUT BHAVAN, RACE COURSE,  
VADODARA - 390 007

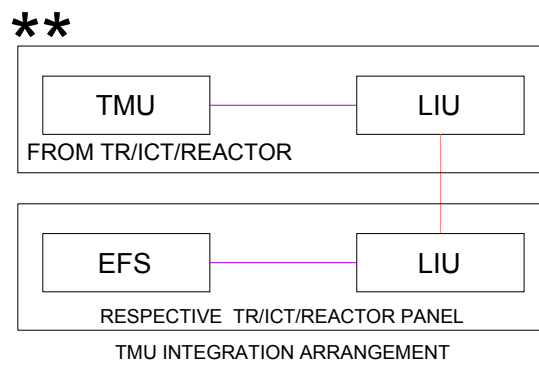
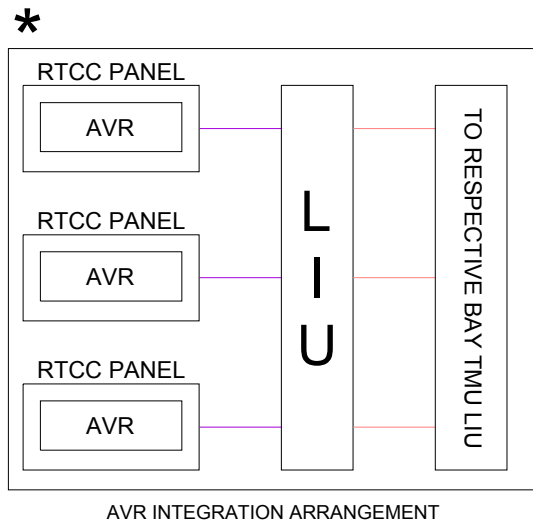
TYPICAL SCADA ARCHITECTURE FOR AUTOMATION OF  
220KV SAGAPARA SUB-STATION FOR STATCOM BAY

DRAWN:	CHECKED	APPD:		
DE(ENGG.)	EE(ENGG.)	I/C ACE(ENGG.)	SIZE:	A2
SCALE:	DATE:	DRG. NO:	SHEET:	REV:
N.T.S.	08.11.2024	GETCO / E /2S-041/ P - 032	1 OF 1	R0

**NOTE:** (1) OTHER THAN RING TOPOLOGY FIBRE OPTIC CABLE, SEPARATE FIBRE OPTIC CABLES ARE TO BE PROVIDED FOR BUS BAR PROTECTION SCHEME'S CENTRAL UNIT TO ALL PERIPHERAL UNITS.  
(2.) THIS IS TENTATIVE SCADA ARCHITECTURE & SCADA SYSTEM REQUIREMENT i.e. EFS LIU ETC. SHALL BE AS PER THE REQUIREMENT OF THE STATCOM SYSTEM.

NOTE:-

- ETHERNET SWITCHES ARE IEC 61850 EDITION-2 AS WELL AS CYBER SECURITY COMPATIBLE WITH PRIORITY TAGGING.
- BCU SHALL HAVE SUFFICIENT I/Os AS PER LCC SCHEME REQUIREMENTS.
- EFS SHALL HAVE AS MANY SPARE PORTS AS UTILIZED.
- % BUS BAR PROTECTION UNIT COMPATIBLE TO EXISTING BUS BAR SCHEME WILL BE PROVIDED BY GETCO. INTEGRATION AND COMMISSIONING IS IN THE SCOPE OF BIDDER.
- ## CONTROLLER SHALL BE AS PER REQUIREMENT OF RESPECTIVE OEMS.



R0	FIRST PREPARATION
REV:	DESCRIPTION