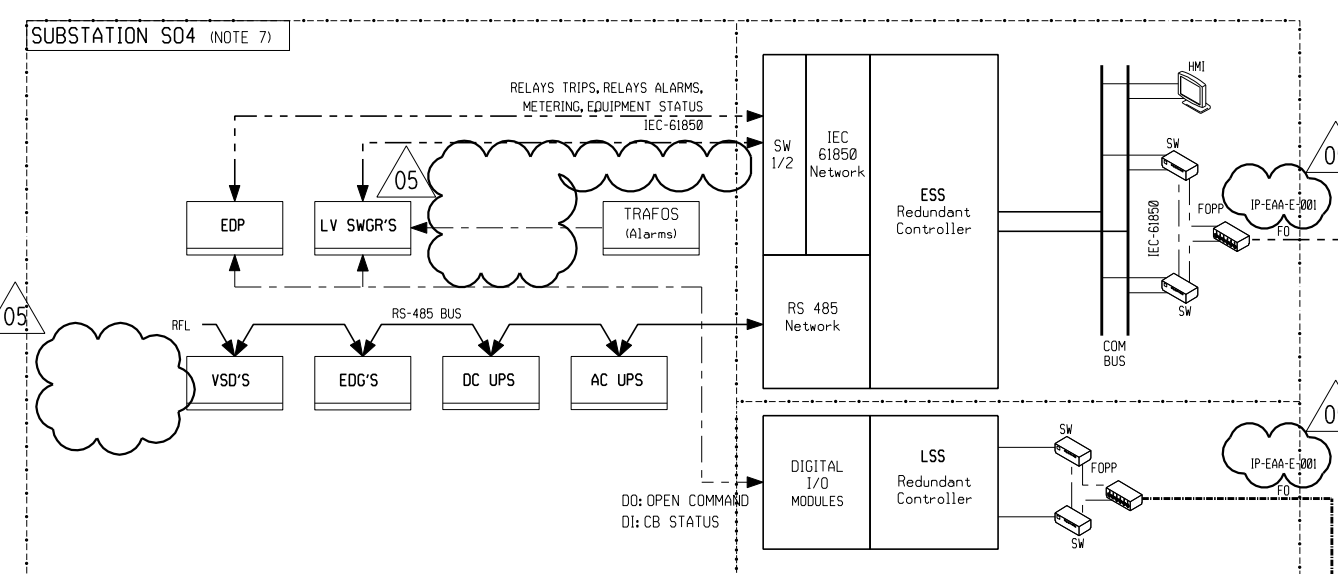
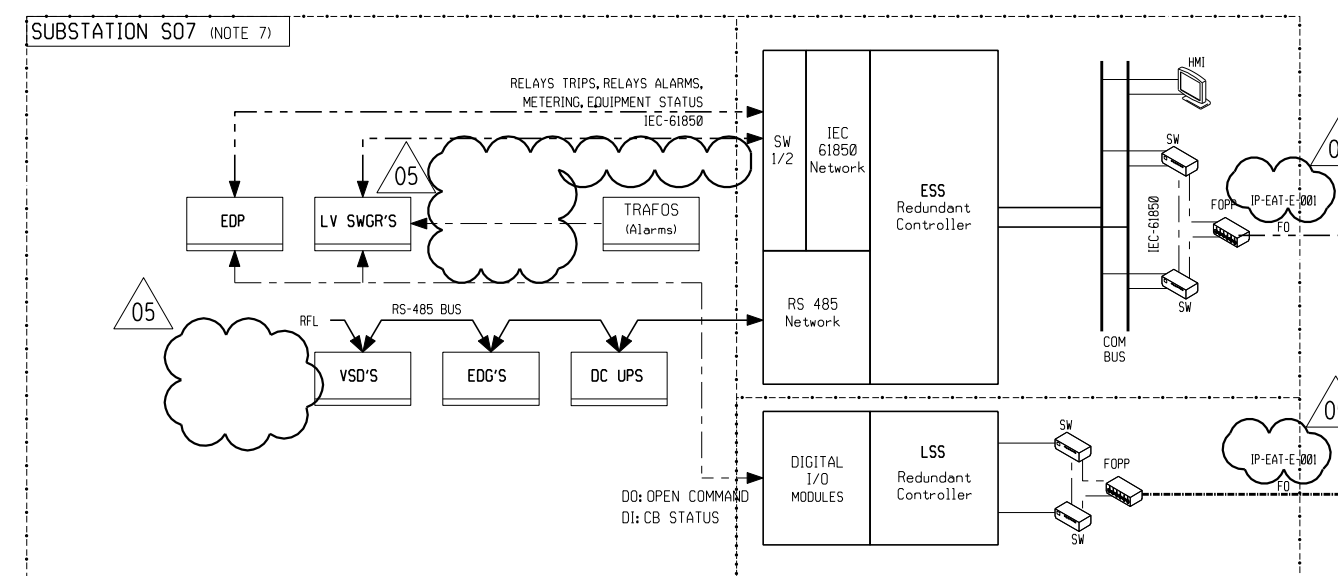
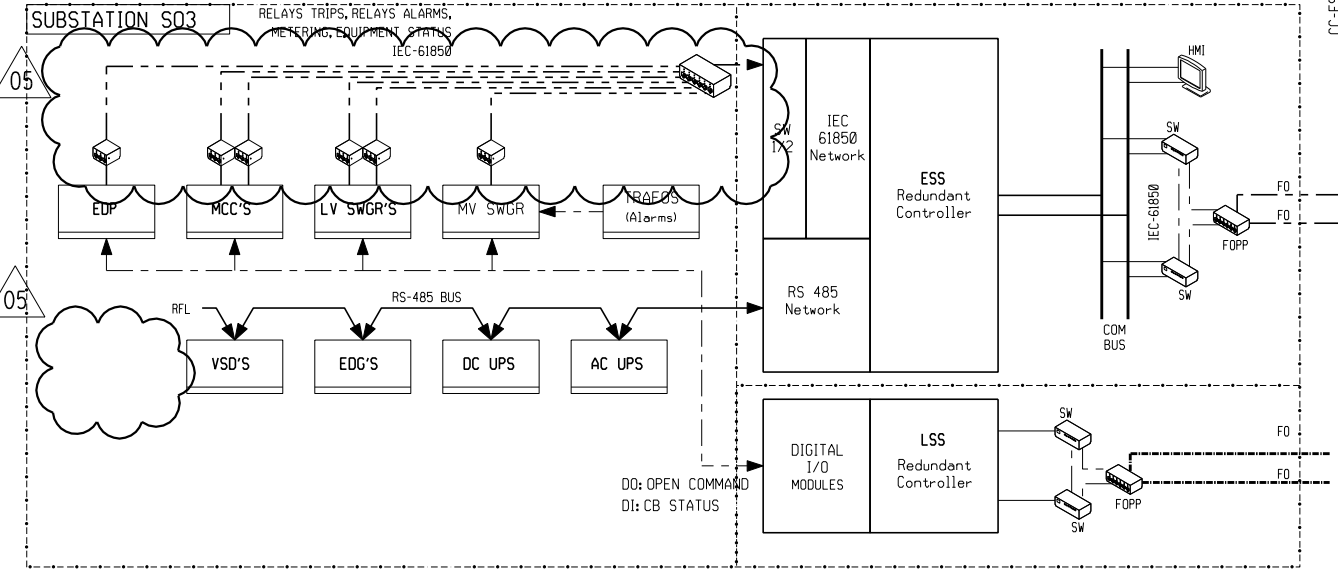
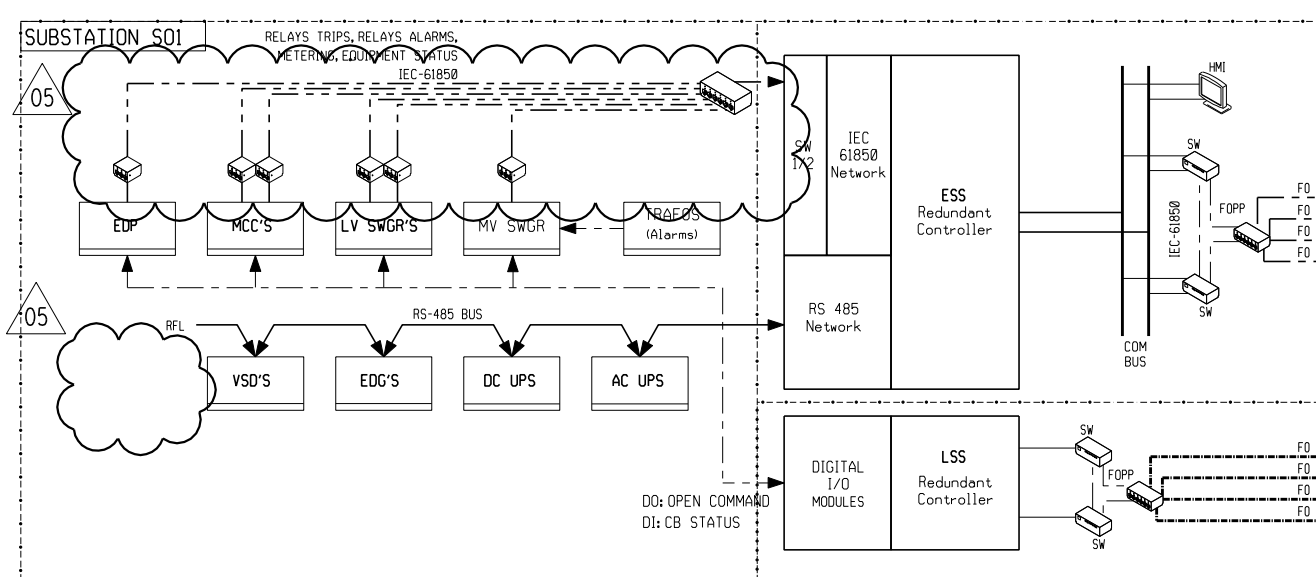
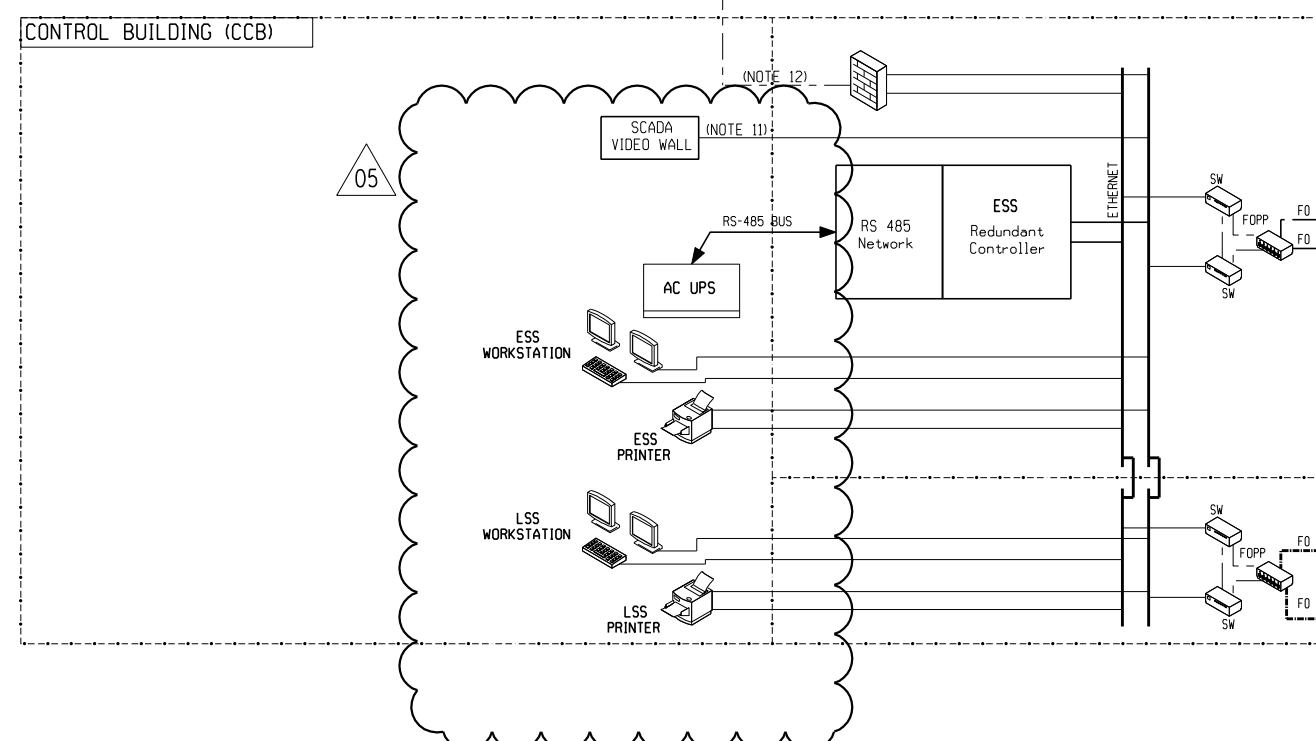
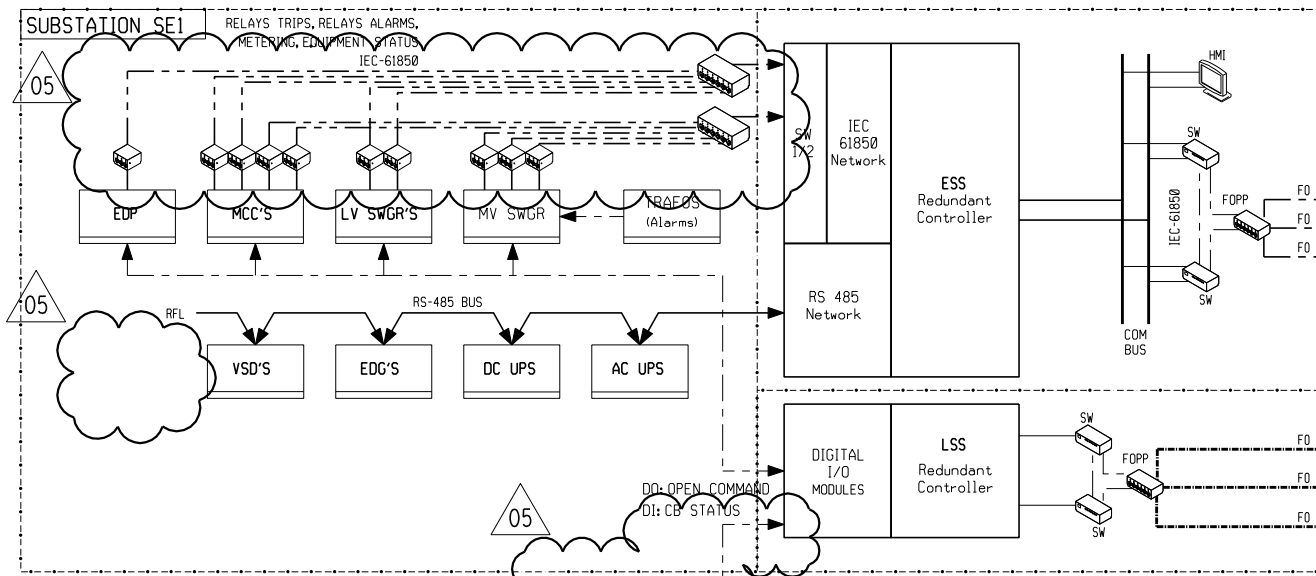
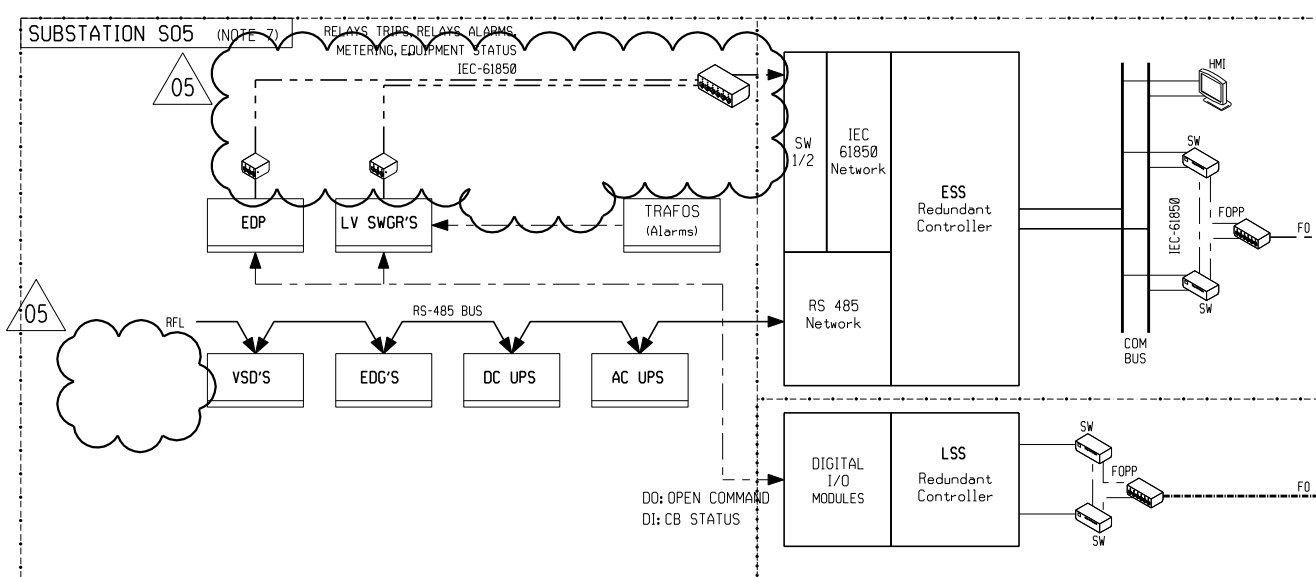
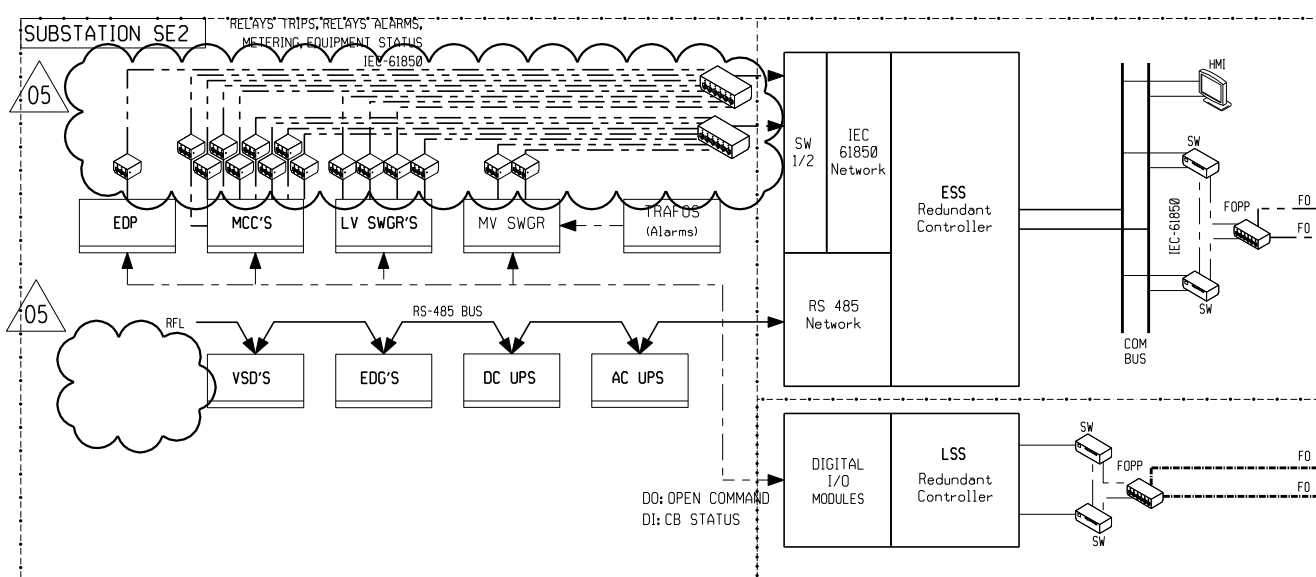
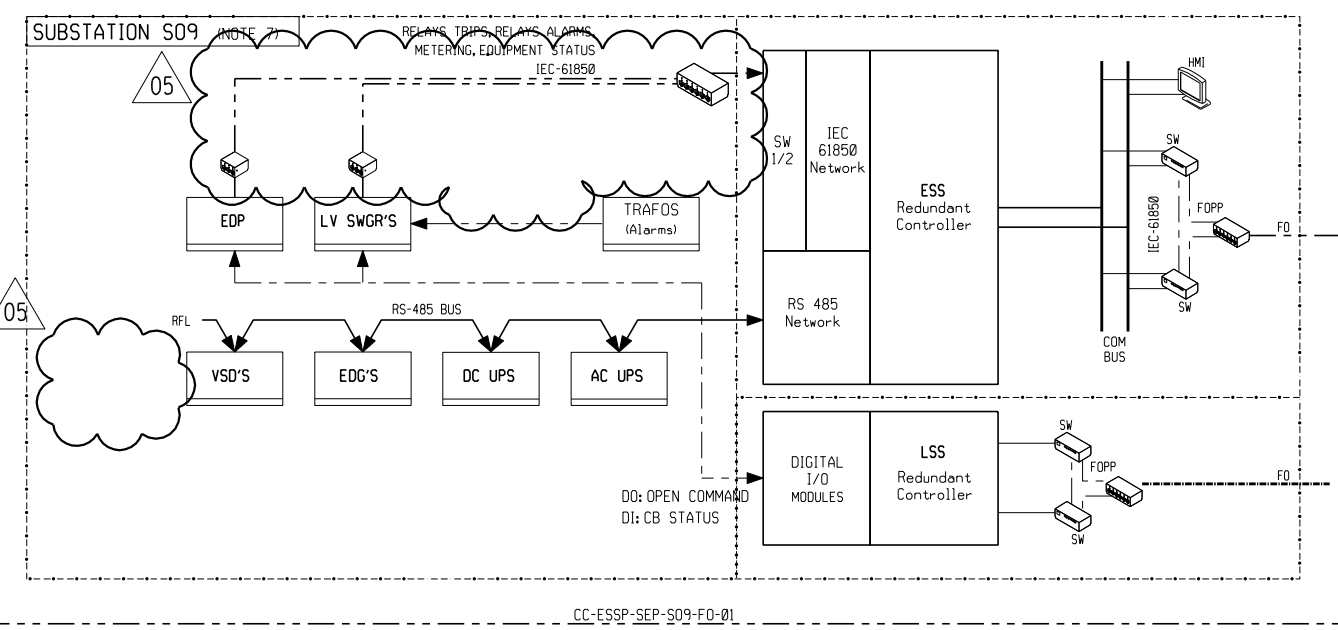
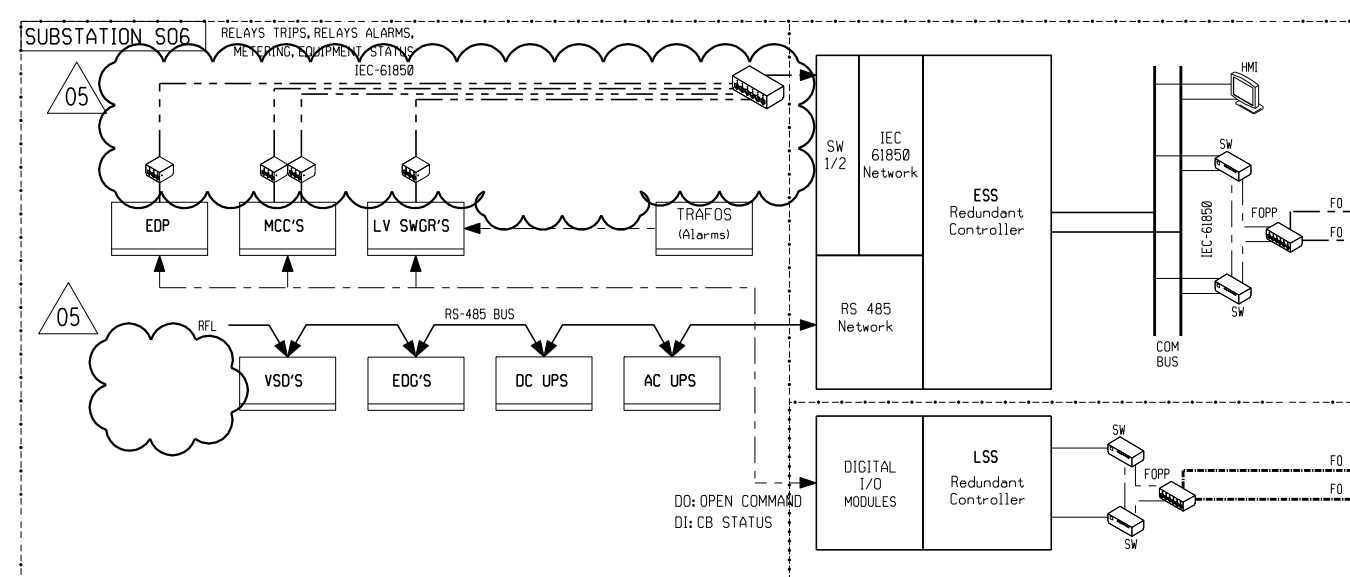
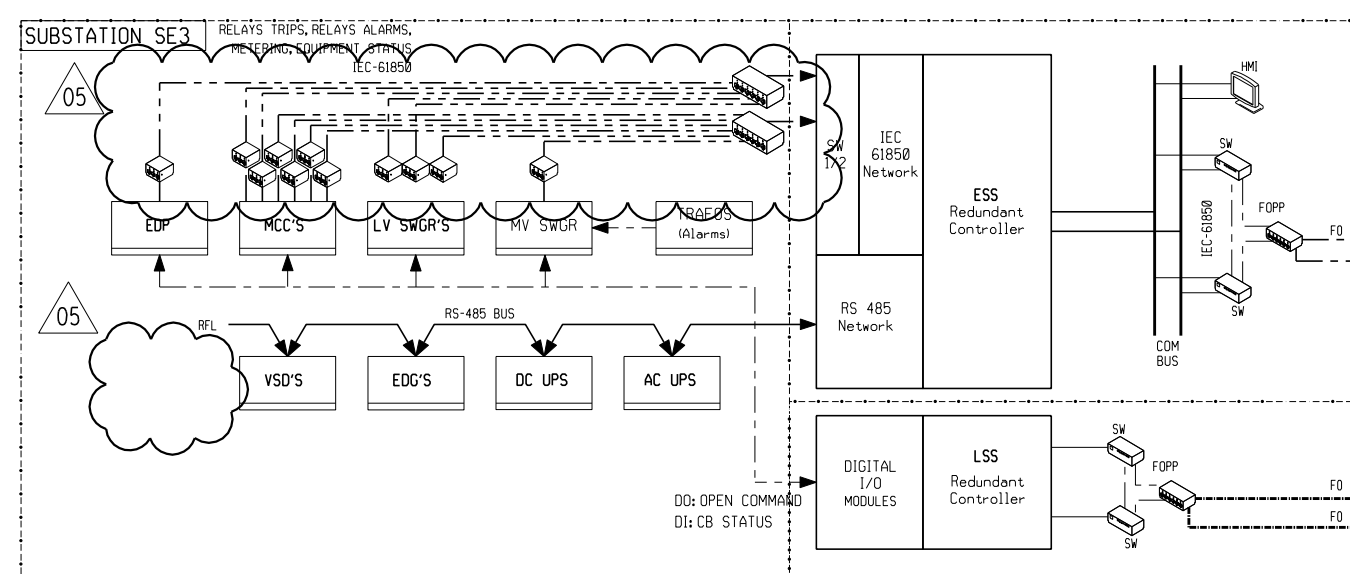
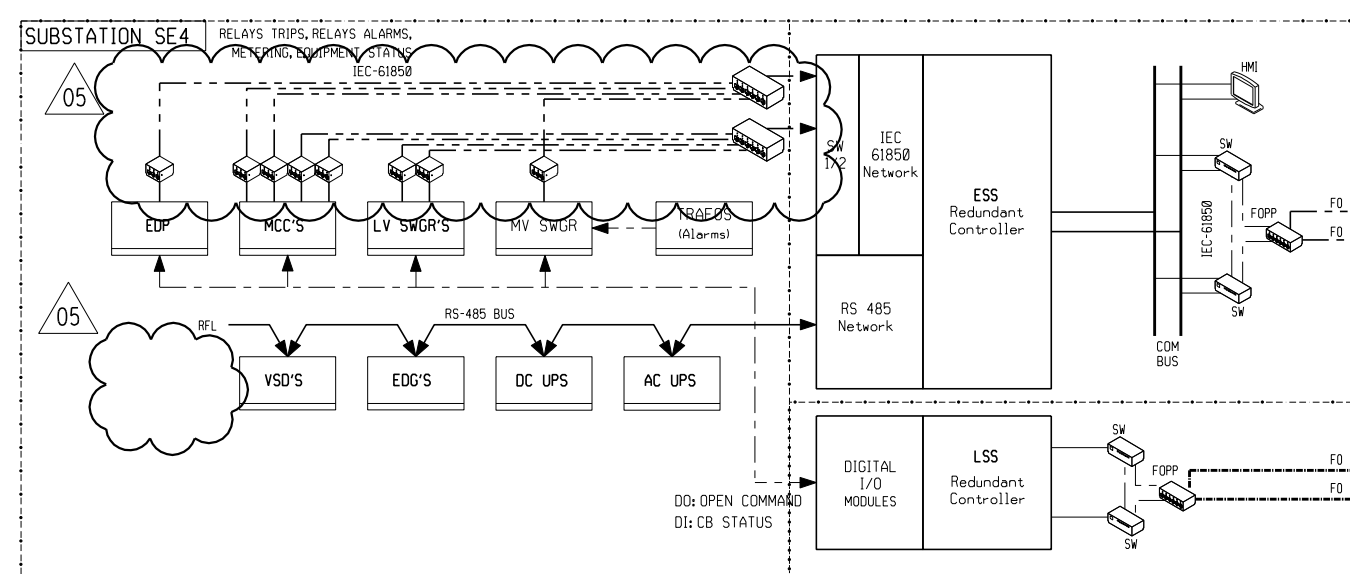
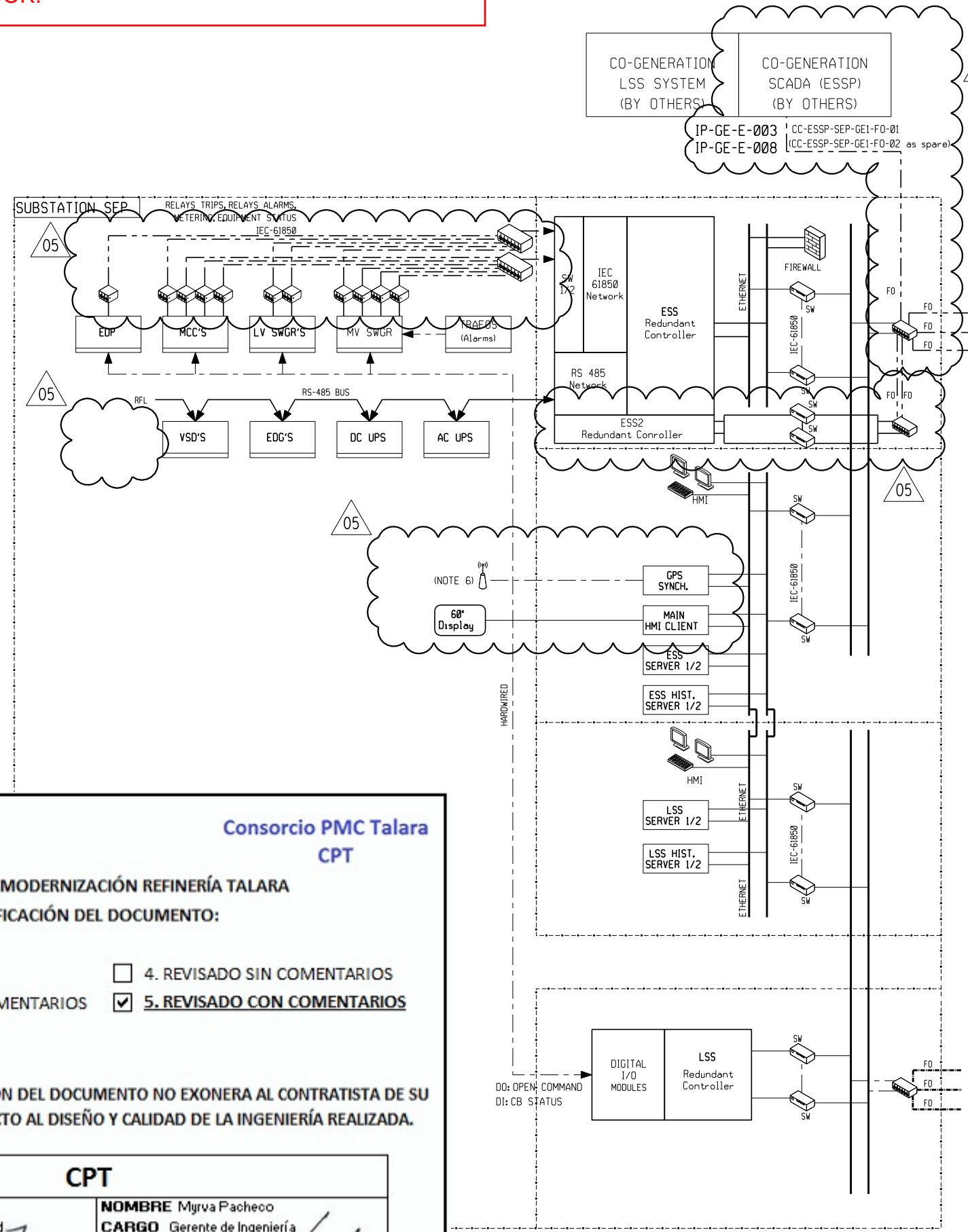



SE OBSERVA QUE SE HAN ELIMINADO LAS SEÑALES DE LOS HVACs, ASUNTO QUE NO HA SIDO APROBADO POR EL EMPLEADOR.




- # NOTES
1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL ASSOCIATED TECHNICAL SPECIFICATIONS.
 2. EQUIPMENT ARRANGEMENT IS ONLY SCHEMATIC. VENDOR SHALL PROPOSE FINAL ARCHITECTURE.
 3. MAINS AND HISTORIES SERVERS TO BE DEFINED BY VENDOR.
 4. COMMUNICATION PROTOCOL AT FIRST LEVEL (FIELD DEVICES) MUST BE IEC-61850.
 5. FIREWALL DEVICES MUST INSULATE SACA SYSTEM FROM OTHER DEVICES.
(INTERNAL CHANGES ARE NOT AUTHORIZED ACCESS)
 6. GPS REDUNDANT SYSTEM GPS CLOCK (SECONDARY) AT MAIN SUBSTATION SEP PROVIDES TIME SYNCHRONIZATION TO ESS/LSS SYSTEM MASTER CLOCK (DCS SYSTEM IS LOCATED AT RE-1).
 7. ALL SUBSTATIONS WILL BE CONNECTED AS A RING EXCEPT SUBSTATIONS S04,S05 S07 AND S09 THAT WILL BE CONNECTED USING RADIAL FIBER OPTIC CABLES CONNECTION ONE (1) FOR SACA AND ONE (1) FOR LSS.
 8. ALL SUBSTATIONS SHALL INCLUDE AS MINIMUM THE FOLLOWING EQUIPMENT RACK DISPLAY, DISPLAY+HMI FIXED IN RACK WITH KEYBOARD AND MOUSE WITH REDUNDANT-RECURRENT GATEWAY COMMUNICATION SWITCH AS PER DOCUMENT 82070-GEN-ELE-SEP-038 AND 82070-GEN-ELE-PHI-001.
 9. FIBER OPTIC WILL BE MULTIMODE OM3 OM2 62.5/125um, with "LC" CONNECTION TYPE.
 10. INTERFACE POINTS BETWEEN TECNICOS REMINDS AND OTHERS.
 - 11-IP-GE-E-003/008
 - 12-IP-PAF-E-002/006
 - 13-IP-EAA-E-001
 - 14-IP-EAT-E-001
 - 15-IP-WTP-E-002/05
 11. SACA VIDEO WALL (SUPPLIED BY HONEYWELL) WILL BE CONNECTED BY USIN AN EXTENDER TO PC DISPLAY PORT (DISPLAY PORT - HMI) ADAPTION AND WILL DISPLAY ESS WORKSTATION.
 12. DCS COMMUNICATION (MOBUS) TCP/IP FOR SYNCHRONIZATION SIGNAL AND CURRENT SIGNALS FOR MOTORS (FCC-MCP-206-A/B) AND FCC-MCP-206-A/B.
 13. DCS SIGNAL (LSS ACTIVE) WILL BE COMMUNICATED HARWORED FROM LSS PANEL TO LSS VIA EIC PANEL IN SUBSTATION SEPI1 RE1(I).

- ## SYMBOLS
- 05




GPS CLOCK

05




FIBER OPTIC CONNECTION BOX / PATCH PANEL

05




ETHERNET SWITCH

05




FIREWALL

05




SERVER

05




PRINTER

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
HUMAN MACHINE INTERFACE (HMI)

05




SERIAL LINK

05




RINGWIRE

05




FIBER OPTIC CABLE REDUNDANT RING FOR SCADA SYSTEM

05




FIBER OPTIC CABLE REDUNDANT RING FOR LOAD SHEDDING SYSTEM

05




BUS/STATION LIMIT

05




VS: VARIABLE SPEED DRIVE

05




EDG: EMERGENCY DIESEL GENERATOR

05




UPS: UNINTERRUPTIBLE POWER SUPPLY

05




HVAC: HEAT VENTILATION AND AIR CONDITION SYSTEM

05




LV SWGR: MEDIUM VOLTAGE SWITCHGEAR

05




LV SWGR: LOW VOLTAGE SWITCHGEAR

05




SCADA: SUPERVISORY CONTROL AND DATA ACQUISITION

05




DCS: DISTRIBUTED CONTROL SYSTEM

05




IRP (IEC: INTERFACE RELAY PANEL (ELECTRICAL INTERFACE CABINET) NODE 13)

05




LSS: LOAD SHEDDING SYSTEM

05




FO: FIBER OPTIC

05




AP: ANNUNCIATOR PANEL (HMI)

05




MCC: MOTOR CONTROL CENTER

05




EDP: EMERGENCY DISTRIBUTION PANEL

05




ERS: ELECTRIC ROOM SYSTEM

05




SW: F0 SWITCH

05




HMI: HUMAN MACHINE INTERFACE

05



FOPP: FIBER OPTIC PATH PANEL

05





REL: END OF LINE RESISTOR

PLANOS DE REFERENCIA	
PLANO NO.	TÍTULO
02070-GEN-ELE-SPE-030	SCADA AND LOAD SHEDDING SYSTEMS SPECIFICATION
02070-GEN-ELE-PHI-001	SCADA AND LOAD SHEDDING OPERATIONAL AND FUNCTIONAL PHILOSOPHY
02070-GEN-ELE-LIS-030	SCADA AND LSS I/O LIST
02070-DCS-INS-ORW-001	ARQUITECTURA DEL SISTEMA DEL CONTROL DE PROCESOS
02070-DCS-INS-SPE-024	BASES DE DISEÑO DEL SISTEMA DE SINCRONIZACIÓN DE TIEMPO
02070-DCS-INS-PHI-003	NARRATIVA DE CONTROL DE MOTORES

EDICIÓN OFICIAL DE
ESTA REVISIÓN.

#5	21-12-2018	ISSUED FOR CONSTRUCTION (FINAL)	PPV/LC	LNM/PEA	EGG
#6	28-07-2016	ISSUED FOR CONSTRUCTION (FINAL)	JJC	JTF/PEA	JMA
#2	13-07-2015	ISSUED FOR CONSTRUCTION	JJC	JTF/PEA	JMA
#3	09-10-2014	ISSUED FOR DESIGN	JJC	JTFB/JR	JMA
#1	11-09-2012	ISSUED FOR FEED	LC	WU	CAP/JMA
#0	29-07-2011	ISSUED FOR INFORMATION & COMMENTS	LC	WU	CAP/JMA
Rev.	Fecha Date	Descripción Description	Usado por Drawn by	Comprob. Checked by	Aprobado Approved by

		PROYECTO DE MODERNIZACIÓN REFINERÍA TALARA (PERU)	
		SCADA OVERALL NETWORK ARCHITECTURE	
TECNICAS REUNIDAS		02070-GEN-ELE-BLD-002	
FORMATO SIZE	A4	PROYECTO No. PROJECT No.	02070
ESCALA SCALE	NONE	PLANO No. DWG No.	02070-GEN-ELE-BLD-002
		HJEDA SHEET	06
		REV.	00