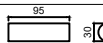
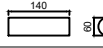
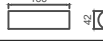
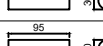


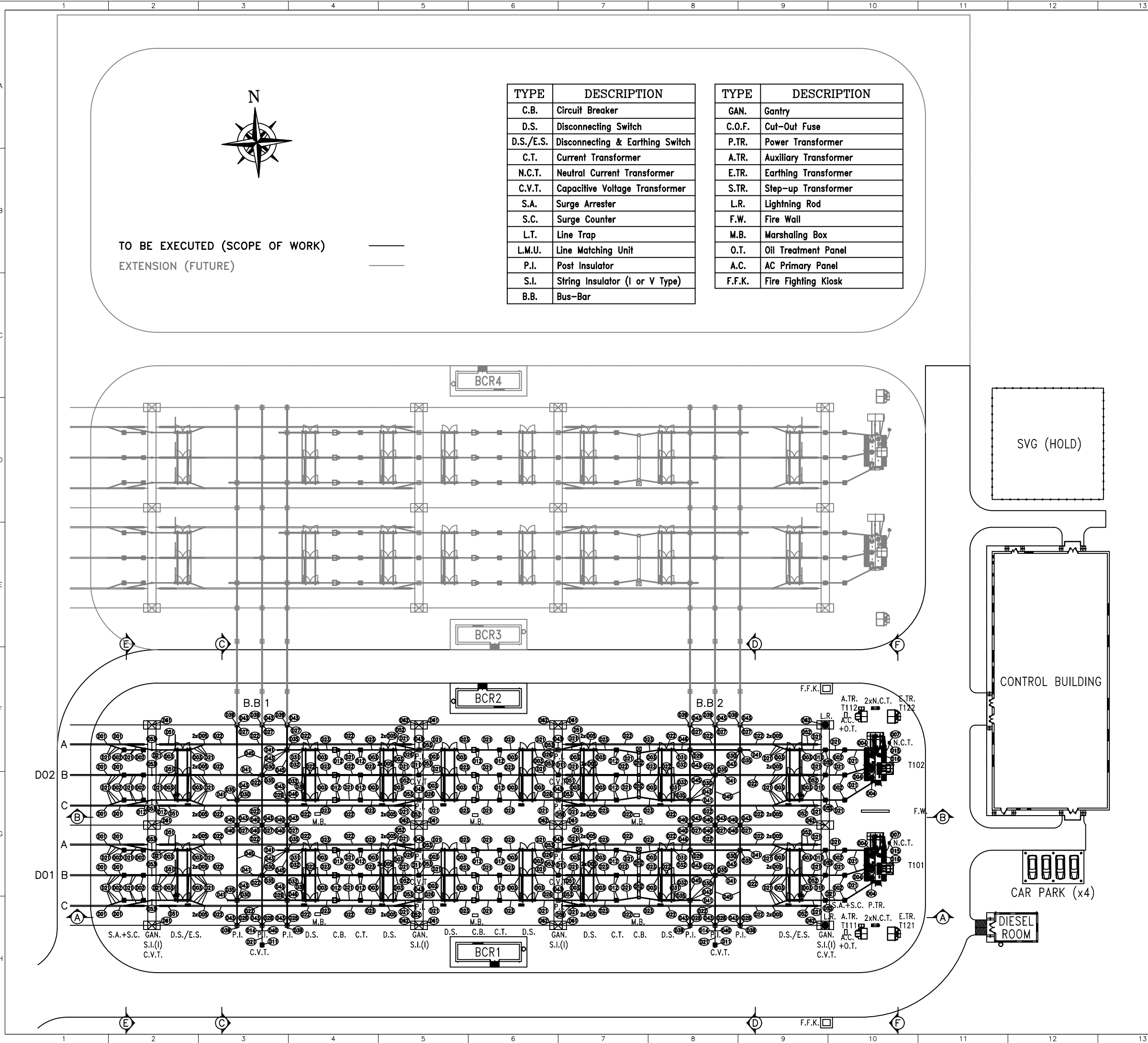
RANFSANJAN 230/33KV SUBSTATION

CLAMP & FITTING LOCATION & CODIFICATION

REFERENCE							
REFERENCE. TITLE				REFERENCE. No.			
NOTES							
LEGEND							
KEY PLAN							
03	1405/02/07	IFA-ISSUED FOR APPROVAL	H.S.	H.S.	EPC ENGINEERING MANAGER	EPC PROJECT MANAGER	
02	1404/11/21	IFA-ISSUED FOR APPROVAL	H.S.	H.S.	EPC ENGINEERING MANAGER	EPC PROJECT MANAGER	
01	1404/10/03	IFA-ISSUED FOR APPROVAL	H.S.	H.S.	EPC ENGINEERING MANAGER	EPC PROJECT MANAGER	
00	1404/09/15	IFR-ISSUED FOR REVIEW	H.S.	H.S.	EPC ENGINEERING MANAGER	EPC PROJECT MANAGER	
REV.	DATE	DESCRIPTION	DESIGN	DRAWN	CHECKED	APPROVED	
Client:			Consultant:				
 NICICO			 موندکو ایران Monenco Iran				
			Contractor:  MOHAM SHARGH CO.		Sub Contractor:		
Project: RANFSANJAN 230/33KV SUBSTATION							
Title: CLAMP & FITTING LOCATION & CODIFICATION COVER SHEET							
<i>DOC NO.:</i>		28P2-B-3MG-DWG-SUS-460001-EL-056				<i>REV.</i>	
						C	
<i>SCALE</i>		<i>SIZE</i>		<i>SHEET</i>		<i>FORMAT</i>	
—		A3		1 OF 8			

													REFERENCE			
													REFERENCE. TITLE		REFERENCE. No.	
													NOTES			
													LEGEND			
													KEY PLAN			
03	1405/02/07	IFA-ISSUED FOR APPROVAL		H.S.	H.S.	EPC ENGINEERING MANAGER		EPC PROJECT MANAGER								
02	1404/11/21	IFA-ISSUED FOR APPROVAL		H.S.	H.S.	EPC ENGINEERING MANAGER		EPC PROJECT MANAGER								
01	1404/10/03	IFA-ISSUED FOR APPROVAL		H.S.	H.S.	EPC ENGINEERING MANAGER		EPC PROJECT MANAGER								
00	1404/09/15	IFR-ISSUED FOR REVIEW		H.S.	H.S.	EPC ENGINEERING MANAGER		EPC PROJECT MANAGER								
REV.	DATE	DESCRIPTION		DESIGN	DRAWN	CHECKED	APPROVED									
Client:				 				Consultant:								
								Contractor:								
				MOHAM SHARGH CO.				Sub Contractor:								
Project:																
RANFSANJAN 230/33KV SUBSTATION																
Title:																
CLAMP & FITTING LOCATION & CODIFICATION INDEX SHEET																
DOC NO.:		28P2-B-3MG-DWG-SUS-460001-EL-056										REV.				
												C				
SCALE		SIZE		SHEET		FORMAT										
-		A3		2 OF 8												

1																		2																		3																		4																		5																		6																		7																		8																		9																		10																		11																		12																		13																		14																		15																		16																	
ITEM		CLAMP/FITTING DESCRIPTION										CLAMP/FITTING SHAPE		EQUIPMENT TERMINAL OR FITTING DETAILS		DESIGNATION CODE		REQUIRED NO.		REFERENCE																																																																																																																																																																																																																																																																											
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A		1 TEE CONNECTOR (2x800mm² AAAC, 100mm C.T.C. DISTANCE, to 1xCANARY, Ø29.52mm) for 230KV LINE TAKEOFF												---		D01		12																																																																																																																																																																																																																																																																													
		2 TEE CONNECTOR (2x800mm² AAAC, 100mm C.T.C. DISTANCE, to Ø30mm STUD TERMINAL) for 230KV LA & CVT												 St@Zn/Al		D02		18																																																																																																																																																																																																																																																																													
		3 TEE CONNECTOR (2x800mm² AAAC, 100mm C.T.C. DISTANCE, to Ø60mm STUD TERMINAL) for 230KV DS & DS/ES												 Al		D03		96																																																																																																																																																																																																																																																																													
		4 TEE CONNECTOR (2x800mm² AAAC, 100mm C.T.C. DISTANCE, to Ø42mm STUD TERMINAL) + BIMETAL (Al/Cu) SLEEVES for 230KV PHASE BUSHING of PTR												 Cu		D04		6																																																																																																																																																																																																																																																																													
B		5 TEE CONNECTOR (1x800mm² AAAC to 1x800mm² AAAC) for 230KV BUSBAR												---		D05		84																																																																																																																																																																																																																																																																													
		6 TEE CONNECTOR (1x185mm² N2XS Y CABLE to Ø30mm STUD TERMINAL) + 2x BIMETAL (Al/Cu) SLEEVES for 230KV & 33KV (EARTH PIT) SIDE NCT												 Cu@Ni		D07		4																																																																																																																																																																																																																																																																													
		7 STRAIGHT CONNECTOR (2x800mm² AAAC, 100mm C.T.C. DISTANCE, to Ø30mm STUD TERMINAL) for 230KV CVT												 Al		D11		12																																																																																																																																																																																																																																																																													
		8 STRAIGHT CONNECTOR (2x800mm² AAAC, 100mm C.T.C. DISTANCE, to 125x125mm² FLAT TERMINAL) for 230KV CT & CB												 Al		D12		72																																																																																																																																																																																																																																																																													
C		9 STRAIGHT CONNECTOR (2x800mm² AAAC, 100mm C.T.C. DISTANCE, to 200/6mm AlMgSi TUBE) for 230KV MAIN BUSBAR												---		D14		2																																																																																																																																																																																																																																																																													
		10 STRAIGHT CONNECTOR (1x240mm² NYY CABLE to Ø30mm STUD TERMINAL) + 2x BIMETAL (Al/Cu) SLEEVES for 230KV & 33KV (EARTH PIT) SIDE NCT												 Cu@Ni		D15		4																																																																																																																																																																																																																																																																													
		11 STRAIGHT CONNECTOR (1x240mm² NYY CABLE to 100x100mm² FLAT TERMINAL) + 2x BIMETAL (Al/Cu) SLEEVES for 230KV NEUTRAL BUSHING of PTR												 CuZn		D16		2																																																																																																																																																																																																																																																																													
		12 PARALLEL CONNECTOR (1x800mm² AAAC to 1x800mm² AAAC) for 230KV BUSBAR												---		D18		72																																																																																																																																																																																																																																																																													
D		13 SPACER (2x800mm² AAAC, 100mm C.T.C. DISTANCE) for 230KV BUSBAR												---		D21		188																																																																																																																																																																																																																																																																													
		14 SPACER (2x800mm² AAAC, 200mm C.T.C. DISTANCE) for 230KV BUSBAR												---		D22		48																																																																																																																																																																																																																																																																													
		15 EARTHING POINT (2x800mm² AAAC, 100mm C.T.C. DISTANCE) for 230KV BAY												---		D23		36																																																																																																																																																																																																																																																																													
		16 VERTICAL CABLE SUPPORT (2x800mm² AAAC, 100mm C.T.C. DISTANCE) for 230KV C8 PI												 18 St@Zn		D26		8																																																																																																																																																																																																																																																																													
E		17 EXPANSION COUPLER WITH SUPPORT (SLIDE, 200/6mm AlMgSi TUBE) for 230KV C8 PI												 18 St@Zn		D27		12																																																																																																																																																																																																																																																																													
		18 HORIZONTAL TUBE SUPPORT (SLIDE, 200/6mm AlMgSi TUBE) for 230KV C8 PI												 18 St@Zn		D28		6																																																																																																																																																																																																																																																																													
		19 HORIZONTAL TUBE SUPPORT (SLIDE, 100/6mm AlMgSi TUBE) for 230KV C8 PI												 18 St@Zn		D29		4																																																																																																																																																																																																																																																																													
		20 HORIZONTAL TUBE SUPPORT (FIXED, 100/6mm AlMgSi TUBE) for 230KV C12.5 PI												 18 St@Zn		D30		12																																																																																																																																																																																																																																																																													
F		21 EXPANSION TEE CONNECTOR (100/6mm AlMgSi TUBE to Ø60mm STUD TERMINAL) with DAMPING WIRE HOLDER for 230KV DS												 Al		D31		12																																																																																																																																																																																																																																																																													
		22 STOPPER (100/6mm AlMgSi TUBE) for 230KV EXPANSION CONNECTOR												---		D32		12																																																																																																																																																																																																																																																																													
		23 A-FRAME UPPER CLAMP (200/6mm AlMgSi TUBE to 2x100/6mm AlMgSi TUBE, 30°)												---		D35		12																																																																																																																																																																																																																																																																													
		24 A-FRAME LOWER CLAMP (100/6mm AlMgSi TUBE to 100/6mm AlMgSi TUBE, 75°)												---		D36		24																																																																																																																																																																																																																																																																													
G		25 CORONA BELL (200/6mm AlMgSi TUBE) with DAMPING WIRE HOLDER for 230KV MAIN BUSBAR												---		D39		10																																																																																																																																																																																																																																																																													
		26 INTERNAL END CAP (200/6mm AlMgSi TUBE) with DAMPING WIRE HOLDER for 230KV BUSBAR												---		D40		14																																																																																																																																																																																																																																																																													
		27 CORONA BELL (100/6mm AlMgSi TUBE) with DAMPING WIRE HOLDER for 230KV BUSBAR BRANCH												---		D41		12																																																																																																																																																																																																																																																																													
		28 INTERNAL END CAP (100/6mm AlMgSi TUBE) without DAMPING WIRE HOLDER for 230KV A-FRAME												---		D42		48																																																																																																																																																																																																																																																																													
H		29 CORONA RING for 230KV C8 PI												 18 St@Zn		D43		30																																																																																																																																																																																																																																																																													
		30 CORONA RING for 230KV C12.5 PI												 18 St@Zn		D44		12																																																																																																																																																																																																																																																																													
		31 WELDING JOINT (200/6mm AlMgSi TUBE) for 230KV MAIN BUSBAR												---		D45		12																																																																																																																																																																																																																																																																													
		32 WELDING JOINT (100/6mm AlMgSi TUBE) for 230KV BRANCH BUSBAR												---		D46		4																																																																																																																																																																																																																																																																													
		33 230KV INSULATOR STRING TENSION SET without TURNBUCKLE (2x800mm² AAAC)												---		D51		12																																																																																																																																																																																																																																																																													
		34 230KV INSULATOR STRING TENSION SET with TURNBUCKLE (2x800mm² AAAC)												---		D52		12																																																																																																																																																																																																																																																																													
		35 230KV INSULATOR STRING SUSPENSION SET without TURNBUCKLE (I TYPE, 2x800mm² AAAC)												---		D53		24																																																																																																																																																																																																																																																																													
		37 SHIELD WIRE TENSION SET without TURNBUCKLE (7N0.8 AW)												---		D61		9																																																																																																																																																																																																																																																																													
		38 SHIELD WIRE TENSION SET with TURNBUCKLE (7N0.8 AW)												---		D62		9																																																																																																																																																																																																																																																																													
		39 TEE CONNECTOR (1x185mm² N2XS Y CABLE to Ø40mm STUD TERMINAL) + BIMETAL (Al/Cu) SLEEVES for 33KV (ETR) SIDE NCT												 Al		H02		2																																																																																																																																																																																																																																																																													
		40 STRAIGHT CONNECTOR (1x240mm² NYY CABLE to Ø40mm STUD TERMINAL) + BIMETAL (Al/Cu) SLEEVES for 33KV (ETR) SIDE NCT												Al		H07		2																																																																																																																																																																																																																																																																													
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TO BE EXECUTED (SCOPE OF WORK)

EXTENSION (FUTURE)

TYPE	DESCRIPTION
C.B.	Circuit Breaker
D.S.	Disconnecting Switch
D.S./E.S.	Disconnecting & Earthing Switch
C.T.	Current Transformer
N.C.T.	Neutral Current Transformer
C.V.T.	Capacitive Voltage Transformer
S.A.	Surge Arrester
S.C.	Surge Counter
L.T.	Line Trap
L.M.U.	Line Matching Unit
P.I.	Post Insulator
S.I.	String Insulator (I or V Type)
B.B.	Bus-Bar

TYPE	DESCRIPTION
GAN.	Gantry
C.O.F.	Cut-Out Fuse
P.TR.	Power Transformer
A.TR.	Auxiliary Transformer
E.TR.	Earthing Transformer
S.TR.	Step-up Transformer
L.R.	Lightning Rod
F.W.	Fire Wall
M.B.	Marshaling Box
O.T.	Oil Treatment Panel
A.C.	AC Primary Panel
F.F.K.	Fire Fighting Kiosk

SVG (HOLD)

CONTROL BUILDING

CAR PARK (x4)

DIESEL ROOM

REFERENCE

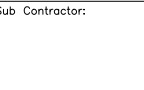
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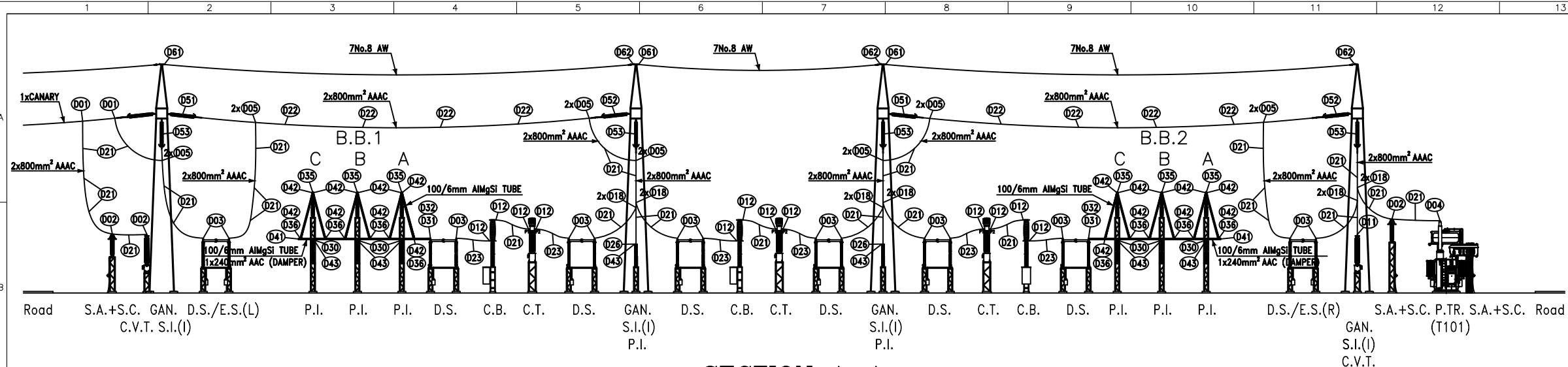
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KEY PLAN

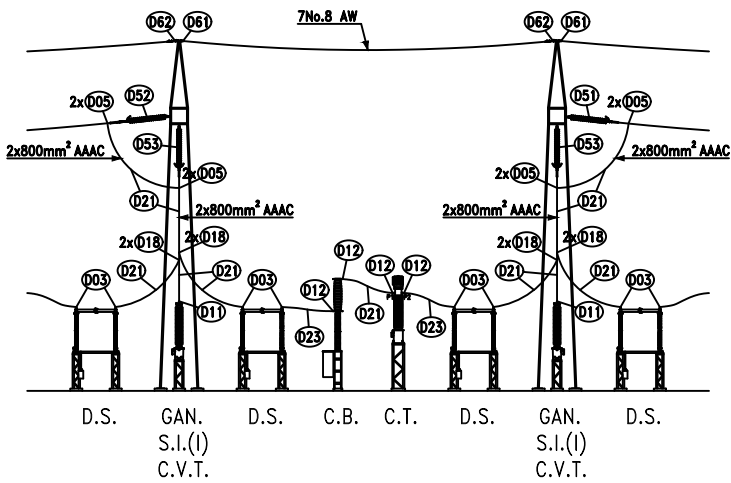
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02	1404/11/21	IFA-ISSUED FOR APPROVAL	H.S.	H.S.	EPC ENGINEERING MANAGER	EPC PROJECT MANAGER
01	1404/10/03	IFA-ISSUED FOR APPROVAL	H.S.	H.S.	EPC ENGINEERING MANAGER	EPC PROJECT MANAGER
00	1404/09/15	IFR-ISSUED FOR REVIEW	H.S.	H.S.	EPC ENGINEERING MANAGER	EPC PROJECT MANAGER

Client:	Consultant:
	
Contractor:	Sub Contractor:
	

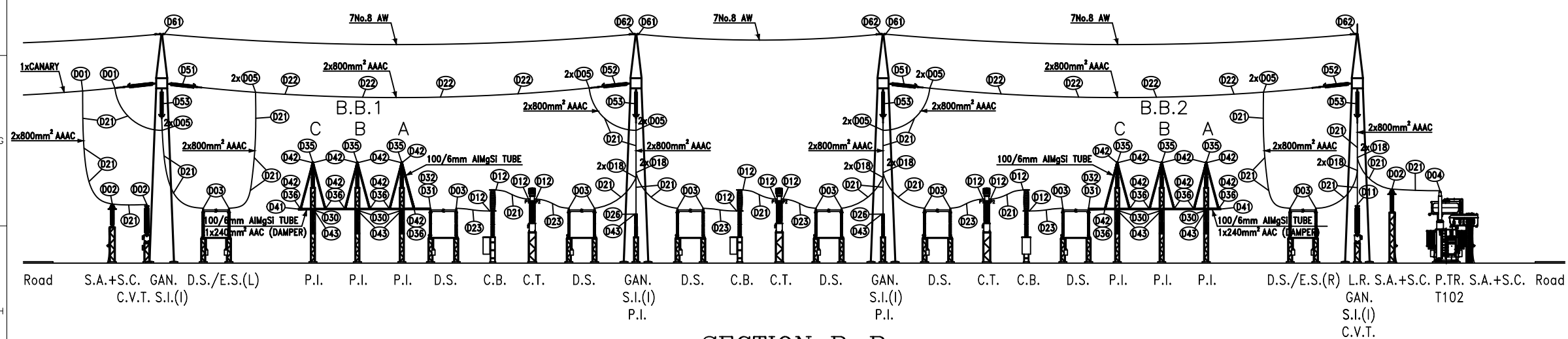
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Title:	CLAMP & FITTING LOCATION & CODIFICATION SWITCHGEAR LAYOUT		
DOC NO.:	28P2-B-3MG-DWG-SUS-460001-EL-056	REV.	C
SCALE	SIZE	SHEET	FORMAT
1:650	A3	4 OF 8	



SECTION A-A
PHASES A & C

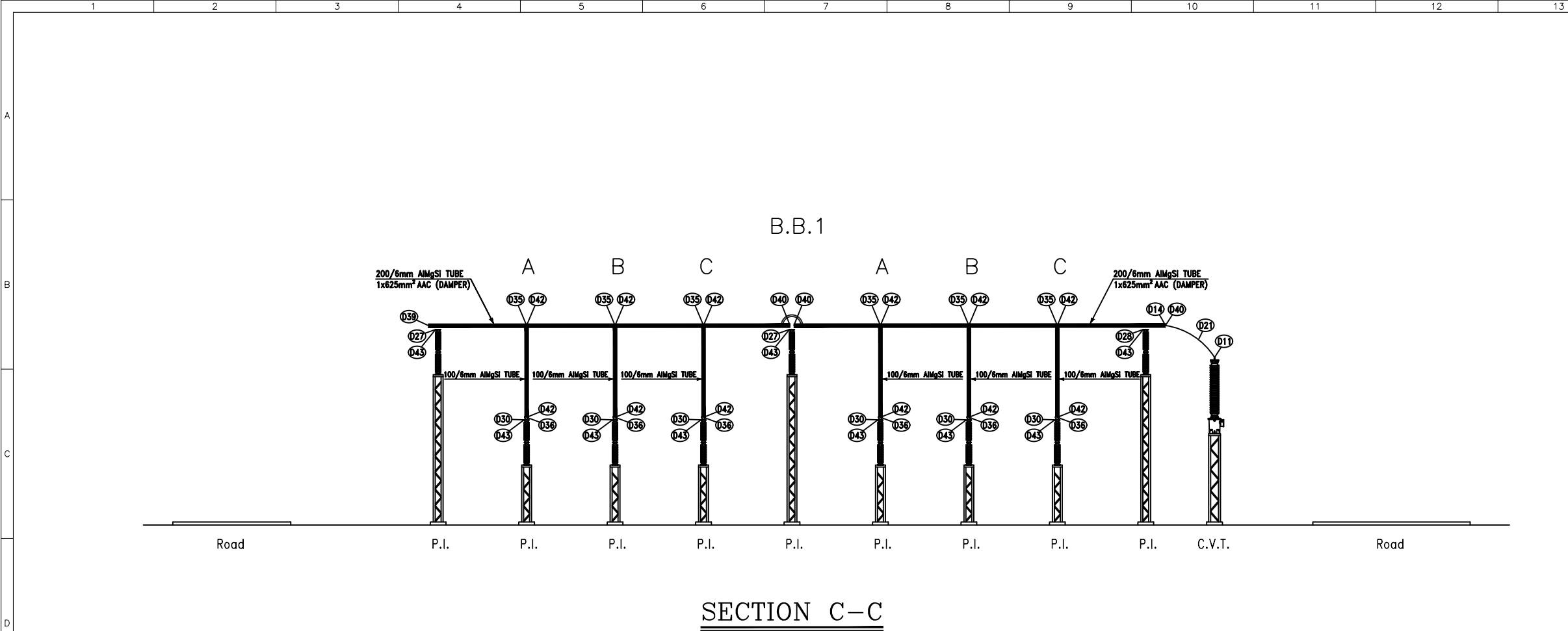


SECTION A-A/B-B
PHASE B

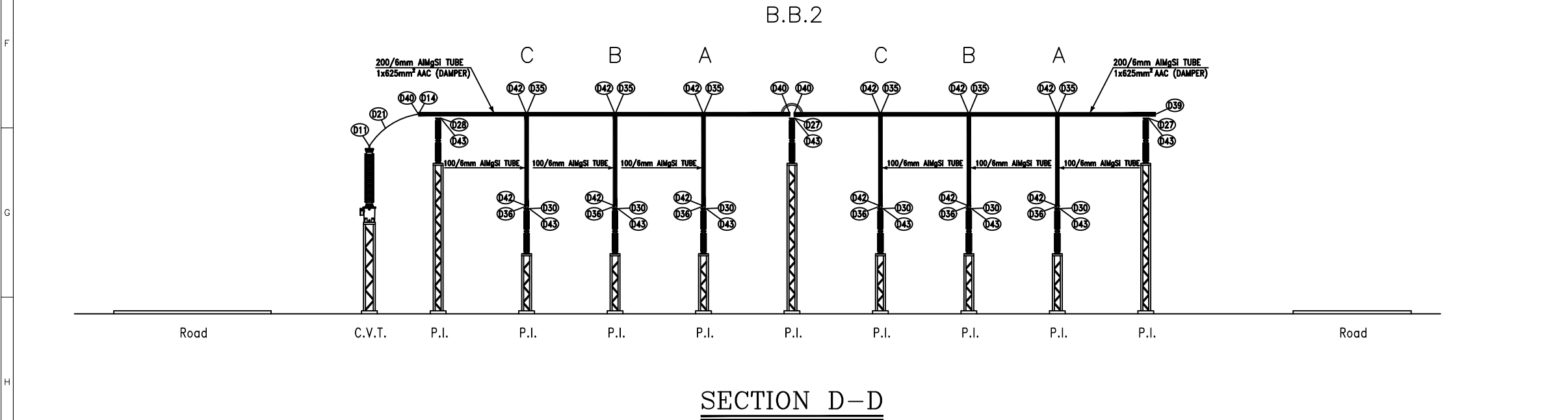


SECTION B-B
PHASES A & C

REFERENCE							
REFERENCE. TITLE				REFERENCE. No.			
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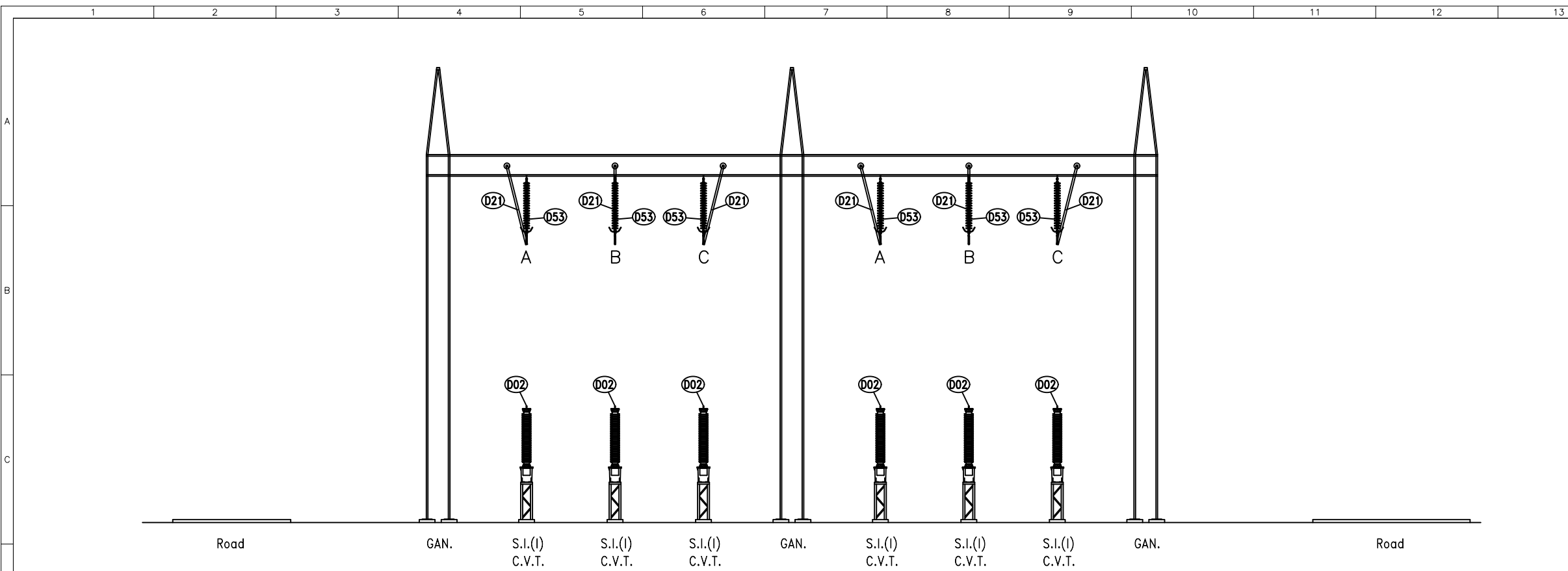


SECTION C-C

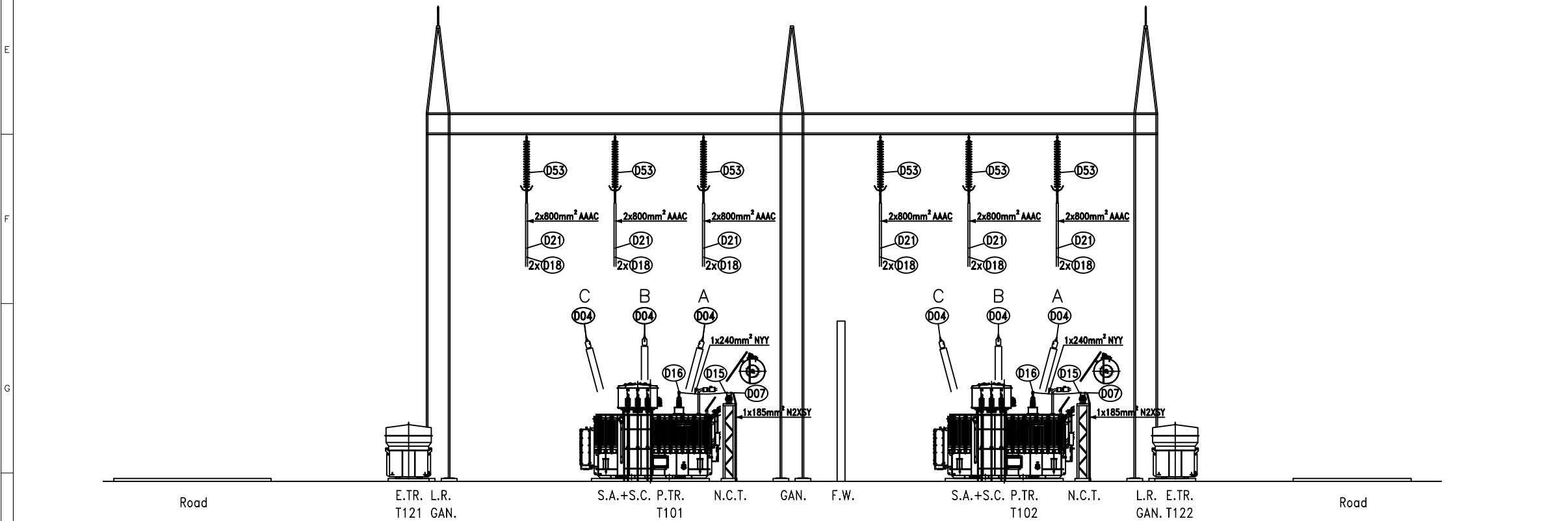


SECTION D-D

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NOTES							
LEGEND							
KEY PLAN							

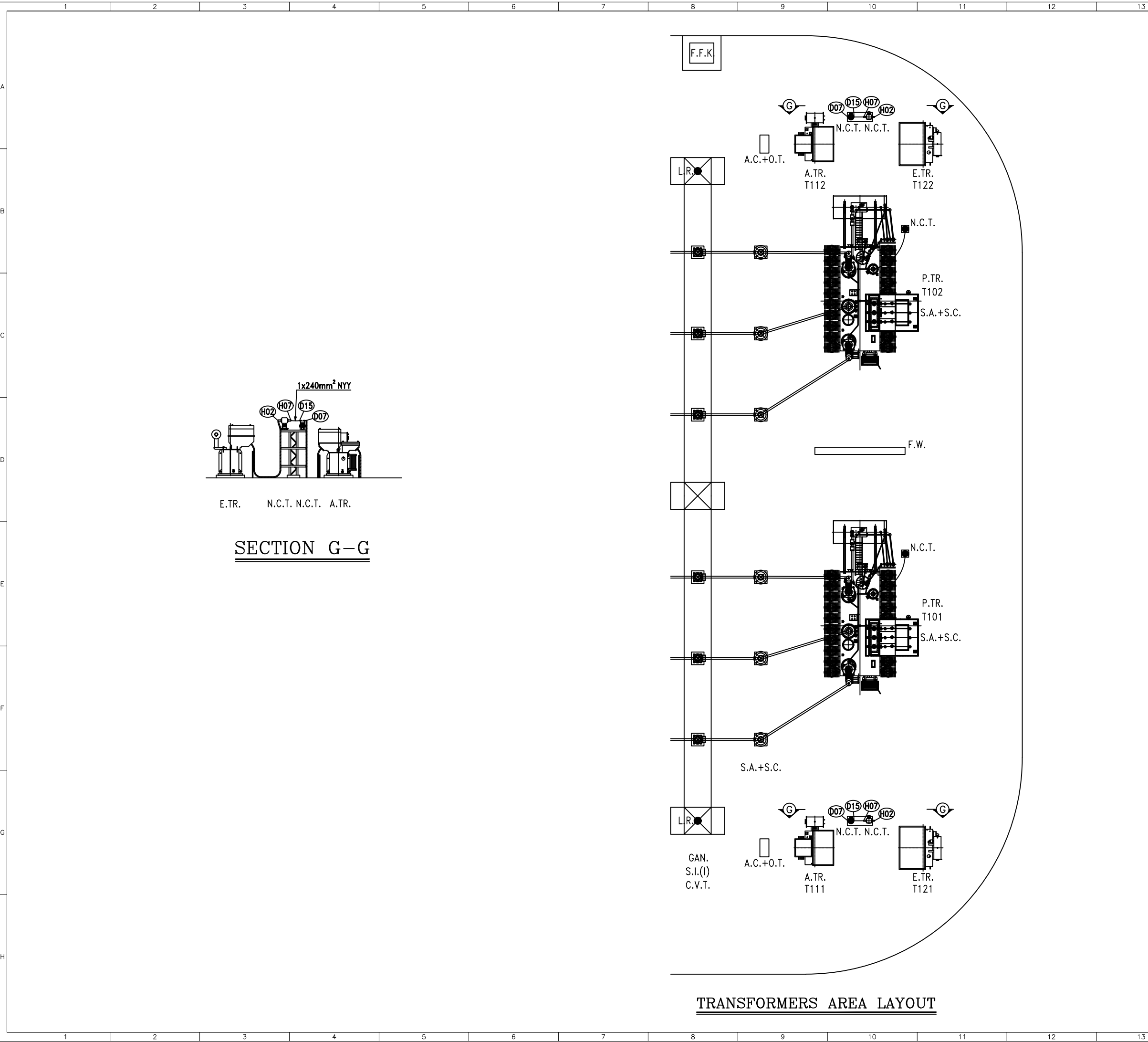


SECTION E-E



SECTION F-F

REFERENCE						
REFERENCE. TITLE			REFERENCE. No.			
NOTES						



REFERENCE						
REFERENCE. TITLE			REFERENCE. No.			
NOTES						