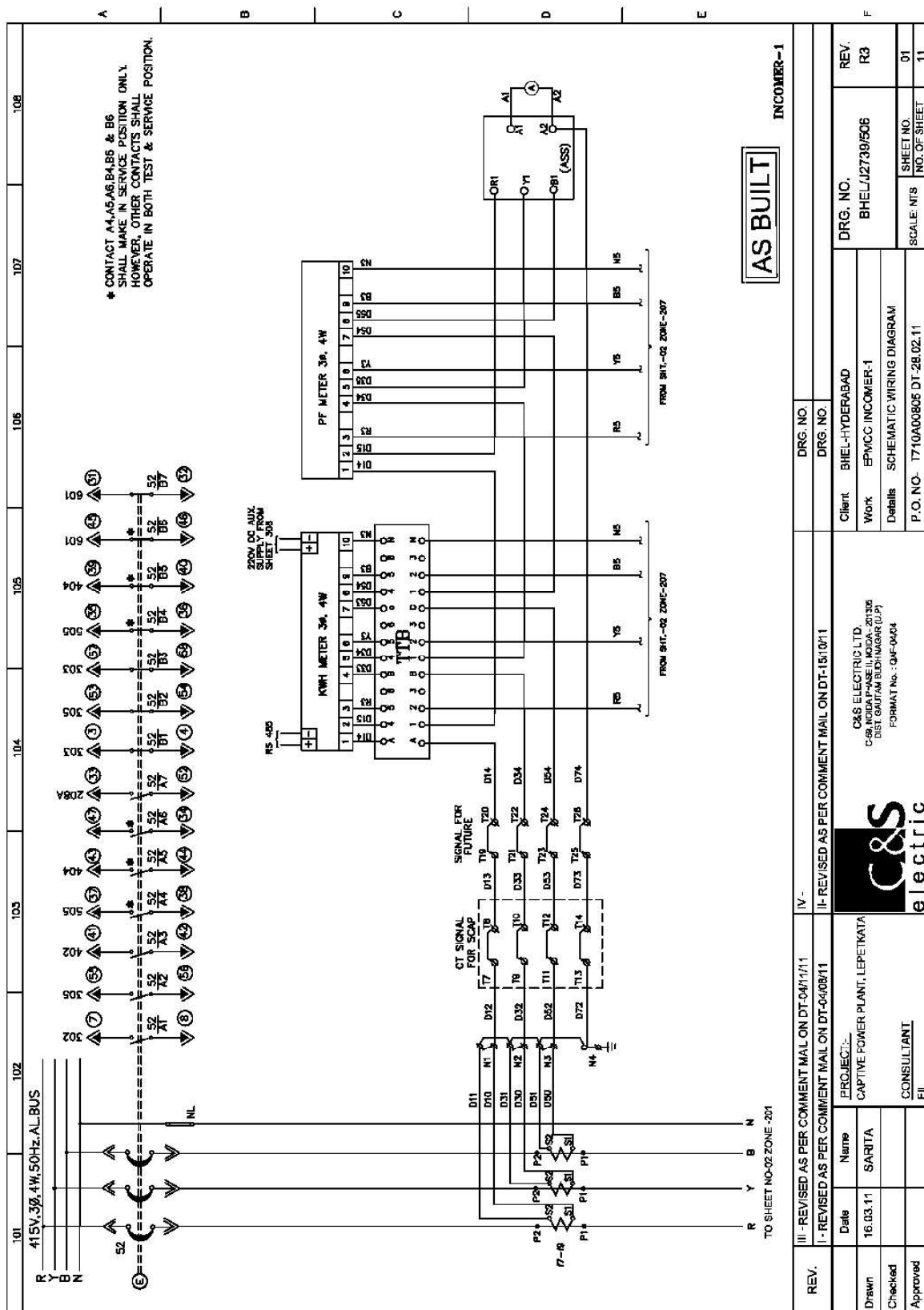


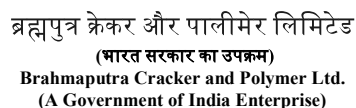
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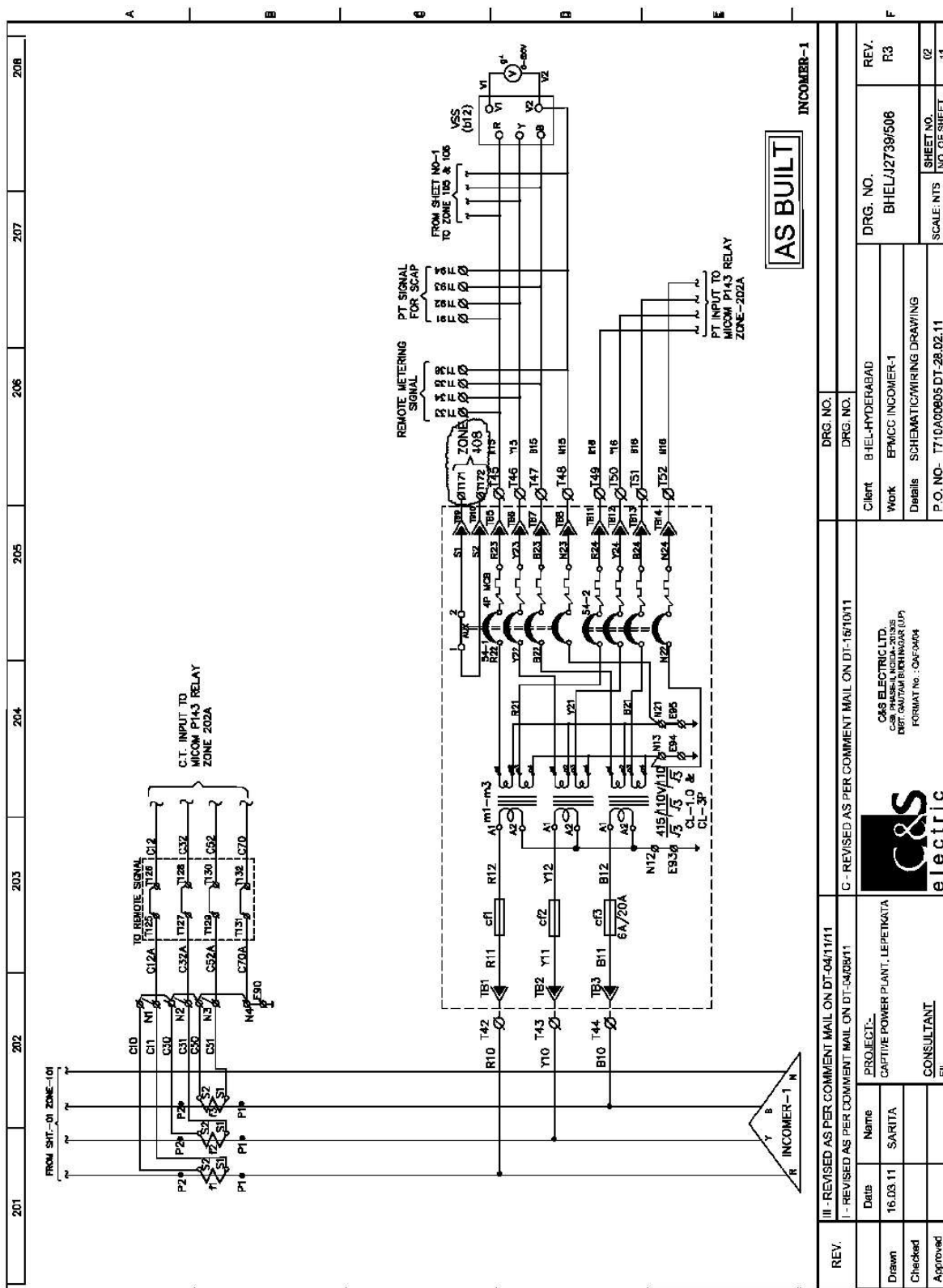
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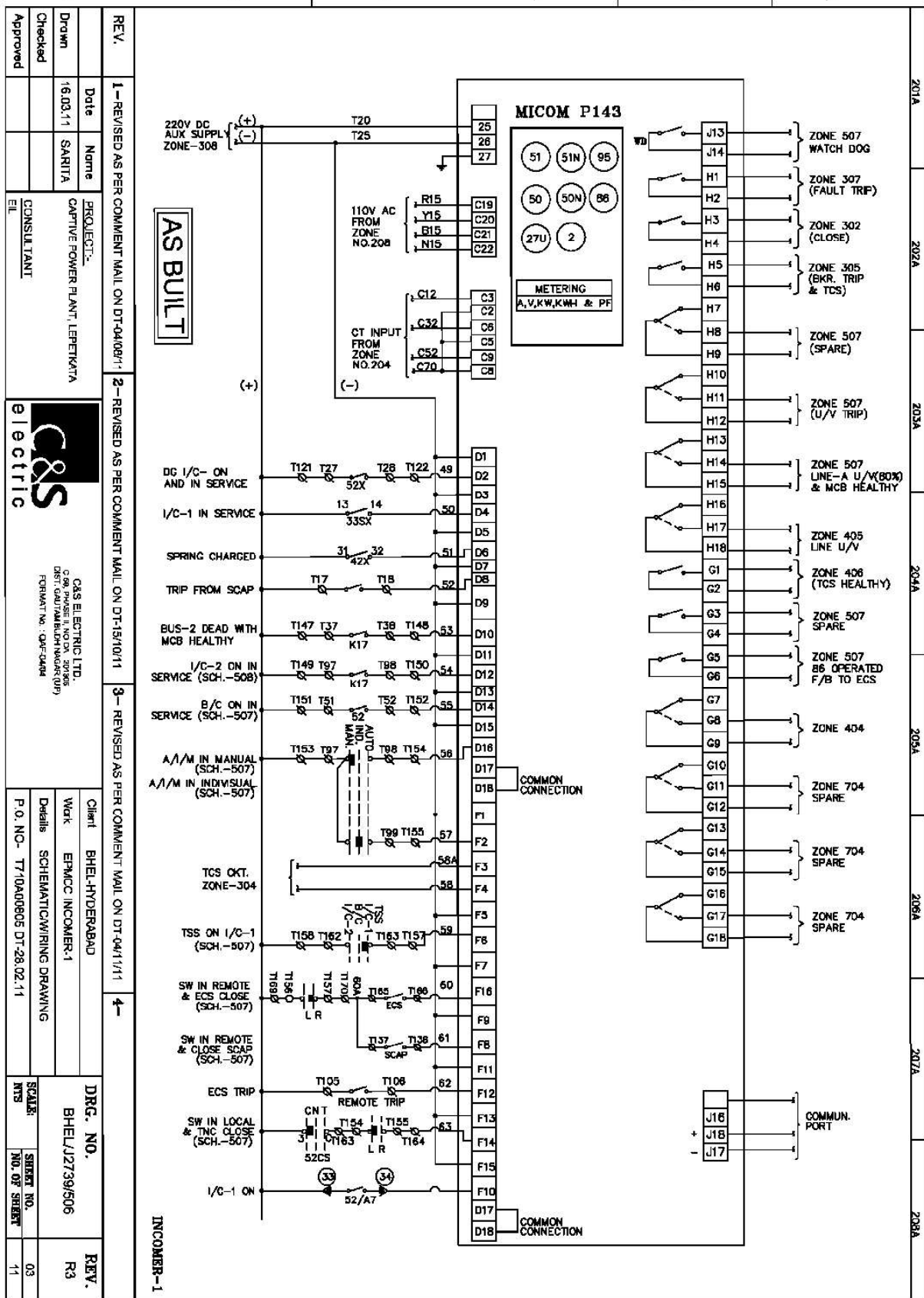
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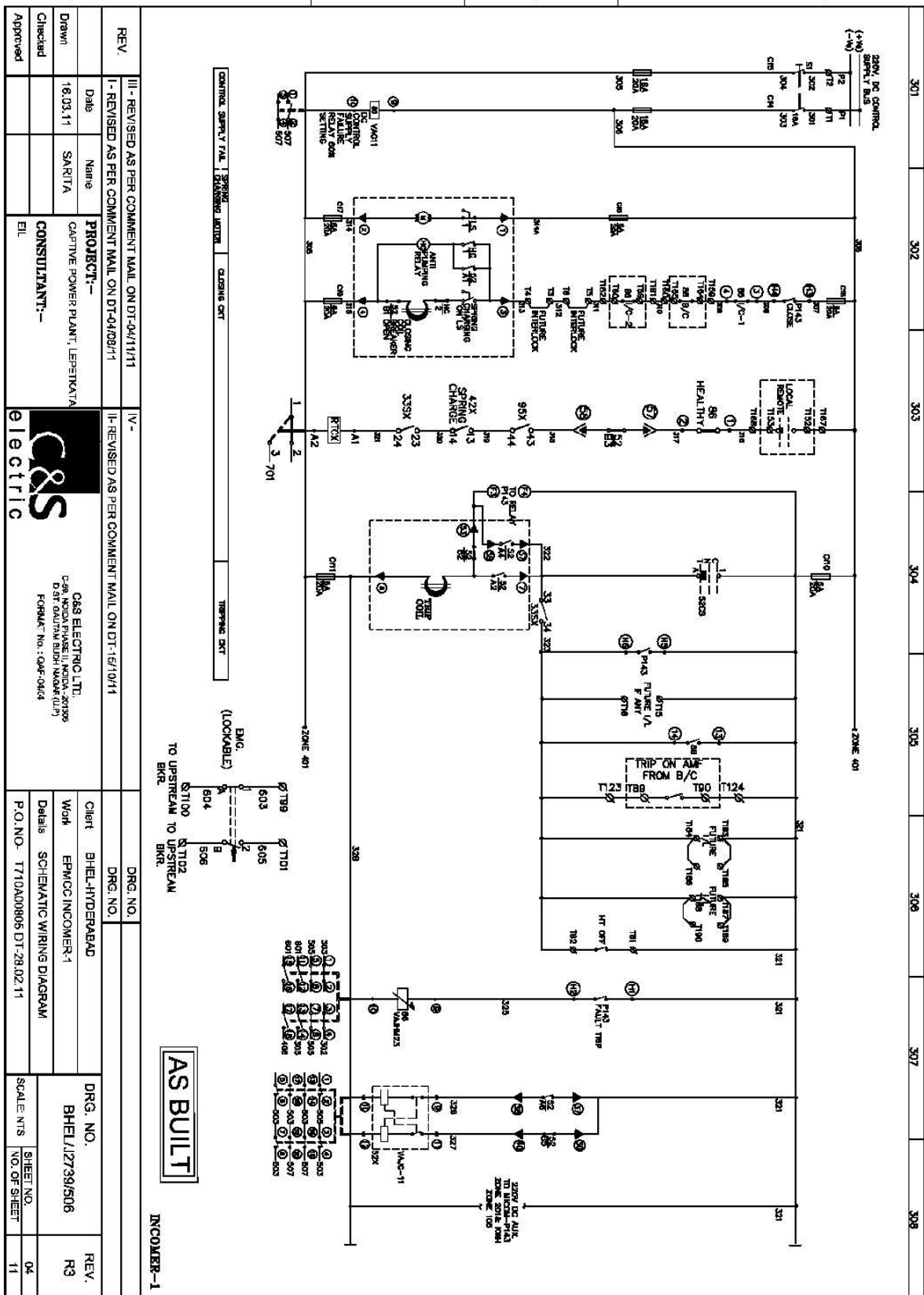
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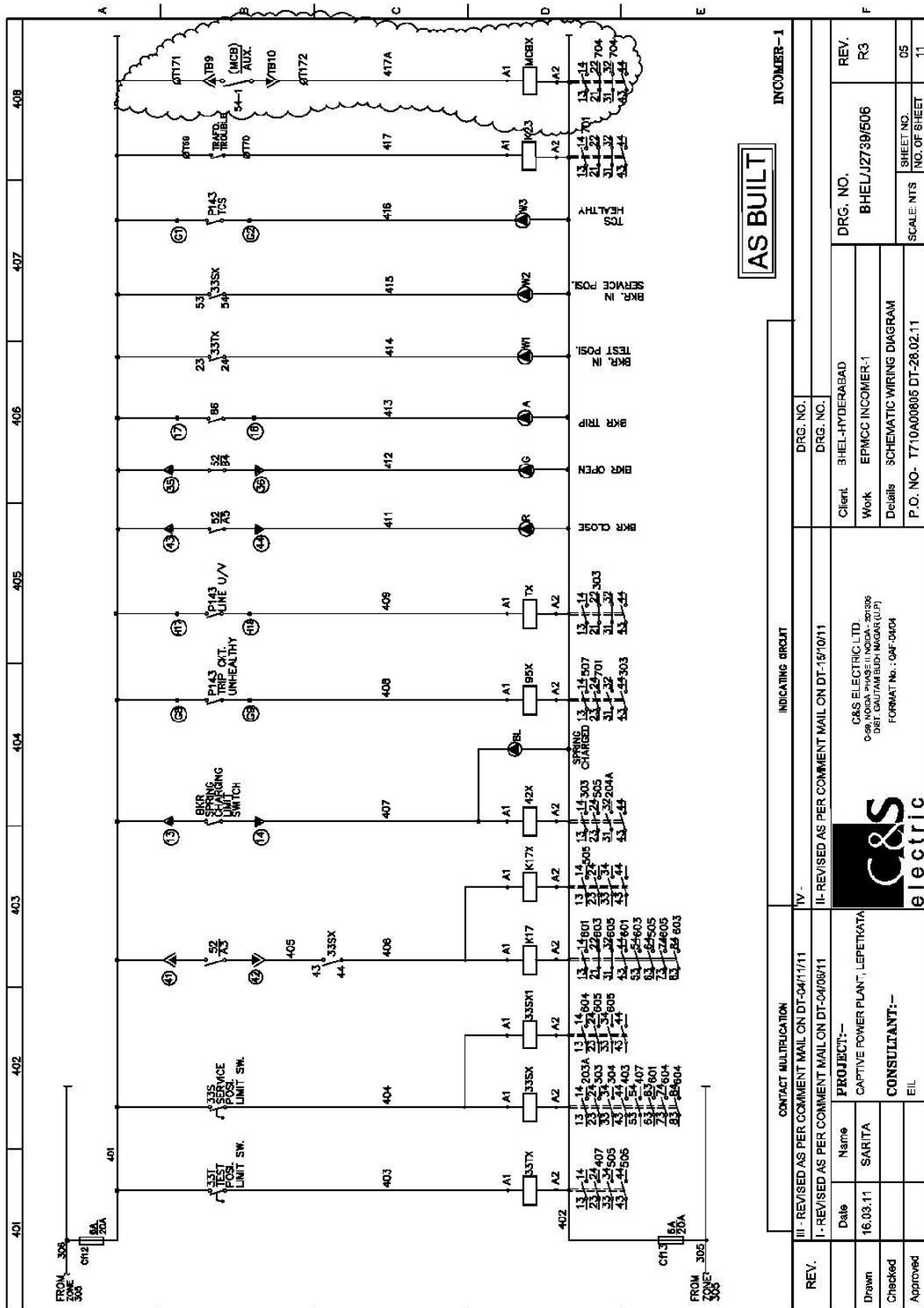


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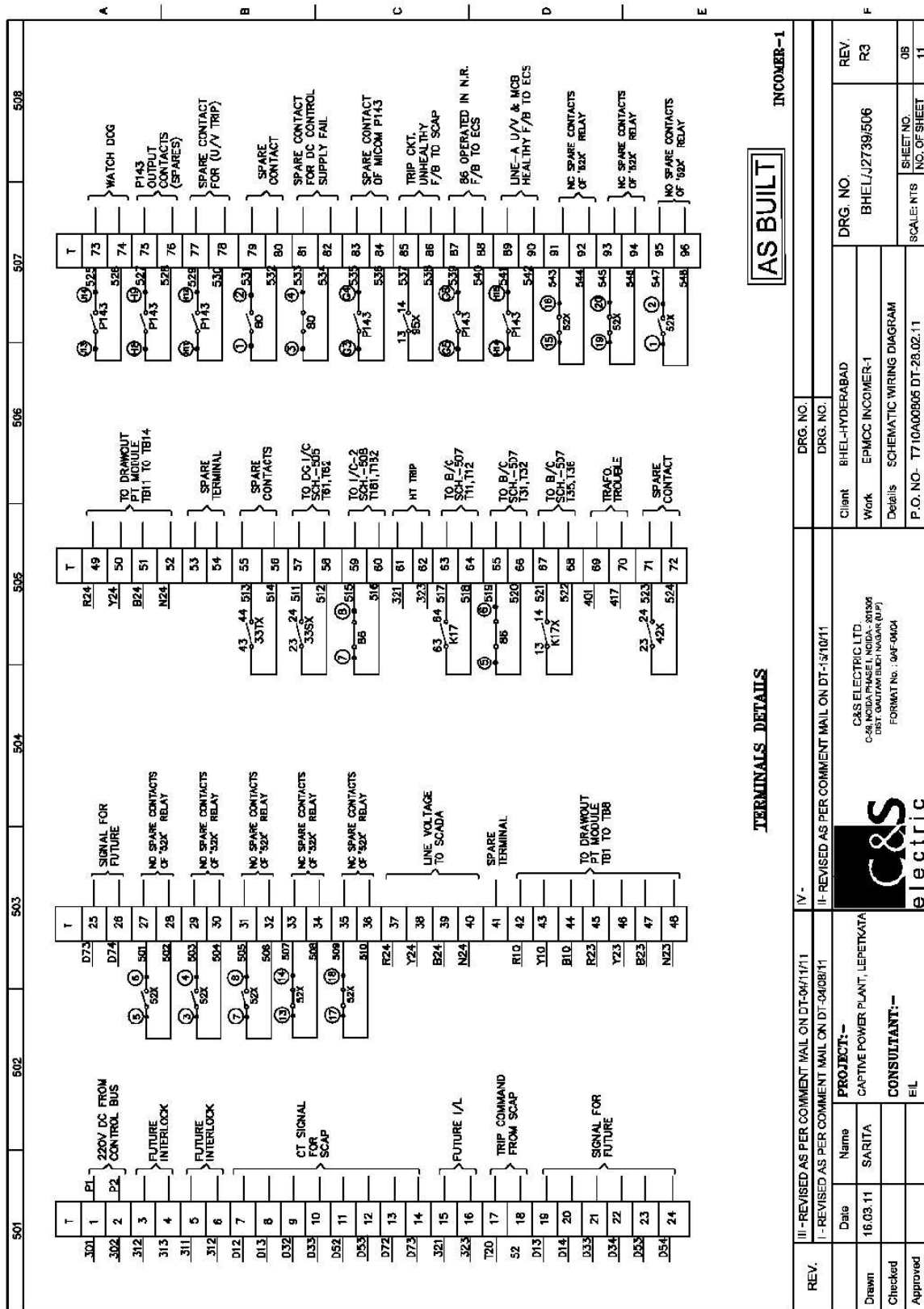
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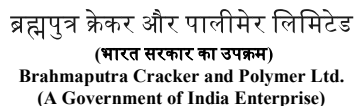
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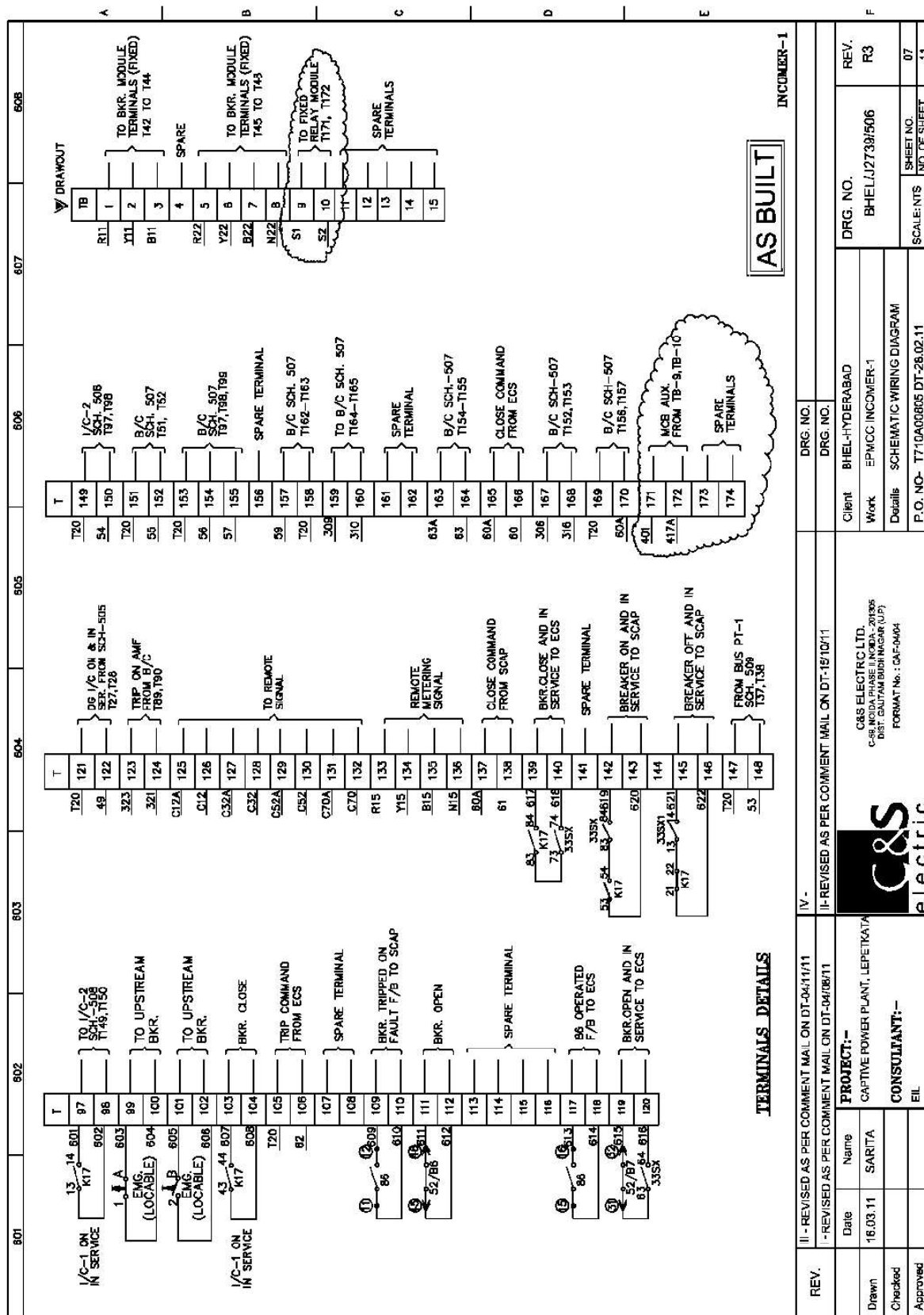


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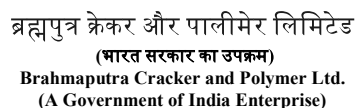
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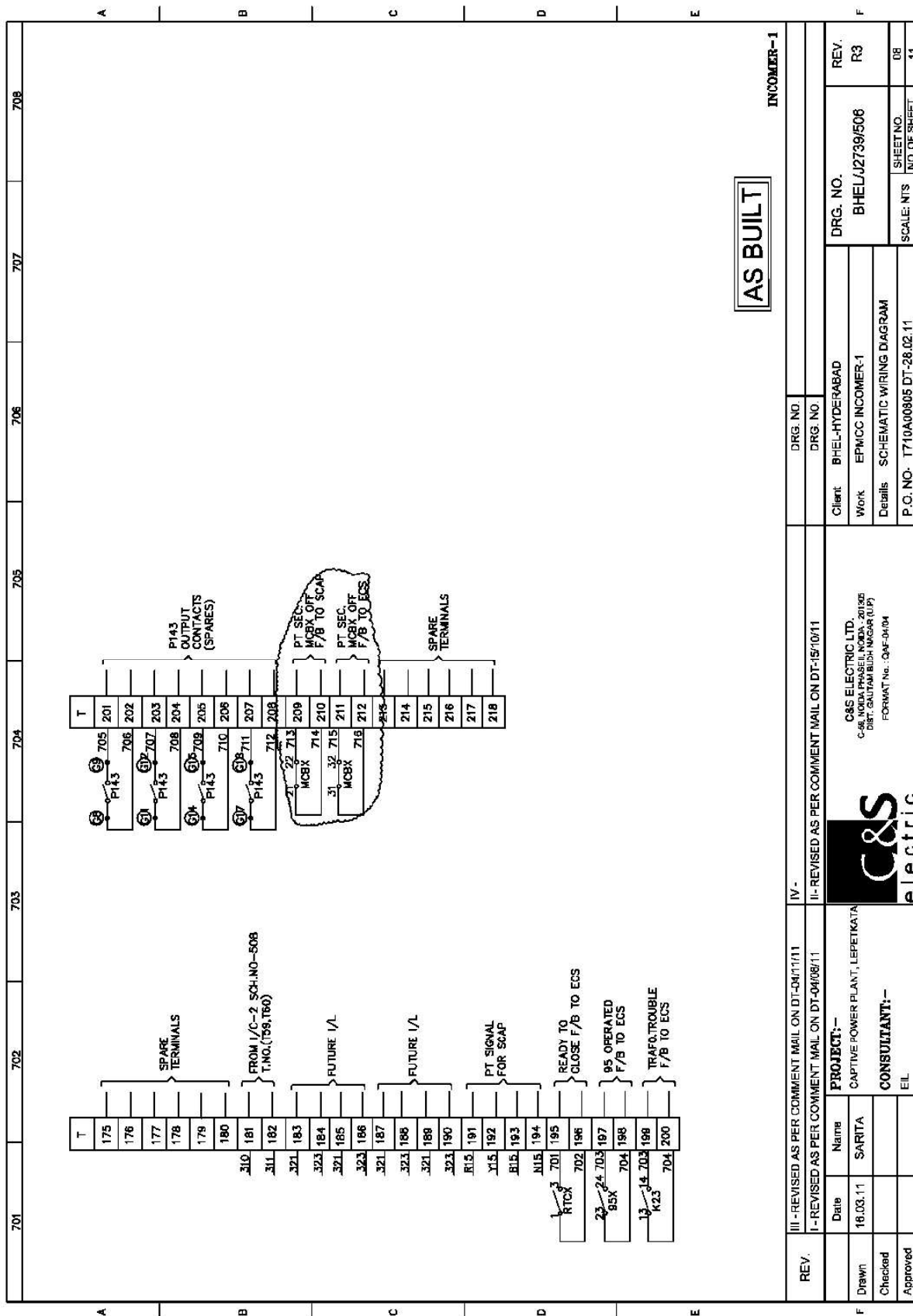
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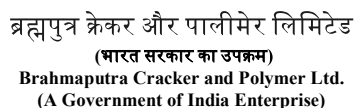
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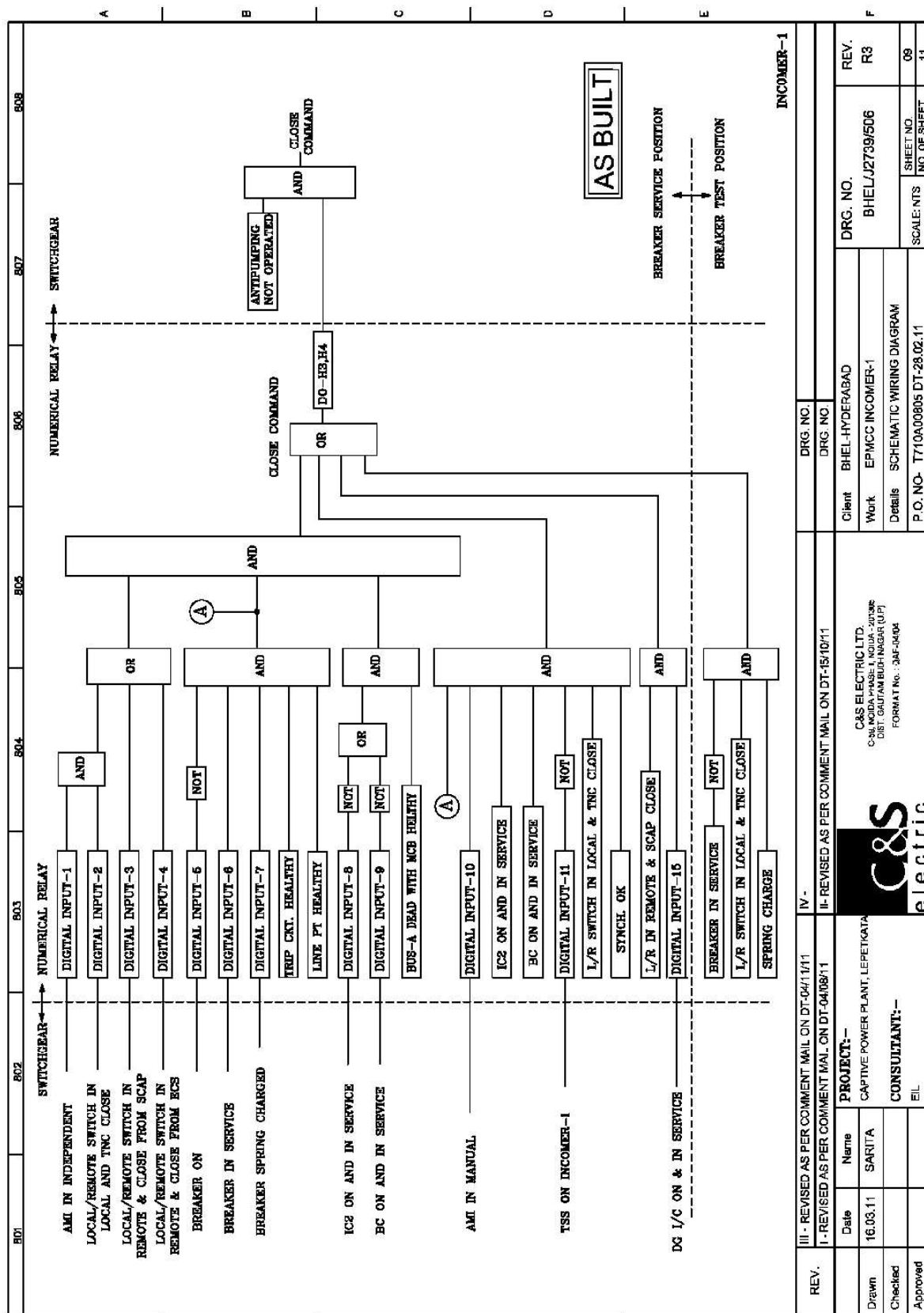
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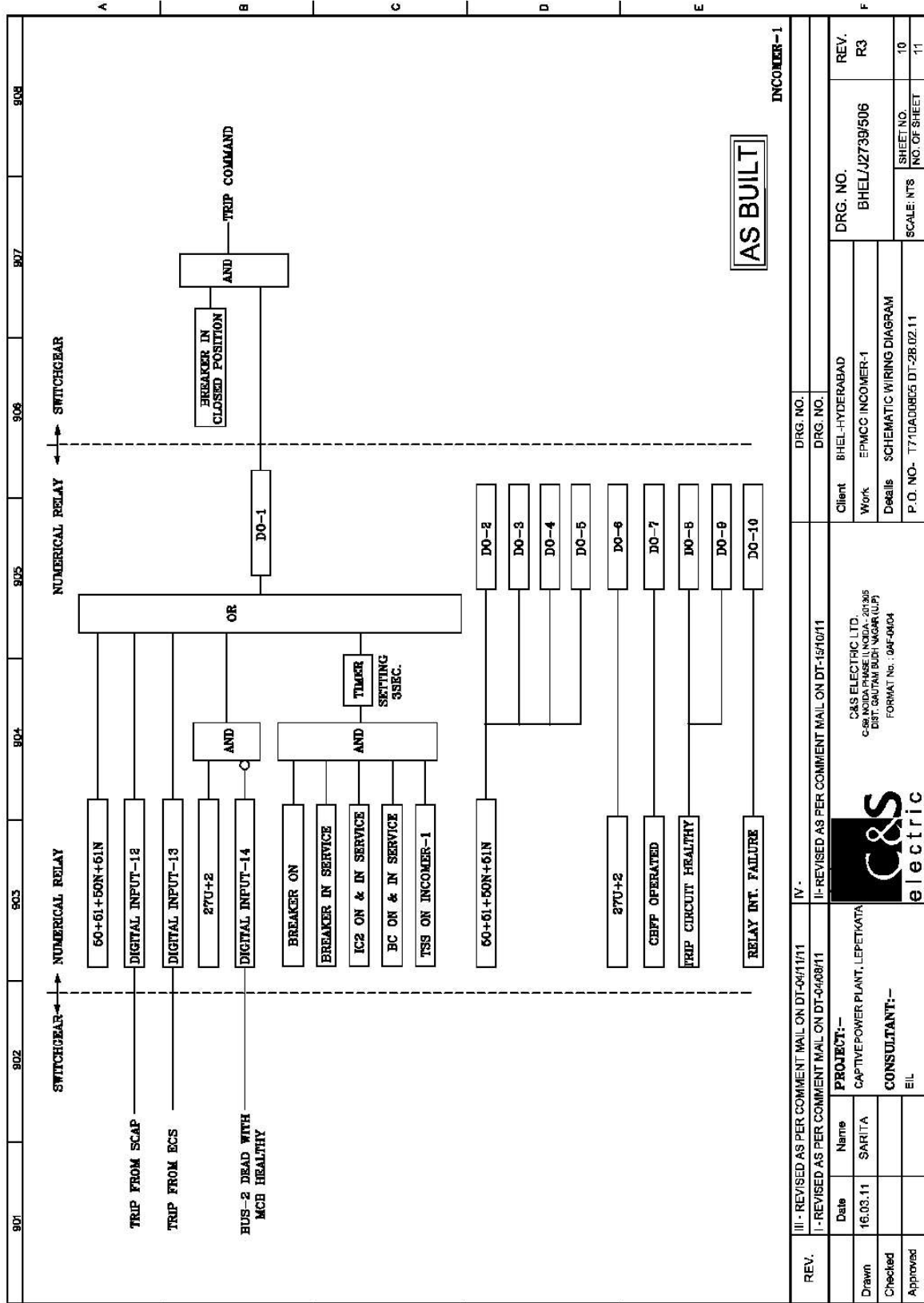
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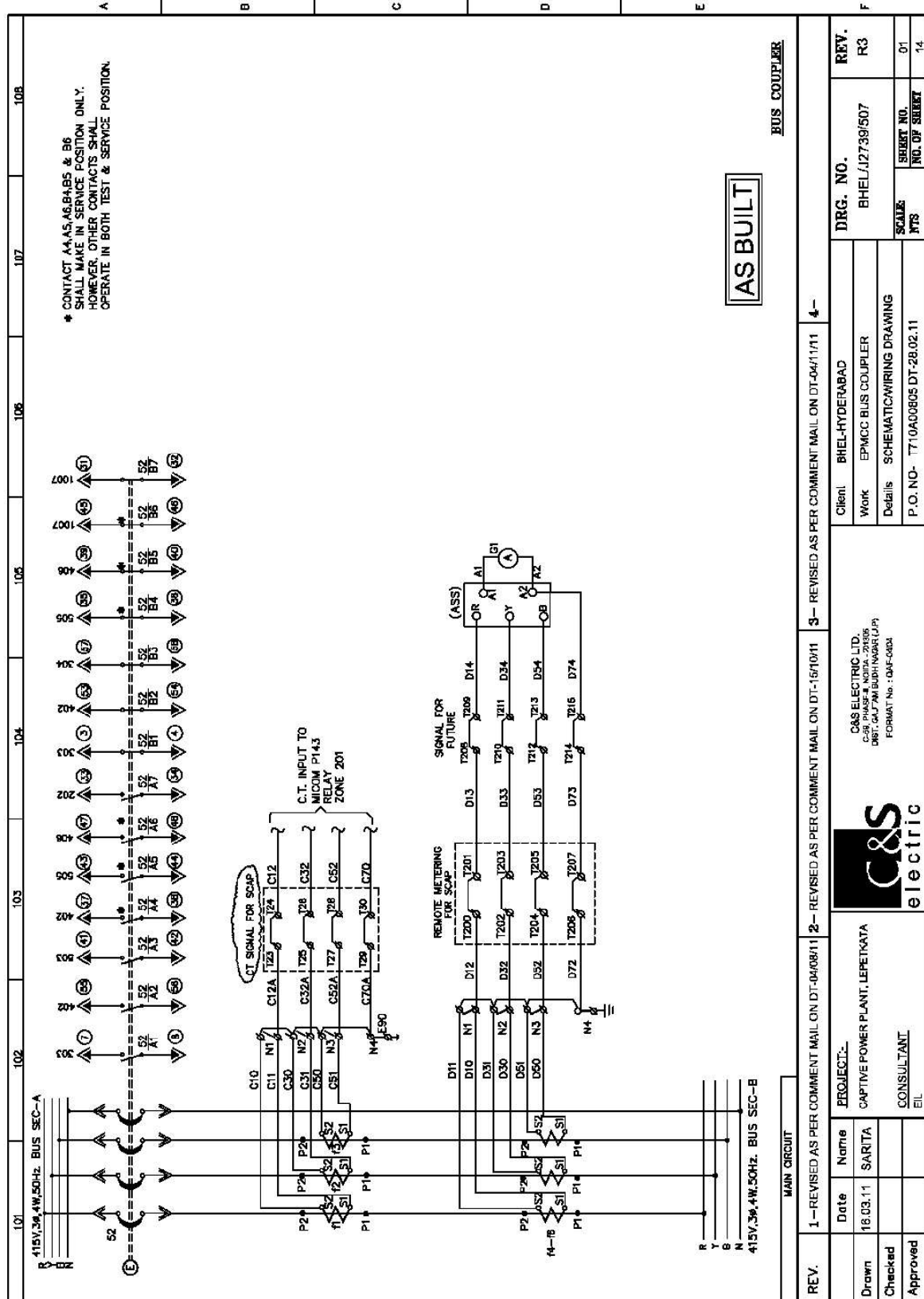
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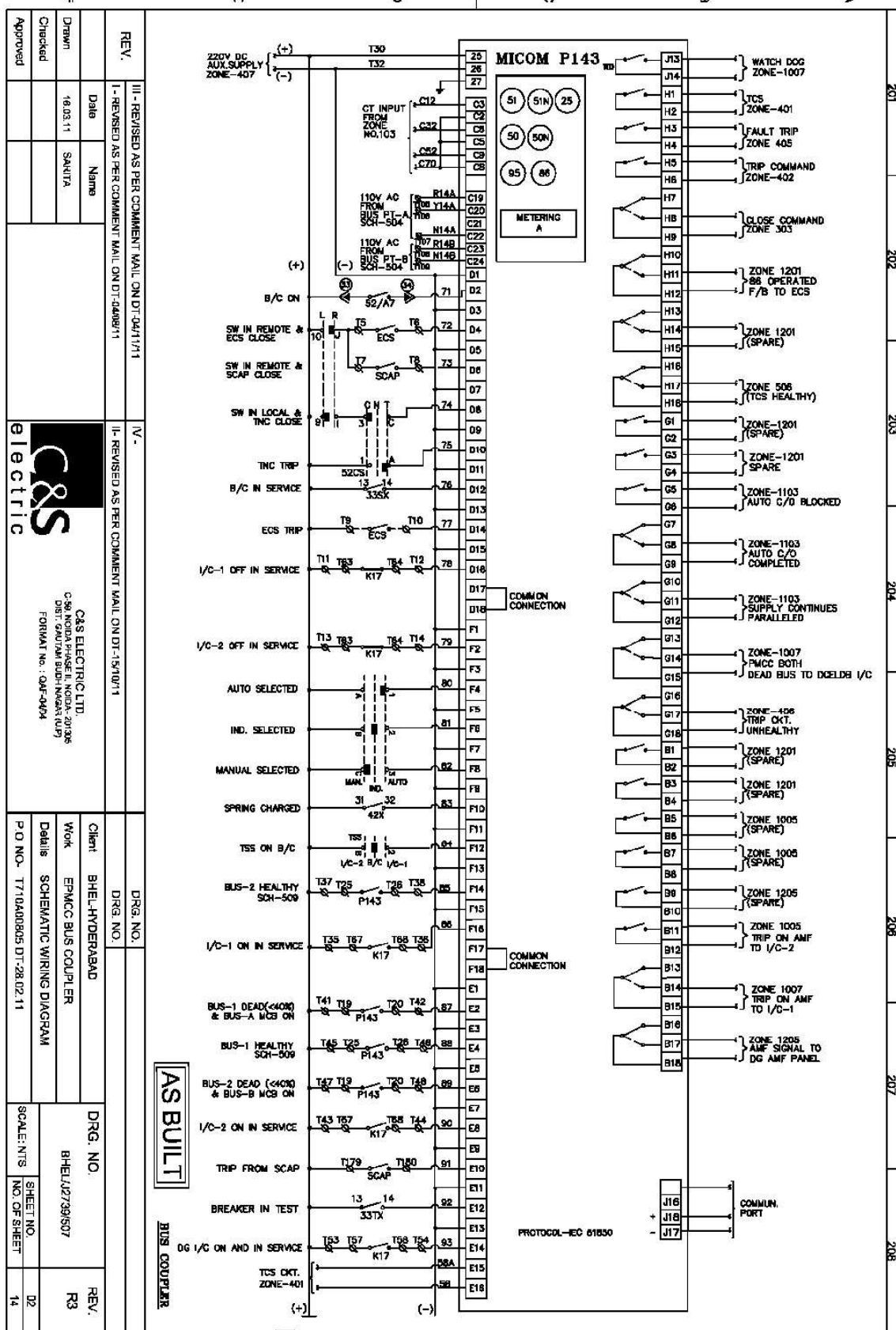
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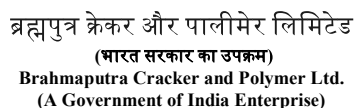
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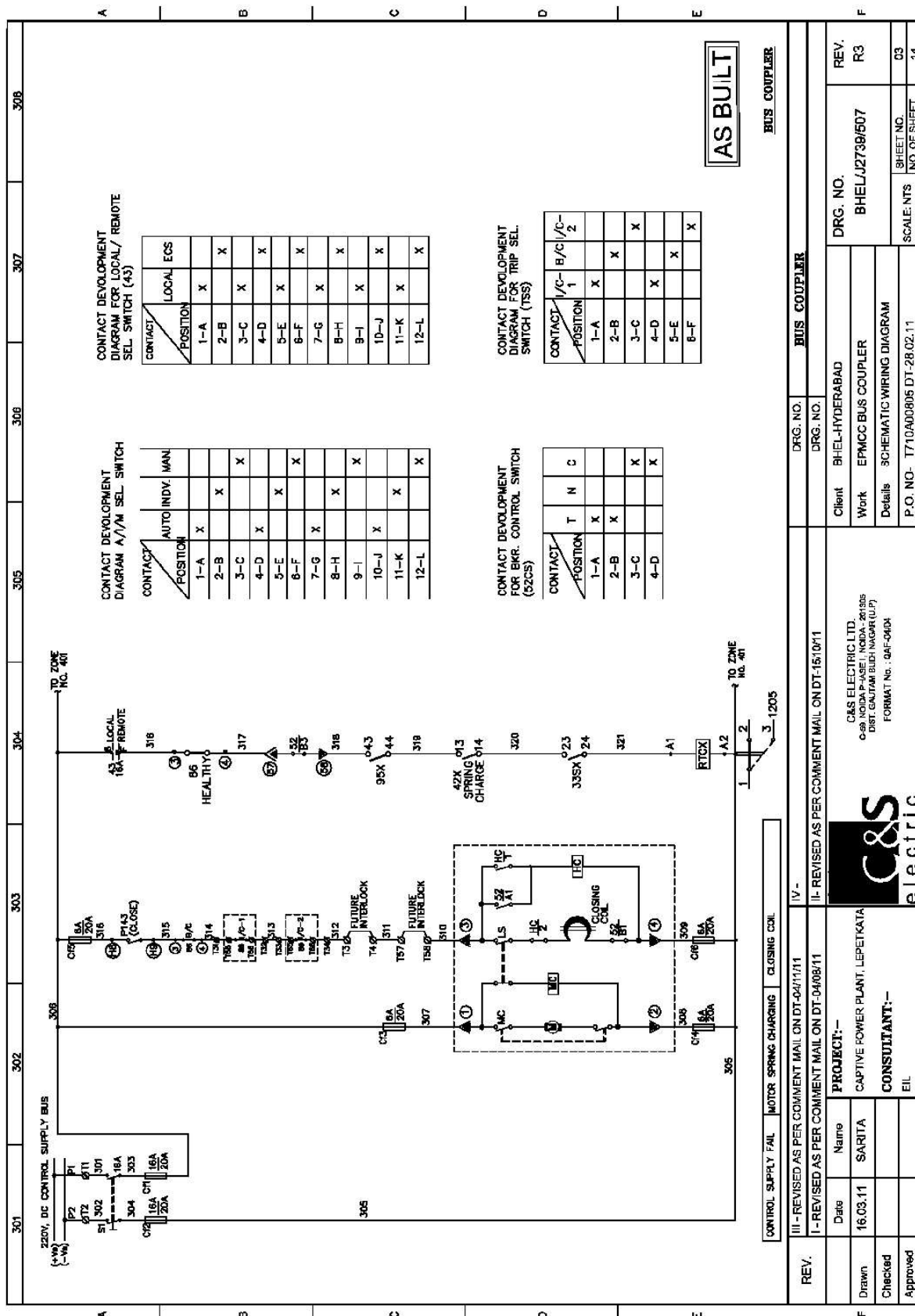


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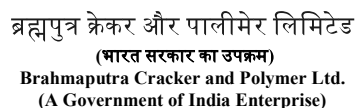


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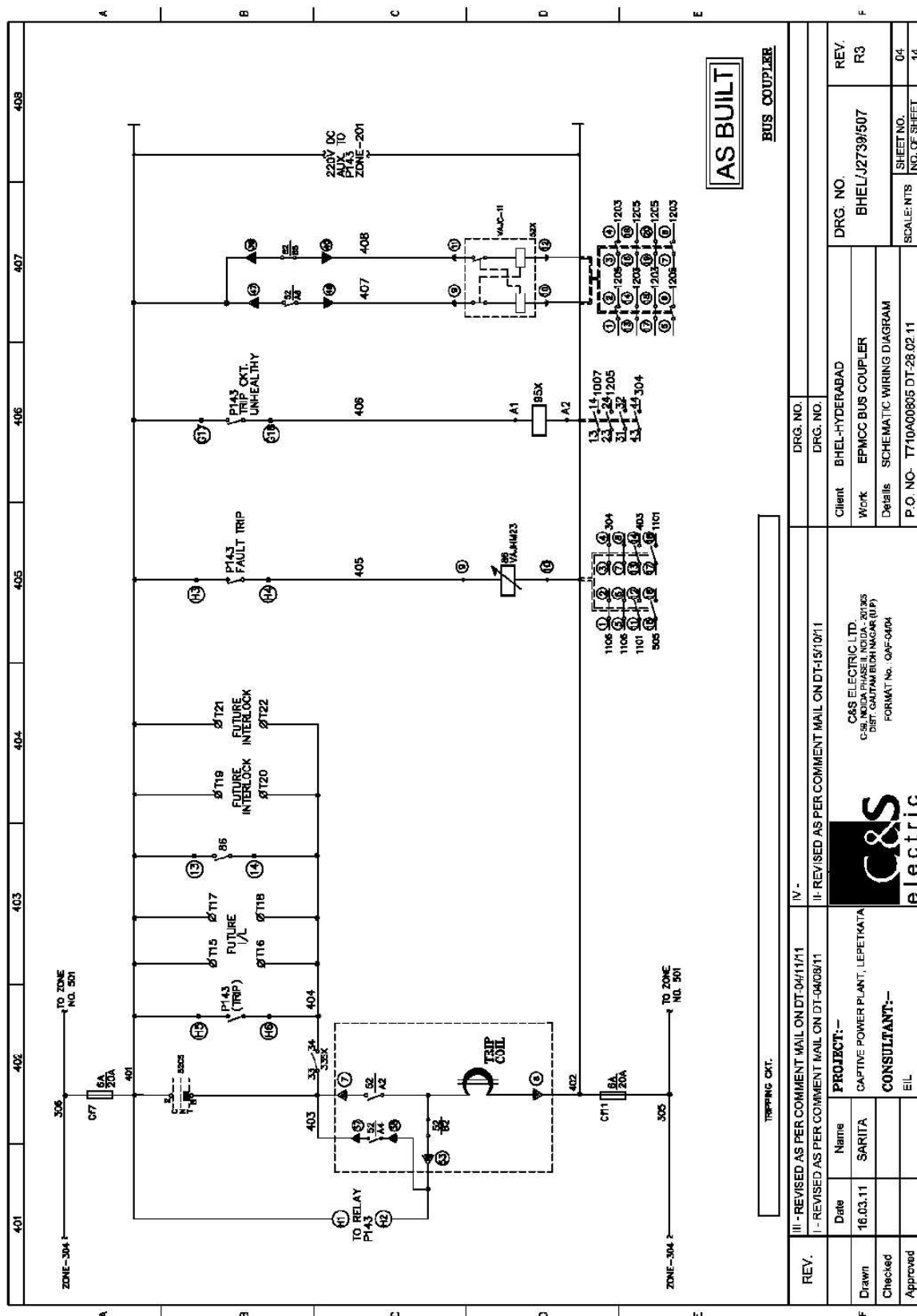


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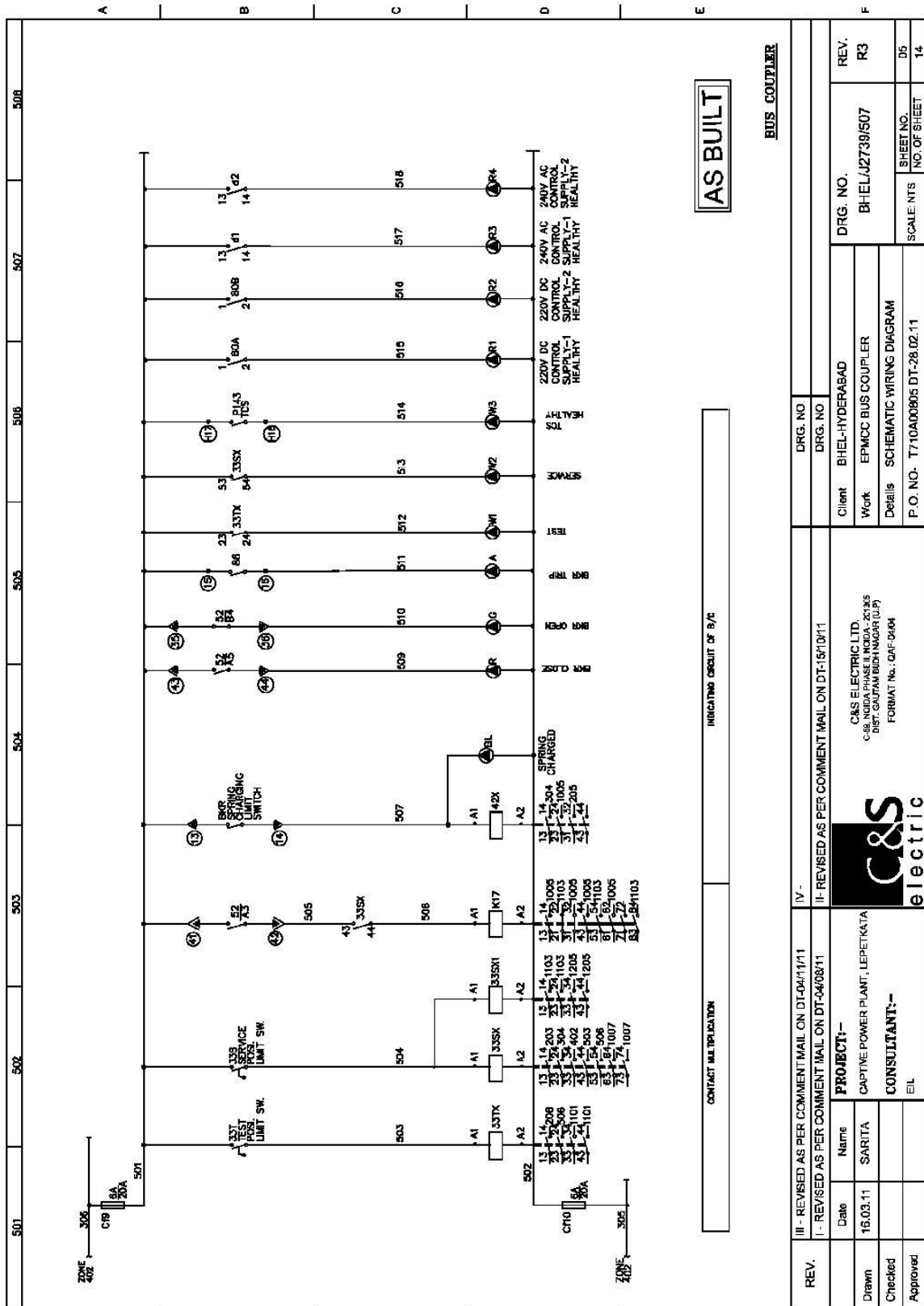
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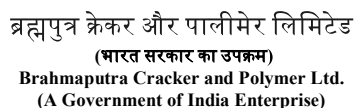
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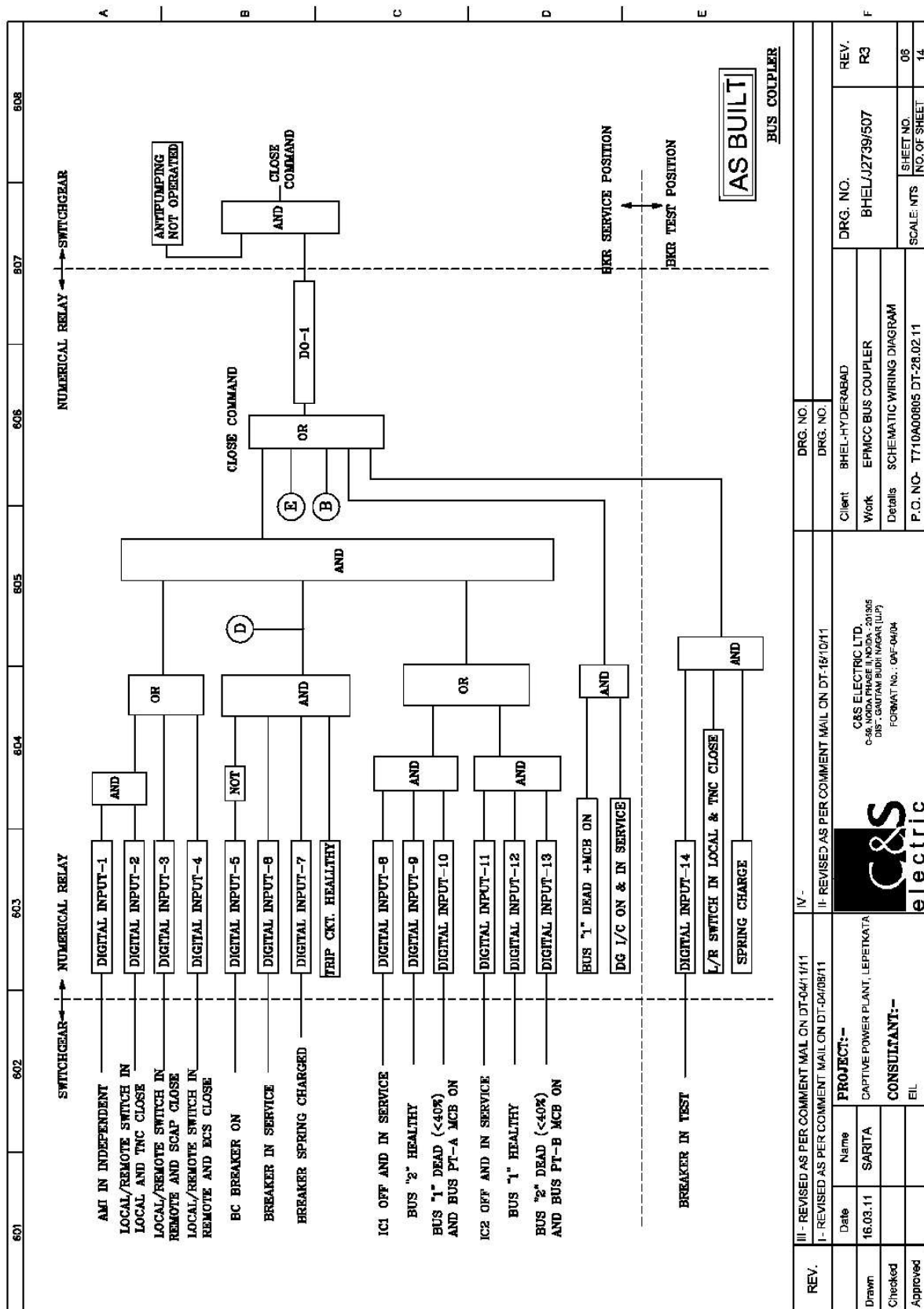
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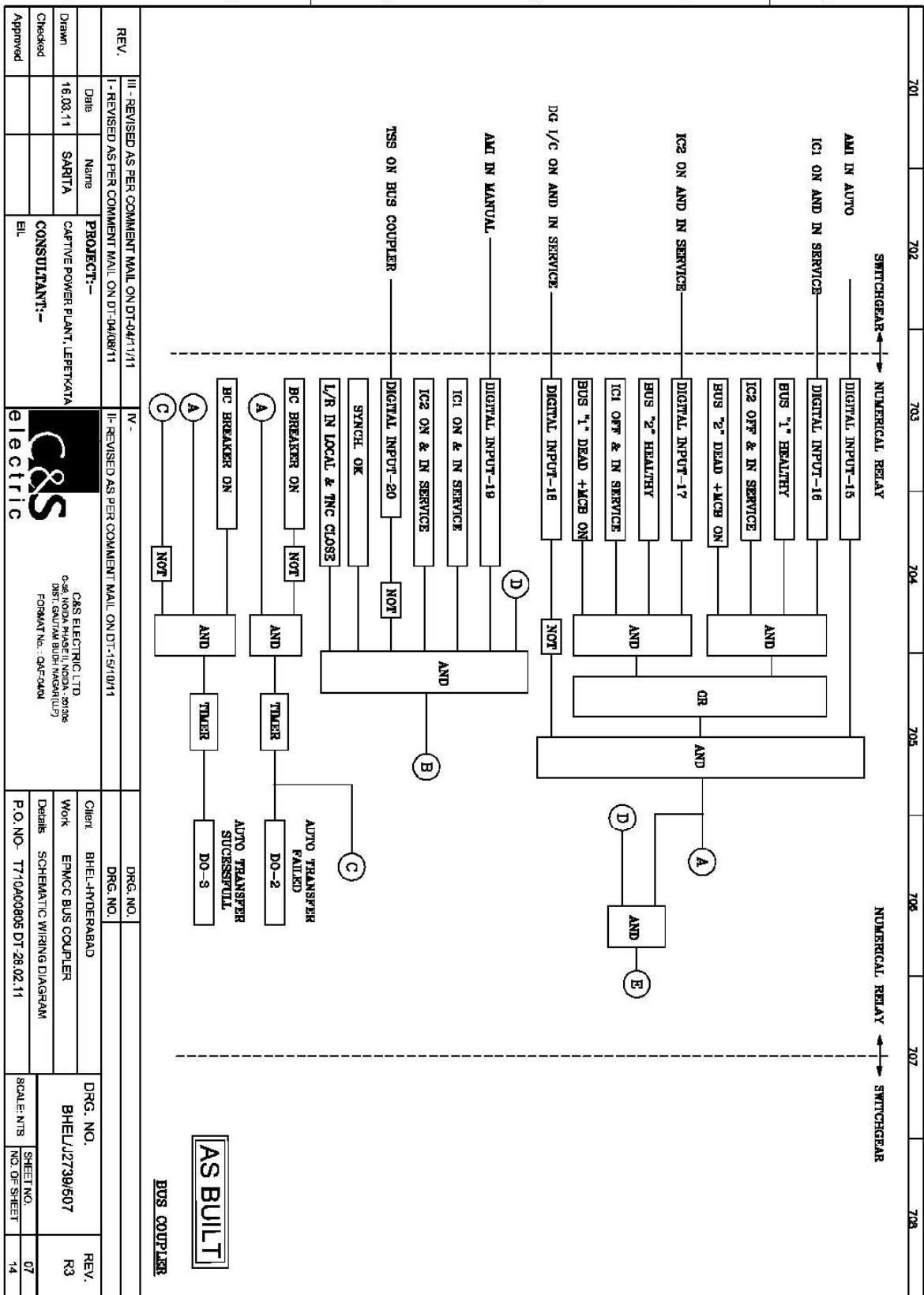
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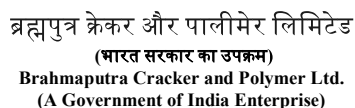
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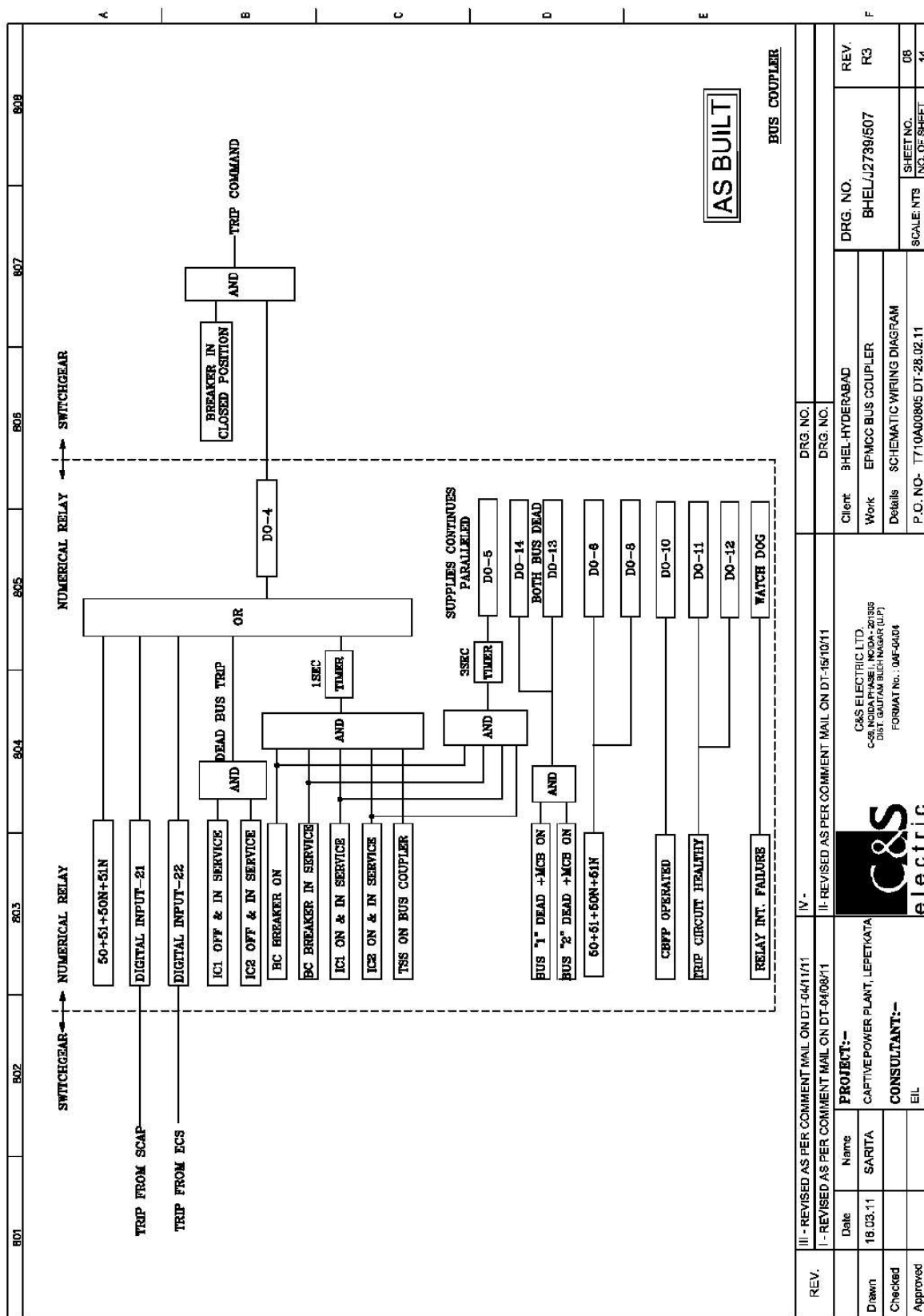
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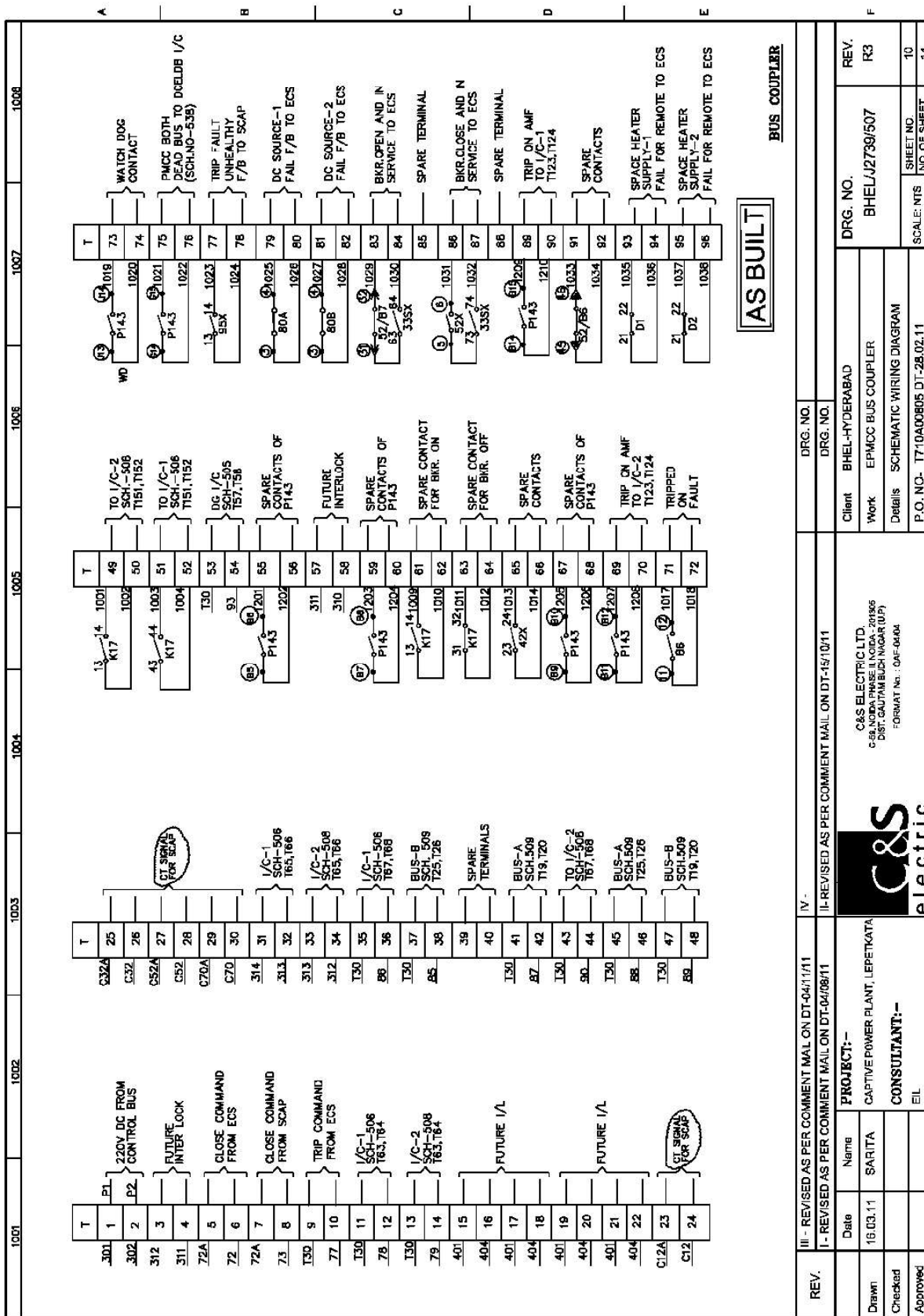
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PROTECTION FUNCTIONS						
3- PH INT./INT. O/C PROTECTION	3- PH INT./INT. O/C PROTECTION	3- PH INT./INT. O/C PROTECTION	3- PH INT./INT. O/C PROTECTION	3- PH INT./INT. O/C PROTECTION	3- PH INT./INT. O/C PROTECTION	3- PH INT./INT. O/C PROTECTION
3- PH INST./INT. O/C PROTECTION	3- PH INST./INT. O/C PROTECTION	3- PH INST./INT. O/C PROTECTION	3- PH INST./INT. O/C PROTECTION	3- PH INST./INT. O/C PROTECTION	3- PH INST./INT. O/C PROTECTION	3- PH INST./INT. O/C PROTECTION
INT./INT. E/F PROTECTION	INT./INT. E/F PROTECTION	INT./INT. E/F PROTECTION	INT./INT. E/F PROTECTION	INT./INT. E/F PROTECTION	INT./INT. E/F PROTECTION	INT./INT. E/F PROTECTION
INST./INT. E/F PROTECTION	INST./INT. E/F PROTECTION	INST./INT. E/F PROTECTION	INST./INT. E/F PROTECTION	INST./INT. E/F PROTECTION	INST./INT. E/F PROTECTION	INST./INT. E/F PROTECTION
CHECK SYNCHRONISING	CHECK SYNCHRONISING	CHECK SYNCHRONISING	CHECK SYNCHRONISING	CHECK SYNCHRONISING	CHECK SYNCHRONISING	CHECK SYNCHRONISING
CIRCUIT BREAKER FAILURE	CIRCUIT BREAKER FAILURE	CIRCUIT BREAKER FAILURE	CIRCUIT BREAKER FAILURE	CIRCUIT BREAKER FAILURE	CIRCUIT BREAKER FAILURE	CIRCUIT BREAKER FAILURE
MEASUREMENT FUNCTIONS						
3- PHASE CURRENT MEASUREMENT	3- PHASE CURRENT MEASUREMENT	3- PHASE CURRENT MEASUREMENT	3- PHASE CURRENT MEASUREMENT	3- PHASE CURRENT MEASUREMENT	3- PHASE CURRENT MEASUREMENT	3- PHASE CURRENT MEASUREMENT
NEUTRAL CURRENT MEASUREMENT	NEUTRAL CURRENT MEASUREMENT	NEUTRAL CURRENT MEASUREMENT	NEUTRAL CURRENT MEASUREMENT	NEUTRAL CURRENT MEASUREMENT	NEUTRAL CURRENT MEASUREMENT	NEUTRAL CURRENT MEASUREMENT
ACTIVE POWER MEASUREMENT	ACTIVE POWER MEASUREMENT	ACTIVE POWER MEASUREMENT	ACTIVE POWER MEASUREMENT	ACTIVE POWER MEASUREMENT	ACTIVE POWER MEASUREMENT	ACTIVE POWER MEASUREMENT
REACTIVE POWER MEASUREMENT	REACTIVE POWER MEASUREMENT	REACTIVE POWER MEASUREMENT	REACTIVE POWER MEASUREMENT	REACTIVE POWER MEASUREMENT	REACTIVE POWER MEASUREMENT	REACTIVE POWER MEASUREMENT
ENERGY MEASUREMENT	ENERGY MEASUREMENT	ENERGY MEASUREMENT	ENERGY MEASUREMENT	ENERGY MEASUREMENT	ENERGY MEASUREMENT	ENERGY MEASUREMENT
POWER FACTOR MEASUREMENT	POWER FACTOR MEASUREMENT	POWER FACTOR MEASUREMENT	POWER FACTOR MEASUREMENT	POWER FACTOR MEASUREMENT	POWER FACTOR MEASUREMENT	POWER FACTOR MEASUREMENT
CONDITION MONITORING FEATURES						
RELAY INTERNAL SELF SUPERVISION	RELAY INTERNAL SELF SUPERVISION	RELAY INTERNAL SELF SUPERVISION	RELAY INTERNAL SELF SUPERVISION	RELAY INTERNAL SELF SUPERVISION	RELAY INTERNAL SELF SUPERVISION	RELAY INTERNAL SELF SUPERVISION
TRIP CIRCUIT SUPERVISION	TRIP CIRCUIT SUPERVISION	TRIP CIRCUIT SUPERVISION	TRIP CIRCUIT SUPERVISION	TRIP CIRCUIT SUPERVISION	TRIP CIRCUIT SUPERVISION	TRIP CIRCUIT SUPERVISION
BREAKER CONDITION MONITORING	BREAKER CONDITION MONITORING	BREAKER CONDITION MONITORING	BREAKER CONDITION MONITORING	BREAKER CONDITION MONITORING	BREAKER CONDITION MONITORING	BREAKER CONDITION MONITORING
OTHER FUNCTIONS AVAILABLE IN RELAY						
CIRCUIT BREAKER CONTROL	CIRCUIT BREAKER CONTROL	CIRCUIT BREAKER CONTROL	CIRCUIT BREAKER CONTROL	CIRCUIT BREAKER CONTROL	CIRCUIT BREAKER CONTROL	CIRCUIT BREAKER CONTROL
DISTURBANCE RECORDING	DISTURBANCE RECORDING	DISTURBANCE RECORDING	DISTURBANCE RECORDING	DISTURBANCE RECORDING	DISTURBANCE RECORDING	DISTURBANCE RECORDING
FAULT RECORDING	FAULT RECORDING	FAULT RECORDING	FAULT RECORDING	FAULT RECORDING	FAULT RECORDING	FAULT RECORDING
EVENT RECORDING	EVENT RECORDING	EVENT RECORDING	EVENT RECORDING	EVENT RECORDING	EVENT RECORDING	EVENT RECORDING
DOUBLING FEATURE DURING STARTING	DOUBLING FEATURE DURING STARTING	DOUBLING FEATURE DURING STARTING	DOUBLING FEATURE DURING STARTING	DOUBLING FEATURE DURING STARTING	DOUBLING FEATURE DURING STARTING	DOUBLING FEATURE DURING STARTING
SIGNALS WIRING TO DI OF RELAY						
INPUT NO.	INPUT DESC.	SIGNAL DESCRIPTION	INPUT NO.	INPUT DESC.	SIGNAL DESCRIPTION	INPUT NO.
D-1	D11-F8	AMI IN INDEPENDENT	D-1	D11-F8	AMI IN INDEPENDENT	D-1
D-2	D12-D8	SW IN LOCAL & INC. CLOSE	D-2	D12-D8	SW IN LOCAL & INC. CLOSE	D-2
D-3	D13-D6	SW IN REMOTE & SOUP. CLOSE	D-3	D13-D6	SW IN REMOTE & SOUP. CLOSE	D-3
D-4	D14-D4	SW IN REMOTE & EDS CLOSE	D-4	D14-D4	SW IN REMOTE & EDS CLOSE	D-4
D-5	D15-D2	BUSCOUPLER ON	D-5	D15-D2	BUSCOUPLER ON	D-5
D-6	D16-D12	BUSCOUPLER IN SERVICE	D-6	D16-D12	BUSCOUPLER IN SERVICE	D-6
D-7	D17-F10	BREAKER SPRING CHARGED	D-7	D17-F10	BREAKER SPRING CHARGED	D-7
D-8	D18-D16	I/C-1 OFF AND IN SERVICE	D-8	D18-D16	I/C-1 OFF AND IN SERVICE	D-8
D-9	D19-F14	BUS-2 HEALTHY	D-9	D19-F14	BUS-2 HEALTHY	D-9
D-10	D10-E2	BUS "1" DEAD (<40%) AND BUS PT-A MCS ON	D-10	D10-E2	BUS "1" DEAD (<40%) AND BUS PT-A MCS ON	D-10
D-11	D11-F2	I/C-2 OFF AND IN SERVICE	D-11	D11-F2	I/C-2 OFF AND IN SERVICE	D-11
D-12	D12-E4	BUS-1 HEALTHY	D-12	D12-E4	BUS-1 HEALTHY	D-12
D-13	D13-E6	BUS "2" DEAD (<40%) AND BUS PT-B MCS ON	D-13	D13-E6	BUS "2" DEAD (<40%) AND BUS PT-B MCS ON	D-13
D-14	D14-E12	BREAKER IN TEST	D-14	D14-E12	BREAKER IN TEST	D-14
D-15	D15-F4	AMI IN AUTO	D-15	D15-F4	AMI IN AUTO	D-15
D-16	D16-F18	I/C-1 ON AND IN SERVICE	D-16	D16-F18	I/C-1 ON AND IN SERVICE	D-16
D-17	D17-E8	I/C-2 ON AND IN SERVICE	D-17	D17-E8	I/C-2 ON AND IN SERVICE	D-17
D-18	D18-E14	DS I/C ON AND IN SERVICE	D-18	D18-E14	DS I/C ON AND IN SERVICE	D-18
D-19	D19-F6	AMI IN MANUAL	D-19	D19-F6	AMI IN MANUAL	D-19
D-20	D20-F12	TSS ON BUSCOUPLER	D-20	D20-F12	TSS ON BUSCOUPLER	D-20
D-21	D21-E10	TRIP FROM SOUP	D-21	D21-E10	TRIP FROM SOUP	D-21
D-22	D22-D14	TRIP FROM EDS	D-22	D22-D14	TRIP FROM EDS	D-22
RELAY COMMUNICATION DETAILS						
FRONT COMMUNICATION PORT	RS232C	FRONT COMMUNICATION PORT	RS232C	FRONT COMMUNICATION PORT	RS232C	FRONT COMMUNICATION PORT
REAR COMMUNICATION PORT	RS485	REAR COMMUNICATION PORT	RS485	REAR COMMUNICATION PORT	RS485	REAR COMMUNICATION PORT
COMMUNICATION PROTOCOL	IEC-61850	COMMUNICATION PROTOCOL	IEC-61850	COMMUNICATION PROTOCOL	IEC-61850	COMMUNICATION PROTOCOL
OUTPUT CONTACT OF RELAY						
OUTPUT NO.	SIGNAL DESCRIPTION	OUTPUT NO.	SIGNAL DESCRIPTION	OUTPUT NO.	SIGNAL DESCRIPTION	OUTPUT NO.
J13, J14	WATCH DOG	J13, J14	WATCH DOG	J13, J14	WATCH DOG	J13, J14
H1, H2	TRIP CIRCUIT MONITORING	H1, H2	TRIP CIRCUIT MONITORING	H1, H2	TRIP CIRCUIT MONITORING	H1, H2
H3, H4	FAULT TRIP	H3, H4	FAULT TRIP	H3, H4	FAULT TRIP	H3, H4
H5, H6	TRIP COMMAND	H5, H6	TRIP COMMAND	H5, H6	TRIP COMMAND	H5, H6
H6, H8	DS CLOSE COMMAND	H6, H8	DS CLOSE COMMAND	H6, H8	DS CLOSE COMMAND	H6, H8
H11, H12	BS OPERATED F/B TO EDS	H11, H12	BS OPERATED F/B TO EDS	H11, H12	BS OPERATED F/B TO EDS	H11, H12
H14, H15	SPARE CONTACT	H14, H15	SPARE CONTACT	H14, H15	SPARE CONTACT	H14, H15
H17, H18	TCS HEALTHY	H17, H18	TCS HEALTHY	H17, H18	TCS HEALTHY	H17, H18
G1, G2	SPARE CONTACT	G1, G2	SPARE CONTACT	G1, G2	SPARE CONTACT	G1, G2
G3, G4	SPARE CONTACT	G3, G4	SPARE CONTACT	G3, G4	SPARE CONTACT	G3, G4
G5, G6	AUTO CHANGE OVER BLOCKED	G5, G6	AUTO CHANGE OVER BLOCKED	G5, G6	AUTO CHANGE OVER BLOCKED	G5, G6
G8, G9	AUTO CHANGE OVER COMPLETED	G8, G9	AUTO CHANGE OVER COMPLETED	G8, G9	AUTO CHANGE OVER COMPLETED	G8, G9
G11, G12	SUPPLY REPAIRED	G11, G12	SUPPLY REPAIRED	G11, G12	SUPPLY REPAIRED	G11, G12
G14, G15	PMCC BOTH DEAD BUS TO INCLUDE I/C	G14, G15	PMCC BOTH DEAD BUS TO INCLUDE I/C	G14, G15	PMCC BOTH DEAD BUS TO INCLUDE I/C	G14, G15
G17, G18	TRIP OKT. UNHEALTHY	G17, G18	TRIP OKT. UNHEALTHY	G17, G18	TRIP OKT. UNHEALTHY	G17, G18
B1, B2	SPARE CONTACT	B1, B2	SPARE CONTACT	B1, B2	SPARE CONTACT	B1, B2
B3, B4	SPARE CONTACT	B3, B4	SPARE CONTACT	B3, B4	SPARE CONTACT	B3, B4
B5, B6	SPARE CONTACT	B5, B6	SPARE CONTACT	B5, B6	SPARE CONTACT	B5, B6
B7, B8	SPARE CONTACT	B7, B8	SPARE CONTACT	B7, B8	SPARE CONTACT	B7, B8
B9, B10	SPARE CONTACT	B9, B10	SPARE CONTACT	B9, B10	SPARE CONTACT	B9, B10
B11, B12	TRIP ON AMF TO I/C-1	B11, B12	TRIP ON AMF TO I/C-1	B11, B12	TRIP ON AMF TO I/C-1	B11, B12
B14, B15	TRIP ON AMF TO I/C-2	B14, B15	TRIP ON AMF TO I/C-2	B14, B15	TRIP ON AMF TO I/C-2	B14, B15
B17, B18	AMF SIGNAL TO DS AMF PANEL	B17, B18	AMF SIGNAL TO DS AMF PANEL	B17, B18	AMF SIGNAL TO DS AMF PANEL	B17, B18
AS BUILT						
BUS COUPLER						
REV. III - REVISED AS PER COMMENT MAIL ON DT-04/11/11						
REV. II - REVISED AS PER COMMENT MAIL ON DT-15/10/11						
REV. I - REVISED AS PER COMMENT MAIL ON DT-04/08/11						
PROJECT: - CAPTIVE POWER PLANT, LEPETKATA						
CONSULTANT: - EIL						
DATE: 16.03.11						
SARITA						
CHECKED: -						
APPROVED: -						
SCALE: NTS						
SHEET NO. 09						
NO. OF SHEET 14						
DRG. NO. BHEL/J2739/507						
REV. R3						
SCHEMATIC WIRING DIAGRAM						
P.O. NO. T710A00005 DT-28.02.11						
Client BHEL-HYDERABAD						
Work EPMCC BUS COUPLER						
Details SCHEMATIC WIRING DIAGRAM						
C&S ELECTRIC LTD.						
C-85, NODA PHASE I NODA - 20136						
DIST. GAUTAM BUDDH NAGAR (UP)						
FORMAT No : DAF-0404						

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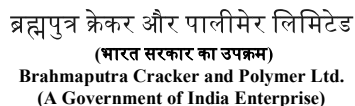
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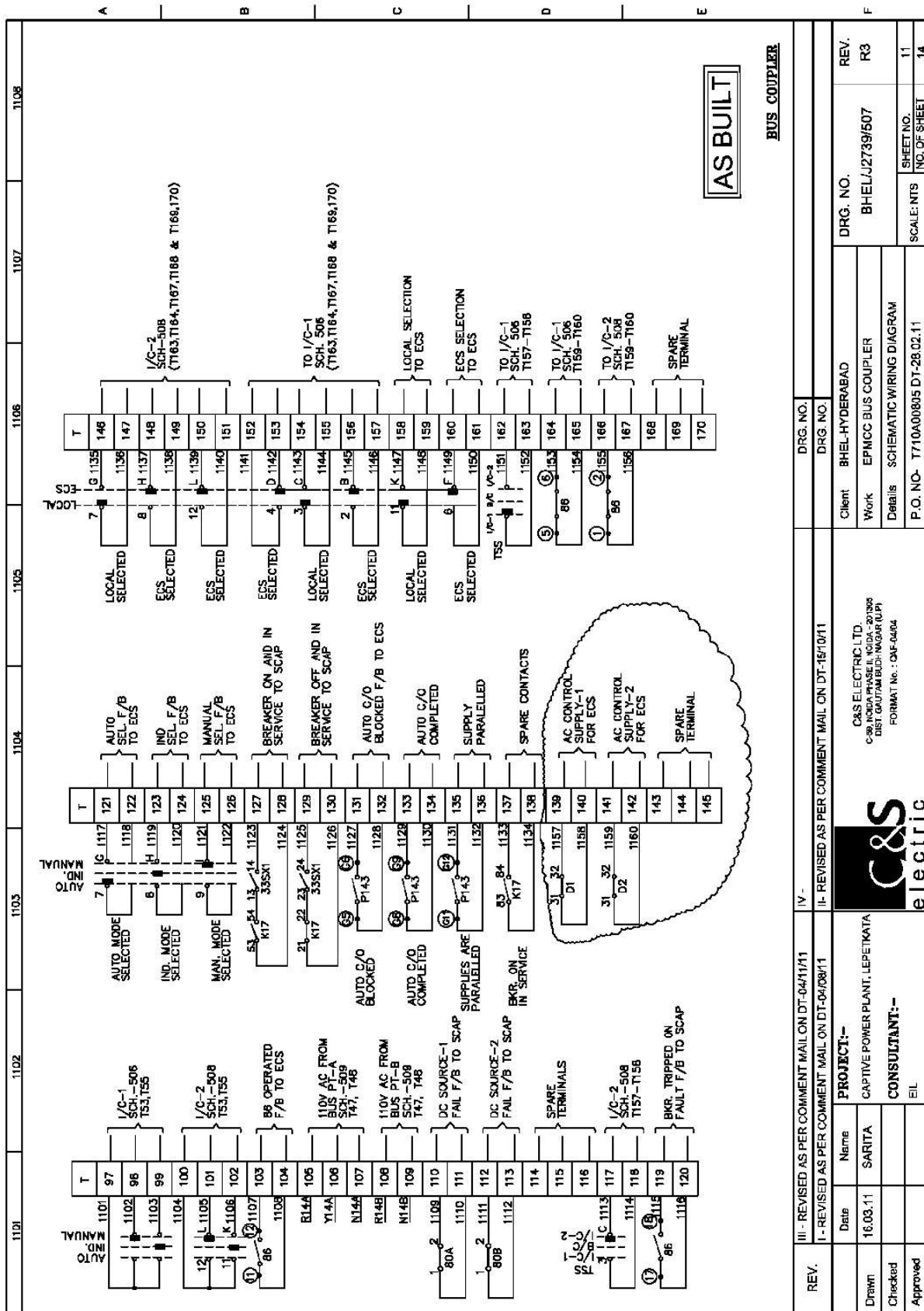


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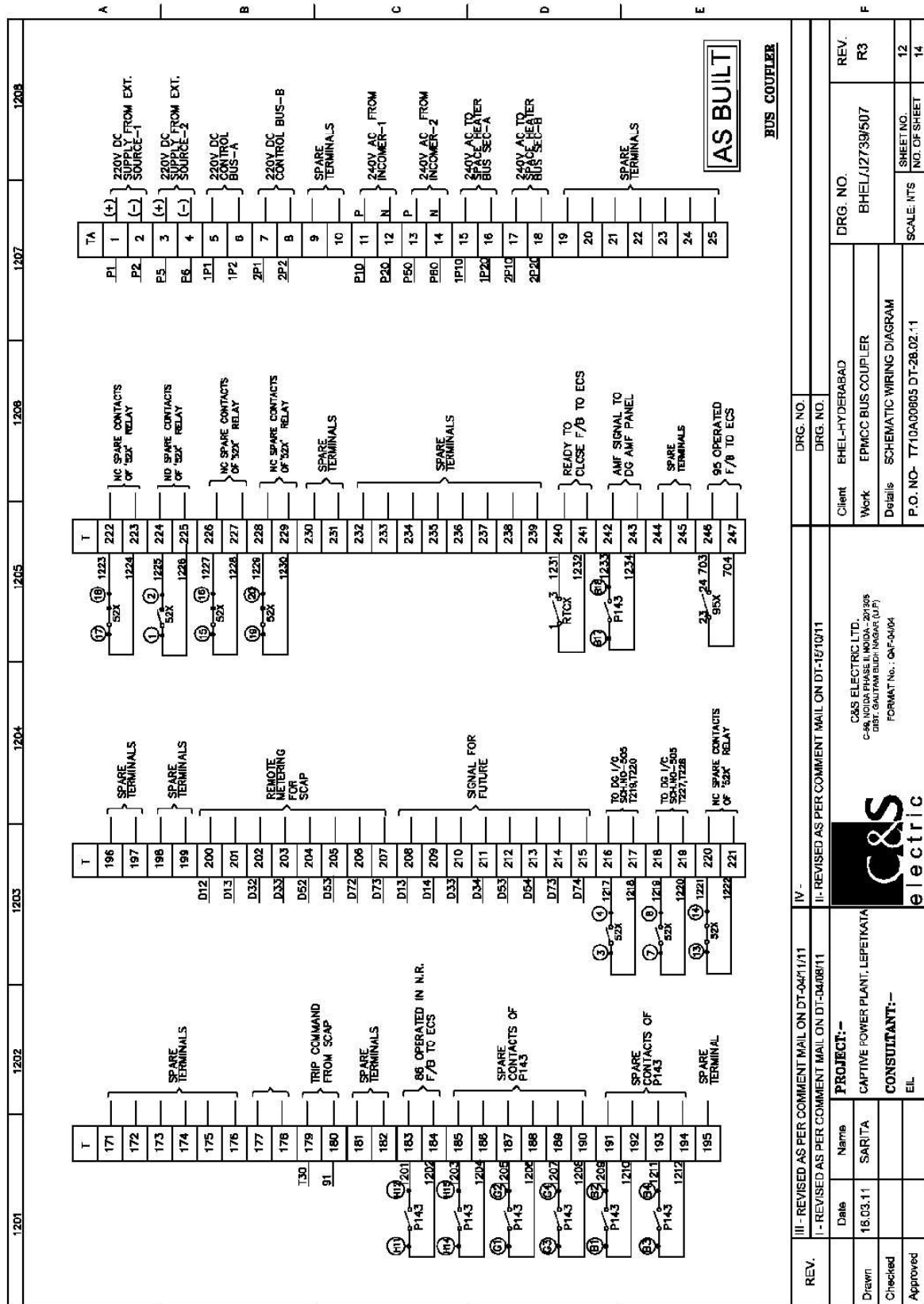


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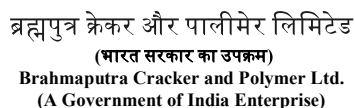
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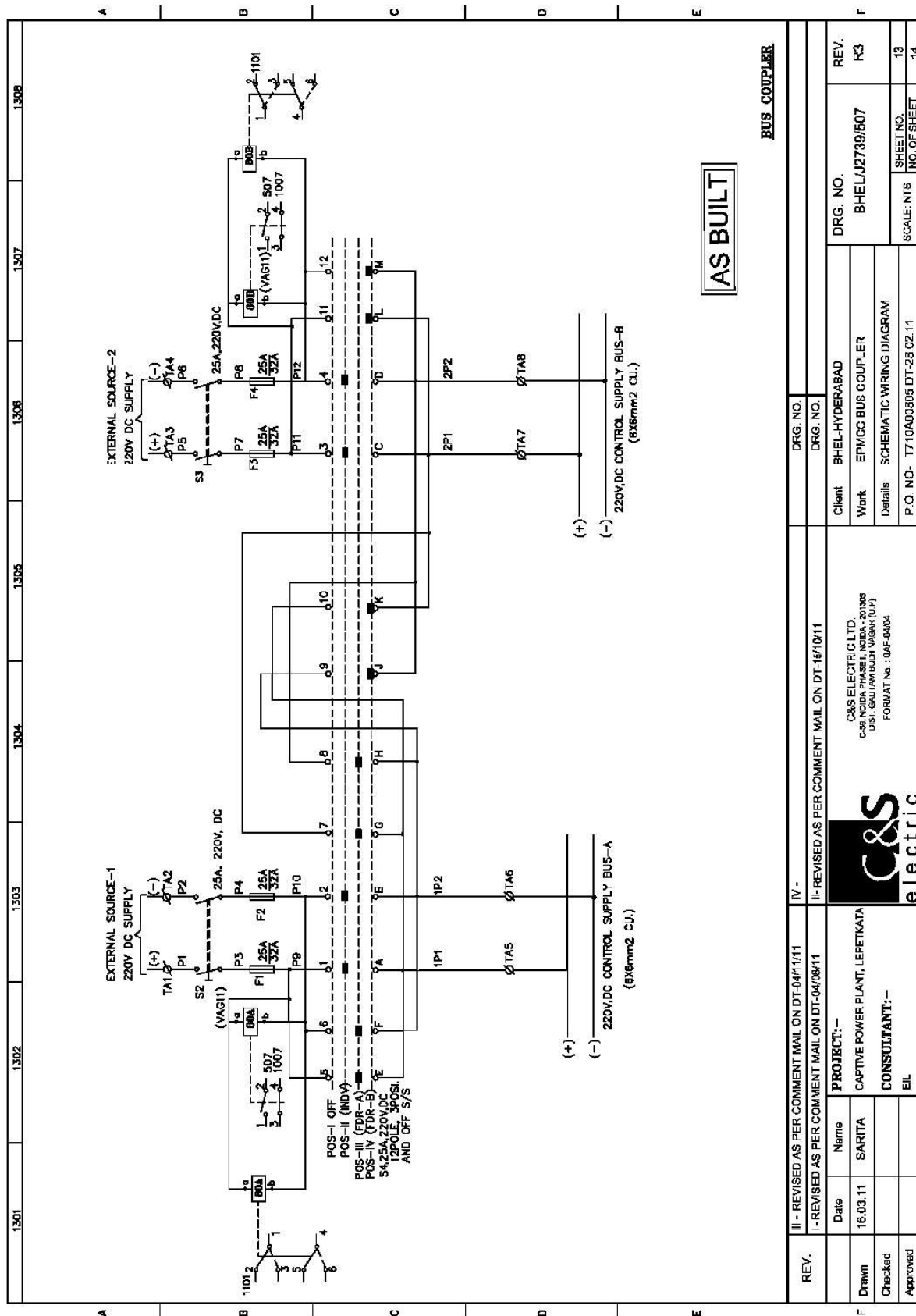


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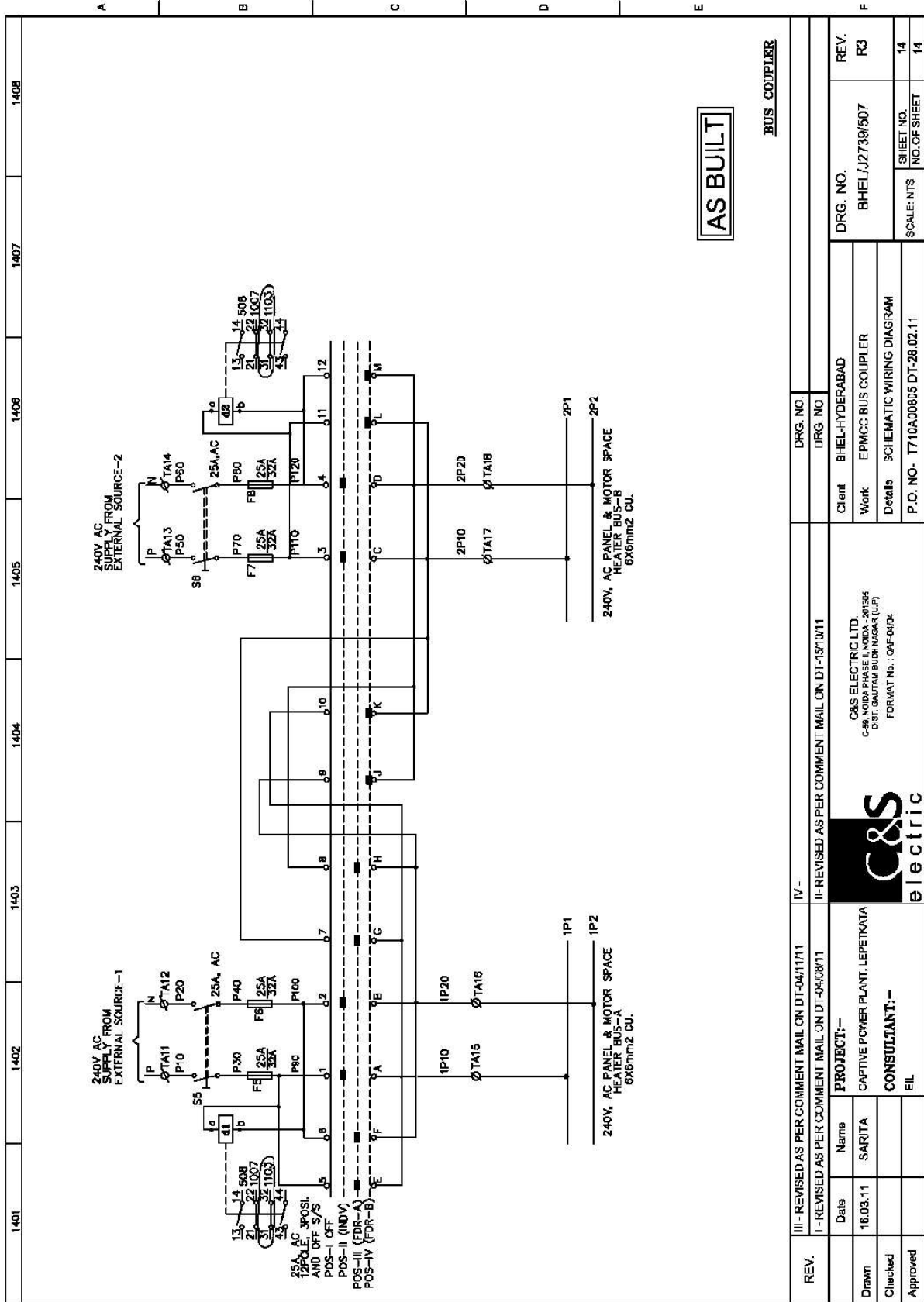
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