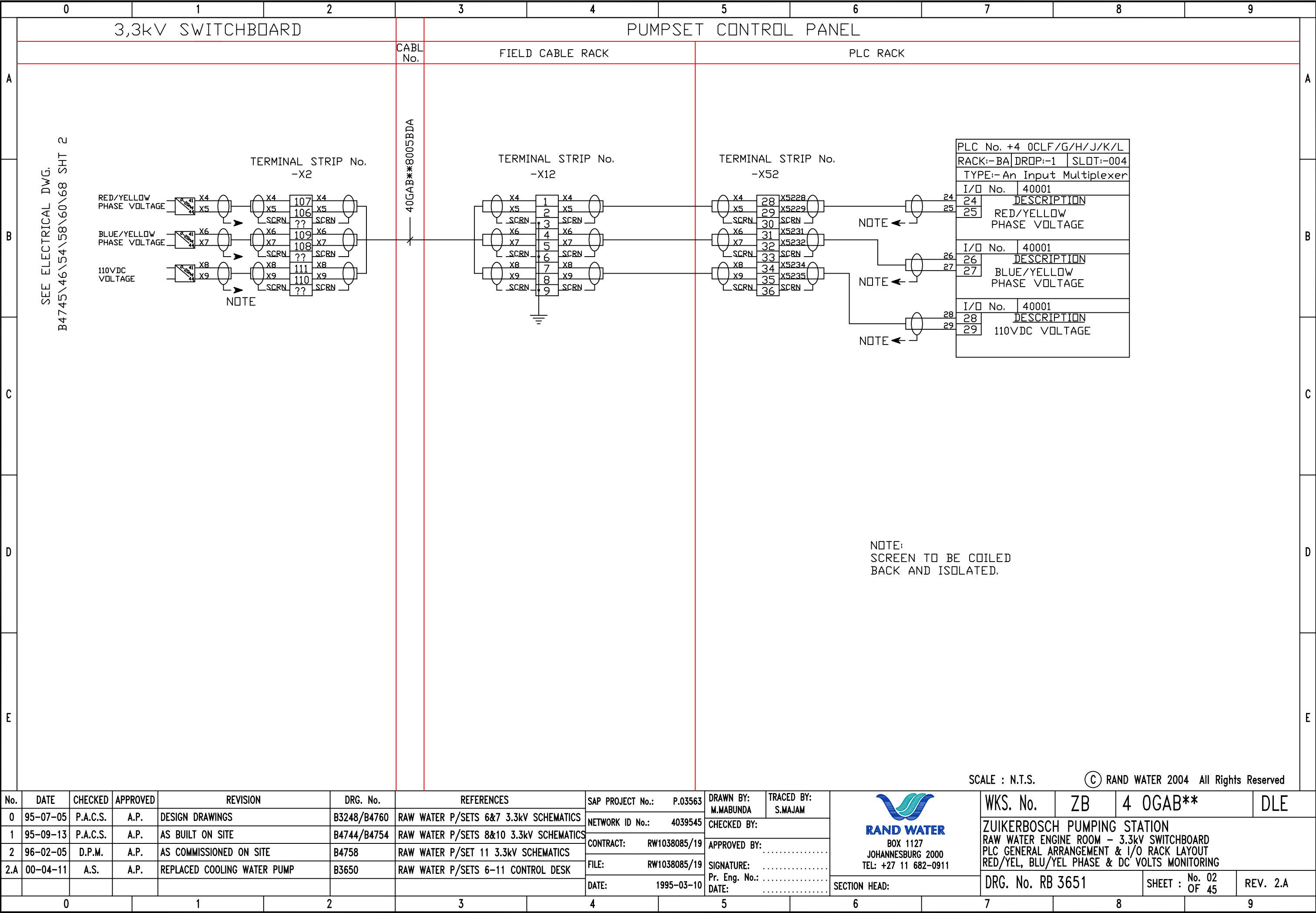


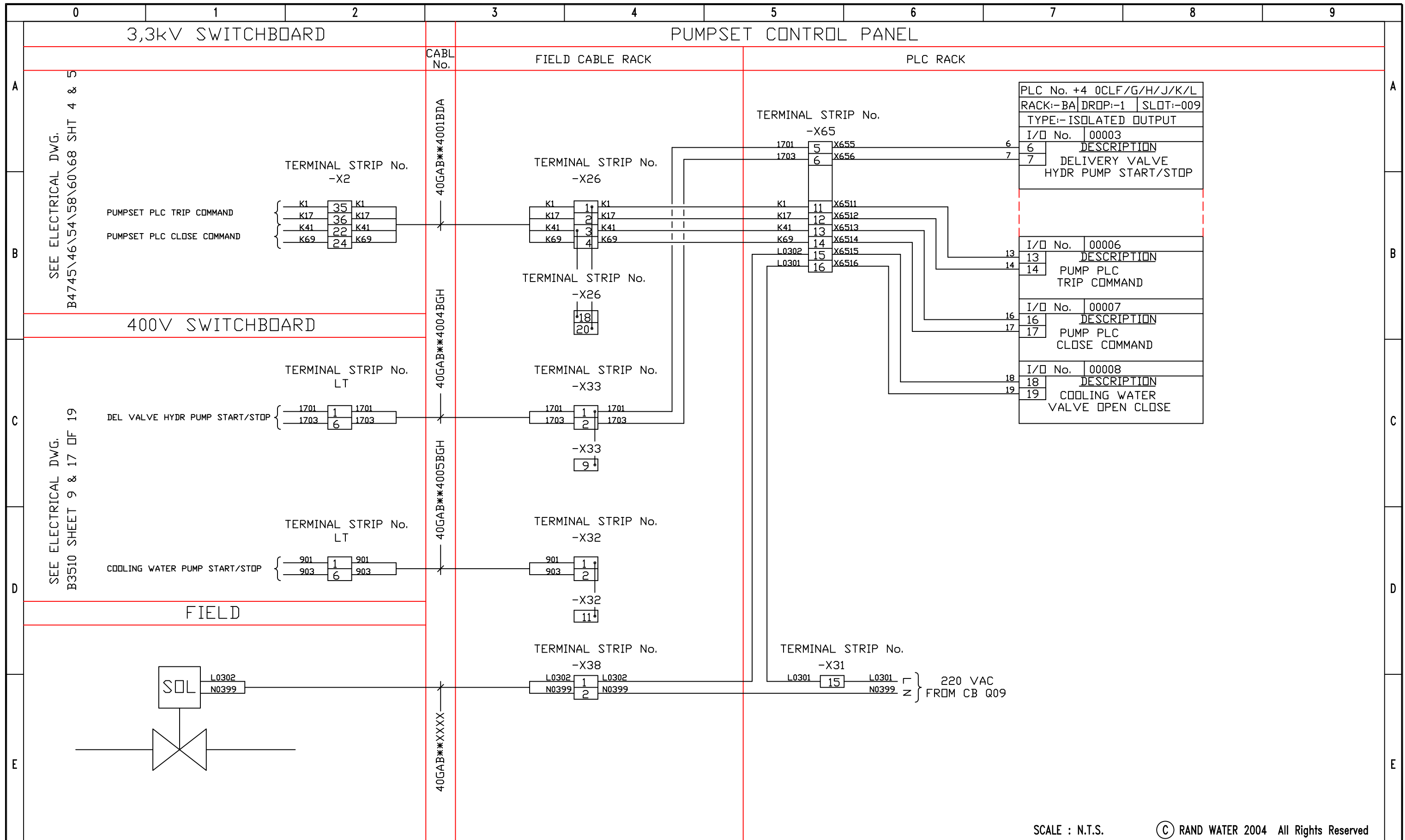
RAW WATER ENGINE ROOM
3.3kV SWITCHBOARD
JMPSETS 6, 7, 8, 9, 10 &

FOR TENDER PURPOSES

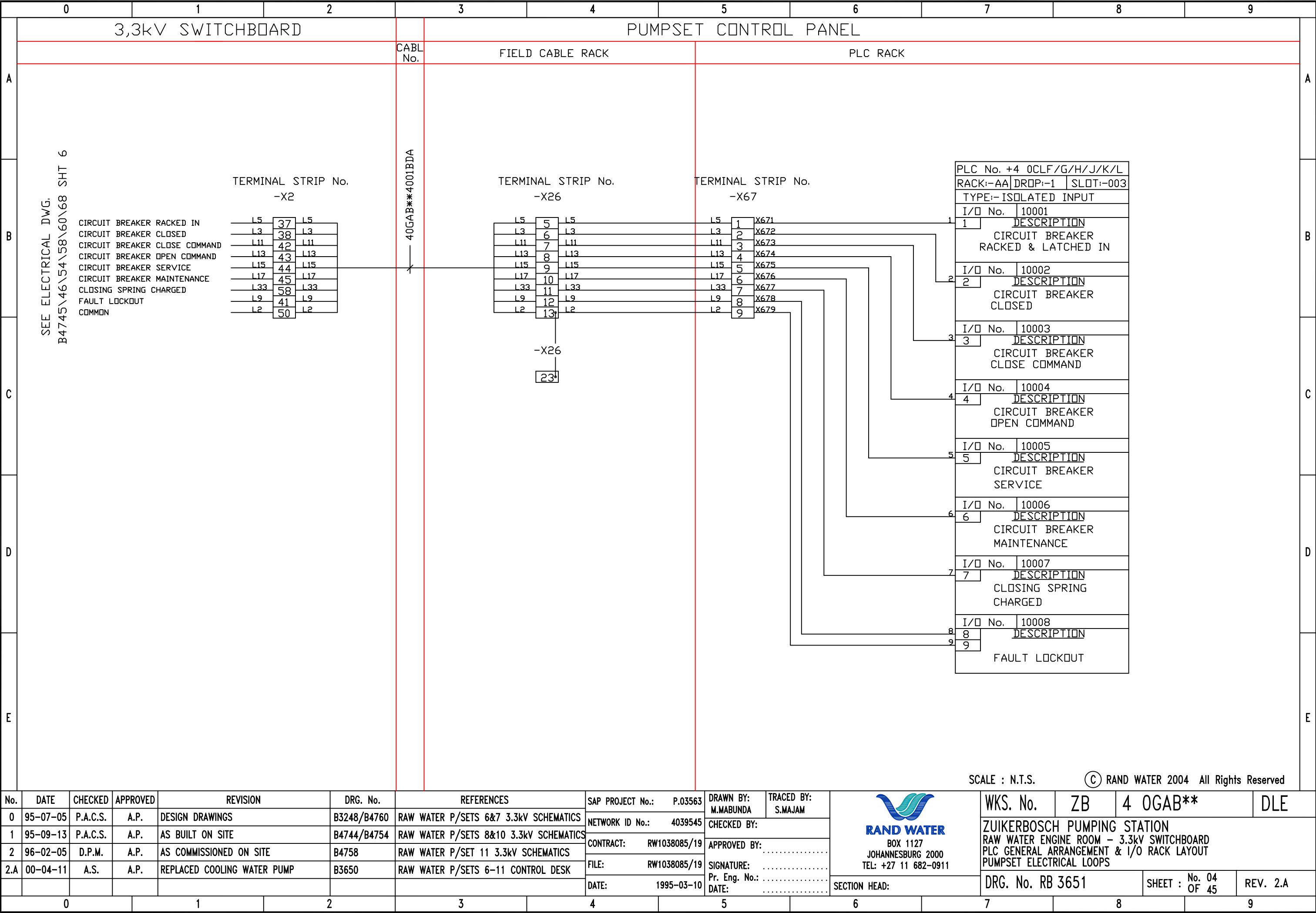
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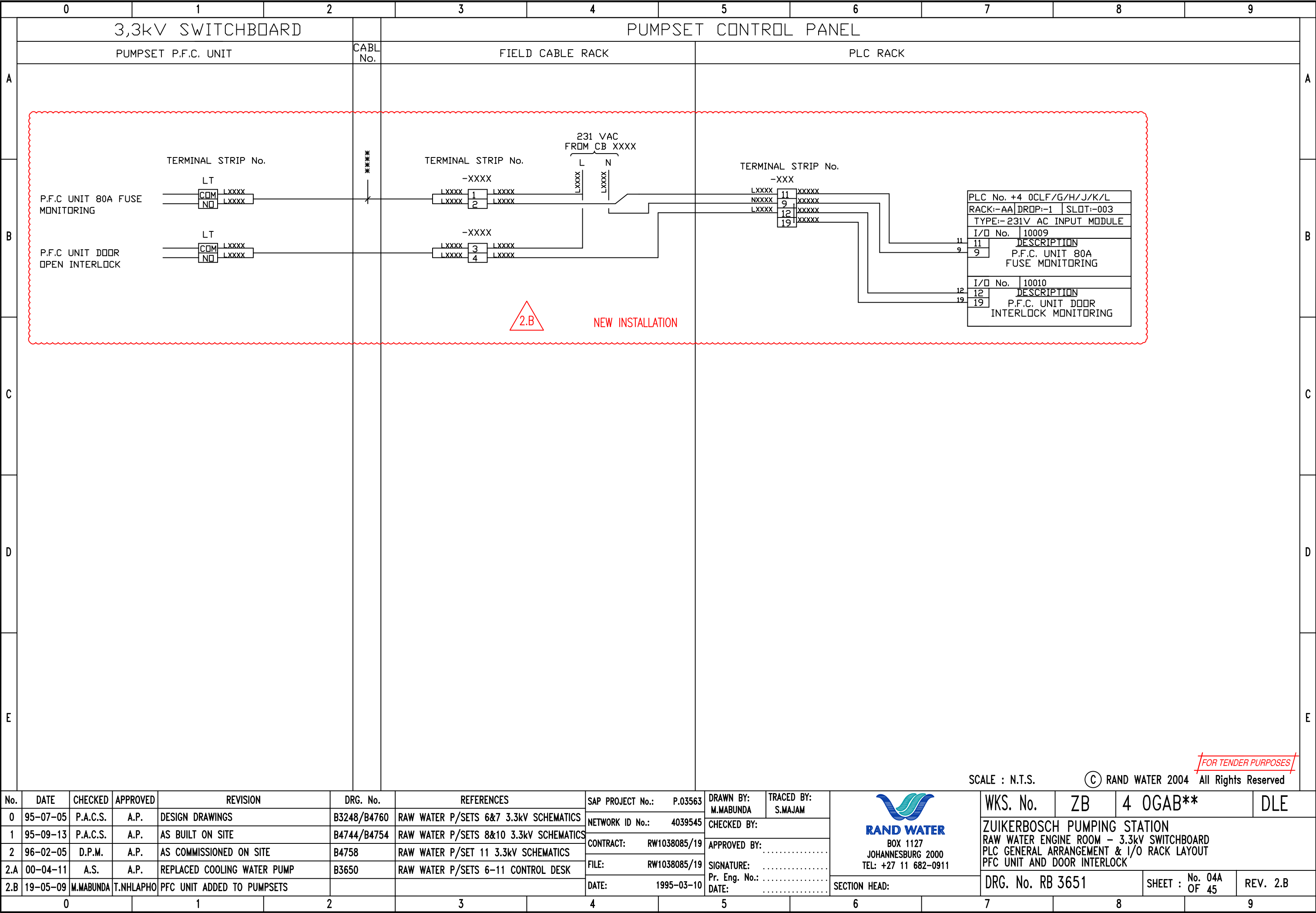
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0	95-07-05	P.A.C.S.	A.P.	DESIGN DRAWINGS	B3248/B4760	RAW WATER P/SETS 6&7 3.3kV SCHEMATICS	NETWORK ID No.: 4039545	CHECKED BY:			ZUIKERBOSCH PUMPING STATION RAW WATER ENGINE ROOM - 3.3kV SWITCHBOARD PLC GENERAL ARRANGEMENT & I/O RACK LAYOUT COVER SHEET								
1	95-09-13	P.A.C.S.	A.P.	AS BUILT ON SITE	B4744/B4754	RAW WATER P/SETS 8&10 3.3kV SCHEMATICS	CONTRACT: RW1038085/19	APPROVED BY:											
2	96-02-05	D.P.M.	A.P.	AS COMMISSIONED ON SITE	B4758	RAW WATER P/SET 11 3.3kV SCHEMATICS	FILE: RW1038085/19	SIGNATURE:											
2.A	00-04-11	A.S.	A.P.	REPLACED COOLING WATER PUMP	B3650	RAW WATER P/SETS 6-11 CONTROL DESK	Pr. Eng. No.:												
2.B	19-05-09	M.MABUNDA	T.NHLAPHO	PFC UNIT ADDED TO PUMPSETS			DATE:												
							DATE: 1995-03-10			SECTION HEAD:	DRG. No. RB 3651	SHEET : No. 01 OF 45	REV. 2.B						
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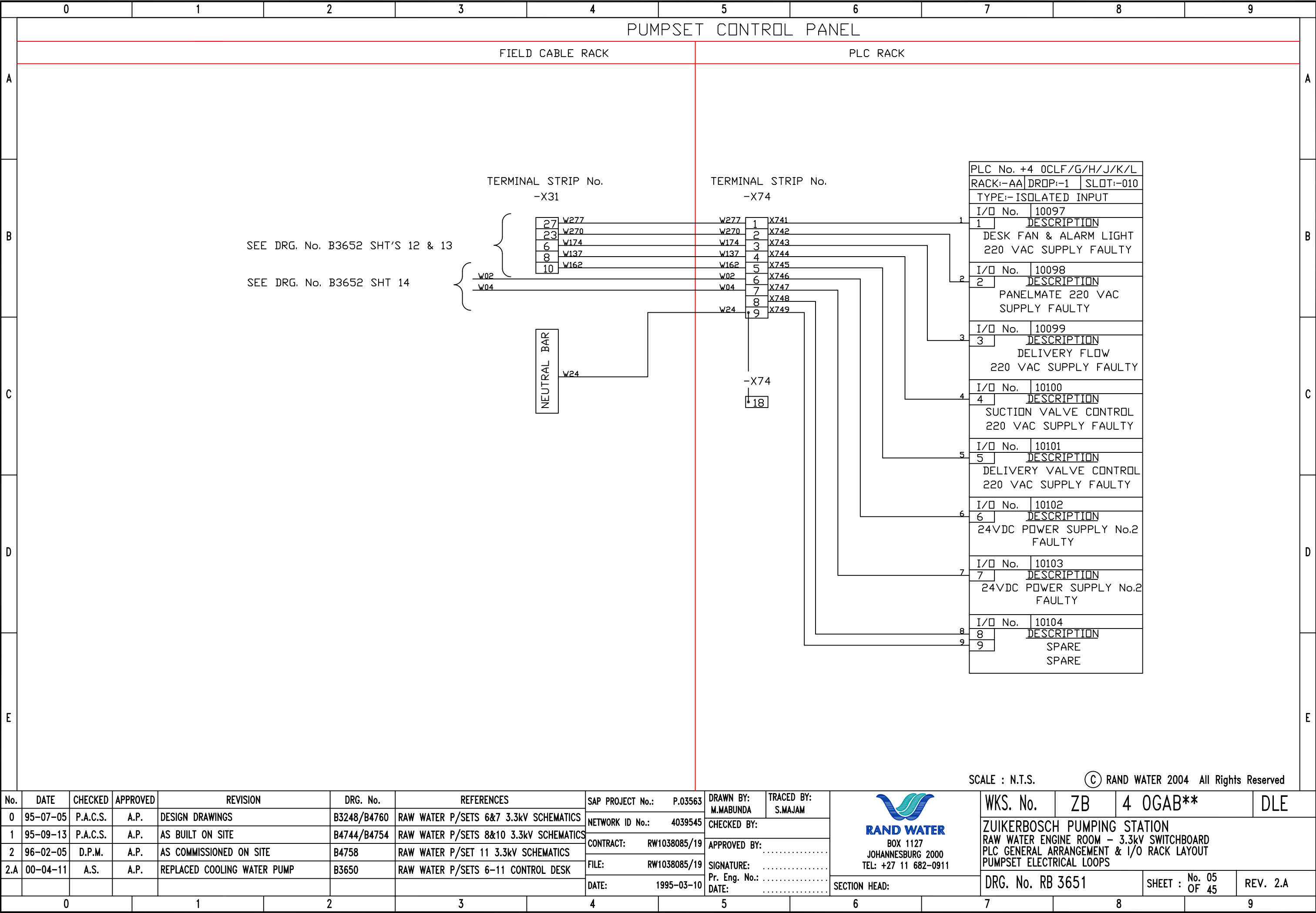


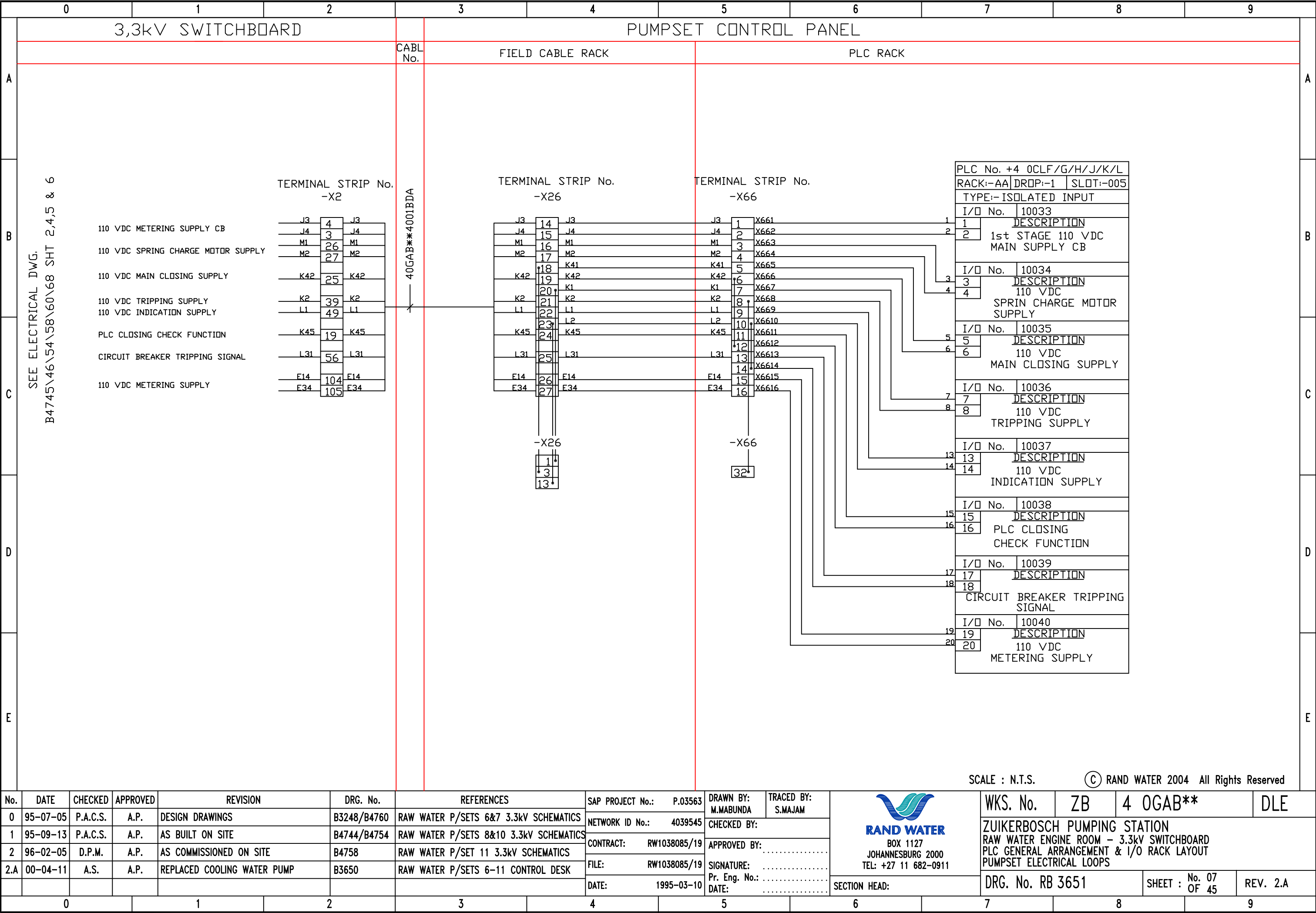


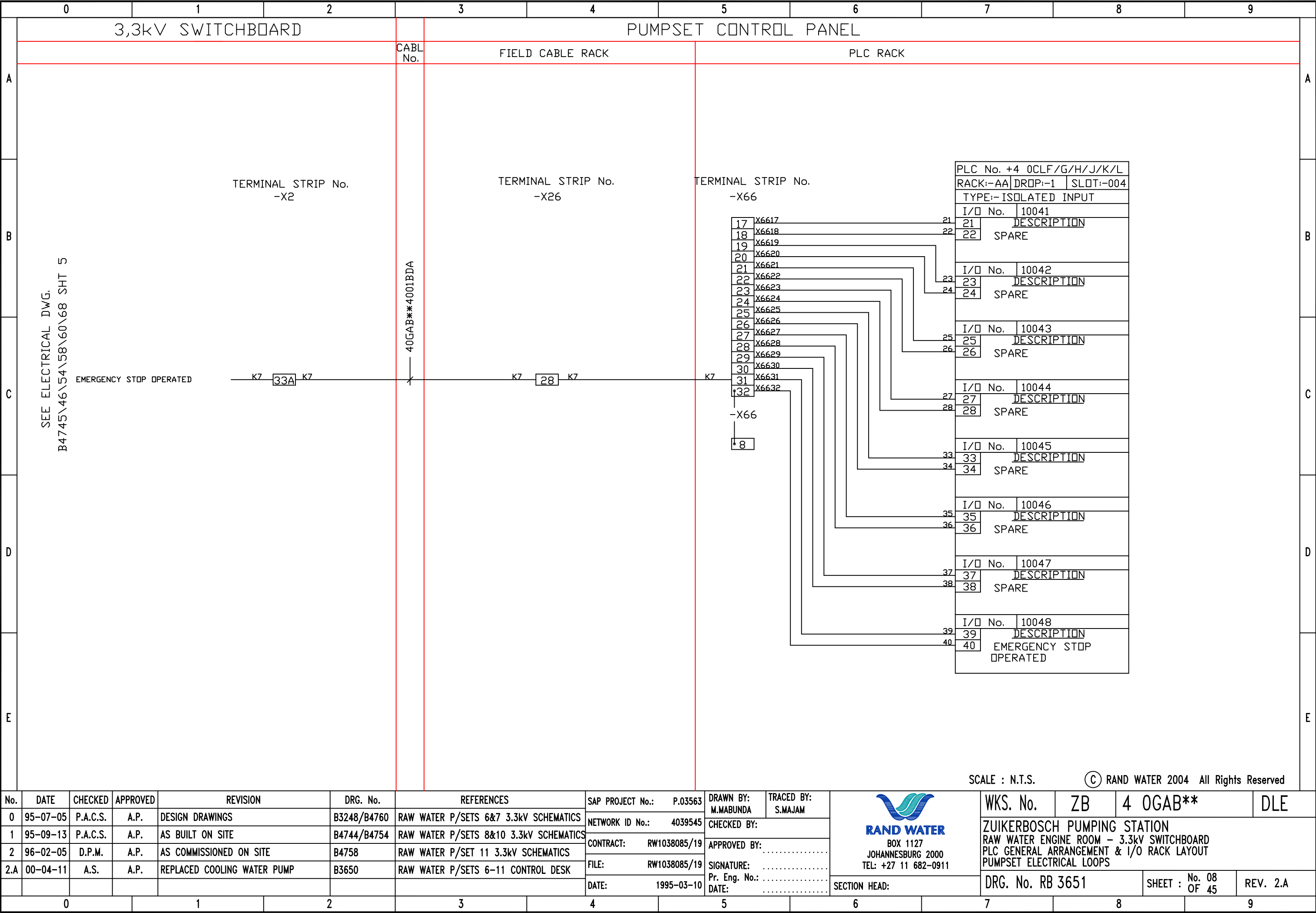
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0	95-07-05	P.A.C.S.	A.P.	DESIGN DRAWINGS	B3248/B4760	RAW WATER P/SETS 6&7 3.3kV SCHEMATICS	NETWORK ID No.: 4039545	CHECKED BY:		ZUIKERBOSCH PUMPING STATION			
1	95-09-13	P.A.C.S.	A.P.	AS BUILT ON SITE	B4744/B4754	RAW WATER P/SETS 8&10 3.3kV SCHEMATICS	CONTRACT: RW1038085/19	APPROVED BY:		RAW WATER ENGINE ROOM - 3.3kV SWITCHBOARD			
2	96-02-05	D.P.M.	A.P.	AS COMMISSIONED ON SITE	B4758	RAW WATER P/SET 11 3.3kV SCHEMATICS	FILE: RW1038085/19	SIGNATURE:		PLC GENERAL ARRANGEMENT & I/O RACK LAYOUT			
2.A	00-04-11	A.S.	A.P.	REPLACED COOLING WATER PUMP	B3650	RAW WATER P/SETS 6-11 CONTROL DESK	DATE: 1995-03-10	Pr. Eng. No.:		PUMPSET PLC TRIP & CLOSE COMMANDS			
								DATE:		DRG. No. RB 3651		SHEET : No. 04 OF 45	REV. 2.A

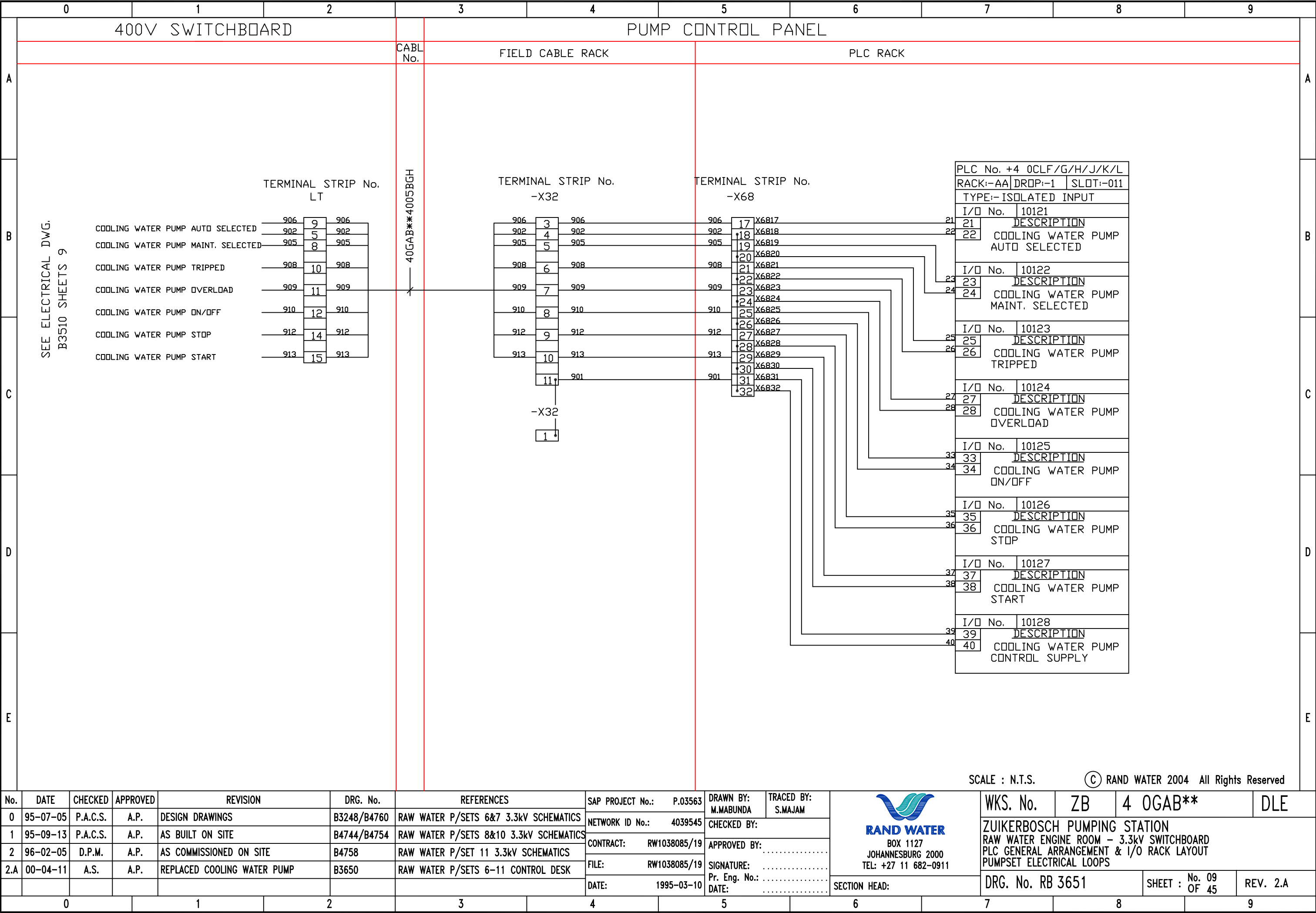


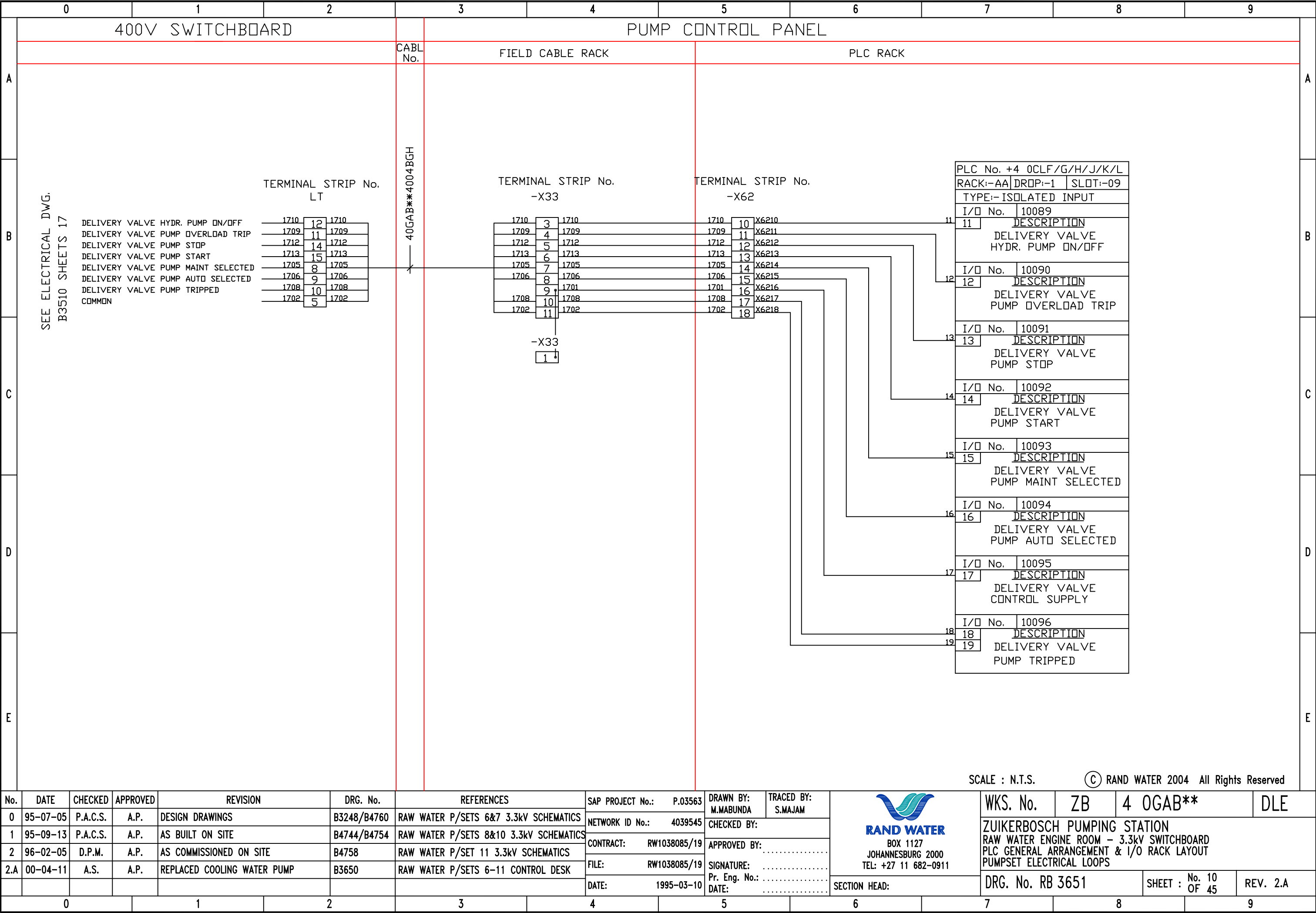


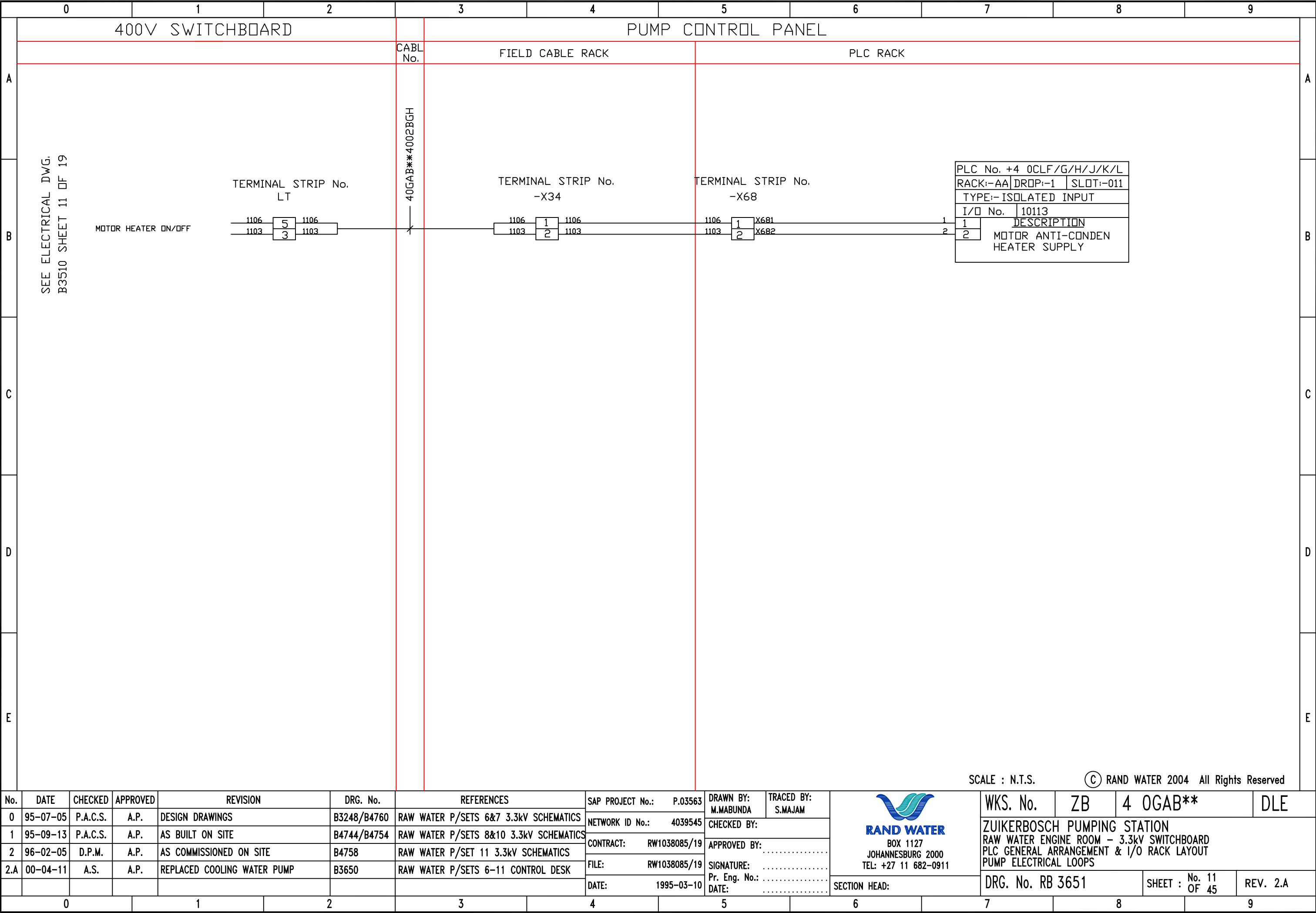


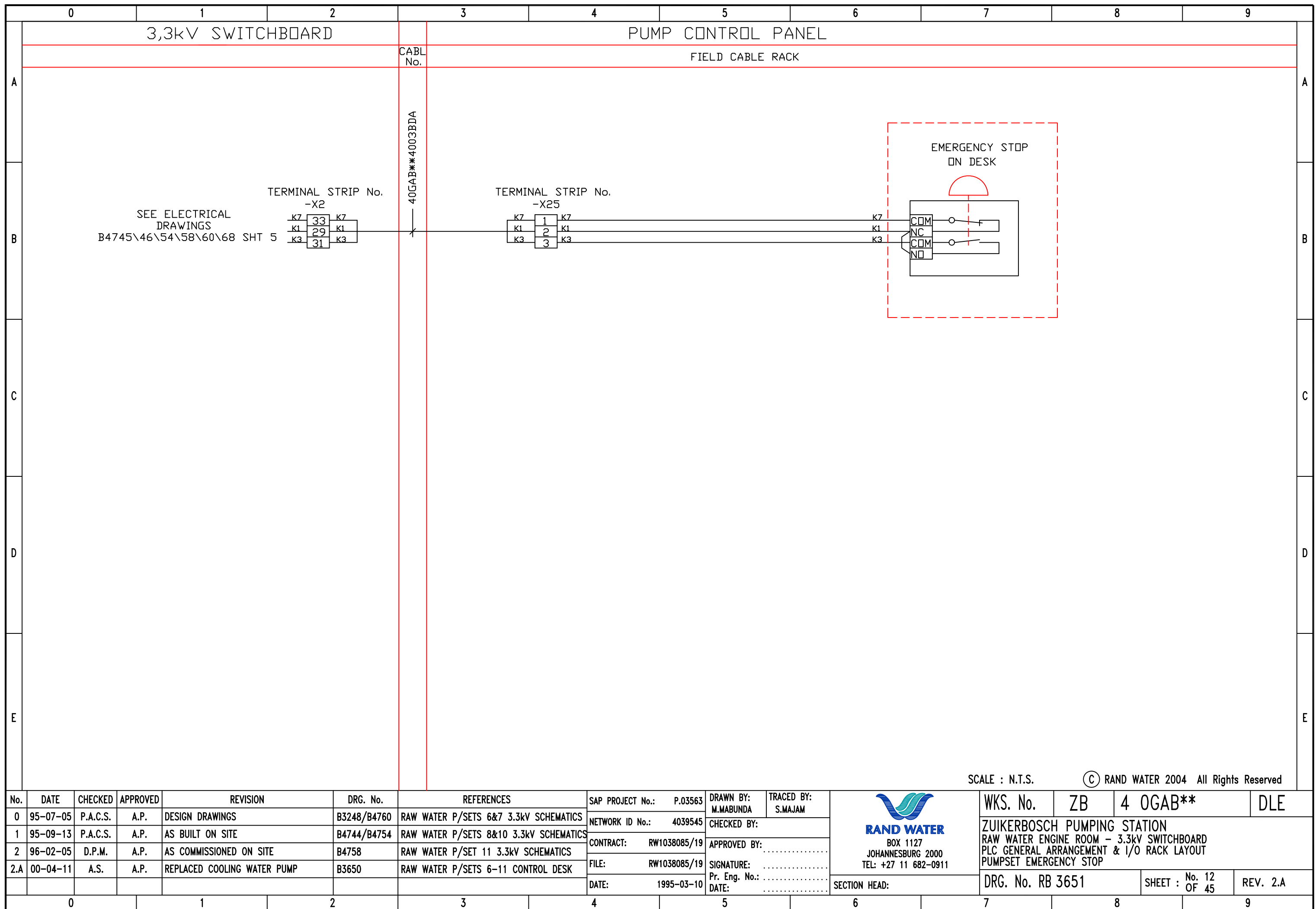


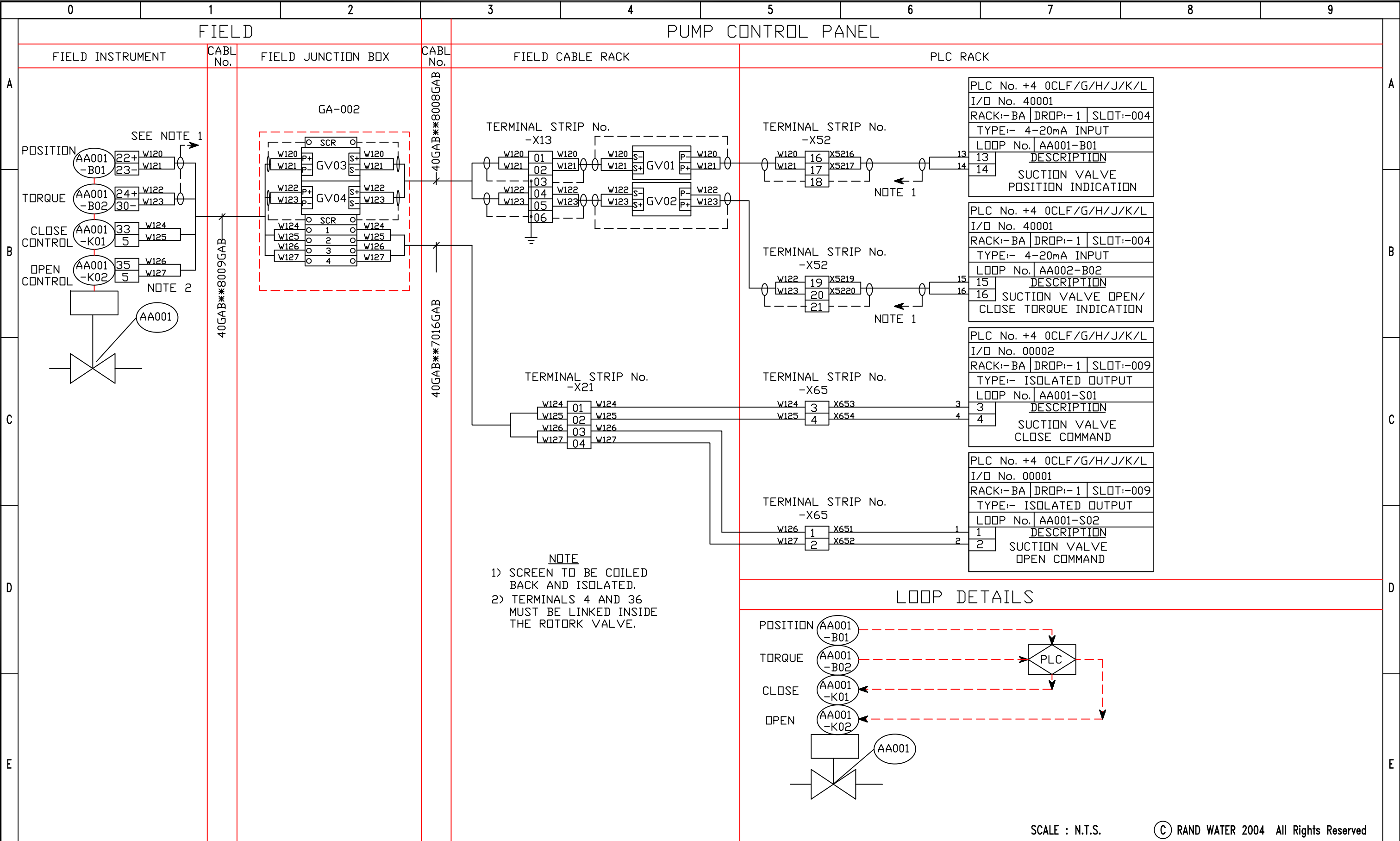




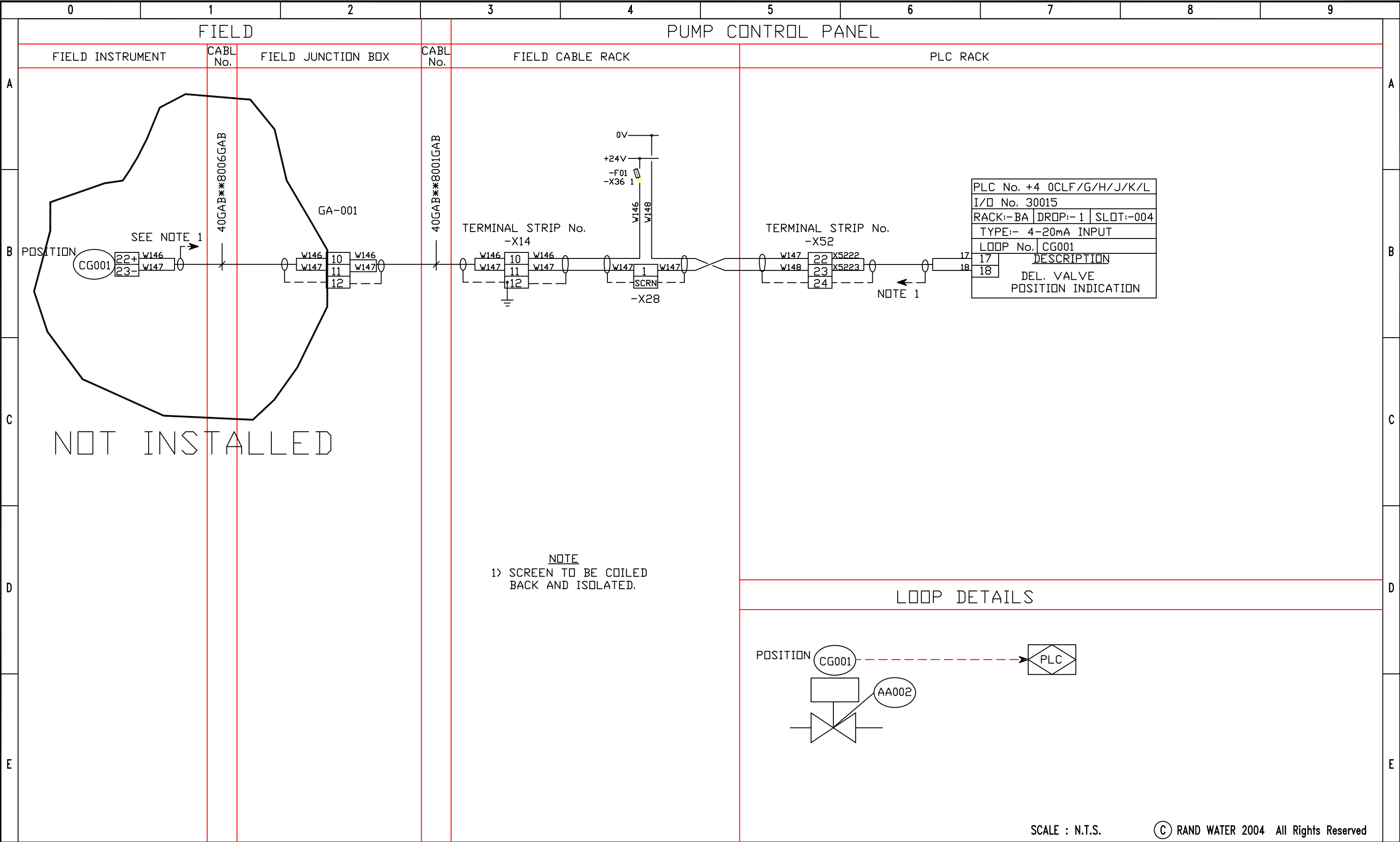


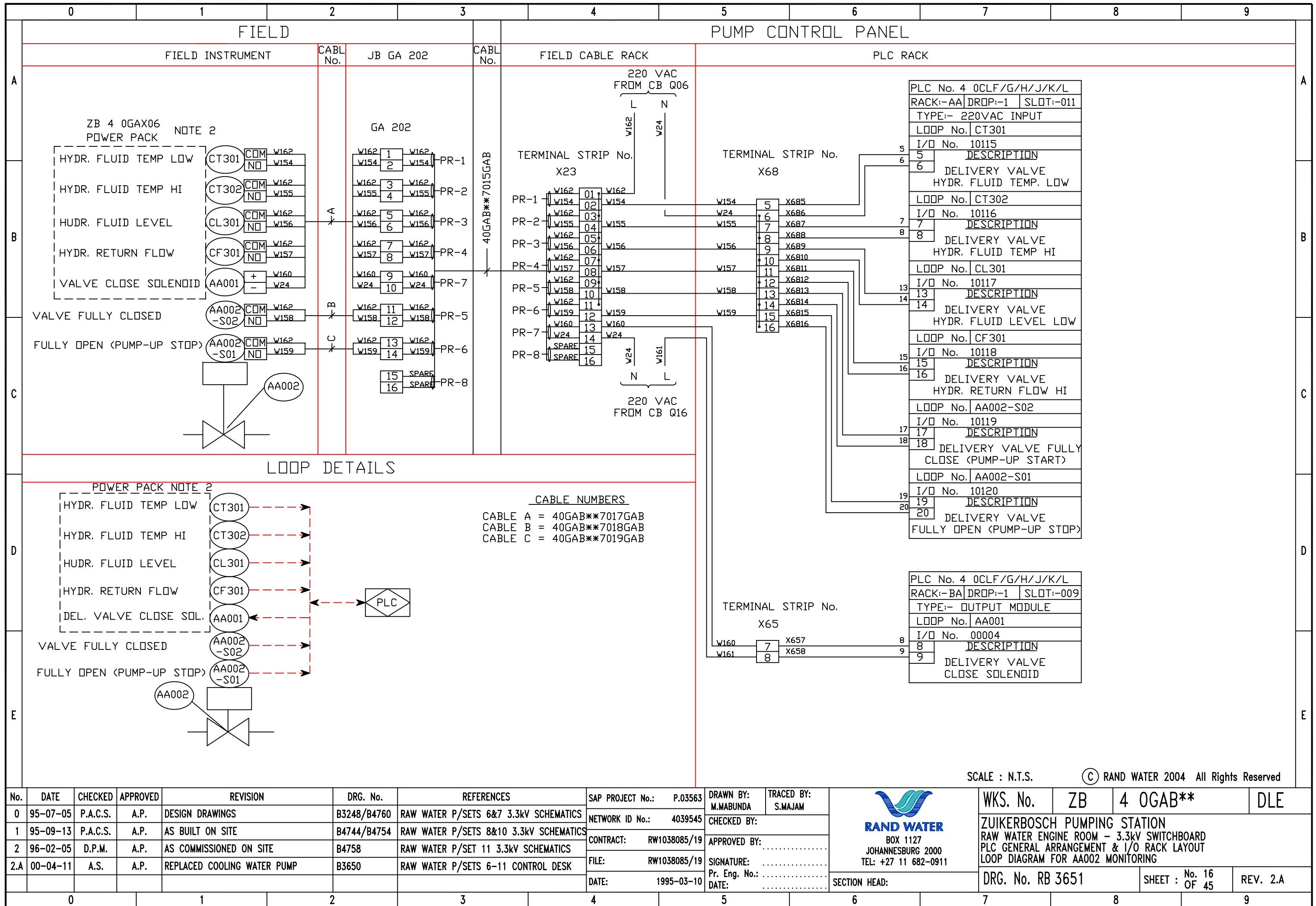


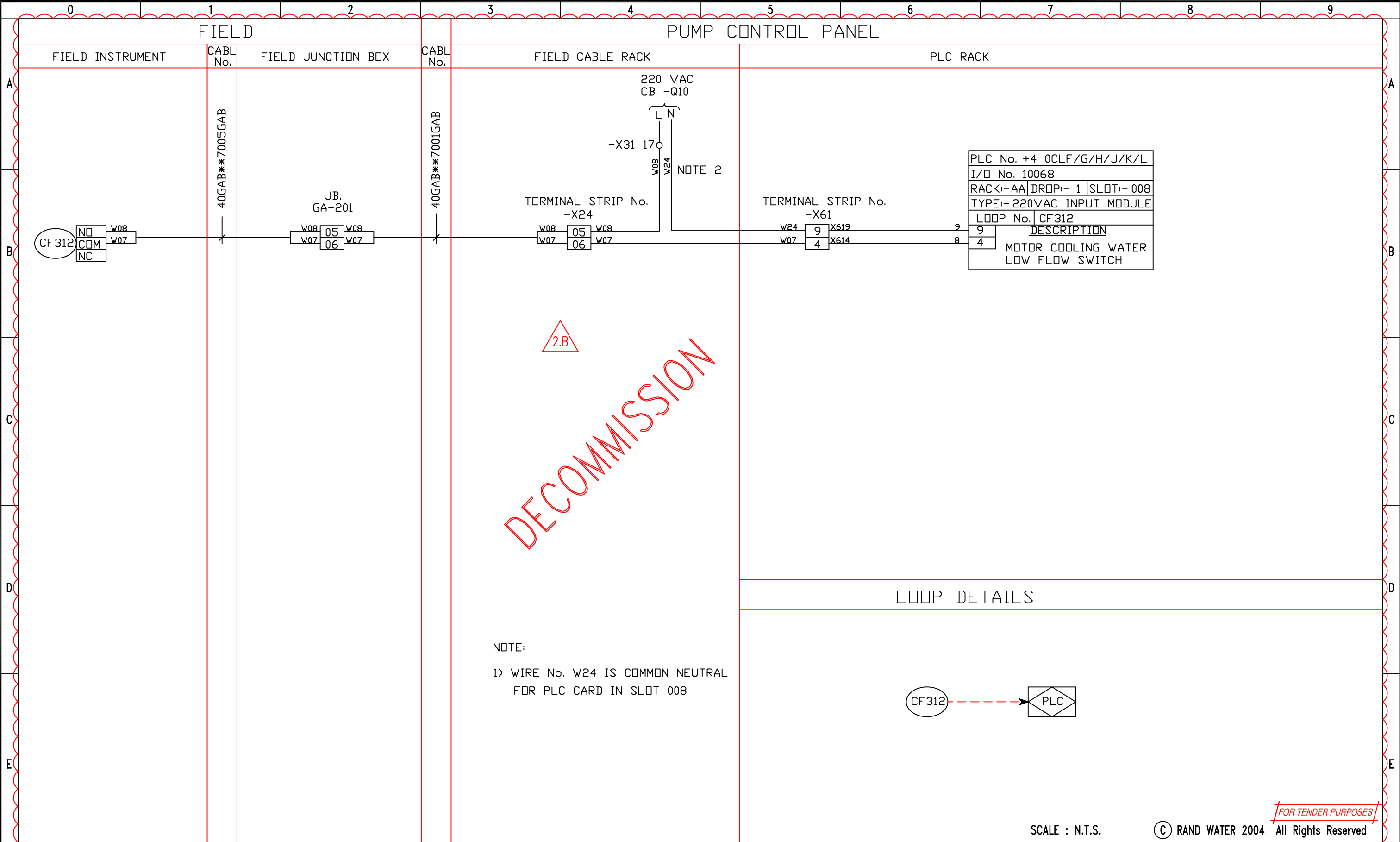




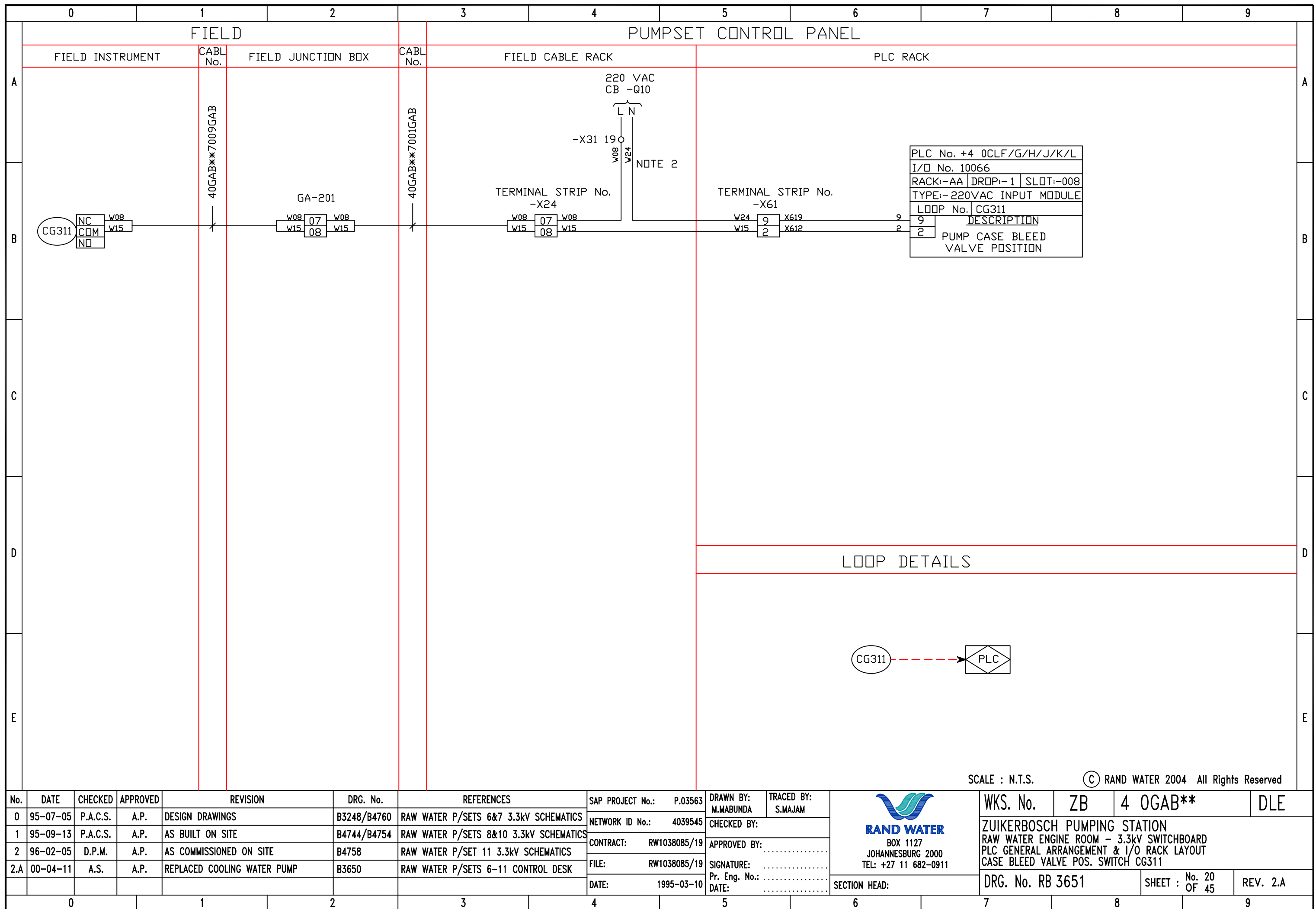
No.	DATE	CHECKED	APPROVED	REVISION	DRG. No.	REFERENCES	SAP PROJECT No.: P.03563	DRAWN BY: M.MABUNDA	TRACED BY: S.MAJAM	WKS. No.	ZB	4 OGAB**	DLE
0	95-07-05	P.A.C.S.	A.P.	DESIGN DRAWINGS	B3248/B4760	RAW WATER P/SETS 6&7 3.3kV SCHEMATICS	NETWORK ID No.: 4039545	CHECKED BY:		 RAND WATER BOX 1127 JOHANNESBURG 2000 TEL: +27 11 682-0911			
1	95-09-13	P.A.C.S.	A.P.	AS BUILT ON SITE	B4744/B4754	RAW WATER P/SETS 8&10 3.3kV SCHEMATICS	CONTRACT: RW1038085/19	APPROVED BY:					
2	96-02-05	D.P.M.	A.P.	AS COMMISSIONED ON SITE	B4758	RAW WATER P/SET 11 3.3kV SCHEMATICS	FILE: RW1038085/19	SIGNATURE:					
2.A	00-04-11	A.S.	A.P.	REPLACED COOLING WATER PUMP	B3650	RAW WATER P/SETS 6-11 CONTROL DESK	DATE: 1995-03-10	Pr. Eng. No.:					
							DATE:			SECTION HEAD:			
											SCALE : N.T.S.		
											© RAND WATER 2004 All Rights Reserved		
											ZUIKERBOSCH PUMPING STATION		
											RAW WATER ENGINE ROOM - 3.3kV SWITCHBOARD		
											PLC GENERAL ARRANGEMENT & I/O RACK LAYOUT		
											LOOP DIAGRAM FOR AA001 INDICATION & CONTROL		
											DRG. No. RB 3651		
											SHEET : No. 13 OF 45		
											REV. 2.A		

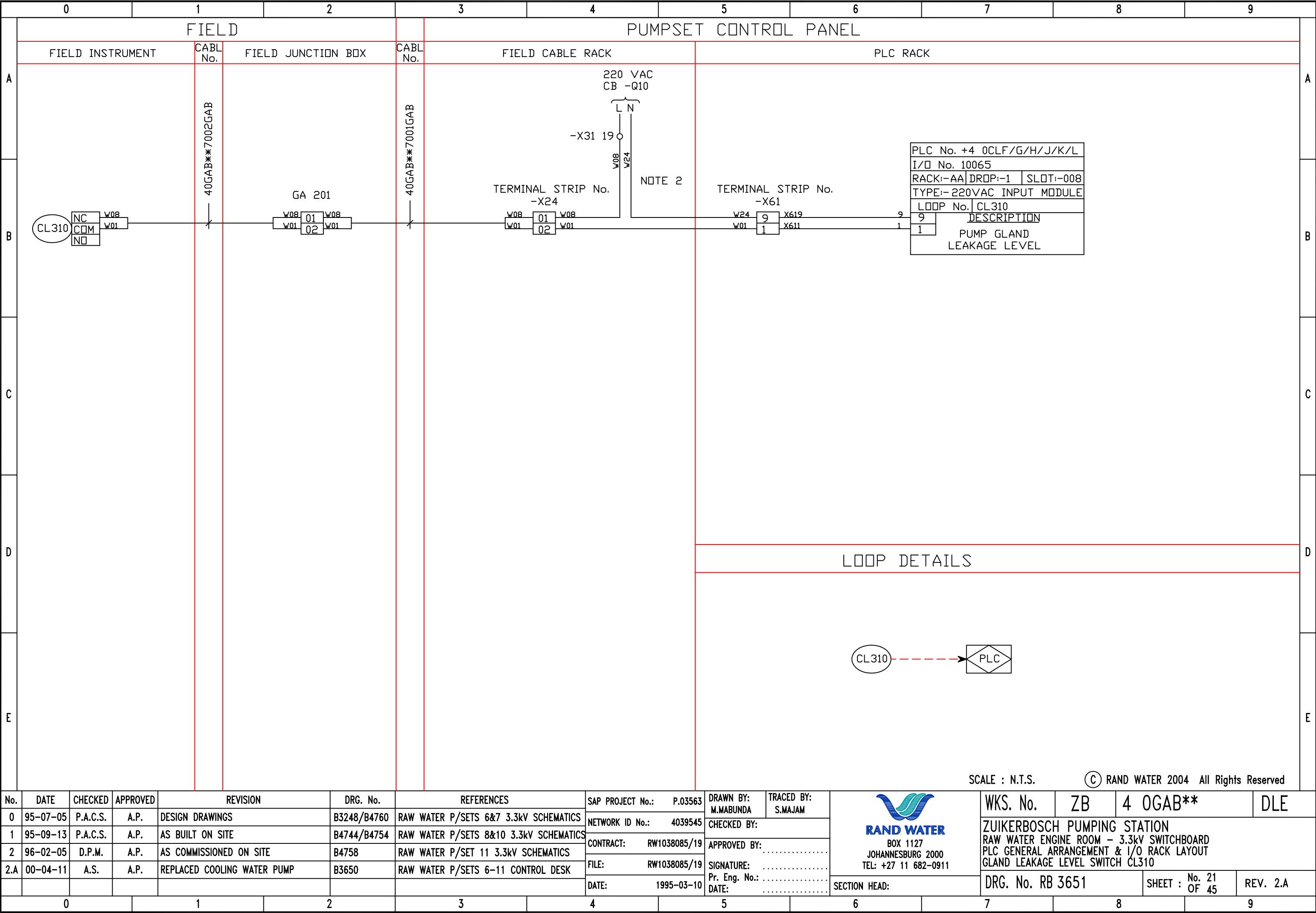


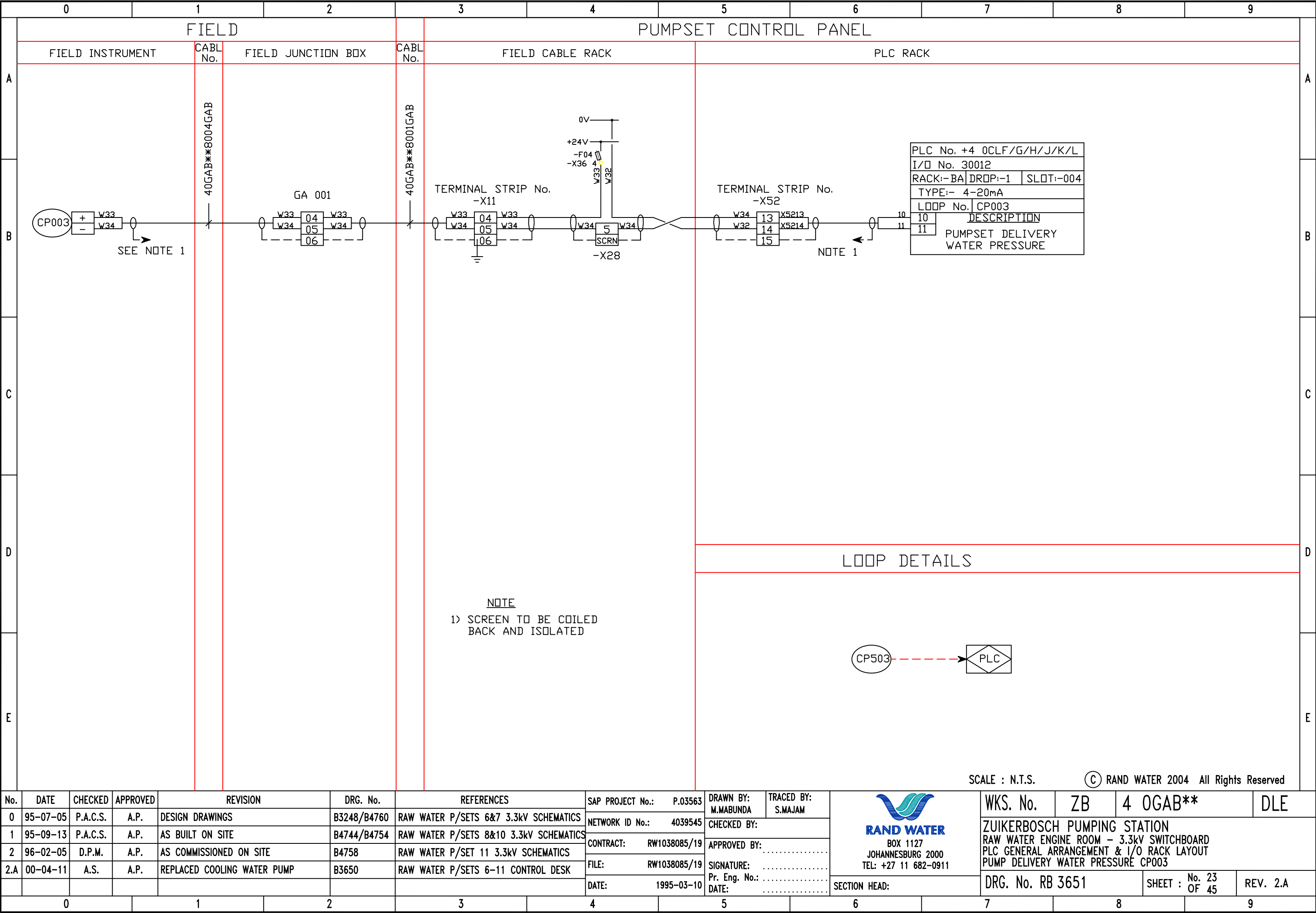




No.	DATE	CHECKED	APPROVED	REVISION	DRG. No.	REFERENCES	SAP PROJECT No.: P.03563	DRAWN BY: M.MABUNDA	TRACED BY: S.MAJAM	 RAND WATER BOX 1127 JOHANNESBURG 2000 TEL: +27 11 682-0911	WKS. No.	ZB	4 0GAB**	DLE					
0	95-07-05	P.A.C.S.	A.P.	DESIGN DRAWINGS	B3248/B4760	RAW WATER P/SETS 6&7 3.3kV SCHEMATICS	NETWORK ID No.: 4039545	CHECKED BY:			ZUIKERBOSCH PUMPING STATION RAW WATER ENGINE ROOM – 3.3kV SWITCHBOARD PLC GENERAL ARRANGEMENT & I/O RACK LAYOUT MOTOR CW LOW FLOW SWITCH CF312								
1	95-09-13	P.A.C.S.	A.P.	AS BUILT ON SITE	B4744/B4754	RAW WATER P/SETS 8&10 3.3kV SCHEMATICS	CONTRACT: RW1038085/19	APPROVED BY:											
2	96-02-05	D.P.M.	A.P.	AS COMMISSIONED ON SITE	B4758	RAW WATER P/SET 11 3.3kV SCHEMATICS	FILE: RW1038085/19	SIGNATURE:											
2.A	00-04-11	A.S.	A.P.	REPLACED COOLING WATER PUMP	B3650	RAW WATER P/SETS 6-11 CONTROL DESK	DATE: 1995-03-10	Pr. Eng. No.:											
2.B	19-05-09	M.MABUNDA	T.NHLAPHO	DECOMMISSION MOTOR CW FLOW				DATE:		SECTION HEAD:	DRG. No. RB 3651		SHEET : No. 19 OF 45	REV. 2.B					
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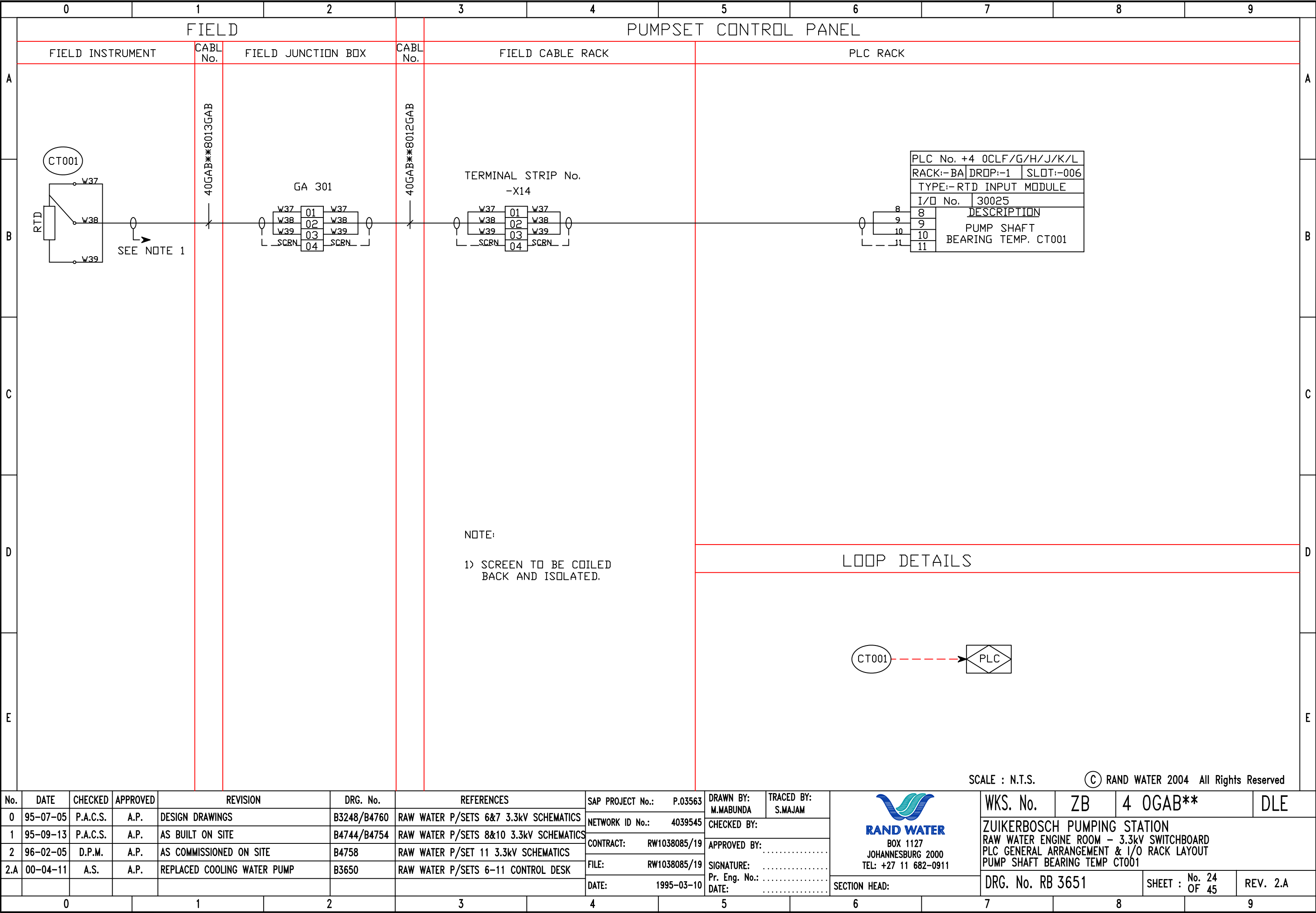


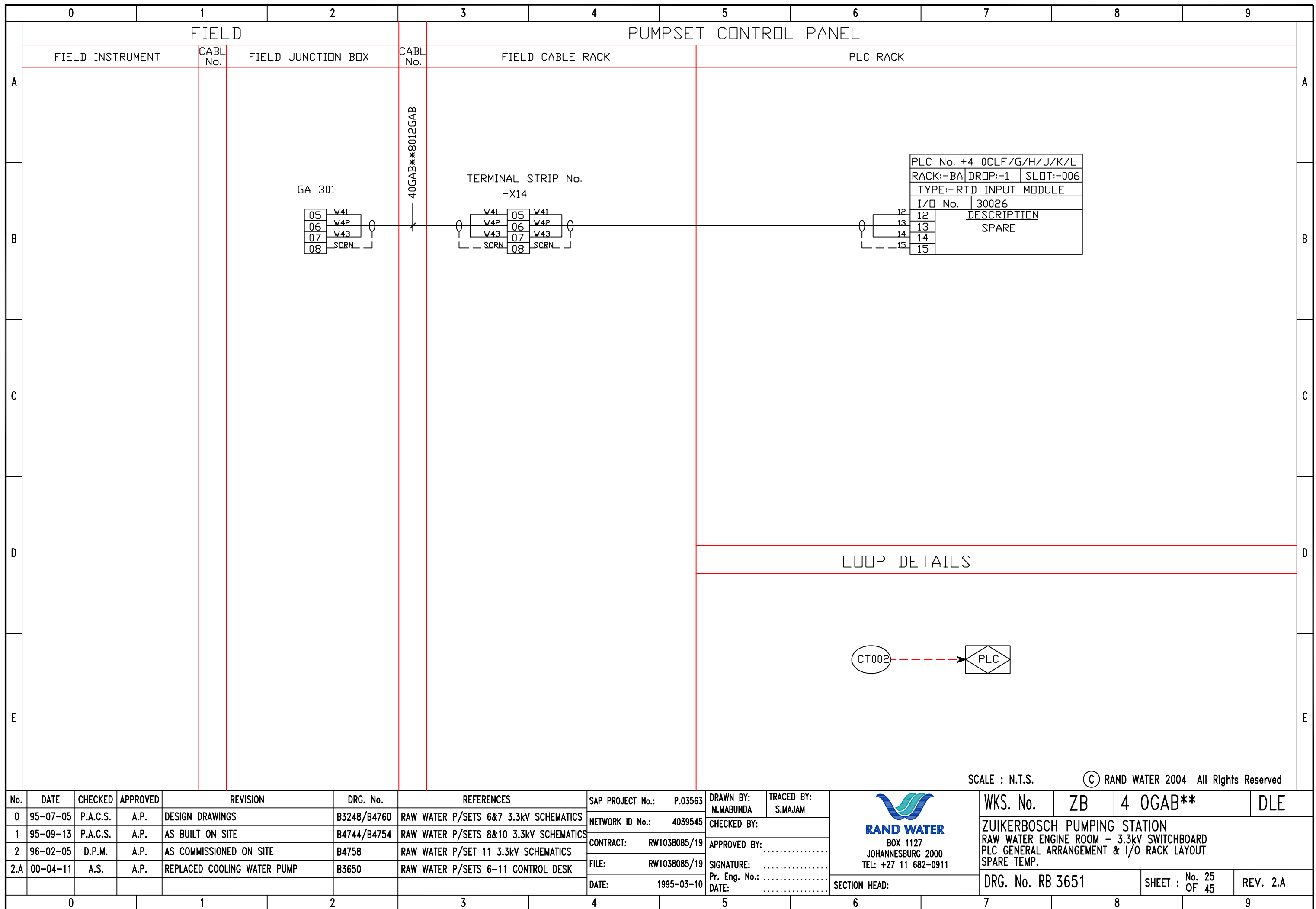


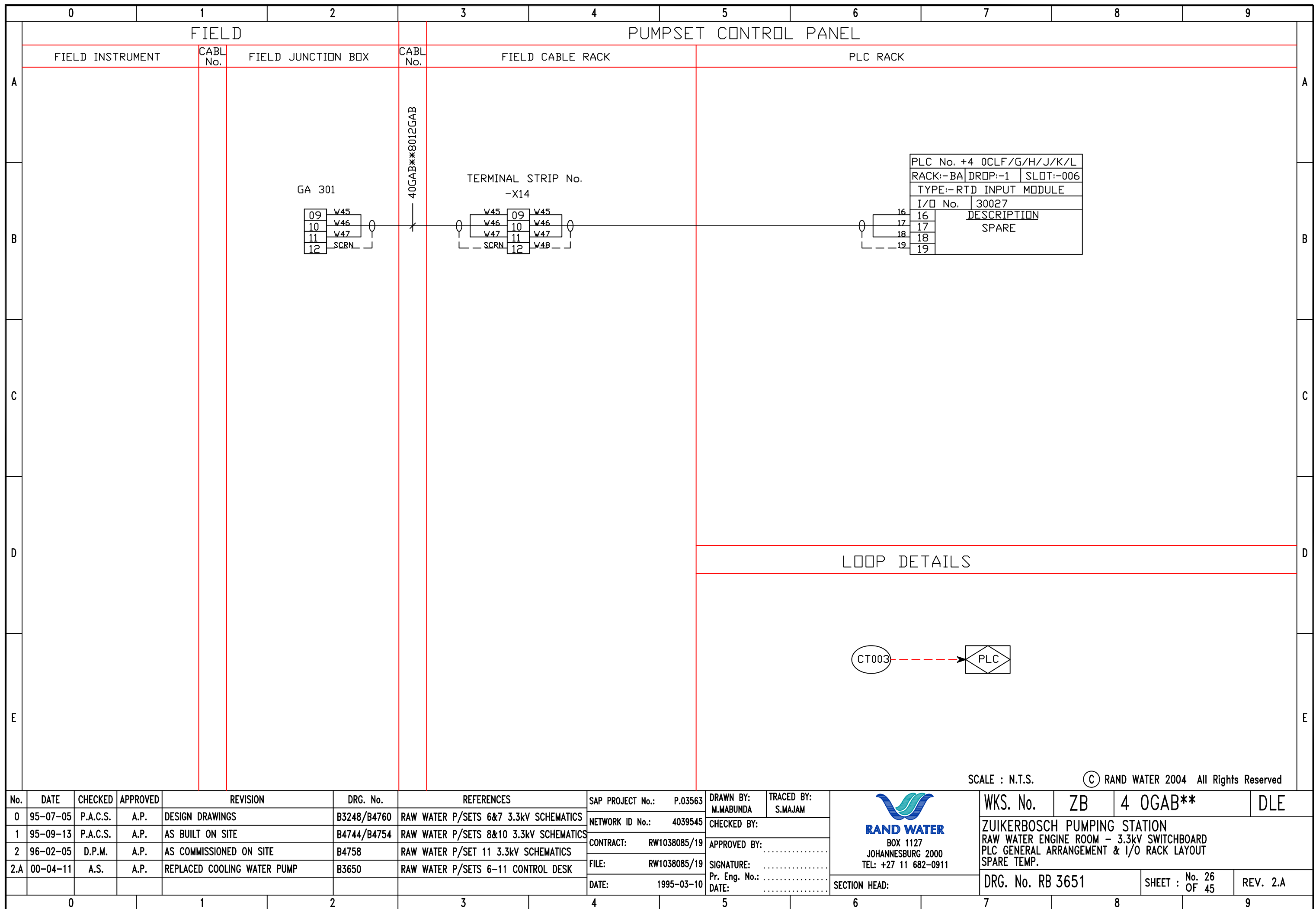
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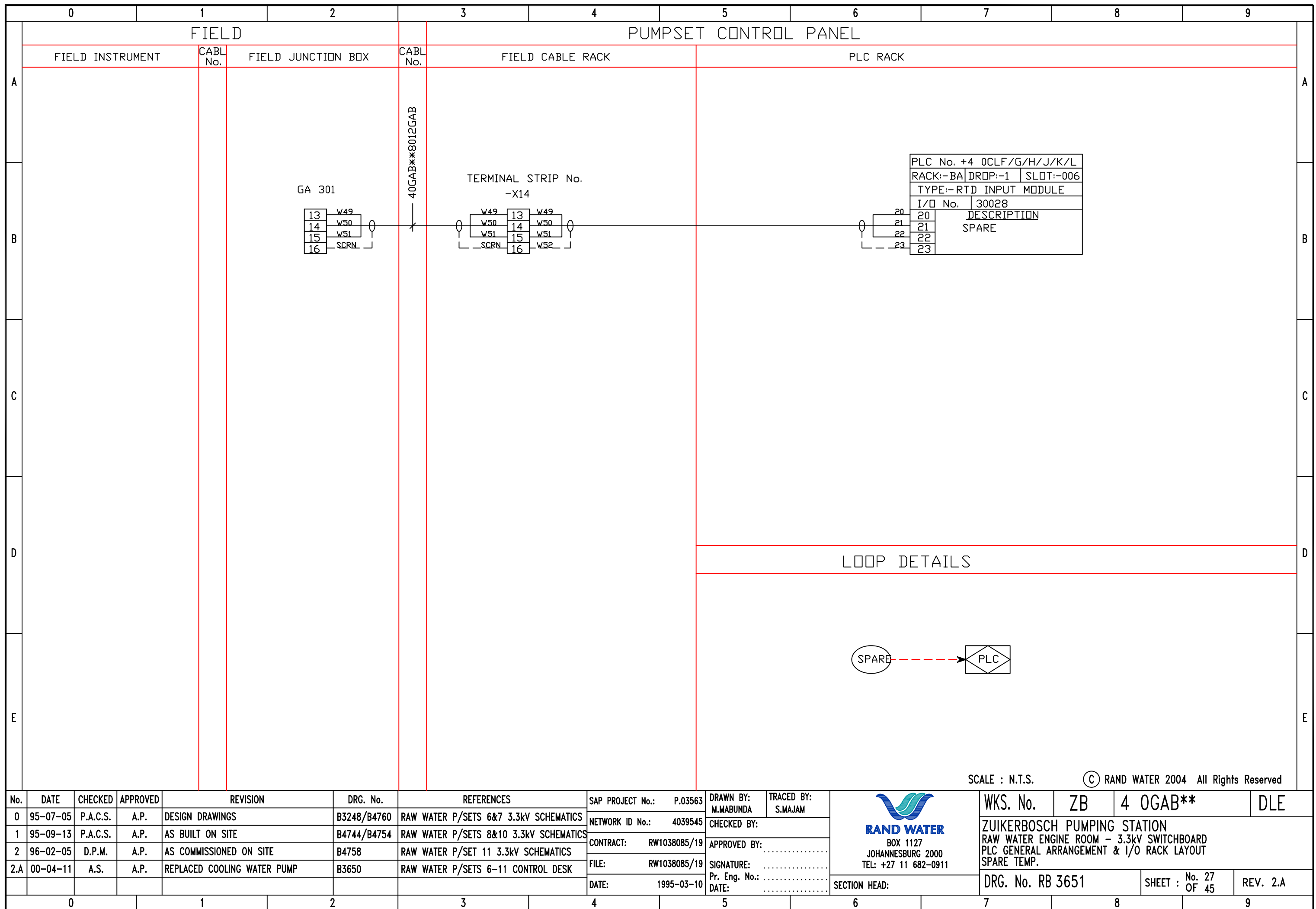
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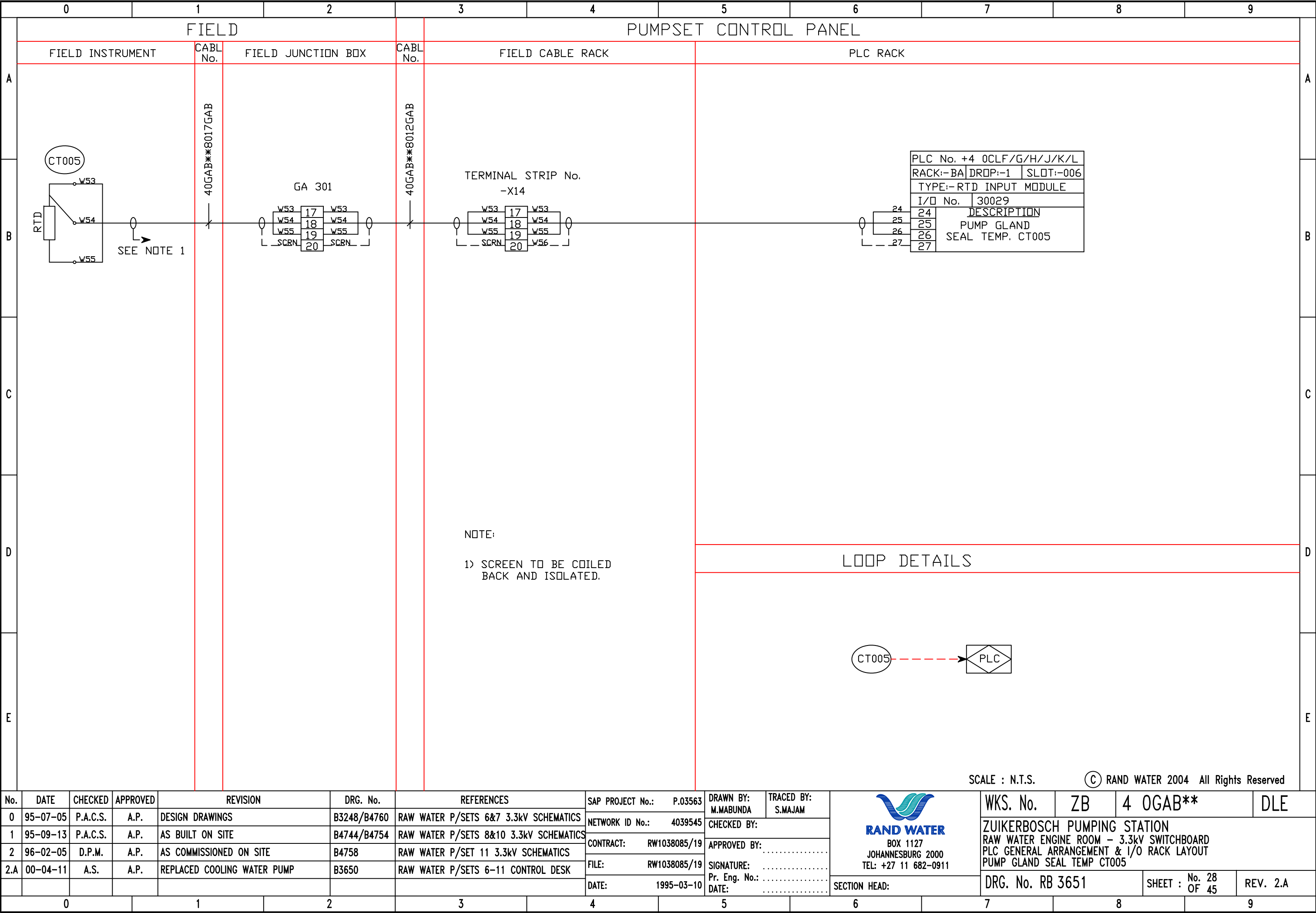
No.	DATE	CHECKED	APPROVED	REVISION	DRG. No.	REFERENCES	SAP PROJECT No.: P.03563	DRAWN BY: M.MABUNDA	TRACED BY: S.MAJAM	RAND WATER BOX 1127 JOHANNESBURG 2000 TEL: +27 11 682-0911	WKS. No.	ZB	4 OGAB**	DLE
0	95-07-05	P.A.C.S.	A.P.	DESIGN DRAWINGS	B3248/B4760	RAW WATER P/SETS 6&7 3.3kV SCHEMATICS	NETWORK ID No.: 4039545	CHECKED BY:	APPROVED BY:		ZUIKERBOSCH PUMPING STATION RAW WATER ENGINE ROOM - 3.3kV SWITCHBOARD PLC GENERAL ARRANGEMENT & I/O RACK LAYOUT PUMP DELIVERY WATER PRESSURE CP003			
1	95-09-13	P.A.C.S.	A.P.	AS BUILT ON SITE	B4744/B4754	RAW WATER P/SETS 8&10 3.3kV SCHEMATICS	CONTRACT: RW1038085/19	SIGNATURE:	DATE:			DRG. No. RB 3651	SHEET : No. 23 OF 45	REV. 2.A
2	96-02-05	D.P.M.	A.P.	AS COMMISSIONED ON SITE	B4758	RAW WATER P/SET 11 3.3kV SCHEMATICS	FILE: RW1038085/19	Pr. Eng. No.:	DATE:					
2.A	00-04-11	A.S.	A.P.	REPLACED COOLING WATER PUMP	B3650	RAW WATER P/SETS 6-11 CONTROL DESK	DATE: 1995-03-10							

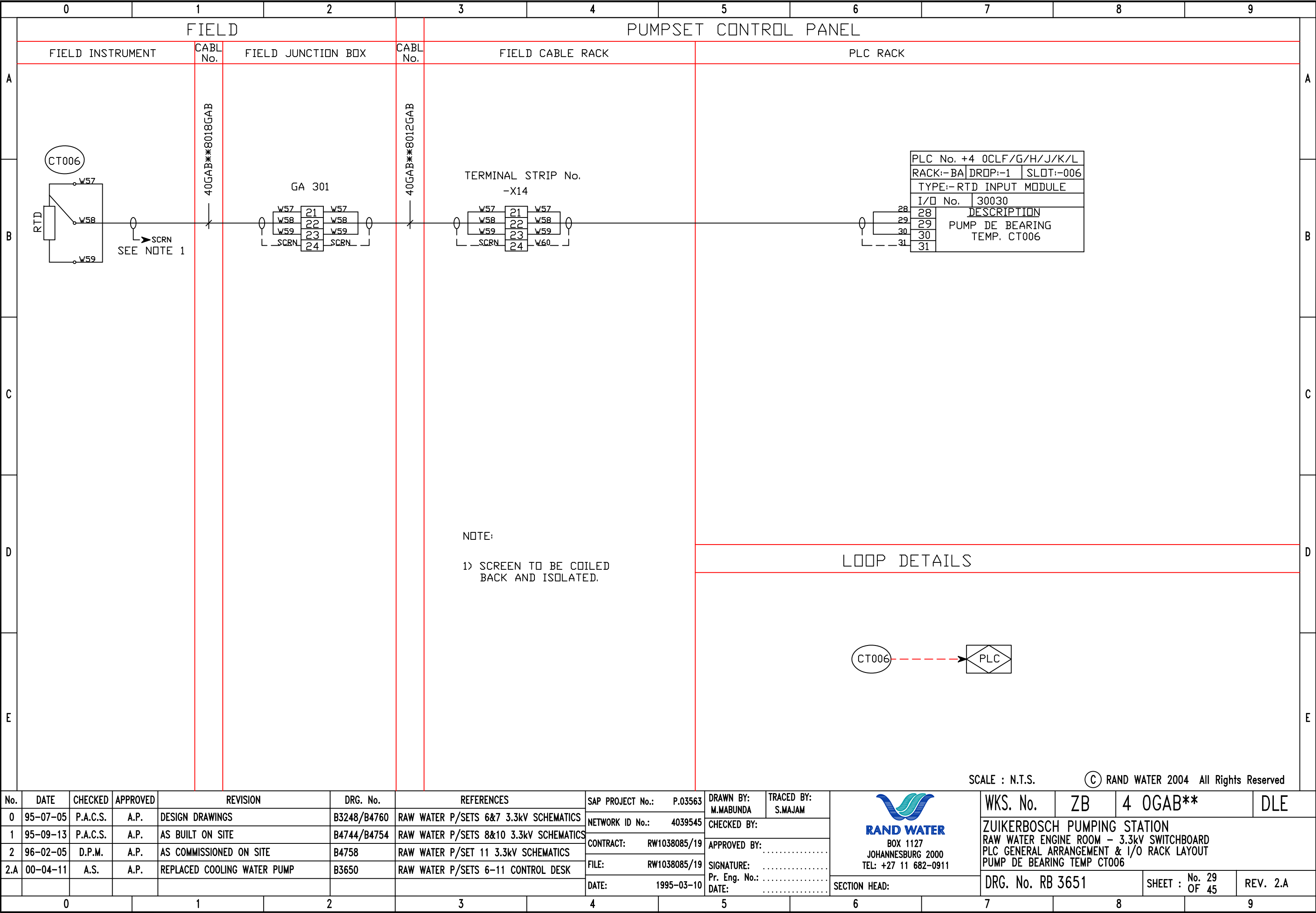


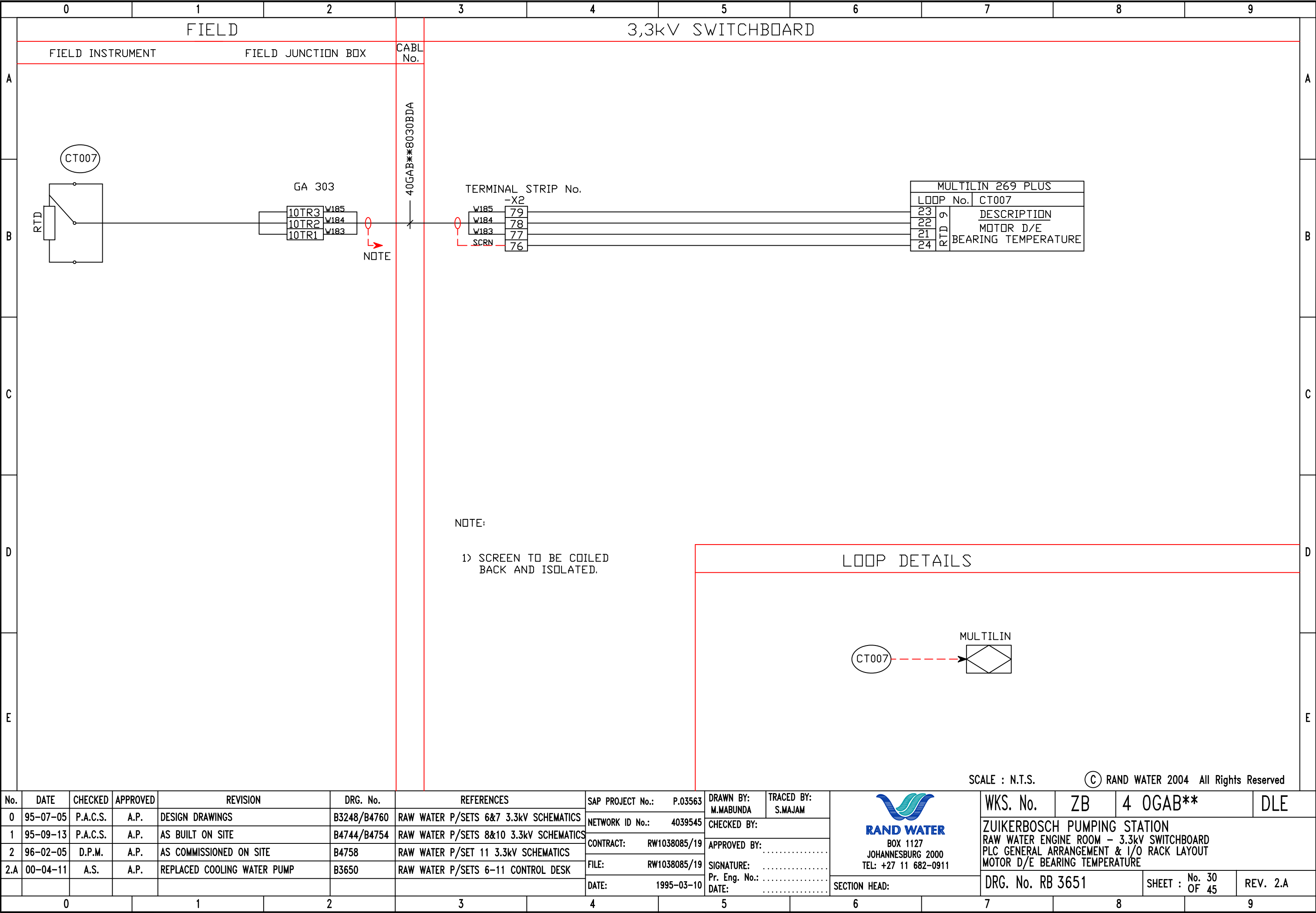








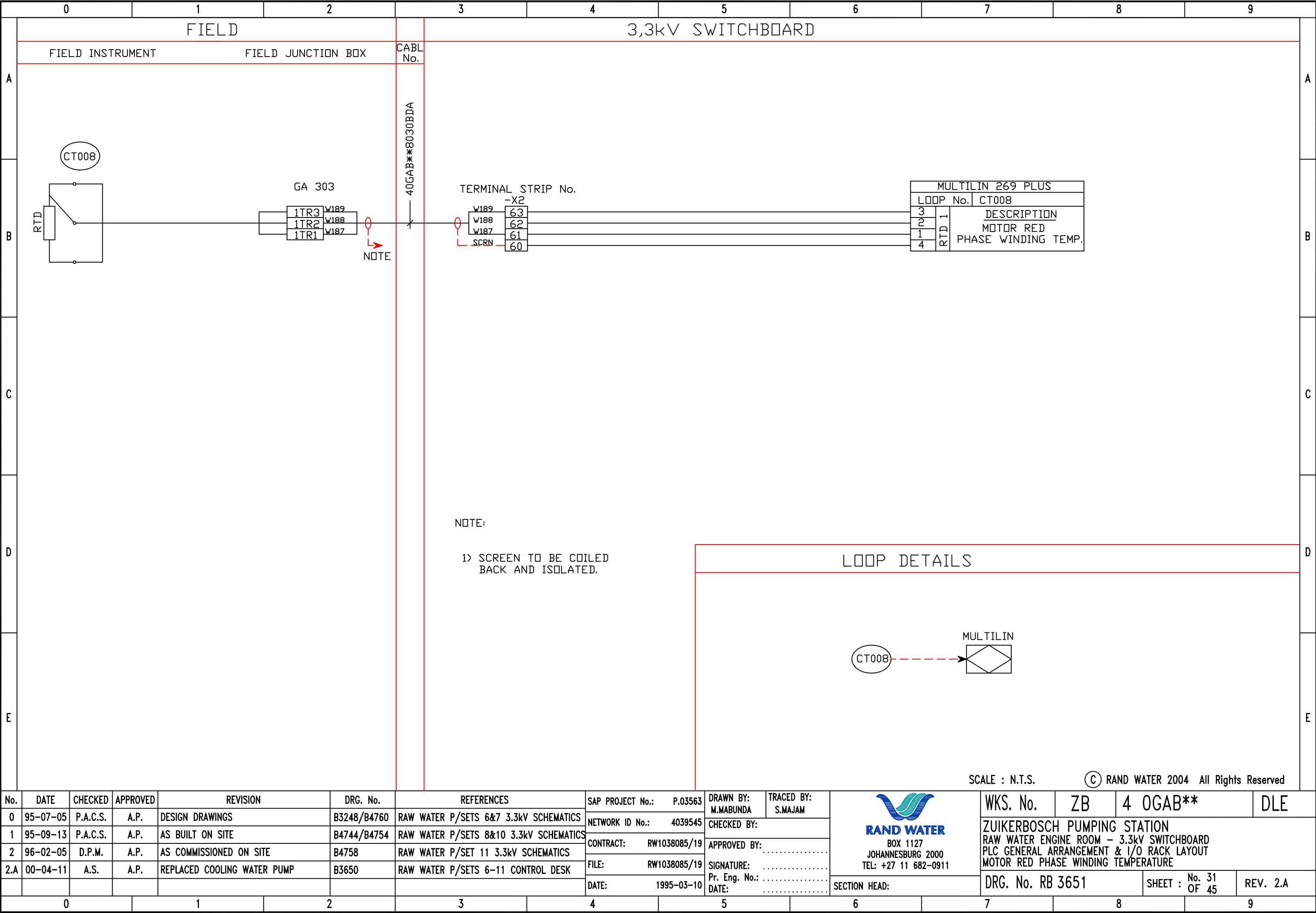


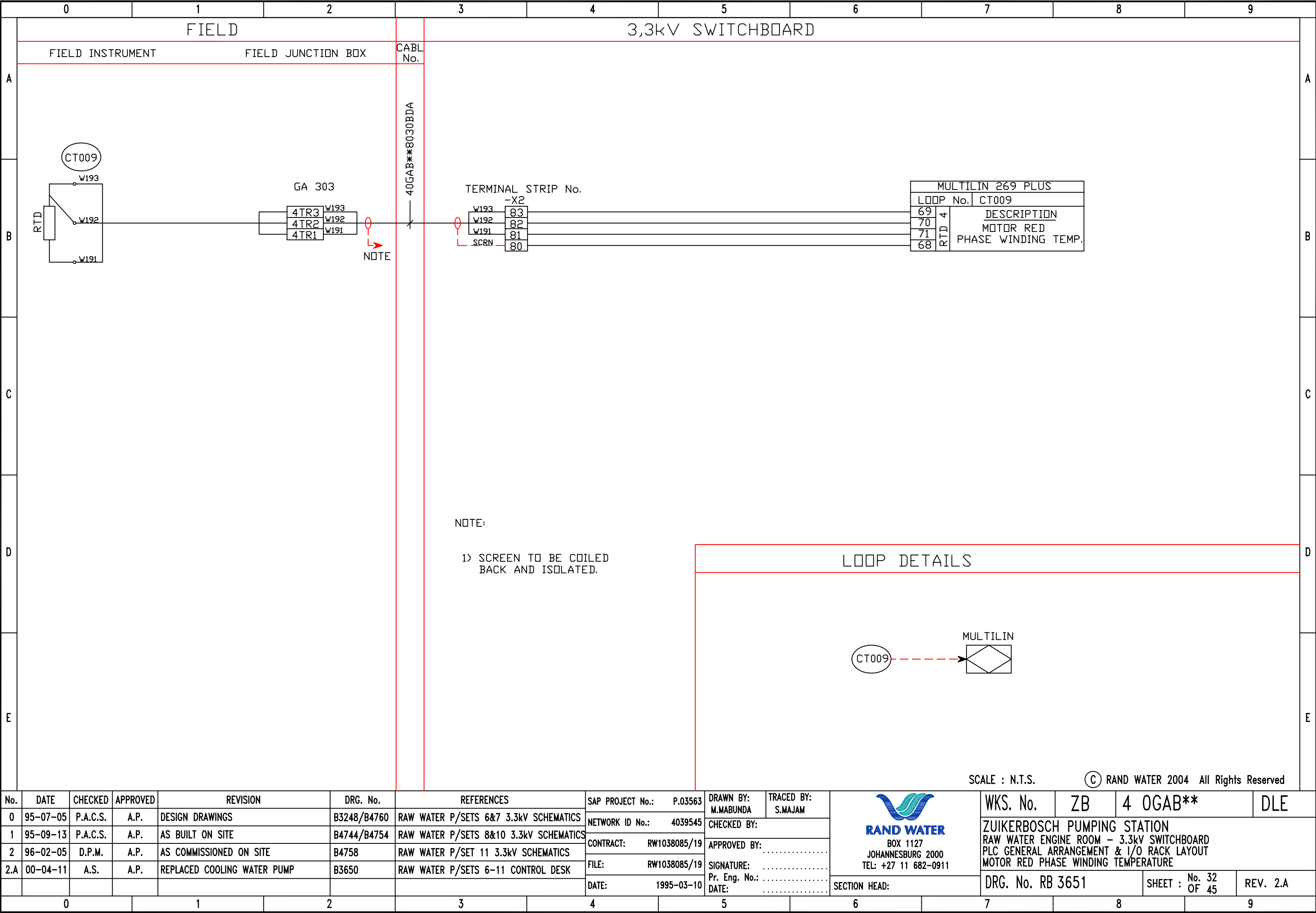


SCALE : N.T.S.

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No.	DATE	CHECKED	APPROVED	REVISION	DRG. No.	REFERENCES	SAP PROJECT No.: P.03563	DRAWN BY: M.MABUNDA	TRACED BY: S.MAJAM	RAND WATER BOX 1127 JOHANNESBURG 2000 TEL: +27 11 682-0911	WKS. No.	ZB	4 OGAB**	DLE
0	95-07-05	P.A.C.S.	A.P.	DESIGN DRAWINGS	B3248/B4760	RAW WATER P/SETS 6&7 3.3kV SCHEMATICS	NETWORK ID No.: 4039545	CHECKED BY:	APPROVED BY:		ZUIKERBOSCH PUMPING STATION RAW WATER ENGINE ROOM – 3.3kV SWITCHBOARD PLC GENERAL ARRANGEMENT & I/O RACK LAYOUT MOTOR D/E BEARING TEMPERATURE			
1	95-09-13	P.A.C.S.	A.P.	AS BUILT ON SITE	B4744/B4754	RAW WATER P/SETS 8&10 3.3kV SCHEMATICS	CONTRACT: RW1038085/19	SIGNATURE:	Pr. Eng. No.:			DRG. No. RB 3651		
2	96-02-05	D.P.M.	A.P.	AS COMMISSIONED ON SITE	B4758	RAW WATER P/SET 11 3.3kV SCHEMATICS	FILE: RW1038085/19	DATE:	DATE:				SHEET : No. 30 OF 45	
2.A	00-04-11	A.S.	A.P.	REPLACED COOLING WATER PUMP	B3650	RAW WATER P/SETS 6-11 CONTROL DESK	DATE: 1995-03-10	DATE:	DATE:					REV. 2.A



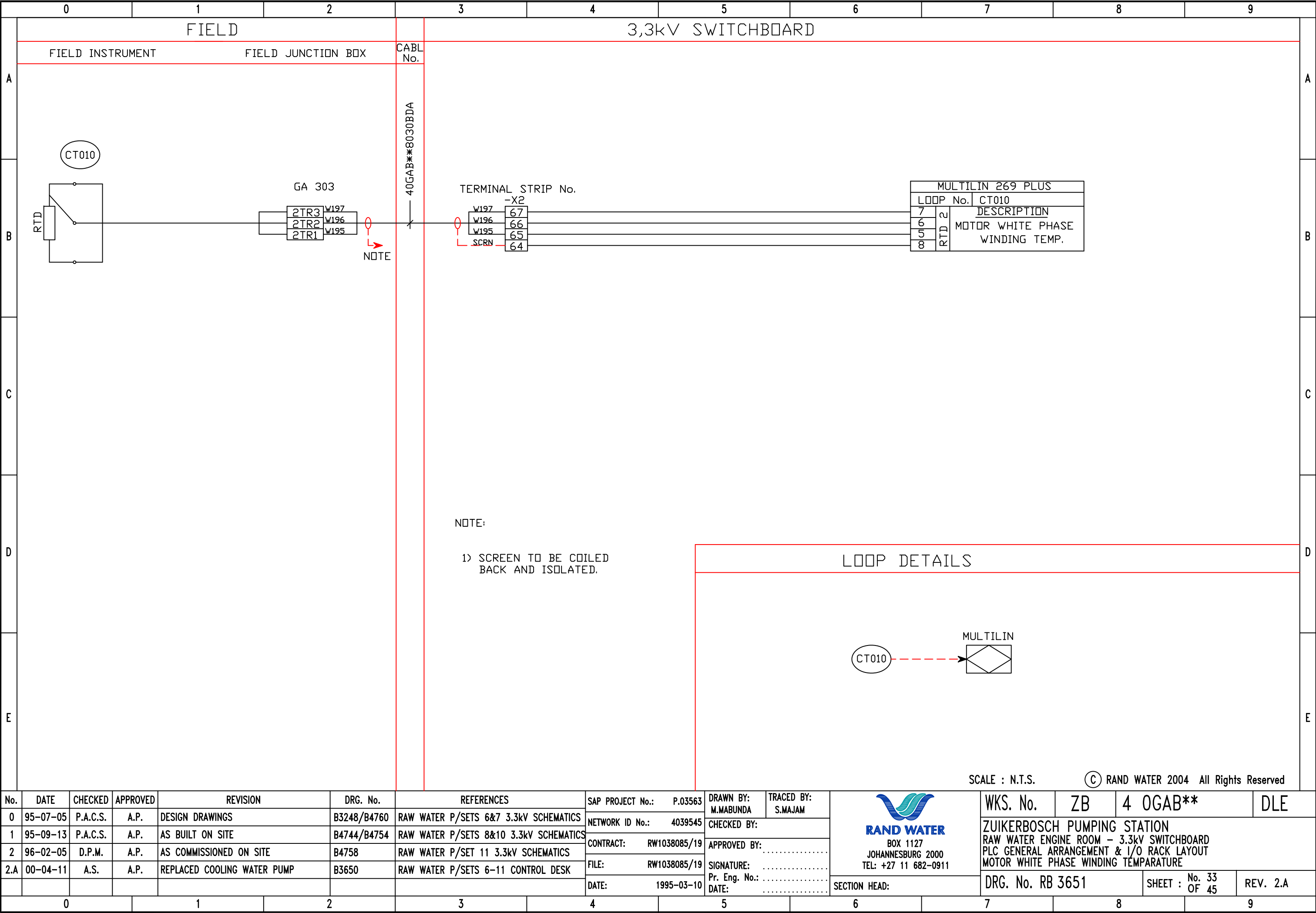


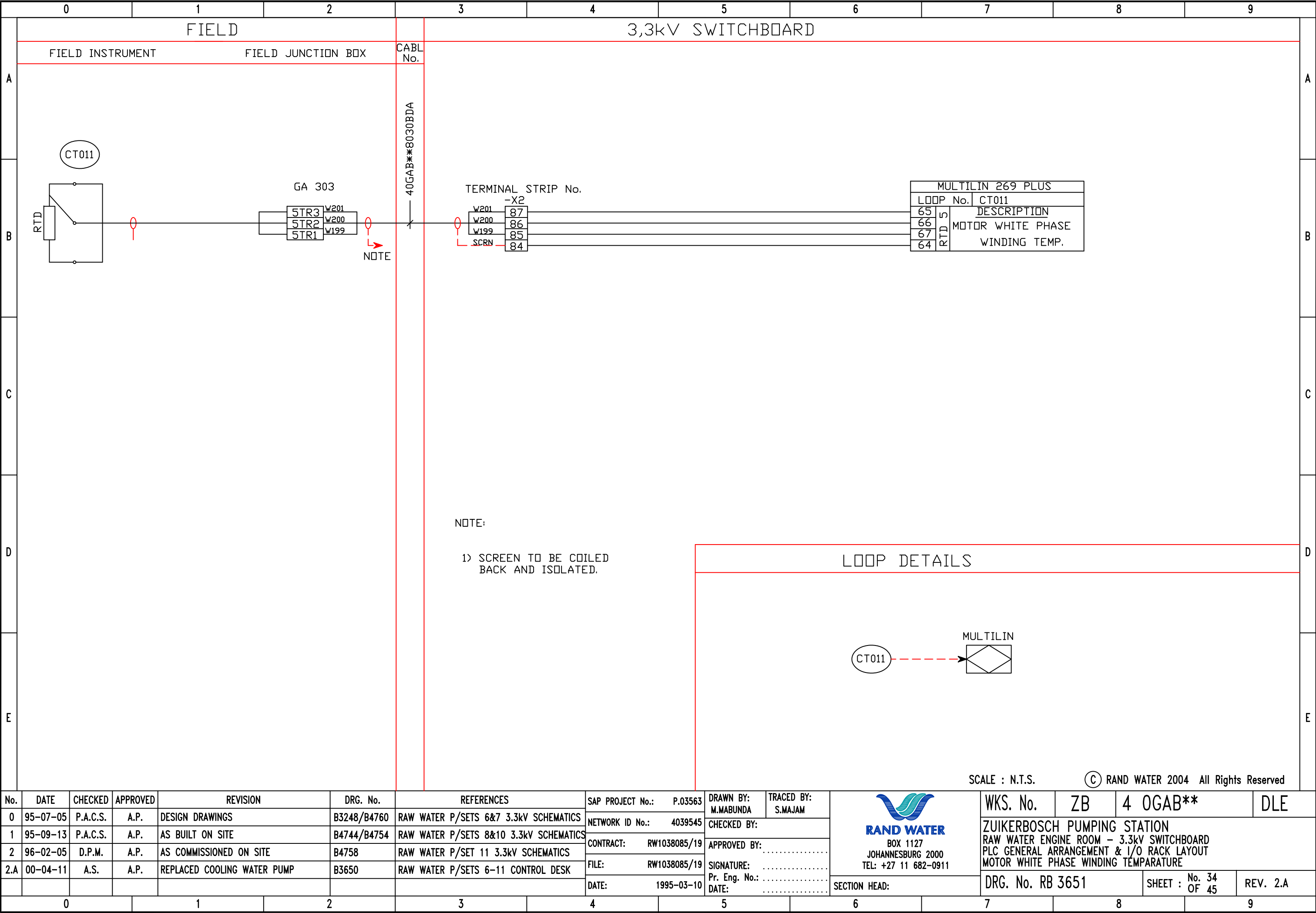
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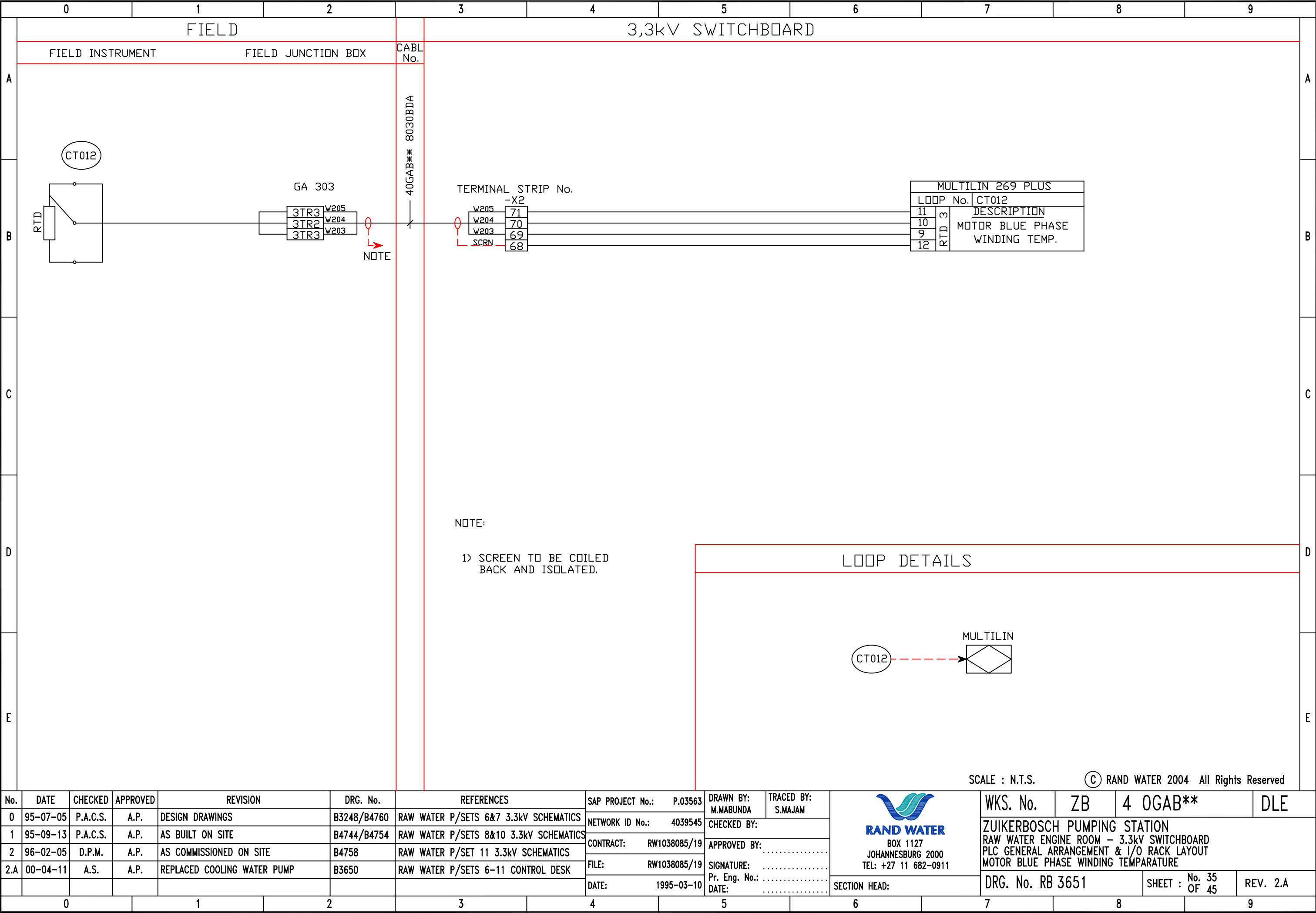
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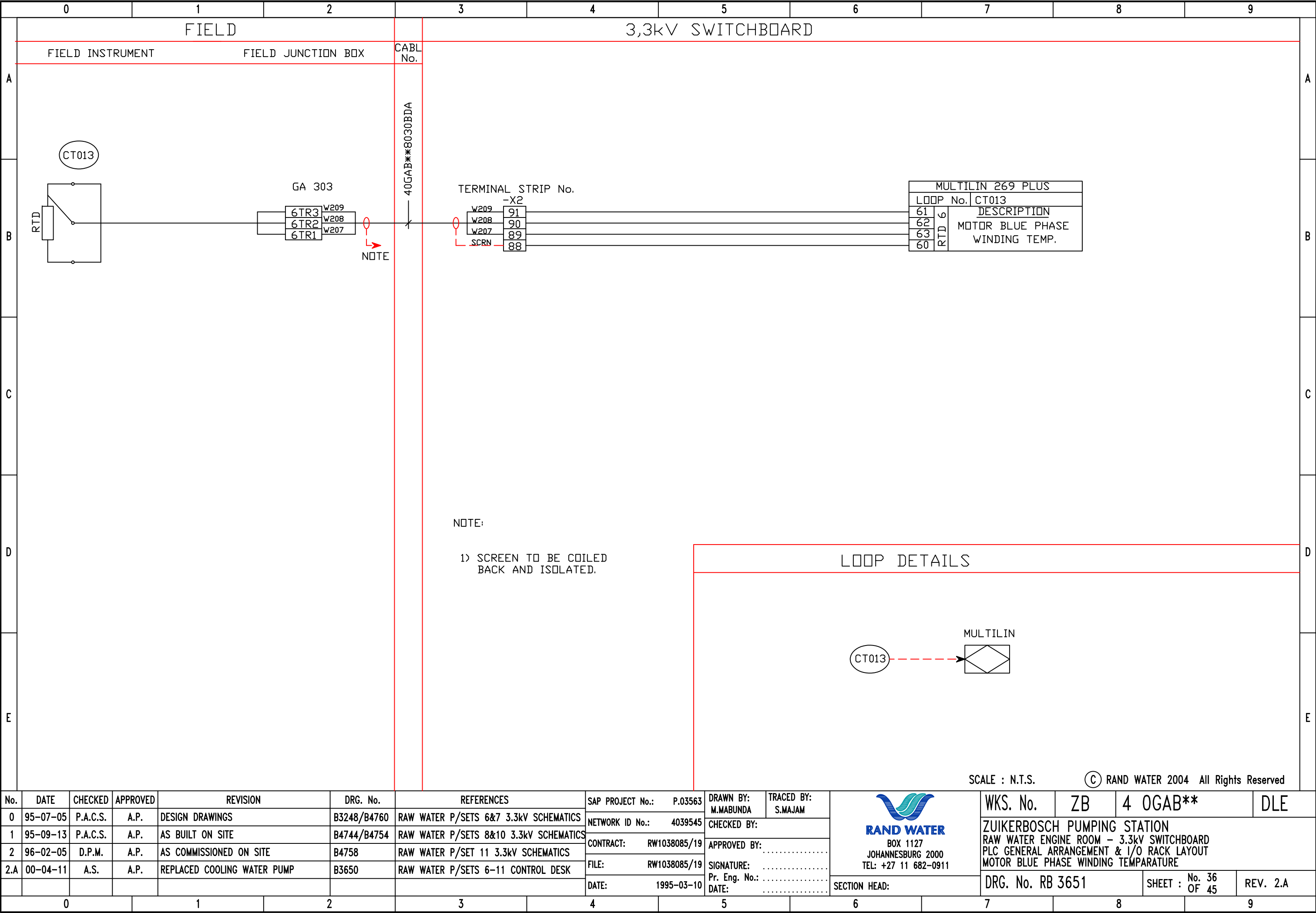
No.	DATE	CHECKED	APPROVED	REVISION	DRG. No.	REFERENCES	SAP PROJECT No.: P.03563	DRAWN BY: M.MABUNDA	TRACED BY: S.MAJAM	RAND WATER BOX 1127 JOHANNESBURG 2000 TEL: +27 11 682-0911 SECTION HEAD:	WKS. No.	ZB	4 OGAB**	DLE
0	95-07-05	P.A.C.S.	A.P.	DESIGN DRAWINGS	B3248/B4760	RAW WATER P/SETS 6&7 3.3kV SCHEMATICS	NETWORK ID No.: 4039545	CHECKED BY:			ZUIKERBOSCH PUMPING STATION			
1	95-09-13	P.A.C.S.	A.P.	AS BUILT ON SITE	B4744/B4754	RAW WATER P/SETS 8&10 3.3kV SCHEMATICS	CONTRACT: RW1038085/19	APPROVED BY:			RAW WATER ENGINE ROOM - 3.3kV SWITCHBOARD			
2	96-02-05	D.P.M.	A.P.	AS COMMISSIONED ON SITE	B4758	RAW WATER P/SET 11 3.3kV SCHEMATICS	FILE: RW1038085/19	SIGNATURE:			PLC GENERAL ARRANGEMENT & I/O RACK LAYOUT			
2.A	00-04-11	A.S.	A.P.	REPLACED COOLING WATER PUMP	B3650	RAW WATER P/SETS 6-11 CONTROL DESK	DATE: 1995-03-10	Pr. Eng. No.:			MOTOR RED PHASE WINDING TEMPERATURE			
								DATE:		DRG. No. RB 3651		SHEET : No. 32 OF 45	REV. 2.A	

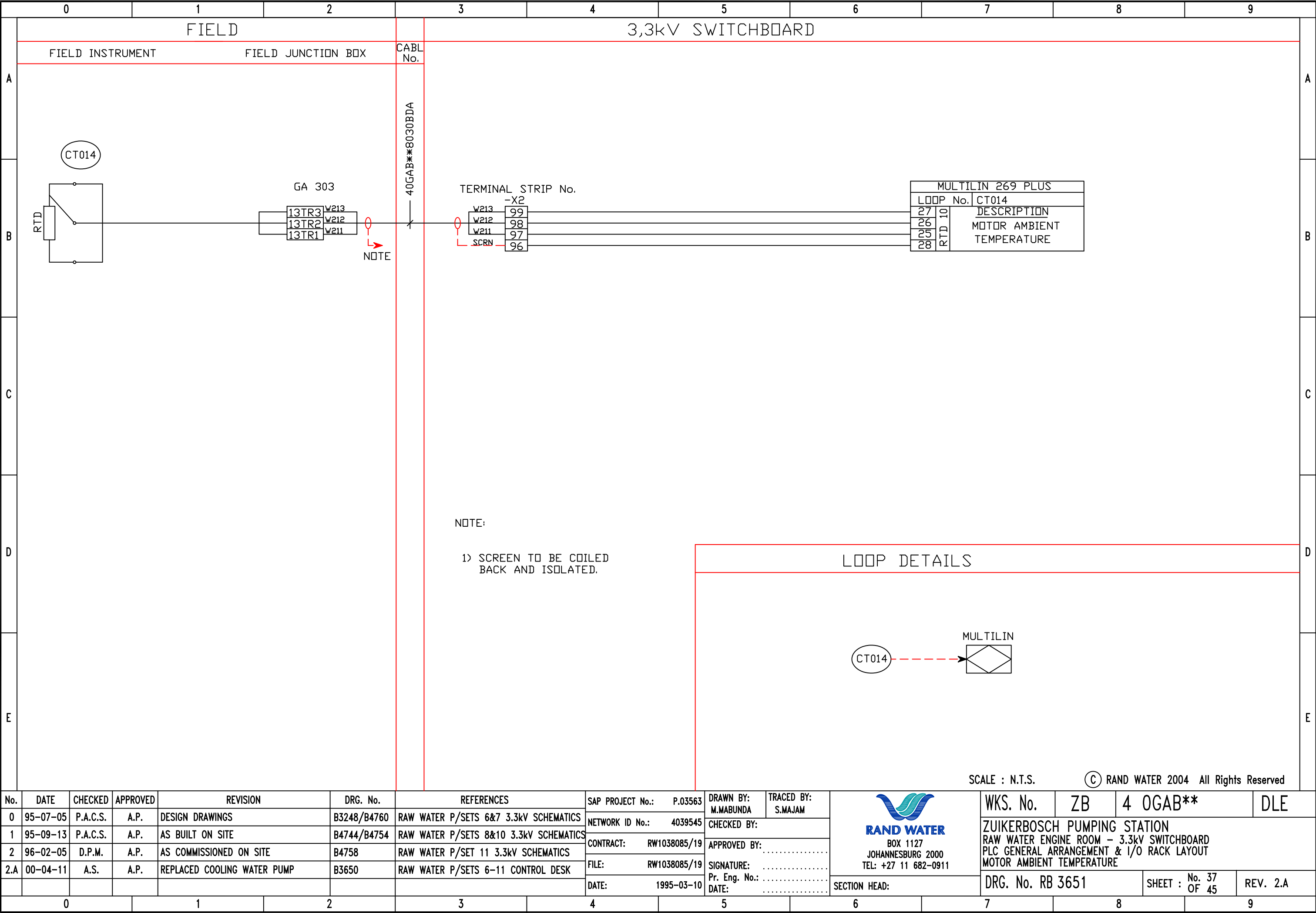
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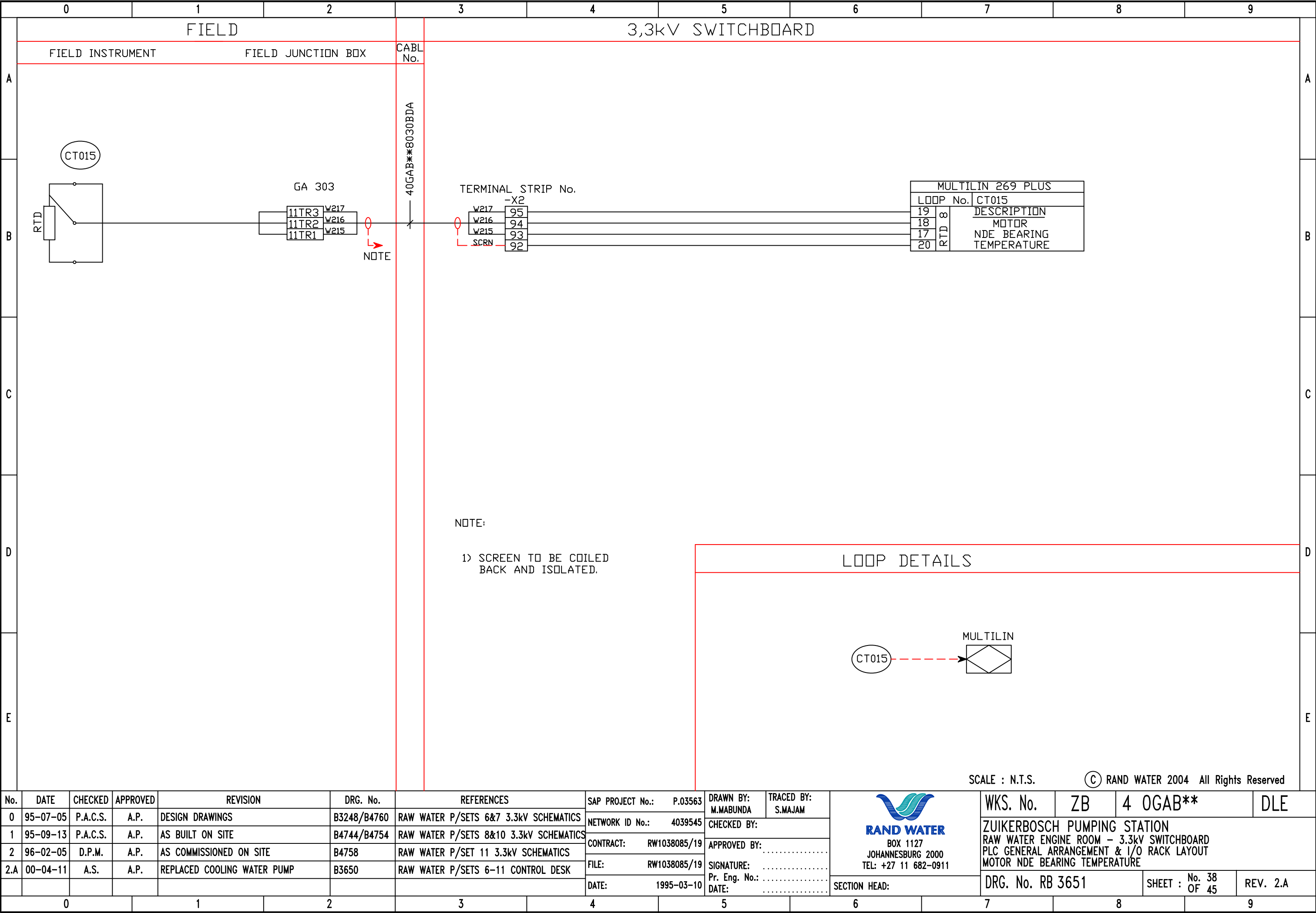


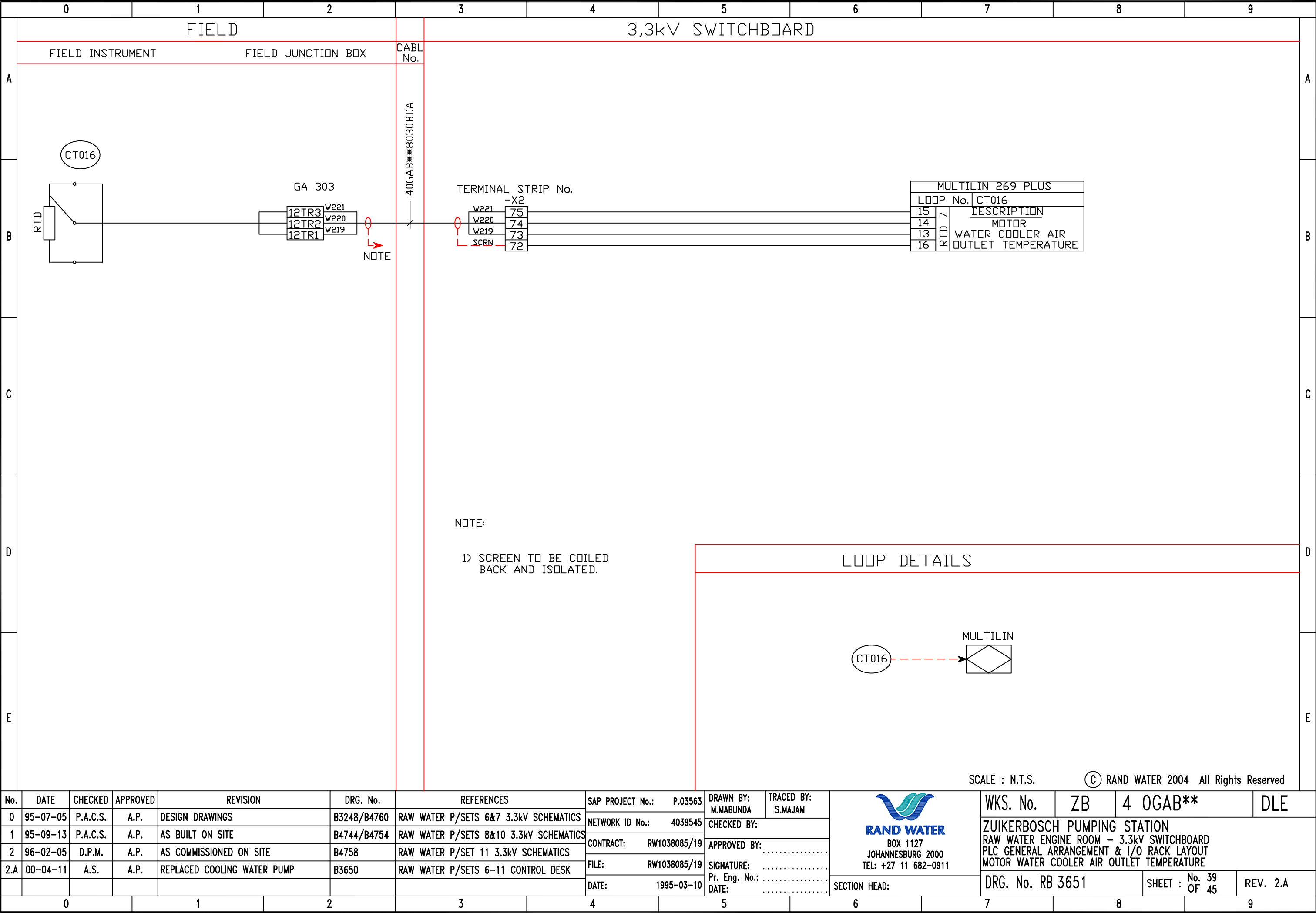




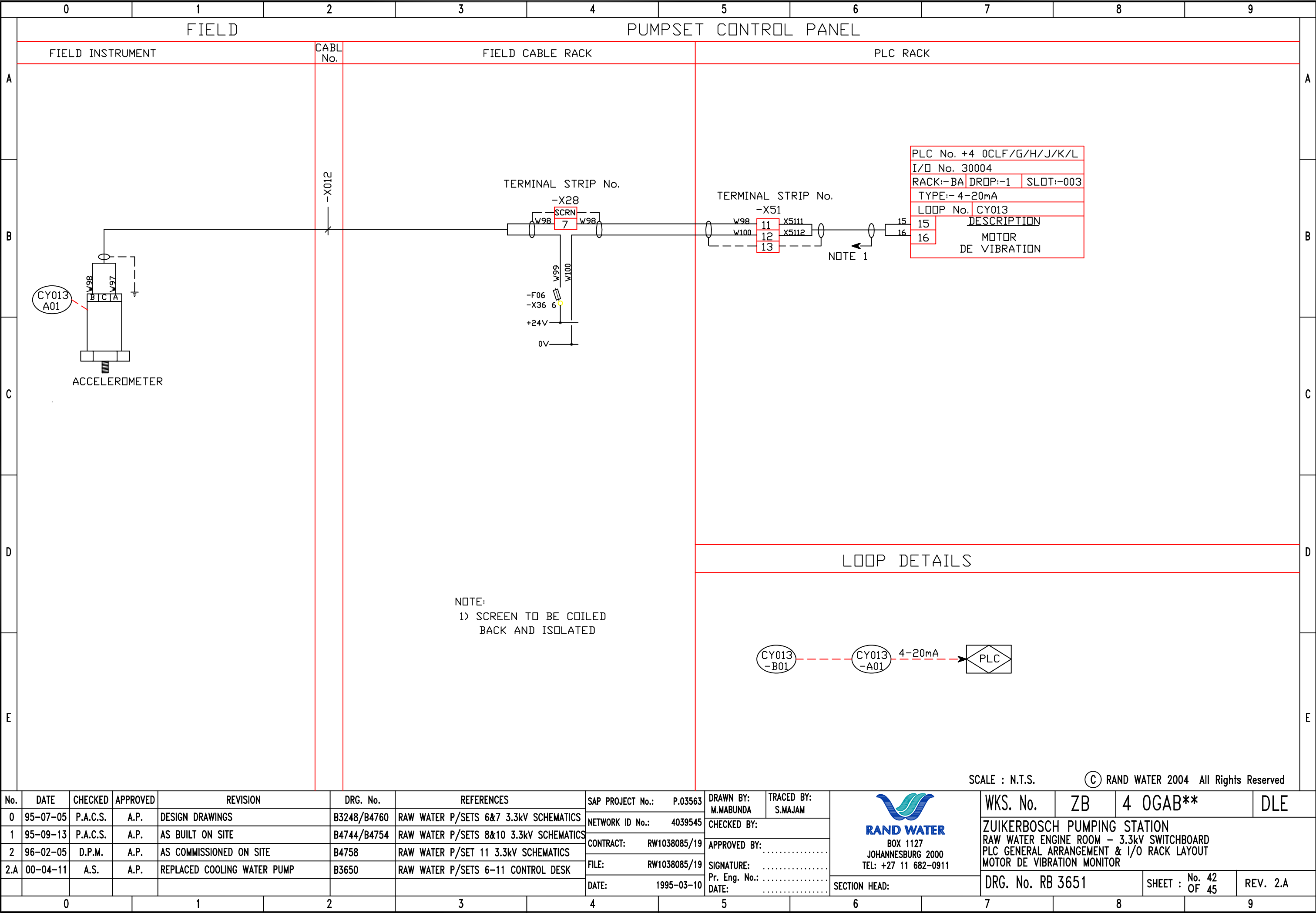


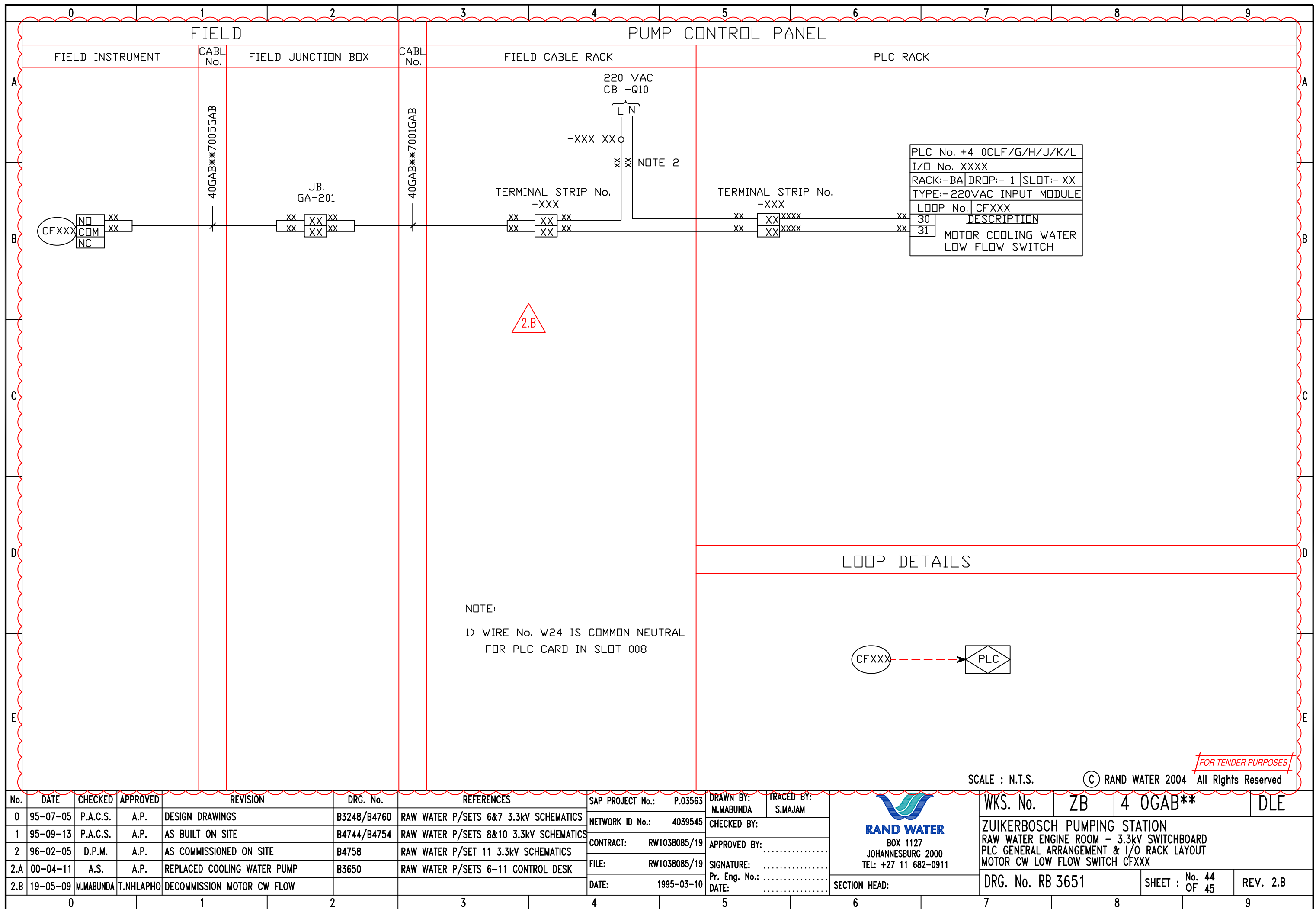






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FIELD						PUMPSET CONTROL PANEL															
FIELD INSTRUMENT			CABL No.	FIELD JUNCTION BOX			CABL No.	FIELD CABLE RACK				PLC RACK									





	0	1	2	3	4	5	6	7	8	9	
A											A
B											B
C											C
D											D
E											E