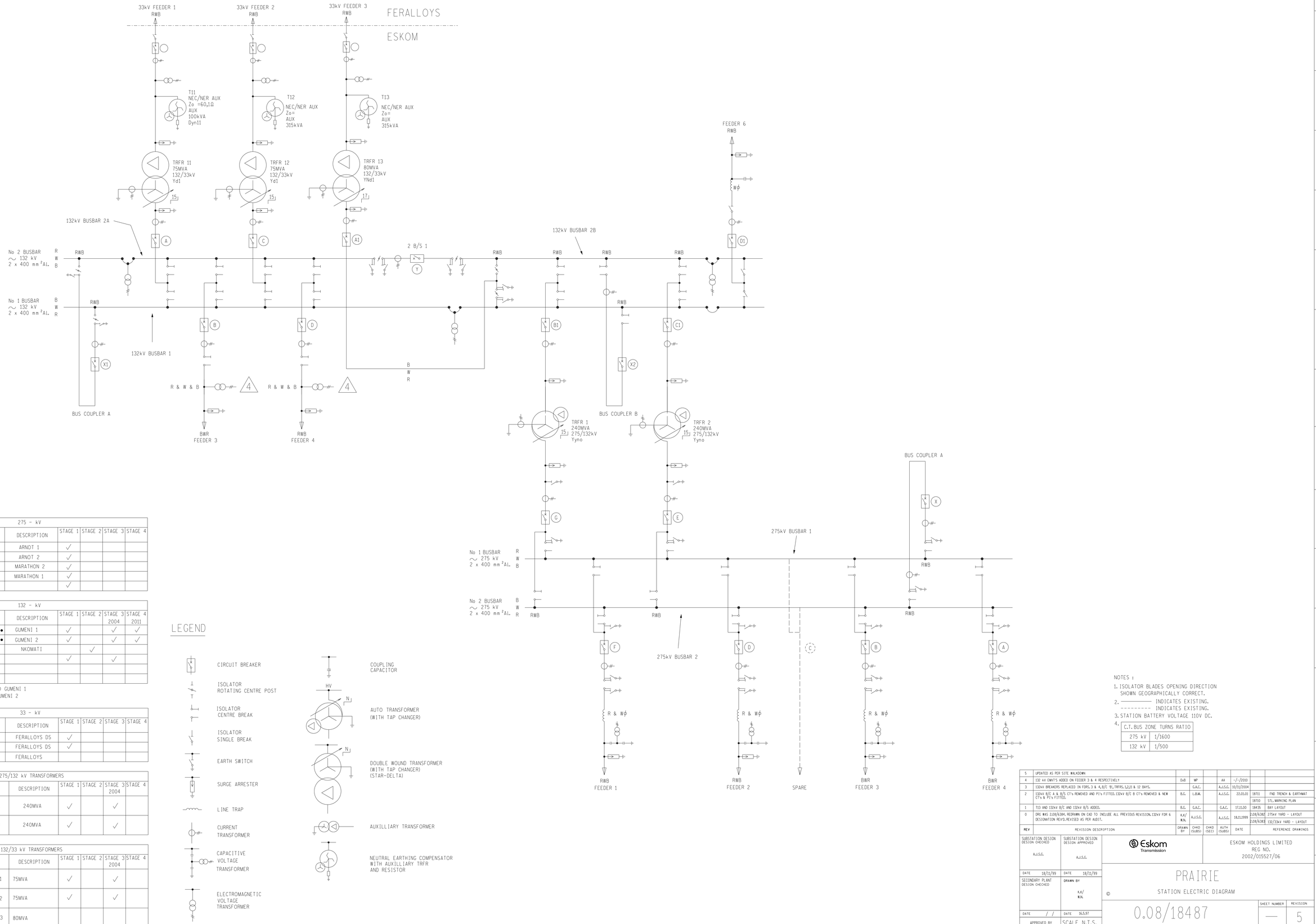

275 - kV							
C.B. RATING		BAY	DESCRIPTION	STAGE 1	STAGE 2	STAGE 3	STAGE 4
A	kA						
1250	26.4	FEEDER 1	ARNOT 1	✓			
1250	26.2	FEEDER 2	ARNOT 2	✓			
1250	26.2	FEEDER 3	MARATHON 2	✓			
1250	26.2	FEEDER 4	MARATHON 1	✓			
1250	26.2	BUS COUPLER		✓			

132 - kV							
C.B. RATING		BAY	DESCRIPTION	STAGE 1	STAGE 2	STAGE 3	STAGE 4
A	kA					2004	2011
3150	40	FEEDER 3 (4) •	GUMENI 1	✓		✓	✓
3150	40	FEEDER 4 (4) •	GUMENI 2	✓		✓	✓
2500	31.5	FEEDER 6	NKOMATI		✓		
3150	40	BUS COUPLER B		✓		✓	
2500	31.5	BUS COUPLER A					
2500	31.5	2 BUS SECTION 1					

• CHANGED FROM MACHADODORP TO GUMENI 1
• CHANGED FROM WITKLOOF TO GUMENI 2

33 - kV							
C.B. RATING		BAY	DESCRIPTION	STAGE 1	STAGE 2	STAGE 3	STAGE 4
A	kA						
2500	25	FEEDER 1	FERALLOYS DS	✓			
2500	25	FEEDER 2	FERALLOYS DS	✓			
1600	20	FEEDER 3	FERALLOYS				

275/132 kV TRANSFORMERS								
C.B. RATING			BAY	DESCRIPTION	STAGE 1	STAGE 2	STAGE 3	STAGE 4
kV	A	kA					2004	
275	1250	26.2	TRANSFORMER 1	240MVA	✓		✓	
132	3150	40						
275	1250	26.2	TRANSFORMER 2	240MVA	✓		✓	
132	3150	40						

132/33 kV TRANSFORMERS								
C.B. RATING			BAY	DESCRIPTION	STAGE 1	STAGE 2	STAGE 3	STAGE 4
kV	A	kA					2004	
132	3150	40	TRANSFORMER 11	75MVA	✓		✓	
33								
132	3150	40	TRANSFORMER 12	75MVA	✓		✓	
33								
132	2500	31.5	TRANSFORMER 13	80MVA				
33								

LEGEND

- CIRCUIT BREAKER
- ISOLATOR ROTATING CENTRE POST
- ISOLATOR CENTRE BREAK
- ISOLATOR SINGLE BREAK
- EARTH SWITCH
- SURGE ARRESTER
- LINE TRAP
- CURRENT TRANSFORMER
- CAPACITIVE VOLTAGE TRANSFORMER
- ELECTROMAGNETIC VOLTAGE TRANSFORMER
- COUPLING CAPACITOR
- AUTO TRANSFORMER (WITH TAP CHANGER)
- DOUBLE WOUND TRANSFORMER (WITH TAP CHANGER) (STAR-DELTA)
- AUXILLIARY TRANSFORMER
- NEUTRAL EARTHING COMPENSATOR WITH AUXILLIARY TRFR AND RESISTOR

NOTES :

1. ISOLATOR BLADES OPENING DIRECTION SHOWN GEOGRAPHICALLY CORRECT.
2. ———— INDICATES EXISTING.
   ---------- INDICATES EXISTING.
3. STATION BATTERY VOLTAGE 110V DC.
4.

C.T. BUS ZONE TURNS RATIO	
275 kV	1/1600
132 kV	1/500

REV	REVISION DESCRIPTION	DRAWN BY	CHKD (SUBS)	CHKD (SEC)	AUTH (SUBS)	DATE	REFERENCE DRAWINGS
5	UPDATED AS PER SITE WALKDOWN						
4	132 kV EW1'S ADDED ON FEEDER 3 & 4 RESPECTIVELY	DvB	MP		AA	-/-/2010	
3	132kV BREAKERS REPLACED IN FDRS. 3 & 4,B/C 'B', TRFRS. 1,2,11 & 12 BAYS.		C.A.C.		A.J.S.S.	30/11/2004	
2	132kV B/C A & B/S CT's REMOVED AND PT's FITTED.132kV B/C B CT's REMOVED & NEW CT's & PT's FITTED.	B.G.	L.B.M.		A.J.S.S.	22.03.00	18711 FND TRENCH & EARTHMAT
							18710 STL.MARKING PLAN
1	713 AND 132kV B/C AND 132kV B/S ADDED.	B.G.	C.A.C.		C.A.C.	17.11.00	18435 BAY LAYOUT
0	DRG WAS 2/08/6384, REDRAWN ON CAD TO INCLUDE ALL PREVIOUS REVISION.132kV FDR 6 DESIGNATION REVS.REVISED AS PER AUDIT.	K.K/ R.N.	A.J.S.S.		A.J.S.S.	18.11.1999	2/08/6382 275kV YARD - LAYOUT
							2/08/6383 132/33kV YARD - LAYOUT

SUBSTATION DESIGN CHECKED	SUBSTATION DESIGN APPROVED	ESKOM HOLDINGS LIMITED REG NO. 2002/015527/06
A.J.S.S.	A.J.S.S.	
DATE 18/11/99	DATE 18/11/99	
SECONDARY PLANT DESIGN CHECKED	DRAWN BY K.K/ R.N.	PRAIRIE
		© STATION ELECTRIC DIAGRAM
DATE / /	DATE 16.5.97	0.08/18487 — 5
APPROVED BY	SCALE N.T.S.	SHEET NUMBER — REVISION 5

SIZE GROOTTE A0L