

PROPOSED TOWNSHIP SITUATED ON A PORTION OF THE REMAINING EXTENT
OF PORTION 3 OF THE FARM NABOOMSPRUIT 348 KT, LIMPOPO PROVINCE.

ELECTRICAL SERVICES REPORT

March 2022, Rev01

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1. Executive Summary

The proposed township establishment is situated on the portion of the remaining extent of portion 3 of the farm Naboomspruit 348KT. The area is administrated by Modimolle-Mookgophong Local Municipality, under the Waterberg District Municipality in Limpopo Province. The proposed development township consists of 91stands. All the stands are not yet electrified. There is an existing medium voltage feeder lines that are supplying the area. The medium voltage line is Fox Conductor. The proposed township establishment is connecting electricity from the existing medium voltage on 11KV.

The proposed site development will be connecting electricity from existing medium voltage on 11KV. The proposed site development will be connecting electricity from the existing Naboom Municipality feeder medium voltage line on 11KV. The feeder line will fed from Naboom Substation. The capacity of the substation is 1x10MVA 132/11kV. There is existing medium voltage aluminum conductor steel reinforced passing through the development and is utilized to supply the development. The site is supplied from existing overhead medium voltage line to the drop out fuse link and distributes cable underground and connected to the electrical meter. According to Municipal network planning department the development can be connected. It is recommended that the development can be installed according to Eskom Distribution Standard.

2. Introduction

This report outlines the design philosophy of the electrical bulk supply installation for township establishment is situated on the portion of the remaining extent of portion 3 of the farm Naboomspruit 348KT, Limpopo Province. The area is administrated by Modimolle-Mookgophong Local Municipality, under the Waterberg District Municipality in Limpopo Province. The installation will be designed to ensure that the installation will comply with the South African national safety standard while meeting the objective of the development.

3. Purpose of the report

The purpose of this report is to provide information to all stakeholders regarding the following:

- Existing electrical infrastructure
- Bulk supply and bulk link to the development
- To notify Municipality about the Existing load

4. Project location

The proposed township is situated, 150km from Polokwane in the heart of Mookgophong town, in Limpopo Province. The area is administered by Modimolle-Mookgophong Local Municipality, under the Waterberg District Municipality. GPS coordinates of site are 24°31'25.13"S 28°42'59.66"E. The locality map is shown on the figures below. The area is within Municipality supply. Please see the figure below.

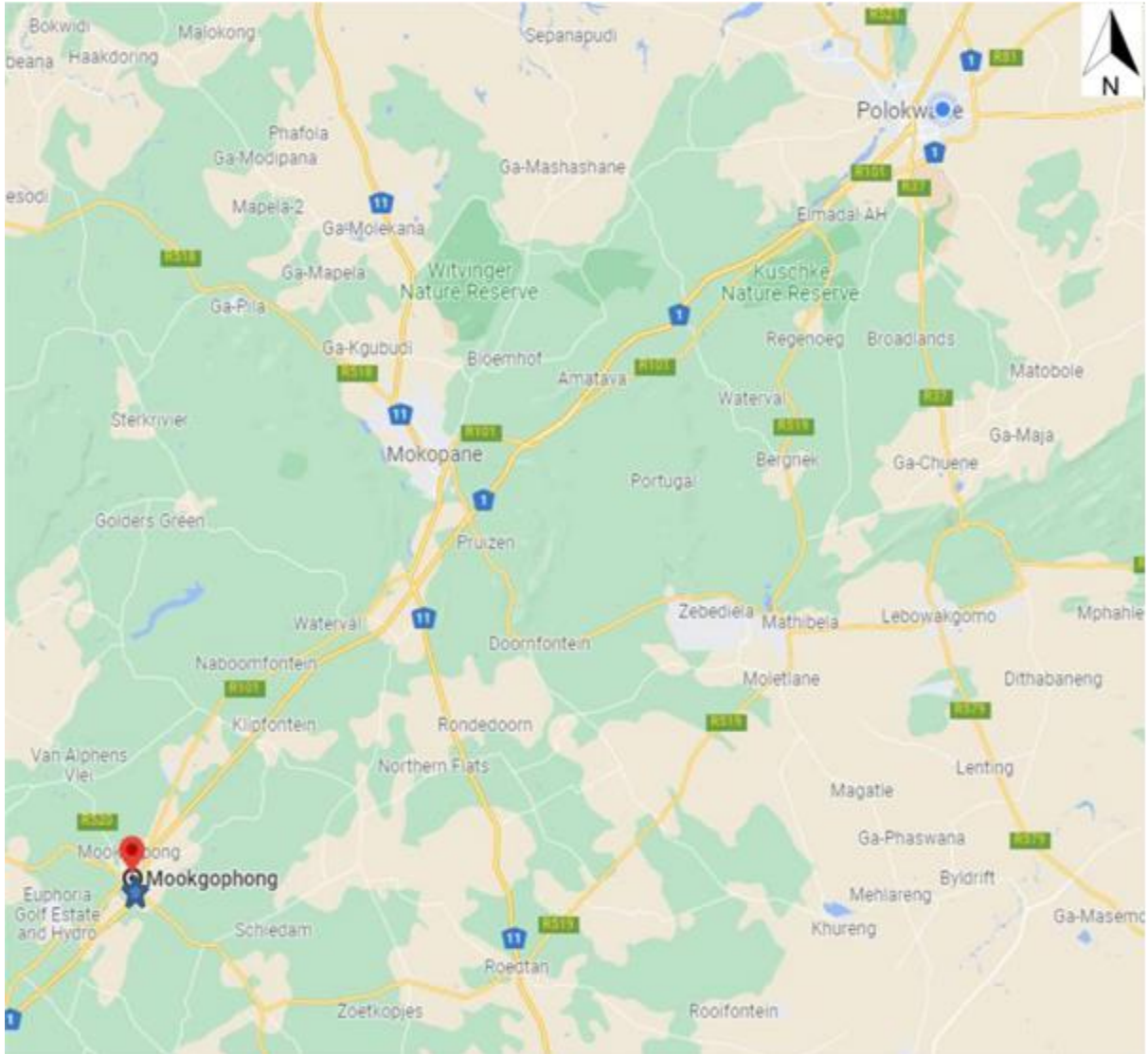


Figure 1 Locality plan

6. Distribution Network Model

6.1 Medium Voltage Reticulation

A site survey was conducted to determine the best and most economical means to provide power supply to site. The proposed site development will be connecting electricity from existing medium voltage on 11KV. The proposed site development will be connecting electricity from the existing Naboom Municipality feeder medium voltage line on 11KV. The feeder line will be fed from Naboom Substation. The capacity of the substation is 1x10MVA 132/11kV. There is existing medium voltage aluminum conductor steel reinforced passing through the development and is utilized to supply the development. The site is supplied from existing overhead medium voltage line to the drop out fuse link and distributes cable underground and connect to the electrical meter. The power supply authority is Municipality.

7. Existing infrastructure

There is existing medium voltage aluminum conductor steel reinforced passing through the development and is utilized to supply the development. The site is supplied from existing overhead medium voltage line to the drop out fuse link and distributes cable underground and connect to the electrical meter. The development can be connected from the existing medium voltage feeder-line that supply the area. See pictures below.



Existing Transformer 100Kva



Naboom Substation



Medium Voltage Reticulation



MV Pole no

Picture 1 Existing Electrical Infrastructure.

8. Proposed Installation.

The proposed electrical works for development will comprise the following:

- Medium Voltage cable reticulation
- Mini substation;
- Low voltage cable reticulation;
- Bare copper earth wires;
- Cable sleeves;
- Danger tape;
- Distribution Kiosks;
- Public Lighting (Street lights) and;
- Excavation, trenching, and backfilling

9. Power distribution

9.1 Estimate Load

Table 1 Total Electricity Demand (ADMD)

Type	Description		No of dwelling Units	VA/m ²	Total
Type1	Residential 1(Dwelling House)		85	1.2	102
Type 2	Institutional	Orphanage	1	1.2	1.2
		Early Childhood Development Centre	1	1.2	1.2
Type 3	Shops and other business related uses		1	1.2	1.2
Type 4	Place of Public Worship Church		1	1.2	1.2
Type 5	Municipal (Municipal commonage)		1	1.2	1.2
Type 6	Government (Social services offices)		1	1.2	1.2
	TOTAL				109.2

Total Existing demand = 109.2KVA for 15 years

Electrical Report Proposed integrated human settlement on portion 3 of the farm Naboomspruit 348 KR, Mookgopong, Limpopo Province

9.2 Cabling

An appropriate size of the conductor will be determined to carry the required load at each section, Transformer to Kiosk, Kiosk to distribution boards.

PVC SWA 600/1000V copper cables complete with bare copper earth wire will be utilized for distribution of power from Transformer to kiosk. All cables to be installed will be according to manufacturers appropriate SANS 1507. Cables should be buried in a 750mm deep and 300mm wide trenches complete with danger tape. Cable route markers will be installed, and cables will be laid in compliance with relevant standards

9.3 Voltage Drop Calculation

The voltage drop which will be experienced at the load terminals was calculated by reference to ABERDARE Cables facts and figures manual. The maximum volt drop allowed by SANS 10142-1 during full load running condition should not exceed 5%.

Voltage Drop Calculation

Volt drop = Volt drop per am per meter x current x distance

The furthest distance a distribution kiosk can be mounted shall not exceed 160m.

9.4 Protection System

The mini-substations is equipped with medium voltage ring-main-units, 1600A main low voltage breaker and low voltage feeding breakers to feed distribution kiosks. Each distribution kiosk will consist of 80 Amps curve 1 breakers to protect each unit for over current. Lightning arrestors with earth connected to the body of the mini substation with necessary clamping arrangement.

10. Distribution Kiosk

Kiosk will consist of 80 Amps curve 1 breakers connected to a Busbar and one meter per circuit breaker. Kiosk must be approved by Municipality and manufactured to the latest standards. Free- standing kiosks are to be recommended with accurate security major to be in place to avoid vandalism. All kiosks to be fully ventilated and vermin proofed with an IP rating of IP55.

11. Metering

The municipality electricity metering system will be adopted for this development. This will ensure that the development has direct access and control to electricity. Typically, this development will be fully electrified with underground network and metering will be installed as soon as connections are made. Meters to be mounted in the distribution kiosk.

12. Indoor Electrical Infrastructure

12.1 Distribution boards

Each building will be equipped with distribution boards which will consist of:

- 63 Amps, 6KA, 2pole main circuit breaker.
- 63 Amps copper busbar.
- 63 Amps, 6KA, 2pole earth leakage.
- 2 x 20 Amps, 3KA, 1pole for plugs.
- 2 x 10 Amps, 3KA, 1 pole for lights.
- 2 x 30 Amps, 3KA, 2pole for stove & geyser.

12.2 Socket outlet

The socket outlet will be fed by two 20 Amps circuit breaker supplied by earth leakage breaker. All plugs to be flashed wall mounted, 4x4 single and double switched socket outlet

12.3 Lighting

The choice of lights is based energy saving, cost efficiency, availability and solid body. The type of lights will include: energy saving downlights, compact fluorescent light, and bulkhead controlled by normal light switch. Outdoor lights will be photo cell controlled and normally switched by a light switch. A Relux simulation has been conducted to determine the type and number of lights in each room for better luminosity

12.4 Heating Appliances

All stoves to be provided with 30 Amps isolator circuits and each building to be provided with a solar water heating system consisting on a 150 Litres energy saving solar geysers mounted on the roof with back up batteries.

13. Earthing and Protection

- The Earthing & lightning protection installation shall be strictly designed as per the latest SANS specifications, these are available from the SABS.
- Lightning arrestors with earth connected to the body of the transformer with necessary clamping arrangements
- Connect the earth rod via insulated Copper wire & wire rope clamps/U-bolts to the rebar of the column.
- The insulated Copper wire must be laid in a trench & the copper must be connected to the earth rod.
- The roof should be bonded to the column via insulated Copper wire.
- Bond to the side of the roof or should there be a concrete slab, run flat aluminum and bond it to the roof.
- Install a link cable insulated copper & earth rods every 20m link the cable to the earth bar of the mini substation.

14. Public Lighting

The installation comprises:

7m above the ground curved galvanized pole complete with LED light fitting will be utilized for internal street, switching via photocell and magnetic contactor.

11m above the ground curved galvanized pole complete with LED light fitting will be utilized for External Street leading to the development, switching via photocell and magnetic contactor.

15. Standards and Specifications

The installations shall be erected and tested in accordance with the latest issues and amendments of the following Acts, Regulations and Specifications:

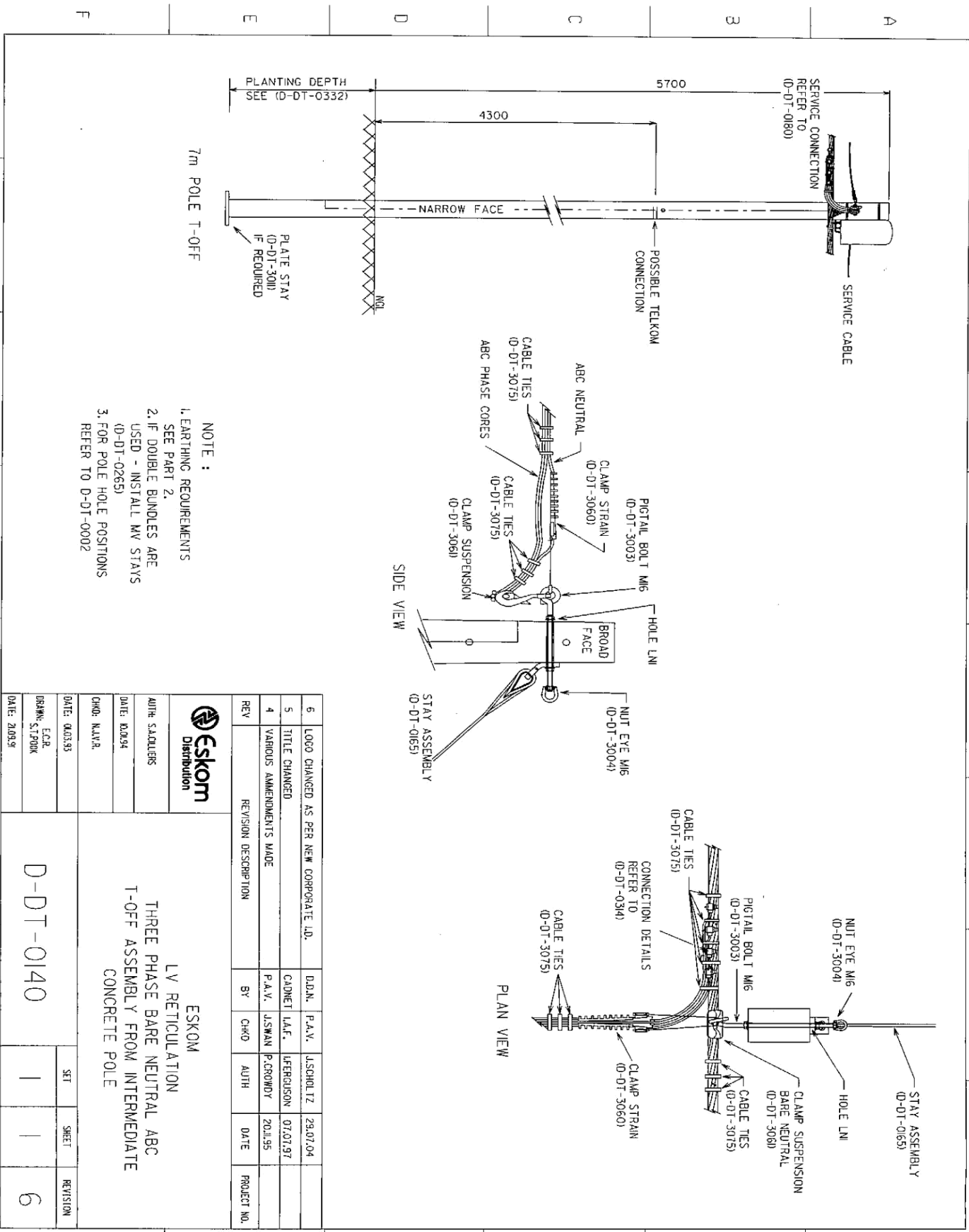
- SANS 10142: "Code of Practice for the Wiring of Premises".
- Eskom Distribution Standards.
- The Occupational Health and Safety Act, 1993 (Act 85 of 1993).
- The Electricity Act 1996 (Act 88 of 1996).
- The Environmental Conservation Act 1998 (Act no. 73 of 1989).
- The National Environmental Management Act 1998 (Act no. 107 of 1998)

16. Recommendation

The proposed development township consists of 91 stands. All the stands are not yet electrified. There is an existing medium voltage feeder lines that are supplying the area. The medium voltage line is Fox Conductor. The proposed township establishment is connecting electricity from the existing medium voltage on 11KV. The proposed site development will be connecting electricity from existing medium voltage on 11KV. The proposed site development will be connecting electricity from the existing Naboom Municipality feeder medium voltage line on 11KV. The feeder line will fed from Naboom Substation.

The capacity of the substation is 1x10MVA 132/11kV. There is existing medium voltage aluminum conductor steel reinforced passing through the development and is utilized to supply the development. The site is supplied from existing overhead medium voltage line to the drop out fuse link and distributes cable underground and connected to the electrical meter. According to Municipal network planning department the development can be connected. It is recommended that the development can be installed according to Eskom Distribution Standard.

Annexure A Eskom Drawing Standards.



NOTE :

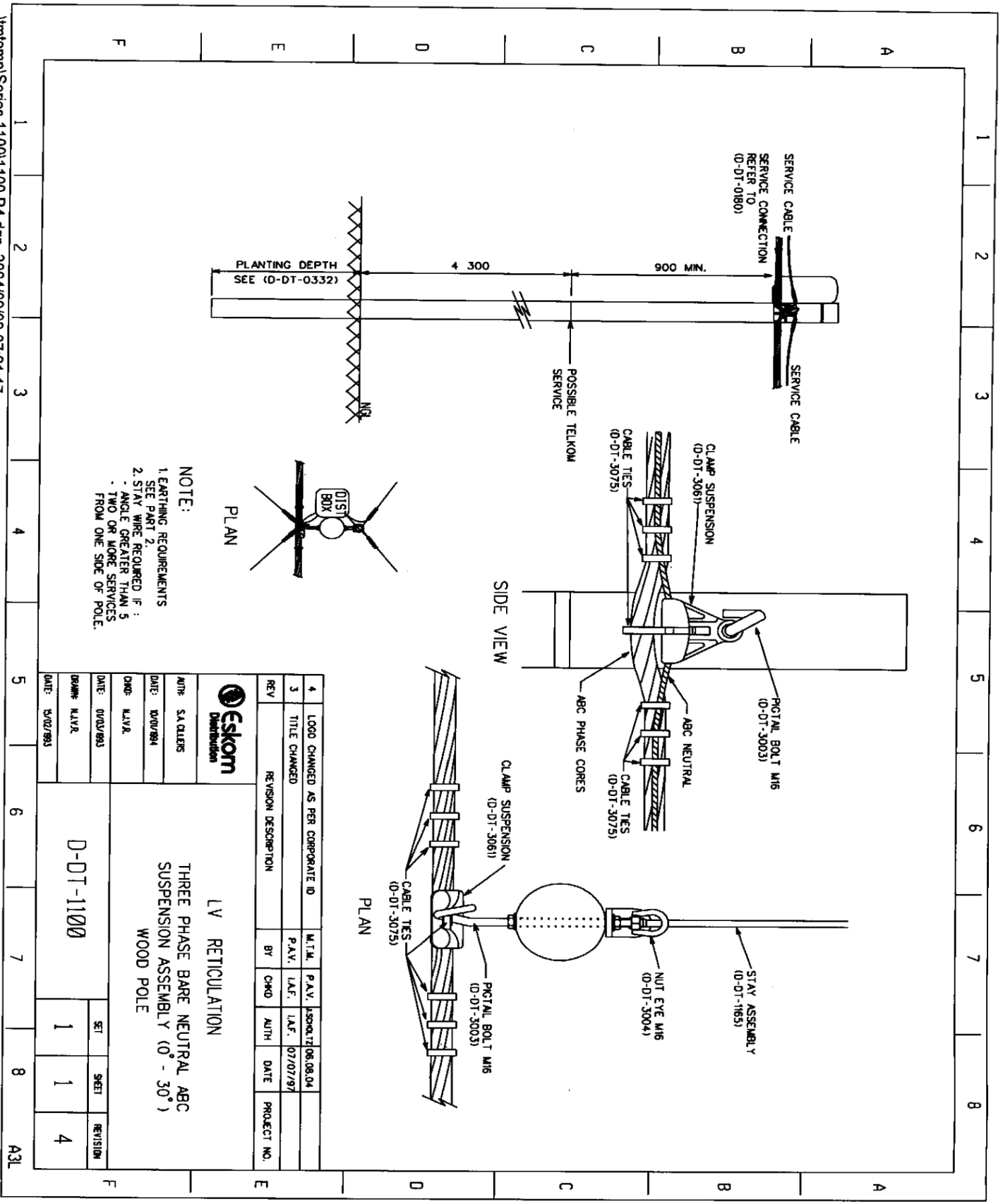
1. EARTHING REQUIREMENTS SEE PART 2.
2. IF DOUBLE BUNDLES ARE USED - INSTALL MV STAYS (D-DT-0265)
3. FOR POLE HOLE POSITIONS REFER TO D-DT-0002

6	LOGO CHANGED AS PER NEW CORPORATE I.D.	D.D.N.	P.A.V.	J.SCHULTZ	29.07.04	
5	TITLE CHANGED	CADNET	L.A.F.	L.FERGUSON	07.01.97	
4	VARIOUS AMENDMENTS MADE	P.A.V.	J.SWAN	P.GROWDY	20.1.95	
REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.

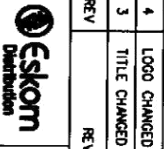
ESKOM
 LV RETICULATION
 THREE PHASE BARE NEUTRAL ABC
 T-OFF ASSEMBLY FROM INTERMEDIATE
 CONCRETE POLE

DATE: 04.03.93	CHKD: N.A.V.R.	DATE: 20.03.91
DATE: 04.03.93	DRWING: S.T.FOX	DATE: 20.03.91

D-DT-0140	1	1	6
SET	SHEET	REVISION	

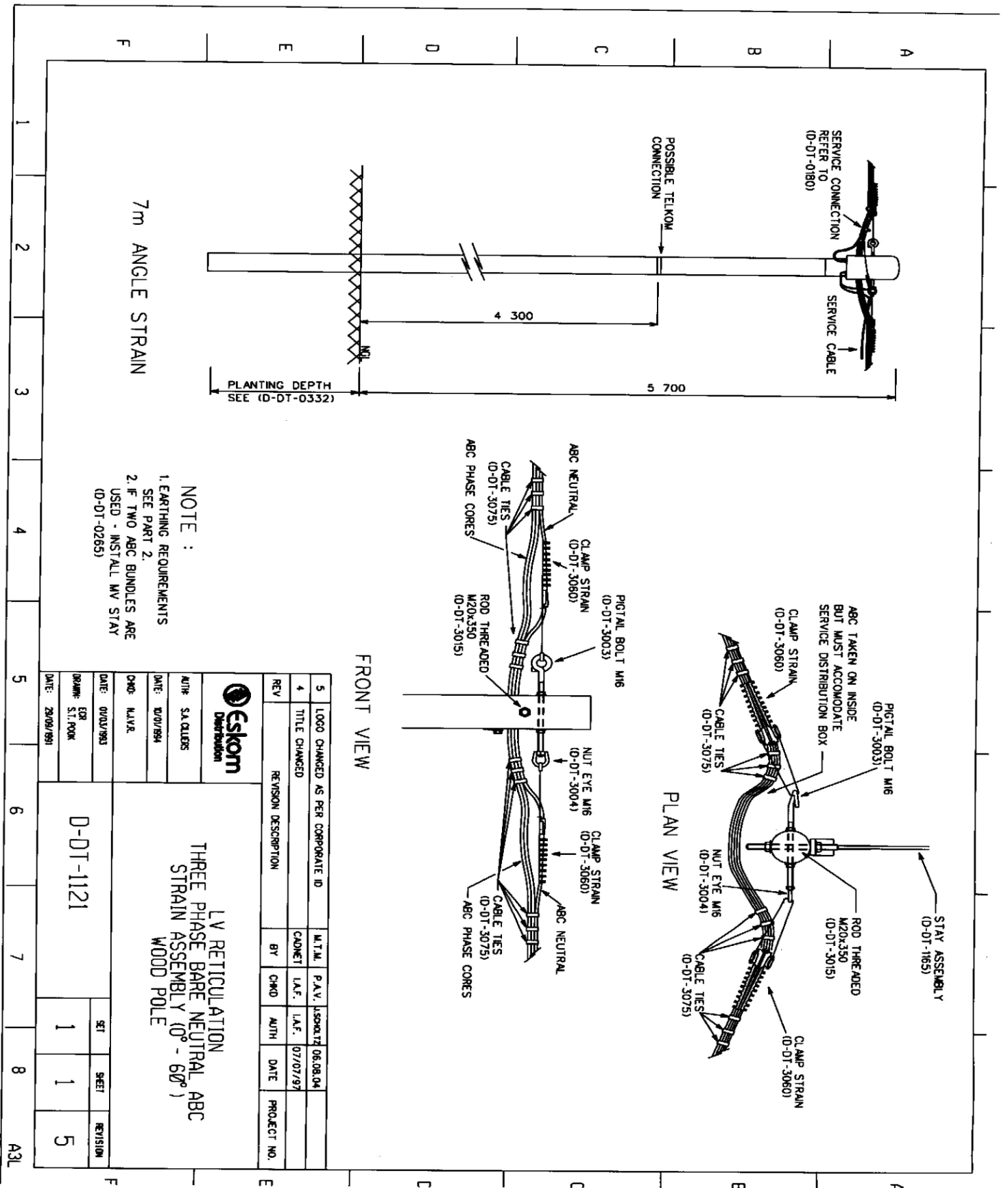


NOTE:
 1. EARTHING REQUIREMENTS
 SEE PART 2.
 2. STAY WIRE REQUIRED IF:
 - ANGLE GREATER THAN 5°
 - TWO OR MORE SERVICES
 FROM ONE SIDE OF POLE.



LV RETICULATION
THREE PHASE BARE NEUTRAL ABC
SUSPENSION ASSEMBLY (0° - 30°)
WOOD POLE

4	LOGO CHANGED AS PER CORPORATE ID	M.T.M.	P.A.V.	J.S.M.	08.08.04		
3	TITLE CHANGED	P.A.V.	L.A.F.	L.A.F.	07/07/97		
REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.	
AUTH: S.A. OULERS							
DATE: 00/0/94							
CHKD: M.L.V.R.							
DATE: 01/01/93							
DRAWN: M.L.V.R.							
DATE: 15/02/93							
D-DT-1100							1
							1
							4



NOTE :

1. EARTHING REQUIREMENTS SEE PART 2.
2. IF TWO ABC BUNDLES ARE USED - INSTALL MV STAY (D-DT-0265)

FRONT VIEW

PLAN VIEW

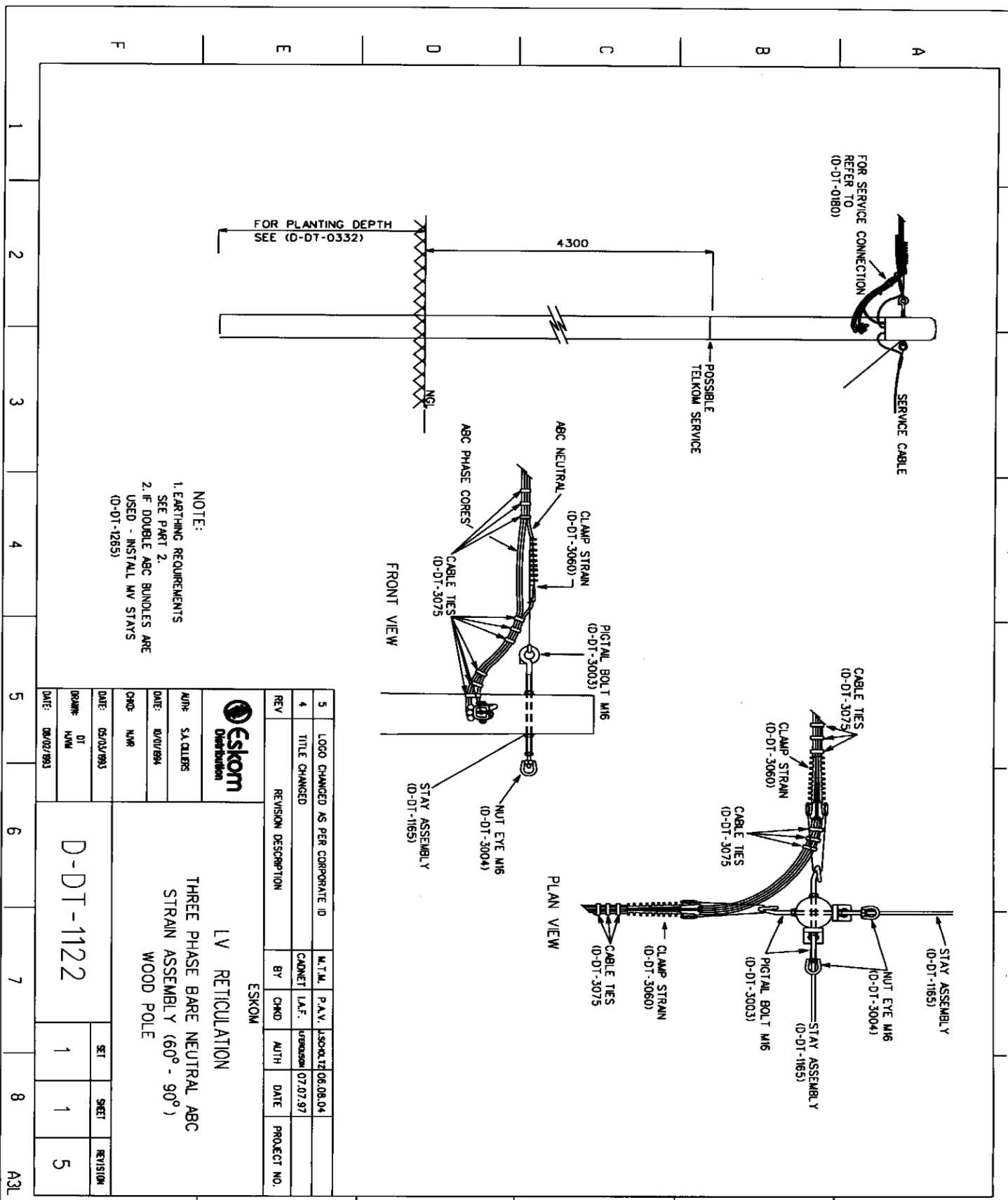


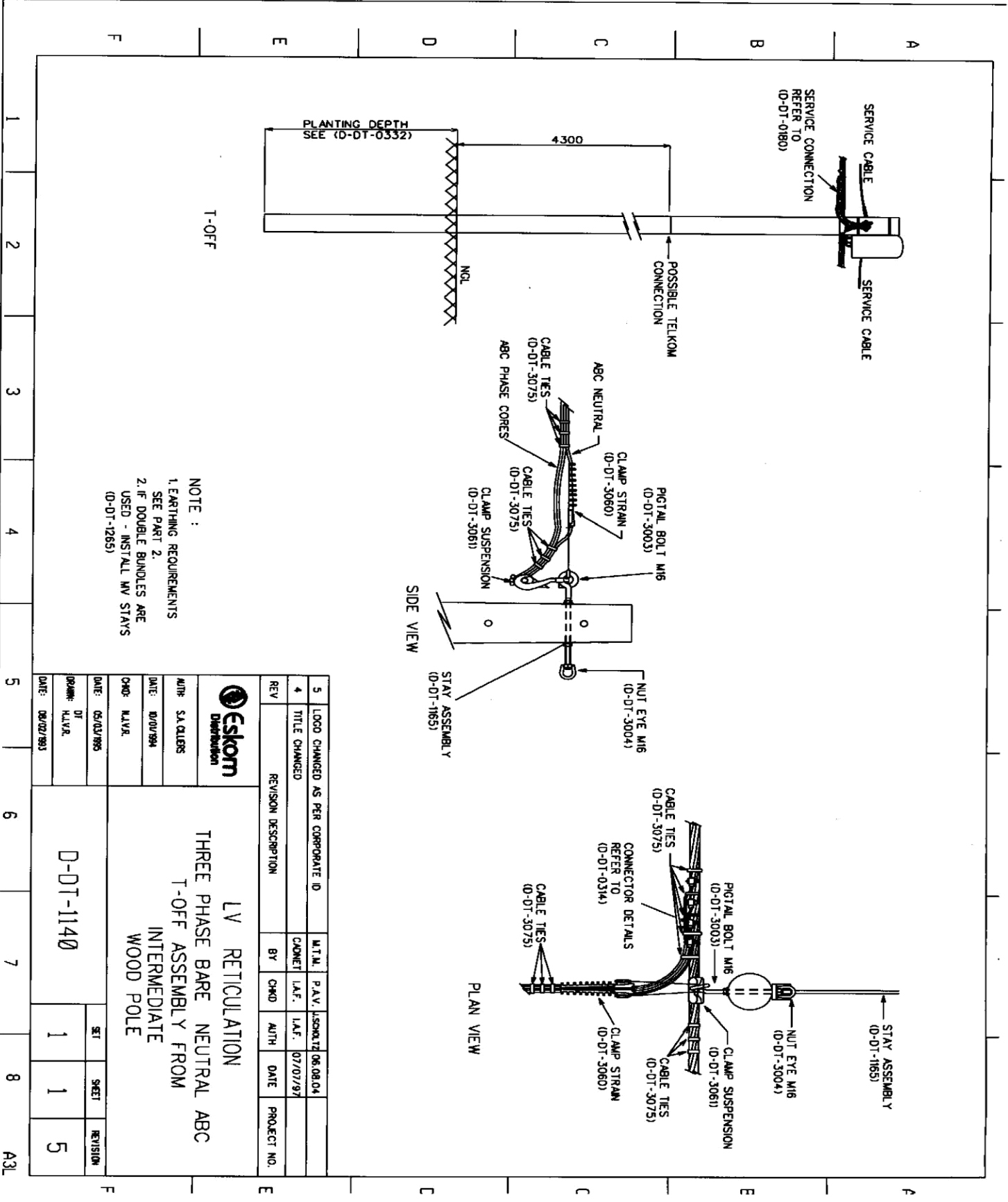
LV RETICULATION
 THREE PHASE BARE NEUTRAL ABC
 STRAIN ASSEMBLY (0° - 60°)
 WOOD POLE

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
5	LOGO CHANGED AS PER CORPORATE ID	M.T.M.	P.A.V.	U.SPOULTZ	06.08.04	
4	TITLE CHANGED	CADNET	L.A.F.	L.A.F.	07/07/97	

DATE:	09/03/93
CHKD:	M.V.R.
DATE:	01/07/94
DATE:	01/07/94
DATE:	01/07/94
DATE:	29/09/99

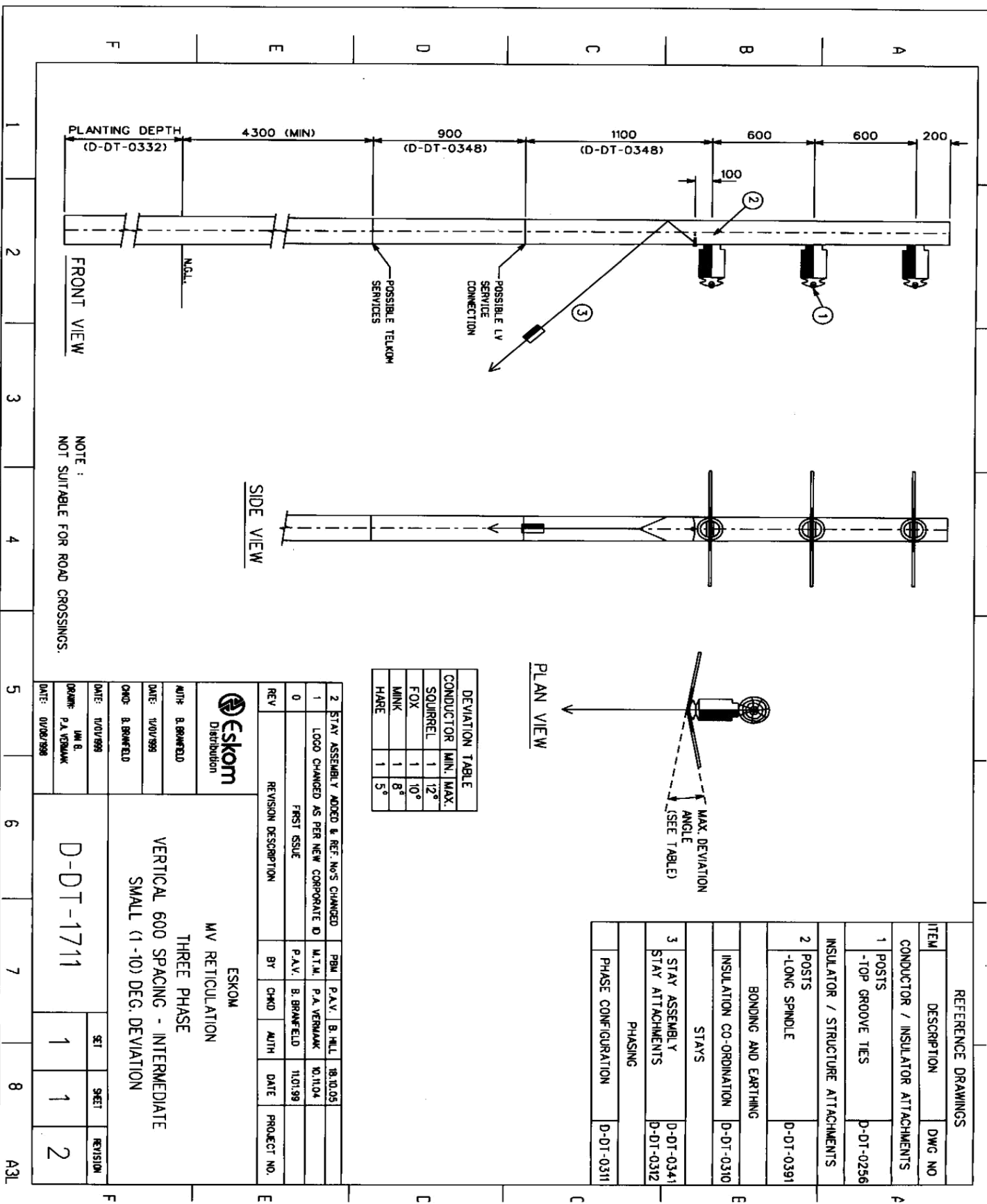
DATE:	09/03/93	SET	SHEET	REVISION
DATE:	01/07/94	1	1	5





NOTE :
 1. EARTHING REQUIREMENTS
 SEE PART 2.
 2. IF DOUBLE BUNDLES ARE
 USED - INSTALL MV STAYS
 (D-DT-1265)

5		LOGO CHANGED AS PER CORPORATE ID		M.T.M.	P.A.V.	J.S.M.W.I.T.Z	08.08.04
4		TITLE CHANGED		COBNET	L.A.F.	07/07/97	
REV		REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
LV RETICULATION THREE PHASE BARE NEUTRAL ABC T-OFF ASSEMBLY FROM INTERMEDIATE WOOD POLE							
DATE: 05/02/1993		DATE: 05/02/1993					
DRAWN: H.L.V.R.		DATE: 05/02/1993					
DATE: 08/02/1993		DATE: 08/02/1993					
D-DT-1140				SET	SHEET	REVISION	
				1	1	5	



NOTE :
NOT SUITABLE FOR ROAD CROSSINGS.

DEVIATION TABLE	
CONDUCTOR	MIN. MAX.
SQUIRREL	1 12°
FOX	1 10°
MINI	1 8°
HARE	1 5°

REFERENCE DRAWINGS		
ITEM	DESCRIPTION	DWG NO
1	CONDUCTOR / INSULATOR ATTACHMENTS	
1	POSTS	
	-TOP GROOVE TIES	D-DT-0256
INSULATOR / STRUCTURE ATTACHMENTS		
2	POSTS	
	-LONG SPINDLE	D-DT-0391
BONDING AND EARTHING		
	INSULATION CO-ORDINATION	D-DT-0310
STAYS		
3	STAY ASSEMBLY	D-DT-0341
	STAY ATTACHMENTS	D-DT-0312
PHASING		
	PHASE CONFIGURATION	D-DT-0311

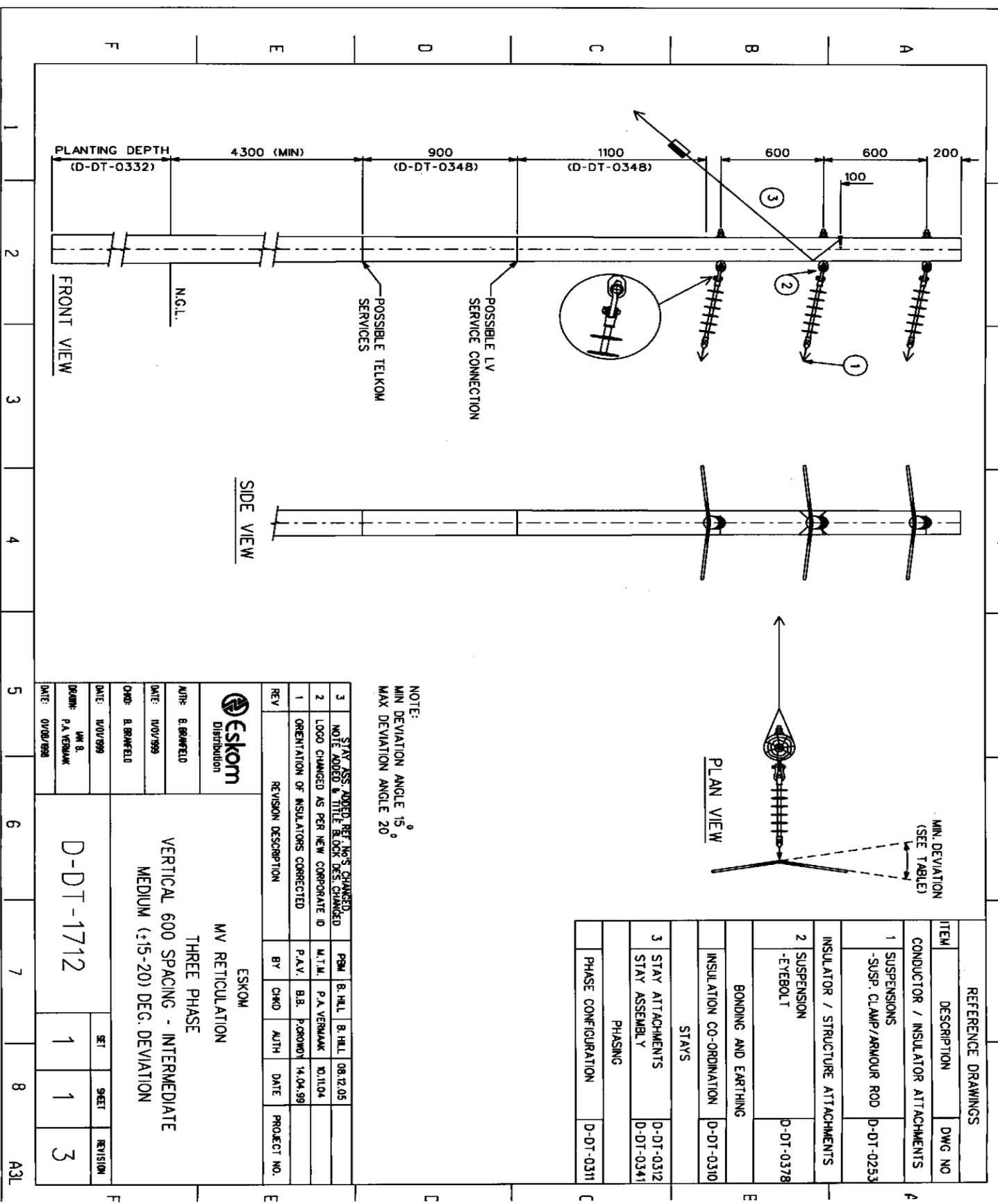
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1	LOCO CHANGED AS PER NEW CORPORATE ID	M.T.M.	P.A. VERMAAK	10/11/04		
0	FIRST ISSUE	P.A.V.	B. BRANFELD	11/01/99		
REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.

Eskom
Distribution

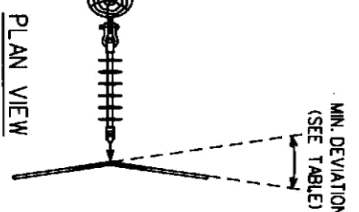
ESKOM
MV RETICULATION
THREE PHASE
VERTICAL 600 SPACING - INTERMEDIATE
SMALL (1-10) DEG. DEVIATION

D-DT-1711

SET	SHEET	REVISION
1	1	2



NOTE:
 MIN DEVIATION ANGLE 15°
 MAX DEVIATION ANGLE 20°



REFERENCE DRAWINGS		
ITEM	DESCRIPTION	DWG NO
1	CONDUCTOR / INSULATOR ATTACHMENTS	
1	SUSPENSIONS	
	-SUSP. CLAMP/ARMOUR ROD	D-DT-0253
INSULATOR / STRUCTURE ATTACHMENTS		
2	SUSPENSION - EYEBOLT	D-DT-0378
BONDING AND EARTHING		
	INSULATION CO-ORDINATION	D-DT-0310
STAYS		
3	STAY ATTACHMENTS	D-DT-0312
	STAY ASSEMBLY	D-DT-0341
PHASING		
	PHASE CONFIGURATION	D-DT-0311

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
3	STAY ASS. ADDED. REF. NOS. CHANGED. NOTE ADDED & TITLE BLOCK DES. CHANGED	P.H.L.	B.H.L.	B.H.L.	08.12.05	
2	LOAD CHANGED AS PER NEW CORPORATE ID	M.T.M.	P.A. VERMAAK		10.11.04	
1	ORIENTATION OF INSULATORS CORRECTED	P.A.V.	B.B. P. BOMBOU		14.04.99	

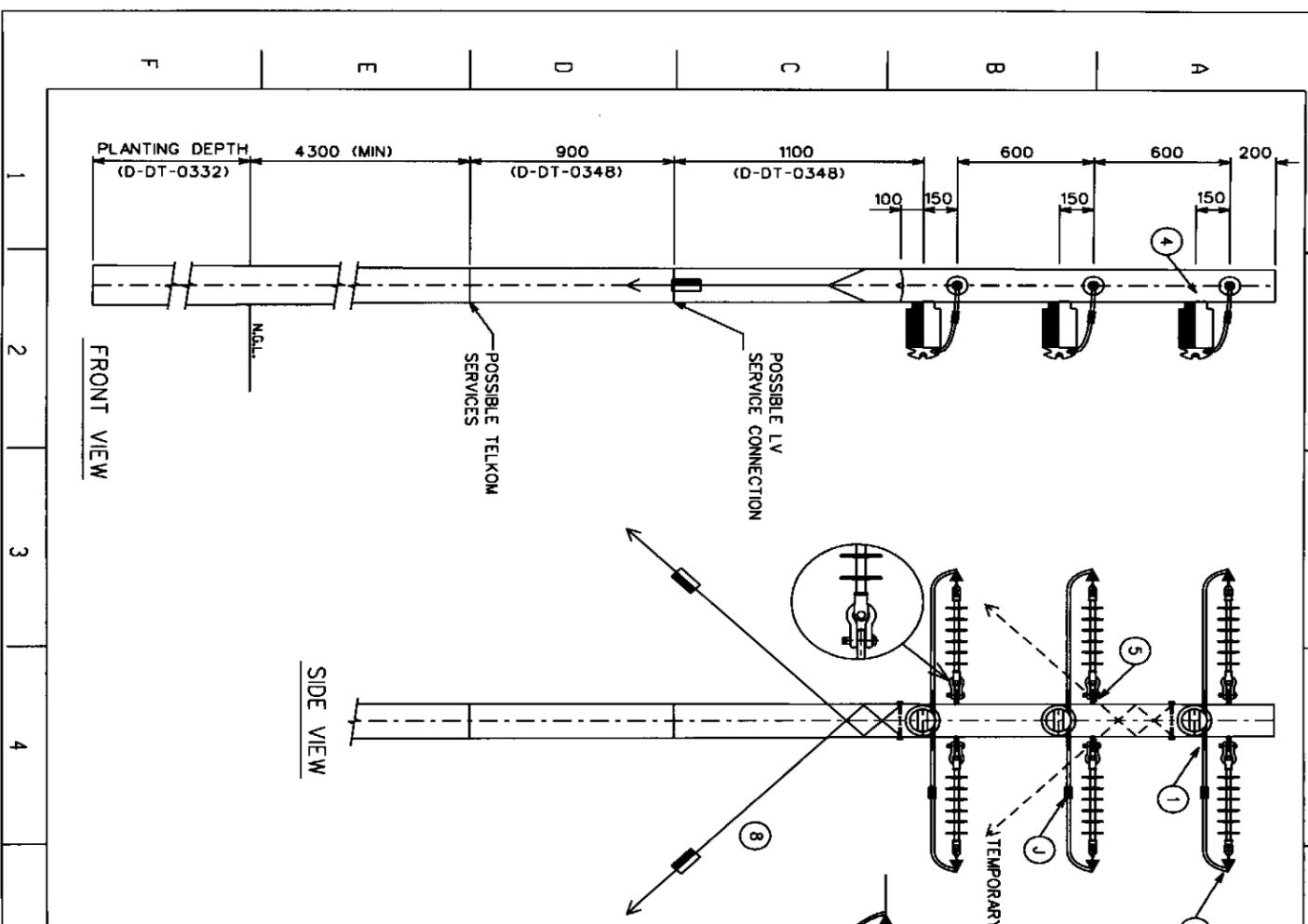
Eskom Distribution

ESKOM
 MV RETICULATION
 THREE PHASE
 VERTICAL 600 SPACING - INTERMEDIATE
 MEDIUM (±15-20) DEG. DEVIATION

D-DT-1712

SET	SHEET	REVISION
1	1	3

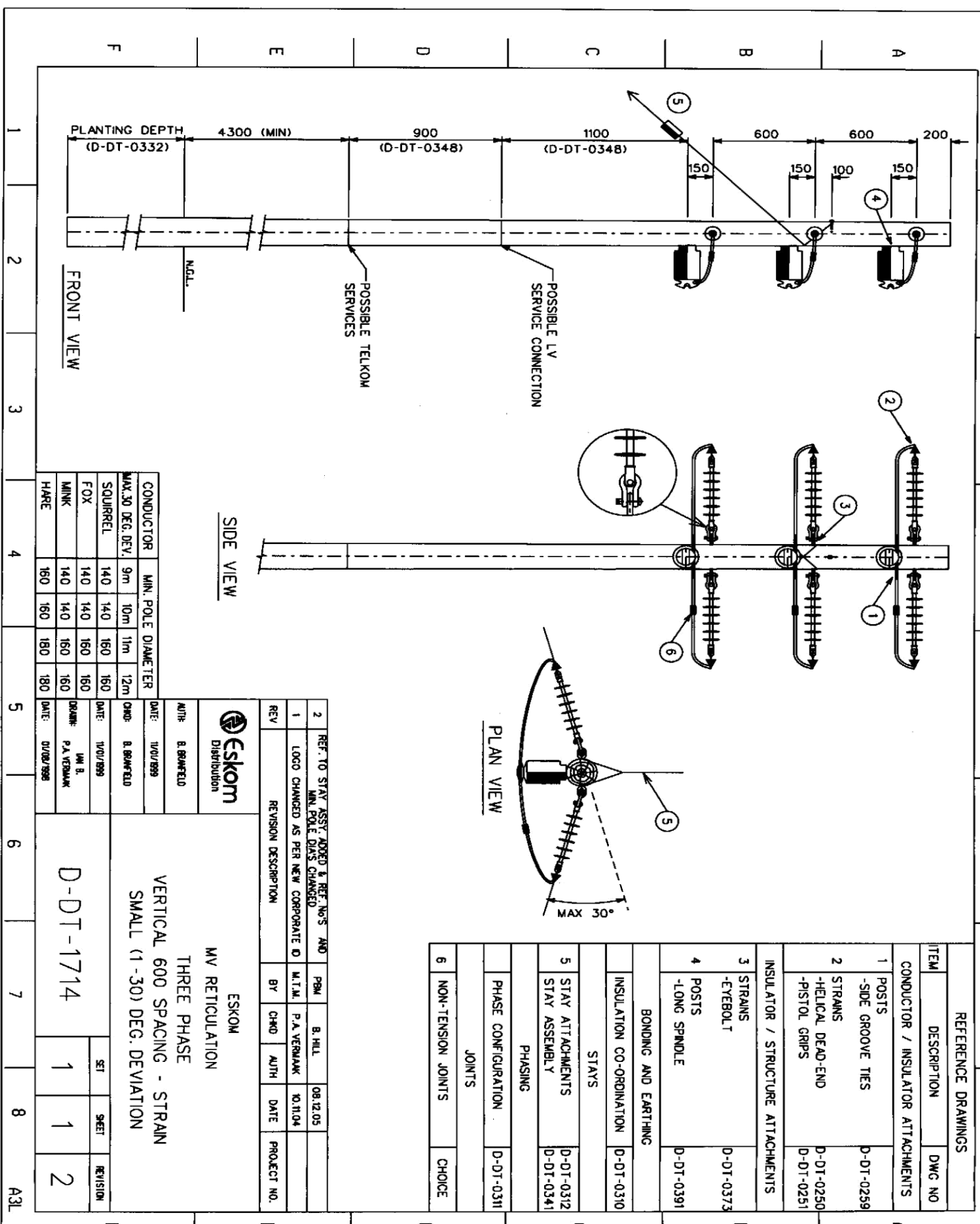
DATE: 10/01/99
 AUTH: B. BRANFELD
 DATE: 10/01/99
 CHKD: B. BRANFELD
 DATE: 10/01/99
 DWG. P.A. VERMAAK
 DATE: 01/08/98



REFERENCE DRAWINGS		
ITEM	DESCRIPTION	DWG NO
CONDUCTOR / INSULATOR ATTACHMENTS		
1	POSTS	
	-SIDE GROOVE TIES	D-DT-0259
3	STRANS	
	-HELICAL DEAD-END	D-DT-0250
	-PISTOL GRIPS	D-DT-0251
INSULATOR / STRUCTURE ATTACHMENTS		
5	STRANS	
	-EYEBOLT	D-DT-0373
4	POSTS	
	-LONG SPINDLE	D-DT-0391
BONDING AND EARTHING		
INSULATION CO-ORDINATION		D-DT-0310
STAYS		
8	STAY ATTACHMENTS	D-DT-0312
PHASING		
PHASE CONFIGURATION		D-DT-0311
JOINTS		
J	NON-TENSION JOINTS	CHOICE

1	LOGO CHANGED AS PER NEW CORPORATE ID	M.T.M.	P.A. VERBAAK	10/11/04	
0	FIRST ISSUE	P.A.V.	B. BRAUNFELD	11/01/99	
REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE
<p align="center"> ESKOM MV RETICULATION THREE PHASE VERTICAL 600 SPACING STRAIN - 0 DEG. DEVIATION </p>					
<p align="center"> EsKOM Distribution </p>					
AUTH:	B. BRAUNFELD				
DATE:	11/01/99				
CHKD:	B. BRAUNFELD				
DATE:	11/01/99				
DATE:	01/08/1998				
DATE:	01/08/1998				
DATE:	01/08/1998				
D-DT-1713		SET	SHEET	REVISION	
		1	1	1	

Electrical Report Proposed integrated human settlement on portion 3 of the farm Naboomspruit 348 KR, Mookgopong, Limpopo Province



REFERENCE DRAWINGS		
ITEM	DESCRIPTION	DWG NO
1	CONDUCTOR / INSULATOR ATTACHMENTS	
2	POSTS	D-01-0259
3	-SIDE GROOVE TIES	
4	STRANS	D-01-0250
5	-HELICAL DEAD-END	D-01-0251
6	-PISTOL GRIPS	

INSULATOR / STRUCTURE ATTACHMENTS	
3	STRANS
4	-EYEBOLT
5	POSTS
6	-LONG SPINDLE

BONDING AND EARTHING	
1	INSULATION CO-ORDINATION
2	STAYS
3	STAY ATTACHMENTS
4	STAY ASSEMBLY

PHASING	
1	PHASE CONFIGURATION
2	JOINTS
3	NON-TENSION JOINTS

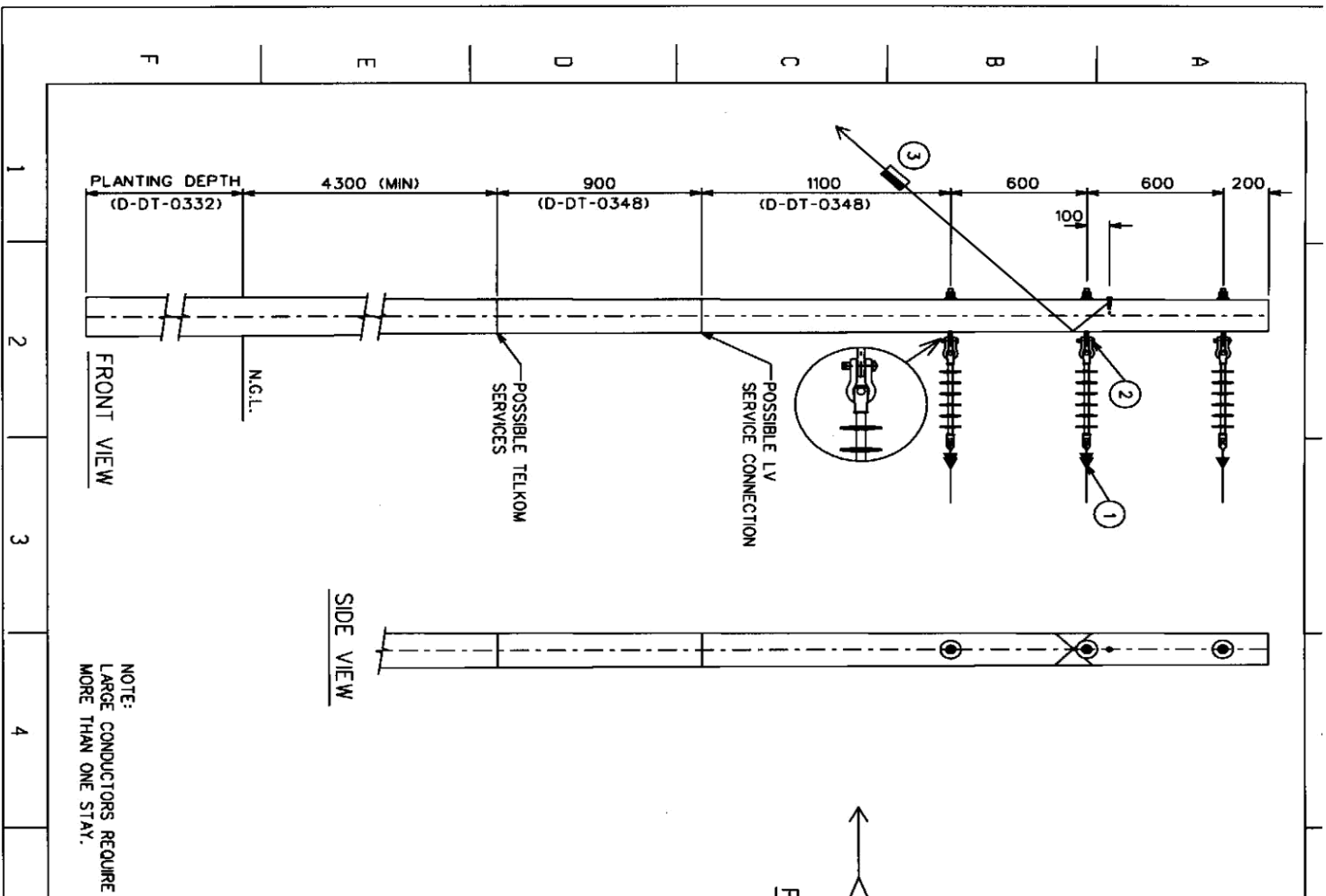
REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
1	REF TO STAY ASSY ADDED & REF No'S AND MIN. POLE DIAS CHANGED	P.M.	B. HILL		08/12/05	
2	LOGO CHANGED AS PER NEW CORPORATE ID	M.T.M.	P.A. VERMAAK		10/11/04	

ESKOM	
MV RETICULATION	
THREE PHASE	
VERTICAL 600 SPACING - STRAIN	
SMALL (1-30) DEG. DEVIATION	

CONDUCTOR	MIN. POLE DIAMETER
MAX. 30 DEG. DEV.	9m 10m 11m 12m
SQUIRREL	140 140 160 160
FOX	140 140 160 160
MINIK	140 140 160 160
HARE	160 160 180 180

DATE	DATE	DATE	DATE
10/01/99	10/01/99	07/03/98	

Electrical Report Proposed integrated human settlement on portion 3 of the farm Naboomspruit 348 KR, Mookgopong, Limpopo Province



NOTE:
LARGE CONDUCTORS REQUIRE MORE THAN ONE STAY.

DATE: 07/08/998	DATE: 10/01/999	DATE: 10/01/999	DATE: 10/01/999	DATE: 08.12.05	PROJECT NO.
DESIGNER: P.A. VERBAUK	CHKD: B. BRWFIELD	DATE: 10/01/999	DATE: 10/01/999	BY: M.T.M.	DATE: 10.11.04
DATE: 07/08/998	CHKD: B. BRWFIELD	DATE: 10/01/999	DATE: 10/01/999	BY: P.A. VERBAUK	DATE: 10.11.04
DATE: 07/08/998	CHKD: B. BRWFIELD	DATE: 10/01/999	DATE: 10/01/999	BY: P.A. VERBAUK	DATE: 10.11.04
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DATE: 07/08/998	CHKD: B. BRWFIELD	DATE: 10/01/999	DATE: 10/01/999	BY: P.A. VERBAUK	DATE: 10.11.04
DATE: 07/08/998	CHKD: B. BRWFIELD	DATE: 10/01/999	DATE: 10/01/999	BY: P.A. VERBAUK	DATE: 10.11.04

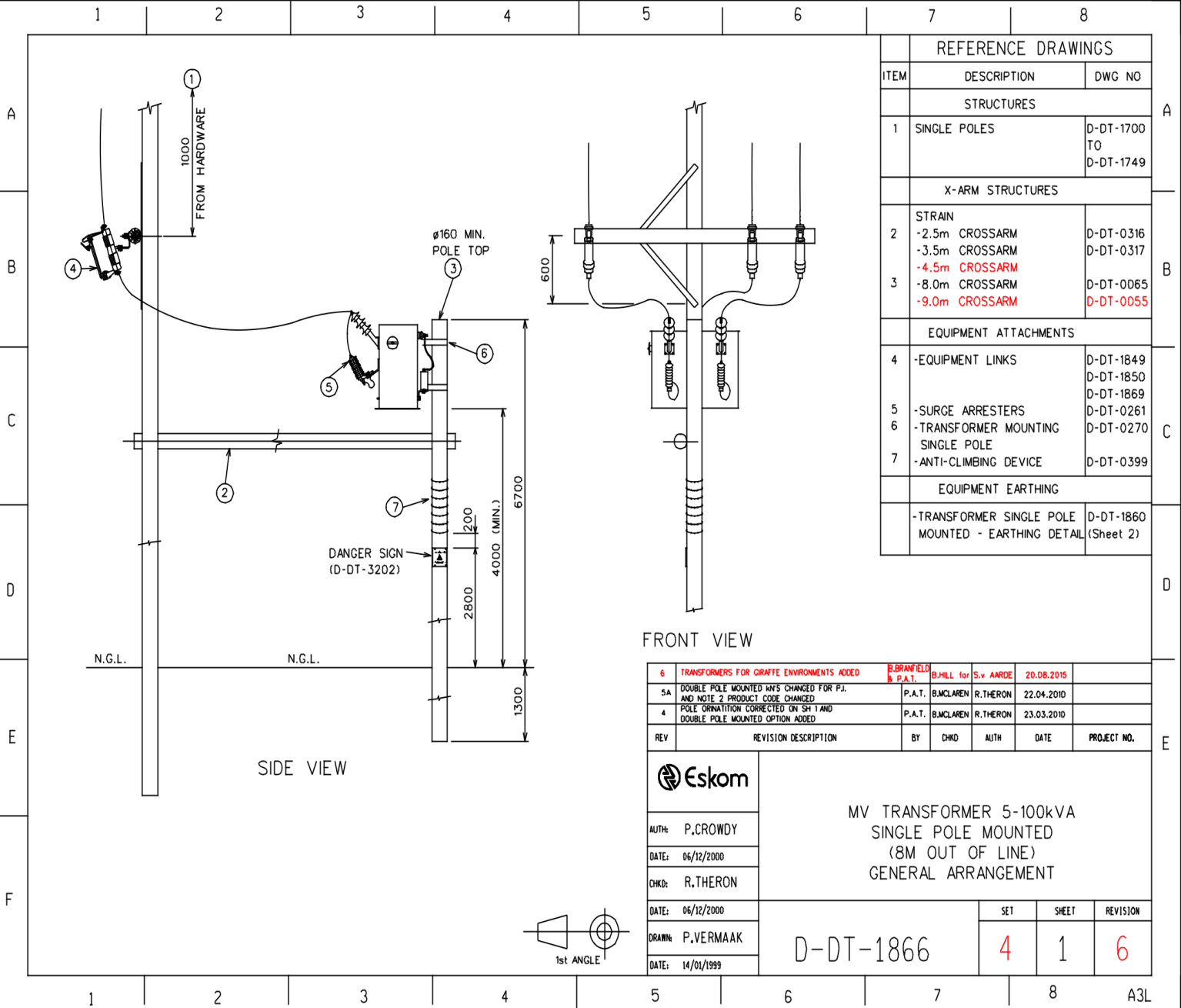
REV	REVISION DESCRIPTION	BY	CHKD	DATE	PROJECT NO.
1	REF TO STAY ASSY. ADDED & REF. NO'S AND MIN. POLE DIAS. CHANGED				
2	LOGO CHANGED AS PER NEW CORPORATE ID				

CONDUCTOR	MIN. POLE DIAMETER
0 DEG. DEV.	9m 10m 11m 12m
SQUIRREL	140 140 160 180
FOX	140 160 160 180
MINK	160 180 180 180
HARE	180 200 200 N/A

1	STRAINS	D-DT-0250
1	HELICAL DEAD-END -PISTOL GRIPS	D-DT-0251
INSULATOR / STRUCTURE ATTACHMENTS		
2	TERMINAL -EYEBOLT	D-DT-0375
BONDING AND EARTHING		
INSULATION CO-ORDINATION		
D-DT-0310		
STAYS		
STAY ATTACHMENTS		
D-DT-0313		
STAY ASSEMBLY		
D-DT-0341		
PHASING		
PHASE CONFIGURATION		
D-DT-0311		

ITEM	DESCRIPTION	DWG NO
REFERENCE DRAWINGS		
CONDUCTOR / INSULATOR ATTACHMENTS		
1	STRAINS	D-DT-0250
1	HELICAL DEAD-END -PISTOL GRIPS	D-DT-0251
INSULATOR / STRUCTURE ATTACHMENTS		
2	TERMINAL -EYEBOLT	D-DT-0375
BONDING AND EARTHING		
INSULATION CO-ORDINATION		
D-DT-0310		
STAYS		
STAY ATTACHMENTS		
D-DT-0313		
STAY ASSEMBLY		
D-DT-0341		
PHASING		
PHASE CONFIGURATION		
D-DT-0311		

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REFERENCE DRAWINGS		
ITEM	DESCRIPTION	DWG NO
STRUCTURES		
1	SINGLE POLES	D-DT-1700 TO D-DT-1749
X-ARM STRUCTURES		
2	STRAIN -2.5m CROSSARM -3.5m CROSSARM -4.5m CROSSARM -8.0m CROSSARM -9.0m CROSSARM	D-DT-0316 D-DT-0317 D-DT-0065 D-DT-0055
EQUIPMENT ATTACHMENTS		
4	-EQUIPMENT LINKS	D-DT-1849 D-DT-1850 D-DT-1869 D-DT-0261 D-DT-0270
5	-SURGE ARRESTERS	D-DT-0261
6	-TRANSFORMER MOUNTING SINGLE POLE	D-DT-0270
7	-ANTI-CLIMBING DEVICE	D-DT-0399
EQUIPMENT EARTHING		
	-TRANSFORMER SINGLE POLE MOUNTED - EARTHING DETAIL	D-DT-1860 (Sheet 2)

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
6	TRANSFORMERS FOR GRAFFIE ENVIRONMENTS ADDED	B.BRANFIELD P.A.T.	B.HILL	S.v. AARDE	20.08.2015	
5A	DOUBLE POLE MOUNTED NWS CHANGED FOR P.J. AND NOTE 2 PRODUCT CODE CHANGED	P.A.T.	B.MCLAREN	R.THERON	22.04.2010	
4	POLE ORNATITION CORRECTED ON SH 1 AND DOUBLE POLE MOUNTED OPTION ADDED	P.A.T.	B.MCLAREN	R.THERON	23.03.2010	

		MV TRANSFORMER 5-100kVA SINGLE POLE MOUNTED (8M OUT OF LINE) GENERAL ARRANGEMENT			
AUTH:	P.CROWDY				
DATE:	06/12/2000				
CHKD:	R.THERON				
DATE:	06/12/2000				
DRAWN:	P.VERMAAK	D-DT-1866	SET	SHEET	REVISION
DATE:	14/01/1999		4	1	6

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