

OVERHEAD CONSTRUCTION MANUAL

Section 2 – Services

Approved by: C Noel

CODE		DESCRIPTION		PAGE	DWG.No.	CODE	DESCRIPTION		PAGE	DWG.No.
		CONSTRUCTIONS								
S1B/W, S2B/W, S3B/W S1B/C, S2B/C, S3B/C S10/W, S20/W, S30/W S10/C, S20/C, S30/C	One,two and three phase service from LVABC (Wood Pole)				LVAUX	LV Isolation Trf Supply - Sep Earth Areas		2-20	4920-A4-20	
	One,two and three phase service from LVABC (Conc.Pole)		2-1	4920-A4-1	SISL, SIA, SIXC, SIXC45, SIX45, SIS SISLC, SIXCC SISC SISC45	Cross Street Service Arrangement Telstra joint use Arrangement Intermediate Pole Constructions (Wood Pole)		2-22	4920-A4-22	
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	One,two & three phase service from O/W Mains (Conc.Pole)		2-3	4920-A4-3		Intermediate Pole Constructions (Conc Pole)		2-23	4920-A4-23	
		2-4	4920-A4-4			2-24	4920-A4-24			
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	Service Fuse Arm		2-9	4920-A4-9						
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	Service cable attachment to Concrete Pole		2-11	4920-A4-11						
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	Twin LVABC service from existing Transformer isolation links. (400A)		2-13	4920-A4-13						
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	Flying Fox Service - Concrete to Concrete Pole		2-15	4920-A4-15						
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						Minor Repair to existing service or service tail				
						Service Cable Replacement				
						No Mains Connection Box				
						Where not possible to work on Mains Connection Box				
						Where possible to work on Mains Connection Box				
						No Mains Connection Box		2-46	4920-A4-46	
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SET			DESCRIPTION			PAGE	DWG.No.	SET	DESCRIPTION			PAGE	DWG.No.
SRBS SRBI				<u>STRINGING</u>									
	Stringing						2-51	4920-A4-51					
	Stringing Table for 1 kN Max. Working Load						2-52	4920-A4-52					
	Crossarm mounted Service Raiser Bracket - LV Shackle x-arm												
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Mains End Connection and Bridging						2-81	4920-A4-81						
Customer Mains Service direct from Pole Mounted Plant						2-84	4920-A4-84						

CU LIST -

	S1B/W	S3B/W	S1B/W45	S3B/W45
SET1-2	1		1	
SET2-1		1		1
SET101-3			1	1
04442	AR	AR	AR	AR
04451	AR	AR	AR	AR
12454		AR		AR
19910	1	3	1	3
16566	2	2		
17794			2	2
02569			2	2

SERVICE CABLE

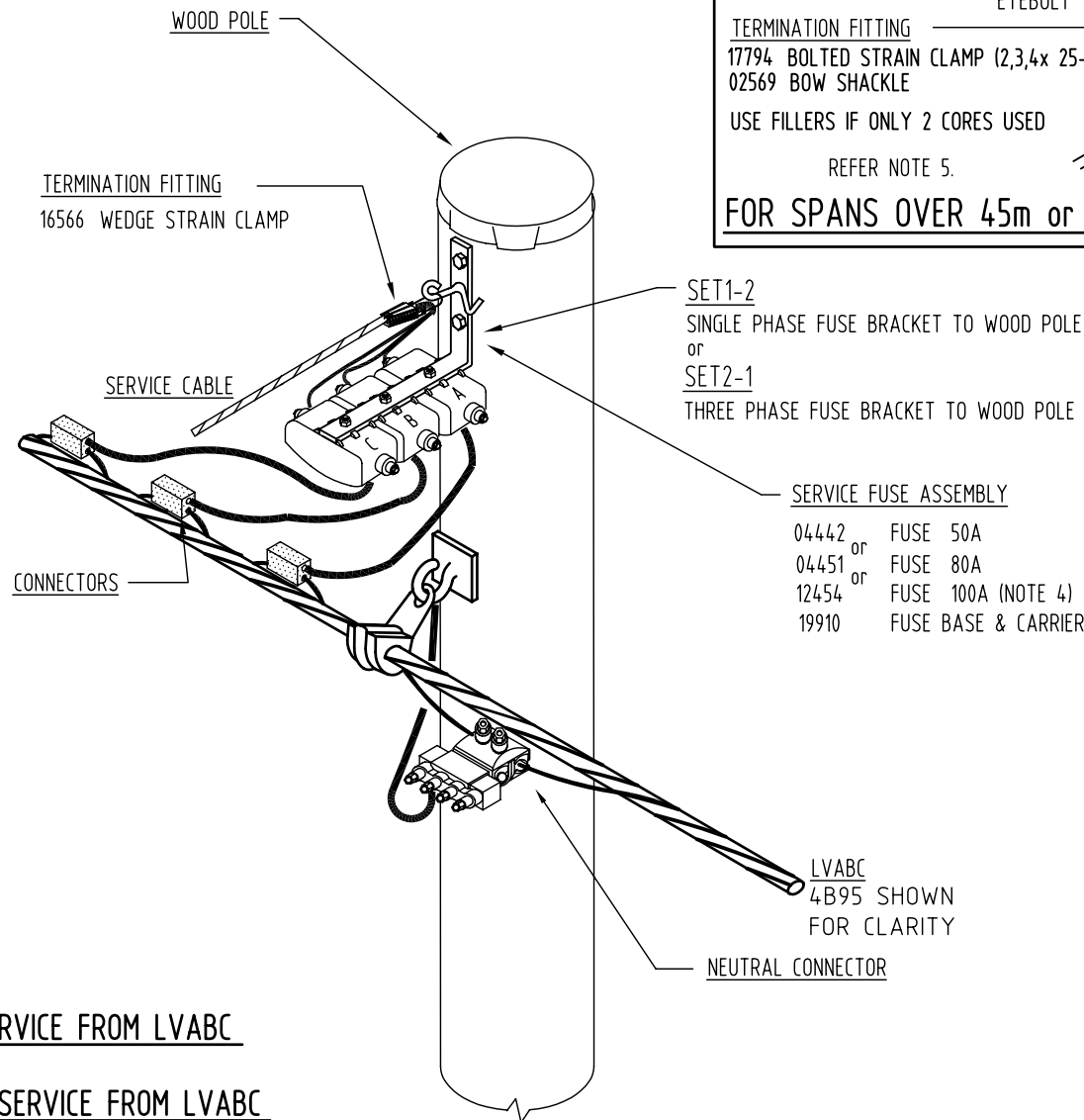
SECTION 2, PAGE 2-43

CONNECTORS

SECTION 8, PAGE 8-34

NOTES :

1. Three phase service arrangement shown.
2. No service shall be erected below LVABC.
3. Standard service fuse assembly included in material list.
4. 100A fuse links used with 4B35 service cables only.
5. Bolted strain clamp is for use in service spans OVER 45m OR if maximum working tension exceeds 1kN.

S1B/W & S1B/W45 - ONE PHASE SERVICE FROM LVABC**S3B/W & S3B/W45 - THREE PHASE SERVICE FROM LVABC**

ORIGINAL ISSUE	DATE	15/11/06	APPD	K NUTTALL	CKD	J. TUNNEY	DRN	GAYAN	TWO PHASE REMOVED THREE PHASE SHOWN FOR CLARITY	DATE	13/10/08	APPD	R. ENGLISH	CKD	J. TUNNEY	DRN	C. DAVISON	SC 16574 CHANGED TO SC 19910 SC17793 DELETED
A	I									J								



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OVERHEAD CONSTRUCTION MANUAL

SERVICES

S1B/W & S1B/W45
S3B/W & S3B/W45 (WOOD POLE)
ONE & THREE PHASE SERVICE FROM LVABC

APP'D	M.GRIFFIN	TECH STDS	AUTOCAD
DATE	15-10-93	4920-A4	J
REC'D		SECT	PAGE
CKD	D.McKENZIE	2	1
DWN	M.WELSH	SHEET	1 OF 1
FILE:DWG_OH\4920A4\S2\S2-1.DWG			

CU LIST -

	S1B/C	S3B/C	S1B/C45	S3B/C45
SET1-2C	1		1	
SET2-1C		1		1
SET3-3			1	1
04442	AR	AR	AR	AR
04451	AR	AR	AR	AR
12454		AR		AR
19910	1	3	1	3
16566	2	2		
17794			2	2

SERVICE CABLE

SECTION 2, PAGE 2-43

CONNECTORS

SECTION 8, PAGE 8-34

NOTES :

1. Three phase service arrangement shown.
2. No service shall be erected below LVABC.
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4. 100A fuse links used with 4B35 service cables only.
5. Bolted strain clamp is for use in service spans OVER 45m OR if maximum working tension exceeds 1kN.

S1B/C & S1B/C45 - ONE PHASE SERVICE FROM LVABC**S3B/C & S3B/C45 - THREE PHASE SERVICE FROM LVABC**CONCRETE POLETERMINATION FITTING

16566 WEDGE STRAIN CLAMP

SERVICE CABLECONNECTORSTERMINATION FITTING17794 BOLTED STRAIN CLAMP (2,3,4x25-35MM²)
USE FILLERS IF ONLY 2 CORES USED

REFER NOTE 5.

FOR SPANS OVER 45m or if MWT exceeds 1kNSET1-2CSINGLE PHASE FUSE BKT TO CONC POLE
orSET2-1C

THREE PHASE FUSE BKT TO CONC POLE

SERVICE FUSE ASSEMBLY

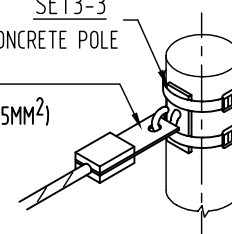
04442	FUSE	50A
04451	or FUSE	80A
12454	or FUSE	100A (NOTE 4)
19910	FUSE BASE & CARRIER	

LVABC

4B95 SHOWN FOR CLARITY

NEUTRAL CONNECTORSET3-3

SUPPORT HOOK TO CONCRETE POLE



ORIGINAL ISSUE	DATE	15/11/06	APPD	K.NUTTALL	CKD	J.TUNNEY	DRN	GAYAN	TWO PHASE REMOVED THREE PHASE SHOWN FOR CLARITY	DATE	13/10/08	APPD	R. ENGLISH	CKD	J. TUNNEY	DRN	C. DAVISON	SC 16574 CHANGED TO SC 19910 SC 17793 DELETED
A	J									K								



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permission from ENERGEX**OVERHEAD CONSTRUCTION MANUAL****SERVICES****S1B/C & S1B/C45
S3B/C & S3B/C45 (CONCRETE POLE)
ONE & THREE PHASE SERVICE FROM LVABC**

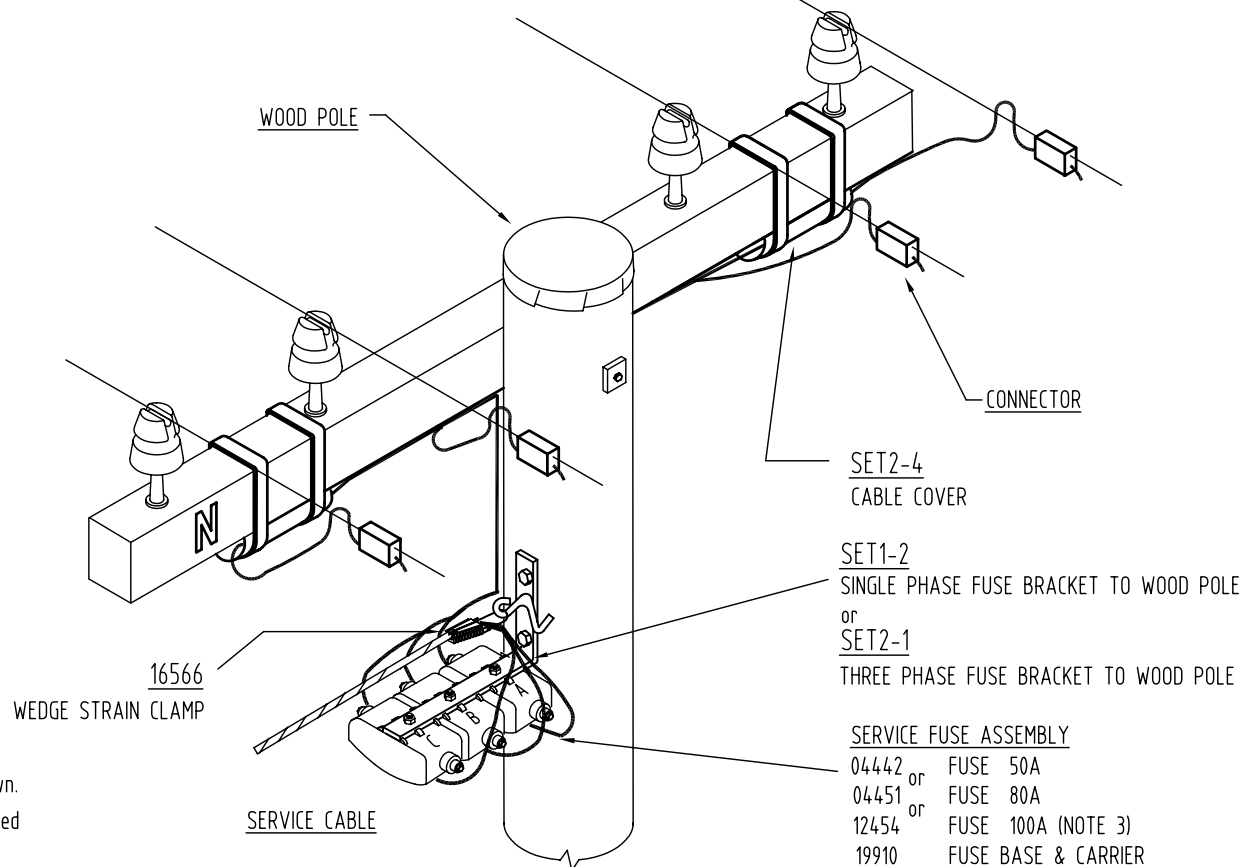
APP'D	M.GRIFFIN	TECH STDS		AUTOCAD
DATE	15-10-93	4920-A4		K
REC'D		SECT	PAGE	
CKD	D.McKENZIE	2	2	
		SHEET 1 OF 1		
DWN	M.WELSH	FILE:		

CU LIST -	S10/W	S20/W	S30/W	S10/W45	S20/W45	S30
SET1-2	1			1		
SET2-1		1	1		1	1
SET101-3			1	1		
SET2-4	3	4	6	3	4	6
04442	AR	AR	AR	AR	AR	AR
04451	AR	AR	AR	AR	AR	AR
12454			AR			AR
19910	1	2	3	1	2	3
16566	2	2	2			
17794				2	2	2
02569				2	2	2

SET1-2	1			1		
SET2-1		1	1		1	1
SET101-3			1	1		
SET2-4	3	4	6	3	4	6
04442	AR	AR	AR	AR	AR	AR
04451	AR	AR	AR	AR	AR	AR
12454			AR			AR
19910	1	2	3	1	2	3
16566	2	2	2			
17794				2	2	2
02569				2	2	2

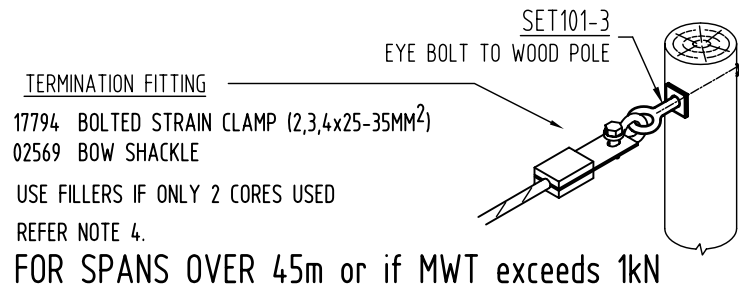
NOTES :


1. Three phase service arrangement shown.
2. Standard service fuse assembly included in material list.
3. 100A fuse links used with 4B35 service cables only.
4. Bolted strain clamp is for use in service spans OVER 45m OR if maximum working tension exceeds 1kN.



<u>SERVICE FUSE ASSEMBLY</u>	
04442	FUSE 50A
04451	FUSE 80A
12454	FUSE 100A (NOTE 3)
19910	FUSE BASE & CARRIER

S10/W & S10/W45 - ONE PHASE SERVICE FROM OPEN WIRE MAINS
S20/W & S20/W45 - TWO PHASE SERVICE FROM OPEN WIRE MAINS
S30/W & S30/W45 - THREE PHASE SERVICE FROM OPEN WIRE MAINS



A	ORIGINAL	ISSUE	SC 16574: CHANGED TO SC 19910 SC 17793 deleted	 ©COPYRIGHT 2008 ENERGEX This drawing must not be reproduced in part or whole without written permission from ENERGEX	OVERHEAD CONSTRUCTION MANUAL		APP'D	M.GRIFFIN	TECH STDS		AUTOCAD
	DATE	15/11/06					DATE	15-10-93	4920-A4		J
	APPD	K.NUTTALL					REC'D		SECT	PAGE	
	CKD	J.TUNNEY					2	3			
	DRN	GAYAN					CKD	D.McKENZIE	SHEET 1 OF 1		
TEMPLATE CHANGED SET2-4: UPDATED					DWN	M.WELSH	FILE:DWG_OH\4920A4\52\S2-3.DWG				

CU LIST -

	S10/C	S20/C	S30/C	S10/C45	S20/C45	S30/C45
SET1-2C	1			1		
SET2-1C		1	1		1	1
SET3-3				1	1	1
SET2-4	3	4	6	3	4	6
04442	AR	AR	AR	AR	AR	AR
04451	AR	AR	AR	AR	AR	AR
12454			AR			AR
19910	1	2	3	1	2	3
16566	2	2	2			
17794				2	2	2

SERVICE CABLE
SECTION 2, PAGE 2-43

CONNECTORS
SECTION 8, PAGE 8-34

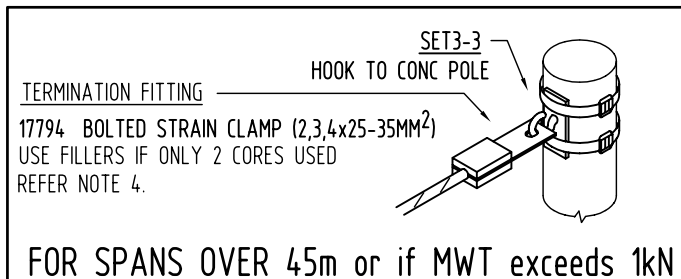
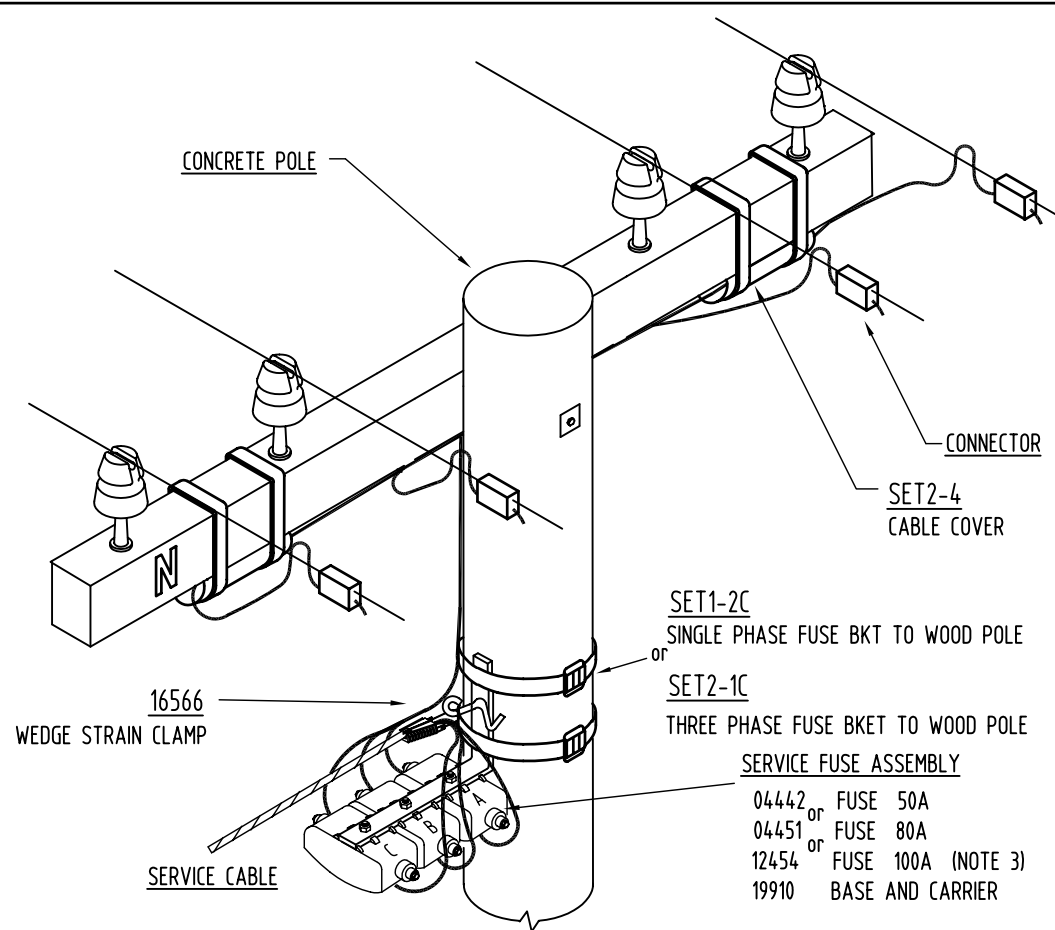
NOTES :

1. Three phase service arrangement shown.
2. Standard service fuse assembly included in material list.
3. 100A fuse links used with 4B35 service cables only.
4. Bolted strain clamp is for use in service spans OVER 45m OR if maximum working tension exceeds 1kN

S10/C & S10/C45 - ONE PHASE SERVICE FROM OPEN WIRE MAINS

S20/C & S20/C45 - TWO PHASE SERVICE FROM OPEN WIRE MAINS

S30/C & S30/C45 - THREE PHASE SERVICE FROM OPEN WIRE MAINS



ORIGINAL ISSUE	DATE	APPD	CKD	DRN	NEW TEMPLATE	FUSE ASSEMBLY	UPDATED	DATE	APPD	CKD	DRN	SC 16574 CHANGED TO SC 19910	SC 17993 DELETED
A	G	APPD KNUUTTALL	CKD J.TUNNEY	DRN GAYAN	NEW TEMPLATE	FUSE ASSEMBLY	UPDATED	H	APPD R. ENGLISH	CKD J. TUNNEY	DRN C. DAVISON	SC 16574 CHANGED TO SC 19910	SC 17993 DELETED



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OVERHEAD CONSTRUCTION MANUAL

SERVICES

S10/C, S20/C, S30/C (CONCRETE POLE)
S10/C45, S20/C45, S30/C45
ONE, TWO & THREE PHASE SERV FROM O/H MAINS

APP'D	M.GRIFFIN	TECH STDS	AUTOCAD
DATE	15-10-93	4920-A4	H
REC'D		SECT	PAGE
CKD	D.McKENZIE	2	4
DWN	M.WELSH	SHEET	1 OF 1
FILE:			

CU LIST -

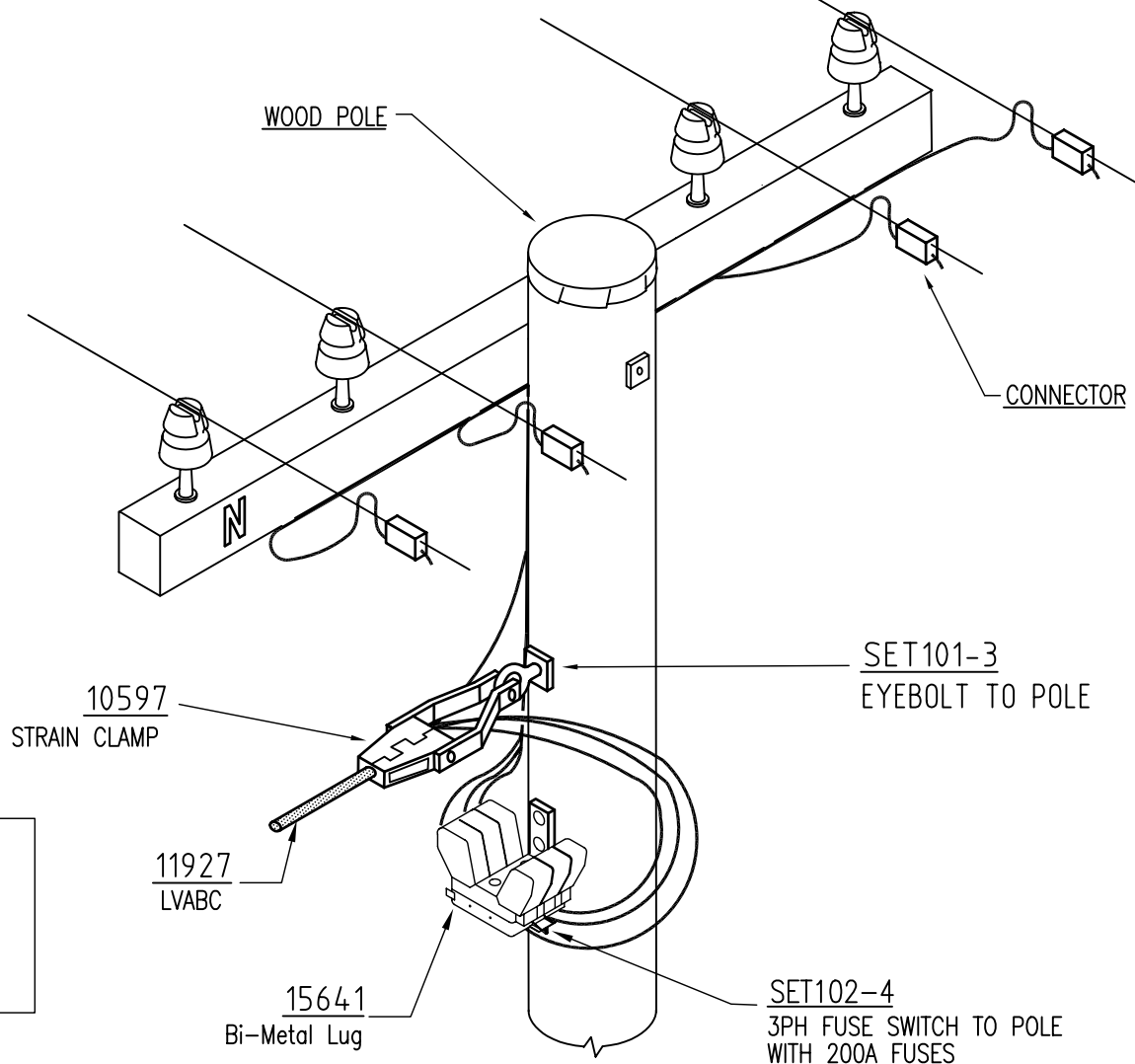
SBOW

SET101-3	1
SET102-4	1
10597	2
15641	6
11927	AR


CONNECTORS
SECTION 8, PAGE 8-33

STOCK CODES FOR ALTERNATE FUSES

13897 FUSE - 160A
13898 FUSE - 200A



SBOW - LVABC SERVICE FROM OPEN WIRE MAINS

A	ORIGINAL ISSUE		APPD K.NUTTALL	CKD J.TUNNEY	DRN	SET102-4, UPDATED 15641 added NEW TEMPLATE		 ©COPYRIGHT 2006 ENERGEX This drawing must not be reproduced in part or whole without written permission from ENERGEX	OVERHEAD CONSTRUCTION MANUAL <u>SERVICES</u> SBOW (WOOD POLE) LVABC SERVICE FROM OPEN WIRE MAINS	APP'D M GRIFFIN	TECH STDS		AUTOCAD	
	DATE 15/11/06									4920-A4				D
	REC'D									SECT 2		PAGE 7		
	CKD C Marino									SHEET 1 OF 1				
	DWN M Welsh									FILE:				

CU LIST -

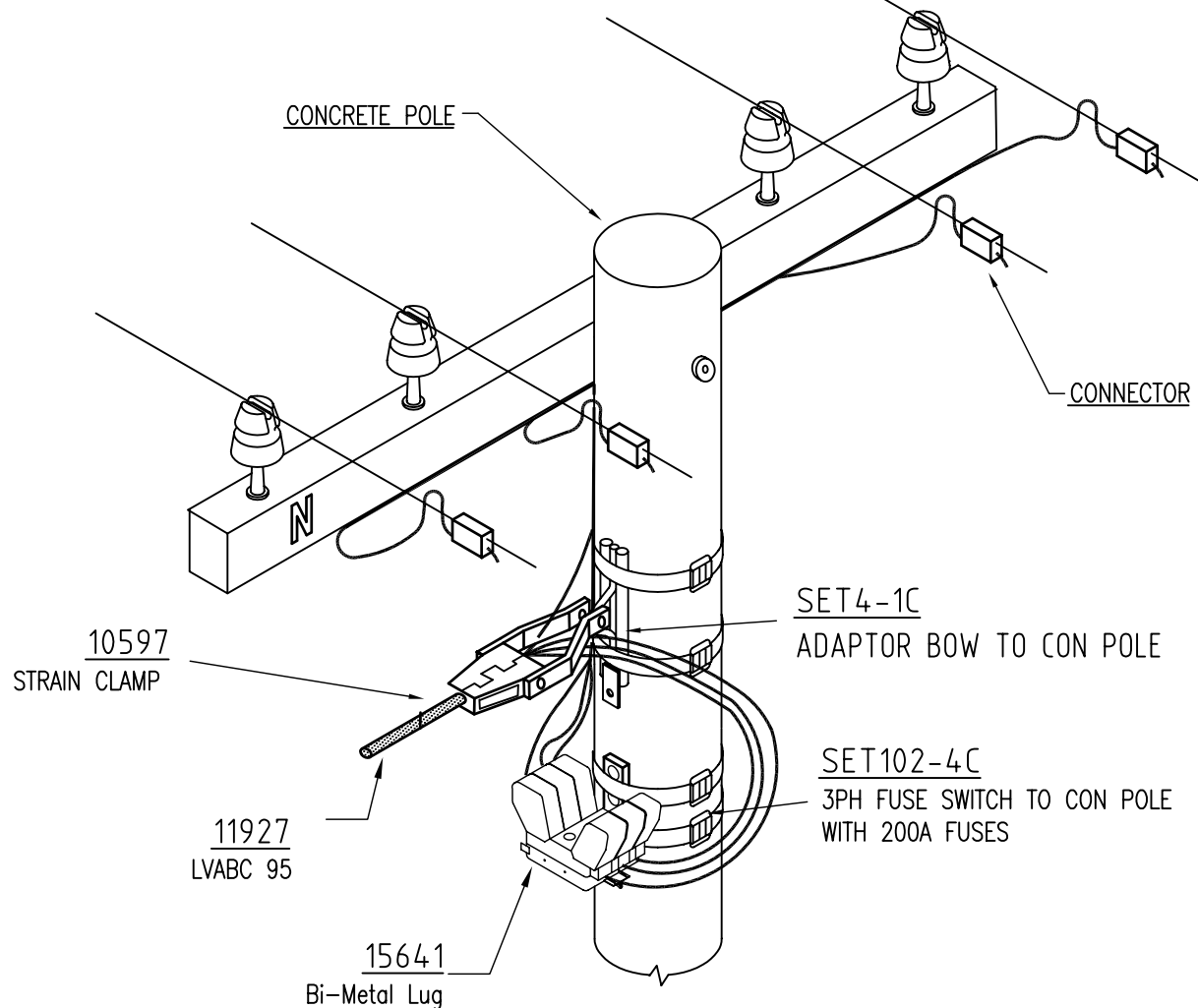
SBOC

SET4-1C	1
SET102-4C	1
00895	2
15780	1
13899	3
10597	2
15641	6
11927	AR

CONNECTORS
SECTION 8, PAGE 8-33

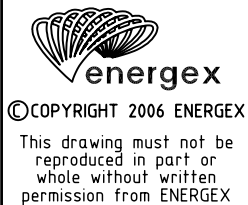
STOCK CODES FOR ALTERNATE FUSES

13897 FUSE - 160A
13898 FUSE - 200A



SBOC - LVABC SERVICE FROM OPEN WIRE MAINS

ORIGINAL ISSUE	DATE	APPD	CKD	DRN	NEW TEMPLATE
A	15/11/06	KNUUTTALL	J.TUNNEY		SET4-1C ADDED SET102-4C UPDATED.



OVERHEAD CONSTRUCTION MANUAL

SERVICES

SBOC

(CONCRETE POLE)

LVABC SERVICE FROM OPEN WIRE MAINS

APP'D	M Griffin	TECH STDS	AUTOCAD
DATE	15/10/93	4920-A4	D
REC'D		SECT	PAGE
CKD	C Marino	2	8
DWN	M Welsh	SHEET	1 OF 1
FILE:			

CU LIST -

	SFA	SFAC
SET51-1	1	
SET51-1C		1
SET53-1	1	
SET53-1C		1
SET3-2	3	3
SET2-4	4	4
21306 (XARM)	1	1

21306
COMPOSITE X-ARM

SET53-1
BRACE TO POLE
or
SET53-1C
BRACE TO CON POLE

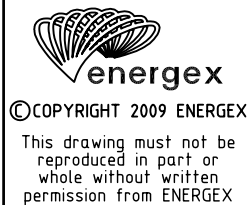
SET51-1
X-ARM TO POLE
or
SET51-1C
X-ARM TO CON POLE

SET3-2
FUSE-SWITCH TO X-ARM (630A)

SET2-4
CABLE COVER

SFA - SERVICE FUSE ARM (WOOD POLE)
SFAC - SERVICE FUSE ARM (CONCRETE POLE)

ORIGINAL ISSUE	DATE	APP'D	CKD	DRN	UPDATED FOR COMPOSITE XARM
A	23-7-09	E	J. TUNNEY		
		RENGISH			



OVERHEAD CONSTRUCTION MANUAL

SERVICES
SFA, SFAC
SERVICE FUSE-SWITCH X-ARM

APP'D	M Griffin	TECH STDS	AUTOCAD
DATE	15-10-93	4920-A4	E
REC'D		SECT	PAGE
CKD	C Marino	2	9
DWN	M Welsh	SHEET	1 OF 1
FILE:DWG_OH\4920A4\S2\S2-9.DWG			

CU LIST -

SFOX

SET101-3

2

06496

AR

06442

3

02604

2

16566

2

10490

AR

16023

AR

4929

AR

TO SERVICE
FUSE ASSEMBLY16023
CONDUIT4929
SADDLEWHERE EYEBOLT ALREADY
INSTALLED USE EYENUT 08989

POLE "C"

DETAIL A

DETAIL B

02604
CLEVISSET101-3
EYE BOLT

POLE "D"

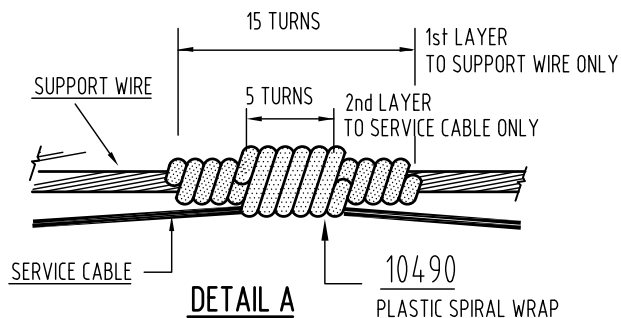
TO CUSTOMER

NOTES :

1. SERVICE CABLE SHALL NOT CROSS ROADWAY IF UNSUPPORTED
2. SERVICE CABLE AND FITTINGS NOT INCLUDED.
3. NO MORE THAN ONE SERVICE CABLE FROM EACH END IS ALLOWED
4. MAXIMUM SIZE SERVICE CABLE IS 4B35
5. FIRST LAYER OF PLASTIC SPIRAL WRAP IS TO BE APPLIED TO THE SUPPORT WIRE AND THE 2ND LAYER TO SERVICE CABLE
6. RESIDUAL POLE STRENGTH MUST BE ASSESSED PRIOR TO INSTALLATION OF SUPPORT WIRE

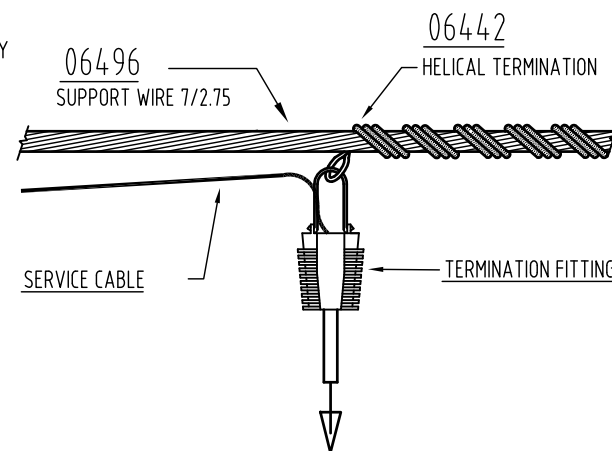
REQUIRED CLEARANCES FROM F/FOX TO THE FOLLOWING CABLES
(BETWEEN POLE C & D)

		ON POLE (m)	IN SPAN (m)
11kV MAINS	BARE INSULATED	1.5	1.5
		1.5	1.5
LV & SL MAINS	BARE INSULATED	0.45	0.75
		0.3	0.6
COMMUNICATION CABLES		0.3	0.6
OTHER - STAYWIRES		0.3	0.5



SERVICE CABLE TO SUPPORT WIRE

SUPPORT WIRE INSTALLATION TABLE		
SPAN (m)	SAG (m) without service wire	Tension (kN)
40	0.4	1.5
50	0.5	2.1
60 max	0.6	2.3

DETAIL B
SERVICE CABLE TEE OFF

SFOX - FLYING FOX SERVICE (WOOD POLE)

ORIGINAL ISSUE	DATE	04/07/16	APP'D	F. ZAINI	P. RELF	P. RELF
A	H		APP'D	F. ZAINI	CKD	DRN

Changed 6479 - rope
thimble to 2604 clevis

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OVERHEAD CONSTRUCTION MANUAL

SERVICES

SFOX
FLYING FOX SERVICE
(WOOD POLE)

APP'D Paul Rainbird

DATE 31-05-96

REC'D John Tunney

CKD Greg Dowling

DWN M. Welsh

TECH STDS AUTOCAD

4920-A4 H

SECT PAGE

2 10

SHEET 2 OF 1

FILE:ocm/s2/ohc2-10h.dwg

CU LIST -

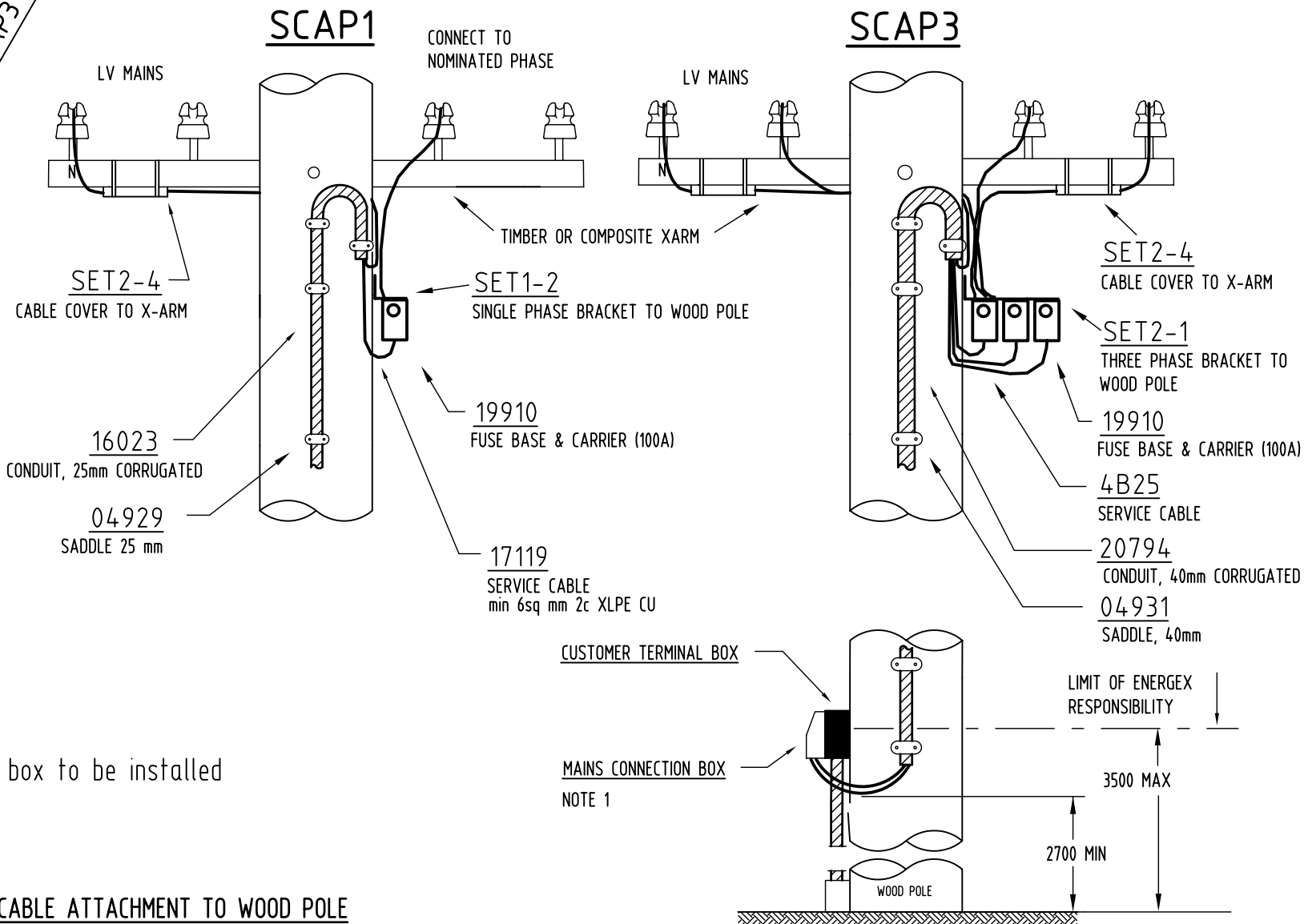
SCAP1
SCAP3

SET1-2	1	
SET2-1		1
SET2-4	1	2
19910	1	3
17119	AR	
4B25		AR
16023	AR	
04929	10	
20794		AR
04931		10

CONNECTORS
SECTION 8, PAGE 8-34

NOTES

1. Mains connection box to be installed by customer

SERVICE CABLE ATTACHMENT TO WOOD POLE

ORIGINAL ISSUE	DATE	15/11/06	APPD	K.NUTTALL	CKD	J.TUNNEY	DRN	A.McCOOK	NEW TEMPLATE	SET1-2 ADDED GROUND CLEARANCE CHANGED	DATE	13/10/08	APPD	R. ENGLISH	CKD	J. TUNNEY	DRN	C. DAVISON	SC 16574 CHANGED TO SC 19910
A	G										H								



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OVERHEAD CONSTRUCTION MANUAL

SERVICES

SCAP1, SCAP3

SERVICE CABLE ATTACHMENT TO WOOD POLE

APP'D	TECH STDS	AUTOCAD
DATE	4920-A4	H
REC'D	SECT	PAGE
CKD	2	11
DWN	N.MANOLIS	SHEET 1 OF 1
FILE:		

CU LIST -

SCAPC1
SCAPC3

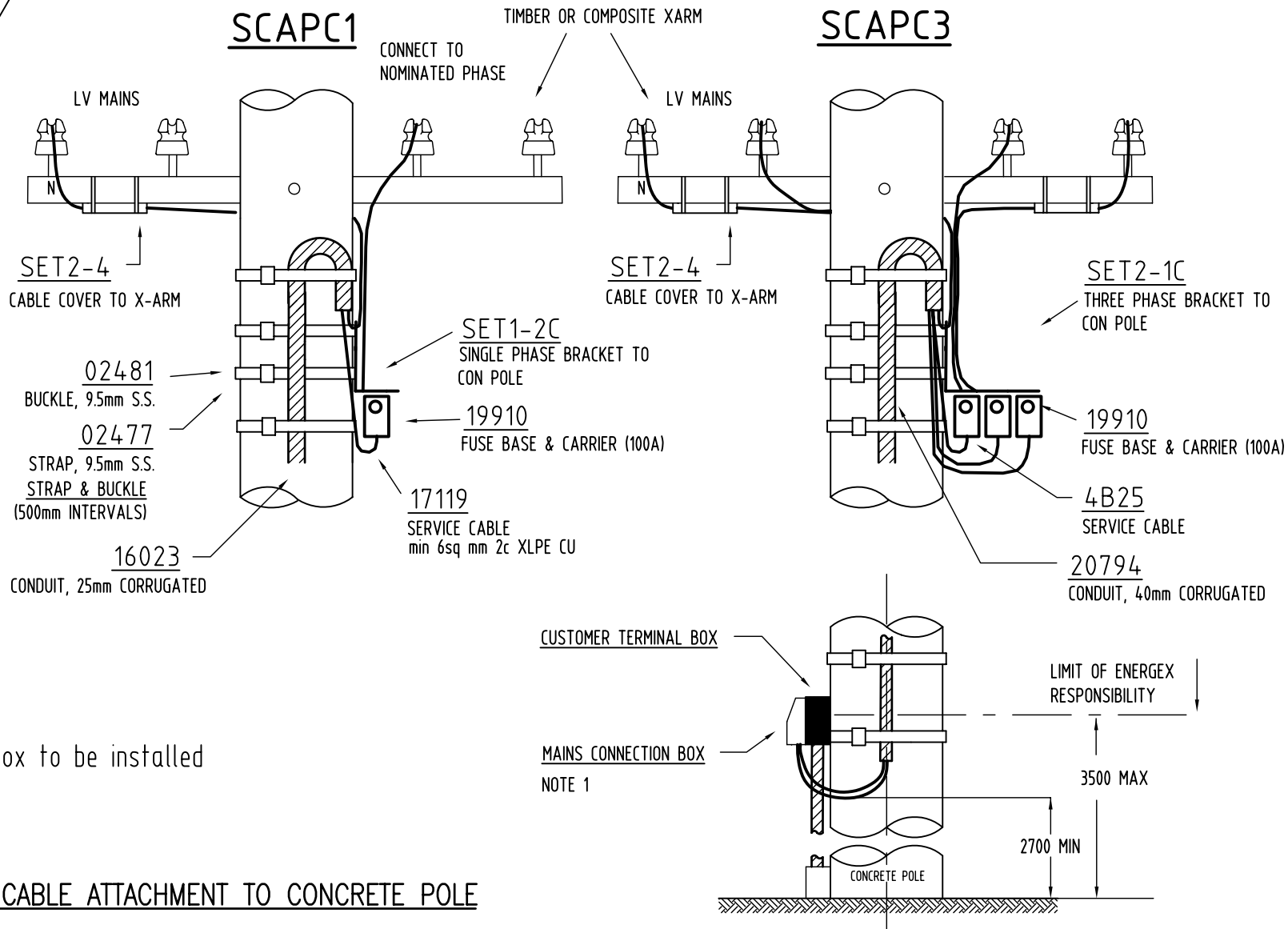
SET1-2C	1	
SET2-1C	1	
SET2-4	1	2
19910	1	3
17119	AR	
4B25		AR
16023	AR	
20794		AR
02477	AR	AR
02481	AR	AR


CONNECTORS
SECTION 8, PAGE 8-34

NOTES

1. Mains connection box to be installed by customer

SERVICE CABLE ATTACHMENT TO CONCRETE POLE



ORIGINAL ISSUE	DATE	15/11/06	APPD	KNUUTTALL	CKD	J. TUNNEY	DRN	A. MCCOOK	3PH ADDED SET2-4 ADDED CLEARANCES CHANGED	DATE	13/10/08	APPD	R. ENGLISH	CKD	J. TUNNEY	DRN	C. DAVISON	SC 16574 CHANGED TO SC 19910		 energex ©COPYRIGHT 2008 ENERGEX This drawing must not be reproduced in part or whole without written permission from ENERGEX
A	G									H										

OVERHEAD CONSTRUCTION MANUAL

SERVICES

SCAPC1, SCAPC3

SERVICE CABLE ATTACHMENT TO CONCRETE POLE

APP'D	M. Griffin	TECH STDS	AUTOCAD
DATE	15/10/93	4920-A4	H
REC'D		SECT	PAGE
CKD	C. Marino	2	12
DWN	M. Welsh	SHEET	1 OF 1
FILE:			

SBOWDS

SET101-3	1
SET102-1	1
SET4-4	1
10597	2
11927	AR
15641	12

CONNECTORS

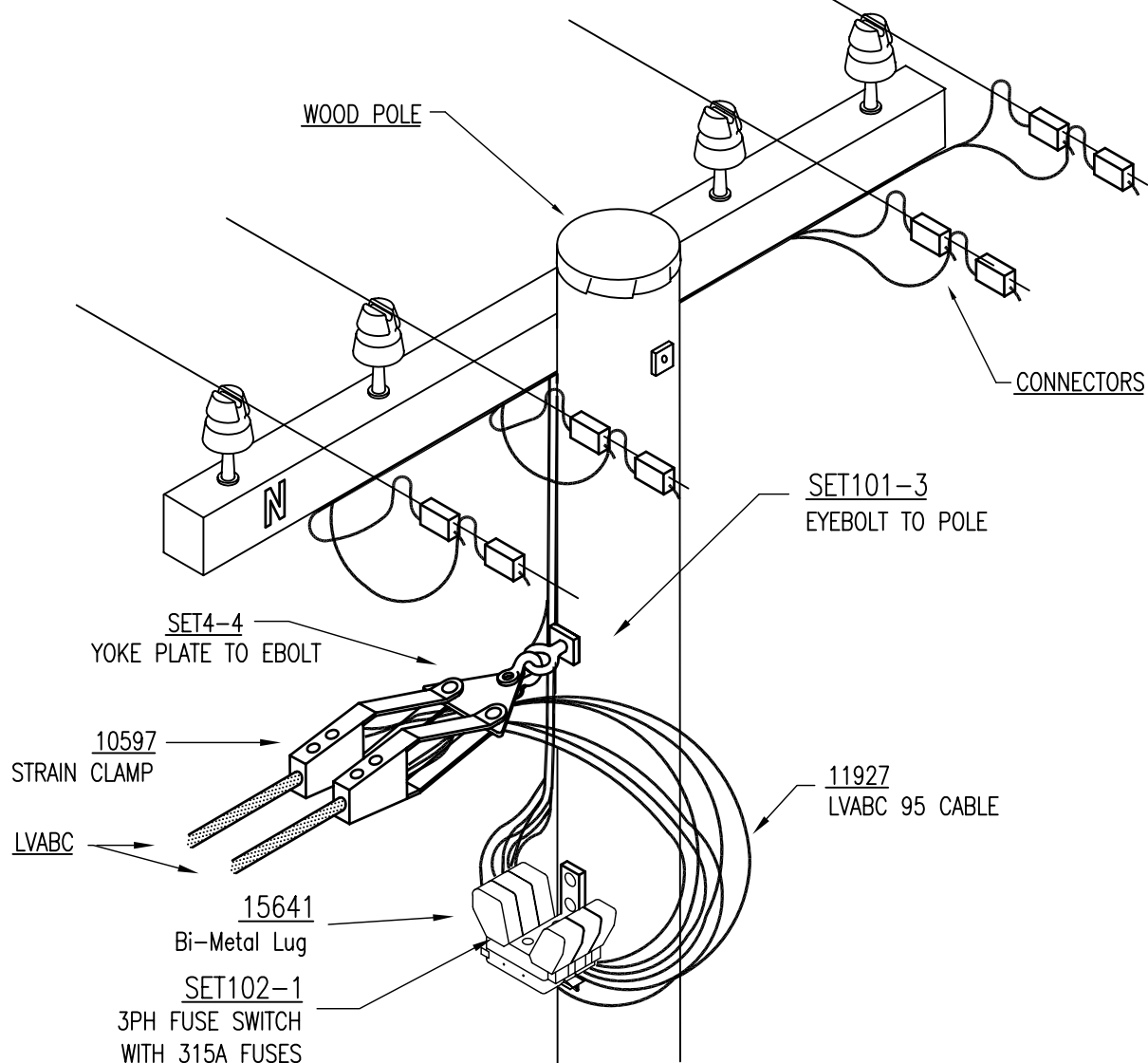
SECTION 8, PAGE 8-33

STOCK CODES FOR ALTERNATE FUSES


13899	FUSE – 250A
15118	FUSE – 315A

NOTE

WHERE SERVICE CABLES ARE REQUIRED TO BE
INSTALLED VERTICALLY, ROTATE POLE EYEBOLT
90 DEGREES



SBOWDS – PARALLEL LVABC SERVICE FROM OPEN WIRE MAINS

A	ORIGINAL ISSUE	C	DATE	15/11/06	APPD K.NUTTALL	CKD J.TUNNEY	DRN A. MCCOOK	YOKE PLATE ADDED		 ©COPYRIGHT 2006 ENERGEX This drawing must not be reproduced in part or whole without written permission from ENERGEX	OVERHEAD CONSTRUCTION MANUAL		APP'D Paul Rainbird	TECH STDS		AUTOCAD
				DATE							15-12-97	4920-A4		C		
				REC'D J Tunney							SECT 2	PAGE 13				
				CKD J Tunney							SHEET 1 OF 1					
				DWN J Hill							FILE:					

CU LIST -

SBOW20PT

SET101-3	1
SET102-1	1
SET4-4	1
14090	2
10597	2
11927	AR
15641	18

SERVICE CABLE (LVABC)
SECTION 8

CONNECTORS
SECTION 8, PAGE 8-33

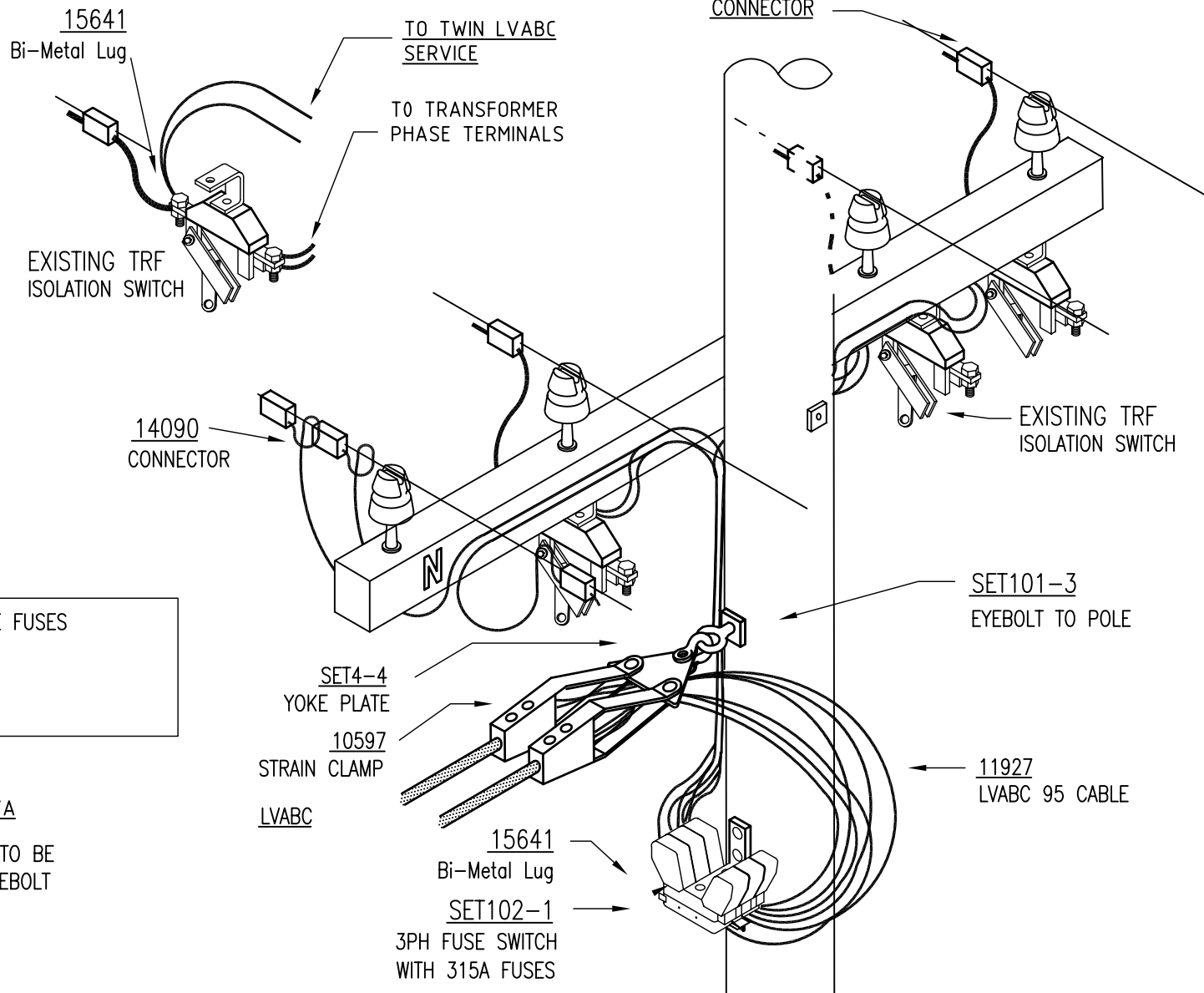
STOCK CODES FOR ALTERNATE FUSES

13899 FUSE - 250A
15118 FUSE - 315A

NOTES

315A (SC15118) FUSE CAN ONLY BE
USED ON TRANSFORMERS OVER 315kVA

WHERE SERVICE CABLES ARE REQUIRED TO BE
INSTALLED VERTICALLY, ROTATE POLE EYEBOLT
90 DEGREES



SBOW20PT

ORIGINAL ISSUE	DATE	APPD	CKD	DRN	YOKE PLATE ADDED
A	15/11/06	C	KNUUTTAL	J.TUNNEY	G.JAYAWEEERA



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OVERHEAD CONSTRUCTION MANUAL

SERVICES

SBOW20PT

(WOOD POLE)

TWIN LVABC SERVICE 400A FROM EXISTING
TRANSFORMER ISOLATION LINKS

APP'D Paul Rainbird

DATE 15-12-97

REC'D J Tunney

CKD J Tunney

DWN J Hill

TECH STDS AUTOCAD

4920-A4 C

SECT PAGE

2 14

SHEET 1 OF 1

FILE:

CU LIST -

SET4-2C	1
SET102-1C	1
SET4-4C	1
14090	2
10597	2
11927	AR
15641	18

SERVICE CABLE (LVABC)
SECTION 8

CONNECTORS
SECTION 8, PAGE 8-33

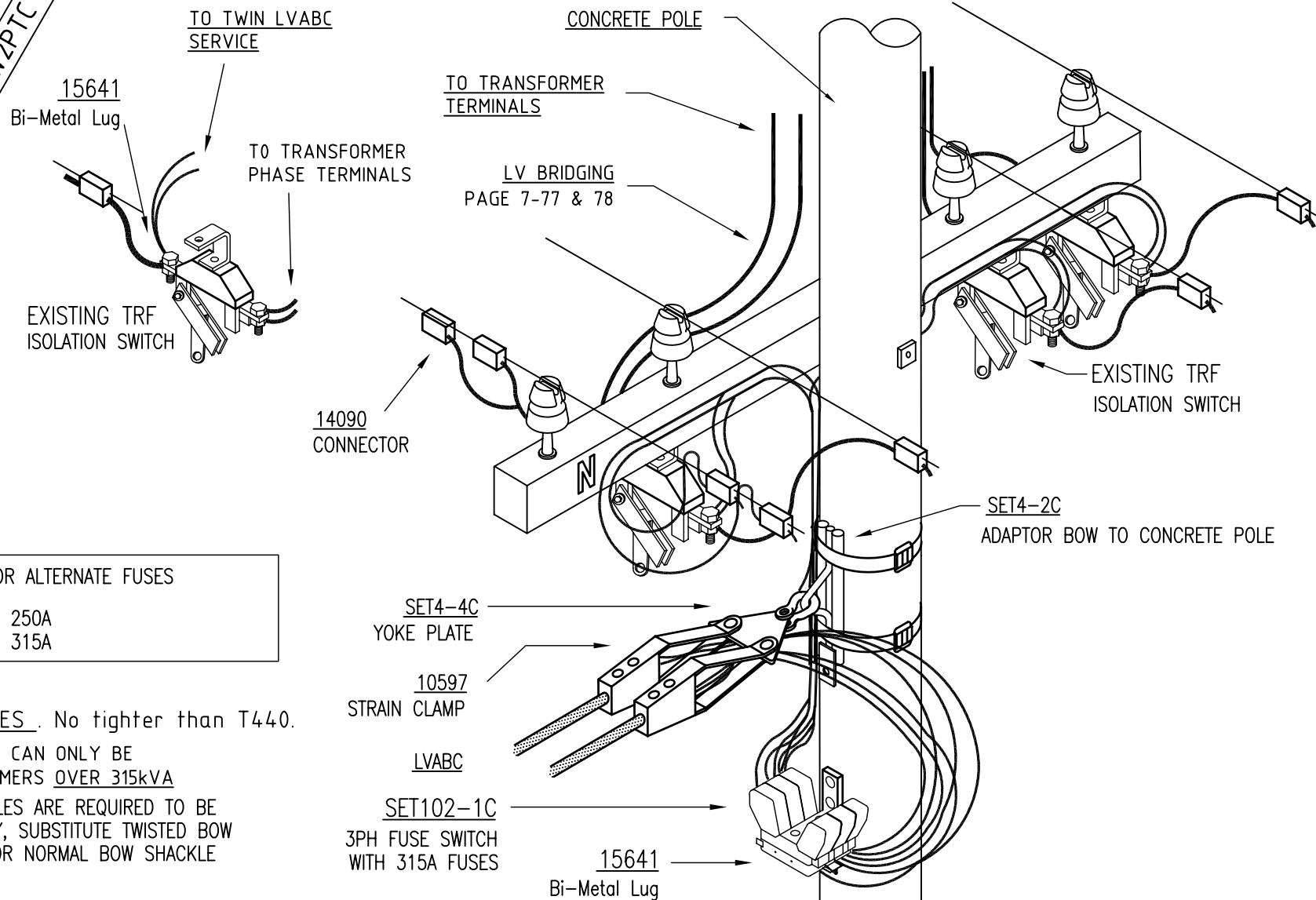
STOCK CODES FOR ALTERNATE FUSES

13899	FUSE - 250A
15118	FUSE - 315A

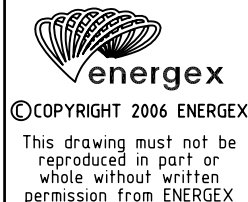
NOTES

1. STRINGING TABLES. No tighter than T440.
2. 315A FUSE (SC15118) CAN ONLY BE USED ON TRANSFORMERS OVER 315kVA
3. WHERE SERVICE CABLES ARE REQUIRED TO BE INSTALLED VERTICALLY, SUBSTITUTE TWISTED BOW SHACKLE AT POLE FOR NORMAL BOW SHACKLE SC 2569

SBOW2PTC-TWIN LVABC SERVICE TO 300kVA & OVER TRANSFORMER (CONC POLE)



ORIGINAL ISSUE	DATE 15/11/06	APPD KNUUTTALL	CKD J.TUNNEY	DRN G.JAYAWEEERA	YOKE PLATE ADDED
A	C				



OVERHEAD CONSTRUCTION MANUAL

SERVICES

SBOW2PTC

(CONCRETE POLE)
TWIN LVABC SERVICE FROM 300kVA AND OVER TRANSFORMER

APP'D Paul Rainbird	S&SD	AUTOCAD
DATE 15-12-97	4920-A4	C
REC'D J Tunney	SECT 2	PAGE 15
CKD J Tunney	SHEET 1 OF 1	
DWN J Hill	FILE:	

CU LIST -

SFOX

SFOXWC

SET4-2C	2	1
SET101-3		1
06496	AR	AR
06442	3	3
02604	2	2
16566	2	2
10490	AR	AR
16023	AR	AR
04929	AR	AR

NOTES:

- SERVICE CABLE SHALL NOT CROSS ROADWAY IF UNSUPPORTED
- SERVICE CABLE AND FITTINGS NOT INCLUDED.
- NO MORE THAN ONE SERVICE CABLE FROM EACH END IS ALLOWED
- MAXIMM SIZE SERVICE CABLE IS 4B35
- FIRST LAYER OF PLASTIC SPIRAL WRAP IS TO BE APPLIED TO THE SUPPORT WIRE AND THE 2ND LAYER TO SERVICE CABLE
- RESIDUAL POLE STRENGTH MUST BE ASSESSED PRIOR TO INSTALLATION OF SUPPORT WIRE

REQUIRED CLEARANCES FROM F/FOX TO THE FOLLOWING CABLES
(BETWEEN POLE C & D)

		ON POLE (m)	MID SPAN (m)
11kV MAINS	BARE	1.5	1.5
	INSULATED	1.5	1.5
LV MAINS	BARE	0.45	0.75
	INSULATED	0.3	0.6
COMMUNICATION CABLES		0.3	0.6
OTHER - STAYWIRES		0.3	0.5

ORIGINAL ISSUE	DATE	APP'D	DATE	F. ZAINI	P. RELF	P. RELF	Changed 6479 - rope thimble to 2604 clevins
A	C						



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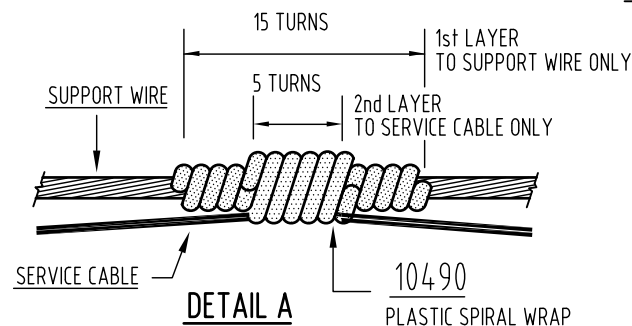
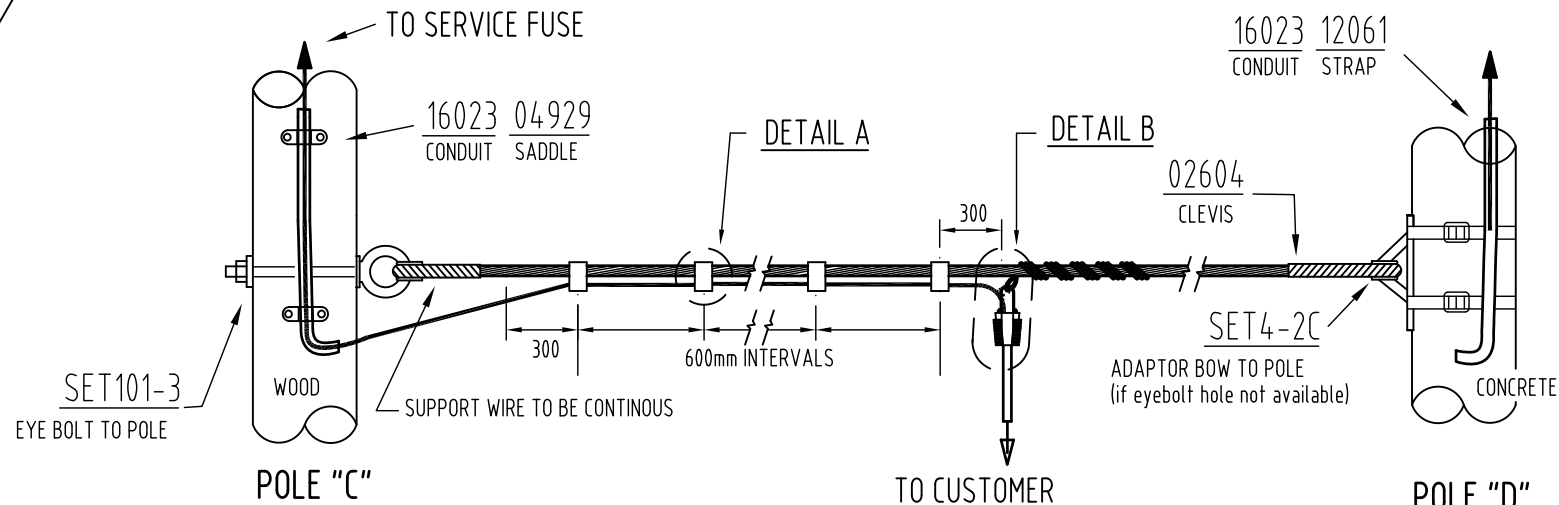
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OVERHEAD CONSTRUCTION MANUAL

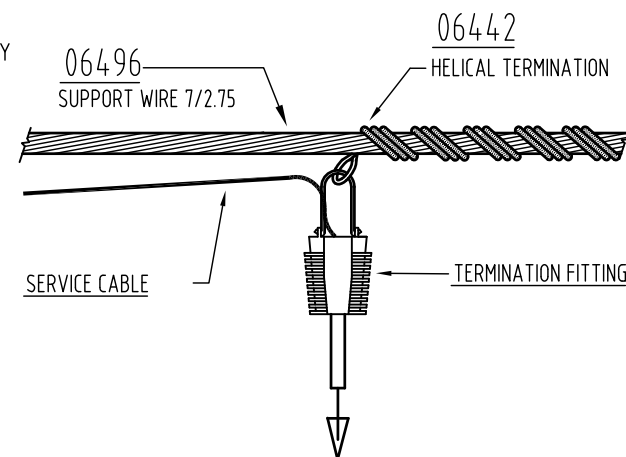
SERVICES

SFOX, SFOXWC
FLYING FOX SERVICE
(CONCRETE to WOOD POLE)

APP'D	K.NUTTALL	TECH STDS		AUTOCAD
DATE	04/10/06	4920-A4		C
REC'D	J.TUNNEY	SECT	PAGE	
CKD	B.SOMERS	2	16	
DWN	G.JAYAWEERA	SHEET 1 OF 1		FILE:



SERVICE CABLE TO SUPPORT WIRE

DETAIL B
SERVICE CABLE TEE OFF

SFOX - FLYING FOX SERVICE (CON POLE TO CON POLE)

SFOXWC - FLYING FOX SERVICE (CON POLE TO WOOD POLE)

CU LIST -

LVAUX

SET1-2	1
SET2-4	2
16574	1
04434	1
17119	AR
16023	6m
04929	AR
16091	1
00678	2
01043	2

NOTES

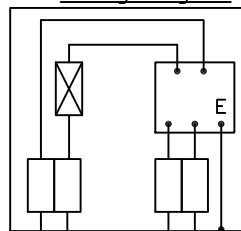
All wiring and associated equipment to be 150mm Min from Earth wire downlead (Earth wire not shown on drawing)
See Section 7 for Earthing Details

CONNECTORS

SECTION 8, PAGE 8-33

Isolation Transformer Assembly

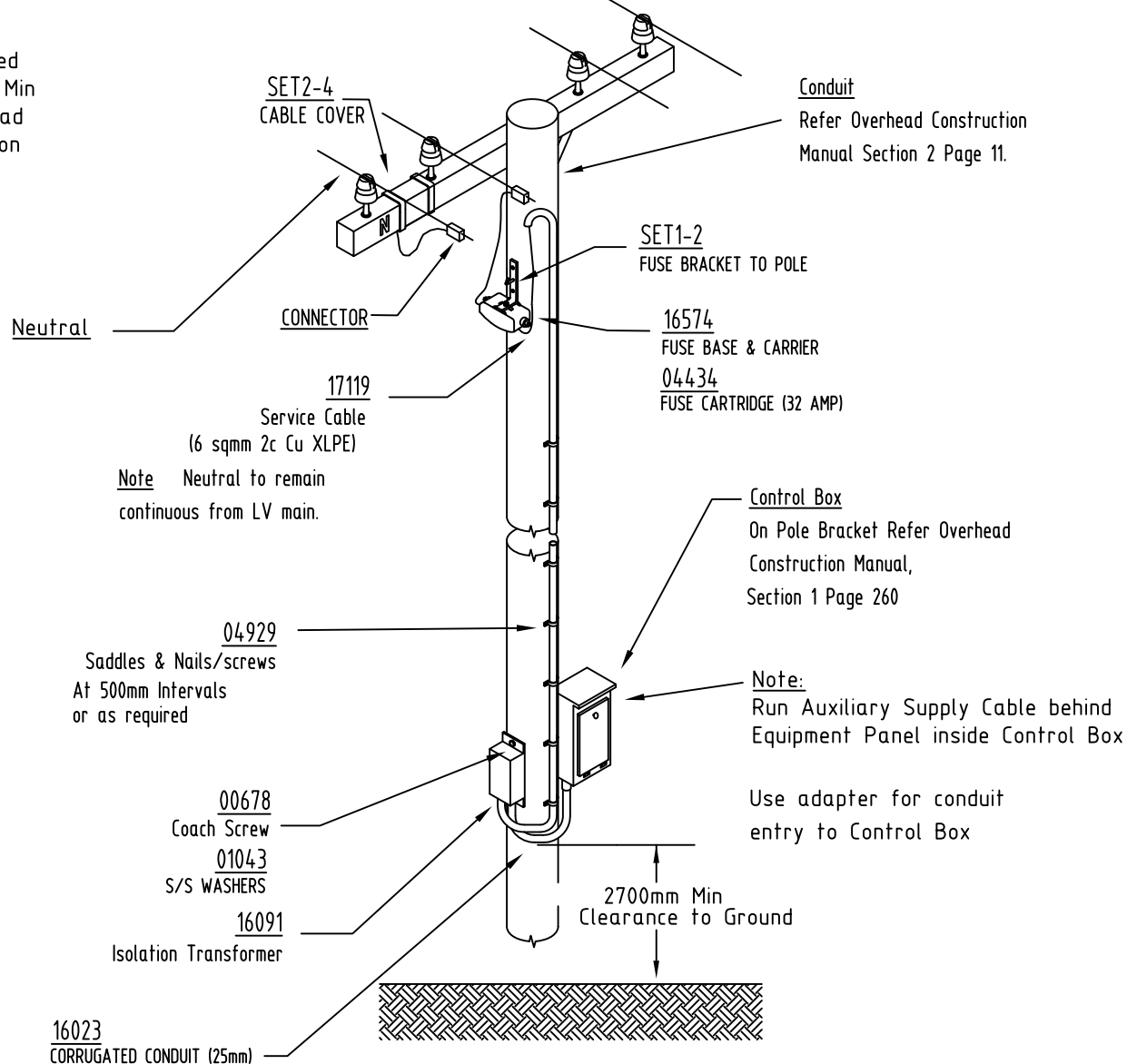
Wiring Diagram



Earth Stud M8

From OH Supply

Supply to Control Box



ORIGINAL ISSUE	DATE	APPD	CKD	DRN	DATE	APPD	CKD	DRN	Update isolation transformer assembly wiring diagram
A	15/11/06	K.NUTTALL	J.TUNNEY	G.JAYAWERA	31/08/10	R. ENGLISH	J. TUNNEY	P. RELF	
B									

M10 Earth Stud changed to M8 New Template SET2-4 ADDED.	
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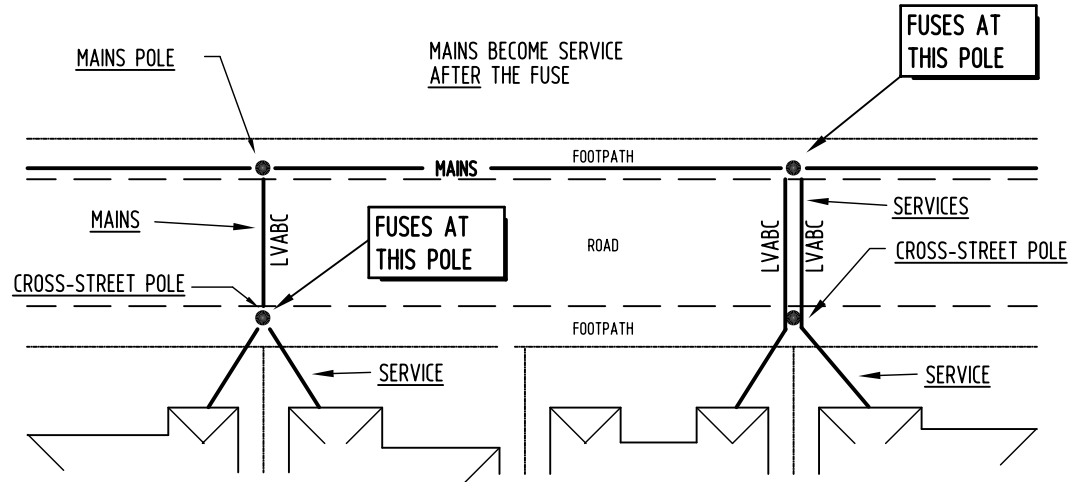
OVERHEAD CONSTRUCTION MANUAL

SERVICES

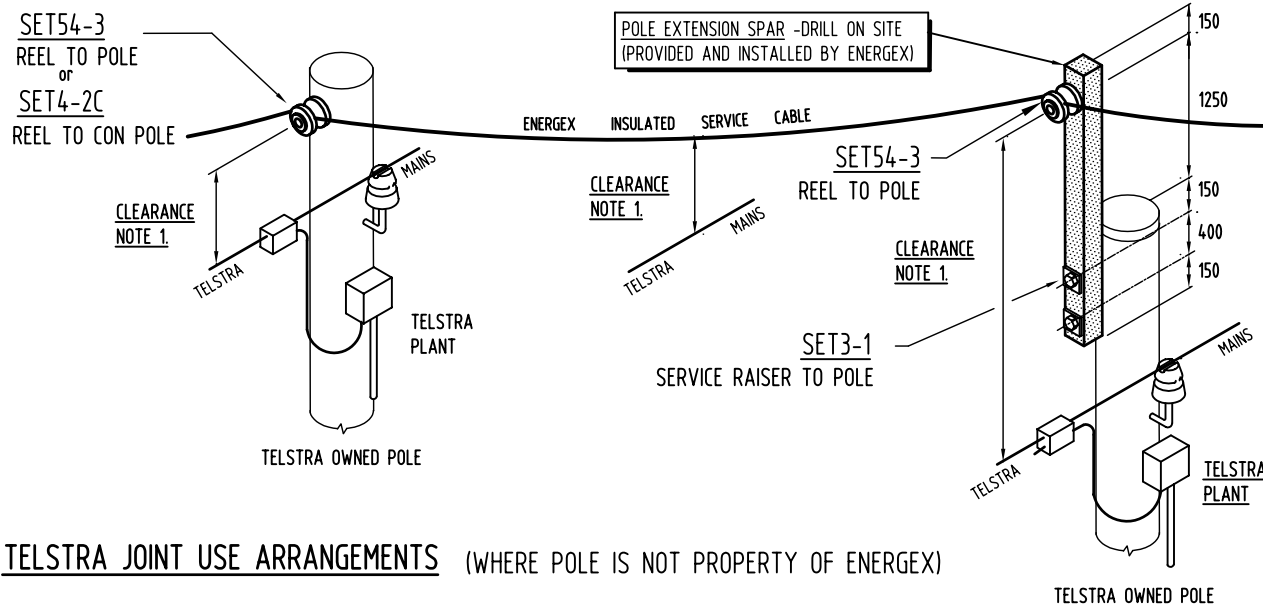
LVAUX

LV ISOLATION TRANSFORMER SUPPLY
SEPARATE EARTH AREAS

APP'D DARREN LLOYD	TECH STDS	AUTOCAD
DATE 14/06/02	4920-A4	C
REC'D KEN MILLERS	SECT 2	PAGE 20
CKD JOHN TUNNEY	SHT 1 OF 1	
DWN D.LANGLEY	FILE:	



CROSS-STREET SERVICING ARRANGEMENTS

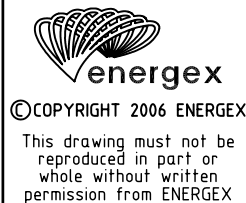


NOTE 1.

CLEARANCES	
TELSTRA INSULATED LINES, INSULATED TERMINAL BOX OR STAYWIRE.	0.6m
TELSTRA BARE LINE OR METAL TERMINAL BOX.	1.8m

TELSTRA JOINT USE ARRANGEMENTS (WHERE POLE IS NOT PROPERTY OF ENERGEX)

ORIGINAL ISSUE	DATE	APP'D	CKD	DRN	IN TO STOCK CODE
A	15/11/06	K.NUTTALL	J.TUNNEY	G.JAYAWERA	NEW TEMPLATE
E					SET4-2C ADDED



OVERHEAD CONSTRUCTION MANUAL

SERVICES

CROSS STREET SERVICING ARRANGEMENTS
TELSTRA JOINT USE ARRANGEMENT

APP'D	M.GRIFFIN	TECH STDS		AUTOCAD
DATE	15/10/93	4920-A4		E
REC'D		SECT	PAGE	
CKD	D.McKENZIE	2	22	
		SHEET 1 OF 1		
DWN	M.WELSH	FILE:		

CU LIST - SIS	
SET54-3 02595	1 AR

SIS - SERVICE INTERMEDIATE STRAIGHT LINE

CU LIST - SIA	
SET2-2 02595	1 AR

SIA - SERVICE INTERMEDIATE ANGLE

CU LIST - SIXC	
SET1-3 10490 16566	2 AR 2

SIXC - SERVICE INTERMEDIATE CROSSCHECK

CU LIST - SIS	
SET54-3 SET1-3 16566 02595 23730	1 2 2 AR AR

SIS - SERVICE INTERMEDIATE SHACKLE

CU LIST - SIXC45	
SET101-3 10490 17794 02569	2 AR AR 2

SIXC45 - SERVICE INTERMEDIATE CROSSCHECK > 45m

CU LIST - SIS45	
SET101-4 SET54-3 23730 2595 17794 02569	1 1 AR AR AR 2

SIS45 - SERVICE INTERMEDIATE SHACKLE > 45m

NOTE :

- Section of cable under Tie Wire is to be protected with three (3) layers of half lapped PVC Tape.
- Bolted strain clamp is for use in service spans OVER 45m OR if MWT exceeds 1kN.

ORIGINAL ISSUE	DATE 23-7-09	APPD A.SMITH DE PEREZ	CKD P. RELF	DRN P. JUDGE	SIS, SIS45 Connectors Modified
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OVERHEAD CONSTRUCTION MANUAL

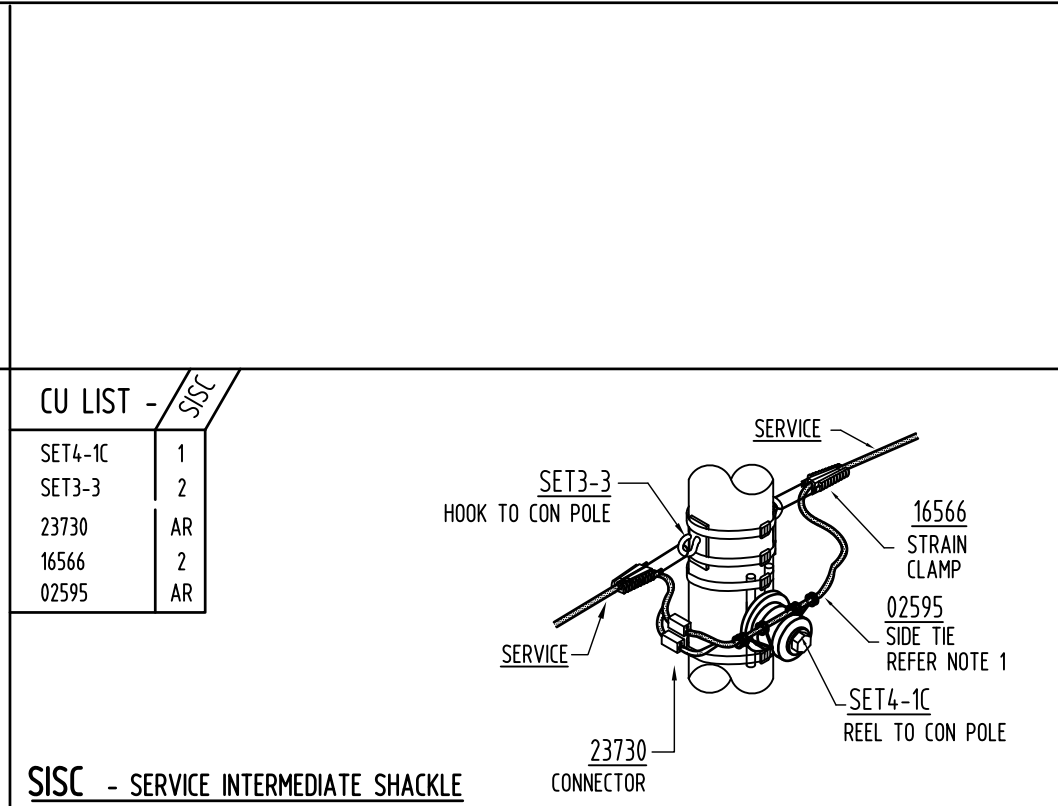
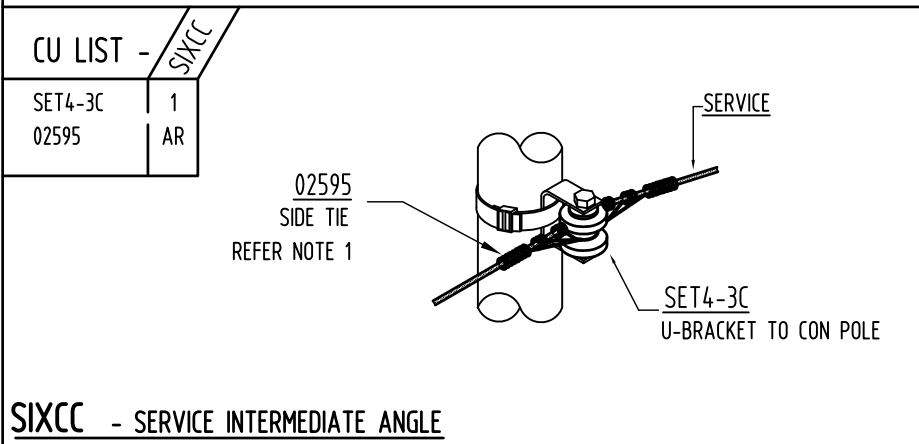
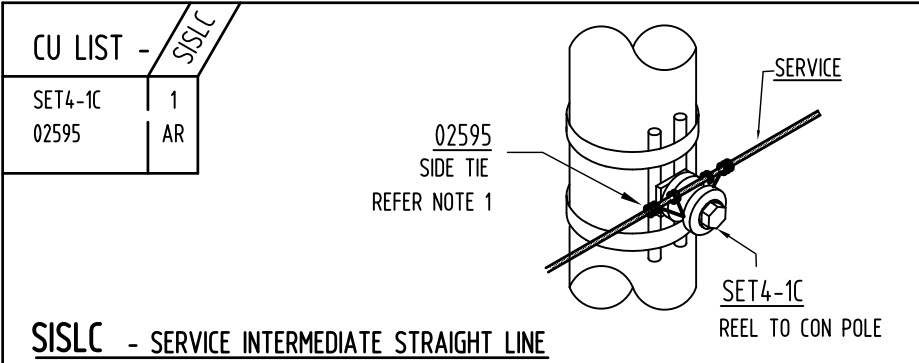
SERVICES

SISL, SIA, SIXC, SIS

SIXC45, SIS45

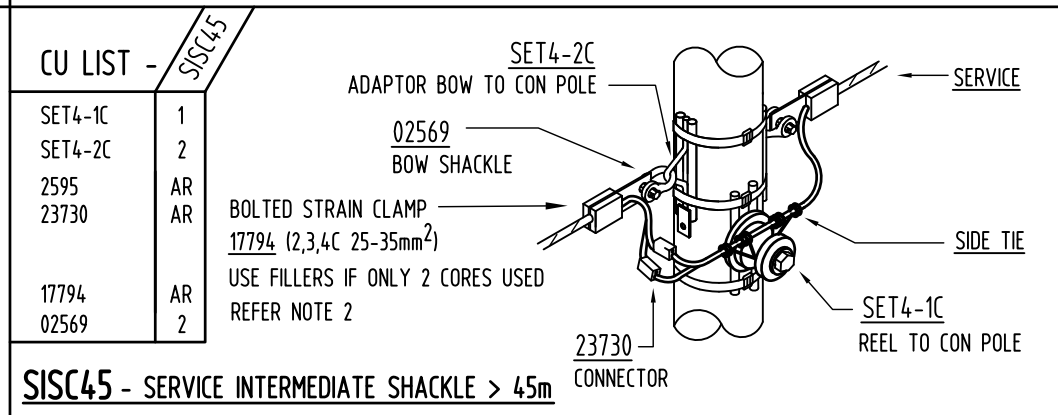
INTERMEDIATE WOOD POLE CONSTRUCTIONS

APP'D M.Griffin	TECH STDS AUTOCAD	
DATE 15-10-93	4920-A4 H	
REC'D	SECT 2	PAGE 23
CKD D.McKenzie	SHEET 1 OF 1	
DWN M.Welsh	FILE:	



NOTE :

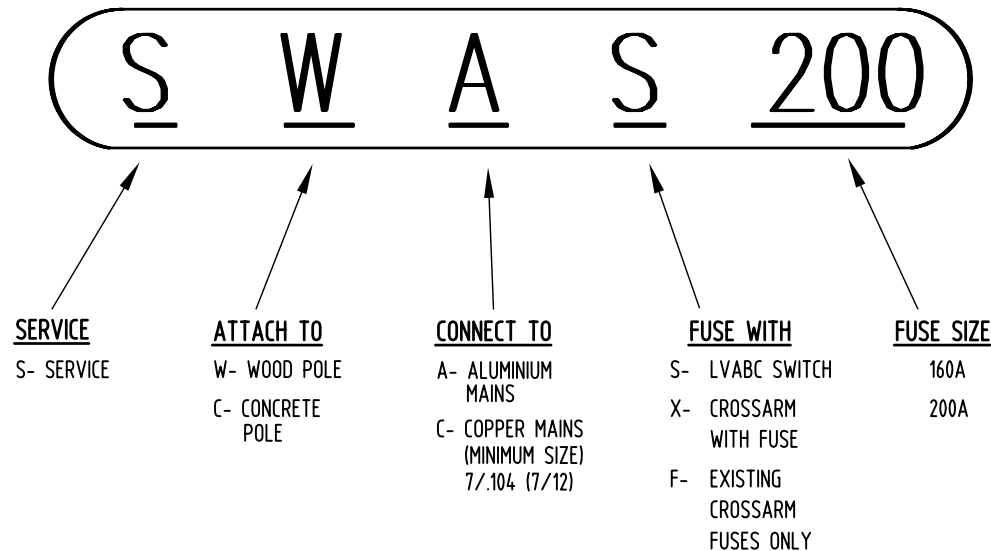
1. Section of cable under Tie Wire is to be protected with three (3) layers of half lapped PVC Tape.
2. Bolted down strain clamp is **ONLY** for use in service spans **OVER 45m** OR if maximum working tension exceeds 1kN.




NOTE : These compatible unit codes provide all the components required to erect a LVABC service. The required cable length must be booked separately.

Minimum mains sizes, other than the minimum specified for Copper, must be determined by voltage drop calculations.

SERVICE FITTING CODE



EXAMPLE : SWAS200 = New LVABC service, Attach to Pole, Connect to Al. Mains, Fuse with LVABC Switch, 200A Fuse.

A	ORIGINAL ISSUE		APPD R. ENGLISH	CKD J. TUNNEY	DRN	CODE TABLE CLARIFIED		 ©COPYRIGHT 2009 ENERGEX This drawing must not be reproduced in part or whole without written permission from ENERGEX	OVERHEAD CONSTRUCTION MANUAL		APP'D	M.G.	TECH STDS		AUTOCAD						
	DATE								SERVICES		DATE	15-10-93	4920-A4		E						
											REC'D		SECT	PAGE							
											CKD	D.McK.	2	41							
											DWN	M.W	SHEET 1 OF 1		FILE:						

NOTE : These compatible unit codes provide all the components required to erect a service cable. The required cable length must be booked separately.

SERVICE FITTING CODE

SERVICE FITTING

N 2B25 W A Y 80

SERVICE	CABLE TYPE	ATTACH TO	CONNECT TO	MAINS BOX	FUSE SIZE
N- NEW SERVICE (HOUSE & POLE END)	2B25	W- WOOD POLE	A- OPENWIRE AL. MAINS	Y- REQ'D	50A
T- TRANSFER SERVICE (POLE END ONLY)	3B25	C- CONCRETE POLE	AAC AND ACSR	I- IN LINE CONNECTORS	80A
	4B25		B- LVABC MAINS		100A note 2
	4B35		C- OPENWIRE Cu. MAINS 7/.064 - 19/.083		

INTERMEDIATE POLE

I 2B25 XC W


INTERMEDIATE POLE	CABLE TYPE	CONSTRUCTION (SEE SECTION 2 PAGE 23 or 25)	ATTACH TO
I- SERVICE TO AN INTERMEDIATE POLE	2B25	SL- STRAIGHT LINE	W- WOOD POLE
	3B25	A- ANGLE	C- CONCRETE POLE
	4B25	XC- CROSSCHECK	
	4B35	S- SHACKLE	

EXAMPLE : N2B25WAY80 = New Service, 2 core bundled conductor 25mm²Al., Attach to wood pole, Connect to Al. Mains, Mains Box required, 80A Fuse.

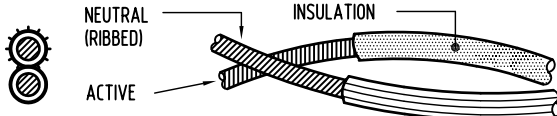
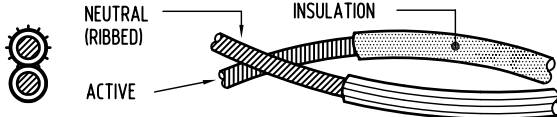



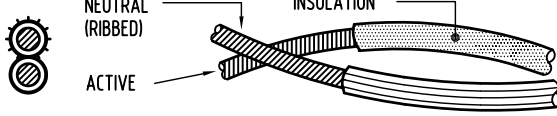

I2B25XCW = Intermediate Pole, 2 core bundled conductor 25mm²Al., Crosscheck arrangement, Attach to wood pole.

NOTE 1 : When estimating for Services over 45m add relevant strain clamp. Refer Section 2-Page 23

NOTE 2 : 100A fuse only allowed with 4B35 service.


ORIGINAL ISSUE	DATE	18/09/18	F. ZAINI	P. RELF	P. RELF	MAINS BOX OPTIONS AMENDED	<div> © COPYRIGHT 2017 ENERGEX This drawing must not be reproduced in part or whole without written permission from ENERGEX</div>	OVERHEAD CONSTRUCTION MANUAL		APP'D	M.G.	TECH STDS		AUTOCAD
										DATE	15-10-93	4920-A4		G
								SERVICES		REC'D		SECT	PAGE	
										CKD	D.McK.	2	42	
										DWN	M.W.	SHEET 1 OF 1		FILE:
A	G							SERVICE FITTING CODE/	(UPTO 100A)					
								FITTING CODE FOR INTERMEDIATE POLE						

STANDARD SERVICE CABLES

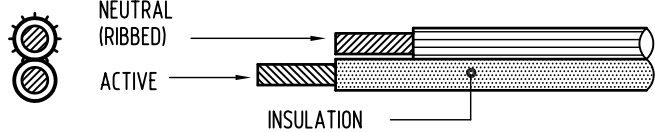
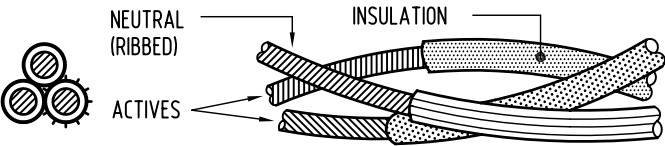
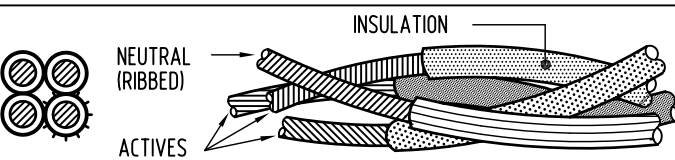
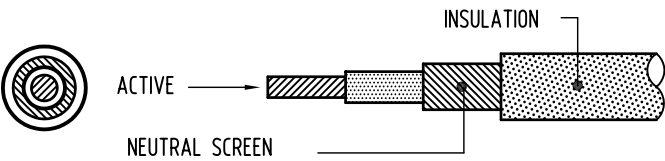
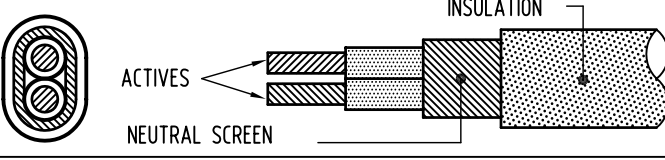
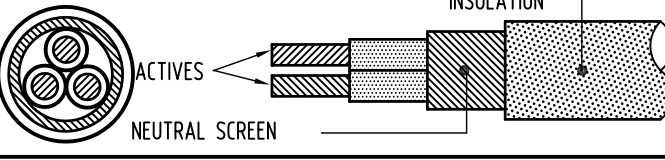
CABLE CODE	DESCRIPTION	CONFIGURATION	CABLE CU	AREA (mm ²)	STRANDING	STOCK CODE	TERM'N FITTING		MAXIMUM CURRENT PER PHASE (AMPS)	MAXIMUM FUSE SIZE (AMPS)
							STOCK CODE	QTY		
2B6	TWO CORE 0.6/1kV XLPE INSULATED CU CABLE (SINGLE PHASE)		2B6	6	COMPACTED ALUMINIUM	17119	16566	2	50	30 NOTE 6
2B25	TWO CORE 0.6/1kV XLPE INSULATED AL CABLE (SINGLE PHASE)		2B25	25	COMPACTED ALUMINIUM	16153	16566 OR 17794 (Note 3)	2	105	80 NOTE 6
3B25	THREE CORE 0.6/1kV XLPE INSULATED AL CABLE (TWO PHASE)		3B25	25	COMPACTED ALUMINIUM	16154	16566 OR 17794 (Note 3)	2	100	80 NOTE 6
4B25	FOUR CORE 0.6/1kV XLPE INSULATED AL CABLE (THREE PHASE)		4B25	25	COMPACTED ALUMINIUM	16578	16566 OR 17794 (Note 3)	2	100	80 NOTE 6
4B35	FOUR CORE 0.6/1kV XLPE INSULATED AL CABLE (THREE PHASE)		4B35	35	COMPACTED ALUMINIUM	16155	16566 OR 17794 (Note 3)	2	120	100 NOTE 6
2B95	TWO CORE 0.6/1kV XLPE INSULATED AL CABLE (SINGLE PHASE)		2B95	95	COMPACTED ALUMINIUM	18960	10597	2	230	200 NOTE 6
4B95	FOUR CORE 0.6/1kV XLPE INSULATED AL CABLE (THREE PHASE)		4B95 TWIN	95 TWIN	COMPACTED ALUMINIUM	11927	10597	2	215	200 NOTES 4 & 6
			4B95 TWIN	95 TWIN	COMPACTED ALUMINIUM	11927	10597	4	430	315 NOTES 4 & 6

NOTES:

- For LVABC used as a Service Cable refer to Section 8, Page 31 for cable identification.
- Standard cables are for normal use through-out ENERGEX.
- Bolted strain clamp (17794) is for use in service spans OVER 45m OR if maximum working tension exceeds 1kN.
- 200A for single service, 315A for twin service.
- Use fillers on bolted strain clamp if only 2 cores used.
- Where service fuse cartridges are to be replaced, they must be of a value equal to or the nearest ENERGEX equivalent available in current rating to those being replaced. Eg, replace "like for like".


A	ORIGINAL ISSUE		G	DATE	30-6-2010	APPD	RENGISH	CKD	J.TUNNEY	DRN	J.TUNNEY	Note 6 added.		 © COPYRIGHT 2010 ENERGEX This drawing must not be reproduced in part or whole without written permission from ENERGEX	OVERHEAD CONSTRUCTION MANUAL		APP'D	M.GRIFFIN	TECH STDS		AUTOCAD
	DATE	12-10-93		4920-A4													G				
	REC'D			SECT	PAGE																
	CKD	D.McKENZIE		2	43																
	DWN	M.WELSH		SHEET 1 OF 1																	
															FILE:						

OBsolete SERVICE CABLES

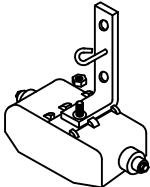

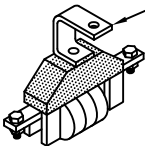
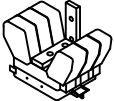
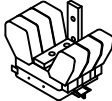
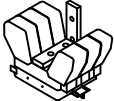
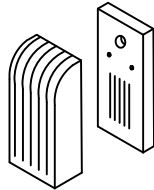
CODE	DESCRIPTION	CONFIGURATION	CABLE MODEL	AREA (mm ²)	STRANDING	STOCK CODE	TERM'N FITTING	
							S/CODE	QTY
PW	TWO CORE 0.6/1kV SINGLE INSULATED PARALLEL WEBBED CABLE. (SINGLE PHASE)		PW-10	10	7/1.35	07221	06460	2
			PW-16	16	7/1.70	07227	06459	2
3TT	THREE CORE 0.6/1kV SINGLE INSULATED TWISTED CABLE. (TWO PHASE)		3TT-10	10	7/1.35	07223	06461	2
			3TT-16	16	7/1.70	07229	06463	2
4TT	FOUR CORE 0.6/1kV SINGLE INSULATED TWISTED CABLE. (THREE PHASE)		4TT-10	10	7/1.35	07225	06461	2
			4TT-16	16	7/1.70	07231	06463	2
			4TT-25	25	19/1.35	07233	06458	2
2NS	SINGLE CORE 0.6/1kV DOUBLE INSULATED NEUTRAL SCREENED CABLE (SINGLE PHASE)		2NS-16	16	7/1.70	07226	06463	2
3NS	TWO CORE 0.6/1kV DOUBLE INSULATED NEUTRAL SCREENED CABLE (TWO PHASE)		3NS-10	10	7/1.35	07222	06458	2
			3NS-16	16	7/1.70	07228	06458	2
4NS	THREE CORE 0.6/1kV DOUBLE INSULATED NEUTRAL SCREENED CABLE (THREE PHASE)		4NS-10	10	7/1.35	07224	06458	2
			4NS-16	16	7/1.70	07230	06458	2

NOTES.

1. PW = PARALLEL WEBBED
TT = TWISTED
NS = NEUTRAL SCREENED
2. Where service fuse cartridges are to be replaced, they must be of a value equal to or the nearest ENERGEX equivalent available in current rating to those being replaced. Eg, replace "like for like".

A	ORIGINAL ISSUE				Note 2 added		 © COPYRIGHT 2010 ENERGEX This drawing must not be reproduced in part or whole without written permission from ENERGEX	OVERHEAD CONSTRUCTION MANUAL <u>SERVICES</u> OBSOLETE SERVICE CABLES		APP'D	M.GRIFFIN	TECH STDS		AUTOCAD
	E	DATE	30-6-2010							4920-A4		E		
	APPD	RENGISH								SECT	PAGE			
	CKD	J.TUNNEY								2	44			
	DRN	J.TUNNEY								SHEET 1 OF 1				
											FILE:DWG_OH\4920A4\52\52-44.DWG			

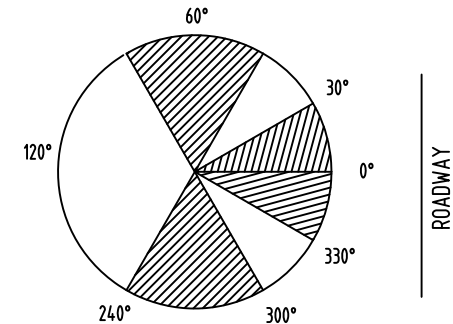
SERVICE FITTINGS

	<div><p>SINGLE PHASE BRACKET <u>SET1-2</u> or <u>SET1-2C</u></p></div> <div><p>THREE PHASE BRACKET <u>SET2-1</u> or <u>SET2-1C</u></p></div> <div>FUSE HOLDER</div>					<div><p><u>SET3-2</u></p></div>					<div><p><u>SET102-2</u> WITH 630A LINKS</p></div>		<div><p><u>SET102-1</u> WITH 315A FUSES</p></div>		<div><p><u>SET102-4</u> WITH 200A FUSES</p></div>		<div><p>Boxes are supplied complete with internal connectors (not shown): 16569 - in Domestic Boxes 20148 - in Commercial Industrial Boxes</p></div>				
	SERVICE FUSE HOLDER					SINGLE PHASE FUSE SWITCH					THREE PHASE FUSE SWITCH		THREE PHASE FUSE SWITCH		THREE PHASE FUSE SWITCH		MAINS CONNECTION BOX				
	FUSE HOLDER	FUSE					FUSE SWITCH	FUSE					SWITCH	LINK	SWITCH	FUSE	SWITCH	FUSE	SINGLE PHASE	THREE PHASE	SINGLE PHASE
CURRENT RATING (Amps)	100	32	50	80	100	630	200	315	400	630	630	630	400	315	400	200	100A	100A	200A	200A	
Stock Code	19910	04434	04442	04451	12454	02622	04471	04477	04484	04490	20146	15849	20146	15118	20146	13898	16571	16572	20150	20149	
USE	-	STREET LIGHT	LOW CAPACITY CUST. MAINS	GENERAL	USE WITH 4B35 ONLY	GENERAL	80 21281			100 04458	160 04465	GENERAL NOTE 5	GENERAL NOTE 5		GENERAL NOTE 5		DOMESTIC		COMMERCIAL INDUSTRIAL		


NOTES :

1. A service fitting should not be placed vertically above or below another service fitting on the same pole.
2. Service fittings are to be mounted on a pole in locations which allow for climbing and working space at the LV crossarm. The unshaded areas show the recommended fuse location.
3. Fuse holders for a multiphase service should be grouped together.
4. Service fuse switches are to be mounted underhung on the LV, or service crossarms.
5. 3ph fuse switch (20146) has maximum rating of 400A with fuses, or 630A with links.

6. Where service fuse cartridges are to be replaced, they must be of a value equal to or the nearest ENERGEX equivalent available in current rating to those being replaced. Eg, replace "like for like".

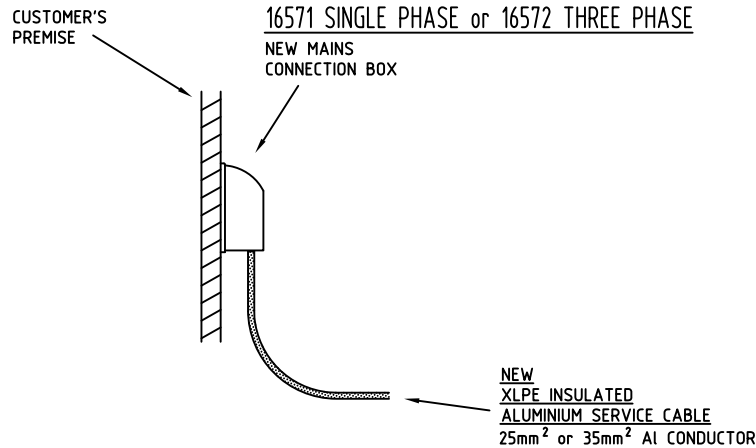


FUSE LOCATION ON POLE

ORIGINAL ISSUE	DATE 27-7-2011		R. ENGLISH	J. TUNNEY	P. ROLF	CORRECT SET102-1 AND SET102-2	<div><p>© COPYRIGHT 2011 ENERGEX</p><p>This drawing must not be reproduced in part or whole without written permission from ENERGEX</p></div>	OVERHEAD CONSTRUCTION MANUAL				APP'D	M.GRIFFIN	TECH STDS		AUTOCAD						
	DATE 27-7-2011											DATE	15-10-93	4920-A4		J						
	DATE 27-7-2011							SERVICES				REC'D		SECT		PAGE						
	DATE 27-7-2011											CKD	D.McKENZIE	2		45						
	DATE 27-7-2011							SERVICE FITTINGS AND FUSE LOCATION ON POLE				DWN	M.WELSH	SHEET 1 OF 1		FILE:						

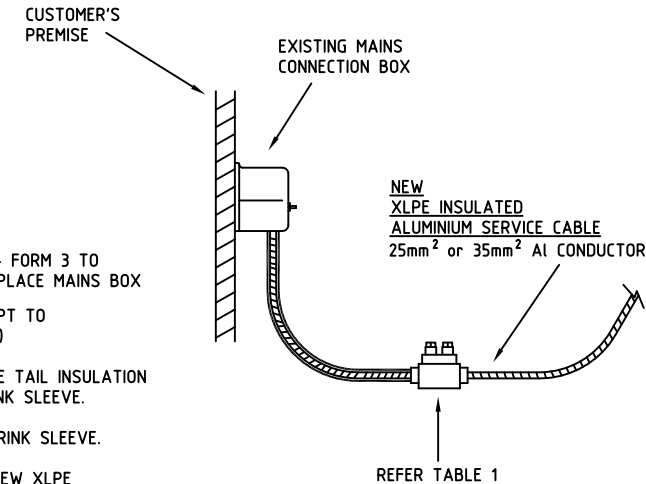
NOTE: OLD STYLE MAINS CONNECTION BOX & BELL MOUTHS TO BE REPLACED WHERE PRACTICAL

NEW MAINS BOX INSTALLATION



WHERE NOT PRACTICAL TO REPLACE OLD STYLE MAINS BOX

TEMPORARY CONNECTION ONLY

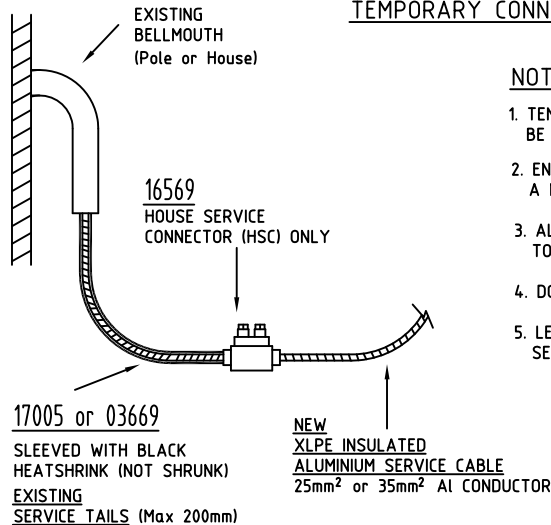


NOTE:

1. TEMPORARY CONNECTION ONLY - FORM 3 TO BE ISSUED TO CUSTOMER TO REPLACE MAINS BOX
2. ENSURE SERVICE TAILS ARE KEPT TO A MINIMUM LENGTH. (200mm Max)
3. ALL EXPOSED EXISTING SERVICE TAIL INSULATION TO BE COVERED BY HEAT SHRINK SLEEVE.
4. DO NOT SHRINK DOWN HEATSHRINK SLEEVE.
5. LEAVE SUFFICIENT LENGTH IN NEW XLPE SERVICE CABLE TO TRANSFER TO FUTURE MAINS CONNECTION BOX.
6. ILC 635 (SC23730) CAN ONLY BE USED INSTEAD OF HSC435 (SC16569) IF CONSUMERS MAINS INSULATION CANNOT BE EASILY STRIPPED AND IS BETWEEN 6-35MM

WHERE NOT PRACTICAL TO INSTALL NEW MAINS BOX ON BELL MOUTH

TEMPORARY CONNECTION ONLY



NOTE:

1. TEMPORARY CONNECTION ONLY - FORM 3 TO BE ISSUED TO CUSTOMER TO REPLACE MAINS BOX
2. ENSURE SERVICE TAILS ARE KEPT TO A MINIMUM LENGTH. (200mm Max)
3. ALL EXPOSED EXISTING SERVICE TAIL INSULATION TO BE COVERED BY HEAT SHRINK SLEEVE.
4. DO NOT SHRINK DOWN HEATSHRINK SLEEVE.
5. LEAVE SUFFICIENT LENGTH IN NEW XLPE SERVICE CABLE TO TRANSFER TO FUTURE

TABLE 1

Where possible to work on but not replace existing Mains Connection Box

17247 or 23731
INSULATION PIERCING
CONNECTOR WITH INTEGRATED COPPER TAIL

HEAT SHRINK NOT REQUIRED ON
XLPE COPPER TAIL FROM CONNECTOR

Where NOT possible to work on existing Mains Connection Box

16569
HOUSE SERVICE CONNECTOR (HSC) ONLY
UNLESS NOTE 6 CONDITIONS ARE MET

17005 or 03669
EXISTING SERVICE TAILS (MAX 200mm) SLEEVED
WITH BLACK HEATSHRINK (NOT SHRUNK)

ORIGINAL ISSUE	DATE	APP'D	F. ZANI	P. RELF	P. RELF
A	H	APP'D	F. ZANI	CKD	DRN
Notes and references to HSC and ILC updated for clarity					



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OVERHEAD CONSTRUCTION MANUAL

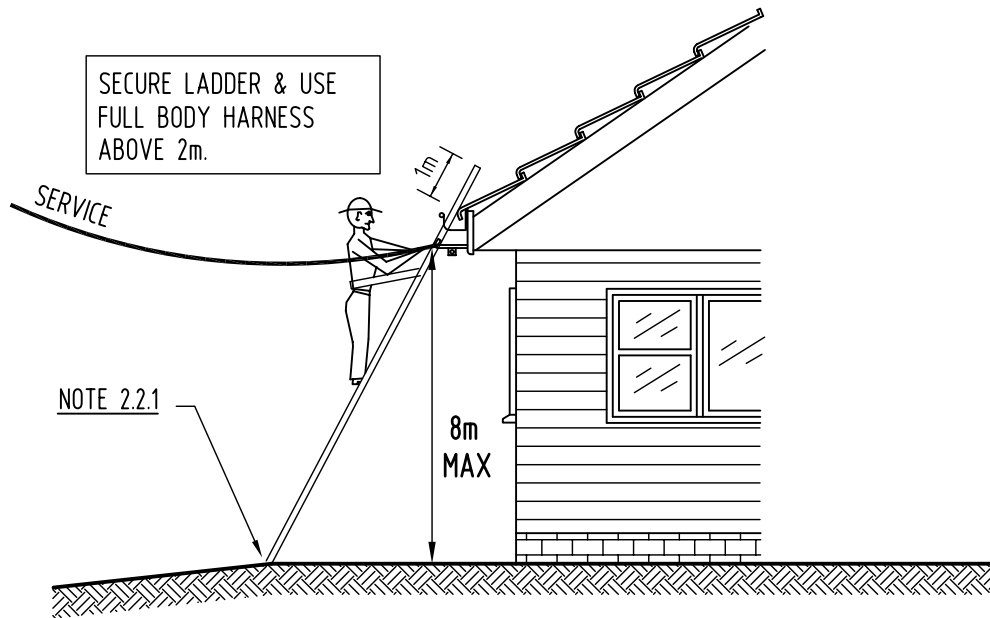
SERVICES MAINTENANCE & REPLACEMENT

APP'D	P. Rainbird	TECH STDS	AUTOCAD
DATE	7/6/96	4920-A4	H
REC'D	J Tunney	SECT	PAGE
CKD	C Marino	2	46
DWN	J Hill	SHEET	1 OF 1
FILE:			

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A	ORIGINAL ISSUE	E	DATE	16/06/14	APPD	F. ZAINI	CKD	P. RELF	DRN	P. JUDGE	Page made Blank Detail in 2-46		 ©COPYRIGHT 2014 ENERGEX This drawing must not be reproduced in part or whole without written permission from ENERGEX	OVERHEAD CONSTRUCTION MANUAL	APP'D	Rod Douglas	TECH STDS	AUTOCAD
			DATE	12-7-2000										4920-A4		E		
			REC'D											SECT	PAGE			
			CKD	John Tunney										2	47			
			DWN	W.Williamson										SHEET 1 OF 1				
														FILE:				

STRINGING



1. GENERAL REQUIREMENTS

DETERMINE :


- 1.1 Number of phases.
- 1.2 Service route.
- 1.3 Point of attachment.
- 1.4 Type and size of cable.
- 1.5 Span length
- 1.6 If intermediate pole required.

2. CUSTOMER'S ATTACHMENT POINT

- 2.1 Customer to provide service attachment to ENERGEX 's requirements as per drawing 7960-A4 of the Electricity Connection and Metering Manual.
- 2.2 Normal attachment point.
 - 2.2.1 Ground to be reasonably flat to allow suitable ladder access.

3. STRINGING PROCEDURE

- 3.1 Attach customer end first.
- 3.2 Sag must be greater than or equal to stringing table sag data (page 2-52).
- 3.3 Minimum vertical clearances to ground must comply with clearances listed in Statutory Requirements (page 8-91).
- 3.4 Add 0.2m to Statutory Clearance value to allow for extra sag due to heating of cable.
- 3.5 Pull up at pole end last.
- 3.6 Do not allow vehicles to run over cables.
- 3.7 Every effort should be taken to prevent moisture ingress.

A	ORIGINAL ISSUE		BODY HARNESS ADDED:			 ©COPYRIGHT 2006 ENERGEX This drawing must not be reproduced in part or whole without written permission from ENERGEX	OVERHEAD CONSTRUCTION MANUAL		APP'D	P Pearl	TECH STDS		AUTOCAD	
	F	DATE							15/11/06	DATE	12-5-94	4920-A4		F
	APPD	K.NUTTALL							REC'D		SECT	PAGE		
	CKD	J.TUNNEY							CKD	C M	2	51		
	DRN	GAYAN							DWN	M Welsh	SHEET 1 OF 1		FILE:	
								SERVICES						
						STRINGING								

CURRENT SERVICE TYPES XLPE

SPAN LENGTH (m)		10	15	20	25	30	35	40	45	50	55	60	65	70	75	80
CABLE DESCRIPTION		SAG (m) @ 25°C														
CODE	SIZE mm ²															
2B6	6 CU	0.05	0.09	0.16	0.25	0.36	0.49	0.64	0.81	1.00	1.20	1.44	1.69	1.96	2.25	2.56
2B25	25 AL	0.10	0.24	0.42	0.65	0.95	1.32	1.76	2.22	2.73	3.30	3.93	4.61	5.34	6.13	6.98
3B25	25 AL	0.13	0.28	0.47	0.76	1.08	1.47	1.90	2.41	2.97	3.58	4.26	5.00	6.02	6.67	7.60
4B25	25 AL	0.15	0.32	0.55	0.86	1.26	1.71	2.22	2.81	3.46	4.20	5.20	5.86	6.82	7.82	8.91
4B35	35 AL	0.16	0.36	0.62	1.00	1.43	1.95	2.54	3.21	3.97	4.80	5.72	6.72	7.81	8.98	10.25
2B95	95 AL	0.22	0.46	0.81	1.26	1.80	2.45	3.20	4.05	5.00	6.07	7.24	8.52	9.91	11.41	13.03
4B95	95 AL	0.32	0.71	1.25	1.95	2.81	3.84	5.03	6.40	7.94	9.67	11.58	13.70	16.02	18.55	21.31

SUPERSEDED SERVICE TYPES

MAXIMUM SPAN LENGTHS
PW & TT CABLES - 50 METRES
NS CABLE - 27 METRES

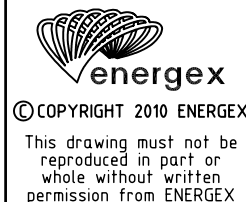
SPAN LENGTH (m)		10	15	20	25	30	35	40	45	50
CABLE DESCRIPTION		MINIMUM SAG (m)								
CODE	SIZE (mm ²)									
PW	10	0.1	0.2	0.4	0.6	0.8	1.1	1.4	1.8	2.2
	16	0.2	0.3	0.5	0.7	1.0	1.3	1.7	2.1	2.6
3TT	10	0.2	0.3	0.5	0.7	1.0	1.4	1.8	2.2	2.7
	16	0.2	0.4	0.6	0.8	1.1	1.5	2.0	2.5	3.1
4TT	10	0.2	0.3	0.5	0.8	1.1	1.5	1.9	2.4	2.9
	16	0.2	0.4	0.6	0.9	1.3	1.8	2.3	2.9	3.6
	25	0.3	0.6	0.9	1.4	1.9	2.6	3.3	4.2	5.2
2NS	16	0.2	0.3	0.5	0.7	-	-	-	-	-
3NS	10	0.2	0.4	0.6	0.9	-	-	-	-	-
	16	0.2	0.4	0.7	1.0	-	-	-	-	-
4NS	10	0.2	0.4	0.6	1.0	-	-	-	-	-
	16	0.2	0.5	0.8	1.2	-	-	-	-	-

NOTE:

SAGS INDICATED ARE FOR
INSTALLATION PURPOSES
AT 25 DEG C, NO WIND CONDITION.

UNDER WIND CONDITION OF 500pa,
TENSIONS DO NOT EXCEED 1kN

A	ORIGINAL ISSUE		G	DATE 30-6-2010		APPD R. ENGLISH	CKD J. TUNNEY	DRN Gayan	1kN included in title. 4B35 data corrected.



OVERHEAD CONSTRUCTION MANUAL

SERVICES

STRINGING TABLE

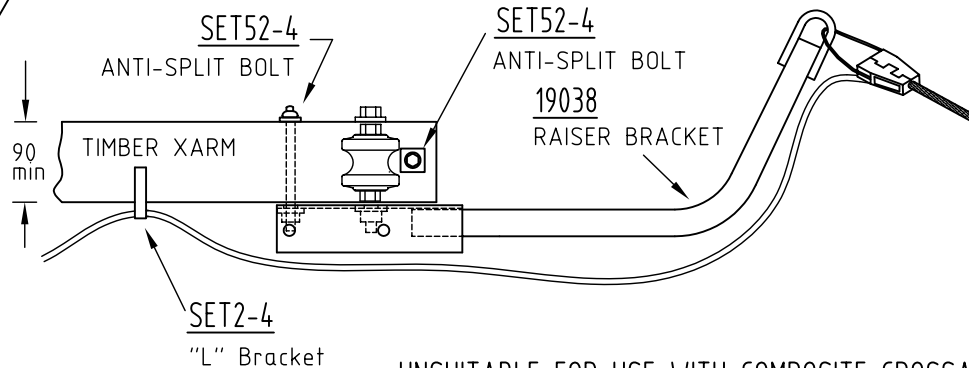
FOR 1.0kN MAXIMUM WORKING SERVICE TENSION

APP'D	Mike Griffin	TECH STDS		AUTOCAD
DATE	15-10-93	4920-A4		G
REC'D		SECT	PAGE	
		2	52	
CKD	Dave McKenzie	SHEET 1 OF 1		
DWN	M. Welsh	FILE:		

CU LIST -

SRBS

SET52-4	2
SET2-4	1
19038	1



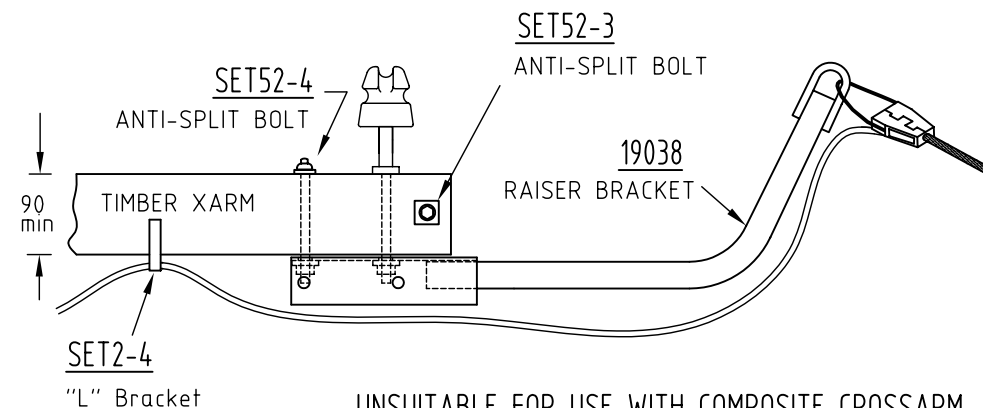
UNSUITABLE FOR USE WITH COMPOSITE CROSSARM

SRBS - SERVICE RAISER BRACKET - LV SHACKLE XARM

CU LIST -

SRBI

SET52-4	1
SET52-3	1
SET2-4	1
19038	1



UNSUITABLE FOR USE WITH COMPOSITE CROSSARM

SRBI - SERVICE RAISER BRACKET - LV INTERMEDIATE XARM

PURPOSE

This bracket is solely intended for use in correcting the height of services which may be less than statutory requirements.

APPLICATION CONDITIONS

Crossarm and associated hardware must be in sound condition before bracket is fitted. If in doubt, replace crossarm.

Sum of span lengths of LV mains on either side of pole must not exceed 80 metres.

Up to 2 x 3 phase services or 3 x single phase services can be attached to bracket.

Length of any services must not exceed 40 metres. Sag in accordance with table below.

IMPORTANT

If installation of the bracket is necessary and any of the above application conditions cannot be met, further permission must be obtained from Technical Standards Department.

CABLE DESCRIPTION		2B25	3B25	4B25
NO. SERVICES	SPAN (m)	SAG (m) 25°C	SAG (m) 25°C	SAG (m) 25°C
1	20	0.4	0.5	0.6
	30	0.9	1.1	1.3
	40	1.7	1.9	2.2
2	20	0.5	0.6	0.8
	30	1.1	1.3	1.5
	40	1.9	2.1	2.7
3	20	0.6		
	30	1.4		
	40	2.5		

ORIGINAL ISSUE	DATE	RENGISH	J.TUNNEY	J.TUNNEY	SRB1 UPDATED
A	30-01-2008	APPD	CKD	DRN	
C					



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OVERHEAD CONSTRUCTION MANUAL

SERVICES

SRBS, SRBI

CROSSARM MOUNTED

SERVICE RAISER BRACKET

APP'D D.LLOYD

DATE 2/7/03

REC'D

CKD

DWN D.LANGLEY

TECH STDS AUTOCAD

4920-A4 C

SECT PAGE

2 53

SHEET 1 OF 1


FILE:

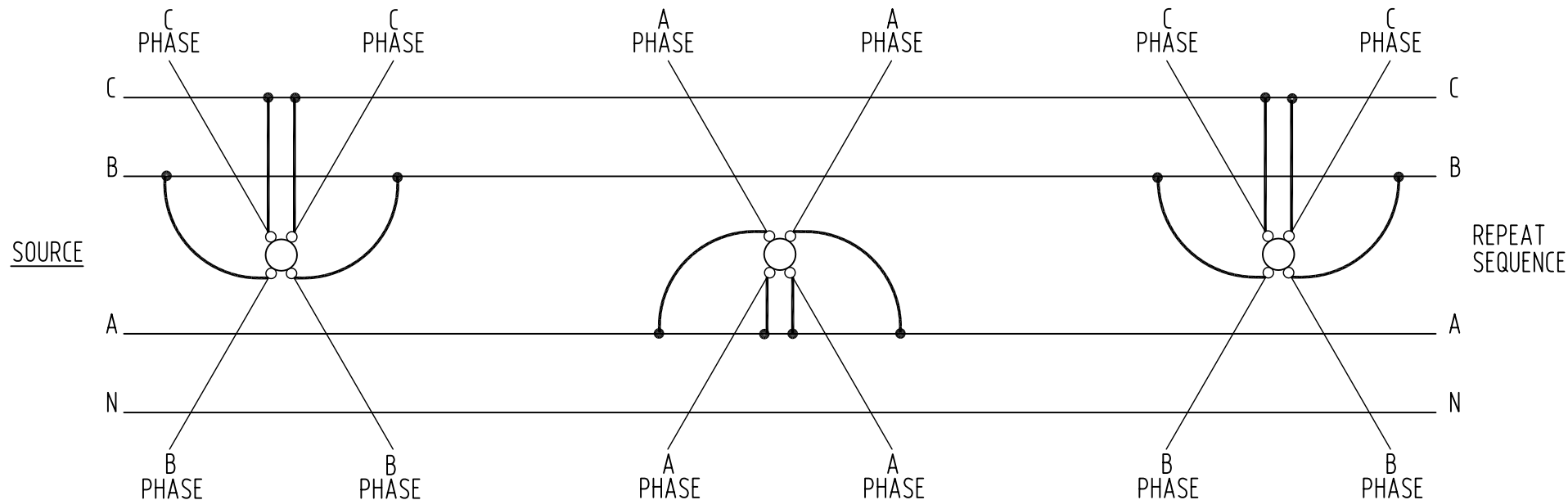
XLPE SERVICE CABLE TYPES

SPAN LENGTH (m)		10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	
CABLE DESCRIPTION		SAG (m) @ 25°C															
CODE	SIZE mm ²																
2B6	6 CU	0.15	0.15	0.15	0.15	0.15	0.15	0.17	0.23	0.29	0.36	0.45	0.55	0.67	0.80	0.95	Max. Working Tension does not exceed 18kN
2B25	25 AL	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.20	0.27	0.38	0.52	0.70	0.90	1.13	1.39	Max. Working Tension does not exceed 35kN
3B25	25 AL	0.15	0.15	0.15	0.15	0.15	0.15	0.25	0.37	0.52	0.70	0.90	1.13	1.40	1.65	1.93	
4B25	25 AL	0.15	0.15	0.15	0.15	0.17	0.28	0.41	0.58	0.84	1.00	1.24	1.50	1.79	2.10	2.44	
4B35	35 AL	0.15	0.15	0.15	0.15	0.26	0.40	0.57	0.76	0.97	1.20	1.46	1.75	2.04	2.39	2.74	
2B95	95 AL	0.15	0.15	0.15	0.25	0.41	0.59	0.82	1.06	1.35	1.62	1.98	2.31	2.67	3.16	3.60	
4B95	95 AL	0.15	0.15	0.28	0.44	0.65	0.92	1.21	1.55	1.90	2.35	2.79	3.26	3.88	4.44	5.05	

NOTES:


1. SAGS SHOWN ARE FOR CABLE INSTALLATION AT 25 DEGREES C, NO WIND.
2. FOR ALL CABLES EXCEPT 2B6, TENSIONS DO NOT EXCEED 3.5kN UNDER WIND CONDITION OF 500pa.
FOR 2B6, TENSIONS DO NOT EXCEED 1.8kN UNDER WIND CONDITION OF 500pa.
3. BOLTED STRAIN CLAMPS MUST BE USED AT EACH END OF THE SERVICE CABLE.
4. CAN ONLY BE USED FOR LAST SPAN TO CUSTOMER WHEN REPLACING AN EXISTING SERVICE AND A STANDARD 1kN SERVICE IS UNABLE TO BE RETRO-FITTED. THE CUSTOMER'S ATTACHMENT POINT MUST BE RPEQ CERTIFIED AS RATED TO 3.5kN MWT.
NEW LAST SPAN SERVICE INSTALLATIONS ARE TO COMPLY WITH THE REQUIREMENTS OF THE QECMM.
5. M16, OR M20 EYEBOLT SHALL BE USED TO ATTACH SERVICE TO POLE.

A	ORIGINAL ISSUE		B	DATE 07/03/2017		APPD F. ZAINI	CKD P. RELF	DRN F. ZAINI	Note 4 updated		<div> © COPYRIGHT 2017 ENERGEX This drawing must not be reproduced in part or whole without written permission from ENERGEX</div>	OVERHEAD CONSTRUCTION MANUAL	APP'D ROY ENGLISH		TECH STDS		AUTOCAD	
	DATE 08/02/12			4920-A4									B					
	REC'D			SECT									PAGE					
	CKD JOHN TUNNEY			2									54					
	DWN JOHN TUNNEY			SHEET 1 OF 1									FILE:					
													SERVICES					
													STRINGING TABLE					
													FOR 3.5kN MAXIMUM WORKING SERVICE TENSION					



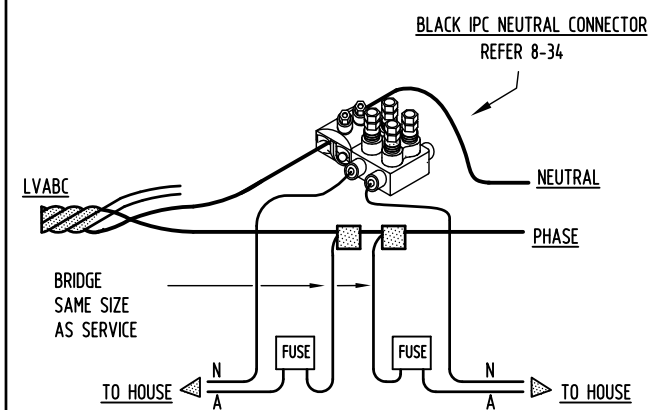
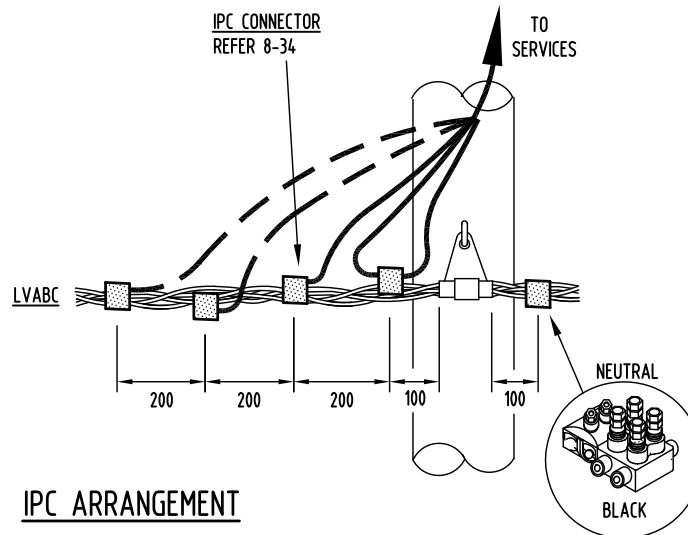
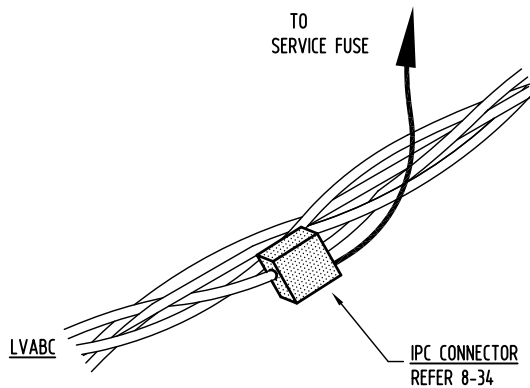
NOTES:

1. Services are to be connected to different phases on each pole as shown. Connection should achieve best load balance on the distribution transformer.
2. Connect streetlights to different phases - NOT all to the same phase.
3. Installation of a number of new services on an existing line may require the rebalancing of existing services connected to that line.

A	ORIGINAL ISSUE		DATE	15/11/06	APPD	K.NUTTALL	CKD	J.TUNNEY	DRN	NEW TITLE BLOCK		 ©COPYRIGHT 2006 ENERGEX This drawing must not be reproduced in part or whole without written permission from ENERGEX	OVERHEAD CONSTRUCTION MANUAL		APP'D	Mike Griffin	TECH STDS		AUTOCAD
															DATE	15-10-93	4920-A4		C
															REC'D		SECT	PAGE	
															CKD	Dave McKenzie	2	61	
															DWN	M. Welsh	SHEET 1 OF 1		FILE:

SERVICES SERVICE BALANCING

LVABC MAINS

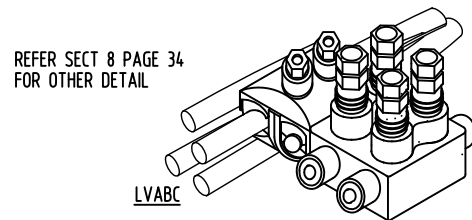


MAINS CONNECTION

IPC ARRANGEMENT

BRIDGING

OPEN WIRE MAINS



WHERE COLOURED INSULATION PIERCING CONNECTORS ARE USED WITH LVABC

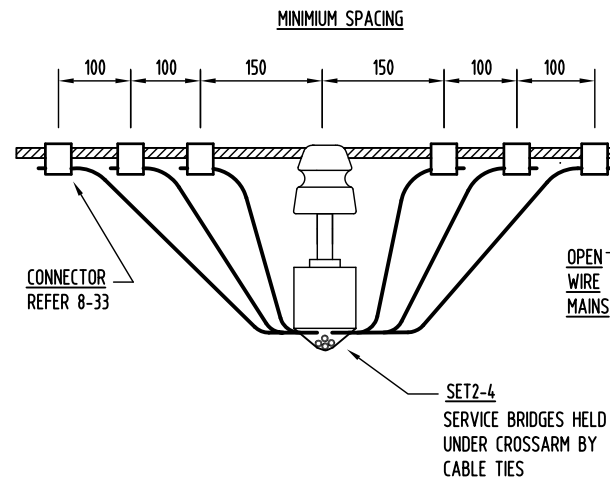
ALWAYS CONNECT RED CONNECTORS TO "A" PHASE - 1 RIB CABLE OF LVABC

ALWAYS CONNECT WHITE CONNECTORS TO "B" PHASE - 2 RIB CABLE OF LVABC

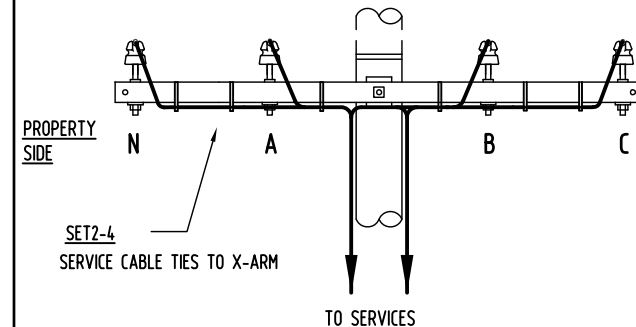
ALWAYS CONNECT BLUE CONNECTORS TO "C" PHASE - 3 RIB CABLE OF LVABC

ALWAYS CONNECT BLACK CONNECTORS TO NEUTRAL - FULLY RIBBED CABLE OF LVABC

COLOURED INSULATION PIERCING CONNECTORS



CONNECTOR ARRANGEMENT



BRIDGING

ORIGINAL ISSUE	DATE	APP'D	CKD	DRN	COLOURED CONNECTOR ADDED
A	G	09-12-2013	A SMITH DE PEREZ	K. DE MANSE	P. JUDGE



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OVERHEAD CONSTRUCTION MANUAL

SERVICES

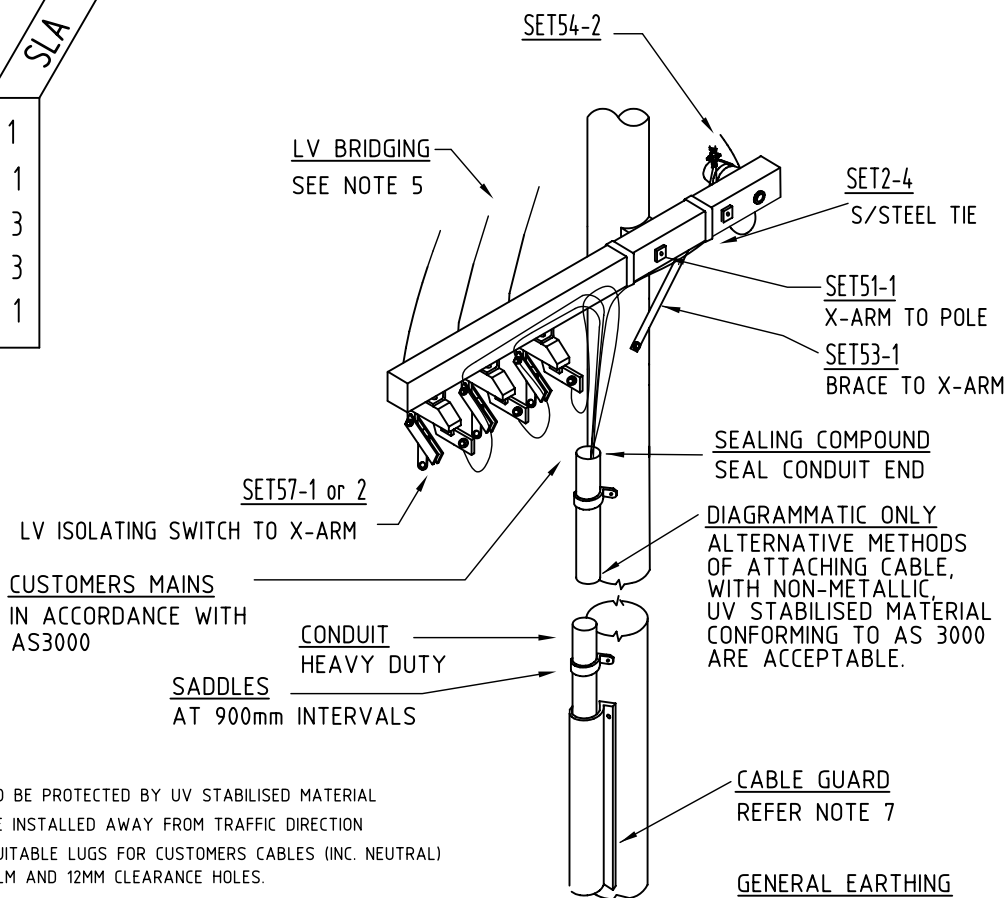
MAINS END CONNECTION AND BRIDGING

APP'D	M Griffin	TECH STDS	AUTOCAD
DATE	15-10-93	4920-A4	G
REC'D		SECT	PAGE
CKD	C Marino	2	81
DWN	M Welsh	SHEET	1 OF 1
		FILE:	

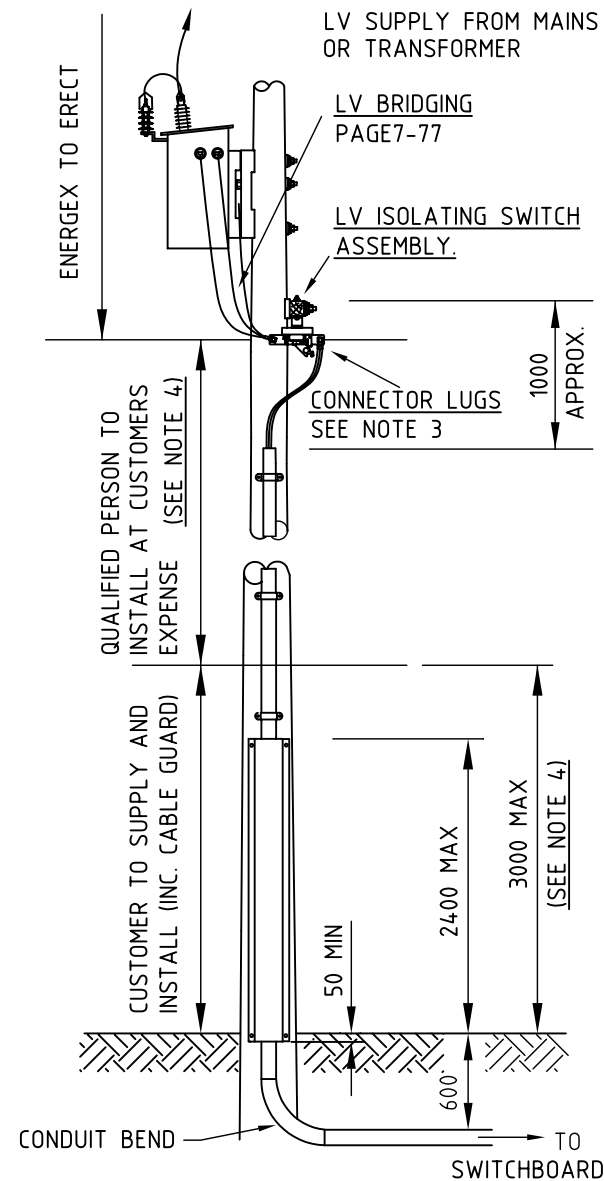
CU LIST -


SLA

SET51-1	1
SET53-1	1
SET2-4	3
SET57-2	3
SET54-2	1

**NOTE:**

1. ANY EXPOSED CABLES TO BE PROTECTED BY UV STABILISED MATERIAL
2. CABLE AND GUARD TO BE INSTALLED AWAY FROM TRAFFIC DIRECTION
3. CUSTOMER TO SUPPLY SUITABLE LUGS FOR CUSTOMERS CABLES (INC. NEUTRAL) WITH TINNED COPPER PALM AND 12MM CLEARANCE HOLES.
4. ONLY PERSONS WITH THE RELEVANT COMPETENCIES, TRAINING AND QUALIFICATIONS AS SET OUT IN SWP 12.1 SECTION 4, ARE PERMITTED TO CLIMB MORE THAN 3 METRES ABOVE GROUND TO ACCESS OR MAKE CONNECTIONS TO AN ENERGEX POLE
5. CUSTOMER TO ALLOW SUFFICIENT CABLE FOR FINAL TERMINATION TO ISOLATORS AND NEUTRAL.
6. ENERGEX TO CONNECT CUSTOMERS MAINS TO ISOLATOR SWITCHES AND CUSTOMERS NEUTRAL TO TRANSFORMER OR MAINS NEUTRAL.
7. IF METALLIC GUARD OR OTHER METALWORK IS MOUNTED ON THE POLE BETWEEN GROUND AND 2400mm ABOVE GROUND LEVEL, THEN ALL METALWORK SHALL BE BONDED TO AN EARTH SPIKE DRIVEN INTO THE GROUND MIN. 1.2m AND HAVING AN EARTH RESISTANCE OF LESS THAN 30 OHMS. ALTERNATIVELY, THE METALWORK MAY BE BONDED TO AN EXISTING LV EARTHED NEUTRAL DOWNLEAD.



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NOTE 7 REVISED												