TITLE	**SPECIFICATION FOR LV ABC WITH INSULATED NEUTRAL SUPPORTINGCONDUCTOR**	REFERENCE **CP_TSSPEC_010**	REV **6**
		DATE:	**MARCH 2022**
		PAGE: **1**	OF **25**

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FOREWORD

This specification was prepared by the following Work Group members:

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Arsenio Cossa	Metering (Retail Services)
Masape Mokgadi Kahumba	Secondary Plant (Metering)
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Recommendations for corrections, additions or deletions should be addressed to the:

Research and Development Department

General Manager

City Power Johannesburg (SOC) Ltd

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2016

INTRODUCTION

This specification was prepared in accordance with SANS 1418-1&2 (Aerial Bundled Conductor Systems – Part I: Cores and Part II: Assembled Insulated Conductor Bundles).

1 SCOPE

This specification covers the requirements for aerial bundled conductor (ABC) for use on City Power's overhead single-phase and three-phase distribution equipment rated at 600/1000 V.

The requirements for the phase and auxiliary cores, the insulated (covered) neutral supporting conductor and the complete assembled bundles are specified.

2 NORMATIVE REFERENCES

The following documents contain provisions that, through reference in the text, constitute requirements of this specification. At the time of publication, the editions indicated were valid. All standards and specifications are subject to revision, and parties to agreements based on this specification are encouraged to investigate the possibility of applying the most recent editions of the documents listed below.

SANS 1418-1*,* Aerial bundled conductor systems Part 1: Cores

SANS 1418-2, Aerial bundled conductor systems Part 2: Assembled insulated conductor bundles

SANS 10198-4, The selection, handling and installation of electric power cables of rating not exceeding 33 kV Part 4: Current ratings

3 DEFINITIONS AND ABBREVIATIONS

The definitions and abbreviations of SANS 1418 and SANS 10198-4 shall apply to this specification. ABC – Aerial Bundle Conductor

4 REQUIREMENTS

4.1 General

4.1.1 The requirements of SANS 1418 and SANS 10198-4 shall apply to this specification.

4.1.2 Nothing in this specification shall lessen the obligations of the supplier. The supplier shall be fully responsible for the design and its satisfactory performance in service. Acceptance by City Power shall not relieve the supplier of the responsibility for the adequacy of the design.

4.2 Electrical, dimensions and physical properties

The following requirements shall comply as in table 1(a) and table 1(b):

- Electrical,
- Physical properties,
- Conductor dimensions,
- Core and
- Supporting conductor

Table 1(a): Properties of conductors and cores

Type of conductor Or core	Nominal cross-section area (mm)	Number of Wires (mm)	Resistance at 20°c (Ω / km Max)	Diameter of conductor (mm)		Breaking force (kN)	Thickness of dielectric (mm)		Core Outside diameter (mm)	
				Min	Max	Min	Average	Min	Min	Max
Phase or auxiliary (Aluminum)	25	6	1.2	5.8	6.3	3300	1.4	1.16	8.6	9.4
	50	6	0.641	7.9	8.4	6200	1.6	1.34	11.1	12
	95	15	0.320	11	12	12300	1.8	1.52	14.6	16
	120	15	0.253	12.5	13.5	15600	1.8	1.52	16.3	17.5
Supporting aluminum		**Number and Nominal diameter Of wires mm**								
	54.6	7 * 3.15	0.63	9.2	9.6	16600	1.6	1.34	12.3	13
	70	7 * 3.50	0.50	10	10.4	20100	1.6	1.34	12.9	13.6

(**Source**: SANS 1418-2)

Table 1(b): Standard ratings for aerial bundled conductors

Nominal phase conductorsize mm^2	Standard rating (A)		
	Type of cable		
	600/1 000 V	6,35/11 kV	12,7/22 kV
25		125	130
35	138	150	155
50	168	185	190
70	213	230	235
95	258	280	290
120	300	325	330
150	–	370	375
185	–	430	430
240	–	510	510

(**Source**: SANS 10198 - 4)

4.3 ABC sizes

The aerial bundled conductors as described in table 2 below shall be the only standard items used:

Table 2: Core identification for aerial bundled conductors

Items	Description	Application
1	1 x 25 mm² street lighting core (comprising an insulated aluminum alloy conductor) plus 1 x 54,6 mm² neutral / earth supporting conductor (aluminum alloy & insulated)	Street lighting
2	3 x 25 mm² street lighting core (comprising an insulated aluminum alloy conductor) plus 1 x 54,6 mm² neutral / earth supporting conductor (aluminum alloy & insulated)	Street lighting
3	3 x 50 mm² phase cores (comprising an insulated aluminum alloy conductor) plus1 x 25 mm² street lighting core(aluminum alloy & insulated) plus 1 x 54,6 mm² neutral / earth supporting conductor (aluminum alloy & insulated)	Electrification
4	3 x 95 mm² phase cores (comprising an insulated aluminum alloy conductor) plus1 x 25 mm² street lighting core (aluminum alloy & insulated) plus 1 x 54,6 mm² neutral / earth supporting conductor (aluminum alloy & insulated)	Electrification
5	3 x 120 mm² phase cores (comprising an insulated aluminum alloy conductor) plus1 x 25 mm² street lighting core (aluminum alloy & insulated) plus 1 x 70 mm² neutral / earth supporting conductor (aluminum alloy & insulated)	Conversion from bare overhead system

5 TESTS

5.1 Testing Requirements

The tests required in SANS 1418-1 and 1418-2 shall apply to this specification.

Nothing in this specification shall lessen the obligations of the supplier. The supplier shall be fully responsible for the design and its satisfactory performance in service. Acceptance by City Power shall not relieve the supplier of the responsibility for the adequacy of the design.

NOTE:

a) City Power reserves the right to request to approve prototype testing before any ordering cancommence.
b) The manufacturer may use the tests given in this section or whatever other tests he chooses as routine tests in his works.

5.2 Type test

Type tests shall be carried out in accordance with SANS 1418-2

a) Impulse Test
b) High Voltage withstand
c) Adherence of dielectric to conductor of supporting core
d) Tensile strength and breaking force of supporting and phase conductors
e) Performance of supporting cores
f) Dielectric shrink-back at high temperature
g) Carbon black dispersion as per SANS 60811-4-1.

5.3 Routine test and Factory Acceptance Test (FAT)

Factory Acceptance Test (FAT) shall be carried out as per SANS 1418, with the presence of City Power Personnel before the cable is released from the manufacturer.

Electrical tests

a) Conductor resistance
b) Voltage withstand
c) Resistance of Dielectric
d) Inspection test

5.4 Sample tests

Factory Acceptance Test (FAT) shall be carried out as per SANS 1418, with the presence of City Power Personnel before the cable is released from the manufacturer.

a) Compliance with dimensions
b) Carbon black content
c) Tensile strength of phase conductor wires

6 MARKING, LABELING AND PACKAGING

6.1 Marking, labeling and packaging shall comply with the requirements of SANS 1418.
6.2 The cable shall be marked with a unique identification marking system. This will provide asset management information of the cable manufacturer's details, specific drum number traceability and meter lengths. This shall be provided in the uniquely marked tape. This tape shall be placed underneath the insulation of the neutral / earth supporting conductor.
6.3 Each core shall be individually marked with a traceable identification system which should be unique to the manufacturer.
6.4 The manufacturer shall keep a secure database of all uniquely marked cables supplied to City Power.
6.5 It shall be possible to prove ownership of either the cable or the individual cores at any given time.

7 DOCUMENTATION

Documentation that complies with the requirements of SANS 1418 shall be submitted in a catalogue format. In addition, relevant test certificates, in English, confirming compliance with the requirements of SANS 1418 shall be submitted.

8 TRAINING

8.1 A certified training course shall be offered to relevant City Power staff. The training shall include handling, transportation, installation and maintenance of ABC.

8.2 The associated costs for the certified training course in 8.1 shall be given per person and shall be fixed for the period of the contract.

9 QUALITY ASSURANCE

A quality management System shall be set up in order to assure the proper quality of aerial bundle conductor during design, development, production installation and servicing phases. Guidance on the requirements for a quality management System may be found in the following standards: ISO 9001:2015. The details shall be subject to agreement between the purchaser and supplier.

10 ENVIRONMENTAL MANAGEMENT

An environmental management plan shall be set up in order to ensure the proper environmental management and compliance of the aerial bundle conductor through its entire life cycle (i.e. during design, development, production, installation, operation and maintenance, decommissioning as well as disposal phases). Guidance on the requirements for an environmental management System shall be found in ISO 14001:2015 standards. The details shall be subject to agreement between City Power and the Supplier. This is to ensure that the asset created conforms to environmental standards and City Power SHERQ Policy.

11 HEALTH AND SAFETY

A health and safety plan shall be set up in order to ensure proper management and compliance of the aerial bundle conductor through its entire life cycle (i.e. during design, development, production, installation, operation and maintenance, decommissioning as well as disposal phases). Guidance on the requirements of a health and safety plan shall be found in ISO 45001:2018 standards. The details shall be subject to agreement between City Power and the Supplier. This is to ensure that the asset created conforms to environmental standards and City Power SHERQ Policy.

ANNEX A – BIBLIOGRAPHY

SCSSCAAD5: 1999, Eskom specification for aerial bundled conductor with uninsulated (bare) neutral

ANNEX B – REVISION INFORMATION

DATE	REV. NO.	NOTES
January 2003	0	First issue
June 2006	1	General editing Update of technical schedules
September 2008	2	Update committee members Inclusion of clause 4.2 Inclusion of table 1 (b) General editing
July 2011	3	Update committee members Inclusion of identifying conductor clause 6
February 2016	4	General editing Added a 25mm² 4AL
November 2018	5	edited tests clause no5 Updated committee members
March 2022	6	General editing Updated committee members Update of technical schedules Added table in clause 4.2 Updated clause 9,10 and 11 Updated Normative Ref. (clause2)

ANNEX C – TECHNICAL SCHEDULE

ITEM 1: CAB LV ABC 25 2AL – SAP 453

Schedule A: Purchaser's specific requirements
Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub-clause of SANS 1418	Description		Schedule A	Schedule B
1	-	ABC manufacturing standard		SANS 1418	XXXX
2	3.1	Rated voltage	V	600/1000	XXXX
3	3.4.1	Type of dielectric		XLPE	XXXX
4		Current rating in air (SANS 10198-4)	A	105	
5		Short circuit rating (1sec) (SANS 10198-4) minimum	kA	2.2	
6	4.2.3	Dielectric resistance at 20°C	MΩ.km	50	XXXX
7	4	Conductor identification and marking		Required	XXXX
		Core			
8	3.3.1.2	Phase conductor size	mm^2	25	XXXX
9	3.2.1	Material of phase conductor		Aluminum	XXXX
10	3.3.4	Minimum number of wires / strands		6	XXXX
11	4.2.1	Maximum resistance at 20º	Ω/km	1,2	
12	4.1.3	Minimum breaking force	N	3 300	
		Supporting Conductor			
13	3.3.1.2	Neutral / earth supporting conductor size	mm^2	54,6	XXXX
14	3.3.4	Minimum number of wires / strands		7* 3.15	XXXX
15	4.2.1	Maximum resistance at 20ºC	Ω/km	0,63	XXXX
16	4.1.3	Minimum breaking force	N	16 600	XXXX
17	5.2.2	Gross mass of cable drum	kg	Required	XXXX

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] WILL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____ _____
Name in block letters Signature

Full name of company: _____

ITEM 1: CAB LV ABC 25 2AL – SAP 453 (Continued)

Schedule A: Purchaser's specific requirements
Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub clause of SANS 1418	Description	Schedule A	Schedule B
18	6	**Tests and Markings**	Required	XXXX
		Type test certificates	Required	XXXX
		a) Impulse Test	Report No.	
		b) High Voltage withstand	Report No.	
		c) Adherence of dielectric to conductor of supporting core	Report No.	
		d) Tensile strength and breaking force of supporting and phase conductors	Report No.	
		e) Performance of supporting cores	Report No.	
		f) Dielectric shrink-back at high temperature	Report No.	
	6	g) Carbon black dispersion as per SANS 60811-4-1.	Report No.	
19		Marking requirements	Required	XXXX

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] WILL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____ _____
Name in block letters Signature

Full name of company: _____

ITEM 1: CAB LV ABC 25 2AL – SAP 453

Deviation schedule

Any deviations offered to this specification shall be listed below with reasons for deviation. In addition, evidence shall be provided that the proposed deviation will at least be more cost-effective than that specified by City Power.		
Item	**Sub-clause of SANS 1418**	**Proposed deviation**

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] WILL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____ _____

Name in block letters Signature

Full name of company: _____

ITEM 2: CAB LV ABC 50 5AL – SAP 454

Schedule A: Purchaser's specific requirements
Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub clause ofSANS 1418	Description		Schedule A	Schedule B
1	-	ABC manufacturing standard		SANS 1418	XXXX
2	3.1	Rated voltage	V	600/1000	XXXX
3	3.4.1	Type of dielectric		XLPE	XXXX
4		Current rating in air (SANS 10198-4) minimum	A	168	
5		Short Circuit rating (1 sec) (SANS 10198-4) minimum	kA	4.1	
6	4.2.3	Dielectric resistance at 20°C	MΩ.km	50	XXXX
7	4	Conductor identification and marking		Required	XXXX
		Core			
8	3.3.1.2	Phase conductor size	mm^2	50	XXXX
9	3.2.1	Material of phase conductor		Aluminum	XXXX
10	3.3.4	Minimum number of wires / strands		6	XXXX
11	4.2.1	Maximum resistance at 20º	Ω/km	0.641	
12	4.1.3	Minimum breaking force	N	6 200	
13	3.3.1.2	Auxiliary conductor size	mm^2	25	XXXX
14	3.3.4	Minimum number of wires / strands		6	XXXX
15	4.2.1	Maximum resistance at 20º	Ω/km	1,2	
16	4.1.3	Minimum breaking force	N	3 300	
		Supporting Conductor			
17	3.3.1.2	Neutral / earth supporting conductorsize	mm^2	54,6	XXXX
18	3.3.4	Minimum number of wires / strands		7* 3.15	XXXX
19	4.2.1	Maximum resistance at 20ºC	Ω/km	0,63	
20	4.1.3	Minimum breaking force	N	16 600	
21	5.2.2	Gross mass of cable drum	kg	Required	XXXX

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] WILL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____ _____
Name in block letters Signature

Full name of company: _____

ITEM 2: CAB LV ABC 50 5AL – SAP 454 (Continued)

Schedule A: Purchaser's specific requirements
Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub clause of SANS 1418	Description	Schedule A	Schedule B
22	6	**Tests and Markings** Type test certificates a) Impulse Test b) High Voltage withstand c) Adherence of dielectric to conductor of supporting core d) Tensile strength and breaking force of supporting and phase conductors e) Performance of supporting cores f) Dielectric shrink-back at high temperature g) Carbon black dispersion as per SANS 60811-4-1.	Required Required Report No. Report No. Report No. Report No. Report No. Report No. Report No.	XXXX XXXX
23	6	Marking requirements	Required	XXXX

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] WILL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____ _____
Name in block letters Signature

Full name of company: _____

ITEM 2: CAB LV ABC 50 5AL – SAP 454

Deviation schedule

Any deviations offered to this specification shall be listed below with reasons for deviation. In addition, evidence shall be provided that the proposed deviation will at least be more cost-effective than that specified by City Power.		
Item	**Sub-clause of SANS 1418**	**Proposed deviation**

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] WILL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____ _____

Name in block letters Signature

Full name of company: _____

ITEM 3: CAB LV ABC 95 5AL – SAP 455

Schedule A: Purchaser's specific requirements
Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub-clause of SANS 1418	Description		Schedule A	Schedule B
1	-	ABC manufacturing standard		SANS 1418	XXXX
2	3.1	Rated voltage	V	600/1000	XXXX
3	3.4.1	Type of dielectric		XLPE	XXXX
4		Current rating in air (SANS 10198-4) minimum	A	258	
5		Short Circuit rating (1sec) (SANS 10198) minimum	kA	8.2	
6	4.2.3	Dielectric resistance at 20°C	MΩ.km	50	XXXX
7	4	Conductor identification and marking		Required	XXXX
		Core			
8	3.3.1.2	Phase conductor size	mm^2	95	XXXX
9	3.2.1	Material of phase conductor		Aluminum	XXXX
10	3.3.4	Minimum number of wires / strands		15	XXXX
11	4.2.1	Maximum resistance at 20º	Ω/km	0,32	
12	4.1.3	Minimum breaking force	N	12 300	
13	3.3.1.2	Auxiliary conductor size	mm^2	25	XXXX
14	3.3.4	Minimum number of wires / strands		6	XXXX
15	4.2.1	Maximum resistance at 20º	Ω/km	1,2	
16	4.1.3	Minimum breaking force	N	3 300	
		Supporting Conductor			
17	3.3.1.2	Neutral / earth supporting conductorsize	mm^2	54,6	XXXX
18	3.3.4	Minimum number of wires / strands		7* 3.15	XXXX
19	4.2.1	Maximum resistance at 20ºC	Ω/km	0,63	
20	4.1.3	Minimum breaking force	N	16 600	
21	5.2.2	Gross mass of cable drum	kg	Required	XXXX

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] WILL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____ _____
Name in block letters Signature

Full name of company: _____

ITEM 3: CAB LV ABC 95 5AL – SAP 455 (Continued)

Schedule A: Purchaser's specific requirements
Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub clause of SANS 1418	Description	Schedule A	Schedule B
22	6	**Tests and Markings**	Required	XXXX
		Type test certificates	Required	XXXX
		a) Impulse Test	Report No.	
		b) High Voltage withstand	Report No.	
		c) Adherence of dielectric to conductor of supporting core	Report No.	
		d) Tensile strength and breaking force of supporting and phase conductors	Report No.	
		e) Performance of supporting cores	Report No.	
		f) Dielectric shrink-back at high temperature	Report No.	
		g) Carbon black dispersion as per SANS 60811-4-1.	Report No.	
23	6	Marking requirements	Required	XXXX

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] WILL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____ _____
Name in block letters Signature

Full name of company: _____

ITEM 3: CAB LV ABC 95 5AL – SAP 455

Deviation schedule

Any deviations offered to this specification shall be listed below with reasons for deviation. In addition, evidence shall be provided that the proposed deviation will at least be more cost-effective than that specified by City Power.		
Item	**Sub-clause of SANS 1418**	**Proposed deviation**

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] WILL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____ _____

Name in block letters Signature

Full name of company: _____

ITEM 4: CAB LV ABC 120 5AL –SAP 456

Schedule A: Purchaser's specific requirements
Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub-clause of SANS 1418	Description		Schedule A	Schedule B
1	-	ABC manufacturing standard		SANS 1418	XXXX
2	3.1	Rated voltage	V	600/1000	XXXX
3	3.4.1	Type of dielectric		XLPE	XXXX
4		Current rating in air (SANS 10198-4) minimum	A	300	XXXX
5		Short Circuit rating (1sec)(SANS 10198) minimum	kA	10.3	
6	4.2.3	Dielectric resistance at 20°C	MΩ.km	50	XXXX
7	4	Conductor identification and marking		Required	XXXX
		Core			
8	3.3.1.2	Phase conductor size	mm^2	120	XXXX
9	3.2.1	Material of phase conductor		Aluminum	XXXX
10	3.3.4	Minimum number of wires / strands		15	XXXX
11	4.2.1	Maximum resistance at 20º	Ω/km	0,253	
12	4.1.3	Minimum breaking force	N	15 600	
13	3.3.1.2	Auxiliary conductor size	mm^2	25	XXXX
14	3.3.4	Minimum number of wires / strands		6	XXXX
15	4.2.1	Maximum resistance at 20º	Ω/km	1,2	
16	4.1.3	Minimum breaking force	N	3 300	
		Supporting Conductor			
17	3.3.1.2	Neutral / earth supporting conductor size	mm^2	70	XXXX
18	3.3.4	Minimum number of wires / strands		7* 3.50	XXXX
19	4.2.1	Maximum resistance at 20ºC	Ω/km	0,5	
20	4.1.3	Minimum breaking force	N	20 100	
21	5.2.2	Gross mass of cable drum	kg	Required	XXXX

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] WILL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____ _____

Name in block letters Signature

Full name of company: _____

ITEM 4: CAB LV ABC 120 5AL –SAP 456 (Continued)

Schedule A: Purchaser's specific requirements
Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub clause of SANS 1418	Description	Schedule A	Schedule B
22	6	**Tests and Markings** Type test certificates a) Impulse Test b) High Voltage withstand c) Adherence of dielectric to conductor of supporting core d) Tensile strength and breaking force of supporting and phase conductors e) Performance of supporting cores f) Dielectric shrink-back at high temperature g) Carbon black dispersion as per SANS 60811-4-1.	Required Required Report No. Report No. Report No. Report No. Report No. Report No. Report No.	XXXX XXXX
23	6	Marking requirements	Required	XXXX

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] WILL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____ _____
Name in block letters Signature

Full name of company: _____

ITEM 4: CAB LV ABC 120 5AL –SAP 456

Deviation schedule

Any deviations offered to this specification shall be listed below with reasons for deviation. In addition, evidence shall be provided that the proposed deviation will at least be more cost-effective than that specified by City Power.		
Item	**Sub-clause of SANS 1418**	**Proposed deviation**

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] WILL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____ _____

Name in block letters Signature

Full name of company: _____

ITEM 5: CAB LV ABC 25 4AL – SAP 2921

Schedule A: Purchaser's specific requirements
Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub-clause of SANS 1418	Description		Schedule A	Schedule B
1	-	ABC manufacturing standard		SANS 1418	XXXX
2	3.1	Rated voltage	V	600/1000	XXXX
3	3.4.1	Type of dielectric		XLPE	XXXX
4		Current rating in air(as per SANS10198)	A	105	
5		minimum Short circuit rating(1sec)(as per SANS 10198) minimum	kA	2.2	
6	4.2.3	Dielectric resistance at 20°C	MΩ.km	50	XXXX
7	4	Conductor identification and marking		Required	XXXX
		Core			
8	3.3.1.2	Phase conductor size	mm^2	25	XXXX
9	3.2.1	Material of phase conductor		Aluminum	XXXX
10	3.3.4	Minimum number of wires / strands		6	XXXX
11	4.2.1	Maximum resistance at 20º	Ω/km	1,2	
12	4.1.3	Minimum breaking force	N	3 300	
		Supporting Conductor			
13	3.3.1.2	Neutral / earth supporting conductorsize	mm^2	54,6	XXXX
14	3.3.4	Minimum number of wires / strands		7* 3.15	XXXX
15	4.2.1	Maximum resistance at 20ºC	Ω/km	0,63	
16	4.1.3	Minimum breaking force	N	16 600	
17	5.2.2	Gross mass of cable drum	kg	Required	XXXX

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] WILL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____ _____
Name in block letters Signature

Full name of company: _____

ITEM 5: CAB LV ABC 25 4AL – SAP 2921 (Continued)

Schedule A: Purchaser's specific requirements
Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub clause of SANS 1418	Description	Schedule A	Schedule B
18	6	**Tests and Markings** Type test certificates a) Impulse Test b) High Voltage withstand c) Adherence of dielectric to conductor of supporting core d) Tensile strength and breaking force of supporting and phase conductors e) Performance of supporting cores f) Dielectric shrink-back at high temperature g) Carbon black dispersion as per SANS 60811-4-1.	Required Required Report No. Report No. Report No. Report No. Report No. Report No. Report No.	XXXX XXXX
19	6	Marking requirements	Required	XXXX

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] WILL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____ _____
Name in block letters Signature

Full name of company: _____

ITEM 5: CAB LV ABC 25 4AL – SAP 2921

Deviation schedule

Any deviations offered to this specification shall be listed below with reasons for deviation. In addition, evidence shall be provided that the proposed deviation will at least be more cost-effective than that specified by City Power.		
Item	**Sub-clause of SANS 1418**	**Proposed deviation**

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] WILL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____ _____

Name in block letters Signature

Full name of company: _____

ANNEX D – STOCK ITEMS

Material Group: COND-ABC

Item	SAP No.	SAP Short Description	SAP Long Description
1	453	CAB LV ABC 25 2AL	CABLE, LV ABC WITH INSULATED NEUTRAL SUPPORTING CONDUCTOR, 1 X 25 MM² PHASE CORE PLUS 1 X 54,6 MM2 NEUTRAL / EARTH SUPPORTING CORE (ALUMINIUM ALLOY & INSULATED). ITEM SPECIFICATION NO. CP_TSSPEC_010.
2	454	CAB LV ABC 50 5AL	CABLE, LV ABC WITH INSULATED NEUTRAL SUPPORTING CONDUCTOR, 3 X 50 MM² PHASE CORES PLUS 1 X 25 MM² STREET LIGHTING CORE PLUS 1 X 54,6 MM² NEUTRAL / EARTH SUPPORTING CONDUCTOR (ALUMINIUM ALLOY & INSULATED). ITEM SPECIFICATION NO. CP_TSSPEC_010.
3	455	CAB LV ABC 95 5AL	CABLE, LV ABC WITH INSULATED NEUTRAL SUPPORTING CONDUCTOR, 3 X 95 MM² PHASE CORES PLUS 1 X 25 MM² STREET LIGHTING CORE PLUS 1 X 54,6 MM² NEUTRAL / EARTH SUPPORTING CONDUCTOR (ALUMINIUM ALLOY & INSULATED). ITEM SPECIFICATION NO. CP_TSSPEC_010.
4	456	CAB LV ABC 120 5AL	CABLE, LV ABC WITH INSULATED NEUTRAL SUPPORTING CONDUCTOR, 3 X 120 MM² PHASE CORES PLUS 1 X 25 MM² STREET LIGHTING CORE PLUS 1 X 70 MM² NEUTRAL / EARTH SUPPORTING CONDUCTOR (ALUMINIUM ALLOY & INSULATED). ITEM SPECIFICATION NO. CP_TSSPEC_010.
5	2921	CAB LV ABC 25 4AL	CABLE, LV ABC WITH INSULATED NEUTRAL SUPPORTING CONDUCTOR, 3 X 25 MM² PHASE CORE PLUS 1 X 54, 6 MM2 NEUTRAL / EARTH SUPPORTING CORE (ALUMINIUM ALLOY & INSULATED). ITEM SPECIFICATION NO. CP_TSSPEC_010.