



BREED VALLEY
MUNICIPALITY • MUNISIPALITEIT • UMASIPALA

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In your reply, please quote: **BV937/2022**
Reference: **BV937/2022**
Enquiries: **Wilfred Bells**

Dear Sir/Madam

ADDENDUM No 1: TENDER: BV937/2022: SUPPLY OF SERVICES FOR JOINTING AND TERMINATION OF ELECTRICAL CABLE WITHIN THE BREED VALLEY MUNICIPALITY FOR A PERIOD ENDING 30 JUNE 2025

Based on the discussions in the virtual compulsory clarification meeting that was held on Tuesday, 22 March 2022 at 11:00 via Microsoft Teams, this addendum is issued to enhance and clarify the technical specifications that have been laid down in the tender document and is not intended to change the specifications materially.

The following items are being added, removed or clarified:

1. Amendments in the Bill of Quantities (BoQ): Replace page C2.2.2 of Part C2.2: BoQ with page C2.2.2a – Unit measurement updates on asphalt and brick paving from m³ to m². Remove 'supply' from PVC pipes, cables sleeves, etc. replace with 'collect and install';
2. Amendments in the Bill of Quantities (BoQ): Replace page C2.2.4 of Part C2.2: BoQ with page C2.2.4a – Update from three single core to single core 1000mm²;
3. Amendments in the Bill of Quantities (BoQ): Replace page C2.2.5 of Part C2.2: BoQ with page C2.2.5a – Update from three single core to single core 630 mm²;
4. Amendments in the Bill of Quantities (BoQ): Replace page C2.2.6 of Part C2.2: BoQ with page C2.2.6a – Update High Voltage 66kV cable (only serving tests);
5. Amendments in the Scope of Works: Replace page C3.2.2 of Part C3.2 Specification: Jointing, Terminating and Fault Finding - PB with page C3.2.2a – Replace HV with MV cables under section PB7.2 jointing;
6. Amendments in the Scope of Works: Replace page C3.2.4 of Part C3.2 Specification: Jointing, Terminating and Fault Finding - PB with page C3.2.4a – Replace HV with MV cables under section PB13 fault finding and testing, kept the serving testing of HV cables; and
7. Amendments in the Scope of Works: Replace page C3.2.12 of Part C3.2 Specification: Jointing, Terminating and Fault Finding - PB with page C3.2.12a – Replace HV with MV cable under section PB17.2.2 & PB17.2.3 for jointing and terminations.

The rest of the ToR (technical specification) remains unchanged.

Yours sincerely,

F. GEDULDT

Manager: Electrical Services
On behalf of the Chief Financial Officer

Please note: This addendum must accompany the tender document upon submission.

A caring valley of excellence.

SCHEDULE OF QUANTITIES

SECTION A: EARTHWORKS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
						R	c
A.1		PB: SUPPLY, DELIVERY, PROVISION OF EXCAVATIONS, BACKFILLING, REINSTATEMENT OF ROAD SURFACES AND SIDEWALKS, SITE CLEARANCE AND IMPORTING OF MATERIAL.					
A.1	PB17.2.8	Trench Excavation 500mm wide by 1100mm deep					
		Normal Excavation	m ³	10			
		Difficult Excavation	m ³	10			
		Hard Rock Excavation	m ³	10			
		Duct opening (0,5 – 2 m depth), including excavation in all types of materials	m ³	10			
		Test holes (0,5 – 2m depth), including excavation in all types of materials	m ³	10			
		Saw cutting of hard surface (Road crossings – driveways)	m	10			
		Export of excess material to approved dumping site	m ³	10			
		Provisions for installation & removal for barricading of open trenches	m	10			
A.2	PB17.2.8	IMPORT OF MATERIAL					
		25mm Continuously graded Bitumen 5% Content	m ³	10			
		150mm G4 Base	m ³	10			
		150mm G5 Subbase	m ³	10			
		200mm Selected layer (Sand)	m ³	10			
		Pre-mix concrete (15Mpa)	m ³	10			
A.3	PB17.2.8	SUPPLY, DELIVERY, OF MATERIAL FOR THRUST BORING OR DIRECTIONAL DRILLING					
		Directional drilling**					
		110mm Ø	m	10			
		160mm Ø	m	10			
		Thrust boring**					
		75mm Ø	m	10			
		110mm Ø	m	10			
		Rock drilling**					
		110mm Ø	m	10			
		160mm Ø	m	10			
A.4	PB17.2.8	COLLECT & INSTALLATION OF MATERIAL FOR ROAD CROSSINGS INSTALLATION OF SLEEVES AND PIPES					
		HDPE pipe 32mm Ø	m	10			
		PVC pipe 110mm Ø	m	10			
		PVC pipe 160mm Ø	m	10			
		Marking of sleeves on kerb	each	10			
		Electrical Warning Tape	m	100			
A.5	PB17.2.8	DELIVERY, INSTALLATION OF MATERIAL FOR REINSTATEMENTS					
		Reinstate road surfaces - Asphalt	m ²	10			
		Reinstate road surfaces - Concrete	m ³	10			
		Reinstate road surfaces - Brick paving	m ²	10			
Total Carried Forward to Summary Page C2.2-10							

SECTION B: CABLE JOINTING (INSTALLATIONS)

	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
						R	c
Brought Forward							
B.7		Complete 35-50mm ² LV Cable Resin Type Joint					
B.7.1	PB17.2.2	Normal time (07h45 – 16h30)	P/ Joint	1.0			
B.7.2	PB17.2.2	After Hours: 16h30 to 07h45 and Saturdays	P/ Joint	1.0			
B.7.3	PB17.2.2	Sundays and public holidays	P/ Joint	1.0			
B.8		Complete 11kV Single Core 1000mm ² , Heat Shrink Joint (PILC)					
B.8.1	PB17.2.2	Normal time (07h45 – 16h30)	P/ Joint	1.0			
B.8.2	PB17.2.2	After Hours: 16h30 to 07h45 and Saturdays	P/ Joint	1.0			
B.8.3	PB17.2.2	Sundays and public holidays	P/ Joint	1.0			
Total Carried Forward to Summary Page C2.2-10							

SECTION C: CABLE TERMINATION(INSTALLATIONS)

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
						R	c
Brought Forward							
C.1		Complete 11kV 25-300mm ² Cable compound filled termination					
C.1.1	PB17.2.3	Normal time (07h45 – 16h30)	P/ Termination	1.0			
C.1.2	PB17.2.3	After Hours: 16h30 to 07h45 and Saturdays	P/ Termination	1.0			
C.1.3	PB17.2.3	Sundays and public holidays	P/ Termination	1.0			
C.2		Complete melt out of compound termination box					
C.2.1	PB17.2.3	Normal time (07h45 – 16h30)	P/ Melt out	1.0			
C.2.2	PB17.2.3	After Hours: 16h30 to 07h45 and Saturdays	P/ Melt out	1.0			
C.2.3	PB17.2.3	Sundays and public holidays	P/ Melt out	1.0			
C.3		Complete 11kV 25-300mm ² Cable Heat Shrink Termination (PILC and XLPE)					
C.3.1	PB17.2.3	Normal time (07h45 – 16h30)	P/ Termination	1.0			
C.3.2	PB17.2.3	After Hours: 16h30 to 07h45 and Saturdays	P/ Termination	1.0			
C.3.3	PB17.2.3	Sundays and public holidays	P/ Termination	1.0			
C.4		Complete 11kV 35-50mm ² ABC conductor, Heat Shrink Termination (Set of 3) (XLPE)					
C.4.1	PB17.2.3	Normal time (07h45 – 16h30)	P/ Termination	1.0			
C.4.2	PB17.2.3	After Hours: 16h30 to 07h45 and Saturdays	P/ Termination	1.0			
C.4.3	PB17.2.3	Sundays and public holidays	P/ Termination	1.0			
C.5		Complete 11kV Single Core 630mm ² , Heat Shrink Termination (PILC)					
C.5.1	PB17.2.3	Normal time (07h45 – 16h30)	P/ Termination	1.0			
C.5.2	PB17.2.3	After Hours: 16h30 to 07h45 and Saturdays	P/ Termination	1.0			
C.5.3	PB17.2.3	Sundays and public holidays	P/ Termination	1.0			
Total Carried Forward to Summary Page C2.2-10							

SECTION D: FAULT FINDING

SECTION BY PRICE ANALYSIS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
						R	c
Brought Forward							
D.1		Fault Finding on cables including – <ul style="list-style-type: none"> • High Voltage 66kV cables (only serving tests). • Medium Voltage (XLPE & PILC) 11kV cables. • Low Voltage 1000V PVC, SWA cables. Contractor to provide testing equipment. (VLF, insulation resistance test, thumping, pre-location, pin pointing, pressure testing, serving test (high voltage DC test), conductor resistance test (equipment to form part of hourly tariff).					
D.1.1	PB17.2.4	Normal time (07h45 – 16h30)	P/ Hour	1.0			
D.1.2	PB17.2.4	After Hours: 16h30 to 07h45 and Saturdays	P/ Hour	1.0			
D.1.3	PB17.2.4	Sundays and public holidays	P/ Hour	1.0			
Total Carried Forward to Summary Page C2.2-10							

PB5 QUALIFICATIONS & WORKMANSHIP

Qualified Artisan (Electrician)/Cable Joiner with suitable practical examination declared competent in jointing and terminating of PILC and XLPE cables in accordance with ESETA (Act 97 of 1998) and SANS 10198.

The quality of work must be of the highest standard and shall be guaranteed for a minimum period of 12 months.

PB6 CONTRACT PERIOD

The contract period shall be from date of final award until 30 June 2025.

PB7 JOINTING OF VARIOUS SIZE CABLES**PB7.1 GENERAL**

Jointing shall be carried out strictly in accordance with the manufacturer's jointing instructions and by artisans thoroughly experienced and competent in jointing the classes of cables used. The joints shall not impair the anti-electrolysis characteristics of the cables. Conductors can be joined using soldered weak-back ferrules crimped with an approved hydraulic crimping tool using the appropriate hexagonal compression die and crimping ferrule for that size of conductor and type of material or mechanical torque shear lugs and ferrules. No joint shall be situated inside a cable pipe. This Standard PB: Jointing, Terminating and Fault Finding is applicable to single-core and three-phase cables armoured or unarmoured, with or without metallic sheath, copper, or aluminium cables, underground or surface mounted cables. Joints will be without sharp edges or protrusions. All completed joint will be pressure tested.

PB7.2 JOINTING: MV CABLES

Paper insulated cables can be jointed with a standard underground cast iron through joint. The filling compound shall be non-hygroscopic with high dielectric strength and insulation resistance qualities. Heat Shrink through Joint: XLPE or PILC cables can be joined with heat shrink joints. The electrical continuity of the conductor's shields, and armouring shall in no way be affected by the joint. Bonding of the earth continuity conductor shall be internal to the joint. No external joining of the earth continuity conductor, which may be subject to corrosion, shall be permitted. The complete joint shall be covered with a waterproof jacket as protection against corrosion.

PB7.3 JOINTING: LV CABLES

LV cables joints shall be Resin Type joints.

PB7.4 FAULTS - CALLOUT AND COMPLETE REPAIR

When the need arises for an Electrical Contractor to joint various size of cables within the Breede Valley Municipality the Electrical Department will prepare the area where the jointing need to be done. The cable will be opened-up and a jointing bay provided. The Contractor shall allow for his own preliminaries and/or overhead costs as required for the execution of the contract.

Tender rates to include:

- 1) All labour/team cost.
- 2) Travel distance cost.
- 3) Repair cost
- 4) Fault response time is 3 hours from time of Call.

Document Reference	Description
NRS 012 / SANS 876	Cable terminations and live conductors within air-filled enclosures (insulation coordination) for rated AC voltages from 7.2 kV and up to and including 36 kV.
NRS 012	Cable terminations and live conductors within air-filled enclosures (insulation co-ordination) for rated AC voltages from 7.2 kV and up to and including 36 kV.
NRS 053	Edition 2, Accessories for medium-voltage power cables (3.8/6.6 kV to 19/33 kV).
NRS 060:2005	Code of practice for clearances for electrical systems
SANS 10142-1 & 2	Wiring of premises: Part 1 & 2
SANS 97	Electric cables – Impregnated paper-insulated metal-sheathed cables for rated voltages 3,3/3,3 kV to 19/33 kV (excluding pressure assisted cables).
SANS 1019	Standard voltages, currents and insulation levels for electricity supply.
SANS 10198	The selection, handling, and installation of electric power cables of rating not exceeding 33kV All Parts

PB13 FAULT FINDING ON VARIOUS CABLES

Contractor will be requested to assist in fault find on PILC and XLPE MV cables within the Breede Valley Municipality. Fault Finding on cables will be executed with the instruments/equipment of the contractor as and when required. This will be agreed on beforehand. Testing and fault finding on cables includes VLF, thumping, pre-location, pin pointing, insulation resistance test, pressure testing, conductor resistance test. Serving testing (High Voltage DC Test) to be done on HV cables.

PB14 EXCAVATIONS/EARTHWORKS

Excavation (Trenching) (The rates for excavation shall include all backfilling)

The general soil conditions vary from Area to Area and within each area. Contractor shall familiarize himself with the various ground conditions found in each area. For the purposes of this contract and due to the different soil conditions, excavations shall be classified into "Normal Excavation", "Difficult" and "Hard Rock Excavation". The Employers agent/representative shall approve the classification of any excavation and the rate used before work is done. The Contractor shall identify and mark all areas that are to be excavated by chalk to indicate the cable route and to ensure straight lines for excavations.

NORMAL EXCAVATION

Digging, loosening or removal of the soil material making use of normal hand tools e.g. pick, shovels etc.

DIFFICULT EXCAVATION

Digging, loosening or removal of hard material that can only be practically done with the use of mechanical plant. hard dry clay, soil containing layers of rock, paved surfaces, road crossings etc. can be categorized as hard excavation materials. The Contractor shall obtain authority before any difficult excavation is done.

- PB17.2.2 JOINTING OF VARIOUS SIZE MV/LV CABLES.....Unit: each**
The tender rate shall include full compensation for the jointing of various size MV/LV cables within the Breede Valley Municipality, complete as specified in clause PB7 (page C3.2.2).
- PB17.2.3 TERMINATION OF VARIOUS SIZE MV/LV CABLES.....Unit: each**
The tender rate shall include full compensation for the terminating of various size MV cables within the Breede Valley Municipality, complete as specified in clause PB8 (page C3.2.3).
- PB17.2.4 FAULT FINDING ON VARIOUS CABLES.....Unit: p/hrs**
The tender rate shall include full compensation for fault finding on various cables within the Breede Valley Municipality, complete as specified in PB13 (page C3.2.4).
- PB17.2.5 TRAVEL DISTANCE COST.....Unit: km**
The tender rate shall include full compensation for the travel distance cost for the execution of the contract within the Breede Valley Municipality, complete as specified in clause PB16 (page C3.2.11).
- PB17.2.6 TRAVEL DISTANCE COST- STANDARD RETURN RATE.....Unit: No**
The tender rate shall include full compensation for the travel distance cost – standard return rate from Bidder's base premises to Electrical Services premises Worcester for the execution of the contract within the Breede Valley Municipality, complete as specified in clause PB16 (page C3.2.11).
- PB 17.2.7 SUPPLY, DELIVERY OF VARIOUS CABLE CLEATS, HEAT SHRINK JOINTS AND TERMINATIONS.....Unit: each**
The tender rate shall include full compensation for the supply, delivery of various cable cleats, heat shrink joints and terminations complete as specified in clause PB9 (page C3.2.3).
- PB 17.2.8 SUPPLY, DELIVERY, PROVISION OF EXCAVATIONS, BACKFILLING, REINSTATEMENT OF ROAD SURFACES AND SIDEWALKS, SITE CLEARANCE, IMPORTING OF MATERIAL AND DIRECTIONAL DRILLING.....Unit: No**
The tender rate shall include full compensation for activities related to earthworks including resources, material, tools, and equipment complete as specified in clause PB14 & PB15 (page C3.2.4 to page C3.2.11).