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TITLE	<b>SPECIFICATION FOR MASONRY MATERIAL</b>	REFERENCE	<b>CP_TSSPEC_388</b>	REV	<b>0</b>
		DATE:	<b>AUGUST 2024</b>		
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**FOREWORD**

This standard was prepared by the following work group members:

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## 1. INTRODUCTION

City Power is a State Owned Company (SOC) distributing and selling electricity to the City of Johannesburg and its surroundings. City Power requires a qualifying service provider for the supply and delivery of masonry material. The material to be used in its building requirements shall be delivered at various locations or depots when required.

## 2. SCOPE

The scope of works entails the supply and delivery of General Building material that is specified on the attached bill of quantities on the as and when required basis. The material shall be delivered at City Power's depots. The required material to be supplied and used in the construction shall be listed in the bill of quantities (BOQ) accompanying this document.

## 3. NORMATIVE REFERENCES

The following document contains provisions that, through reference in the text, constitute requirements of this specification. At the time of publication, the edition indicated was 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 edition of the document listed below.

SANS 10400; *The application of the National Building Regulations,*

SABS 0100; *The structural use of concrete*

SABS EN 50197-1 *Cement: Composition, specifications and conformity criteria for common cements*

SANS 248; *Bituminous damp-proof courses*

BS 1377:1975; *Soils for Civil Engineering*

ISO 9001:2015; *Quality Management System*

ISO 45001:2018; *Occupational Health and Safety Management System*

ISO 14001:2015; *Environmental Management System*

## 4. ABBREVIATIONS

The definitions and abbreviations in the above documents (Normative Reference) shall apply to this specification.

## 5. REQUIREMENTS

### 5.1 Environmental conditions

- a) Ambient temperature range of  $-20^{\circ}\text{C}$  to  $+65^{\circ}\text{C}$
- b) Relative humidity 5-95% @  $50^{\circ}\text{C}$

### 5.2 General Requirements

- 5.2.1 The building material shall comply with SANS 10400 and related regulations as per below.
- 5.2.2 This document shall complement and be used in conjunction with CP\_TSSTAN\_092
- 5.2.3 Only quality and SABS approved material shall be quoted for, substandard material shall be returned at the service providers cost. The same shall apply to incorrect orders.
- 5.2.4 Service Provider shall be held responsible for cracked walls resulting from incorrect and substandard material.
- 5.2.5 The Service provider shall deliver the material within 7-days from the time of receiving a Purchase Order.
- 5.2.6 All equipment shall be assembled in SA and meet local content requirements as dictated by the Department of Trade and Industry. (DTI).
- 5.2.7 General principles and requirements of the National Building regulator (NBR) shall always be adhered to.
- 5.2.8 The Service Provider and its Personnel shall meet the requirements of the NBR.

### 5.3 Cement

- 5.3.1 Cement should comply with SABS EN 197-1. Strength class should be 42,5N or higher because the concrete must develop strength as rapidly as possible.
- 5.3.2 Cement that does not bear the SABS mark shall not be accepted.
- 5.3.3 Solid bricks that are in accordance with CP\_TSSTAN\_092 shall be preferred.

### 5.4 Concrete

- 5.4.1 The concrete in both plain and reinforced concrete shall be in accordance with SABS 0100
- 5.4.2 High density bricks with low water absorption shall be used up to a 150mm above ground level to mitigate moisture problems
- 5.4.3 A damp proof course shall meet requirements stipulated in SANS 248.

## 5.5 Sand

### 5.5.1 Classification

5.5.1.1 Sand can be classified into three categories from different prospect: Namely, pit sands, stream sands, and marine sands

5.5.1.2 Texture: Sandstones are composed almost entirely of well-sorted, sub-angular to rounded sand grains.

Type	Grain size
course grained"	grains is 2 to 0.5mm,
medium grained	grains is 0.5 to 0.25mm
fine grained	grains is 0.25 to 0.1mm.

### 5.5.2 Quality of sand

5.5.2.1 The sand shall consist of natural sand; crushed stone sand or crushed gravel sand, or a combination of any of these.

5.5.2.2 The sand shall be hard, durable, clean and free from adherent coatings and organic matter and shall not contain any appreciable amount of clay balls or pallets.

5.5.2.3 The sand shall not contain any harmful impurities, such as iron pyrites, alkalis, salts, coal, mica, shale or similar laminated or other materials in such form or in such quantities as to affect adversely the hardening, the strength, the durability or the appearance of the mortar or applied or to attack any reinforcement used in the masonry work.

5.5.2.4 Poorly graded sands having a prominent clay fraction (particle size below 1/256 mm) and also plastic fines shall not be accepted.

5.5.2.5 Only clean sand must be used shall be used in accordance with (BS 1377:1975).

## 6. DOCUMENTATION

NA

## 7. QUALITY MANAGEMENT

A quality management system shall be set up in order to assure the quality during manufacture, removal, transportation and disposal. 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.

## **8. HEALTH AND SAFETY**

A health and safety plan shall be set up in order to ensure proper management and compliance during removal, transportation and disposal of the material. 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.

## **9. ENVIRONMENTAL MANAGEMENT**

An environmental management plan shall be set up in order to ensure the proper environmental management and compliance is adhered to during, removal, transportation and disposal of rubble. 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.

ANNEXURE A - BIBLIOGRAPHY

None

ANNEXURE B - REVISION INFORMATION

DATE	REV. NO.	NOTES
November 2023	0	First issue



### Annex C - Technical Schedules A and B for REQUIREMENTS

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub-clause of CP_TSSPEC_388	Description	Schedule A	Schedule B
		Name of OEM	XXXX	
	5.1	Environmental conditions		
	a)	Ambient temperature range of -20°C to +65°C	State	
	b)	Relative humidity 5-95% @ 50°C	State	
	5.2.1	The building material shall comply with SANS 10400 as to 5.2.1	Required	
	5.2.2	This document shall be used in conjunction with CP_TSSTAN_092	Required	
	5.2.3	Only quality and SABS approved material shall be quoted for, in accordance with 5.2.3	Required	
	5.2.4	Service Provider shall be held responsible for cracked walls resulting from and substandard material.	Required	
	5.2.5	The Service provider shall deliver the material within 7-days from the time of receiving a Purchase Order.	Required	
	5.2.6	All material shall be produced in SA and meet local content requirements as dictated by the DTI.	Required	
	5.2.7	General principles and requirements of the NBR shall always be adhered to.	Required	
	5.2.8	The Service Provider and its Personnel shall meet the requirements of the NBR.	Required	
	5.3.1	Cement should comply with SABS EN 197-1. Strength class should be 42,5N or higher as to clause 5.3.1	Required	
	5.3.2	Cement that does not bear the SABS mark shall not be accepted.	Required	
	5.3.3	Solid bricks that are in accordance with CP_TSSTAN_092 shall be preferred.	Required	
	5.4	Concrete	Required	
	5.4.1	The concrete in both plain and reinforced concrete shall be in accordance with SABS 0100	Required	
	5.4.2	High density bricks with low water absorption shall be used up to a 150mm above ground level to mitigate moisture problems	Required	
	5.4.3	A damp proof course shall meet requirements stipulated in SANS 248.	Required	

Note: Ticks, Cross [✓, X], Astrick [∗], Word [Noted] or TBA ["To Be Advice"] shall not be accepted.

Tender Number: \_\_\_\_\_

Tenderer's Authorised Signatory: \_\_\_\_\_

Name in block letters

Signature

Full name of company: \_\_\_\_\_

### Annex C - Technical Schedules A and B for REQUIREMENTS

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub-clause of CP_TSSPEC_388	Description	Schedule A	Schedule B
		Name of OEM	XXXX	
	5.5	Sand	XXX	
	5.5.2	Quality of sand	XXX	
	5.5.2.1	The sand shall consist of natural sand; crushed stone sand or crushed gravel sand, or a combination of any of these.	state	
	5.5.2.2	The sand shall be hard, durable, and clean in accordance with clause 5.5.2.2	Required	
	5.5.2.3	The sand shall not contain any harmful impurities, such as iron pyrites or other material in accordance with clause 5.5.2.3	Required	
	5.5.2.4	Poorly graded sands having a prominent clay fraction (particle size below 1/256 mm) and also plastic fines shall not be accepted.	Required	
	5.5.2.5	Only clean sand shall be used in accordance with (BS 1377:1975).	Required	
	7	A quality management system shall be set up in order to assure the quality during manufacture, removal, transportation and disposal as to clause 7.	Required	
	8	A health and safety plan shall be set up in order to ensure proper management and compliance during removal, transportation and disposal of the material as to clause 8	Required	
	9	An environmental management plan shall be set up in order to ensure the proper environmental management in accordance with clause 9.	Required	

Note: Ticks, Cross [✓, X], Astrick [\*], Word [Noted] or TBA ["To Be Advice"] shall not be accepted.

Tender Number: \_\_\_\_\_

Tenderer's Authorised Signatory: \_\_\_\_\_

Name in block letters                      Signature

Full name of company: \_\_\_\_\_

**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 CP_TSSPEC_385	Proposed deviation

Tender Number: \_\_\_\_\_

Tenderer's Authorised Signatory: \_\_\_\_\_  
Name in block letters Signature

Full name of company: \_\_\_\_\_

**ANNEXURE D – Stock Items**

It is not intended that City Power should keep stock of these items.