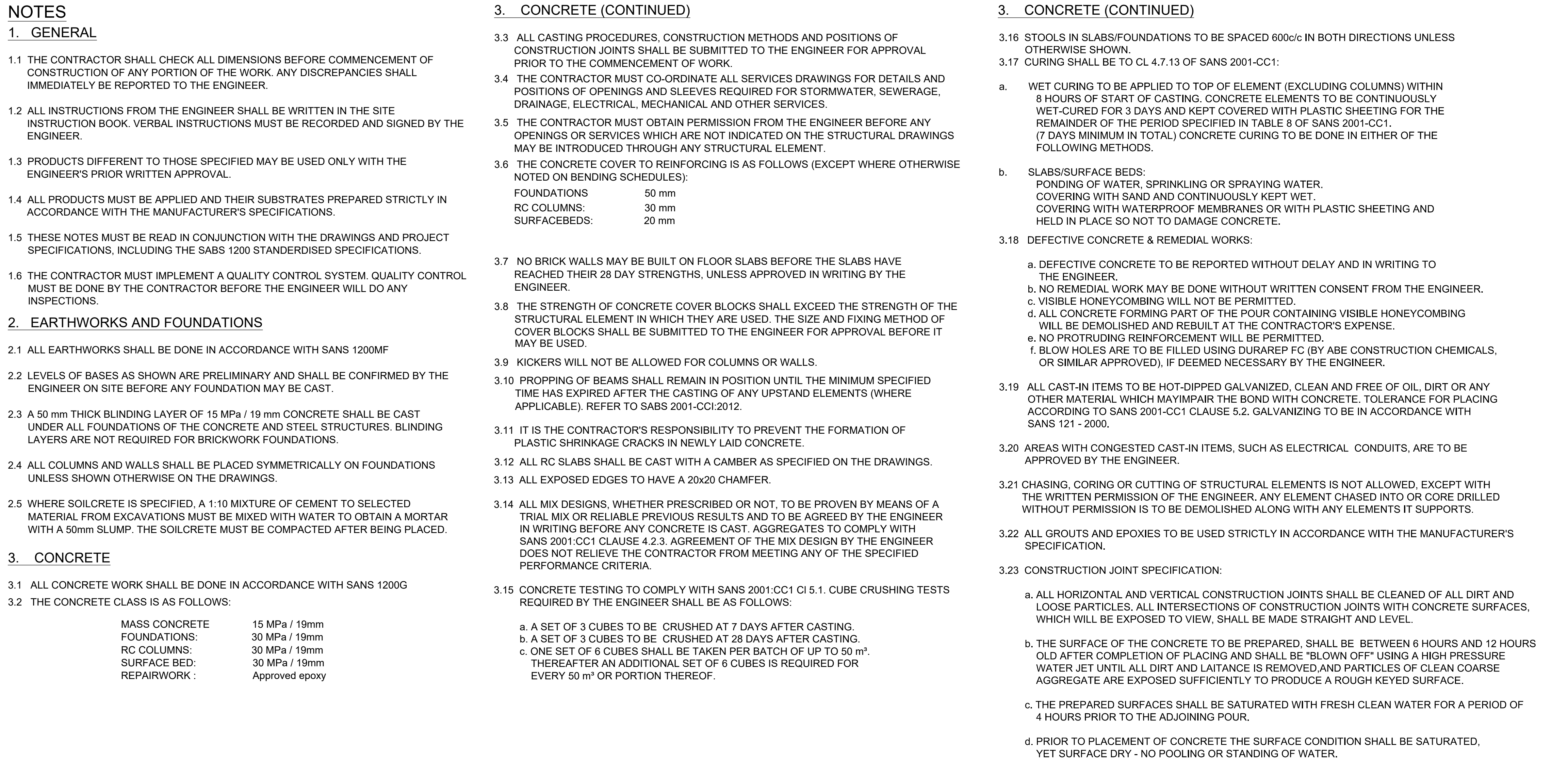


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CONSULTANT:

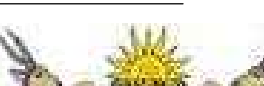

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REINFORCEMENT

4.1 ALL REINFORCEMENT SHALL COMPLY WITH THE REQUIREMENTS OF SANS 2001-CCI:2012.

4.2 THE CONTRACTOR SHALL GIVE AT LEAST 24 HOURS NOTICE TO THE ENGINEER WHEN INSPECTIONS WILL BE REQUIRED.

4.3 NO HEATING, FLAME CUTTING OR WELDING OF REINFORCEMENT SHALL BE ALLOWED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.

4.4 THE CONTRACTOR SHALL SUPPLY A PROGRAMME TO THE ENGINEER INDICATING DATES, IN ACCORDANCE WITH THE CONSTRUCTION PROGRAMME, WHEN BENDING SCHEDULES FOR EACH COMPONENT WILL BE REQUIRED.

4.5 BEND-OUT BARS AT CONSTRUCTION JOINTS SHALL BE BENT OUT WITH A SUITABLE PIPE SO THAT NO KINK IS FORMED IN THE BARS.

4.6 INSTALLATION OF DOWELS SHALL COMPLY WITH THE FOLLOWING:

DEPTH OF HOLE: 15 x DIAMETER OF DOWEL

a. DIAMETER OF HOLE: 1.3 - 1.4 x DIAMETER OF DOWEL

c. EPOXY VERTICAL UPSIDE DOWN: PRO-STRUCT 617 OR SIKADUR 31 (OR SIMILAR APPROVED)

d. EPOXY VERTICAL INSTALLATION: PRO-STRUCT 618 OR SIKADUR 32 (OR SIMILAR APPROVED)

e. EPOXY HORIZONTAL INSTALLATION: PRO-STRUCT 617 OR SIKADUR 31 (OR SIMILAR APPROVED)

f. ADHESIVE TO BE APPLIED STRICTLY TO MANUFACTURES SPECIFICATION

4.7 THE CONTRACTOR SHALL INSPECT AND APPROVE THE FIXED REINFORCEMENT BEFORE THE PRESENCE OF THE ENGINEER IS REQUIRED FOR INSPECTION. THE ENGINEER IS TO BE NOTIFIED, IN WRITING, AT LEAST 48 HOURS IN ADVANCE FOR THE REQUIRED INSPECTION.

4.8 CONCRETING MAY NOT COMMENCE PRIOR TO THE INSPECTION AND APPROVAL IN WRITING BY THE ENGINEER OF ALL THE REINFORCEMENT OF A PLANNED POUR.

4.9 SHOULD STARTER BARS MOVE DURING THE PRECEDING CAST, THEY MAY NOT BE BENT BACK INTO POSITION. THE ENGINEER IS TO BE INFORMED IN WRITING - THE CORRESPONDENCE IS TO INCLUDE SUFFICIENT DIGITAL PHOTOGRAPHS TO SHOW THE PROBLEM.

4.10 REINFORCING STEEL SHALL BE CLEAN FROM OIL, RUST, DIRT AND OTHER CONTAMINANTS.

4.11 NO PLASTIC COVER BLOCKS WILL BE PERMITTED.

4.12 SPLICE LENGTHS SHALL NOT BE LESS THAN BE 50x DIAMETER OF SMALLER BAR LAPPED.

4.13 REINFORCEMENT STRENGTH:

a) Y - BARS TO HAVE A MIN STRENGTH OF 450 MPa

b) R - BARS TO HAVE A MIN STRENGTH OF 250 MPa

4.13 CONCRETE COVER BLOCKS OR SPACERS SHALL BE MANUFACTURED IN ACCORDANCE WITH THE REQUIREMENTS OF SANS10100 PART (8.4.1.2)

5. STRUCTURAL STEELWORK

5.1 ALL STRUCTURAL STEELWORK SHALL BE IN ACCORDANCE WITH SANS 2001-CSI:2017

5.2 ALL DIMENSIONS SHALL BE CHECKED ON SITE BEFORE PREPARATION OF SHOP DRAWINGS COMMENCES. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.

5.3 ALL STRUCTURAL STEELWORK SHALL BE GRADE S355JR.

5.4 A CERTIFICATE FROM THE STEEL MANUFACTURER IN WHICH THE GRADE OF THE STRUCTURAL STEEL IS VERIFIED SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

5.5 STABILITY DURING ERECTION REMAINS THE CONTRACTOR'S RESPONSIBILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL TEMPORARY BRACING OR PROPPING.

5.6 WHERE APPLICABLE, GROUT SHALL BE PROVIDED UNDER BEARING PLATES BEFORE ANY PRIMARY LOADS ARE APPLIED TO THE STRUCTURE.

5.7 BEAM END CONNECTIONS TO BE DESIGNED AS SIMPLY SUPPORTED TO SAISC STANDARD END CONNECTION DETAIL U.O.N

5.8 MINIMUM PLATE THICKNESS TO BE 12mm U.O.N

5.9 ALL END CONNECTIONS TO HAVE A MINIMUM OF TWO BOLTS.

5.10 BOLTS TO BE GRADE 8.8 U.O.N

5.11 ALL WORKSHOP DRAWINGS TO BE SUBMITTED FOR REVIEW BY ENGINEER BEFORE FABRICATION.

5.12 WELDING TO BE TO SANS 044 AND BE A MINIMUM OF 6mm CONTINUOUS FILLET U.O.N

5.13 THE CONTRACTOR SHALL PRODUCE EVIDENCE ACCEPTABLE TO THE ENGINEER, THAT WELDING PROCEDURES & WELDS HAVE BEEN TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF SANS 044 PARTS LII & LV.

5.14 ALL WELDS SHALL COMPLY WITH SANS 10167:2004, SANS 44:2009 & AWS D1:1 SPECIFICATIONS

5.15 UNLESS SHOWN AS A BOLTED CONNECTION, PLATES AND MEMBERS INDICATED IN CONTACT SHALL BE WELDED ALL ROUND.

5.16 CORROSION PROTECTION OF STRUCTURAL STEEL IS AS FOLLOWS:

A) ALL PAINT SHALL BE APPLIED STRICTLY IN ACCORDANCE WITH SABS 1200 HC-1988 AND THE MANUFACTURER'S INSTRUCTIONS.

B) REPAIR OF DAMAGED PAINT AND SITE PAINTING SHALL BE IN ACCORDANCE WITH SABS 1200 HC-1988 AND SABS 0120: PART 3 SECTION HC

C) THE STEELWORK SHALL BE CLEANED BY MEANS OF A MECHANICAL WIRE BRUSH TO REMOVE ALL SLAG, DIRT, RUST, ETC. AFTER ALL WELDING HAS BEEN COMPLETED, IF THE STEEL IS CONTAMINATED BY OIL, IT SHALL BE

D) A FIRST COAT OF ZINC CHROMATE PRIMER (TO SABS 679) SHALL BE APPLIED TO A THICKNESS OF 30 MICRONS. A SECOND COAT OF GENERAL PURPOSE UNDERCOAT TYPE II (TO SABS 681) SHALL BE APPLIED TO A THICKNESS OF 30 MICRONS. A FINAL COAT HIGH GLOSS ENAMEL TO SABS 0120 SHALL BE APPLIED TO 35 MICRONS. ALL COLOURS SHALL BE TO THE ARCHITECT'S SPECIFICATION.

E) THE STANDARD OF PREPARATION OF THE STEELWORK AND THE THICKNESSES OF THE DIFFERENT COATS OF PAINT SHALL BE VERIFIED ACCORDING TO SABS 1200 HC CLAUSE 7 AND THE RESULTS SUBMITTED TO THE ENGINEER FOR APPROVAL.

5.17 DOWNPIPES SHALL BE HOT DIP GALVANIZED AND THE OUTSIDE PAINTED WITH A SUITABLE PRIMER APPROVED BY THE ENGINEER. SECOND AND THIRD COAT SHALL COMPLY WITH 5.17 ABOVE.

5.18 GUTTERS SHALL BE PREPARED AND PAINTED AS DESCRIBED UNDER 5.17, BUT INSIDES SHALL BE PRIMED WITH PLASCON EPOXY TAR EPD 100, SECOND COAT EPD 112 AND THIRD COAT EPD 100, ALL 90 µm THICK, OR SIMILAR TO SABS 1200H SYSTEM INDEX 080.

6. LOAD BEARING BRICKWORK

6.1 MASONRY UNITS SHALL COMPLY WITH THE FOLLOWING SPECIFICATIONS:

SABS 227: BURNT CLAY MASONRY UNITS

SABS 285: CALCIUM SILICATE MASONRY UNITS

SABS 1215: CONCRETE MASONRY BLOCKS

6.2 BRICKWORK SHALL BE BUILT ACCORDING TO SABS 0164.

6.3 THE MINIMUM CRUSHING STRENGTH OF ALL LOAD BEARING BRICKS SHALL BE 14 MPa.

6.4 THE MINIMUM CRUSHING STRENGTH OF MORTAR FOR LOADBEARING BRICKWORK SHALL BE AS FOR CLASS I MORTAR IN ACCORDANCE WITH SABS 0164 PART I-1980.

6.5 BRICKWORK SHALL BE REINFORCED WITH BRICKFORCE EVERY FOURTH COURSE, PLUS REINFORCING SPECIFIED ON THE DRAWINGS

6.6 ALL WALL TIES, STRAPS AND BRICKWORK ANCHORS SHALL BE HOT DIPPED

6.7 ONLY LOAD BEARING BRICKWORK IS SHOWN ON THE DRAWINGS. REFER TO THE ARCHITECT'S DRAWINGS FOR LAYOUT AND DIMENSIONS OF OTHER BRICKWORK. STRAIGHT EDGE

6.8 V-JOINTS ARE TO BE MADE THROUGH PLASTER WORK WHERE BRICKWORK JOINS ONTO CONCRETE OR STEELWORK. REFER TO DETAIL ABOVE

6.9 NON-LOADBEARING BRICKWORK MAY NOT BE BUILT NEARER THAN 10 mm FROM THE SOFFIT OF BEAMS AND SLABS. WHERE BRICKWORK BELOW SLABS IS PLASTERED, THE PLASTER SHALL BE NEATLY CUT LOOSE FROM THE CONCRETE ELEMENT ABOVE TO THE ARCHITECT'S SATISFACTION IN ORDER TO FORM A GAP OF 5 mm.

7. SURFACE BEDS

7.1 THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE PROVISION OF SUITABLE MATERIALS AND MANUFACTURE OF CONCRETE TO THE REQUIRED QUALITY.

7.2 THE DEGREE OF ACCURACY SHALL BE AS FOLLOWS:

* THE MAXIMUM DEVIATION OF THE SURFACE FROM ANY STRAIGHT LINE BETWEEN TWO POINTS 3m APART SHALL BE 3mm

* THE DIFFERENCE IN LEVEL AT ANY JOINT OR OTHER DISCONTINUITY IN THE FLOOR SHALL BE LESS THAN 1mm

* THE DEVIATION OF THE TOP OR BOTTOM SURFACE OF THE FLOOR FROM THE DESIGNED LEVEL AS DETERMINED FROM THE NEAREST TRANSFERRED DATUM LEVEL SHALL NOT EXCEED -15 +5 mm

* DEVIATION IN THE THICKNESS OF THE FLOOR SHALL NOT EXCEED -5 +15 mm

7.3 CONCRETE SHALL BE CURED BY MEANS OF A LIQUID MEMBRANE FORMING COMPOUND TO AASHTO M148 THAT DOES NOT FLAKE AND THAT IS SUITABLE FOR THE APPLICATION OF EPOXY SURFACING, PVC TILES, SCREED, ETC.

7.4 CONCRETE SHALL BE PLACED IN POSITION IN SUCH A WAY THAT SEGREGATION DOES NOT OCCUR AND COMPACTED IMMEDIATELY AFTER PLACING. IT SHALL BE THOROUGHLY WORKED AROUND REINFORCING, PIPES, SHUTTERS, EMBEDDED FIXTURES, ETC. WITHOUT DISPLACING THEM.

7.5 FLOOING SHALL BE DONE AFTER BLEEDING OF THE CONCRETE HAS CEASED, AFTER BLEEDWATER HAS EVAPORATED OR HAS BEEN REMOVED, AND THE CONCRETE HAS STIFFENED SUFFICIENTLY. CEMENT POWDER SHALL NOT BE APPLIED TO THE SURFACE UNDER ANY CIRCUMSTANCE.

7.6 JOINT EDGES SHALL BE ROUNDED TO A RADIUS OF 3mm TO FORM A SMOOTH.

7.7 SAWCUT JOINTS SHALL COMMENCE AS SOON AS THE CONCRETE HAS HARDENED SUFFICIENTLY TO PERMIT SAWING WITHOUT SPALLING OR EXCESSIVE RAVELLING, AND BEFORE SHRINKAGE CRACKING OCCURS. THE CUTS AND SURFACE SHALL BE CLEANED BY MEANS OF A HIGH VELOCITY WATER JET.

7.8 IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PREVENT THE FORMATION OF PLASTIC SHRINKAGE CRACKS IN NEWLY LAID CONCRETE.

7.9 TESTING OF THE MATERIALS SHALL BE DONE IN ACCORDANCE WITH SABS1200G.

GENERAL NOTES	PROJECT TEAM		DATE	SCALE
	PROJECT MANAGER		2025/07/08	AS SHOWN
	L.Wangaza		SHEET NO: 1 OF 1	
	DESIGNED		CONSULTANT PROJECT NO: 22-2023-GE	
	C.Sithole		REV:	DISC: DWG SIZE
	G. Mogale		0	STR A0
CHECKED		DRAWING NUMBER		
C.Sithole		100-BD-001-STR 005		