

THE SPECIFICATIONS NOTED ARE AS GENERAL INFORMATION FOR DEFAULT SITUATIONS THAT MAY ARISE DURING CONSTRUCTION AND SPECIFIES THE MINIMUM QUALITATIVE REQUIREMENTS FOR CONFORMITY AND CHECKS DURING CONSTRUCTION

GENERAL NOTES: Continue

15.2. JOINT FILLERS/SEALANTS

- 15.2.1. Material
- 15.2.1.1. Two-part gun-grade polysulphide sealants SANS 110
- 15.2.1.2. One part low modulus silicone rubber sealant SANS 1305, type 1 for building joints
- 15.2.1.3. One part high modulus fungus proof silicone rubber sealant SANS 1305, type 2 for glazing and sanitary ware
- 15.2.1.4. Pretreated elastomeric compression joint seals SANS 1023 type 1
- 15.2.1.5. Rubber or flexible PVC watertop seals in construction and expansion joints in concrete structures where movements of up to 15 mm is expected to comply with CKS 389/389, of type, dimension and workmanship as specified in these standards
- 15.2.1.6. Backing: closed-cell expanded polyethylene cord or strip
- 15.2.1.7. Life expectancy: 10 years
- 15.2.1.8. Colour: Grey as approved by Architect
- 15.2.1.9. Fungus-proof sealant required in all wet areas, e.g. between ceramic wall tiles and kitchen cupboards, baths, wash-basins and shower floors

15.3. PREPARATION

- 15.3.1. Sealant work: by specialists recommended by manufacturer
- 15.3.2. Pre-installation meeting: well in advance of installation to review products and procedures; samples asked for to be in place and cured before this meeting
- 15.3.3. Joints: clean and dry
- 15.3.4. Insert backing strip to ensure correct sealant thickness
- 15.3.5. Apply correct primer to sides of joints
- 15.3.6. Bond-breaking material: according to manufacturer's instructions
- 15.3.7. Edges: mask if necessary to ensure clean edges.
- 15.4. SEALING
- 15.4.1. Fill foremost part of movement joints to thickness not less than half the width of the joint, or according to manufacturer's instructions
- 15.4.2. Seal joints around door and window frames, movement joints, joints between walls and columns, floor joints, and other joints to requirements of SANS 204
- 15.4.3. Finish: neatly and smoothly to agreed profile

16. PATENT SUSPENDED CEILINGS

16.1. BOARDS

- 16.1.1. Type: Gypsum boards SANS 266
- 16.1.2. Size: 600x1200mm
- 16.1.3. Colour: White
- 16.1.4. Finish: White Vinyl Finished
- 16.1.5. Fire rating: Class 4
- 16.1.6. Store boards on even surface under cover and keep dry
- 16.1.7. Ceiling panels to be: removable and replaceable from below

16.2. SUSPENSION FITTINGS

- 16.2.1. Patent approved suspension fittings of cold-formed galvanized steel Ts, hold down clips, suspension rods and hooks, suspension clips, T suspension plates, lipped wall angles, shadowline wall angles and wall channel trim, with finish and colour White for Ts and black for shadowline angles.

16.3. FIXING

- 16.3.1. Only by approved specialist installers
- 16.3.2. Fix suspended ceiling system strictly according to manufacturer's instructions
- 16.3.3. Do not start this work before the building is enclosed, plasterwork has dried out, and services are in position and tested
- 16.3.4. Arrange boards symmetrically about rooms, with cut boards along walls, with straight joints in both directions.
- 16.3.5. Suspend main tees from structure at centres according to manufacturer's instructions with galvanized mild steel strapping or 2mm diameter galvanized wire or by patent suspension rods or hooks combined with spring clips and suspension plates; clip cross tees into main tees at the end of each board
- 16.3.6. Level out
- 16.3.7. Hold down ceiling boards or tiles with patent hold-down tags or wedges
- 16.3.8. Provide extra hangers for light fittings, sound systems, air conditioning vents etc. as required
- 16.3.9. Provide approved access to ceiling space where concealed Tee system is used.

17. PARTITIONS AND LIGHT WEIGHT INTERNAL WALLS

17.1. DRYWALL PARTITIONS

- 17.1.1. Framing: steel
- 17.1.2. Cladding: gypsum plasterboard
- 17.1.3. Cladding finish: vinyl
- 17.1.4. Exposed door/window frame finish: Naturally anodised
- 17.1.5. Glazing: None required
- 17.1.6. Fire resistance: 17.1.6.1. 2 hour Type (to extend to soffit of space in ALL cases)
- 17.1.6.2. 1 hour Type
- 17.1.7. Sound insulation grading SANS 10218: 51 & 48dB respectively
- 17.1.8. Deflection requirements to South African Building Interior Systems Association (SABISA).

17.2. FIBRE CEMENT BOARD SANS 803

- 17.2.1. Type: Flat pressed (HD)
- 17.2.2. Thickness: 12,5 mm

17.3. STUDS AND TRACKS

- 17.3.1. Metal studs and tracks: galvanized steel with wall thickness and size complying with the structural requirements of the installed system

17.4. ALUMINIUM EXTRUSIONS

- 17.4.1. Extruded aluminium sections: alloy 6063 or 6261 in temper T5 or T6, of wall thickness and strength to meet the structural requirements
- 17.4.2. Anodising SANS 1407: Colour Naturally anodised

17.5. INSTALLATION

- 17.5.1. Installation of partitions: to structural requirements of SANS 10160 and according to manufacturer's instructions.

17.6. ACCURACY

- 17.6.1. SANS 10155 grade II Certification

- 17.7. AT COMPLETION, obtain certificate from installer certifying manufacturer of the materials used and their conformance to this specification.

18. PLASTER & SCREEDS

18.1. PLASTER

- 18.1.1. Applicable standard: SANS 2001:2007-EM1 Cement plaster.
- 18.1.2. Sands to comply with SANS 1090
- 18.1.3. Admixtures: not permitted
- 18.1.4. Finish to plaster: Smooth, wood trowelled to Accuracy II by default, no scratching and or texturing allowed.

18.2. GYPSUM PLASTER

- 18.2.1. Hardwall gypsum plaster: retarded semi-hydrate finishing plaster.

18.3. CORNER PROTECTION

- 18.3.1. Strips: 1500 x 1.0 x 35 mm girth galvanized angle rounded corner protection. Strips SANS 190 required only for drywalling.
- 18.3.2. Fixed to external angles of interior walls from skirting to 1.8 m

19. SCREEDS & TOPPINGS:

- 19.1. Invoked standard: SANS 10109 Part 2 Finishes to Concrete Floors
- 19.2. Cement: SANS 50197-1: strength class 32,5N
- 19.3. Aggregate for toppings and screeds: SANS 1083
- 19.4. Aggregate from natural sources: SANS 1083

19.5. STONE FOR TOPPING

- 19.5.1. Nominal aggregate size: 6,7mm
- 19.5.2. Minimum thickness of topping: 19.5.2.1. 25mm to General RC Floors
- 19.5.2.2. 15mm to Concrete stairs
- 19.5.3. Supply grading test results when required by Principal agent.

20. JOINTS

20.1.

- Isolation joints: Against walls, columns or other fixed objects

20.2.

- 10 mm wide through full thickness of toppings, screeds to co-incide with isolation joints in base.
- Intermediate contraction joints:
- 20.3.1. In continuously cast toppings only
- 20.3.2. Saw halfway through topping thickness with mechanical concrete saw
- 20.3.3. Form panels not exceeding 9 m², or to patterns per drawings
- 20.3.4. Aris-round top edges of joints with a radius of 3-5 mm
- 20.3.5. Seal joints with an approved elastomeric material as indicated on drawings

20.4. ACCURACY

- 20.4.1. Deviation of floor finish from datum level: ±15 mm and gradual; not near door openings, where levels must be accurate.
- 20.4.2. Maximum permissible deviation in surface regularity: 5 mm along a 3 m straight-edge in any direction, and gradual.

20.5. EXTERNAL THRESHOLDS AND STAIR TREADS

- 20.5.1. Remove one masonry course of foundation wall over width of door opening
- 20.5.2. Cast concrete topping threshold over full width of wall
- 20.5.3. Cast in metal dividing strip under door, as described below
- 20.5.4. Provide thresholds and stair treads with 75 mm wide reeding, stopped 100 mm from threshold ends.

20.6. EDGE STRIPS

- 20.6.1. See Tile details for material, size.
- 20.6.2. Under internal doors: Where floor finish changes material or pattern; so that floor change is not visible when door is closed; top edge of strip level with finished floor
- 20.6.3. Under external doors: top edge level with finished internal floor; external exposed threshold or paving 5 mm lower to prevent rainwater from entering when door is closed.

20.7. SKIRTINGS

- 20.7.1. 50 mm high of same material as floor finish and in same operation, against walls, columns etc., unless as otherwise specified on drawings;

20.8. CURING

- 20.8.1. Cure finish for at least seven days by ponding water on surface, covering with sand which is kept moist, or with plastic sheet
- 20.8.2. Extend curing time in cold weather when ambient temperature falls below 10°C.

20.9. INSPECTION, TESTING AND REPAIR

- 20.9.1. Inspect screed or topping as late as possible in the construction program
- 20.9.2. Test adhesion of screed or topping to base by tapping surface with a hammer or end of a rod; hollow sound indicates lack of adhesion, in which case the architect/principal agent must decide whether repair work is necessary
- 20.9.3. Isolate rejected panels by sawing with a mechanical concrete saw in an acceptable pattern, remove and relay, using the same procedure as above, starting with preparation of the base.

21. PAINT

- INVOKED STANDARDS:
- SANS 10305 Painting of Buildings part 4, 5, 6
- SANS 12944 Paints and varnishes--corrosion protection of steel structures by protective paint systems

21.1. PREAMBLES

- 21.1.1. TRADE NAME IS SPECIFICATION FOR PAINT MANUFACTURER IS INTENTIONAL OF DESIGN AND QUALITY INTENT ONLY SAID MANUFACTURER WILL BE ACCEPTED.

- 21.1.2. Arrange a meeting with the painting contractor, a representative of the paint manufacturer and the architect/principal agent well in advance of the start of painting work and discuss every aspect of the paintwork. After this meeting, obtain from the manufacturer a written paint specification, confirming compliance with this specification, and stating separately exceptions where the manufacturer's specification differs from this specification. Exceptions will be acceptable only with the approval of the architect/principal agent
- 21.1.3. Restrict all paint to one manufacturer where possible
- 21.1.4. Containers to reach site unopened, bearing SABS-mark and specification number where applicable
- 21.1.5. Complete paint systems--primer, undercoat and finishing coat--to be as recommended by the same manufacturer
- 21.1.6. Paint manufacturer to visit site at least twice during course of paintwork, and confirm his approval of paintwork in writing in site instruction book.

21.2. PREPARATION OF SURFACES

- 21.2.1. Clean all surfaces of dirt, grease, soot, mould and marks - do not spare time or effort
- 21.2.2. Remove hemp from pipe joints
- 21.2.3. Remove ironmongery, light fittings and other removable fittings that can be contained; mark, store and refit after completion; mask fittings that cannot be removed
- 21.2.4. Seal cracks between frames, skirtings, cornices etc. and walls with paintable acrylic sealant
- 21.2.5. Protect surfaces not to be painted.

21.3. COLOURS

- 21.3.1. Colours of undercoats to match finishing coat closely but with enough difference to be able to distinguish between coats
- 21.3.2. Prepare colour samples of finishing coats for approval before any bulk paint is purchased
- 21.3.3. Paint items to be identification-colour marked according to SANS 10140

21.4. PREPARATION FOR PAINTING

- 21.4.1. Select paint systems most suited to environment, compatible with substrate and components of the system
- 21.4.2. Follow manufacturer's instructions
- 21.4.3. Sandpaper all coats of paint and varnish and leave time to dry before next coat is applied
- 21.4.4. Do not paint when conditions are unsuitable, for example dust, insufficient light, direct sunlight or inclement weather
- 21.4.5. Spray-paint only where this is the accepted method; mask all surrounding surfaces when spray-painting.

21.5. ALKYD PAINT ON PLASTER

- 21.5.1. walls to be dry
- 21.5.2. Remove loose paint from previously painted surfaces
- 21.5.3. Fill and stop cracks on one coat plaster only with suitable filling or with plaster of similar mix, and rub down; do not fill gypsum plaster
- 21.5.4. Paint one coat bonding liquid on gypsum plaster skim
- 21.5.5. Paint one coat alkali resistant plaster primer SANS 1416 on cement plaster
- 21.5.6. Paint one universal undercoat SANS 681 grade 1
- 21.5.7. Paint one or two coats high gloss alkyd paint SANS 630 grade 1 (high hiding) / 2 (regular hiding) / see drawings.

21.6. EMULSION PAINT ON PLASTER

- 21.6.1. Remove loose paint from previously painted surfaces
- 21.6.2. Ensure complete drying depth of plaster before applying paint
- 21.6.3. Rake out cracks and print SANS 1586 paint SANS 1586 grade 3
- 21.6.4. Paint walls one coat emulsion paint SANS 1586 grade 3, thinned down with 10% clean water, and two coats emulsion paint SANS 1586 grade 1 and gloss designation semi matt or as shown on drawings, or two coats emulsion based textured wall coating SANS 1227 type 1 (smooth, aggregate-free textured finish).Paint ceilings two coats emulsion paint SANS 1586 grade 1 and gloss designation semi matt.

21.7. EMULSION PAINT ON FIBRE-CEMENT FASCIAS, BARGE BOARDS, CLADDING

- 21.7.1. Remove loose paint from previously painted surfaces
- 21.7.2. Touch up steel screw heads and metal cover strips with zinc phosphate primer SANS 1319
- 21.7.3. Touch up brass screw heads with vinyl wash primer SANS 723
- 21.7.4. Paint one coat emulsion paint SANS 1586 grade 3, thinned down with 10% clean water, and two coats emulsion paint SANS 1586 grade 1 and gloss designation matt / semi matt / semi-gloss / see drawings.

21.8. EMULSION PAINT ON FIBRE-CEMENT AND GYPSUM CEILINGS

- 21.8.1. Remove loose paint from previously painted surfaces
- 21.8.2. Touch up nail heads and metal cover strips with zinc phosphate primer SANS 1319; spot fill all nail heads and indentations
- 21.8.1. Paint two coats emulsion paint SANS 1586, grade 1 / 2 / 3 and gloss designation matt / semi matt / semi-gloss / see drawings.

21.9. ALKYD PAINT ON STRUCTURAL STEEL

- 21.9.1. In the case of structural steel that could not be factory primed, or where shop-primed steel has been damaged on site, or in the case of previously painted surfaces where the paint system has failed; prepare steel surfaces for priming to shiny metal state to SANS 10064
- 21.9.2. In the case where painting is not possible after fixing, paint steel components with full paint system before fixing
- 21.9.3. Paint two coats of zinc phosphate primer SANS 1319, and two coats structural steel paint SANS 684 as per drawings.

21.10. ALKYD PAINT ON NON-STRUCTURAL STEEL

- 21.10.1. Clean unpainted steel surfaces to shiny metal state by scraping or brushing
- 21.10.2. Remove loose paint from previously painted surfaces
- 21.10.3. Paint one coat zinc phosphate primer SANS 1319, one universal undercoat SANS 681 grade 1, and two coats high gloss alkyd enamel paint SANS 630 grade 2.

21.11. PAINT ON GALVANIZED STEEL

- 21.11.1. Prepare surfaces according to SANS 10064 and HDGASA 01:1990 Code of Practice for Surface Preparation and Application of Organic Coatings applied to New Unweathered Hot Dip Galvanized Steel (Sheet and Section) excluding In-line Coat Coating (Duplex Systems)
- 21.11.2. Where galvanized steel was unavoidably welded on site.
- 21.11.3. Paint galvanized steel with the following system:
- 21.11.4. One coat metal primer, one universal undercoat SANS 681 grade 1, and two coats
- 21.11.5. Emulsion paint SANS 1586 grade 1
- 21.11.6. Fencing posts:
- 21.11.7. Paint galvanized fence posts one coat metal primer, and two coats aluminium finishing paint SANS 682, grade 2.

22. GLAZING:

- SANS 10400 N
- SANS 1263
- 22.1. All safety glass should bear a permanently etched emblem as permanent proof
- 22.2. All solar coatings should bear permanent etching from supplier as permanent proof

MEANING OF WORDS.

- The following words appear often in the text of this specification. They are always highlighted in *italics*. The meaning of these words is important and are therefore explained, in alphabetical order.

- According to manufacturer's instructions means the manufacturer's instructions at the time of tender.

- Applicable standard means a national standard applicable to the works. *Applicable* implies that the relevant standard becomes a contract document.

- Approval means approval in writing. Architect's approval of building work, material or components is limited to visual appearance. *Approval* does not relieve the contractor from compliance with the specification.

- ARP means a Recommended Practice prepared by the SABS.

- BS means British Standard.

- Coastal regions or areas means those areas between the coastline and an imaginary line 30 km inland, including the entire area of jurisdiction of any local authority falling within this region.

- CKS means a Coordinating Specification prepared by the SABS, mainly for the procurement of products for the use of government departments.

- Competent Person means a person who is qualified by virtue of his education, training, experience and contextual knowledge to make a determination regarding the performance of a building or part thereof in relation to a functional regulation or to undertake such duties as may be assigned to him in terms of these regulations, as defined in SANS 10400.

- Drawings means the drawings forming part of the contract documents, and any modification thereto or additions thereto delivered by the architect/principal agent to the contractor during the execution of the works.

- EN means European Norm

- IEC means the International Electro Technical Commission.

- Invoked standard means a standard that is called upon for guidance in the proper execution of the works on site. An *Invoked standard* is not deemed a contract document.

- Invoked implies that the relevant standard be obtained and a copy kept in the site office for reference. Whether a standard is to be invoked is a decision to be taken by the architect, depending on size, complexity and importance of the works, and on the level of sophistication of the builder.

- ISO means the International Organization for Standardization, a worldwide federation of national standards bodies of which South Africa, Botswana and Zimbabwe are members and Namibia, Angola, Zambia and Mozambique correspondent members.

- MOD AASHTO refers to an internationally accepted test to determine the density of compacted material like soil filling, expressed as a percentage of the maximum compaction of the filling at various moisture contents as determined in a laboratory.

- NBR means the National Building Regulations.

- NRS means Rationalized User Specification prepared by the SABS.

- Particular Specification means a specification that is drawn up as a supplement to a General Specification to specify items for a particular contract not covered by a General Specification. The *Particular Specification* has preference over the General Specification.

- PIESA means the Power Institute of East and Southern Africa.

- SABS means the South African Bureau of Standards.

- SANS means South African National Standard

- Specification data means data required by standards without which the specification is incomplete.

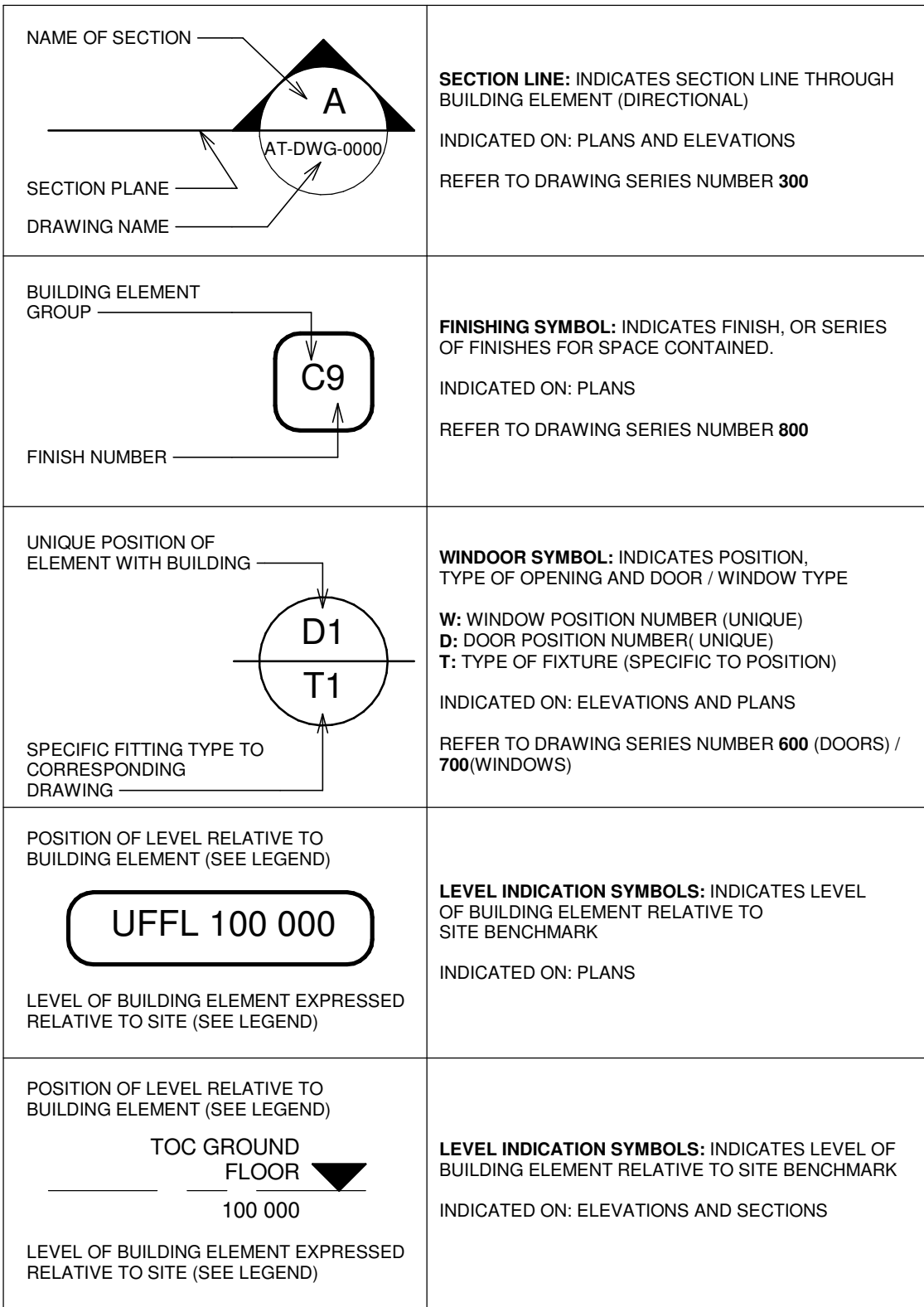
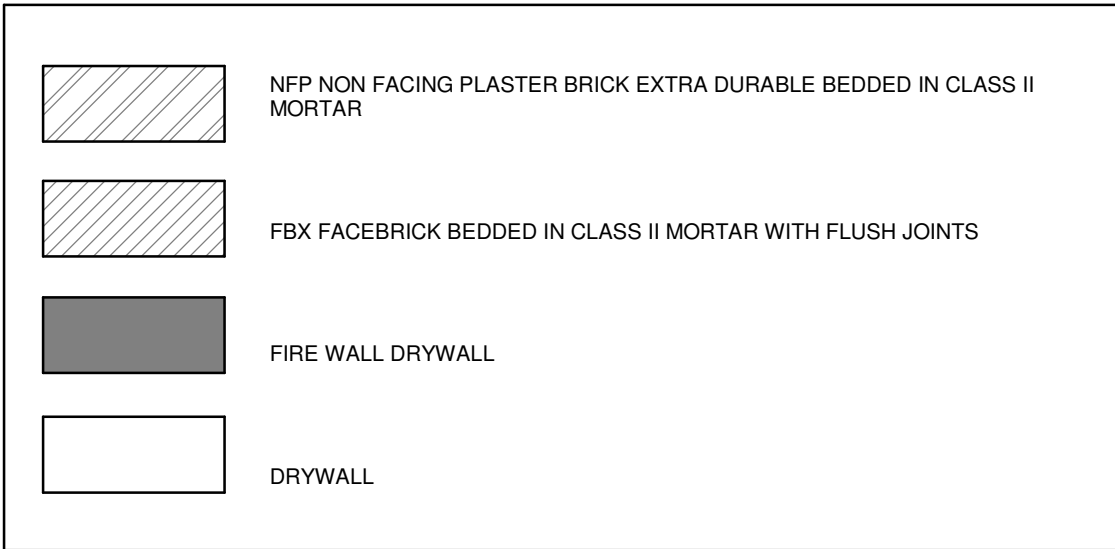
- VC means Compulsory Specification (technical regulation) prepared by the SABS.

ABBREVIATIONS

- AE - ACCESS EYE
- BTH - BATH
- C - C-CHANNEL
- CE - CLEANING EYE
- DPC - DAMP PROOF COURSE
- DPM - DAMP PROOF MEMBRANE
- FFL - FINISHED FLOOR LEVEL
- G - GEYSER OR HOT WATER SOURCE
- IE - INSPECTION EYE
- IL - INVERT LEVEL
- HDG - HOT DIPPED GALVANISED
- WHB - WASH HAND BASIN
- LC - LIPPED CHANNEL
- MS - MILD STEEL
- RHS - RECTANGULAR HOLLOW SECTION
- SS - STAINLESS STEEL
- UFFL - UNFINISHED FLOOR LEVEL
- TOC - TOP OF CONCRETE (LEVEL)
- TOW - TOP OF WALL (LEVEL)
- UC - UNDERSIDE OF CEILING (LEVEL)

DRAWING SERIES NUMBERS:

- 000 Coordination, Legislative and Orientation drawings
- 100 Plans
- 200 Elevations
- 300 Sections
- 400 Details
- 500 Interior Details and Elevations
- 600 Door Schedules
- 700 Window Schedules
- 800 Finishing, Fixture and Sanitary Schedule
- 900 Auxiliary Drawings



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LEGEND:

TENDER

Rev	Date	Description of changes	By
A	14-04-2022	ISSUED FOR APPROVAL	SBM

REVISIONS

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APPROVED

THE MASTER HELD AT DELTA BUILT ENVIRONMENT CONSULTANTS BEARS THE ORIGINAL SIGNITURE OF APPROVAL

SACAP No. 30447969

Signature: _____ Approver: _____ 14-04-2022

SIGNATURE: NAME: DATE:

Project

SANBI LOWVELD STAFF RESIDENCES AND FACILITIES

Project Description

REPAIRS, RENOVATIONS & UPGRADES OF FACILITIES AT THE LOWVELD NATIONAL BOTANICAL GARDEN

Drawing Title

HOUSE 2 - GENERAL SPECIFICATIONS SHEET 2

Drawing Units: MILLIMETERS

Date: APRIL 2022 Scale: 1 : 50 Designed By: T. JANSE VAN RENSBURG

Checked By: M. POTGIETER Drawn By: I. MULDER Approved By: Approver

Drawing No: P21124-TN-06-ARC-003 Rev: A