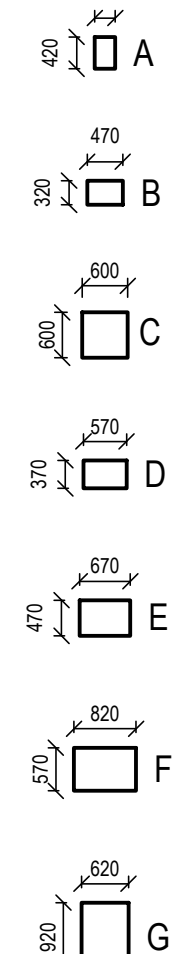


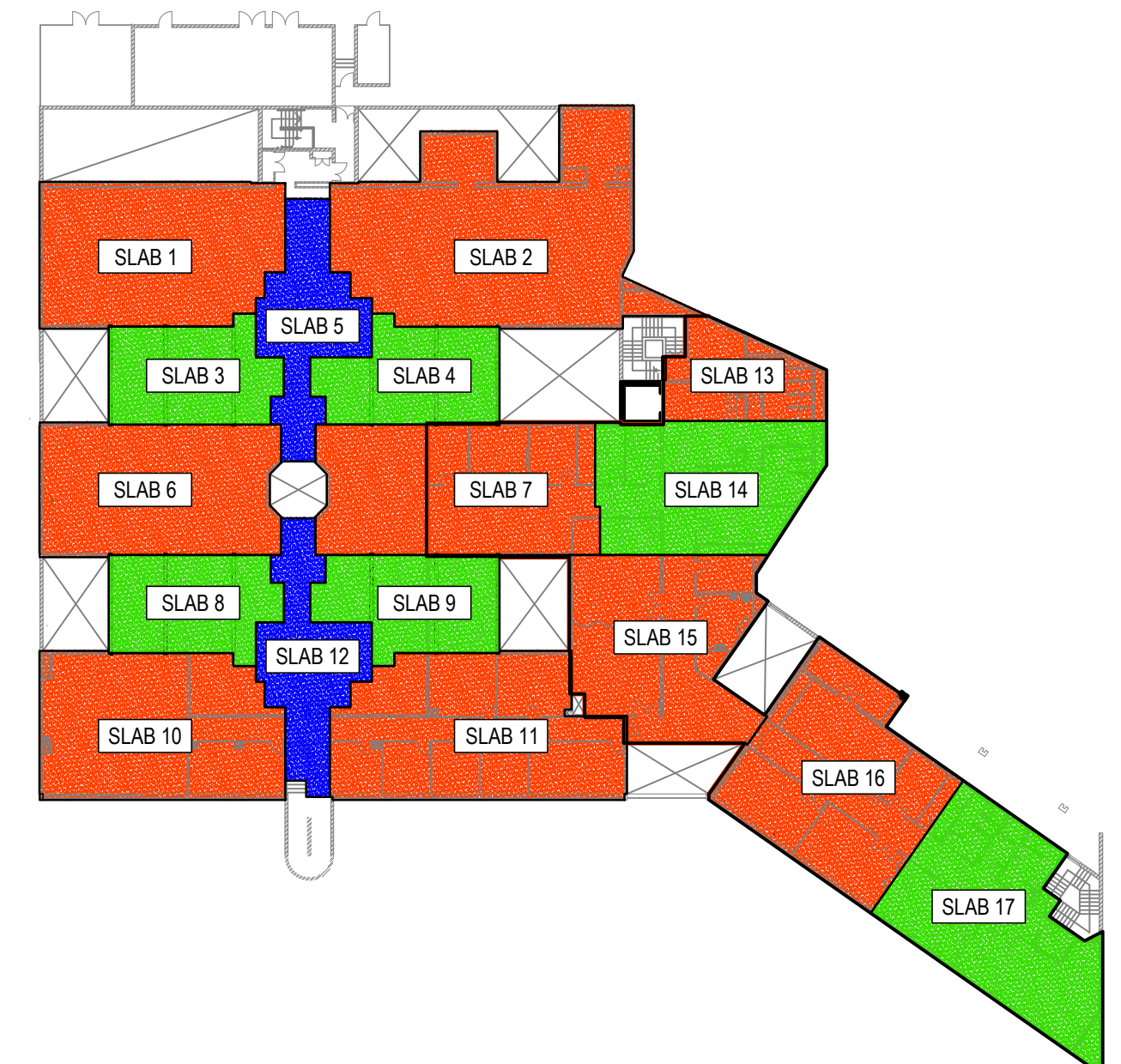
NOTE:  
ALL WALLS ABOVE SLAB ARE SHOWN IN BLUE.  
ALL COLUMNS / WALLS BELOW SLAB ARE SHOWN IN RED.  
ALL ELECTRICAL FITTINGS SHOWN IN GREEN, ARE CAST INTO THE SLAB

255mm R.C. SLAB TOC S3 355m  
255mm R.C. SLAB TOC S3 780m

SLAB PENETRATIONS



SLAB NUMBERING

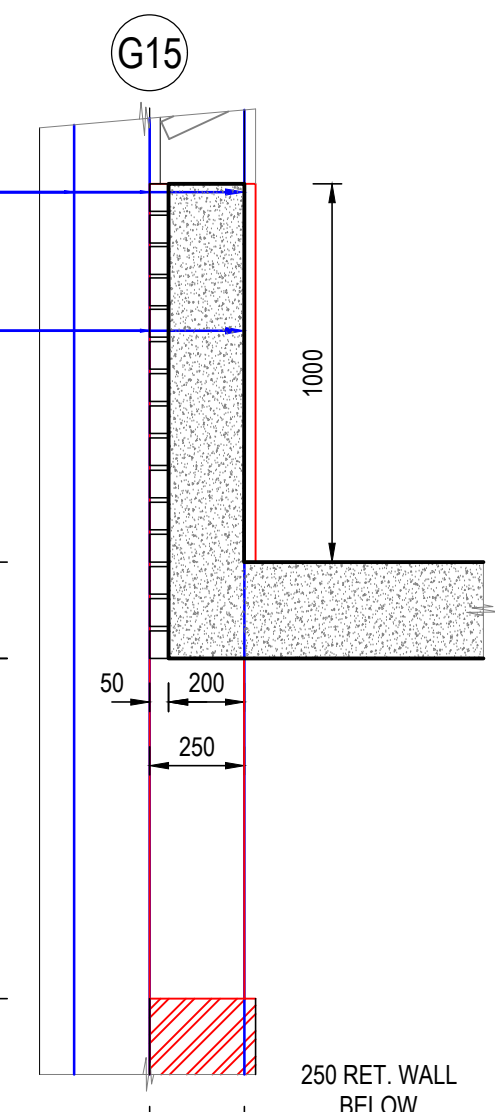


CONSTRUCTABILITY CONSIDERATIONS LOAD BEARING BRICKWORK

- To obviate the development of horizontal cracks three to four courses above top-of-concrete in the structural masonry at Ground Floor level, initial deflection of the Ground Floor slab is to be unimpeded as is the short-term deflection thereof under application of the masonry dead-load at the time of construction. Consequently, the Ground Floor slab reinforced concrete is to achieve 28-day strength and be 100% de-propped prior to Ground Floor level bricklaying.
- The Contractor is to plan the programme of works to allow for the phased pouring of the suspended slabs and the construction of the load bearing walls which can only be constructed on completely de-propped ground floor suspended slab.
- The Programme of works proposed by the Main Contractor at Stage 4 is to receive the necessary scrutiny by the Department of Public Works prior to award of the Contract.
- Provision is to be made for structural repairs to 110mm thick load-bearing masonry into which Electrical and Mechanical services (designed in accordance with the Department of Health requirements for Psychiatric Hospitals) are to be chased. Structural repairs and the details thereof are to be classified by the Structural Engineer in accordance with Table 6 above. Given that the Ground Floor masonry is a structural element which spans vertically, no horizontal chasing is permitted and the Electrical and Mechanical services are to be coordinated accordingly.
- Given that the Ground Floor masonry is a structural element which spans vertically, the layout inflexibility characteristic of the podium system is to be considered. That is: no (future) alterations to the hospital layout which require demolition of any Ground Floor masonry are permitted unless supervised by a Structural Engineer.
- Articulation joints in the Ground Floor masonry (constructed on the independent grid) are located to obviate cracking consequent of hogging over Ground Floor beam-strips on the rationalised grid. The articulation joints are to be free of obstructions (e.g. mortar droppings etc) which may impede the function thereof and are to be finished with both a filler and sealant capable of withstanding the range of expected movements (in accordance with SANS 10400-4:2011). Refer Figure 1.
- A positive-for slip-joint is to be located at the Ground Floor masonry interface with the First Floor slab to limit cracking consequent of concrete shrinkage of the First Floor slab. Consequently, the First Floor slab shall be cast in limited, alternating pour pours. The Stage 5 Programme of Works is to consider the consequential construction sequence.

Masonry Notes

- All masonry materials, components, workmanship and testing shall comply with SANS 10164: The Structural Use of Masonry.
- All building work to be carried out in accordance with the South African National Standard for the Application of the National Building Regulations, Part K: Walls (SANS 10400-4:2011).
- The minimum thickness of all masonry walls is as follows. No hollow-units permitted.
  - External Walls: 220 mm
  - Internal Walls: 110 mm
- The maximum length of all internal walls at Ground Floor level shall be 7.0m. Ground Floor masonry panels in excess of 7.0m length shall incorporate control joints (at 7.0m centres) 10-12mm in width similar in detail to that shown at Figure 1 above.
- The minimum crushing strength of all structural masonry shall be 14MPa and the maximum water absorption 12%.
- Clay bricks to be soaked in a water bath prior to use.
- The minimum crushing strength of structural mortar shall be as per Class 1 mortar (1:4 cement:sand, but not less than 10MPa) as per SANS 10164 Part 1.
- All vertical and horizontal joints between bricks to be filled solid with mortar.
- Vertical and horizontal chasing will be permitted only with the approval of the Structural Engineer and is to be limited to 35mm in depth. Where chasing exceeds 35mm in depth following conduit installation, the recess is to be dovetailed with 16/16 bars and caulked with a high-strength, non-shrink grout. (Detail to be advised.)
- Masonry walls to be tied to concrete columns with 12x30x800 galvanised hoop iron straps shot fixed (with 2 HSLTI shot studs each) or cast into concrete columns every 3rd course. Refer Figure 3 below.
- All masonry to be reinforced with an approved brickforce every fourth course, and every course over openings for 3No. courses minimum.
- All brickwork, masonry anchors and straps, and wall ties shall be hot-dip galvanised.
- Wall ties to be of the modified PWD type or the vertical twister type as per SANS 10164 Part 1, Figure 1, positioned every 3rd course vertically and at 500mm c/c horizontally.
- Masonry layout in accordance with the Architectural layouts.
- Control joints in masonry to be provided at the positions indicated on the Architectural layouts; however, the maximum spacing thereof is limited to 7.0m c/c for all walls.
- Wall joints to be repeated in all tied finishes.
- All external joints to be sealed with a gunned-into-place, approved, two-part, polyurethane-based, adhesive, elastic joint sealer.
- 12mm vertical joint to be formed at intersection of masonry walls with concrete columns.
- Full depth V-joints to be made in plaster at intersection of masonry with concrete.
- Lintels over openings to have a minimum 230mm bearing at each end.
- Slip-joints comprising 2No. layers 375mm DPC to be formed on top of all masonry supporting a concrete slab. Refer Figure 2.
- Non-load bearing masonry may not be built within 20mm of the soffits of concrete beams and sills unless indicated otherwise.
- The maximum spacing of control joints in masonry balustrades is limited to 6.0m c/c.
- All masonry planters to be drained by Ø25 weepholes at 1.0m c/c installed above finished paving levels.



FIRST FLOOR LAYOUT:  
SCALE 1:100

Revision

Rev.	Date	Drawn	Description
03	11-11-2024	D.J.P.	CONSTRUCTION

PLEASE READ THOROUGHLY!!!!

GENERAL NOTES:  
G1. All work to be carried out in accordance with the latest issue of SANS 1200 unless noted otherwise.  
G2. All setting out to Architect's details.  
G3. Piles, pile caps, ground beams, footings, and columns are central on grid lines unless shown otherwise.  
G4. Contractor to check all dimensions and levels prior to commencing work on site, and any discrepancies to be reported to the Engineer immediately.

CONCRETE NOTES:  
C1. Blinding concrete to be placed below all pile caps, ground beams, and footings and shall be a minimum of 50mm thick.  
C2. Concrete mix design to SANS 10100. Design loads from SANS 10161 and Client's specification.  
C3. Concrete mix design to be submitted to Engineer for approval prior to commencement of work. Only Engineer-approved admixtures to be used.  
C4. Foundations designed for a bearing pressure of 80kPa. Refer to DRENNAN MAUD (PTY) LTD Ref Ref. 22649P.  
C5. All concrete to have a minimum compressive strength at 28 days as follows:

- Blinding: 15 MPa / 25mm
- Foundations: 25 MPa / 25mm
- Columns: 30 MPa / 19mm
- Surface Beds: 25 MPa / 19mm
- Suspended Slabs & Beams: 30 MPa / 19mm

C6. Concrete cure to main reinforcement:

- Foundations: 50 mm
- Columns: 30 mm
- Surface Beds: 50 mm
- Suspended Slabs & Beams: 30 mm

C7. All concrete work, including formwork stripping times and propping, to SANS 1200-G3.

C8. Formwork classification:

- Concealed surfaces: Rough
- Exposed surfaces (unless otherwise shown): Smooth (off-shutter) to Grade 1 tolerances.
- Exposed surfaces (where specified by architect): Smooth-special to SANS 2001-CC1: 4.3.1.8 Table 1.

C9. Degree of accuracy I Table 1.1.

C10. All sharp edges to concrete to have 25mm chamfers.

C11. Uniformed surface finishes as follows:

- Surface Beds: Power-floated
- Suspended Slabs: Power-floated

C12. All services and sleeves to be positioned prior to concrete pour. No in situ concrete to be cast without prior approval from the Engineer.

C13. The positions of all construction joints not shown on the drawings are to be discussed with and approved by the Engineer.

REFER TO DRAWING 3119-S20 - GENERAL NOTES

IF IN DOUBT, ASK!!!

HEALTH DEPARTMENT SIGNATURES

DEPUTY DIRECTOR GENERAL: \_\_\_\_\_

HEAD OFFICE PROGRAMME / SERVICE: \_\_\_\_\_

DISTRICT MANAGER: \_\_\_\_\_

CED MANAGER OF THE FACILITY: \_\_\_\_\_

DOH PROJECT MANAGER: \_\_\_\_\_

IMPLEMENTING AGENT PROJECT MANAGER: \_\_\_\_\_

PROFESSIONAL SERVICES PROVIDER: \_\_\_\_\_

Name: **S. Boyce (Pr. Eng. 20160768)**

Signature: \_\_\_\_\_ Date: 04/10/2024

Consultant: **DRENNAN MAUD (PTY) LTD**

**GEOTECHNICAL ENGINEERS & ENGINEERING GEOLOGISTS**

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**health**  
Department:  
Health  
PROVINCE OF KWAZULU-NATAL

**KWAZULU-NATAL PROVINCE**  
PUBLIC WORKS  
REPUBLIC OF SOUTH AFRICA

Project: **DEPARTMENT OF HEALTH  
PORT SHEPSTONE HOSPITAL  
NEW PSYCHIATRIC WARD**

Drawing description: **FIRST FLOOR LAYOUT  
& DETAILS**

Drawn: I.B.U./D.J.P. Date: Aug 2019

Scales: As shown

Consultant Drawing number: **3119-S10** Rev: C0

Drawing number: **WIMS 044 044 / S / 10 / C0**

Stamped by Health Plans Approval Committee