CONSTRUCTION NOTES

1. GENERAL NOTES

1.1. ALL WORK TO SANS 1200, SANS 10400 NBR AND NHBRC.

1.2. ENGINEER'S DRAWINGS TO BE READ IN CONJUNCTION WITH OTHER ENGINEERING/ARCHITECTS DRAWINGS AND OTHER CONTRACT DOCUMENTATION. ANY DISCREPANCY/INCONSISTENCY IS TO BE REPORTED TO THE ARCHITECT PRIOR TO CONSTRUCTION.

1.3. STATUTORY OCCUPATIONAL HEALTH AND SAFETY PRECAUTIONARY MEASURES TO BE TAKEN BEFORE, DURING AND AFTER DEMOLITION. ANY RISKS TO BE DISCUSSED WITH FOREMAN ON DUTY AND FORWARDED TO ENGINEER WHERE DEEMED CRITICAL.

1.4. POSITIONING AND LEVELS OF THE STRUCTURE TO BE IN ACCORDANCE WITH THE ARCHITECTS DRAWINGS. ANY DISCREPANCY BETWEEN STRUCTURAL AND ARCHITECTURAL DRAWINGS IS TO BE REPORTED TO THE ARCHITECT PRIOR TO CONSTRUCTION.

1.5. ALL PROPRIETARY PRODUCTS ARE TO BE STORED, FIXED AND APPLIED TO MANUFACTURERS SPECIFICATIONS.

1.6. ALL WATERPROOFING TO BE DONE BY A SPECIALIST.

1.7. ALL INTERNAL STRUCTURAL STEEL SHOULD HAVE A SIXTY MINUTE FIRE RATING PROTECTION SYSTEM AS PER THE FIRE ENGINEER'S SPECIFICATION. ALL BASEMENTS TO HAVE A 120 MINUTE FIRE RATING PROTECTION SYSTEM. REFER TO SANS 10400-T FOR APPLICABLE FIRE RATING.

1.8. ALL ENGINEER'S DESIGN DRAWINGS AND BENDING SCHEDULES REMAINS THE INTELLECTUAL PROPERTY OF DMS STRUCTURES (PTY) LTD. ANY COPIES OR USE OF THESE DOCUMENTS ARE PROHIBITED WITHOUT CONSENT OF DMS STRUCTURES (PTY) LTD. THESE DOCUMENTS CAN ONLY BE USED TO COMPLETE THE PROJECT DESCRIBED IN THE TITLE BLOCK OF THESE DRAWINGS ONCE FULL PAYMENT HAS BEEN MADE AS STIPULATED IN THE

2. FOUNDATIONS

2.1. FOUNDING LEVELS OF FOUNDATIONS AS SHOWN ARE PRELIMINARY AND HAVE TO BE CONFIRMED BY THE ENGINEER ON SITE IN ORDER TO OBTAIN AN ALLOWABLE SOIL BEARING PRESSURE OF 150KPA. STRIP FOOTING FOUNDING DEPTH >650mm BELOW GROUND LEVEL.

2.2. RETAINING FOUNDATION WALLS:
- 2.2.1. ALL 230mm FOUNDATION WALLS RETAINING >700mm TO BECOME 280 MASONRY CAVITY INFILL WALLS.
- 2.2.2. ALL 280mm FOUNDATION WALLS RETAINING >1000mm TO BECOME 330 MASONRY CAVITY INFILL WALLS.
- 2.2.3. ALL 330mm FOUNDATION WALLS RETAINING >1200mm TO RECEIVE Y12@200 STARTER BARS & MESH REF 245.
- 2.2.4. ALL 330mm FOUNDATION WALLS RETAINING >1500mm TO BE DESIGNED BY ENGINEER.

2.3. ALL FOUNDATIONS MUST BE INSPECTED AND APPROVED IN WRITING BY THE ENGINEER BEFORE CONCRETE OR BLINDING IS PLACED. OVER-EXCAVATION REQUIRED BY THE ENGINEER FOR FOUNDING PURPOSES SHALL BE BACKFILLED WITH 10MPA MASS CONCRETE UP TO UNDERSIDE OF FOUNDATIONS. PORTIONS WHICH ARE OVER-EXCAVATED BEYOND THE DEPTH REQUIRED BY THE ENGINEER SHALL BE BACKFILLED WITH MASS CONCRETE AT THE CONTRACTOR'S EXPENSE.

2.4. A 75mm THICK BLINDING LAYER (CLASS 15MPA/19MM) SHALL BE PROVIDED UNDER ALL FOUNDATIONS, UNLESS OTHERWISE APPROVED BY THE ENGINEER ON SITE. IN THE EVENT THAT NO DEGRADATION WHATSOEVER OF THE IN-SITU MATERIAL WILL OCCUR, 75mm THICK SPACERS OF SIMILAR STRENGTH AND DENSITY AS THAT OF THE FOUNDATION CONCRETE MAY BE USED.

2.5. ALL LEVELS SHOWN ON THE FOUNDATION DRAWINGS REFER TO THE TOP OF BLINDING UNLESS OTHERWISE INDICATED.

2.6. ALL FOUNDATIONS ARE PLACED SYMMETRICALLY BELOW COLUMNS AND BRICKWORK UNLESS OTHERWISE SHOWN.

2.7. WHERE A STRUCTURALLY REINFORCED CONCRETE SLAB TIES INTO A RETAINING WALL, BACKFILLING BEHIND THE RETAINING WALL SHALL ONLY COMMENCE ONCE THE ABOVE MENTIONED ELEMENTS HAVE REACHED THEIR 14 DAY STRENGTH.

2.8. NO UNDERGROUND SERVICES WILL BE PERMITTED DIRECTLY BELOW COLUMN BASES. SERVICES IN THE ZONE 90° TO 45° TO THE HORIZONTAL MEASURED FROM THE TOE OF COLUMN BASES, AS WELL AS ALL SERVICES BELOW WALL STRIP FOOTINGS, SHALL BE ENCASED IN 15MPA/19mm CONCRETE.

2.9. ALL BACKFILLING TO SURFACE BED AND BEHIND RETAINING WALLS SHALL BE COMPACTED IN ACCORDANCE WITH THE BULK EARTHWORKS SPECIFICATIONS.

3. FILL

3.1. FILL MATERIAL SHALL BE AS SPECIFIED AND APPROVED BY THE ENGINEER.

3.2. FILL MATERIAL SHALL EXCLUDE CLAYEY SOIL, STONES >75mm, ORGANIC MATERIAL, <10% ROCK>50mm.

4. SURFACE BED

4.1. SURFACE BED TO BE CAST IN PANELS NOT EXCEEDING 30x CONCRETE THICKNESS, WITH 4.5m SIDE LIMIT. NO LENGTH-TO-WIDTH RATIO <1.5. POSITION OF JOINTS AS APPROVED BY THE ENGINEER.

4.2. A FINISHING LAYER COMPACTED IN ACCORDANCE WITH THE BULK EARTHWORKS SPECIFICATIONS SHALL BE PROVIDED TO MAKE UP THE DIFFERENCE BETWEEN THE BUILDING PLATFORM LEVEL AND THE UNDERSIDE OF THE SURFACE BED.

4.3. SURFACE BED MUST BE CAST ON 250 MICRON POLYETHYLENE SLIPSHEET WITH JOINTS LAPPED 200mm AND JOINTS CONTINUOUSLY TAPED TOGETHER.

4.4. SAW-CUT JOINTS MUST BE CUT AS SOON AS CONCRETE IS FIRM ENOUGH NOT TO BE TORN OR DAMAGED AND WITH THE BLADE CAUSING ONLY SLIGHT UNRAVELLING OF THE CONCRETE.

4.5. SURFACE BED TO BE FINISHED TO ARCHITECT'S SPECIFICATION. WHERE FLOORS ARE FINISHED WITH TILES, GRANO OR SIMILAR, JOINTS MUST BE REPEATED IN THE FINISH.

4.6. ALL 230mm WIDE BRICK WALLS SHALL BE BUILT ON INDEPENDENT STRIP FOOTINGS.

4.7. UNLESS OTHERWISE SHOWN, PROVIDE 6mm THICK JOINTEX AROUND ALL COLUMNS AND ALONG FOUNDATION WALLS.

4.8. FLATNESS/LEVELNESS OF SURFACE BED TO SATISFY DEGREE OF ACCURACY NO II AS SPECIFIED BY SABS 1200 G.

4.9. PROVIDE 25x25mm CHAMFERS TO EXPOSED CORNERS OF ALL PLINTHS.

5. CONCRETE

5.1. ALL CONCRETE WORK SHALL COMPLY WITH THE REQUIREMENTS OF SABS 1200 G.

5.2. CONCRETE CUBE STRENGTH AT 28 DAYS SHALL BE AS FOLLOWS, UNLESS OTHERWISE SHOWN:

5.2.1.	COLUMNS	30MPa/19mm
5.2.2.	SUSPENDED SLABS	30MPa/19mm
5.2.3.	BEAMS	30MPa/19mm
5.2.4.	FOUNDATIONS	25MPa/19mm
5.2.5.	RETAINING WALLS	30MPa/19mm
5.2.6.	SURFACE BEDS	25MPa/19mm
5.2.7.	CONC INFILL TO BRICK RET WALLS	25MPa/19mm
5.2.8.	BLINDING LAYERS	10MPa/19mm
5.2.9.	MASS CONCRETE	20MPa/19mm

5.3. CEMENT SHALL NOT BE KEPT IN STORAGE FOR PERIODS LONGER THAN 12 WEEKS WITHOUT THE ENGINEER'S PERMISSION.

5.4. SLAGMENT AND/OR ADMIXTURES MAY ONLY BE USED IF APPROVED BY THE ENGINEER.

5.5. CURING OF CONCRETE SHALL BE CARRIED OUT STRICTLY IN ACCORDANCE WITH SABS 1200 G AND MUST BE APPROVED BY THE ENGINEER. CONCRETE TO BE CURED FOR 7 DAYS FROM CASTING.

5.6. ALL CONCRETE TO BE VIBRATED IN PLACE.

5.7. COVER TO STEEL: BASES 50, COLUMNS 40, SLABS 30, BEAMS 30.

5.8. ENGINEER TO CHECK REINFORCING BEFORE CASTING CONCRETE.

5.9. FORMWORK STRIPPING TIME [DAYS]:

5.9.1.	SIDES OF WALLS, COLUMNS, BEAMS:	2
5.9.2.	SLABS (PROPS LEFT UNDER):	3
5.9.3.	PROPS OF SLABS:	14
5.9.4.	BEAM SOFFITS (PROPS LEFT UNDER):	7
5.9.5.	PROPS FOR BEAMS:	21

5.10. TESTING OF CONCRETE SHALL COMPLY WITH THE REQUIREMENTS OF SABS 1200 G, SUMMARIZED AS FOLLOWS:
- 5.10.1. SAMPLES SUFFICIENT FOR 3 TEST CUBES SHALL BE TAKEN IN ACCORDANCE WITH SABS METHOD 861 AT THE FOLLOWING INTERVALS:
  - 5.10.1.1. PER GRADE OF CONCRETE PLACED.
  - 5.10.1.2. PER 50m³ OF CONCRETE PLACED.
  - 5.10.1.3. PER DAY THAT CONCRETE IS PLACED.
- 5.10.2. ONLY ONE SAMPLE SHALL BE DRAWN FROM ANY ONE BATCH OF CONCRETE AND EXCEPT WHERE OTHERWISE APPROVED, NO SAMPLE SHALL BE TAKEN OF ANY GRADE UNTIL AT LEAST 3 BATCHES OF SUCH GRADE HAVE BEEN MIXED AND DISCHARGED. WHEN READY MIXED CONCRETE IS USED, SAMPLES SHALL BE TAKEN ON SITE WHILST CASTING.
- 5.10.3. TESTING OF SAMPLES SHALL BE CARRIED OUT IN ACCORDANCE WITH SABS METHOD 863 BY A RECOGNIZED TESTING INSTITUTION. THE RESULTS OF THESE TESTS SHALL BE PRESENTED TO THE ENGINEER AT REGULAR INTERVALS, WITHIN ONE WEEK AFTER BEING TESTED AND IN A FORMAT SUCH THAT THE TEST RESULTS OF A PARTICULAR SAMPLE CAN BE REFERENCED TO THE STRUCTURAL ELEMENT WHERE THE CORRESPONDING CONCRETE WAS PLACED.
- 5.10.4. WHEREAS THE CRITERIA FOR CONCRETE STRENGTH ARE BASED ON SAMPLES TESTED AT 28 DAYS, EARLY STRENGTH TESTING MAY BE REQUIRED AT THE DISCRETION OF THE ENGINEER.

5.11. CONSTRUCTION JOINTS IN SLABS AND BEAMS:
- 5.11.1. BEFORE COMMENCING TO PLACE NEW CONCRETE, THE SURFACE OF EXISTING CONCRETE SHALL BE CLEANED AND CHIPPED TO EXPOSE AGGREGATE AND SHALL BE KEPT WET FOR TWO HOURS. GROUT WHICH CONSIST OF A 1:1 MIX OF CEMENT AND CLEAN FINE SAND WITH JUST ENOUGH WATER TO PROVIDE THE CONSISTENCY OF A SLURRY, SHALL BE APPLIED TO THE EXISTING CONCRETE BEFORE CASTING.
- 5.11.2. NO HORIZONTAL JOINTS SHALL BE PERMITTED IN COLUMN BASES OR OTHER DEEP ELEMENTS.
- 5.11.3. NO VERTICAL JOINTS SHALL BE PERMITTED IN ELEMENTS DIRECTLY EXPOSED TO THE WEATHER UNLESS OTHERWISE INDICATED.
- 5.11.4. ALL CABLE SLEEVES, CONDUITS AND PIPES THROUGH JOINTS SHALL BE PROVIDED WITH EXPANSION JOINTS OR FLEXIBLE COUPLINGS.

5.12. CASTING OF CONCRETE IN EXCESS OF 3.5m HIGH IS NOT PERMITTED WITHOUT PRIOR APPROVAL OF THE ENGINEER.

5.13. WHERE A SLAB AND BEAM IS CAST MONOLITHICALLY AND THE BEAM DEPTH EXCEEDS 3x THE SLAB THICKNESS, THE BEAM MUST BE VIBRATED A SECOND TIME ONE HOUR AFTER INITIAL VIBRATION OF THE SLAB.

5.14. THE CONTRACTOR MUST MAKE PROVISION FOR PROPPING OF SLABS AND BEAMS TO CARRY ALL CONSTRUCTION LOADS TO THE APPROVAL OF THE ENGINEER. STRIPPING TIMES OF FORMWORK AND PROPS SHALL BE IN ACCORDANCE WITH SABS 1200 G.

5.15. UPSTAND BEAMS ARE TO REMAIN PROPPED UNTIL THE UPSTAND PORTION IS CAST AND THE CONCRETE HAS REACHED ITS 14 DAY STRENGTH.

5.16. NO BRICKWORK SHALL BE BUILT ON SLABS UNTIL THE CONCRETE HAS REACHED ITS 14 DAY STRENGTH.

5.17. TEMPORARY PROPPING OF RETAINING WALLS MUST BE PROPOSED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.

5.18. CONCRETE TOLERANCES IN TOILET AREAS SHALL BE DEGREE OF ACCURACY NO I AND IN ALL OTHER AREAS DEGREE OF ACCURACY NO II IN ACCORDANCE WITH SABS 1200 G.

5.19. PROVIDE 10x10mm DRIP GROOVES IN ALL PERIMETER CONCRETE SLABS TO ARCHITECT'S DETAILS.

5.20. THE CONTRACTOR MUST ENSURE THAT ALL CAST-IN ITEMS ARE PROVIDED AND POSITIONED ACCORDING TO THE LATEST DRAWINGS OF ALL DISCIPLINES BEFORE CASTING CONCRETE.

5.21. REFER TO ARCHITECT'S DRAWINGS FOR CONCRETE FINISHES, GROOVES AND CHAMFERS. UNLESS OTHERWISE SHOWN, ALL EXPOSED CONCRETE WORK SHALL BE OFF-SHUTTER AND ALL EXPOSED CORNERS SHALL BE PROVIDED WITH 20x20mm CHAMFERS.

5.22. FOR DETAILS OF WATERPROOFING ON ROOF SLABS, REFER TO ARCHITECT'S DRAWINGS. FOR DETAILS OF WATERPROOFING BEHIND RETAINING WALLS AND UNDER SURFACE BEDS, REFER TO ARCHITECT'S DRAWINGS.

5.23. ALL BEAMS AND SUSPENDED SLABS MUST BE PROVIDED WITH AN UPWARD CAMBER AS SHOWN BELOW, UNLESS OTHERWISE INDICATED:
- 5.23.1. CANTILEVER: SPAN/250
- 5.23.2. ALL OTHER SPAN: SPAN/600

6. REINFORCEMENT

6.1. REINFORCEMENT SHALL BE INSPECTED BY THE ENGINEER ONLY AFTER FIXING OF REINFORCEMENT, CLEANING OF FORMWORK AND POSITIONING OF SPACER BLOCKS HAVE BEEN COMPLETED AND AFTER THE CONTRACTOR HAS INSPECTED IT HIMSELF. ALL REINFORCEMENT SHALL BE APPROVED BY THE ENGINEER IN WRITING BEFORE CASTING CONCRETE MAY COMMENCE.

6.2. CONCRETE COVER TO REINFORCEMENT, UNLESS OTHERWISE NOTED ON BENDING SCHEDULES, SHALL BE AS FOLLOWS:

6.2.1.	SLABS – INTERNAL	30mm
6.2.2.	SLABS – EXTERNAL	30mm
6.2.3.	BEAMS	30mm
6.2.4.	FOUNDATIONS – BOTTOM	50mm
6.2.5.	FOUNDATIONS – SIDES AND TOP	50mm
6.2.6.	COLUMNS	40mm
6.2.7.	WALLS	30mm
6.2.8.	SURFACE BEDS	50mm
6.2.9.	RETAINING WALL SOIL FACE	50mm

6.3. BENDING OF REINFORCEMENT SHALL BE IN ACCORDANCE WITH SABS 82.

6.4. REINFORCEMENT SHALL BE FIXED TO COMPLY WITH THE TOLERANCES SPECIFIED IN SABS 1200 G.

6.5. HEAT TREATMENT OR WELDING OF REINFORCEMENT IS NOT PERMITTED.

6.6. THE CONTRACTOR SHALL EXERCISE CARE TO ENSURE THAT NO DAMAGE TO WATERPROOFING MEMBRANES UNDERNEATH SURFACE BEDS OCCURS DURING FIXING OF REINFORCEMENT OR BACKFILLING OPERATIONS. THE COST TO REPAIR OR REPLACE THE WATERPROOFING MEMBRANE SHALL BE AT THE CONTRACTOR'S EXPENSE.

6.7. SPECIFICATION FOR DOWELING OF REINFORCEMENT INTO EXISTING CONCRETE:
- 6.7.1. FOR VERTICAL DOWEL BARS USE ABE EPIDERMIX 365 LIQUID EPOXY OR SIMILAR APPROVED GROUTING COMPOUND TO MANUFACTURER'S SPECIFICATION.
- 6.7.2. FOR HORIZONTAL DOWEL BARS USE ABE EPIDERMIX 372 EPOXY PASTE OR SIMILAR APPROVED GROUTING COMPOUND TO MANUFACTURER'S SPECIFICATION.
- 6.7.3. HOLES SHALL BE DRY AND DUST FREE AS PER PRODUCT MANUFACTURER SPECS.

7. BRICKWORK

7.1. REFER TO ARCHITECT'S DRAWINGS AND NOTES FOR GENERAL LAYOUT OF BRICKWORK.

7.2. ALL BRICKWORK SHALL CONSIST OF SOLID HARD BURNT CLAY BRICKS, LAID ON CLASS II MORTAR AS DEFINED IN TABLE 1, SABS 0164: PART 1. LOAD-BEARING BRICKS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 10MPa (FOUNDATION.LOWER STOREY WALLS) AND 4MPa (SINGLE/TOP STOREY). CLAY BRICKS SHALL BE MOISTENED PRIOR TO USE.

7.3. BRICKFORCE SHALL BE PLACED EVERY COURSE IN FOUNDATION WALLS, AND THEREAFTER EVERY 3RD COURSE (<300mm c/c) WITH AN ADDITIONAL LAYER IN THE LAST COURSE IN ALL BRICKWALLS. PLACE BRICKFORCE EVERY COURSE UP TO WALL PLATE FOR THE FIRST 5 COURSES ABOVE ALL OPENINGS. BRICKFORCE SHALL BE LAPPED AT LEAST 300mm AT END JOINTS.

7.4. WALL TIES, MINIMUM 230mm LONG, SHALL BE USED IN ALL CAVITY WALLS PLACED EVERY 3RD COURSE VERTICALLY AND AT 450mm c/c HORIZONTALLY (STAGGERED).

7.5. ALL LINTOLS SHALL BE SUPPORTED ON TEMPORARY FORMWORK FOR AT LEAST 14 DAYS.

7.6. PRECAST LINTOLS SHALL HAVE BEARING DISTANCE ON EITHER SIDE AS PER SANS 10400 PART K.

7.7. BRICKWALLS SHALL BE TIED TO ALL CONCRETE COLUMNS WITH 30x3mm GALVANIZED HOOP IRON STRAPS EVERY 3RD COURSE, 150mm LONG FIXED TO COLUMNS WITH 2x HILTI SHOT-STUDS EACH AND BUILT >400mm INTO BRICKWORK.

7.8. PROVIDE 10mm JOINTEX IN ALL JOINTS AND REPEAT JOINTS IN FINISHES.

7.9. V-JOINTS ARE TO BE MADE IN PLASTER WHERE BRICKWORK AND CONCRETE JOINS.

7.10. ALL LOAD-BEARING BRICKWALLS SHALL BE FINISHED WITH TWO CONTINUOUS LAYERS OF 3mm TEMPERED HARDBOARD, SMOOTH SIDES FACE TO FACE.

7.11. ALL NON LOAD-BEARING BRICKWALLS BUILT BELOW SUSPENDED SLABS AND BEAMS SHALL BE FINISHED WITH A 20mm LAYER OF EASILY COMPRESSIBLE MATERIAL.

7.12. ALL PLANTERS BUILT IN BRICKWORK SHALL BE PROVIDED WITH 25ø WEEPHOLES 1.0m c/c ABOVE FINISHED PAVING LEVELS.

7.13. BRICKWORK, PARTITIONS AND WINDOW FRAMES BELOW SUSPENDED SLABS OR BEAMS MUST MAKE ALLOWANCE FOR LONG TERM DEFLECTION OF SPAN/350.

7.14. VERTICAL JOINTS SHALL BE PROVIDED IN BRICKWALLS IN THE FOLLOWING CASES:
- 7.14.1. WHERE 115mm WALLS ARE BUILT ACROSS JOINTS IN THE SURFACE BED, THESE JOINTS SHALL BE REPEATED IN THE 115mm WALL.
- 7.14.2. WHERE 115mm WALLS BUILT ON THE SURFACE BED JOIN 230mm WALLS BUILT ON INDEPENDENT STRIP FOOTINGS.

8. IN-FILL RETAINING WALLS

8.1. WALLS TO BE SMOOTHLY BAGGED.

8.2. WALL WATERPROOFING TO SPECIALIST SPECIFICATION.

8.3. CAVITIES TO BE CLEANED AND FILLED WITH HIGH SLUMP 25MPa CONCRETE (13mm STONE) AND WITH CRYSO FUGE B ADDITIVE FOR INCREASED WATERPROOFING PROPERTIES.

8.4. BRICKWORK AT SURFACE BED LEVEL TO RECEIVE MINIMUM TWO COATS OF ABE DURAFLEX (OR SIMILAR APPROVED) HORIZONTALLY APPLIED TO PREVENT RISING DAMP.

8.5. SEEPAGE DRAINAGE SYSTEM TO BE PLACED BEHIND RETAINING WALL >350mm BELOW UFFL AT >1:100 FALL. SYSTEM TO COMPRISE OF 110mmø PERFORATED PIPE IN 300x300x19 STONE DRAIN WRAPPED IN BIDIM WITH 150mm WIDE SAND LAYER WRAPPED IN BIDIM TO 200mm BELOW FGL. WEEP HOLES AS PER NBR.

9. STRUCTURAL STEEL

9.1. ALL STRUCTURAL STEELWORK DETAILS ACCORDING TO SANS 10162 – STRUCTURAL USE OF STEEL.

9.2. ALL STRUCTURAL STEELWORK SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH SABS 1200 H.

9.1. ALL DIMENSIONS SHALL BE CHECKED ON SITE BEFORE FABRICATION OF STRUCTURAL STEEL COMMENCES. ANY DISCREPANCIES MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.

9.2. A COMPLETE SET OF SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE FABRICATION COMMENCES.

9.3. ALL STRUCTURAL STEELWORK SHALL BE GRADE S355JR UNLESS OTHERWISE SHOWN.

9.4. ALL CONNECTIONS ARE CONSIDERED BOLTED CONNECTIONS UNLESS OTHERWISE SHOWN.

9.5. ALL STRUCTURAL BOLTS,NUTS SHALL BE GRADE 8.8 UNLESS OTHERWISE SHOWN. MAXIMUM TORQUE OF GRADE 8.8 BOLTS SHALL BE:
- 9.5.1. M10: 57.3 N.m
- 9.5.2. M12: 99.8 N.m
- 9.5.3. M16: 248 N.m
- 9.5.4. M20: 500 N.m
- 9.5.5. M24: 865 N.m

9.6. ALL WELDS SHALL BE 6mm CONTINUOUS FILLET WELDS UNLESS OTHERWISE SHOWN.

9.7. ALL WELDING SHALL BE CARRIED OUT IN ACCORDANCE WITH SABS 044 PARTS III AND IV. WELDING AND SURFACE PREPARATION SHALL BE DISCUSSED, INSPECTED AND APPROVED BY THE ENGINEER, THE SABS OR ANOTHER APPROVED INSPECTION AGENCY.

9.8. ALL STRUCTURAL STEEL MEMBERS TO BE HOT DIPPED GALVANIZED PRIOR TO LEAVING WORKSHOP AS PER SANS 14713, EXCEPT WHEN SPECIFIED. ALL DAMAGES TO GALVANIZING/PRIMER PAINT MUST BE REPAIRED AFTER ERECTION.

9.9. STEEL TO BE FREE OF DUST, RUST, OIL, GREASE OR DEBRIS. ONE COAT DULUX TRADE STEEL PRIMER (OR SIMILAR APPROVED). ONE COAT DULUX TRADE UNIVERSAL UNDERCOAT (OR SIMILAR APPROVED). TWO COAT DULUX ENAMEL (OR SIMILAR APPROVED). COLOUR TO ARCHITECT'S SPECIFICATION. ALL IN ACCORDANCE WITH SABS 684.

9.10. DAMAGED AREAS SHALL BE REPAIRED ON SITE IN ACCORDANCE WITH SABS 1200 HC. COLOUR TO ARCHITECT'S SPECIFICATION.

9.11. CONTRACTOR TO POSITION STEEL COLUMNS ON BASE PLATES TO ACCOMMODATE DOOR AND WINDOW FRAMES. ALL STEEL COLUMN BASE PLATES TO BE RECESSED 40mm INTO CONCRETE TO ACCOMMODATE DOOR AND WINDOW FRAMES.

10. RAFT FOUNDATIONS

10.1. THE FOLLOWING METHOD IS TO BE FOLLOWED TO PREPARE PLATFORM FOR REINFORCED CONCRETE RAFT FOUNDATION
- 10.1.1. REMOVE ALL RUBBLE.
- 10.1.2. CUT 100mm TOPSOIL TO BE STOCKPILED FOR LANDSCAPING.
- 10.1.3. CUT-TO-FILL REMAINING MATERIAL AND COMPACT MATERIAL TO 93 % MAMDD. ENGINEER TO CHECK BEFORE PLACEMENT OF FILL.
- 10.1.4. IMPORT >300mm DEEP G7 GRADE GRANULAR FILL MATERIAL >1.0m WIDER THAN FOOTPRINT OF RAFT FOUNDATION COMPACTED TO 96 % MAMDD IN 150mm LAYERS. ENGINEER TO CHECK BEFORE CONCRETE IS CAST.

11. TIMBER CONSTRUCTION

11.1. ENSURE ALL CONSTRUCTION COMPLIES WITH THE NATIONAL BUILDING REGULATIONS AND BUILDING STANDARDS ACT (SANS 10400).

11.2. TIMBER FRAME CONSTRUCTION SHOULD MEET THE REQUIREMENTS OF SANS 10082 FOR TIMBER BUILDINGS.

11.3. USE TREATED TIMBER THAT COMPLIES WITH SANS 1288 (PRESERVATIVE-TREATED TIMBER) AND SANS 457 (POLES, DROPPERS, AND STANDARDS).

11.4. EXCAVATE AND LEVEL THE SITE TO PROVIDE ADEQUATE DRAINAGE AND PREVENT WATER POOLING.

11.5. ENSURE TERMITE PROTECTION MEASURES ARE IN PLACE, ESPECIALLY IN HIGH-RISK AREAS.

11.6. USE CCA-TREATED TIMBER (H3 OR HIGHER) TO PROTECT AGAINST TERMITES, FUNGI, AND WEATHERING.

11.7. ENSURE ALL TIMBER IS DRIED TO APPROPRIATE MOISTURE LEVELS (12-16%) TO MINIMIZE WARPING AND SHRINKAGE.

11.8. STRUCTURAL MEMBERS SHOULD MEET GRADE SPECIFICATIONS (E.G., S5 OR S7 FOR STRUCTURAL TIMBER).

11.9. TIMBER JOINTS MUST USE CORROSION-RESISTANT FASTENERS (E.G., STAINLESS STEEL OR GALVANIZED STEEL).

11.10. FOUNDATIONS SHOULD BE DESIGNED TO SUPPORT THE LOAD AND PREVENT SETTLEMENT, FOLLOWING SANS 2001-CC1 (CONCRETE WORKS).

11.11. USE TERMITE BARRIERS OR TREATED BASEPLATES FOR TIMBER MEMBERS IN DIRECT CONTACT WITH FOUNDATIONS.

11.12. ENSURE ADEQUATE DAMP-PROOFING AND VENTILATION UNDER FLOORS (E.G., 150 MM CLEARANCE FROM GROUND LEVEL).

11.13. TIMBER STUDS SHOULD BE SPACED ACCORDING TO STRUCTURAL REQUIREMENTS (TYPICALLY 400-600mm CENTERS).

11.14. USE STRUCTURAL SHEATHING (1.2X30mm GALVANIZED HOOP STRAPPING, PLACED BOTH DIRECTIONS TO FORM "X" SHAPE AND OSB/PLYWOOD) FOR LATERAL STABILITY.

11.15. INCLUDE A WEATHERPROOF MEMBRANE (BREATHABLE WATERPROOFING LAYER) BETWEEN CLADDING AND SHEATHING.

11.16. REGULARLY INSPECT AND MAINTAIN TIMBER, FOCUSING ON JOINTS, EXPOSED SURFACES, AND AREAS PRONE TO MOISTURE.

11.17. REAPPLY PROTECTIVE COATINGS (E.G., SEALANTS, PAINTS) EVERY 3-5 YEARS.

11.18. ADDRESS PEST OR FUNGAL ISSUES PROMPTLY TO PREVENT STRUCTURAL DAMAGE.

LEGEND

WALLS SECTIONED

WALLS UNDER

FOUNDATIONS – STRIP AND SPOT

CONCRETE – SLABS AND INFILLS

LAYER WORKS

REV	DESCRIPTION / BESKRYWING	BY / DEUR	DATE / DATUM

PROJECT / PROJEK

STAND RAILTON FOUNDATION NEW ADMINISTRATION BUILDING, ERF 8530, RAILTON

TITLE / TITEL

CONSTRUCTION NOTES

SCALE / SKAAL 1:50 ON A1

dms CONSULTING STRUCTURAL ENGINEERING

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DESIGNED / ONTWERP	CvD
DRAWN / GETEKEN	CvD
CHECKED / NAGESIEN	CvD
DATE / DATUM	2026.08.31
STATUS	TENDER
DRAWING NO. TEKENING NR.	J23-1 REV